Aboriginal and Torres Strait Islander Health Performance Framework 2008 report

Detailed analyses

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Executive Summary

This report contains detailed analyses underlying the summary data presented in the Aboriginal and Torres Strait Islander Health Performance Framework 2008 report (AHMAC 2006). The Aboriginal and Torres Strait Islander Health Performance Framework (HPF) is designed to provide the basis to monitor the impact of the National Strategic Framework for Aboriginal and Torres Strait Islander Health (NSFATSH) and inform policy analyses, planning and program implementation. The HPF consists of 70 measures covering three Tiers—health status and outcomes, determinants of health and health systems performance.

A summary of the key findings are outlined below.

Health status and health outcomes

A number of measures are used to describe the health status and health outcomes of Aboriginal and Torres Strait Islander peoples in a range of health issues. These include life expectancy, self-assessment of health, disability, low birthweight, morbidity rates and mortality rates.

Getting better

Trends over time show improvements in several important measures of health of Aboriginal and Torres Strait Islander people.

- **All cause mortality.** Between 1991 and 2006, in the three jurisdictions for which there is 16 years of adequate coverage of Indigenous deaths, all cause mortality rates have declined by 9% for Indigenous males and 15% for Indigenous females.
- **Deaths from circulatory disease.** Over the period 1997–2006, there were significant declines in mortality rates from circulatory diseases among Indigenous Australians (31%).
- **Infant mortality** has declined by 47% between 1991 and 2006 and **perinatal mortality** has declined by about 51% between 1991 and 2005 resulting in a significant closing of the gap between Indigenous and non-Indigenous infant and perinatal mortality (20% and 33% declines in the rate ratios respectively).
- **Hospitalisations from pneumonia** for Indigenous children aged 0–4 years declined at an average annual rate of around 3 per 1,000 between 1998–99 to 2005–06 which was greater than the decline observed for non-Indigenous children.

Areas of concern

- **Low birthweight** has remained around twice as common for Aboriginal and Torres Strait Islander babies as for other Australian babies.
- **Ear disease.** There has been little change in the prevalence of ear and hearing problems among Indigenous children aged 0–14 years between 2001 and 2004–05. In 2004–05, approximately 10% of Indigenous children aged 0–14 years reported having ear or hearing problems compared with 3% of non-Indigenous children of the same age.
- **Acute Rheumatic Fever and Rheumatic Heart Disease.** Data from the Top End of the Northern Territory and Central Australia indicate that the incidence rates of Acute Rheumatic Fever and the prevalence of Rheumatic Heart Disease are substantially higher

in the Indigenous population compared to the non-Indigenous population and there is no indication that these rates are falling.

- **End Stage Renal Disease.** The incidence rate of end stage renal disease among the Indigenous population has increased by 185% between 1991 and 2006.
- **Oral health.** Indigenous children experience higher levels of tooth decay and lower levels of access to dental care than non-Indigenous children. Trends data from the Northern Territory indicate that there has been no improvement in the dental health of Aboriginal and Torres Strait Islander children over the last decade.
- **Sexually transmissible infections.** Rates of chlamydia and gonorrhea have increased significantly between 1994 and 2006 (by 188% and 74% respectively).
- **Social and emotional wellbeing.** Indigenous persons are more likely to report high levels of psychological distress than non-Indigenous persons and in 2004–05 around 77% of Indigenous adults reported having experienced at least one stressor in the last 12 months, the most common stressor being death of a family member or close friend (42%).

Determinants of health

A range of factors can impact on health including environmental factors such as functional housing and overcrowding, health behaviours such as smoking and alcohol use, socioeconomic factors such as educational participation and attainment, employment, income and housing tenure, and community/cultural factors such as safety and crime, child protection, transport and access to traditional lands.

Getting better

There have been improvements in several key health determinants in recent years including:

- **Access to functional housing.** The proportion of the population living in discrete Indigenous communities that were connected to a town water supply almost doubled between 2001 and 2006 (from 17% to 30%).
- **School retention.** Indigenous school retention rates to Year 10, Year 11 and Year 12 have steadily increased over the last 5 to 10 years.
- **Literacy and numeracy** levels have improved at years 3, 5 and 7, particularly for reading and writing.
- **School completion.** The proportion of Indigenous people who have completed year 12 has increased between 2001 and 2006 (from 21% to 25%).
- **Unemployment** rates are more than twice as high among Indigenous Australians as amongst other Australians, unemployment has however declined somewhat between 1996 and 2006 (from 13% to 9%).
- **Home ownership.** The proportion of Aboriginal and Torres Strait Islander people who own their own home has increased slightly from 27% in 1996 to 29% in 2006.

Areas of concern

- **Overcrowding.** In 2006, Indigenous adults were five times more likely to live in overcrowded homes than other adults.
- **Income.** In 2006, approximately 40% of Aboriginal and Torres Strait Islanders adults were in the bottom 20% of incomes which is an increase from 1996 (36%).
- **Victims of violence.** Aboriginal and Torres Strait Islander people are much more likely to be the victims of violence than other people. The proportion of Indigenous Australians

aged 15 years and over who reported being a victim of physical or threatened violence in the last 12 months has increased from 13% in 1994 to 24% in 2002. These rates are likely to be an underestimate of the true level of violence experienced by Aboriginal and Torres Strait Islander peoples.

- **Imprisonment.** Between 2000 and 2007, the proportion of Aboriginal and Torres Strait Islander adults who were in prison increased significantly from 1,265 per 100,000 to 1,787 per 100,000 population.
- **Child abuse and neglect.** The rate of substantiated child protection notifications for Aboriginal and Torres Strait Islander children has increased substantially in all jurisdictions except Western Australia since 1998–99 and is around 5 times higher than for other children.
- **Smoking.** Around half of Aboriginal and Torres Strait Islander adults are current daily smokers and this rate has not changed in the last decade.
- **Risky alcohol consumption.** Aboriginal and Torres Strait Islanders are less likely to consume alcohol than non-Indigenous Australians, however of those who consume alcohol, around 50% consume it at long-term risky or high risk levels.
- **Substance use.** The proportion of Indigenous adults in non-remote areas who reported using substances in the last 12 months increased from 25% in 2002 to 28% in 2004–05.
- **Overweight and obesity.** Approximately 60% of Indigenous adults were overweight or obese in 2004–05, which is an increase from 1995 and 2001. Indigenous Australians are nearly twice as likely to be obese as non-Indigenous Australians.

Health system performance

There is a range of data available on the performance of the health system in relation to Aboriginal and Torres Strait Islander peoples.

Getting better

- **Availability of staff and number of services.** There has been an increase in the number of Aboriginal and Torres Strait Islander primary health care services in recent years and greater availability of staff.
- **Usual source of care.** A high percentage of Aboriginal and Torres Strait Islander people report that they usually go to the same GP or medical service (91%).
- **Access to prescription medicines** for Aboriginal and Torres Strait Islander peoples has improved through the section 100 arrangement for remote areas. Aboriginal and Torres Strait Islander primary health care services and the average expenditure per person for the Indigenous population by the Australian Government on the Pharmaceutical Benefits Scheme almost doubled between 1995–96 and 1998–99, and increased by a further 64% between 1998–99 and 2004–05.
- **Immunisation coverage** for Indigenous children is similar to coverage rates for other children and has improved in recent years for children aged 6 years.

Areas of concern

Gaps remain in health system performance and access to services for Aboriginal and Torres Strait Islander peoples.

- **Antenatal care.** While a high proportion of Aboriginal and Torres Strait Islander women access antenatal care (around 96% of Indigenous mothers attended at least one antenatal care session in 2005 in the four jurisdictions for which data are available), data suggest that it occurs later and less frequently than for other women.

- **Access to health care.** In 2004–05, a slightly higher proportion of Aboriginal and Torres Strait Islander peoples than other Australians reported accessing health care in the last 12 months (42% compared to 47%). There were differences in the types of health care accessed, for example, Indigenous Australians were twice as likely as other Australians to visit casualty/outpatients but half as likely to see a dentist.
- **Barriers to accessing health care include:** cost, transport, availability and sustainability of services. In 2004–05, 15% of Indigenous people did not visit a doctor when they needed to, with transport/distance being a major reason, especially in remote areas. Other reasons included cost, waiting time and being too busy. Approximately 21% of Indigenous Australians did not visit a dentist when needed because of cost.
- **Key hospital procedures.** There are large disparities between the Indigenous and non-Indigenous population in access to certain key hospital procedures which cannot entirely be explained by diagnosis, age, sex or place of residence and this situation has not improved in recent years. Between July 2004 and June 2006, excluding care involving dialysis, 55% of hospital separations for Aboriginal and Torres Strait Islander peoples in public hospitals had a procedure recorded compared to 80% of hospital separations for other people.
- **Discharge from hospital against medical advice.** There have been significant increases in the rate at which Aboriginal and Torres Strait Islander peoples are discharged from hospital against medical advice in recent years. For the period 2004–05 to 2005–06, Aboriginal and Torres Strait Islander peoples were discharged from hospital against medical advice at 13 times the rate of other Australians.
- **Avoidable hospitalisations through health care.** Between 2000–01 to 2005–06, hospitalisation rates for ambulatory care sensitive conditions have increased for Indigenous Australians, particularly for potentially preventable chronic conditions and the relative gap between Indigenous and non-Indigenous Australians for these conditions has widened (from a rate ratio of 4.4 to 6.5).
- **Mental health services.** In 2005–06, there were around twice as many contacts with community mental health care services for Aboriginal and Torres Strait Islander people as for other people.
- **Health workforce.** Aboriginal and Torres Strait Islander people continue to be under-represented in the health workforce and in training for various health professions. In 2006, Aboriginal and Torres Strait Islander peoples accounted for only 1.0% of the total health workforce and in 2006, only 1.6% of all undergraduate students enrolled in tertiary health-related courses, and 5% of all people in the vocational, education and training sector, were Aboriginal or Torres Strait Islander.
- **Health expenditure.** In 2004–05, on a per person basis, average health expenditures for Aboriginal and Torres Strait Islander peoples was 17% higher than expenditures for other Australians which was less than that reported in 1998–99.

Introduction

This report presents the detailed analyses undertaken by the Australian Institute of Health and Welfare that were used to support the policy report—The *Aboriginal and Torres Strait Islander Health Performance Framework, 2008 report*. The report was the second report against the Aboriginal and Torres Strait Islander Health Performance Framework (HPF) produced by the Department of Health and Ageing which provides a baseline to monitor progress against the National Strategic Framework for Aboriginal and Torres Strait Islander Health 2003 to 2013.

The Health Performance Framework monitors progress of the health system and broader determinants of health in improving Aboriginal and Torres Strait Islander Health. The HPF comprises three tiers of performance as follows:

Tier 1—health status and health outcomes. This Tier covers measures of prevalence of health conditions (e.g. circulatory disease, diabetes), human function (e.g. disability), life expectancy and well-being and deaths. This Tier aims to provide an overall indication of current health status and recent trends in the health status of Aboriginal and Torres Strait Islander peoples on a range of health issues. These issues include child and maternal health, chronic diseases, injury, communicable diseases, social and emotional wellbeing and overall health status.

Tier 2—determinants of health. This Tier consists of measures of the determinants of health which focus on factors outside the health system that impact on the health of Aboriginal and Torres Strait Islander peoples. The domains covered in this Tier include socioeconomic status (e.g. income and education), environmental factors (e.g. overcrowding), community capacity (e.g. child protection), health behaviours (e.g. risky alcohol consumption and dietary behaviours) and person-related factors (e.g. prevalence of overweight and obesity). Such factors have been shown to have a strong association with both disease and ill-health.

Tier 3—health systems performance. This Tier includes measures of the performance of the health system including population health, primary health care and secondary/tertiary care services. Six domains are covered: effectiveness of health services, responsiveness of health services to Aboriginal and Torres Strait Islander communities and individuals, accessibility of services, capability and sustainability. This Tier includes measures that deal with a range of programs and service types including child and maternal health, early detection and chronic disease management, continuous care, assess to secondary/tertiary care, the health workforce and expenditure.

The Tiers and domains of the HPF and selected measures are shown in Figure 1. There are currently 70 measures which have been developed and for which data is available.

Health Status and Outcomes (Tier 1)		
Health Conditions 1.01 Low birthweight infants 1.02 Top reasons for hospitalisation 1.03 Hospitalisation for injury and poisoning 1.04 Hospitalisation for pneumonia 1.05 Circulatory disease 1.06 Acute rheumatic fever & rheumatic heart disease 1.07 High blood pressure 1.08 Diabetes 1.09 End stage renal disease 1.10 Decayed, missing, filled teeth 1.11 HIV/AIDS, hepatitis C and sexually transmissible infections 1.12 Children's hearing loss	**Human Function** 1.13 Disability 1.14 Community functioning	**Deaths** 1.19 Infant mortality rate 1.20 Perinatal mortality 1.21 Sudden infant death syndrome 1.22 All causes age standardised deaths rates 1.23 Leading causes of mortality 1.24 Maternal mortality 1.25 Avoidable and preventable deaths
	Life Expectancy & Wellbeing 1.15 Life expectancy at birth 1.16 Perceived health status 1.17 Median age at death 1.18 Social and emotional wellbeing	
Determinants of Health (Tier 2)		
Environmental Factors 2.01 Access to functional housing with Utilities 2.02 Overcrowding in housing 2.03 Environmental tobacco smoke	**Community Capacity** *Demography* 2.11 Dependency ratio 2.12 Single-parent families by age group *Safety and Crime* 2.13 Community safety 2.14 Contact with the criminal justice system 2.15 Child protection *Other* 2.16 Transport 2.17 Indigenous people with access to their traditional lands	**Health Behaviours** *Tobacco, alcohol and other drug use* 2.18 Tobacco use 2.19 Tobacco smoking during pregnancy 2.20 Risky and high risk alcohol consumption 2.21 Drug and other substance use including inhalants *Physical activity* 2.22 Level of physical activity *Nutrition* 2.23 Dietary behaviours 2.24 Breastfeeding practices *Other health behaviours* 2.25 Unsafe sexual practices
Socioeconomic Factors 2.04 Educational participation and attainment of Aboriginal and Torres Strait Islander adults 2.05 Years 10 and 12 retention and attainment 2.06 Year 3, 5 and 7 literacy and numeracy 2.07 Employment status including CDEP participation 2.08 Income 2.09 Housing tenure type 2.10 Index of disparity		**Person-related Factors** 2.24 Prevalence of overweight and obesity
Health System Performance (Tier 3)		
Effective/Appropriate/Efficient 3.01 Antenatal care 3.02 Immunisation (child and adult) 3.03 Early detection and early treatment (including cancer screening) 3.04 Chronic disease management 3.05 Differential access to key hospital procedures 3.06 Ambulatory care sensitive hospital admissions 3.07 Health promotion	**Accessible** 3.12 Access to services by types of service compared to need 3.13 Access to prescription medicines 3.14 Access to after hours primary health care	**Capable** 3.17 Accreditation 3.18 Aboriginal and Torres Strait Islander people in Tertiary Education for health related disciplines
Responsive 3.08 Discharge against medical advice 3.09 Access to mental health services 3.10 Aboriginal and Torres Strait Islander Australians in the health workforce 3.11 Competent governance	**Continuous** 3.15 Regular GP or health service 3.16 Care planning for client with chronic diseases	**Sustainable** 3.19 Expenditure on Aboriginal and Torres Strait Islander health compared to need 3.20 Recruitment and retention of clinical and management staff (including GPs)

Figure 1: Aboriginal and Torres Strait Islander Health Performance Framework Measures

Notes: The **Safe** domain is measured within the National Health Performance Committee framework.

Demographic information

The Aboriginal and Torres Strait Islander population of Australia was estimated to be 517,174 in 2006. Aboriginal and Torres Strait Islander peoples represent 2.5% of the total Australian population. They have an age structure that is significantly younger than that of other Australians. For example, Aboriginal and Torres Strait Islander peoples aged less than 15 years constitute 38% of the total Indigenous population, whereas this age group represents about 20% of the total Australian population. Conversely, those aged 65 years and over comprise only 3% of the Indigenous population, compared with 13% of the total Australian population.

About two-thirds of Aboriginal and Torres Strait Islander peoples live in major cities, inner and outer regional areas. However, just over a quarter reside in remote and very remote areas. The majority of Aboriginal and Torres Strait Islander peoples live in New South Wales (29% of the Indigenous population) and Queensland (28%), Western Australia (15%) and the Northern Territory (13%). Indigenous people comprise about 32% of the Northern Territory population but less than 4% in all other state/territory populations.

Structure of this report

Chapter 1 presents analyses for Tier 1—health status and health outcomes; Chapter 2 presents analyses for Tier 2—determinants of health status, and Chapter 3 presents analyses for Tier 3—health system performance. The layout for each measure is constant and includes a definition according to the technical specifications, a section on the data sources used, analyses undertaken, additional information and data quality issues. For each measure, analyses are presented by age, sex, state/territory and remoteness. Time trends are presented where possible for years that have adequate identification of Indigenous people in their recording systems. For some measures, data are also presented by selected health and population characteristics to examine the relationships between health and socioeconomic factors. International comparisons with New Zealand, the United States and Canada are presented for some measures.

Data sources and methodology

Data in this report come from a number of different administrative data sets and surveys. A table of all data sources used for each measure of the Framework is presented at Appendix 1.

Administrative data sets used in the report include administrative data related to health such as the Australian Institute of Health and Welfare (AIHW) National Hospital Morbidity Database, the AIHW National Mortality Database, the AIHW National Perinatal Data Collection, Australia and New Zealand Dialysis and Transplant Registry and the National Notifiable Diseases Surveillance System; administrative data related to education such as the ABS National Schools Statistics Collection, DEST Higher Educations Statistics Collection and the National Centre for Vocational Education Research database; administrative data related to crime and justice such as the Juvenile Justice National Minimum Dataset and the AIC National Homicide Monitoring Program; administrative data related to community services such as the AIHW Community Mental Health Care Database and the AIHW National Child Protection Data collections; and administrative data related to other government services and programs such as the Service Activity Reporting Database, Australian Childhood Immunisation Register and Medicare database.

Surveys that were used to obtain data include Indigenous specific surveys such as the National Aboriginal and Torres Strait Islander Health Survey, the National Aboriginal and Torres Strait Islander Social Survey, the Community Housing Infrastructure Needs Survey and the Western Australian Aboriginal Child Health Survey; and mainstream surveys such as the Census of Population and Housing, the Bettering the Evaluation and Care of Health (BEACH) survey, the ABS National Prison Census and the AIHW National Drug Strategy Household Survey.

Age-standardised rates and ratios have been used in many of the indicators as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions. All age-standardised rates and rate ratios have been calculated using the direct standardisation method and the 2001 Australian population as the standard population.

Time series analyses presented throughout this report have used linear regression analysis to determine whether there have been significant increases or decreases in the observed rates over the period. Many of the tables also include a * to indicate that rates for the Indigenous and non-Indigenous populations are statistically different from each other at the $p<.05$ level.

Data limitations

There are a number of limitations of available data presented in this report that should be noted when interpreting data analyses and making comparisons across jurisdictions and over time. The main issue in most administrative data collections is the under-identification of Aboriginal and Torres Strait Islander peoples. Under-identification is a major problem in mortality, hospital morbidity and communicable disease data, particularly in some states and territories. Data analysis has therefore been limited to jurisdictions with adequate identification of Indigenous people for these data collections. For recent hospital separations these jurisdictions are New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. For longer term hospital separations data and recent mortality data, these jurisdictions are Queensland Western Australia, South Australia and the Northern Territory. Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have over 10 years of adequate identification of Indigenous deaths in their recording systems. Data on communicable diseases from the National Notifiable Disease Surveillance System includes data from Western Australia, South Australia and the Northern Territory which have been assessed as having adequate identification.

The incompleteness of Indigenous identification means the number of hospital separations, deaths and disease notifications recorded as Indigenous are an underestimate of the true level of morbidity and mortality of Aboriginal and Torres Strait Islander people. As a result, the observed differences between the Indigenous and non-Indigenous populations are underestimates of the true differences.

Surveys are also subject to a number of data limitations. Under-identification can be an issue for some surveys. For example, the Bettering the Evaluation and Care of Health (BEACH) survey has a high number of 'not stated' responses to the Indigenous identification question which suggests the survey consistently undercounts the number of Indigenous people visiting doctors. A problem for some national surveys such as the BEACH and National Drug Strategy Household Survey is that they have small samples of Indigenous people. Survey data are also subject to sampling and non-sampling errors. In most tables in this report, estimates with large relative standard errors, which is a measure of the sampling variability, have been footnoted to indicate that they should be used with caution or are considered too unreliable for general use.

There are also data limitations surrounding international comparisons for some of the measures. These include the lack of an accurate denominator for the Indigenous population (mainly due to undercounting) and the lack of agreement over which is the best population denominator to use when they exist (for example, whether to use single ethnic response groups or multiple ethnic response groups). There are differences in how Indigenous status is defined in the different countries. There have also been frequent modifications to the ethnicity question recorded in the censuses in some of these countries.

Health status and outcomes (Tier 1)

1.01 Low birthweight infants

The incidence of low birthweight among live-born babies of Aboriginal and Torres Strait Islander mothers

Data sources

National Perinatal Data Collection

Data for this measure come from the Australian Institute of Health and Welfare (AIHW) National Perinatal Statistics Unit National Perinatal Data Collection.

Data on birthweight are collected as part of the Perinatal National Minimum Data Set. Each state and territory has a perinatal collection based on birth notification forms completed by midwives and other staff, using information obtained from mothers and from hospital and other records. These data are provided in electronic format annually to the AIHW National Perinatal Statistics Unit. Perinatal notification forms are completed in Australia for all births of 20 weeks or more gestation, or a birthweight of 400 grams or more.

All jurisdictions collect the Indigenous status of the mother of the baby. However, this data element does not provide the Indigenous status of the baby. Therefore, Indigenous births will be underestimated as babies born to Indigenous fathers and non-Indigenous mothers are not included in the data collection. Over the period 2003–2005 there were approximately 10,100 ABS registered births to Indigenous fathers only, which represented 28% of registered Indigenous births (ABS 2006, 2005, 2004).

Data are presented for all states and territories with the exception of Tasmania for which the 'not stated' category for Indigenous status was unable to be distinguished from the category for non-Indigenous until 2005.

Data on mothers for whom Indigenous status was 'not stated' have been excluded from analysis. In 2005, there were 128 births with a 'not stated' Indigenous status (0.05%).

The World Health Organization (WHO) defines low birthweight as less than 2,500 grams.

Analyses

Births

Between 2003 and 2005 there were 769,587 births recorded in the Perinatal National Minimum Data Set (excluding Tasmania) of which 27,722 (3.6%) were to Aboriginal and Torres Strait Islander mothers.

Low birthweight

Table 1.01.1 presents the number and proportion of live-born low birthweight babies by Indigenous status of the mother and state/territory for the period 2003–2005.

- Over the period 1998–2000, there were 3,087 live-born babies weighing less than 2,500 grams birthweight born to Indigenous mothers in Australia (not including Tasmania). Babies of Indigenous mothers were twice as likely to be of low birthweight as babies born to non-Indigenous mothers (12% compared with 6%).

- Over the period 2003–2005, there were 3,601 live-born babies of low birthweight born to Indigenous mothers in Australia (not including Tasmania). Approximately 13% of babies born to Indigenous mothers were of low birthweight, compared with 6% of babies born to non-Indigenous mothers.
- When multiple births are excluded, approximately 12% of babies born to Indigenous mothers are of low birthweight compared with 5% of babies born to non-Indigenous mothers.
- Queensland and New South Wales had the lowest proportion of live-born low birthweight babies born to Indigenous mothers in 2003–2005 (12%). The Australian Capital Territory and South Australia had the highest proportion of low birthweight babies (18%); however, ACT data should be interpreted with caution because of the small number of Indigenous babies born in the Australian Capital Territory each year and the likelihood that some women from surrounding areas of New South Wales (especially those with pregnancy complications) are referred to hospitals in the Australian Capital Territory.

Table 1.01.1: Low birthweight babies, by Indigenous status of mother and state/territory, 1998–2000 2001–2003 and 2003–2005[a][b][c][d][e]

	1998–2000		2001–2003		2003–2005	
	No.	**Per cent**	**No.**	**Per cent**	**No.**	**Per cent**
NSW						
Indigenous	681	11.0	784	12.2	835	12.0
Non-Indigenous	14,429	5.7	14,451	5.8	14,516	5.7
Vic						
Indigenous	171	13.4	152	12.7	190	14.3
Non-Indigenous	11,542	6.2	11,814	6.3	12,066	6.3
Qld						
Indigenous	907	10.8	956	11.5	1,014	11.7
Non-Indigenous	8,319	6.1	8,671	6.2	9,225	6.3
WA						
Indigenous	606	13.3	675	14.5	683	14.7
Non-Indigenous	4,160	5.8	4,042	5.8	4,306	6.0
SA						
Indigenous	203	15.7	229	17.6	251	17.5
Non-Indigenous	3,349	6.3	3,193	6.2	3,315	6.4
ACT[f]						
Indigenous	29	16.7	39	19.1	45	17.7
Non-Indigenous	950	6.8	901	6.5	1,020	7.1
NT						
Indigenous	490	12.7	568	13.3	583	14.3
Non-Indigenous	490	7.2	402	6.0	434	6.6
Total[g]						
Indigenous	**3,087**	**12.0**	**3,403**	**12.9**	**3,601**	**13.1**
Non-Indigenous	**43,239**	**6.0**	**43,474**	**6.1**	**44,882**	**6.1**

(a) Table includes live births of 20 weeks gestation or more or of 400 grams or more birthweight. Low birthweight is defined as less than 2,500 grams.

(b) Data are presented in 3-year groupings because of small numbers each year. These groupings represent three calendar years.

(c) Data relate to the Indigenous status of the mother only and therefore underestimate Indigenous births.

(d) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.

(e) State-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are to mothers usually resident in New South Wales.

(f) ACT percentages are influenced by both small numbers and high proportions of non-ACT residents who gave birth in the Australian Capital Territory and must be interpreted with caution. In 2003–2005, the ACT resident proportion was 14.0% for low birthweight Indigenous babies and 5.6% for non-Indigenous babies.

(g) Excludes Tasmania, as the 'not stated' category for Indigenous status was unable to be distinguished from the 'non-Indigenous' category for 2003 and 2004.

Source: AIHW analysis of National Perinatal Statistics Unit (NPSU) National Perinatal Data Collection.

Time series analysis

Longer term perinatal trend data are limited to six states and territories—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six states and territories have been assessed by the AIHW as having adequate identification of Indigenous mothers in their perinatal data collections from 1991 onwards (AIHW: Leeds et al. 2007).

Owing to the late inclusion of a 'not stated' category of Indigenous status in 2000 in the National Perinatal Data Collection (before which 'not stated' responses were included in the number of births to non-Indigenous mothers), the rate of low birthweight babies born to Indigenous mothers has been compared with rates of 'other' Australians (which includes births to both non-Indigenous mothers and births to mothers for which Indigenous status was not stated).

Fluctuations in the number/proportion of low birthweight babies of Indigenous mothers over time partly reflect changing levels of coverage of babies of Indigenous mothers in the perinatal data. Caution should be exercised in assessing trends in low birthweight babies of Indigenous mothers over time and comparisons with the non-Indigenous population.

The rate (proportion) of low birthweight babies per 100 live births, rate ratios and rate differences between Indigenous and non-Indigenous low birthweight babies over the period 1991–2005 are presented in Table 1.01.2 and Figure 1.01.1. Data are presented for all live births and for live singleton births only. Analyses of live singleton births are presented because low birthweight is associated with multiple births and there has been an increasing trend in multiple births over time. Inclusion of multiple births may therefore confound the results of trends analyses on low birthweight.

- Over the period 1991–2005, there was a significant increase in the proportion of low birthweight babies born to Indigenous mothers. The fitted trend implies an average yearly increase in low birthweight babies born to Indigenous mothers of around 0.1 per 100 live births, which is equivalent to an increase of 16% over the period (Figure 1.01.1). A similar increase was evident for singleton babies born to Indigenous mothers.
- Over the same period there was a significant increase in the proportion of low birthweight babies born to other mothers. There was an average yearly increase in low-birthweight babies of around 0.04 per 100 live births which is equivalent to a 9% increase over the period. Again, a similar increase was evident for singleton babies born to other mothers.
- Between 1991 and 2005 there was a significant increase in both the rate ratio and rate difference between low birthweight babies born to Indigenous and non-Indigenous mothers. The fitted trend implies an average yearly increase in the rate ratio of around 0.01 (increase of 7% over the period) and an average yearly increase in the rate difference of around 0.1 per 100 live births (increase of 23% over the period) (Figure 1.01.1). There were also significant increases in the rate ratio and rate differences for low birthweight singleton live-born babies.

Table 1.01.2: Rate (proportion), rate ratio and rate difference between low birthweight babies of Indigenous and other mothers, 1991–2005

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Annual change[(a)]	Per cent change[(b)]
Low birthweight live-born babies																	
Indigenous rate	11.9	11.8	10.8	11.9	10.9	11.6	12.1	11.0	12.2	12.7	12.8	12.9	12.9	13.1	13.3	0.1*	16.4
Other rate[(c)]	5.7	5.7	5.7	5.7	5.8	5.8	5.9	5.9	6.0	6.1	6.0	6.1	6.0	6.1	6.1	0.04*	8.9
Rate ratio	2.1	2.1	1.9	2.1	1.9	2.0	2.1	1.9	2.0	2.1	2.1	2.1	2.1	2.2	2.2	0.01*	7.3
Rate difference	6.2	6.1	5.1	6.3	5.2	5.9	6.3	5.1	6.2	6.6	6.8	6.8	6.9	7.0	7.2	0.1*	23.3
Low birthweight singleton live-born babies																	
Indigenous rate	11.1	10.8	9.7	11.0	10.2	10.7	11.3	10.0	10.9	11.7	11.5	11.8	11.9	12.1	12.1	0.1*	15.5
Other rate[(c)]	4.5	4.4	4.5	4.4	4.5	4.5	4.5	4.6	4.6	4.5	4.5	4.6	4.5	4.6	4.5	0.01*	2.6
Rate ratio	2.5	2.4	2.2	2.5	2.3	2.4	2.5	2.2	2.4	2.6	2.6	2.6	2.6	2.6	2.7	0.02*	12.8
Rate difference	6.6	6.3	5.3	6.7	5.7	6.2	6.8	5.4	6.3	7.2	7.0	7.3	7.4	7.5	7.5	0.1*	24.2

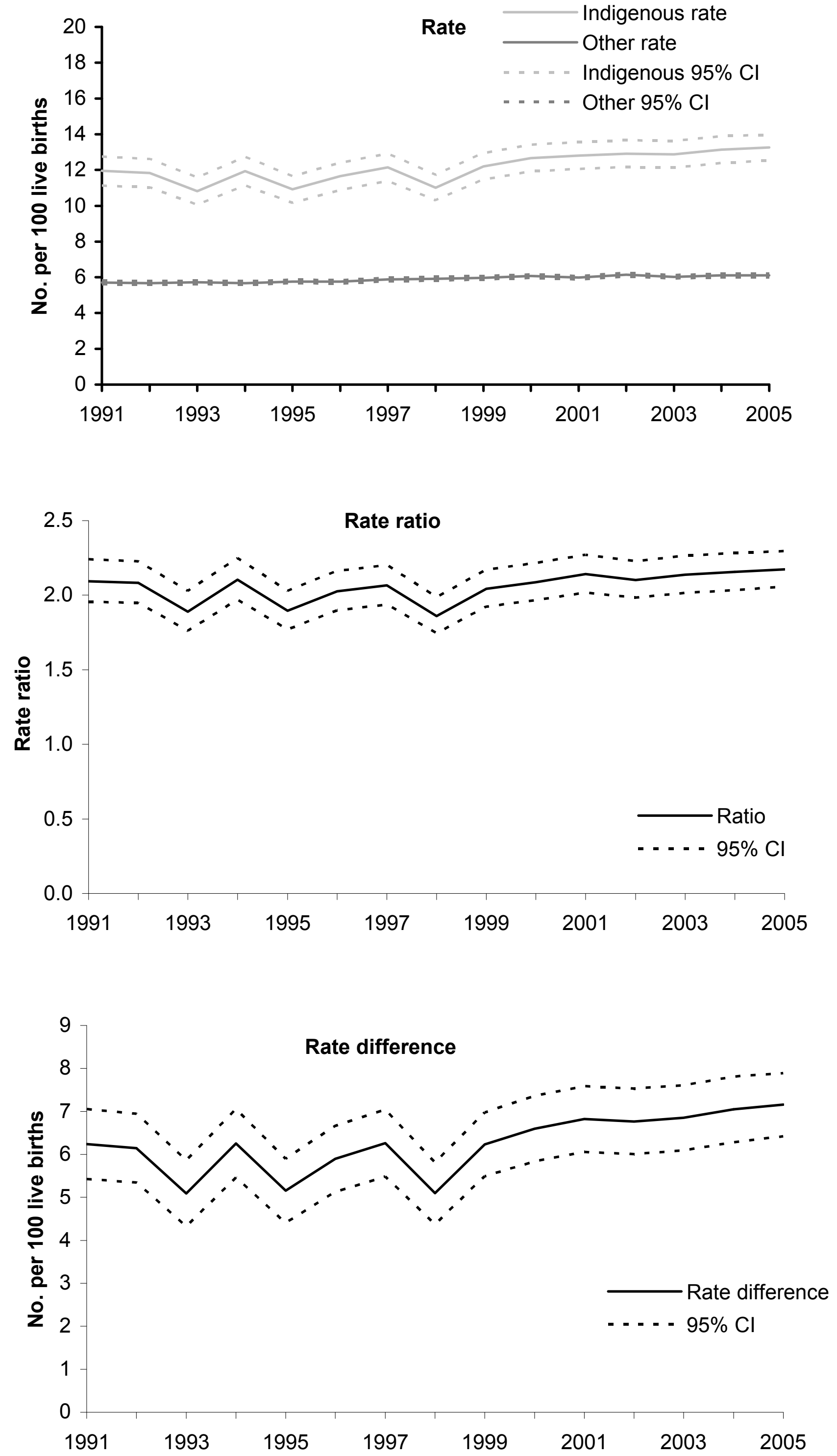
(a) Average annual change in number and proportion of low birthweight babies determined using linear regression analysis.

(b) Per cent change between 1991 and 2005 based on the average annual change over the period.

(c) Includes non-Indigenous mothers and mothers for whom Indigenous status was not stated.

Note: Excludes Tasmania and the Australian Capital Territory.

Source: AIHW analysis of NPSU National Perinatal Data Collection.



Note: Excludes Tasmania and the Australian Capital Territory.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Figure 1.01.1: Rates, rate ratios and rate differences between low birthweight babies (all live births) of Indigenous and other mothers, 1991–2005

Low birthweight babies by birth characteristics

Table 1.01.3 presents the number and proportion of low birthweight babies born to Indigenous and non-Indigenous mothers in 2003–2005 by selected birth characteristics.

- Approximately 68% of pre-term babies born to Indigenous mothers were of low birthweight compared with only 5% of full-term babies born to Indigenous mothers.
- Approximately 63% of multiple births of Indigenous mothers resulted in babies born with low birthweight compared with 13% of singleton births.
- Almost half (47%) of live-born babies born to Indigenous mothers with an Apgar score of less than 7 were of low birthweight.
- Although the proportion of pre-term and multiple births resulting in low birthweight babies was similar for babies born to Indigenous and non-Indigenous mothers, low birthweight among full-term births and singleton births was almost 3 times as high among babies born to Indigenous mothers as among babies born to non-Indigenous mothers.
- The perinatal death rate among low birthweight babies born to Indigenous mothers was 625 per 1,000 births. This compared with 588 per 1,000 births among low birthweight babies born to non-Indigenous mothers.

Table 1.01.3: Live-born low birthweight babies by birth characteristics and Indigenous status, 2003–2005

	Indigenous		Non-Indigenous		
	Number	**%**	**Number**	**%**	**Ratio**
Pre-term	2,671	68.1	35,098	60.6	1.1
Full-term	1,181	5.0	13,788	2.0	2.5
Multiple birth	390	63.2	12,936	51.5	1.2
Singleton birth	3,463	12.8	35,968	5.0	2.5
APGAR score[(a)]					
0–6	282	46.6	2,972	31.6	1.5
7–10	3,269	12.3	41,753	5.8	2.1
Perinatal deaths per 1,000 births[(b)]	306	624.5	4,389	587.9	1.1
Total	**3,853**	**13.1**	**48,904**	**6.1**	. .

(a) Live births only.

(b) Excludes the Northern Territory for 2003.

Notes

1. Excludes Tasmania, as the ‘not stated’ category for Indigenous status was unable to be distinguished from the ‘non-Indigenous’ category for 2003 and 2004.
2. Excludes mothers for whom Indigenous status was not stated.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Low birthweight babies by maternal characteristics

Table 1.01.4 presents the number and proportion of live-born low birthweight babies born to Indigenous and non-Indigenous mothers in 2003–2005 by selected characteristics of the mother.

- In 2003–2005, the highest rate of low birthweight babies born to Indigenous mothers was among mothers aged 35 years and over (16%) followed by mothers aged less than 20 years (14%). Indigenous mothers in all age groups were around twice as likely to have low birthweight babies as non-Indigenous mothers.
- Indigenous mothers in the most disadvantaged quintile and 4th quintile of socioeconomic status (SES) were most likely to have low birthweight babies (14%). Rates of low birthweight babies among Indigenous mothers were around twice those among non-Indigenous mothers across all quintiles of socioeconomic status.
- Low birthweight babies were most common among Indigenous mothers who had a parity of three or more or who were having their first baby (around 14%).
- The proportion of low birthweight babies born to Indigenous mothers was highest among mothers living in Remote and Very Remote areas (15% and 14% respectively). In remote areas, babies born to Indigenous mothers were almost three times as likely as babies born to non-Indigenous mothers to be of low birthweight.

Table 1.01.4: Live-born low birthweight babies by maternal characteristics and Indigenous status, 2003–2005

	Indigenous		Non-Indigenous		
	Number	%	number	%	Ratio
Age of mother					
Less than 20	817	13.5	2,134	7.8	1.7
20–24	1,095	12.8	6,685	6.6	2.0
25–29	805	12.6	11,481	5.7	2.2
30–34	551	12.9	14,419	5.6	2.3
35+	333	15.5	10,160	6.8	2.3
Quintile of socioeconomic status					
1st quintile (most disadvantaged)	1,456	13.9	9,487	6.7	2.1
2nd quintile	932	12.7	9,128	6.3	2.0
3rd quintile	620	11.8	9,189	6.3	1.9
4th quintile	401	13.8	8,711	5.9	2.4
5th quintile (least disadvantaged)	119	12.6	8,184	5.4	2.3
Parity					
None	1,141	13.6	22,803	7.3	1.9
One	778	11.8	12,013	4.8	2.5
Two	588	12.3	5,553	5.0	2.5
Three	457	14.4	2,542	6.6	2.2
Four or more	627	13.9	1,952	8.3	1.7
Remoteness					
Major Cities	857	12.8	31,431	6.1	2.1
Inner Regional	573	12.1	8,463	6.2	1.9
Outer Regional	988	13.0	4,075	6.1	2.1
Remote	452	14.7	659	5.7	2.6
Very Remote	723	13.6	233	5.7	2.4
Total	**3,601**	**13.1**	**44,882**	**6.1**	. .

Notes

1. Excludes Tasmania, as the ‘not stated’ category for Indigenous status was unable to be distinguished from the ‘non-Indigenous’ category for 2003 and 2004.
2. Excludes mothers for whom Indigenous status was not stated.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Mean birthweight

- In 2005, the average birthweight of live-born babies of Indigenous mothers was 3,155 grams. This was 221 grams lighter than the average of 3,376 grams for live-born babies of non-Indigenous mothers in 2005.
- Note that male babies were proportionally less likely to be of low birthweight than were female babies (the average birthweight of male babies was 119 grams higher than that of female babies in 2005).

Time series analysis

- Over the period 1997–2005, although there was a significant decline in the mean birthweight of babies born to Indigenous mothers (the fitted trend implies an average yearly decline of around 2.9 grams), this decline is not necessarily clinically significant. The change could be accounted for by measurement error, such as instrument calibration or error in the observer making the measurement, which is more likely to occur in births in remote areas or home births for which Indigenous births are over-represented (Table 1.01.3).
- There was no significant change in the mean birthweight of babies of other mothers over the same period.
- There was a significant increase in the difference between the mean birthweight of babies born to Indigenous and other mothers over the period 1997–2005.

Table 1.01.3: Mean birthweight, ratio and difference between mean birthweight of live-born babies of Indigenous and other mothers, 1997–2005

	1997	1998	1999	2000	2001	2002	2003	2004	2005	Annual change[(a)]	% change
Mean birthweight (grams)											
Indigenous	3,170	3,186	3,170	3,175	3,166	3,165	3,160	3,158	3,155	–2.9*	–0.7
Other[(b)]	3,375	3,382	3,380	3,384	3,382	3,378	3,380	3,382	3,376	0.0	0.0
Ratio	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0	–0.7
Difference (grams)	–205	–196	–211	–209	–216	–214	–220	–223	–221	2.9*	11.1

* Represents results with statistically significant increases or decreases at the $p < 0.05$ level over the period 1997–2005.

(a) Average annual change in number and proportion of low birthweight babies determined using linear regression analysis.

(b) Includes non-Indigenous mothers and mothers for whom Indigenous status was not stated.

Note: Excludes Tasmania and the Australian Capital Territory.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

High birthweight

High birthweight is defined here as babies born weighing 4,000 grams or more.

- In 2003–2005 the proportion of high birthweight babies born to Indigenous mothers in Australia (excluding Tasmania) was 8%. This compared with 12% of babies born of high birthweight to non-Indigenous mothers (AIHW: NPSU unpublished data).

International comparisons

International indigenous data are available for Indigenous persons from New Zealand, the United States and Canada using the WHO definition of low birthweight.

International statistics on low birthweight show that Indigenous mothers in Canada and the United States have lower rates of low birthweight babies than the general population, and Indigenous mothers in New Zealand have slightly higher rates of low birthweight babies than the general population, but the gap is not as great as for Aboriginal and Torres Strait Islander Australians. In Australia, babies of Aboriginal or Torres Strait Islander mothers are more than twice as likely to be of low birthweight as babies born to other Australian mothers (13% compared with 6%— Laws et al. 2007).

The latest available data from the United States, Canada and New Zealand are outlined below. Note that the Canadian data exclude births less than 500 grams because of changes over time in the quality of reporting babies' birthweight less than 500 grams. This definition is slightly different from Australia's criteria—excluding babies less than 400 grams or less than 20 weeks gestation.

- For the period 2004–2006, 7.4% of babies born to American Indian or Alaskan native mothers on reserves were of low birthweight compared with 8.2% of babies born to non-Indigenous mothers in the United States (National Center for Health Statistics, unpublished data).
- For the period 2001–2002, 5.5% of Canadian First Nation babies were of low birthweight which was the same as the 2001 total Canadian rate of 5.5% (Health Canada unpublished data; Health Canada 2005).
- For the period 2004–2006, 6.8% of babies born to Maori mothers were of low birthweight compared with 5.6% of babies born to non-Indigenous mothers in New Zealand (Statistics New Zealand unpublished data).

Additional information

Risk factors for low birthweight

There are a range of factors that can affect a baby's birthweight. Low birthweight babies may also be the result of pre-term birth, fetal growth restriction, or a combination of the two, or other factors such as socioeconomic status, the size and age of the mother, the number of babies previously born to the mother, the mother's nutritional status, smoking and other risk factors such as the use of alcohol, illness during pregnancy, multiple births and the duration of pregnancy (Horta et al. 1997; Kramer 1998). Data on some of these risk factors for low birthweight are presented below for Indigenous and non-Indigenous mothers.

- Aboriginal and Torres Strait Islander mothers smoke during pregnancy at around three times the rate of non-Indigenous mothers (see 2.19 for more information on smoking during pregnancy).
- Indigenous females are more likely to have babies at younger ages than non-Indigenous mothers. Between 2001 and 2004, around 20% of Aboriginal and Torres Strait Islander mothers were aged less than 20 years compared with 4% of non-Indigenous mothers (AIHW: Leeds et al. 2007). Teenage pregnancies are associated with a number of adverse reproductive outcomes including low birthweight (Fraser et al. 1995).
- Indigenous mothers have twice the rate of pre-term birth (gestational age of less than 37 weeks) as non-Indigenous mothers (14% compared with 8% in 2003–2005).
- Indigenous mothers are more likely to have had a higher number of previous pregnancies. Between 2001 and 2004, 28% of Aboriginal and Torres Strait Islander

mothers had given birth three or more times previously. This compared with 8% of non-Indigenous mothers (AIHW: Leeds et al. 2007).

Data quality issues

Perinatal data

Births

Birth notification forms are completed for all births of 20 weeks or more gestation, or a birthweight of 400 grams or more. The Perinatal National Minimum Data Set includes all births in Australia in hospitals, birth centres and the community.

The state/territory of birth is provided for all births. State-level data is based on place where birth occurred, not place of usual residence. Complicated pregnancies from surrounding New South Wales may be referred to the Australian Capital Territory and hence there may be poorer outcomes attributed to Australian Capital Territory births. Because of this and the small numbers involved, care should be taken in interpreting data from the Australian Capital Territory (Laws et al. 2007).

Indigenous status question

A standard data item for Indigenous status is specified in the Perinatal National Minimum Data Set. However, not all states and territories use this standard wording for the Indigenous status question on their forms. This affects the quality and comparability of the data collected (ABS & AIHW 2003).

Under-identification

All jurisdictions collect Indigenous status of the mother for each baby. However, this does not necessarily indicate the Indigenous status of the baby.

Studies linking perinatal data with birth registration data and hospital admissions in Canada show that Indigenous data are under-reported (Human Resources Development Canada &Health Canada 2003). In 2007 the AIHW completed an assessment of the quality of Indigenous status information in perinatal data in each state and territory. This involved a survey which was sent to the midwifery managers across Australia to determine how many hospitals in each jurisdiction obtain Indigenous status information of mothers giving birth from admission records and how many collect this information independently. The assessment also involved analysis of the variability in the number and proportion of mothers recorded as Indigenous in the perinatal data collection over time and across jurisdictions for the period 1991–2004. The outcomes of this assessment showed that Indigenous status data from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory are suitable for trends analysis. Perinatal data from Tasmania, although improving, were deemed to be of insufficient quality. Although the most recent data in the Australian Capital Territory were of publishable quality, the data were not yet of sufficient stability to support trends analysis (AIHW: Leeds et al. 2007).

All jurisdictions are working towards improving the quality of the Indigenous status data. Data on Indigenous status are not reported for Tasmania before 2005 because the 'not stated' category for Indigenous status was included with the non-Indigenous category. The 'not stated' category for birthweight was found to be small nationally in the evaluation of the Perinatal National Minimum Data Set (Laws & Sullivan 2004). Therefore, the exclusion of 'not stated for birthweight will not have a significant impact on these data.

(continued)

Data quality issues (continued)

International comparisons

International indigenous data are available for New Zealand, the United States and Canada using the WHO definition of low birthweight. These data are subject to similar data quality issues experienced in Australia around the accuracy of identification. The Canadian data exclude births less than 500 grams because of changes over time in the quality of reporting babies' birthweight less than 500 grams. This definition is slightly different from Australia's criteria – excluding babies less than 400 grams or less than 20 weeks gestation.

The scope of data collections in Canada and the United States is often limited to the registered or reserve Indigenous populations and therefore does not cover the whole Indigenous population. International comparisons need to take into account that the definition of Indigenous status is specific to each country.

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1.02 Top reasons for hospitalisation

Hospital admissions for the leading ICD-10-AM (International Classification of Diseases) categories for Aboriginal and Torres Strait Islander people expressed as a rate by age group, age-standardised rate and rate ratio

Data sources

Data for this measure come from the AIHW National Hospital Morbidity Database.

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Analyses

Age-standardised rates and ratios have been used as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

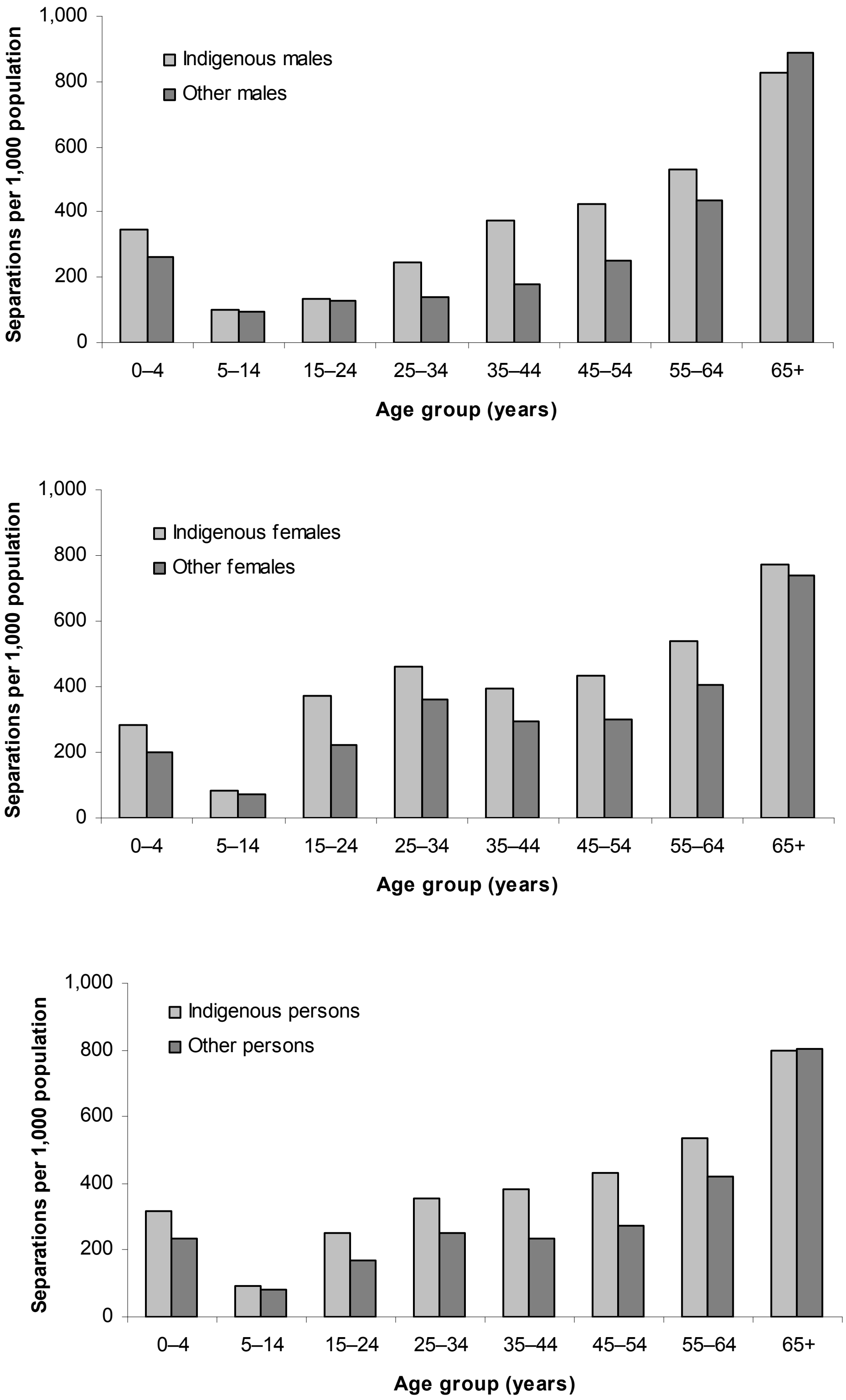
Hospitalisations

- In the 2-year period July 2004 to June 2006 there were a total of 13,783,538 hospitalisations in New South Wales, Victoria, Queensland, Western Australia, South

Australia and the Northern Territory. Of these, 467,822 or 3% were hospitalisations of Indigenous Australians.
- Excluding hospitalisations for dialysis, there were 12,126,332 hospitalisations in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, 277,186 (2.3%) of which were hospitalisations of Indigenous Australians (Table 1.02.1).
- For all hospitalisations, the average number of diagnoses on separation for Indigenous Australians was 3.0 and for other Australians was 2.9. Excluding hospitalisations for care involving dialysis, the average number of diagnoses on separation for Indigenous Australians was 3.6 and for other Australians was 3.0.

Hospitalisations by age and sex

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, when hospitalisations for dialysis are excluded, Indigenous males had higher hospitalisation rates than other males across all age groups with the exception of those aged 65 years and over. Indigenous females had higher hospitalisation rates than other females across all age groups (Figure 1.02.1).
- The greatest difference in hospitalisation rates occurred in the 25–34, 35–44, and 45-54 year age groups for males and in the 15–24 and 45–54 year age groups for females. Indigenous males and females were hospitalised at between 1.5 and 2 times the rate of other males and females in these age groups.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.02.1: Age-specific hospitalisation rates (excluding dialysis), by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Hospitalisations by state/territory

Table 1.02.1 presents hospitalisations excluding dialysis for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are included in the table. The Australia data are adjusted by applying a completeness factor of 89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, excluding hospitalisations for dialysis, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised at 1.3 times the rate of other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised at 1.4 times the rate of other Australians.
- Indigenous Australians were hospitalised (excluding dialysis) at 0.8 times the rate of other Australians in Victoria, at 1.2 times the rate of other Australians in New South Wales and at 1.3 times the rate of other Australians in Queensland. In Western Australia, South Australia and the Northern Territory, Indigenous Australians were hospitalised at up to twice the rate of other Australians (Table 1.02.1).
- For all hospitalisations, including those with a principal diagnosis of care involving dialysis, Indigenous Australians were hospitalised at about the same rate as other Australians in Victoria, at two to three times the rate of other Australians in New South Wales, Queensland, Western Australia and South Australia, and at almost six times the rate of other Australians in the Northern Territory.

Table 1.02.1: Hospitalisations (excluding dialysis), by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

	Indigenous				Other(e)				
	Number	No. per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Number	No. per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Ratio(i)
NSW									
Males	31,536	316.3	311.1	321.6	1,746,399	266.2	265.8	266.6	1.2*
Females	40,063	359.1	354.5	363.7	2,056,593	291.8	291.4	292.2	1.2*
Persons	71,604	337.4	334.0	340.8	3,803,072	277.7	277.4	278.0	1.2*
Vic									
Males	5,266	255.8	245.6	266.0	1,504,389	306.0	305.5	306.5	0.8*
Females	7,273	293.9	285.5	302.4	1,896,343	355.2	354.7	355.7	0.8*
Persons	12,539	272.0	265.6	278.3	3,400,751	329.2	328.8	329.5	0.8*
Qld									
Males	32,164	386.0	379.9	392.0	1,112,409	294.2	293.7	294.8	1.3*
Females	44,523	427.4	422.1	432.6	1,324,338	334.3	333.7	334.9	1.3*
Persons	76,687	406.3	402.4	410.3	2,436,747	312.9	312.5	313.3	1.3*
WA									
Males	22,335	432.8	425.3	440.2	526,417	278.4	277.6	279.2	1.6*
Females	30,446	519.5	512.4	526.6	625,396	317.0	316.3	317.8	1.6*
Persons	52,781	477.0	471.9	482.1	1,151,814	296.1	295.5	296.6	1.6*
SA									
Males	8,245	432.6	420.3	444.9	459,659	292.8	291.9	293.6	1.5*
Females	10,972	486.9	475.7	498.0	549,642	328.8	327.9	329.7	1.5*
Persons	19,221	459.4	451.2	467.7	1,009,307	308.9	308.3	309.5	1.5*
NT									
Males	18,971	403.9	396.3	411.6	23,460	189.6	186.7	192.6	2.1*
Females	25,383	485.4	478.2	492.7	23,995	196.7	193.8	199.6	2.5*
Persons	44,354	444.7	439.5	450.0	47,455	194.2	192.1	196.3	2.3*
NSW, Vic, Qld, WA, SA and NT(d)									
Males	**118,517**	**366.1**	**363.1**	**369.0**	**5,372,733**	**285.0**	**284.8**	**285.3**	**1.3***
Females	**158,660**	**421.8**	**419.2**	**424.4**	**6,476,307**	**321.9**	**321.7**	**322.2**	**1.3***
Persons	**277,186**	**393.9**	**391.9**	**395.8**	**11,849,146**	**302.1**	**301.9**	**302.2**	**1.3***
Australia unadjusted(j)									
Males	121,578	359.0	356.2	361.9	5,600,715	285.4	285.2	285.7	1.3*
Females	162,624	413.6	411.0	416.2	6,742,671	321.9	321.6	322.1	1.3*
Persons	284,208	386.2	384.3	388.1	12,343,547	302.2	302.1	302.4	1.3*
Australia adjusted(j)(k)									
Males	135,863	401.2	398.2	404.2	5,586,430	284.7	284.5	284.9	1.4*
Females	181,732	462.2	459.5	464.9	6,723,563	320.9	320.7	321.2	1.4*
Persons	317,603	431.6	429.6	433.6	12,310,152	301.4	301.2	301.6	1.4*

(continued)

Table 1.02.1 (continued): Hospitalisations (excluding dialysis), by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data excludes private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by principal diagnosis

Table 1.02.2 presents data on the most common principal diagnoses for hospitalisations involving Aboriginal and Torres Strait Islander peoples for the 2-year period July 2004 to June 2006 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.

- In absolute terms the most common principal diagnosis among Indigenous Australians was care involving dialysis (41%), followed by injury and poisoning (8%), pregnancy (8%), diseases of the respiratory system (7%) and diseases of the digestive system (5%). However, when the younger age structure of the Indigenous population is taken into account, circulatory disease becomes a significant cause of hospitalisation among Indigenous people. Diseases of the digestive system were the most common diagnosis for other Australians in these six jurisdictions, responsible for 12% of hospitalisations.
- Overall, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, Indigenous Australians were hospitalised at twice the rate of other Australians. Excluding dialysis, Indigenous Australians were hospitalised at 1.3 times the rate of other Australians.
- The greatest differences in rates between Indigenous and other Australians were for care involving dialysis, endocrine, nutritional and metabolic diseases, caused mainly by diabetes, and diseases of the respiratory system. Indigenous Australians were hospitalised at 11 times the rate of other Australians for dialysis and three times the rate of other Australians for endocrine, nutritional and metabolic diseases and respiratory diseases.

Table 1.02.2: Hospitalisations, by principal diagnosis and Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Number		Per cent		Indigenous			Other[(e)]			
Principal diagnosis	**Indigenous**	**Other[(e)]**	**Indigenous**	**Other[(e)]**	**No. per 1,000[(f)]**	**95% UCL[(g)]**	**95% UCL[(h)]**	**No. per 1,000[(f)]**	**95% UCL[(g)]**	**95% UCL[(h)]**	**Ratio[(i)]**
Injury & poisoning & certain other consequences of external causes	36,505	869,960	7.8	6.5	43.9	43.4	44.5	22.5	22.4	22.5	2.0*
Pregnancy, childbirth and the puerperium[(j)]	34,936	849,957	7.5	6.4	31.7	31.4	32.1	22.8	22.8	22.9	1.4*
Diseases of the respiratory system	30,604	607,720	6.5	4.6	45.2	44.5	45.9	15.7	15.7	15.8	2.9*
Diseases of the digestive system	25,059	1,529,651	5.4	11.5	36.9	36.4	37.5	38.9	38.9	39.0	0.9*
Symptoms, signs and abnormal clinical and laboratory findings	20,286	831,397	4.3	6.2	32.3	31.7	32.9	21.1	21.0	21.1	1.5*
Mental and behavioural disorders	19,709	537,945	4.2	4.0	24.6	24.2	25.0	13.9	13.8	13.9	1.8*
Diseases of the circulatory system	15,314	857,107	3.3	6.4	35.4	34.7	36.1	21.2	21.2	21.3	1.7*
Diseases of the genitourinary system	12,248	680,026	2.6	5.1	20.0	19.5	20.4	17.4	17.3	17.4	1.2*
Diseases of the skin & subcutaneous tissue	10,897	220,754	2.3	1.7	13.3	13.0	13.6	5.6	5.6	5.7	2.4*
Certain infectious and parasitic diseases	9,708	166,930	2.1	1.3	9.8	9.5	10.1	4.4	4.4	4.4	2.2*

(continued)

Table 1.02.2 (continued): Hospitalisations, by principal diagnosis and Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004–June 2006(a)(b)(c)(d)

	Number		Per cent		Indigenous			Other(e)			
Principal diagnosis	**Indigenous**	**Other(e)**	**Indigenous**	**Other(e)**	**No. per 1,000(f)**	**95% UCL(g)**	**95% UCL(h)**	**No. per 1,000(f)**	**95% UCL(g)**	**95% UCL(h)**	**Ratio(i)**
Endocrine, nutritional and metabolic diseases	9,030	232,477	1.9	1.7	18.7	18.2	19.1	5.9	5.8	5.9	3.2*
Other(k)	52,890	4,465,222	11.3	33.5	82.0	81.0	82.9	112.7	112.6	112.8	0.7*
Total	*277,186*	*11,849,146*	*59.3*	*89.0*	*393.9*	*391.9*	*395.8*	*302.1*	*301.9*	*302.2*	*1.3**
Care involving dialysis	190,489	1,461,917	40.7	11.0	402.0	399.9	404.0	36.5	36.4	36.5	11.0*
Total(l)	**467,822**	**13,315,716**	**100.0**	**100.0**	**796.1**	**793.3**	**798.9**	**338.7**	**338.5**	**338.9**	**2.4***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).
(c) Financial year reporting.
(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital.
(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
(f) Directly age-standardised using the Australian 2001 standard population.
(g) LCL = lower confidence limit.
(h) UCL = upper confidence limit.
(i) Rate ratio Indigenous:other.
(j) Rates and rate ratios are for females only.
(k) Includes: diseases of the musculoskeletal system and connective tissue; neoplasms; diseases of the nervous system; certain conditions originating in the perinatal period; diseases of the ear and mastoid process; diseases of the eye and adnexa; diseases of the blood and blood-forming organs and certain disorders involving the immune system; congenital malformations, deformations and chromosomal abnormalities; and factors influencing health status and contact with health services (except dialysis).
(l) Includes hospitalisations for which no principal diagnosis was recorded.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by additional diagnosis

Table 1.02.3 presents hospitalisations for selected principal diagnoses by additional diagnoses, for Aboriginal and Torres Strait Islander peoples in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.

- For the 2-year period July 2004 to June 2006, the majority of hospitalisations with a principal diagnosis of care involving dialysis were reported with an additional diagnosis of diseases of the genitourinary system (78%) followed by endocrine, metabolic and nutritional disorders (19%).
- Approximately 24% of hospitalisations with a principal diagnosis of injury and poisoning were reported with an additional diagnosis of mental and behavioural disorders and to a lesser extent with endocrine, metabolic and nutritional disorders (11%).
- Hospitalisations with a principal diagnosis of circulatory diseases were most commonly reported with an additional diagnosis of endocrine, metabolic and nutritional diseases (50%).
- Hospitalisations with a principal diagnosis of infectious and parasitic diseases, respiratory diseases, diseases of the digestive system, and skin diseases were all commonly reported with an additional diagnosis of endocrine, metabolic and nutritional disorders (39%, 22%, 20% and 19% respectively).
- Hospitalisations with a principal diagnosis of endocrine, nutritional and metabolic diseases were commonly reported with an additional diagnosis of diseases of the circulatory system (50%).

Table 1.02.3: Hospitalisations of Indigenous persons: principal diagnosis chapter by additional diagnosis chapter of hospitalisation, NSW, Vic, Qld, WA, SA, and NT, July 2004 to June 2006(a)(b)(c)(d)

	Principal diagnosis														
Additional diagnosis of hospitalisation	**Dialysis (Z49)**	**Injury & poisoning (S00-Y98)**	**Pregnancy (O00-O99)**	**Respiratory (J00-J99)**	**Digestive (K00-K93)**	**Abnormal findings (R00-R99)**	**Mental disorders (F00-F99)**	**Circulatory (I00-I99)**	**Genito -urinary (N00-N99)**	**Skin (L00-L99)**	**Infectious (A00-B99)**	**Endocrine (E00-E90)**	**Other(e)**	***Total (excl. dialysis)***	**Total(f)**
	Per cent														
Genitourinary diseases (N00–N99)	78.3	5.3	4.4	7.6	6.8	7.9	2.3	18.0	26.2	5.8	14.3	40.1	6.9	8.9	37.2
Endocrine, nutritional & metabolic (E00–E90)	18.5	11.2	3.1	21.8	20.4	23.2	9.8	50.3	22.2	19.0	39.4	60.5	14.2	19.1	18.8
Diseases of the circulatory system (I00–I99)	4.1	8.3	2.0	16.5	14.9	19.3	5.2	64.3	15.6	11.6	9.9	49.8	11.7	15.2	10.7
Mental and behavioural disorders (F00–F99)	0.1	23.5	4.8	12.2	19.8	16.3	51.8	12.8	6.7	9.1	6.8	12.2	9.0	15.4	9.2
Symptoms, signs and abnormal findings (R00–R99)	0.2	7.3	5.7	11.1	9.3	16.4	15.2	13.6	9.5	6.8	16.0	15.5	8.8	10.2	6.1
Infectious and parasitic diseases (A00–B99)	0.0	8.4	5.9	12.9	7.7	5.3	3.4	7.1	22.5	39.9	20.4	16.7	7.0	10.1	6.0

(continued)

Table 1.02.3 (continued): Hospitalisations of Indigenous persons: principal diagnosis chapter by additional diagnosis chapter of hospitalisation, NSW, Vic, Qld, WA, SA, and NT, July 2004 to June 2006(a)(b)(c)(d)

	Principal diagnosis														
Additional diagnosis of hospitalisation	**Dialysis (Z49)**	**Injury & poisoning (S00-Y98)**	**Pregnancy (O00-O99)**	**Respiratory (J00-J99)**	**Digestive (K00-K93)**	**Abnormal findings (R00-R99)**	**Mental disorders (F00-F99)**	**Circulatory (I00-I99)**	**Genito -urinary (N00-N99)**	**Skin (L00-L99)**	**Infectious (A00-B99)**	**Endocrine (E00-E90)**	**Other(e)**	***Total (excl. dialysis)***	**Total(f)**
	Per cent														
Injury & poisoning (S00-Y98)	0.1	41.4	0.8	2.1	2.8	2.4	6.4	4.2	3.2	17.0	3.4	6.7	6.4	9.3	5.5
Respiratory diseases (J00-J99)	0.1	4.1	2.8	20.9	6.3	6.6	3.5	15.2	5.8	3.9	13.1	10.0	6.0	7.7	4.6
Digestive diseases (K00-K93)	0.0	3.4	2.6	5.0	27.2	8.6	4.3	8.0	6.2	3.4	7.4	9.5	5.8	7.3	4.3
Pregnancy, childbirth (O00-O99)	0.0	0.2	55.7	0.1	0.1	0.2	0.2	0.1	0.3	0.0	0.1	0.0	0.6	7.2	4.3
Skin diseases (L00-L99)	0.0	3.8	0.6	2.9	2.0	1.8	1.4	3.0	2.4	17.0	9.1	14.2	3.1	3.6	2.1
Care involving dialysis (Z49)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.3	0.0	0.1	0.0
Other(e)	4.7	39.5	73.9	43.5	46.3	47.8	59.3	68.3	47.8	44.8	39.4	70.9	57.6	53.6	33.7
Total number(g)	**190,489**	**36,505**	**34,936**	**30,604**	**25,059**	**20,286**	**19,709**	**15,314**	**12,248**	**10,897**	**9,708**	**9,030**	**52,890**	**277,186**	**467,822**

(continued)

Table 1.02.3 (continued): Hospitalisations of Indigenous persons: principal diagnosis chapter by additional diagnosis chapter of hospitalisation, NSW, Vic, Qld, WA, SA, and NT, July 2004 to June 2006(a)(b)(c)(d)

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Indigenous data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes: diseases of the musculoskeletal system and connective tissue; neoplasms; diseases of the nervous system; certain conditions originating in the perinatal period; diseases of the ear and mastoid process; diseases of the eye and adnexa; diseases of the blood and blood-forming organs and certain disorders involving the immune system; congenital malformations, deformations and chromosomal abnormalities; and factors influencing health status and contact with health services (except dialysis).

(f) Includes hospitalisations for which no principal diagnosis was recorded.

(g) Total number of hospitalisations for each principal diagnosis.

Note: Sum of components may exceed 100% as more than one additional diagnosis can be reported for each hospitalisation.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analysis

All hospitalisations

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, therefore they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians over the period 1998–99 to 2005–06 are presented in Table 1.02.4 and Figure 1.02.2.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates among Indigenous males and females during the 7-year period 1998–99 to 2005–06. The fitted trend implies an average yearly increase in the rate of around 48 per 1,000 for Indigenous persons which is equivalent to a 46% increase in the rate over the period.
- There were also significant increases in hospitalisation rates among other Australian males and females during the same period, with an average yearly increase in the rate of 4 per 1,000 for other Australians. This is equivalent to a 9% increase in the rate over the period.
- There were significant increases in the hospitalisation rate ratios and rate differences between Indigenous and other Australians. The fitted trend implies an average yearly increase of 0.1 in the rate ratio (34% increase over the period) and 44 per 1,000 in the hospitalisation rate differences between Indigenous and other Australians in the 7-year period 1998–99 to 2005–06 (76% increase). This indicates a relative and absolute increase in the gap between hospitalisation rates for Indigenous and other Australians.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all affect the level of hospitalisation over time. Caution should be used in interpreting changes over time, as it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may also reflect increased use of admitted patient hospital services rather than a worsening of health.

Table 1.02.4: Age-standardised hospitalisation rates, rate ratios and rate differences, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous rate (separations per 1,000)										
Males	648.8	661.6	648.8	734.5	734.5	840.1	893.4	949.7	44.6*	48.1
Females	797.7	882.8	797.7	961.1	961.1	1,063.9	1,089.8	1,167.2	50.2*	44.1
Persons	726.0	777.9	726.0	854.8	854.8	957.3	995.8	1,064.1	47.6*	45.9
Other Australian[(d)] rate (separations per 1,000)										
Males	318.1	324.9	318.1	338.6	338.6	342.9	343.8	348.1	4.0*	8.7
Females	339.5	347.0	339.5	364.2	364.2	366.3	366.3	370.6	4.1*	8.4
Persons	326.5	333.7	326.5	349.4	349.4	352.5	352.8	357.1	4.0*	8.6
Rate ratio[(e)]										
Males	2.0	2.0	2.0	2.2	2.2	2.4	2.6	2.7	0.1*	36.2
Females	2.3	2.5	2.3	2.6	2.6	2.9	3.0	3.1	0.1*	32.6
Persons	2.2	2.3	2.2	2.4	2.4	2.7	2.8	3.0	0.1*	34.1
Rate difference[(f)]										
Males	330.7	336.8	330.7	396.0	396.0	497.2	549.6	601.6	40.6*	86.0
Females	458.2	535.8	458.2	596.9	596.9	697.6	723.5	796.6	46.2*	70.5
Persons	399.5	444.2	399.5	505.4	505.4	604.8	643.0	707.0	43.6*	76.4

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

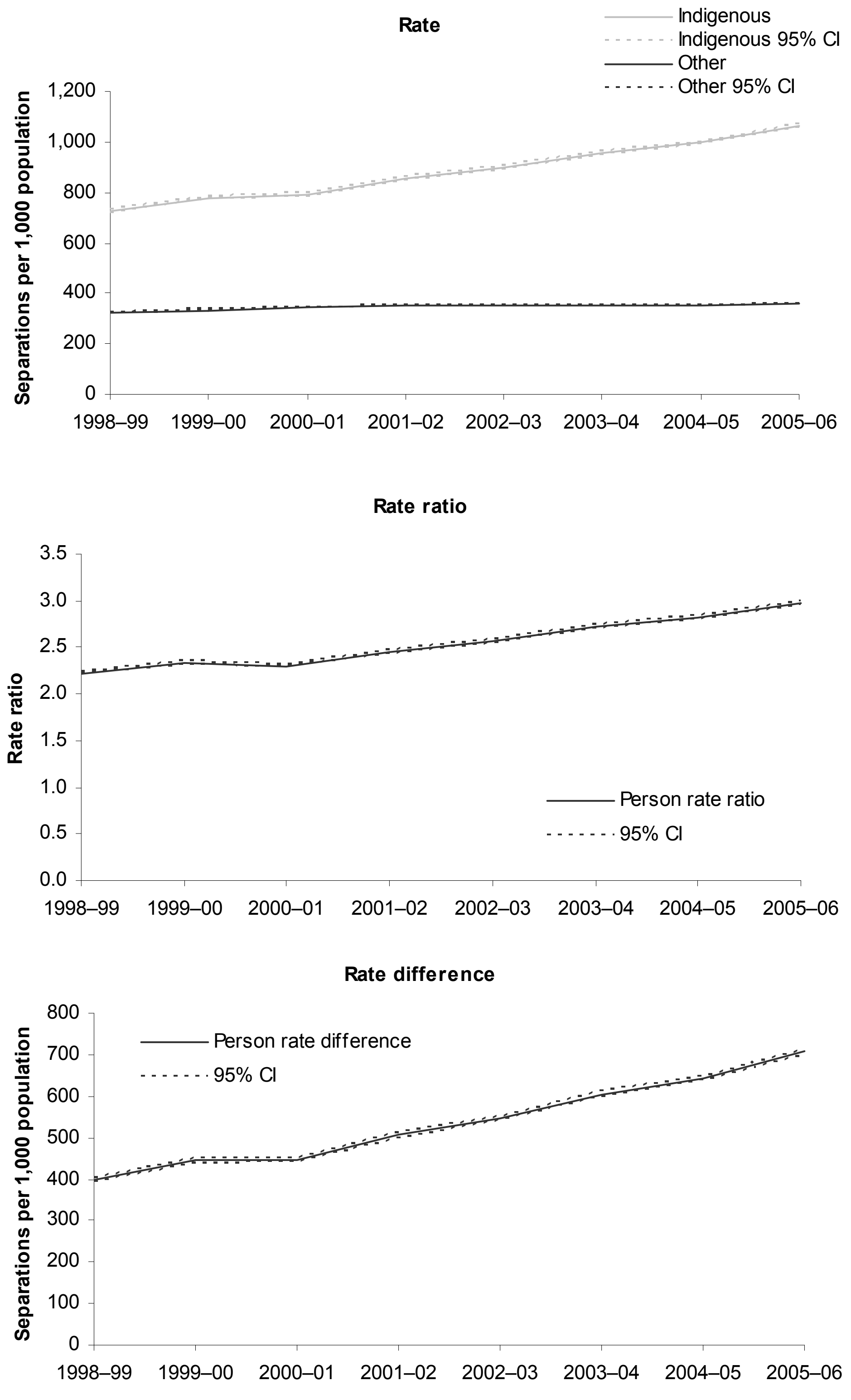
(d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.02.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians, Qld, WA, SA and NT, 1998–99 to 2005–06

All hospitalisations excluding dialysis

Hospitalisation rates, rate ratios and rate differences (excluding dialysis) between Indigenous and other Australians over the period 1998–99 to 2005–06 are presented in Table 1.02.5 and Figure 1.02.3.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates among Indigenous males and females during the 7-year period 1998–99 to 2005–06. The fitted trend implies an average yearly increase in the rate of around 5 per 1,000 for Indigenous persons. This is equivalent to a 7% increase in the rate over the period.
- There were also significant increases in hospitalisation rates among other Australian males and females during the same period, with an average yearly increase in the rate of 2 per 1,000 for other Australian persons. This is equivalent to a 4% increase in the rate over the period.
- There were significant increases in the hospitalisation rate ratios between Indigenous males and other males—the fitted trend implies an average yearly increase of 0.01 per 1,000 in the 7-year period 1998–99 to 2005–06 (7% increase). Over the same period, there were no significant changes in the rate ratios for females or persons overall.
- There were significant increases in the hospitalisation rate differences between Indigenous and other Australians. The fitted trend implies an average yearly increase of 3 per 1,000 in the hospitalisation rate differences between Indigenous and other Australians in the 7-year period 1998–99 to 2005–06 (13% increase over the period).

Table 1.02.5: Age-standardised hospitalisation rates, rate ratios and rate differences (excluding dialysis), Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

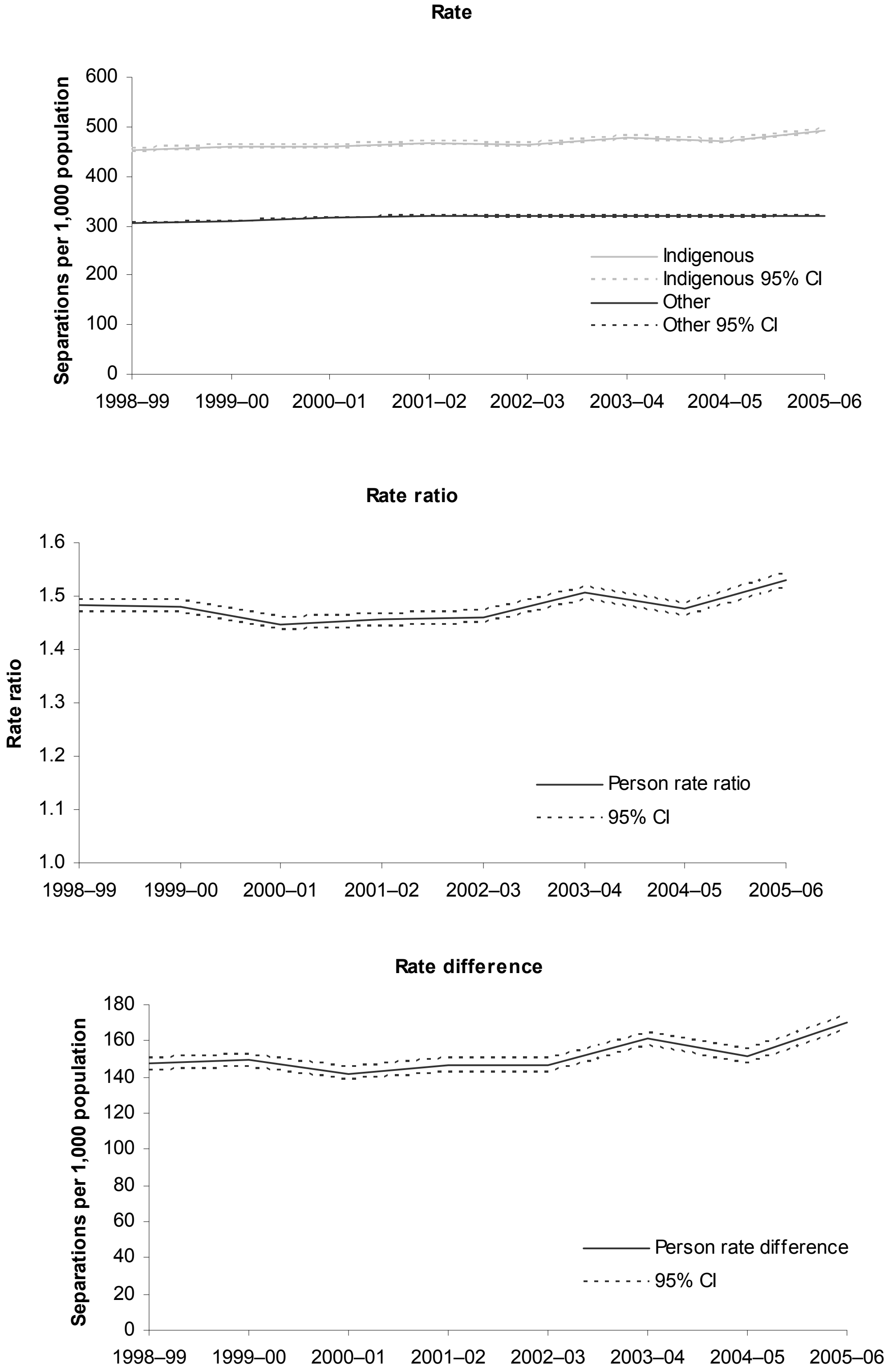
	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous rate (separations per 1,000)										
Males	392.8	398.9	392.7	400.6	402.0	423.7	412.1	434.6	5.4*	9.6
Females	507.2	515.2	520.3	529.8	523.8	533.0	525.1	545.6	4.2*	5.8
Persons	451.8	459.0	458.4	467.6	464.6	479.1	469.5	490.9	4.6*	7.1
Other Australian[(d)] rate (separations per 1,000)										
Males	290.9	295.3	300.8	304.0	299.7	299.7	299.4	301.6	1.0*	2.5
Females	322.5	328.4	335.7	341.3	339.5	339.8	340.1	343.3	2.6*	5.6
Persons	304.7	310.0	316.6	321.1	318.1	318.2	318.2	320.9	1.9*	4.3
Rate ratio[(e)]										
Males	1.4	1.4	1.3	1.3	1.3	1.4	1.4	1.4	0.01*	6.9
Females	1.6	1.6	1.5	1.6	1.5	1.6	1.5	1.6	—	0.2
Persons	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	0.01	2.7
Rate difference[(f)]										
Males	101.8	103.6	91.9	96.6	102.3	124.0	112.7	133.0	4.4*	29.9
Females	184.8	186.9	184.6	188.5	184.2	193.2	185.0	202.3	1.6*	6.1
Persons	147.1	149.0	141.9	146.6	146.6	161.0	151.3	170.0	2.7*	13.0

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.
(d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.
(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.02.3: Hospitalisation rates, rate ratios and rate differences (excluding dialysis) between Indigenous and other Australians, Qld, WA, SA and NT, 1998–99 to 2005–06

Sensitivity of hospitalisation trends to changes in identification

- The fitted trends described above have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for identification were posted—constant identification, increasing identification and decreasing identification:
  - Under the constant identification scenario, the number of hospitalisations for the period under study was adjusted using the following identification factors:
    - Queensland 87%
    - Western Australia 97%
    - South Australia 82%
    - Northern Territory 96%.
  - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study—from 82% in 1998–99 to 87% in 2005–06 for Queensland, from 95% to 97% for Western Australia, from 76% to 82% for South Australia, and from 94% to 96% for the Northern Territory.
  - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 92% in 1998–99 to 87% in 2005–06 for Queensland, from 99% to 97% for Western Australia, from 88% to 82% for South Australia, and from 98% to 96% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in hospitalisations might not persist.
- For all hospitalisations including dialysis, the increases in hospitalisation rates, rate ratios and rate differences during the period 1998–99 to 2005–06 remained significant under all three identification scenarios.
- For all hospitalisations excluding dialysis, all the observed significant increases in hospitalisation rates, rate ratios and rate differences during the period 1998–99 to 2005–06 remained statistically significant under the constant identification scenario. All the observed significant trends except the increase in the rate for other males remained significant under the decreasing identification scenario. Only the observed increases in other Australian hospitalisation rates and hospitalisation rates for Indigenous males remained statistically significant under the increasing identification scenario.

Time series by principal diagnosis

Hospitalisation rates by principal diagnosis were compared for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory.

- Hospitalisation rates among Indigenous Australians for most principal diagnoses for the period June 1998 to July 2000 were similar to those for the period June 2004 to July 2006. Hospitalisation rates of Indigenous Australians for care involving dialysis; symptoms, signs and abnormal clinical findings; diseases of the digestive system; and endocrine, nutritional and metabolic diseases increased between the two periods. Hospitalisation rates of Indigenous Australians for mental and behavioural disorders declined between the two periods (Table 1.02.6).

Table 1.02.6: Hospitalisations, by principal diagnosis and Indigenous status, Qld, WA, SA and NT, July 1998 to June 2000 and July 2004 to June 2006[(a)(b)(c)(d)]

	1998–99 to 1999–00			2004–05 to 2005–06		
Principal diagnosis	**Indigenous no. per 1,000**[(f)]	**Other**[(e)] **no. per 1,000**[(f)]	**Ratio**[(g)]	**Indigenous no. per 1,000**[(f)]	**Other**[(e)] **no. per 1,000**[(f)]	**Ratio**[(g)]
Injury & poisoning & certain other consequences of external causes	51.4	22.7	2.3*	51.1	22.5	2.3*
Pregnancy, childbirth and the puerperium	34.0	21.4	1.6*	34.6	23.1	1.5*
Diseases of the respiratory system	54.1	17.0	3.2*	52.1	15.7	3.3*
Diseases of the digestive system	34.2	37.5	0.9*	39.0	39.3	1.0
Symptoms, signs and abnormal clinical and laboratory findings	20.3	12.7	1.6*	34.1	19.6	1.7*
Mental and behavioural disorders	27.1	16.3	1.7*	21.8	12.6	1.7*
Diseases of the circulatory system	36.7	22.7	1.6*	39.4	20.5	1.9*
Diseases of the genitourinary system	25.0	18.2	1.4*	22.4	17.0	1.3*
Diseases of the skin & subcutaneous tissue	19.1	5.9	3.2*	16.9	6.1	2.8*
Certain infectious and parasitic diseases	12.7	4.6	2.8*	12.0	4.1	2.9*
Endocrine, nutritional and metabolic diseases	15.8	3.4	4.7*	23.5	5.9	4.0*
Other[(h)]	124.8	114.8	1.1*	88.4	119.0	0.7*
Total	*455.4*	*297.2*	*1.5**	*435.3*	*305.4*	*1.4**
Care involving dialysis	296.9	22.4	13.3*	550.1	35.5	15.5*
Total[(i)]	**752.3**	**319.5**	**2.4***	**985.4**	**340.9**	**2.9***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification from 1998–99, although the level of accuracy varies by jurisdiction and hospital. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for these four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) Rate ratio Indigenous:other.

(h) Includes: diseases of the musculoskeletal system and connective tissue; neoplasms; diseases of the nervous system; certain conditions originating in the perinatal period; diseases of the ear and mastoid process; diseases of the eye and adnexa; diseases of the blood and blood-forming organs and certain disorders involving the immune system; congenital malformations, deformations and chromosomal abnormalities; and factors influencing health status and contact with health services (except dialysis).

(i) Includes hospitalisations for which no principal diagnosis was recorded.

Source: AIHW analysis of National Hospital Morbidity Database.

Data quality issues

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

References

ABS (Australian Bureau of Statistics) 2004. Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009. ABS cat. no. 3238.0. Canberra: ABS.

ABS & AIHW (Australian Institute of Health and Welfare) 2005. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2005. ABS cat. no. 4704.0, Cat. no. IHW 14. Canberra: ABS & AIHW.

AIHW 2005. Improving the quality of Indigenous identification in hospital statistics. Health services series no. 25. Cat. no. HSE 101. Canberra: AIHW.

AIHW 2007. Australian hospital statistics 2005–06. Health services series no. 30. Cat. no. HSE 50. Canberra: AIHW.

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1.03 Hospitalisation for injury and poisoning

The number of hospital separations with a principal diagnosis of injury and poisoning for Aboriginal and Torres Strait Islander peoples expressed as a rate by age group, age-standardised rate and rate ratio

Data sources

Data for this measure come from the AIHW National Hospital Morbidity Database, the ABS mortality unit record data collection, and the National Aboriginal and Torres Strait Islander Health Survey.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Mortality data

Mortality data in this report are from the ABS mortality unit record data collection. Data are presented according to the year in which the deaths occurred.

Data are presented for the four jurisdictions which have been assessed as having adequate identification of Indigenous deaths for the period 1999–00 to 2003–04—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous population of Australia.

Deaths for which Indigenous status was not reported have been included with deaths data for non-Indigenous people under the 'other' category.

Because of small case numbers, mortality data are presented for the 5-year period 1999–00 to 2003–2004.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Analyses

Age-standardised rates and ratios have been used as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

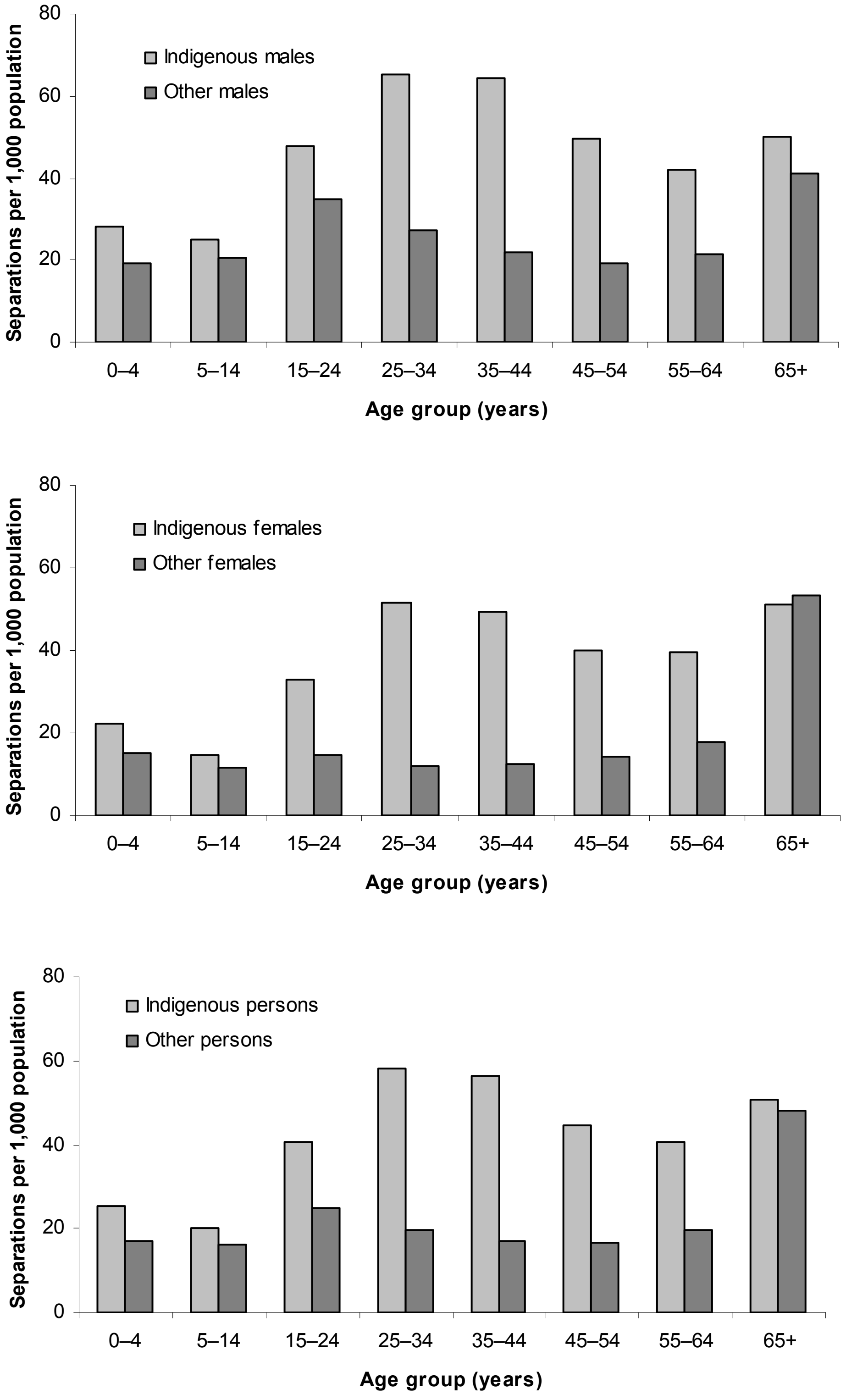
Hospitalisations

- In the 2-year period July 2004 to June 2006, there were 906,465 hospitalisations for injury and poisoning in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, 36,505 (4.0%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples (Table 1.03.1).
- Hospitalisations for injury and poisoning were the second most common principal diagnosis at the ICD-10-AM chapter level among Aboriginal and Torres Strait Islander Australians, representing 8% of all hospital separations.

Hospitalisations by age and sex

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males had higher hospitalisation rates for injury and poisoning than other males across all age groups. Indigenous females had higher hospitalisation rates for injury and poisoning than other females across all age groups, except among those aged 65 years and over (Figure 1.03.1).
- The greatest difference in hospitalisation rates occurred in the 35–44 and 45–54 year age groups for males, and the 25–34 and 35–44 year age groups for females. Indigenous males were hospitalised at around three times the rate of other males in these age groups and Indigenous females were hospitalised at around four times the rate of other females in these age groups.

- For Indigenous males and females, hospitalisation rates were highest among those aged 25–34 years, and for other males and females, rates were highest among those aged 65 years and over.
- Approximately 56% of Indigenous Australians hospitalised for injury and poisoning were males (20,507) and 44% were females (15,998).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.03.1: Age-specific hospitalisation rates for a principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Hospitalisations by state/territory

Table 1.03.1 presents hospitalisations for a principal diagnosis of injury and poisoning for the 2-year period July 2004 to June 2006 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are also presented in the table. The Australia data are adjusted by applying a completeness factor of 89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised for injury at about twice the rate of other Australians in these jurisdictions.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous Australians were hospitalised for injury and poisoning at 2.1 times the rate of other Australians.
- In New South Wales and Victoria, Indigenous people were hospitalised for injury and poisoning at around 1.5 times the rate of other Australians. In Queensland and South Australia, Indigenous people were hospitalised for injury and poisoning at around twice the rate of other Australians. In Western Australia and the Northern Territory, Indigenous people were hospitalised at three times the rate of other Australians.

Table 1.03.1: Hospitalisations for principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
NSW									
Males	4,937	37.4	35.9	38.8	170,951	26.2	26.1	26.4	1.4*
Females	3,332	27.5	26.2	28.7	129,240	17.9	17.8	18.0	1.5*
Persons[(j)]	8,269	32.4	31.5	33.3	300,199	22.2	22.2	22.3	1.5*
Vic									
Males	877	34.4	31.0	37.9	127,669	25.9	25.7	26.0	1.3*
Females	614	24.2	21.8	26.6	104,430	19.2	19.0	19.3	1.3*
Persons[(j)]	1,491	28.8	26.9	30.8	232,101	22.7	22.6	22.8	1.3*
Qld									
Males	5,760	48.1	46.4	49.8	107,998	28.3	28.2	28.5	1.7*
Females	4,100	34.8	33.4	36.2	73,979	18.6	18.5	18.8	1.9*
Persons[(j)]	9,860	41.2	40.1	42.3	181,977	23.6	23.5	23.7	1.7*
WA									
Males	4,152	66.3	63.8	68.8	47,009	24.4	24.2	24.6	2.7*
Females	3,638	58.1	55.9	60.3	34,103	17.2	17.0	17.4	3.4*
Persons[(j)]	7,790	62.1	60.4	63.8	81,112	21.0	20.8	21.1	3.0*
SA									
Males	1,342	54.0	50.5	57.6	37,964	25.1	24.8	25.3	2.2*
Females	1,113	43.4	40.4	46.4	31,317	18.2	18.0	18.4	2.4*
Persons[(j)]	2,455	48.5	46.2	50.8	69,281	21.8	21.6	22.0	2.2*
NT									
Males	3,439	63.3	60.6	65.9	3,586	25.4	24.5	26.4	2.5*
Females	3,201	59.5	57.1	61.9	1,704	15.3	14.5	16.2	3.9*
Persons[(j)]	6,640	61.4	59.6	63.2	5,290	20.7	20.0	21.3	3.0*
NSW, Vic, Qld, WA, SA and NT[(d)]									
Males	**20,507**	**48.9**	**48.0**	**49.8**	**495,177**	**26.3**	**26.2**	**26.3**	**1.9***
Females	**15,998**	**39.1**	**38.4**	**39.9**	**374,773**	**18.3**	**18.3**	**18.4**	**2.1***
Persons[(j)]	**36,505**	**43.9**	**43.4**	**44.5**	**869,960**	**22.5**	**22.4**	**22.5**	**2.0***
Australia unadjusted[(k)]									
Males	21,013	47.9	47.0	48.7	518,551	26.4	26.4	26.5	1.8*
Females	16,289	38.1	37.4	38.8	391,826	18.4	18.4	18.5	2.1*
Persons[(j)]	37,302	42.9	42.4	43.5	910,388	22.6	22.5	22.6	1.9*
Australia adjusted[(k)(l)]									
Males	23,482	53.5	52.6	54.4	516,082	26.3	26.2	26.4	2.0*
Females	18,203	42.6	41.8	43.3	389,912	18.3	18.3	18.4	2.3*
Persons[(j)]	41,685	48.0	47.4	48.5	906,005	22.5	22.4	22.5	2.1*

(continued)

Table 1.03.1 (continued): Hospitalisations for principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes S00–T98.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Includes hospitalisations for which sex was indeterminate or not stated.

(k) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(l) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by principal diagnosis

Type of injury

Table 1.03.2 presents hospitalisations for a principal diagnosis of injury and poisoning and certain other consequences of external causes by type of injury for the 2-year period July 2004 to June 2006 for the six jurisdictions.

- For the period 2004–05 to 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, of all hospitalisations with a principal diagnosis of injury and poisoning, injuries were the most common reason for hospitalisation among Aboriginal and Torres Strait Islander peoples (77%) followed by complications of medical and surgical care not elsewhere classified (10%).
- Indigenous males and females were hospitalised at between two and three times the rate of other males and females for burns and frostbite and 'other and unspecified effects of external causes (such as radiation, hypothermia, maltreatment syndromes) and certain early complications of trauma'.

Table 1.03.2: Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning and certain other consequences of external causes, by type of injury and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Males						Females						Persons[(e)]					
Principal diagnosis	**No.**	**%[(f)]**	**No. per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**	**No.**	**%[(f)]**	**No. per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**	**No.**	**%[(f)]**	**No. per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**
Injuries (S00–T19)	16,405	80.0	37.4	36.7	38.2	1.9*	11,684	73.0	27.7	27.0	28.3	2.3*	28,089	76.9	32.5	32.0	33.0	2.0*
Complications of surgical & medical care n.e.c (T80–T89)	1,744	8.5	6.2	5.8	6.6	1.6*	1,833	11.5	6.1	5.8	6.4	1.8*	3,577	9.8	6.1	5.9	6.4	1.7*
Poisoning (T36–T50)	817	4.0	1.9	1.8	2.1	1.8*	1,427	8.9	3.2	3.0	3.4	1.8*	2,244	6.1	2.6	2.5	2.7	1.8*
Other and unspecified effects of external causes/ Certain early complications of trauma (T66–T79)	486	2.4	1.2	1.0	1.3	2.4*	431	2.7	1.0	0.8	1.1	2.5*	917	2.5	1.1	1.0	1.2	2.5*
Burns and frostbite (T20–T35)	673	3.3	1.4	1.3	1.6	3.0*	367	2.3	0.7	0.6	0.8	2.9*	1,040	2.8	1.0	0.9	1.1	2.9*
Toxic effects of substances chiefly non-medicinal (T51–T65)	381	1.9	0.8	0.7	0.9	1.8*	256	1.6	0.5	0.4	0.6	1.9*	637	1.7	0.6	0.6	0.7	1.8*
Total[(k)]	**20,507**	**100.0**	**48.9**	**48.0**	**49.8**	**1.9***	**15,998**	**100.0**	**39.1**	**38.4**	**39.9**	**2.1***	**36,505**	**100.0**	**43.9**	**43.4**	**44.5**	**2.0***

(continued)

Table 1.03.2 (continued): Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning, by type of injury and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/Other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); Cause of injury is based on the first reported external causes where the principle diagnosis was ‘injury, poisoning and certain other consequences of external causes’; ICD-10-AM codes S00–T98.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have the highest level of accuracy of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes hospitalisations for which sex was indeterminate or not stated.

(f) Proportion of male, female and total hospitalisations of Indigenous persons in the period 2004–05 to 2005–06.

(g) Directly age-standardised using the Australian 2001 standard population.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:other.

(k) Total includes sequelae of injuries, poisoning, external causes (T90–T98).

Source: AIHW analysis of National Hospital Morbidity database.

External cause of injury and poisoning

Table 1.03.3 presents external causes of injury and poisoning for Aboriginal and Torres Strait Islander peoples in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory with a principal diagnosis of injury, poisoning and other consequences of external causes.

- In the 2-year period July 2004 to June 2006, assault was the most common cause for hospitalisation for Indigenous males and females hospitalised with a principal diagnosis of injury and poisoning (22% and 32% respectively) in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.
- Aboriginal and Torres Strait Islander males and females were 8 and 35 times more likely to be hospitalised for injuries due to assault as other males and females respectively.
- Indigenous males were hospitalised for intentional self-harm at more than twice the rate of other males.
- Indigenous males and females were around 2.5 times as likely to be hospitalised for exposure to electrical currents, smoke, fire, animals or nature as other males and females.

Table 1.03.3: External causes for hospitalisations of Indigenous persons with a principal diagnosis of injury and poisoning and other consequences of external causes, by sex, NSW, Vic, Qld, WA, SA and NT, July 2000 to June 2006(a)(b)(c)(d)

	Males						Females						Persons(e)					
External cause	**No.**	**%(f)**	**No. per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**	**No.**	**%(f)**	**No. per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**	**No.**	**%(f)**	**No. per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**
Assault (X85–Y09)	4,603	22.4	10.7	10.4	11.1	7.5*	5,074	31.7	10.9	10.6	11.3	35.3*	9,677	26.5	10.8	10.6	11.1	12.3*
Falls (W00–W19)	3,601	17.6	9.7	9.3	10.2	1.5*	2,627	16.4	8.4	8.0	8.9	1.2*	6,228	17.1	9.1	8.8	9.5	1.3*
Exposure to inanimate mechanical forces (W20–W49)	2,973	14.5	5.8	5.6	6.0	1.4*	1,372	8.6	2.5	2.4	2.7	1.9*	4,345	11.9	4.1	4.0	4.3	1.5*
Complications of medical and surgical care (Y40–Y84)	1,783	8.7	6.5	6.1	6.9	1.6*	1,873	11.7	6.3	5.9	6.6	1.8*	3,656	10.0	6.3	6.1	6.6	1.7*
Transport accidents (V01–V99)	2,322	11.3	4.7	4.5	5.0	1.2*	1,143	7.1	2.3	2.2	2.5	1.4*	3,465	9.5	3.5	3.4	3.6	1.3*
Other accidental exposures(k)	1,608	7.8	3.8	3.5	4.0	1.2*	884	5.5	2.2	2.0	2.4	1.4*	2,492	6.8	3.0	2.8	3.1	1.3*
Intentional self-harm (X60–X84)	993	4.8	2.3	2.1	2.4	2.5*	1,323	8.3	2.8	2.7	3.0	1.9*	2,316	6.3	2.5	2.4	2.7	2.2*
Exposure to animate mechanical forces (W50–W64)	1,005	4.9	1.9	1.8	2.1	2.1*	462	2.9	1.0	0.9	1.0	2.6*	1,467	4.0	1.4	1.4	1.5	2.2*
Exposure to electric current/smoke/ fire/venomous animals and plants/forces of nature (W85–W99, X00–X39)(l)	829	4.0	1.7	1.6	1.9	2.5*	463	2.9	0.9	0.8	1.0	2.4*	1,292	3.5	1.3	1.2	1.4	2.4*
Accidental poisoning by and exposure to noxious substances (X40–X49)	451	2.2	0.9	0.8	1.0	1.8*	469	2.9	1.0	0.9	1.1	2.0*	920	2.5	1.0	0.9	1.1	1.9*
Other external causes(m)	287	1.4	0.7	0.6	0.7	2.9*	270	1.7	0.6	0.5	0.7	2.7*	557	1.5	0.7	0.6	0.7	2.8*
Total(n)	**20,504**	**100.0**	**48.8**	**48.0**	**49.7**	**1.9***	**15,998**	**100.0**	**39.1**	**38.4**	**39.9**	**2.1***	**36,505**	**100.0**	**43.9**	**43.4**	**44.5**	**2.0***

Table 1.03.3 (continued): External causes for hospitalisations of Indigenous persons with a principal diagnosis of injury and poisoning and other consequences of external causes, by sex, NSW, Vic, Qld, WA, SA and NT, July 2000 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); cause of injury is based on the first reported external causes where the principle diagnosis was ‘injury, poisoning and certain other consequences of external causes’; ICD-10-AM codes V01–Y98.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes hospitalisations for which sex was indeterminate or not stated.

(f) Proportion of male, female and total hospitalisations for injury and poisoning of Indigenous persons in the period 2004–05 to 2005–06.

(g) Directly age-standardised using the Australian 2001 standard population.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:other.

(k) Accidental drowning and submersion (W65–W74), accidental threats to breathing (W75–W84), overexertion, travel and privation (X50–X57), accidental exposure to other and unspecified factors (X58–X59),

(l) Includes exposure to electrical current, radiation and extreme ambient air temperature and pressure (W85–W99), smoke, fire and flames (X00–X09), contact with heat and hot substances (X10–X19), contact with venomous animals and plants (X20–X29), exposure to forces of nature (X30–X39).

(m) Includes event of undetermined intent (Y10–Y34), legal intervention and operation of war (Y35–Y36), sequelae of external causes of morbidity and mortality (Y85–Y89), supplementary factors classified elsewhere (Y90–Y98).

(n) Includes injuries where no external cause was reported.

Source: AIHW analysis of National Hospital Morbidity Database.

Injury due to transport

Mode of transport

Tables 1.03.4 and 1.03.5 present data on mode of transport for fatal and serious injury for the four jurisdictions assessed as having adequate identification of Indigenous deaths and hospitalisations for 1999–00 to 2003–04—Queensland, Western Australia, South Australia and the Northern Territory. Because of small case numbers, transport accident data for these jurisdictions have been combined for 1999–00 to 2003–04.

- In 1999–00 to 2003–04, 52% of Indigenous persons fatally injured in a transport accident were occupants of a car, 35% were pedestrians, 3% were motorcyclists and 3% were occupants of a pick-up truck or van. Of non-Indigenous persons fatally injured in a transport accident, 55% were occupants of a car, 13% were pedestrians, 13% were motorcyclists and 2% were occupants of a pick-up truck or van (Table 1.03.4).
- Of Indigenous persons seriously injured in a transport accident, 47% were occupants of a car, 17% were pedestrians, 16% were pedal cyclists and 8% were motorcyclists. Of non-Indigenous persons seriously injured in a transport accident, 34% were occupants of a car, 7% were pedestrians, 17% were pedal cyclists and 24% were motorcyclists (Table 1.03.5).

Table 1.03.4: Mode of transport[(a)] for fatal injury, Qld, WA, SA & NT, 1999–00 to 2003–04

	Indigenous			Non-Indigenous			
Fatally injured person	**Number**	**%**	**Rate[(b)]**	**Number**	**%**	**Rate[(b)]**	**Rate ratio[(c)]**
Car occupant[(d)]	**169**	**52.0**	**13.5**	**2,060**	**55.2**	**5.9**	**2.3**
traffic	*159*	*48.9*	*12.8*	*2,026*	*54.3*	*5.8*	*2.2*
non-traffic	*8*	*2.5*	*0.5*	*29*	*0.8*	*0.1*	*6.6*
Pedestrian[(d)]	**113**	**34.8**	**9.8**	**479**	**12.8**	**1.4**	**7.1**
traffic	*101*	*31.1*	*8.9*	*415*	*11.1*	*1.2*	*7.4*
non-traffic	*12*	*3.7*	*0.9*	*47*	*1.3*	*0.1*	*6.8*
Motorcyclist[(d)]	**9**	**2.8**	**0.5**	**469**	**12.6**	**1.3**	**0.4**
traffic	*8*	*2.5*	*0.5*	*414*	*11.1*	*1.2*	*0.4*
non-traffic	*0*	*0.0*	*0.0*	*55*	*1.5*	*0.2*	*0.0*
Occupant of pick-up truck or van[(d)]	**8**	**2.5**	**0.5**	**86**	**2.3**	**0.2**	**1.9**
traffic	*8*	*2.5*	*0.5*	*83*	*2.2*	*0.2*	*2.0*
non-traffic	*0*	*0.0*	*0.0*	n.p.	n.p.	n.p.	n.p.
Pedal cyclist[(d)]	**n.p.**	**n.p.**	**n.p.**	**80**	**2.1**	**0.2**	**n.p.**
traffic	n.p.	n.p.	n.p.	*78*	*2.1*	*0.2*	n.p.
non-traffic	*0*	*0.0*	*0.0*	n.p.	n.p.	n.p.	n.p.
Occupant of heavy transport vehicle[(d)]	**n.p.**	**n.p.**	**n.p.**	**85**	**2.3**	**0.2**	**0.2**
traffic	*0*	*0.0*	*0.0*	*82*	*2.2*	*0.2*	*0.0*
non-traffic	*0*	*0.0*	*0.0*	n.p.	n.p.	n.p.	n.p.
Bus occupant[(d)]	**n.p.**	**n.p.**	**n.p.**	**10**	**0.3**	**0.0**	**n.p.**
traffic	n.p.	n.p.	n.p.	*10*	*0.3*	*0.0*	n.p.
non-traffic	*0*	*0.0*	*0.0*	*0*	*0.0*	*0.0*	*0.0*
Other and unspecified	**15**	**4.6**	**1.1**	**134**	**3.6**	**0.4**	**2.9**
Total[(e)]	**325**	**100.0**	**26.1**	**3,731**	**100.0**	**10.7**	**2.4**

(a) 'Mode of transport' here means the vehicle the person was travelling in at the time of being injured in a transport accident. 'Other and unspecified' includes V87, V88, V89, V98, and V99 for ICD-10 (deaths).

(b) Number per 100,000 population, adjusted by direct standardisation to the Australian population in June 2001.

(c) Ratio of age-standardised rate for persons specified as Indigenous to the equivalent rate for all other persons (i.e. non-Indigenous or not stated).

(d) A traffic accident is any vehicle accident occurring on a public road [i.e. originating on, terminating on, or involving a vehicle partially on the road]. A non-traffic accident is any vehicle accident that occurs entirely on any place other than a public road. For a certain proportion of cases, whether an accident was traffic or non-traffic was unknown. These cases are included in the totals for each mode of transport and this is the reason the sum of traffic and non-traffic cases is sometimes less than the total for each mode.

(e) Includes Animal rider or occupant of animal-drawn vehicle; Occupant of a special all-terrain or off-road motor vehicle; Occupant of three-wheeled motor vehicle; Occupant of a tram, train, special industrial vehicle, special agricultural vehicle, special construction vehicle, watercraft and aircraft.

Source: Berry et al. 2007.

Table 1.03.5: Mode of transport[(a)] for serious injury, NT, WA, SA and Qld, 1999–00 to 2003–04

	Indigenous			Non-Indigenous			
Seriously injured person	**Number**	**%**	**Rate[(b)]**	**Number**	**%**	**Rate[(b)]**	**Rate Ratio[(c)]**
Car occupant[(d)]	**2,270**	**47.0**	**166.0**	**29,753**	**34.0**	**85.4**	**1.9**
traffic	*1,787*	*37.0*	*132.1*	*24,387*	*27.8*	*70.0*	*1.9*
non-traffic	*382*	*7.9*	*26.9*	*4,392*	*5.0*	*12.6*	*2.1*
Pedestrian[(d)]	**815**	**16.9**	**61.4**	**5,785**	**6.6**	**16.7**	**3.7**
traffic	*579*	*12.0*	*45.4*	*3,543*	*4.0*	*10.2*	*4.4*
non-traffic	*128*	*2.7*	*5.7*	*1,592*	*1.8*	*4.6*	*1.7*
Pedal cyclist[(d)]	**762**	**15.8**	**37.5**	**14,849**	**17.0**	**42.7**	**0.9**
traffic	*275*	*5.7*	*14.8*	*6,017*	*6.9*	*17.3*	*0.9*
non-traffic	*450*	*9.3*	*21.2*	*8,303*	*9.5*	*23.9*	*0.9*
Motorcyclist[(d)]	**387**	**8.0**	**23.5**	**20,961**	**23.9**	**60.1**	**0.4**
traffic	*158*	*3.3*	*9.9*	*9,946*	*11.4*	*28.5*	*0.3*
non-traffic	*222*	*4.6*	*13.3*	*10,414*	*11.9*	*29.9*	*0.4*
Occupant of pick-up truck or van[(d)]	**81**	**1.7**	**5.4**	**1,008**	**1.2**	**2.9**	**1.9**
traffic	*40*	*0.8*	*2.8*	*521*	*0.6*	*1.5*	*1.9*
non-traffic	*34*	*0.7*	*2.2*	*375*	*0.4*	*1.1*	*2.0*
Bus occupant[(d)]	**30**	**0.6**	**2.8**	**585**	**0.7**	**1.7**	**1.6**
traffic	*16*	*0.3*	1.3	*200*	*0.2*	*0.6*	*2.3*
non-traffic	*5*	*0.1*	0.5	*119*	*0.1*	*0.3*	*1.4*
Occupant of heavy transport vehicle[(d)]	**21**	**0.4**	**2.3**	**1,327**	**1.5**	**3.8**	**0.6**
traffic	*11*	*0.2*	*1.2*	*714*	*0.8*	*2.0*	*0.6*
non-traffic	*5*	*0.1*	*0.6*	*421*	*0.5*	*1.2*	*0.5*
Animal rider or occupant of animal-drawn vehicle	235	4.9	14.4	6,607	7.5	18.9	0.8
Occupant of watercraft	30	0.6	2.0	1,868	2.1	5.3	0.4
Occupant of a special all-terrain or off-road motor vehicle	26	0.5	1.2	1,104	1.3	3.2	0.4
Occupant of three-wheeled motor vehicle	12	0.3	0.6	258	0.3	0.7	0.8
Occupant of a special agricultural vehicle	13	0.3	1.0	439	0.5	1.3	0.8
Occupant of a tram	7	0.2	0.6	78	0.1	0.2	2.7
Occupant of a train	6	0.1	0.3	99	0.1	0.3	1.0
Occupant of a special industrial vehicle	4	0.1	0.3	275	0.3	0.8	0.3
Occupant of a special construction vehicle	4	0.1	0.3	163	0.2	0.5	0.6
Occupant of aircraft	0	0.0	0.0	453	0.5	1.3	0.0
Other and unspecified	124	2.6	7.9	2,013	2.3	5.8	1.4
Total	**4,827**	**100.0**	**327.6**	**87,625**	**100.0**	**251.6**	**1.4**

(continued)

Table 1.03.5 (continued): Mode of transport[(a)] for serious injury; NT, WA, SA and Qld, 1999-00 to 2003–04

(a) 'Mode of transport' here means the vehicle the person was travelling in at the time of being injured in a transport accident. 'Other and unspecified' includes V87, V88, V89, V98, and V99 for ICD-10 (deaths).

(b) Number per 100,000 population, adjusted by direct standardisation to the Australian population in June 2001.

(c) Ratio of age-standardised rate for persons specified as Indigenous to the equivalent rate for all other persons (i.e. non-Indigenous or not stated).

(d) A traffic accident is any vehicle accident occurring on a public road [i.e. originating on, terminating on, or involving a vehicle partially on the road]. A non-traffic accident is any vehicle accident that occurs entirely on any place other than a public road. For a certain proportion of cases, whether an accident was traffic or non-traffic was unknown. These cases are included in the totals for each mode of transport and this is the reason the sum of traffic and non-traffic cases is sometimes less than the total for each mode.

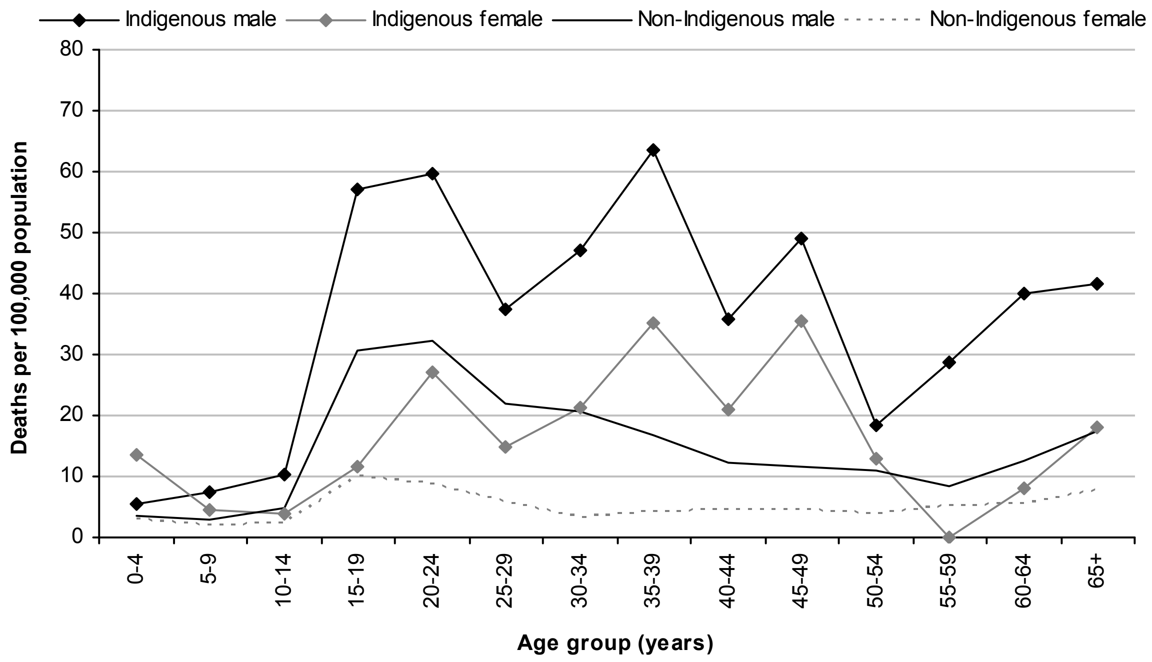
Source: Berry et al. 2007.

Land transport injury

- Most Indigenous transport deaths (99%) and serious injury cases (99%) were known to have involved land transport; 94% of non-Indigenous transport deaths and 96% of serious injury cases were known to have involved land transport (Berry et al. 2007).
- From 1999–00 to 2003–04, land transport accidents accounted for 27% of fatal injury cases for Indigenous people and 8.7% of all injury hospitalisations for Indigenous people. The age-standardised rate of land transport injury was 26 deaths per 100,000 Indigenous persons and 324 admissions to hospital per 100,000 Indigenous persons (Berry et al. 2007).

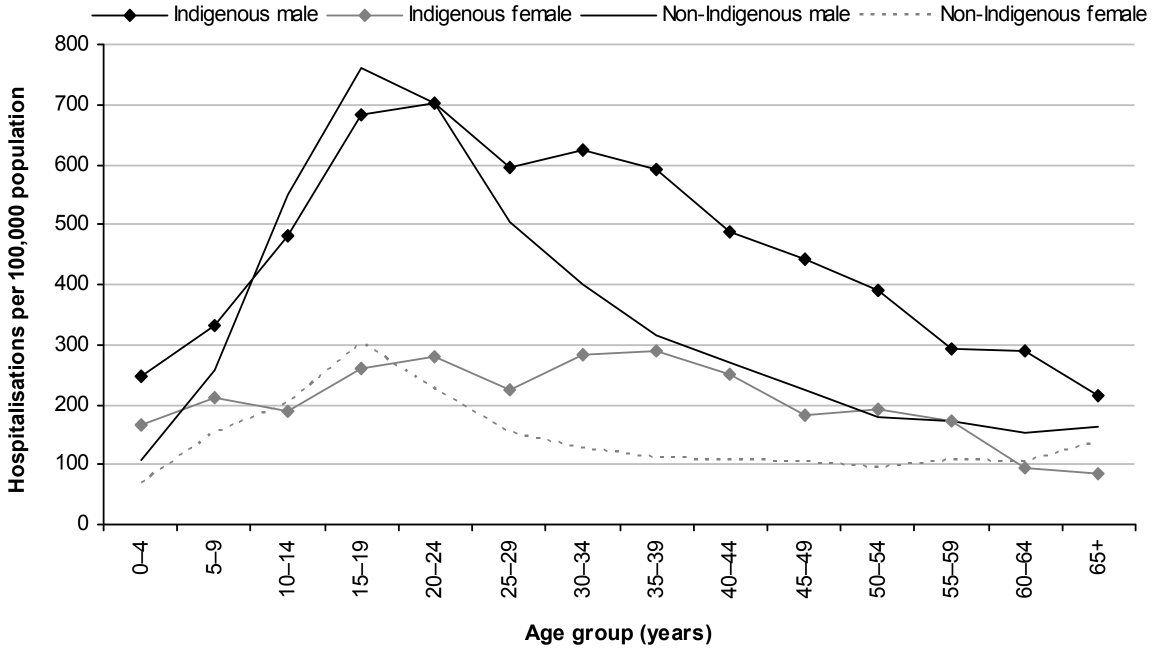
Land transport injury by age and sex

- Indigenous males accounted for two-thirds (66%) of all land transport deaths of Indigenous Australians in 1999–00 to 2003–04 (Figure 1.03.2).
- Fatal injury rates, on an age-specific population basis, for non-Indigenous males and females were highest for the 15–19 and 20–24 year age groups. For Indigenous males and females, fatal injury rates rose in early adulthood and remained elevated through middle age, although age-specific rates were variable because of small case numbers in each age group (Berry et al. 2007).
- Fatal injury rates for Indigenous males were substantially higher than non-Indigenous rates across all ages, except for infants aged 0–4 years. For females, Indigenous and non-Indigenous fatal injury rates were similar in the age bands from 5 to 19 years and the 55–64 years age group; but Indigenous females had a substantially higher death rate than non-Indigenous females in infancy, and over the age bands from 20 to 54 years (Figure 1.03.2).
- Indigenous males accounted for over two-thirds (68%) of Indigenous land transport deaths in 1999–00 to 2003–04 (Figure 1.03.3).
- For both males and females, Indigenous serious injury rates were fairly similar to non-Indigenous rates over the age bands from 5 to 29 years and above age 60 (women) or 65 (men); but Indigenous people had a substantially higher serious injury rate in infancy, and in the age bands from 30 to 59 years (Figure 1.03.3).



Source: Berry et al. 2007.

Figure 1.03.2: Age-specific fatal injury rates for land transport injury by sex, Indigenous and non-Indigenous persons, NT, WA, SA and Qld, 1999–00 to 2003–04



Source: Berry et al. 2007.

Figure 1.03.3: Age-specific serious injury rates for land transport injury by sex, Indigenous and non-Indigenous persons, NT, WA, SA and Qld, 1999–00 to 2003–04

Time series analysis

Injury and poisoning

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, therefore they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning over the seven-year period 1998–99 to 2005–06 are presented in Table 1.03.6 and Figure 1.03.4.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were apparent declines in hospitalisation rates for injury and poisoning among Indigenous males and females during the period 1998–99 to 2005–06, but these declines were not significant.
- There were significant declines in hospitalisation rates for injury and poisoning among other Australian males and persons overall during the same period, with an average yearly decline in the rate of around 0.2 and 0.1, respectively, per 1,000 population. This was equivalent to a 5% and 4% decline in the rate for males and persons overall over the period. There was an apparent decline in the hospitalisation rates for injury and poisoning among other Australian females over the same period, but this decline was not significant.
- There were no significant changes in the hospitalisation rate ratios or rate differences between Indigenous and other Australians for the period 1998–99 to 2005–06.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all affect the level of hospitalisation over time. Caution should be used in interpreting changes over time, as it is not possible to ascertain whether a change in reported hospitalisation rates is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisations may reflect increased use of admitted patient hospital services rather than a worsening of health.

Table 1.03.6: Age-standardised hospitalisation rates, rate ratios and rate differences for injury and poisoning, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous rate (separations per 1,000)										
Males	58.8	54.0	55.1	57.0	52.4	53.6	54.9	57.6	–0.2	–1.8
Females	46.8	46.4	45.0	46.1	44.4	45.9	45.7	46.7	—	–0.5
Persons	52.6	50.2	49.9	51.5	48.4	49.8	50.2	52.0	–0.1	–1.2
Other Australian[(d)] rate (separations per 1,000)										
Males	27.7	27.7	27.0	26.5	25.5	26.0	26.5	26.7	–0.2*	–5.2
Females	18.6	18.3	18.1	17.8	17.5	17.8	18.0	18.2	–0.1	–2.6
Persons	23.3	23.2	22.7	22.3	21.7	22.0	22.4	22.6	–0.1*	–4.3
Rate ratio[(e)]										
Males	2.1	1.9	2.0	2.1	2.1	2.1	2.1	2.2	—	3.3
Females	2.5	2.5	2.5	2.6	2.5	2.6	2.5	2.6	—	2.1
Persons	2.3	2.2	2.2	2.3	2.2	2.3	2.2	2.3	—	3.1
Rate difference[(f)]										
Males	31.1	26.3	28.1	30.5	26.8	27.7	28.4	30.9	0.1	1.2
Females	28.2	28.1	26.9	28.3	26.9	28.1	27.7	28.6	—	0.9
Persons	29.3	27.0	27.2	29.2	26.8	27.7	27.8	29.4	—	1.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

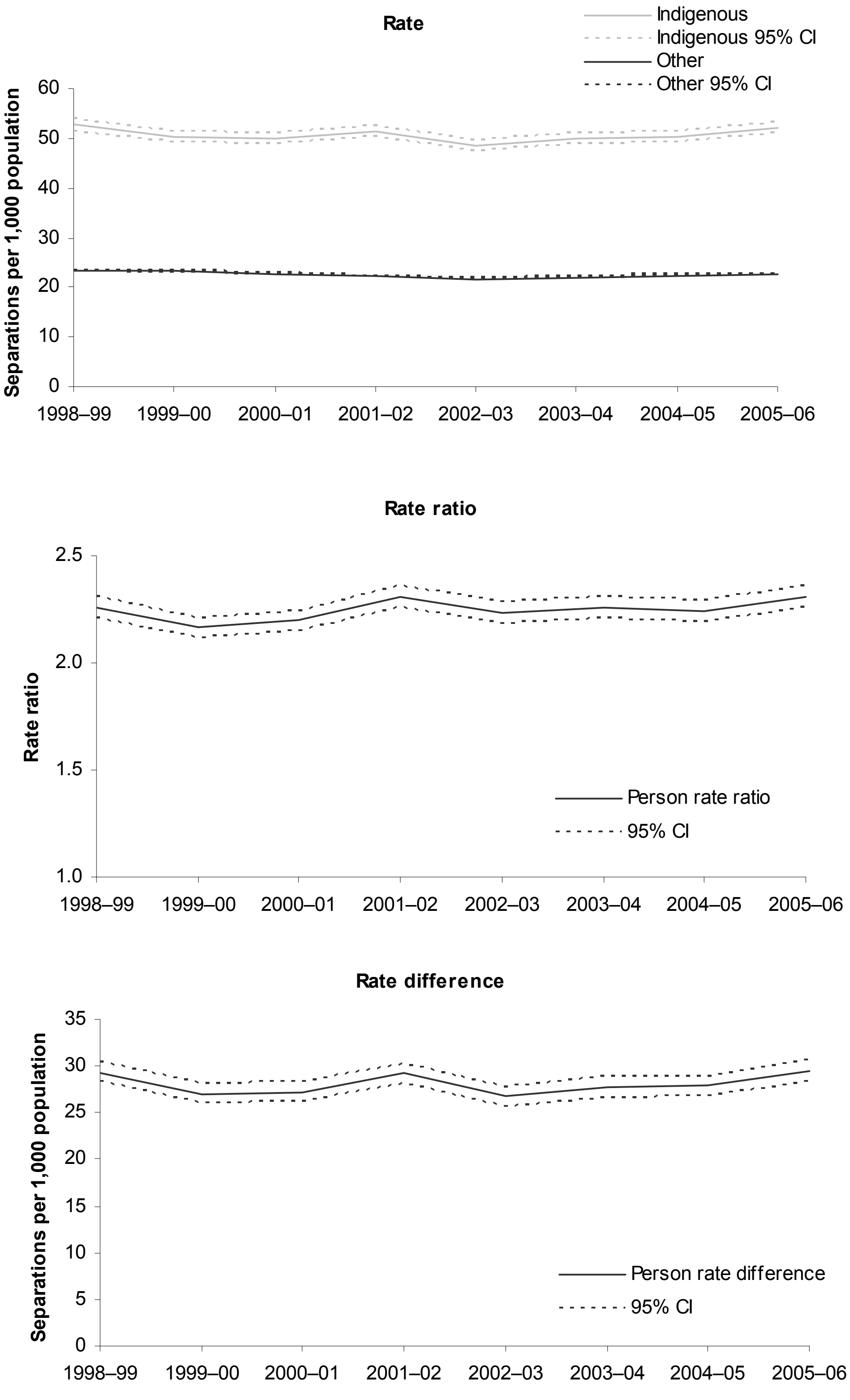
(d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.03.4: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning, Qld, WA, SA and NT, 1998–99 to 2005–06

Sensitivity of hospitalisation trends to changes in identification

- The fitted trends described above have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for identification were posted—constant identification, increasing identification and decreasing identification:
    - Under the constant identification scenario, the number of hospitalisations for the period under study was adjusted using the following identification factors:
        - Queensland 87%
        - Western Australia 97%
        - South Australia 82%
        - Northern Territory 96%.
    - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study—from 82% in 1998–99 to 87% in 2005–06 for Queensland, from 95% to 97% for Western Australia, from 76% to 82% for South Australia, and from 94% to 96% for the Northern Territory.
    - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 92% in 1998–99 to 87% in 2005–06 for Queensland, from 99% to 97% for Western Australia, from 88% to 82% for South Australia, and from 98% to 96% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in hospitalisations might not persist.
- The decline in the hospitalisation rates for injury and poisoning for other Australian males and persons overall during the period 1998–99 to 2005–06 remained significant under the constant and decreasing identification scenarios. Only the decline in the hospitalisation rates for other Australian males remained significant under the increasing identification scenario.

Assault

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault over the 7-year period 1998–99 to 2005–06 are presented in Table 1.03.7 and Figure 1.03.5.

- Over the period 1998–99 to 2005–06, there were significant declines in the hospitalisation rate for assault among Indigenous males and females. The fitted trend implies an average yearly decline in the rate of around 0.4 per 1,000 for Indigenous males and 0.2 per 1,000 for Indigenous females, which is equivalent to a 16% and 9% reduction in the rate for males and females over the period.
- Over the same period there was no significant change in the hospitalisation rate for assault for other Australians.
- There were significant declines in both the hospitalisation rate ratios and rate differences between Indigenous and other Australians for assault over the period 1998–99 to 2005–06 (13% decline in the ratio and rate difference). This reflects both a relative and absolute decline in the gap between Indigenous and other Australian hospitalisation rates for assault.

Table 1.03.7: Age-standardised hospitalisation rates, rate ratios and rate differences for assault, Qld, WA, SA and NT, 1998–99 to 2005–06

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(a)]	% change over period[(b)]
Indigenous rate (separations per 1,000)										
Males	16.2	15.3	15.2	15.8	14.6	13.6	13.6	13.8	–0.4*	–16.1
Females	16.6	16.1	15.1	15.5	15.0	14.5	15.0	15.1	–0.2*	–9.1
Persons	16.4	15.7	15.1	15.6	14.8	14.1	14.3	14.4	–0.3*	–12.4
Other Australian[(c)] rate (separations per 1,000)										
Males	1.4	1.4	1.5	1.5	1.4	1.3	1.4	1.5	—	1.9
Females	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	—	–3.6
Persons	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	—	1.1
Rate ratio[(d)]										
Males	11.5	11.1	10.2	10.8	10.5	10.1	9.6	9.1	–0.3*	–17.4
Females	51.4	50.5	45.1	46.5	48.1	46.6	50.5	45.6	–0.4	–5.5
Persons	18.7	18.3	16.4	17.3	17.2	16.9	16.6	15.5	–0.4*	–13.2
Rate difference[(e)]										
Males	14.8	13.9	13.7	14.4	13.2	12.3	12.2	12.3	–0.4*	–17.8
Females	16.2	15.7	14.7	15.2	14.7	14.2	14.7	14.7	–0.2*	–9.2
Persons	15.5	14.8	14.2	14.7	13.9	13.2	13.4	13.5	–0.3*	–13.2

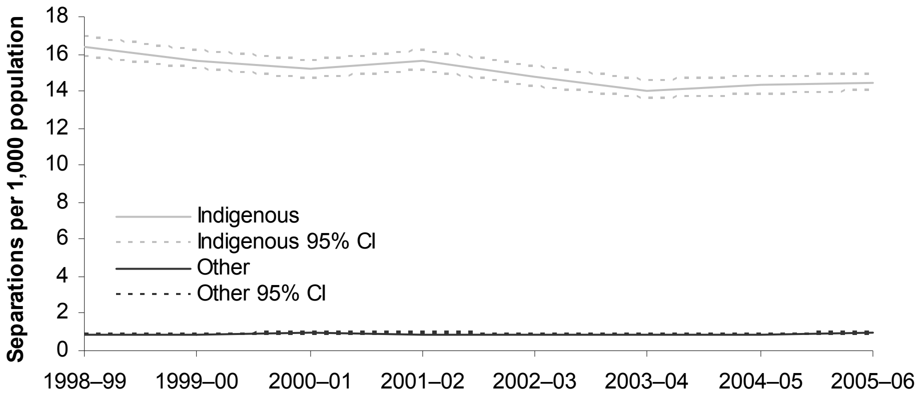
* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.
(c) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
(d) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.
(e) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

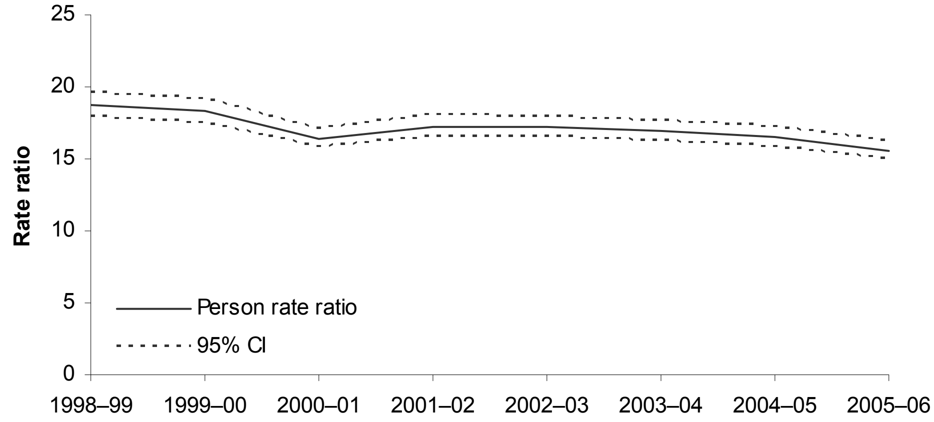
Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity database.

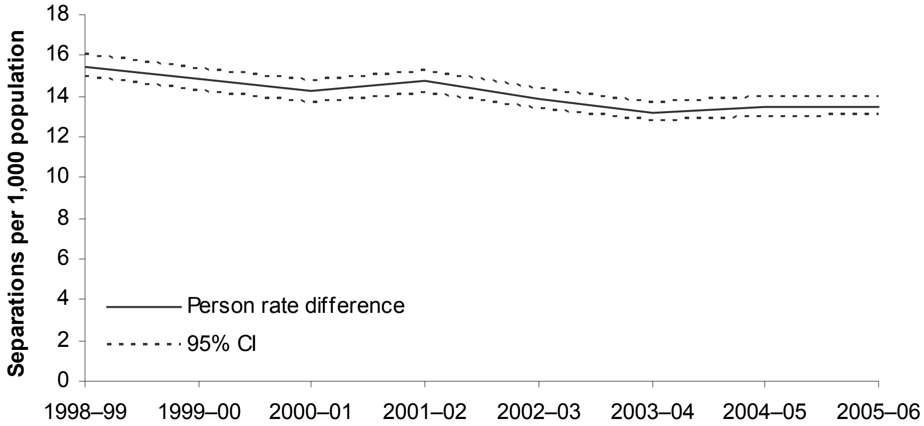
Rate



Rate ratio



Rate difference



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.03.5: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault, Qld, WA, SA and NT, 1998–99 to 2005–06

Additional information

This section presents information on injuries received in the 4 weeks before the interview from the 2004–05 ABS National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). The NATSIHS collected information on the type of injury, the damage caused by the injury, the activity and location at the time of injury and the part of the body affected.

Note that the 2004–05 NATSIHS data relate only to persons in private dwellings. People in hospitals, nursing and convalescent homes, and hospices were excluded from the sample.

Prevalence

- After adjusting for differences in age distribution, Indigenous Australians had a slightly lower rate of reported recent injury (in the previous 4 weeks) than non-Indigenous Australians (15.4 per 100 compared with 18.6 per 100).

Type of injury

- The most common events which led to injury for Indigenous Australians were low falls (33%) and cuts (19%).
- Indigenous Australians were three times as likely as non-Indigenous Australians to report a recent injury which was the result of an attack by another person (rate ratio 2.8) or a high fall (rate ratio 3.1).

Nature of injury

- The most common forms of recent injury for Indigenous Australians were an open wound (41%) and bruising (30%).
- Nearly half (45%) of Indigenous Australians in the 0–14 age group who experienced an injury had an open wound. Bruising was also a common injury in this age group (36%).
- Indigenous Australians were more than twice as likely as non-Indigenous Australians to report a fracture as a recent injury (rate ratio 2.4).

Activity at time of injury event

- Leisure activities were the most common activity being undertaken when Indigenous Australians were injured (37% of Indigenous persons recently injured were undertaking leisure activity at the time of injury).
- In the Indigenous 0–14 age group, 62% of injuries occurred during leisure activities, 14% occurred during sports activities and 7% of injuries received in this age group occurred while attending school. For non-Indigenous Australians in the 0–14 age group, 54% of injuries occurred during leisure activities, 15% of injuries occurred during sports activities and 12% of injuries were received while attending school.
- Indigenous Australians who were recently injured were slightly less likely than non-Indigenous Australians who were recently injured to be attending school/college/university or working for income or as a volunteer at the time of injury (rate ratios of 0.7 and 0.8 respectively) and slightly more likely to be resting, sleeping or engaged in other personal activities at the time of injury (rate ratio of 1.4).

Location at time of injury event

- Indigenous Australians who received recent injuries were most likely to experience them inside or outside their own or someone else's home (29% and 28% respectively).
- Indigenous Australians were less likely that non-Indigenous Australians to experience recent injuries at a commercial or industrial place (respective rate ratios of 0.5 and 0.7)

and slightly more likely than non-Indigenous Australians to experience recent injuries at a street/highway (rate ratio of 1.3).

Influence of alcohol

- In 2004–05, 6% of Indigenous Australians aged 15 years and over reported being under the influence of alcohol or other substances at the time of injury.
- Indigenous Australians were almost five times as likely as non-Indigenous Australians to report being under the influence of alcohol or other substances at the time of injury (rate ratio of 4.5).

Data quality issues

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

(continued)

Data quality issues (continued)

Data sources for injury emergency episodes

The National Non-admitted Patient Emergency Department Care Database is a national collection of de-identified data on emergency department episodes based on the Non-admitted Emergency Department Care National Minimum Data Set. This data set includes the standard Indigenous status question but does not include injury coding (for example, ICD-10). The Injury Surveillance National Minimum Data Set includes injury coding (components of ICD-10) but does not include demographic details such as Indigenous status. Therefore, there is currently no national minimum data set containing both Indigenous status and injury coding.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in major cities and regional and remote areas, but very remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Survey.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the NATSIHS 2004–05 publication (ABS 2006).

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1.04 Hospitalisation for pneumonia

The number of hospital separations with a principal diagnosis of pneumonia for Aboriginal and Torres Strait Islander peoples expressed as a rate by age group, age-standardised rate and ratio

Data sources

Data for this measure come from the AIHW National Hospital Morbidity Database. Additional information on invasive pneumococcal disease notifications comes from the National Notifiable Disease Surveillance System.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

National Notifiable Diseases Surveillance System (NNDSS)

A set of 56 diseases and conditions are notifiable nationally. Data on all these cases are forwarded to the NNDSS, managed by the Australian Government Department of Health and Ageing.

Although identification of Indigenous notifications in all states and territories is incomplete, three jurisdictions (Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2001–2002 in the NNDSS. Data on Indigenous status for certain notifiable diseases are not available for the Australian Capital Territory, New South Wales or Tasmania.

Analyses

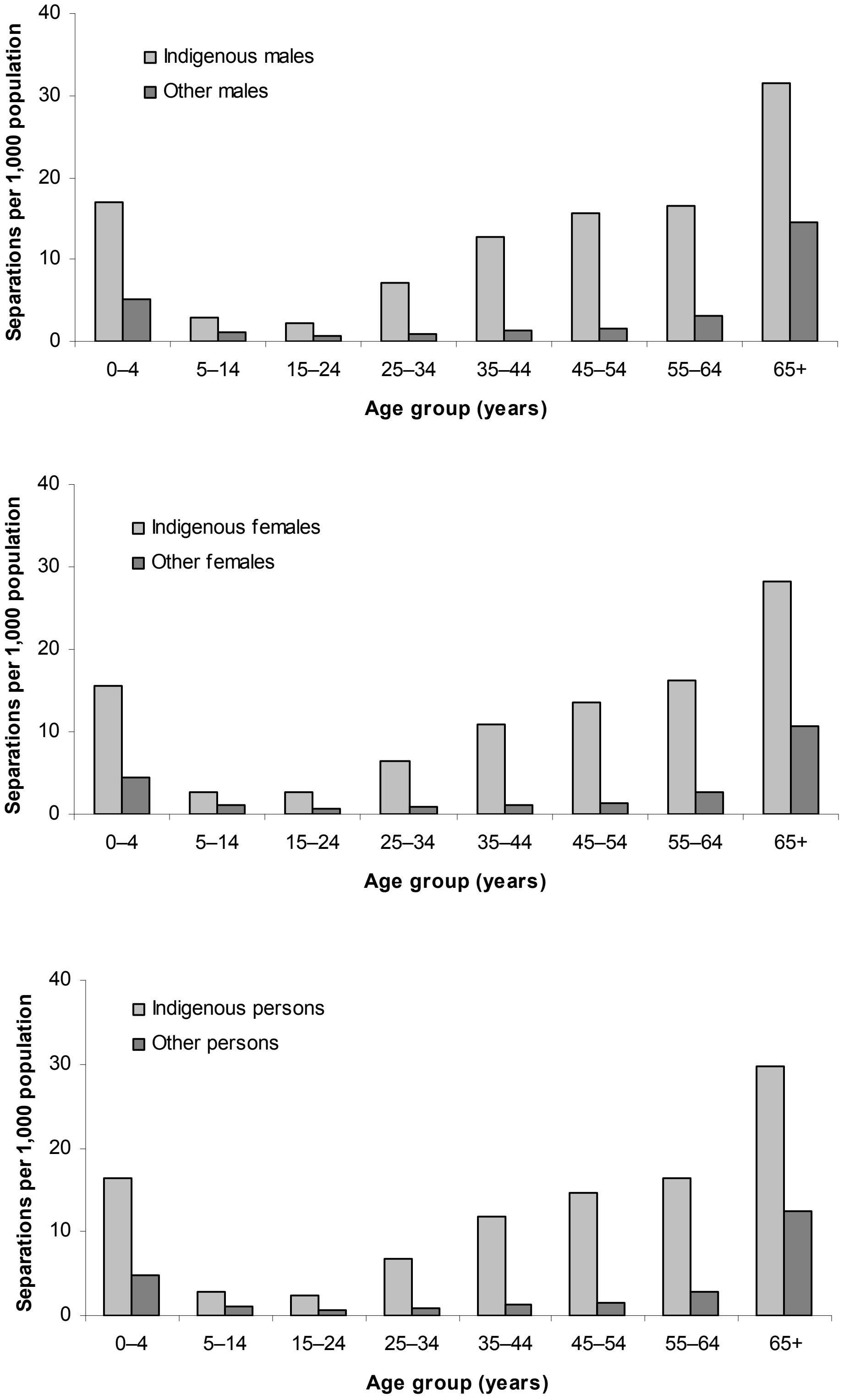
Age-standardised rates and ratios have been used as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

Hospitalisations

- In the 2-year period July 2004 to June 2006, there were 122,951 hospitalisations for pneumonia in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, 7,943 (6%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples (Table 1.04.1).
- Hospitalisations for pneumonia represented 1.7% of all hospital separations for Aboriginal and Torres Strait Islander Australians.

Hospitalisations by age and sex

- In the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males and females had higher hospitalisation rates for pneumonia than other males and females across all age groups (Figure 1.04.1).
- The greatest difference in rates occurred in the 35–44 and 45–54 year age groups where Indigenous males and females were hospitalised at around 9–10 times the rate of other Australians.
- For both Indigenous and other Australian males and females, hospitalisation rates were highest among those aged 0–4 years, 55–64 years and 65 years and over.
- Approximately 51% of Indigenous Australians hospitalised for pneumonia were males (4,051) and 49% were females (3,892).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.04.1: Age-specific hospitalisation rates for a principal diagnosis of pneumonia, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Hospitalisations by state/territory

Table 1.04.1 presents hospitalisations for a principal diagnosis of pneumonia for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are also included in the table. The Australia data are adjusted by applying a completeness factor of 89.4% which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised for pneumonia at four times the rate of other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous males and females were hospitalised for pneumonia at 4.2 and 5.0 times the rate of other males and females respectively.
- In the Northern Territory, Indigenous Australians were nine times more likely to be hospitalised for pneumonia than other Australians. In Western Australia, Indigenous Australians were seven times more likely to be hospitalised for pneumonia than other Australians. In South Australia and Queensland, Indigenous Australians were hospitalised for pneumonia at four times the rate of other Australians. In New South Wales and Victoria, Indigenous Australians were twice as likely to be hospitalised for pneumonia than other Australians in these jurisdictions.

Table 1.04.1: Hospitalisations for principal diagnosis of pneumonia, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
NSW									
Males	702	7.2	6.4	8.1	21,265	3.3	3.3	3.4	2.2*
Females	627	6.1	5.4	6.7	18,932	2.5	2.5	2.6	2.4*
Persons	1,329	6.6	6.1	7.1	40,199	2.9	2.9	2.9	2.3*
Vic									
Males	94	5.6	3.8	7.4	17,865	3.8	3.7	3.8	1.5*
Females	96	5.7	4.2	7.1	15,846	2.8	2.7	2.8	2.1*
Persons	190	5.6	4.5	6.7	33,711	3.2	3.2	3.2	1.7*
Qld									
Males	841	11.7	10.5	12.8	10,834	3.0	2.9	3.1	3.9*
Females	805	9.5	8.6	10.3	9,677	2.4	2.3	2.4	4.0*
Persons	1,646	10.4	9.7	11.1	20,511	2.7	2.6	2.7	3.9*
WA									
Males	923	18.4	16.9	20.0	5,073	2.9	2.8	2.9	6.4*
Females	948	17.4	16.0	18.8	4,394	2.2	2.1	2.3	7.9*
Persons	1,871	17.9	16.8	18.9	9,467	2.5	2.4	2.5	7.2*
SA									
Males	236	14.9	12.4	17.5	5,560	3.6	3.5	3.7	4.2*
Females	220	11.2	9.3	13.1	5,006	2.8	2.7	2.8	4.0*
Persons	456	12.8	11.3	14.3	10,566	3.1	3.0	3.2	4.1*
NT									
Males	1,255	25.8	23.9	27.8	323	3.2	2.8	3.7	8.0*
Females	1,196	26.0	24.1	27.8	231	2.4	2.0	2.7	11.0*
Persons	2,451	26.1	24.7	27.4	554	2.8	2.5	3.1	9.3*
NSW, Vic, Qld, WA, SA and NT[(d)]									
Males	**4,051**	**12.9**	**12.3**	**13.5**	**60,920**	**3.3**	**3.3**	**3.4**	**3.9***
Females	**3,892**	**11.6**	**11.1**	**12.1**	**54,086**	**2.6**	**2.5**	**2.6**	**4.5***
Persons	**7,943**	**12.2**	**11.8**	**12.6**	**115,008**	**2.9**	**2.9**	**2.9**	**4.2***
Australia unadjusted[(j)]									
Males	4,092	12.4	11.9	13.0	63,483	3.3	3.3	3.4	3.7*
Females	3,943	11.3	10.8	11.7	56,299	2.6	2.5	2.6	4.4*
Persons	8,035	11.8	11.4	12.2	119,784	2.9	2.9	2.9	4.1*

(continued)

Table 1.04.1 (continued): Hospitalisations for principal diagnosis of pneumonia, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
Australia adjusted[(j)(k)]									
Males	4,573	13.9	13.3	14.5	63,002	3.3	3.3	3.4	4.2*
Females	4,406	12.6	12.1	13.1	55,836	2.5	2.5	2.6	5.0*
Persons	8,979	13.2	12.8	13.6	118,840	2.9	2.9	2.9	4.6*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes J12–J18.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analysis

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, therefore they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

All ages

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for pneumonia over the 7-year period 1998–99 to 2005–06 are presented in Table 1.04.2 and Figure 1.04.2.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were apparent declines in hospitalisation rates for pneumonia among Indigenous males and persons overall during the period 1998–99 to 2005–06, however, the declines were only significant for Indigenous males. Hospitalisation rates for pneumonia declined by 15% for Indigenous males over the period.
- There were significant declines in hospitalisation rates among other Australian males over the same period, but there were no significant changes among other Australian females.
- There were also significant declines in the hospitalisation rate ratios and rate differences between Indigenous and other Australian males for pneumonia. The fitted trend implies an average yearly decline of 0.1 in the rate ratio (8% decline over the period) and 0.4 per 1,000 in the rate difference for the period 1998–99 to 2005–06 (16% decline over the period). This reflects a relative and absolute decrease in the gap between the hospitalisation rates for Indigenous and other Australian males for pneumonia.

Children aged 0–4 years

Hospitalisation rates, rate ratios and rate differences between Indigenous and other children aged 0–4 years for pneumonia over the 7-year period 1998–99 to 2005–06 are presented in Table 1.04.3 and Figure 1.04.3.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant declines in hospitalisation rates for pneumonia among Indigenous children aged 0–4 years during the period 1998–99 to 2005–06. The fitted trend implies an average yearly decline in the rate of around 3 per 1,000 which is equivalent to a 48% decline in the rate over the period.
- Over the same period, there were no significant changes in the hospitalisation rates among other children aged 0–4 years for pneumonia.
- There were significant declines in both the hospitalisation rate ratios and rate differences between Indigenous and other children for pneumonia. The fitted trend implies an average yearly decline of around 0.4 in the rate ratio (39% decline over the period) and 2.6 per 1,000 in the rate difference (53% decline) for the period 1998–99 to 2005–06. This reflects a relative and absolute decline in the gap in hospitalisation rates for pneumonia among Indigenous and other Australian children aged 0–4 years over the period.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous

Australians. Also, changes in access, hospital policies and practices all affect the level of hospitalisation over time. Caution should be used in interpreting changes over time as it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may reflect better hospital access rather than a worsening of health.

Table 1.04.2: Age-standardised hospitalisation rates, rate ratios and rate differences for pneumonia, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

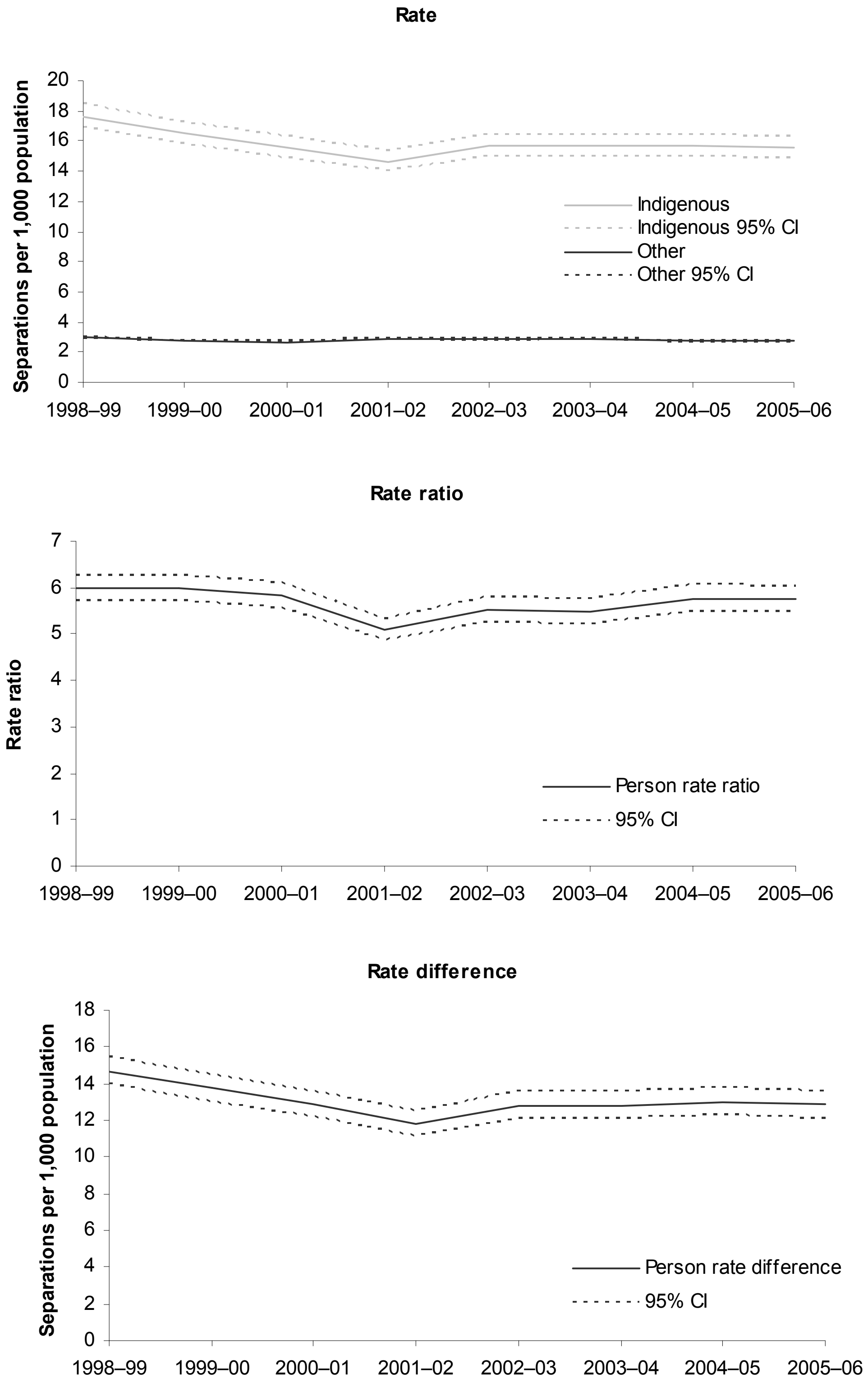
	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous rate (separations per 1,000)										
Males	20.0	18.6	17.0	17.2	17.0	17.0	16.8	16.3	–0.4*	–14.8
Females	15.6	14.7	14.3	12.5	14.6	14.5	14.9	14.9	—	–0.5
Persons	17.6	16.5	15.6	14.7	15.7	15.7	15.7	15.6	–0.2	–7.9
Other Australian[(d)] rate (separations per 1,000)										
Males	3.5	3.3	3.1	3.3	3.3	3.2	3.1	3.1	–0.04*	–8.0
Females	2.5	2.4	2.3	2.6	2.5	2.6	2.4	2.4	—	0.4
Persons	2.9	2.8	2.7	2.9	2.8	2.9	2.7	2.7	—	–3.6
Rate ratio[(e)]										
Males	5.7	5.7	5.5	5.2	5.2	5.3	5.4	5.3	–0.1*	–7.6
Females	6.2	6.1	6.1	4.9	5.8	5.6	6.2	6.2	—	–0.9
Persons	6.0	6.0	5.8	5.1	5.5	5.5	5.8	5.8	—	–4.6
Rate difference[(f)]										
Males	16.5	15.4	13.9	13.9	13.7	13.8	13.6	13.2	–0.4*	–16.2
Females	13.1	12.3	11.9	10.0	12.1	11.9	12.5	12.5	—	–0.7
Persons	14.7	13.7	12.9	11.8	12.8	12.8	13.0	12.9	–0.2	–8.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.
(d) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.
(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.04.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for pneumonia, Qld, WA, SA and NT, 1998–99 to 2005–06

Table 1.04.3: Children aged 0–4 years, hospitalisation rates, rate ratios and rate differences for pneumonia, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous rate (separations per 1,000)										
Persons	40.1	36.5	34.8	31.8	30.3	29.6	21.3	20.7	–2.7*	–47.6
Other Australian[(d)] rate (separations per 1,000)										
Persons	5.5	5.8	6.2	6.3	6.3	6.3	5.5	4.5	–0.1	–12.6
Rate ratio[(e)]										
Persons	7.2	6.3	5.6	5.1	4.8	4.7	3.9	4.6	–0.4*	–38.7
Rate difference[(f)]										
Persons	34.5	30.8	28.6	25.5	24.0	23.2	15.8	16.2	–2.6*	–53.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

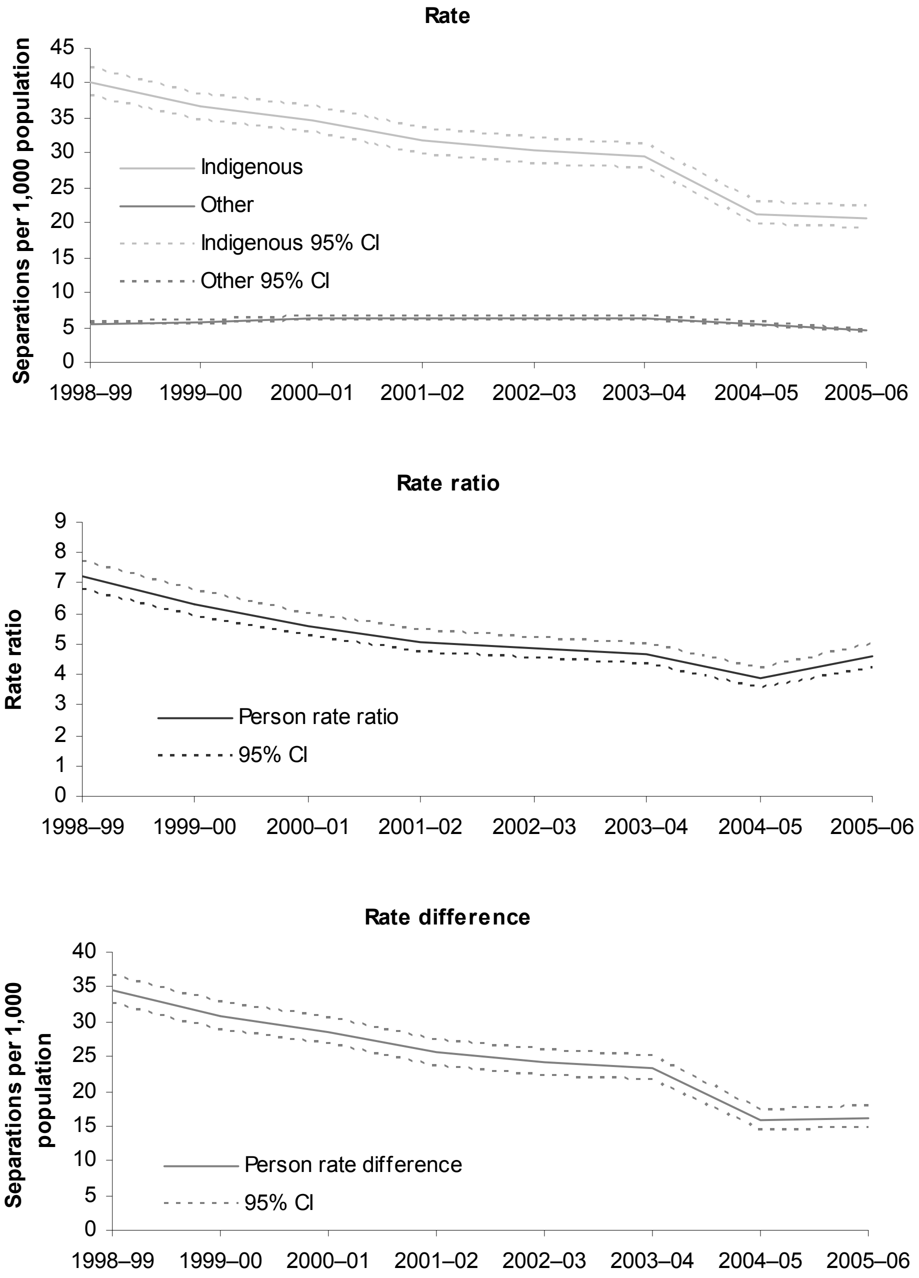
(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

(d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.04.3: Children aged 0–4 years, hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for pneumonia, Qld, WA, SA and NT, 1998–99 to 2005–06

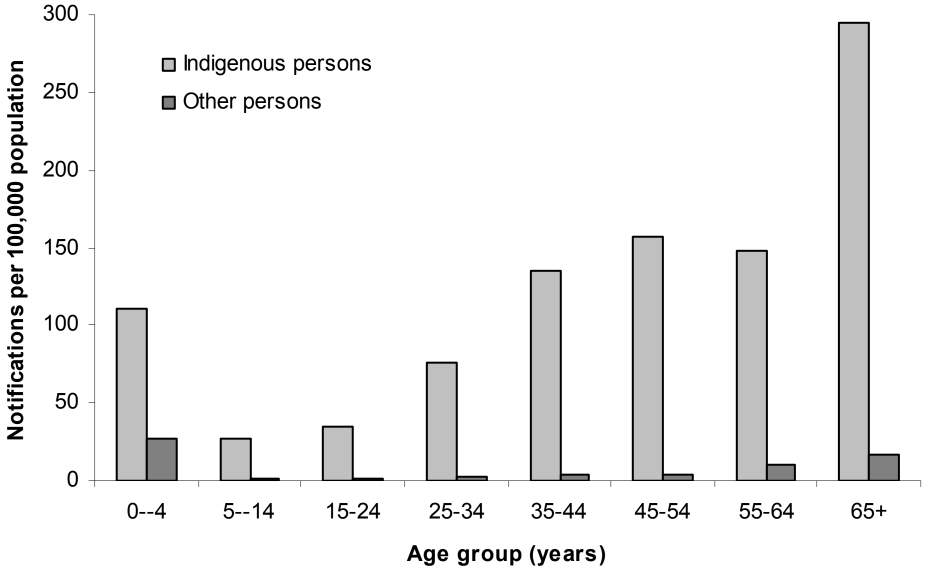
Additional information

Invasive pneumococcal disease

Pneumococcal disease is caused by the bacterium *Streptococcus pneumoniae* and can cause infection in parts of the respiratory tract (otitis media, sinusitis, pneumonia) or enter the bloodstream. Manifestations include meningitis, pneumonia and septicaemia. Invasive pneumococcal disease is defined as a sterile site isolate of *Streptococcus pneumoniae*, usually from blood (Menzies et al. 2004).

Incidence

For the period 2004–2006, there were 403 invasive pneumococcal disease notifications among Indigenous persons in Western Australia, South Australia and the Northern Territory. The notification rate for Indigenous persons was 84.5 per 100,000, which was 12 times the rate for other persons (7.1 per 100,000). Notification rates were highest among those aged 65 years and over and 45–54 years for Indigenous Australians, and highest among those aged 0–4 years and 65 years and over for other Australians. For all age groups, Indigenous Australians had higher notification rates than other Australians. Rate differences were highest among the 35–44 and 45–54 year age groups, where Indigenous Australians suffered from invasive pneumococcal disease at between 37 and 40 times the rate of other Australians. Importantly, the notification rate among Aboriginal and Torres Strait Islander peoples was significantly higher at younger ages than for other Australians. For example, the rate among those aged 5–14 years was equivalent to the rate seen among other Australians aged 65 years and over (Figure 1.04.4).



Source: AIHW analysis of National Notifiable Disease Surveillance System, DoHA.

Figure 1.04.4: Invasive pneumococcal disease notification rate, by age group and Indigenous status, WA, SA and NT, 2004–2006

Hospitalisations

Over the period June 2004 to July 2006, there were 86 hospitalisations of Indigenous people in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined for invasive pneumococcal disease. Over one-quarter (27%) of these hospitalisations were among those aged 0–4 years.

Time series

Hospitalisation rates, rate ratios and rate differences between Indigenous and other children aged 0–4 years in Queensland, Western Australia, South Australia and the Northern Territory for invasive pneumococcal disease over the 7-year period 1998–99 to 2005–06 are shown in Table 1.04.4.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant declines in hospitalisation rates for invasive pneumococcal disease among Indigenous children aged 0–4 years during the period 1998–99 to 2005–06. The fitted trend implies an average yearly decline in the rate of around 0.1 per 1,000, which is equivalent to a 66% decline in the rate over the period.
- Over the same period, there was an apparent decline in the hospitalisation rate for invasive pneumococcal disease among other children aged 0–4 years, but the decline was not significant.
- There was a significant decrease in the hospitalisation rates for other children between 2004–05 and 2005–06. This decrease reflects the impact of the introduction of pneumococcal vaccinations for all Australian children from January 2005 (Roche et al. 2007). The introduction of these vaccinations has not had the same impact for Indigenous children, as free pneumococcal vaccinations have been available to all Indigenous children under 2 years of age since 2001.
- There were apparent declines in both the hospitalisation rate ratios and rate differences between Indigenous and other children for invasive pneumococcal disease during the period 1998–99 to 2005–06, but these declines were not significant. The non-significance of the trends can be attributed to the large change in the other Australian rate because of the introduction of pneumococcal vaccinations for all Australian children from January 2005.

Table 1.04.4: Children aged 0–4 years, hospitalisation rates, rate ratios and rate differences for invasive pneumococcal disease, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change [(c)]
Indigenous rate (separations per 1,000)										
Persons	0.6	0.6	0.4	0.2	0.4	0.3	0.2	0.2	–0.1*	–65.6
Other Australian[(d)] rate (separations per 1,000)										
Persons	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.03	–0.01	–83.9
Rate ratio[(e)]										
Persons	5.9	2.9	1.6	0.8	1.8	1.6	1.8	6.4	–0.02	–1.8
Rate difference[(f)]										
Persons	0.5	0.4	0.1	–0.1	0.2	0.1	0.1	0.1	–0.05	–61.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

(d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Hospitalisations for pneumococcal meningitis (G00.1) and pneumococcal septicaemia (A40.3) have been used as a measure for invasive pneumococcal disease.

Source: AIHW analysis of National Hospital Morbidity Database.

Immunisation

A recent report from the National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases found that among adults aged 50–64 years, coverage of pneumococcal vaccine was higher for Indigenous Australians than for other Australians (20% compared with 3% respectively) (Menzies et al. 2004). Indigenous adults in remote areas had higher vaccination coverage rates for this disease than in non-remote areas. Pneumococcal vaccinations are likely to be higher for Indigenous adults than for other adults as the vaccinations have been funded for Indigenous adults since 1999.

Data quality issues

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

References

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1.05 Circulatory disease

Prevalence, incidence and number of hospital separations with a principal diagnosis of circulatory disease for Aboriginal and Torres Strait Islander peoples expressed as a rate by age group, age-standardised rate and rate ratio

Data sources

Data for this measure come from the National Aboriginal and Torres Strait Islander Health Survey, the Bettering the Evaluation and Care of Health survey and the AIHW National Hospital Morbidity Database.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Bettering the Evaluation and Care of Health (BEACH) survey

Information about encounters in general practice is available from the BEACH survey, which is conducted by the AIHW Australian GP Statistics and Classification Centre. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be underestimated. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Because of a late inclusion of a 'not stated' category of Indigenous status in 2001–02 (before which 'not stated' responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2002–03 to 2006–07, during which there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.5% of total GP encounters in the survey.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Analyses

Age-standardised rates and ratios have been used as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported prevalence

Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey on the prevalence of heart and circulatory conditions among Aboriginal and Torres Strait Islander people are presented in the tables in this section and figure 1.05.1.

Prevalence by age and sex

- In 2004–05 approximately 23% of Indigenous Australians reported having a heart or circulatory condition compared with 20% of non-Indigenous Australians.
- High blood pressure was the most common type of heart and circulatory condition reported by Indigenous and non-Indigenous Australians (15% and 11% respectively) (Table 1.05.1), followed by high cholesterol (7% for both population groups).
- Heart and circulatory conditions were most prevalent among those aged 55 years and over (57% for Indigenous Australians and 53% for non-Indigenous Australians).
- A higher proportion of Indigenous Australians reported having a heart or circulatory problem than non-Indigenous Australians across all age groups 25 years and over (Figure 1.05.1).

Table 1.05.1: Persons reporting heart and circulatory conditions, by Indigenous status and age group, 2004–05[(a)]

	0–24 years		25–44 years		45–54 years		55 years and over		Total[(b)]	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
	Per cent									
Total with heart or circulatory condition	**2**	**2**	**17**	**12**	**35**	**28**	**57**	**53**	**23***	**20***
Has current and/or long-term high blood pressure	—[(c)]	—[(c)]	8*	4*	23*	14*	43*	34*	15*	11*
Heart murmur/heart valve disorder	1	1	3*	1*	2[(c)]	2	4	3	2*	2*
Total persons	**272,736**	**6,396,209**	**128,829**	**5,660,920**	**39,578**	**2,705,580**	**33,167**	**4,529,678**	**474,310**	**19,292,387**

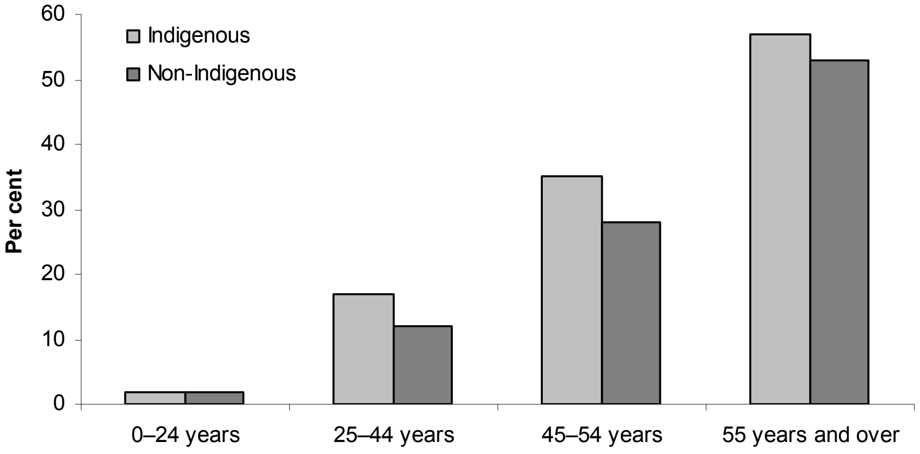
* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Age-standardised proportions.

(c) Estimate has a relative standard error of 25% to 50% and should be used with caution.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.



Source: AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Figure 1.05.1: Proportion of persons reporting heart and circulatory conditions, by Idnigenous status and age group, 2004–05

Prevalence by remoteness and time series

- In 2004–05, the prevalence of heart/circulatory conditions was slightly higher among Aboriginal and Torres Strait Islander males and females in remote areas (12% and 17% respectively) than those in non-remote areas (10% and 14% respectively) (Table 1.05.2).
- There has been little change in the prevalence of heart/circulatory conditions among Aboriginal and Torres Strait Islander peoples between 2001 and 2004–05.

Table 1.05.2: Indigenous persons reporting heart and circulatory problems/diseases,[(a)] by sex and remoteness area, 1995, 2001 and 2004–05

	1995[(b)]			2001			2004–05		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
					Per cent				
Remote	n.a.	n.a.	n.a.	10	16	12	12	17	14
Non-remote	15	16	15	10	13	10	10	14	11
Total	**n.a.**	**n.a.**	**n.a.**	**10**	**14**	**11**	**11**	**15**	**12**
Total number	**131,616**	**133,800**	**265,416**	**217,893**	**225,102**	**442,995**	**232,362**	**241,948**	**474,310**

(a) ICD-10-AM based output classification.

(b) Non-remote data are not available from the 1995 National Health Survey.

Sources: ABS and AIHW analysis of 1995 National Health Survey (Indigenous supplement); 2001 National Health Survey (Indigenous supplement); 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Prevalence by selected population and health characteristics

- In 2004–05, Indigenous Australians aged 15 years and over were more likely to report having heart or circulatory problems if they were in the lowest (1st) quintile of household income than in the highest (5th) income quintile (28% compared with 25%); if the highest year of school completed was Year 9 or below than if Year 12 was the highest year of school completed (30% compared with 24%); and if they were unemployed or not in the labour force (28% and 30%) than if they were employed (23%).

- Indigenous Australians with reported fair/poor health status were much more likely to report heart or circulatory problems than Indigenous Australians with excellent/very good health status (37% compared with 19%). The proportions for non-Indigenous Australians were similar (34% compared with 16%).
- Indigenous Australians aged 18 years and over were more likely to report heart or circulatory problems if they reported their exercise level as low or sedentary rather than high (28% compared with 11%). They were also more likely to report heart or circulatory problems if they had experienced stressors in the previous 12 months (21%) than if no stressors were experienced (17%); if they drank at risky/high-risk levels in the last 12 months than if they did not (31% compared with 28%); and if they were overweight and obese than if they were normal or underweight (29% compared with 21%).
- Indigenous Australians aged 15 years and over were much more likely to report having heart or circulatory problems if they also reported hypertension, diabetes or high cholesterol than if they did not report these conditions. This was also the case for non-Indigenous Australians.

Table 1.05.3: Proportion[(a)] of Indigenous and non-Indigenous Australians aged 15 years and over with heart/circulatory problems, by selected population characteristics, 2004–05

	Indigenous Australians		Non-Indigenous Australians	
	Has heart/circulatory problems	Does not have heart/circulatory problems	Has heart/circulatory problems	Does not have heart/circulatory problems
Household income				
1st quintile	28.2	71.8	25.7	74.3
5th quintile	24.8	75.2	16.7	83.3
Financial stress—able to raise $2,000 within a week for something important				
Yes	15.9	84.1	n.a.	n.a.
No	20.0	80.0	n.a.	n.a.
Highest year of school completed				
Year 12	23.6	76.4	18.4	81.6
Year 9 or below	30.0	70.0	24.6	75.4
Whether has non-school qualification				
Has a non-school qualification	25.4	74.6	20.7	79.3
Does not have a non-school qualification	28.0	72.0	21.9	78.1
Employment				
Employed	22.5	77.5	17.0	83.0
Unemployed	28.2	71.8	13.6	86.4
Not in the labour force	30.3	69.7	25.9	74.1
Housing				
Owner	17.3	82.7	n.a.	n.a.
Renter	18.4	81.6	n.a.	n.a.
Stressors in last 12 months[(b)]				
Serious illness or disability	24.5	75.5	n.a.	n.a.
Total experienced stressors	21.4	78.6	n.a.	n.a.
No stressors	16.8	83.2	n.a.	n.a.
Self-assessed health status				
Excellent/very good	18.8	81.2	15.9	84.1
Good	24.1	75.9	23.2	76.8
Fair/poor	37.4	62.6	33.5	66.5
Smoker status[(b)]				
Current daily smoker	29.0	71.0	19.4	80.6
Not current daily smoker	27.7	72.3	22.9	77.1
Risky/high-risk alcohol consumption in last 12 months[(b)]				
Yes	31.0	69.0	20.5	79.5
No	28.1	71.9	22.8	77.2

(continued)

Table 1.05.3 (continued): Proportion(a) of Indigenous and non-Indigenous Australians aged 15 years and over with heart/circulatory problems, by selected population characteristics, 2004–05

	Indigenous Australians		Non-Indigenous Australians	
	Has heart/circulatory problems	Does not have heart/circulatory problems	Has heart/circulatory problems	Does not have heart/circulatory problems
Whether used substances in last 12 months[(b)(c)]				
Yes	13.0	87.0	n.a.	n.a.
No	21.3	78.7	n.a.	n.a.
Physical activity[(c)]				
Low/sedentary	27.5	72.5	21.9	78.1
Moderate	21.9	78.1	21.0	79.0
High	11.0	89.0	15.4	84.6
Overweight/obesity				
Yes	29.3	70.7	23.8	76.2
No	20.6	79.4	18.5	81.5
Eats vegetables daily				
Yes	27.0	73.0	21.4	78.6
No	24.5	75.5	27.0	73.0
Eats fruit daily				
Yes	27.1	72.9	21.5	78.5
No	24.9	75.1	19.6	80.4
Hypertension				
Yes	97.4	2.6	94.4	5.6
No	11.6	88.4	10.9	89.1
Diabetes				
Yes	39.5	60.5	35.6	64.4
No	23.9	76.1	20.4	79.6
High cholesterol				
Yes	59.6	40.4	44.5	55.5
No	23.4	76.6	18.6	81.4
Total (age-standardised)	**26.9**	**73.1**	**21.4**	**78.6**
Total (crude)	**18.1**	**81.9**	. .	. .
Total number persons aged 15 years and over	53,179	240,462	3,422,780	12,109,597

(a) Proportions are age-standardised except for data for financial stress, housing tenure, substance use in the last 12 months and stressors experienced in the last 12 months for which crude proportions are presented, as data for non-Indigenous Australians are not available.

(b) Persons aged 18 years and over.

(c) Non-remote areas only.

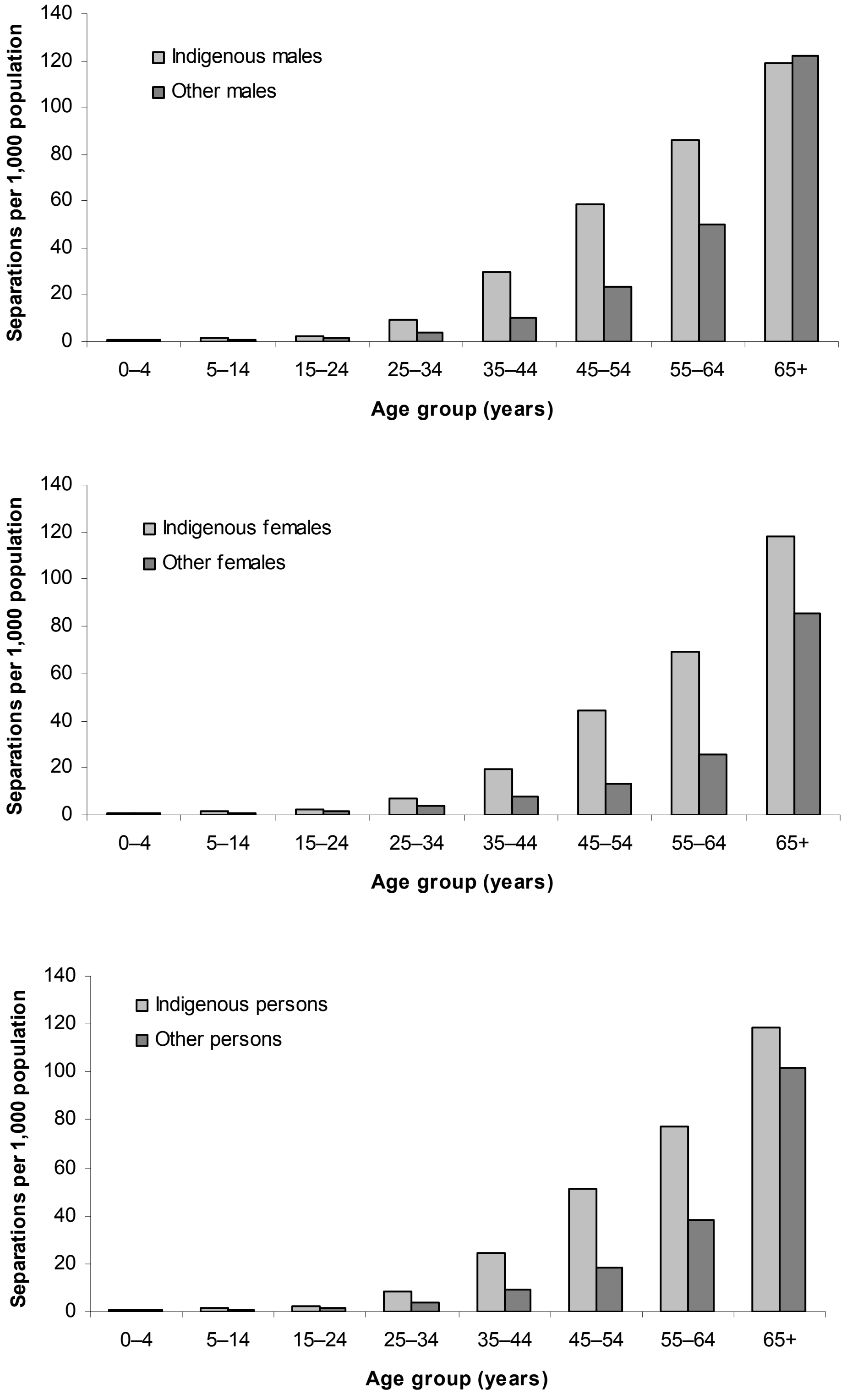
Source: AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Hospitalisations

- For the 2-year period July 2004 to June 2006, there were 872,421 hospitalisations for circulatory diseases in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, 15,314 (1.8%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples.
- Circulatory disease is the eighth most common diagnosis at the ICD-10-AM chapter level for Aboriginal and Torres Strait Islander Australians admitted to hospital. Approximately 3% of all hospitalisations of Indigenous Australians were for circulatory diseases.

Hospitalisations by age and sex

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous females had higher hospitalisation rates for circulatory diseases than other females across all age groups. Indigenous males had higher hospitalisation rates for circulatory diseases than other males across all age groups except for those aged 65 years and over (Figure 1.05.2).
- The greatest difference in hospitalisation rates for males occurred in the 5–14, 35–44 and 45–54 year age groups where Indigenous males were hospitalised at between two and three times the rate of other Australian males. The greatest difference in hospitalisation rates for females occurred in the 35–44 , 45–54 and 55–64 year age groups where Indigenous females were hospitalised at around three times the rate of other Australian females.
- Hospitalisation rates for circulatory diseases increased with age for both Indigenous and other Australians.
- Approximately 53% of Indigenous Australians hospitalised for circulatory diseases were males (8,041) and 47% were females (7,273).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.05.2: Age-specific hospitalisation rates for a principal diagnosis of circulatory disease, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Hospitalisations by state/territory

Table 1.05.4 presents hospitalisations for a principal diagnosis of diseases of the circulatory system for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are also included in the table. The Australia data are adjusted by applying a completeness factor of 89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised for circulatory disease at almost twice the rate of other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised for circulatory disease at 1.8 times the rate of other Australians.
- In New South Wales, Queensland, Western Australia, South Australia and the Northern Territory, Indigenous persons were hospitalised for circulatory diseases at around twice the rate of other Australians. In Victoria, Indigenous persons were hospitalised for circulatory diseases at around 0.9 times the rate of other Australians.

Table 1.05.4: Hospitalisations for principal diagnosis of diseases of the circulatory system, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
NSW									
Males	2,062	34.6	32.6	36.7	174,868	26.6	26.4	26.7	1.3*
Females	1,746	28.5	26.9	30.2	128,086	16.5	16.4	16.6	1.7*
Persons[(j)]	3,808	31.5	30.2	32.7	302,971	21.2	21.2	21.3	1.5*
Vic									
Males	313	22.9	19.5	26.3	132,941	27.3	27.1	27.4	0.8*
Females	234	15.9	13.5	18.4	103,171	17.7	17.6	17.9	0.9
Persons[(j)]	547	18.9	17.0	20.9	236,112	22.2	22.1	22.3	0.9*
Qld									
Males	2,318	42.9	40.7	45.2	96,712	26.0	25.8	26.2	1.7*
Females	2,299	40.1	38.1	42.1	70,960	17.1	17.0	17.2	2.3*
Persons[(j)]	4,617	41.5	40.0	43.0	167,672	21.4	21.3	21.5	1.9*
WA									
Males	1,383	40.5	38.0	43.1	43,291	23.6	23.4	23.8	1.7*
Females	1,337	36.4	34.2	38.6	30,238	14.7	14.6	14.9	2.5*
Persons[(j)]	2,720	38.4	36.7	40.0	73,529	19.0	18.8	19.1	2.0*
SA									
Males	670	48.3	44.0	52.6	41,185	25.3	25.0	25.5	1.9*
Females	468	33.7	30.2	37.2	32,500	16.5	16.3	16.6	2.0*
Persons[(j)]	1,138	40.6	37.9	43.4	73,685	20.6	20.4	20.7	2.0*
NT									
Males	1,295	40.3	37.6	43.0	2,133	20.4	19.4	21.5	2.0*
Females	1,189	33.0	30.8	35.2	1,005	13.2	12.2	14.1	2.5*
Persons[(j)]	2,484	36.4	34.7	38.1	3,138	17.3	16.6	18.0	2.1*
NSW, Vic, Qld, WA, SA & NT[(d)]									
Males	**8,041**	**38.3**	**37.2**	**39.4**	**491,130**	**26.2**	**26.1**	**26.3**	**1.5***
Females	**7,273**	**32.8**	**31.9**	**33.7**	**365,960**	**16.8**	**16.7**	**16.8**	**2.0***
Persons[(j)]	**15,314**	**35.4**	**34.7**	**36.1**	**857,107**	**21.2**	**21.2**	**21.3**	**1.7***
Australia unadjusted[(k)]									
Males	8,270	37.7	36.7	38.8	513,122	26.3	26.2	26.4	1.4*
Females	7,414	32.1	31.2	32.9	381,491	16.8	16.7	16.8	1.9*
Persons[(j)]	15,684	34.8	34.1	35.4	894,631	21.3	21.2	21.3	1.6*
Australia adjusted[(k)(l)]									
Males	9,242	42.2	41.1	43.3	512,150	26.2	26.2	26.3	1.6*
Females	8,285	35.8	34.9	36.8	380,620	16.7	16.7	16.8	2.1*
Persons[(j)]	17,527	38.9	38.2	39.6	892,788	21.2	21.2	21.3	1.8*

(continued)

Table 1.05.4 (continued): Hospitalisations for principal diagnosis of diseases of the circulatory system, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes I00–I99.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Includes hospitalisations for which sex was indeterminate or not stated.

(k) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(l) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by principal diagnosis

Table 1.05.5 presents hospitalisations with a principal diagnosis of diseases of the circulatory system by type of circulatory disease for the 2-year period July 2004 to June 2006 for the six jurisdictions.

- For the 2-year period July 2004 to June 2006 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, of all hospitalisations with a principal diagnosis of diseases of the circulatory system, ischaemic heart disease was the most common reason for hospitalisation among Aboriginal and Torres Strait Islander peoples (43%), followed by other heart disease (30%).
- Indigenous males and females were hospitalised for rheumatic heart disease at much higher rates than other males and females (five and nine times respectively).
- Indigenous males and females were hospitalised for ischaemic heart disease at two and three times the rate of other males and females respectively.
- Indigenous Australians were hospitalised at around four times the rate of other Australians for hypertension disease.

Table 1.05.5: Hospitalisations of Indigenous persons for principal diagnosis of diseases of the circulatory system, by type of circulatory disease and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

	Males						Females						Persons					
Principal diagnosis	**No.**	**%(e)**	**No. per 1,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**	**No.**	**%(e)**	**No. per 1,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**	**No.**	**%(e)**	**No. per 1,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**
Ischaemic heart disease (I20–I25)	3,778	47.0	17.7	17.0	18.4	1.7*	2,820	38.8	12.8	12.3	13.4	2.7*	6,598	43.1	15.1	14.7	15.6	2.0*
Acute myocardial infarction (I21)	*1,468*	*18.3*	*6.8*	*6.3*	*7.2*	*2.1**	*978*	*13.4*	*4.7*	*4.3*	*5.0*	*3.4**	*2,446*	*16.0*	*5.7*	*5.4*	*5.9*	*2.5**
Pulmonary heart disease and other forms of heart disease (I26–I52)	2,352	29.3	12.2	11.6	12.9	1.7*	2,207	30.3	11.0	10.5	11.6	2.1*	4,559	29.8	11.6	11.2	12.0	1.9*
Cerebrovascular disease (I60–I69)	633	7.9	3.7	3.3	4.0	1.6*	651	9.0	3.4	3.1	3.7	2.1*	1,284	8.4	3.6	3.3	3.8	1.9*
Stroke (I60–I64)	*572*	*7.1*	*3.4*	*3.0*	*3.7*	*1.9**	*575*	*7.9*	*3.0*	*2.7*	*3.3*	*2.2**	*1,147*	*7.5*	*3.2*	*3.0*	*3.4*	*2.0**
Acute rheumatic fever and chronic rheumatic heart disease (I00–I09)	241	3.0	0.4	0.4	0.5	4.8*	445	6.1	0.9	0.8	1.1	8.6*	686	4.5	0.7	0.6	0.8	7.0*
Hypertension disease (I10–I15)	229	2.8	0.9	0.7	1.0	3.4*	359	4.9	1.5	1.3	1.7	4.0*	588	3.8	1.3	1.1	1.4	3.8*
Other diseases of the circulatory system (I70–I99)(j)	808	10.0	3.4	3.1	3.7	0.6*	791	10.9	3.0	2.7	3.2	0.6*	1,599	10.4	3.2	3.0	3.4	0.6*
Total	**8,041**	**100.0**	**38.3**	**37.2**	**39.4**	**1.5***	**7,273**	**100.0**	**32.8**	**31.9**	**33.7**	**2.0***	**15,314**	**100.0**	**35.4**	**34.7**	**36.1**	**1.7***

(continued)

Table 1.05.4 (continued: Hospitalisations of Indigenous persons for principal diagnosis of diseases of the circulatory system, by type of circulatory disease and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes I00–I99.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Proportion of male, female and total hospitalisations of Indigenous persons in the period 2004–05 to 2005–06.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Includes disease of arteries, arterioles and capillaries, diseases of veins, lymphatic vessels and lymph nodes and other unspecified disorders of the circulatory system.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by additional diagnosis

Table 1.05.6 presents hospitalisations for additional causes of diseases of the circulatory system for Aboriginal and Torres Strait Islander peoples in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.

- For the 2-year period July 2004 to June 2006, hospitalisations of Indigenous Australians with a principal diagnosis of circulatory diseases were commonly reported with other diseases of the circulatory system (64%), the disease category 'contact with health services and factors influencing health status' which includes dialysis (61%), and endocrine, metabolic and nutritional disorders (50%).
- In particular, hospitalisations with a principal diagnosis of ischaemic heart disease, cerebrovascular disease and other heart disease were commonly reported with an additional diagnosis of endocrine, metabolic and nutritional disorders (62%, 52% and 51% respectively).
- Indigenous Australians who were hospitalised with a principal diagnosis of cerebrovascular disease, which includes stroke, had diseases of the nervous system commonly reported as an additional diagnosis of hospitalisation (59%).

Table 1.05.6: Hospitalisations of Indigenous persons for principal diagnosis of circulatory disease, by additional diagnoses of hospitalisation, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Reported with a principal diagnosis of circulatory disease								
Additional diagnoses of hospitalisation	**Ischaemic heart disease (I20–I25)**	***Acute myocardial infarction (I21)***	**Pulmonary heart disease/ Other heart disease (I26–I52)**	**Cerebro-vascular disease (I60–I69)**	***Stroke (I60–I64)***	**Acute rheumatic fever /chronic rheumatic heart disease (I00–I09)**	**Hypertensive disease (I10–115)**	**Other circulatory diseases (I70–I99)[(e)]**	**All circulatory diseases**
					Per cent				
Diseases of the circulatory system (I00–I99)	77.8	80.4	65.0	67.7	68.7	43.0	17.2	30.6	64.3
Contact with health services & factors influencing health status (includes dialysis) (Z00–Z99)	70.6	73.7	58.9	59.5	58.4	41.7	45.2	46.0	61.3
Endocrine, nutritional & metabolic diseases (E00–E90)	61.6	63.4	50.6	52.3	53.7	15.9	29.6	23.6	50.3
Diseases of the genitourinary system (N00–N99)	16.3	19.3	23.5	19.6	19.8	8.5	16.5	12.9	18.0
Diseases of the respiratory system (J00–J99)	11.6	15.5	24.5	14.1	14.1	14.0	8.0	6.9	15.2
Symptoms, signs & abnormal clinical & laboratory findings (R00–R99)	7.6	10.1	15.0	41.7	42.7	10.5	22.1	10.1	13.6
Mental & behavioural disorders (F00–F99)	10.7	11.8	15.5	20.5	21.1	4.7	14.3	10.3	12.8
Diseases of the nervous system (G00–G99)	4.7	5.7	6.7	58.6	62.0	1.6	5.3	4.3	9.6
Diseases of the digestive system (K00–K93)	6.1	7.5	8.6	8.3	8.8	7.0	5.8	15.4	8.0
Certain infectious and parasitic diseases (A00–B99)	5.0	7.6	8.8	12.1	12.6	10.8	3.6	6.8	7.1

(continued)

Table 1.05.6 (continued): Hospitalisations of Indigenous persons for principal diagnosis of circulatory disease, by additional diagnoses of hospitalisation, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[a][b][c][d]

	Reported with a principal diagnosis of circulatory disease								
Additional diagnoses of hospitalisation	**Ischaemic heart disease (I20–I25)**	***Acute myocardial infarction (I21)***	**Other heart disease (I26–I52)**	**Cerebro-vascular disease (I60–I69)**	***Stroke (I60–I64)***	**Rheumatic heart disease (I00–I09)**	**Hypertensive disease (I10–115)**	**Other circulatory diseases (I70–I99)[e]**	**All circulatory diseases**
	Per cent								
Diseases of the blood and disorders involving immune mechanism (D50–D89)	5.7	7.8	8.2	5.8	5.9	9.6	2.7	5.9	6.5
Diseases of the eye and adnexa (H00–H59)	4.4	4.7	4.9	11.3	11.7	0.6	3.4	2.5	4.7
Injury & poisoning and other consequences of external causes (S00–T98)	3.9	4.9	3.9	5.7	5.6	5.0	2.0	5.6	4.2
Other[f]	6.3	8.0	11.3	13.3	12.6	9.8	8.8	12.9	9.3
Total number	**6,598**	**2,446**	**4,559**	**1,284**	**1,147**	**686**	**588**	**1,599**	**15,314**

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes I00–I99.

(c) Financial year reporting.

(d) Indigenous data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes diseases of arteries, arterioles and capillaries, diseases of veins, lymphatic vessels and lymph nodes and other unspecified disorders of the circulatory system.

(f) Includes: diseases of the musculoskeletal system and connective tissue; diseases of the skin and subcutaneous tissue; neoplasms; congenital malformations, deformations and chromosomal abnormalities; diseases of the ear and mastoid process; pregnancy, childbirth and the puerperium; and certain conditions originating in the perinatal period.

Note: Sum of components may exceed 100% as more than one additional diagnosis can be reported for each hospitalisation.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analysis

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, therefore they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for diseases of the circulatory system over the 7-year period 1998–99 to 2005–06 are presented in Table 1.05.7 and Figure 1.05.3.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates for circulatory diseases among Indigenous Australians during the period 1998–99 to 2005–06. The fitted trend implies an average yearly increase in the rate of 0.6 per 1,000 which is equivalent to an increase of 11% over the period. There was a significant increase in hospitalisation rates for Indigenous males and no significant change in hospitalisation rates for Indigenous females.
- There were significant declines in hospitalisation rates among other Australian males, and females during the same period, with an average yearly decrease in the rate of around 0.5 per 1,000 population. This is equivalent to a 14% decline over the period.
- There were significant increases in the hospitalisation rate ratios and rate differences between Indigenous and other Australians for circulatory diseases over the period 1998–99 to 2005–06. The fitted trend implies an average yearly increase of 0.1 in the rate ratio (29% increase over the period) and 1.0 per 1,000 in the rate difference between Indigenous and other Australians (58% increase) for the period 1998–99 to 2005–06. This reflects a relative and absolute increase in the gap between hospitalisation rates for Indigenous and other Australians for circulatory diseases.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all affect the level of hospitalisation over time. Caution should be used in interpreting changes over time as it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may reflect increased use of admitted patient hospital services rather than a worsening of health.

Table 1.05.7: Age-standardised hospitalisation rates, rate ratios and rate differences from circulatory diseases, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous rate (separations per 1,000)										
Males	37.3	39.8	37.3	38.6	40.8	43.5	39.8	44.5	0.8*	15.9
Females	34.5	35.5	32.3	34.4	34.3	33.0	36.4	37.2	0.3	6.1
Persons	35.9	37.5	34.7	36.4	37.4	37.7	38.0	40.7	0.6*	10.8
Other Australian[(d)] rate (separations per 1,000)										
Males	28.9	28.6	27.6	27.0	26.3	25.7	25.3	24.9	–0.6*	–14.6
Females	18.6	18.4	18.0	17.7	17.0	16.6	16.6	16.0	–0.4*	–14.4
Persons	23.4	23.2	22.5	22.1	21.4	20.9	20.8	20.3	–0.5*	–14.2
Rate ratio[(e)]										
Males	1.3	1.4	1.4	1.4	1.5	1.7	1.6	1.8	0.1*	35.6
Females	1.9	1.9	1.8	1.9	2.0	2.0	2.2	2.3	0.1*	23.7
Persons	1.5	1.6	1.5	1.6	1.7	1.8	1.8	2.0	0.1*	28.8
Rate difference[(f)]										
Males	8.4	11.2	9.7	11.6	14.5	17.8	14.4	19.6	1.5*	121.2
Females	15.9	17.0	14.3	16.7	17.2	16.4	19.8	21.2	0.7*	30.2
Persons	12.4	14.3	12.1	14.3	15.9	16.8	17.3	20.4	1.0*	57.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

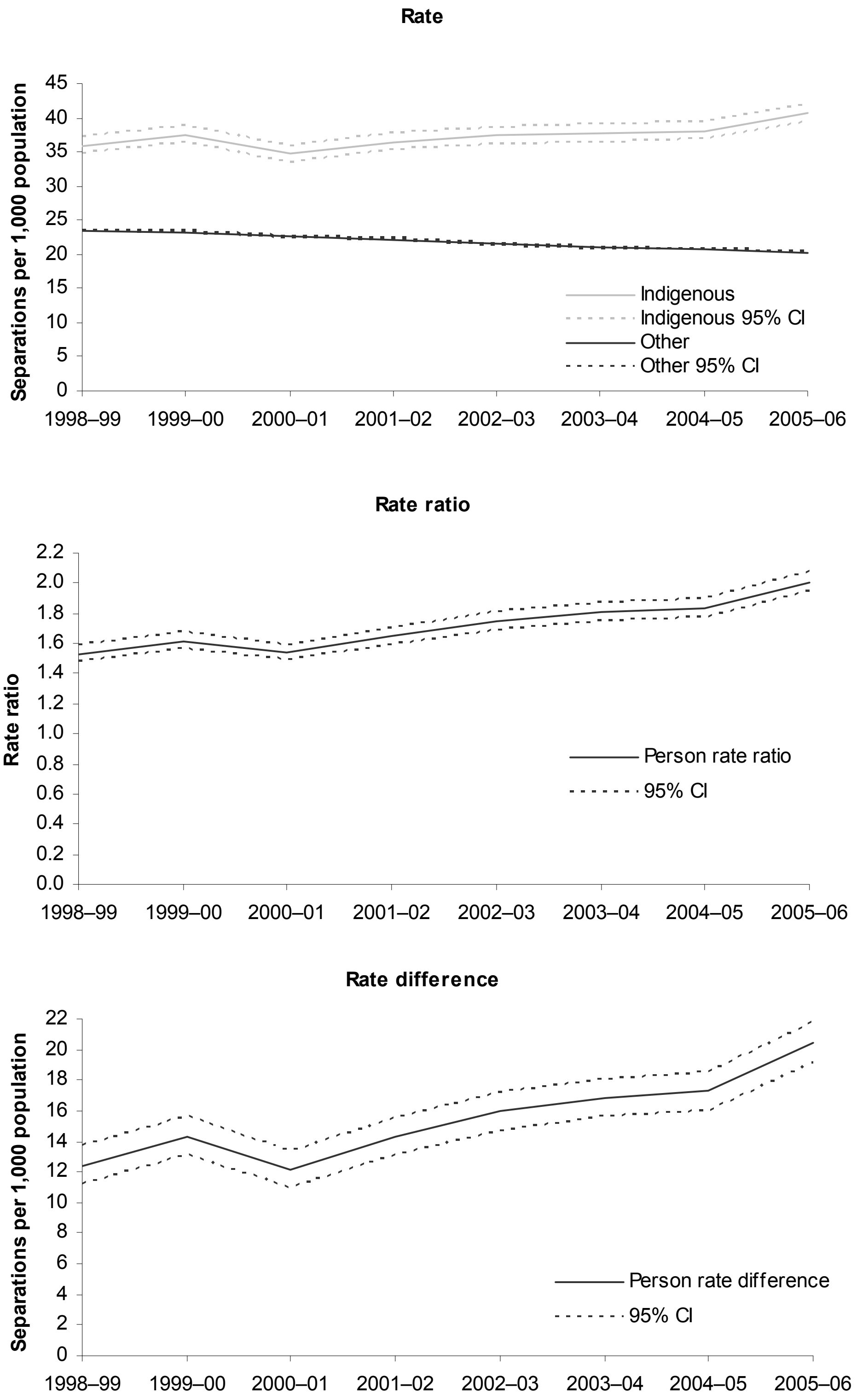
(d) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity database.

Figure 1.05.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from circulatory diseases, Qld, WA, SA and NT, 1998–99 to 2005–06

Sensitivity of hospitalisation trends to changes in identification

- The fitted trends described above have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for identification were posted—constant identification, increasing identification and decreasing identification:
  - Under the constant identification scenario, the number of hospitalisations for the period under study were adjusted using the following identification factors:
    - Queensland 87%
    - Western Australia 97%
    - South Australia 82%
    - Northern Territory 96%.
  - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study—from 82% in 1998–99 to 87% in 2005–06 for Queensland, from 95% to 97% for Western Australia, from 76% to 82% for South Australia, and from 94% to 96% for the Northern Territory.
  - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 92% in 1998–99 to 87% in 2005–06 for Queensland, from 99% to 97% for Western Australia, from 88% to 82% for South Australia, and from 98% to 96% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in hospitalisations might not persist.
- The increase in hospitalisation rates for Indigenous males and the decrease in hospitalisation rates for other Australian males, females and persons overall over the period 1998–99 to 2005–06 remained significant under all three scenarios. The increases in hospitalisation rate for Indigenous persons remained significant only under the constant and decreasing identification scenarios.
- The increases in hospitalisation rate ratios for males and females remained significant under all three scenarios.
- The increases in the hospitalisation rate differences between Indigenous and other males and Indigenous and other persons overall remained significant under all three scenarios, whereas for females the increase in rate differences only remained significant under the constant and decreasing identification scenarios.

General practitioner encounters

Information about general practitioner (GP) encounters is available from the BEACH survey. Data for the 5-year period 2002–03 to 2006–07 are presented below. Circulatory problems are among the five most common types of problems managed at GP encounters with Indigenous patients.

- In the period 2002–03 to 2006–07 there were a total of 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 11,219 problems were managed. Of these, 8.7% (979) were circulatory problems (Table 1.05.8).
- Circulatory problems were managed at a rate of around 13 per 100 encounters among Indigenous patients.
- After adjusting for differences in age distribution:
  - circulatory problems were managed at similar rates during GP encounters with Indigenous patients and other patients.
  - There were almost three times as many GP encounters for heart failure and twice as many GP encounters for ischaemic heart disease with Indigenous patients than with other patients over the 5-year period.

Table 1.05.8: Circulatory problems(a) managed by general practitioners, by Indigenous status of the patient, 2002–03 to 2006–07(b)(c)(d)

	Number		Per cent		Crude rate (no. per 100 encounters)						Age-standardised rate (no. per 100 encounters)(e)		
Problem managed	**Indigenous**	**Other(f)**	**Indigenous**	**Other(f)**	**Indigenous**	**95% LCL(g)**	**95% UCL(h)**	**Other**	**95% LCL(g)**	**95% UCL(h)**	**Indigenous**	**Other(f)**	**Ratio(i)**
Hypertension (K86, K87)	466	44,507	4.2	6.1	6.2	5.0	7.4	9.2	9.0	9.4	9.0	9.1	1.0
Ischaemic heart disease (K74, K76)	111	5,886	1.0	0.8	1.5	1.0	1.9	1.2	1.2	1.3	2.5	1.2	2.1
Heart failure (K77)	72	3,475	0.6	0.5	1.0	0.6	1.3	0.7	0.7	0.8	1.9	0.7	2.7
Cardiac check-up (K30, K31)	55	5,624	0.5	0.8	0.7	0.5	1.0	1.2	1.1	1.2	1.1	1.1	1.0
Atrial fibrillation/ flutter (K78)	31	4,035	0.3	0.6	0.4	0.2	0.6	0.8	0.8	0.9	0.8	0.8	0.9
Total circulatory problems(K00-K99)	***979***	***81,644***	***8.7***	***11.3***	***13.0***	***10.7***	***15.3***	***16.9***	***16.6***	***17.2***	***19.3***	***16.6***	***1.2***
Other problems managed	10,240	642,416	91.3	88.7	135.8	115.2	156.3	132.9	132.2	133.7	137.4	131.8	1.0
Total problems	**11,219**	**724,060**	**100.0**	**100.0**	**148.8**	**126.2**	**171.3**	**149.8**	**148.9**	**150.7**	**156.7**	**148.4**	**1.1**

(a) Classified according to ICPC-2 chapter codes (Classification Committee of the World Organization of Family Doctors (WICC) 1998).

(b) These survey results are likely to undercount the number of Indigenous Australians visiting doctors.

(c) Combined financial year data for 5 years.

(d) Data for Indigenous and other Australians have not been weighted.

(e) Directly age-standardised rate (no. per 100 encounters). Figures do not add to 100 as more than one problem can be managed at each encounter.

(f) 'Other' includes non-Indigenous patients and patients for whom Indigenous status was not stated.

(g) LCL = lower confidence interval.

(h) UCL = upper confidence interval.

(i) Rate ratio Indigenous:other.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in major cities and regional and remote areas, but very remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Survey.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the NATSIHS 2004–05 publication (ABS 2006).

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations of Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data).

(continued)

Data quality issues (continued)

It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%.

The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

General practitioner data (BEACH)

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey, 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

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1.06 Acute rheumatic fever and rheumatic heart disease

Incidence and prevalence of acute rheumatic fever and rheumatic heart disease among Aboriginal and Torres Strait Islander peoples expressed as a rate by age group, age-standardised rate and ratio

Data sources

Data for this measure come from the registers of acute rheumatic fever and rheumatic heart disease in the Top End of the Northern Territory and Central Australia. Published data on the incidence of acute rheumatic fever in North Queensland (Hanna & Heazlewood 2005) are also summarised here.

Data from the Top End registry cover the northern part of the Northern Territory including Darwin, East Arnhem, Lower Top End (Katherine region), Alligator, Daly, Finniss and Bathurst–Melville. Data from the Central Australian registry cover the Barkley region and Central Northern Territory (Alice Springs region). Although Central Australia also covers parts of Western Australia and South Australia, data from these areas have not been included because of difficulties in determining denominator populations for the calculation of rates.

Because of small numbers of registrations for acute rheumatic fever among the non-Indigenous population, incidence rates have not been calculated for non-Indigenous Australians. Rates presented for Indigenous Australians are therefore crude rates (that is, not age-standardised). Age-standardised rates and ratios have been used for data on rheumatic heart disease as a measure of morbidity in the Indigenous population relative to non-Indigenous Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Incidence data for acute rheumatic fever are for the period 2003–2006. Prevalence data for rheumatic heart disease are at 31 December 2006.

The 2001 estimated resident Indigenous populations for the Top End and Central Australia have been used as the denominator for rates. This is because data for the Top End and Central Australia are available from the ABS for Census years only. Caution should therefore be used in interpreting rates presented here.

Hospitalisation data on rheumatic heart disease from the AIHW National Hospital Morbidity Database and prevalence data from the National Aboriginal and Torres Strait Islander Health Survey are presented in Measure 1.05 (Circulatory disease).

Analyses

Incidence of acute rheumatic fever

- Between 2003 and 2006 there were 251 new and recurrent cases of acute rheumatic fever in the Top End of the Northern Territory and Central Australia, of which 247 (98.4%) were Aboriginal and Torres Strait Islander peoples (Table 1.06.1).

Incidence by sex and age group

- For the 4-year period 2003–2006, Aboriginal and Torres Strait Islander children aged 5–14 years in the Top End of the Northern Territory and Central Australia accounted for over half (54%) of new and recurrent cases of acute rheumatic fever in these regions. There are very few cases of acute rheumatic fever in non-Indigenous children of the same age.
- The incidence of acute rheumatic fever among Aboriginal and Torres Strait Islander children aged 5–14 years in the Top End of the Northern Territory and Central Australia was around 2.0 per 1,000 among males and 2.9 per 1,000 among females (Table 1.06.1).
- Approximately 41% of new and recurrent cases of acute rheumatic fever in the Indigenous population were of males and 59% were of females (Table 1.06.1).

Table 1.06.1: New and recurrent cases of acute rheumatic fever among Indigenous persons in the Top End of the Northern Territory and Central Australia, by age group and sex, 2003–2006[(a)]

	Males					Females					Persons				
	No.	**%**	**No. per 1,000[(b)]**	**95% LCL[(c)]**	**95% UCL[(d)]**	**No.**	**%**	**No. per 1,000[(b)]**	**95% LCL[(c)]**	**95% UCL[(d)]**	**No.**	**%**	**No. per 1,000[(b)]**	**95% LCL[(c)]**	**95% UCL[(d)]**
0–4	n.p.	n.p	n.p.	n.p.	n.p.	n.p.	n.p	n.p.	n.p.	n.p.	5	2.0	0.2	0.0	0.3
5–14	58	56.9	2.0	1.5	2.6	75	51.7	2.9	2.3	3.6	133	53.8	2.5	2.0	2.9
15–24	28	27.5	1.2	0.8	1.7	36	24.8	1.6	1.1	2.1	64	25.9	1.4	1.1	1.7
25–34	8	7.8	0.4	0.1	0.7	14	9.7	0.7	0.3	1.1	22	8.9	0.6	0.3	0.8
35–44	n.p.	n.p	n.p.	n.p.	n.p.	n.p.	n.p	n.p.	n.p.	n.p.	13	5.3	0.5	0.2	0.7
45+	n.p.	n.p	n.p.	n.p.	n.p.	n.p.	n.p	n.p.	n.p.	n.p.	10	4.0	0.3	0.1	0.5
Total	**102**	**100.0**	**0.9**	**0.7**	**1.1**	**145**	**100.0**	**1.3**	**1.1**	**1.5**	**247**	**100.0**	**1.1**	**1.0**	**1.2**

(a) Calender year reporting. Data are presented in 4-year groupings because of small numbers each year.

(b) Age-specific rates calculated using the average number of registrations for 2003–2006 divided by the 2001 estimated resident Indigenous population for the Top End and Central Australia.

(c) LCL = lower confidence limit.

(d) UCL = upper confidence limit.

Source: AIHW analysis of Top End Rheumatic Heart Disease Register and Central Australian Rheumatic Heart Disease Register data.

Incidence by region

- In the 4-year period 2003–2006, there were over 150 new or recurrent cases of acute rheumatic fever in the Top End of the Northern Territory—97% of these were Indigenous Australians. For the same period in Central Australia, there were 97 cases of acute rheumatic fever registered, all of which were Indigenous Australians (Table 1.06.2).
- In 2003–2006, incidence of acute rheumatic fever among Indigenous Australians in the Top End of the Northern Territory was around 0.6 per 1,000 and in Central Australia the incidence rate was around 1.1 per 1,000 (Table 1.06.2).
- Incidence rates of acute rheumatic fever among Indigenous Australians were around 80 times those for non-Indigenous Australians, which is the result of the very small number of notifications among non-Indigenous Australians.

Table 1.06.2: New or recurrent cases of acute rheumatic fever in the Top End of the Northern Territory and Central Australia, by Indigenous status and sex, 2003–2006[(a)]

	Number		Per cent[(b)]		Indigenous			Non-Indigenous			
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	No. per 1,000[(c)]	95% LCL[(d)]	95% UCL[(e)]	No. per 1,000[(b)]	95% LCL[(d)]	95% UCL[(e)]	Ratio[(f)]
NT Top End											
Males	70	n.p.	98.6	1.4	0.6	0.4	0.7	n.p.	n.p.	n.p.	174.0
Females	80	n.p.	96.4	3.6	0.7	0.6	0.9	n.p.	n.p.	n.p.	54.5
Persons	150	n.p.	97.4	2.6	0.6	0.5	0.8	n.p.	n.p.	n.p.	80.2
Central Australia[(g)]											
Males	32	—	100.0	—	0.7	0.4	1.0	—	—	—	—
Females	65	—	100.0	—	1.5	1.1	1.9	—	—	—	—
Persons	97	—	100.0	—	1.1	0.8	1.3	—	—	—	—

(a) Calender year reporting. Data are presented in 4-year groupings because of small numbers each year.

(b) Proportion of total male, female and all persons cases in the period 2003–2006.

(c) Directly age-standardised using the Australian 2001 standard population.

(d) LCL = lower confidence limit.

(e) UCL = upper confidence limit.

(f) Rate ratio Indigenous:non-Indigenous.

(g) Excludes cases in Western Australia and South Australia because of difficulties in ascertaining denominator populations.

Source: AIHW analysis of Top End Rheumatic Heart Disease Register and Central Australian Rheumatic Heart Disease Register data.

- Over the 5-year period 1999–2004, there were 144 episodes of acute rheumatic fever among Indigenous Australians in the seven Health Service Districts in North Queensland. The annual incidence rate of acute rheumatic fever among Indigenous people in these seven districts was 61 per 100,000 and throughout North Queensland the incidence rate was 54 per 100,000. Incidence rates were highest in the Cape York and the Torres Strait and Northern Peninsula Area Districts. More than three-quarters (76%) of cases of acute rheumatic fever occurred in children aged less than 15 years and the median age of cases was 12 years. The incidence rate for Indigenous children aged 5–14 years in North Queensland over the 5 years was 133 per 100,000 (Hanna & Heazlewood 2005).

Time series analyses

Incidence rates for acute rheumatic fever among Indigenous Australians in the Top End, Northern Territory and Central Australia are presented in three year groupings for the period 1995–1997 to 2004–2006 in Table 1.06.3. Rates for non-Indigenous Australians are not presented because of the small number of cases each year.

Note that as population data for the Top End and Central Australia are available for Census years only, the 1996 estimated resident Indigenous population for these areas has been used as the denominator for rates for 1995–1997 and 1998–2000 and the 2001 estimated resident Indigenous population for these areas has been used as the denominator for rates for 2001–2003 and 2004–2006.

- Over the period 2001–2003 to 2004–2006 there was a significant decrease of 35% in the rate of acute rheumatic fever among Indigenous Australians in the Top End of the Northern Territory (Table 1.06.3; Figure 1.06.1).
- Over the periods 1995–1997 to 1998–2000 and 2001–2003 to 2004–2006, there were no significant changes in the rate of acute rheumatic fever among Indigenous Australians in Central Australia (Table 1.06.3; Figure 1.06.1).

Note also that changes in the level of accuracy of Indigenous identification in registration data will result in changes in the level of reported cases of acute rheumatic fever for Indigenous Australians. Caution should therefore be used in interpreting rates and changes over time.

Table 1.06.3: Numbers and rates[(a)] of acute rheumatic fever in the Top End of the Northern Territory and Central Australia, Indigenous Australians, 1995–1997 to 1998–2000 and 2001–2003 to 2004–2006

	1995–97	1998–2000	Difference in rates[(b)]	% change[(c)]	2001–03	2004–06	Difference in rates[(b)]	% change[(c)]
Top End NT								
Number	88	96	. .		149	97	. .	
Rate	0.8	0.9	0.1	9.1	1.3	0.8	–0.4*	–34.9
Central Australia								
Number	67	90	. .		91	67	. .	
Rate	1.3	1.7	0.4	34.3	1.7	1.2	–0.4	–26.4

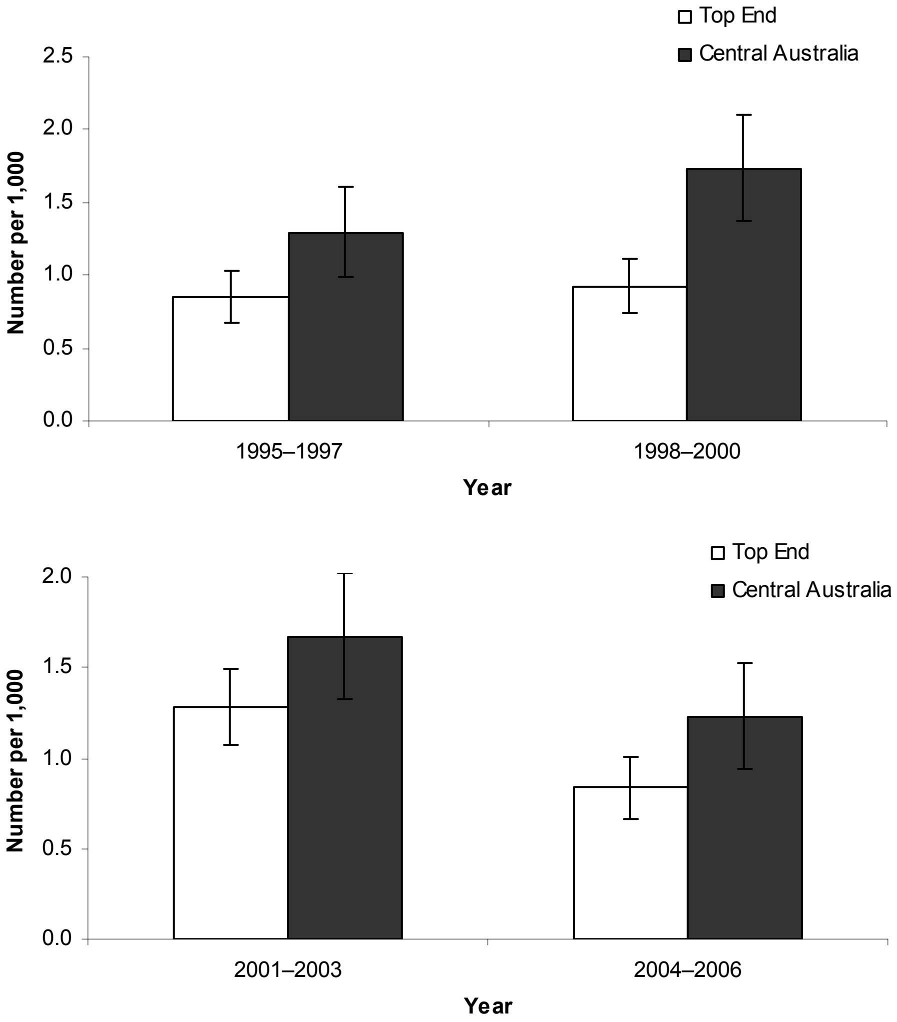
* Represents significant increases or decreases over the period 1995–1997 to 1998–2000 and 2001–03 to 2004–2006 at the $p < 0.05$ level.

(a) Crude rates per 1,000 population calculated using the 1996 estimated resident Indigenous population for the Top End and Central Australia for 1995–1997 and 1998–2000 and the 2001 estimated resident Indigenous population for the Top End and Central Australia for 2001–2003 and 2004–2006.

(b) Average annual change in rates determined using linear regression analysis.

(c) Per cent change between 1995–97 and 1998–2000 and per cent change between 2001–03 and 2004–06 based on the difference in rates over the period.

Source: AIHW analysis of Top End Rheumatic Heart Disease Register and Central Australian Rheumatic Heart Disease Register data.



Note: Figures have been split for the periods 1995–97 to 1998–2000 and 2001–2003 to 2004–2006 because of the use of a different denominator population used for each period (1996 population for 1995–97 to 1998–2000 and 2001 population for 2001–2003 to 2004–2006).

Source: AIHW analysis of Top End Rheumatic Heart Disease Register and Central Australian Rheumatic Heart Disease Register data.

Figure 1.06.1: Rate of new and recurrent cases of acute rheumatic fever among Indigenous persons in the Top End of the Northern Territory and Central Australia, all ages, 1995–1997 to 1998–2000 and 2001–2003 to 2004–2006

Prevalence of rheumatic heart disease

- As at 31 December 2006, there were 1,402 cases of rheumatic heart disease in the Top End of the Northern Territory and Central Australia, of which 1,288 (92%) were Indigenous peoples.

Prevalence by sex and age group

- As at 31 December 2006, rates of rheumatic heart disease in the Top End of the Northern Territory and Central Australia were between 19 and 28 per 1,000 among Indigenous adults between the ages of 25 and 64 years (Table 1.06.4).
- The biggest differences in rates of rheumatic heart disease between Indigenous and non-Indigenous Australians were in the 0–14, 15–24 and 25–34 year age groups, where rate ratios were between 47 and 61 (Table 1.06.4).
- Approximately 35% of cases of rheumatic heart disease in the Indigenous population were among Indigenous males and 65% among Indigenous females (Table 1.06.4).
- The overall prevalence rate for Indigenous males in the Top End of the Northern Territory and Central Australia was around 15 per 1,000. For Indigenous females, the prevalence rate was much higher at around 26–30 per 1,000.

Table 1.06.4: Rheumatic heart disease registrations for Indigenous persons in the Top End of the Northern Territory and Central Australia, by age group and sex, as at 31 December 2006

	Males						Females						Persons					
	No.	**%**	**No. per 1,000(a)**	**95% LCL(b)**	**95% UCL(c)**	**Rate ratio(d)**	**No.**	**%**	**No. per 1,000(a)**	**95% LCL(b)**	**95% UCL(c)**	**Rate ratio(d)**	**No.**	**%**	**No. per 1,000(a)**	**95% LCL(b)**	**95% UCL(c)**	**Rate ratio(d)**
0–14	132	29.5	12.5	10.3	14.6	28.3*	194	23.1	19.9	17.1	22.7	148.7*	326	25.3	16.0	14.3	17.8	54.9*
15–24	119	26.6	20.6	16.9	24.4	42.7*	238	28.3	42.3	36.9	47.6	77.4*	357	27.7	31.3	28.1	34.6	61.1*
25–34	94	21.0	19.0	15.2	22.9	88.3*	184	21.9	36.9	31.6	42.2	37.2*	278	21.6	28.0	24.7	31.3	47.3*
35–44	44	9.8	13.0	9.1	16.8	29.3*	92	11.0	25.2	20.1	30.4	27.5*	136	10.6	19.3	16.1	22.6	29.1*
45–54	33	7.4	16.0	10.5	21.4	37.1*	80	9.5	35.9	28.0	43.7	27.1*	113	8.8	26.3	21.5	31.2	31.3*
55–64	18	4.0	17.0	9.2	24.9	13.6*	38	4.5	31.8	21.7	41.9	8.6*	56	4.3	24.9	18.4	31.4	11.1*
65+	8	1.8	12.0	3.7	20.3	4.8*	14	1.7	14.8	7.0	22.5	3.2*	22	1.7	13.6	7.9	19.3	3.9*
Total	**448**	**100**	**15.7**	**14.3**	**17.2**	**28.1***	**840**	**100.0**	**29.6**	**27.6**	**31.6**	**27.1***	**1288**	**100.0**	**22.6**	**21.4**	**23.9**	**28.0***
Total ASR(e)	**448**	**100**	**15.6**	**13.7**	**17.4**	**18.8***	**840**	**100.0**	**29.0**	**26.7**	**31.2**	**19.3***	**1288**	**100.0**	**22.3**	**20.9**	**23.8**	**25.5***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Age-specific rates calculated using the 2001 estimated resident Indigenous population for the Top End and Central Australia.

(b) LCL = lower confidence limit.

(c) UCL = upper confidence limit.

(d) Rate ratio Indigenous:non-Indigenous.

(e) Total age-standardised rates.

Source: AIHW analysis of Top End Rheumatic Heart Disease Register and Central Australian Rheumatic Heart Disease Register data.

Prevalence by region

Table 1.06.5 presents numbers and rates of rheumatic heart disease among Indigenous and non-Indigenous Australians in the Top End of the Northern Territory and Central Australia as at 31 December 2006.

- As at 31 December 2006, there were 1,053 cases of rheumatic heart disease in the Top End of the Northern Territory, of which 91% (959) were Indigenous Australians (Table 1.06.5).
- For the same reference period, there were 349 cases of rheumatic heart disease in Central Australia, of which 94% (329) were Indigenous Australians (Table 1.06.5).
- After adjusting for differences in age structures, rates of rheumatic heart disease among Indigenous males and females in the Top End of the Northern Territory were around 22 and 19 times the rates for non-Indigenous males and females respectively (Table 1.06.5).
- In 2006, the prevalence rate of rheumatic heart disease among Indigenous males and females in Central Australia was around 11 and 23 times the rates for non-Indigenous males and females respectively (Table 1.06.5).

Table 1.06.5: Total number of rheumatic heart disease registrations in the Top End of the Northern Territory and Central Australia, by Indigenous status and sex, as at 31 December 2006

	Number		Per cent[(a)]		Indigenous			Non-Indigenous			
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	No. per 1,000[(b)]	95% LCL[(c)]	95% UCL[(d)]	No. per 1,000[(b)]	95% LCL[(c)]	95% UCL[(d)]	Ratio[(e)]
NT Top End											
Males	332	33	91.0	9.0	15.4	13.3	17.6	0.7	0.4	1.0	21.7*
Females	627	61	91.1	8.9	30.1	27.4	32.8	1.6	1.1	2.1	18.8*
Persons	959	94	91.1	8.9	22.8	21.1	24.6	1.1	0.7	1.5	20.9*
Central Australia[(f)]											
Males	116	9	92.8	7.2	15.2	11.9	18.5	1.4	0.2	2.5	11.2*
Females	213	11	95.1	4.9	25.9	22.0	29.7	1.1	0.4	1.8	23.1*
Persons	329	20	94.3	5.7	20.6	18.1	23.2	1.1	0.9	1.4	18.0*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Proportion of total registrations for males, females and all persons.

(b) Directly age-standardised using the Australian 2001 standard population.

(c) LCL = lower confidence limit.

(d) UCL = upper confidence limit.

(e) Rate ratio Indigenous:non-Indigenous.

(f) Excludes cases in Western Australia and South Australia because of difficulties in ascertaining denominator populations.

Source: AIHW analysis of Top End Rheumatic Heart Disease Register and Central Australian Rheumatic Heart Disease Register data.

Time series analyses

The registration of cases of rheumatic heart disease among Indigenous and non-Indigenous Australians has only been accurately ascertained in recent years since the Top End and Central Australian registries have become fully operational (June 2002 in Central Australia and June 1998 in the Top End). Trends have therefore not been presented here and any increase in prevalence over this period is likely to be due to an improvement in reporting and case finding, and to better awareness of the condition and its symptoms, rather than to an actual rise in the number of cases.

Data quality issues

Registries of acute rheumatic fever and rheumatic heart disease

Registrations

Registrations do not measure the incidence or prevalence of conditions in a population. Under-reporting of these conditions can occur at a number of stages. A person infected may not feel ill or may not seek medical care. The condition may not be diagnosed or a registration may not occur.

Liaison with the data custodians for these registers will be needed to identify any particular data quality issues to be taken into account in the use of these data.

Under-identification

The accurate identification of Aboriginal and Torres Strait Islander peoples within this data collection is less likely to be a problem given the high proportion of Aboriginal and Torres Strait Islander peoples in the Top End of the Northern Territory and in Central Australia and the predominance of Aboriginal and Torres Strait Islander peoples with this disease. Only 8 of the 153 cases of acute rheumatic fever registered in North Queensland from mid-1999 to mid-2004 were identified as non-Indigenous and 3 of these were of Pacific Island descent (Hanna & Heazlewood 2005).

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1.07 High blood pressure

The prevalence of high blood pressure/hypertension among Aboriginal and Torres Strait Islander Australians expressed as a rate by age group, age-standardised rate and ratio

Data sources

Data for this measure come from the National Aboriginal and Torres Strait Islander Health Survey, the Bettering the Evaluation and Care of Health survey and the AIHW National Hospital Morbidity Database.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Bettering the Evaluation and Care of Health (BEACH) survey

Information about encounters in general practice is available from the BEACH survey which is conducted by the AIHW Australian GP Statistics and Classification Centre. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be underestimated. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Because of a late inclusion of a 'not stated' category of Indigenous status in 2001–02 (before which 'not stated' responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2002–03 to 2006–07, during which there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.5% of total GP encounters in the survey.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which Indigenous status was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Analyses

Age-standardised rates and ratios have been used as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported prevalence

Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey on the prevalence of high blood pressure/ hypertension among Indigenous Australians are presented in Tables 1.07.1 and 1.07.2.

- In 2004–05, after adjusting for differences in age structures, approximately 14% of Indigenous males and 16% of Indigenous females reported high blood pressure/ hypertension compared with 10% of non-Indigenous males and females.
- High blood pressure/ hypertension was most prevalent among those aged 55 years and over for both population groups. Approximately 39% of Indigenous males and 46% of Indigenous females reported high blood pressure/hypertension in this age group compared with 32% and 36% of non-Indigenous males and females respectively.
- In 2004–05, the prevalence of high blood pressure/ hypertension was higher among Indigenous Australians in remote areas (10% for males and females) than among Indigenous Australians in non-remote areas (6% for males and 7% for females).
- There was no significant change in the prevalence of high blood pressure/hypertension among Indigenous Australians between 2001 and 2004–05.

Table 1.07.1: Persons reporting high blood pressure/ hypertension, by Indigenous status, sex and age group, 2004–05[(a)]

	Males		Females	
Age group	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
	Per cent			
0–14	—(b)	—(b)	—(b)	—(b)
15–24	1(b)	—(b)	1(c)	—(b)
25–34	4	3	5*(c)	2*(c)
35–44	14*	6*	11*	4*
45–54	22	15	24*	13*
55 years and over	39	32	46*	36*
Total	**7**	**10**	**8**	**12**
Total standardised(d)	**14***	**10***	**16***	**10***
Total number	232,632	9,600,405	241,948	9,691,973

* Statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05 and the National Health Survey 2004–05 consisting of persons ever told has condition, still current and long term, and ever told has condition, current and not long term.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(d) Age-standardised proportions.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.

Table 1.07.2: Indigenous persons reporting high blood pressure/ hypertension, by sex and remoteness, 1995, 2001 and 2004–05

	1995(a)		2001		2004–05	
	Males	Females	Males	Females	Males	Females
	Per cent					
Remote	n.a.	n.a.	7	10	10	10
Non-remote	15	16	5	7	6	7
Total	**n.a.**	**n.a.**	**6**	**8**	**7**	**8**
Total number	131,616	133,800	217,893	225,012	232,362	241,948

(a) Remote data are not available for the 1995 National Health Survey.

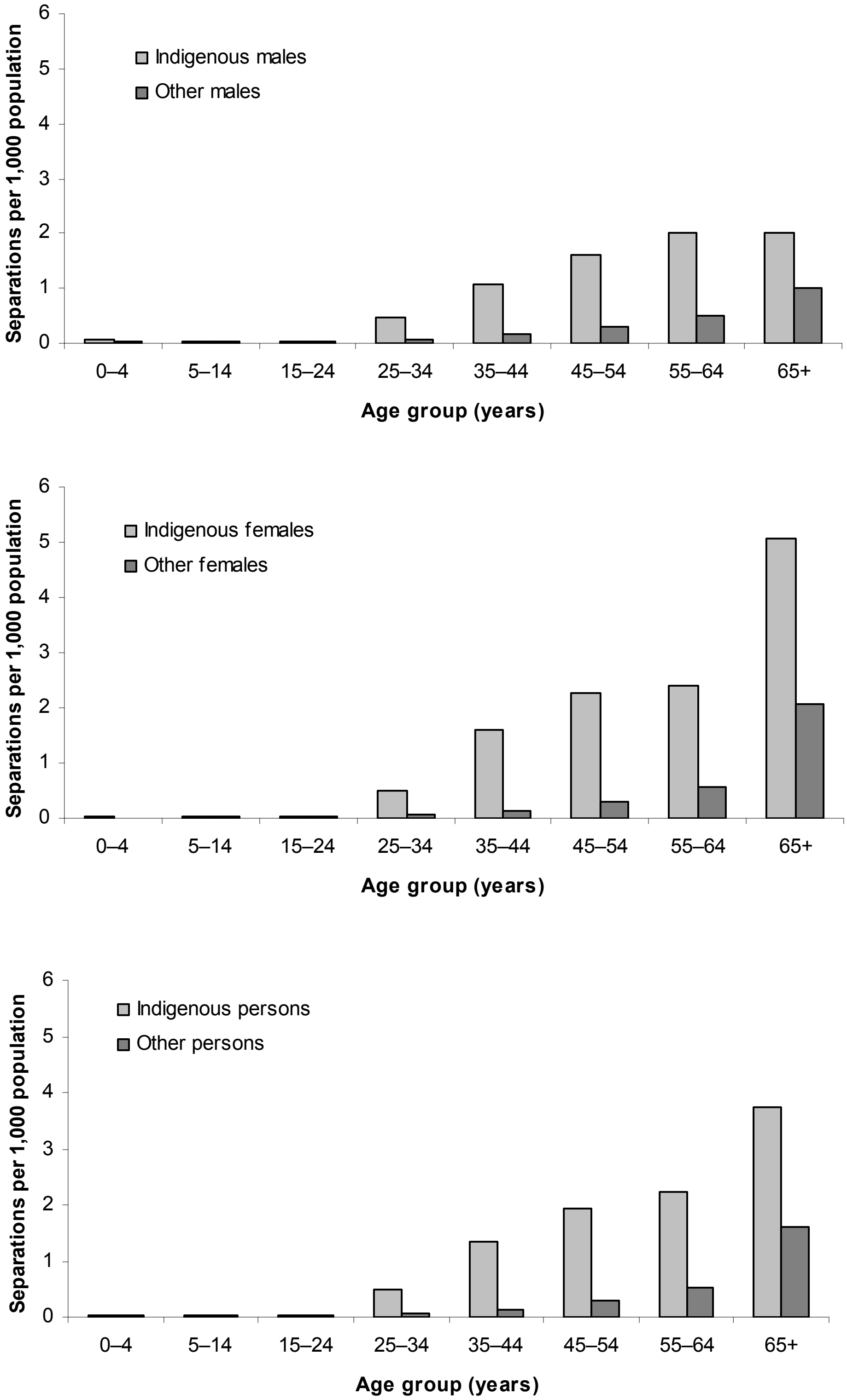
Sources: ABS and AIHW analysis of ABS 1995 National Health Survey (Indigenous supplement); 2001 National Health Survey (Indigenous supplement); 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Hospitalisations

- In the 2-year period July 2004 to June 2006 there were 13,982 hospitalisations for hypertensive disease in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, of which 588 (4.2%) were hospitalisations of Aboriginal and Torres Strait Islander peoples.
- Hospitalisations for hypertensive disease accounted for 0.1% of total hospitalisations of Aboriginal and Torres Strait Islander peoples.

Hospitalisations by age and sex

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, Indigenous males and females had higher hospitalisation rates for hypertensive disease than other males and females across all age groups (Figure 1.07.1).
- The greatest difference in rates occurred in the 25–34, 35–44 and 45–54 year age groups where Indigenous males were hospitalised at between 5 and 7 times the rate of other males in these age groups and Indigenous females were hospitalised at between 8 and 11 times the rates of other females in these age groups.
- Age-specific hospitalisation rates were much higher for Indigenous females than for Indigenous males.
- For both Indigenous and other Australian males and females, hospitalisation rates for hypertensive disease were highest in the 65 years and over age group.
- Approximately 39% of Indigenous Australians hospitalised for hypertensive disease were males (229) and 61% were females (359) (Table 1.07.3).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.07.1: Age-specific hospitalisation rates for a principal diagnosis of hypertensive disease, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Overall hospitalisation rates

Table 1.07.3 presents hospitalisations for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined. As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are included in the table. The Australia data are adjusted by applying a completeness factor of 89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- In New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there were around three to four times as many hospitalisations for hypertensive disease among Indigenous males and females as would be expected based on the rates for other males and females.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised for hypertensive disease at 4.1 times the rate of other Australians.

Table 1.07.3: Hospitalisations of Indigenous persons for principal diagnosis of hypertensive disease, by sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)d)]

	Indigenous				Other[(e)]				
	No.	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	No.	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
NSW, Vic, Qld, WA, SA & NT									
Males	229	0.9	0.7	1.0	4,956	0.3	0.3	0.3	3.4*
Females	359	1.5	1.3	1.7	8,437	0.4	0.4	0.4	4.0*
Persons	588	1.3	1.1	1.4	13,394	0.3	0.3	0.3	3.8*
Australia unadjusted[(j)]									
Males	230	0.8	0.7	1.0	5,129	0.3	0.3	0.3	3.2*
Females	359	1.5	1.3	1.7	8,721	0.4	0.4	0.4	3.9*
Persons	589	1.2	1.1	1.3	13,851	0.3	0.3	0.3	3.6*
Australia adjusted[(j)(k)]									
Males	257	0.9	0.8	1.1	5,102	0.3	0.3	0.3	3.6*
Females	401	1.6	1.4	1.8	8,679	0.4	0.4	0.4	4.3*
Persons	658	1.3	1.2	1.5	13,782	0.3	0.3	0.3	4.1*

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes I10–I15.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

General practitioner encounters

Information about general practitioner (GP) encounters is available from the BEACH survey. Data for the 5-year period 2002–03 to 2006–07 are presented in Table 1.07.4. Hypertension is the second most common individual problem managed at GP encounters with Aboriginal and Torres Strait Islander patients.

- In the period 2002–03 to 2006–07 there were a total of 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 11,219 problems were managed. Of these, 466 (4.2% of all problems managed) were for hypertension.
- Hypertension was managed at GP encounters at a rate of 6.2 per 100 encounters with Indigenous patients.
- After adjusting for differences in age distribution, hypertension was managed at GP encounters at similar rates with both Indigenous patients and other patients.

Table 1.07.4: Hypertension[(a)] managed by general practitioners, by Indigenous status, 2002–03 to 2006–07[(b)(c)(d)]

	Number		**Crude rate (no. per 100 encounters)**						**Age-standardised rate (no. per 100 encounters)[(e)]**		
	Indigenous	**Other[(f)]**	**Indigenous**	**95% LCL[(g)]**	**95% UCL[(h)]**	**Other[(f)]**	**95% LCL[(g)]**	**95% UCL[(h)]**	**Indigenous**	**Other[(f)]**	**Ratio[(i)]**
Males	207	18,531	6.7	5.3	8.2	9.5	9.2	9.7	9.2	9.2	1.0
Females	255	25,599	5.8	4.4	7.1	9.0	8.8	9.3	9.0	9.0	1.0
Persons	466	44,507	6.2	5.0	7.4	9.2	9.0	9.4	9.0	9.1	1.0

(a) ICPC–2 codes: K86, K87.

(b) These survey results are likely to undercount the number of Indigenous Australians visiting doctors.

(c) Combined financial year data for 5 years.

(d) Data for Indigenous and other Australians have not been weighted.

(e) Directly age-standardised rate (no. per 100 encounters) using the total encounters over the period 2002–03 to 2006–07 as the standard.

(f) Includes non-Indigenous patients and patients for whom Indigenous status was not stated.

(g) LCL = lower confidence interval.

(h) UCL = upper confidence interval.

(i) Rate ratio Indigenous:other.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in major cities and regional and remote areas, but very remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Survey.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the NATSIHS 2004–05 publication (ABS 2006).

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations of Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%.

(continued)

Data quality issues (continued)

The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

General practitioner data (BEACH)

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey, 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

High blood pressure

Data quality issues specific to this measure include:

- *The definition of high blood pressure has changed over time and could be further adjusted.*
- *The issue of the most appropriate absolute risk assessment for high blood pressure in Aboriginal and Torres Strait Islander peoples has not yet been determined.*
- *The hospital statistics on hypertensive disease are significantly lower than the prevalence of hypertension in the population as there is very little hospitalisation for hypertensive disease.*

References

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1.08 Diabetes

Prevalence of diabetes for Aboriginal and Torres Strait Islander peoples expressed as a rate by age group, age-standardised rate and ratio

Data sources

Data for this measure come from the National Aboriginal and Torres Strait Islander Health Survey, the Bettering the Evaluation and Care of Health survey and the AIHW National Hospital Morbidity Database.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Bettering the Evaluation and Care of Health (BEACH) survey

Information about encounters in general practice is available from the BEACH survey which is conducted by the AIHW Australian GP Statistics and Classification Centre. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be underestimated. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Because of a late inclusion of a 'not stated' category of Indigenous status in 2001–02 (before which 'not stated' responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2002–03 to 2006–07, during which there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.5% of total GP encounters in the survey.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which Indigenous status was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Analyses

Age-standardised rates and ratios have been used as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported prevalence

Data on the self-reported prevalence of diabetes were measured in the National Aboriginal and Torres Strait Islander Health Survey and are presented below.

Prevalence by age, sex and remoteness

- In 2004–05, after adjusting for differences in age structure, approximately 12% of Indigenous Australians reported diabetes/ high sugar levels compared with 4% of non-Indigenous Australians.
- The greatest difference in prevalence rates between Indigenous and non-Indigenous Australians was among those aged 45–54 years. Indigenous Australians were more than five times as likely to report diabetes as non-Indigenous Australians in this age group (Table 1.08.1; Figure 1.08.1).
- Prevalence of diabetes was highest among those aged 55 years and over for both Indigenous Australians (32%) and non-Indigenous Australians (12%) (Figure 1.08.1).
- Indigenous males were three times as likely, and Indigenous females four times as likely, as non-Indigenous males and females to report diabetes/high sugar levels (Table 1.08.2).

- Prevalence of diabetes was higher among Indigenous Australians in remote areas than among Indigenous Australians in non-remote areas (9% compared with 5%) (Table 1.08.3).
- There was no significant change in the prevalence of diabetes among Indigenous Australians between 1995, 2001 and 2004–05 (Table 1.08.3).

Table 1.08.1: Persons reporting diabetes/high sugar levels, by Indigenous status and age group, 2004–05(a)

Age group	Indigenous	Non-Indigenous
	Per cent	
0–14	—(b)	—(c)
15–24	1(c)	1(c)
25–34	4*	1*
35–44	10*	2*
45–54	21*	4*
55 years and over	32*	12*
Total	**6***	**4***
Total (age-standardised)(d)	**12***	**4***

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

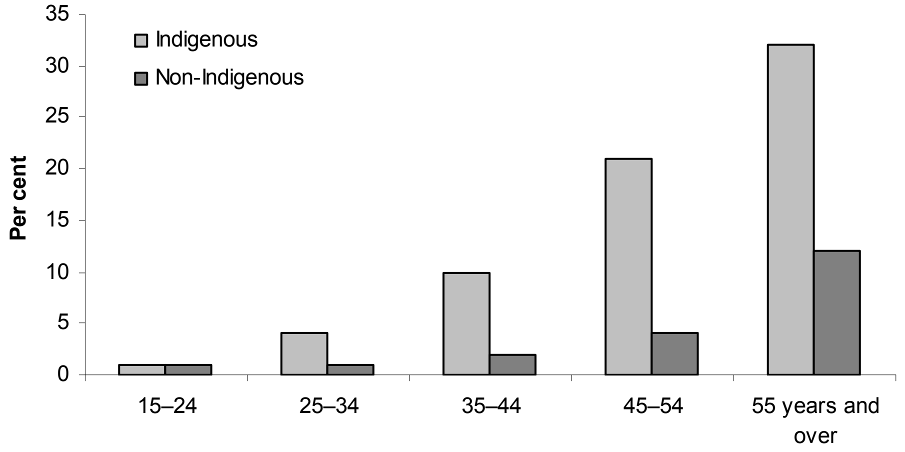
(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(d) Total is a directly age-standardised proportion.

Source: ABS 2006.



Source: AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Figure 1.08.1: Proportion of persons reporting diabetes/high sugar levels, by Indigenous status and age group, 2004–05

Table 1.08.2: Persons reporting diabetes/high sugar levels, by Indigenous status, sex and remoteness, 2004–05

	Males		Females		Persons	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
			Per cent			
Remote	15	n.a.	18	n.a.	16	n.a.
Non-remote	10	4	11	3	11	4
Total	**11**	**4**	**13**	**3**	**12**	**4**
Total number	232,362	9,788,447	241,948	9,893,092	474,310	19,681,539

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Table 1.08.3: Indigenous persons reporting diabetes/high sugar levels, by remoteness, 1995, 2001 and 2004–05

	1995	2001	2004–05
		Per cent	
Remote	n.a.	7	9
Non-remote	4	4	5
Total	**n.a.**	**5**	**6**
Total number	265,416	442,995	474,310

Sources: ABS and AIHW analysis of 1995 National Health survey (Indigenous supplement); 2001 National Health Survey (Indigenous supplement); ABS 2006.

Prevalence by selected population and health characteristics

- In 2004–05, Indigenous Australians aged 15 years and over were more likely to report having diabetes if they were unable to raise $2000 within a week (11% compared with 8%); if the highest year of school completed was Year 9 or below than if Year 12 was the highest year of school completed (17% compared with 14%); and if they were unemployed than if they were employed (22% compared with 13%). Among non-Indigenous Australians, those who were not in the labour force were more likely to report having diabetes than those who were unemployed or employed (Table 1.08.4).
- Indigenous Australians with reported fair/poor health status were much more likely to have diabetes than Indigenous Australians with excellent/very good health status (22% compared with 9%).
- Indigenous Australians aged 18 years and over were more likely to report having diabetes if they had experienced stressors in the last 12 months (12%) than if no stressors were experienced (9%); if they reported their exercise level as low or sedentary rather than high (14% compared with 11%); and if they were overweight and obese than if they were normal or underweight (18% compared with 9%).
- Indigenous Australians who drank at risky/high-risk levels, smoked daily or reported using substances in the last 12 months were less likely to report diabetes than Indigenous Australians who did not report these behaviours. The same was true for non-Indigenous Australians.

- Indigenous Australians who reported that they did not eat vegetables daily were more likely to report having diabetes than those who did eat vegetables daily. The reverse was true for non-Indigenous Australians.
- Indigenous Australians who reported that they eat fruit daily were more likely to report having diabetes than those who did not eat fruit daily.
- Indigenous Australians aged 15 years and over were much more likely to report having diabetes if they also reported hypertension, circulatory problems or high cholesterol than if they did not report these conditions. This was also the case for non-Indigenous Australians.

Table 1.08.4: Proportion[(a)] of Indigenous and non-Indigenous Australians aged 15 years and over with diabetes/high sugar levels, by selected population characteristics, 2004–05

	Indigenous Australians		Non-Indigenous Australians	
	Has diabetes	Does not have diabetes	Has diabetes	Does not have diabetes
Household income				
1st quintile	17.9	82.1	6.0	94.0
5th quintile	16.3	83.7	3.4	96.6
Financial stress—able to raise $2,000 within a week for something important				
Yes	7.7	92.3	n.a.	n.a.
No	11.2	88.8	n.a.	n.a.
Highest year of school completed				
Year 12	14.4	85.6	3.8	96.2
Year 9 or below	17.3	82.7	6.0	94.0
Whether has non-school qualification				
Has a non-school qualification	13.3	86.7	4.3	95.7
Does not have a non-school qualification	16.6	83.4	4.7	95.3
Employment				
Employed	12.5	87.5	3.2	96.8
Unemployed	22.2	77.8	3.7	96.3
Not in the labour force	17.3	82.7	5.5	94.5
Housing				
Owner	6.6	93.4	n.a.	n.a.
Renter	10.9	89.1	n.a.	n.a.
Stressors in last 12 months[(b)]				
Serious illness or disability	12.2	87.8	n.a.	n.a.
Total experienced stressors	11.7	88.3	n.a.	n.a.
No stressors	8.8	91.2	n.a.	n.a.
Self-assessed health status				
Excellent/very good	9.0	91.0	1.9	98.1
Good	14.2	85.8	5.0	95.0
Fair/poor	21.8	78.2	9.6	90.4

(continued)

Table 1.08.4 (continued): Proportion[(a)] of Indigenous and non-Indigenous Australians aged 15 years and over with heart/circulatory problems, by selected population characteristics, 2004–05

	Indigenous Australians		Non-Indigenous Australians	
	Has diabetes	Does not have diabetes	Has diabetes	Does not have diabetes
Smoker status[(b)]				
Current daily smoker	12.7	87.3	3.5	96.5
Not current daily smoker	18.5	81.5	4.8	95.2
Risky/high-risk alcohol consumption in last 12 months[(b)]				
Yes	8.1	91.9	2.9	97.1
No	17.4	82.6	5.0	95.0
Whether used substances in last 12 months[(b)(c)]				
Yes	3.7	96.3	n.a.	n.a.
No	10.7	89.3	n.a.	n.a.
Physical activity[(c)]				
Low/sedentary	13.6	86.4	4.8	95.2
Moderate	12.1	87.9	4.0	96.0
High	11.2	88.8	2.6	97.4
Overweight/obesity				
Yes	17.7	82.3	5.9	94.1
No	8.7	91.3	2.9	97.1
Eats vegetables daily				
Yes	14.9	85.1	4.5	95.5
No	23.7	76.3	3.4	96.6
Eats fruit daily				
Yes	15.5	84.5	4.5	95.5
No	12.6	87.4	3.5	96.5
Hypertension				
Yes	26.5	73.5	9.6	90.4
No	12.3	87.7	3.3	96.7
Circulatory problems				
Yes	21.9	78.1	7.2	92.8
No	11.3	88.7	2.5	97.5
High cholesterol				
Yes	29.6	70.4	10.3	89.7
No	13.9	86.1	3.6	96.4
Total (age-standardised)	**15.4**	**84.6**	**4.5**	**95.5**
Total (crude)	**9.8**	**90.2**	**4.6**	**95.4**
Total number persons aged 15 years and over	28,703	264,938	720,634	14,811,743

(a) Proportions are-age-standardised except for data for financial stress, housing tenure, substance use in the last 12 months and stressors experienced in the last 12 months for which crude proportions are presented, as data for non-Indigenous Australians are not available.

(b) Persons aged 18 years and over.

(c) Non-remote areas only.

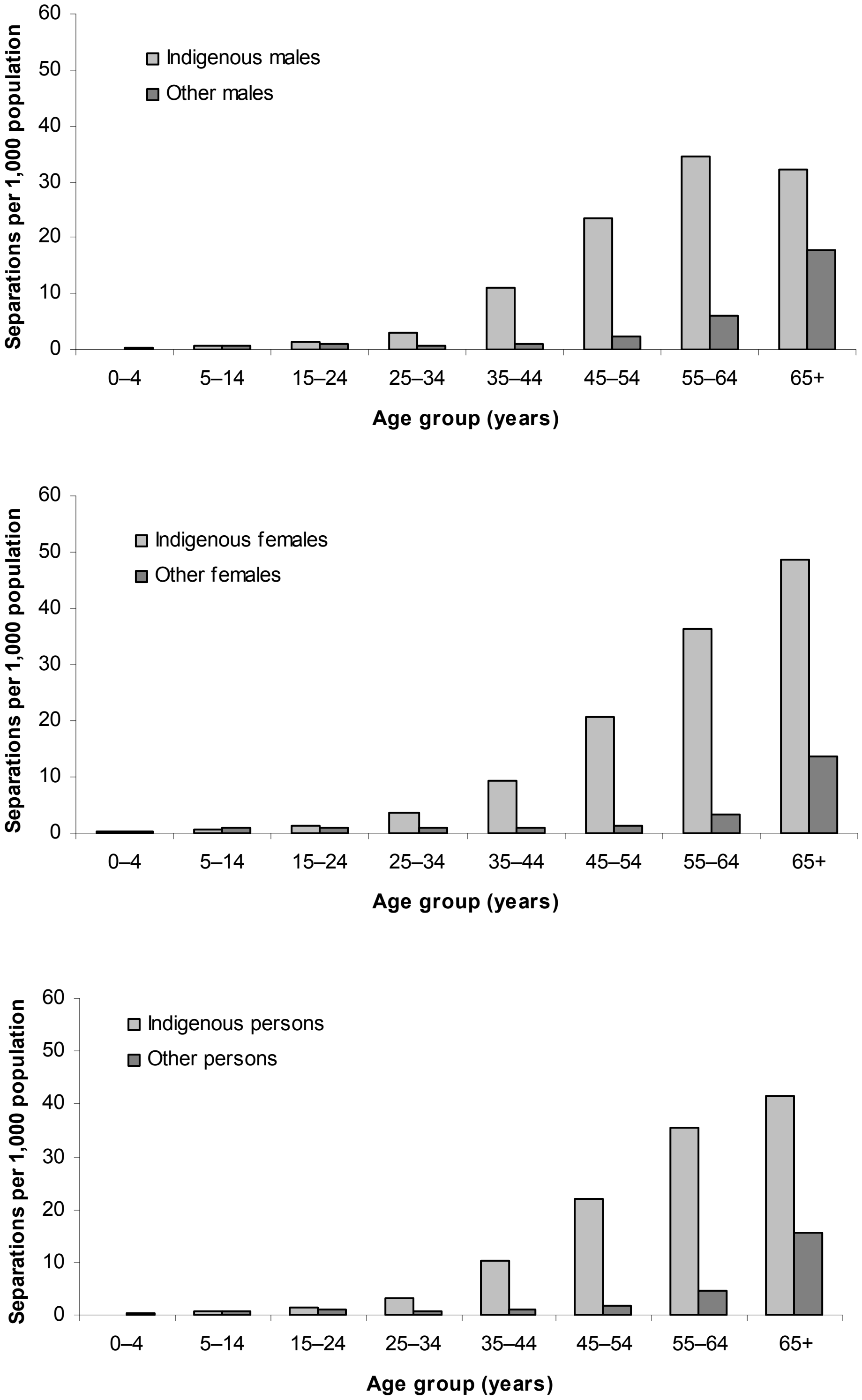
Source: AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Hospitalisations

- In the 2-year period July 2004 to June 2006, there were 134,295 hospitalisations for diabetes in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, of which 6,399 hospitalisations (4.8%) were of Aboriginal and Torres Strait Islander peoples (Table 1.08.5).
- Diabetes was the principal diagnosis in 1.4% of all hospital separations for Aboriginal and Torres Strait Islander Australians.

Hospitalisations by age and sex

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, Indigenous males and females had much higher hospitalisation rates for diabetes than other males and females in all age groups from 25–34 years onwards (Figure 1.08.2).
- The greatest difference in rates for both males and females occurred in the 45–54 year age group, where Indigenous males were hospitalised at around 10 times the rate of other males and Indigenous females were hospitalised at 14 times the rate of other females.
- For Indigenous males, hospitalisation rates for diabetes were highest among those aged 55–64 years, whereas for Indigenous females, other males and other females, rates were highest among those aged 65 years and over.
- Approximately 46% of Indigenous Australians hospitalised for diabetes were males (2,969) and 54% were females (3,429).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.08.2: Age-specific hospitalisation rates for a principal diagnosis of diabetes, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Hospitalisations by state/territory

Table 1.08.5 presents hospitalisations for a principal diagnosis of diabetes for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are presented in the table below. The Australia data are adjusted by applying a completeness factor of 89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- In New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males and females were hospitalised for diabetes at around four and five times the rate of other Australian males and females respectively.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous males and females were hospitalised for diabetes at 3.8 and 5.7 times the rate of other males and females.
- In South Australia and Western Australia, Indigenous Australians were hospitalised for diabetes at six times the rate of other Australians; in Queensland, the rate was five times; in the Northern Territory the rate was four times; in New South Wales the rate was three times; and in Victoria the rate was twice that of other Australians.

Table 1.08.5: Hospitalisations for principal diagnosis of diabetes mellitus, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(g)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
NSW									
Males	596	8.1	7.3	9.0	21,303	3.3	3.2	3.3	2.5*
Females	595	9.0	8.1	9.8	18,753	2.5	2.4	2.5	3.6*
Persons	1,192	8.7	8.1	9.3	40,056	2.8	2.8	2.9	3.1*
Vic									
Males	107	7.5	5.5	9.5	20,382	4.2	4.1	4.3	1.8*
Females	116	7.8	6.1	9.5	17,885	3.1	3.1	3.2	2.5*
Persons	223	7.6	6.4	8.9	38,267	3.6	3.6	3.7	2.1*
Qld									
Males	870	15.2	13.9	16.5	13,617	3.7	3.6	3.8	4.1*
Females	1,088	17.5	16.2	18.7	10,821	2.7	2.6	2.7	6.6*
Persons	1,958	16.5	15.6	17.3	24,438	3.1	3.1	3.2	5.2*
WA									
Males	635	17.5	16.0	19.1	6,932	3.9	3.8	3.9	4.6*
Females	803	21.5	19.9	23.2	6,157	3.0	3.0	3.1	7.1*
Persons	1,438	19.8	18.6	21.0	13,089	3.4	3.4	3.5	5.8*
SA									
Males	247	18.9	16.0	21.8	5,942	3.7	3.6	3.8	5.1*
Females	291	18.6	16.1	21.1	5,405	2.9	2.8	3.0	6.5*
Persons	538	18.6	16.8	20.5	11,347	3.2	3.2	3.3	5.7*
NT									
Males	514	16.0	14.5	17.6	513	4.9	4.4	5.5	3.2*
Females	536	15.7	14.2	17.1	186	2.0	1.7	2.4	7.7*
Persons	1,050	15.9	14.8	17.0	699	3.6	3.3	3.9	4.4*
NSW, Vic, Qld, WA, SA, NT[(d)]									
Males	**2,969**	**13.0**	**12.4**	**13.6**	**68,689**	**3.7**	**3.7**	**3.7**	**3.5***
Females	**3,429**	**14.6**	**14.0**	**15.1**	**59,207**	**2.8**	**2.8**	**2.8**	**5.3***
Persons	**6,399**	**13.9**	**13.5**	**14.3**	**127,896**	**3.2**	**3.2**	**3.2**	**4.4***
Australia unadjusted[(j)]									
Males	3,016	12.6	12.1	13.2	71,983	3.7	3.7	3.7	3.4*
Females	3,469	14.1	13.5	14.6	61,932	2.8	2.8	2.8	5.0*
Persons	6,486	13.5	13.1	13.9	133,915	3.2	3.2	3.2	4.2*
Australia adjusted[(j)]									
Males	3,370	14.1	13.5	14.7	71,629	3.7	3.7	3.7	3.8*
Females	3,877	15.7	15.2	16.3	61,524	2.8	2.7	2.8	5.7*
Persons	7,248	15.1	14.6	15.5	133,153	3.2	3.2	3.2	4.7*

(continued)

Table 1.08.5 (continued): Hospitalisations for principal diagnosis of diabetes mellitus, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes E10–E14.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate coverage of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity database.

Hospitalisations by principal diagnosis

Table 1.08.6 presents hospitalisations for a principal diagnosis of diabetes by type of diabetic condition for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.

- For the period 2004–05 to 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, of all hospitalisations with a principal diagnosis of diabetes, Type 2 diabetes was the most common, responsible for 85% of hospitalisations of Indigenous Australians for diabetes (excluding gestational diabetes).
- In the six jurisdictions, Indigenous males and females were hospitalised for Type 2 non-insulin-dependent diabetes at much higher rates than other males and females (four and seven times respectively).
- Indigenous males and females were hospitalised for other specified diabetes at three and four times the rate of other males and females respectively.
- Indigenous females were hospitalised for gestational diabetes at twice the rate of other females.

Table 1.08.6: Hospitalisations of Indigenous persons for principal diagnosis of diabetes mellitus, by type of diabetes and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Males						Females						Persons					
Principal diagnosis	**No.**	**%[(e)]**	**No. per 1,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**	**No.**	**%[(e)]**	**No. per 1,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**	**No.**	**%[(e)]**	**No. per 1,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**
Type 2—non-insulin-dependent diabetes (E11)	2,517	84.8	11.9	11.3	12.4	4.2*	2,910	84.9	13.2	12.6	13.7	6.6*	5,428	84.8	12.6	12.2	13.0	5.3*
Type 1—insulin-dependent diabetes (E10)	403	13.6	1.0	0.9	1.1	1.3*	461	13.4	1.2	1.1	1.3	1.6*	864	13.5	1.1	1.0	1.2	1.5*
Other specified diabetes (E13)	21	0.7	0.1	0.0	0.1	2.8*	17	0.5	0.0	0.0	0.1	4.0*	38	0.6	0.1	0.0	0.1	3.2*
Unspecified diabetes (E14)	28	0.9	0.1	0.0	0.1	2.8*	41	1.2	0.1	0.1	0.2	5.7*	69	1.1	0.1	0.1	0.2	4.3*
Total[(j)]	**2,969**	**100.0**	**13.0**	**12.4**	**13.6**	**3.5***	**3,429**	**100.0**	**14.6**	**14.0**	**15.1**	**5.3***	**6,399**	**100.0**	**13.9**	**13.5**	**14.3**	**4.4***
Gestational diabetes (O24.4)[(k)]	—	—	—	—	—	—	643	15.8	1.3	1.2	1.4	2.2*	—	—	—	—	—	—

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes E10-E14, 024.4.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these five jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Proportion of male, female and total hospitalisations of Indigenous people for diabetes (excluding gestational diabetes) in the period 2004–05 to 2005–06. *Note:* Proportions for gestational diabetes are out of the total number of hospitalisations for diabetes, including gestational diabetes.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Total excludes gestational diabetes (O24.4).

(k) Proportion of Indigenous females with gestational diabetes out of those with Type 1, Type 2, other specified, unspecified or gestational diabetes (E10–E14 and O24.4).

Note: There were no hospitalisations with a principal diagnosis of malnutrition-related diabetes mellitus (E13).

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by additional diagnosis

Table 1.08.7 presents hospitalisations with a principal diagnosis of diabetes by additional causes of hospitalisation for Aboriginal and Torres Strait Islander peoples in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory.

- For the 2-year period July 2004 to June 2006, aside from factors influencing health status and contact with health services for which 60% of Indigenous hospitalisations for diabetes had an additional diagnosis, hospitalisations of Indigenous Australians with a principal diagnosis of diabetes were commonly reported with an additional diagnosis of diseases of the circulatory system (56%), diseases of the genitourinary system (39%) and other endocrine, metabolic and nutritional disorders (29%).
- Aside from the diseases mentioned above, insulin-dependent diabetes was commonly reported with an additional diagnosis of mental and behavioural disorders (15%), and non-insulin-dependent diabetes was commonly reported with an additional diagnosis of diseases of the eyes (24%) and skin (20%).

Table 1.08.7: Hospitalisations of Indigenous persons for principal diagnosis of diabetes mellitus, by additional dignosis of hospitalisation, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Reported with a principal diagnosis of diabetes				
Additional diagnosis of hospitalisation	**Insulin-dependent diabetes (E10)**	**Non-insulin-dependent diabetes (E11)**	**Other specified diabetes (E13)**	**Unspecified diabetes (E14)**	**Total**
			Per cent		
Factors influencing health status and contact with health services (includes dialysis) (Z00–Z99)	55.8	61.5	76.3	26.1	60.4
Diseases of the circulatory system (I00–I99)	18.2	62.3	31.6	13.0	55.6
Diseases of the genitourinary system (N00–N99)	16.9	43.1	28.9	13.0	39.1
Endocrine, nutritional & metabolic diseases (E00–E90) excluding (E10–E14)	19.2	30.9	34.2	8.7	29.1
Diseases of the eye & adnexa (H00–H59)	11.5	24.4	21.1	7.2	22.5
Diseases of the skin & subcutaneous tissue (L00–L99)	9.3	19.8	23.7	1.4	18.2
Certain infectious and parasitic diseases (A00–B99)	12.7	19.1	23.7	1.4	18.1
Diseases of the nervous system (G00–G99)	10.8	16.0	13.2	1.4	15.1
Symptoms, signs & abnormal clinical & laboratory findings (R00–R99)	10.8	14.6	18.4	5.8	14.0
Mental & behavioural disorders (F00–F99)	15.3	12.3	39.5	4.3	12.8
Diseases of the digestive system (K00–K93)	12.2	8.8	42.1	1.4	9.4
Diseases of the respiratory system (J00–J99)	7.3	8.2	0.0	1.4	8.0
Injury & poisoning (S00–T98)	3.0	8.2	5.3	2.9	7.4
Neoplasms (C00–D48)	0.2	1.0	2.6	0.0	0.9
Other[(e)]	8.9	17.9	10.5	8.7	16.5
Total number	**864**	**5,428**	**38**	**69**	**6,399**

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Indigenous data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes: diseases of the musculoskeletal system and connective tissue; diseases of the ear and mastoid process; congenital malformations, deformations and chromosomal abnormalities; pregnancy, childbirth and the puerperium; certain conditions originating in the perinatal period; diseases of the blood and blood-forming organs; and certain disorders involving the immune system.

Note: Sum of components may exceed 100% as more than one additional diagnosis can be reported for each hospitalisation.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analysis

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 2000–01 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, therefore they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for diabetes over the period 2000–01 to 2005–06 are presented in Table 1.08.8 and Figure 1.08.3. This period has been used for analysis because coding changes were made to diabetes complications in July 1999 and July 2000. Coding for diabetes is consistent only from 2000–01 onwards and data for previous years should not be included in the analysis of diabetes trends.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates for diabetes among Indigenous males and females during the period 2000–01 to 2005–06. The fitted trend implies an average yearly increase in the rate of around 0.8 per 1,000 population, which is equivalent to an increase of 28% in the hospitalisation rate over this period.
- There were also significant increases in hospitalisation rates among other Australian males and females during the same period, with an average yearly increase in the rate of around 0.2 per 1,000 population. This is equivalent to a 36% increase in the hospitalisation rate between 2001–02 and 2005–06.
- There was no significant change in the hospitalisation rate ratio, but a significant increase in the hospitalisation rate difference between Indigenous and other Australians for diabetes over the period 2000–01 to 2005–06 (26%). This increase was significant for females but not for males.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all affect the level of hospitalisation over time. Caution should be used in interpreting changes over time, as it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may reflect better access rather than a worsening of health.

Table 1.08.8: Age-standardised hospitalisation rates, rate ratios and rate differences from diabetes, Qld, WA, SA and NT, 2000–01 to 2005–06(a)

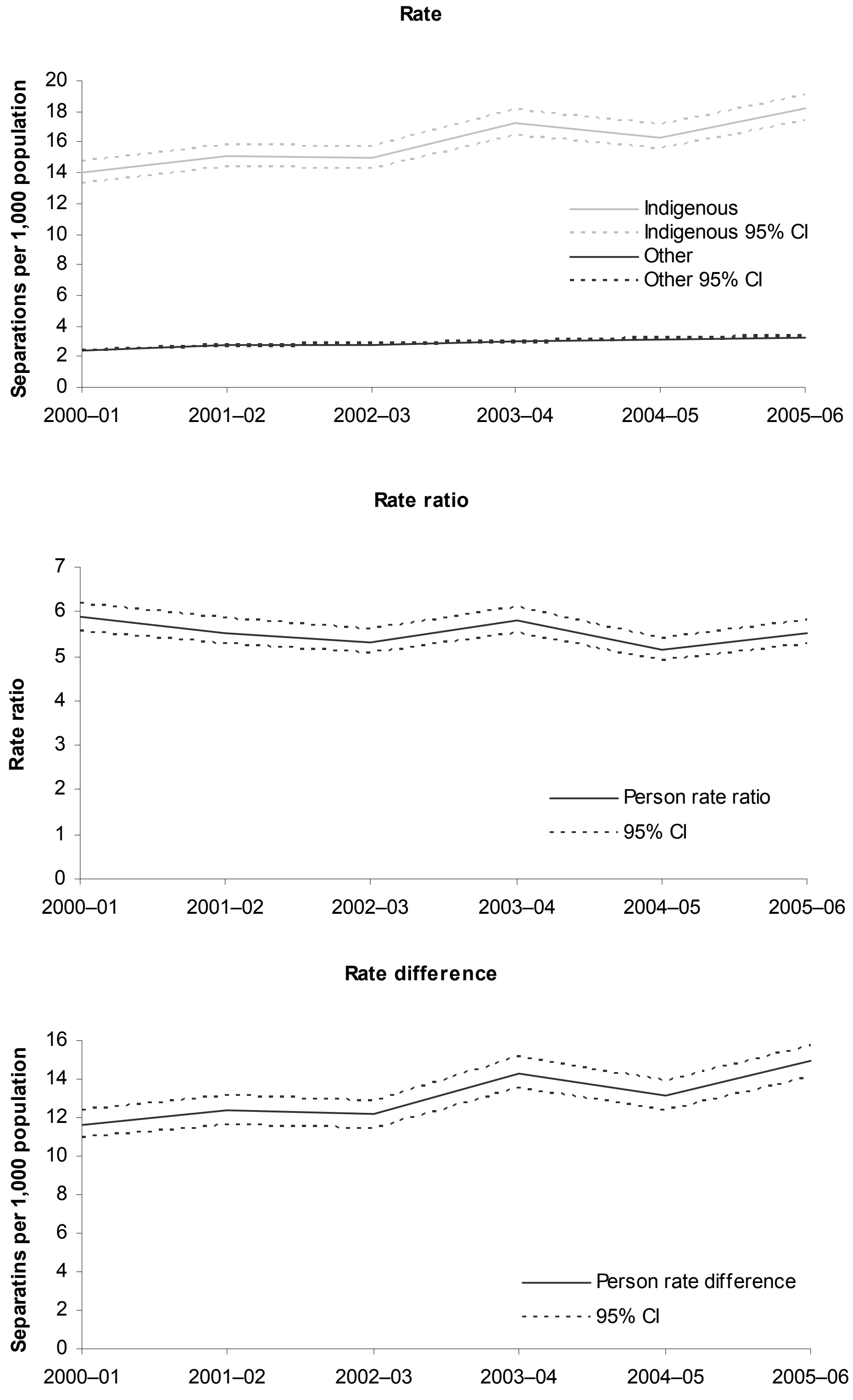
	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change(b)	% change over period(c)
Indigenous rate (separations per 1,000)								
Males	13.9	14.4	14.3	17.0	15.2	17.2	0.6*	21.9
Females	14.1	15.7	15.4	17.3	17.1	19.1	0.9*	31.5
Persons	14.0	15.1	15.0	17.3	16.3	18.2	0.8*	27.6
Other rate (separations per 1,000)(d)								
Males	2.8	3.2	3.3	3.5	3.6	3.8	0.2*	34.6
Females	2.0	2.3	2.4	2.6	2.8	2.8	0.2*	37.8
Persons	2.4	2.7	2.8	3.0	3.2	3.3	0.2*	36.1
Rate ratio(e)								
Males	5.0	4.5	4.4	4.9	4.2	4.5	–0.1	–8.8
Females	6.9	6.7	6.4	6.8	6.2	6.7	–0.1	–4.2
Persons	5.9	5.5	5.3	5.8	5.2	5.5	–0.1	–5.7
Rate difference(f)								
Males	11.1	11.2	11.1	13.6	11.6	13.3	0.4	18.6
Females	12.1	13.3	13.0	14.7	14.4	16.2	0.7*	30.5
Persons	11.6	12.4	12.1	14.3	13.2	14.9	0.6*	25.9

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 2000–01 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(c) Per cent change between 2001–02 and 2005–06 based on the average annual change over the period.
(d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.
(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.08.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from diabetes, Qld, WA, SA and NT, 2000–01 to 2005–06

Sensitivity of hospitalisation trends to changes in identification

- The fitted trends described above have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for identification were posted—constant identification, increasing identification and decreasing identification.
  - Under the constant identification scenario, the number of hospitalisations for the period under study were adjusted using the following identification factors:
    - Queensland 87%
    - Western Australia 97%
    - South Australia 82%
    - Northern Territory 96%.
  - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study—from 83% in 2000–01 to 87% in 2005–06 for Queensland, from 96% to 97% for Western Australia, from 78% to 82% for South Australia, and from 94% to 96% for the Northern Territory.
  - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 90% in 2000–01 to 87% in 2005–06 for Queensland, from 98% to 97% for Western Australia, from 86% to 82% for South Australia, and from 98% to 96% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in hospitalisations might not persist.
- The observed increases in diabetes hospitalisation rates for Indigenous and other Australians during the period 2000–01 to 2005–06 remained statistically significant under all three identification scenarios.
- The observed increases in rate differences between Indigenous and other Australians also remained statistically significant under all three identification scenarios.

General practitioner encounters

Information about general practitioner (GP) encounters is available from the BEACH survey. Data for the 5-year period 2002–03 to 2006–07 are presented in Table 1.08.9. Diabetes is the most common individual problem managed at GP encounters with Indigenous patients.

- In the period 2002–03 to 2006–07 there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 11,219 problems were managed. Of these, 5.3% (590) of problems managed were for diabetes.
- Diabetes was managed at a rate of 7.8 per 100 GP encounters with Indigenous patients.
- After adjusting for differences in age distribution, diabetes was managed at encounters with Indigenous patients at almost four times the rate at encounters with other patients.
- Non-insulin-dependent diabetes (Type 2) was the most common type of diabetes managed at encounters with Indigenous patients—at almost four times the rate at encounters with other patients.
- Insulin-dependent diabetes (Type 1) was managed at encounters with Indigenous patients at around three times the rate at encounters with other patients.
- Gestational diabetes was managed at GP encounters with Indigenous females at around four times the management rate at encounters with other females.

Table 1.08.9: Diabetes problems(a) managed by general practitioners, by Indigenous status of patient, 2002–03 to 2006–07(b)(c)(d)

	Number		Per cent		Crude rate (no. per 100 encounters)						Age-standardised rate (no. per 100 encounters)(e)		
Problem managed	**Indigenous**	**Other(f)**	**Indigenous**	**Other(f)**	**Indigenous**	**95% LCL(g)**	**95% UCL(h)**	**Other**	**95% LCL(g)**	**95% UCL(h)**	**Indigenous**	**Other(f)**	**Ratio(i)**
Diabetes: non-insulin-dependent (T90)	545	13,961	4.9	1.9	7.2	5.6	8.8	2.9	2.8	3.0	10.1	2.8	3.5*
Diabetes: insulin-dependent (T89)	38	1,299	0.3	0.2	0.5	0.3	0.7	0.3	0.3	0.3	0.7	0.3	2.8*
Total diabetes: non-gestational(	*583*	*15,260*	*5.2*	*2.1*	*7.7*	*6.1*	*9.4*	*3.2*	*3.1*	*3.2*	*10.8*	*3.1*	*3.5**
Gestational diabetes (W85)(j)	7	88	0.1	—	0.2	—	0.4	—	—	—	0.1	—	3.6
All diabetes	***590***	***15,348***	***5.3***	***2.1***	***7.8***	***6.1***	***9.5***	***3.2***	***3.1***	***3.3***	***10.9***	***3.1***	***3.5****
Total problems	**11,219**	**724,060**	**100.0**	**100.0**	**148.8**	**126.2**	**171.3**	**149.8**	**148.9**	**150.7**	**156.7**	**148.4**	**1.1**

(a) Classified according to ICPC-2 codes (Classification Committee of the World Organization of Family Doctors (WICC) 1998). ICPC-2 codes T90, T89, W85.

(b) These survey results are likely to undercount the number of Indigenous Australians visiting doctors.

(c) Combined financial year data for 5 years.

(d) Data for Indigenous and other Australians have not been weighted.

(e) Directly age-standardised rate (no. per 100 encounters).

(f) Includes non-Indigenous patients and patients for whom Indigenous status was not stated.

(g) LCL = lower confidence interval.

(h) UCL = upper confidence interval.

(i) Rate ratio Indigenous:other.

(j) Proportions, rates and ratios are for females only.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in major cities and regional and remote areas, but very remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Survey.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the NATSIHS 2004–05 publication (ABS 2006).

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations of Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%.

(continued)

Data quality issues (continued)

The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

General practitioner data (BEACH)

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

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1.09 End stage renal disease

The number of Aboriginal and Torres Strait Islander people with a principal diagnosis of end-stage renal disease as registered by the Australia and New Zealand Dialysis and Transplant Registry, expressed as a rate by age group, age-standardised rate and ratio

Data sources

Data for this indicator come from the Australia and New Zealand Dialysis and Transplant Registry, the AIHW National Hospital Morbidity Database and the AIHW National Mortality Database.

Australia and New Zealand Dialysis and Transplant Registry (ANZDATA)

The data reported here on Indigenous persons with end-stage renal disease (ESRD) have been supplied by ANZDATA. The interpretation and reporting of these data are the responsibility of the authors and in no way should be seen as an official policy or interpretation of the Registry.

In Australia, persons who develop ESRD and undertake dialysis or kidney transplantation are registered with ANZDATA. The Registry is the most comprehensive and reliable source of information on persons treated for ESRD. It compiles data on incidence and prevalence, renal complications, co-morbidities and patient deaths. The current Registry began in 1977 and is coordinated by the Queen Elizabeth Hospital in Adelaide. All relevant hospitals and related satellite units in Australia and New Zealand participate.

Indigenous identification in the Registry is based on self-identification in hospital records. However, because of the heightened awareness of the extent of renal disease in Indigenous Australians and the prolonged and repeated contact with renal units in hospitals, it is believed that Indigenous identification in the Registry is more complete than in general hospital data (Cass et al. 2001).

Registrations for which Indigenous status was not stated have been included under the ‘other’ category.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the ‘other’ category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Mortality

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death, or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data for which year of registration of death was used. Data published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Analyses

Age-standardised rates and ratios have been used as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Registration data

Information is available on Indigenous persons with end-stage renal disease (ESRD) from the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA).

ESRD is a complete or near-complete failure of the kidneys to excrete wastes, concentrate urine, and regulate electrolytes. ESRD occurs when the kidneys are no longer able to function at a level that is necessary for day-to-day life. It usually occurs as chronic renal failure worsens to the point where kidney function is less than 10% of normal.

Incidence of end stage renal disease

- Between 2004 and 2006, there were 6,616 new patients registered with ANZDATA, of which 615 (10%) identified as Aboriginal or Torres Strait Islander. This is higher than the proportion of Indigenous people in the total population (2.4%).
- Indigenous people starting ESRD treatment were substantially younger than non-Indigenous Australians starting ESRD treatment. Over half (60%) of new Indigenous patients registered with ANZDATA were aged less than 55 years, whereas less than a third (30%) of non-Indigenous Australians registered were below that age (Table 1.09.1).
- Incidence rates of treated ESRD for Indigenous Australians were higher than for non-Indigenous Australians across all age groups. The difference was marked at ages 45–54 years and 55–64 years where incidence rates for Indigenous Australians were between 14 and 16 times those for non-Indigenous Australians.
- After adjusting for differences in age structure, the incidence rate of treated ESRD for Indigenous Australians was more than eight times the incidence rate of non-Indigenous Australians.
- Between 2004 and 2006, Indigenous males and females were 6 and 12 times as likely to register for treatment of ESRD as non-Indigenous males and females (Table 1.09.2).
- Incidence rates of treated ESRD for Indigenous Australians were higher than for non-Indigenous Australians in all states and territories. Rate ratios ranged from 3 in New South Wales and Victoria to 28 in the Northern Territory (Table 1.09.3).
- Incidence rates for ESRD among Indigenous Australians were higher in remote areas of Australia than in Major Cities. Indigenous Australians were 18 and 20 times as likely to register for treatment of ESRD as non-Indigenous Australians in Remote and Very Remote areas respectively, and 14 times as likely to register for treatment of ESRD in outer regional areas. In Major Cities and Inner Regional areas, incidence rates for Indigenous Australians were 4 to 6 times those for non-Indigenous Australians living in these areas (Table 1.09.4).

The reasons for the high incidence of treated ESRD among Indigenous Australians are probably related to the high proportion of the Indigenous population with factors which contribute to the increased risk of kidney impairment and lack of access to services for detection and treatment of chronic kidney disease (AIHW 2005a).

Table 1.09.1: Incidence of end-stage renal disease, by Indigenous status and age group, 2004–2006[(a)]

	Number		Per cent[(b)]		Indigenous	Non-Indigenous	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	No. per 1,000)[(c)]	No. per 1,000[(c)]	Rate ratio[(d)]
0–24	15	197	2.4	3.3	0.0	0.0	1.8*
25–44	161	822	26.2	13.7	0.4	0.0	8.4*
45–54	194	821	31.5	13.7	1.6	0.1	15.8*
55–64	169	1220	27.5	20.3	2.6	0.2	13.8*
65+	76	2941	12.4	49.0	1.8	0.4	4.9*
Total[(e)]	**615**	**6001**	**100.0**	**100.0**	**0.8**	**0.1**	**8.4***

* Represents results with statistically significant differences in the Indigenous/other comparisons.

(a) Calendar year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Proportion of Indigenous and other patients in each age group.

(c) Age-specific rates per 1,000 population.

(d) Rate ratio Indigenous: non-Indigenous.

(e) Total rates are directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of ANZDATA data.

Table 1.09.2: Incidence of end-stage renal disease for Indigenous Australians, by age group and sex, 2004–2006(a)

Age group	Male						Female						Total					
	No.	%(b)	No. per 1,000(c)	LCL 95%(d)	UCL 95%(e)	Rate ratio(f)	No.	%(b)	No. per 1,000(c)	LCL 95%(d)	UCL 95%(e)	Rate ratio(f)	No.	%(b)	No. per 1,000(c)	LCL 95%(d)	UCL 95%(e)	Rate ratio(f)
0–14 years	n.p.	n.p.	n.p.	n.p.	n.p.	2.6	0	0.0	0.0	0.0	0.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	1.3
15–24 years	n.p.	n.p.	n.p.	n.p.	n.p.	1.4	7	2.1	0.0	0.0	0.1	3.8*	11	1.8	0.0	0.0	0.1	2.3*
25–34 years	22	8.0	0.2	0.1	0.3	5.2*	20	5.9	0.2	0.1	0.3	6.1*	42	6.8	0.2	0.1	0.2	5.5*
35–44 years	60	21.7	0.7	0.5	0.9	9.2*	59	17.4	0.6	0.4	0.8	13.6*	119	19.3	0.6	0.5	0.8	10.8*
45–54 years	97	35.1	1.6	1.3	2.0	12.8*	97	28.6	1.5	1.2	1.8	21.3*	194	31.5	1.6	1.3	1.8	15.8*
55–64 years	61	22.1	2.0	1.5	2.4	8.5*	108	31.9	3.2	2.6	3.8	21.9*	169	27.5	2.6	2.2	3.0	13.8*
65 +years	28	10.1	1.6	1.0	2.1	3.1*	48	14.2	2.1	1.5	2.7	7.9*	76	12.4	1.8	1.4	2.3	4.9*
Total(g)	**276**	**100.0**	**0.7**	**0.6**	**0.8**	**5.9***	**339**	**100.0**	**0.9**	**0.8**	**1.0**	**12.1***	**615**	**100.0**	**0.8**	**0.7**	**0.9**	**8.4***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Calender year reporting. Data are presented in 3-year groupings because of small numbers each year.
(b) Proportion of male, female and total registration rates for Indigenous persons in the period 2004–2006.
(c) Age-specific rates per 1,000 population.
(d) LCL = lower confidence limit.
(e) UCL = upper confidence limit.
(f) Rate ratio Indigenous: non-Indigenous.
(g) Total rates are directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of ANZDATA data.

Table 1.09.3: Incidence of end-stage renal disease, by Indigenous status, sex and state/territory, 2004–2006[(a)]

	Males			Females			Persons		
	No.	No. per 1,000[(b)]	Ratio[(c)]	No.	No. per 1,000[(b)]	Ratio[(c)]	No.	No. per 1,000[(b)]	Ratio[(c)]
NSW									
Indigenous	30	0.3	2.2*	25	0.3	3.4*	55	0.3	2.7*
Non-Indigenous	1,187	0.1	. .	808	0.1	. .	1,995	0.1	. .
Vic									
Indigenous	12	0.4	3.5*	13	0.7	9.4*	25	0.6	5.9*
Non-Indigenous	950	0.1	. .	572	0.1	. .	1,522	0.1	. .
Qld									
Indigenous	68	0.8	6.1*	92	0.9	12.0*	160	0.9	8.5*
Non-Indigenous	724	0.1	. .	463	0.1	. .	1,187	0.1	. .
WA									
Indigenous	53	0.9	7.2*	66	1.1	16.9*	119	1.0	10.8*
Non-Indigenous	348	0.1	. .	200	0.1	. .	548	0.1	. .
SA									
Indigenous	18	0.9	7.3*	23	0.8	12.5*	41	0.9	9.2*
Non-Indigenous	304	0.1	. .	169	0.1	. .	473	0.1	. .
Tas									
Indigenous	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Non-Indigenous	65	0.1	. .	46	0.1	. .	111	0.1	. .
ACT									
Indigenous	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Non-Indigenous	97	0.2	. .	45	0.1	. .	142	0.2	. .
NT									
Indigenous	93	2.0	17.0*	118	2.3	57.3*	211	2.2	27.6*
Non-Indigenous	17	0.1	. .	6	0.0	. .	23	0.1	. .
Australia									
Indigenous	**276**	**0.7**	**5.9***	**339**	**0.9**	**12.1***	**615**	**0.8**	**8.4***
Non-Indigenous	**3,692**	**0.1**	**. .**	**2,309**	**0.1**	**. .**	**6,001**	**0.1**	**. .**

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons.

(a) Calendar year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Directly age-standardised using the Australian 2001 standard population.

(c) Rate ratio Indigenous: non-Indigenous.

Source: AIHW analysis of ANZDATA data.

Table 1.09.4: Incidence of end-stage renal disease, by Indigenous status and remoteness, 2004–2006[(a)]

	Number		Per cent[(b)]		Indigenous	Non-Indigenous	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	No. per 1,000[(c)]	No. per 1,000[(c)]	Rate ratio[(d)]
Major Cities	71	4,229	11.8	70.6	0.4	0.1	3.5*
Inner Regional	62	1,219	10.3	20.4	0.5	0.1	5.5*
Outer Regional	169	465	28.1	7.8	1.1	0.1	14.4*
Remote	116	56	19.3	0.9	1.6	0.1	19.7*
Very Remote	184	19	30.6	0.3	1.4	0.1	18.3*
Australia[(f)]	**615**	**6,001**	**100.0**	**100.0**	**0.8**	**0.1**	**8.4***

* Represents results with statistically significant differences in the Indigenous/other comparisons.

(a) Calendar year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Proportion of Indigenous and other patients in each age group.

(c) Directly age-standardised using the Australian 2001 standard population.

(d) Rate ratio Indigenous: non-Indigenous.

(e) Australia total includes cases where remoteness category was not known.

Source: AIHW analysis of ANZDATA data.

Time series analysis

Data on the incidence of ESRD among Indigenous and non-Indigenous Australians for the period 1991–2006 are presented below.

- The number of Indigenous patients starting ESRD treatment has more than tripled over the last decade (from 54 in 1991 to 207 in 2004).
- Over the period 1991–2006, there were significant increases in the incidence rate of ESRD among Indigenous Australians. The fitted trend implies an average yearly increase in the rate of around 0.03 per 1,000 (or 3 per 100,000) which is equivalent to a 185% increase in the rate over the period. The fitted trend showed significant increases in the incidence of ESRD for both Indigenous males and females.
- Over the same period, there were also significant increases in the incidence rates of ESRD among non-Indigenous males and females, but these increases were not as rapid as in the Indigenous population (increase of 87% for males and 48% for females).
- There were significant increases in both the incidence rate ratios and rate differences between Indigenous and non-Indigenous Australians for ESRD over the period 1991–2004 (60% in the rate ratio and 215% in the rate difference for persons), reflecting both a relative and absolute increase in the gap between incidence rates for Indigenous and other Australians for ESRD over the period.

The rapid increase in the incidence of ESRD in the Indigenous population may reflect both real growth and the increasing availability and acceptability of kidney replacement therapy to Indigenous communities in recent years.

Fluctuations in the incidence rates of ESRD for Indigenous Australians over time may also reflect changing levels of identification of Indigenous registrations in the ANZDATA Registry and Indigenous population estimates. Caution should be exercised in assessing trends in Indigenous ESRD rates over time and comparisons with the non-Indigenous population.

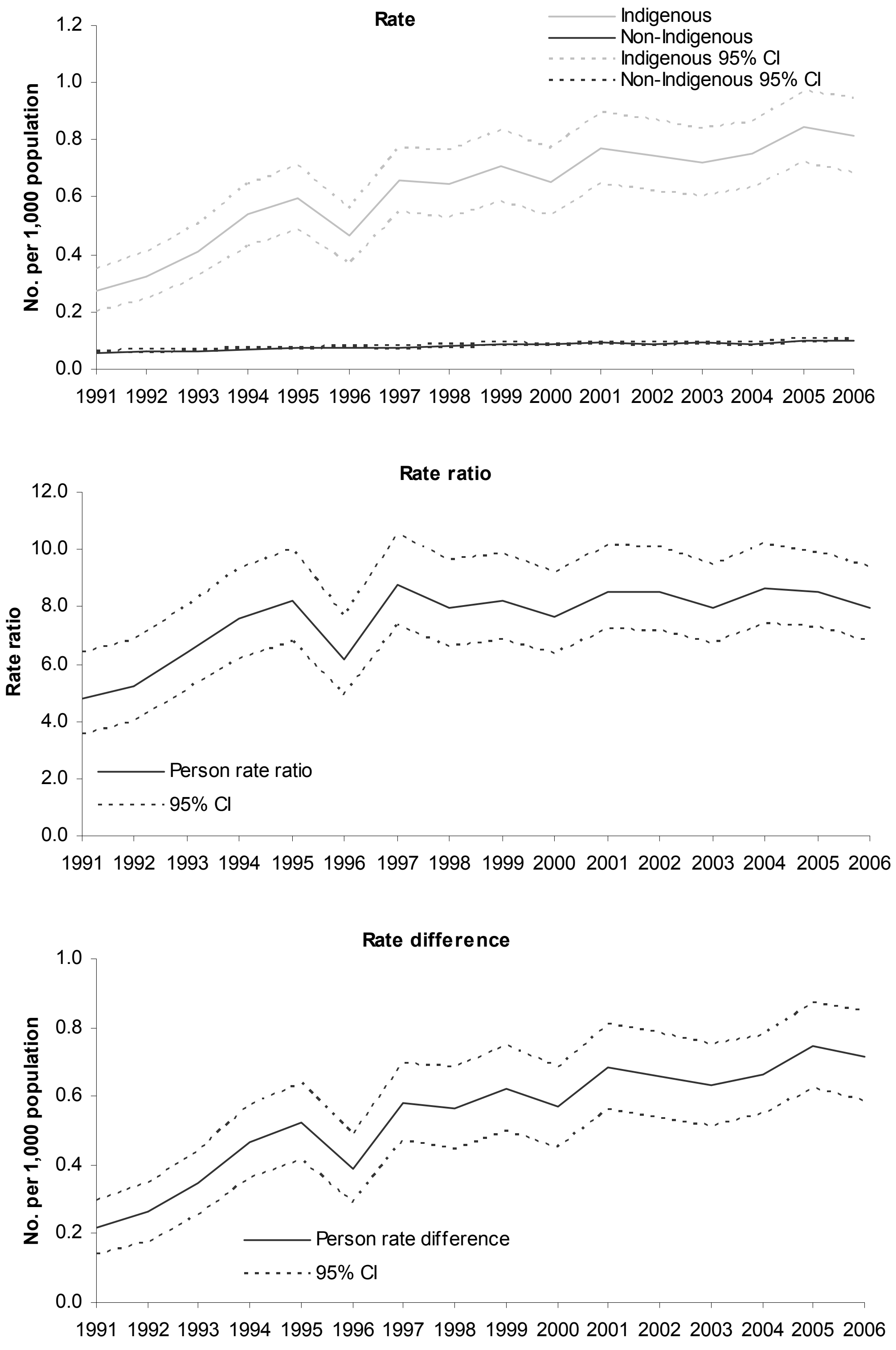
Table 1.09.5: Age-standardised incidence rates, rate ratios and rate differences for end-stage renal disease, 1991–2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change over period(b)
	Indigenous rate (no. per 1,000)(c)																	
Males	0.2	0.2	0.4	0.5	0.6	0.4	0.5	0.7	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.03*	206.6
Females	0.3	0.4	0.4	0.6	0.6	0.5	0.8	0.6	0.9	0.7	0.9	0.8	0.7	0.8	1.0	0.8	0.03*	169.3
Persons	0.3	0.3	0.4	0.5	0.6	0.5	0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.8	0.03*	184.5
	Non-Indigenous(c) rate (no. per 1,000)																	
Males	0.07	0.07	0.08	0.09	0.09	0.09	0.09	0.10	0.11	0.10	0.12	0.11	0.12	0.11	0.13	0.13	0.004*	86.5
Females	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.06	0.07	0.06	0.07	0.08	0.001*	47.6
Persons	0.06	0.06	0.06	0.07	0.07	0.08	0.07	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.003*	68.7
	Rate ratio(d)																	
Males	3.6	3.4	5.3	5.3	6.2	4.4	5.0	6.4	4.9	6.1	5.1	6.3	6.5	6.2	5.5	6.0	0.14*	57.4
Females	5.2	6.3	6.7	8.7	8.8	6.8	11.1	8.0	10.1	7.9	10.3	8.7	7.8	9.2	9.7	8.1	0.17*	49.3
Persons	4.8	5.2	6.4	7.6	8.2	6.1	8.8	8.0	8.2	7.7	8.5	8.5	8.0	8.7	8.5	8.0	0.19*	60.3
	Rate difference(e)																	
Males	0.2	0.2	0.3	0.4	0.5	0.3	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.03*	253.5
Females	0.2	0.3	0.4	0.5	0.6	0.4	0.8	0.6	0.8	0.6	0.8	0.7	0.6	0.7	0.9	0.7	0.03*	193.4
Persons	0.2	0.3	0.3	0.5	0.5	0.4	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.03*	215.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1991–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1991 and 2006 based on the average annual change over the period.
(c) Rates have been directly age-standardised using the 2001 Australian standard population.
(d) Incidence rate for non-Indigenous people divided by the rate for non-Indigenous Australians.
(e) Incidence rate for non-Indigenous people minus the rate for non-Indigenous Australians.

Source: AIHW analysis of ANZDATA data



Source: AIHW analysis of ANZDATA data.

Figure 1.09.1: Age-standardised registration rates, rate ratios and differences for end-stage renal disease, by Indigenous status, 1991–2006

Management of end-stage renal disease

ESRD patients require either a kidney transplant or dialysis to maintain the functions normally performed by the kidneys. Patterns of treatment for ESRD differ between Indigenous and non-Indigenous patients.

- As at 31 December 2006, of all Indigenous ESRD patients registered, 87% relied on dialysis and only 13% had received a kidney transplant. In contrast, 55% of non-Indigenous Australians living with ESRD relied on dialysis and 45% had received a kidney transplant (Table 1.09.6).
- Indigenous Australians were 10 times as likely as non-Indigenous Australians to have ESRD and rely on dialysis.

Once dialysis treatment has started, Indigenous people are less likely than other Australians to be placed on the active transplant waiting list and less likely to move from the waiting list to transplantation (McDonald & Russ 2003; Cass et al. 2003). Factors which may contribute to these disparities include miscommunication between Indigenous patients and health professionals, lack of understanding from Indigenous patients of their illness and its treatments, and lower rates of well-matched kidney donors for Indigenous patients than for other patients (Cass et al. 2003; McDonald & Russ 2003).

Table 1.09.6: Total patients with end-stage renal disease, by Indigenous status and treatment, as at 31 December 2006[(a)]

	Number		Per cent[(b)]		No. per 1,000[(c)]		
Treatment	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**[)]	**Indigenous**	**Non-Indigenous**	**Ratio**[(d)]
Dialysis	971	8,211	86.9	54.7	3.9	0.4	10.1*
Transplant	147	6,806	13.1	45.3	0.5	0.3	1.4*
Total	**1,118**	**15,017**	**100.0**	**100.0**	**4.4**	**0.7**	**5.7***

* Represents results with statistically significant differences in the Indigenous/other comparisons.

(a) Calendar year reporting.

(b) Proportion of Indigenous and other patients receiving dialysis and transplants.

(c) Directly age-standardised using the Australian 2001 standard population.

(d) Rate ratio Indigenous:other.

Source: AIHW analysis of ANZDATA data.

Hospitalisations

- Over the period June 2004 to July 2006, there were 1,699,005 hospitalisations for chronic kidney disease and its sequelae in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, of which 193,806 (11.4%) were of Indigenous Australians.
- Approximately 41% of total hospitalisations of Indigenous Australians were for chronic kidney disease.

Hospitalisations for chronic kidney disease

Chronic kidney disease includes diabetic nephropathy, hypertensive renal disease, glomerular disease, chronic renal failure and end-stage renal disease (ESRD).

Hospitalisations of Indigenous Australians for chronic kidney disease and its sequelae in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined over the period June 2004 to July 2006 are presented in Tables 1.09.7 and 1.09.8.

- Of all hospitalisations for chronic kidney disease among Aboriginal and Torres Strait Islander peoples, the large majority (98%) were for care involving dialysis.
- Overall, Indigenous Australians were hospitalised for chronic kidney disease with dialysis at 11 times the rate of other Australians (Table 1.09.7).
- Indigenous Australians were hospitalised for care involving dialysis at 11 times the rate of other Australians, diabetic nephropathy at 11 times the rate of other Australians and chronic renal failure at 7 times the rate of other Australians.
- Approximately 44% of Indigenous Australians hospitalised for chronic kidney disease and its sequelae were males (85,842) and 56% were females (107,964).
- Indigenous males were hospitalised for chronic kidney disease with dialysis at 8 times the rate of other males, and Indigenous females were hospitalised for chronic kidney disease at 15 times the rate of other females (Table 1.09.8).
- Over the period June 2004 to July 2006, there were 207,528 bed-days additional with Indigenous chronic kidney disease hospitalisations in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, at an average of 1.1 days per separation. Excluding same-day separations for dialysis (189,949 hospitalisations), the average length of stay in hospital for Indigenous people with chronic kidney disease was 4.6 days compared with 4.9 days for other Australians.

Table 1.09.7: Hospitalisations for chronic kidney disease and its sequelae, by Indigenous status and type of kidney disease, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Number		Per cent[(e)]		Indigenous			Other[(f)]			
	Indigenous	Other[(f)]	Indigenous	Other[(f)]	No. per 1,000[(g)]	95% LCL[(h)]	95% UCL[(i)]	No. per 1000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate Ratio[(j)]
Care involving dialysis (ESRD)	190,489	1,461,917	98.3	97.1	402.0	399.9	404.0	36.5	36.4	36.5	11.0*
Diabetic nephropathy	1,112	8,847	0.6	0.6	2.5	2.3	2.7	0.2	0.2	0.2	11.4*
Renal-tubulo interstitial diseases	873	12,266	0.5	0.8	1.1	1.1	1.2	0.3	0.3	0.3	3.6*
Chronic renal failure	636	9,160	0.3	0.6	1.6	1.5	1.7	0.2	0.2	0.2	7.0*
Glomerular diseases	417	4,634	0.2	0.3	0.3	0.3	0.3	0.1	0.1	0.1	2.5*
Hypertensive renal disease	54	1,263	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	3.2*
Other chronic diseases	225	7,112	0.1	0.5	0.3	0.3	0.4	0.2	0.2	0.2	1.7*
Total	**193,806**	**1,505,199**	**100.0**	**100.0**	**407.9**	**405.9**	**410.0**	**37.6**	**37.5**	**37.6**	**10.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ANZDATA for this measure. Other coding categories are based on the ICD-10-AM fifth edition (National Centre for Classification of Health 2006); ICD-10-AM codes Z49; E102, E112, E132 and E142; N11–N12 and N14–N16; N18–N19; N00–N08; I12–I13, I150 and I151; N25–N28, N391, N392, Q60–Q63, T824, T861, and Z940.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Proportion of hospitalisations of Indigenous and non-Indigenous people in the period 2004–05 to 2005–06.

(f) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(g) Directly age-standardised using the Australian 2001 standard population.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:other.

Source: AIHW analysis of National Hospital Morbidity Database.

Table 1.09.8: Hospitalisations of Indigenous Australians for chronic kidney disease and its sequelae, by sex and type of kidney disease, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Males						Females					
	No.	%[(e)]	No. per 1,000[(f)]	95% LCL[(g)]	95% UCL[(h)]	Rate ratio[(i)]	No.	%[(e)]	No. per 1,000[(f)]	95% LCL[(g)]	95% UCL[(h)]	Rate ratio[(i)]
Care involving dialysis (ESRD)	84,491	98.4	370.9	368.0	373.8	7.8*	105,998	98.2	429.7	426.9	432.6	15.9*
Diabetic nephropathy	470	0.5	2.2	1.9	2.4	8.1*	642	0.6	2.8	2.6	3.0	15.6*
Renal-tubulo interstitial diseases	97	0.1	0.3	0.2	0.3	2.3*	776	0.7	1.9	1.8	2.1	3.7*
Chronic renal failure	427	0.5	2.6	2.3	2.8	9.2*	209	0.2	0.8	0.7	0.9	4.3*
Glomerular diseases	223	0.3	0.3	0.3	0.4	2.1*	194	0.2	0.3	0.3	0.4	3.1*
Hypertensive renal disease	32	0.0	0.1	0.1	0.2	3.4*	22	0.0	0.1	0.0	0.1	3.0*
Other chronic diseases	102	0.1	0.3	0.2	0.3	1.2	123	0.1	0.4	0.3	0.4	2.2*
Total	**85,842**	**100.0**	**376.6**	**373.6**	**379.5**	**7.7***	**107,964**	**100.0**	**436.0**	**433.1**	**438.9**	**15.4***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ANZDATA for this measure. Other coding categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes Z49; E102, E112, E132 and E142; N11–N12 and N14–N16; N18–N19; N00–N08; I12–I13, I150 and I151; N25–N28, N391, N392, Q60–Q63, T824, T861, and Z940.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Proportion of hospitalisations of Indigenous and non-Indigenous people in the period 2004–05 to 2005–06.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

Source: AIHW analysis of National Hospital Morbidity Database.

Mortality

- Over the period 2002–2006, in Queensland, Western Australia, South Australia and the Northern Territory, there were 4,493 deaths for which chronic kidney disease was recorded as the underlying cause of death, of which 298 deaths (7%) were of Indigenous Australians.
- Approximately 4% of all deaths of Indigenous Australians over this period were from chronic kidney disease.
- Approximately 40% of all Indigenous Australians who died from chronic kidney disease were males and 60% were females.
- After adjusting for differences in age structure, Indigenous Australians were 5.5 times as likely as non-Indigenous Australians to have died from chronic kidney disease between 2002 and 2006.
- Indigenous males died from chronic kidney disease at over four times the rate of non-Indigenous males, and Indigenous females died from chronic kidney disease at over six times the rate of non-Indigenous females.
- In the period 2002–2006, similar proportions of Indigenous and non-Indigenous deaths for which chronic kidney disease was recorded as the underlying cause of death were reported with circulatory disease as an additional cause of death (58% and 60%, respectively). Over the same period, 21% of Indigenous deaths for which chronic kidney disease was recorded as the underlying cause of death were reported with diabetes as an additional cause of death, compared with 8% of non-Indigenous deaths. Approximately 14% of Indigenous deaths and 9% of non-Indigenous deaths for which chronic kidney disease was recorded as the underlying cause of death were reported with digestive system diseases as an additional cause of death.

Data quality issues

ANZDATA

The data reported here on Indigenous persons with end-stage renal disease (ESRD) have been supplied by the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA). The interpretation and reporting of these data are the responsibility of the authors and in no way should be seen as an official policy or interpretation of the Registry.

Indigenous status question

Patients in the Registry are identified according to 'racial origin'. Aboriginal people and Torres Strait Islanders are identified separately, but separate results are not always published for Torres Strait Islanders because of small numbers of patients.

Under-identification

The completeness of identification of Indigenous people in the registry is not known, but the nature of the illness means that treatment centres have prolonged contact with patients and, therefore, have a considerable opportunity to collect accurate information (Disney et al. 1997).

Indigenous identification is based on self-identification and discussion with the treating physician. There is often significant concern about the quality of Indigenous identification in morbidity, mortality and demographic data sets. However, racial identification in the ANZDATA Registry is reported to be good. A survey form is completed every 6 months for all patients on maintenance dialysis or with functioning renal transplants. In this survey, question 5 is about 'Racial origin' and includes a prompt regarding Indigenous status. ESRD patients have regular contact with renal services from the time of diagnosis, through intensive maintenance therapy until death. There is heightened awareness of renal disease in Indigenous Australians and multiple opportunities exist to reconfirm data accuracy (Cass et al. 2001).

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005b).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories.

(continued)

Data quality issues (continued)

Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have wording that is slightly different from the national standard for the instruction regarding those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

(continued)

Data quality issues (continued)

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded/recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are under-estimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems (ABS & AIHW 2005). The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous.

The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death.

There are also current concerns about data quality for causes of death, especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006).

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

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1.10 Decayed, missing, filled teeth

The number of decayed, missing and filled deciduous infant teeth (dmft) and the number of decayed, missing and filled permanent adult teeth (DMFT) for Aboriginal and Torres Strait Islander peoples

Data sources

Data for this measure come from the AIHW Dental Statistics Research Unit (Child Dental Health Survey, Indigenous child oral health in remote communities study, and the National Survey of Adult Oral Health), the ABS 2004–05 National Aboriginal and Torres Strait Islander Health Survey, the Western Australian Aboriginal Child Health Survey and the AIHW National Hospital Morbidity Database.

Dental health survey data

The AIHW Dental Statistics Research Unit is responsible for a number of data collections in the areas of oral health, access to dental care and dental health services.

Child Dental Health Survey

Data on children's dental health come from the Child Dental Health Survey, a national survey which monitors the dental health of children enrolled in school dental services operated by health departments in all states and territories. In the period 2000–2003, Indigenous status was recorded reliably and for sufficient numbers of children in New South Wales, South Australia and the Northern Territory. Data from those jurisdictions are used for this measure. Data from a total of 341,195 children were included in the analyses: 11,017 (3.2%) Indigenous children and 330,178 (96.8%) non-Indigenous children.

Indigenous child oral health in remote communities study

Indigenous child oral health data were collected from remote Indigenous communities in all jurisdictions in the 2000–2003 period as part of a study undertaken by the Australian Research Centre for Population Oral Health in collaboration with the Far West Area Health Service (New South Wales), the remote Indigenous communities of Nganampa lands (South Australia), and various remote communities around Alice Springs (Northern Territory). Data were collected by dental health professionals providing services to these communities. (Because of issues of confidentiality, specific location details were unable to be included in the analysis.)

Data were gathered in terms of sociodemographic information (age, sex, Indigenous status), self-care habits (toothbrushing at home and school), dental disease experience, gingivitis and caries risk status, and fluorosis and hypoplasia levels.

National Survey of Adult Oral Health

The 2004–06 National Survey of Adult Oral Health is the second national oral examination survey of Australians which included telephone interviews with 14,123 people aged 15–97 years, 5,505 of whom were also dentally examined. The survey included 229 people who identified as Aboriginal or Torres Strait Islander (1.5%). The survey collected information on levels of oral disease, perceptions of oral health and patterns of dental care within a representative cross-section of adults in all states and territories of Australia. The first survey (the National Oral Health Survey of Australia) was conducted in 1987–88 and did not collect information on Indigenous status.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Western Australian Aboriginal Child Health Survey

This survey was a large-scale investigation into the health of 5,289 Western Australian Aboriginal and Torres Strait Islander children aged 0–17 years. It was undertaken in 2001 and 2002 by the Telethon Institute for Child Health Research in conjunction with the Kulunga Research Network. The survey was the first to gather comprehensive health, educational and developmental information on a population-based sample of Aboriginal and Torres Strait Islander children and their families and communities.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which Indigenous status was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation).

‘Separation’ also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Analyses

Age-standardised rates and ratios have been used as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

Decayed, missing and filled teeth

Oral health outcomes are usually measured in terms of the number of decayed, missing or filled baby (deciduous) and adult (permanent) teeth (dmft and DMFT scores) (AIHW 2000). The dmft score measures decay experience in deciduous teeth, and the DMFT score measures decay experience in permanent teeth. Another measure of good oral health is the proportion of children with no tooth decay.

Data on decayed, missing and filled teeth for Indigenous children and adults come from the Child Dental Health Survey and the National Survey of Adult Dental Health and are presented below.

Children

Data on decay in deciduous and permanent teeth are presented below for Indigenous children in New South Wales, South Australia and the Northern territory. Data for New South Wales are for 2000, for South Australia they are for 2003 and for the Northern Territory they are for 2002.

Deciduous teeth

Mean dmft

- In New South Wales, South Australia and the Northern Territory, the mean number of decayed, missing or filled deciduous teeth for Indigenous children aged 4–10 years was higher than for non-Indigenous children at all ages (Table 1.10.1, Figure 1.10.1).
- Of all children with decayed, missing or filled deciduous teeth, both Indigenous and non-Indigenous children were most likely to have decayed teeth, followed by filled teeth.
- The mean numbers of decayed or missing teeth were highest among those aged less than 7 years, whereas the mean number of filled teeth was highest among those aged 7 years and over.
- Children in New South Wales had lower mean numbers of decayed or filled teeth than children in South Australia and the Northern Territory. One possible explanation for this is the different type of dental examination used in New South Wales where a screening is undertaken rather than a clinical examination used in other states and territories.
- Indigenous children in the Northern Territory had much higher mean numbers of decayed teeth than Indigenous children in South Australia and New South Wales, whereas for non-Indigenous children, scores were similar across jurisdictions.

Table 1.10.1: Mean number of decayed, missing or filled deciduous teeth, children aged 4–10 years, by Indigenous status, NSW (2000), SA (2003) and NT (2002)

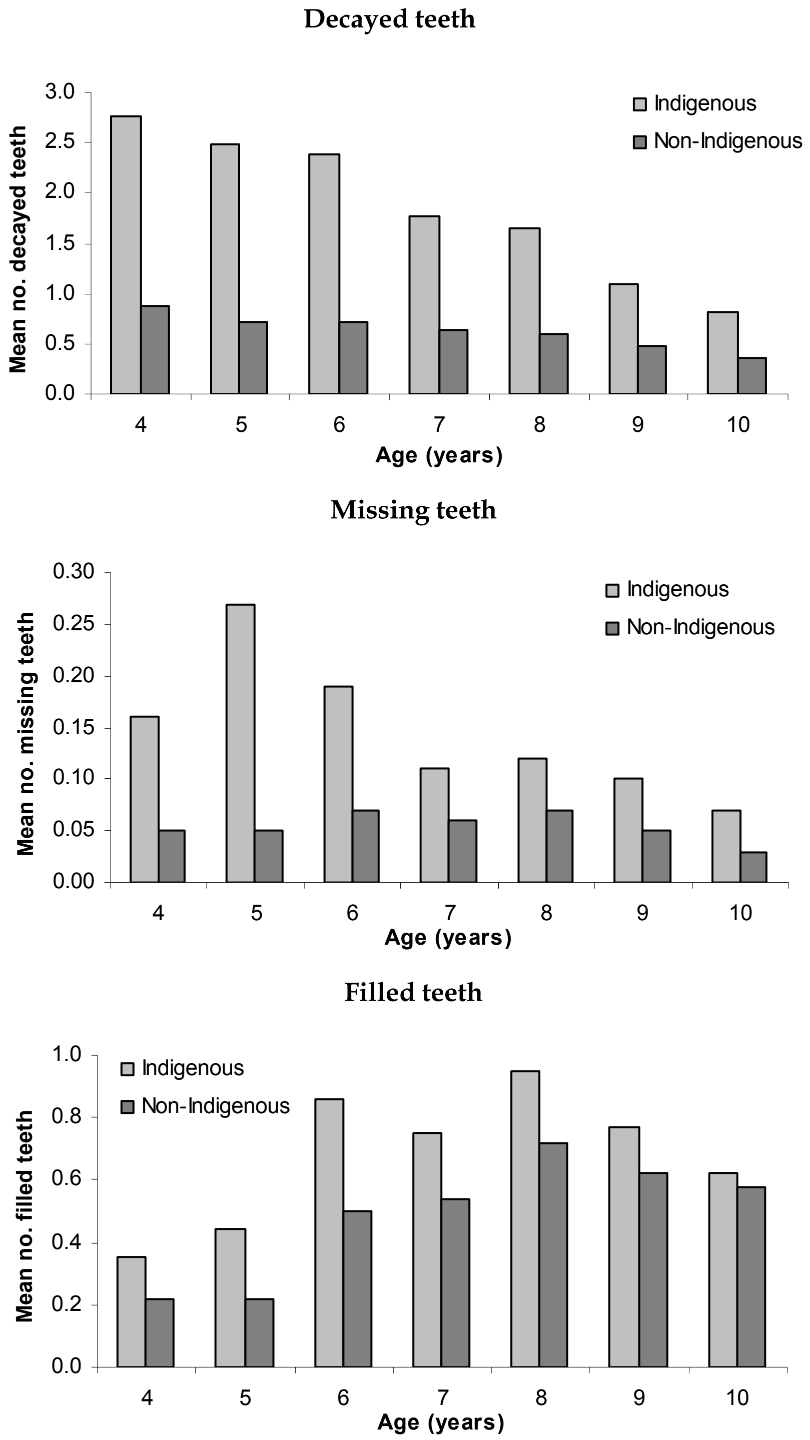
	New South Wales		South Australia		Northern Territory		NSW, SA & NT	
Age	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
Decayed (d)								
4	1.90*	0.79*	2.48*	0.96*	3.07*	0.82*	2.77*	0.87*
5	1.64*	0.69*	2.11*	0.89*	3.62*	0.92*	2.49*	0.72*
6	1.36*	0.65*	2.10*	0.89*	3.10*	0.85*	2.38*	0.72*
7	1.05*	0.62*	1.54*	0.78*	2.90*	0.73*	1.77*	0.64*
8	0.98*	0.56*	1.22*	0.67*	2.19*	0.67*	1.65*	0.60*
9	0.74*	0.45*	1.27*	0.60*	1.54*	0.54*	1.10*	0.47*
10	0.43*	0.32*	0.58*	0.44*	1.17*	0.38*	0.82*	0.36*
Missing (m)								
4	(b)0.16*	(a)0.04*	(a)0.33*	0.06*	(a)0.11	(a)0.05	(a)0.16*	0.05*
5	0.33*	0.04*	0.35*	0.09*	(a)0.15*	0.05*	0.27*	0.05*
6	(a)0.16*	0.05*	(a)0.31*	0.10*	(a)0.15*	(a)0.05*	0.19*	0.07*
7	(a)0.12*	0.068	(a)0.21*	0.08*	0.08	0.06	0.11*	0.06*
8	0.13*	0.06*	(a)0.24*	0.08*	(a)0.07	0.09	0.12*	0.07*
9	0.10*	0.048	(a)0.07	0.06	0.09	0.09	0.10*	0.05*
10	0.05	0.03	(b)0.05	0.03	(a)0.08	0.05	0.07*	0.03*
Filled (f)								
4	(a)0.36*	0.15*	(a)0.58*	0.30*	0.26	0.19	0.35*	0.22*
5	0.30*	0.17*	1.18*	0.51*	0.32*	0.43*	0.44*	0.22*
6	0.57*	0.32*	1.54*	0.94*	0.69	0.76	0.86*	0.50*
7	0.57*	0.43*	1.45*	1.17*	0.72*	0.93*	0.75*	0.54*
8	0.68*	0.49*	1.81*	1.25*	0.76*	1.08*	0.95*	0.72*
9	0.51*	0.498	1.68*	1.29*	0.76*	1.08*	0.77*	0.62*
10	0.49*	0.40*	1.29	1.45	0.44*	0.70*	0.62	0.58*
Decayed, missing & filled (dmft)								
4	2.42*	0.98*	3.39*	1.32*	3.44*	1.06*	3.41*	1.33*
5	2.27*	0.90*	3.64*	1.49*	4.09*	1.40*	3.66*	1.31*
6	2.09*	1.02*	3.95*	1.93*	3.94*	1.66*	3.68*	1.54*
7	1.74*	1.11*	3.20*	2.03*	3.70*	1.72*	2.94*	1.54*
8	1.79*	1.11*	3.27*	2.00*	3.02*	1.84*	2.91*	1.60*
9	1.35*	0.98*	3.02*	1.95*	2.39*	1.71*	2.17*	1.34*
10	0.97*	0.75*	1.92	1.92	1.69*	1.13*	1.60*	1.09*

* Statistically significant differences in the Indigenous/Non-Indigenous comparisons.

(a) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(b) Estimate has a relative standard error of greater than 50% and is considered too unreliable for general use.

Source: AIHW Dental Statistics Research Unit.



Decayed teeth

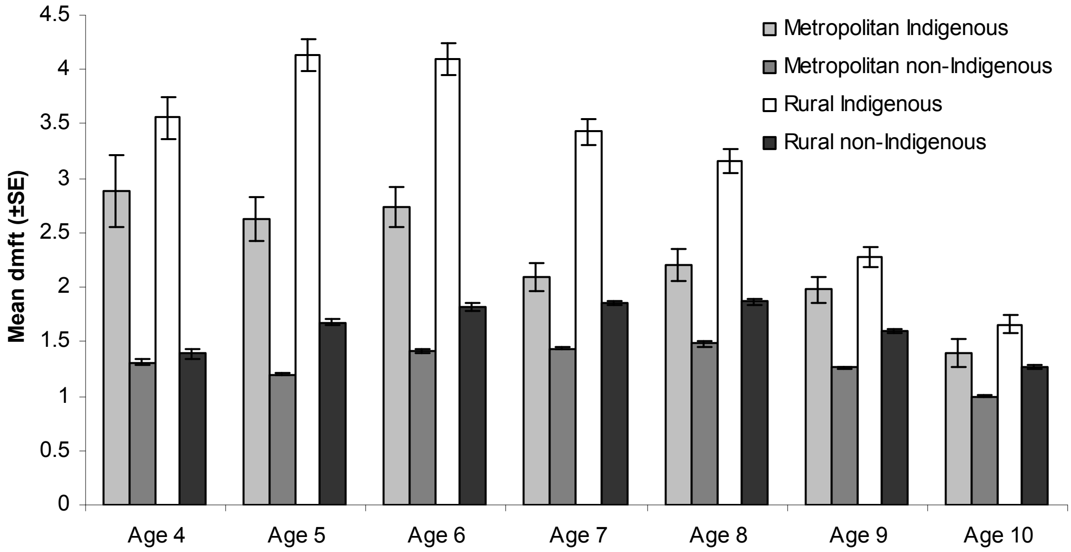
Missing teeth

Filled teeth

Source: AIHW Dental Statistics Research Unit.

Figure 1.10.1: Mean number of decayed, missing or filled deciduous teeth, children aged 4–10 years, by Indigenous status, NSW (2000), SA (2003) and NT (2002)

- The mean dmft of children aged 4–10 years by residential location is presented in Figure 1.10.2. In all age groups rural Indigenous children had the highest mean dmft levels, followed by metropolitan Indigenous children, rural non-Indigenous children and metropolitan non-Indigenous children.

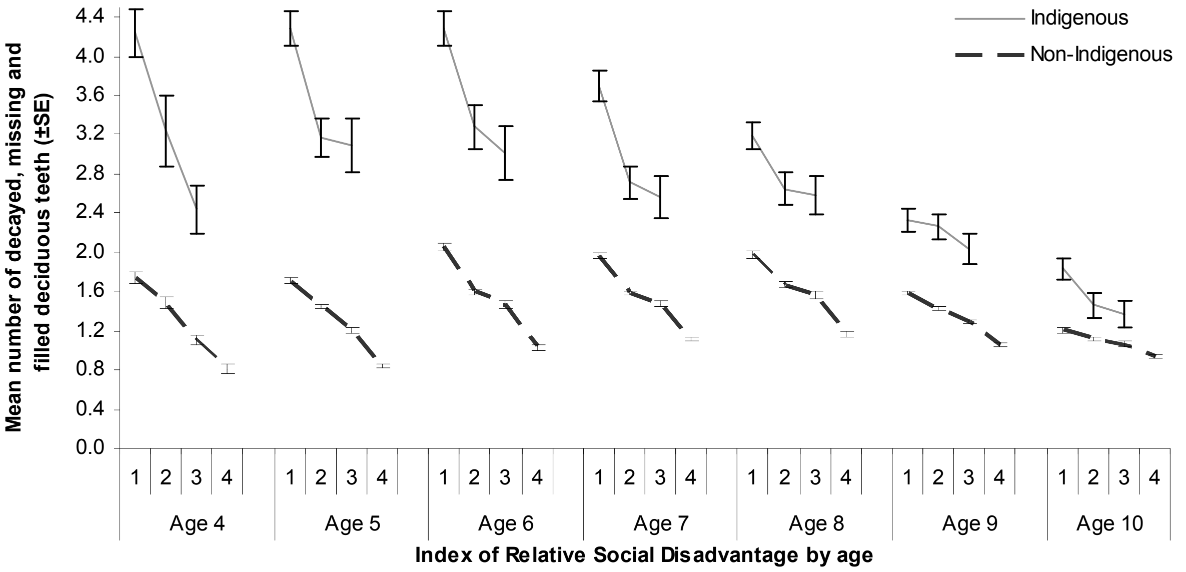


Note: SE = standard error
Source: AIHW DSRU 2007.

Figure 1.10.2: Mean dmft for Indigenous and non-Indigenous children aged 4–10 years by residential location, NSW (2000), SA (2003) and NT (2002)

The mean dmft of Indigenous and non-Indigenous children aged 4–10 years by the SEIFA Index of Relative Disadvantage is presented in Figure 1.10.3.

- Indigenous children across all age groups had higher dmft than non-Indigenous children, and Indigenous children in the most disadvantaged category had higher dmft than Indigenous children who were less disadvantaged.
- Indigenous children aged 4–6 years from disadvantaged areas had the highest dmft scores, and this was around 2.5 times the dmft of non-Indigenous children aged 4–6 years from disadvantaged areas.
- The dmft difference among Indigenous and non-Indigenous children decreased with increasing age, although across all age groups the dmft of Indigenous children from the most advantaged areas was less than the dmft of non-Indigenous children from the most disadvantaged areas.



1 = most disadvantaged and 4 = least disadvantaged.
SE = standard error.

Notes

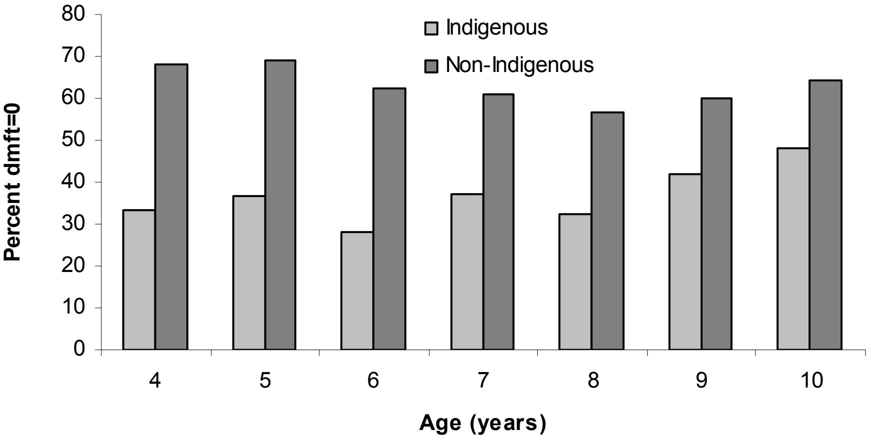
1. $p < 0.05$.
2. The numbers of Indigenous children in the least disadvantaged Index of relative social disadvantage were too small to allow for robust statistical analysis and thus were excluded from analyses.
3. Estimates with a relatvie standard error greater than 40% have been excluded.

Source: AIHW DSRU 2007.

Figure 1.10.3: Mean dmft for Indigenous and non-Indigenous children aged 4–10 years by SEIFA Index of Relative Disadvantage, NSW (2000), SA (2003) and NT (2002)

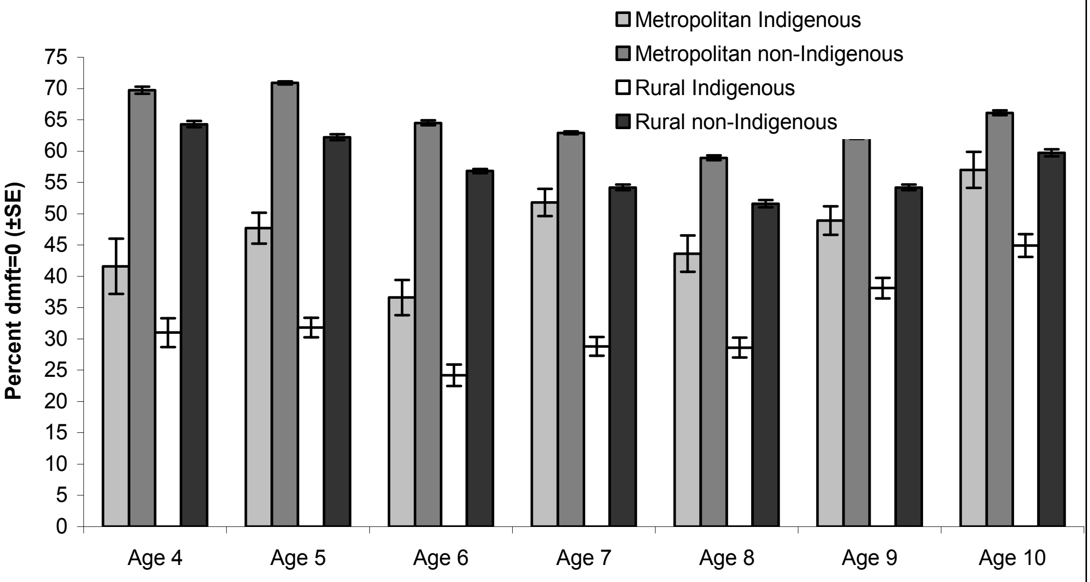
dmft = 0

- At all ages, the proportion of Indigenous children in New South Wales, South Australia and the Northern Territory free of caries in their deciduous teeth (dmft = 0) was lower than the proportion for non-Indigenous children. At age 6 years, twice as many non-Indigenous children had no clinical deciduous caries experience (62.3%) than Indigenous children (28.0%) (Figure 1.10.4).
- The proportion of children aged 4–10 years with dmft = 0 by residential location is presented in Figure 1.10.5. Across all age groups a higher proportion of metropolitan non-Indigenous children had no evidence of dental disease experience in their deciduous teeth, followed by rural non-Indigenous children, metropolitan Indigenous children and rural Indigenous children respectively.



Source: AIHW Dental Statistics Research Unit.

Figure 1.10.4: Proportion of children aged 4–10 years with no decayed, missing or filled deciduous teeth (dmft = 0), by age and Indigenous status, NSW (2000), SA (2003) and NT (2002)



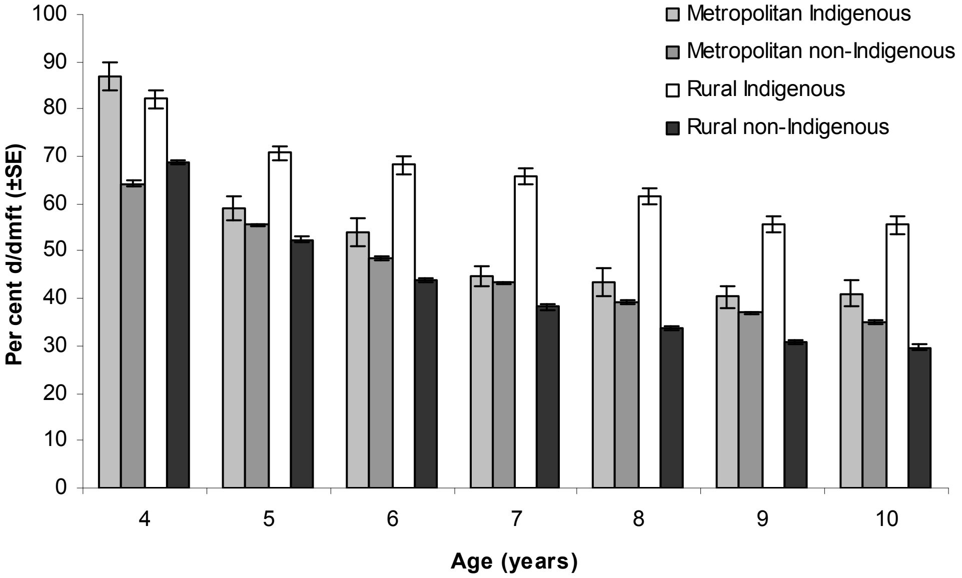
Note: SE = standard error.

Source: AIHW DSRU 2007.

Figure 1.10.5: Proportion of Indigenous and non-Indigenous children aged 4–10 years with dmft = 0 by residential location, NSW (2000), SA (2003) and NT (2002)

d/dmft

- The d/dmft ratio refers to the proportion of untreated teeth with decay in the population. It shows that Indigenous children have a greater unmet need for dental treatment than non-Indigenous children. Indigenous children had higher levels of untreated decay as a percentage of total caries experience than non-Indigenous children across all age groups, with the difference between rural Indigenous and rural non-Indigenous children becoming more marked with increasing age (Figure 1.10.6). Across all age groups, with the exception of 4-year-olds, rural Indigenous children had markedly higher proportions of d/dmft than their metropolitan and non-Indigenous counterparts.



Note: SE = standard error.

Source: AIHW Dental Statistics Research Unit.

Figure 1.10.6: Children aged 4–10 years with decayed deciduous teeth as a proportion of total children with decayed, missing or filled deciduous teeth (d/dmft), by age and Indigenous status, metropolitan and rural areas, NSW (2000), SA (2003) and NT (2002)

Permanent teeth

Mean DMFT

- In New South Wales, South Australia and the Northern Territory, the mean numbers of decayed and filled permanent teeth for Indigenous children aged 6–15 years were higher than for non-Indigenous children at all ages except at age 15 years for filled teeth (Table 1.10.2, Figure 1.10.7). Data are not presented separately for missing permanent teeth because of low numbers.
- As with deciduous teeth, children in New South Wales had lower mean numbers of decayed or filled permanent teeth than children in South Australia and the Northern Territory.
- Indigenous children in the Northern Territory had the highest mean number of decayed teeth, whereas Indigenous children in South Australia had the highest mean number of filled teeth.

Table 1.10.2: Mean number of decayed, missing and filled permanent teeth for children aged 6–15 year, by age and Indigenous status, NSW (2000), SA (2003) and NT (2002)

Age	New South Wales		South Australia		Northern Territory		NSW, SA & NT	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
				Decayed (D)				
6	0.09*	0.03*	0.14*	0.06*	0.12*	0.06*	0.12*	0.04*
7	0.17*	0.12*	0.30*	0.17*	0.25*	0.12*	0.21*	0.12*
8	0.29*	0.13*	0.39*	0.18*	0.40*	0.12*	0.35*	0.15*
9	0.29*	0.15*	0.53*	0.19*	0.45*	0.14*	0.38*	0.16*
10	0.37*	0.16*	0.51*	0.21*	0.69*	0.17*	0.56*	0.18*
11	0.36*	0.21*	0.55*	0.24*	0.72*	0.21*	0.53*	0.22*
12	0.54*	0.26*	0.59*	0.31*	0.78*	0.25*	0.70*	0.28*
13	0.66*	0.31*	1.00*	0.41*	1.45*	0.258	0.90*	0.32*
14	0.82*	0.38*	1.24*	0.50*	1.24	(a)0.74	1.04*	0.43*
15	n.a.	n.a.	1.59*	0.54*	*1.31*	(b)0.48*	1.54*	0.58*
				Filled (F)				
6	(b)0.01	0.01	(b)0.03	0.01	(b)0.01	0.01	0.02	0.01
7	(a)0.03	0.03	(a)0.06	0.06	(a)0.04	(a)0.04	0.04	0.03
8	(a)0.06	0.06	(a)0.13	0.14	(a)0.08	0.08	0.09	0.08
9	0.11	0.10	0.33	0.27	0.15	0.18	0.15*	0.13*
10	0.22*	0.13*	0.47*	0.35*	0.19	0.21	0.25*	0.20*
11	0.25*	0.20*	0.55*	0.43*	0.21*	0.29*	0.28*	0.24*
12	0.33	0.27	0.67*	0.48*	0.32	0.39	0.42*	0.34*
13	0.34	0.32	0.78	0.66	(a)0.36	0.41	0.42	0.38
14	0.45	0.39	1.12*	0.81*	(a)0.43	(b)0.77	0.71*	0.56*
15	n.a.	n.a.	1.18	1.14	(b)0.11	(b)0.39	0.96	1.12
				Decayed, missing & filled (DMFT)				
6	(a)0.11*	0.04*	0.17*	0.07*	0.13*	0.07*	0.16*	0.06*
7	0.21*	0.15*	0.36*	0.22*	0.29*	0.16*	0.31*	0.22*
8	0.36*	0.20*	0.53*	0.32*	0.49*	0.20*	0.51*	0.29*
9	0.42*	0.26*	0.87*	0.47*	0.61*	0.32*	0.64*	0.38*
10	0.61*	0.30*	1.09*	0.57*	0.93*	0.40*	0.94*	0.46*
11	0.63*	0.43*	1.11*	0.68*	0.99*	0.52*	0.96*	0.59*
12	0.87*	0.54*	1.28*	0.80*	1.13*	0.71*	1.25*	0.75*
13	1.03*	0.65*	1.83*	1.09*	1.87*	0.78*	1.62*	0.90*
14	1.37*	0.81*	2.43*	1.34*	1.87	(a)1.51	2.09*	1.18*
15	n.a.	n.a.	2.79*	1.73*	*1.60	(b)0.86	2.65*	1.80*

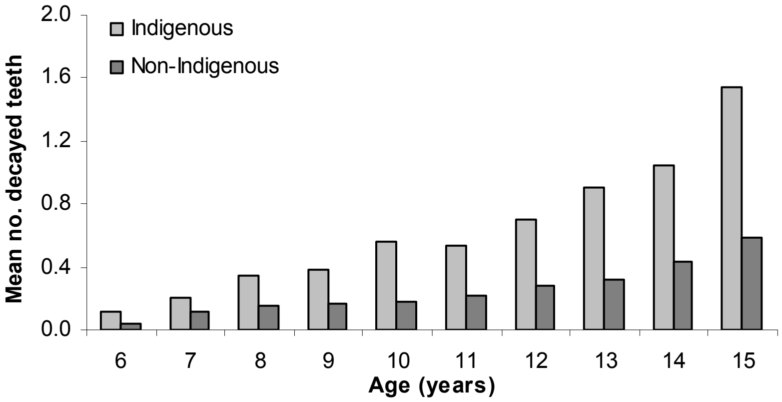
* Statistically significant differences in the Indigenous/Non-Indigenous comparisons.

(a) Estimate has a relative standard error of 25% to 50% and should be used with caution.

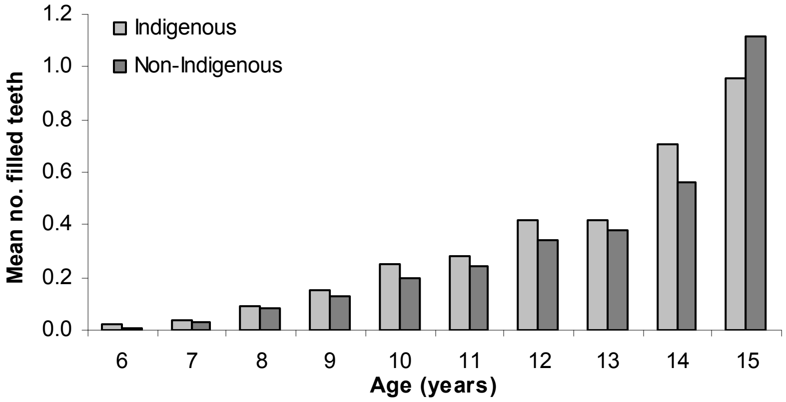
(b) Estimate has a relative standard error of greater than 50% and is considered too unreliable for general use.

Source: AIHW Dental Statistics Research Unit.

Decayed teeth



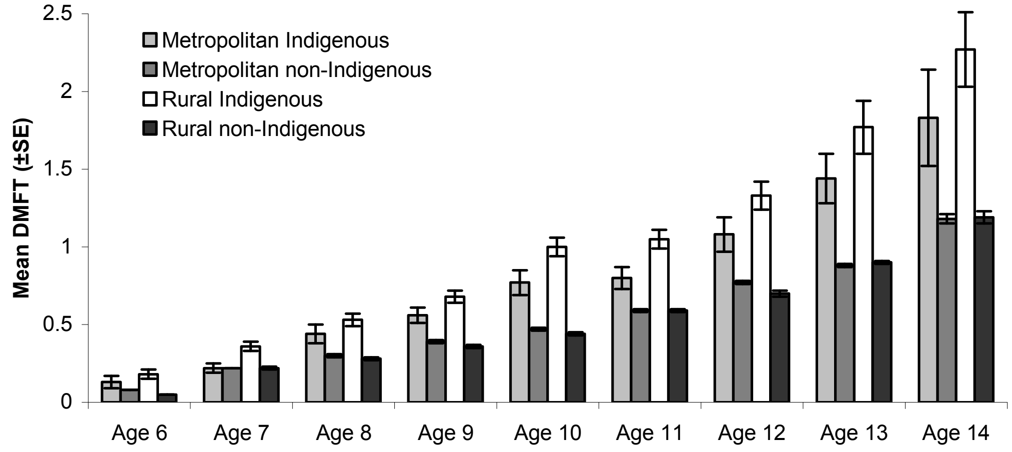
Filled teeth



Source: AIHW Dental Statistics Research Unit.

Figure 1.10.7: Mean number of decayed and filled permanent teeth, children aged 6–15 years, by age and Indigenous status, NSW (2000), SA (2003) and NT (2002)

- The mean DMFT of Indigenous and non-Indigenous children aged 6–14 years by residential location is presented in Figure 1.10.8. Indigenous children had higher DMFT than non-Indigenous children across all age groups except metropolitan children aged 7 years, with the difference becoming more marked with increasing age. Across all age groups, rural Indigenous children had greater DMFT than their metropolitan counterparts but rural and metropolitan non-Indigenous DMFT levels were relatively similar. The mean DMFT increased with increasing age for all children, with the steepest gradient occurring among rural Indigenous children.



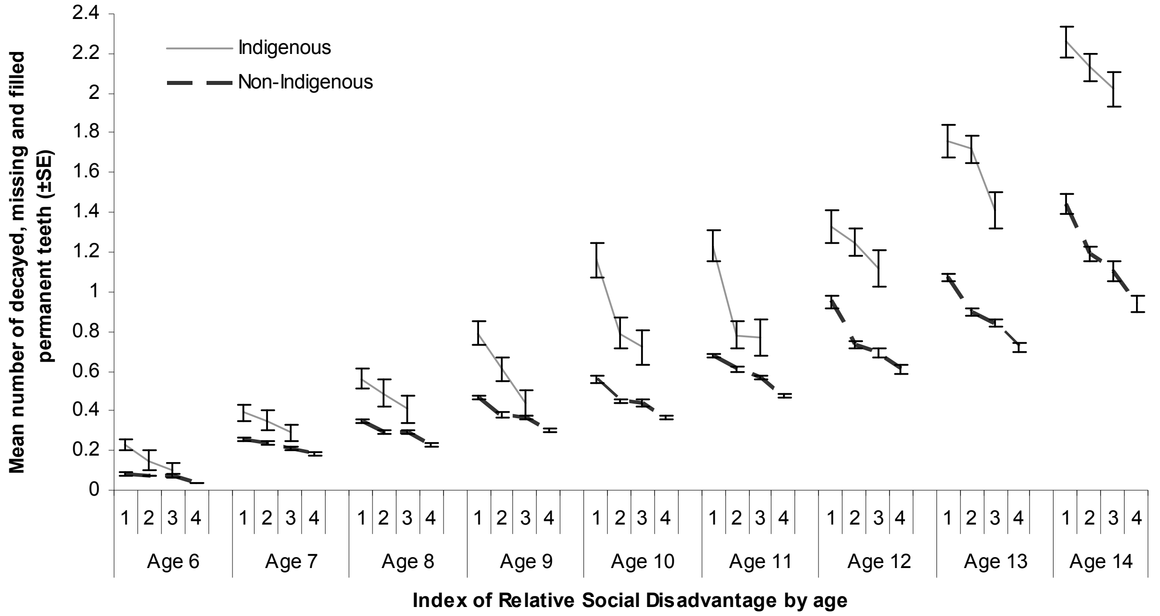
Note: SE = standard error.

Source: AIHW DSRU 2007.

Figure 1.10.8: Mean DMFT of Indigenous and non-Indigenous children aged 6–14 years by residential location, NSW (2000), SA (2003) and NT (2002)

The mean DMFT of Indigenous and non-Indigenous children aged 6–14 years by the SEIFA Index of Relative Disadvantage is presented in Figure 1.10.9.

- Across all age groups, Indigenous children had higher DMFT than non-Indigenous children and this difference increased with increasing age. Indigenous and non-Indigenous children in the most disadvantaged SES category had higher DMFT than their counterparts in more advantaged categories across all age groups, with mean DMFT decreasing with increasing social advantage.
- The highest DMFT was observed among Indigenous children aged 14 years in the most disadvantaged category, and this was 1.6 times the DMFT of similarly disadvantaged non-Indigenous children aged 14 years.
- The greatest DMFT difference among disadvantaged Indigenous and non-Indigenous children was observed among those aged 10 years (Indigenous children aged 10 years from disadvantaged areas had 2.1 times the DMFT of their non-Indigenous counterparts from disadvantaged areas). Across all age groups, except 9 years, Indigenous children in the least disadvantaged categories had higher DMFT than the most disadvantaged non-Indigenous children.



1 = most disadvantaged and 4 = least disadvantaged.
SE = standard error.

Notes

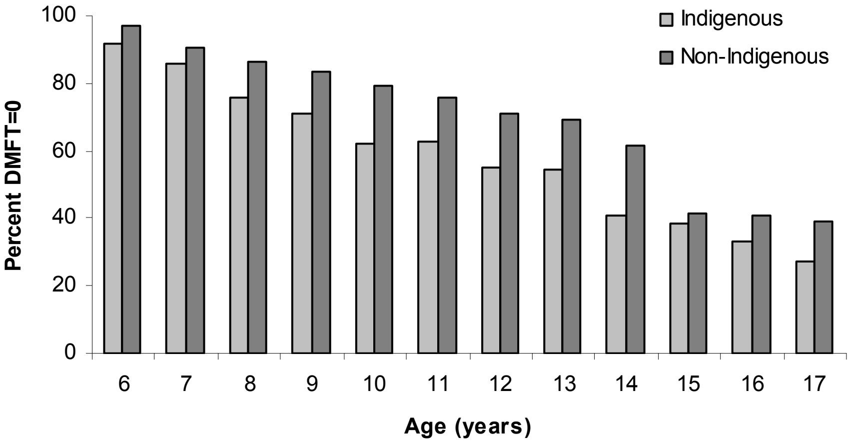
1. $p < 0.05$.
2. The numbers of Indigenous children in the least disadvantaged Index of relative social disadvantage were too small to allow for robust statistical analysis and thus were excluded from analyses.
3. Estimates with a relatvie standard error greater than 40% have been excluded.

Source: AIHW DSRU 2007.

Figure 1.10.9: Mean DMFT for Indigenous and non-Indigenous aged 6–14 years children by SEIFA Index of Relative Disadvantage, NSW (2000), SA (2003) and NT (2002)

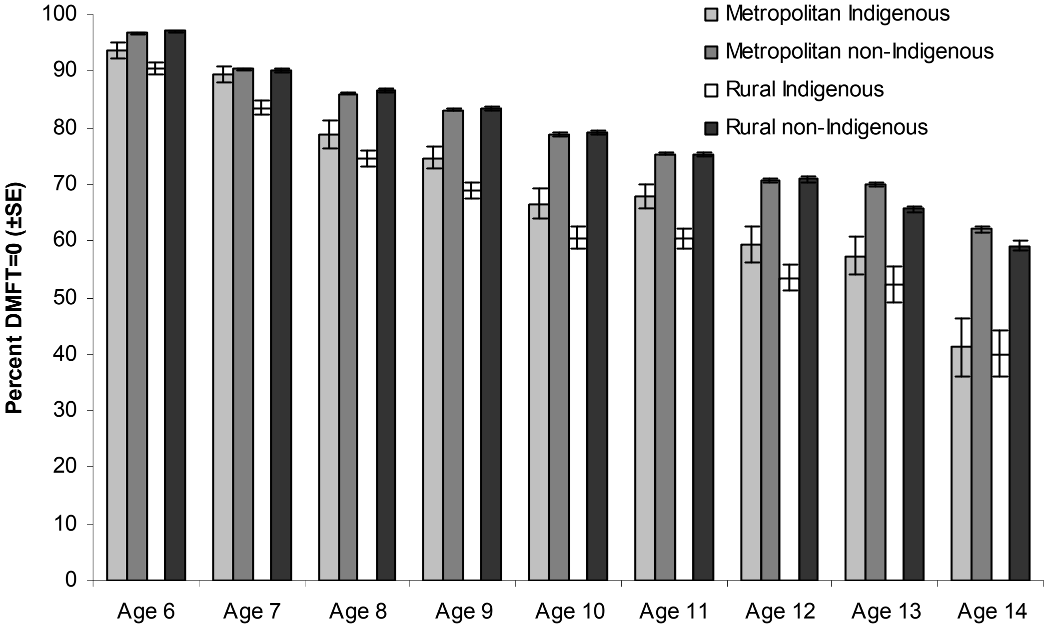
DMFT = 0

- The proportion of Indigenous children in New South Wales, South Australia and the Northern Territory free of caries in their permanent teeth decreased with increasing age. At each age level, fewer Indigenous children had no caries experience than non-Indigenous children, but the differences between Indigenous and non-Indigenous children in the proportion with no clinical caries experience was less marked than with their deciduous teeth (Figure 1.10.10).
- Across all age groups the proportion of children with no evidence of dental disease experience in their permanent teeth was highest among metropolitan and rural non-Indigenous groups, followed by metropolitan Indigenous children and rural Indigenous children respectively (Figure 1.10.11). The highest proportion of children who were caries-free in their permanent teeth were metropolitan and rural non-Indigenous children aged 6 years. The proportion of children with DMFT = 0 generally decreased with increasing age across Indigenous and non-Indigenous groups, with the trend being most marked among rural and metropolitan Indigenous children.



Source: AIHW Dental Statistics Research Unit,

Figure 1.10.10: Proportion of children aged 6–14 years with no decayed, missing or filled permanent teeth (DMFT = 0), by age and Indigenous status, NSW (2000), SA (2003) and NT (2002)

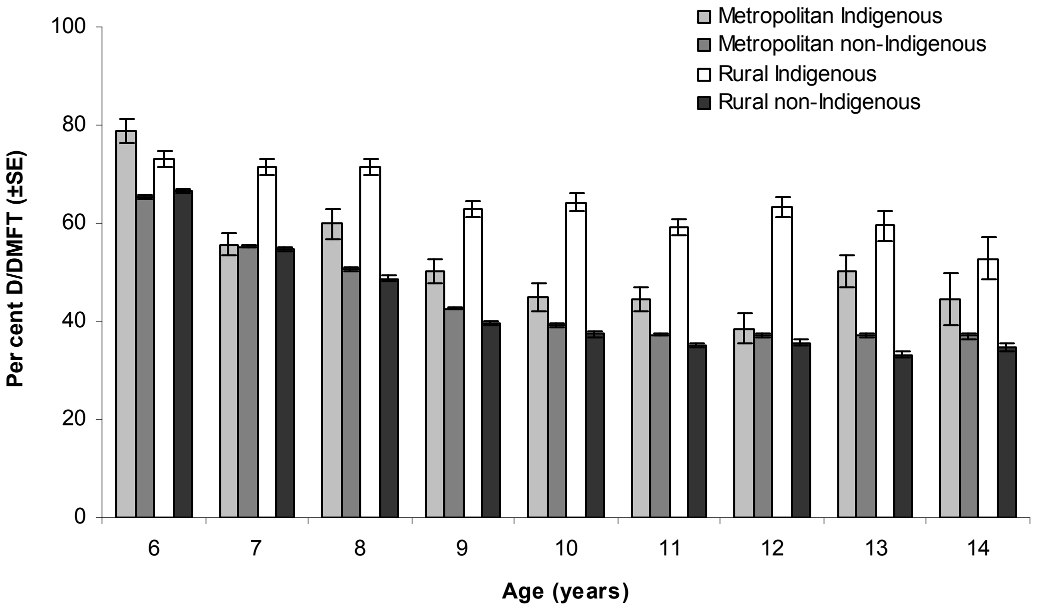


Source: AIHW DSRU 2007.

Figure 1.10.11: Proportion of Indigenous and non-Indigenous children aged 6–14 years with DMFT = 0 by residential location NSW (2000), SA (2003) and NT (2002)

D/DMFT

- At all ages between 6 and 14 years, there was a higher proportion of Indigenous children in rural areas with untreated permanent decayed teeth as a percentage of those with decayed, missing or filled teeth (D/DMFT) than non-Indigenous children in rural areas (Figure 1.10.10). This was also the case in metropolitan areas for most ages, but the differences between Indigenous and non-Indigenous children with untreated permanent decayed teeth were not as marked as in rural areas.



SE= standard error.

Source: AIHW Dental Statistics Research Unit.

Figure 1.10.12: Children aged 6–14 years with decayed deciduous teeth as a proportion of total children with decayed, missing or filled permament teeth (D/DMFT), by age and Indigenous status, metropolitan and rural areas, NSW (2000), SA (2003) and NT (2002)

dmft and DMFT of Indigenous children in remote communities

Data on the oral health of Indigenous children in remote communities come from a study undertaken in 2000–2003 by the Australian Research Centre for Population Oral Health in collaboration with the Far West Area Health Service (New South Wales), the remote Indigenous communities of Nganampa lands (South Australia), and various remote communities around Alice Springs (Northern Territory). There were a total of 831 children in the sample, whose ages ranged from 2 to 16 years.

The mean dmft and DMFT scores of Indigenous children in remote locations by age group are presented in Table 1.10.3. Overall, the mean dmft for Indigenous children aged 2–16 years was 4.03 and the mean DMFT was 1.06.

Indigenous children aged under 5 years and aged 5–9 years had higher mean dmft scores than those in older age groups (3.69 to 6.27 compared with 0.08 to 1.99). In contrast, older children had higher mean DMFT scores than their younger counterparts. Indigenous children aged 15–16 years had mean DMFT scores of 3.67 compared with 0.55 and 1.62 for Indigenous children aged 5–9 years and 10–14 years respectively.

Table 1.10.3: Mean dmft and DMFT scores of remote Indigenous children, by age group, 2000–2003

	Age group				
	<5 years	5–9 years	10–14 years	15–16 years	All children (2–16 years)
Mean dmft	3.69	6.27	1.99	0.08	4.03
Mean DMFT	—	0.55	1.62	3.67	1.06

Source: AIHW DSRU 2007.

Comparison of remote Indigenous child oral health and state/territory and national dental disease levels

A comparison of caries experience of remote Indigenous children compared with children in South Australia, the Northern Territory and total Australia is shown in Table 1.10.4.

Dental disease experience in primary teeth was greater for remote Indigenous children (dmft = 2.94 for 5–6 years) compared with children in South Australia, the Northern Territory and total Australia (dmft = 1.46 to 2.26 for 5–6 years). The proportion of children with caries in both deciduous and permanent teeth was greater for children living in remote Indigenous communities.

Table 1.10.4: Caries experience of remote Indigenous children compared with South Australia, the Northern Territory and total Australia child populations

Population	dmft (5–6 years)	% dmft > 0	DMFT (> 12 years old)	% DMFT > 0
Remote Indigenous	2.94	69.0	0.92	43.6
SA	1.46	58.5	0.60	31.4
NT	2.26	47.6	0.97	37.5
Australia	1.56	59.1	0.84	35.1

Source: AIHW DSRU 2007.

Comparison of remote Indigenous child oral health and state/territory Indigenous oral health

Indigenous children aged 6 years in remote communities had higher dmft levels than their New South Wales counterparts, but lower levels than Indigenous children in the Northern Territory and South Australia (Table 1.10.5). Average DMFT levels for Indigenous children aged 12 years were highest among those in the Northern Territory (DMFT = 1.33) and lowest among those in New South Wales (DMFT = 0.87). A higher proportion of Indigenous children aged 6 years in remote communities had caries experience in their deciduous teeth than children in New South Wales and South Australia, and a higher percentage of Indigenous children aged 12 years in remote locations had caries experience in their permanent teeth compared with their New South Wales and South Australia counterparts (Table 1.10.5).

Table 1.10.5: Remote and state/territory caries experience of Indigenous children

Population	dmft (6 years old)	% dmft > 0	DMFT (12 years old)	% DMFT > 0
Remote Indigenous	2.94	69.0	0.92	43.6
NSW Indigenous	2.09	55.0	0.87	35.9
SA Indigenous	3.64	49.3	1.28	37.0
NT Indigenous	3.96	67.8	1.33	46.1

Source: AIHW DSRU 2007.

Time series analysis

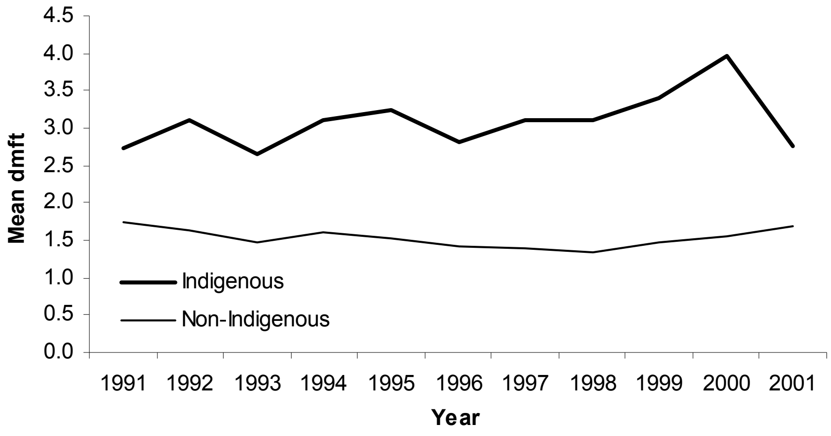
Time series data for caries experience among Indigenous children are available for the Northern Territory and are presented in Table 1.10.6 and Figures 1.10.13 and 1.10.14.

- Between 1991 and 2001, the mean number of decayed, missing and filled deciduous teeth (dmft) for Indigenous children in the Northern Territory at 6 years of age varied from year to year.
- For the period 1991–2001, there was little change in the number of decayed, missing and filled deciduous (dmft) and permanent teeth (DMFT) for Indigenous and non-Indigenous children.
- The mean dmft and DMFT scores were higher for Indigenous children than for non-Indigenous children over the period 1991–2001.
- The decline in Indigenous dmft and DMFT in 2001 may be part of normal variation in Indigenous data which may relate to particular remote communities receiving school dental services in any particular year.

Table 1.10.6: Mean dmft and DMFT scores for Indigenous children in NT, 1991–2001

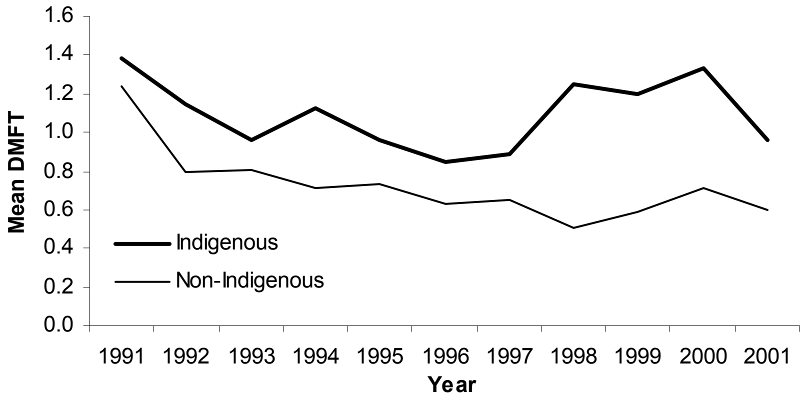
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Mean dmft scores, children aged 6 yrs											
Indigenous	2.74	3.11	2.66	3.11	3.23	2.80	3.12	3.11	3.4	3.96	2.77
Non-Indigenous	1.73	1.64	1.48	1.62	1.53	1.41	1.40	1.35	1.47	1.56	1.68
Mean DMFT scores, children aged 12 yrs											
Indigenous	1.38	1.15	0.96	1.13	0.96	0.85	0.89	1.25	1.20	1.33	0.96
Non-Indigenous	1.24	0.79	0.81	0.71	0.73	0.63	0.65	0.51	0.59	0.71	0.60

Source: AIHW Dental Statistics Research Unit.



Source: AIHW Dental Statistics Research Unit.

Figure 1.10.13: Mean dmft scores for children at 6 years of age in NT, by Indigenous status, 1991–2001



Source: AIHW Dental Statistics Research Unit.

Figure 1.10.14: Mean DMFT scores for children at 12 years of age in NT, by Indigenous status, 1991–2001

Adult oral health

The latest available data on DMFT scores and complete loss of all natural teeth for Indigenous adults come from the 2004–06 Adult Dental Health Survey.

- In 2004–06, the mean number of decayed, missing or filled teeth for Indigenous adults aged 15 years and over was 14.8 compared with 12.8 for non-Indigenous persons of the same age. The mean numbers of decayed and missing teeth were higher for Indigenous adults across all age groups from 15 to 74 years, and the mean number of filled teeth was higher for non-Indigenous adults in the age groups 35–54 and 55–74 years (Table 1.10.7, Figure 1.10.15).
- Overall, a higher percentage of Indigenous persons aged 15 years and over had no natural teeth (7.9%) than non-Indigenous persons aged 15 years and over (6.4%) (Figure 1.10.16). This difference is observed in all age groups over 35 years of age and is

particularly marked in the 35–54 age group where Indigenous adults were around five times as likely to have no natural teeth as non-Indigenous adults.

Table 1.10.7: Mean number of decayed, missing or filled teeth for adults, by age group and Indigenous status, 2004–06

	Age group				
	15–34	**35–54**	**55–74**	**> 75+**	**All ages (15+)**
Mean no. of decayed teeth					
Indigenous	1.7(c)	4.1(c)	1.4(c)	n.p.	2.7(c)
Non-Indigenous	0.9	0.8	0.5	0.6(b)	0.8
Mean no. of missing teeth					
Indigenous	4.0(b)	7.4(b)	13.1(b)	n.p.	7.4
Non-Indigenous	3.5	5.3	10.2	14.2	6.1
Mean no. of filled teeth(a)					
Indigenous	1.3	4.3	8.8	n.p.	4.7
Non-Indigenous	0.1	8.2	11.5	9.6	5.9
Mean no. of filled tooth surfaces					
Indigenous	8.0(c)	15.9(b)	26.5(b)	n.p.	16.6(b)
Non-Indigenous	5.6	24.5	34.7	30.3	19.9
Mean no. of decayed, missing or filled teeth					
Indigenous	7.0(c)	15.8	23.3	n.p.	14.8
Non-Indigenous	4.5	14.3	22.2	24.4	12.8

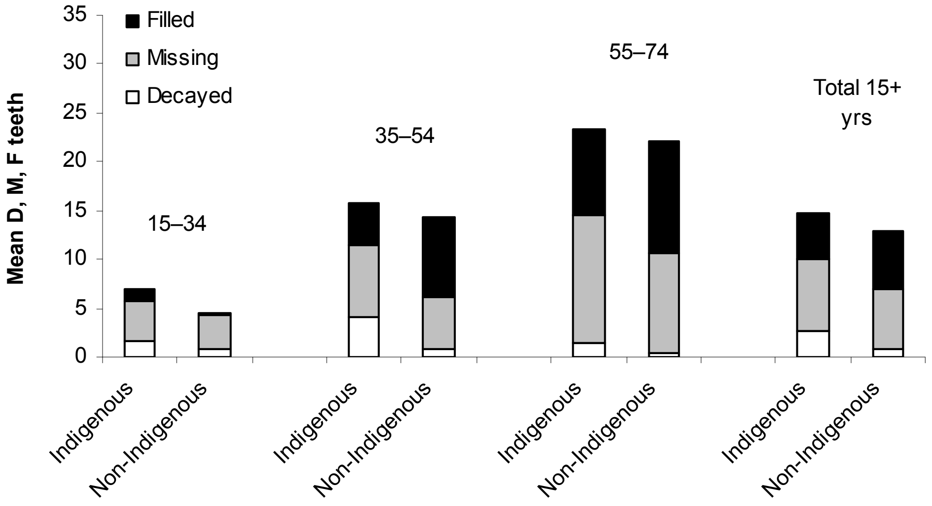
(a) No relative standard error estimates for mean number of filled teeth available.

(b) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(c) Estimate has a relative standard error of greater than 50% and is considered too unreliable for general use.

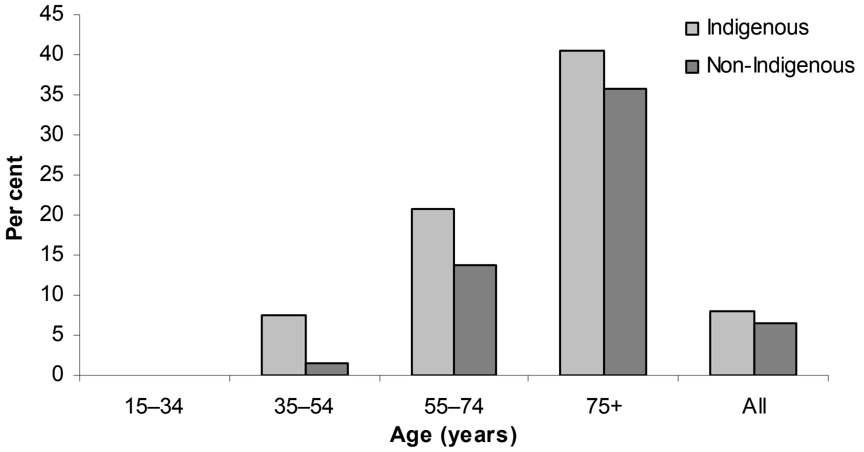
Note: Excludes those with no natural teeth.

Source: Roberts-Thomson & Do 2007.



Source: Roberts-Thomson & Do 2007.

Figure 1.10.15: Mean number of decayed, missing or filled teeth for persons aged 15 years and over, by age group and Indigenous status, 2004–06

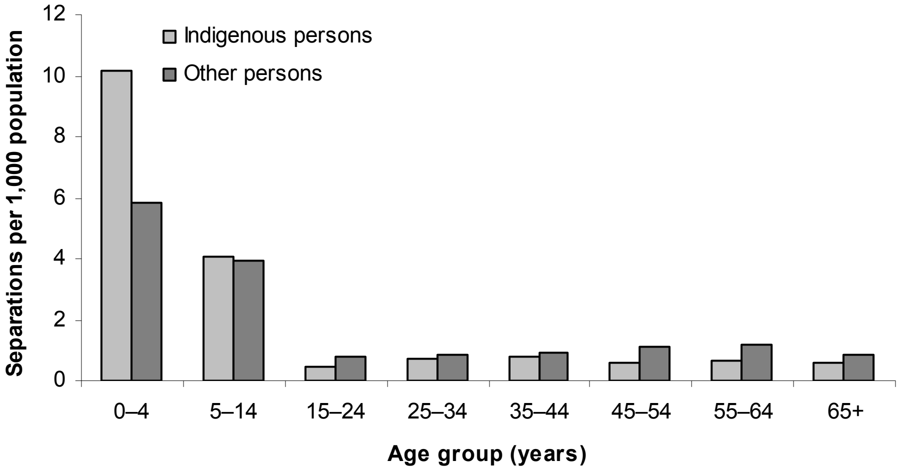


Source: Roberts-Thomson & Do 2007.

Figure 1.10.16: Persons aged 15 years and over with no natural teeth (complete tooth loss), by Indigenous status, 2004–06

Hospitalisations for dental problems

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there were 65,633 hospitalisations for dental problems, of which 2,495 (3.8%) were of Aboriginal and Torres Strait Islander peoples.
- Indigenous children aged 0–4 years had higher hospitalisation rates for dental problems (dental caries and tooth extractions) than other children of the same age (Figure 1.10.17). At ages 5–14 years, Indigenous children were hospitalised for dental problems at similar rates to other children, but in the older age groups other Australians were hospitalised at higher rates than Indigenous Australians.



Note: ICD-10-AM codes: K02, K08.1.

Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.10.17: Age-specific hospitalisation rates for dental problems, by Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

- After adjusting for differences in age structure between the two population groups, Indigenous and other Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised at similar rates for dental problems.

Additional information

Child oral health

Dental health problems of Aboriginal children

Information on dental problems among Aboriginal children was collected in the Western Australian Aboriginal Child Health Survey between 2001 and 2002. Carers of Aboriginal children were asked whether their child currently had a number of dental problems including cavities and dental filings.

- Overall, approximately 38% of Aboriginal children aged 0–17 years were assessed by their carers as having one or more dental problems (tooth decay, tooth removals or fillings). Almost half of children aged 4–17 years had experienced one or more dental problems at the time of the survey (47%). The proportion of children who had dental problems varied by level of relative isolation, with children living in Perth metropolitan areas twice as likely to have tooth decay, a tooth removal or filling (52%) than children living in areas of extreme isolation (25%).
- Approximately 19% of Aboriginal children aged 0–17 years were assessed by their carers as having holes in their teeth. Prevalence of cavities was lowest for children aged 0–3 years (8%) and highest for children aged 4–7 years (31%).
- Around 9% of Aboriginal children were reported to have ever had a tooth removed. Children aged over 3 years were more likely to have had a tooth extraction for dental decay.
- Over one-quarter (28%) of children aged 0–17 years were reported to have had dental fillings. A greater proportion of older children were reported to have ever had a tooth filled than younger children. Less than 1% of children aged 0–3 years had ever had a dental filing compared with around 40% of children aged 8–11 years and 12–17 years.
- An estimated 6% of Aboriginal children aged 0–17 years were reported to have a problem with sore and bleeding gums. The prevalence of sore and bleeding gums was highest for children aged 12–17 years (8%).

Dental characteristics of Indigenous children in remote communities

Data on the oral health of Indigenous children in remote communities come from a study undertaken in 2000–2003 by the Australian Research Centre for Population Oral Health in collaboration with the Far West Area Health Service (New South Wales), the remote Indigenous communities of Nganampa lands (South Australia), and various remote communities around Alice Springs (Northern Territory).

Dental characteristics of remote Indigenous children are presented in Table 1.10.8. Almost one-third were classified as 'high caries risk' and just over one-fifth were in the 'moderate' gingivitis risk group. One-quarter had 'moderate' hypoplasia on permanent teeth and one-quarter had 'mild' fluorosis on permanent teeth.

Table 1.10.8: Dental characteristics of remote Indigenous children, 2000–2003

	Number	Per cent (%)
Caries risk status		
Low	366	44.0
Moderate	193	23.2
High	265	31.9
Gingivitis risk status		
Low	541	65.1
Moderate	171	20.6
High	56	6.7
Hypoplasia on permanent teeth		
None	92	25.4
Mild	127	35.1
Moderate	88	24.3
Severe	55	15.2
Fluorosis on permanent teeth		
None	120	58.3
Mild	50	24.3
Moderate	33	16.0
Severe	3	1.5

Source: Jamieson et al 2007.

Dental characteristics of remote Indigenous children by age group are presented in Table 1.10.9. Less than 4% of children aged less than 5 years brushed their teeth at home, compared with almost one-quarter of those aged 10–14 years (23%). Children aged less than 5 years and 5–9 years were at the highest caries risk (37% and 39% respectively), and those aged 15–16 years were at the highest gingivitis risk (25%). The prevalence of hypoplasia and fluorosis on permanent teeth was higher among children in the older age groups.

Table 1.10.9: Dental characteristics of remote Indigenous children, by age group, 2000–2003

	< 5 years		5–9 years		10–14 years		15–16 years	
	Number	%	Number	%	Number	%	Number	%
Brush teeth school	11	21.2	78	20.5	52	14.6	5	20.8
Brush teeth home	2	3.8	79	20.7	80	22.5	3	12.5
Caries risk status								
Low	28	53.8	130	34.1	192	54.1	10	41.7
Moderate	5	9.6	98	25.7	76	21.4	8	33.3
High	19	36.5	150	39.4	84	23.7	6	25.0
Gingivitis risk status								
Low	38	73.1	290	76.1	198	55.8	8	33.3
Moderate	3	5.8	56	14.7	97	27.3	10	41.7
High	—	—	10	2.6	39	11.0	6	25.0
Hypoplasia on permanent teeth								
None	3	100.0	49	26.1	31	20.0	3	42.9
Mild	—	—	72	38.3	54	34.8	1	14.3
Moderate	—	—	45	23.9	42	27.1	1	14.3
Severe	—	—	22	11.7	28	18.1	2	28.6
Fluorosis on permanent teeth								
None	3	100.0	55	61.8	55	54.5	—	—
Mild	—	—	21	23.6	26	25.7	2	40.0
Moderate	—	—	11	12.4	19	18.8	3	60.0
Severe	—	—	2	2.2	1	1.0	—	—

Source: Jamieson et al 2007.

Water fluoridation and children's oral health

Water fluoridation is the process of adjusting the level of fluoride in drinking water to achieve a concentration of approximately 1 ppm. That concentration is effective in preventing decay but it does not cause appreciable levels of dental fluorosis, a discolouration of the enamel that, in severe cases, creates a chalky appearance on the tooth surface. Fluoride reduces dental decay by making teeth less susceptible to the acids formed by micro-organisms living on and around the teeth. Fluoride can also assist in reversing the process of decay once it has begun. Some small communities in Australia have drinking water that contains naturally occurring fluoride in a concentration of around 1 ppm; that concentration is achieved by water fluoridation in most larger communities and cities (Jamieson et al 2007).

Non-fluoridated water supplies are more likely in rural and remote areas, where a significant proportion of the population is Indigenous, and there is evidence that children in these areas are more likely to have poorer dental health (Armfield 2006). Data from the Child Dental Health Survey showed that children from fluoridated areas had less dental decay than children from non-fluoridated areas (Jamieson et al 2007). Within each jurisdiction, children from areas with fluoride concentrations at or above 0.7 ppm had fewer dmft per child, on average, than did children residing in areas with relatively low fluoride concentrations. The proportion of Australians who had access to fluoridated water in 2006 ranged from 5% in Queensland to 100% in the Australian Capital Territory (Australian Dental Association 2006).

Adult oral health

The National Survey of Adult Oral Health collected information on the oral health status, dental care and oral health perceptions of Indigenous and non-Indigenous Australians. This information is presented below.

Oral health status

In 2004–06, approximately 12% of Indigenous persons aged 15 years and over wore dentures, 57% reported untreated coronal decay (compared with 25% of non-Indigenous persons), 8% had untreated root decay and only 4% had no dental decay (compared with 10% of non-Indigenous persons). In addition, 21% of Indigenous persons reported having periodontitis, 21% reported periodontal pockets of depth of 4 mm and 27% reported gingival inflammation (Table 1.10.10).

Table 1.10.10: Oral health status of persons aged 15 years and over, Australia, 2004–06

	Indigenous	Non-Indigenous
	Per cent	
Fewer than 21 teeth[(a)]	10.4[(c)]	11.4
Wear dentures[(a)]	11.5[(c)]	15.0
Untreated coronal decay[(a)]	57.0[(c)]	25.1
Untreated root decay[(a)]	7.7[(d)]	6.7
One or more filled teeth[(a)]	82.5	83.9
No dental decay[(a)]	3.8[(d)]	10.0
Moderate or severe periodontitis[(b)]	29.0[(c)]	22.9
Periodontitis[(b)]	21.2[(c)]	19.0
4mm periodontal pocket depth[(b)]	21.4[(c)]	19.7
2+mm gingival recession[(b)]	56.1[(c)]	52.8
Gingival inflammation[(b)]	26.8[(c)]	19.6

(a) Excludes those with no natural teeth.

(b) Includes those who were periodontally examined only.

(c) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(d) Estimate has a relative standard error of greater than 50% and is considered too unreliable for general use.

Source: Roberts-Thomson & Do 2007.

Dental care

Information on the dental care of Indigenous and non-Indigenous Australians is presented in Table 1.10.11.

- In 2004–06, approximately 51% of Indigenous persons aged 15 years and over reported they had visited a dentist in the last 12 months and 15% reported their last dental visit was at least 5 years ago compared with 60% and 12% of non-Indigenous Australians respectively.
- Indigenous persons were less likely to have attended a private dental practice at the last dental visit (66%), to have paid for their last dental visit (80%), to usually visit a dentist at least once a year (43%), to have a regular dentist (72%) and to usually visit a dentist for a

check-up (45%) than non-Indigenous persons (83%, 92%, 53%, 79% and 56% respectively).

- Indigenous Australians were more likely to report that they had avoided or delayed dental care (38%), that cost had prevented recommended dental treatment (34%) and that they would have a lot of difficulty paying a $100 dental bill (27%) than non-Indigenous Australians.

Table 1.10.11: Dental care of Indigenous and non-Indigenous adults, 2004–06

	Indigenous	Non-Indigenous
	Per cent	
Visit dentist in last 12 months	50.7	59.5
Last dental visit at least 5 years ago	14.5[(a)]	11.8
Attended private dental practice at last dental visit	66.2	83.4
Paid for last dental visit[(b)]	79.8	91.5
Usually visit dentist at least once a year[(c)]	43.4	53.3
Have a regular dentist[(d)]	72.1	78.7
Usually visit dentist for check-up	44.6	56.4
Avoided or delayed dental care	37.7	29.9
Reported cost had prevented recommended dental treatment[(e)]	33.7[(a)]	20.5
Would have a lot of difficulty paying $100 dental bill	26.9[(a)]	18.1

(a) Estimate has a relative standard error of 25% to 50% and should be used with caution.
(b) People who visited dentist within last 5 years.
(c) Excludes those with no natural teeth.
(d) People who visited dentist in last 5 years. Excludes those with no natural teeth.
(e) People who visited dentist within last 2 years.

Source: Spencer & Harford 2007.

Oral health perceptions

Information on the dental care of Indigenous and non-Indigenous Australians is presented in Table 1.10.12.

- In 2004–06, Indigenous persons were more likely than non-Indigenous Australians to report their oral health as fair or poor (25% compared with 16%), to experience toothache (27% compared with 15%), to need dentures (16% compared with 7%), to need an extraction or filling (49% compared with 33%) and to need oral treatment within 3 months (83% compared with 69%).

Table 1.10.12: Oral health perceptions of Indigenous and non-Indigenous adults, 2004–06

	Indigenous	Non-Indigenous
	Per cent	
Avoid foods due to dental problems	34.9	17.1
Self assessed fair/poor oral health(a)	25.1(c)	16.3
Experiences toothache(a)	27.0(c)	15.0
Experiences orofacial pain	27.1(c)	22.5
Needs dentures	15.8(c)	7.1
Need an extraction or filling(a)	48.8	32.6
Perceive a need for a check-up(a)	58.1	59.6
Perceive need for treatment within 3 mths(a)(b)	82.9	69.1

(a) Excludes those with no natural teeth.

(b) People who need an extraction or filling.

(c) Estimate has a relative standard error of 25% to 50% and should be used with caution.

Source: Harford & Spencer 2007.

Dental consultations and oral health actions

Information on the dentist consultations and oral health actions of Indigenous Australians was also collected in the 2004–05 NATSIHS and yielded similar findings to the Adult Dental Health Survey. This information is summarised below.

- In 2004–05, approximately 4% of Indigenous Australians and 6% of non-Indigenous Australians aged 2 years and over reported they had visited a dentist in the last 2weeks.
- Approximately 89% of Indigenous Australians aged 15 years and over reported they had visited a health professional about their teeth at some point in their lives. A higher proportion of Indigenous people living in remote areas had visited a health professional about their teeth than Indigenous people living in non-remote areas (94% compared with 76%).
- In 2004–05, approximately 10% of Indigenous Australians aged 15 years and over reported wearing dentures and 6% reported they required dentures. A higher proportion of Indigenous Australians in non-remote areas reported wearing dentures than those living in remote areas (12% compared with 5%), whereas a higher proportion of Indigenous people in remote areas reported they required dentures (8%) than those living in non-remote areas (6%).

For more detailed information on oral health actions of Indigenous Australians from the NATSIHS, see the 2006 edition of this report (detailed analyses).

International comparisons

Information is available on the oral health of Maori children in New Zealand, First Nation children in Canada and Native American children in the United States of America.

Indigenous child oral health in New Zealand

There is no national survey data that describe the oral health status of Maori children in New Zealand. However, regional studies suggest that Maori children experience higher levels of dental disease than non-Maori children (Thomson 1993 cited in Jamieson et al 2007), and that this disparity is widening (Lee & Dennison 2004; Thomson et al. 2002 cited in Jamieson et al 2007). In a survey of 3,283 5-year-olds in one region the proportion of Maori children identified as having dental caries severe enough to warrant treatment under a general anaesthetic was over twice that of non-Maori children (Thomson 1993 cited in Jamieson et al 2007). Another report found that 66% of children receiving dental care under a general anaesthetic in one region were Maori, and that demand for this form of care was increasing (Broughton 2000; Thomson 1994 cited in Jamieson et al 2007).

Indigenous child oral health in Canada

Although dental health is improving among Canadian children in the general population, the same cannot be said for First Nation Canadian children. A comparison of two national oral health surveys of First Nation Canadian children conducted in 1990–91 and 1996–97 respectively showed that deft (decayed, extracted, filled deciduous teeth) scores for 6-year-old children had increased from 8.2 to 8.7, and mean DMFT scores had increased from 0.7 to 0.8. This was in contrast to the overall Canadian child population in these age groups, where a decrease in dental disease experience was noted (Peressini et al. 2004, cited in Jamieson et al 2007). Other regional reports of First Nation Canadian child oral health show similar trends (Harrison & Davis 1993; Harrison & White 1997; Klooz 1988 cited in Jamieson et al 2007).

Indigenous child oral health in the United States of America

Findings from the 1991 Indian Health Service Patient Oral Health Status and Treatment Needs Survey revealed that Native American children experienced a much higher prevalence of dental caries in their primary and permanent teeth than the general US child population (Niendorff & Jones 2000, cited in Jamieson et al 2007). Grim et al. (1994) reported that of 1,667 public school students dentally examined in Oklahoma, Native American children had over double the dmfs and DMFS scores of their non-Native American counterparts. The mean dmfs for children aged 5–6 years was 10.4 for Native American children and 5.1 for non-Native American children, and the mean DMFS for children aged 15–17 years was 10.1 for Native American children and 6.0 for non-Native American children (Jamieson et al 2007). A review of several large-scale oral health epidemiologic surveys found that Native American children had greater caries experience than non-Native American children, with risk factors including rural residence, minimal exposure to fluoride, and coming from less educated or poorer families (Caplan & Weintraub 1993 cited in Jamieson et al 2007).

Data quality issues

Dental health survey data

The assessment of dmft and DMFT is based on the World Health Organization protocol. The accuracy of dmft and DMFT will depend on the quality of the assessment and the accuracy of recording.

Child Dental Health Survey

The Child Dental Health Survey monitors the dental health of children enrolled in school dental services operated by health departments or authorities in each state and territory. Therefore, this survey will miss those children not attending these programs. There are some variations among state and territory programs with respect to priority age groups and the nature of the services provided, such as dental examinations, preventive services and restorative treatment. Caution is required in interpreting statistics for those over the age of 12 years, as many programs only include primary school children. Different sampling procedures are used across the states and territories (Armfield et al. 2003). The sample has not been specifically designed to measure Indigenous children and therefore caution is needed in interpreting the results. Data on Indigenous status are collected from the patient's treatment card or medical history. Problems have been identified in the accurate recording of Indigenous status in this data (Armfield et al. 2003).

Indigenous child oral health in remote communities study

Indigenous child oral health data were collected from remote Indigenous communities in all jurisdictions in the 2000–2003 period as part of a study undertaken by the Australian Research Centre for Population Oral Health in collaboration with the Far West Area Health Service (New South Wales), the remote Indigenous communities of Nganampa lands (South Australia), and various remote communities around Alice Springs (Northern Territory). Data were collected by dental health professionals providing services to these communities. Because of issues of confidentiality, specific location details were unable to be included in the analysis. The sample included 832 Indigenous children aged 2–16 years.

National Survey of Adult Oral Health

The 2004–06 National Survey of Adult Oral Health included computer-assisted telephone interviews with 14,123 people aged 15–97 years, 5,505 of which were also dentally examined. The survey included 229 people who identified as Aboriginal or Torres Strait Islander (1.5%). Indigenous identity was based on responses to the question 'Are you of Aboriginal or Torres Strait Islander origin?' People who responded 'Yes, Aboriginal', 'Yes, Torres Strait Islander' or 'Yes, Torres Strait Islander & Aboriginal' were classified as Indigenous. People who responded 'no' were classified as non-Indigenous. Twelve interviewees did not respond or said 'don't know' and they were excluded from estimates for the two subgroups. Results of Indigenous Australians should be interpreted with care because of the small sample size.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

(continued)

Data quality issues (continued)

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in major cities and regional and remote areas, but very remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Survey.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the NATSIHS 2004–05 publication (ABS 2006).

Western Australian Aboriginal Child Health Survey

Survey data are subject to sampling and non-sampling errors. Confidence intervals are published with the data to provide a guide to the reliability of the estimates. Non-sampling errors can occur in surveys owing to questionnaire design problems, respondent difficulty recalling information/lack of appropriate records, and errors made in the recording and processing of the data. Every effort was made to minimise non-sample errors in this survey.

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations of Aboriginal and Torres Strait Islander peoples. The identification of Indigenous people in hospitalisations is incomplete in all states and territories, but six jurisdictions (New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the AIHW as having adequate identification (above 80%) in 2004–05 (AIHW unpublished data). This assessment was based on a comparison of the number of Indigenous patients identified in patient interviews with the number of Indigenous patients identified in hospital records. It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated data from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%.

(continued)

Data quality issues (continued)

The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital and records may take place at different rates than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

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1.11 HIV/AIDS, hepatitis C and sexually transmissible infections

The rate of notified sexually transmissible infections (STIs) for chlamydia, donovanosis, gonorrhoea, syphilis, hepatitis C and HIV/AIDS for Aboriginal and Torres Strait Islander people expressed as a rate by age group, gender, age-standardised rate and ratio

Data sources

Data are available from the National Notifiable Diseases Surveillance System held at the Department of Health and Ageing, and the National AIDS Registry and National HIV database held at the National Centre in HIV Epidemiology and Clinical Research (NCHECR).

National Notifiable Diseases Surveillance System (NNDSS)

A set of 56 diseases and conditions are notifiable nationally. Data on all these cases are forwarded to the NNDSS, managed by the Australian Government Department of Health and Ageing.

Identification of Indigenous notifications in all states and territories is incomplete, but three jurisdictions (Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2001–2002 in the NNDSS. Data on Indigenous status for certain notifiable diseases are not available for the Australian Capital Territory, New South Wales or Tasmania.

National AIDS Registry and National HIV database

Notifications of HIV infections are forwarded to the NCHECR. Recording of Indigenous status in the NCHECR data is considered reliable in all states and territories.

Notifications for which Indigenous status was not reported have been included with notifications data for non-Indigenous people under the ‘other’ category.

Data are presented for the 3-year period 2004–2006 because notifications of some diseases are too small to present for a single year.

Analyses

Age-standardised rates and ratios have been used as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Notification rates by age and sex

Chlamydia, syphilis, gonorrhoea, hepatitis C and donovanosis

Age-specific notification rates for chlamydia, syphilis, gonorrhoea and hepatitis C are presented in Table 1.11.1. Rates for donovanosis are not presented because of small numbers but are described in the text below.

- For the 3-year period 2004–2006 in Western Australia, South Australia and the Northern Territory, notification rates for chlamydia, syphilis, gonorrhoea and hepatitis C were higher among Indigenous males and females than among other males and females across all age groups.
- Rates were generally highest among Indigenous males and females aged 15–24 years and 25–34 years. In these age groups, chlamydia notification rates among Indigenous males and females were 5–7 times higher than rates for other males and females; syphilis notification rates were 49–199 times higher; gonorrhoea notification rates were 51–147 times higher and hepatitis C notification rates were 5–6 times higher than for other males and females of the same age.
- Age-specific rate ratios for chlamydia, syphilis and gonorrhoea were highest in the 0–14 years and 65 years and over age groups. This is likely to be due to the very small number of notifications among other Australians in these age groups.
- Age-specific rates for donovanosis were highest among those aged 25–34 years and 65 years and over, although the number of cases in each age group was very small.

HIV and AIDS

Age-specific notification rates for AIDS and HIV are presented in Table 1.11.2 below.

- For the period 2004–2006, notification rates for HIV were similar for Indigenous males and other males across most age groups. Over the same period, HIV notification rates were higher among Indigenous females than among other females across most age groups.
- Between 2004 and 2006, notification rates for AIDS were higher among Indigenous males than other males in the 15–24, 25–34, 35–44, 45–54 and 55–64 year age groups (rate ratios range 1.7 to 4.6). Indigenous females had higher notification rates than other females for AIDS in the 35–44 year age group (ratio of 2.4).
- HIV notification rates were highest among those aged 25–34 and 35–44 years in both the Indigenous and other Australian populations. AIDS notification rates were highest among those aged 35–44 years and 45–54 years in both the Indigenous and other Australian populations.
- HIV and AIDS notification rates were higher among males than females across all age groups in both population groups.

Table 1.11.1: Age-specific notification rates per 100,000 for chlamydia, syphilis, gonorrhoea and hepatitis C, by Indigenous status and sex, WA, SA and NT, 2004–2006(a)(b)(c)

	Males			Females			Persons		
	Indigenous	Other(d)	Rate ratio(e)	Indigenous	Other(d)	Rate ratio(e)	Indigenous	Other(d)	Rate ratio(e)(f)
Chlamydia									
0–14	76.9	1.4	54.4*	396.2	13.8	28.8*	235.8	7.4	31.8*
15–24	3,240.1	598.1	5.4*	6,289.9	1,266.9	5.0*	4,823.5	925.3	5.2*
25–34	2,018.4	393.8	5.1*	2,514.7	360.0	7.0*	2,328.1	378.2	6.2*
35–44	853.4	106.6	8.0*	915.3	67.7	13.5*	912.0	88.3	10.3*
45–54	328.9	43.1	7.6*	261.1	13.2	19.8*	296.0	28.5	10.4*
55–64	126.7	24.8	5.1*	46.5	5.6	8.3*	89.1	15.4	5.8*
65+	n.p.	3.5	n.p.	n.p.	0.9	n.p.	50.4	2.0	24.6*
Syphilis									
0–14	6.9	n.p.	n.p.	25.4	0.5	51.0*	16.5	0.3	48.7*
15–24	374.0	4.9	75.8*	467.9	2.3	199.1*	437.7	3.7	118.9*
25–34	336.8	6.9	48.8*	279.1	5.2	53.7*	313.1	6.1	51.6*
35–44	282.2	9.6	29.5*	236.6	3.3	71.3*	259.9	6.5	40.2*
45–54	291.8	5.7	50.9*	241.8	1.8	135.1*	265.6	3.8	70.5*
55–64	316.8	7.1	44.8*	269.9	1.4	199.3*	291.9	4.3	68.6*
65+	394.0	3.5	114.2*	372.6	0.9	415.0*	388.8	2.0	190.0*
Gonorrhoea									
0–14	68.9	0.5	146.2*	387.7	2.3	169.0*	229.9	1.4	169.4*
15–24	4,508.5	64.7	69.7*	5,545.1	42.4	130.7*	5,117.7	54.6	93.7*
25–34	3,368.4	65.6	51.4*	2,728.0	18.6	146.6*	3,109.5	42.8	72.7*
35–44	1,548.6	46.2	33.5*	1,155.0	9.0	128.7*	1,386.1	28.2	49.1*
45–54	641.9	29.2	22.0*	338.5	2.8	120.3*	495.8	16.5	30.0*
55–64	232.3	14.5	16.0*	n.p.	1.2	n.p.	138.5	7.9	17.5*
65+	137.1	4.5	30.1*	n.p.	n.p.	n.p.	86.4	2.1	40.8*
Hepatitis C									
0–14	0.0	n.p.	n.p.	0.0	n.p.	n.p.	0.0	n.p.	n.p.
15–24	50.8	10.1	5.0*	35.7	7.9	4.5*	43.4	9.0	4.8*
25–34	96.2	15.5	6.2*	42.1	7.5	5.6*	69.0	11.6	6.0*
35–44	24.1	5.3	4.5*	31.1	2.3	13.3*	27.8	3.8	7.2*
45–54	n.p.	2.4	n.p.	29.0	1.7	17.5*	22.8	2.0	11.1*
55–64	0.0	n.p.	n.p.	0.0	0.0	n.p.	0.0	n.p.	n.p.
65+	0.0	0.0	n.p.	0.0	n.p.	n.p.	0.0	n.p.	n.p.

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the $p < 0.05$ level.

(a) Calender year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Age-specific rates are calculated using the average Indigenous June population for the relevant years.

(c) Data are reported for Western Australia, South Australia and the Northern Territory. These three jurisdictions are considered to have adequate levels of Indigenous identification in these data. They do not represent a quasi-Australian figure.

(d) Includes notifications for non-Indigenous Australians and those for whom Indigenous status was not stated.

(e) Rate ratio Indigenous:other.

(f) Because of the very high rates of syphilis and gonorrhoea in the Indigenous population and low rates of these STIs in the other population, rate ratios are large and may vary between reports, as fairly minor changes in rates can result in large changes in the resulting ratios.

Source: AIHW analysis of NNDSS data.

Table 1.11.2: Age-specific notification rates per 100,000 for HIV and AIDS, by Indigenous status and sex, 2004–2006[(a)(b)(c)]

	Males			Females			Persons		
	Indigenous	Other[(d)]	Rate ratio[(e)]	Indigenous	Other[(d)]	Rate ratio[(e)]	Indigenous	Other[(d)]	Rate ratio[(e)]
					HIV				
0–14	0.0	0.1	n.p.	0.0	0.2	n.p.	0.0	0.1	n.p.
15–24	4.7	4.9	1.0	4.2	1.6	2.6*	4.5	3.3	1.3
25–34	18.0	17.3	1.0	3.6	3.5	1.0	10.6	10.4	1.0
35–44	16.2	20.1	0.8	4.1	1.8	2.3	9.8	10.9	0.9
45–54	3.4	10.2	0.3	1.6	0.7	2.2	2.4	5.4	0.5
55–64	3.2	5.5	0.6	0.0	0.5	0.0	1.5	3.0	0.5
65+	0.0	1.3	n.p.	0.0	0.0	n.p.	0.0	0.6	n.p
					AIDS				
0–14	0.0	0.0	n.p.	0.0	0.0	n.p.	0.0	0.0	n.p.
15–24	0.7	0.1	4.6	0.0	0.1	n.p.	0.3	0.1	3.4
25–34	5.7	1.9	2.9*	0.0	0.6	n.p.	2.8	1.3	2.2
35–44	9.2	5.0	1.9	1.0	0.4	2.4	4.9	2.7	1.8
45–54	8.5	3.3	2.5*	0.0	0.4	0.0	4.1	1.8	2.2
55–64	3.2	1.9	1.7	0.0	0.2	0.0	1.5	1.1	1.4
65+	0.0	0.5	n.p.	0.0	0.0	n.p.	0.0	0.2	n.p.

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the $p < 0.05$ level.

(a) Calender year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Age-specific rates are calculated using the average Indigenous June population for the relevant years.

(c) Total of all state/territories excluding the Australian Capital Territory.

(d) Includes notifications for non-Indigenous Australians and those for whom Indigenous status was not stated.

(e) Rate ratio Indigenous:other.

Source: AIHW analysis of National AIDS Registry and National HIV database.

Notification rates by state/territory

Notification rates for chlamydia, syphilis, gonorrhoea and hepatitis C for the period 2004–2006 for Western Australia, South Australia and the Northern Territory are presented in Table 1.11.3, and notification rates for HIV and AIDS for all states and territories, except the Australian Capital Territory, are presented in Table 1.11.4.

Chlamydia

- For the period 2004–2006, there were 29,245 notifications of chlamydia in Western Australia, South Australia and the Northern Territory, 26% of which were notifications of Aboriginal and Torres Strait Islander peoples. In the Northern Territory, 63% of notifications for chlamydia were among Indigenous people. In Western Australia and South Australia, 22% and 10% of notifications were among Indigenous Australians respectively.
- In Western Australia, South Australia and the Northern Territory combined, notifications rates of chlamydia among Indigenous males and females were six times those of other males and females.

- Notification rates for chlamydia among Indigenous males and females were particularly high in Western Australia where rates were around six times those of other males and females.

Syphilis

- For the period 2004–2006, there were 1,464 notifications of syphilis in Western Australia, South Australia and the Northern Territory combined, 73% of which were notifications of Aboriginal and Torres Strait Islander peoples. In the Northern Territory, 90% of notifications for syphilis were among Indigenous people. In Western Australia and South Australia, 57% and 22% of notifications were among Indigenous Australians respectively.
- In Western Australia, South Australia and the Northern Territory combined, notification rates for syphilis among Indigenous males and females were 53 and 115 times the rates for other males and females.
- Rates of syphilis among Indigenous Australians were markedly higher than among other Australians in Western Australia (59 times higher).

Gonorrhoea

- For the period 2004–2006, there were 11,105 notifications of gonorrhoea in Western Australia, South Australia and the Northern Territory combined, 79% of which were notifications of Aboriginal and Torres Strait Islander peoples. In the Northern Territory, 86% of notifications for gonorrhoea were among Indigenous people. In Western Australia and South Australia, 75% and 67% of notifications were among Indigenous Australians.
- In Western Australia, South Australia and the Northern Territory combined, notification rates of gonorrhoea among Indigenous males and females were 47 and 134 times the rates of other males and females respectively.
- Rates of gonorrhoea among Indigenous females were much higher than among other females in Western Australia and South Australia (124 and 270 times as high respectively).

Hepatitis C (incident)

- For the period 2004–2006, there were 530 notifications of hepatitis C (incident) in Western Australia, South Australia and the Northern Territory, 23% of which were notifications of Aboriginal and Torres Strait Islander peoples.
- In Western Australia, South Australia and the Northern Territory combined, Indigenous males and females were six and seven times more likely to contract hepatitis C as other males and females.
- In Western Australia, notification rates of hepatitis C among Indigenous males and females were 9 times those of other males and females. In South Australia, the rates among Indigenous males and females were 8 and 14 times those of other males and females respectively.

Donovanosis

- For the period 2004–2006, there were 27 notifications of donovanosis in Australia, 93% (25) of which were notifications of Aboriginal and Torres Strait Islander peoples. All of these recorded notifications took place in Queensland, Western Australia and the Northern Territory. Rates have not been calculated for these states and territories because of the small numbers of notifications.

HIV

- Over the period 2004–2006, there were 2,841 HIV notifications in Australia, 2.0% of which were notifications of Indigenous Australians.
- After adjusting for differences in age structure, notification rates for HIV were similar among Indigenous males and other males for the period 2004–06. HIV notification rates for Indigenous females were around 1.5 times those for other females over the same period.
- Of the states and territories for which rates could be calculated, Indigenous males in Western Australia and Victoria were approximately twice as likely to contract HIV as other males, and Indigenous females in Western Australia were approximately seven times as likely to contract HIV as other females.

AIDS

- Over the period 2004–2006, there were 610 cases of AIDS in Australia, 3.6% of which were notifications of Indigenous Australians.
- After adjusting for differences in age structure, notification rates for AIDS were higher among Indigenous males than among other males. Indigenous males were twice as likely to contract AIDS as other males.
- Of the states and territories for which numbers were large enough to calculate rates, notification rates for AIDS among Indigenous males in New South Wales and Queensland were 1.5 and 3.5 times the rates for other males in these jurisdictions respectively.

Table 1.11.3: Notification rates for chlamydia, syphilis, gonorrhoea and hepatitis C, by Indigenous status and sex, WA, SA and NT, 2004–2006[a]

				Males			Females			Persons		
		Proportion (%)		No. per 100,000[b]			No. per 100,000[b]			No. per 100,000[b]		
	No	Indig.	Other[c]	Indig.	Other[c]	Ratio[d][e]	Indig.	Other[c]	Ratio[d][e]	Indig.	Other[c]	Ratio[d][e]
Chlamydia												
WA	15,688	21.7	78.3	949.5	171.8	5.5*	1,500.5	247.9	6.1*	1,222.0	208.3	5.9*
SA	8,258	9.6	90.4	607.9	138.1	4.4*	955.0	208.0	4.6*	779.2	172.0	4.5*
NT	5,299	62.7	37.3	1,083.5	322.6	3.4*	1,719.0	511.3	3.4*	1,456.7	431.7	3.4*
WA, SA & NT[f]	29,245	25.7	74.3	945.7	164.7	5.7*	1,491.5	242.3	6.2*	1,239.4	202.9	6.1*
Syphilis												
WA	598	57.2	42.8	280.8	5.8	48.3*	228.7	2.7	83.7*	252.5	4.3	59.1*
SA	85	22.4	77.6	22.9	2.3	10.0*	21.3	0.7	29.8*	22.1	1.5	14.7*
NT	781	90.1	9.9	360.9	23.6	15.3*	379.9	9.6	39.5*	380.5	17.0	22.4*
WA, SA & NT[f]	1,464	72.7	27.3	270.3	5.1	53.4*	250.9	2.2	115.1*	263.4	3.6	72.8*
Gonorrhoea												
WA	4,666	75.0	25.0	1,424.6	29.3	48.7*	1,262.5	10.2	124.2*	1,338.3	19.8	67.5*
SA	1,272	66.7	33.3	869.8	16.3	53.3*	817.3	3.0	269.7*	838.1	9.7	86.1*
NT	5,167	85.7	14.3	1,818.6	198.6	9.2*	1,992.0	99.0	20.1*	1,980.9	158.5	12.5*
WA, SA & NT[f]	11,105	79.0	21.0	1,486.5	31.6	47.1*	1,465.7	11.0	133.8*	1,503.4	21.7	69.4*
Hepatitis C												
WA	354	26.3	73.7	49.6	5.5	9.0*	32.2	3.5	9.2*	40.9	4.5	9.0*
SA	170	15.9	84.1	34.2	4.5	7.6*	30.4	2.2	14.1*	32.7	3.4	9.8*
NT	6	0.0	100.0	0.0	n.p.	n.p.	0.0	n.p.	n.p.	0.0	1.2	n.p.
WA, SA & NT[f]	530	22.6	77.4	27.2	4.9	5.5*	19.5	2.8	6.9*	23.4	3.9	6.0*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Calender year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Directly age-standardised using the Australian 2001 standard population.

(c) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(d) Rate ratio Indigenous:other.

(e) Because of the very high rates of syphilis and gonorrhoea in the Indigenous population and low rates of these STIs in the other population, rate ratios are large and may vary between reports, as fairly minor changes in rates can result in large changes in the resulting ratios.

(f) Data are reported for Western Australia, South Australia and the Northern Territory. These three jurisdictions are considered to have adequate levels of Indigenous identification in these data. They do not represent a quasi-Australian figure.

Source: AIHW analysis of NNDSS data.

Table 1.11.4: Notification rates for HIV and AIDS, by Indigenous status, sex and state/territory, 2004–2006[a]

				Males			**Females**			**Persons**		
		Proportion (%)		**No. per 100,000[b]**			**No. per 100,000[b]**			**No. per 100,000[b]**		
	No.	**Indig.**	**Other[c]**	**Indig.**	**Other[c]**	**Ratio[d]**	**Indig.**	**Other[c]**	**Ratio[d]**	**Indig.**	**Other[c]**	**Ratio[d]**
						HIV						
NSW	1,203	1.2	98.8	5.1	10.7	0.5*	n.p.	1.5	n.p.	3.2	6.1	0.5
Vic	758	1.2	98.8	20.5	8.9	2.3*	n.p.	1.1	n.p.	9.9	5.0	2.0
Qld	486	3.1	96.9	8.2	7.2	1.1	n.p.	1.0	n.p.	4.1	4.1	1.0
WA	186	9.1	90.9	8.8	4.5	2.0	8.6	1.2	7.3*	8.7	2.9	3.0*
SA	166	1.2	98.8	n.p.	6.5	n.p.	0.0	0.9	n.p.	n.p.	3.7	n.p.
Tas	17	0.0	100.0	0.0	2.3	n.p.	0.0	n.p.	n.p.	0.0	1.2	n.p.
NT	25	4.0	96.0	n.p.	6.4	n.p.	0.0	2.9	n.p.	n.p.	4.8	n.p.
Aust.[e]	**2,841**	**2.0**	**98.0**	**6.6**	**8.4**	**0.8**	**2.0**	**1.2**	**1.6**	**4.2**	**4.8**	**0.9**
						AIDS						
NSW	289	2.4	97.6	3.5	2.6	1.4	n.p.	0.3	n.p.	2.0	1.4	1.4
Vic	166	2.4	97.6	n.p.	1.9	n.p.	0.0	0.3	n.p.	n.p.	1.1	n.p.
Qld	82	7.3	92.7	4.0	1.1	3.6*	0.0	0.2	n.p.	1.9	0.7	2.9*
WA	27	11.1	88.9	n.p.	0.7	n.p.	0.0	n.p.	n.p.	n.p.	0.4	n.p.
SA	35	2.9	97.1	n.p.	1.4	n.p.	0.0	n.p.	n.p.	n.p.	0.7	n.p.
Tas	5	0.0	100.0	0.0	0.7	n.p.	0.0	0.0	n.p.	0.0	0.3	n.p.
NT	6	16.7	83.3	n.p.	1.4	n.p.	0.0	n.p.	n.p.	n.p.	1.2	n.p.
Aust.[e]	**610**	**3.6**	**96.4**	**3.8**	**1.8**	**2.1***	**n.p.**	**0.2**	**n.p.**	**1.9**	**1.0**	**1.9***

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the $p < 0.05$ level.

(a) Calender year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Directly age-standardised using the Australian 2001 standard population.

(c) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(d) Rate ratio Indigenous:other.

(e) Australia total excludes the Australian Capital Territory.

Source: AIHW analysis of National AIDS Registry and National HIV database.

HIV/AIDS by exposure categories

Table 1.11.5 presents HIV and AIDS notifications in Australia by exposure category over the period 2004–2006.

- For the period 2004–2006, the most common method of contracting HIV among Indigenous Australians was homosexual/bisexual contact (42%) followed by heterosexual contact (25%), and injecting drug use (20%). These were also the most common ways of contracting HIV among other Australians (67%, 20% and 3% respectively).
- Over the same period, the most common method of contracting AIDS among Indigenous Australians was male homosexual/bisexual contact (52%). This was also the most common way of contracting AIDS among other Australians (57%), followed by heterosexual contact (22%).
- Indigenous Australians were six times as likely to contract HIV through injecting drug use as other Australians. Indigenous Australians were less likely to contract HIV through male homosexual/bisexual contact as other Australians (ratio of 0.6).
- Indigenous Australians were around 1.5 times as likely to contract AIDS through male homosexual/bisexual contact than other Australians.

Table 1.11.5: Exposure categories for HIV/AIDS, by Indigenous status, 2004–2006[(a)(b)]

	Number		Per cent		No. per 100,000[(c)]		
Exposure category	**Indigenous**	**Other[(d)]**	**Indigenous**	**Other[(d)]**	**Indigenous**	**Other[(d)]**	**Ratio[(e)]**
				HIV			
Male homosexual/bisexual contact	25	1,660	42.4	67.1	1.8	2.8	0.6
Male homosexual/bisexual contact and injecting drug use	n.p.	96	n.p.	3.9	n.p.	0.2	n.p.
Heterosexual contact	15	499	25.4	20.2	1.1	0.8	1.3
Injecting drug use	12	72	20.3	2.9	0.8	0.1	6.3*
Mother with/at risk of HIV infection	0	11	0.0	0.4	0.0	0.02	n.p.
Other[(f)]	n.p.	137	n.p.	5.5	n.p.	0.2	n.p.
Total	**59**	**2,475**	**100.0**	**100.0**	**4.2**	**4.2**	**1.0**
				AIDS			
Male homosexual/bisexual contact	11	335	52.4	56.6	0.9	0.6	1.6
Male homosexual/bisexual contact and injecting drug use	n.p.	45	n.p.	7.6	n.p.	0.1	n.p.
Heterosexual contact	n.p.	132	n.p.	22.3	n.p.	0.2	n.p.
Injecting drug use	n.p.	32	n.p.	5.4	n.p.	0.1	n.p.
Mother with/at risk of HIV infection	0.0	11	0.0	0.4	0.0	0.0	n.p.
Other[(f)]	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total	**21**	**592**	**100.0**	**100.0**	**1.8**	**1.0**	**1.8***

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the $p < 0.05$ level.

(a) Calender year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Total Australia data, excluding 2004 ACT data which was not available.

(c) Directly age-standardised using the 2001 Australian standard population.

(d) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(e) Rate ratio Indigenous:other.

(f) Includes: Haemophilia/coagulation disorder, receipt of blood/tissue, and exposure category undetermined.

Source: AIHW analysis of National AIDS Registry and National HIV database.

Time series analysis

Notification rates, rate ratios and rate differences between Indigenous and other Australians for syphilis, chlamydia and gonorrhoea for the period 1994–1996 to 2005–2006, and hepatitis C (incident) for the period 1995–1996 to 2005–2006, are presented in the following tables and figures. HIV and AIDS notifications for the period 1994–1996 to 2005–2006 are also presented here. Data are presented in 2- to 3-year groupings because of the small number of notifications each year.

Chlamydia

- In Western Australia, South Australia and the Northern Territory combined there were significant increases in notification rates for chlamydia among Indigenous Australians during the period 1994–1996 to 2005–2006. The fitted trend line shows an average yearly increase in the rate of around 99 per 100,000 which is equivalent to a 188% increase in the rate over the period (Table 1.11.6). Significant increases in rates for chlamydia were evident for both Indigenous males and females.
- There were also significant increases in notification rates for chlamydia among other Australian males and females during the same period (447% increase for males and 344% increase for females) (Table 1.11.6).
- Notification rate ratios between Indigenous and other Australians for chlamydia showed significant declines over the 12-year period (Figure 1.11.1). The fitted trend line showed an average yearly decline in the ratio of around 0.4 which is equivalent to a 47% decline in the rate ratio over the period.
- Although rate ratios showed declines over the period, the difference in notification rates between Indigenous and other Australians increased significantly for both males and females.

Table 1.11.6: Crude and age-standardised notification rates, rate ratios and rate differences for chlamydia, WA, SA and NT, 1994–1996 to 2005–2006

	1994–1996	1997–1999	2000–2002	2003–2004	2005–2006	Annual change[(a)]	% change over period[(b)]
Indigenous crude rate (no. per 100,000)							
Males	414.8	579.5	767.5	1064.3	1190.1	76.3*	220.7
Females	846.2	1047.6	1413.7	1838.9	1974.0	114.7*	162.6
Persons	630.3	813.4	1091.7	1469.9	1616.3	98.7*	187.8
Indigenous age-standardised rate (no. per 100,000)							
Males	357.4	497.5	647.5	888.1	961.5	60.1*	201.9
Females	657.2	829.7	1113.1	1435.2	1515.2	87.6*	160.0
Persons	507.3	661.9	878.7	1171.0	1260.1	75.8*	179.4
Other Australian age-standardised rate (no. per 100,000)[(c)]							
Males	35.5	58.0	91.1	131.4	176.7	13.2*	446.3
Females	64.3	86.4	132.0	191.4	260.9	18.4*	343.5
Persons	49.9	71.8	111.5	160.8	218.1	15.8*	379.0
Rate ratio[(d)]							
Males	10.1	8.6	7.1	6.8	5.4	–0.4*	–49.8
Females	10.2	9.6	8.4	7.5	5.8	–0.4*	–47.5
Persons	10.2	9.2	7.9	7.3	5.8	–0.4*	–47.3
Rate difference[(e)]							
Males	321.8	439.4	556.4	756.6	784.8	46.9*	175.0
Females	592.8	743.3	981.1	1243.7	1254.3	69.2*	140.1
Persons	457.4	590.1	767.2	1010.2	1041.9	60.1*	157.6

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1994–1996 to 2005–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1994–1996 and 2005–2006 based on the annual rate of change over the period.

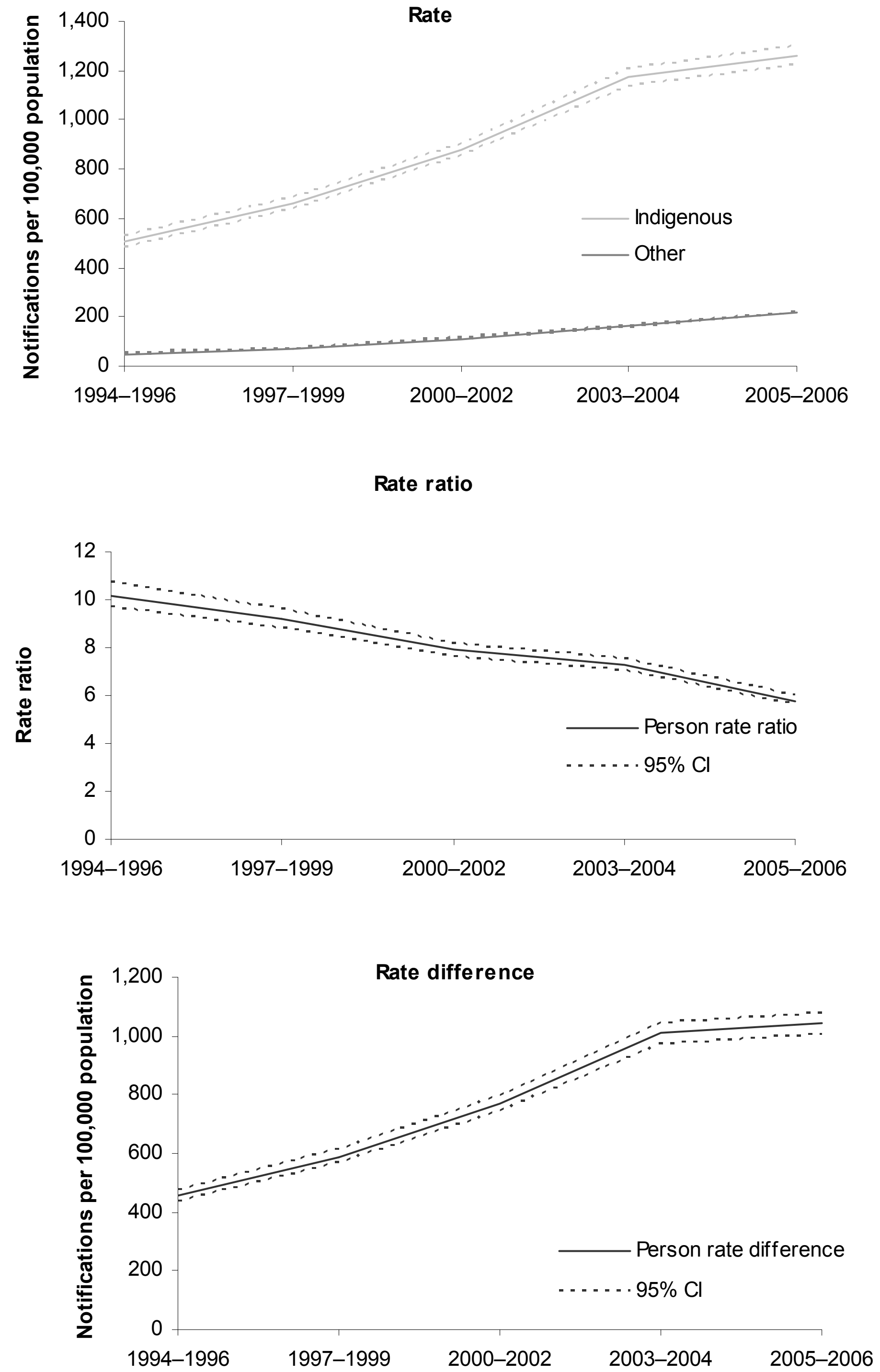
(c) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(d) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(e) Notification rate for Indigenous Australians minus the notification rate for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian population.

Source: AIHW analysis of NNDSS data.



Source: AIHW analysis of NNDSS data.

Figure 1.11.1: Age-standardised notification rates, rate ratios and rate differences for chlamydia, WA, SA and NT, 1994–1996 to 2005–2006

Syphilis

- Over the period 1994–1996 to 2005–2006 in Western Australia, South Australia and the Northern Territory combined, there were significant decreases in notification rates for syphilis among Indigenous Australians (from around 333 to 207 notifications per 100,000). The fitted trend line shows an average yearly decline in the rate of around 9 per 100,000 which is equivalent to a 33% reduction in the rate over the period (Table 1.11.7). These declines were significant for males but not for females.
- There were significant increases in notification rates for syphilis among other Australians males during the same period. The fitted trend line showed an average yearly increase in the rate of around 0.2 per 100,000 which was equivalent to a 99% increase in the rate over the period (Table 1.11.7; Figure 1.11.2).
- There was a significant decline in notification rate ratios between Indigenous and other Australians for syphilis over the 12-year period. The fitted trend showed an average yearly decline in the rate ratio of around 5 which was equivalent to a 47% reduction in the rate ratio over the period. These declines were statistically significant for males but not for females.

Table 1.11.7: Crude and age-standardised notification rates, rate ratios and rate differences for syphilis, WA, SA and NT, 1994–1996 to 2005–2006

	1994–1996	1997–1999	2000–2002	2003–2004	2005–2006	Annual change[(a)]	% change over period[(b)]
Indigenous crude rate (no. per 100,000)							
Males	337.2	257.7	308.7	254.2	190.3	–10.8*	–38.5
Females	328.2	241.0	294.6	254.4	209.0	–8.3	–30.2
Persons	333.2	249.6	301.6	255.0	206.6	–9.1*	–32.7
Indigenous age-standardised rate (no. per 100,000)							
Males	328.7	286.4	340.5	311.9	243.7	–5.0	–18.1
Females	296.9	231.5	289.1	275.9	229.3	–3.2	–12.9
Persons	311.6	256.9	313.5	292.4	240.5	–3.7	–14.2
Other Australian age-standardised rate (no. per 100,000)[(c)]							
Males	2.7	3.7	4.7	4.3	5.3	0.2*	99.0
Females	2.0	1.5	2.2	1.7	2.3	0.0	15.6
Persons	2.3	2.7	3.5	3.0	3.8	0.1*	62.2
Rate ratio[(d)]							
Males	122.9	76.4	72.6	72.2	46.0	–6.0*	–58.4
Females	149.8	151.2	131.9	166.4	100.1	–2.9	–23.3
Persons	132.6	96.5	89.6	98.0	63.3	–5.1*	–46.6
Rate difference[(e)]							
Males	326.0	282.6	335.8	307.6	238.4	–5.2	–19.1
Females	295.0	230.0	286.9	274.2	227.0	–3.2	–13.1
Persons	309.2	254.2	310.0	289.5	236.7	–3.8	–14.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1994–1996 to 2005–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1994–1996 and 2005–2006 based on the annual rate of change over the period.

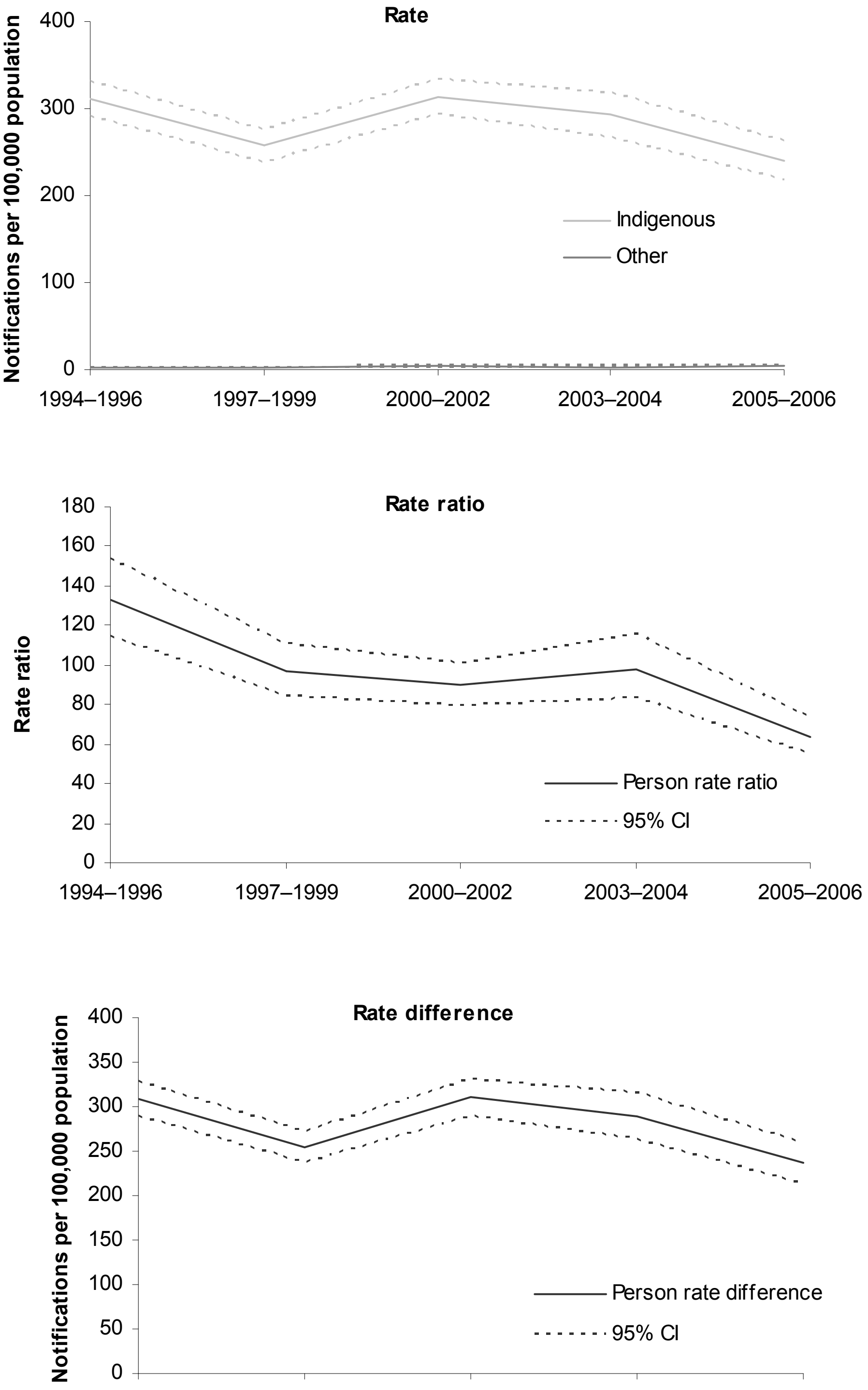
(c) ‘Other’ includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(d) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(e) Notification rate for Indigenous Australians minus the notification rate for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of NNDSS data.



Source: AIHW analysis of NNDSS data.

Figure 1.11.2: Age-standardised notification rates, rate ratios and rate differences for syphilis, WA, SA and NT, 1994–1996 to 2005–2006

Gonorrhoea

- In Western Australia, South Australia and the Northern Territory combined, there were significant increases in notification rates for gonorrhoea among Indigenous Australians during the period 1994–1996 to 2005–2006. The fitted trend line shows an average yearly increase in the rate of around 69 per 100,000 which is equivalent to a 74% increase in the rate over the period (Table 1.11.8). There were significant increases in notification rates for both Indigenous males and females.
- There were also increases in notification rates for gonorrhoea among other Australians during the same period. Rates showed a significant increase for males (84% increase over the period) but not for females.
- Notification rate ratios between Indigenous and other Australians for gonorrhoea showed no significant changes for males or females over the 12-year period (Figure 1.11.3).
- There were significant increases in the notification rate differences between Indigenous and other Australians for gonorrhoea over the period, with an average yearly increase in the rate difference of around 51 per 100,000 (65% increase). These increases were statistically significant for both males and females.

Table 1.11.8: Crude and age-standardised notification rates, rate ratios and rate differences for gonorrhoea, WA, SA and NT, 1994–1996 to 2005–2006

	1994–1996	1997–1999	2000–2002	2003–2004	2005–2006	Annual change[(a)]	% change over period[(b)]
Indigenous crude rate (no. per 100,000)							
Males	1308.1	1257.5	1381.8	1500.8	1833.9	46.6*	42.8
Females	938.5	1371.9	1531.7	1678.3	1916.3	85.5*	109.3
Persons	1126.9	1315.4	1456.9	1608.3	1916.5	69.4*	73.9
Indigenous age-standardised rate (no. per 100,000)							
Males	1,168.0	1,114.6	1,207.4	1,255.8	1,575.0	34.0*	34.9
Females	761.2	1,113.7	1,234.1	1,314.8	1,518.0	64.9*	102.3
Persons	962.5	1,110.1	1,216.9	1,296.1	1,574.1	52.1*	64.9
Other Australian age-standardised rate (no. per 100,000)[(c)]							
Males	18.5	26.0	30.3	32.3	32.0	1.3*	84.1
Females	7.7	16.1	15.8	12.3	11.1	0.2	24.7
Persons	13.3	21.2	23.5	22.5	22.0	0.8*	68.3
Rate ratio[(d)]							
Males	63.2	42.9	39.9	38.9	49.2	–1.4	–25.7
Females	98.5	69.3	78.1	107.0	136.9	4.0	48.3
Persons	72.6	52.5	51.8	57.7	71.5	–0.1	–1.2
Rate difference[(e)]							
Males	1,149.6	1,088.6	1,177.1	1,223.6	1,543.0	32.7*	34.1
Females	753.5	1,097.6	1,218.3	1,302.5	1,506.9	64.7*	103.1
Persons	949.2	1,089.0	1,193.4	1,273.6	1,552.0	51.3*	64.9

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1994–1996 to 2005–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1994–1996 and 2005–2006 based on the annual rate of change over the period.

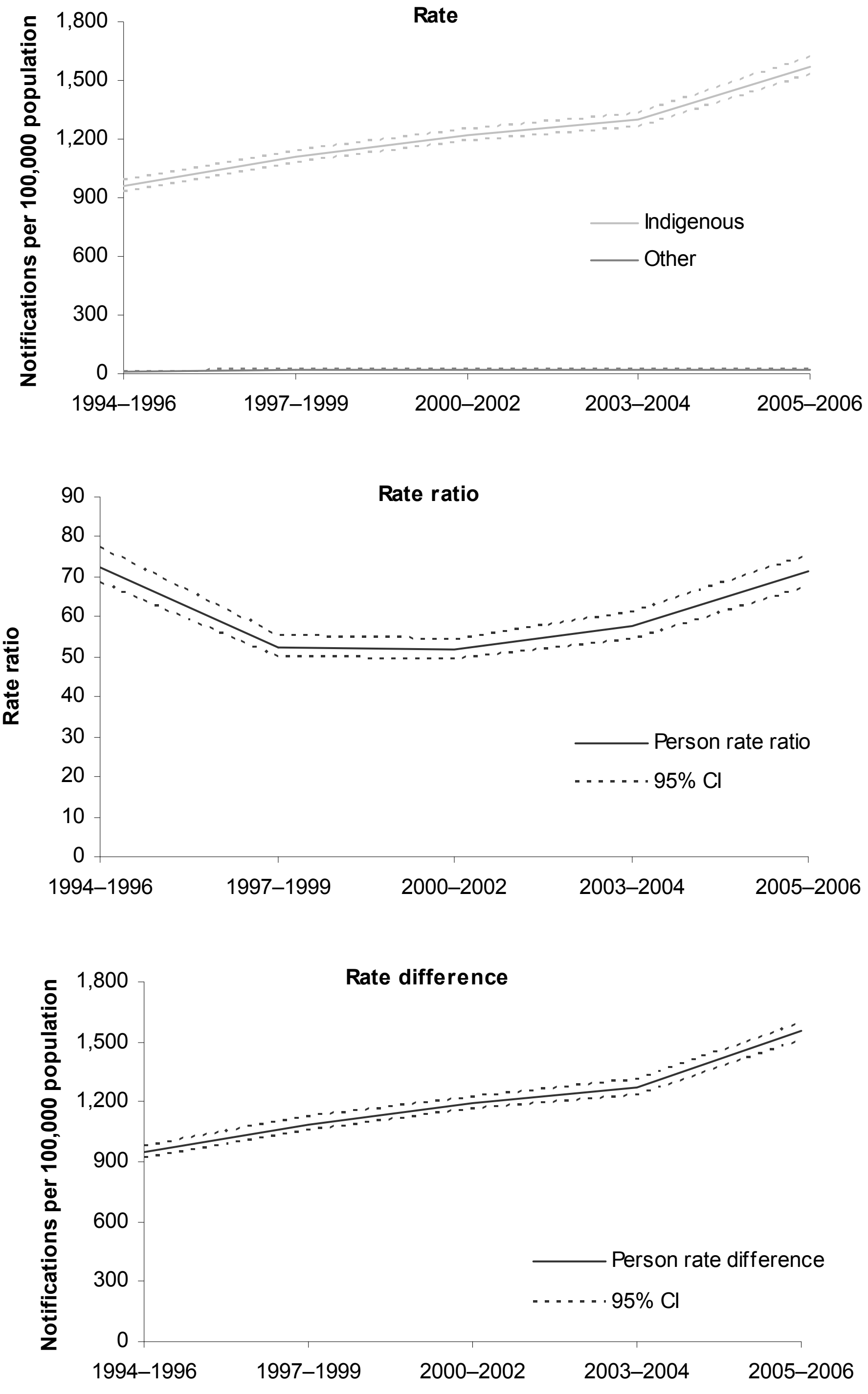
(c) ‘Other’ includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(d) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(e) Notification rate for Indigenous Australians minus the notification rate for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of NNDSS data.



Source: AIHW analysis of NNDSS data.

Figure 1.11.3: Age-standardised notification rates, rate ratios and rate differences for gonorrhoea, WA, SA and NT, 1994–1996 to 2005–2006

Hepatitis C (incident)

Time trends data for hepatitis C notifications are presented for the period 1997–1999 to 2005–2006, as complete and consistent data on hepatitis C notifications are not available before 1997 in the three states and territories.

- In Western Australia, South Australia and the Northern Territory combined, there was a significant increase in notification rates for hepatitis C among Indigenous females during the period 1997–1999 to 2005–2006. There was an average yearly increase in the rate of 1.1 per 100,000 which was equivalent to a 63% increase in the rate over the period (Table 1.11.9).
- There were small non-significant increases in the rate of hepatitis C notifications for other Australians over the same period.
- Notification rate ratios between Indigenous and other Australians for hepatitis C showed significant increases for both males and females over the period 1997–1999 to 2005–2006 (an increase of 119% for males and 135% for females). The rate difference between Indigenous and other Australian notifications for hepatitis C showed significant increases for females only.

Table 1.11.9: Crude and age-standardised notification rates, rate ratios and rate differences for hepatitis C (incident), WA, SA and NT, 1997–1999 to 2005–2006

	1997–1999	2000–2002	2003–2004	2005–2006	Annual change[(a)]	% change over period[(b)]
Indigenous crude rate (no. per 100,000)						
Males	16.2	27.5	40.9	22.6	1.5	85.3
Females	13.3	16.6	21.2	19.2	0.9*	62.5
Persons	14.7	22.0	31.0	20.9	1.2	74.8
Indigenous age-standardised rate (no. per 100,000)						
Males	14.1	24.1	35.4	20.8	1.4	91.9
Females	10.6	13.9	19.3	17.9	1.1*	95.6
Persons	12.3	18.9	27.4	19.4	1.3	94.3
Other Australian age-standardised rate (no. per 100,000)[(c)]						
Males	5.6	6.3	6.3	4.6	–0.1	–16.9
Females	3.5	4.0	4.2	2.7	–0.1	–17.7
Persons	4.6	5.2	5.3	3.7	–0.1	–17.3
Rate ratio[(d)]						
Males	2.5	3.8	5.6	4.5	0.3*	119.2
Females	3.0	3.5	4.6	6.5	0.5*	134.9
Persons	2.7	3.7	5.2	5.3	0.4*	126.2
Rate difference[(e)]						
Males	8.5	17.8	29.1	16.2	1.5	164.4
Females	7.1	9.9	15.2	15.2	1.2*	151.5
Persons	7.7	13.7	22.1	15.7	1.4	160.7

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1995–1996 to 2005–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1997–1999 and 2005–2006 based on the annual rate of change over the period.

(c) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

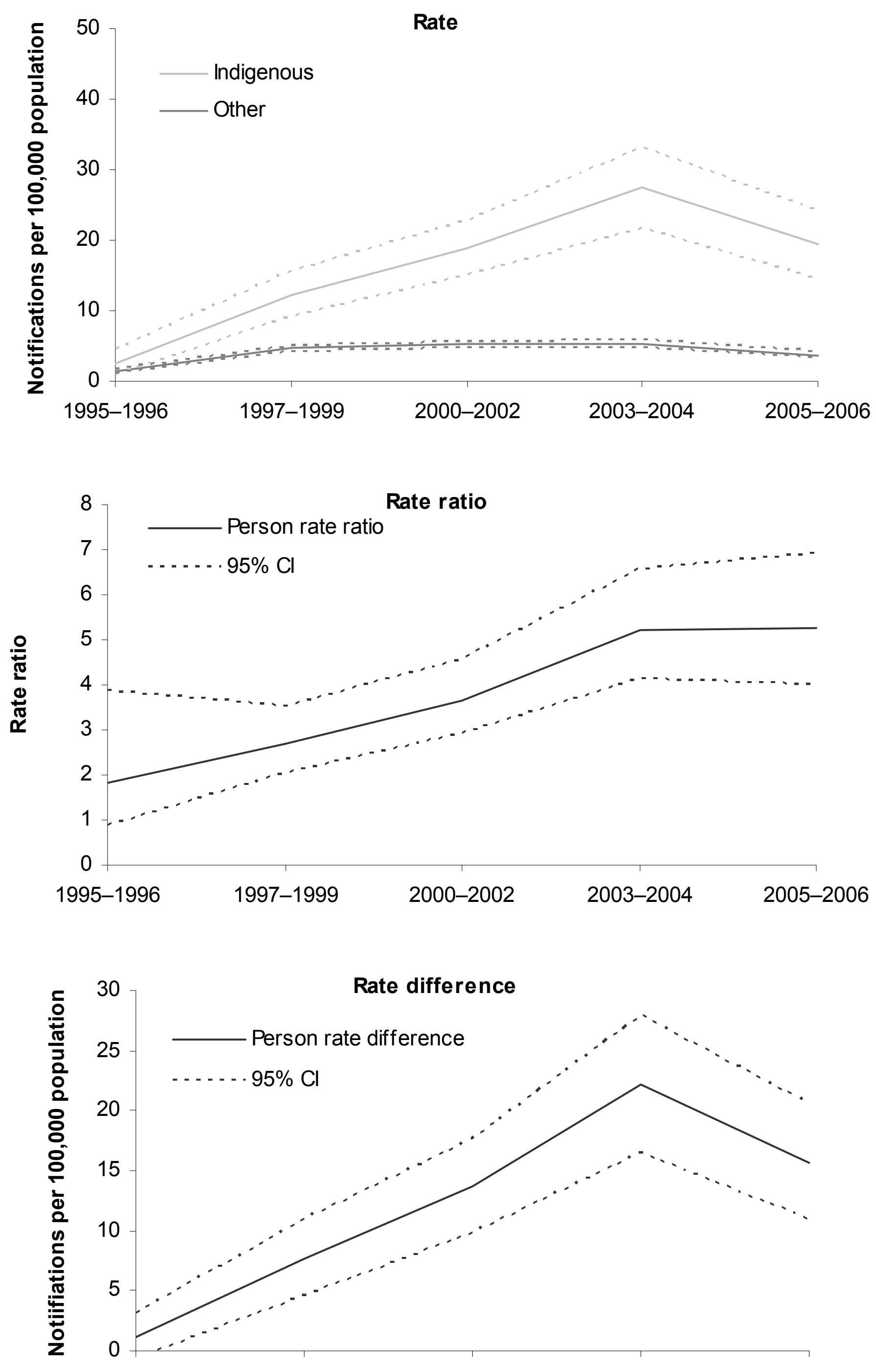
(d) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(e) Notification rate for Indigenous Australians minus the notification rate for other Australians.

Notes

1. Rates have been directly age-standardised using the 2001 Australian standard population.
2. Rates differ from those presented in the 2006 edition of this report. This is because both incident and unspecified cases of hepatitis C were presented in the 2006 report whereas only hepatitis C incident cases are presented here.

Source: AIHW analysis of NNDSS data.



Source: AIHW analysis of NNDSS data.

Figure 1.11.4: Age-standardised notification rates, rate ratios and rate differences for hepatitis C (incident), WA, SA and NT, 1995–1996 to 2005–2006

HIV

- There were apparent increases in the rate of HIV notifications among Indigenous Australians over the period 1998–2000 to 2005–2006, but this trend was not significant (Table 1.11.10, Figure 1.11.5).
- Over the same period, there were significant increases in notification rates for HIV among other Australians. The fitted trend implies an average yearly increase in the rate of around 0.2 per 100,000 which is equivalent to a 36% increase in the rate over the period.
- There were no significant changes in the notification rate ratios and rate differences between Indigenous and other Australians for HIV between 1998–2000 and 2005–2006.

Table 1.11.10: Crude and age-standardised notification rates, rate ratios and rate differences for HIV(a), 1998–2000 to 2005–2006

	1998–2000	2001–2002	2003–2004	2005–2006	Annual change(b)	% change over period(c)
Indigenous crude rate (no. per 100,000)	2.6	4.4	4.4	3.8	0.2	55.1
Indigenous age-standardised rate (no. per 100,000)	3.0	4.9	4.7	4.0	0.2	40.7
Other Australian age-standardised rate (no. per 100,000)(d)	3.8	4.2	4.5	4.9	0.2*	35.8
Rate ratio(e)	0.8	1.2	1.1	0.8	0.0	2.8
Rate difference(f)	–0.8	0.7	0.3	–0.9	0.0	17.3

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2000 to 2005–2006.

(a) Data exclude cases diagnosed in the Australian Capital Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–2000 and 2005–2006 based on the annual rate of change over the period.

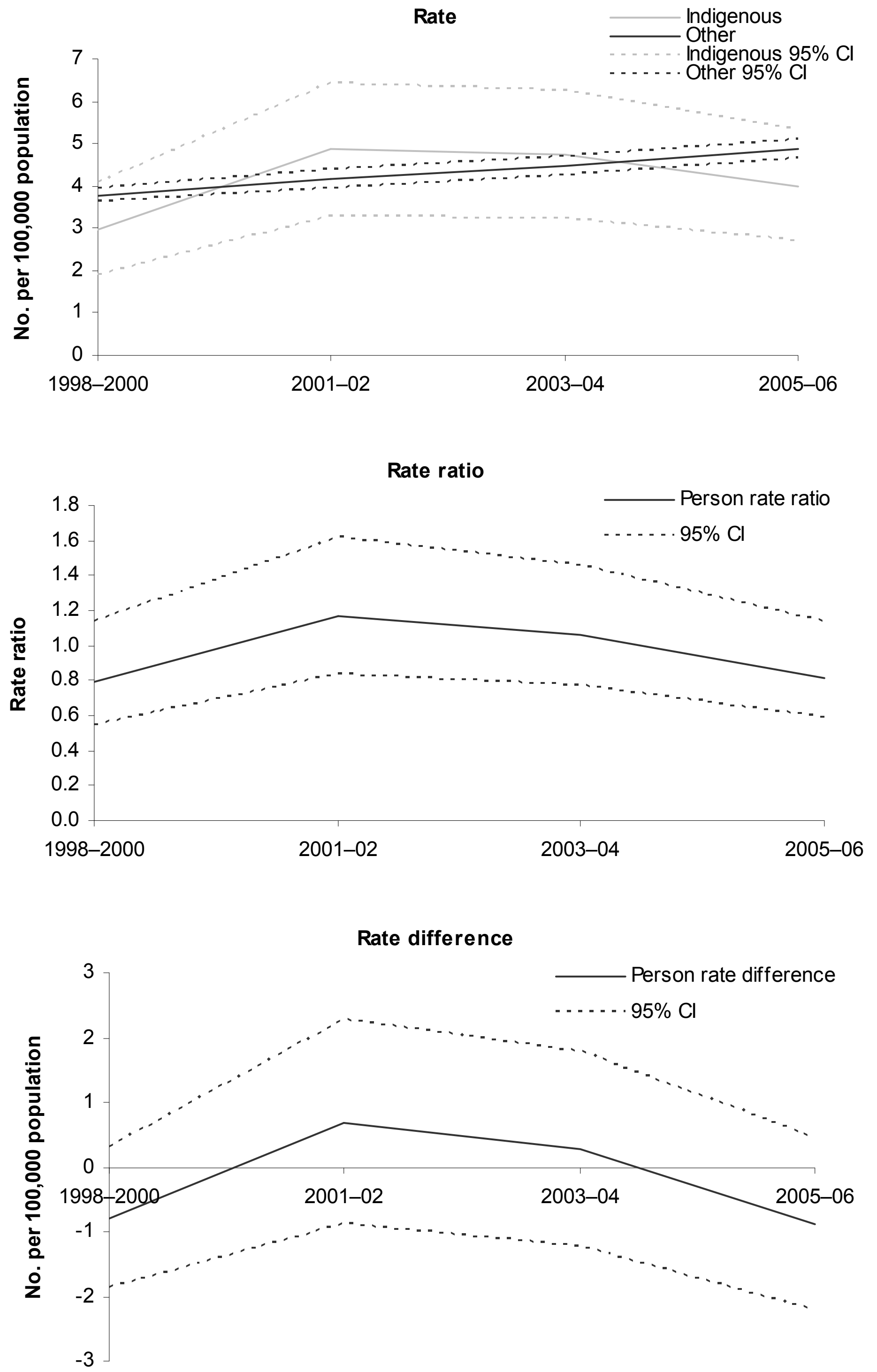
(d) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(e) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(f) Notification rate for Indigenous Australians minus the notification rate for other Australians.

Notes: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of NCHECR data.



Source: AIHW analysis of NCHECR data.

Figure 1.11.5: Age-standardised notification rates, rate ratios and rate differences for HIV, 1998–2000 to 2005–2006

AIDS

- There were no significant change in the rate of AIDS notifications among Indigenous Australians over the period 1998–2000 to 2005–2006 (Table 1.11.11, Figure 1.11.6).
- Over the period 1998–2000 to 2005–2006, there were significant declines in notification rates for AIDS among other Australians. The fitted trend implies an average yearly decline in the rate of around 0.1 per 100,000 which is equivalent to a 32% decline in the rate over the period.
- There were non significant increases in both notification rate ratios and rate differences between Indigenous and other Australians for AIDS between 1998–2000 and 2005–2006.

Table 1.11.11: Crude and age-standardised notification rates, rate ratios and rate differences for AIDS[(a)], 1998–2000 to 2005–2006

	1998–2000	2001–2002	2003–2004	2005–2006	Annual change[(b)]	% change over period[(c)]
Indigenous crude rate (no. per 100,000)	1.4	1.4	2.5	1.0	0.0	–2.8
Indigenous age-standardised rate (no. per 100,000)	1.7	1.9	3.2	1.2	0.0	–1.5
Other Australian age-standardised rate (no. per 100,000)[(d)]	1.4	1.2	1.0	1.0	–0.1*	–32.0
Rate ratio[(e)]	1.2	1.6	3.0	1.1	0.1	41.6
Rate difference[(f)]	0.3	0.7	2.1	0.1	0.1	148.4

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2000 to 2005–2006.

(a) Excludes cases diagnosed in the Australian Capital Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–2000 and 2005–2006 based on the annual rate of change over the period.

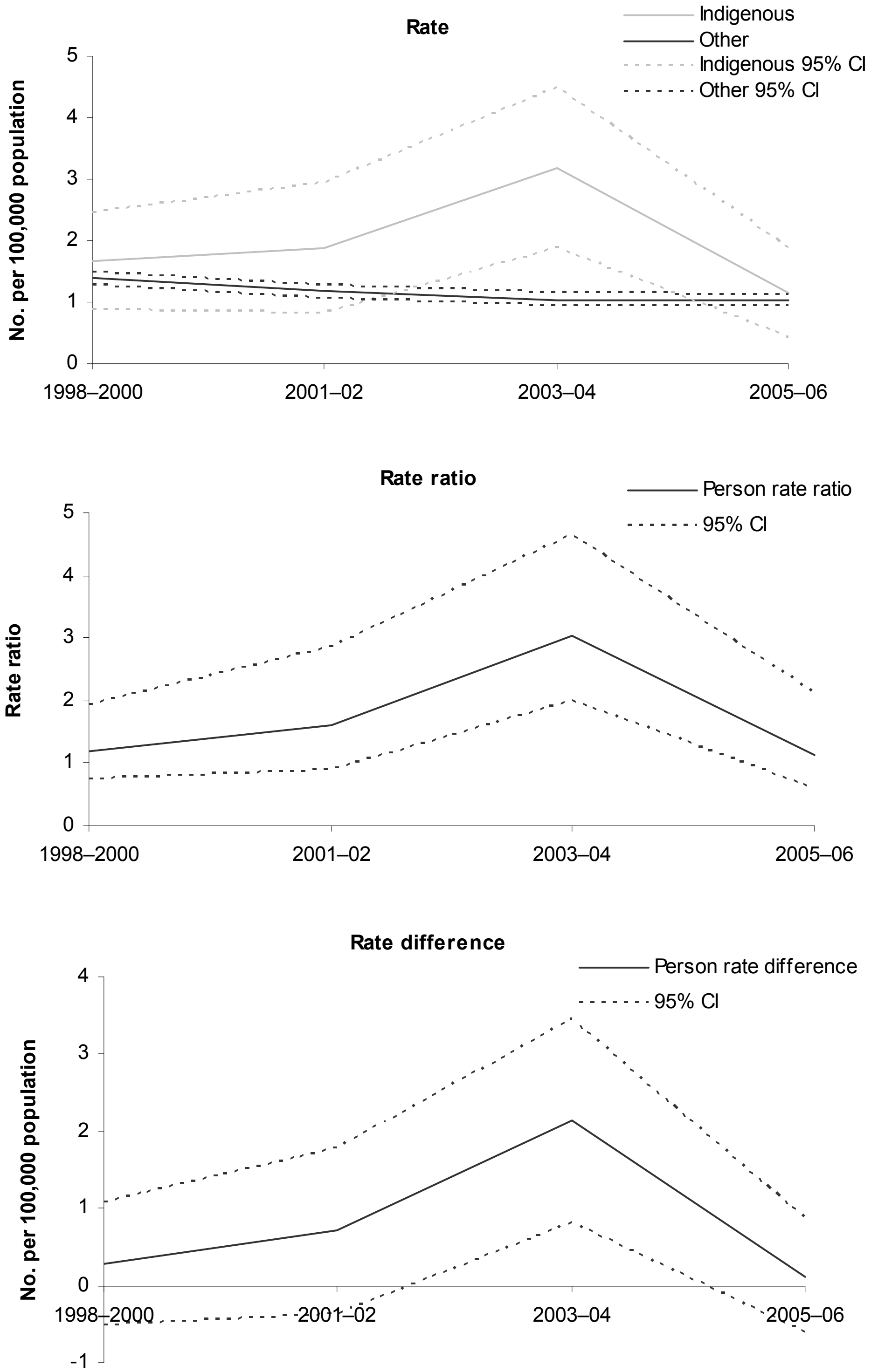
(d) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(e) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(f) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

Notes: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of NCHECR data.



Source: AIHW analysis of NCHECR data.

Figure 1.11.6: Age-standardised notification rates, rate ratios and rate differences for AIDS, 1998–2000 to 2005–2006

Sensitivity of trends in notifications to changes in identification

- The fitted trends described above have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for identification were posted—constant identification, increasing identification and decreasing identification.
  - Under the constant identification scenario, the number of notifications for chlamydia, syphilis, gonorrhoea and hepatitis C for the period under study were adjusted using the following identification factors based on an assessment of Indigenous identification by the NNDSS in 2004:
    - o Western Australia 64%
    - o South Australia 89%
    - o Northern Territory 92%.
  - The number of HIV/AIDS notifications for the period under study was adjusted using an 85% identification factor for Australia.
  - Under the increasing identification scenario, chlamydia, syphilis, gonorrhoea and hepatitis C notifications were adjusted by linearly increasing the identification through the period under study—from 54% in 1994 to 66% in 2006 for Western Australia, from 82% to 90% for South Australia, and from 87% to 93% for the Northern Territory. HIV/AIDS notifications were adjusted by linearly increasing the identification from 77% in 1998 to 85% in 2006.
  - Under the decreasing identification scenario, chlamydia, syphilis, gonorrhoea and hepatitis C notifications were adjusted by linearly decreasing the identification from 74% in 1994 to 62% in 2006 for Western Australia, from 96% to 88% for South Australia, and from 97% to 91% for the Northern Territory. HIV/AIDS notifications were adjusted by linearly decreasing the identification from 93% in 1998 to 85% in 2006.
- The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in notifications might not persist.
- Of the aforementioned trends observed for chlamydia notifications, all remained statistically significant under all three identification scenarios.
- Of the aforementioned trends observed for syphilis notifications, the increase in rates for other Australian males and all persons only remained significant under the increasing identification scenario. The decline in rate ratios for males and all persons did not remain statistically significant under any identification scenario.
- Of the aforementioned trends observed for gonorrhoea notifications, all remained statistically significant under all three identification scenarios.
- The observed trends in hepatitis C notifications all remained significant under all three identification scenarios.
- The observed trends in HIV notifications remained statistically significant under all three identification scenarios.
- The observed trends in AIDS notifications remained statistically significant under all three identification scenarios.

Data quality issues

Notification data

Notifications

Notification statistics do not measure the incidence or prevalence of these infections in the community. Under-reporting of these infections can occur at a number of stages:

- *a person infected may not feel ill*
- *a person may not seek medical care*
- *a false negative result may occur*
- *there may be a positive test result but for some reason a notification may not occur*
- *the case may not be reported to the NNDSS.*

The level of under-reporting can vary by disease, jurisdiction and time. The method of surveillance can vary between jurisdictions with different requirements for notification by medical practitioners, laboratories and hospitals. The case definitions for surveillance also vary among jurisdictions. These can also change over time.

Notification statistics can provide insights into the health of the population which has been diagnosed with a notifiable illness and changes over time.

Indigenous status question

In the NNDSS, New South Wales, Queensland and Tasmania use the standard ABS question of Indigenous status. Other states and territories can provide data for the categories 'Indigenous', 'non-Indigenous' and 'not stated' but do not identify Torres Strait Islanders separately (AIHW & ABS 2006).

Under-identification

The incompleteness of Indigenous identification means the number of notifications recorded as Indigenous is an underestimate of Aboriginal and Torres Strait Islander notifications rates. In 2003, Indigenous status was reported for only 43% of sexually transmissible infections notifications nationally (DoHA 2005).

The accuracy of Indigenous identification in notifiable disease registries varies between the states and territories. Jurisdictional comparisons must be undertaken with care and it is not possible to provide reliable measures of change over time for most of these measures (SIMC 2004).

The identification of Indigenous notifications is incomplete in all states and territories, but three jurisdictions (Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2001–2002 in the NNDSS. Data on Indigenous status for certain notifiable diseases are not available for the Australian Capital Territory, New South Wales or Tasmania. For HIV/AIDS the recording of Indigenous status in the NCHECR data is considered reliable (SIMC 2004).

(continued)

Data quality issues (continued)

Numerator and denominator

Rate and ratio calculations rely on good population estimates. The changes in the completeness of identification of Indigenous people in notification records may take place at different rates from changes in the identification of Indigenous people in the population estimates. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

References

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1.12 Children's hearing loss

This indicator includes a number of measures of children's hearing including prevalence rates and hospitalisation rates for diseases of the ear and mastoid process, and rates of ear and hearing problems managed at consultations with general practitioners

Data sources

Data for this measure come from the National Aboriginal and Torres Strait Islander Health Survey, the Western Australian Aboriginal Child Health Survey, the Bettering the Evaluation and Care of Health survey and the AIHW National Hospital Morbidity Database. Limited data are presented on child hearing screening from the state and territory health departments.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Western Australian Aboriginal Child Health Survey

This survey was a large-scale investigation into the health of 5,289 Western Australian Aboriginal and Torres Strait Islander children aged 0–17 years. It was undertaken in 2001 and 2002 by the Telethon Institute for Child Health Research in conjunction with the Kulunga Research Network. The survey was the first to gather comprehensive health, educational and developmental information on a population-based sample of Aboriginal and Torres Strait Islander children and their families and communities.

Bettering the Evaluation and Care of Health (BEACH) survey

Information about encounters in general practice is available from the BEACH survey which is conducted by the AIHW Australian GP Statistics and Classification Centre. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be underestimated. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Because of a late inclusion of a 'not stated' category of Indigenous status in 2001–02 (before which 'not stated' responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2002–03 to 2006–07, during which there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.5% of total GP encounters in the survey.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Child hearing screening data

No data are currently available on Aboriginal and Torres Strait Islander children's hearing loss in the Australian Capital Territory, Queensland and Western Australia. New South Wales, Victoria, South Australia, Tasmania and the Northern Territory currently have screening programs for hearing loss at school entry, but comprehensive data are not yet available.

Analysis

Age-standardised rates and ratios have been used for this indicator as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported prevalence

Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey on the prevalence of diseases of the ear and mastoid are presented in Table 1.12.1, Figure 1.12.1 and Table 1.12.2.

Prevalence by age

- In 2004–05, approximately 10% of Indigenous children aged 0–14 years reported having ear or hearing problems compared with 3% of non-Indigenous children of the same age. Prevalence rates for ear/hearing problems were 95 per 1,000 population among Indigenous children and 30 per 1,000 population among non-Indigenous children.
- Diseases of the ear and mastoid were more prevalent among Indigenous children aged 5–14 years (12%) than among Indigenous children aged 0–4 years (6%) (Figure 1.12.1).
- Complete or partial deafness/ hearing loss and otitis media were both more prevalent among Indigenous children than among non-Indigenous children. Approximately 5% of Indigenous children aged 0–14 years reported complete or partial hearing loss or deafness compared with 1% of non-Indigenous children. Approximately 4% of Indigenous children of the same age reported otitis media compared with 2% of non-Indigenous children. Otitis media is infection and inflammation of the middle ear space and eardrum. Symptoms include earache, fever and, in some cases, diminished hearing.

Table 1.12.1: Children reporting diseases of the ear and mastoid, by Indigenous status and age group, 2004–05[(a)]

Age (years)	0–4		5–14		0–14	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
			Per cent			
Complete or partial deafness/ hearing loss	2(b)	1(b)	6*	2*	5*	1*
Otitis media	4*	2*(b)	5*	1*	4*	2*
Other diseases of the ear and mastoid	—(b)	—(c)	2(b)	1	1(b)	—
Total(d)(e)	**6***	**2***	**12***	**3***	**10***	**3***
Total number	60,183	1,198,038	120,486	2,561,973	180,669	3,760,010

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05 and National Health Survey 2004–05.

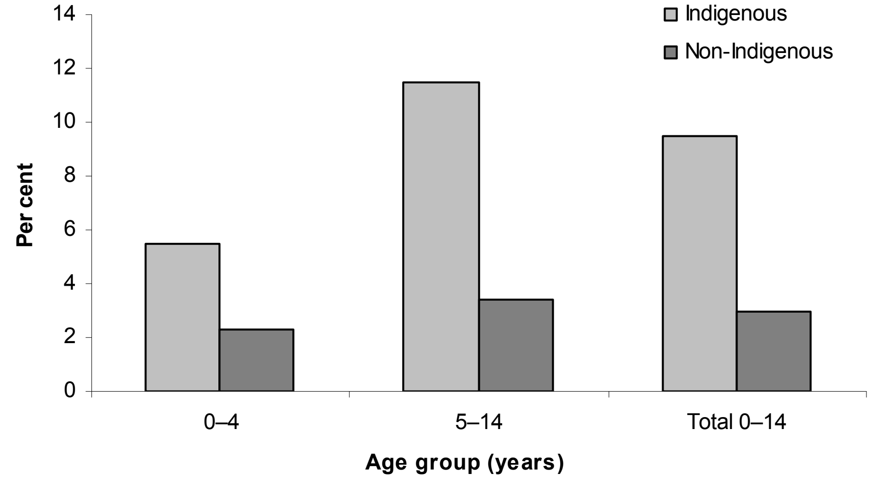
(b) Estimates having a relative standard error of between 25% and 50% and should be used with caution.

(c) Estimate having a relative standard error greater than 50% are considered too unreliable for general use.

(d) Includes 'Type of ear/hearing problem' not known.

(e) Components may not add to total as persons may have reported more than one type of condition.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.



Source: ABS and AIHW analysis of National Aboriginal and Torres Strait Islander Health Survey 2004–05.

Figure 1.12.1: Proportion of children aged 0–14 years reporting ear and hearing problems, by Indigenous status and age group, 2004–05

Prevalence by remoteness and time series

- In 2004–05, prevalence of diseases of the ear and mastoid process was higher among Indigenous children aged 0–14 years in remote areas (12% males and 13% females) than those in non-remote areas (9% males and 8% females) (Table 1.12.2).
- Overall, there has been little change in the prevalence of ear and hearing problems among Indigenous children aged 0–14 years between 2001 and 2004–05, but in remote areas there has been a decline over this period for both Indigenous males (from 18% in 2001 to 12% in 2004–05) and Indigenous females (from 18% in 2001 to 13% in 2004–05).

Table 1.12.2: Indigenous children aged 0–14 years reporting conditions of the ear and mastoid process, by remoteness, 1995, 2001 and 2004–05

	1995[(a)]		2001		2004–05		
	Males	**Females**	**Males**	**Females**	**Males**	**Females**	**Persons**
				Per cent			
Remote	n.a.	n.a.	18	18	12	13	13
Non-remote	7	4	6	11	9	8	8
Total	**n.a.**	**n.a.**	**10**	**13**	**10**	**9**	**10**
Total number	54,392	52,401	90,615	85,878	92,767	87,902	180,699

(a) Data for the National Aboriginal and Torres Strait Islander Health Survey 1995 are available for non-remote regions only. Total numbers are therefore for non-remote areas only.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Prevalence by selected population and health characteristics

Table 1.12.3 presents the proportion of Indigenous children aged 0–14 years who had ear and circulatory problems by selected demographic characteristics and risk factors.

- In 2004–05, among Indigenous children aged 0–14 years, a higher proportion of those who lived in households with regular smokers who smoked at home indoors reported having ear and hearing problems than those who did not live with regular smokers who smoked at home indoors (13% compared to 8%).
- Indigenous children who lived in overcrowded households or in the most disadvantaged quintile of index of disparity where more likely to have ear and hearing problems (both 15%) than Indigenous children who did not live in overcrowded households (8%) or were in the least disadvantaged index of disparity (11%).
- A higher proportion of Indigenous children aged 12–14 years who reported they did not eat vegetables daily and/or did not eat fruit daily reported ear and hearing problems than Indigenous children who did eat fruit and vegetables daily.
- Approximately 11% of Indigenous children whose last consultation with a GP was less than 3 months ago reported ear and hearing problems compared to 8% of Indigenous children who whose last GP consultation was 3 or more months ago.

Table 1.12.3: Proportion of Indigenous children aged 0–14 years with ear/hearing problems, by selected demographic characteristics and risk factors, 2004–05

	Has ear/hearing problems	Does not have ear/hearing problems
	Per cent	
Lives in households with regular smokers		
Yes	10.4	89.6
No	8.0	92.0
Lives in households with regular smokers who smoke at home indoors		
Yes	13.0	87.0
No	8.3	91.7
Overcrowding in housing		
Yes	14.5	85.5
No	8.3	92.0
SEIFA — index of disparity		
Most disadvantaged quintile	14.7	85.3
Least disadvantaged quintile	10.6	89.4
Eats vegetables daily(a)		
Yes	7.7	92.3
No	20.8	79.2
Eats fruit daily(a)		
Yes	7.8	92.2
No	13.8	86.2
Time since consulted GP/specialist		
Less than 3 months	11.0	89.0
3 months or more	8.4	91.6
Total	**9.5**	**90.5**
Total number	**17,097**	**163,572**

(a) Children aged 12–14 years.

Source: AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Hospitalisations

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, there were 56,663 hospitalisations from diseases of the ear and mastoid process among children aged 0–14 years, 4.6% of which were hospitalisations of Aboriginal and Torres Strait Islander children.
- Diseases of the ear and mastoid process accounted for 4.4% of total hospitalisations among Indigenous children aged 0–14 years.

Hospitalisations by age and principal diagnosis

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, for diseases of the ear and mastoid process there were 1,083 hospitalisations among Indigenous children aged 0–4 years, and 1,516 hospitalisations among those aged 5–14 years. This represented 3% and 7% of total hospitalisations among Indigenous children respectively (Table 1.12.4).
- Indigenous children aged 0–4 years were less likely to be hospitalised from diseases of the ear and mastoid process as other children, but Indigenous children aged 5–14 years were 1.4 times more likely to be hospitalised from these diseases as other children.
- Diseases of the middle ear, which include otitis media, were the most common type of ear disease causing hospitalisation among Indigenous children. Indigenous children aged 0–4 years were less likely to be hospitalised for diseases of the middle ear than other children, whereas Indigenous children aged 5–14 years were 1.4 times more likely to be hospitalised than other children (Table 1.12.4).

As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data for children aged 0–14 years are also included in table 1.12.4. The Australia data are adjusted by applying a completeness factor of 89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, Indigenous children aged 0–14 years in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised for diseases of the ear and mastoid process at similar rates to other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous children were hospitalised for diseases of the ear and mastoid process at slightly higher rates than non-Indigenous children (ratio of 1.1).

Hospitalisations for tympanoplasty procedures

Indigenous children aged 0–14 years had reported rates of tympanoplasty procedures with a principal diagnosis of otitis media at almost four times the rate of other children. Differences observed in hospitalisations from otitis media may be due to the chronic nature of the disease among Indigenous children resulting in greater damage to the eardrum.

Table 1.12.4: Hospitalisations for diseases of the ear and mastoid process, by Indigenous status, children aged 0–14 years, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[a][b][c][d]

	Number		Per cent[e]		Indigenous			Other[e]			
	Indigenous	Other[e]	Indigenous	Other[e]	No. per 1,000[f]	LCL 95%[g]	UCL 95%[h]	No. per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Rate ratio[i]
Aged 0–4 years											
Diseases of middle ear and mastoid (H65–H75)	983	28,443	2.7	5.2	8.5	7.9	9.0	12.0	11.9	12.2	0.7*
Other disorders of ear (H90–H95)	51	1,589	0.1	0.3	0.4	0.3	0.6	0.7	0.6	0.7	0.7*
Diseases of the external ear (H60–H62)	47	617	0.1	0.1	0.4	0.3	0.5	0.3	0.2	0.3	1.6*
Diseases of inner ear (H80–H83)	n.p.	37	n.p.	—	n.p.	n.p.	n.p.	—	—	—	n.p.
Total	**1,083**	**30,686**	**2.9**	**5.6**	**9.3**	**8.8**	**9.9**	**13.0**	**12.8**	**13.1**	**0.7***
Aged 5–14 years											
Diseases of middle ear and mastoid (H65–H75)	1,390	21,263	6.4	5.1	6.0	5.7	6.3	4.2	4.2	4.3	1.4*
Other disorders of ear (H90–H95)	59	903	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	1.4*
Diseases of the external ear (H60–H62)	66	1,149	0.3	0.3	0.3	0.2	0.4	0.2	0.2	0.2	1.2
Diseases of inner ear (H80–H83)	n.p.	63	n.p.	—	n.p.	n.p.	n.p.	—	—	—	n.p.
Total	**1,516**	**23,378**	**7.0**	**5.6**	**6.5**	**6.2**	**6.8**	**4.7**	**4.6**	**4.7**	**1.4***
Aged 0–14 years											
Diseases of middle ear and mastoid (H65–H75)	2,373	49,706	4.1	5.1	6.8	6.5	7.1	6.7	6.7	6.8	1.0
Other disorders of ear (H90–H95)	110	2,492	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.9
Diseases of the external ear (H60–H62)	113	1,766	0.2	0.2	0.3	0.3	0.4	0.2	0.2	0.3	1.4*
Diseases of inner ear (H80–H83)	3	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Total NSW, Vic, Qld, WA, SA & NT	**2,599**	**54,064**	**4.4**	**5.6**	**7.5**	**7.2**	**7.7**	**7.3**	**7.3**	**7.4**	**1.0**
Total Australia	2,628	56,021	4.4	5.6	7.2	6.9	7.5	7.3	7.2	7.3	1.0
Total Australia adjusted[j][k]	2,937	55,712	4.9	5.5	8.0	7.7	8.3	7.2	7.2	7.3	1.1*

(continued)

Table 1.12.4 (continued): Hospitalisations for diseases of the ear and mastoid process, by Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)(e)]

(a) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes H60–H95.

(b) Financial year reporting.

(c) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(d) Proportion of total hospitalisations for Indigenous and non-Indigenous people in that age group for the period 2004–05 to 2005–06.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Age-specific hospitalisation rate using the average Indigenous December populations for the relevant years.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analysis

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, therefore they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for diseases of the ear and mastoid process over the 7-year period 1998–99 to 2005–06 are presented in Table 1.12.5 and Figure 1.12.2.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant declines in hospitalisation rates for diseases of the ear and mastoid process among Indigenous children aged 0–14 years during the period 1998–99 to 2005–06, with an average yearly decline in the rate of around 0.2 per 1,000 population. This is equivalent to a 17% reduction in the rate over the period. The declines in hospitalisation rates were significant for both males and females.
- There were also significant declines in hospitalisation rates among other Australian children, with an average yearly decline in the rate of 0.2 per 1,000. This is equivalent to an 18% decline in the rate over the period.
- There was no significant change in the hospitalisation rate ratios or rate difference between Indigenous and other children during the period 1998–99 to 2005–06.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all affect the level of hospitalisation over time. Caution should be used in interpreting changes over time, as it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may reflect increased use of admitted patient hospital services rather than a worsening of health.

Table 1.12.5: Age-standardised hospitalisation rates, rate ratios and rate differences from diseases of the ear and mastoid process, children aged 0–14 years, Qld, WA, SA & NT, 1998–99 to 2005–06[(a)]

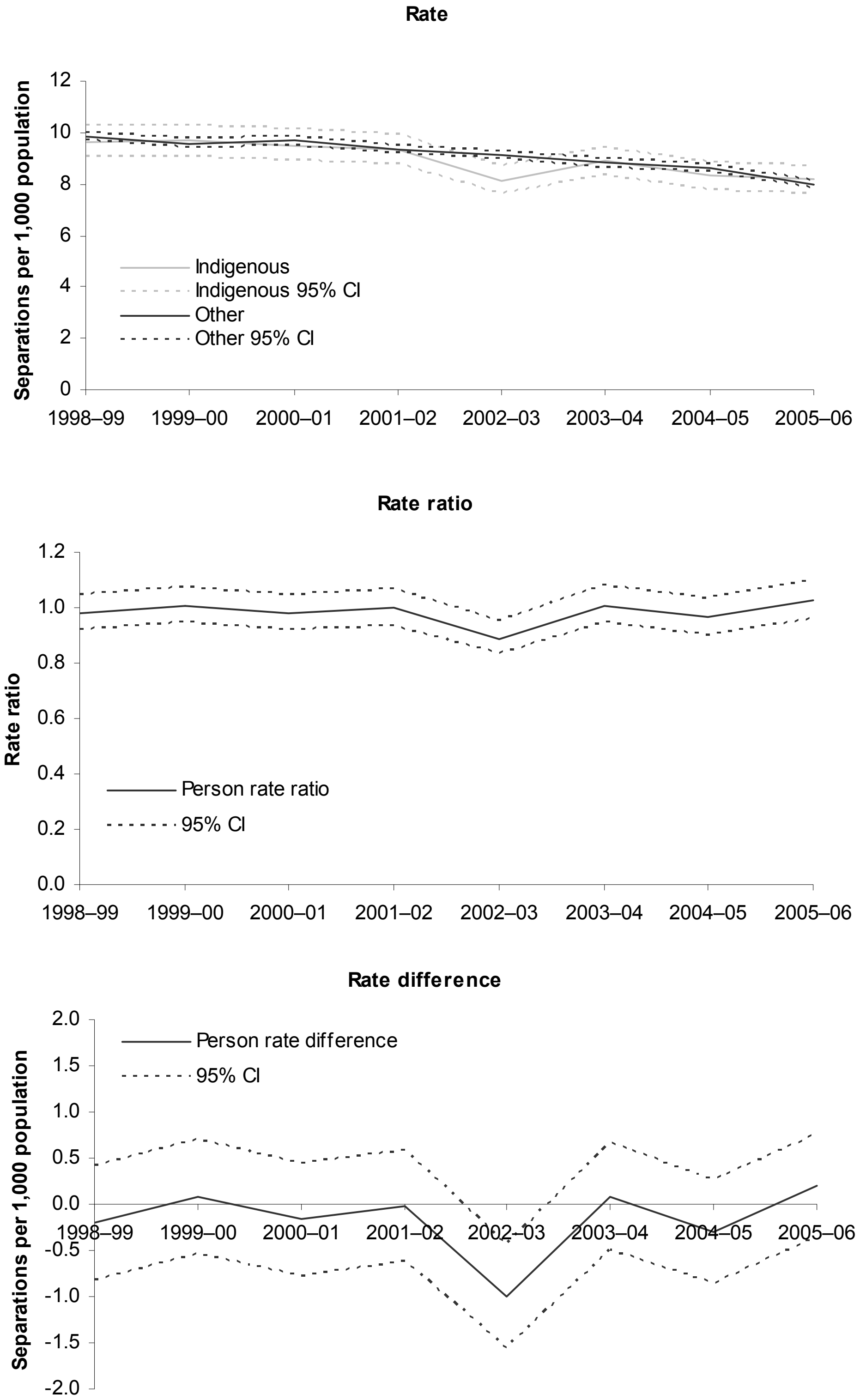
	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous rate (no. per 1,000)										
Males	10.1	10.4	10.4	9.4	8.5	9.5	8.8	9.0	–0.2*	–15.6
Females	9.2	9.0	8.6	9.2	7.8	8.2	7.8	7.3	–0.3*	–19.5
Persons	9.7	9.7	9.5	9.3	8.1	8.9	8.3	8.2	–0.2*	–17.4
Other Australian[(d)] rate (no. per 1,000)										
Males	11.4	11.1	11.1	10.8	10.7	10.3	10.2	9.4	–0.3*	–15.7
Females	8.2	8.0	8.1	7.8	7.5	7.2	7.0	6.5	–0.2*	–20.4
Persons	9.9	9.6	9.7	9.3	9.1	8.8	8.6	8.0	–0.2*	–17.6
Rate ratio[(e)]										
Males	0.9	0.9	0.9	0.9	0.8	0.9	0.9	1.0	—	0.8
Females	1.1	1.1	1.1	1.2	1.0	1.1	1.1	1.1	—	1.0
Persons	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.0	—	0.5
Rate difference[(f)]										
Males	–1.3	–0.7	–0.7	–1.4	–2.2	–0.8	–1.4	–0.3	—	–16.2
Females	0.9	0.9	0.5	1.4	0.3	1.0	0.8	0.8	—	–11.4
Persons	–0.2	0.1	–0.2	0.0	–1.0	0.1	–0.3	0.2	—	–24.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.
(d) 'Other' includes hospitalisations for non-Indigenous people and those for whom Indigenous status was not stated.
(e) Hospitalisation rates for Indigenous Australians divided by hospitalisation rates for other Australians.
(f) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.12.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other children aged 0–14 years from diseases of the ear and mastoid process, Qld, WA, SA and NT, 1998–99 to 2005–06

General practitioner encounters

Information about general practitioner (GP) encounters is available from the BEACH survey. Information is collected from a random sample of approximately 1,000 general practitioner from across Australia each year. A sample of 100 consecutive encounters is collected from each GP. Data for the 5-year period 2002–03 to 2006–07 are presented in Table 1.12.6.

- In the period 2002–03 to 2006–07 there were 58,145 GP encounters with patients aged 0–14 years, 1,635 (2.8%) of which were with Aboriginal and Torres Strait Islander patients.
- Ear and hearing problems were responsible for 11% of total problems managed among Indigenous patients aged 0–14 years and 9% of total problems managed among other patients of the same age.
- Ear and hearing problems were managed at GP encounters with Indigenous children at similar rates to encounters with other children (at rates of 13.1 and 10.8 per 100 encounters for Indigenous and other children aged 0–14 years respectively).
- Acute otitis media/myringitis was the most common ear and hearing problem managed at GP encounters, responsible for 6.4% of total problems managed among Indigenous patients aged 0–14 years. It made up a greater proportion of problems managed in the 0–4 year age group (7.2%) than at encounters with children aged 5–14 years (5.4%).
- Acute otitis media/myringitis was managed at GP encounters with Indigenous children aged 0–14 years at similar rates to encounters with other children of the same age (7.8 per 100 encounters compared with 7.0).

Table 1.12.6: Ear and hearing problems[a] managed by general practitioners, by Indigenous status of patient, 2002–03 to 2006–07[b][c][d]

	Number		Per cent total problems[e]		Indigenous			Other[f]			
	Indigenous	Other[f]	Indigenous	Other[f]	No. per 100 encounters[g]	95% LCL[h]	95% UCL[i]	No. per 100 encounters[g]	95% LCL[h]	95% UCL[i]	Ratio[j]
0–4 years											
Acute otitis media/ myringitis	80	2,510	7.2	7.2	8.8	6.3	11.4	8.4	8.0	8.9	1.1
Other infections of ear	25	467	2.3	1.3	2.8	1.5	4.0	1.6	1.4	1.8	1.8
Subtotal infections of ear	*105*	*2,977*	*9.5*	*8.6*	*11.6*	*8.5*	*14.7*	*10.0*	*9.5*	*10.5*	*1.2*
Hearing loss	—	11	—	—	—	—	—	—	—	0.1	—
Other diseases of the ear	12	439	1.1	1.3	1.3	0.4	2.3	1.5	1.1	1.8	0.9
Total diseases of the ear	**117**	**3,427**	**10.6**	**9.9**	**12.9**	**9.5**	**16.4**	**11.5**	**10.8**	**12.2**	**1.1**
5–14 years											
Acute otitis media/ myringitis	48	1,439	5.4	4.6	6.6	4.2	8.9	5.4	5.1	5.7	1.2
Other infections of ear	29	753	3.3	2.4	4.0	2.0	5.9	2.8	2.6	3.1	1.4
Subtotal infections of ear	*77*	*2,192*	*8.7*	*7.1*	*10.5*	*7.1*	*13.9*	*8.2*	*7.8*	*8.6*	*1.3*
Hearing loss	—	23	—	0.1	—	—	—	0.1	0.1	0.1	—
Other diseases of the ear	21	437	2.4	1.4	2.9	1.5	4.3	1.6	1.4	1.8	1.8
Total diseases of the ear	**98**	**2,652**	**11.1**	**8.5**	**13.4**	**9.3**	**17.5**	**9.9**	**9.5**	**10.4**	**1.3**

(continued)

Table 1.12.6 (continued): Ear and hearing problems[(a)] managed by general practitioners, by Indigenous status of patient, 2002–03 to 2006–07[(b)(c)(d)]

	Number		Per cent total problems[(e)]		Indigenous			Other[(f)]			
	Indigenous	Other[(f)]	Indigenous	Other[(f)]	No. per 100 encounters[(g)]	95% LCL[(h)]	95% UCL[(i)]	No. per 100 encounters[(g)]	95% LCL[(h)]	95% UCL[(i)]	Ratio[(j)]
					0–14 years						
Acute otitis media/ myringitis	128	3,949	6.4	6.0	7.8	5.8	9.8	7.0	6.7	7.3	1.1
Other infections of ear	54	1,220	2.7	1.9	3.3	2.1	4.5	2.2	2.0	2.3	1.5
Subtotal infections of ear	*182*	*5,169*	*9.1*	*7.9*	*11.1*	*8.5*	*13.8*	*9.1*	*8.8*	*9.5*	*1.2*
Hearing loss	—	34	—	0.1	—	—	—	0.1	—	0.1	—
Other diseases of the ear	33	876	1.7	1.3	2.0	1.1	2.9	1.6	1.3	1.8	1.3
Total diseases of the ear	**215**	**6,079**	**10.8**	**9.2**	**13.1**	**10.1**	**16.2**	**10.8**	**10.3**	**11.3**	**1.2**

(a) ICPC–2 codes: H00–H99. Acute otitis media/myringitis = H71; other ear infections = H70, H72, H73, H74; hearing loss = H28, H84, H85, H86; other diseases of the ear = H00–H27, H29–H69, H75–H83, H87–H99.

(b) These survey results are likely to undercount the number of Indigenous Australians visiting doctors.

(c) Combined financial year data for 5 years.

(d) Data for Indigenous and other Australians have not been weighted.

(e) Per cent of total problems within age group.

(f) Includes non-Indigenous patients and patients for whom Indigenous status was not stated.

(g) Age-specific rate (no. per 100 encounters). Figures do not add to 100 as more than one problem can be managed at each encounter.

(h) LCL = lower confidence interval.

(i) UCL = upper confidence interval.

(j) Rate ratio Indigenous:other.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.

Additional information

Ear and hearing problems among Aboriginal children in Western Australia

The Western Australian Aboriginal Child Health Survey collected information on ear and hearing problems among Aboriginal children living in Western Australia in 2001 and 2002.

- Approximately 18% of Aboriginal children were assessed by their carers as having recurring ear infections. Children aged 12–17 years were less likely to have recurring ear infections (14%) than younger children aged 0–3 and 4–11 years (20%). Of those children with recurring ear infections, over two-thirds (69%) had at least one episode in which infection ruptured the eardrum causing ear discharge.
- Overall, approximately 13% of Aboriginal children aged 4–17 years had recurring ear infections with at least one instance of discharging ears, and a further 9% had had an isolated case of discharging ears. The risk of discharging ears in children with recurring ear infections was highest in areas of high and extreme isolation (83%).
- Carers of children aged 4–17 years were also asked about their child's hearing and learning ability. Approximately 7% of children were assessed as having abnormal hearing, 9% with unintelligible speech, 10% as having difficulty with sounds, 5% with a stammer and 9% as having learning difficulties. Younger children aged 4–11 years were more likely to have language difficulties such as unintelligible speech (11%) and difficulty with sounds (13%) than children aged 12–17 years (5% and 4% respectively).
- Aboriginal children with ear infections had a significantly greater risk of abnormal hearing, language problems and learning difficulties. Approximately 30% of children with recurrent ear infections with discharge had abnormal hearing compared with 2% of children with no ear infections. Children with recurring ear infections with discharge were around three times as likely to have difficulty with sounds and twice as likely to have learning difficulties as children with no ear infection.

Child hearing screening

Limited data are currently available on the screening of Aboriginal and Torres Strait Islander children's hearing in most states and territories. Available data are summarised below.

- In South Australia, in 2003, the prevalence of otitis media leading to hearing loss and contributing to communication problems and long-term disability was estimated to be 11.1% for Aboriginal children compared with 4.7% for the general community (SIMC 2004).
- In Victoria, all children are screened for hearing loss at 500 Hz at 30 dB and 1,000, 2,000 and 4,000 Hz at 20 dB through two universal programs—Maternal and Child Health (2–8 weeks) and School Nursing (prep school 5–6 years). In 2004, 58,793 prep children were screened, of whom 724 were recorded as Aboriginal and/or Torres Strait Islander. Of the Indigenous children screened, 598 were recorded with hearing within normal limits and 141 were referred for further action.
- In the Northern Territory in 2004, 62% of school-aged children (aged 4–16 years) tested in remote communities in the Northern Territory were identified with varying degrees of hearing loss in one or both ears. The tests were performed by audiologists and nurse audiometrists who travelled to remote communities. The numbers tested included mostly children who failed hearing screening at school entry (aged 4–5 years) and children with hearing concerns, but also older children who have had existing hearing loss and were being monitored.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in major cities and regional and remote areas, but very remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the NATSIHS 2004–05 publication (ABS 2006).

Western Australian Aboriginal Child Health Survey

Survey data are subject to sampling and non-sampling errors. Confidence intervals are published with the data to provide a guide to the reliability of the estimates. Non-sampling errors can occur in surveys because of questionnaire design problems, respondent difficulty recalling information/lack of appropriate records, and errors made in the recording and processing of the data. Every effort was made to minimise non-sample errors in this survey (Zubrick et al. 2004).

General practitioner data (BEACH)

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey, 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices between regions and jurisdictions and from year to year, and differing levels and patterns of service delivery.

(continued)

Data quality issues (continued)

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations of Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data). It has been recommended that reporting of Indigenous hospital separations be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

Child hearing screening

The Australian Capital Territory, Queensland and Western Australia reported that there were no data available on Aboriginal and Torres Strait Islander children's hearing loss. Victoria reported that children are screened for hearing through two universal programs – Maternal and Child Health (2–8 weeks), and School Nursing (prep school 5–6 years). Screening relies on a consent form being completed by the parent. The form is still valid if Indigenous status is not completed. All children are screened for hearing loss at 500 Hz at 30 dB and 1000, 2000 and 4000 Hz at 20 dB. School Nursing has made efforts to improve the quality of the data but the level of accurate identification is uncertain.

(continued)

Data quality issues (continued)

Tasmanian enrolment cards are completed by parents or nurses; asking for Indigenous status is compulsory but responding is voluntary. Children whose hearing loss has been detected and who attend the Australian Hearing Service have their Indigenous status collected (SIMC 2004).

In 2004–05, NSW Health has started a statewide otitis media screening initiative for Aboriginal children aged 0–6 years over a 4-year term. Data are not yet available.

In the Northern Territory, remote nurses from the Maternal and Child Health team perform hearing screening at 1,000 Hz and 4,000 Hz at 25 dB at school entry. Children who fail the hearing screening are then referred to hearing services within the Department of Health and Community Services for follow-up diagnostic assessments.

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1.13 Disability

The prevalence of disability among Aboriginal and Torres Strait Islander people, including children with special needs

Data sources

Data for this measure come from the 2002 National Aboriginal and Torres Strait Islander Social Survey, the 2006 Census of Population and Housing and the Western Australian Aboriginal Child Health Survey.

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The ABS 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at 5-yearly intervals, with 2006 the most recent, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

The Census data are adjusted for undercounts at the person level to arrive at the estimated resident population (ERP), but no such adjustment is done for the statistics used in this measure.

Western Australian Aboriginal Child Health Survey

This survey was a large-scale investigation into the health of 5,289 Western Australian Aboriginal and Torres Strait Islander children aged 0–17 years. It was undertaken in 2001 and 2002 by the Telethon Institute for Child Health Research in conjunction with the Kulunga Research Network. The survey was the first to gather comprehensive health, educational and developmental information on a population-based sample of Aboriginal and Torres Strait Islander children and their families and communities across the state. Current work is under way to assess applicability of the results of this survey in other jurisdictions.

The International Classification of Functioning, Disability and Health defines disability as a multi-dimensional concept, relating to:

- the body functions and structures of people
- the activities people do and the life areas in which they participate
- the factors in their environment which affect these experiences.

Analyses

Comparisons of NATSISS and Census data

Both the 2002 NATSISS and 2006 Census included measures of disability, but the questions and criteria used in the two surveys differ and thus data from the two sources should not strictly be compared.

The 2002 NATSISS included two measures of disability. The first 'common' measure is based on a set of common criteria used to identify Indigenous people aged 15 years and over with a disability in both remote and non-remote areas. This measure does not include people whose only reported disability was psychological (that is, a nervous or emotional condition and/or mental illness requiring supervision). The second 'broader' measure was collected in non-remote areas only. It includes Indigenous people with a psychological disability and is directly comparable to criteria used to identify non-Indigenous people with a disability in the ABS 2002 General Social Survey. Comparisons between Indigenous and non-Indigenous people are therefore limited to those aged 18 years and over in non-remote areas.

The 2006 Census asked three questions about need for assistance with core activities of self-care, mobility and communication and then a further question about the reason(s) that help was needed. Responses to these questions were used to identify whether there was a core activity need for assistance. Although conceptually consistent with the 'severe/profound core activity limitation' concept from the 2002 NATSISS, the Census criteria asked fewer questions to identify people with disability. Because of this, the proportion of people identified in the 2006 Census as needing assistance with core activities (16,000 or 5.6% for Indigenous persons aged 15 years and over) will generally be lower than comparable estimates of people with a profound/severe core activity limitation from the 2002 NATSISS (15,800 or 7.7% for Indigenous persons aged 15 years and over).

This measure presents data included in the 2006 edition of this report—2002 NATSISS data for Indigenous persons aged 15 years and over and Indigenous and non-Indigenous persons aged 18 years and over for those with a profound/severe core activity limitation —and new data from the 2006 Census for persons of all ages for those who had a core activity need for assistance. Data from the NATSISS are presented first followed by data from the 2006 Census.

In order to include all respondents from the 2002 NATSISS (from remote and non-remote areas), the majority of tables in this measure are based on the disability populations identified using the common criteria, that is, the more restrictive criteria used in remote areas. The broader criteria are used in making comparisons with the non-Indigenous population (from the 2002 General Social Survey), and in the more detailed tables examining disability status of Indigenous people.

NATSISS data

Disability status

Common criteria

The common criteria for disability are based on a set of common criteria used to identify Indigenous people aged 15 years and over with a disability in both remote and non-remote areas. This measure does not include people whose only reported disability was psychological (that is, a nervous or emotional condition and/or mental illness requiring supervision).

Tables 1.13.1, 1.13.2 and 1.13.3 present data on the disability status of Indigenous Australians in 2002 based on the common criteria for disability.

- In 2002, 102,900 (36%) of Indigenous people aged 15 years and over had a disability or a long-term health condition according to the common criteria (Table 1.13.1). Of these, 21,800 or 8% of the population aged 15 years and over had a profound or severe core activity limitation, meaning that they always or sometimes needed assistance with at least one activity of everyday living (self-care, mobility or communication).
- The rate of disability or long-term health condition increased with age. Approximately 70% of people aged 55 years and over had a disability or long-term health condition.
- Overall, the prevalence rate, or proportion of people with a disability or long-term health condition, was similar in males (37%) and females (36%) (Table 1.13.2).
- In 2002, there was little difference between the proportion of Indigenous persons aged 15 years and over reporting a disability or long-term condition in remote and non-remote areas (35% and 37% respectively) (Table 1.13.3).

Table 1.13.1: Disability status, by age group, Indigenous persons aged 15 years and over, 2002

Disability status	15–24 years	25–34 years	35–44 years	45–54 years	55 years and over	Total
			Per cent			
Has profound/severe core activity limitation	3.8	5.9	7.2	12.3	17.4	7.7
Disability/restriction not further defined	19.0	23.1	31.0	37.3	52.2	28.7
Total with disability or long-term health condition	***22.7***	***29.0***	***38.2***	***49.6***	***69.6***	***36.5***
No disability or long-term health condition	77.3	71.0	61.8	50.4	30.4	63.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	82,700	71,100	57,800	38,400	32,200	282,200

Source: AIHW analysis of the ABS 2002 National Aboriginal and Torres Strait Islander Social Survey.

Table 1.13.2: Disability status, by sex, Indigenous persons aged 15 years and over, 2002

Disability status	Male	Female	Persons
		Per cent	
Has profound/severe core activity limitation	7.4	8.0	7.7
Disability/restriction not further defined	29.5	28.1	28.7
Total with disability or long-term health condition	***36.9***	***36.1***	***36.5***
No disability or long-term health condition	63.1	63.9	63.5
Total	**100.0**	**100.0**	**100.0**
Total number	135,200	147,000	282,200

Source: AIHW analysis of the ABS 2002 National Aboriginal and Torres Strait Islander Social Survey.

Table 1.13.3: Disability status, by remoteness, Indigenous persons aged 15 years and over, 2002

Disability status	Remote	Non-remote
	Per cent	
Has profound core activity restriction	4.0	2.9
Has severe core activity restriction	4.9	4.4
Disability/restriction not defined	26.5	29.6
Total with disability or long-term health condition	**35.4**	**36.9**
Total number	**77,100**	**205,100**

Source: ABS & AIHW analysis of the ABS 2002 National Aboriginal and Torres Strait Islander Social Survey.

Broader criteria

The broader criteria for disability were used in non-remote areas only. They include Indigenous people with a psychological disability and are directly comparable to criteria used to identify non-Indigenous people with a disability in the ABS 2002 General Social Survey (GSS). The GSS collected information on non-Indigenous persons aged 18 years and over. Comparisons between Indigenous and non-Indigenous people are therefore limited to those aged 18 years and over in non-remote areas using the broader criteria.

Tables 1.13.4 and 1.13.5 present disability rates for Indigenous and non-Indigenous Australians aged 18 years and over using the broader criteria for disability in non-remote areas of Australia.

- In 2002, after adjusting for differences in age structure, Indigenous Australians aged 18 years and over in non-remote areas were 1.4 times more likely to have a disability or long-term condition than non-Indigenous Australians in non-remote areas (Table 1.13.4).
- Indigenous people were twice as likely to have a profound or severe core activity limitation as non-Indigenous Australians.
- Indigenous people had a higher rate of profound and severe core activity limitation than non-Indigenous people in all age groups. The greatest difference in rates occurred in the 45–54 year age group where Indigenous Australians reported a disability or long-term condition at around four times the rate of non-Indigenous people.
- In 2002, Indigenous Australians aged 18 years and over had higher rates of disability than non-Indigenous Australians in all states and territories (rate ratios of between 1.3 and 1.6) except the Northern Territory, where rates were similar for Indigenous and non-Indigenous Australians (Table 1.13.5).
- The proportion of Indigenous Australians with a profound or severe core activity limitation was around three times that for non-Indigenous Australians in Victoria and Tasmania.

Table 1.13.4: Disability status, by Indigenous status and age group, persons aged 18 years and over, non-remote areas, 2002[(a)]

Disability status	18–24		25–34		35–44		45–54		55 and over		Total		Total—age-standardised[(b)]		
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Rate ratio**
	Per cent														
Profound/severe core activity limitation	3.6	1.8	6.8	2.2	7.5	4.0	12.4	3.5	14.5	9.6	8.1	4.9	10.5	5.0	2.1
Disability/restriction not further defined	30.0	20.7	32.6	22.3	44.4	27.4	48.5	37.1	62.6	53.6	41.0	34.8	46.1	35.1	1.3
Total with disability or long-term health condition	***33.7***	***22.5***	***39.4***	***24.5***	***51.9***	***31.4***	***60.9***	***40.6***	***77.1***	***63.2***	***49.2***	***39.6***	***56.6***	***40.0***	***1.4***
No disability or long-term health condition	66.3	77.5	60.6	75.5	48.1	68.6	39.1	59.4	22.9	36.8	50.8	60.4	43.4	60.0	0.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**1.0**
Total number	37,439	1,850,494	51,224	2,805,628	42,384	2,864,507	28,249	2,597,818	22,764	4,045,650	182,061	14,164,097	n.a.	n.a.	n.a.

(a) Includes psychological disability.

(b) Directly age-standardised proportions.

Source: AIHW analysis of the ABS National Aboriginal and Torres Strait Islander Social Survey 2002.

Table 1.13.5: Disability status, by Indigenous status and state/territory, persons aged 18 years and over, non-remote areas, 2002(a)

			Profound/ severe core activity limitation	Moderate/ mild core activity limitation	With schooling/ employment restriction only	No specific limitation	***Total with disability or long-term health condition***	No disability or long-term health condition	Total
NSW	Indig.	%	10.3	10.9	13.0	22.9	***57.1***	42.9	100.0
	Non-Indig.	%	5.4	6.5	4.8	22.5	***39.1***	60.9	100.0
	Ratio		1.9	1.7	2.7	1.0	***1.5***	0.7	
Vic	Indig.	%	13.1	11.5	10.9	28.4	***63.8***	36.2	100.0
	Non-Indig.	%	4.6(b)	7.3	5.4	21.8	***39.1***	60.9	100.0
	Ratio		2.8	1.6	2.0	1.3	***1.6***	0.6	
Qld	Indig.	%	9.7	9.3	6.7	27.8	***53.5***	46.5	100.0
	Non-Indig.	%	4.0(b)	9.7	5.2	23.9	***42.7***	57.3	100.0
	Ratio		2.4	1.0	1.3	1.2	***1.3***	0.8	
WA	Indig.	%	9.7	13.5	8.3	25.8	***57.3***	42.7	100.0
	Non-Indig.	%	5.5(b)	8.6	6.5	20.6	***41.2***	58.8	100.0
	Ratio		1.8	1.6	1.3	1.3	***1.4***	0.7	
SA	Indig.	%	7.9	9.9	10.3	28.4	***56.4***	43.6	100.0
	Non-Indig.	%	5.9(b)	8.8	5.4	21.3	***41.2***	58.8	100.0
	Ratio		1.3	1.1	1.9	1.3	***1.4***	0.7	
Tas	Indig.	%	14.8	13.2	9.9	22.9	***60.7***	39.3	100.0
	Non-Indig.	%	5.9(b)	10	6.0	17.6	***39.6***	60.4	100.0
	Ratio		2.5	1.3	1.7	1.3	***1.5***	0.7	
ACT	Indig.	%	9.4(b)	8.8(b)	8.4(b)	30.7	***57.3***	42.7	100.0
	Non-Indig.	%	4.4(b)	6.3	3.5	21.3	***35.4***	64.6	100.0
	Ratio		2.1	1.4	2.4	1.4	***1.6***	0.7	
NT	Indig.	%	6.5(b)	5.5(c)	4.3(c)	9.0(b)	***25.3(b)***	74.7	100.0
	Non-Indig.	%	6.1(c)	6.5	3.0	16.6	***32.1***	67.9	100.0
	Ratio		1.1	0.8	1.4	0.5	***0.8***	1.1	

(a) Includes psychological disability.

(b) Estimates with a relative standard error of between 25% and 50% and should be used with caution.

(c) Estimates with a relative standard error greater than 50% are considered too unreliable for general use.

Note: Proportions are age-standardised.

Source: ABS & AIHW analyses of ABS National Aboriginal and Torres Strait Islander Social Survey 2002 and 2002 General Social Survey.

Disability type

Using the common criteria, disabilities and long-term health conditions have been grouped into broad disability types: physical, sensory/speech (sight, hearing or speech) and intellectual.

- In 2002, 24% of Indigenous people aged 15 years and over had a physical disability or long-term health condition, 14% had a sensory/speech disability and 7% had an intellectual disability (Table 1.13.6). One in six Indigenous people (16%) had an unspecified long-term health condition (requiring treatment) which could not be coded to a disability type.
- The proportions of Indigenous people with a sensory/speech, physical or intellectual disability were higher in the older age groups. In the 55 years and over age group, 30% of Indigenous people reported a sensory/speech disability, 50% reported a physical disability and 9% reported an intellectual disability.

Table 1.13.6: Disability type, by age group, Indigenous persons aged 15 years and over, 2002

Disability type	15–24	25–34	35–44	45–54	55 or over	Total
			Per cent			
Sight, hearing, speech	7.6	10.5	13.3	19.3	30.0	13.7
Physical	13.5	16.6	24.0	35.8	50.2	23.6
Intellectual	7.4	6.3	6.7	5.5	9.0	6.9
***Total with a disability or long-term health condition*[(a)]**	***22.7***	***29.0***	***38.2***	***49.6***	***69.7***	***36.5***
Total with no disability or long-term health condition	77.3	71.0	61.8	50.4	30.3	63.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	82,800	71,100	57,800	38,300	32,300	282,200

(a) Includes disability type not specified. Note that more than one disability type may be reported and thus the sum of the components may add to more than the total.

Source: AIHW analysis of the ABS National Aboriginal and Torres Strait Islander Social Survey 2002.

Disability by selected population characteristics

Table 1.13.7 presents disability status of Indigenous persons aged 15 years and over in non-remote areas of Australia by selected population characteristics. Data are based on the broader criteria used to identify persons with a disability in non-remote areas.

- In 2002, in non-remote areas, around two-thirds of Indigenous persons aged 15 years and over with a disability or long-term condition did not have a non-school qualification. Around half (51%) of Indigenous persons with a disability reported the highest year of school completed was Year 9 or below.
- Approximately 51% of Indigenous Australians in non-remote areas with a disability were in the lowest quintile of household income, and for 65% their principal source of income was government cash, pensions or allowances.
- The majority of Indigenous persons aged 15 years and over with a disability or long-term condition were not in the labour force in 2002 (54%).
- Approximately 87% of Indigenous persons in non-remote areas with a disability reported they had been involved in social activities in the last 3 months and 89% were able to get support in a time of crisis. Around 54% of Indigenous persons with a disability or long-term condition had been removed, or had a relative that had been removed, from their natural family and 27% currently lived on their homelands.

Table 1.13.7: Disability status, by selected population characteristics, Indigenous persons aged 15 years and over, non-remote areas, 2002

	Has disability or long-term health condition	Has no disability or long-term health condition
	Per cent	
Education		
Attending post-school education institution	11.2	13.6
Non-school qualification[(a)]		
Has a non-school qualification	34.0	37.3
Does not have a non-school qualification	66.0	62.7
Highest school qualification attained[(b)]		
Completed Year 12	12.5	21.8
Completed Year 10/11	36.8	49.0
Completed Year 9 or below	50.7	29.2
Household income		
1st quintile	51.4	36.0
5th quintile	4.8	8.5
Total	56.1	44.5
Principle source of personal income		
Community Development Employment Program (CDEP)	8.3	11.5
Other wage or salary	18.1	35.3
Government cash, pensions, allowances	64.6	42.0
Other sources of income	3.4	2.9
Subtotal received income	*95.2*	*92.3*
Did not receive personal income	4.8	7.7
Employment		
Employed		
Full time	18.8	32.7
Part time	14.6	21.0
Total employed	*33.2*	*53.7*
Unemployed	13.3	14.0
Not in the labour force	53.6	32.3
Transport access		
Can easily get to places needed	64.6	78.3
Cannot, or often has difficulty, getting to places needed	14.1	6.4

(continued)

Table 1.13.7 (continued): Disability status, by selected population characteristics, Indigenous persons aged 15 years and over, non-remote areas, 2002

	Has disability or long-term health condition	Has no disability or long-term health condition
	Per cent	
Family and culture		
Involved in social activities in last 3 months	86.2	92.3
Had undertaken voluntary work in last 12 months	34.0	30.3
Able to get support in time of crisis from someone outside the household	89.3	93.8
Has been removed from natural family	12.0	7.0
Relatives removed from natural family	41.7	35.6
Currently lives in homelands	27.4	22.6
Attended cultural event(s) in last 12 months	27.0	25.7
Total	**47.2**	**52.7**
Total number	**102,900**	**179,300**

(a) Rate for persons aged 25–64 years.

(b) Excludes persons still at school.

Note: Data based on the broader criteria for disability.

Source: AIHW analysis of the ABS National Aboriginal and Torres Strait Islander Social Survey 2002.

Census data

According to the 2006 Census 19,614 Indigenous Australians (4%) had a core activity need for assistance. After adjusting for differences in the age structures of the Indigenous and non-Indigenous populations, Aboriginal and Torres Strait Islander peoples were almost twice as likely as non-Indigenous people to have a core activity need for assistance in 2006 (ABS & AIHW 2008).

Disability by age and sex

- The prevalence of core activity need for assistance increased noticeably from about 35 years of age onwards for both Indigenous men and women (Table 1.13.8). The disability rate ranged from around 1% of Indigenous children aged 0–4 years to 38% of Indigenous persons aged 75 years and over.
- Indigenous Australians had a higher rate of core activity need for assistance than non–Indigenous Australians across all age groups. The greatest differences occurred in the age groups 40–69 years, where Indigenous Australians reported a core activity need for assistance around three times the rate of non-Indigenous Australians (Table 1.13.8).
- Indigenous males were slightly more likely than Indigenous females to have a core activity need for assistance (4.5% compared with 4.1%). In comparison, non-Indigenous females were more likely than non-Indigenous males to have a core activity need for assistance (4.6% compared with 3.9%).

Table 1.13.8: Indigenous persons with core activity need for assistance, by sex and age group, 2006

Age group (years)	Indigenous						Non-Indigenous						Rate ratio		
	Males		Females		Persons		Males		Females		Persons				
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	Males	Females	Persons
0–4	388	1.4	238	0.9	628	1.1	6,421	1.1	3,828	0.7	10,249	0.9	1.2	1.3	1.2
5–9	963	3.3	525	1.9	1,487	2.6	16,422	2.7	8,017	1.4	24,439	2.1	1.2	1.3	1.2
10–14	970	3.3	556	2.0	1,528	2.7	15,799	2.5	8,175	1.4	23,974	1.9	1.3	1.5	1.4
15–19	697	2.8	422	1.8	1,117	2.3	11,191	1.8	7,081	1.2	18,272	1.5	1.6	1.5	1.5
20–24	461	2.5	318	1.7	779	2.1	8,464	1.4	6,403	1.1	14,867	1.2	1.8	1.6	1.8
25–29	381	2.6	308	1.9	688	2.2	7,759	1.3	6,272	1.1	14,031	1.2	1.9	1.8	1.8
30–34	482	3.2	351	2.1	833	2.6	9,404	1.5	7,979	1.2	17,383	1.3	2.1	1.8	2.0
35–39	572	4.0	562	3.4	1,135	3.7	11,819	1.8	10,428	1.5	22,247	1.6	2.2	2.3	2.3
40–44	711	5.6	689	4.8	1,400	5.2	14,661	2.2	13,328	1.9	27,989	2.0	2.6	2.5	2.6
45–49	742	6.9	786	6.6	1,527	6.8	17,062	2.6	16,780	2.4	33,842	2.5	2.7	2.7	2.7
50–54	773	9.0	817	8.7	1,590	8.8	19,558	8.8	19,617	3.1	39,175	3.2	2.8	2.8	2.8
55–59	796	12.7	787	11.3	1,583	12.0	27,660	4.8	23,793	4.1	51,453	4.4	2.6	2.8	2.7
60–64	688	16.3	717	15.1	1,405	15.6	29,695	6.6	22,383	5.0	52,078	5.8	2.5	3	2.7
65–69	500	18.5	578	17.4	1,077	17.9	23,405	6.7	22,483	6.3	45,888	6.5	2.8	2.8	2.8
70–74	382	21.6	581	25.0	962	23.5	24,813	9.1	30,308	10.1	55,121	9.6	2.4	2.5	2.4
75 and over	642	33.3	1232	40.3	1,874	37.6	108,098	22.7	221,711	32.1	329,809	28.2	1.5	1.3	1.3
Total (crude)	**10,147**	**4.5**	**9,468**	**4.1**	**19,613**	**4.3**	**352,231**	**3.9**	**428,586**	**4.6**	**780,817**	**4.3**	**1.2**	**0.9**	**1.0**
Total—age-standardised[(a)]	**. .**	**7.5**	**. .**	**7.2**	**. .**	**7.4**	**. .**	**3.9**	**. .**	**4.2**	**. .**	**4.1**	**1.9**	**1.7**	**1.8**

(a) Age-standardised to the 2001 Australian standard population.

Source: ABS & AIHW analysis of 2006 Census data; ABS & AIHW 2008.

Prevalence of disability among Indigenous children

The 2006 Census was the first national survey to include a question on disability which included Indigenous respondents under 15 years of age.

Table 1.13.9 presents proportions of Indigenous children with core activity need for assistance.

- In 2006, among Indigenous children aged 0–18 years, a higher proportion of males than females required assistance with core activities.
- Indigenous children aged 0–4 years were slightly more likely to have a core activity need for assistance than non-Indigenous children of the same age (ratios of 1.2 for males and 1.3 for females).
- Approximately 3% of Indigenous children aged 5–18 years had a core activity need for assistance. Indigenous males and females in this age group were 1.3 and 1.5 times as likely to have a profound or severe disability as non-Indigenous males and females of the same age.

Table 1.13.9: Indigenous children aged 0–18 years with a core activity need for assistance, by sex, 2006

Age group (years)	Males		Females		Persons		Ratio		
	no.	%	no.	%	no.	%	Males	Females	Persons
0–4	388	1.4	238	0.9	626	1.2	1.2	1.3	1.2
5–18	2,526	3.2	1436	1.9	3,962	2.6	1.3	1.5	1.4
0–18	2,914	2.7	1674	1.6	4,588	2.2	1.3	1.4	1.3

Note: Data exclude those for whom whether needed assistance with core activities was not stated (7% for Indigenous and 2% for non-Indigenous all ages).

Source: ABS & AIHW analysis of 2006 Census data; ABS & AIHW 2008.

Data relating to disability in Indigenous children were also collected in the Western Australia Aboriginal Child Health Survey which collected information on the health of Aboriginal and a small number of Torres Strait Islander children in Western Australia over 2001 and 2002. Parents and carers were asked a number of questions in relation to their child's health and special needs.

An estimated 2% of Indigenous children aged 4–17 years in Western Australia needed help with activities of daily living such as eating, dressing, bathing and going to the toilet. Limitations in vigorous activity were experienced by 4% of children of the same age. Approximately 8% of Indigenous children did not have normal vision in both eyes, and 7% did not have normal hearing in both ears (ABS & AIHW 2005).

Additional information

Indigenous carers

Information on Indigenous carers of persons with a disability, long-term health condition or problems related to old age is available from the 2006 Census. Information on the carers of Indigenous children with a disability, chronic illness or pain is available from the Western Australian Aboriginal Child Health Survey. These data are presented below.

In 2006, the Census collected, for the first time, information on the number of carers aged 15 years and over in Australia. Table 1.13.10 presents data for carers by Indigenous status and age.

- After adjusting for differences in the age structures of the Indigenous and non–Indigenous populations, Indigenous Australians were more likely than non–Indigenous Australians to be caring for another person with a disability, long–term illness or problems related to old age.
- The median age of Indigenous careers was 37 years, compared with 49 years for non–Indigenous carers (ABS & AIHW 2008). The age groups 35–44 years and 45–54 years had the highest proportion of Indigenous carers and the age group 55–64 years had the highest proportion of non-Indigenous carers.
- Indigenous persons aged 15–34 years were almost twice as likely as non-Indigenous persons of the same age to be carers in 2006. The proportion of persons aged 45 years and over who were carers was similar for Indigenous and non-Indigenous people.

Table 1.13.10: Carers[(a)] by Indigenous status and age, 2006

Age group (years)	Indigenous	Non–Indigenous	Rate ratio
	(%)	(%)	
15–24	7.9	4.5	1.7
25–34	12.1	7.5	1.6
35–44	14.7	11.2	1.3
45–54	15.3	15.0	1.0
55–64	14.0	16.5	0.9
65 and over	10.4	10.4	1.0
Total[(b)]	**11.9**	**10.8**	**1.1**
Total—age-standardised[(c)]	**12.4**	**10.5**	**1.2**
Total carers[(a)]	**31,600**	**1,532,057**	. .

(a) Persons aged 15 years and over living in private dwellings who provided unpaid care, help or assistance to another person because of their disability, long-term illness or problems related to old age.

(b) Rates are age-specific so will not add to 100%.

(c) Age-standardised to the 2001 final ERP.

Source: ABS & AIHW 2008.

In the survey, carers of Indigenous children were asked whether each child placed a burden on them and the family as a result of any disability, chronic illness or pain. Carers reported that around 5% of children placed a 'little or some' burden on their carers and families, and 3% children placed 'quite a lot or very much' burden on their carers and families. The experience of burden on carers and families declined with increasing level of relative isolation. Burden was reported to be particularly high in families where children were reported to have impairments in self-care (e.g. activities of daily living). Just over half of the carers of the 380 children who needed special help with eating, dressing, bathing or toileting reported that this placed ‘quite a lot or very much’ burden on the family (Zubrick et al. 2004).

Data quality issues

Census of Population and Housing

The Census uses the standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example, whether people are counted more than once, or are undercounted (ABS 1996).

The 2006 Census included a short series of questions in relation to core activity need for assistance. This is a new variable for the 2006 Census. This variable has been developed to measure the number of people with a profound or severe disability, that is, people needing help or assistance in one or more of the three core activity areas of self-care, mobility and communication, because of a disability (lasting6 months or more), long-term health condition (lasting 6 months or more) or old age. This population is a subset of the broader disability population, and is more readily and consistently identifiable than that broader population.

Note that because of the collapsed nature of the questions and different collection methodology, the census data should not be used for prevalence estimate updates between disability survey years. The disability variable in the Census was designed to capture the characteristics of the population of interest rather than to obtain exactly the same population, even though conceptually it is the same as 'profound or severe core activity limitation' from the survey and module approaches.

Although this topic is based on the criteria used in the ABS Survey of Disability, Ageing and Carers, the population measured will differ as a result of the different collection methodology used and reduced question format. On this basis, data for this topic should be taken as an indication of the characteristics of people who report a need for assistance, not as the total prevalence of people with a 'profound or severe core activity limitation' as represented in the survey data.

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSISS uses the standard Indigenous status question. The NATSISS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problems inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSISS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions (ABS 2004).

Non-Indigenous comparisons are available through the General Social Survey. Time series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built in edit checks and sequencing.

(continued)

Data quality issues **(continued)**

Further information on NATSISS data quality issues can be found in the NATSISS 2002 publication (ABS 2004).

Western Australian Aboriginal Child Health Survey

Survey data are subject to sampling and non-sampling errors. Confidence intervals are published with the data to provide a guide to the reliability of the estimates. Non-sampling errors can occur in surveys due to questionnaire design problems, respondent difficulty recalling information/lack of appropriate records, and errors made in the recording and processing of the data. Every effort was made to minimise non-sample errors in this survey.

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1.14 Community functioning

Analysis of factors associated with community functioning for Indigenous Australians

Data sources

Data for this measure come from the 2006 Community Housing and Infrastructure Needs Survey, and the 2002 National Aboriginal and Torres Strait Islander Social Survey.

Community Housing and Infrastructure Needs Survey (CHINS)

The CHINS collects data from all Aboriginal and Torres Strait Islander housing organisations and discrete Aboriginal and Torres Strait Islander communities in Australia. The ABS conducted the CHINS on behalf of the Aboriginal and Torres Strait Islander Commission (ATSIC) and the Office for Aboriginal and Torres Strait Islander Health (OATSIH) in 1999 and 2001. The most recent CHINS was conducted by the ABS in 2006 on behalf of the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) through funding from FaHCSIA. Results from this survey were published in August 2007. Data from the CHINS are held by FaHCSIA and the ABS.

The 2006 information was collected on 496 Indigenous housing organisations which managed a total of 21,854 permanent dwellings. Information was also collected on 1,187 discrete Indigenous communities with a combined population of 92,960. Most of these communities were in Very Remote regions of Australia, with 73% (865) having a population of fewer than 50 people.

In the 2006 CHINS, a community questionnaire collected detailed infrastructure information from all discrete Indigenous communities with a reported usual population of 50 persons or more, as well as for communities which had a reported usual population of fewer than 50 persons but which were not administered by a larger discrete Indigenous community or Resource Agency (375 communities). The 812 other communities had reported usual populations of fewer than 50 persons and were asked a subset of questions from the community questionnaire form, the short community questionnaire (ABS 2007).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Analyses

Community functioning is defined as the ability and freedom of community members and communities to determine the context of their lives (e.g. social, cultural, spiritual, organisational) and to translate their capability (knowledge, skills, understanding) into action (to make things happen and achieve a life they value).

Community functioning is related to concepts of wellbeing, capability and human functioning in the context of the economic, political and social infrastructure.

Community functioning scores

A workshop was held in June 2008 involving Aboriginal and Torres Strait Islander peoples drawn from a variety of roles across the country to discuss the factors contributing to family and community functioning in Aboriginal and Torres Strait Islander communities. Key themes related to community functioning, and weights for each theme were agreed on at the workshop. Workshop participants ranked themes in order of importance, which then contributed to the themes receiving a weighting. Data items from the 2002 NATSISS were then allocated to each theme. Workshop participants later ranked the data items in order of importance and a weight was applied to each in order to produce a score out of 100. Community functioning scores were calculated for each Indigenous person aged 15 years or over based on these weightings.

Community and individual aspects contributing to community functioning scores

Table 1.14.1 presents the themes and related data items that were used to calculate the community functioning scores.

Power to control choices and options

- In 2002, over two-thirds (82%) of Indigenous Australians reported no stressors related to discrimination or racism and 46% could visit their homelands.
- Over one quarter (26%) of Indigenous persons reported involvement with an Aboriginal and Torres Strait Islander organisation and 90% had support in a time of crisis.

Connectedness to family land and history

- Approximately 70% of Indigenous persons reported recognition of their homeland.
- Around 87% of Indigenous persons aged 15 years and over reported they were not removed from their natural family and 44% reported that their relatives were not removed from their natural family.

Health, chronic disease and substance use

- Around 44% of Indigenous persons aged 15 years and over reported excellent or very good health.
- Around 84% of Indigenous persons had not drunk alcohol at risky/high-risk levels in the 12 months before the survey and 71% had not used illicit substances in the previous 12 months.

Culture

- The majority (68%) of Indigenous Australians participated in at least one cultural event in the previous 12 months and 21% reported they spoke an Aboriginal or Torres Strait Islander language.

Identity

- Just over half (54%) of Indigenous Australians reported identifying with a tribal group or clan.

Continuing employment

- In 2002, approximately 12% of Indigenous persons were employed in the Community Development Employment Projects (CDEP) scheme and a further 34% were employed but not in CDEP.

Education

- Around 18% of Indigenous persons aged 15 years and over completed Year 12 and 32% of Indigenous persons aged 25–64 years had a non-school qualification.

Infrastructure and community

- Around 60% of Indigenous persons were living in a dwelling that had no major structural problems and three-quarters (74%) were living in a dwelling that was not overcrowded.
- Approximately 71% of Indigenous Australians reported having a working telephone, 56% had used a computer in the previous 12 months and 41% had used the internet in the previous 12 months.
- Over half (55%) of Indigenous persons aged 15 years and over reported having access to a motor vehicle.

Coping within the internal world and external world

- Around 25% of Indigenous Australians reported no community problems and 18% reported experiencing no stressors in the 12 months before the survey.
- Around three-quarters of Indigenous persons reported they were not a victim of physical violence in the previous 12 months and did not need legal services in the previous 12 months.

Structure and routine

- Approximately 69% of Indigenous persons reported living in only one dwelling in the previous 12 months.
- Almost half (46%) of Indigenous persons reported they did not have a cash flow problem.

Income

- One quarter of Indigenous persons aged 15 years and over were in the third quintile or above of equivalised household income.
- Approximately 40% of Indigenous persons reported that government support was not the main source of income during the previous 2 years and 41% could raise $2,000 within a week.

Other

- Approximately 91% of Indigenous persons who were unemployed reported experiencing difficulties with finding work. The most common difficulty reported was insufficient education, training and skills (26%).

- Just over two-thirds (68%) of Indigenous persons who were unemployed reported using employment support services in the previous 12 months.
- Around 60% of Indigenous persons reported they went out to cafes, restaurants or bars, and took part in or attended sport or physical activities.

Table 1.14.1: Variables contributing to community functioning and associated scores, Indigenous persons aged 15 years and over, Australia, 2002

Themes and community infrastructure	No.	%	Score
Power to control choices and options			
No stressors reported for discrimination/racism	232,201	82.0	2.99
Can visit homelands	130,287	46.2	2.43
Has support in a time of crisis	255,065	90.4	2.52
Involvement with Aboriginal/Torres Strait Islander organisation	73,605	26.1	1.40
Work allows for cultural responsibilities—can meet responsibilities	62,956	22.3	2.43
Used strategies to meet living expenses	137,002	48.5	2.24
Connectedness to family land and history			
Access to traditional lands			
Recognition of homelands	196,326	69.6	2.96
Lives in homelands	61,700	21.9	1.90
Removal			
Respondent not removed from natural family	245,997	87.2	3.38
Relatives not removed from natural family	125,243	44.4	2.75
Health, chronic disease and substance use			
Self-assessed health status excellent or very good	124,360	44.1	1.95
Has no disability or long term-health condition	179,274	63.5	2.57
Not a regular smoker(a)	143,070	50.7	2.31
Has not drunk alcohol in last 12 months at risky/high-risk levels(b)	237,320	84.1	2.13
Has not used substances illicitly in last 12 months(c)	199,639	71.0	2.04
Culture			
Protection and maintenance of culture			
Main language spoken at home is Aboriginal language/ Torres Strait Islander language	34,003	12.0	1.57
Speaks an Aboriginal/Torres Strait Islander language	59,470	21.1	1.64
Participation in cultural events			
Attended Aboriginal and Torres Strait Islander cultural event in last 12 months			
Attended funeral	131,621	46.6	1.50
Attended ceremony	66,392	23.5	1.71
Attended sports carnival	84,149	29.8	1.07
Attended festival/carnival involving arts, crafts, music or dance	100,823	35.7	1.50
Total events attended in last 12 months	*192,126*	*68.1*	*1.00*
Identity			
Identification with tribal group or language group/clan	152,806	54.1	9.00
Continuing employment			
Employed in CDEP	34,230	12.1	3.64
Employed, not in CDEP	96,165	34.1	4.36

(continued)

Table 1.14.1 (continued): Variables contributing to community functioning and associated scores, Indigenous persons aged 15 years and over, Australia, 2002

Themes and community infrastructure	No.	%	Score
Education			
Year 12 highest year of school completed	47,006	17.9	3.83
Total persons 15 years and over not at school[(d)]	*262,958*	*100.0*	. .
Has a non-school qualification	59,869	32.1	3.17
Total persons aged 25–64 years[(e)]	*186,574*	*100.0*	. .
Having a role			
Has done volunteer work for an organisation in the last 12 months	77,939	27.6	2.57
Expected to have the same employment in 12 months	114,625	40.6	4.43
Infrastructure of community			
Housing			
Living in a dwelling that has no major structural problems	170,547	60.0	0.49
Living in a dwelling that is not overcrowded (Canadian National Occupancy Standard)	209,651	74.0	0.48
Working household facilities for:			
Washing people	278,203	99.0	0.45
Washing clothes and bedding	276,807	98.0	0.41
Storing/preparing foods	260,380	92.0	0.43
Sewerage facilities	276,939	98.0	0.45
Communication services			
Has working telephone	201,239	71.3	0.36
Used computer in last 12 months	156,677	56.0	0.26
Used internet in last 12 months	115,712	41.0	0.26
Transport			
Access to motor vehicles	154,160	55.0	0.33
Can easily get to places needed	197,862	70.0	0.45
Main reasons for not using public transport:			
Prefer to use own transport	82,411	29.0	0.30
No service available	82,205	29.0	0.43
No service available/convenient time	12,070	4.0	0.35
Cost considerations	3,402	1.0	0.38
Other[(f)]	19,471	7.0	0.18

(continued)

Table 1.14.1 (continued): Variables contributing to community functioning and associated scores, Indigenous persons aged 15 years and over, Australia, 2002

Themes and community infrastructure	No.	%	Score
Coping within the internal world and external world/role models			
Community problems			
No community problems reported	19,243	25.3	0.55
Community problems reported, but less than three types	81,172	28.8	0.42
No problems reported for theft	160,788	57.0	0.35
No problems reported for alcohol	187,571	66.5	0.41
No problems reported for illicit drugs	191,165	67.7	0.41
No problems reported for family violence	222,474	78.8	0.44
No problems reported for assault	226,159	80.1	0.41
No problems reported for sexual assault	259,356	91.9	0.50
Total persons who reported a community problem	*207,607*	*73.6*	*0.09*
Stressors			
No stressors reported in last 12 months	50,004	17.7	0.57
Less than three types of stressors reported in the last 12 months(g)	156,671	55.5	0.37
No stressors reported for death of a family member or close friend	153,176	54.3	0.44
No stressors reported for serious illness of disability	195,195	69.2	0.39
No stressors reported for not able to get a job	206,059	73.0	0.42
No stressors reported for witness to violence	237,974	84.3	0.41
No stressors reported for member of family sent to jail/currently in jail	227,178	80.5	0.30
Total persons who reported a stressor	*232,122*	*82.3*	. .
Crime and justice			
Not a victim of physical or threatened violence in the last 12 months	213,514	75.7	0.55
Did not need legal services in the last 12 months	217,664	77.1	0.39
Did not use legal services in the last 12 months	226,312	80.2	0.35
Not arrested by police in the last 5 years	235,937	83.6	0.37
Not incarcerated in the last 5 years	262,125	92.9	0.42
Structure and routine			
Has no difficulties communicating with service providers in English(h)	245,244	86.9	0.44
In the last 12 months, has lived in only one dwelling	195,105	69.0	1.17
No days without money for basic living expenses in the last 12 months(i)	158,788	56.3	1.22
No days without money for basic living expenses in the last 2 weeks(i)	192,474	68.2	1.28
Did not have a cash flow problem(i)	129,627	45.9	1.33
Income			
Equivalised gross household income			
3rd quintile or above	69,310	25.0	0.62

(continued)

Table 1.14.1 (continued): Variables contributing to community functioning and associated scores, Indigenous persons aged 15 years and over, Australia, 2002

Themes and community infrastructure	No.	%	Score
Main current source of personal income			
CDEP	29,166	10.3	0.53
Other wages/salaries	81,970	29.0	0.60
Government pensions and allowances	141,799	50.2	0.48
Total in labour force	169,200	60.0	0.53
Other sources[(j)]	8,723	3.0	0.40
Government support was not the main source of income during the last 2 years	112,828	40.0	0.60
Household financial stress and cash flow problems			
Has a bank account	265,830	94.2	0.48
Could raise $2,000 within a week	114,578	41.0	0.50
Total persons aged 15 years and over	282,205	100.0	100.0
Other			
Unemployed and main difficulty finding work			
Transport problems/distance	5,830	15.0	. .
No jobs at all	4,157	10.7	. .
No jobs in locality or line of work	4,442	11.4	. .
Insufficient education, training, skills	10,189	26.3	. .
Own ill health or disability	2,242	5.8	. .
Racial discrimination	862	2.2	. .
Age	2,479	6.4	. .
Other	4,921	12.7	. .
Total with difficulties	***35,123***	***90.5***	**. .**
Total difficulties reported	***2,483***	***6.4***	**. .**
Unemployed and use of employment support services in last 12 months			
Used services	26,417	68.1	. .
Did not use services			
Needed services	3,370	8.7	. .
Did not need services	8,990	23.2	. .
Total did not use services in last 12 months	*12,360*	*31.9*	. .
Involved in social activities in the last 3 months			
Church or religious activities	66,892	23.7	. .
Went out to a café, restaurant or bar	161,166	57.1	. .
Took part or attended sport or physical activities	169,188	60.0	. .
Attended movies, theatre, concert, museum, library or art gallery	122,931	43.6	. .
Other	170,601	60.5	. .
Transport used in the last 2 weeks (private or public)	267,366	95.0	. .
Total persons aged 15 years and over	282,205	100.0	. .

(continued)

Table 1.14.1 (continued): Variables contributing to community functioning and associated scores, Indigenous persons aged 15 years and over, Australia, 2002

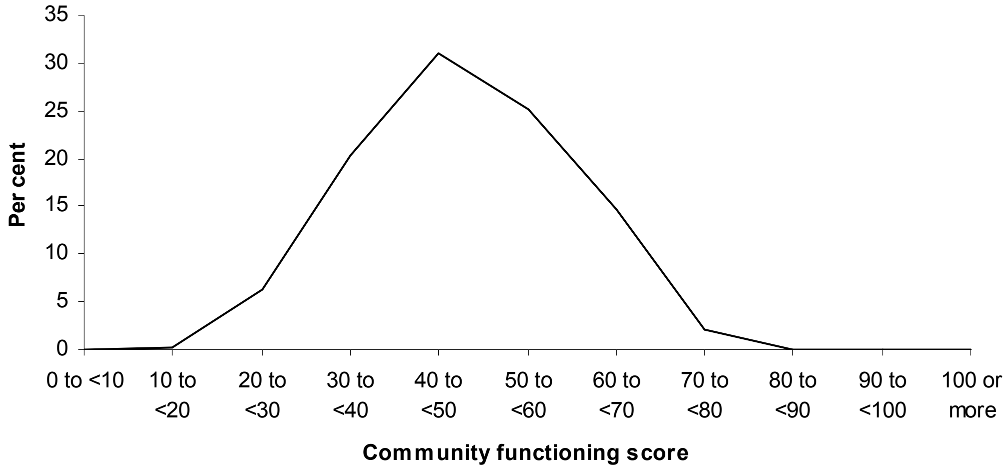
(a) Excludes regular smoker and not stated.
(b) Excludes high-risk, medium-risk and not stated.
(c) Excludes no response, not stated and has used substance in the last 12 months.
(d) Proportion of total persons aged 15 years and over, but not at school.
(e) Proportion of total persons aged 25–64 years.
(f) Includes takes too long, concerned about own personal safety, racial discrimination and other.
(g) Includes values of zero to less than three.
(h) Excludes with assistance.
(i) Non-community responses only.
(j) Excludes not stated.

Source: AIHW and ABS analysis of 2002 NATSISS.

Score distribution

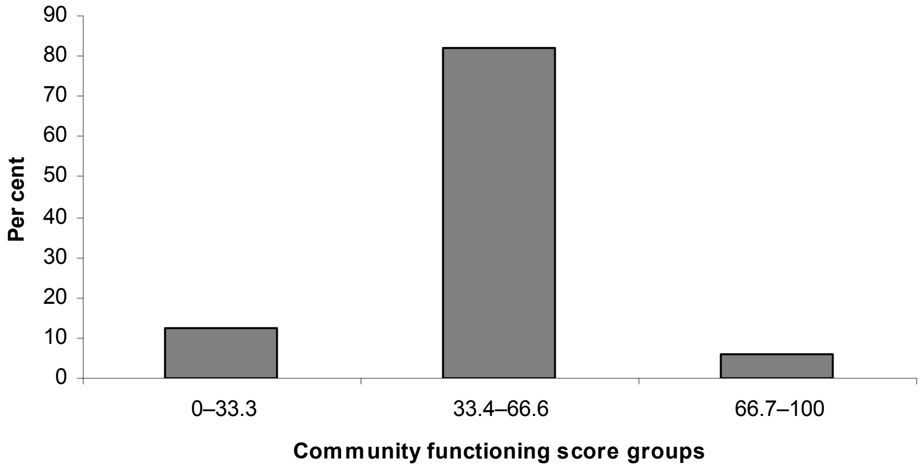
Figures 1.14.1 and 1.14.2 show the distribution of the calculated community functioning scores for Indigenous persons aged 15 years and over. The higher the score, the better the community functioning.

- In 2002, almost one-third (31%) of Indigenous persons aged 15 years and over had community functioning scores between 40 and 50, and over three-quarters had scores between 30 and 60 (Figure 1.14.1).
- Less than one-eighth (12%) of Indigenous persons had community functioning scores below 33, over three-quarters (82%) had scores between 33 and 67 and less than one-tenth (6%) had scores above 67 (Figure 1.14.2).



Source: ABS and AIHW analysis of 2002 NATSISS.

Figure 1.14.1: Distribution of community functioning scores for Indigenous persons aged 15 years and over, 2002



Source: ABS and AIHW analysis of 2002 NATSISS.

Figure 1.14.2: Distribution of community functioning scores for Indigenous persons aged 15 years and over, 2002

Indigenous and non-Indigenous comparisons

Table 1.14.2 presents data for Indigenous Australians from the 2002 NATSISS and for non-Indigenous Australians from the 2002 GSS on community and individual aspects that contribute to community functioning, which are comparable across the two surveys.

- In 2002, after adjusting for differences in age structure, a smaller proportion of Indigenous than non-Indigenous Australians aged 15 years and over were home owners (28% and 73% respectively), reported using a computer in the previous 12 months (44% and 55% respectively) or reported having access to motor vehicles (57% and 85% respectively).
- A higher proportion of Indigenous than non-Indigenous Australians were in the lowest (1st) household equivalised income quintile (38% compared with 18%), and a lower proportion reported that government income was not their main source of income at any point in the previous 2 years (34% compared with 67%).
- Less than half (40%) of Indigenous Australians aged 15 years and over reported that they could raise $2,000 in a week for an emergency compared with 84% of non-Indigenous Australians.
- Around 14% of Indigenous Australians reported completing year 12 compared with 43% of non-Indigenous Australians.
- Approximately 35% of Indigenous Australians reported their health status as excellent/very good compared with 59% of non-Indigenous Australians.

Table 1.14.2: Persons aged 15 years and over living in communities with access to community infrastructure by Indigenous status, Australia, 2002

	Indigenous	Indigenous age-standardised	Non-Indigenous	Non-Indigenous age-standardised	Rate ratio
	No.	%	No.	%	
Community infrastructure					
Housing					
Home owner	66,703	28.1	10,498,555	73.2	0.4
Communication services					
Whether used computer in last 12 months	130,253	43.5	7,972,955	55.0	0.8
Whether used internet in last 12 months	92,749	30.4	6,193,160	42.6	0.7
Transport					
Access to motor vehicles	150,140	57.3	12,226,014	85.0	0.7
Can easily get to the places needed	179,089	71.4	12,117,472	84.4	0.8
Individual aspects					
Community and social capital					
Has done volunteer work for an organisation in the last 12 months	69,266	26.8	4,937,330	34.3	0.8
Crime and justice					
Not a victim of physical or threatened violence in the last 12 months	192,777	80.5	13,065,117	91.1	0.9
Employment status					
Labour force participation	154,019	52.1	9,760,388	67.2	0.8
Expected to have same employment in 12 months	109,759	38.4	8,168,524	56.3	0.7

(continued)

Table 1.14.2 (continued): Persons aged 15 years and over living in communities with access to community infrastructure by Indigenous status, Australia, 2002

	Indigenous	Indigenous age-standardised	Non-Indigenous	Non-Indigenous age-standardised	
	No.	%	No.	%	Rate ratio
Income					
Household equivalised weekly income:					
1st quintile	87,941	37.9	2,554,627	18.1	2.1
5th quintile	13,469	5.0	3,057,455	21.2	0.2
Government support not main source of income at any point in the last 2 years	96,107	34.3	9,734,589	67.3	0.5
Household financial stress and cash flow problems					
Ability to raise money in an emergency—could raise $2,000 within a week	102,285	39.7	12,031,326	83.9	0.5
Health					
Self-assessed health status excellent/very good	105,396	35.2	8,510,044	58.9	0.6
Has no disability or long-term health condition	107,083	36.4	8,656,484	59.9	0.6
Education					
Completed Year 12	46,164	14.1	6,222,919	43.1	0.3
Has a non-school qualification	59,869	31.2	5,836,908	56.9	0.5

Source: AIHW and ABS analysis of 2002 NATSISS.

Community functioning by sex, age, remoteness, state/territory, and time series

Tables 1.14.3, 1.14.4, 1.14.5, 1.14.6 and 1.14.7 present the proportion of Indigenous persons aged 15 years and over with each of the characteristics recognised as contributing to community functioning by sex, age, remoteness, state/territory and time series.

Table 1.14.3: Variables contributing to community functioning, Indigenous persons aged 15 years and over, by sex, Australia, 2002

Themes and community infrastructure	Males		Females	
	No.	%	No.	%
Power to control choices and options				
No stressors reported for discrimination/racism	112,268	83.0	119,933	81.6
Can visit homelands	60,123	44.5	70,165	47.7
Has support in a time of crisis	120,345	89.0	134,720	91.6
Involvement with Aboriginal/Torres Strait Islander organisation	33,996	25.1	39,609	26.9
Work allows for cultural responsibilities—can meet responsibilities	33,981	25.1	28,975	19.7
Used strategies to meet living expenses	63,570	47.0	73,433	50.0
Connectedness to family land and history				
Access to traditional lands				
Recognition of homelands	94,053	69.6	102,273	69.6
Lives in homelands	31,958	23.6	29,742	20.2
Removal				
Respondent not removed from natural family	118,683	87.8	127,314	86.6
Relatives not removed from natural family	60,965	45.1	64,279	43.7
Health, chronic disease and substance use				
Self-assessed health status excellent or very good	63,705	47.1	60,656	41.3
Has no disability or long-term health condition	85,368	63.0	93,905	64.0
Not a regular smoker[(a)]	66,143	49.0	76,927	52.0
Has not drunk alcohol in last 12 months at risky/high-risk levels[(b)]	111,076	82.2	126,244	85.9
Has not used substances illicitly in last 12 months[(c)]	90,906	67.2	108,734	74.0
Culture				
Protection and maintenance of culture				
Main language spoken at home is Aboriginal language/ Torres Strait Islander language	15,819	11.7	18,184	12.4
Speaks an Aboriginal/Torres Strait Islander language	29,336	21.7	30,134	20.5
Participation in cultural events				
Attended Aboriginal and Torres Strait Islander cultural event in last 12 months				
Attended funeral	61,531	45.5	70,090	47.7
Attended ceremony	30,719	22.7	35,673	24.3
Attended sports carnival	40,902	30.3	43,247	29.4
Attended festival/carnival involving arts, crafts, music or dance	42,408	31.4	58,415	39.7
Total events attended in last 12 months	*87,410*	*64.7*	*104,716*	*71.2*

(continued)

Table 1.14.3 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by sex, Australia, 2002

	Males		Females	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Identity				
Identification with tribal group or language group/clan	76,861	56.9	75,945	51.7
Continuing employment				
Employed in CDEP	21,392	15.8	12,838	8.7
Employed, not in CDEP	51,317	38.0	44,848	30.5
Education				
Year 12 highest year of school completed[d]	21,975	18	25,031	18
Total persons 15 years and over not at school	*125,533*	*100.0*	*137,425*	*100.0*
Has a non-school qualification[e]	29,274	33	30,594	31
Total persons aged 25–64 years	*88,122*	*100.0*	*98,453*	*100.0*
Having a role				
Has done volunteer work for an organisation in the last 12 months	36,025	26.6	41,913	28.5
Expected to have the same employment in 12 months	63,935	47.3	50,690	34.5
Infrastructure of community				
Housing				
Living in a dwelling that has no major structural problems	83,700	61.9	86,848	59.1
Living in a dwelling that is not overcrowded (Canadian National Occupancy Standard)	101,683	75.0	107,969	73.0
Working household facilities for:				
Washing people	133,260	98.6	144,943	98.6
Washing clothes and bedding	132,657	98.1	144,151	98.1
Storing/preparing foods	124,088	91.8	136,292	92.7
Sewerage facilities	132,745	98.2	144,194	98.1
Communication services				
Has working telephone	94,933	70.2	106,306	72.3
Used computer in last 12 months	71,123	52.6	85,554	58.2
Used internet in last 12 months	53,376	39.5	62,336	42.4
Transport				
Access to motor vehicles	79,757	59.0	74,403	50.6
Can easily get to places needed	96,393	71.3	101,468	69.0
Main reasons for not using public transport:				
Prefer to use own transport	40,218	29.7	42,193	28.7
No service available	42,522	31.5	39,683	27.0
No service available/convenient time	6,323	4.7	5,747	3.9
Cost considerations	1,638	1.2	1,765	*1
Other[f]	9,373	6.9	10,099	6.9

(continued)

Table 1.14.3 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by sex, Australia, 2002

	Males		Females	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Coping within the internal world and external world/role models				
Community problems				
No community problems reported	35,140	26.0	36,397	24.8
Community problems reported, but less than three types	38,872	28.8	42,300	28.8
No problems reported for theft	77,022	57.0	83,766	57.0
No problems reported for alcohol	90,415	66.9	97,156	66.1
No problems reported for illicit drugs	91,659	67.8	99,506	67.7
No problems reported for family violence	108,763	80.4	113,711	77.4
No problems reported for assault	107,269	79.3	118,890	80.9
No problems reported for sexual assault	124,966	92.4	134,391	91.4
Total persons who reported a community problem	*98,620*	*73.0*	*108,987*	*74.0*
Stressors				
No stressors reported in last 12 months	27,419	20.3	22,664	15.4
Less than three types of stressors reported in the last 12 months[(g)]	79,059	59.0	77,612	53.0
No stressors reported for death of a family member or close friend	76,853	56.8	76,323	51.9
No stressors reported for serious illness of disability	94,850	70.2	100,344	68.3
No stressors reported for not able to get a job	97,007	71.8	109,052	74.2
No stressors reported for witness to violence	116,441	86.1	121,533	82.7
No stressors reported for member of family sent to jail/currently in jail	109,435	80.9	117,743	80.1
Total persons who reported a stressor	*107,780*	*80.0*	*124,342*	*85.0*
Crime and justice				
Not a victim of physical or threatened violence in the last 12 months	100,472	74.3	113,042	76.9
Did not need legal services in the last 12 months	102,713	76.0	114,951	78.2
Did not use legal services in the last 12 months	106,697	78.9	119,615	81.4
Not arrested by police in the last 5 years	102,524	75.8	133,413	90.8
Not incarcerated in the last 5 years	119,723	88.6	142,402	96.9
Structure and routine				
Has no difficulties communicating with service providers in English[(h)]	118,540	87.7	126,704	86.2
In the last 12 months, has lived in only one dwelling	93,976	69.5	101,130	68.8
No days without money for basic living expenses in the last 12 months[(i)]	77,664	57.4	81,124	55.2
No days without money for basic living expenses in the last 2 weeks[(i)]	93,639	69.3	98,835	67.2
Did not have a cash flow problem[(i)]	62,399	46.2	67,227	45.7
Income				
Equivalised gross household income				
3rd quintile or above	35,446	26.2	33,864	23.0

(continued)

Table 1.14.3 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by sex, Australia 2002

	Males		Females	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Main current source of personal income				
CDEP	19,539	14.5	9,627	6.5
Other wages/salaries	44,369	32.8	37,601	25.6
Government pensions and allowances	54,346	40.2	87,453	59.5
Total in labour force	94,987	70.3	74,213	50.5
Other sources[j]	5,772	4.3	2,950	2.0
Government support was not the main source of income during the last 2 years	64,844	48.0	47,984	32.6
Household financial stress and cash flow problems				
Has a bank account	126,151	93.3	139,679	95.0
Could raise $2,000 within a week	56,410	41.7	58,167	39.6
Total persons aged 15 years and over	**135,199**	**100.0**	**147,006**	**100.0**

(a) Excludes regular smoker and not stated.
(b) Excludes high-risk, medium-risk and not stated.
(c) Excludes no response, not stated and has used substance in the last 12 months.
(d) Proportion of total persons aged 15 years and over, but not at school.
(e) Proportion of total persons aged 25–64 years.
(f) Includes takes too long, concerned about own personal safety, racial discrimination and other.
(g) Includes values of zero to less than three.
(h) Excludes with assistance.
(i) Non-community responses only.
(j) Excludes not stated.

Source: AIHW and ABS analysis of 2002 NATSISS.

Table 1.14.4: Variables contributing to community functioning, Indigenous persons aged 15 years and over, by age group, Australia, 2002

Themes and community infrastructure	15–34		35–54		55 years and over	
	No.	%	No.	%	No.	%
Power to control choices and options						
No stressors reported for discrimination/racism	127,902	83.1	76,439	79.5	27,860	86.5
Can visit homelands	68,358	44.4	45,955	47.8	15,974	49.6
Has support in a time of crisis	140,192	91.1	85,798	89.2	29,076	90.3
Involvement with Aboriginal/Torres Strait Islander organisation	34,072	22.1	30,984	32.2	8,549	26.5
Work allows for cultural responsibilities—can meet responsibilities	33,836	22.0	25,268	26.3	3,853	12.0
Used strategies to meet living expenses	82,080	53.3	44,057	45.8	10,865	33.7
Connectedness to family land and history						
Access to traditional lands						
Recognition of homelands	101,365	65.9	70,199	73.0	24,762	76.9
Lives in homelands	30,979	20.1	22,454	23.4	8,267	25.7
Removal						
Respondent not removed from natural family	136,662	88.8	82,512	85.8	26,823	83.3
Relatives not removed from natural family	67,737	44.0	41,328	43.0	16,179	50.2
Health, chronic disease and substance use						
Self-assessed health status excellent or very good	83,875	54.5	35,047	36.4	5,439	16.9
Has no disability or long-term health condition	114,447	74.4	55,084	57.3	9,743	30.3
Not a regular smoker(a)	76,709	49.9	45,201	47.0	21,159	65.7
Has not drunk alcohol in last 12 months at risky/high-risk levels(b)	131,862	85.7	77,365	80.5	28,094	87.2
Has not used substances illicitly in last 12 months(c)	99,914	64.9	72,616	75.5	27,109	84.2

(continued)

Table 1.14.4 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by age group, Australia, 2002

	15–34		35–54		55 years and over	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**	**No.**	**%**
Culture						
Protection and maintenance of culture						
Main language spoken at home is Aboriginal language/ Torres Strait Islander language	18,409	12.0	10,864	11.3	4,730	14.7
Speaks an Aboriginal/Torres Strait Islander language	30,964	20.1	20,090	20.9	8,416	26.1
Participation in cultural events						
Attended Aboriginal and Torres Strait Islander cultural event in last 12 months						
Attended funeral	66,099	43.0	47,820	49.7	17,701	55.0
Attended ceremony	34,255	22.3	23,949	24.9	8,188	25.4
Attended sports carnival	49,941	32.5	26,990	28.1	7,218	22.4
Attended festival/carnival involving arts, crafts, music or dance	57,975	37.7	33,631	35.0	9,217	28.6
Total events attended in last 12 months	*103,315*	*67.2*	*66,942*	*69.6*	*21,868*	*67.9*
Identity						
Identification with tribal group or language group/clan	77,422	50.3	56,076	58.3	19,308	60.0
Continuing employment						
Employed in CDEP	21,578	14.0	11,124	11.6	1,528	*5
Employed, not in CDEP	48,302	31.4	42,010	43.7	5,852	18.2
Education						
Year 12 highest year of school completed(d)	33,269	25	12,823	13	915	*3
Total persons 15 years and over not at school	134,672	100	96,085	100	32,201	100
Has a non school qualification(e)	23,398	33	31,956	33	4,514	23
Total persons aged 25–64 years	71,104	100.0	96,151	100.0	19,319	100.0

(continued)

Table 1.14.4 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by age group, Australia, 2002

	15–34		35–54		55 years and over	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**	**No.**	**%**
Having a role						
Has done volunteer work for an organisation in the last 12 months	38,216	24.8	31,414	32.7	8,308	25.8
Expected to have the same employment in 12 months	59,025	38.4	48,476	50.4	7,124	22.1
Infrastructure of community						
Housing						
Living in a dwelling that has no major structural problems	90,540	58.8	58,356	60.7	21,651	67.2
Living in a dwelling that is not overcrowded (Canadian National Occupancy Standard)	109,519	71.0	73,921	77.0	26,212	81.0
Working household facilities for:						
Washing people	151,961	98.8	94,786	98.6	31,455	97.7
Washing clothes and bedding	150,827	98.0	94,613	98.4	31,367	97.4
Storing/preparing foods	142,191	92.4	88,278	91.8	29,911	92.9
Sewerage facilities	151,080	98.2	94,449	98.2	31,410	97.5
Communication services						
Has working telephone	107,142	69.6	70,317	73.1	23,780	73.8
Used computer in last 12 months	101,610	66.0	48,872	50.8	6,196	19.2
Used internet in last 12 months	77,973	50.7	34,006	35.4	3,732	11.6
Transport						
Access to motor vehicles	74,096	48.2	64,081	66.6	15,983	49.6
Can easily get to places needed	104,724	68.1	70,528	73.4	22,609	70.2

(continued)

Table 1.14.4 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by age group, Australia, 2002

	15–34		35–54		55 years and over	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**	**No.**	**%**
Main reasons for not using public transport:						
Prefer to use own transport	43,907	28.5	30,312	31.5	8,192	25.4
No service available	41,970	27.3	29,744	30.9	10,491	32.6
No service available/convenient time	5,475	3.6	5,007	5.2	1,588	*5
Cost considerations	2,270	*2	916	*1	216	*1
Other[(f)]	9,469	6.2	6,390	6.6	3,613	11.2
Coping within the internal world and external world/ role models						
Community problems						
No community problems reported	38,307	24.9	23,751	24.7	9,480	29.4
Community problems reported, but less than three types	43,656	28.4	26,441	27.5	11,075	34.4
No problems reported for theft	88,868	57.8	51,756	53.8	20,164	62.6
No problems reported for alcohol	100,734	65.5	63,116	65.6	23,721	73.7
No problems reported for illicit drugs	102,051	66.3	64,548	67.1	24,566	76.3
No problems reported for family violence	120,780	78.5	74,438	77.4	27,256	84.6
No problems reported for assault	122,276	79.5	76,267	79.3	27,616	85.8
No problems reported for sexual assault	140,822	91.5	88,015	91.5	30,519	94.8
Total persons who reported a community problem	*113,724*	*74.0*	*71,766*	*75.0*	*22,118*	*69.0*
Stressors						
No stressors reported in last 12 months	25,642	16.7	17,105	17.8	7,337	22.8
Less than three types of stressors reported in the last 12 months[(g)]	83,701	54	52,285	54	20,685	64
No stressors reported for death of a family member or close friend	85,534	55.6	51,430	53.5	16,212	50.3

(continued)

Table 1.14.4 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by age group, Australia, 2002

	15–34		35–54		55 years and over	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**	**No.**	**%**
No stressors reported for serious illness of disability	110,929	72.1	63,870	66.4	20,396	63.3
No stressors reported for not able to get a job	107,873	70.1	71,100	73.9	27,086	84.1
No stressors reported for witness to violence	127,758	83.0	81,849	85.1	28,367	88.1
No stressors reported for member of family sent to jail/currently in jail	121,352	78.9	78,192	81.3	27,634	85.8
Total persons who reported a stressor	*128,211*	*83.3*	*79,046*	*82.2*	*24,864*	*77.2*
Crime and justice						
Not a victim of physical or threatened violence in the last 12 months	107,731	70.0	77,174	80.3	28,609	88.8
Did not need legal services in the last 12 months	117,946	76.7	72,986	75.9	26,732	83.0
Did not use legal services in the last 12 months	122,099	79.4	76,412	79.5	27,801	86.3
Not arrested by police in the last 5 years	121,539	79.0	83,282	86.6	31,116	96.6
Not incarcerated in the last 5 years	140,475	91.3	89,731	93.3	31,919	99.1
Structure and routine						
Has no difficulties communicating with service providers in English(h)	133,501	86.8	85,364	88.8	26,380	81.9
In the last 12 months, has lived in only one dwelling	93,651	60.9	73,690	76.6	27,764	86.2
No days without money for basic living expenses in the last 12 months(i)	80,874	52.6	55,414	57.6	22,500	69.9
No days without money for basic living expenses in the last 2 weeks(i)	101,811	66.2	65,464	68.1	25,198	78.3
Did not have a cash flow problem(i)	65,385	42.5	46,076	47.9	18,166	56.4
Income						
Equivalised gross household income						
3rd quintile or above	37,782	24.6	26,646	27.7	4,882	15.2

(continued)

Table 1.14.4 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by age group, Australia, 2002

	15–34		35–54		55 years and over	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**	**No.**	**%**
Main current source of personal income						
CDEP	18,627	12.1	9,376	9.8	1,163	*4
Other wages/salaries	41,838	27.2	35,381	36.8	4,750	14.8
Government pensions and allowances	75,090	48.8	42,718	44.4	23,991	74.5
Total in labour force	98,348	63.9	63,065	65.6	7,787	24.2
Other sources(j)	2,091	1.4	5,583	5.8	1,048	3*
Government support was not the main source of income during the last 2 years	60,787	39.5	45,127	46.9	6,914	21.5
Household financial stress and cash flow problems						
Has a bank account	142,227	92.4	93,334	97.1	30,269	94.0
Could raise $2,000 within a week	62,561	40.7	39,735	41.3	12,282	38.1
Total persons aged 15 years and over	**153,853**	**100.0**	**96,151**	**100.0**	**32,201**	**100.0**

* Estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Excludes regular smoker and not stated.
(b) Excludes high-risk, medium-risk and not stated.
(c) Excludes no response, not stated and has used substance in the last 12 months.
(d) Proportion of total persons aged 15 years and over, but not at school.
(e) Proportion of total persons aged 25–64 years.
(f) Includes takes too long, concerned about own personal safety, racial discrimination and other.
(g) Includes values of zero to less than three.
(h) Excludes with assistance.
(i) Non-community responses only.
(j) Excludes not stated.

Source: AIHW and ABS analysis of 2002 NATSISS.

Table 1.14.5: Variables contributing to community functioning, Indigenous persons aged 15 years and over, by remoteness, Australia, 2002

	Remote		Non-remote	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Power to control choices and options				
No stressors reported for discrimination/racism	64,548	83.7	167,652	81.8
Can visit homelands	36,201	46.9	94,087	45.9
Has support in a time of crisis	67,069	86.9	187,996	91.7
Involvement with Aboriginal/Torres Strait Islander organisation	19,239	24.9	54,366	26.5
Work allows for cultural responsibilities—can meet responsibilities	27,602	35.8	35,354	17.2
Used strategies to meet living expenses	38,277	49.6	98,726	48.1
Connectedness to family land and history				
Access to traditional lands				
Recognition of homelands	66,221	85.8	130,105	63.4
Lives in homelands	29,319	38.0	32,382	15.8
Removal				
Respondent not removed from natural family	65,551	85.0	180,446	88.0
Relatives not removed from natural family	40,707	52.8	84,537	41.2
Health, chronic disease and substance use				
Self-assessed health status excellent or very good	34,119	44.2	90,242	44.0
Has no disability or long-term health condition	49,803	64.6	129,470	63.1
Not a regular smoker[(a)]	36,344	47.1	106,726	52.0
Has not drunk alcohol in last 12 months at risky/high-risk levels[(b)]	63,697	82.6	173,623	84.7
Has not used substances illicitly in last 12 months[(c)]	61,291	79.4	138,348	67.5
Culture				
Protection and maintenance of culture				
Main language spoken at home is Aboriginal language/ Torres Strait Islander language	29,879	38.7	4,124	2.0
Speaks an Aboriginal/Torres Strait Islander language	41,820	54.2	17,650	8.6
Participation in cultural events				
Attended Aboriginal and Torres Strait Islander cultural event in last 12 months				
Attended funeral	57,196	74.1	74,425	36.3
Attended ceremony	34,677	45.0	31,715	15.5
Attended sports carnival	40,730	52.8	43,419	21.2
Attended festival/carnival involving arts, crafts, music or dance	32,160	41.7	68,663	33.5
Total events attended in last 12 months	*67,213*	*87.1*	*124,913*	*60.9*
Identity				
Identification with tribal group or language group/clan	59,079	76.6	93,727	45.7

(continued)

Table 1.14.5 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by remoteness, Australia 2002

	Remote		Non-remote	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Continuing employment				
Employed in CDEP	25,037	32.5	9,193	4.5
Employed not in CDEP	14,832	19.2	81,332	39.7
Education				
Year 12 highest year of school completed[(d)]	9,718	13	37,288	20
Total persons 15 years and over not at school	*73,098*	*100*	*189,860*	*100*
Has a non school qualification[(e)]	11,521	23	48,347	36
Total persons aged 25–64 years	*50,674*	*100.0*	*135,900*	*100.0*
Having a role				
Has done volunteer work for an organisation in the last 12 months	12,174	15.8	65,765	32.1
Expected to have the same employment in 12 months	36,523	47.3	78,102	38.1
Infrastructure of community				
Housing				
Living in a dwelling that has no major structural problems	32,118	41.6	138,430	67.5
Living in a dwelling that is not overcrowded (Canadian National Occupancy Standard)	37,047	48.0	172,605	84.2
Working household facilities for:				
Washing people	74,064	96.0	204,139	99.6
Washing clothes and bedding	74,366	96.4	202,442	98.7
Storing/preparing foods	60,055	77.8	200,325	97.7
Sewerage facilities	72,556	94.1	204,383	99.7
Communication services				
Has working telephone	33,317	43.2	167,922	81.9
Used computer in last 12 months	26,545	34.4	130,133	63.5
Used internet in last 12 months	16,678	21.6	99,034	48.3
Transport				
Access to motor vehicles	33,689	43.7	120,470	58.7
Can easily get to places needed	50,579	65.6	147,282	71.8
Main reasons for not using public transport:				
Prefer to use own transport	13,534	17.5	68,877	33.6
No service available	48,838	63.3	33,367	16.3
No service available/convenient time	1,796	*2	10,274	5.0
Cost considerations	276	*—	3,127	1.5
Other[(f)]	1,589	*2.1	17,882	8.7

(continued)

Table 1.14.5 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by remoteness, Australia 2002

	Remote		Non-remote	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Coping within the internal world and external world/ role models				
Community problems				
No community problems reported	19,243	24.9	52,295	25.5
Community problems reported, but less than three types	13,375	17.3	67,797	33.1
No problems reported for theft	45,094	58.5	115,694	56.4
No problems reported for alcohol	35,393	45.9	152,178	74.2
No problems reported for illicit drugs	41,582	53.9	149,583	72.9
No problems reported for family violence	45,610	59.1	176,864	86.2
No problems reported for assault	45,406	58.9	180,754	88.1
No problems reported for sexual assault	64,234	83.3	195,122	95.2
Total persons who reported a community problem	*57,244*	*74.2*	*150,364*	*73.3*
Stressors				
No stressors reported in last 12 months	11,194	14.5	38,889	19.0
Less than three types of stressors reported in the last 12 months[(g)]	34,940	45	121,731	59
No stressors reported for death of a family member or close friend	34,507	44.7	118,669	57.9
No stressors reported for serious illness of disability	50,844	65.9	144,351	70.4
No stressors reported for not able to get a job	58,050	75.2	148,009	72.2
No stressors reported for witness to violence	54,001	70.0	183,974	89.7
No stressors reported for member of family sent to jail/currently in jail	57,848	75.0	169,331	82.6
Total persons who reported a stressor	*65,951*	*85.5*	*166,171*	*81.0*
Crime and justice				
Not a victim of physical or threatened violence in the last 12 months	59,649	77.3	153,865	75.0
Did not need legal services in the last 12 months	61,071	79.2	156,593	76.4
Did not use legal services in the last 12 months	63,320	82.1	162,991	79.5
Not arrested by police in the last 5 years	64,132	83.1	171,805	83.8
Not incarcerated in the last 5 years	70,567	91.5	191,557	93.4
Structure and routine				
Has no difficulties communicating with service providers in English[(h)]	60,694	78.7	184,550	90.0
In the last 12 months, has lived in only one dwelling	56,167	72.8	138,938	67.8
No days without money for basic living expenses in the last 12 months[(i)]	45,117	58.5	113,671	55.4
No days without money for basic living expenses in the last 2 weeks[(i)]	51,985	67.4	140,489	68.5
Did not have a cash flow problem[(i)]	17,865	23.2	111,761	54.5
Income				
Equivalised gross household income				
3rd quintile or above	13,023	16.9	56,287	27.4

(continued)

Table 1.14.5 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by remoteness, Australia, 2002

	Remote		Non-remote	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Main current source of personal income				
CDEP	21,722	28.2	7,444	3.6
Other wages/salaries	13,932	18.1	68,038	33.2
Government pensions and allowances	34,104	44.2	107,695	52.5
Total in labour force	44,389	57.5	124,811	60.9
Other sources[i]	998	1.3	7,724	3.8
Government support was not the main source of income during the last 2 years	34,561	44.8	78,268	38.2
Household financial stress and cash flow problems				
Has a bank account	67,125	87.0	198,705	96.9
Could raise $2,000 within a week	17,755	23.0	96,822	47.2
Total persons aged 15 years and over	**77,145**	**100.0**	**205,060**	**100.0**

* Estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Excludes regular smoker and not stated.

(b) Excludes high-risk, medium-risk and not stated.

(c) Excludes no response, not stated and has used substance in the last 12 months.

(d) Proportion of total persons aged 15 years and over, but not at school.

(e) Proportion of total persons aged 25–64 years.

(f) Includes takes too long, concerned about own personal safety, racial discrimination and other.

(g) Includes values of zero to less than three.

(h) Excludes with assistance.

(i) Non-community responses only.

(j) Excludes not stated.

Source: AIHW and ABS analysis of 2002 NATSISS.

Table 1.14.6: Variables contributing to community functioning, Indigenous persons aged 15 years and over, by state/territory, Australia, 2002

Themes and community infrastructure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
Power to control choices and options									
No stressors reported for discrimination/racism	80.5	81.6	81.9	80.2	77.4	93.3	60.1	90.2	82.3
Can visit homelands	35.0	46.6	57.8	43.4	52.0	19.3	71.0	54.1	46.2
Has support in a time of crisis	91.5	88.0	91.0	88.0	90.4	94.1	95.5	88.6	90.4
Involvement with Aboriginal/Torres Strait Islander organisation	26.1	30.5	26.3	25.6	33.6	19.0	46.4	21.4	26.1
Work allows for cultural responsibilities—can meet responsibilities	17.4	16.8	20.5	27.9	22.2	10.3	29.0	37.3	22.3
Used strategies to meet living expenses	45.4	49.4	47.2	61.5	54.5	37.9	47.1	44.9	48.5
Connectedness to family land and history									
Access to traditional lands									
Recognition of homelands	60.1	63.3	72.7	72.2	70.6	41.3	80.7	92.3	69.6
Lives in homelands	23.3	14.5	13.6	27.6	16.4	20.1	9.2	37.1	21.9
Removal									
Respondent not removed from natural family	86.7	82.8	91.9	88.3	85.0	95.1	85.5	77.8	87.2
Relatives not removed from natural family	48.3	32.7	44.6	34.4	41.8	56.9	27.3	50.0	44.4
Health, chronic disease and substance use									
Self-assessed health status excellent or very good	42.8	41.8	43.2	35.2	48.2	46.8	46.7	56.8	44.1
Has no disability or long-term health condition	62.2	55.7	65.0	60.8	61.4	56.0	62.5	73.3	63.5
Not a regular smoker(a)	49.3	48.2	50.8	56.0	56.0	58.3	56.9	44.1	50.7
Has not drunk alcohol in last 12 months at risky/high-risk levels(b)	81.0	82.6	84.4	83.3	83.5	91.2	85.2	90.4	84.1
Has not used substances illicitly in last 12 months(c)	64.9	62.2	73.7	73.2	62.6	74.6	65.0	82.3	70.7

(continued)

Table 1.14.6 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by state/territory, Australia, 2002

Themes and community infrastructure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
Culture									
Protection and maintenance of culture									
Main language spoken at home is Aboriginal language/ Torres Strait Islander language	**—	*1	5.6	11.5	**12	—	**1	63.2	12.0
Speaks an Aboriginal/Torres Strait Islander language	*3	7.8	15.2	27.3	31.4	*1	10.7	76.6	21.1
Participation in cultural events									
Attended Aboriginal and Torres Strait Islander cultural event in last 12 months									
Attended funeral	36.8	28.8	46.9	62.3	45.0	7.8	39.2	73.3	46.6
Attended ceremony	12.4	15.6	27.9	18.8	15.8	4.1	31.5	57.6	23.5
Attended sports carnival	21.0	16.3	35.2	33.9	31.5	*2	40.3	47.9	29.8
Attended festival/carnival involving arts, crafts, music or dance	29.0	26.3	44.6	37.6	35.8	11.4	50.3	41.3	35.7
Total events attended in last 12 months	*58.6*	*53.2*	*74.5*	*75.7*	*69.3*	*27.8*	*73.3*	*86.6*	*68.1*
Identity									
Identification with tribal group or language group/clan	41.7	47.9	56.2	53.8	63.3	16.4	69.9	88.4	54.1
Continuing employment									
Employed in CDEP	5.0	3.5	11.8	21.1	12.9	**1	*3	27.5	12.1
Employed, not in CDEP	39.3	42.4	33.9	28.5	34.7	49.5	60.2	17.6	34.1
Education									
Year 12 highest year of school completed[(d)]	17	19	24	11	16	16	38	14	18
Total persons 15 years and over not at school	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*

(continued)

Table 1.14.6 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by state/territory, Australia, 2002

Themes and community infrastructure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
Has a non school qualification[(e)]	33	45	31	30	41	34	57	23	32
Total persons aged 25–64 years	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Having a role									
Has done volunteer work for an organisation in the last 12 months	31.6	37.2	28.7	23.6	31.6	37.0	47.4	9.8	27.6
Expected to have the same employment in 12 months	38.6	38.7	39.8	42.4	42.7	44.5	51.2	43.0	40.6
Infrastructure of community									
Housing									
Living in a dwelling that has no major structural problems	64.3	62.3	64.3	59.2	59.9	73.5	69.5	39.5	60.4
Living in a dwelling that is not overcrowded (Canadian National Occupancy Standard)	86.0	85.0	74.0	75.0	76.0	89.0	86.0	38.0	74.0
Working household facilities for:									
Washing people	99.4	100.0	99.0	98.6	99.1	99.8	99.7	94.4	98.6
Washing clothes and bedding	98.9	98.0	99.1	98.0	98.8	99.0	98.0	93.9	98.1
Storing/preparing foods	97.1	97.2	97.1	89.7	93.4	98.5	98.7	68.5	92.3
Sewerage facilities	99.7	98.8	97.9	99.0	99.3	99.8	99.7	92.7	98.1
Communication services									
Has working telephone	81.3	87.6	74.3	62.1	72.2	89.1	90.8	36.9	71.3
Used computer in last 12 months	60.9	65.8	57.8	50.0	60.0	69.6	83.3	31.2	55.5
Used internet in last 12 months	48.4	52.6	41.4	32.6	43.5	53.7	76.2	19.3	41.0
Transport									
Access to motor vehicles	56.7	61.2	53.8	54.0	56.9	73.9	71.1	41.0	54.6
Can easily get to places needed	73.4	71.6	68.5	66.0	67.4	78.0	80.3	67.6	70.1

(continued)

Table 1.14.6 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by state/territory, Australia, 2002

Themes and community infrastructure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
Main reasons for not using public transport:									
Prefer to use own transport	33.6	34.6	27.7	26.1	25.2	42.2	38.4	20.4	29.2
No service available	21.3	11.4	26.7	33.1	28.9	19.6	**1	61.6	29.1
No service available/convenient time	3.9	6.9	*5	4.2	*2	7.9	*5	*2	4.3
Cost considerations	*2	*1	*1	*1	**—	*1	**—	**—	1.2
Other[f]	8.5	8.4	7.6	6.8	5.2	5.1	10.8	*2	6.9
Coping within the internal world and external world/ role models									
Community problems									
No community problems reported	24.8	23.9	24.5	26.5	24.5	26.1	20.1	28.4	25.3
Community problems reported, but less than three types	32.7	34.2	27.9	26.5	27.9	33.1	36.2	19.8	28.8
No problems reported for theft	54.2	56.1	56.9	60.6	55.3	53.2	46.6	62.5	57.0
No problems reported for alcohol	69.7	77.5	63.4	65.0	67.9	77.8	84.3	56.6	66.5
No problems reported for illicit drugs	68.7	72.3	63.6	70.3	67.0	76.4	77.2	66.3	67.7
No problems reported for family violence	85.1	87.1	73.6	78.5	78.8	91.4	92.5	67.1	78.8
No problems reported for assault	85.6	86.9	79.0	80.7	78.9	90.4	90.9	62.8	80.1
No problems reported for sexual assault	93.9	94.9	87.2	92.7	94.9	97.3	97.4	91.6	91.9
Total persons who reported a community problem	*74.9*	*72.5*	*74.4*	*72.4*	*74.5*	*72.6*	*77.6*	*70.2*	*73.6*
Stressors									
No stressors reported in last 12 months	20.3	18.3	14.0	20.9	21.5	26.1	12.7	12.2	17.7
Less than three types of stressors reported in the last 12 months[g]	60	57	51	58	54	72	41	46	56
No stressors reported for death of a family member or close friend	57.7	60.0	51.3	54.6	54.2	65.9	50.4	46.5	54.3

(continued)

Table 1.14.6 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by state/territory, Australia, 2002

Themes and community infrastructure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
No stressors reported for serious illness of disability	71.9	67.2	65.6	74.9	68.7	71.1	58.7	65.3	69.2
No stressors reported for not able to get a job	72.5	74.7	68.7	78.2	76.9	76.5	69.7	74.2	73.0
No stressors reported for witness to violence	90.6	87.7	81.3	86.0	83.9	93.1	82.8	70.4	84.3
No stressors reported for member of family sent to jail/currently in jail	83.4	84.6	79.4	74.0	81.2	92.8	79.0	77.2	80.5
Total persons who reported a stressor	*79.7*	*81.7*	*86.0*	*79.1*	*78.5*	*73.9*	*87.3*	*87.8*	*82.3*
Crime and justice									
Not a victim of physical or threatened violence in the last 12 months	77.6	69.7	73.5	74.0	70.4	77.9	66.7	82.6	75.7
Did not need legal services in the last 12 months	77.0	75.9	75.9	74.2	74.6	76.7	73.1	85.4	77.1
Did not use legal services in the last 12 months	79.2	80.1	79.5	78.7	76.6	80.9	80.1	86.9	80.2
Not arrested by police in the last 5 years	82.6	83.0	85.7	77.9	80.5	91.1	85.5	87.1	83.6
Not incarcerated in the last 5 years	93.5	93.3	93.8	89.4	91.8	97.1	94.9	92.2	92.9
Structure and routine									
Has no difficulties communicating with service providers in English(h)	89.8	87.8	88.7	81.0	80.1	91.8	95.1	83.3	86.9
In the last 12 months, has lived in only one dwelling	67.7	66.3	65.2	66.4	70.9	78.3	67.4	81.7	69.1
No days without money for basic living expenses in the last 12 months(i)	57.2	52.8	55.7	48.9	47.3	63.8	58.8	66.4	56.3
No days without money for basic living expenses in the last 2 weeks(i)	70.2	64.5	68.3	63.8	60.1	76.8	71.6	70.7	68.2
Did not have a cash flow problem(i)	61.7	51.5	40.8	39.6	48.0	65.4	55.4	17.1	45.9
Income									
Equivalised gross household income									
3rd quintile or above	26.6	28.7	27.1	21.8	22.9	33.1	52.1	11.9	24.6

(continued)

Table 1.14.6 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, by state/territory, Australia, 2002

Themes and community infrastructure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
Main current source of personal income									
CDEP	4.1	*3	9.6	18.0	11.1	*1	*2	24.8	10.3
Other wages/salaries	34.0	33.1	28.8	24.5	30.9	37.6	52.4	16.2	29.0
Government pensions and allowances	52.1	52.1	49.2	49.9	50.3	48.1	34.8	49.5	50.2
Total in labour force	61.4	57.5	61.4	61.5	59.8	63.0	68.5	51.6	60.0
Other sources[(j)]	3.4	5.4	3.9	*1	*1	6.3	*4	**1	3.1
Government support was not the main source of income during the last 2 years	38.2	33.9	44.1	35.4	39.0	42.5	56.3	41.7	40.0
Household financial stress and cash flow problems									
Has a bank account	97.5	97.0	95.3	90.5	93.6	96.0	95.5	86.7	94.2
Could raise $2,000 within a week	44.4	48.0	42.4	38.8	37.0	61.8	71.0	19.6	40.6
Total persons aged 15 years and over	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

* Estimate has a relative standard error of 25% to 50% and should be used with caution.

** Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(a) Excludes regular smoker and not stated.

(b) Excludes high-risk, medium-risk and not stated.

(c) Excludes no response, not stated and has used substance in the last 12 months.

(d) Proportion of total persons aged 15 years and over, but not at school.

(e) Proportion of total persons aged 25–64 years.

(f) Includes takes too long, concerned about own personal safety, racial discrimination and other.

(g) Includes values of zero to less than three.

(h) Excludes with assistance.

(i) Non-community responses only.

(j) Excludes not stated.

Source: AIHW and ABS analysis of 2002 NATSISS.

Table 1.14.7: Variables contributing to community functioning, Indigenous persons aged 15 years and over, 1994 and 2002[(a)]

	1994		2002	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Power to control choices and options				
Involvement with Aboriginal/Torres Strait Islander organisation	50,888	24[(b)]	73,605	26[(b)]
Connectedness to family land and history				
Access to traditional lands				
Lives in homelands	62,675	29	61,700	22
Health, chronic disease and substance use				
Self-assessed health status excellent or very good	97,265	45[(b)]	124,361	44[(b)]
Culture				
Protection and maintenance of culture:				
Main language spoken at home is Aboriginal language/ Torres Strait Islander language	25,468	12[(b)]	34,003	12[(b)]
Participating in cultural events				
Attended Aboriginal and Torres Strait Islander cultural event in last 12 months				
Attended funeral	114,115	53	131,621	47
Attended ceremony	41,350	19	66,392	24
Total events attended in last 12 months[(c)(d)]	***151,758***	***71***	***192,126***	***68***
Identity				
Identification with tribal group or language group/clan	124,706	58[(b)]	152,806	54[(b)]
Continuing employment				
Employed in CDEP	17,658	8	34,230	12
Employed not in CDEP	60,236[(e)]	28	96,165	34
Education				
Year 12 highest year of school completed	18,590	9[(f)]	47,006	18[(f)]
Total persons 15 years and over not at school	*200,022*	*100*	*262,958*	*100*
Has a non school qualification	27,366[(g)]	20	59869[(g)]	32
Total persons aged 25–64 years[(h)]	*135,899*	*100*	*186,574*	*100*
Crime and justice				
Not a victim of physical or threatened violence in the last 12 months	186,619	87	213,514	76
Did not need legal services in the last 12 months	178,766	83	217,664	77
Did not use legal services in the last 12 months	182,323	85	226,312	80
Not arrested by police in the last 5 years	170,874	80	235,937	84
Structure and routine				
Has no difficulties communicating with service providers in English	188,996	88[(b)]	245,244	87[(b)]

(continued)

Table 1.14.7 (continued): Variables contributing to community functioning, Indigenous persons aged 15 years and over, 1994 and 2002[(a)]

	1994		2002	
Themes and community infrastructure	**No.**	**%**	**No.**	**%**
Income				
Main current source of personal income				
CDEP	16,310	8	29,166	10
Other wages/salaries	54,348	25	81,970	29
Government pensions and allowances	117,108	55	141,799	50
Total in labour force	125,842	59(b)	169,200	60(b)
Total persons aged 15 years and over	**214,626**	**100**	**282,205**	**100**

(a) The content of this table has been restricted to those items in the 1994 NATSIS and the 2002 NATSISS that are comparable.

(b) Difference between the 1994 NATSIS and the 2002 NATSISS data is not statistically significant.

(c) Respondents may have indicated more than one response category.

(d) Includes carnival involving arts, crafts, music, dance or sport.

(e) Includes did not know and not stated.

(f) Calculated as a proportion of 15 years and over not at school.

(g) Includes level not determined.

(h) Includes only those 25–64 years not at school.

Source: AIHW and ABS analysis of 2002 NATSISS & 1994 NATSIS.

Discrete Indigenous communities

Characteristics contributing to community functioning

Tables 1.14.8, 1.14.9 and 1.14.10 present data on characteristics contributing to community functioning in discrete Indigenous communities as collected in the 2006 CHINS.

Housing

- In 2006, almost one-quarter (23%) of permanent dwellings managed by Indigenous housing organisations needed major repair.
- Of the 1,187 discrete Indigenous communities surveyed in the 2006 CHINS, the majority (65%) reported that no-one in the community was living in temporary dwellings.
- In 2006, of the 96% of discrete Indigenous communities that reported having an organised water supply, 84% reported having an organised sewerage supply and 97% reported having an organised electricity supply (97%).

Health and medical services

- Over two-thirds (70%) of discrete Indigenous communities were located 100 kilometres or more from the nearest hospital and over one-third (40%) were located 100 kilometres or more from the nearest Aboriginal primary health care centre.
- In 2006, approximately one-third (32%) of discrete Indigenous communities reported having access to medical emergency air services, representing three-quarters of the total reported usual population of all the discrete Indigenous communities surveyed in CHINS.

Educational services

- Less than one-quarter (23%) of discrete Indigenous communities, representing 73% of the population, reported having a primary school located in the community; 5% of discrete Indigenous communities, representing 31% of the population, reported having a secondary school up to Year 12 located in the community.

Communication services

- Over one-third (42%) of discrete Indigenous communities (representing 16% of the population) reported not having access to a public telephone and almost two thirds (63%, representing 42% of the population) reported not having access to the internet.

Transport

- In 2006, 88% of discrete Indigenous communities reported road, 9% reported air and 3% reported sea as the main mode of transport to the nearest town with major services.

Community services

- One-third of discrete Indigenous communities reported have visitor accommodation facilities, 12% reported aged care accommodation facilities and 9% reported women's refuge accommodation facilities.
- Around one-third of discrete Indigenous communities reported having an arts/cultural centre (31%, representing 57% of the population), a women's centre (31%, representing 56% of the population) or a child care centre (30%, representing 58% of the population) in the community.

- Over one-third (39%) of discrete Indigenous communities reported having no sporting facilities in the community.

Community priority needs plan

- In 2006, over half (52%) of discrete Indigenous communities reported having a community priority needs plan and one-third (35%) were developing a community priority needs plan.
- Of those communities with a community priority needs plan, 90% identified more housing, 56% identified sports facilities, 46% identified upgrading the water supply and 45% identified rubbish collection/disposal as main planning priorities.

Time series comparison

Table 1.14.11 presents data on characteristics contributing to community functioning in discrete Indigenous communities as collected in the 2001 Community Housing and Infrastructure Needs Survey (CHINS).

Housing

- In 2006, of those communities surveyed, approximately 37% of people living discrete Indigenous communities who completed the long community questionnaire experienced sewerage system overflows or leakages in the past 12 months, compared to 56% in 2001.
- In 2006, approximately 29% of people living in discrete Indigenous communities who completed the long community questionnaire experienced an electricity interruption greater than 24 hours in the past 12 months, compared to 10% in 2001.

Health and medical services

- In 2006, approximately 13% of people living in discrete Indigenous communities located ten kilometres or more from a hospital who completed the long community questionnaire did not have a doctor visiting or working in their community, compared to 6% in 2001.

Educational services

- The proportion of people living in discrete Indigenous communities that had a secondary school up to year 12 increased from 5% in 2001 to 23% in 2006.

Table 1.14.8: Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2006

	Dwellings		Reported usual population	
Community Infrastructure	**No.**	**%**	**No.**	**%**
Housing				
Condition of permanent dwellings managed by Indigenous housing organisations				
Needing minor or no repairs	15,180	69.5	n.a.	n.a.
Needing major repairs	5,111	23.4	n.a.	n.a.
Needing replacement	1,563	7.2	n.a.	n.a.
Total dwellings	**21,854**	**100.0**	**n.a.**	**n.a.**
	Communities		**Reported usual population**	
	No.	**%**	**No.**	**%**
No-one in community living in temporary dwellings	708	65.3	59,737	64.5
Population living in temporary dwellings	n.a.	n.a.	4,039	4.4
No-one in community requiring permanent dwelling	726	68.2	63,362	68.5
Population requiring permanent housing	n.a.	n.a.	3,886	4.2
Access to clean water				
Organised water supply[(b)]	1,040	96.4	91,527	99.2
No organised water supply	39	3.6	761	0.8
Drinking water failed testing in last 12 months[(c)]	48	29.3	12,059	24.1
Drinking water not sent away for testing[(d)]	45	21.5	4,796	8.7
Experienced 5 or more water interruptions over last 12 months[(d)]	69	18.9	21,291	25.7
Experienced interruptions to water supply longer than 24 hours[(d)]	80	21.9	15,665	18.9
Access to sewerage				
Organised sewerage supply[(e)]	908	83.8	89,925	97.1
No organised system	176	16.2	2,701	2.9
Experienced overflows or leakage[(d)]	142	39.3	30,140	36.5
Over a 12-month period 10 or more overflows[(d)]	31	8.6	5,341	6.5
Overflows or leakages longer than 48 hours [(d)]	81	22.4	14,376	17.4
Not all dwellings connected	200	18.8	4,185	4.5
Access to electricity				
Organised electricity supply	1,049	97.0	92,304	99.7
No organised supply	32	3.0	284	0.3
20 or more interruptions in the last 12 months[(d)]	41	11.2	13,342	16.1
At least one interruption longer than 24 hours in last 12 months[(d)]	96	26.2	23,952	29.0
Not all dwellings connected[(d)]	12	3.3	1,543	1.9
Access to rubbish disposal				
Community has organised rubbish collection[(d)]	337	92.1	80,180	96.9
Community does not have organised rubbish disposal[(d)]	29	7.9	2,550	3.1

(continued)

Table 1.14.8 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2006

	Communities		Reported usual population	
Community Infrastructure	**No.**	**%**	**No.**	**%**
Health and medical services				
Aboriginal primary health care centre				
Located within community	107	10.2	41,450	47.0
Located less than 100 km	530	50.3	21,181	24.0
Located 100 km or more	417	39.6	25,486	28.9
Total stated	1,054	100.0	88,117	100.0
Hospital				
Located within community	10	0.9	14,090	15.3
Located less than 100 km	313	29.0	26,111	28.3
Located 100 km or more	755	70.0	51,992	56.4
Total stated	1,078	100.0	92,193	100.0
Other (state-funded) community health centre				
Located within community	104	9.9	35,737	42.9
Located less than 100 km	576	54.8	24,342	29.2
Located 100 km or more	372	35.4	23,308	28.0
Total stated	1,052	100.0	83,387	100.0
Emergency services[(f)]				
Access to medical emergency air services	316	32.3	52,936	75.2
No access to medical emergency air services	663	67.7	17,424	24.8
Whether health professionals visiting or working in the community[(f)]				
Male Indigenous health worker daily, weekly, fortnightly	122	42.4	39,291	64.2
Male Indigenous health worker monthly or longer	26	9.0	3,685	6.0
No male Indigenous health worker	140	48.6	18,272	29.8
Female Indigenous health worker daily, weekly, fortnightly	159	55.2	48,843	79.7
Female Indigenous health worker monthly or longer	21	7.3	2,294	3.7
No female Indigenous health worker	108	37.5	10,111	16.5
Doctor daily, weekly, fortnightly	118	41.0	37,313	60.9
Doctor monthly or longer	74	25.7	15,888	25.9
No doctor	96	33.3	8,047	13.1
Registered nurse daily, weekly, fortnightly	184	63.9	52,977	86.5
Registered nurse monthly or longer	27	9.4	2,746	4.5
No registered nurse	77	26.7	5,525	9.0

(continued)

Table 1.14.8 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2006

	Communities		Reported usual population	
Community Infrastructure	**No.**	**%**	**No.**	**%**
Educational services				
Primary				
Located within community	245	22.6	67,405	72.8
Located less than 50 km	533	49.2	20,849	22.5
Located 50 km or more	306	28.2	4,372	4.7
Total stated	1,084	100.0	92,626	100.0
Secondary school up to Year 10				
Located within community	49	4.7	21,909	30.8
Located less than 50 km	409	39.4	24,631	34.7
Located 50 km or more	581	55.9	24,535	34.5
Total stated	1,039	100.0	71,075	100.0
Secondary school up to Year 12				
Located within community	40	3.7	21,213	23.0
Located less than 50 km	295	27.3	25,957	28.1
Located 50 km or more	744	69.0	45,118	48.9
Total stated	1,079	100.0	92,288	100.0
Access to educational services other than school				
Pre-primary	126	34.4	46,426	56.1
Homework centre	29	7.9	8,366	10.1
TAFE courses	70	19.1	30,978	37.4
Other adult education	50	13.7	17,678	21.4
Other educational services	18	4.9	5,757	7.0
No other educational services	198	54.1	23,555	28.5
Communication services				
Public access to community telecommunication facilities				
Public telephones	630	58.1	77,779	84.0
Satellite dish	180	49.2	56,083	67.8
Radio	337	92.1	79,621	96.2
Television	349	95.4	81,540	98.6
Internet	136	37.2	47,848	57.8
Community has no access to a public telephone	454	41.9	14,847	16.0
Community has no access to internet	230	62.8	34,882	42.2

(continued)

Table 1.14.8 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2006

	Communities		Reported usual population	
Community Infrastructure	**No.**	**%**	**No.**	**%**
Transport				
Access to nearest town				
Main mode of transport				
Road	894	88.0	63,529	78.0
Air	95	9.4	15,363	18.9
Sea	27	2.7	2,520	3.1
Usual method of transport[(d)]				
Private	260	85.8	56,558	78.7
Public	26	8.6	12,708	17.7
Community-owned vehicle	13	4.3	1,588	2.2
Other	4	1.3	1,000	1.4
Whether transport services available to/from community[(d)]				
Public	54	17.8	23,407	32.6
Community	72	23.8	18,011	25.1
Road access[(d)]				
Road access not cut	129	42.6	21,376	29.7
Road access cut 5 or more times	42	13.9	12,074	16.8
Inaccessible by road	35	11.5	16,572	23.1
Airstrip[(d)]				
Airstrip located in community	147	48.5	49,655	69.1
Airstrip open all year round	109	74.1	37,702	75.9
Airstrip not open all year round	38	25.9	11,953	24.1
Community services[(d)]				
Accommodation facilities				
Visitor	119	32.5	46,974	56.8
Camping	52	14.2	10,757	13.0
Single men's	48	13.1	16,337	19.7
Single women's	25	6.8	10,724	13.0
Hostel	8	2.2	2,150	2.6
Contract workers	85	23.2	44,468	53.8
Disability	23	6.3	11,315	13.7
Aged	44	12.0	28,447	34.4
Women's refuge	32	8.7	28,835	34.9
Other	4	1.1	2,675	3.2
No accommodation facilities	178	48.6	16,882	20.4

(continued)

Table 1.14.8 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2006

	Communities		Reported usual population	
Community Infrastructure	**No.**	**%**	**No.**	**%**
Public facilities				
Hall/meeting area	208	56.8	62,740	75.8
Administration building	224	61.2	70,721	85.5
Store	175	47.8	66,153	80.0
Library	44	12.0	31,143	37.6
Arts/cultural centre	114	31.1	46,736	56.5
Women's centre	113	30.9	46,027	55.6
Child care centre	108	29.5	48,257	58.3
Youth centre	71	19.4	36,321	43.9
Canteen	47	12.8	28,893	34.9
Broadcasting facilities	113	30.9	52,291	63.2
Other	39	10.7	13,634	16.5
No public facilities	89	24.3	5,583	6.7
Recreation facilities				
Sports grounds	169	46.2	65,265	78.9
Outdoor basketball/netball courts	177	48.4	59,865	72.4
Indoor or covered sporting facilities	46	12.6	32,437	39.2
Swimming pools	27	7.4	19,328	23.4
Other buildings used for sport	57	15.6	30,406	36.8
Other community sporting facilities	22	6.0	8,443	10.2
No sporting facilities	141	38.5	10,050	12.1
Community priority needs plan[(d)]				
Communities with a community priority needs plan	189	51.6	48,688	58.9
Of those with plan, needs identified include:				
More housing	170	89.9	45,716	93.9
Upgrade water supply	86	45.5	22,775	46.8
Upgrade electricity supply	71	37.6	15,676	32.2
Upgrade sewerage	82	43.4	22,480	46.2
Rubbish collection/disposal	85	45.0	19,524	40.1
Transport	77	40.7	19,635	40.3
Communication facilities	51	27.0	16,060	33.0
Education facilities	59	31.2	18,155	37.3
Sports facilities	105	55.6	30,620	62.9
Health care facilities	79	41.8	23,025	47.3
Animal control	73	38.6	24,725	50.8
Broadcasting capabilities	51	27.0	17,222	35.4

(continued)

Table 1.14.8 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2006

	Communities		Reported usual population	
Community Infrastructure	**No.**	**%**	**No.**	**%**
Other	48	25.4	13,082	26.9
Communities developing a community priority needs plan	129	35.2	28,348	34.3
No community priority needs plan being developed	48	13.1	5,694	6.9
Total no. of communities	**1,187**	**100.0**	**92,960**	**100.0**

(a) All proportions were calculated excluding 'not stated' from denominator.

(b) Excluding communities with carted and other organised water supply.

(c) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency, excluding communities where water was not sent away for testing and communities connected to town supply.

(d) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency.

(e) Excluding communities which reported pit and pan toilets as the main sewerage system type.

(f) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency, and which are located 10 kilometres or more from a hospital.

Source: AIHW analysis of 2006 CHINS.

Table 1.14.9: Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Dwellings**	**Reported usual population**	**Dwellings**	**Reported usual population**	**Dwellings**	**Reported usual population**	**Dwellings**	**Reported usual population**	**Dwellings**	**Reported usual population**
					Per cent					
Housing										
Condition of permanent dwellings managed by Indigenous housing organisations										
Needing minor or no repairs	78.6	n.a.	67.8	n.a.	62.0	n.a.	71.9	n.a.	68.7	n.a.
Needing major repairs	18.8	n.a.	26.3	n.a.	27.9	n.a.	22.4	n.a.	21.0	n.a.
Needing replacement	2.7	n.a.	5.9	n.a.	10.1	n.a.	5.8	n.a.	10.2	n.a.
Total dwellings	**100.0**	**n.a.**	**100.0**	**n.a.**	**100.0**	**n.a.**	**100.0**	**n.a.**	**100.0**	**n.a.**
	Communities	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
	%	%	%	%	%	%	%	%	%	%
No-one in community living in temporary dwellings	78.9	78.2	48.7	55.4	55.5	68.7	67.9	46.1	71.6	69.6
Population living in temporary dwellings	n.a.	1.2	n.a.	4.3	n.a.	5.8	n.a.	5.7	n.a.	4.2
No-one in community requiring permanent dwelling	86.0	87.1	49.6	56.6	60.6	75.8	72.4	47.6	73.1	74.3
Population requiring permanent housing	n.a.	n.p.	n.a.	4.3	n.a.	5.4	n.a.	5.6	n.a.	4.0
Access to clean water										
Organised water supply[(b)]	100.0	100.0	95.6	99.9	98.4	99.0	97.4	99.7	95.1	98.6
No organised water supply	0.0	0.0	4.4	n.p.	1.6	1.0	2.6	n.p.	4.9	1.4
Drinking water failed testing in last 12 months[(c)]	80.0	93.7	16.7	11.1	37.3	38.4	30.8	19.6	21.3	27.0
Drinking water not sent away for testing[(d)]	16.7	0.0	30.8	12.1	5.6	1.3	48.0	20.1	21.9	7.4
Experienced 5 or more water interruptions over last 12 months[(d)]	3.8	4.5	21.1	11.1	19.8	30.7	14.3	18.5	24.5	39.1

(continued)

Table 1.14.9 (continued): Proportion(a) of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Experienced interruptions to water supply longer than 24 hours(d)	18.9	27.2	23.7	13.6	15.4	18.0	35.7	37.4	23.0	20.1
Access to sewerage										
Organised sewerage supply(e)	96.5	99.1	75.2	99.3	94.3	98.2	97.4	99.8	77.4	94.7
No organised system	3.5	n.p.	24.8	0.7	5.7	1.8	2.6	n.p.	22.6	5.3
Experienced overflows or leakage(d)	23.5	28.3	47.4	30.2	40.9	46.2	33.3	39.6	43.2	38.6
Over a 12-month period 10 or more overflows(d)	5.9	8.2	7.9	2.8	8.0	11.8	9.5	12.1	9.4	6.4
Overflows or leakages longer than 48 hours (d)	19.6	25.2	28.9	18.4	26.1	29.9	26.2	28.3	17.3	9.8
Not all dwellings connected	5.3	1.7	47.7	6.9	28.9	4.9	13.2	4.4	11.0	3.3
Access to electricity										
Organised electricity supply	100.0	100.0	95.5	100.0	98.1	99.6	97.4	97.3	96.5	99.8
No organised supply	0.0	0.0	4.5	n.p.	1.9	0.4	2.6	2.7	3.5	0.2
20 or more interruptions in the last 12 months(d)	1.9	3.6	10.5	7.1	20.9	28.0	4.8	3.8	10.8	22.6
At least one interruption longer than 24 hours in last 12 months(d)	13.2	26.3	36.8	32.4	29.7	33.9	35.7	32.3	23.0	24.8
Not all dwellings connected(d)	1.9	n.p.	5.3	3.3	2.2	0.5	9.5	8.6	2.2	0.6
Access to rubbish disposal										
Community has organised rubbish collection(d)	92.5	89.9	100.0	100.0	89.0	90.9	95.2	97.0	90.6	97.4
Community does not have organised rubbish disposal(d)	7.5	10.1	0.0	0.0	11.0	9.1	4.8	3.0	9.4	2.6

(continued)

Table 1.14.9 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Health and medical services										
Aboriginal primary health care centre										
Located within community	27.8	37.1	14.7	64.4	8.0	22.3	9.0	20.8	8.2	48.1
Located less than 100 km	66.7	57.8	56.0	11.0	32.9	28.6	34.6	23.1	57.8	26.6
Located 100 km or more	5.6	5.1	29.4	24.6	59.0	49.1	56.4	56.1	34.0	25.3
Total stated	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Hospital										
Located within community	1.8	3.2	6.2	48.6	0.8	4.7	0.0	0.0	0.0	0.0
Located less than 100 km	90.9	87.8	38.1	27.8	32.8	29.2	41.0	39.3	17.7	19.7
Located 100 km or more	7.3	9.0	55.8	23.6	66.4	66.1	59.0	60.7	82.3	80.3
Total stated	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Other (state funded) community health centre										
Located within community	13.0	20.1	19.8	67.7	12.0	41.7	14.1	44.9	6.1	34.1
Located less than 100 km	85.2	78.3	51.9	14.4	60.8	31.6	78.2	43.2	46.3	27.6
Located 100 km or more	1.9	1.6	28.3	17.9	27.2	26.7	7.7	11.8	47.6	38.3
Total stated	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Emergency services[(f)]										
Access to medical emergency air services	18.2	19.6	40.2	96.7	37.7	70.7	22.9	61.1	30.3	75.7
No access to medical emergency air services	81.8	80.4	59.8	3.3	62.3	29.3	77.1	38.9	69.7	24.3

(continued)

Table 1.14.9 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Whether health professionals visiting or working in the community[(f)]										
Male Indigenous health worker daily, weekly, fortnightly	63.3	65.0	64.0	82.1	19.4	25.3	50.0	75.9	44.7	66.8
Male Indigenous health worker monthly or longer	3.3	n.p.	24.0	11.7	13.9	10.9	5.9	6.3	4.9	2.8
No male Indigenous health worker	33.3	33.7	12.0	6.2	66.7	63.8	44.1	17.8	50.4	30.4
Female Indigenous health worker daily, weekly, fortnightly	73.3	76.5	96.0	99.6	90.0	60.3	52.9	78.2	54.5	78.7
Female Indigenous health worker monthly or longer	3.3	n.p.	0.0	0.0	23.3	6.2	11.8	6.4	6.5	4.0
No female Indigenous health worker	23.3	22.3	4.0	0.4	126.7	33.6	35.3	15.4	39.0	17.3
Doctor daily, weekly, fortnightly	53.3	64.7	60.0	74.7	44.4	59.4	14.7	19.1	39.0	60.6
Doctor monthly or longer	6.7	3.0	36.0	24.8	20.8	23.0	38.2	59.1	27.6	25.6
No doctor	40.0	32.3	4.0	0.4	34.7	17.7	47.1	21.8	33.3	13.8
Registered nurse daily, weekly, fortnightly	50.0	55.2	88.0	96.5	56.9	73.5	44.1	70.9	71.5	90.9
Registered nurse monthly or longer	13.3	14.5	8.0	3.0	6.9	7.1	5.9	4.3	11.4	3.4
No registered nurse	36.7	30.2	4.0	0.4	36.1	19.3	50.0	24.8	17.1	5.7
Educational services										
Primary										
Located within community	24.6	29.7	28.3	87.1	25.1	62.3	17.9	57.3	20.7	74.3
Located less than 50 km	75.4	70.3	43.4	12.0	40.3	29.8	74.4	39.8	48.2	18.8
Located 50 km or more	0.0	0.0	28.3	0.9	34.6	7.9	7.7	2.9	31.1	7.0

(continued)

Table 1.14.9 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Total stated	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Secondary school up to Year 10										
Located within community	0.0	0.0	4.5	36.9	8.3	36.8	2.8	18.7	3.8	30.8
Located less than 50 km	92.6	94.6	39.1	28.8	44.6	41.3	41.7	51.6	31.5	24.9
Located 50 km or more	7.4	5.4	56.4	34.3	47.1	21.9	55.6	29.7	64.7	44.2
Total stated	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Secondary school up to Year 12										
Located within community	5.3	5.7	2.7	22.7	6.2	23.0	7.7	28.1	2.1	24.9
Located less than 50 km	87.7	89.2	13.3	34.4	26.4	23.0	37.2	32.7	22.8	17.1
Located 50 km or more	7.0	5.1	84.1	43.0	67.4	54.0	55.1	39.2	75.1	58.0
Total stated	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Access to educational services other than school										
Pre-primary	28.3	44.2	57.9	61.0	38.5	59.1	28.6	61.8	29.5	52.6
Homework centre	11.3	22.1	7.9	3.3	13.2	20.2	2.4	4.7	5.0	11.2
TAFE courses	26.4	38.5	31.6	53.9	13.2	21.2	38.1	63.8	10.8	26.7
Other adult education	13.2	20.2	5.3	5.2	11.0	25.6	7.1	19.8	19.4	32.5
Other educational services	1.9	1.5	7.9	8.1	4.4	8.1	2.4	2.8	6.5	7.0
No other educational services	58.5	44.4	34.2	29.2	56.0	32.2	57.1	29.0	55.4	24.2

(continued)

Table 1.14.9 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Communication services										
Public access to community telecommunication facilities										
Public telephones	24.6	37.1	45.1	76.7	63.9	90.6	62.8	88.5	60.7	91.9
Satellite dish	7.5	5.3	76.3	67.2	60.4	73.4	42.9	57.8	52.5	76.8
Radio	98.1	98.5	100.0	100.0	90.1	94.4	95.2	96.1	87.8	93.6
Television	100.0	100.0	100.0	100.0	95.6	98.4	97.6	98.5	90.6	97.1
Internet	26.4	24.0	52.6	62.4	39.6	44.8	42.9	60.2	33.1	62.8
Community has no access to a public telephone	75.4	62.9	54.9	23.3	36.1	9.4	37.2	11.5	39.3	8.1
Community has no access to internet	73.6	76.0	47.4	37.6	60.4	55.2	57.1	39.8	66.9	37.2
Transport										
Access to nearest town										
Main mode of transport										
Road	100.0	100.0	78.9	69.7	96.2	94.6	98.7	99.9	83.9	73.1
Air	0.0	0.0	9.2	20.8	2.5	5.2	0.0	0.0	14.3	25.9
Sea	0.0	0.0	11.9	9.5	1.3	n.p.	1.3	n.p.	1.8	1.0
Usual method of transport[(d)]										
Private	82.1	79.0	61.8	67.2	87.5	84.8	97.6	95.1	89.5	82.7
Public	10.3	13.6	32.4	30.5	0.0	0.0	2.4	4.9	8.8	16.5
Community-owned vehicle	5.1	3.3	5.9	2.2	8.3	6.2	0.0	0.0	1.8	0.8
Other	2.6	4.1	0.0	0.0	4.2	9.0	0.0	0.0	0.0	0.0

(continued)

Table 1.14.9 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Whether transport services available to/from community[(d)]										
Public	35.9	32.6	50.0	56.9	8.3	19.5	7.3	20.9	12.3	22.0
Community	48.7	55.9	35.3	41.1	29.2	32.0	17.1	26.6	9.6	8.2
Road access[(d)]										
Road access not cut	82.1	90.1	44.4	32.4	31.9	22.6	65.9	52.5	35.6	31.0
Road access cut 5 or more times	0.0	0.0	27.8	36.3	29.2	35.5	7.3	6.6	12.5	10.1
Inaccessible by road	0.0	0.0	51.4	30.9	2.8	6.2	0.0	0.0	12.3	28.3
Airstrip[(d)]										
Airstrip located in community	7.7	6.7	58.8	61.8	55.6	72.4	31.7	53.7	61.4	82.4
Airstrip open all year round	100.0	100.0	70.0	61.8	77.5	86.9	76.9	84.3	71.4	81.0
Airstrip not open all year round	0.0	0.0	30.0	41.8	22.5	13.1	23.1	15.7	28.6	19.0
Community services[(d)]										
Accommodation facilities										
Visitor	9.4	10.3	68.4	66.8	37.4	53.9	26.2	41.1	30.9	59.1
Camping	7.5	6.3	23.7	16.0	24.2	29.3	9.5	9.3	8.6	6.7
Single men's	1.9	1.0	21.1	24.5	19.8	24.6	2.4	8.9	13.7	18.3
Single women's	1.9	1.0	10.5	18.5	9.9	13.1	0.0	0.0	7.2	11.7
Hostel	3.8	3.2	2.6	0.7	2.2	1.9	0.0	0.0	2.2	4.5
Contract workers	1.9	1.0	68.4	70.9	17.6	31.9	9.5	15.4	26.6	59.9
Disability	0.0	0.0	15.8	21.5	7.7	8.4	2.4	8.9	5.8	11.6

(continued)

Table 1.14.9 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Aged	0.0	0.0	28.9	62.8	13.2	21.7	11.9	21.0	10.8	23.2
Women's refuge	0.0	0.0	34.2	66.8	4.4	10.0	0.0	0.0	10.8	27.8
Other	1.9	1.5	2.6	5.6	0.0	0.0	2.4	7.1	0.7	2.3
No accommodation facilities	84.9	83.9	5.3	1.8	37.4	24.2	69.0	53.0	48.2	20.4
Public facilities										
Hall/meeting area	49.1	58.3	86.8	91.9	64.8	72.8	42.9	61.4	49.6	68.5
Administration building	39.6	47.6	92.1	95.1	74.7	88.6	52.4	67.6	54.0	84.5
Store	11.3	21.2	80.0	91.7	51.6	72.8	31.0	53.6	54.7	85.3
Library	7.5	12.5	47.4	58.7	4.4	6.0	0.0	0.0	12.9	40.0
Arts/cultural centre	28.3	34.4	60.5	74.9	26.4	34.3	31.0	51.7	27.3	53.5
Women's centre	13.2	22.3	31.6	49.6	36.3	55.6	23.8	25.4	36.7	69.1
Child care centre	22.6	37.8	60.5	73.0	28.6	49.6	16.7	28.1	28.1	56.6
Youth centre	17.0	28.0	34.2	59.3	16.5	30.3	26.2	46.7	16.5	38.8
Canteen	5.7	11.3	36.8	51.1	5.5	7.2	4.8	5.1	16.5	38.6
Broadcasting facilities	3.8	5.9	73.7	73.1	26.4	47.5	16.7	31.5	37.4	73.1
Other	17.0	15.5	13.2	24.9	11.0	20.0	2.4	7.1	10.1	10.4
No public facilities	41.5	32.1	2.6	0.2	19.8	7.4	40.5	24.3	22.3	5.9
Recreation facilities										
Sports grounds	17.0	29.2	68.4	86.7	50.5	72.9	40.5	67.3	49.6	83.3
Outdoor basketball/netball courts	24.5	36.6	65.8	77.3	58.2	75.0	35.7	60.3	50.4	74.6

(continued)

Table 1.14.9 (continued): Proportion[a] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Indoor or covered sporting facilities	3.8	9.3	44.7	66.2	5.5	11.0	2.4	3.7	15.1	36.5
Swimming pools	1.9	3.2	18.4	37.3	7.7	16.4	7.1	9.2	6.5	19.7
Other buildings used for sport	7.5	14.1	28.9	40.3	11.0	16.9	14.3	23.5	18.0	45.2
Other community sporting facilities	1.9	3.1	5.3	8.8	8.8	9.7	11.9	24.7	4.3	10.8
No sporting facilities	66.0	48.6	7.9	3.2	29.7	13.2	47.6	25.3	40.3	12.1
Community priority needs plan[d]										
Communities with a community priority needs plan	49.1	45.9	55.3	48.5	51.6	62.2	26.2	41.4	59.0	69.5
Of those with plan, needs identified include:										
More housing	68.0	66.6	95.2	98.4	97.9	99.4	90.9	90.8	92.6	97.9
Upgrade water supply	24.0	23.8	57.1	61.4	44.7	44.8	9.1	3.1	55.6	47.2
Upgrade electricity supply	16.0	15.4	28.6	20.3	51.1	53.1	18.2	21.2	40.7	36.2
Upgrade sewerage	24.0	23.8	66.7	75.5	36.2	44.1	36.4	15.7	49.4	37.3
Rubbish collection/disposal	32.0	43.6	42.9	27.3	53.2	63.1	54.5	64.0	44.4	40.4
Transport	60.0	64.3	42.9	21.2	36.2	39.6	36.4	35.4	37.0	51.1
Communication facilities	24.0	24.4	38.1	27.4	23.4	35.9	27.3	15.9	27.2	38.9
Education facilities	32.0	41.9	42.9	46.5	14.9	26.9	36.4	19.1	37.0	38.1
Sports facilities	40.0	46.8	71.4	53.0	57.4	65.3	72.7	68.8	54.3	72.4
Health care facilities	56.0	61.1	47.6	48.7	34.0	45.0	27.3	12.9	43.2	51.1
Animal control	24.0	35.5	47.6	47.8	36.2	41.6	27.3	30.6	44.4	60.9
Broadcasting capabilities	16.0	18.1	38.1	35.7	21.3	42.1	36.4	16.3	30.9	38.6

(continued)

Table 1.14.9 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by state/territory, 2006

	NSW		Qld		WA		SA		NT	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
					Per cent					
Other	24.0	40.6	19.0	8.7	36.2	36.0	18.2	15.3	22.2	35.3
Communities developing a community priority needs plan	35.8	45.2	36.8	46.0	35.2	31.5	57.1	51.2	28.1	22.7
No community priority needs plan being developed	15.1	9.0	7.9	5.5	13.2	6.3	16.7	7.4	12.9	7.8
Total no. of communities	**57**	**5,082**	**120**	**27,349**	**277**	**14,023**	**91**	**4,607**	**639**	**41,553**

n.p. Not published where number in population is less than 5.

(a) All proportions were calculated excluding ‘not stated’ from denominator.

(b) Excluding communities with carted and other organised water supply.

(c) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency, excluding communities where water was not sent away for testing and communities connected to town supply.

(d) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency.

(e) Excluding communities which reported pit and pan toilets as the main sewerage system type.

(f) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency, and which are located 10 kilometres or more from a hospital.

Source: AIHW analysis of 2006 CHINS.

Table 1.14.10: Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very remote	
Community infrastructure	**Dwellings**	**Reported usual population**	**Dwellings**	**Reported usual population**	**Dwellings**	**Reported usual population**
			Per cent			
Housing						
Condition of permanent dwellings managed by Indigenous housing organisations						
Needing minor or no repairs	73.2	n.a.	66.8	n.a.	67.5	n.a.
Needing major repairs	23.0	n.a.	24.1	n.a.	23.5	n.a.
Needing replacement	3.8	n.a.	9.1	n.a.	9.0	n.a.
Total dwellings	**100.0**	**n.a.**	**100.0**	**n.a.**	**100.0**	**n.a.**
	Communities	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
No-one in community living in temporary dwellings	76.0	60.2	61.0	45.6	64.9	68.2
Population living in temporary dwellings	n.a.	5.4	n.a.	4.9	n.a.	4.1
No-one in community requiring permanent dwelling	81.3	63.0	64.1	52.1	76.4	72.4
Population requiring permanent housing	n.a.	5.3	n.a.	4.8	n.a.	4.5
Access to clean water						
Organised water supply[(b)]	100.0	100.0	87.5	97.5	97.1	99.3
No organised water supply	0.0	0.0	12.5	2.5	2.9	0.7
Drinking water failed testing in last 12 months[(c)]	54.5	26.4	16.7	1.4	27.9	26.0
Drinking water not sent away for testing[(d)]	15.4	n.p.	40.0	12.4	21.0	9.7
Experienced 5 or more water interruptions over last 12 months[(d)]	6.1	4.1	38.6	28.7	18.8	29.6
Experienced interruptions to water supply longer than 24 hours[(d)]	18.2	11.2	29.5	34.3	21.5	18.1
Access to sewerage						
Organised sewerage supply[(e)]	97.3	99.6	98.1	99.7	81.5	96.2

(continued)

Table 1.14.10 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very Remote	
Community infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
			Per cent			
No organised system	2.7	n.p.	1.9	n.p.	19.0	3.8
Experienced overflows or leakage[(d)]	25.0	15.6	54.5	33.2	40.3	41.2
Over a 12-month period 10 or more overflows[(d)]	6.3	4.3	2.3	2.0	10.3	7.6
Overflows or leakages longer than 48 hours [(d)]	21.9	14.3	22.7	10.0	22.5	19.2
Not all dwellings connected	8.0	14.3	10.7	4.1	20.7	3.4
Access to electricity						
Organised electricity supply	100.0	100.0	99.0	100.0	96.6	99.6
No organised supply	0.0	0.0	1.0	n.p.	3.4	0.4
20 or more interruptions in the last 12 months[(d)]	1.5	1.5	11.4	15.8	13.7	19.1
At least one interruption longer than 24 hours in last 12 months[(d)]	16.7	41.2	36.4	19.2	27.0	28.0
Not all dwellings connected	4.5	2.9	0.0	0.0	3.5	2.0
Access to rubbish disposal						
Community has organised rubbish collection[(d)]	90.9	94.8	97.7	99.9	91.4	96.9
Community does not have organised rubbish disposal[(d)]	9.1	5.2	2.3	n.p.	8.6	3.1
Health and medical services						
Aboriginal primary health care centre						
Located within community	28.8	67.0	10.4	52.7	8.6	42.8
Located less than 100 km	65.8	30.4	78.1	45.4	46.0	20.6
Located 100 km or more	5.5	2.6	11.5	2.0	45.4	36.6

(continued)

Table 1.14.10 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very Remote	
Community infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
			Per cent			
Total stated	100.0	100.0	100.0	100.0	100.0	100.0
Hospital						
Located within community	5.4	49.3	1.0	28.5	0.6	7.1
Located less than 100 km	91.9	49.2	85.4	69.4	17.4	18.3
Located 100 km or more	2.7	1.5	13.6	2.1	82.0	74.6
Total stated	100.0	100.0	100.0	100.0	100.0	100.0
Other (state funded) community health centre						
Located within community	15.3	41.9	4.1	31.6	10.1	44.8
Located less than 100 km	84.7	58.1	87.6	52.8	48.7	21.3
Located 100 km or more	0.0	0.0	8.2	15.6	41.2	33.9
Total stated	100.0	100.0	100.0	100.0	100.0	100.0
Emergency services[(f)]						
Access to medical emergency air services	6.3	10.0	14.7	60.5	35.3	81.2
No access to medical emergency air services	93.8	90.0	85.3	39.5	64.7	18.8
Whether health professionals visiting or working in the community[(f)]						
Male Indigenous health worker daily, weekly, fortnightly	52.5	58.3	57.1	92.7	39.2	62.2
Male Indigenous health worker monthly or longer	10.0	5.5	0.0	0.0	9.7	6.6
No male Indigenous health worker	37.5	36.2	42.9	7.3	51.1	31.2
Female Indigenous health worker daily, weekly, fortnightly	52.5	61.6	57.1	92.7	55.5	80.0
Female Indigenous health worker monthly or longer	12.5	8.2	0.0	0.0	7.0	3.7
No female Indigenous health worker	35.0	30.3	42.9	7.3	37.4	16.2

(continued)

Table 1.14.10 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very Remote	
Community infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
			Per cent			
Doctor daily, weekly, fortnightly	45.0	57.5	47.6	88.6	39.6	58.9
Doctor monthly or longer	7.5	6.5	0.0	0.0	31.3	29.6
No doctor	47.5	36.0	52.4	11.4	29.1	11.5
Registered nurse daily, weekly, fortnightly	45.0	54.9	52.4	88.4	68.3	88.8
Registered nurse monthly or longer	7.5	10.2	0.0	0.0	10.6	4.4
No registered nurse	47.5	35.0	47.6	11.6	21.1	6.8
Educational services						
Primary						
Located within community	25.3	61.6	12.4	59.4	23.6	76.9
Located less than 50 km	73.3	38.3	72.4	38.0	44.5	17.3
Located 50 km or more	1.3	n.p.	15.2	2.6	32.0	5.9
Total stated	100.0	100.0	100.0	100.0	100.0	100.0
Secondary school up to Year 10						
Located within community	2.8	36.9	1.0	0.8	5.3	33.7
Located less than 50 km	91.5	61.8	70.6	78.0	31.4	22.0
Located 50 km or more	5.6	1.3	28.4	21.2	63.3	44.3
Total stated	100.0	100.0	100.0	100.0	100.0	100.0
Secondary school up to Year 12						
Located within community	5.3	2.9	1.9	30.6	3.8	25.5
Located less than 50 km	88.0	87.9	67.3	54.2	17.7	13.3
Located 50 km or more	6.7	9.3	30.8	15.2	78.6	61.3
Total stated	100.0	100.0	100.0	100.0	100.0	100.0

(continued)

Table 1.14.10 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very Remote	
Community infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
			Per cent			
Access to educational services other than school						
Pre-primary	33.3	70.1	20.5	43.9	37.1	55.2
Homework centre	10.6	8.5	11.4	8.9	6.6	10.6
TAFE courses	30.3	68.2	9.1	36.5	18.0	31.4
Other adult education	13.6	17.5	9.1	10.5	14.5	23.8
Other educational services	1.5	0.6	4.5	8.0	5.9	8.1
No other educational services	56.1	25.3	70.5	44.1	50.8	26.7
Communication services						
Public access to community telecommunication facilities						
Public telephones	46.7	77.0	48.6	74.5	60.2	86.7
Satellite dish	6.1	9.8	15.9	28.9	66.0	85.5
Radio	98.5	99.4	100.0	100.0	89.1	95.0
Television	100.0	100.0	100.0	100.0	93.0	97.9
Internet	30.3	35.8	13.6	60.8	43.0	61.8
Community has no access to a public telephone	53.3	23.0	51.4	25.5	39.8	13.3
Community has no access to internet	69.7	64.2	86.4	39.2	57.0	38.2
Transport						
Access to community not located in town						
Main mode of transport						
Road	100.0	100.0	97.6	96.6	86.3	72.8
Air	0.0	0.0	0.0	0.0	10.8	23.7
Sea	0.0	0.0	2.4	3.4	2.8	3.6

(continued)

Table 1.14.10 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very Remote	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
			Per cent			
***Usual method of transport*[(d)]**						
Private	80.4	89.3	87.0	87.8	86.8	76.0
Public	8.7	4.8	13.0	12.2	8.1	20.5
Community-owned vehicle	8.7	4.4	0.0	0.0	3.8	2.0
Other	2.2	1.5	0.0	0.0	1.3	1.5
***Whether transport services available to/from community*[(d)]**						
Public	34.8	47.5	13.0	12.2	15.0	31.6
Community	52.2	59.9	30.4	33.0	17.5	18.1
***Road access*[(d)]**						
Road access not cut	82.6	61.4	78.3	52.0	35.3	27.8
Road access cut 5 or more times	4.3	35.7	13.0	45.0	17.9	13.8
Inaccessible by road	0.0	0.0	4.3	4.2	14.5	28.8
***Airstrip*[(d)]**						
Airstrip located in community	2.2	9.8	26.1	52.8	59.8	81.2
Airstrip open all year round	100.0	100.0	50.0	32.3	75.0	77.8
Airstrip not open all year round	0.0	0.0	50.0	67.7	25.0	22.2
Community services[(d)]						
Accommodation facilities						
Visitor	9.1	11.1	9.1	11.1	41.8	65.2
Camping	10.6	5.0	10.6	5.0	15.2	15.1
Single men’s	10.6	12.5	10.6	12.5	14.5	23.1

(continued)

Table 1.14.10 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very Remote	
Community infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
			Per cent			
Single women's	7.6	10.8	7.6	10.8	7.8	15.4
Hostel	3.0	1.3	3.0	1.3	2.0	2.9
Contract workers	4.5	9.1	4.5	9.1	30.1	61.5
Disability	4.5	9.9	4.5	9.9	7.0	11.2
Aged	10.6	51.4	10.6	51.4	12.1	27.7
Women's refuge	4.5	48.9	4.5	48.9	10.2	29.6
Other	3.0	12.8	3.0	12.8	0.8	1.8
No accommodation facilities	74.2	41.1	74.2	41.1	39.8	16.4
Public facilities						
Hall/meeting area	56.1	80.5	56.1	80.5	55.5	72.4
Administration building	50.0	76.1	50.0	76.1	68.4	88.4
Store	13.6	59.0	25.0	75.0	60.5	84.9
Library	9.1	45.8	9.1	29.7	13.3	37.2
Arts/cultural centre	28.8	65.5	15.9	63.5	34.4	53.6
Women's centre	13.6	45.4	18.2	37.4	37.5	60.5
Child care centre	25.8	67.8	22.7	39.7	31.6	59.3
Youth centre	15.2	47.5	15.9	61.4	21.1	40.5
Canteen	6.1	5.1	9.1	40.9	15.2	40.0
Broadcasting facilities	6.1	22.7	11.4	61.5	40.6	71.6
Other	12.1	32.7	11.4	11.8	10.2	13.9
No public facilities	33.3	14.8	34.1	7.8	20.3	5.0

(continued)

Table 1.14.10 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very Remote	
Community infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
			Per cent			
Recreation facilities						
Sports grounds	28.8	68.2	25.0	75.0	54.3	81.6
Outdoor basketball/netball courts	33.3	63.3	31.8	74.8	55.1	73.8
Indoor or covered sporting facilities	10.6	54.6	15.9	66.1	12.5	31.9
Swimming pools	4.5	38.0	2.3	5.8	9.0	23.1
Other buildings used for sport	13.6	45.9	9.1	42.4	17.2	34.0
Other community sporting facilities	1.5	0.7	11.4	13.4	6.3	11.6
No sporting facilities	51.5	19.1	63.6	19.4	30.9	9.6
Community priority needs plan[(d)]						
Communities with a community priority needs plan	45.5	43.0	72.7	70.5	49.6	60.2
Of those with plan, needs identified include:						
More housing	86.2	121.5	90.3	96.1	92.9	97.2
Upgrade water supply	37.9	50.4	67.7	79.5	42.9	43.8
Upgrade electricity supply	20.7	14.2	61.3	32.0	36.5	36.6
Upgrade sewerage	37.9	79.5	61.3	76.3	41.3	40.2
Rubbish collection/disposal	51.7	62.6	29.0	22.5	48.4	43.7
Transport	58.6	40.7	19.4	19.2	42.9	47.1
Communication facilities	34.5	44.3	9.7	7.1	30.2	38.9
Education facilities	41.4	88.8	9.7	8.9	34.9	39.4
Sports facilities	62.1	107.3	25.8	23.7	62.7	69.7
Health care facilities	58.6	96.8	16.1	16.9	45.2	50.7
Animal control	55.2	106.4	19.4	10.3	40.5	55.7

(continued)

Table 1.14.10 (continued): Proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, by remoteness, 2006

	Non-remote		Remote		Very Remote	
Community Infrastructure	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**	**Communities**	**Reported usual population**
			Per cent			
Broadcasting capabilities	24.1	73.3	3.2	3.8	34.1	39.5
Other	17.2	19.3	12.9	12.4	31.0	32.4
Communities developing a community priority needs plan	43.9	53.9	25.0	29.2	34.8	31.1
No community priority needs plan being developed	10.6	3.0	2.3	n.p.	15.6	8.7
Total no. of communities	**75**	**12,560**	**107**	**10,775**	**1,005**	**69,625**

(a) All proportions were calculated excluding 'not stated' from denominator.

(b) Excluding communities with carted and other organised water supply.

(c) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency, excluding communities where water was not sent away for testing and communities connected to town supply.

(d) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency.

(e) Excluding communities which reported pit and pan toilets as the main sewerage system type.

(f) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of fewer than 50 persons but which are not administered by a larger discrete Indigenous community or resource agency, and which are located 10 kilometres or more from a hospital.

Source: AIHW analysis of 2006 CHINS.

Table 1.14.11: Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2001

Community Infrastructure	Dwellings		Reported usual population	
	No.	%	No.	%
Housing				
Condition of permanent dwellings managed by Indigenous Housing Organisations				
needing minor or no repairs	14,990	72.1	n.a.	n.a.
needing major repairs	4,024	19.3	n.a.	n.a.
needing replacement	1,790	8.6	n.a.	n.a.
Total dwellings[(b)]	**21,287**	**100.0**	**n.a.**	**n.a.**
	Communities		**Reported usual population**	
	No.	**%**	**No.**	**%**
No-one in community living in temporary dwellings	745	61.3	56,759	52.5
Population living in temporary dwellings	n.a.	n.a.	5,602	5.2
No-one in community requiring permanent dwelling	776	63.9	59,868	55.4
Population requiring permanent housing	n.a.	n.a.	5,120	5.3
Access to clean water				
Organised water supply[(c)]	1,173	96.5	107,797	99.7
No organised water supply	43	3.5	288	0.3
Drinking water failed testing in last 12 months[(d)]	61	32.6	17,206	24.7
Drinking water not sent away for testing[(e)]	56	22.8	6,561	8.4
Experienced 5 or more water interruptions over last 12 months[(e)(f)]	n.a.	n.a.	n.a.	n.a.
Experienced interruptions to water supply greater than 24 hours[(e)(f)]	n.a.	n.a.	n.a.	n.a.
Access to sewerage				
Organised sewerage supply[(g)]	898	73.8	103,402	95.7
No organised system	318	26.2	4,683	4.3
Experienced overflows or leakage[(e)]	171	43.8	54,123	56.0
Over a 12 month period 10 or more overflows[(e)]	42	10.8	10,341	10.7
Overflows or leakages longer than 48 hours [(e)]	104	26.9	30,378	31.7
Not all dwellings connected	62	6.1	3,171	3.0
Access to electricity				
Organised electricity supply	1,136	93.4	107,404	99.4
no organised supply	80	6.6	681	0.6
20 or more interruptions in the last 12 months[(e)]	60	15.5	17,301	18.0
At least one interruption greater than 24 hours in last 12 months[(e)]	57	14.8	9,682	10.1
Not all dwellings connected[(e)]	11	2.8	2,072	1.9
Access to rubbish disposal				
Community has organised rubbish collection[(e)]	363	92.8	94,481	97.8
Community does not have organised rubbish disposal[(e)]	28	7.2	2,089	2.2

(continued)

Table 1.14.11 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2001

Community Infrastructure	Communities		Reported usual population	
	No.	%	No.	%
Health and medical services				
Aboriginal primary health care centre[(f)]				
Located within community	n.a.	n.a.	n.a.	n.a.
Located less than 100km	n.a.	n.a.	n.a.	n.a.
Located 100km or more	n.a.	n.a.	n.a.	n.a.
Total stated	n.a.	n.a.	n.a.	n.a.
Hospital				
Located within community	9	0.7	15,800	14.6
Located less than 100km	364	30.0	35,054	32.4
Located 100km or more	841	69.3	57,222	52.9
Total stated	1,214	100.0	108,076	100.0
Other (state funded) community health centre[(f)]				
Located within community	n.a.	n.a.	n.a.	n.a.
Located less than 100km	n.a.	n.a.	n.a.	n.a.
Located 100km or more	n.a.	n.a.	n.a.	n.a.
Total stated	n.a.	n.a.	n.a.	n.a.
Emergency services[(h)]				
Access to medical emergency air services	525	48.3	64,721	82.6
No access to medical emergency air services	562	51.7	13,661	17.4
Whether health professionals visiting or working in the community[(h)]				
Male Indigenous health worker daily, weekly, fortnightly	89	31.6	34,697	53.4
Male Indigenous health worker monthly or longer	43	15.2	7,526	11.6
No male Indigenous health worker	150	53.2	22,746	35.0
Female Indigenous health worker daily, weekly, fortnightly	166	58.7	53,105	80.4
Female Indigenous health worker monthly or longer	36	12.7	3,905	5.9
No female Indigenous health worker	81	28.6	9,069	13.7
Doctor daily, weekly, fortnightly	167	57.8	57,063	84.7
Doctor monthly or longer	57	19.7	6,167	9.2
No doctor	65	22.5	4,145	6.2
Registered nurse daily, weekly, fortnightly	189	65.4	58,243	86.4
Registered nurse monthly or longer	43	14.9	4,665	6.9
No registered nurse	57	19.7	4,467	6.6

(continued)

Table 1.14.11 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2001

Community Infrastructure	Communities		Reported usual population	
	No.	%	No.	%
Educational services				
Primary				
Located within community	249	20.7	77,039	71.5
Located less than 50km	602	50.1	25,481	23.6
Located 50km or more	351	29.2	5,283	4.9
Total stated	1,202	100.0	107,803	100.0
Secondary school up to Year 10				
Located within community	67	5.6	34,992	32.5
Located less than 50km	435	36.3	30,522	28.4
Located 50km or more	698	58.2	42,128	39.1
Total stated	1,200	100.0	107,642	100.0
Secondary school up to Year 12				
Located within community	17	1.4	5,905	5.5
Located less than 50km	280	23.2	31,002	28.8
Located 50km or more	909	75.4	70,846	65.7
Total stated	1,206	100.0	107,753	100.0
Access to educational services other than school				
Pre-primary	153	39.8	68,474	71.6
Homework centre	40	10.4	14,466	15.1
TAFE courses	77	20.1	41,594	43.5
Other adult education	21	5.5	14,104	14.8
Other educational services	27	7.0	13,362	14.0
No other educational services	194	50.5	20,943	21.9
Communication services				
Public access to community telecommunication facilities				
Public telephones	597	50.8	84,480	78.7
Satellite dish[(f)]	n.a.	n.a.	n.a.	n.a.
Radio	357	93.5	93,118	97.3
Television	363	95.0	94,299	98.5
Internet[(f)]	n.a.	n.a.	n.a.	n.a.
Community has no access to a public telephone	579	49.2	22,877	21.3
Community has no access to internet[(f)]	n.a.	n.a.	n.a.	n.a.

(continued)

Table 1.14.11 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2001

Community Infrastructure	Communities		Reported usual population	
	No.	%	No.	%
Transport				
Access to community not located in town				
Main mode of transport				
Road	1,025	89.4	72,062	72.4
Air	86	7.5	21,312	21.4
Sea	36	3.1	6,092	6.1
Usual method of transport[(f)]				
Private	n.a.	n.a.	n.a.	n.a.
Public	n.a.	n.a.	n.a.	n.a.
Community owned vehicle	n.a.	n.a.	n.a.	n.a.
Other	n.a.	n.a.	n.a.	n.a.
Whether transport services available to/from community[(f)]				
Public	n.a.	n.a.	n.a.	n.a.
Community	n.a.	n.a.	n.a.	n.a.
Road access[(e)]				
Road access not cut	114	37.3	20,122	27.9
Road access cut 5 or more times	37	12.2	17,302	24.1
Inaccessible by road	27	8.1	16,534	18.7
Airstrip[(d)]				
airstrip located in community	167	50.2	61,371	69.3
airstrip open all year round	111	66.5	46,675	76.1
airstrip not open all year round	56	33.5	14,696	23.9
Community services[(e)]				
Accommodation facilities				
Visitor	135	35.2	56,226	58.8
Camping	85	22.2	26,730	28.0
Single men’s	90	23.5	30,411	31.8
Single women’s	40	10.4	16,291	17.0
Hostel	15	3.9	9,362	9.8
Contract workers	83	21.7	41,068	42.9
Disability	40	10.4	19,144	20.0
Aged	65	17.0	37,067	38.8
Women’s refuge	29	7.6	29,045	30.4
Other	4	1.0	1,357	1.4
No accommodation facilities	149	38.8	17,435	18.2

(continued)

Table 1.14.11 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2001

Community Infrastructure	Communities		Reported usual population	
	No.	%	No.	%
Public facilities				
Hall/meeting area	228	59.2	72,691	75.6
Administration building	146	37.9	83,150	86.5
Store	181	47.0	75,636	78.6
Library	49	12.7	32,965	34.3
Arts/cultural centre	91	23.6	40,305	41.9
Women’s centre	123	31.9	56,713	59.0
Child care centre	111	28.8	51,116	53.1
Youth centre	60	15.6	35,738	37.2
Canteen	53	13.8	36,624	38.1
Broadcasting facilities[(f)]	n.a.	n.a.	n.a.	n.a.
Other	51	13.2	25,122	26.1
No public facilities	79	20.5	5,239	5.4
Recreation facilities				
Sports grounds	168	43.8	72,820	76.5
Outdoor basketball/netball courts	183	47.7	69,563	73.1
Indoor or covered sporting facilities	29	7.6	19,316	20.3
Swimming pools	23	6.0	13,749	14.4
Other buildings used for sport	56	14.6	27,821	29.2
Other community sporting facilities	10	2.6	6,820	7.2
No sporting facilities	161	41.9	14,087	14.8
Community priority needs plan[(f)]				
Communities with a community priority needs plan	n.a.	n.a.	n.a.	n.a.
Of those with plan needs identified include:				
More housing	n.a.	n.a.	n.a.	n.a.
Upgrade water supply	n.a.	n.a.	n.a.	n.a.
Upgrade electricity supply	n.a.	n.a.	n.a.	n.a.
Upgrade sewerage	n.a.	n.a.	n.a.	n.a.
Rubbish collection/disposal	n.a.	n.a.	n.a.	n.a.
Transport	n.a.	n.a.	n.a.	n.a.
Communication facilities	n.a.	n.a.	n.a.	n.a.
Education facilities	n.a.	n.a.	n.a.	n.a.
Sports facilities	n.a.	n.a.	n.a.	n.a.
Health care facilities	n.a.	n.a.	n.a.	n.a.
Animal control	n.a.	n.a.	n.a.	n.a.
Broadcasting capabilities	n.a.	n.a.	n.a.	n.a.

(continued)

Table 1.14.11 (continued): Number and proportion[(a)] of discrete Indigenous communities by characteristics contributing to community functioning, 2001

Community Infrastructure	Communities		Reported usual population	
	No.	%	No.	%
Other	n.a.	n.a.	n.a.	n.a.
Communities developing a community priority needs plan	n.a.	n.a.	n.a.	n.a.
No community priority needs plan being developed	n.a.	n.a.	n.a.	n.a.
Total no. of communities	**1,216**	**100.0**	**108,085**	**100.0**

n.a. Not available

(a) All proportions were calculated excluding not stated from denominator.

(b) Includes condition of permanent dwellings not stated.

(c) Excluding communities with carted and other organised water supply.

(d) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency, excluding communities where water not sent away for testing and communities connected to town supply.

(e) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(f) Data not collected in 2001 CHINS.

(g) Excluding communities who reported pit and pan toilets as the main sewerage system type.

(h) Percentage calculated as a proportion of all discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency, and are located 10 kilometres or more from a hospital.

Source: AIHW analysis of 2001 CHINS.

Data quality issues

Community functioning should be measured at the community level, but many of the data items currently collected are based only on individuals. This will affect how community functioning data can be interpreted.

Community Housing and Infrastructure Needs Survey (CHINS)

The 2006 CHINS collected information on a variety of topics from discrete Aboriginal and Torres Strait Islander communities throughout Australia and on Indigenous organisations that provide rental housing to Aboriginal and Torres Strait Islander peoples. In 2006 CHINS information was collected on 496 Indigenous organisations which managed a total of 21,854 permanent dwellings. The majority of those dwellings were located in the Northern Territory (6,448), Queensland (6,230), New South Wales (4,176) and Western Australia (3,462) (ABS 2007).

The CHINS covers only discrete Indigenous communities. In 2006 the survey collected information from 1,187 discrete Indigenous communities which included approximately 92,960 Aboriginal and Torres Strait Islander peoples or 18% of the total Indigenous population. CHINS data are collected every 5 years. The data are collected from key personnel in Indigenous communities and housing organisations knowledgeable about housing and infrastructure issues.

The estimates are not subject to sampling error, as the CHINS was designed as a complete enumeration of discrete Indigenous communities. However, data could not be obtained from a small number of communities. In addition, the community population was often estimated by community representatives without reference to records.

Further information on the CHINS can be found in the 2006 CHINS summary publication (ABS 2007).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSISS uses the standard Indigenous status question. The NATSISS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problems inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSISS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions (ABS 2004).

Non-Indigenous comparisons are available through the General Social Survey. Time series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSISS data quality issues can be found in the 2002 NATSISS publication (ABS 2004).

References

ABS (Australian Bureau of Statistics) 2004. National Aboriginal and Torres Strait Islander Social Survey 2002. ABS cat. no. 4714.0. Canberra: ABS.

ABS 2007. Housing and infrastructure in Aboriginal and Torres Strait Islander communities, Australia 2006. ABS cat. no. 4710.0. Canberra: ABS.

1.15 Perceived health status

Self-reported, self-assessed health status of Aboriginal and Torres Strait Islander Australians

Data sources

Data for this measure come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey and the 2002 National Aboriginal and Torres Strait Islander Social Survey.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Analyses

Age-standardised rates and ratios have been used for this indicator as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-assessed health status

- In 2004–05 around 43% of the Indigenous population aged 15 years and over reported their health as very good or excellent, 35% reported their health as good and 22% reported their health as fair or poor.
- After adjusting for differences in age structure between the Indigenous and non-Indigenous population, Indigenous Australians were almost twice as likely as non-Indigenous Australians to report their health as fair or poor.

Self-assessed health status by age and sex

- The proportion of Indigenous Australians aged 15–24 years reporting fair or poor health was 9% compared with 50% of those aged 55 years and over (Table 1.15.1). Indigenous Australians were more likely than non-Indigenous Australians to report fair or poor health across all age groups (Figure 1.15.1).
- Indigenous females were more likely to report their health as fair or poor than Indigenous males (24% compared with 19%) (Table 1.15.2).

Table 1.15.1: Self-assessed health status, by Indigenous status and age, persons aged 15 years and over, 2004–05(a)(b)

	15–24		25–34		35–44		45–54		55 and over		Total non-age-standardised		Total age-standardised		
	Indig	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Rate ratio**
								Per cent							
Self assessed health status															
Excellent	23*	31*	12*	24*	10*	22*	7*	19*	5*	13*	14*	21*	11	21	0.5*
Very good	36	39	37	40	28*	40*	18*	36*	14*	28*	30*	35*	25	36	0.7*
Subtotal excellent/ very good	*59**	*70**	*49**	*64**	*38**	*62**	*25**	*55**	*19**	*41**	*43**	*56**	*36*	*57*	*0.6**
Good	32*	24*	36*	28*	38*	27*	38*	29*	32*	30*	35*	28*	35	28	1.3*
Fair	8	6	12*	7*	18*	9*	24*	11*	31*	19*	16*	11*	20	11	1.8*
Poor	1(c)	1	3	2	6*	2*	12*	5*	19*	9*	6*	4*	10	4	2.2*
Subtotal fair/poor	*9*	*7*	*15**	*9**	*24**	*11**	*36**	*16**	*50**	*28**	*22**	*16**	*29*	*15*	*1.9**
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	**92,067**	**2,636,199**	**69,772**	**2,761,354**	**59,057**	**2,899,566**	**39,578**	**2,705,580**	**33,167**	**4,529,678**	**293,641**	**15,532,377**	**293,641**	**15,532,377**	**. .**

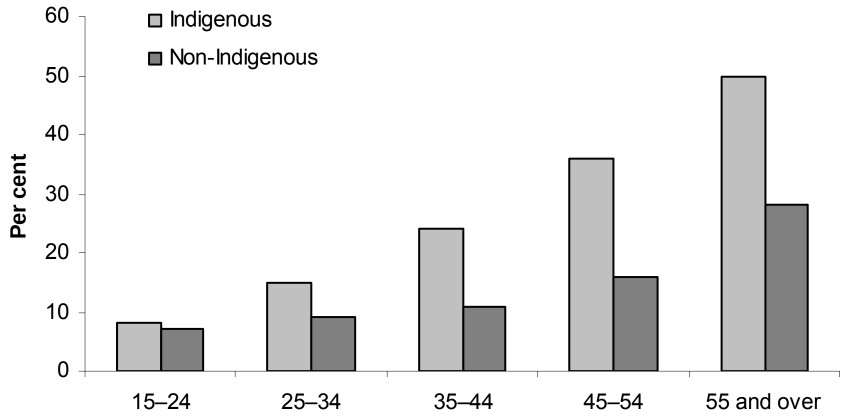
* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Information for some persons aged 15–17 years was provided by a parent or guardian.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Sources: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.



Source: ABS 2006.

Figure 1.15.1: Proportion of persons reporting fair or poor health, by Indigenous status and age group, 2004–05

Table 1.15.2: Self-assessed health status, persons aged 15 years and over, by sex and Indigenous status, 2004–05[(a)(b)]

	Non-age-standardised				Age-standardised					
	Males		Females		Males			Females		
Self-assessed health status	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Ratio**	**Indig**	**Non-Indig**	**Ratio**
	%	%	%	%	%	%		%	%	
Excellent	15*	21*	13*	21*	11	21	0.5*	11	22	0.5*
Very good	30*	34*	29*	36*	26	35	0.7*	25	37	0.7*
Subtotal excellent/very good	45*	55*	42*	58*	36	55	0.7*	36	58	0.6*
Good	36*	29*	34*	27*	35	29	1.2*	34	27	1.3*
Fair	14*	12*	17*	11*	19	12	1.6*	20	11	1.9*
Poor	6	5	7*	4*	9	5	2.1*	10	4	2.4*
Subtotal fair/poor	19*	16*	24*	15*	28	16	1.7*	30	15	2.0*
Total	100	100	100	100	100	100	. .	100	100	. .
Total number	**139,595**	**7,666,352**	**154,046**	**7,866,025**	**139,595**	**7,666,352**	**. .**	**154,046**	**7,866,025**	**. .**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Information for some persons aged 15–17 years was provided by a parent or guardian.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.

Self-assessed health status by state/territory and remoteness

- The proportion of Indigenous Australians aged 15 years and over reporting fair or poor health was similar in all states and territories (between 22% and 23%) except in the Australian Capital Territory and the Northern Territory where 17% and 16% respectively reported their health as fair or poor (Table 1.15.3a). Indigenous Australians were approximately twice as likely as non-Indigenous Australians to report fair or poor health across all states and territories (Table 1.15.3b).
- A higher proportion of Indigenous Australians aged 15 years and over in non-remote areas reported fair or poor health (23%) than Indigenous Australians in remote areas (19%) (Table 1.15.4a). Indigenous Australians were around twice as likely to report their health as fair or poor as non-Indigenous Australians across all remoteness categories (Table 1.15.4b).

Table 1.15.3a: Self-assessed health status, Indigenous persons aged 15 years and over, by state and territory, 2004–05(a)(b)

Self-assessed health status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Per cent				
Excellent	13	17	13	12	15	19	10	15	14
Very good	30	31	30	24	27	31	39	35	30
Subtotal excellent/very good	*43*	*48*	*42*	*36*	*42*	*50*	*49*	*51*	*43*
Good	34	30	35	42	35	27	34	34	35
Fair	16	15	16	15	17	14	10	13	16
Poor	7	6	6	7	6	9	8(c)	3	6
Subtotal fair/poor	*23*	*22*	*23*	*22*	*23*	*23*	*17*	*16*	*22*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	**85,426**	**18,492**	**79,351**	**42,043**	**16,677**	**11,256**	**2,596**	**37,800**	**293,641**

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Information for some persons aged 15–17 years was provided by a parent or guardian.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Table 1.15.3b: Self-assessed health status, by Indigenous status and state and territory, persons aged 15 years and over, 2004–05(a)(b)

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT	
Self-assessed health status	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig(c)**
	Per cent															
Excellent	11*	21*	12*	23*	10*	20*	9*	22*	12*	21*	16*	22*	7(d)*	22*	12	. .
Very good	25*	35*	27*	37*	25*	36*	20*	36*	24*	35*	26*	36*	36	36	31	. .
Total excellent/very good	*36**	*56**	*40**	*59**	*35**	*55**	*29**	*58**	35*	56*	*42**	*58**	*44**	*58**	*42*	. .
Good	35*	28*	30	27	34*	28*	41*	28*	32	29	28	25	32	28	35	. .
Fair	19*	12*	19*	10*	21*	12*	20*	10*	23*	12*	19*	12*	13(d)	10	17	. .
Poor	9*	5*	11*	4*	11*	4*	11*	4*	9*	4*	12(d)*	6*	11(d)	4	5	. .
Total fair/poor	*29**	*16**	*30**	*14**	*31**	*16**	*31**	*14**	32*	15*	*31**	*18**	*24*	*14*	*22*	. .
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	**85,426**	**5,222,355**	**18,492**	**3,944,895**	**79,351**	**2,949,876**	**42,043**	**1,498,665**	**16,677**	**1,200,435**	**11,256**	**366,280**	**2,596**	**252,744**	**37,800**	**. .**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Information for some persons aged 15–17 years was provided by a parent or guardian.

(c) Sample does not support estimates for the non-Indigenous population in the Northern Territory.

(d) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.

Table 1.15.4a: Self-assessed health status, Indigenous persons aged 15 years and over, by remoteness, 2004–05[(a)(b)]

Self-assessed health status	Major Cities	Inner Regional	Outer Regional	*Total non-remote*	Remote	Very Remote	*Total remote*	Total
					Per cent			
Excellent	12	14	15	*14*	14	13	*13*	14
Very good	31	29	30	*30*	24	30	*28*	30
Total excellent/very good	*44*	*43*	*45*	*44*	*38*	*43*	*41*	*43*
Good	32	34	33	*33*	38	41	*40*	35
Fair	16	16	16	*16*	17	13	*14*	16
Poor	8	7	5	*7*	7	3	*5*	6
Total fair/poor	*25*	*23*	*21*	*23*	*24*	*16*	*19*	*22*
Total(c)	**100**	**100**	**100**	***100***	**100**	**100**	***100***	**100**
Total number	**89,350**	**58,372**	**65,700**	***213,422***	**24,456**	**55,763**	***80,219***	**293,641**

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Information for some persons aged 15–17 years was provided by a parent or guardian.

(c) Includes self-assessed health status ‘not stated’.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Table 1.15.4b: Self-assessed health status, by Indigenous status and remoteness, persons aged 15 years and over, 2004–05[(a)(b)]

	Major Cities			**Inner Regional**			**Outer Regional**			***Total non-remote***			**Remote**			**Very Remote[(c)]**	***Total remote[(c)]***
Self-assessed health status	**Indig.**	**Non-Indig.**	**Ratio[(d)]**	**Indig.**	**Non-Indig.**	**Ratio[(d)]**	**Indig.**	**Non-Indig.**	**Ratio[(d)]**	***Indig.***	***Non-Indig.***	**Ratio[(d)]**	**Indig.**	**Non-Indig.**	**Ratio[(d)]**	**Indig.**	***Indig.***
	(%)	(%)		(%)	(%)		(%)	(%)		*(%)*	*(%)*		(%)	(%)		(%)	*(%)*
Excellent	10	22	0.4*	12	21	0.6*	11	18	0.6*	*11*	*21*	*0.5**	11	19	0.6*	11	*11*
Very good	26	35	0.7*	25	37	0.7*	26	36	0.7*	*26*	*36*	*0.7**	21	30	0.7*	26	*24*
Total excellent/very good	*36*	*57*	*0.6**	*37*	*58*	*0.6**	*37*	*54*	*0.7**	*36*	*57*	*0.6**	*32*	*49*	*0.6**	*37*	*35*
Good	31	28	1.1	34	26	1.3*	34	28	1.2*	*33*	*28*	*1.2**	38	35	1.1	41	*40*
Fair	20	11	1.9*	19	12	1.5*	22	13	1.7*	*20*	*11*	*1.8**	20	12	1.7*	17	*18*
Poor	13	4	3.2*	10	4	2.4*	7	5	1.3	*11*	*4*	*2.4**	11	3[(e)]	3.2*	5	*7*
Total fair/poor	*34*	*15*	*2.3**	*29*	*16*	*1.8**	*29*	*18*	*1.6**	*31*	*15*	*2.0**	*30*	*15*	*2.0**	*22*	*25*
Total[(f)]	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	***100***	***100***	. .	**100**	**100**	. .	**100**	***100***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Information for some persons aged 15–17 years was provided by a parent or guardian.

(c) Non-Indigenous data were not collected in very remote areas in the National Health Survey.

(d) Indigenous rate divided by non-Indigenous rate.

(e) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(f) Includes self-assessed health status ‘not stated’.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.

Time series analysis

- There has been a significant decline in Indigenous Australians reporting their health as fair or poor between 2001 (26%) and 2004–05 (22%) (Figure 1.15.2).

Source: ABS and AIHW analysis of 2001 National Health Survey (Indigenous supplement), 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.

Figure 1.15.2: Self-assessed health status, by Indigenous status, 2001 and 2004–05

Self-assessed health status by population, health and social/cultural characteristics

Table 1.15.5 presents data on the association between the self-assessed health status of Indigenous Australians and a number of summary population characteristics.

- In 2004–05, Indigenous Australians aged 15 years and over who reported their highest year of schooling was Year 9 or below were more likely to report their health as fair or poor than Indigenous Australians who had completed Year 11 or 12 as their highest year of schooling (Table 1.15.5).
- A higher proportion of Indigenous Australians who were employed reported their health as excellent or very good than Indigenous Australians who were unemployed or not in the labour force.
- Indigenous Australians who were in the lowest (1st) quintile of household income and index of disparity were more likely to report their health as fair or poor than Indigenous Australians in the highest (5th) quintile for these characteristics.

Table 1.15.6 presents data on the self-assessed health status of Indigenous Australians by the number of long-term conditions reported.

- In 2004–05, a higher proportion of Indigenous Australians with no long-term conditions reported their health as excellent/very good than Indigenous Australians with three or more long-term conditions (49% compared with 27%).

Table 1.15.5: Self-assessed health status, by selected population characteristics and Indigenous status, persons aged 15 years and over, 2004–05[(a)][(b)]

	Excellent/very good			Good			Fair/poor			Total	
	Indigenous	Non-Indigenous	Rate ratio(c)	Indigenous	Non-Indigenous	Rate ratio(c)	Indigenous	Non-Indigenous	Rate ratio(c)	Indigenous	Non-Indigenous
	(%)	(%)		(%)	(%)		(%)	(%)		(%)	(%)
Main language spoken at home(d)											
English	34	57	0.6*	35	28	1.2*	32	15	2.0*	100	100
Other	23	44	0.5*	45	34	1.3	32	22	1.0	100	100
Highest year of school completed(e)											
Year 12	42	62	0.7*	35	27	1.3	24	11	2.2*	100	100
Year 11	39	57	0.7*	41	30	1.4	20	13	1.5	100	100
Year 10	36	53	0.7*	38	31	1.2*	26	16	1.6*	100	100
Year 9 or below(f)	30	41	0.7*	36	31	1.2*	34	28	1.2*	100	100
Whether has non-school qualification(e)											
Has a non-school qualification	38	59	0.6*	36	28	1.3*	26	13	2.1*	100	100
Does not have a non-school qualification	33	52	0.6*	36	29	1.2*	31	19	1.6*	100	100
Employment											
Employed	43	64	0.7*	39	27	1.4*	18	9	2.0*	100	100
Unemployed	38	48	0.8	25	31	0.8	37	21	1.8	100	100
Not in the labour force	29	47	0.6*	33	28	1.2*	38	26	1.5*	100	100
Household income											
1st quintile	30	42	0.7*	34	29	1.2*	35	29	1.2*	100	100
5th quintile	45	69	0.7*	40	24	1.6	14	7	2.1	100	100

(continued)

Table 1.15.5 (continued): Self-assessed health status, by selected population characteristics and Indigenous status, persons aged 15 years and over, 2004–05[(a)(b)]

	Excellent/very good			Good			Fair/poor			Total	
	Indigenous	Non-Indigenous	Rate ratio[(c)]	Indigenous	Non-Indigenous	Rate ratio[(c)]	Indigenous	Non-Indigenous	Rate ratio[(c)]	Indigenous	Non-Indigenous
	(%)	(%)		(%)	(%)		(%)	(%)		(%)	(%)
Index of disparity											
1st quintile	33	48	0.7*	35	29	1.2*	32	22	1.5*	100	100
5th quintile	49	65	0.8	24	25	1.0	27	10	2.6	100	100
Location											
Remote[(g)]	35	n.p.	n.p.	40	n.p.	n.p.	25	n.p.	n.p.	100	100
Non-remote	36	57	0.6*	33	28	1.2*	31	15	2.0*	100	100
Total persons aged 18 years and over	**34**	**55**	**0.6***	**36**	**28**	**1.3***	**30**	**16**	**1.9***	**100**	**100**
Total persons aged 15 years and over	**36**	**57**	**0.6***	**35**	**28**	**1.3***	**29**	**15**	**1.9***	**100**	**100**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Information for some persons aged 15–17 years was provided by a parent or guardian.

(c) Indigenous rate divided by non-Indigenous rate.

(d) Persons aged 18 years and over.

(e) Persons not still at school.

(f) Includes persons who never attended school.

(g) Non-Indigenous data were not collected in remote areas in the National Health Survey.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.

Table 1.15.6: Self-assessed health status, by long-term conditions and Indigenous status, persons aged over 15 years, 2004–05[(a)(b)]

	Number of long-term conditions[(c)]														
	0			1			2			3+			Total		
Self-assessed health status	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
	%	%		%	%		%	%		%	%		%	%	
Excellent	17[(d)]	36	0.5*	16	31	0.5*	13	23	0.5*	6	13	0.5*	11	21	0.5*
Very good	32	34	0.9	30	42	0.7*	29	40	0.7*	21	32	0.6*	25	36	0.7*
Subtotal excellent/very good	49	70	0.7*	46	72	0.6*	42	63	0.7*	27	45	0.6*	36	57	0.6*
Good	43	25	1.7*	42	23	1.8*	36	28	1.3*	34	32	1.1	35	28	1.3*
Fair	7[(d)]	4[(d)]	2.0	12[(d)]	4	3.0*	16	7	2.3*	26	16	1.6*	20	11	1.8*
Poor	0[(e)]	1[(e)]	0.3	1[(e)]	1[(d)]	0.7	6[(d)]	1	4.7*	13	7	2.0*	10	4	2.2*
Subtotal fair/poor	8[(d)]	5[(d)]	1.5	12[(d)]	5	2.6*	22	8	2.7*	39	23	1.7*	29	15	1.9*
Total	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number	66,545	2,232,436	. .	53,944	3,043,357	. .	51,243	2,746,277	. .	121,838	7,510,307	. .	293,571	15,532,377	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey 2004–05.

(b) Information for some persons aged 15–17 years was provided by a parent or guardian.

(c) Includes chronic long-term conditions and injury only.

(d) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(e) Estimate has a relative standard error of greater than 50% and is too high for most practical purposes.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004–05 National Health Survey.

Additional information

Data on the association between self-assessed health status and other health and social/cultural characteristics are presented in a number of other health performance measures included in this framework. These data come from the 2004–05 NATSIHS and the 2002 NATSISS and are summarised below.

- In 2002, approximately 45% of Indigenous Australians aged 15 years and over who reported their health as fair/poor had been formally charged by the police compared with 30% of Indigenous Australians who reported their health as excellent or very good (Measure 2.14).
- In 2004–05, the proportion of Indigenous Australians who reported that they usually went to the same GP or medical service was similar for those with reported excellent/very good/good health and those with fair/poor health (89% and 90% respectively) (Measure 3.12).
- In 2002, approximately 21% of Indigenous Australians aged 15 years and over who reported they did not recognise or live on their homeland/traditional country reported their health as fair/poor compared with 24% of Indigenous Australians who reported they recognised and lived on their homeland (Measure 2.17).
- In 2004–05, a higher proportion of Indigenous Australians who reported fair/poor health accessed health care in the last 12 months than Indigenous Australians who reported excellent/very good or good health (64% compared with 44%) (Measure 3.10).
- The proportion of Indigenous Australians aged 18 years who drank at short-term or long-term risky/high-risk levels and reported their health as fair/poor was similar to the proportion of Indigenous Australians in the total population who reported their health as fair/poor (Measure 2.20).
- Approximately 58% of Indigenous Australians in non-remote areas with fair/poor health status reported exercising at sedentary levels compared with 48% of Indigenous Australians with excellent/very good/good health status (Measure 2.22).
- In 2004–05, approximately 65% of Indigenous Australians aged 15–64 years with reported excellent/very good/good health were in the labour force (55% employed) compared with 43% of Indigenous Australians with reported fair/poor health (35% employed) (Measure 2.07).
- A higher proportion of both Indigenous and non-Indigenous Australians aged 18 years who could not get to places when needed reported fair/poor health status than Indigenous and non-Indigenous Australians who could easily get to places when needed (Measure 2.16).

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in these surveys is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS) and the 2002 General Social Survey. The NHS was conducted in major cities and regional and remote areas, but very remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys and the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the NATSIHS 2004–05 (ABS 2006) and NATSISS 2002 (ABS 2004) publications.

References

ABS (Australian Bureau of Statistics) 2004. National Aboriginal and Torres Strait Islander Social Survey 2002. ABS cat. no. 4714.0. Canberra: ABS.

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

1.16 Social and emotional wellbeing

The social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples expressed as a percentage by age group, age-standardised rate and ratio

Data sources

Data for this measure come from the National Aboriginal and Torres Strait Islander Health Survey, the National Aboriginal and Torres Strait Islander Social Survey, the Western Australian Aboriginal Child Health Survey, the Bettering the Evaluation and Care of Health survey, the AIHW National Hospital Morbidity Database, the AIHW National Mortality Database, the AIHW National Community Mental Health Care Database, and the AIHW National Residential Mental Health Care Database.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Western Australian Aboriginal Child Health Survey

This survey was a large-scale investigation into the health of 5,289 Western Australian Aboriginal and Torres Strait Islander children aged 0–17 years. It was undertaken in 2001 and 2002 by the Telethon Institute for Child Health Research in conjunction with the Kulunga Research Network. The survey was the first to gather comprehensive health, educational and developmental information on a population-based sample of Aboriginal and Torres Strait Islander children and their families and communities.

Bettering the Evaluation and Care of Health (BEACH) survey

Information about encounters in general practice is available from the BEACH survey, which is conducted by the AIHW Australian GP Statistics and Classification Centre. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be underestimated. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Because of a late inclusion of a 'not stated' category of Indigenous status in 2001–02 (before which not stated responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2002–03 to 2006–07, during which there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.5% of total GP encounters in the survey.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Mortality

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death, or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data for which year of registration of death was used. Data published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Community mental health care

Information on the use of community mental health services by Aboriginal and Torres Strait Islander peoples is available from the AIHW National Community Mental Health Care Database. The information collected in the database is a nationally agreed set of common data elements collected by service providers based on the National Minimum Data Set for Community Mental Health Care.

The quality of Indigenous identification in this database varies by jurisdiction. In 2005–06, Queensland, Western Australia, Tasmania, the Northern Territory and the Australian Capital Territory reported that the quality of their data was suitable for analysis.

As with hospitalisation data, service contacts in which the Indigenous status of the client was not reported have been included with contacts for non-Indigenous clients under the ‘other’ category.

Residential mental health care

Information on the use of residential mental health services by Aboriginal and Torres Strait Islander peoples is available from the AIHW National Residential Mental Health Care Database. The information collected in the database is a nationally agreed set of common data elements collected by service providers based on the National Minimum Data Set for Residential Mental Health Care.

The quality of Indigenous identification in this database varies by jurisdiction. In 2005–06 there were no residential mental health care services in Queensland and the Northern Territory, and only Western Australia, Tasmania and the Australian Capital Territory reported that the quality of their data was suitable for analysis.

As with hospitalisation data, service contacts for which the Indigenous status of the client was not reported have been included with hospitalisations for non-Indigenous people under the ‘other’ category.

Analyses

Age-standardised rates and ratios have been used for this indicator as a measure of the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported prevalence

Self-reported data on the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples are available from the 2004–05 NATSIHS and the 2002 NATSISS. Data from these two surveys are outlined below.

The social and emotional wellbeing module in the 2004–05 NATSIHS comprised selected questions from two established mental health surveys—the Kessler Psychological Distress Scale and the Medical Outcome Short Form (SF-36). The module also included some questions relating to feelings of anger, the impact of psychological distress, cultural identification and stressors.

Psychological distress

Five questions from the Kessler Psychological Distress Scale were used to measure psychological distress in the 2004–05 NATSIHS. The responses to these five psychological distress items were scored and summed to create a 'Kessler-5' (K5) psychological distress score. The results indicated that 27% of Indigenous adults had high or very high levels of psychological distress, with Indigenous females significantly more likely than Indigenous males to report high levels of psychological distress (32% and 21%, respectively) (AIHW 2008 forthcoming). Psychological distress did not differ significantly by age group or geographic remoteness.

As shown in Table 1.16.1, overall, 71% of Indigenous people reported low/moderate psychological distress levels and 27% reported feelings associated with high/very high levels of psychological distress. No psychological distress score could be calculated for the remaining 2% because of missing data. Indigenous females were significantly more likely than Indigenous males to report high/very high levels of distress (32% and 21%, respectively). In contrast, there were no significant differences in psychological distress levels by age or by remoteness category.

Table 1.16.1: Proportion of Indigenous people aged 18 years and over who reported psychological distress, by level of psychological distress, by demographic characteristics, 2004–05 (per cent)

	Low/ moderate	High/ very high	Total[(a)]
		Per cent	
Sex			
Male	77.1	21.4	100.0
Female	66.2	32.2	100.0
Age			
18–24 years	72.8	26.0	100.0
25–34 years	71.4	27.1	100.0
35–44 years	69.6	29.2	100.0
45–54 years	69.3	29.4	100.0
55 years and over	73.8	23.0	100.0
Remoteness			
Major Cities	74.2	25.2	100.0
Inner Regional	70.8	29.1	100.0
Outer Regional	68.7	29.6	100.0
Remote or Very Remote	70.4	26.0	100.0
Total[(a)]	*71.3*	*27.2*	*100.0*
Total no. of Indigenous people[(a)]	**184,123**	**70,168**	**258,297**

(a) Includes missing responses.

Source: AIHW analysis of the 2004–05 NATSIHS.

By using data from both the 2004–05 NATSIHS and the 2004–05 NHS, the level of psychological distress among Indigenous and non-Indigenous Australians can be compared. After adjusting for age differences between the Indigenous and non-Indigenous populations, Indigenous Australians were twice as likely as non-Indigenous Australians to report high or very high levels of psychological distress. This difference applied to males as well as to females (AIHW 2008 forthcoming).

Across all age groups, with the exception of the age group 18–24 years, the rate of distress for Indigenous Australians was at least twice the non-Indigenous rate (Table 1.16.2).

Table 1.16.2: Number and proportion of people aged 18 years and over who reported high or very high levels of psychological distress, by Indigenous status, by age, 2004–05

	Indigenous		Non-Indigenous		
	Number	Per cent[a]	Number	Per cent[a]	Rate ratio[b]
18–24 years	14,727	26.0	299,556	16.1	1.6
25–34 years	18,935	27.1	338,165	12.2	2.2
35–44 years	17,231	29.2	389,503	13.4	2.2
45–54 years	11,656	29.4	369,117	13.6	2.2
55 years and over	7,620	23.0	528,206	11.7	2.0
Total	*70,168*	*26.6*	*1,924,547*	*13.1*	*2.0*
Total no. of people[c]	**258,297**	. .	**14,753,256**	. .	. .

(a) The rates for total persons were directly age-standardised, and the rates for each age group are crude rates.

(b) Rate ratio Indigenous:non-Indigenous.

(c) Includes missing responses.

Source: AIHW analysis of the 2004–05 NATSIHS and 2004 NHS.

Significant differences by Indigenous status were also observed for each of the three remoteness categories for which there were data (Table 1.16.3), with the largest difference observed for those in Outer Regional areas, where 2.3 Indigenous adults reported high/very high psychological distress levels for every one non-Indigenous adult who reported the same level of psychological distress.

Table 1.16.3: Number and proportion of people aged 18 years and over who reported high or very high levels of psychological distress, by Indigenous status, by remoteness[a], 2004–05

	Indigenous		Non-Indigenous		
	Number	Per cent[b]	Number	Per cent[b]	Rate ratio[c]
Major Cities	19,871	25.4	1,301,362	12.9	2.0
Inner Regional	14,995	27.9	403,581	13.9	2.0
Outer Regional	16,383	29.0	198,968	12.8	2.3
Total[d]	*70,168*	*26.6*	*1,924,547*	*13.1*	*2.0*
Total no. of people[d][e]	**258,297**	**. .**	**14,753,256**	**. .**	**. .**

(a) Since the remote sample of the NHS did not have the same scope and coverage as that of the NATSIHS, comparisons of psychological distress can be made only between Indigenous and non-Indigenous people living in non-remote areas of Australia.

(b) Directly age-standardised using the Australian 2001 standard population.

(c) Rate ratio Indigenous:non-Indigenous.

(d) Includes those living in Remote or Very Remote areas.

(e) Includes missing responses.

Source: AIHW analysis of the 2004–05 NATSIHS and 2004 NHS.

Impact of psychological distress

Among Indigenous Australians who indicated some level of psychological distress (i.e. those who answered 'a little of the time', 'some of the time', 'most of the time' or 'all of the time' to at least one K5 question), 21% indicated having been unable to work or carry out their normal activities because of their distress for at least 1 day during the previous 4 weeks, and 12% had seen a doctor or other health professional at least once for this reason over the same time period. One in seven (15%) of those who indicated some level of psychological distress indicated that physical health problems were the main cause of those feelings all or most of the time.

Visits to health professional

The majority (87%) of those who reported at least some level of psychological distress (a score of more than 5) did not see a doctor or other health professional about their feelings of distress in the 4-week period, but 12% did so (Table 1.16.4). Those who did seek help saw a health professional, on average, 2.1 times during the 4 weeks before interview. Indigenous women were more likely than Indigenous men to have visited a health professional about their distress (14% compared with 8%, respectively). Further, those aged 45–54 years were significantly more likely to have seen a health professional about their distress than those aged 18–24 years (14% and 8%, respectively). Among those who reported one or more visits, the average number of visits did not differ significantly by age, sex or remoteness area.

Table 1.16.4: Proportion of Indigenous people aged 18 years and over who reported a level of psychological distress, by whether saw a health professional because of psychological distress[(a)], by demographic characteristics, 2004–05

	No (0 days)	Yes (1 day or more)		Total[(b)]
	%	%	Average number of visits	%
Sex				
Male	89.5	8.4	2.4	100.0
Female	84.3	14.2	2.0	100.0
Age				
18–24 years	91.3	7.5	2.1	100.0
25–34 years	86.7	12.0	2.2	100.0
35–44 years	85.3	13.0	2.3	100.0
45–54 years	84.1	14.3	1.8	100.0
55 years and over	83.0	12.8	2.2	100.0
Remoteness				
Major Cities	87.4	11.2	2.3	100.0
Inner Regional	86.4	13.2	2.5	100.0
Outer Regional	88.1	10.0	2.0	100.0
Remote or Very Remote	84.4	12.4	1.8	100.0
Total	*86.6*	*11.6*	*2.1*	*100.0*
Total no. of Indigenous people[(b)]	**182,994**	**24,582**	. .	**211,390**

(a) Analysis excludes those who had no stress—K5 score = 5 (18%).

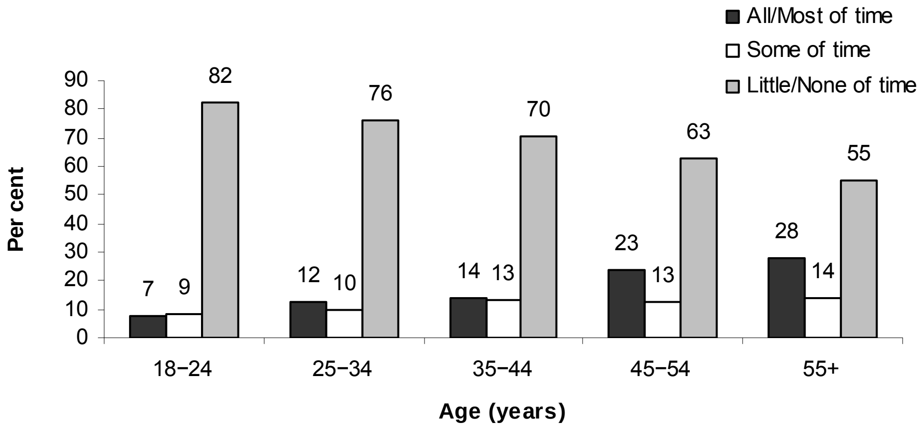
(b) Includes missing responses.

Source: AIHW analysis of the 2004–05 NATSIHS.

Relationship between physical and mental health

Of those who had indicated some level of psychological distress in the previous 4 weeks, 15% said that physical health problems were the main cause of their feelings all or most of the time. Thus, most of the psychological distress that was reported by Indigenous Australians was not an outcome of physical illness.

Although there was no significant difference by sex, there was a clear association with age—as age increased, physical health problems were more likely to be reported as the main cause of feelings of distress all or most of the time (Figure 1.16.1). Indigenous Australians who lived in Major Cities (18%) were more likely than those who lived in Remote or Very Remote areas (11%) to indicate that physical health problems were the main cause of their feelings of distress all or most of the time.



Notes

1. Includes missing responses.
2. Analysis excludes those who had no stress–K5 score = 5 (18%).

Source: AIHW analysis of 2004–05 NATSIHS.

Figure 1.16.1: Proportion of Indigenous people aged 18 years and over who reported a level of psychological distress, by how often physical health problems were the main cause of their psychological distress, by age, 2004–05

Population characteristics

Table 1.16.5 presents the level of psychological distress for Indigenous persons aged 18 years and over by selected population characteristics.

- In 2004–05, a higher proportion of Indigenous persons with fair/poor health reported high/very high levels of psychological distress than Indigenous persons with excellent or very good health (46% compared with 18%).
- Indigenous persons who reported four or more stressors were more likely to have high/very high levels of psychological distress than those who reported three or fewer stressors.
- A higher proportion of Indigenous persons in the lowest income quintile reported high/very high levels of psychological distress than Indigenous persons in the highest income quintile (32% compared with 13%).

- Approximately 31% of Indigenous persons who were renters reported high/very high levels of psychological distress compared with 18% of Indigenous persons who were home owners.
- Indigenous persons who completed Year 9 or below as their highest year of school completed or who did not have a non-school qualification were more likely to have high/very high levels of psychological distress than persons who completed Year 12 or had a non-school qualification.
- Approximately 37% of Indigenous persons who were unemployed reported high/very high levels of psychological distress compared with 21% of Indigenous persons who were employed.

Table 1.16.5: Proportion of people who reported psychological distress, by level of psychological distress, by selected population characteristics, Indigenous persons aged 18 years and over, 2004–05 (per cent)

	Level of psychological distress	
	Low/moderate	**High/very high**
	%	**%**
Self-assessed health status		
Excellent/very good	82.2	17.8
Good	73.6	26.4
Fair/poor	54.1	45.9
Number of stressors		
0–3	77.1	22.9
4–7	60.5	39.5
8–11	54.0	46.0
12–15	64.9	35.1
Individual income		
1st quintile (lowest)	67.7	32.3
5th quintile (highest)	86.9	13.1
Housing		
Owner	82.4	17.6
Renter	69.1	30.9
Highest year of school completed		
Year 9 or below	66.9	33.1
Year 10	71.8	28.2
Year 12	80.1	19.9
Whether has non-school qualification		
Has a non-school qualification	75.0	25.0
Does not have a non-school qualification	71.1	28.9
Employment status		
Employed	79.3	20.7
Unemployed	62.6	37.4
Not in labour force	65.1	34.9
Total	**72.4**	**27.6**
Total number	**184,123**	**70,168**

Source: AIHW analysis of 2004–05 NATSIHS.

Stressors

Respondents of the NATSIHS were asked to indicate which (if any) of 15 stressors they, their family and/or friends had experienced during the 12 months before interview (ABS 2006a).

- In 2004–05, approximately 77% of Indigenous people aged 18 years and over reported that they had experienced at least one stressor in the last 12 months. The most common stressors reported were the death of a family member or close friend (42%), serious illness or disability (28%) alcohol-related problems (20%), and a family member sent to, or currently in, jail (19%) (Table 1.16.6).
- The types of stressors reported by respondents differed significantly according to remoteness area. For example, Indigenous adults who lived in Remote or Very Remote areas were significantly more likely than other Indigenous adults to say that they, their family and/or friends had been witness to violence; experienced overcrowding at home; had a member of family sent to jail/currently in jail; or had a gambling problem. Those living in Inner Regional areas reported an average of 2.2 stressors in the previous 12 months, whereas those living in Remote or Very Remote areas reported an average of 3.
- There were significant differences in the number of stressors reported by Indigenous people across age groups. On average, Indigenous people aged 25–44 experienced the highest number of stressors, those aged 55 years and over experienced the lowest number of stressors and those aged 18–24 were the most likely to report they had experienced no stressors in the last 12 months (AIHW 2008 forthcoming).

Table 1.16.6: Proportion of Indigenous people aged 18 years and over reporting a stressor, by remoteness, by type of stressor, 2004–05 (per cent)

	Major Cities	Inner Regional	Outer Regional	Remote or Very Remote	Australia
			Per cent		
Type of stressor					
Serious illness or disability	30.0	28.4	25.8	28.7	28.4
Serious accident	9.9	7.5	6.8	12.1	9.4
Death of a family member or close friend	41.8	39.2	40.5	45.6	42.1
Divorce or separation	12.4	14.2	11.2	7.3	11.1
Not able to get a job	20.2	15.8	16.4	14.6	16.9
Involuntary loss of job	12.4	7.6	5.0	3.7	7.4
Alcohol-related problems	20.9	15.3	18.1	24.1	20.1
Drug-related problems	19.2	14.5	15.9	15.2	16.4
Witness to violence	11.2	10.8	9.5	23.5	14.2
Abuse or violent crime	11.3	10.1	10.1	13.2	11.4
Trouble with the police	15.6	12.9	17.1	19.0	16.3
Gambling problem	12.6	8.8	11.4	19.4	13.5
Member of family sent to jail/currently in jail	17.2	13.6	17.7	24.7	18.7
Overcrowding at home	11.3	8.9	16.1	29.2	16.9
Discrimination/racism	11.7	11.0	10.4	13.1	11.6
None of the above	22.5	22.6	23.8	20.9	22.4
Average number of stressors	*2.6*	*2.2*	*2.3*	*3.0*	*2.6*
Total no. of Indigenous people[(a)]	**78,705**	**51,445**	**55,364**	**72,783**	**258,297**

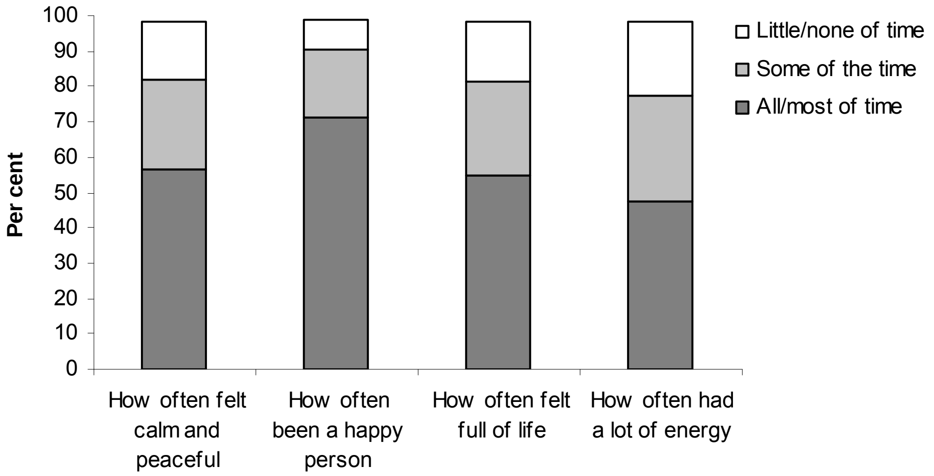
(a) Includes missing responses.

Source: AIHW analysis of the 2004–05 NATSIHS.

Positive wellbeing

Four items were selected from the mental health and vitality scales of the Medical Outcome Short Form Health Survey (SF-36) to provide a measure of positive wellbeing in the NATSIHS. These items measured the extent to which respondents felt calm/peaceful, happy, full of life, and had lots of energy. More than half of the adult Indigenous population reported being happy (71%), calm and peaceful (56%) and/or full of life (55%) all or most of the time, and just under half (47%) said they had a lot of energy all or most of the time. Only a relatively small proportion (between 2% and 7%) of Indigenous Australians said they experienced these feelings of positive wellbeing 'none of the time' (Figure 1.16.2).

Indigenous people aged 55 years and over were more likely than those in the younger age groups to report feeling happy and calm/peaceful all or most of the time, but the only significant difference was between this older group and those aged 25–34 years. Indigenous people aged 55 years and over were least likely to report feeling full of life or having a lot of energy all or most of the time (AIHW 2007b).



Note: Percentages exclude missing responses.

Source: AIHW analysis of the 2004–05 NATISHS.

Figure 1.16.2: Positive wellbeing of Indigenous Australians aged 18 years and over, 2004–05

Cultural, family and community attachments

The 2004–05 NATSIHS and the 2002 NATSISS collected information on a range of social issues relevant to the social and emotional wellbeing of Indigenous Australians including cultural, family and community attachments.

- In 2004–05, approximately 44% of Indigenous people aged 18 years and over reported that they or a relative had been removed from their natural family (Table 1.16.7).
- In 2002, 54% of Indigenous Australians reported they identified with a clan or tribal group, 22% currently lived in traditional lands, 68% had attended cultural events in the last 12 months and 14% did not speak English as a primary language.

Table 1.16.7: Removal from natural family by psychological distress, Indigenous persons aged 18 years and over, 2004–05

	Low	Moderate	High	Very high	Total[(a)]
			Per cent		
Respondent removed (with or without removal of relative)	6.8	7.3	9.4	13.7	8.2
Relative only removed	31.5	39.4	38.6	39.6	35.9
Neither self nor relative removed	61.7	53.3	52.0	46.7	55.9
Total[(b)]	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total no. of Indigenous people[(a)(b)]	**85,444**	**70,783**	**28,157**	**30,672**	**218,353**

(a) Includes missing responses on variable psychological distress.

(b) Excludes missing responses on variable removal from family (17%).

Note: Percentages calculated with the inclusion of missing responses on variable psychological distress.

Source: AIHW 2008 (forthcoming); AIHW analysis of the 2004–05 NATSIHS.

- In 2002, approximately 90% of Indigenous people aged 15 years and over reported that they had been involved in social activities in the last 3 months (such as religious activities, sporting activities, going out to a café, restaurant or bar) and 28% had undertaken voluntary work in the last 12 months. The large majority of Indigenous people (90%) reported that, in a time of crisis, they could get support from outside the household.

Alcohol and other substance use

The 2004–05 NATSIHS, the 2004 National Drug Strategy Household Survey and the 2002 NATSISS collected information on the alcohol consumption and substance use of Aboriginal and Torres Strait Islander peoples. These data are summarised below.

- The 2004–05 NATSIHS found that approximately 50% of Indigenous Australians aged 18 years and over reported having consumed alcohol in the week before the survey, of whom one-third (16%) reported drinking at long-term risky/high-risk levels. Approximately 55% of Indigenous adults drank at short-term risky/high-risk levels in the last 12 months and 19% drank at short-term risky/high-risk levels at least once a week in the last 12 months.
- In 2004–05, after adjusting for differences in age structure, Indigenous Australians were twice as likely as non-Indigenous Australians to drink at short-term risky/high-risk levels at least once a week in the last 12 months, but equally as likely to drink at long-term risky/high-risk levels in the week before the survey (15% and 14% respectively). Indigenous adults were twice as likely as non-Indigenous Australians to have abstained from alcohol consumption in the last 12 months.
- In 2004–05, approximately 28% of Indigenous people aged 18 years and over reported rates of illicit substance use in the 12 months before the survey. In addition, around 50% of Indigenous Australians aged 18 years and over reported illicit substance use at least once in their lifetime. The substances most commonly used in the last 12 months were marijuana (23%), amphetamines (6%) and analgesics/sedatives (for non-medicinal use) (6%).
- The 2004 National Drug Strategy Household Survey found that illicit drug use among Aboriginal and Torres Strait Islander peoples was higher than for other Australians. For example, 27% of Aboriginal and Torres Strait Islander peoples aged 14 years and over had

used drugs or other substances in the last 12 months compared with 15% of other Australians.

- The 2002 NATSISS reported that in non-remote areas of Australia approximately 4% of Indigenous Australians aged 15 years and over reported they had ever used heroin, 4% had ever used cocaine, 6% had ever used LSD or other synthetic hallucinogens, 5% had ever used ecstasy or designer drugs, 4% had sniffed petrol and 4% had used other inhalants.
- Additional data and information on the consumption of alcohol and the use of illicit drugs can be found in Measures 2.20 and 2.21.

Financial stress

The 2004–05 NATSIHS also collected data on financial stress.

- In 2004–05, about half (49%) of all Indigenous persons aged 15 years and over reported they were living in households in which they could not raise $2,000 within a week in a time of crisis.

Law and justice

- Approximately 20% of Indigenous people aged 15 years and over reported they had used legal services in the last 12 months, 16% had been arrested by the police, 7% had been incarcerated in the last 5 years, and 24% had been a victim of physical or threatened violence in the last 12 months. After adjusting for age differences between the Indigenous and non-Indigenous populations, Indigenous Australians aged 18 years and over experienced double the victimisation rate of non-Indigenous persons.
- The National Inquiry into the Human Rights of People with Mental Illness (HREOC 1993) found that anti-social and self-destructive behaviour—often the result of lack of acceptance, choice and opportunity, the history of dispossession, assimilation, cultural and community genocide and/or undiagnosed mental and social distress—brought Indigenous people into frequent contact with the criminal justice system. Not only may mental illness and/or emotional distress cause Indigenous and other Australians to come into contact with the criminal justice system, but also incarceration may be a risk factor for mental illness (HREOC 1993). Incarceration separates Indigenous people and other nationalities from their communities and culture. However, removal from extended family or community tends to have a significant impact on Indigenous detainees. Indigenous prisoners frequently experience depressive symptoms associated with unresolved anger which can result in suicide attempts. The number of Indigenous deaths in custody is also relatively high. Of the 68 deaths in custody in Australia in 2003, 17 (25%) were Indigenous people (McCall 2004). Indigenous Australians are imprisoned at much higher rates than non-Indigenous Australians. In 2005, the incarceration rate for Indigenous people aged 18 years and over was 1,561 per 100,000 compared with 129 per 100,000 for non-Indigenous people.

Hospitalisations

Mental health related conditions include mental and behavioural disorders (such as schizophrenia and psychoactive substance use) and other mental health conditions (such as Alzheimer's disease and postnatal depression).

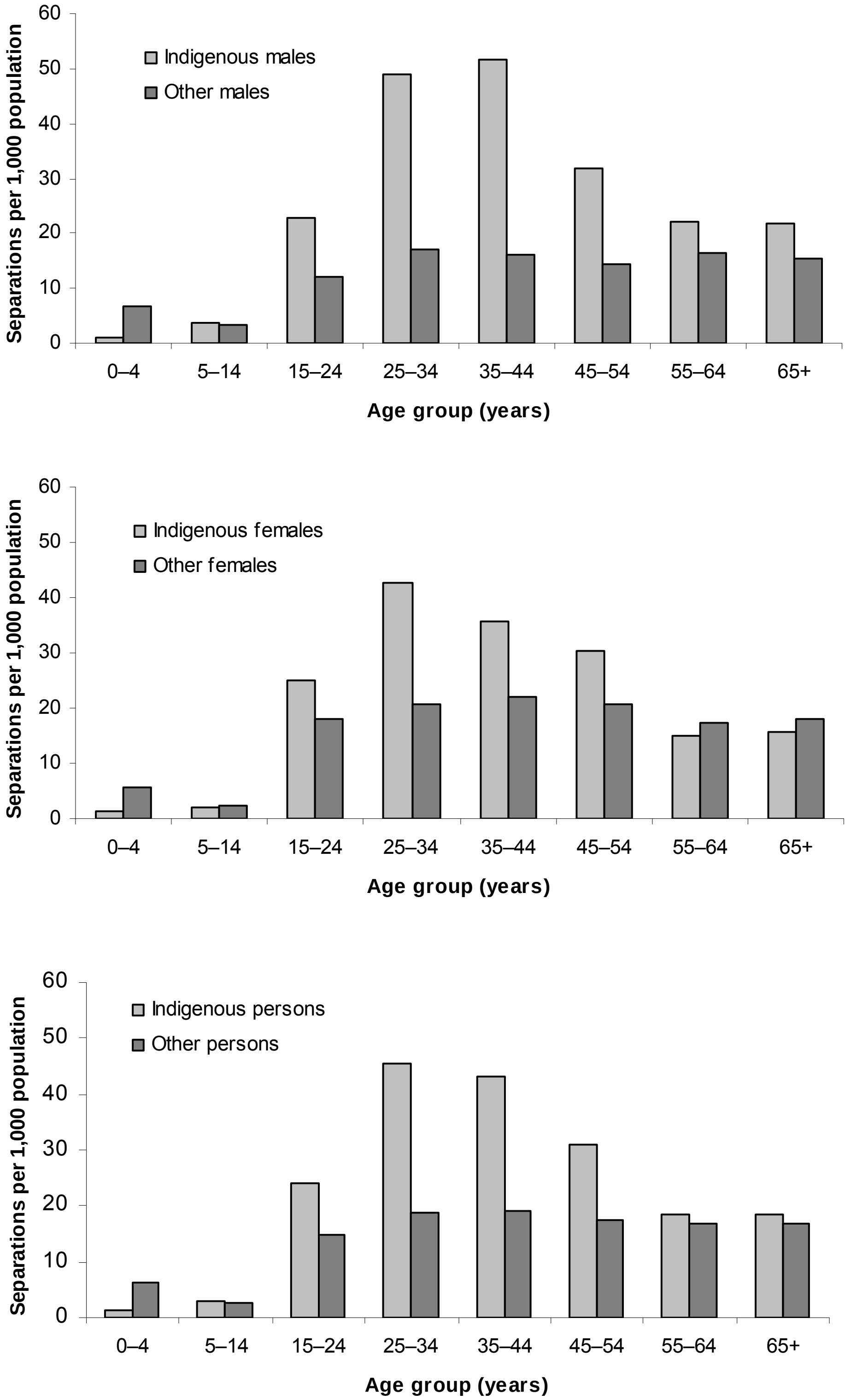
- For the 2-year period July 2004 to June 2006, there were 587,180 hospitalisations from mental health related conditions in New South Wales, Victoria, Queensland, Western

Australia, South Australia and the Northern Territory combined, 20,463 (3.5%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples.

- Mental health related conditions were responsible for 4.4% of all hospitalisations of Aboriginal and Torres Strait Islander Australians.
- Mental and behavioural disorders were the seventh most common group of principal diagnosis for Aboriginal and Torres Strait Islander Australians admitted to hospital, behind care involving dialysis; injury and poisoning; complications of pregnancy and childbirth; diseases of the respiratory system; diseases of the digestive system; symptoms, signs and ill-defined conditions; and abnormal clinical and laboratory findings.

Hospitalisations by age and sex

- For the 2-year period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males had higher hospitalisation rates for mental health related conditions than other males across all age groups from 5–14 years and over. Indigenous females had higher hospitalisation rates for mental health related conditions than other females across all age groups from 15–24 years to 45–54 years (Figure 1.16.3).
- The greatest difference in rates occurred in the 25–34 years and 35–44 years age groups where Indigenous males were hospitalised for mental health related conditions at around three times the rate of other males and Indigenous females were hospitalised at twice the rate of other females in these age groups.
- For Indigenous females and other Australian males, hospitalisation rates for mental health related conditions were highest among those aged 25–34 years. For Indigenous males and other Australian females, hospitalisation rates were highest among those aged 35–44 years.
- Approximately 53% of Indigenous Australians hospitalised for mental health related conditions were males (10,760) and 47% were females (9,703).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.16.3: Age-specific hospitalisation rates for a principal diagnosis of mental health related conditions, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Hospitalisations by state/territory

Table 1.16.8 presents hospitalisations for a principal diagnosis of mental health related conditions for the 2-year period July 2004 to June 2006 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are included in the table. The Australia data are adjusted by applying a completeness factor of 89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males were hospitalised for mental health related conditions at twice the rate of other males and Indigenous females were hospitalised for mental health related conditions at 1.4 times the rate of other females.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised for mental health related conditions at 1.9 times the rate of other Australians.
- In South Australia Indigenous Australians were hospitalised for mental health related conditions at around four times the rate of other Australians, and in New South Wales, Western Australia and the Northern Territory Indigenous Australians were hospitalised at around twice the rate of other Australians in these states and territories. In Queensland and Victoria the rate ratios were 1.3.

Table 1.16.8: Hospitalisations for principal diagnosis of mental health related conditions, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[a][b][c]

	Indigenous				Other[d]				
	Number	No. per 1,000[e]	LCL 95%[f]	UCL 95%[g]	Number	No. per 1,000[e]	LCL 95%[f]	UCL 95%[g]	Ratio[h]
NSW									
Males	4,392	38.2	36.8	39.6	92,746	14.1	14.0	14.2	2.7*
Females	3,357	26.8	25.7	27.8	91,694	13.5	13.5	13.6	2.0*
Persons	7,749	32.2	31.3	33.0	184,442	13.8	13.7	13.8	2.3*
Vic									
Males	521	18.9	17.2	20.6	68,791	13.8	13.7	13.9	1.4*
Females	686	27.3	25.1	29.6	113,619	21.9	21.7	22.0	1.3*
Persons	1,207	23.0	21.6	24.4	182,410	17.9	17.8	18.0	1.3*
Qld									
Males	2,253	21.1	20.1	22.2	47,753	12.2	12.1	12.4	1.7*
Females	1,976	17.0	16.1	17.9	62,074	15.8	15.7	16.0	1.1*
Persons	4,229	19.0	18.3	19.6	109,827	14.1	14.0	14.1	1.3*
WA									
Males	1,847	32.0	30.3	33.7	22,217	11.4	11.2	11.5	2.8*
Females	1,934	29.0	27.6	30.5	31,200	16.0	15.8	16.2	1.8*
Persons	3,781	30.3	29.2	31.4	53,417	13.6	13.5	13.8	2.2*
SA									
Males	926	40.5	37.5	43.5	16,512	10.9	10.7	11.1	3.7*
Females	1,145	45.0	42.1	47.9	18,425	11.5	11.3	11.7	3.9*
Persons	2,071	42.7	40.6	44.8	34,937	11.2	11.1	11.3	3.8*
NT									
Males	821	14.4	13.3	15.6	1,041	7.1	6.6	7.6	2.0*
Females	605	10.4	9.5	11.4	643	4.8	4.3	5.2	2.2*
Persons	1,426	12.4	11.7	13.1	1,684	6.0	5.7	6.3	2.1*
NSW, Vic, Qld, WA, SA & NT[i]									
Males	**10,760**	**28.0**	**27.4**	**28.7**	**249,060**	**13.1**	**13.0**	**13.1**	**2.1***
Females	**9,703**	**23.2**	**22.6**	**23.7**	**317,655**	**16.2**	**16.2**	**16.3**	**1.4***
Persons	**20,463**	**25.5**	**25.1**	**25.9**	**566,717**	**14.6**	**14.6**	**14.7**	**1.7***
Australia unadjusted[j]									
Males	11,310	28.1	27.5	28.7	264,076	13.3	13.3	13.4	2.1*
Females	10,106	23.1	22.6	23.6	333,997	16.4	16.3	16.4	1.4*
Persons	21,416	25.5	25.1	25.9	598,095	14.8	14.8	14.9	1.7*
Australia adjusted[j][k]									
Males	12,639	31.4	30.8	32.1	262,747	13.2	13.2	13.3	2.4*
Females	11,293	25.8	25.3	26.3	332,810	16.3	16.3	16.4	1.6*
Persons	23,932	28.5	28.0	28.9	595,579	14.8	14.7	14.8	1.9*

(continued)

Table 1.16.8 (continued): Hospitalisations for principal diagnosis of mental health related conditions, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes F00–F99, G30, G47.0, G47.1, G47.2, G47.8, G47,9, 099.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0.

(c) Financial year reporting.

(d) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Directly age-standardised using the Australian 2001 standard population.

(f) LCL = lower confidence limit.

(g) UCL = upper confidence limit.

(h) Rate ratio Indigenous:other.

(i) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Note: Person numbers and rates include hospitalisations for which sex was not stated.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by principal diagnosis

Mental health related conditions

Table 1.16.9 presents hospitalisations for a principal diagnosis of mental health related conditions for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.

- Mental and behavioural disorders due to psychoactive substance use was the most common mental health related condition for which Aboriginal and Torres Strait Islander people were hospitalised (36%), followed by schizophrenia, schizotypal and delusional disorders (25%).
- Based on the hospitalisation rates of other males and females, in the six jurisdictions there were three to five times as many hospitalisations for mental and behavioural disorders due to psychoactive substance use among Indigenous males and females as would be expected.
- Indigenous males and females were hospitalised for schizophrenia, schizotypal and delusional disorders at around two to three times the rate of other males and females.

Self-harm and assault

- Although self-harm and assault are not included among the mental health related conditions presented in this indicator, hospitalisations for these conditions may be mental health related. In 2004–05 to 2005–06 in the six jurisdictions, Indigenous males and females were hospitalised for injuries related to assault at 8 and 35 times the rate, and for injuries related to self-harm at 3 times and twice the rate of other males and females respectively (Table 1.16.10).

For more information on assault and self-harm, see Measures 1.03 (Hospitalisation for injury and poisoning) and 2.13 (Community safety).

Table 1.16.9: Hospitalisations of Indigenous persons for principal diagnosis of mental health related conditions, by type of condition and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

	Males						Females						Persons(e)					
Principal diagnosis	No.	%(f)	No. per 1,000(g)	LCL 95%(h)	UCL 95%(i)	Ratio(j)	No.	%(f)	No. per 1,000(g)	LCL 95%(h)	UCL 95%(i)	Ratio(j)	No.	%(f)	No. per 1,000(g)	LCL 95%(h)	UCL 95%(i)	Ratio(j)
Mental & behavioural disorders due to psychoactive substance use (F10–F19)	4,708	43.8	12.8	12.4	13.3	4.6*	2,603	26.8	6.2	5.9	6.4	3.3*	7,311	35.7	9.3	9.1	9.6	4.0*
Schizophrenia, schizotypal and delusional disorders (F20–F29)	2,962	27.5	6.7	6.4	7.0	2.5*	2,130	22.0	4.8	4.6	5.1	2.3*	5,092	24.9	5.7	5.6	5.9	2.4*
Mood disorders (F30–F39)	1,075	10.0	3.0	2.8	3.2	0.8*	2,073	21.4	5.3	5.1	5.6	0.8*	3,148	15.4	4.2	4.0	4.4	0.8*
Neurotic, stress-related disorders (F40–F49)	1,060	9.9	3.0	2.8	3.2	1.5*	1,617	16.7	3.8	3.6	4.0	1.4*	2,677	13.1	3.4	3.2	3.5	1.5*
Disorders of adult personality and behaviour (F60–F69)	177	1.6	0.4	0.3	0.5	1.7*	303	3.1	0.6	0.6	0.7	0.9*	480	2.3	0.5	0.5	0.6	1.1*
Behavioural and emotional disorders (F90–F98)	307	2.9	0.4	0.3	0.4	1.2*	136	1.4	0.2	0.2	0.2	1.9*	443	2.2	0.3	0.3	0.3	1.3*
Organic, including symptomatic, mental disorders (F00–F09)	158	1.5	1.0	0.7	1.2	1.7*	138	1.4	0.8	0.6	1.0	1.7*	296	1.4	0.9	0.7	1.0	1.7*

(continued)

Table 1.16.9 (continued): Hospitalisations of Indigenous persons for principal diagnosis of mental health related conditions, by type of condition and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

	Males						Females						Persons(e)					
Principal diagnosis	**No.**	**%(f)**	**No. per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**	**No.**	**%(f)**	**No. per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**	**No.**	**%(f)**	**No. per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**
Behavioural syndromes assoc. with physiological disturbances (F50–F59)	15	0.1	—	—	0.1	0.6	84	0.9	0.1	0.1	0.2	0.2*	99	0.5	0.1	0.1	0.1	0.2*
Unspecified mental disorder (F99)	46	0.4	0.1	0.1	0.2	2.7*	32	0.3	0.1	—	0.1	1.4	78	0.4	0.1	0.1	0.1	2.0*
Mental retardation (F70–F79)	25	0.2	—	—	0.1	2.1*	19	0.2	—	—	—	1.7*	44	0.2	—	—	—	2.0*
Disorders of psych. development (F80–F89)	26	0.2	—	—	—	0.4*	15	0.2	—	—	—	0.6	41	0.2	—	—	—	0.5*
Other(k)	201	1.9	0.5	0.4	0.7	0.8*	553	5.7	1.1	1.0	1.3	1.4*	754	3.7	0.8	0.8	0.9	1.1
Total	**10,760**	**100.0**	**28.0**	**27.4**	**28.7**	**2.1***	**9,703**	**100.0**	**23.2**	**22.6**	**23.7**	**1.4***	**20,463**	**100.0**	**25.5**	**25.1**	**25.9**	**1.7***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes hospitalisations for which sex was indeterminate or not stated.

(f) Proportion of male, female and total hospitalisations of Indigenous people in the period 2004–05 to 2005–06.

(g) Directly age-standardised using the Australian 2001 standard population.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:other.

(k) Other includes ICD-10-AM codes relating to mental health: G30, G47.0, G47.1, G47.2, G47.8, G47.9, O99.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0.

Source: AIHW analysis of National Hospital Morbidity Database.

Table 1.16.10: Hospitalisations of Indigenous people with principal diagnosis of injury and poisoning and other consequences of external causes and a first reported external cause of assault and self-harm, by sex, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Males						Females						Persons[(e)]					
External cause	**No.**	**%[(f)]**	**No. per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**	**No.**	**%[(f)]**	**No. per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**	**No.**	**%[(f)]**	**No. per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**
Assault (X85–Y09)	4,603	22.4	10.7	10.4	11.1	7.5*	5,074	31.7	10.9	10.6	11.3	35.3*	9,677	26.5	10.8	10.6	11.1	12.3*
Intentional self-harm (X60–X84)	993	4.8	2.3	2.1	2.4	2.5*	1,323	8.3	2.8	2.7	3.0	1.9*	2,316	6.3	2.5	2.4	2.7	2.2*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006). Cause of injury is based on the first reported external causes where the principle diagnosis was 'injury, poisoning and certain other consequences of external causes'.

(c) Financial year reporting.

(d) Indigenous data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes hospitalisations for which sex was indeterminate or not stated.

(f) Proportion of male, female and total hospitalisations of Indigenous people in the period 2004–05 to 2005–06.

(g) Directly age-standardised using the Australian 2001 standard population.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:other.

Source: AIHW analysis of National Hospital Morbidity Database.

Average length of stay in hospital (days)

- For the 2-year period July 2004 to June 2006, the average length of stay in hospital due to mental health related conditions was 8 days for Indigenous patients and 9 days for other patients (Table 1.16.11).
- On average, Indigenous males stayed in hospital for longer than Indigenous females for most types of mental and behavioural disorders.
- Mental retardation (disability characterised by significant limitations both in intellectual functioning and adaptive skills) was responsible for the highest number of bed-days of all mental health related conditions (19 days for Indigenous patients and 105 days for other patients). Organic mental disorders (which include dementia, delirium and other mental disorders due to brain damage and dysfunction) and schizophrenia, schizoptypal and delusional disorders were also responsible for a high number of days spent in hospital.
- Other mental health related conditions, including Alzheimer's disease and postnatal depression, were responsible for an average of 4 bed-days for Indigenous patients and an average of 8 bed-days for other patients.

Table 1.16.11: Average length of stay in hospital (days), mental health related conditions, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous			Other[(e)]		
Mental health related condition	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
Mental retardation	30.1	3.5	18.6	95.1	117.5	105.2
Schizophrenia, schizotypal and delusional disorders	18.3	14.8	16.8	20.3	15.9	18.3
Organic mental disorders	15.6	15.5	15.6	20.8	19.5	20.1
Behavioural syndromes associated with psychological disturbances and physical factors	2.1	10.4	9.1	6.3	9.1	8.9
Unspecified mental disorder	9.8	5.7	8.1	11.1	7.2	8.9
Mood disorders	8.1	7.1	7.5	7.4	6.8	7.0
Disorders of adult personality & behaviour	4.8	5.6	5.3	4.7	4.7	4.7
Mental disorders due to psychoactive substance use	4.8	3.4	4.3	4.7	4.0	4.5
Disorders of psychological development	3.9	2.8	3.5	5.0	18.8	8.9
Neurotic, stress-related and somatoform disorders	3.4	3.5	3.5	4.1	4.3	4.2
Behavioural & emotional disorders with onset usually occurring in childhood & adolescence	2.1	2.4	2.2	2.9	3.8	3.1
Total mental & behavioural disorders (F00-F99)	*8.9*	*7.2*	*8.1*	*9.6*	*7.9*	*8.6*
Other mental health conditions	4.2	4.4	4.4	8.2	7.4	7.8
Total	**8.8**	**7.1**	**8.0**	**9.5**	**7.9**	**8.6**

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre in Health Classification 2006); ICD-10-AM codes F70–F79; F20–F29; F00–F09; F99; F50–F59; F30–F39; F60–F69; F10–F19; F80–F89; F40–F49; F90–F98; F00–F99; G30, G47.0, G47.1, G47.2, G47.8, G47.9, O99.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analysis

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, therefore they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for mental health related conditions over the 7-year period 1998–99 to 2005–06 are presented in Table 1.16.12 and Figure 1.16.4.

- In Queensland, Western Australia, South Australia and the Northern Territory, there were significant increases in hospitalisation rates for mental health related conditions among Indigenous females during the period 1998–99 to 2005–06. The fitted trend implies an average yearly increase in the rate of around 0.4 per 1,000, which is equivalent to a 16% increase in the rate over the period.
- There were significant declines in hospitalisation rates for mental health related conditions among other Australians over the same period with an average yearly decline in the rate of around 0.1 per 1,000 (equivalent to a 7% reduction in the rate over the period). The declines in hospitalisation rates were significant for males but not for females.
- There were significant increases in both the hospitalisation rate ratios and rate differences between Indigenous and other Australians during the period 1998–99 to 2005–06. There was a 14% increase in the rate ratio and a 30% increase in the rate difference for persons over the period. This reflects both a relative and absolute increase in the gap between hospitalisation rates of Indigenous and other Australians for mental health related conditions over the period 1998–99 to 2005–06.

Note that changes in the level of accuracy of Indigenous identification in hospital records over this period will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all affect the level of hospitalisation over time. Caution should be used in interpreting changes over time, as it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or to real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may reflect better hospital access rather than a worsening of health.

Table 1.16.12: Age-standardised hospitalisation rates, rate ratios and rate differences from mental health related conditions, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous rate (no. per 1,000)										
Males	24.4	24.4	26.0	24.9	24.5	24.1	23.7	24.7	–0.1	–2.8
Females	19.2	17.0	20.5	20.4	21.3	21.2	21.4	20.8	0.4*	15.9
Persons	21.7	20.5	23.1	22.5	22.8	22.6	22.4	22.6	0.2	5.7
Other Australian[(d)] rate (no. per 1,000)										
Males	13.6	12.9	13.2	13.0	12.4	12.3	11.8	11.5	–0.3*	–14.7
Females	14.9	14.8	15.0	14.6	15.1	15.1	15.1	14.5	–0.01	0.0
Persons	14.2	13.9	14.1	13.9	13.7	13.7	13.5	13.0	–0.1*	–7.1
Rate ratio[(e)]										
Males	1.8	1.9	2.0	1.9	2.0	2.0	2.0	2.2	0.04*	14.6
Females	1.3	1.1	1.4	1.4	1.4	1.4	1.4	1.4	0.03*	16.3
Persons	1.5	1.5	1.6	1.6	1.7	1.6	1.7	1.7	0.03*	13.8
Rate difference[(f)]										
Males	10.8	11.5	12.8	11.9	12.1	11.8	11.9	13.2	0.2	12.4
Females	4.3	2.1	5.5	5.8	6.3	6.1	6.2	6.3	0.4*	72.4
Persons	7.5	6.6	9.0	8.7	9.1	8.8	9.0	9.6	0.3*	30.0

* Represents results with statistically significant increases or decreases at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

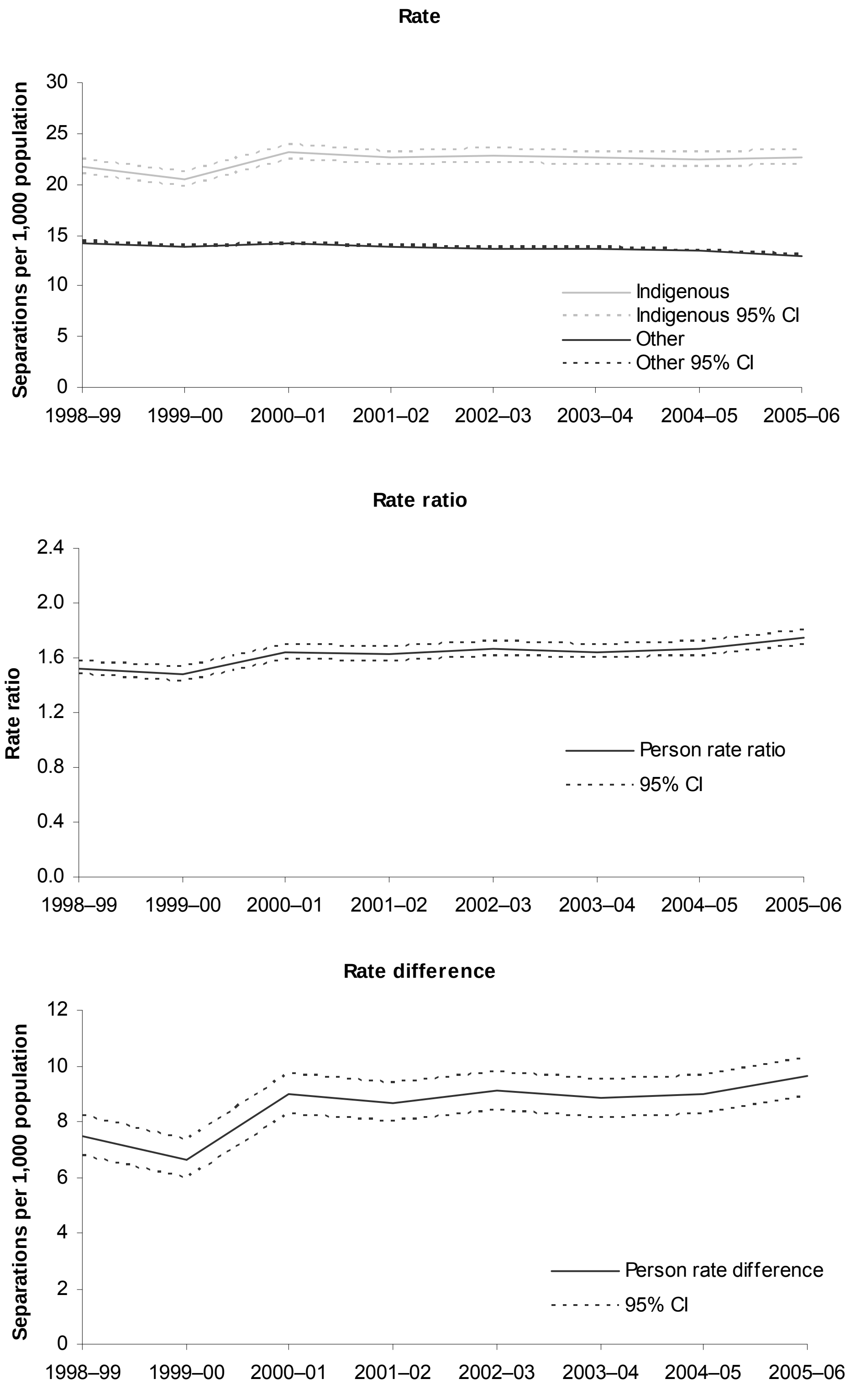
(d) Includes hospitalisations of non-Indigenous Australians and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.16.4: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for mental health related conditions, Qld, WA, SA and NT, 1998–99 to 2005–06

Community mental health care services

Community mental health care is defined as care which is provided by specialised public mental health services dedicated to the assessment, treatment, rehabilitation and care of non-admitted clients. This excludes specialised mental health care services for admitted patients, support services that are not provided by specialised mental health care organisations, services provided by non-government organisations, and residential care services.

The number and rate of service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples varies among the states and territories. This may reflect variations in completeness of Indigenous identification among patients, varying coverage of service contacts for Aboriginal and Torres Strait Islander peoples or for the total population, or different patterns of service use by Indigenous and non-Indigenous persons.

- In 2005–06, the proportion of service contacts for clients of community mental health services who identified themselves as being of Aboriginal and/or Torres Strait Islander origin ranged from 1.4% for Victoria to 30.4% for the Northern Territory.
- There were more service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples (531.7) than for other Australians (270.3). This was true in all jurisdictions. These rates should be interpreted with caution as there is likely to be an underestimate of the actual number of service contacts for Indigenous clients.
- In 2005–06, Aboriginal and Torres Strait Islander peoples had higher proportions of mental health service contacts for the younger age groups than did other Australians, but lower proportions in the older age groups. For example, 26% and 23% of service contacts for Indigenous Australian males and females respectively were for clients aged between 15 and 24 years compared with 16% and 18% of service contacts for other Australian males and females
- In the older age groups, there were lower proportions of service contacts for Indigenous Australian males and females aged 65 years or more (1% and 2% respectively) than for other Australian males (8%) and females (15%).
- In 2005–06, Indigenous males and females had higher rates of community mental health care service contacts across all age groups except those aged less than 15 years. Differences were most marked in the 25–34 and 35–44 year age groups where Indigenous males and females were between two and three times as likely to be clients of community mental health care services as other Australians in these age groups.

For more information on community mental health services see Measure 3.09 (Access to mental health services).

Residential mental health care services

Residential mental health care refers to care provided by a specialised mental health service that:

- employs mental health trained staff on-site
- provides rehabilitation, treatment or extended care to residents for whom the care is intended to be on an overnight basis and in a domestic-like environment
- encourages residents to take responsibility for their daily living activities.

This excludes non-government-operated services and services that are staffed less than 24 hours a day. There are no residential mental health care services in Queensland or the Northern Territory.

- In 2005–06, there were 2,345 clients of residential mental health care services, of which 64 service contacts (2.7%) were for Aboriginal and Torres Strait Islander peoples.
- The proportion of service contacts for clients of community mental health services who identified themselves as being of Aboriginal and/or Torres Strait Islander origin ranged from 1.4% for Victoria to 5.7% for South Australia.
- There were more service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples than for other Australians (1.9 and 1.1 respectively). This was true in all jurisdictions except Western Australia. These rates should be interpreted with caution as there is likely to be an underestimate of the actual number of service contacts for Indigenous clients.

For more information on residential mental health services see Measure 3.09 (Access to mental health services).

Mortality

- During the period 2002–2006, there were 9,588 deaths from mental health related conditions in Queensland, Western Australia, South Australia and the Northern Territory combined, 193 (2.0%) of which were deaths of Aboriginal and Torres Strait Islander peoples; for 1.5% of deaths, Indigenous status was not stated.
- Mental health related conditions (such as mental and behavioural disorders due to psychoactive substance use and organic mental disorders) were responsible for approximately 2.5% of all deaths of Aboriginal and Torres Strait Islander peoples.
- Mental and behavioural disorders are the eleventh most common cause of death among Aboriginal and Torres Strait Islander peoples, behind diseases of the circulatory system; external causes; cancer; endocrine, metabolic and nutritional disorders; diseases of the respiratory system; diseases of the digestive system; symptoms, signs and ill-defined conditions; diseases of the genitourinary system; certain conditions originating in the perinatal period; and diseases of the nervous system.

Mortality by age and sex

Table 1.16.13 presents age-specific mortality rates for mental health related conditions for the period 2002–2006 for Queensland, Western Australia, South Australia and the Northern Territory combined.

- Between 2002 and 2006, Indigenous Australians had twice the mortality rates as non-Indigenous Australians for mental health related conditions. Mortality rates for Indigenous males and females were higher across most age groups. Mortality rates were higher for males than for females across most age groups in both the Indigenous and non-Indigenous population.
- Differences were most marked in the 25–34, 35–44 and 45–54 year age groups where Indigenous males died at between 10 and 13 times the rates of non-Indigenous males and Indigenous females died at between 13 and 15 times the rates of non-Indigenous females. These differences in mortality rates are mainly the result of the high number of deaths from mental and behavioural disorders due to psychoactive substance use among the Indigenous population in these age groups.
- Approximately 49% of Indigenous Australians who died from mental health related conditions were males (94 deaths) and 51% (99 deaths) were females.

Table 1.16.13: Mental health related mortality rates per 100,000, by Indigenous status, age group and sex, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)(d)(e)(f)]

	Males			Females		
Age group (years)	Indigenous rate[(g)]	Non-Indigenous rate[(g)]	Rate ratio[(h)]	Indigenous rate[(g)]	Non-Indigenous rate[(g)]	Rate ratio[(h)]
Less than 1	0.0	0.0	. .	0.0	0.0	. .
1–4	1.4	0.0	. .	0.0	0.1	. .
5–14	0.0	0.0	. .	0.6	0.0	. .
15–24	1.4	0.3	5.2*	1.4	0.4	3.5
25–34	10.0	1.0	10.4*	7.7	0.6	13.1*
35–44	22.0	1.7	13.3*	9.4	0.6	15.4*
45–54	27.1	2.7	9.9*	16.4	1.2	14.2*
55–64	43.1	7.1	6.1*	15.7	3.9	4.1*
65–74	114.9	29.9	3.8*	77.9	23.2	3.4*
75 and over	381.0	285.2	1.3	667.5	445.1	1.5*
Total[(i)]	**42.1**	**20.0**	**2.1***	**50.6**	**27.9**	**1.8***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) ICD-10 codes: F00–F99, G30, G47.0, G47.1, G47.2, G47.8, G47.9, O99.3, R44, R45.0, R45.1, R45.4, R48.

(b) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states and territories are considered to have adequate levels of Indigenous identification in mortality data. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Mortality data for the four jurisdictions should not be assumed to represent the experience in the other jurisdictions.

(c) Data are presented in 5-year groupings because of small numbers each year.

(d) These data exclude 148 registered deaths where the Indigenous status is not stated.

(e) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates because of these data quality issues.

(f) Deaths are by year of registration and state/territory of usual residence.

(g) Age-specific death rates per 100,000 using the average December populations for the relevant years.

(h) Rate ratio Indigenous:other.

(i) Total includes age not stated. Total rates have been directly age-standardised using the Australian 2001 standard population.

Note: The completeness of identification of Indigenous deaths can vary by age.

Source: AIHW analysis of National Mortality Database.

Mortality by cause of death

Mental health related conditions

Deaths for the period 2002–2006 among Aboriginal and Torres Strait Islander peoples in Queensland, Western Australia, South Australia and the Northern Territory combined are presented in Table 1.16.14 by type of mental health related condition.

- For Indigenous males, the most common cause of death was from mental and behavioural disorders due to psychoactive substance (68 deaths or 72%). For Indigenous females it was organic mental disorders, which include dementia, delirium and other mental disorders due to brain damage and dysfunction (52 deaths or 53%).
- In the four jurisdictions combined, Indigenous males and females died from mental health related conditions at around twice the rate of other males and females.
- Indigenous males and females died from mental and behavioural disorders due to psychoactive substance use at 9 and 10 times the rate of other males and females respectively.
- Indigenous females died from organic mental disorders, which include dementia, delirium and other mental disorders due to brain damage and dysfunction, at over twice the rate of non-Indigenous females.

Assault and self-harm

- In addition to the mental health related conditions presented here, there were 359 deaths of Aboriginal and Torres Strait Islander peoples due to self-harm (suicide) (4.7%) and 118 deaths of Aboriginal and Torres Strait Islander peoples due to assault (1.5%) in Queensland, Western Australia, South Australia and the Northern Territory between 2002 and 2006.
- Indigenous Australians died from self-harm and assault at 2 and 10 times the rate of non-Indigenous Australians for these causes of death respectively.
- Mental health related conditions, assault and self-harm together were responsible for 8.7% of all deaths of Indigenous Australians.

Table 1.16.14: Deaths from mental health related conditions for Indigenous Australians, by sex, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)(d)(e)]

	Males					Females					Persons				
Cause of death	**No.**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**	**No.**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**	**No.**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**
Mental and behavioural disorders due to psychoactive substances use (F10–F19)	68	21.9	15.2	28.6	9.2*	34	6.8	4.1	9.6	10.0*	102	13.5	10.3	16.8	9.1*
Organic, including symptomatic mental disorders (F00–F09)	17	15.7	7.9	23.5	1.4	52	34.9	25.1	44.6	2.2*	69	26.9	20.4	33.5	1.9*
Other[(j)]	9	4.5	0.6	8.4	0.7	13	8.9	4.0	13.9	0.8	22	7.2	3.8	10.5	0.8
Total	**94**	**42.1**	**31.2**	**53.1**	**2.1***	**99**	**50.6**	**39.4**	**61.9**	**1.8***	**193**	**47.6**	**39.6**	**55.7**	**1.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states and territories are considered to have adequate levels of Indigenous identification in mortality data. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Mortality data for the four jurisdictions should not be assumed to represent the experience in the other jurisdictions.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 148 registered deaths where the Indigenous status is not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates because of these data quality issues.

(e) Deaths are by year of registration.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) Includes ICD-10 codes: F20–F99, G30, G47.0, G47.1, G47.2, G47.8, G47.9, O99.3, R44, R45.0, R45.1, R45.4, R48.

Note: Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database

General practitioner encounters

Information about general practitioner (GP) encounters is available from the BEACH survey. Data for the 5-year period 2002–03 to 2006–07 are presented below. Mental health related problems (psychological problems) were the sixth most common type of problems managed at GP encounters with Aboriginal and Torres Strait Islander patients during this period. The other five most common types of problems were respiratory conditions, circulatory conditions, endocrine and metabolic problems, musculoskeletal conditions and skin problems.

- In the period 2002–03 to 2006–07 there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 11,219 problems were managed. Of these, 9.7% (1,088) were mental health related problems (Table 1.16.15).
- Depression was the most common mental health related problem managed at GP encounters with Indigenous patients, followed by drug abuse (licit or illicit), anxiety and sleep disturbance.
- Mental health related problems were managed at a rate of 14.4 per 100 GP encounters with Indigenous patients compared to a rate of 11.7 per 100 GP encounters with other patients.
- After adjusting for differences in age distribution, mental health related problems were managed at GP encounters with Indigenous patients at a similar rate to encounters with other patients.
- Alcohol, drug and tobacco abuse were managed at GP encounters with Indigenous patients at around three times the rate at encounters with other patients.
- Schizophrenia was also more commonly managed at GP encounters with Indigenous patients than with other patients (at around twice the rate).

Table 1.16.15: Most frequently reported mental health related problems[a] managed by general practitioners, by Indigenous status of patient, 2002–03 to 2006–07[b][c][d]

	Number		% of total problems		Crude rate (no. per 100 encounters)						Age-standardised rate (no. per 100 encounters)[e]		
Problem managed	**Indigenous**	**Other[f]**	**Indigenous**	**Other[f]**	**Indigenous**	**95% LCL[g]**	**95% UCL[h]**	**Other**	**95% LCL[g]**	**95% UCL[h]**	**Indigenous**	**Other[f]**	**Ratio[i]**
Depression (P03, P76)	272	19,216	2.4	2.7	3.6	2.9	4.3	4.0	3.9	4.1	3.3	3.9	0.8
Drug abuse (P19)	148	2,354	1.3	0.3	2.0	1.1	2.8	0.5	0.4	0.6	1.5	0.5	3.0
Anxiety (P01, P74)	115	8,600	1.0	1.2	1.5	1.0	2.0	1.8	1.7	1.8	1.4	1.8	0.8
Sleep disturbance (P06)	97	7,847	0.9	1.1	1.3	1.0	1.6	1.6	1.6	1.7	1.3	1.6	0.8
Alcohol abuse (P15, P16)	83	1,685	0.7	0.2	1.1	0.7	1.5	0.3	0.3	0.4	0.9	0.3	2.7
Schizophrenia (P72)	75	2,203	0.7	0.3	1.0	0.6	1.4	0.5	0.4	0.5	0.8	0.5	1.9
Tobacco abuse (P17)	65	1,618	0.6	0.2	0.9	0.5	1.2	0.3	0.3	0.4	0.8	0.3	2.5
Acute stress reaction (P02)	58	2,932	0.5	0.4	0.8	0.5	1.1	0.6	0.6	0.6	0.8	0.6	1.3
Affective psychosis (P73)	20	892	0.2	0.1	0.3	0.1	0.4	0.2	0.2	0.2	0.2	0.2	1.1
Dementia (P70)	14	2,439	0.1	0.3	0.2	0.1	0.3	0.5	0.5	0.5	0.7	0.5	1.5
Other[j]	141	6,694	1.3	0.9	1.9	1.4	2.3	1.4	1.3	1.5	1.6	1.4	1.2
Total mental health	**1,088**	**56,480**	**9.7**	**7.8**	**14.4**	**11.9**	**16.9**	**11.7**	**11.4**	**12.0**	**13.5**	**11.6**	**1.2**

(a) Classified according to ICPC-2 codes (Classification Committee of the World Organization of Family Doctors (WICC) 1998).
(b) These survey results are likely to undercount the number of Indigenous Australians visiting doctors.
(c) Combined financial year data for 5 years.
(d) Data for Indigenous and other Australians have not been weighted.
(e) Directly age-standardised rate (no. per 100 encounters). Figures do not add to 100 as more than one problem can be managed at each encounter.
(f) Includes non-Indigenous patients and patients for whom Indigenous status was not stated.
(g) LCL = lower confidence interval.
(h) UCL = upper confidence interval.
(i) Rate ratio Indigenous:other.
(j) ICPC–2 codes: P04–P05, P07–P13, P18, P20, P22–P25, P27–P29, P71, P75,P77–P82, P85–P86, P98–P99.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.

Additional information

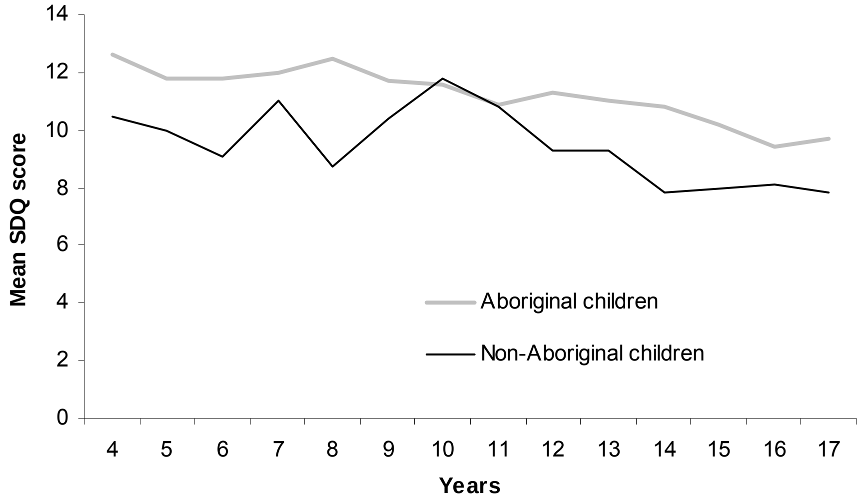
Social and emotional wellbeing of Aboriginal children

The Western Australian Aboriginal Child Health Survey (WAACHS) collected information on the social and emotional wellbeing of Aboriginal children and a small number of Torres Strait Islander children over 2001 and 2002. It found that a variety of health conditions, social circumstances and behaviours experienced by individuals, their carers and families can have an impact on the social and emotional wellbeing of Indigenous children (Zubrick et al. 2005). Some of the findings from the survey are presented below. Note that the term 'Aboriginal' is used here and in the survey but refers to both Aboriginal and Torres Strait Islander children.

Emotional and behavioural difficulties

The Strengths and Difficulties Questionnaire (SDQ), used throughout the world to measure emotional and behavioural difficulties in children, was modified for Aboriginal children in the WAACHS. The SDQ contains questions that explore emotional symptoms, conduct problems, hyperactivity, peer problems and social behaviour.

- Approximately 24% of Aboriginal children aged 4–17 years surveyed were assessed from the SDQ completed by their carers as being at high risk of clinically significant emotional or behavioural difficulties compared with 15% of other children (Zubrick et al. 2005).
- Aboriginal children had higher mean SDQ scores than other children at all ages between 4 and 17 years except for ages 10 and 11 where mean scores were similar (Figure 1.16.5).
- Male Aboriginal children were twice as likely as female Aboriginal children to be at high risk of clinically significant emotional or behavioural difficulties.
- Those children living in areas of extreme isolation were less at risk than those living in urban areas.



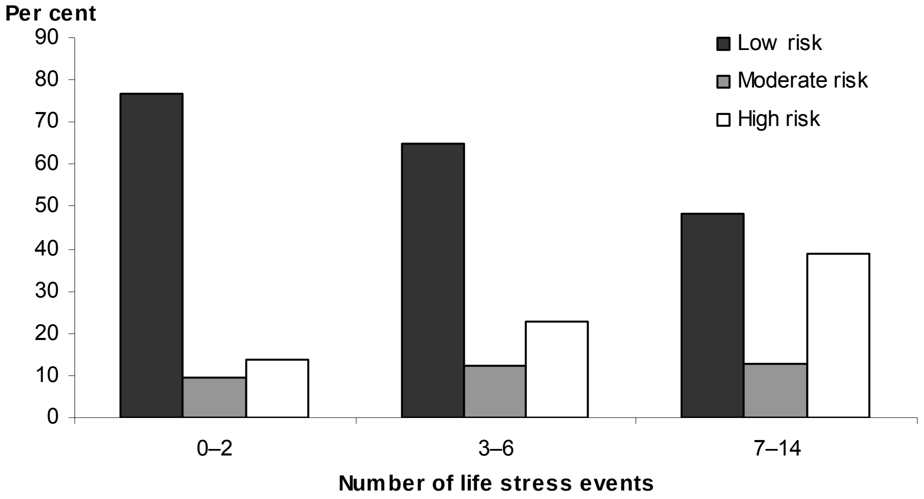
Sources: Zubrick et al. 2005; Computer-assisted telephone interview survey conducted for the WAACHS by the Survey Research Centre at the University of Western Australia.

Figure 1.16.5: Mean Strengths and Difficulties Questionnaire (SDQ) total score, by age, Aboriginal and non-Aboriginal children aged 4–17 years, WA, 2001, 2002

Family and household factors

The WAACHS looked at a range of family and household factors which could affect the social and emotional wellbeing of children. Factors which were found to be associated with high risk of clinically significant emotional or behavioural difficulties in Aboriginal children included the number of stress events experienced by the family in the 12 months before the survey (such as illness, hospitalisation, death of a close family member, family break-up, arrests, job loss, financial difficulties), quality of parenting, family functioning and family care arrangements. Residential mobility, the physical health of the child (speech, hearing and vision problems), the physical health of the carer and the carer's use of mental health services were also associated with an increased risk of clinically significant emotional or behavioural difficulties in children.

- For example, around 22% of children aged 4–17 years in Western Australia were living in families where seven or more life stress events had occurred over the preceding 12 months. Of these children, 39% were at high risk of clinically significant emotional or behavioural difficulties compared with 14% of children in families where two or fewer life stress events had occurred (Figure 1.16.6).



Source: Zubrick et al. 2005.

Figure 1.16.6: Proportion of Aboriginal children aged 4–17 years at low, moderate and high risk of clinically significant emotional or behavioural difficulties, by number of life stress events, WA, 2001, 2002

- Around one-quarter of Aboriginal children were living in families with poor quality of parenting (measured by how often carers praised their children, hit or smacked their children and laughed together with their children) and one-fifth of children were living in families that functioned poorly (families with poor communication and decision making, poor emotional support, limited time spent together and poor family cooperation). These children were over twice as likely to be at high risk of emotional and behavioural difficulties as children living in families with very good quality of parenting or very good family functioning (Zubrick et al. 2005).

Health risk factors

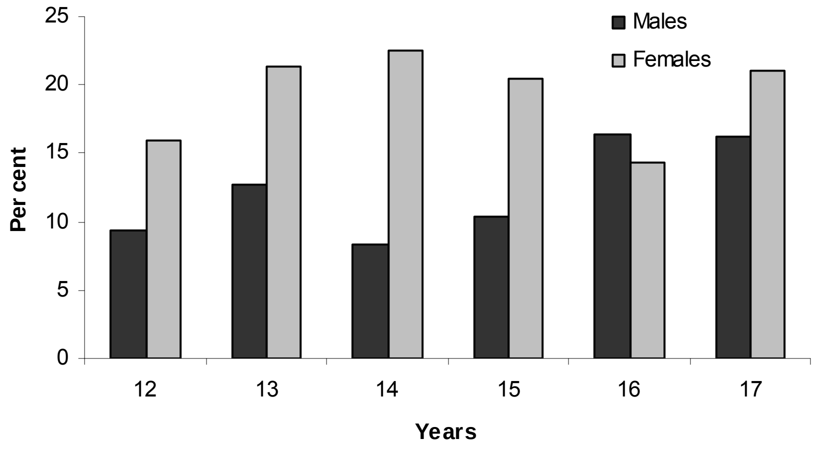
A number of health risk factors were also found to be associated with a high risk of clinically significant emotional and behavioural difficulties.

- An estimated 18% of Western Australian Aboriginal young people aged 12–17 years who smoked regularly were at high risk of emotional and behavioural difficulties compared with 7% of non-smokers.
- Approximately 29% of young people aged 12–17 years who used marijuana/cannabis daily were at risk of clinically significant emotional or behavioural difficulties compared with 9% of young people who had never used marijuana/cannabis. Although Indigenous males were more likely to use marijuana than Indigenous females, particularly at age 17 (45% compared with 21%), Indigenous females who used marijuana/cannabis were more likely to be at risk of clinically significant emotional or behavioural difficulties than Indigenous males.
- Young people who did not participate in organised sport were twice as likely to be at high risk of emotional and behaviour difficulties compared with young people who did participate in sport (16% and 8% respectively).
- Those who had been subject to racism in the preceding 6 months were more than twice as likely to be at high risk of emotional and behavioural difficulties than those who had not experienced racism.

Suicidal behaviour

An additional survey was administered by the Telethon Institute to Aboriginal young people aged 12–17 years to measure rates of suicidal thoughts and suicide attempts.

- Suicidal thoughts were reported by around one in six (16%) Western Australian Aboriginal people aged 12–17 years in the 12 months before the survey.
- Overall, a higher proportion of Aboriginal females reported they had seriously thought about ending their own life than Aboriginal males (20% compared with 12%). This was true for all ages from 12 to 17 years except for those aged 16 where Indigenous males were more likely than females to report having thought about ending their own life (Figure 1.16.7).
- Of those who had suicidal thoughts in the 12 months before the survey, 39% reported they had attempted suicide in the same period. This finding is similar to the proportion of the general young population aged 12–16 years who reported suicide attempts in the 1993 Western Australian Child Health Survey (Zubrick et al 2005).
- Aboriginal young people who had been exposed to family violence were more than twice as likely to have thought about ending their own life (22%) as Aboriginal young people who had not been exposed to family violence (9%).
- A higher proportion of Aboriginal males reported they had thought about ending their own life if they had low self-esteem (21%) than if they had high self-esteem (5%).
- Suicidal thoughts were associated with a number of health risk behaviours. The proportion of Aboriginal young people who reported suicidal thoughts was significantly higher among those who smoked regularly, used marijuana, drank to excess in the 6 months before the survey, were exposed to some form of family violence and who had a friend who had attempted suicide.



Source: Zubrick et al. 2005.

Figure 1.16.7: Proportion of Aboriginal young people who had seriously thought about ending own life, by sex and age, WA, 2001, 2002

Effects of forced separation

- Children of Aboriginal carers who had been forcibly separated from their natural family by past removal policies and practices or removed from country to a welfare institution or a mission were twice as likely to be at high risk of clinically significant emotional or behavioural difficulties as children whose primary carer had not been forcibly separated from their natural family. These children also had higher rates of conduct and hyperactivity problems.
- Children whose primary carers had been forcibly separated from their natural families were over 1.5 times as likely to be at high risk of clinically significant conduct problems and 2.5 times as likely to be at high risk of clinically significant hyperactivity problems (Zubrick et al. 2005).

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in these surveys is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS) and the 2002 General Social Survey. The NHS was conducted in major cities and regional and remote areas, but very remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys and the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the NATSIHS 2004–05 (ABS 2006a) and NATSISS 2002 (ABS 2004a) publications.

Western Australian Aboriginal Child Health Survey

Survey data are subject to sampling and non-sampling errors. Confidence intervals are published with the data to provide a guide to the reliability of the estimates. Non-sampling errors can occur in surveys because of questionnaire design problems, respondent difficulty recalling information/lack of appropriate records, and errors made in the recording and processing of the data. Every effort was made to minimise non-sample errors in this survey.

General practitioner data (BEACH)

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey, 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

(continued)

Data quality issues (continued)

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery. In terms of mental health service delivery, there are a number of different service delivery models ranging from ambulatory care in community mental health services and hospitals and non-ambulatory care in hospitals and residential services.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished data). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004b).*

(continued)

Data quality issues (continued)

National Community Mental Health Care Database (NCMHCD)

The quality of the Indigenous identification in this database varies by jurisdiction.

The number and rate of service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples vary among the states and territories. This may reflect variations in completeness of Indigenous identification among patients or different patterns of service use by Indigenous and non-Indigenous persons.

All states and territories use the standard ABS question of Indigenous status. For a number of jurisdictions, the NCMHCD data reported for the 'Both Aboriginal and Torres Strait Islander' category are suspected to be affected by misinterpretation of the category to include non-Aboriginal and Torres Strait Islander peoples (for example, Maoris and South Sea Islanders) and use of the category as 'Indigenous, not further specified'.

All state and territory health authorities provided information on the quality of the data for the NCMHCD 2005–06. New South Wales stated that the quality of Indigenous data has not been evaluated. Victoria considered the quality of Indigenous data was not acceptable because of lack of consistency in data entry across its services. Queensland reported that the quality of Indigenous data is acceptable at the broad level, that is, in distinguishing Indigenous Australians and other Australians, but that there are quality issues regarding the coding of more specific details (that is, 'Aboriginal', 'Torres Strait Islander', 'Both Aboriginal and Torres Strait Islander'). Queensland also reported that several strategies have been implemented to improve the quality of Indigenous data and noted that a replacement for the existing collection system with in-built validation checks would further improve the quality of these data. Western Australia reported that the quality of Indigenous status data for 2005–06 was acceptable; however, the data could be improved with the appropriate resources, training and reporting standards. South Australia indicated that there has been limited analysis of the quality of Indigenous status data; therefore, the quality of the data is uncertain at this stage. Tasmania reported the quality of its data to be acceptable; the Australian Capital Territory considered the quality of its Indigenous status data to be acceptable, noting that there is some room for improvement regarding the reporting of the 'not stated' category. The Northern Territory indicated its Indigenous status data to be of acceptable quality

National Residential Mental Health Care Database (NRMHCD)

The quality of the Indigenous identification in this database varies by jurisdiction.

The number and rate of service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples varies among the states and territories. This may reflect variations in completeness of Indigenous identification among patients or different patterns of service use by Indigenous and non-Indigenous persons.

Data from the NRMHCD on Indigenous status should be interpreted with caution because of the varying quality and completeness of Indigenous identification across all jurisdictions. Only Western Australia, Tasmania and the Australian Capital Territory considered their Indigenous status data of acceptable quality. New South Wales has not evaluated the quality of its Indigenous data. Likewise, limited analysis was done on indigenous data in South Australia. Victoria considered the quality of Indigenous data not acceptable because of the lack of consistency in data entry across its services.

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

(continued)

Data Quality issues (continued)

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Under-identification

Almost all deaths in Australia are registered. However the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification.

Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death

There are also current concerns about data quality for causes of death especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006b).

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004b).*

Cause of death coding

Causes of death are based on the 10th revision of the ICD-10. Mortality coding using ICD-10 was introduced into Australia on 1 January 1997.

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1.17 Life expectancy at birth

The life expectancy of Aboriginal and Torres Strait Islander males and females for a given period

Data sources

Life expectancy estimates presented in this measure are from the ABS and are based on population estimates based on the 2001 Census of Population and Housing. A new set of life expectancy estimates based on the 2006 Census results and Indigenous deaths for the period 2001–2006 is expected to be available in November 2008.

Data on potential years of life lost before age 65 are calculated by the AIHW and are derived from the AIHW National Mortality Database.

Life expectancy estimates

Life expectancy refers to the average number of years a person of a given age and sex can expect to live, if current age- and sex-specific death rates continue to apply throughout his or her lifetime.

Estimates of life expectancy are drawn from life tables. To construct a life table, data on total population, births and deaths are needed, and the accuracy of the life table depends on the completeness of these data. Because of uncertainty about the estimates of these components for Aboriginal and Torres Strait Islander peoples, experimental methods are used to calculate life expectancies for the Indigenous population. These life expectancies should only be used as an indicative summary measure of life expectancy of the Indigenous population.

The Bhat method was used by the ABS to construct a model life table for the Indigenous population which gives an estimation of life expectancy at birth. This method offers improvement over other indirect methods used earlier by the ABS to estimate life expectancy from incomplete data, such as the Preston and Hill (1980) method. Although the Bhat method allows for an adjustment for changes in identification to be taken into account in the estimation of life expectancy, it remains experimental and therefore work needs to be done on such estimates as more robust methods become available.

The ABS has recently produced experimental Indigenous life tables for the 1996–2001 period. To produce reliable age-specific death rates, states with a small number of Indigenous deaths were grouped together with others on the basis of geographic proximity (that is, Victoria with New South Wales, and South Australia with Western Australia). Because of the small number of registered Indigenous deaths, Indigenous life tables were not produced for Tasmania and the Australian Capital Territory. Mortality estimates for New South Wales and Victoria (combined) were used to produce Indigenous population estimates and projections for Tasmania and the Australian Capital Territory.

Mortality

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death, or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data for which year of registration of death was used. Rates published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Analyses

Life expectancy

- Over the period 1996–2001, the life expectancy at birth for Indigenous people was estimated to be around 59 years for males and 65 years for females. This was some 17 years lower than life expectancy estimates for the total Australian population for the period 1998–2000 (77 years for males and 82 years for females) (Table 1.17.1 and Figure 1.17.1).
- Life expectancy was lowest for Indigenous males in the Northern Territory (58 years) and for Indigenous females in Queensland (63 years).

A study of causes of the inequality in life expectancy between Indigenous and non-Indigenous Australians in the Northern Territory found that the main contributors to the gaps in life expectancy are non-communicable diseases including conditions such as respiratory diseases, cardiovascular diseases and diabetes. These conditions are more prevalent in ageing populations. The study also found that communicable diseases, maternal, perinatal and nutritional conditions and injury contributed far less to the life expectancy gap (Zhao & Dempsey 2006).

Table 1.17.1: Life expectancy at birth, Indigenous 1996–2001, total population 1998–2000(a)(b)

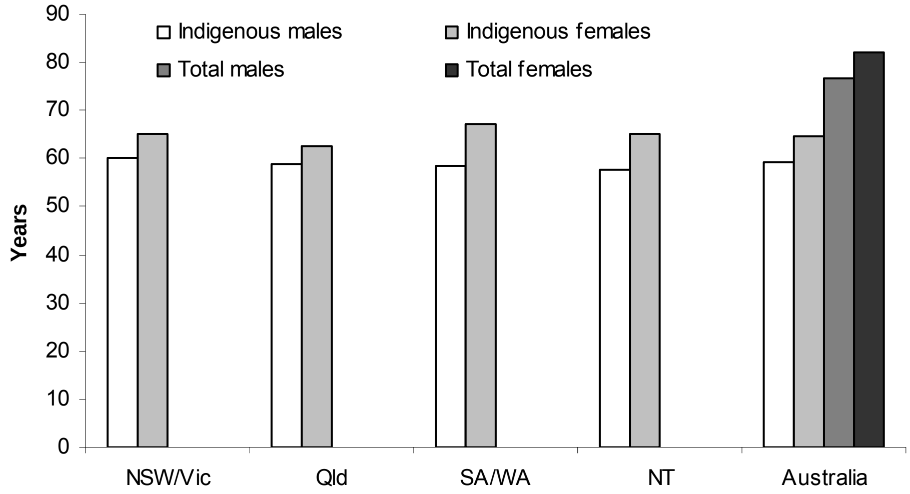
	Males	Females
	Indigenous	
New South Wales/Victoria	60.0	65.1
Queensland	58.9	62.6
South Australia/Western Australia	58.5	67.2
Northern Territory	57.6	65.2
Australia(c)	**59.4**	**64.8**
	Total population	
New South Wales	76.4	82.0
Victoria	77.1	82.3
Queensland	76.4	81.9
Western Australia	76.9	82.6
South Australia	76.6	82.3
Tasmania	75.7	81.2
Australian Capital Territory	78.3	82.3
Northern territory	70.3	75.2
Australia	**76.6**	**82.0**

(a) For Tasmania and Australian Capital Territory estimates for the Indigenous population, use New South Wales/Victoria estimates.

(b) Variations in life expectancies by Indigenous status, sex and jurisdiction should be interpreted with care as they are sensitive to differential data quality.

(c) Includes all states and territories.

Sources: ABS 2000a, 2000b, 2000c, 2000d, 2000e, 2000f, 2000g, 2000h; SCATSIH & SIMC 2006.



Source: ABS 2000a; SCATSIH & SIMC 2006.

Figure 1.17.1: Life expectancy at birth, Indigenous 1996–2001 and total population 1998–2000, by sex and state/territory

International comparisons

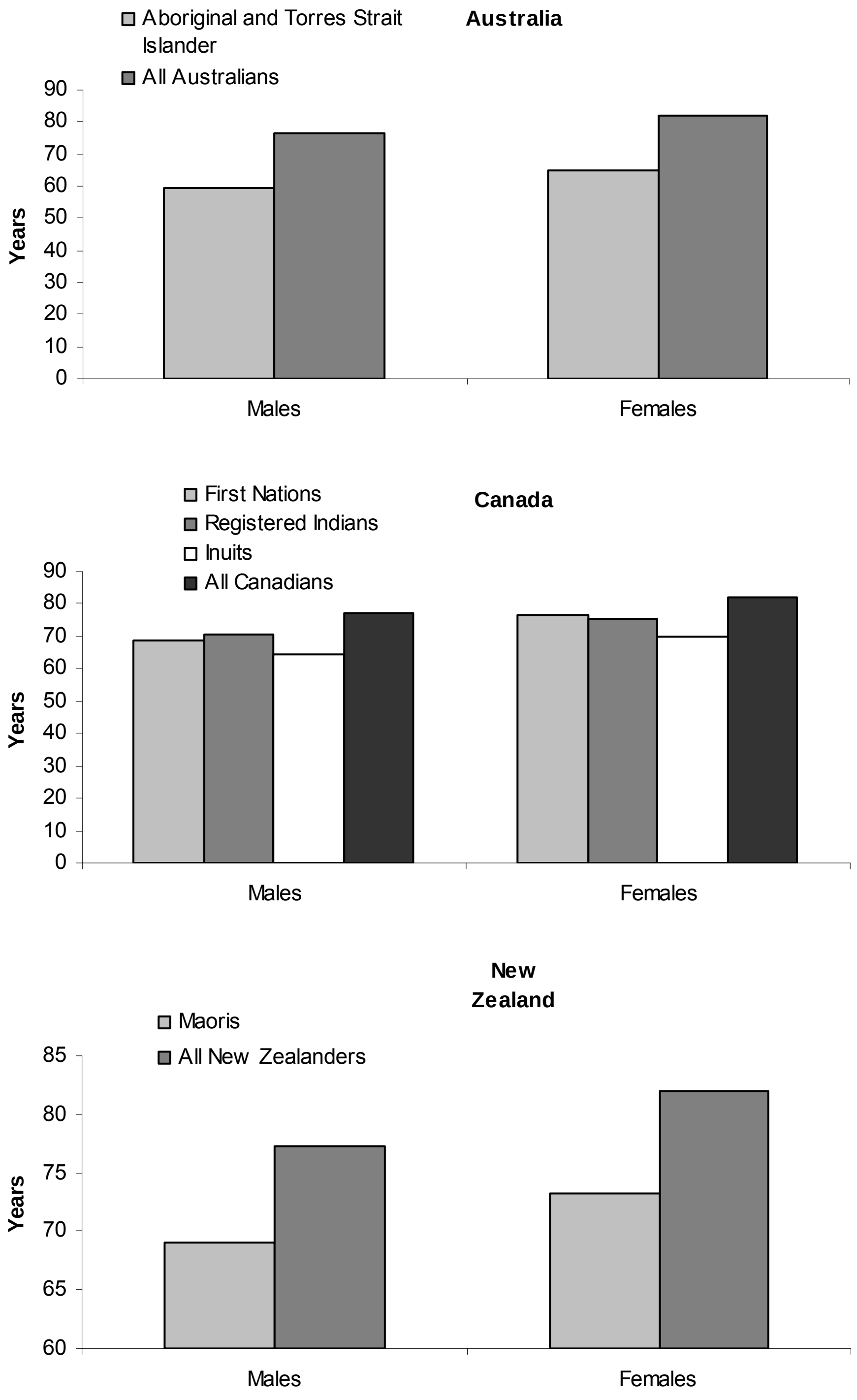
International indigenous data are available for New Zealand, the United States and Canada.

There are several common issues that adversely affect the quality of Indigenous mortality data in these three countries and Australia. These include the lack of an accurate denominator for the Indigenous population (mainly due to undercounting) and the lack of agreement over which is the best population denominator to use when they exist (for example, whether to use single ethnic response groups or multiple ethnic response groups). There are differences in how Indigenous status is defined in the different countries. There have also been frequent modifications to the ethnicity question recorded in the censuses in some of these countries. These changes in the census ethnicity question have led to difficulties in comparing mortality trends over time and have also produced difficulties in estimating inter-census population denominator counts.

An important issue in relation to the quality of Indigenous mortality data is the undercounting of deaths (the numerator for mortality data). In each of the four countries, the undercounting of Indigenous deaths is likely to lead to an underestimation of the relative size of disparities that exist between Indigenous and non-Indigenous populations. This will affect life expectancy estimates.

The life expectancy estimates presented below are not strictly comparable because of differences in the methods used to estimate life expectancy. Moreover, the populations covered by these estimates are variable across the three countries.

- The life expectancy for Maoris for 2000–02 was 69.0 years for males and 73.2 years for females (Statistics New Zealand 2005).
- The life expectancy of Canadian First Nations people in 2000 was 68.9 years for males and 76.6 years for females (Health Canada 2005). The life expectancy for Canadian registered Indians in 2001 was 70.4 for males and 75.5 for females (India and Northern Affairs Canada 2005) and the life expectancy for Canadian Inuit people for the period 1999–2003 was 64.4 years for males and 69.8 years for females (Statistics Canada unpublished data). This compared to a life expectancy of 77.0 years for all Canadian males and 82.1 years for all Canadian females (Statistics Canada unpublished data).
- Life expectancy at birth is not readily available for American Indians in the United States. The most recent published data on the life expectancy of American Indians are projected life expectancies for 1999. In 1999, the projected life expectancy for American Indian males was 72.8 compared with 74.0 for total males, and 82.0 for American Indian females compared with 79.7 for total females (based on low series population estimates) (National Projections Program, Population Division, US Census Bureau).



Notes

1. Life expectancy estimates for Aboriginal and Torres Strait Islander peoples are for 1996–2001 and for the total Australian population they are for 1998–2000.
2. Life expectancy estimates for First Nations are for 2000; Registered Indians are for 2001; Inuits are for 1999–2003 and the total Canadian population are for 2001.
3. Life expectancy estimates for Maoris and the total New Zealand population are for 2000–2002.

Sources: SCATSIH & SIMC 2006; Health Canada 2005; Statistics Canada unpublished; Indian and Northern Affairs Canada 2005; Statistics New Zealand 2005.

Figure 1.17.2: Life expectancy at birth for males and females in Australia, Canada and New Zealand, by Indigenous status, various years

Years of potential life lost

Potential years of life lost (PYLL) is a measure of premature or untimely death. It represents the total number of years of life lost before a given age (for example, 65 years). If dying before the age of 65 is considered premature then a person dying at age 55 would have lost 10 years of potential life. This measure gives more importance to the causes of death that occurred at younger ages than those that occurred at older ages.

The PYLL due to death is calculated for each person who died before age 65. Deaths of people aged 65 years and over are not included in the calculation. Potential years of life lost correspond to the sum of the PYLL contributed for each individual. The rate is obtained by dividing total potential years of life lost by the total population less than 65 years of age.

Table 1.17.2 presents the number and rate of potential years of life lost for Indigenous and non-Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory over the period 2002–2006.

- Between 2002 and 2006, approximately 74% of Indigenous males and 64% of Indigenous females died before the age of 65, compared with 26% of non-Indigenous males and 16% of non-Indigenous females.
- For the period 2002–2006, there were 86,303 and 52,872 years of potential life lost before the age of 65 for Indigenous males and females respectively.
- The rate of potential years of life lost per 1,000 population was 123.3 for Indigenous males and 74.3 for Indigenous females, compared with 33.8 for non-Indigenous males and 19.1 for non-Indigenous females.
- For every death of Indigenous males and females over the period 2002–2006, an average of 25–27 years of life were lost before the age of 65 years, compared with 18 years for non-Indigenous males and females.

Table 1.17.2: Potential years of life lost before age 65 years (PYLL), Qld, WA, SA & NT, 2002–2006[(a)][(b)][(c)]

	Deaths aged under 65 years		PYLL (65)		
	No.	% of deaths	No.	Deaths per 1,000[(d)]	No. years per death
Indigenous					
Males	3,252	74.4	86,303	123.3	26.5
Females	2,123	63.9	52,872	74.3	24.9
Non-Indigenous					
Males	31,060	25.8	550,355	33.8	17.7
Females	17,190	15.7	303,246	19.1	17.6

(a) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous PYLL.

(b) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(c) Data are based on year of registration of death.

(d) Deaths per 1,000 population.

Source: AIHW analysis of National Mortality Database.

Additional information

Life expectancy in the Northern Territory

A study was undertaken by Wilson et al. (2007) to assess the extent of changes in life expectancy at birth for Indigenous Australians living in the Northern Territory over the period 1967–2004. Life expectancy at birth figures were calculated via life table calculations using Indigenous mortality data and population data from the Northern Territory.

The study found that the life expectancy at birth of Indigenous Australians has risen considerably in the Northern Territory, increasing from 52 years for males and 54 years for females in the late 1960s to around 60 years for males and 68 years for females in 2004. The gap between Indigenous and total Australian female life expectancy in the Northern Territory has narrowed between 1967 and 2004, but the gap between Indigenous and total Australian male life expectancy has remained the same.

Wilson et al. (2007) reported that declines in infant mortality accounted for a large amount of the increases in life expectancy for the Northern Territory Indigenous population between the late 1960s and mid 1980s, especially for males. A significant proportion of female life expectancy gains in this early period also came from other childhood and adult ages. From the mid 1980s to the early 2000s, declines in mortality at age 45 and over were responsible for the majority of life expectancy gains for both Indigenous males and females in the Northern Territory. For the total Australian population, improvements in middle age and older adult mortality were responsible for the vast majority of gains to Australian life expectancy over the entire period 1967–2004.

The gains in life expectancy for Indigenous males and females in the Northern Territory reported by Wilson et al. (2007) indicate that Indigenous health status has improved considerably in recent decades in the Northern Territory. There is still, however, substantial disparity between life expectancy measures of the Indigenous and non-Indigenous populations.

Data quality issues

Life expectancy estimates

Estimates of life expectancy are drawn from life tables. To construct a life table, data on total population, births and deaths are needed, and the accuracy of the life table depends on the completeness of these data. Because of uncertainty about the estimates of these components for Aboriginal and Torres Strait Islander peoples, experimental methods are used to calculate life expectancies for the Indigenous population. These experimental life expectancies should only be used as an indicative summary measure of life expectancy of the Indigenous population.

The Bhat method differs from other indirect methods used earlier by the ABS to estimate life expectancy from incomplete data such as the Preston Hill method. Although the Bhat method allows for an adjustment for changes in identification to be taken into account in the estimation of life expectancy, it remains experimental and therefore more work needs to be done on such estimates as more robust methods become available.

Births and deaths

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their birth and death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording to the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Under-identification

Almost all births and deaths in Australia are registered. However, the Indigenous status of the person is not always recorded/recorded correctly. The incompleteness of Indigenous identification means the number of births and deaths registered as Indigenous is an underestimate of births and deaths occurring in the Aboriginal and Torres Strait Islander population. As a result, the observed differences between Indigenous and non-Indigenous rates are under-estimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. Note that as the data quality improves, the states and territories to be included here should be reviewed.

The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007).

(continued)

Data quality issues (continued)

Numerator and denominator

Life expectancy calculations rely on good numerator and denominator estimates. The numerator and denominator are not based on the same collection or the same method of collection. Births are registered by the parents whereas death registration forms are completed by doctors and funeral directors. Therefore there would be inconsistency of Indigenous identification in the numerator and denominator. The changes in the completeness of identification of Indigenous people in birth and death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population estimates (ABS 2004).

International comparisons

International Indigenous data are available for New Zealand, the United States and Canada.

In New Zealand, research has been undertaken that attempts to adjust for this undercounting by a process of probabilistic record linkage of death registration data with census data. This research has produced estimates of the considerable extent of the undercounting of Maori deaths. This adjusted data could not be used in international comparisons unless the data in the other countries were also adjusted (Bramley et al. 2004).

In Canada the national mortality database administered by Statistics Canada does not contain ethnicity data. The regional offices of Health Canada collect mortality data for the indigenous, on-reserve, First Nations population. Via a series of partnerships with each provincial vital statistics registrar, First Nations specific death certificate information is sent to the regional First Nations and Inuit Health Branch regional office. However, in a number of areas no such relationships exist (for example, the Atlantic, Ontario, and Quebec regions), and therefore data are obtained directly from the local communities, or not at all. The availability of Indigenous mortality data in Canada is further limited by the lack of information for off-reserve, or non-status, Indigenous peoples.

The varying degrees of completeness and accuracy of the Indigenous mortality databases that exist within the four countries are likely to affect the comparisons.

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1.18 Median age at death

The age at which exactly half the deaths registered (or occurring) in a given time period were deaths of people above that age and half were deaths below that age

Data sources

Data for this measure come from the AIHW National Mortality Database.

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death, or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data for which year of registration of death was used. Data published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Analyses

Care should also be exercised when analysing Indigenous median age at death, as differences in identification by age may lead to biased summary indicators such as median age at death. Better identification of Indigenous infant deaths compared with older age groups will result in observed median age at death being underestimated. Median age at death values are influenced to some extent by the age structure of a population. The Indigenous population has a younger age structure than the non-Indigenous population and this is reflected in the median age at death of the two populations.

Median age at death by state/territory

- Over the period 2002–2006, in Queensland, Western Australia, South Australia and the Northern Territory combined, the median age at death was 49 years for Indigenous males and 56 years for Indigenous females, compared with 76 years for non-Indigenous males and 82 years for non-Indigenous females in these jurisdictions.
- Over the period 2002–2006, in the four jurisdictions, the median age at death for Indigenous males ranged from 45 years in the Northern Territory to 52 years in

Queensland. For Indigenous females, the median age at death ranged from 52 years in the Northern Territory and South Australia to 59 years in Queensland (Table 1.18.1).

Table 1.18.1: Median age at death, by Indigenous status and sex, Qld, WA, SA and NT, 2002–2006[a][b][c][d]

	Qld	WA	SA	NT	Qld, WA, SA & NT
			Indigenous males		
2002	51	51	48	47	49
2003	51	50	48	46	49
2004	53	49.5	49	43	49
2005	51	52	42	45	49
2006	55	47	50	45	49
2002–2006	**52**	**50**	**47**	**45**	**49**
			Non-Indigenous males		
2002	75	75	77	62.5	76
2003	75	76	77	65	76
2004	76	76	77	62.5	76
2005	76	76	77	63	76
2006	76	76	78	64	77
2002–2006	**76**	**76**	**77**	**63**	**76**
			Indigenous females		
2002	58	52.5	54.5	49.5	55
2003	62	54	49.5	52	56
2004	57	63	53	53.5	58
2005	59	57	47	50	55
2006	56.5	56.5	59	55	56
2002–2006	**59**	**57**	**52**	**52**	**56**
			Non-Indigenous females		
2002	82	82	82	70	82
2003	82	82	83	74	82
2004	82	82	83	71	82
2005	82	83	83	70	82
2006	83	83	84	74.5	83
2002–2006	**82**	**82**	**83**	**71**	**82**

(a) The incompleteness of Indigenous identification means that the number of deaths registered as Indigenous is an underestimate of the actual number of deaths which occur in the Aboriginal and Torres Strait Islander population.

(b) Variations in median age at death by Indigenous status, sex and jurisdiction should be interpreted with care as they are sensitive to differential data quality.

(c) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states and territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(d) Data are by year of registration of death and state/territory of usual residence

Sources: AIHW analysis of National Mortality Database.

Time series analysis

Total deaths can be partitioned into quartiles by age at death (the first quartile is the age below which 25% of all deaths occur, the median is the age below which 50% of all deaths occur, and the third quartile is the age below which 75% of all deaths occur). An analysis of this kind can reveal changes in patterns of mortality over time, such as an increase in the proportion of deaths occurring at older ages and a corresponding decrease in the proportion occurring at younger ages.

But any such changes must be interpreted with care before any inferences can be drawn regarding an improvement or deterioration in the mortality of Indigenous Australians. Fluctuations in the level of Indigenous mortality over time partly reflect changing levels of identification of Indigenous deaths and population estimates. Quartiles of age at death are also affected by changes in age distribution of the population resulting, for example, from changes in fertility, and therefore they support comparisons only if fertility rates remain consistent over the period being analysed.

Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have over 10 years of adequate identification of Indigenous deaths in their recording systems. As there is a consistent time series of population estimates from 1991, data for the period 1991–2006 have been used for the analysis of Indigenous mortality trends.

Because of the late inclusion of a 'not stated' category of Indigenous status in 1998 (before which 'not stated' responses were included with non-Indigenous deaths), quartiles of death and median age of death for Indigenous Australians have been compared with those of 'other' Australians (which include deaths of both non-Indigenous people and people for whom Indigenous status was not stated).

Table 1.18.2 and Figure 1.18.1 present trends in the median age at death for Indigenous and other Australians in Western Australia, South Australia and the Northern Territory combined over the period 1991–2006.

Table 1.18.3 and Figure 1.18.2 present quartiles of age at death for Indigenous Australians in Western Australia, South Australia and the Northern Territory by jurisdiction over the period 1991–2006.

- Over the period 1991–2006, there was no significant change in the median age at death for Indigenous males and females in Western Australia, South Australia and the Northern Territory combined (Table 1.18.2). Over the same period, there were increases in the median age at death for other males and other females in Western Australia, South Australia and the Northern Territory combined of around 6% for males and 5% for females (Table 1.18.2).
- When analysing age at death by quartiles over the period 1991–2006, there has been a significant increase in the age at death in the first quartile among Indigenous males in all three jurisdictions—Western Australia, South Australia and the Northern Territory—and among Indigenous females in South Australia (Table 1.18.3).

Table 1.18.2: Median age at death, by Indigenous status and sex, WA, SA and NT, 1991–2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change over period[(b)]
Indigenous																		
Males	46	49	46	49	48	47	48	45	48	46	48	48	48	47	47	46	–0.03	–1.1
Females	55	56	57	60	56	56	53	52	54.5	55	53	52	51	59	52	56	–0.2	–5.2
Other																		
Males	73	72	73	73	73	74	74	74	75	75	75	76	76	76	76	77	0.3*	6.1
Females	79	79	79	80	80	81	81	81	81	81	82	82	82	82	83	83	0.3*	5.1

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1991–2006.

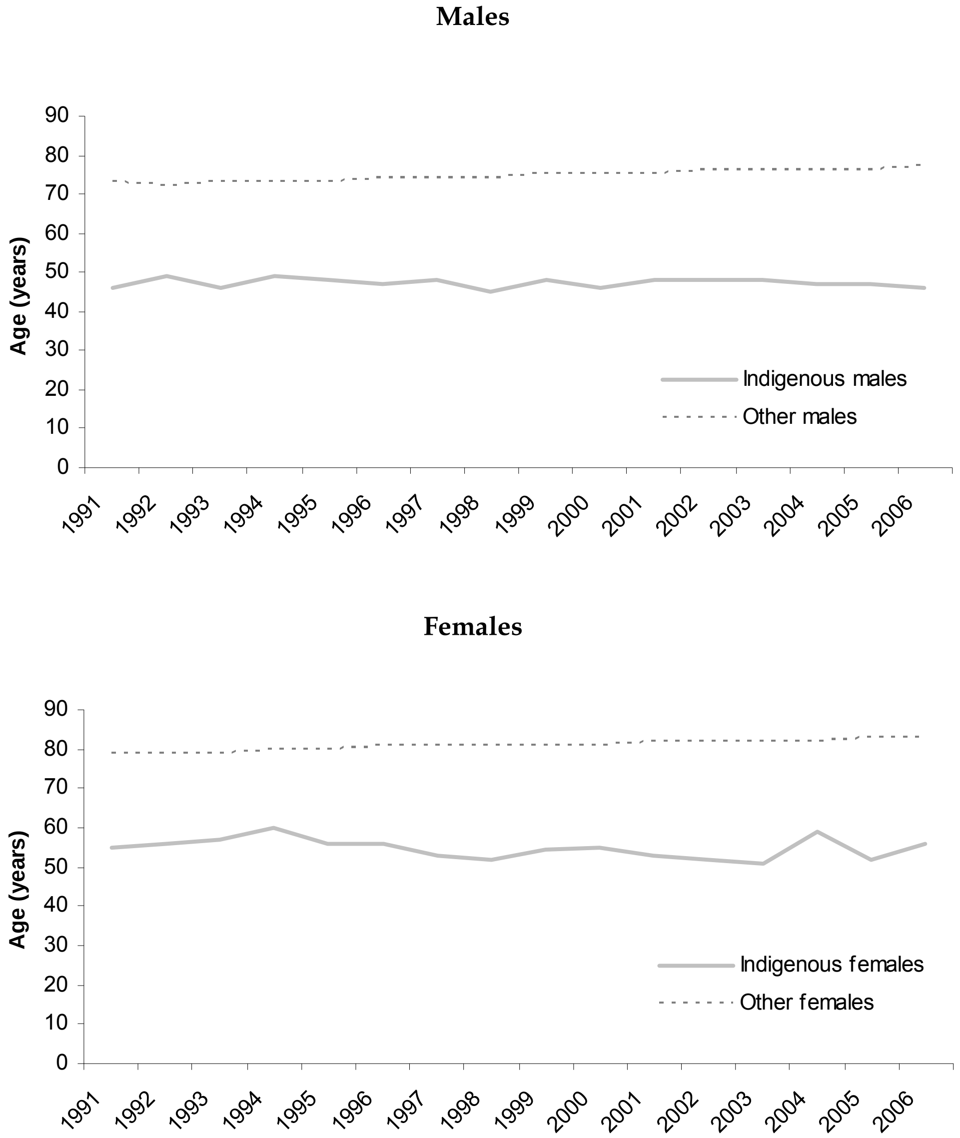
(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1991 and 2006 based on the average annual change over the period.

Notes

1. Data based on year of registration of death and state/territory of usual residence.
2. Data presented in this table may differ from data presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.18.1: Median age at death, by Indigenous status, WA, SA and NT combined, 1991–2006

Table 1.18.3: Quartiles of age at death, Indigenous Australians in WA, SA and NT, 1991–2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change over period[(b)]
First quartile of age at death																		
Males																		
WA	26	31	29	31	32	32	33	29	31.5	31	34	33.5	36	36.5	37	35	0.5*	30.3
SA	23	22	27	38	28	26.5	32	32	37	31	34	35	37	35	31	36	0.7*	46.0
NT	26	29.5	26	28	29	32	33	31	30	29	32	33	33	31	32	33	0.4*	21.4
Females																		
WA	31	34	43	42.5	39	39	40	35	35	35	36	35	32	46	39	41	0.1	6.8
SA	27.5	33	34	32	41	36	35	39	36	39	45	38.5	40	39	35	44	0.6*	35.1
NT	33	37	31.5	37.5	39	36	36	35	36	37	38	33	39	36.5	37	39	0.2	8.7
Median age at death																		
Males																		
WA	49	51	48	51	49	48	48	44.5	49	46	51.5	51	50	49.5	52	47	0.0	0.9
SA	41	37	40	51	45	47	50	43.5	46	49	49.5	48	48	49	42	50	0.4*	16.4
NT	46	49	46.5	46	50	46.5	48	45	47	46	45	47	46	43	45	45	–0.2*	–6.6
Females																		
WA	59	58	61	62	59	57.5	57	56.5	55	55.5	53.5	52.5	54	63	57	56.5	–0.3	–6.4
SA	47.5	55	55.5	49	51	54	52	50	50	56	55	54.5	49.5	53	47	59	0.1	4.0
NT	52	55	51.5	60	56	53.5	52	49	56	53.5	52	49.5	52	53.5	50	55	–0.2	–4.7

(continued)

Table 1.18.3 (continued): Quartiles of age at death, Indigenous Australians in WA, SA and NT, 1991–2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change over period(b)
Third quartile of age at death																		
Males																		
WA	66	64	65	64	68	66	63	65	62.5	66	66	66.5	65	66	64	67	0.0	1.0
SA	57	59	56	63	62	62.5	67	67	58	62	63	65	57	66	55	60	0.1	1.9
NT	61	65	61	63	62	60	64	61	63	61	62	62	63	58	59	61	–0.2	–3.9
Females																		
WA	71	70	74	76	72	69.5	68	69	71	69	69	69	70	77	72	73	0.0	0.5
SA	62	64	69	67	64	72	68	69	72	70	72	68	65.5	71	70	72	0.4*	9.7
NT	66	67	65	72	68	68	67.5	67	71	68	69	66.5	67	69	64	72	0.1	1.7

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1991–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

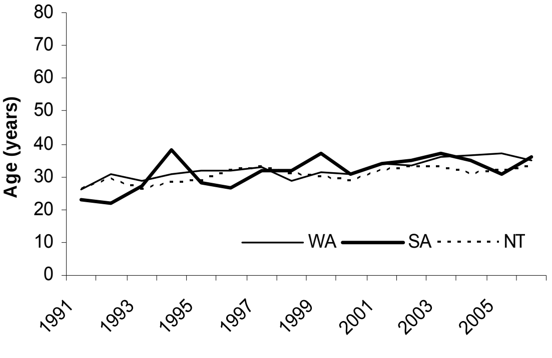
(b) Per cent change between 1991 and 2006 based on the average annual change over the period.

Notes

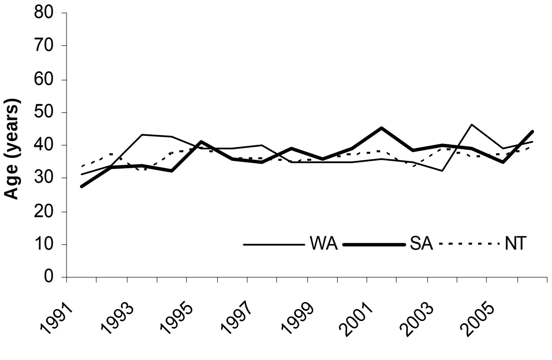
1. Data based on year of registration of death and state/territory of usual residence.
2. Data presented in this table may differ from data presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.

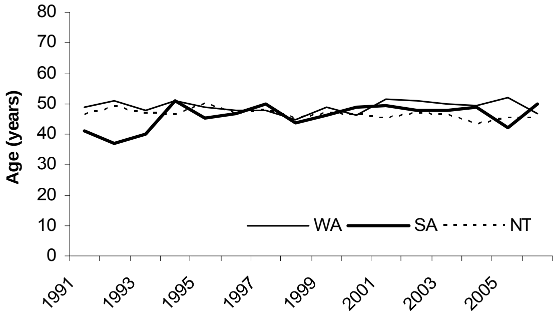
First quartile, males



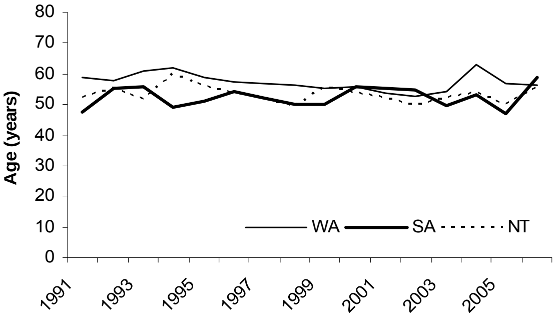
First quartile, females



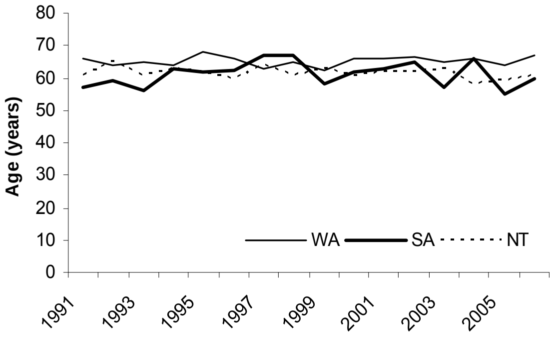
Median age at death, males



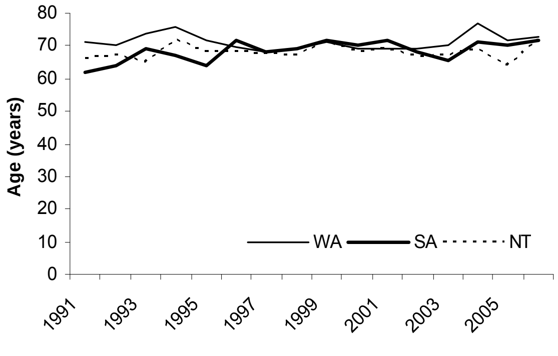
Median age at death, females



Third quartile, males



Third quartile, females



Source: AIHW analysis of National Mortality Database.

Figure 1.18.2: Quartiles of age at death for Indigenous males and females in WA, SA and NT, 1991–2006

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous Australians in Table 1.18.4 and Figure 1.18.3. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these deaths have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

- Over the period 1998–2006, there was no significant change in the median age at death for Indigenous males and females in Queensland, Western Australia, South Australia and the Northern Territory combined. Over the same period, there were significant increases in the median age at death for non-Indigenous males and other females of around 4% for males and 3% for females (Table 1.18.4).

Table 1.18.4: Median age at death, by Indigenous status and sex, Qld, WA, SA and NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change over period[(b)]
Indigenous											
Males	45	48	49	50	49	49	49	49	49	0.3	5.3
Females	55	57	57	53	55	56	58	55	56	0.05	0.7
Non-Indigenous											
Males	74	74	75	75	76	76	76	76	77	0.4*	3.8
Females	81	81	81	81	82	82	82	82	83	0.2*	2.3

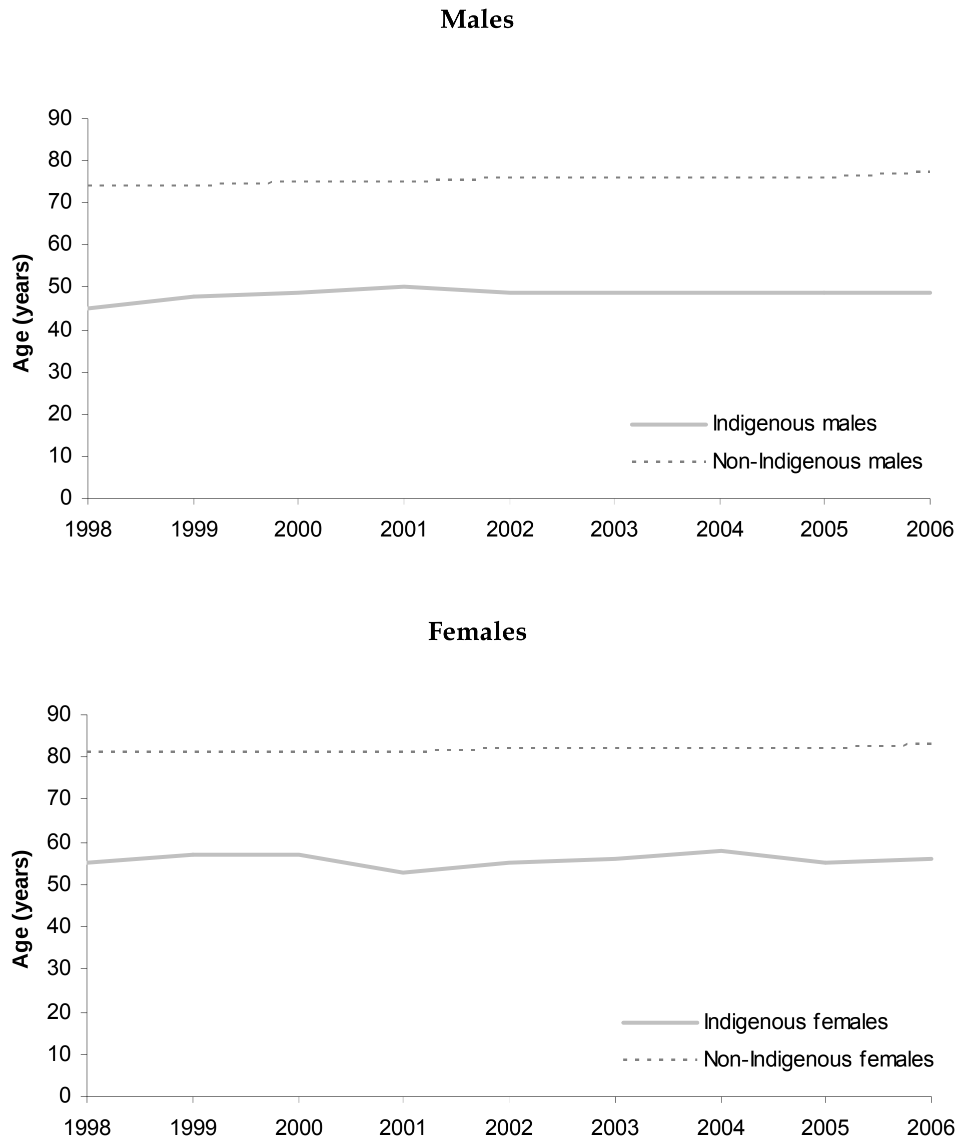
* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1998 and 2006 based on the average annual change over the period.

Note: Data based on year of registration of death and state/territory of usual residence.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.18.3: Median age at death, by Indigenous status, Qld, WA, SA and NT combined, 1998–2006

International comparisons

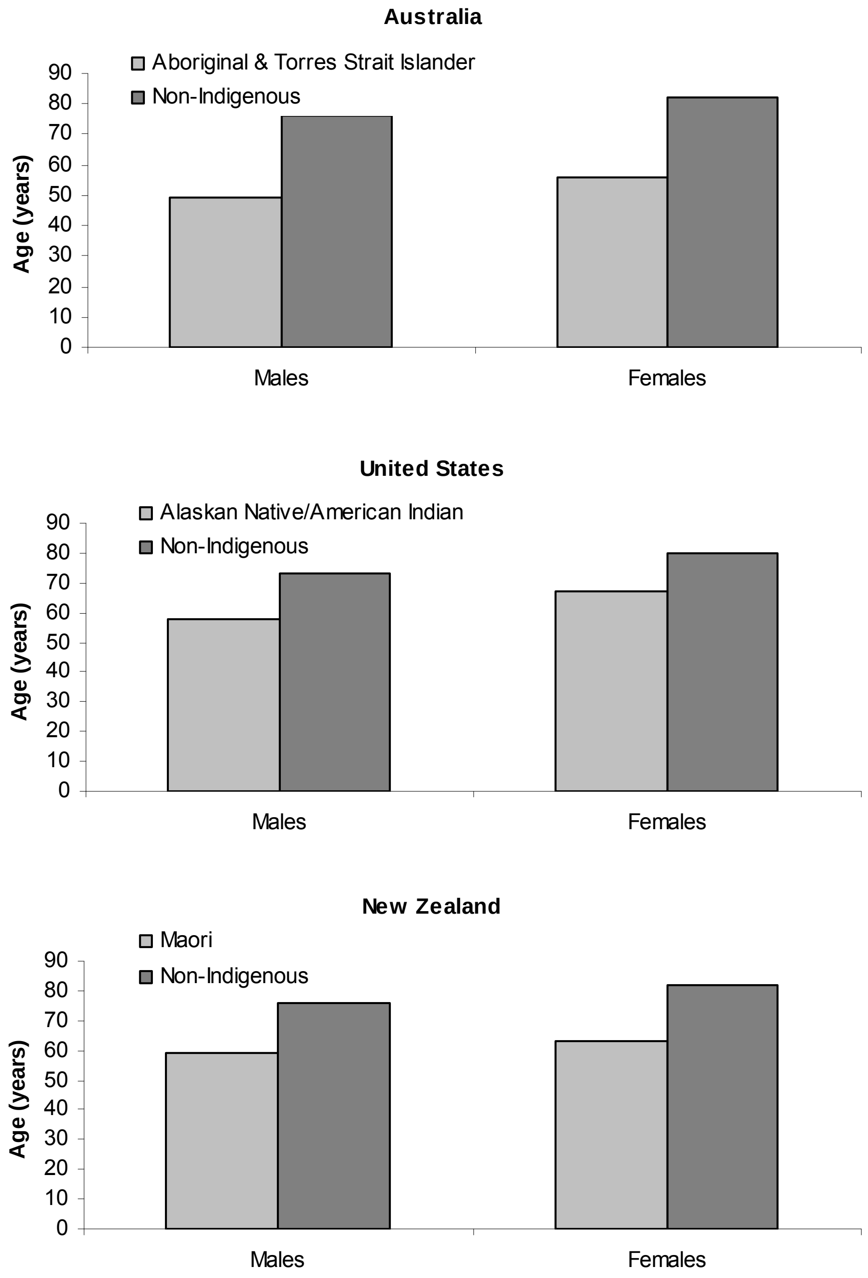
International indigenous data are available for New Zealand, the United States and Canada.

There are several common issues that adversely affect the quality of Indigenous mortality data in these three countries and Australia. These include the lack of an accurate denominator value for the Indigenous population and the lack of agreement over which population denominator values to use if they do exist. There are differences in how Indigenous status is defined in the different countries. There have also been frequent modifications to the ethnicity question recorded in the censuses in some of these countries. These frequent changes in the census ethnicity question have led to difficulties in comparing mortality trends over time and have also produced difficulties in estimating population denominator counts between censuses.

The most important issue in regard to the quality of Indigenous mortality data is the undercounting of deaths (the numerator for mortality data). In each of the four countries, the undercounting of Indigenous deaths is likely to lead to an underestimation of the relative size of disparities that exist between Indigenous and non-Indigenous populations.

The median age at death is available for American Indians and Alaskan Natives and is presented below. Median age at death is not available for Canadian First Nations because, for this population group, data are not accurately available by single year age groups. Because of differences in coverage of Indigenous deaths in the three countries, the median age at death should not be strictly compared between countries and the data presented below should be interpreted with caution.

- In the United States, for the period 2002–2005 the median age at death for American Indians and Alaskan Natives was 58 years for males and 67 years for females, compared with 73 years for non-Indigenous males and 80 years for non-Indigenous females (United States Department of Health and Human Services unpublished data).
- In New Zealand, for the period 2002–2006, the median age at death for Maoris was 59 years for males and 63 years for females, compared with 76 years for non-Indigenous males and 82 years for non-Indigenous females (Statistics New Zealand, unpublished data).
- The median age at death for Aboriginal and Torres Strait Islander peoples is well below that of American Indians/Alaskan Natives and New Zealand Maoris (Figure 1.18.4).



Notes

1. Australia data are 2002–2006 for Qld, WA, SA and NT, Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians.
2. US data are for 2002–2005 for US Indians/Alaskan Natives and non-Indigenous Americans.
3. New Zealand data are for 2002–2006 for Maoris and the non-Indigenous New Zealand population.
4. Because of differences in coverage of Indigenous deaths in the three countries, the median age at death should not be strictly compared between countries.

Sources: AIHW analysis of National Mortality Database; United States Department of Health and Human Services; Statistics New Zealand.

Figure 1.18.4: Median age at death, by Indigenous status, Australia, United States and New Zealand, 2002–2006

Data quality issues

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded, or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with over 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia 55% (ABS 2007).

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009*(ABS 2004).*

International comparisons

International Indigenous data are available for New Zealand, the United States and Canada.

In New Zealand, research has been undertaken that attempts to adjust for this undercounting by a process of probabilistic record linkage of death registration data with census data. This research has produced estimates of the considerable extent of the undercounting of Maori deaths. This adjusted data could not be used in international comparisons unless the data in the other countries were also adjusted (Bramley et al. 2004).

(continued)

Data quality issues (continued)

In Canada the national mortality database administered by Statistics Canada does not contain ethnicity data. The regional offices of Health Canada collect mortality data for the Indigenous, on-reserve, First Nations population. Via a series of partnerships with each provincial vital statistics registrar, First Nations specific death certificate information is sent to the regional First Nations and Inuit Health Branch regional office. However, in a number of areas no such relationships exist (for example, the Atlantic, Ontario and Quebec regions), and therefore data are obtained directly from the local communities, or not at all. The availability of Indigenous mortality data in Canada is further limited by the lack of information that is available for off-reserve, or non-status, Indigenous peoples.

The varying degrees of completeness and accuracy of the Indigenous mortality databases that exist within the four countries are likely to affect the comparisons.

References

ABS (Australian Bureau of Statistics) 1997. Occasional Paper: Mortality of Aboriginal and Torres Strait Islander Australians. ABS cat. no. 3315.0. Canberra: ABS.

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Bramley D, Hebert P, Jackson R & Chassin M 2004. Indigenous disparities in disease-specific mortality, a cross-country comparison: New Zealand, Australia, Canada, and the United States. New Zealand Medical Journal 117(1207). <www.nzma.org.nz/journal/117-1207/1215>.

1.19 Infant mortality

The number of Aboriginal and Torres Strait Islander people who die in the first year of life, expressed as a rate (per 1,000 live births) for that period

Data sources

Data for this measure come from the AIHW National Mortality Database.

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Several years of data have been combined because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data, for which year of registration of death was used. Rates published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Analyses

Mortality

- Over the period 2002–2006 there were 2,408 deaths of infants in Queensland, Western Australia, South Australia and the Northern Territory, 455 (19%) of which were deaths of Aboriginal and Torres Strait Islander infants and 62 (3%) were of infants for whom Indigenous status was not stated.
- The mortality rate for Indigenous infants was 12.3 per 1,000 live births compared with 4.2 per 1,000 live births for non-Indigenous infants in Queensland, Western Australia, South Australia and the Northern Territory combined. Indigenous infants died at around three times the rate of non-Indigenous infants in these jurisdictions (Table 1.19.1).

Mortality by sex

- Over the period 2002–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined, the mortality rate for Indigenous male infants was 14.4

per 1,000 live births compared with 10.1 per 1,000 live births for Indigenous female infants (Table 1.19.1).

- Over the same period Indigenous male and female infants died at around three times the rate of non-Indigenous infants.

Table 1.19.1: Infant mortality rates per 1,000 live births, by Indigenous status and sex, Qld, WA, SA and NT, 2002–2006[a][b][c][d][e]

	Indigenous				Non-Indigenous				
	Deaths	No. per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Deaths	No. per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Rate ratio[i]
Males	272	14.4	12.7	16.2	1,036	4.5	4.2	4.8	3.2*
Females	183	10.1	8.6	11.6	855	3.9	3.7	4.2	2.6*
Persons	455	12.3	11.2	13.4	1,891	4.2	4.0	4.4	2.9*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data for these periods. They do not represent a quasi-Australian figure.

(b) Data exclude 62 registered infant deaths where Indigenous status was not stated over the period 2002–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous infant deaths and, depending on the under-identification in births, may either underestimate or overestimate the rates. The ABS calculated the completeness of identification of Indigenous deaths for the period 2002–2006 using population estimates as 51% for Queensland, 72% for Western Australia, 62% for South Australia and 90% for the Northern Territory. The completeness of Indigenous identification for infant mortality may differ from the estimates for 'all causes'.

(d) Because of changes in the level of accuracy of Indigenous identification in the births and deaths data over time, caution should be used in interpreting changes in Indigenous infant mortality rates. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous infant mortality rates because of these data quality issues.

(e) Deaths are by year of registration and state/territory of usual residence.

(f) No. per 1,000 live births.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

Source: AIHW analysis of National Mortality Database.

Mortality by state/territory

Table 1.19.2 presents infant deaths, mortality rates and rate ratios for Queensland, Western Australia, South Australia and the Northern Territory for the years 1996–1998, 1999–2001, 2002–2004 and 2005–2006.

- For the period 1996–1998, there were 189 deaths of Aboriginal and Torres Strait Islander infants in Western Australia, South Australia and the Northern Territory combined. Indigenous infant mortality rates were 8.3 per 1,000 live births in South Australia, 18.3 per 1,000 in Western Australia and 23.7 per 1,000 in the Northern Territory. In South Australia, Indigenous infants died at twice the rate of non-Indigenous infants and in Western Australia and the Northern Territory, Indigenous infants died at around four times the rate of non-Indigenous infants.
- For the period 1999–2001, there were 296 deaths of Indigenous infants in Queensland, Western Australia, South Australia and the Northern Territory combined. Infant mortality rates ranged from 8.0 per 1,000 live births in South Australia to 19.2 per 1,000 live births in the Northern Territory. In Western Australia and the Northern Territory, Indigenous infants died at three to five times the rate of non-Indigenous infants. In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous infants died at three times the rate of non-Indigenous infants.
- For the period 2002–2004, there were 270 deaths of Aboriginal and Torres Strait Islander infants in the four jurisdictions. Infant mortality rates ranged from 9.4 per 1,000 live

births in South Australia to 15.4 per 1,000 live births in the Northern Territory. In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous infants died at three times the rate of non-Indigenous infants.

- For the period 2005–2006, there were 185 deaths of Aboriginal and Torres Strait Islander infants in the four jurisdictions. Infant mortality rates ranged from 6.9 per 1,000 live births in South Australia to 16.1 per 1,000 live births in the Northern Territory. In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous infants died at three times the rate of non-Indigenous infants.

Mortality by cause of death

- In the period 2002–2006, the most common group of diseases causing mortality among Indigenous infants was conditions originating in the perinatal period such as birth trauma, disorders related to fetal growth, complications of pregnancy, labour and delivery, and respiratory and cardiovascular disorders specific to the perinatal period. Indigenous infants died at three times the rate of non-Indigenous infants for these conditions (Table 1.19.3).
- Congenital malformations, deformations and chromosomal abnormalities and sudden infant death syndrome (SIDS) were also leading causes of death among Indigenous infants who died at twice and five times the rates of non-Indigenous infants respectively for these conditions.
- Indigenous infants also died at much higher rates for respiratory diseases, infectious and parasitic diseases, and injury and poisoning than non-Indigenous infants (nine, four and four times the rates respectively).

Table 1.19.2: Infant mortality rates per 1,000 live births, by Indigenous status, Qld, WA, SA and NT, 1996–1998, 1999–2001, 2002–2004 and 2005–2006(a)(b)(c)(d)(e)(f)(g)

	Indigenous				Non-Indigenous				
	Deaths	No. per 1,000(h)	LCL 95%(i)	UCL 95%(j)	Deaths	No. per 1,000(h)	LCL 95%(i)	UCL 95%(j)	Rate ratio(k)
					1996–98(b)				
WA	82	18.3	14.3	22.3	332	4.8	4.2	5.3	3.8*
SA	15	8.3	4.1	12.5	239	4.4	3.9	5.0	1.9*
NT	92	23.7	18.8	28.5	39	5.6	3.9	7.4	4.2*
					1999–2001				
Qld	111	11.7	9.5	13.9	721	5.5	5.1	5.9	2.1*
WA	81	16.6	13.0	20.2	251	3.6	3.2	4.1	4.6*
SA	15	8.0	3.9	12.0	219	4.3	3.7	4.8	1.9*
NT	89	19.2	15.2	23.2	37	5.7	3.9	7.6	3.3*
Qld, WA, SA & NT(a)	**296**	**14.2**	**12.6**	**15.8**	**1,228**	**4.7**	**4.5**	**5.0**	**3.0***
					2002–04				
Qld	111	10.9	8.9	12.9	643	4.7	4.4	5.1	2.3*
WA	69	14.1	10.8	17.5	222	3.3	2.8	3.7	4.3*
SA	18	9.4	5.1	13.8	184	3.7	3.1	4.2	2.6*
NT	72	15.4	11.8	18.9	39	6.1	4.2	8.0	2.5*
Qld, WA, SA & NT(a)	**270**	**12.5**	**11.0**	**14.0**	**1,088**	**4.2**	**3.9**	**4.4**	**3.0***
					2005–06				
Qld	81	11.4	8.9	13.9	452	4.6	4.2	5.1	2.4*
WA	45	12.3	8.7	15.8	199	4.0	3.4	4.5	3.1*
SA	10	6.9	2.6	11.2	133	3.8	3.2	4.5	1.8
NT	49	16.1	11.6	20.6	19	4.4	2.4	6.4	3.6*
Qld, WA, SA & NT(a)	**185**	**12.1**	**10.4**	**13.8**	**803**	**4.3**	**4.0**	**4.6**	**2.8***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

Table 1.19.2 (continued): Infant mortality rates per 1,000 live births, by Indigenous status, Qld, WA, SA and NT, 1996–1998, 1999–2001, 2002–2004 and 2005–2006[(a)(b)(c)(d)(e)(f)(g)]

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data for these periods. They do not represent a quasi-Australian figure.

(b) A subtotal for Queensland, Western Australia, South Australia and the Northern Territory has not been provided for the period 1996–1998, as Indigenous mortality data for Queensland are reliable only from 1998 onwards.

(c) Data are presented in 3- and 2-year groupings because of small numbers each year.

(d) Data exclude 90 registered infant deaths where Indigenous status was not stated over the period 1996–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

(e) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous infant deaths and, depending on the under-identification in births, may either underestimate or overestimate the rates. The ABS calculated the completeness of identification of Indigenous deaths for the period 2002–2006 using population estimates as 51% for Queensland, 72% for Western Australia, 62% for South Australia and 90% for the Northern Territory. The completeness of Indigenous identification for infant mortality may differ from the estimates for 'all causes'.

(f) Because of changes in the level of accuracy of Indigenous identification in the births and deaths data over time, caution should be used in interpreting changes in Indigenous infant mortality rates. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous infant mortality rates because of these data quality issues.

(g) Deaths are by year of registration and state/territory of usual residence.

(h) No. per 1,000 live births.

(i) LCL = lower confidence limit.

(j) UCL = upper confidence limit.

(k) Rate ratio Indigenous:non-Indigenous.

Source: AIHW analysis of National Mortality Database.

Table 1.19.3: Causes of infant death by Indigenous status, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)(d)(e)]

	Number of deaths		No. per 1,000[(f)]		
Cause of death	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Rate ratio[(g)]**
Certain conditions originating in the perinatal period (P00–P96)	209	937	5.7	2.1	2.7*
Signs, symptoms & ill-defined conditions (R00-R99)	101	214	2.7	0.5	5.7*
SIDS (R95)[(h)]	*39*	*88*	*1.1*	*0.2*	*5.4**
Congenital malformations (Q00–Q99)	54	447	1.5	1.0	1.5*
Diseases of the respiratory system (J00–J99)	35	49	0.9	0.1	8.6*
Injury & poisoning (V01–Y99)	19	60	0.5	0.1	3.8*
Infectious and parasitic diseases (A00–B99)	11	32	0.3	0.1	4.2*
Diseases of the circulatory system (I00–I99)	7	27	0.2	0.1	3.1*
Other conditions[(i)]	19	125	0.5	0.3	1.8*
Total	**455**	**1,891**	**12.3**	**4.2**	**2.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states and territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 62 infant deaths where the Indigenous status is not stated.

(d) Although most deaths of Indigenous infants are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate Indigenous infant deaths and, depending on the under-identification in births, may either underestimate or overestimate the rates. Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

(e) Deaths are by year of registration.

(f) No. per 1,000 live births.

(g) Rate ratio Indigenous:non-Indigenous.

(h) Data presented for SIDS are a subset of data presented for signs, symptoms and ill-defined conditions presented in this table.

(i) Other conditions include: neoplasms; diseases of blood and blood-forming organs; endocrine, nutritional and metabolic diseases; mental and behavioural disorders; diseases of the nervous system; diseases of the eye and adnexa; diseases of the ear and mastoid process; diseases of the digestive system; diseases of the musculoskeletal system and connective tissues; diseases of the genitourinary system; and diseases of the skin and subcutaneous tissue.

Source: AIHW analysis of National Mortality Database.

Mortality by associated causes of death

Table 1.19.4 presents underlying causes of deaths for Indigenous infants by associated causes of death for the period 2002–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

- In the period 2002–2006, just over half (52%) of infant deaths were reported with no associated causes of death.
- Deaths of Indigenous infants were most commonly reported with conditions originating in the perinatal period (32%) and congenital malformations, deformations and chromosomal abnormalities (7%) as associated causes of death.
- Indigenous infants who died from infectious and parasitic diseases, respiratory diseases or congenital malformations as an underlying cause of death were commonly reported with conditions originating in the perinatal period as an associated cause of death (18%, 20% and 52% respectively).

Table 1.19.4: Underlying and associated causes of death for Indigenous infants, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)(d)(e)]

	Underlying cause of death									
Associated cause of death	**Conditions originating in perinatal period**	**Signs, symptoms & ill-defined conditions (excluding SIDS)**	**Congenital malformations**	**SIDS**	**Disease of respiratory system**	**Injury & poisoning**	**Infectious & parasitic diseases**	**Disease of circulatory system**	**Other conditions[(f)]**	**Total**
					Per cent					
Reported alone (no associated causes)	45.9	100.0	22.2	92.3	45.7	0.0	63.6	57.1	15.8	51.9
Conditions originating in perinatal period (P00–P96)	49.3	0.0	51.9	0.0	20.0	0.0	18.2	0.0	26.3	31.9
Congenital malformations (Q00–Q99)	3.3	0.0	37.0	2.6	2.9	0.0	9.1	14.3	10.5	7.3
Diseases of the respiratory system (J00–J99)	2.4	0.0	11.1	0.0	20.0	10.5	0.0	14.3	21.1	5.5
Injury & poisoning (V01–Y98)	0.0	0.0	3.7	0.0	2.9	94.7	0.0	0.0	5.3	4.8
Infectious & parasitic diseases (A00–B99)	1.4	0.0	3.7	2.6	14.3	0.0	0.0	14.3	26.3	3.7
Signs, symptoms & ill-defined conditions (R00–R99)	2.4	0.0	3.7	2.6	0.0	15.8	0.0	14.3	15.8	3.3
Circulatory diseases (I00–I99)	1.0	0.0	11.1	0.0	2.9	0.0	0.0	42.9	5.3	2.9
Other conditions[(f)]	4.3	0.0	9.3	0.0	5.7	10.5	18.2	14.3	42.1	6.4
Total deaths	**209**	**62**	**54**	**39**	**35**	**19**	**11**	**7**	**19**	**455**

(continued)

Table 1.19.4 (continued): Underlying and associated causes of death for Indigenous infants, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)(e)

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states and territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 62 infant deaths where the Indigenous status is not stated.

(d) Although most deaths of Indigenous infants are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate Indigenous infant deaths and, depending on the under-identification in births, may either underestimate or overestimate the rates. Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

(e) Deaths are by year of occurrence except the latest year, which is based on year of registration.

(f) Other conditions include: neoplasms; diseases of blood and blood-forming organs; endocrine, nutritional and metabolic diseases; mental and behavioural disorders; diseases of the nervous system; diseases of the eye and adnexa; diseases of the ear and mastoid process; diseases of the digestive system; diseases of the musculoskeletal system and connective tissues; diseases of the genitourinary system; and diseases of the skin and subcutaneous tissue.

Note: Sum of components may exceed 100% as more than one associated cause of death can be reported for each death.

Source: AIHW analysis of National Mortality Database.

Time series analysis

Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have over 10 years of adequate identification of Indigenous deaths in their recording systems.

As there is a consistent time series of population estimates from 1991, data for the period 1991–2006 have been used for the analysis of Indigenous mortality in this indicator.

Because of the late inclusion of a 'not stated' category of Indigenous status in 1998 (before which 'not stated' responses were included with non-Indigenous deaths), Indigenous mortality rates have been compared with the mortality rates of other Australians (which include deaths of both non-Indigenous people and people for whom Indigenous status was not stated).

Infant mortality rates, rate ratios and rate differences between Indigenous and other Australian infants over the period 1991–2006 in Western Australia, South Australia and the Northern Territory are presented in Table 1.19.5 and Figure 1.19.1.

- Over the period 1991–2006, there were significant declines in recorded mortality rates for Indigenous infants and other infants in Western Australia, South Australia and the Northern Territory combined. The fitted trend implies an average yearly decline in the rate of around 0.8 per 1,000 births for Indigenous infants (equivalent to a 47% reduction in the rate over the period) and 0.1 per 1,000 births for other infants (equivalent to a 34% reduction in the rate over the period) (Table 1.19.5).
- Over the same period, there were significant declines in the mortality rate ratios and rate differences between Indigenous and other Australian infants of around 20% and 51% respectively (Table 1.19.5).

Fluctuations in the level of Indigenous mortality over time partly reflect changing levels of identification of Indigenous deaths and population estimates. Given the variability in the measures of Indigenous mortality, caution should be exercised in assessing trends in Indigenous mortality over time and comparisons between jurisdictions and with the non-Indigenous population.

Table 1.19.5: Infant mortality rates, rate ratios and rate differences, WA, SA and NT, 1991–2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change over period[(b)]
Indigenous rate (no. per 1,000 live births)																		
Persons	24.5	25.5	21.7	17.4	17.9	20.4	18.7	16.7	16.0	18.3	14.4	15.7	13.1	12.9	13.1	12.4	–0.8*	–47.4*
Other[(c)] rate (no. per 1,000 live births)																		
Persons	5.7	5.9	5.1	4.8	5.1	5.1	4.6	4.3	4.2	3.8	4.5	4.3	3.5	3.3	4.4	3.9	–0.1*	–34.2*
Rate ratio[(d)]																		
Persons	4.3	4.3	4.2	3.7	3.5	4.0	4.0	3.9	3.8	4.8	3.2	3.7	3.7	3.8	3.0	3.2	–0.1*	–19.8*
Rate difference[(e)]																		
Persons	18.8	19.6	16.6	12.6	12.8	15.2	14.0	12.4	11.8	14.5	9.9	11.4	9.6	9.5	8.7	8.5	–0.6*	–51.4*

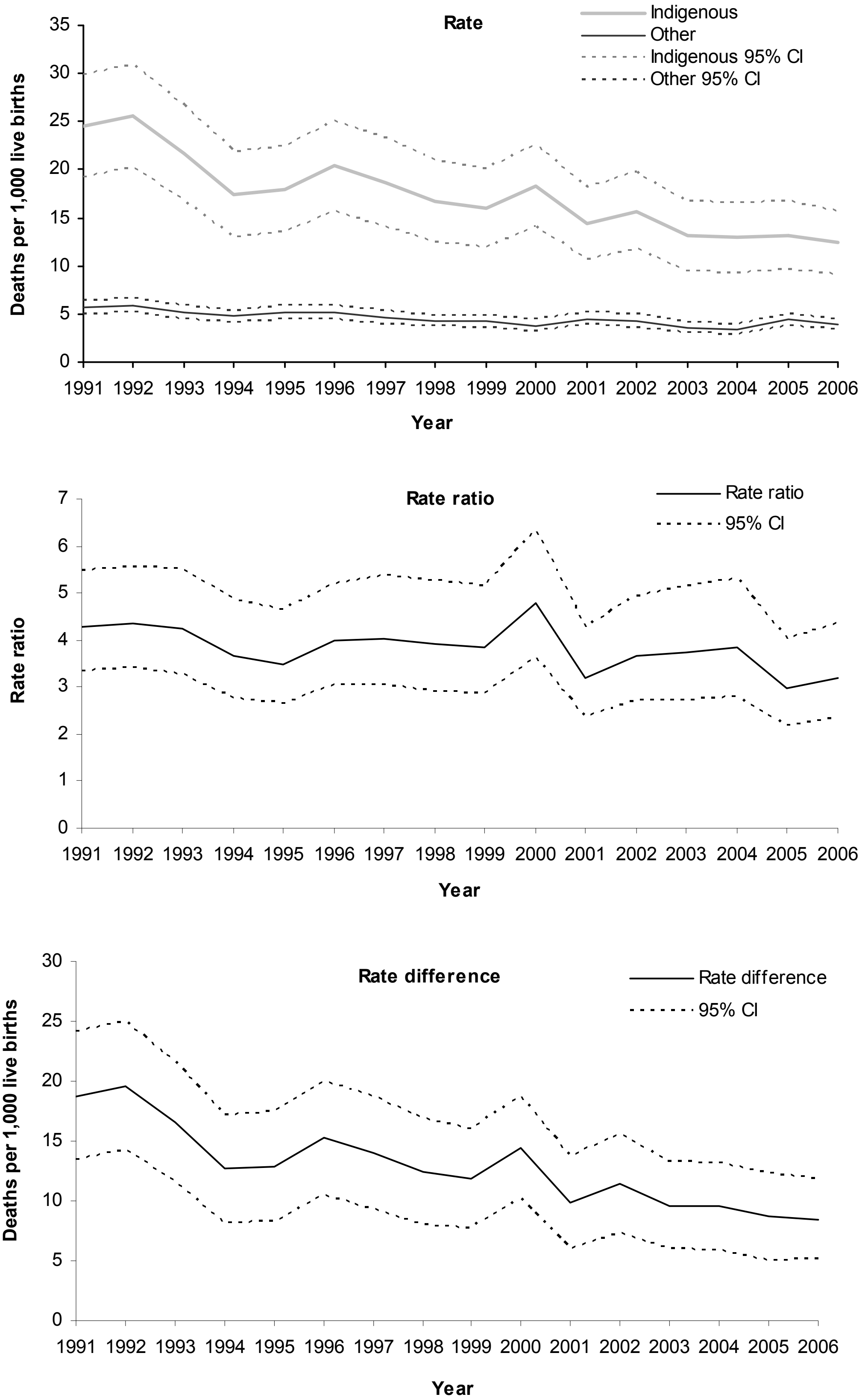
* Represents results with statistically significant increases or decreases at the $p < 0.05$ level over the period 1991–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1991 and 2006 based on the average annual change over the period.
(c) ‘Other’ includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.
(d) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.
(e) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Notes

1. Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.
2. The average of births over the period 1993–1995 in Western Australia was used for births in that state in 1991 and 1992, as there were errors in the number of births recorded in these years.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.19.1: Infant mortality rates, rate ratios and rate differences between Indigenous and other Australians, WA, SA and NT, 1991–2006

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous infants in Table 1.19.6 and Figure 1.19.2. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

- Over the period 1998–2006, there were significant declines in recorded mortality rates for Indigenous and non-Indigenous infants in Queensland, Western Australia, South Australia and the Northern Territory combined. The fitted trend implies an average yearly decline in the rate of around 0.5 per 1,000 births for Indigenous infants (equivalent to a 25% reduction in the rate over the period) and 0.1 per 1,000 births for other infants (equivalent to an 18% reduction in the rate over the period) (Table 1.19.6).
- Over the same period, there was no significant change in the mortality rate ratios, but there was a significant decline in the mortality rate differences between Indigenous and other Australian infants (decline of 29%).

Table 1.19.6: Infant mortality rates, rate ratios and rate differences, Qld, WA, SA and NT, 1998–2006[(a)]

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(b)]	% change over period[(c)]
Indigenous rate (no. per 1,000 live births)											
Persons	15.2	14.7	14.9	13.0	14.0	11.6	11.8	12.6	11.6	–0.5*	–24.9*
Non-Indigenous rate (no. per 1,000 live births)											
Persons	5.1	4.7	4.7	4.8	4.8	3.8	4.0	4.4	4.2	–0.1*	–17.8*
Rate ratio[(d)]											
Persons	3.0	3.2	3.1	2.7	3.0	3.1	3.0	2.9	2.7	0.0	–8.4
Rate difference[(e)]											
Persons	10.2	10.1	10.1	8.2	9.3	7.8	7.8	8.2	7.4	–0.4*	–28.5*

* Represents results with statistically significant increases or decreases at the $p < 0.05$ level over the period 1998–2006.

(a) Data exclude 90 registered infant deaths where Indigenous status was not stated over the period 1998–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

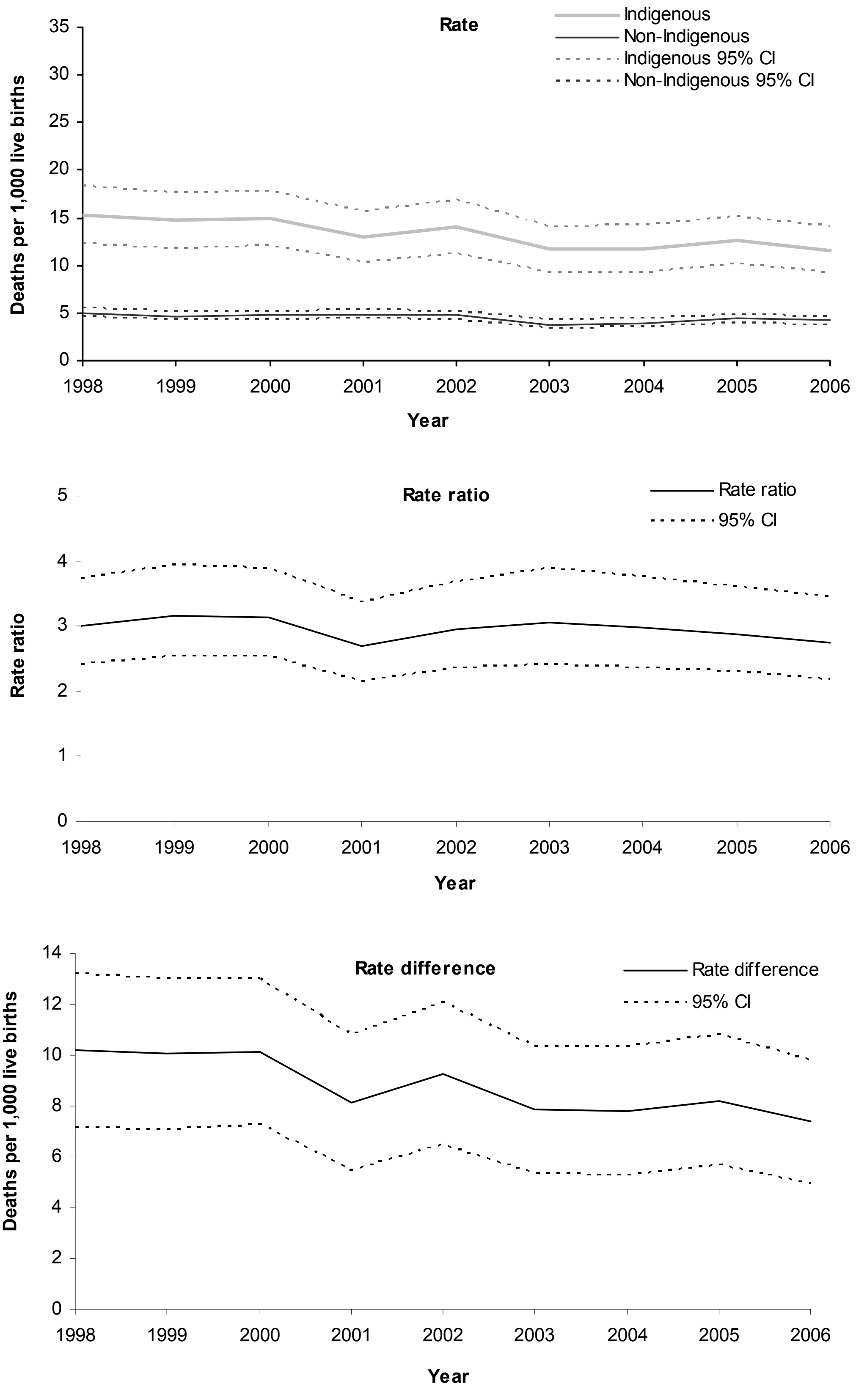
(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998 and 2006 based on the average annual change over the period.

(d) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.19.2: Infant mortality rates, rate ratios and rate differences between Indigenous and non-Indigenous Australians, Qld, WA, SA and NT, 1998–2006

Sensitivity of mortality trends to changes in identification

- The fitted trends described above for the period 1991–2006 in Western Australia, South Australia and the Northern Territory have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for identification were posted—constant identification, increasing identification and decreasing identification.
  - Under the constant identification scenario, the numbers of deaths for the period under study were adjusted using the following identification estimates derived from the most recent ABS analyses (relating to the period 2002–2006):
    - Western Australia 72%
    - South Australia 62%
    - Northern Territory 90%.
  - Under the increasing identification scenario, deaths were adjusted by linearly increasing the identification through the period under study—from 64% in 1991 to 72% in 2006 for Western Australia, from 52% to 62% for South Australia, and from 80% to 90% for the Northern Territory.
  - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 72% in 2006 for Western Australia, from 72% to 62% for South Australia, and from 100% to 90% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in mortality might not persist.
- The declines in infant mortality rates for Indigenous and other Australians, and the declines in the mortality rate differences between Indigenous and other infants during the period 1991–2006 remained statistically significant under all three identification scenarios. The decline in the mortality rate ratios between Indigenous and other infants remained statistically significant only under the constant and increasing identification scenarios.

Time series analysis by cause of death

Table 1.19.7 presents infant mortality rates by cause of death for the periods 1991–1996 and 1997–2006.

- Over the periods 1991–1996 and 1997–2006, the most common causes of death among Indigenous infants were certain conditions originating in the perinatal period, SIDS and congenital malformations.
- Between 1991–1996 and 1997–2006, there were declines in infant mortality rates for congenital malformations, SIDS, certain conditions originating in the perinatal period and diseases of the respiratory system for Indigenous infants.

Table 1.19.7: Causes of infant death, by Indigenous status, WA, SA and NT, 1991–1996 and 1997–2003[(a)(b)(c)(d)(e)]

	Number of deaths		No. per 1,000[(f)]		Rate ratio[(h)]
	Indigenous	Other[(g)]	Indigenous	Other[(g)]	
			1991–1996		
Certain conditions originating in the perinatal period (760–779)	157	626	7.6	2.3	3.3*
Congenital malformations (740–759)	69	387	3.4	1.4	2.3*
Signs, symptoms & ill-defined conditions (780–799)	110	245	5.4	0.9	5.9*
SIDS (798)[(i)]	*106*	*241*	*5.2*	*0.9*	*5.8**
Diseases of the respiratory system (460–519)	41	24	2.0	0.1	22.4*
Injury & poisoning (800–999)	15	40	0.7	0.1	4.9*
Infectious and parasitic diseases (001–139)	18	15	0.9	0.1	15.7*
Diseases of the circulatory system (390–459)	11	13	0.5	0.05	11.1*
Other conditions[(j)]	15	72	0.7	0.3	2.7*
Total	**436**	**1,422**	**21.2**	**5.3**	**4.0***
			1997–2006		
Certain conditions originating in the perinatal period (P00–P96)	243	793	6.4	1.9	3.5*
Congenital malformations (Q00–Q99)	83	439	2.2	1.0	2.1*
Signs, symptoms & ill-defined conditions (R00–R99)	124	231	3.3	0.5	6.1*
SIDS (R95)[(i)]	*69*	*125*	*1.8*	*0.3*	*6.2**
Diseases of the respiratory system (J00–J99)	44	36	1.2	0.1	13.8*
Injury & poisoning (V01–Y99)	23	71	0.6	0.2	3.7*
Infectious and parasitic diseases (A00–B99)	17	24	0.4	0.1	8.0*
Diseases of the circulatory system (I00–I99)	9	23	0.2	0.1	4.4*
Other conditions[(j)]	24	129	0.6	0.3	2.1*
Total	**567**	**1,746**	**15.0**	**4.1**	**3.7***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Western Australia, South Australia and the Northern Territory only. These three states and territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in multi-year groupings because of small numbers each year.

(c) Although most deaths of Indigenous infants are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate Indigenous infant deaths and, depending on the under-identification in births, may either underestimate or overestimate the rates. Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

(d) Because of changes in the level of accuracy of Indigenous identification in the births and deaths data over time, caution should be used in interpreting changes in Indigenous infant mortality rates. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous infant mortality rates because of these data quality issues.

(e) Deaths are by year of registration and state/territory of usual residence.

(f) No. per 1,000 live births.

(g) ‘Other’ includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(h) Rate ratio Indigenous:non-Indigenous.

(i) Data presented for SIDS are a subset of data presented for signs, symptoms and ill-defined conditions in this table.

(j) ‘Other conditions’ include: neoplasms; diseases of blood and blood-forming organs; endocrine, nutritional and metabolic diseases; mental and behavioural disorders; diseases of the nervous system; diseases of the eye and adnexa; diseases of the ear and mastoid process; diseases of the digestive system; diseases of the musculoskeletal system and connective tissues; diseases of the genitourinary system; and diseases of the skin and subcutaneous tissue.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.

International comparisons

International indigenous data are available for New Zealand, the United States and Canada.

There are several common issues that adversely affect the quality of Indigenous mortality data in these three countries and Australia. These include the lack of an accurate denominator value for the Indigenous population and the lack of agreement over which population denominator values to use if they do exist. There are differences in how Indigenous status is defined in the different countries. There have also been frequent modifications to the ethnicity question recorded in the censuses in some of these countries. These frequent changes in the census ethnicity question have led to difficulties in comparing mortality trends over time and have also produced difficulties in estimating inter-census population denominator counts. Another difficulty is that data are not always available for the same time periods.

The most important issue in relation to the quality of Indigenous mortality data is the undercounting of deaths (the numerator for mortality data). In each of the four countries, the undercounting of Indigenous deaths is likely to lead to an underestimation of the relative size of disparities that exist between Indigenous and non-Indigenous populations.

International statistics on infant mortality show that Indigenous infants in the United States, Canada and New Zealand have higher mortality rates than infants in the general population but the gap is not as great as for Aboriginal and Torres Strait Islander infants. The infant mortality rate for Aboriginal and Torres Strait Islander infants is around three times that for non-Indigenous infants (12 per 1,000 live births compared with 5 per 1,000 live births). The latest available data from the United States, Canada and New Zealand are outlined below.

- For the period 2002–2004, the infant mortality rate of babies born to American Indian or Alaskan Native mothers was 8.6 per 1,000 live births, compared with 6.9 per 1,000 live births for babies born to all mothers in the United States (United States department of Health and Human Services unpublished data).
- For the period 2002–2006 in New Zealand, the mortality rate of Maori infants was 7.5 per 1,000 live births, compared with 4.7 per 1,000 live births for non-Indigenous infants (Statistics New Zealand unpublished data).
- In 2000, the mortality rate of Canadian First Nations infants was 6.4 per 1,000 live births, compared with the 2001 Canadian rate of 5.2 per 1,000 live births (Health Canada 2005).

Time series

Infant mortality data are available from 1996 to 2006 for the Maori population in New Zealand, and from 1995 to 2004 for the American Indian and Alaskan Native populations in the United States. These data are presented in Figure 1.19.3 along with data for Australia for the period 1996–2006. Reliable time series of infant mortality data for Canadian First Nations is not available at present.

- In New Zealand between 1996 and 2006 there was a significant decline in mortality for Maori infants. The fitted trend implies an average yearly decline in the rate of around 0.4 per 1,000 live births, which is equivalent to a 33% reduction in the rate over this period. Over the same period there was no significant decline in non-Indigenous infant mortality (Statistics New Zealand unpublished data).
- In the United States between 1995 and 2004 there was no significant decline in infant mortality for American Indians and Alaskan Natives. Over the same period there was a significant decline in other infant mortality (a reduction of 9%) (United States Department of Health and Human Services, unpublished data).

Note: Australia data is for Western Australia, South Australia & the Northern Territory combined.

Source: AIHW analysis of National Mortality Database; Statistics New Zealand; United States Department of Health and Human Services.

Figure 1.19.3: Infant mortality rates per 1,000 live births, by Indigenous status, Australia (1996–2006), New Zealand (1996–2006) and the United States (1995–2004)

Additional information

Children aged under 5 years mortality

Table 1.19.8 presents the main causes of death among Indigenous children aged 0–4 years in Queensland, Western Australia, South Australia and the Northern Territory combined for the period 2002–2006.

- Over the period 2002–2006, there were 551 deaths of Indigenous children aged 0–4 years in Queensland, Western Australia, South Australia and the Northern Territory combined, which represented 19% of total deaths of children aged 0–4 years in these jurisdictions.
- Indigenous children aged 0–4 years in these jurisdictions died at around three times the rate of non-Indigenous children.
- The most common causes of death among Indigenous children were conditions originating in the perinatal period (40%), symptoms, signs & ill-defined conditions (20%), congenital malformations (11%) and injury and poisoning (11%). Indigenous children died at around three times the rate of non-Indigenous children for conditions originating in the perinatal period and injury and poisoning; at almost six times the rate of non-Indigenous children for symptoms, signs and ill-defined conditions, and at twice the rate of non-Indigenous children for congenital malformations.
- Indigenous children died from respiratory diseases at seven times the rate of other children and from infectious and parasitic diseases and diseases of the circulatory system at around four times the rate of non-Indigenous children.

Table 1.19.8: Causes of death among children aged 0–4 years by Indigenous status, Qld, WA, SA and NT, 2002–2006[a][b][c][d][e]

	Number of deaths		No. per 100,000[f]		
Cause of death	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Rate ratio[g]**
Certain conditions originating in the perinatal period (P00–P96)	209	947	115.8	41.5	2.8*
Signs, symptoms & ill-defined conditions (R00-R99)	109	250	60.4	11.0	5.5*
Congenital malformations (Q00–Q99)	61	477	33.8	20.9	1.6*
Injury & poisoning (V01–Y99)	59	251	32.7	11.0	3.0*
Diseases of the respiratory system (J00–J99)	39	68	21.6	3.0	7.2*
Diseases of the nervous system (G00–G99)	20	85	11.1	3.7	3.0*
Infectious and parasitic diseases (A00–B99)	17	51	9.4	2.2	4.2*
Diseases of the circulatory system (I00–I99)	13	44	7.2	1.9	3.7*
Other conditions[(h]	24	161	13.3	7.1	1.9*
Total	**551**	**2334**	**305.2**	**102.4**	**3.0***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states and territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 79 deaths of children aged 0–4 years where the Indigenous status is not stated.

(d) Although most deaths of Indigenous children are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate Indigenous child mortality rates.

(e) Deaths are by year of registration and state/territory of usual residence.

(f) No. per 100,000 population.

(g) Rate ratio Indigenous:non-Indigenous.

(h) Other conditions include: neoplasms; diseases of blood and blood-forming organs; endocrine, nutritional and metabolic diseases; mental and behavioural disorders; diseases of the eye and adnexa; diseases of the ear and mastoid process; diseases of the digestive system; diseases of the musculoskeletal system and connective tissues; diseases of the genitourinary system; and diseases of the skin and subcutaneous tissue.

Source: AIHW analysis of National Mortality Database.

Time series analyses

Infant mortality rates, rate ratios and rate differences between Indigenous and other Australian children aged 0–4 years over the period 1991–2006 in Western Australia, South Australia and the Northern Territory are presented in Table 1.19.9.

- Over the period 1991–2006, there were significant declines in recorded mortality rates for Indigenous children and other children in Western Australia, South Australia and the Northern Territory. The fitted trend implies an average yearly decline in the rate of around 14 deaths per 100,000 for Indigenous children (equivalent to a 36% reduction in the rate over the period) and 3 deaths per 100,000 for other infants (equivalent to a 36% reduction in the rate over the period).
- Over the same period, there were no significant changes in the mortality rate ratios but significant declines in the mortality rate differences between Indigenous and other Australian children (36%).

Table 1.19.9: Mortality rates, rate ratios and rate differences for children aged 0–4 years, WA, SA and NT, 1991–2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change over period[(b)]
Indigenous rate (no. per 100,000)																		
Persons	594.0	535.4	506.5	425.0	396.5	458.9	419.8	324.4	367.9	460.6	371.0	385.2	312.5	306.6	390.2	309.3	–14.3*	–36.1
Other[(c)] rate (no. per 100,000)																		
Persons	134.3	148.5	129.7	117.4	128.1	124.7	116.6	106.7	104.4	92.2	108.5	102.4	90.9	82.3	109.4	95.8	–3.2*	–35.9
Rate ratio[(d)]																		
Persons	4.4	3.6	3.9	3.6	3.1	3.7	3.6	3.0	3.5	5.0	3.4	3.8	3.4	3.7	3.6	3.2	0.0	–7.0
Rate difference[(e)]																		
Persons	459.7	386.9	376.8	307.5	268.4	334.2	303.2	217.7	263.4	368.4	262.5	282.8	221.6	224.2	280.8	213.4	–11.1*	–36.2

* Represents results with statistically significant increases or decreases at the $p < 0.05$ level over the period 1991–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1991 and 2006 based on the average annual change over the period.

(c) ‘Other’ includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(d) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Source: AIHW analysis of National Mortality Database.

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous children aged 0–4 years in Table 1.19.10. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these deaths have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

- Over the period 1998–2006, there were non-significant declines in recorded mortality rates for Indigenous children and significant declines in recorded mortality rates for non-Indigenous children in Queensland, Western Australia, South Australia and the Northern Territory combined (a decline of 16% over the period).
- Over the same period, there was no significant change in the mortality rate ratios or rate differences between Indigenous and non-Indigenous children.

Table 1.19.10: Mortality rates, rate ratios and rate differences for children aged 0–4 years, Qld, WA, SA and NT, 1998–2006(a)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(b)	% change over period(c)
Indigenous rate (no. per 100,000)											
Persons	308.2	318.1	342.4	325.0	324.9	280.8	293.6	344.8	282.0	–2.8	–7.2
Non-Indigenous rate (no. per 100,000)											
Persons	125.3	112.9	110.4	114.0	111.3	93.2	98.4	103.8	105.2	–2.5*	–16.3
Rate ratio(d)											
Persons	2.5	2.8	3.1	2.9	2.9	3.0	3.0	3.3	2.7	0.0	12.6
Rate difference(e)											
Persons	182.9	205.2	232.0	211.0	213.6	187.6	195.2	241.0	176.8	–0.2	–1.0

* Represents results with statistically significant increases or decreases at the $p < 0.05$ level over the period 1998–2006.

(a) Data exclude 116 registered deaths where Indigenous status was not stated over the period 1998–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998 and 2006 based on the average annual change over the period.

(d) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.

Data quality issues

Mortality

Deaths

The mortality rate for Indigenous Australians can be influenced by late registration of deaths, identification of Indigenous deaths and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, the Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007a).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death.

There are also current concerns about data quality for causes of death especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006).

Numerator and denominator

Infant mortality data also rely on birth registration data. Unfortunately, as with deaths, some Indigenous births are not correctly identified as Indigenous. The estimated identification of births as Indigenous in 2002–06 was 95%. Identification for the states and territories ranged from 83% for the Australian Capital Territory to 107% for the Northern Territory (ABS 2007b). Given the identification is higher in births than deaths it is likely that Indigenous infant mortality rates are underestimated.

(continued)

Data quality issues (continued)

The numerator and denominator are not based on the same collection or the same method of collection. Births are registered by the parents while death registration forms are completed by doctors and funeral directors. Therefore, there would be inconsistency of Indigenous identification between the numerator and denominator.

International comparisons

International Indigenous data are available for New Zealand, the United States and Canada. Data quality is an important issue in all countries with small Indigenous populations. The mortality rates are therefore likely to be underestimated to some degree for each of the Indigenous groups. The scope of data collections in Canada and the United States is often limited to the registered or reserve Indigenous populations and therefore does not cover the whole Indigenous population. International comparisons need to take into account that the definition of Indigenous status is specific to each country.

Cause of death coding

Causes of death are based on the 10th revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia on 1 January 1997.

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1.20 Perinatal mortality

The number of Aboriginal and Torres Strait Islander babies who die in the perinatal period, expressed as a rate (per 1,000 births)

Data sources

Data for this measure come from the ABS Deaths Registration Database.

The ABS Deaths Registration Database contains details of all deaths registered in Australia including information on fetal (stillbirths) and neonatal deaths (deaths occurring in live births up to 28 days of age), by age of the baby, sex, state/territory of birth, Indigenous status and cause of death (ICD-10).

The National Perinatal Data Collection also contains data on fetal and neonatal deaths, by sex, state/territory of birth and the Indigenous status of the mother, but it does not collect information on cause of death for all jurisdictions. Work is under way for this collection to include data on obstetric antecedent factors that initiated the sequence of events leading to death based on the Perinatal Society of Australia and New Zealand Perinatal Death Classification for all jurisdictions.

Data from the ABS Deaths Registration Database have been used in this measure, as cause of death can be ascertained and neonatal deaths are more comprehensively captured in this database.

Data are presented by state/territory of usual residence rather than state/territory of death. Although identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland since 1998, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia.

Several years of data have been combined because of the small number of deaths from some conditions each year. The latest year for which mortality data are currently available is 2006, but Indigenous status information on fetal deaths is not available for that year. Therefore, data in this measure have been analysed for the period 2001–2005 using the year of registration of death.

The perinatal mortality rate is defined by the ABS as the number of deaths (fetal deaths and neonatal deaths) of babies of at least 400 grams birthweight or, if birthweight is unavailable, a gestational age of at least 20 weeks, up to 28 completed days after birth per 1,000 live births during a given period. This definition has been used for the purposes of this measure.

Analyses

Mortality

Mortality by sex

- Over the period 2001–2005, there were 495 deaths (285 male, 207 female) of Indigenous perinatal infants and 3,524 deaths (1,918 male, 1,582 female) of non-Indigenous perinatal infants in Queensland, Western Australia, South Australia and the Northern Territory combined.
- The perinatal mortality rate for Indigenous infants was around 14 per 1,000 births compared with 10 per 1,000 births for non-Indigenous infants.
- Perinatal mortality rates were higher for males than females for both Indigenous and non-Indigenous infants. The perinatal mortality rate for Indigenous males was 15 per 1,000 births compared with 12 per 1,000 births for Indigenous females. The perinatal mortality rate for non-Indigenous males was 9 per 1,000 births compared with 7 per 1,000 births for non-Indigenous females (Table 1.20.1)

Table 1.20.1: Perinatal mortality rates per 1,000 births, by Indigenous status and sex, Qld, WA, SA & NT[(a)], 2001–2005

	Indigenous		Non-Indigenous	
	Deaths	**No. per 1,000 births**	**Deaths**	**No. per 1,000 births**
Males	285	15.2	1,918	8.5
Females	207	11.6	1,582	7.4
Persons[(b)]	495	13.5	3,524	8.1

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Includes sex indeterminate.

Note: Data are based on state of usual residence and year of registration of death.

Source: ABS Deaths Registration database.

Mortality by state/territory

Perinatal mortality rates per 1,000 births among Indigenous and non-Indigenous babies are presented in Table 1.20.2 for Queensland, Western Australia, South Australia and the Northern Territory for the years 1996–1998, 1999–2001, and 2002–2005.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were 315 perinatal deaths of Indigenous babies in 1996–1998, 350 perinatal deaths of Indigenous babies in 1999–2001 and 372 perinatal deaths of Indigenous babies in 2002–2005.
- Over the period 2002–2005, the perinatal mortality rate for Indigenous babies in Queensland, Western Australia, South Australia and the Northern Territory combined was 12.5 per 1,000 live births compared with 7.9 for non-Indigenous babies.
- Indigenous perinatal mortality rates ranged from 9.5 per 1,000 live births in Western Australia to 18.8 per 1,000 births in the Northern Territory in 2002–05.

- In 2002–05 Indigenous babies in the Northern Territory and South Australia died in the perinatal period at twice the rate of non-Indigenous babies in these jurisdictions. In Queensland, Indigenous babies died in the perinatal period at around 1.5 times the rate of non-Indigenous babies. In Western Australia there was no statistically significant difference between Indigenous and non-Indigenous perinatal death rates.
- The majority of perinatal deaths were fetal deaths. In 2002–2005, the fetal death rate was 6.8 per 1,000 births among Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined compared to 5.3 among non-Indigenous Australians. The neonatal death rate among Indigenous babies for the same period was 5.9 per 1,000 live births compared with 2.6 among non-Indigenous babies.

Table 1.20.2: Fetal, neonatal and perinatal mortality rates per 1,000 births, by Indigenous status, Qld, WA, SA and NT, 1996–1998 to 2002–2005[(a)(b)(c)(d)(e)(f)]

	1996–1998[(g)]					1999–2001					2002–2005				
	No.	No. per 1,000	LCL 95%[(h)]	UCL 95%[(i)]	Rate ratio[(i)]	No.	No. per 1,000	LCL 95%[(h)]	UCL 95%[(i)]	Rate ratio[(j)]	No.	No. per 1,000	LCL 95%[(h)]	UCL 95%[(i)]	Rate ratio[(j)]
							Fetal deaths								
Qld															
Indigenous	61	7.0	5.2	8.8	1.2	75	7.8	6.1	9.6	1.5*	76	5.5	4.2	6.7	1.0
Non-Indigenous	759	5.7	5.3	6.1		701	5.3	4.9	5.7		966	5.2	4.9	5.6	
WA															
Indigenous	56	12.3	9.1	15.6	2.4*	49	9.9	7.2	12.7	1.9*	37	5.5	3.8	7.3	1.0
Non-Indigenous	366	5.2	4.7	5.8		371	5.3	4.8	5.9		494	5.3	4.8	5.8	
SA															
Indigenous	12	6.6	2.9	10.3	1.2	23	12.1	7.1	17.0	2.4*	22	8.3	4.8	11.8	1.6*
Non-Indigenous	299	5.5	4.9	6.1		255	5.0	4.3	5.6		356	5.3	4.7	5.8	
NT															
Indigenous	45	11.4	8.1	14.8	2.3*	46	9.8	7.0	12.7	1.7*	65	10.4	7.9	13.0	1.8*
Non-Indigenous	35	5.0	3.4	6.7		37	5.7	3.9	7.5		49	5.7	4.1	7.3	
Qld, WA, SA & NT[(c)]															
Indigenous	**174**	**9.2**	**7.8**	**10.5**	**1.7***	**193**	**9.2**	**7.9**	**10.5**	**1.7***	**200**	**6.8**	**5.8**	**7.7**	**1.3***
Non-Indigenous	**1,459**	**5.5**	**5.2**	**5.8**		**1,364**	**5.2**	**5.0**	**5.5**		**1,865**	**5.3**	**5.0**	**5.5**	

(continued)

Table 1.20.2 (continued): Fetal, neonatal and perinatal mortality rates per 1,000 births, by Indigenous status, Qld, WA, SA and NT, 1996–1998 to 2002–2005(a)(b)(c)(d)(e)(f)

	1996–1998(g)					1999–2001					2002–2005				
	No.	No. per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)	No.	No. per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)	No.	No. per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)
							Neonatal deaths								
Qld															
Indigenous	57	6.6	4.9	8.3	1.8*	59	6.2	4.6	7.8	1.9*	82	5.9	4.6	7.2	2.0*
Non-Indigenous	485	3.6	3.3	4.0		435	3.3	3.0	3.6		555	3.0	2.8	3.3	
WA															
Indigenous	35	7.8	5.2	10.4	2.9*	40	8.2	5.7	10.7	3.8*	27	4.1	2.5	5.6	1.9*
Non-Indigenous	186	2.7	2.3	3.0		151	2.2	1.8	2.5		201	2.2	1.9	2.5	
SA															
Indigenous	n.p.	n.p.	n.p.	n.p.	n.p.	9	4.8	1.7	7.9	1.9	10	3.8	1.4	6.2	1.7
Non-Indigenous	134	2.5	2.1	2.9		126	2.5	2.0	2.9		153	2.3	1.9	2.6	
NT															
Indigenous	46	11.8	8.4	15.3	3.6*	49	10.6	7.6	13.5	2.5*	53	8.6	6.3	10.9	3.1*
Non-Indigenous	23	3.3	2.0	4.7		27	4.2	2.6	5.8		24	2.8	1.7	3.9	
Qld, WA, SA & NT(c)															
Indigenous	**141**	**7.5**	**6.3**	**8.7**	**2.4***	**157**	**7.5**	**6.3**	**8.7**	**2.6***	**172**	**5.9**	**5.0**	**6.8**	**2.2***
Non-Indigenous	**828**	**3.1**	**2.9**	**3.4**		**739**	**2.9**	**2.7**	**3.1**		**933**	**2.6**	**2.5**	**2.8**	

(continued)

Table 1.20.2 (continued): Fetal, neonatal and perinatal mortality rates per 1,000 births, by Indigenous status, Qld, WA, SA and NT, 1996–1998 to 2002–2005(a)(b)(c)(d)(e)(f)

	1996–1998(g)					1999–2001					2002–2005				
	No.	No. per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)	No.	No. per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)	No.	No. per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)
							Perinatal deaths								
Qld															
Indigenous	118	13.4	11.0	15.9	1.5*	134	13.9	11.6	16.3	1.6*	158	11.3	9.5	13.0	1.4*
Non-Indigenous	1,244	9.3	8.7	9.8		1,136	8.5	8.0	9.0		1,521	8.2	7.8	8.6	
WA															
Indigenous	91	19.9	15.8	24.0	2.5*	89	17.9	14.2	21.6	2.4*	64	9.5	7.2	11.9	1.3
Non-Indigenous	552	7.8	7.2	8.5		522	7.5	6.9	8.1		695	7.4	6.9	8.0	
SA															
Indigenous	15	8.2	4.1	12.4	1.0	32	16.7	10.9	22.5	2.3*	32	12.0	7.9	16.2	1.6*
Non-Indigenous	433	8.0	7.2	8.7		381	7.4	6.6	8.1		509	7.5	6.8	8.1	
NT															
Indigenous	91	22.9	18.2	27.6	2.7*	95	20.1	16.0	24.1	2.0*	118	18.8	15.4	22.2	2.2*
Non-Indigenous	58	8.3	6.2	10.5		64	9.8	7.4	12.2		73	8.5	6.5	10.4	
Qld, WA, SA & NT(c)															
Indigenous	**315**	**16.5**	**14.6**	**18.3**	**1.9***	**350**	**16.5**	**14.8**	**18.2**	**2.0***	**372**	**12.5**	**11.3**	**13.8**	**1.6***
Non-Indigenous	**2,287**	**8.6**	**8.2**	**9.0**		**2,103**	**8.1**	**7.7**	**8.4**		**2,798**	**7.9**	**7.6**	**8.2**	

(continued)

Table 1.20.2 (continued): Fetal, neonatal and perinatal mortality rates per 1,000 births, by Indigenous status, Qld, WA, SA and NT, 1996–1998 to 2002–2005(a)(b)(c)(d)(e)(f)

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Shading indicates that the Indigenous identification is likely to be less than 50% complete.

(b) Data are presented in 3-year groupings because of small numbers each year.

(c) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(d) Although most perinatal deaths of Indigenous perinatal babies are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous perinatal mortality rate. There may also be under-identification of Indigenous babies in the denominator and the under-identification may be different for fetal deaths and live births, which would also affect the perinatal mortality rate. The ABS calculated the completeness of identification of Indigenous deaths for the period 1999–2003 using population estimates as 54% for Queensland, 72% for Western Australia, 66% for South Australia and 95% for the Northern Territory. The completeness of Indigenous identification for perinatal deaths may differ from the estimates for 'all causes'.

(e) Because of changes in the level of accuracy of Indigenous identification in the births and deaths data over time, caution should be used in interpreting changes in Indigenous perinatal mortality rates. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous perinatal mortality rates because of these data quality issues.

(f) Deaths are by year of registration and state/territory of usual residence.

(g) Queensland data are only reliable from 1998 (National Health Performance Committee 2004).

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:non-Indigenous.

Source: ABS Deaths Registration Database.

Mortality by cause of death

Table 1.20.3 presents fetal, neonatal and total perinatal deaths of Indigenous and non-Indigenous babies by main underlying cause of death. Note that perinatal cause of death data should be used with caution as the level of identification by cause is unknown and may not be suitable for the calculation of rates.

- Over the period 2001–2005, in Queensland, Western Australia, South Australia and the Northern Territory combined, of conditions which originate in the fetus or infant, the most common cause of perinatal death among Indigenous babies was ‘other conditions originating in the perinatal period’ (such as birth trauma) which were reported as an underlying or associated cause of death in 41% of deaths of Indigenous babies. For 23% of Indigenous babies, disorders relating to length of gestation and fetal growth were reported as the main underlying cause of death.
- Of conditions which originate in the mother, the most common cause of perinatal death among Indigenous babies was the fetus or newborn affected by complications of the placenta, cord and membranes (30%). For approximately 18% of Indigenous babies, the fetus and newborn affected by maternal complications of pregnancy was reported as the main underlying cause of death.
- For fetal deaths, the most common causes of death among Indigenous babies were other conditions originating in the perinatal period (62%) and fetus or newborn affected by complications of the placenta, cord and membranes (38%). For neonatal deaths, the most common causes of death among Indigenous babies were fetus and newborn affected by maternal complications of pregnancy (31%) and disorders related to length of gestation and fetal growth (31%).

Table 1.20.3: Main underlying cause of death for perinatal babies, by Indigenous status, Qld, WA, SA and NT, 2001–2005[(a)(b)(c)(d)(e)]

	Foetal deaths				Neonatal deaths				Perinatal deaths			
	Total number		Per cent		Total number		Per cent		Total number		Per cent	
Cause of death	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
					Main condition in the fetus/infant							
Disorders related to length of gestation and fetal growth (P05–P08)	45	238	16.5	10.2	68	254	30.6	21.3	113	492	22.8	14.0
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	25	291	9.2	12.5	39	239	17.6	20.1	64	530	12.9	15.0
Infections specific to the perinatal period (P35–P39)	9	45	3.3	1.9	19	84	8.6	7.1	28	129	5.7	3.7
Other conditions originating in the perinatal period (P10–P15 and P50–P96)	169	1,355	61.9	58.1	34	227	15.3	19.1	203	1,582	41.0	44.9
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	25	381	9.2	16.3	38	324	17.1	27.2	63	705	12.7	20.0
Other conditions	—	23	—	1.0	24	63	10.8	5.3	24	86	4.8	2.4
Total deaths	**273**	**2,333**	**100.0**	**100.0**	**222**	**1,191**	**100.0**	**100.0**	**495**	**3,524**	**100.0**	**100.0**
					Main condition in the mother							
Fetus and newborn affected by complications of placenta, cord and membranes	104	733	38.1	31.4	45	218	20.3	18.3	149	951	30.1	27.0
Fetus and newborn affected by maternal complications of pregnancy	21	215	7.7	9.2	68	404	30.6	33.9	89	619	18.0	17.6
Fetus and newborn affected by maternal conditions that may be unrelated to present pregnancy	48	395	17.6	16.9	23	72	10.4	6.0	71	467	14.3	13.3
Fetus and newborn affected by other complications of labour and delivery and noxious influences transmitted via placenta or breast milk	12	148	4.4	6.3	6	41	2.7	3.4	18	189	3.6	5.4
Total deaths	**273**	**2,333**	**100.0**	**100.0**	**222**	**1,191**	**100.0**	**100.0**	**495**	**3,524**	**100.0**	**100.0**

(continued)

Table 1.20.3 (continued): Main underlying cause of death for perinatal babies, by Indigenous status, Qld, WA, SA and NT, 2001–2005(a)(b)(c)(d)(e)

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Includes all fetuses and babies delivered weighing at least 400 grams or, if birthweight is unavailable, at gestational age of 20 weeks or more.

(c) Data are presented in 5-year groupings because of small numbers each year.

(d) Data based on state of usual residence of mother.

(e) Deaths are by year of registration.

Source: ABS Deaths Registration Database.

Time series analysis

Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have over 10 years of adequate identification of Indigenous deaths in their recording systems.

As there is a consistent time series of population estimates from 1991, data for the period 1991–2005 have been used for the analysis of Indigenous mortality in this indicator.

Because of the late inclusion of a 'not stated' category for Indigenous status in 1998 (before which 'not stated' responses were included with non-Indigenous deaths), Indigenous mortality rates have been compared with the mortality rates of other Australians (which include deaths of both non-Indigenous people and people for whom Indigenous status was not stated).

Fluctuations in the level of Indigenous mortality over time partly reflect changing levels of identification of Indigenous deaths and population estimates. Given the volatility in the measures of Indigenous mortality, caution should be exercised in assessing trends in Indigenous mortality over time and comparisons between jurisdictions and with the non-Indigenous population.

Perinatal mortality rates, rate ratios and rate differences between Indigenous and other babies over the period 1991–2005 are presented in Table 1.20.4 and Figure 1.20.1.

- Over the period 1991–2005, there were significant declines in perinatal mortality rates of Indigenous babies in Western Australia, South Australia and the Northern Territory. The fitted trend implies an average yearly decline in the rate of around 0.8 deaths per 1,000 births, which is equivalent to a 51% decline in the rate over this period.
- Over the same period, there were also significant declines in perinatal mortality rates of other babies, with an average yearly decline in the rate of around 0.2 deaths per 1,000 births, which is equivalent to a 24% decline in the rate over this period.
- There were significant declines in both the mortality rate ratios and mortality rate differences between Indigenous and other babies between 1991 and 2005 (33% decline in the rate ratio and 70% decline in the rate difference).
- There was a large drop in the number of perinatal deaths of Indigenous infants in Western Australia in 2002, which has resulted in a decline in the perinatal mortality rate for Indigenous infants in the three jurisdictions combined for that year (Figure 1.20.1). It is not known why there were so few Indigenous perinatal deaths in Western Australia in 2002.

Fetal and neonatal mortality rates

- Fetal mortality rates are available for the period 1991–2005. Over this period there was a significant decline in the fetal mortality rate for both Indigenous and other babies (47% decline for Indigenous and 15% decline for other babies). There was also a significant decline in the mortality rate ratio and mortality rate difference between Indigenous and other fetuses between 1991 and 2005.
- Neonatal mortality rates are available for the period 1991–2006. Over this period there was a significant decline in the neonatal mortality rate for both Indigenous and other babies (41% decline for Indigenous and 35% decline for other babies). There was also a significant decline in the mortality rate ratio and mortality rate difference between Indigenous and other neonates between 1991 and 2005.

Table 1.20.4: Perinatal mortality rates, rate ratios and rate differences, WA, SA and NT, 1991–2005

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Annual change[(a)]	% change over period[(b)]
Indigenous rate (no. per 1,000 births)																	
Number	79	89	96	77	65	61	71	65	69	80	67	34	70	48	62		
Rate	22.8	25.2	27.4	21.9	18.8	17.4	20.9	18.7	18.7	20.2	16.9	9.1	17.7	12.2	15.4	–0.8*	–50.8
Other[(c)] rate (no. per 1,000 births)																	
Number	429	423	423	360	424	404	339	300	316	333	318	321	332	299	325		
Rate	9.5	9.4	9.2	8.0	9.4	9.1	7.8	6.9	7.3	7.7	7.7	7.7	7.9	7.1	7.4	–0.2*	–23.5
Rate ratio[(d)]	2.4	2.7	3.0	2.7	2.0	1.9	2.7	2.7	2.6	2.6	2.2	1.2	2.2	1.7	2.1	–0.1*	–33.2
Rate difference[(e)]	13.4	15.8	18.1	13.9	9.4	8.3	13.2	11.8	11.4	12.5	9.2	1.4	9.7	5.2	8.0	–0.7*	–70.1

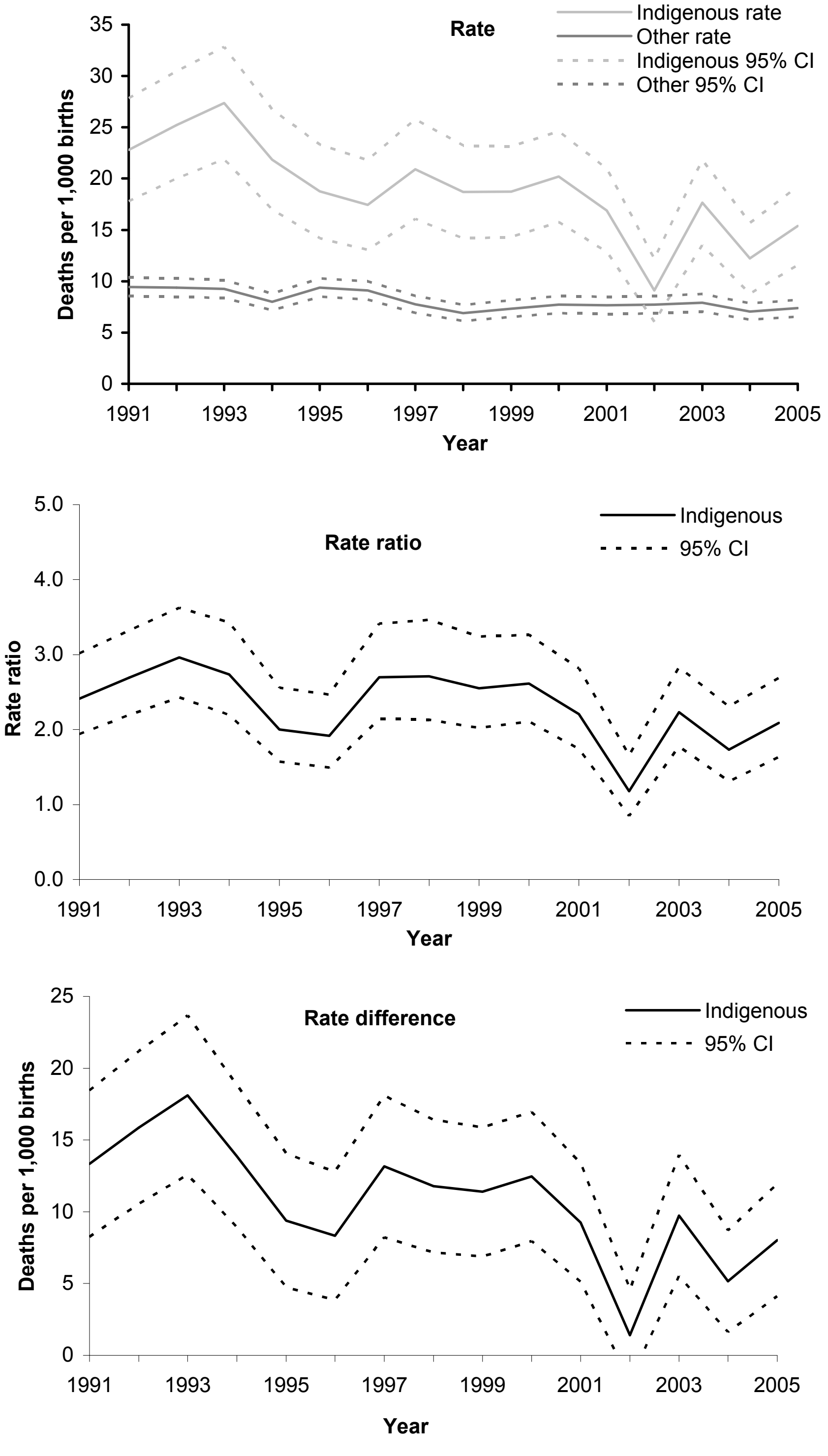
* Represents statistically significant increases or decrease over the period 1991–2005 at the $p < 0.05$ level.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1991 and 2005 based on the average annual change over the period.
(c) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.
(d) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.
(e) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Notes

1. Perinatal deaths were not available in South Australia in 1996.
2. The average of births over the period 1993–1995 in Western Australia was used for births in 1991 and 1992, as there were errors in the number of Indigenous births recorded.

Source: ABS Deaths Registration Database.



Source: ABS Deaths Registration Database.

Figure 1.20.1: Perinatal mortality rates, rate ratios and rate differences between Indigenous and other Australians, WA, SA and NT, 1991–2005

Sensitivity of mortality trends to changes in identification

- The fitted trends described above have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for identification were posted—constant identification, increasing identification and decreasing identification.
  - Under the constant identification scenario, the numbers of deaths for the period under study were adjusted using the following identification estimates derived from the most recent ABS analyses (relating to the period 2002–2005):
    - Western Australia 72%
    - South Australia 62%
    - Northern Territory 90%.
  - Under the increasing identification scenario, deaths were adjusted by linearly increasing the identification through the period under study—from 64% in 1991 to 72% in 2005 for Western Australia, from 52% to 62% for South Australia, and from 80% to 90% for the Northern Territory.
  - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 72% in 2005 for Western Australia, from 72% to 62% for South Australia, and from 100% to 90% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in mortality might not persist.
- All of the observed trends in perinatal mortality mentioned above remained statistically significant under all three identification scenarios except for the decline in the rate ratio, which did not remain significant under the decreasing identification scenario.

International comparisons

International data are available for New Zealand, the United States and Canada using the World Health Organization (WHO) definition of perinatal mortality. However, the WHO definition differs significantly from the Australian definition of the perinatal period. Australian data include babies of at least 400 grams (or at least 20 weeks if birthweight is unavailable) whereas the WHO definition starts at 500 grams (22 weeks if birthweight is unavailable). In addition, the WHO defines perinatal deaths as less than 7 days whereas Australia includes deaths up to 28 days. Perinatal mortality rates of Aboriginal and Torres Strait Islander babies are therefore not comparable to rates for Indigenous populations in the other countries. Therefore, international comparisons have not been presented here.

Additional information

Influencing factors

The main risk factors for perinatal mortality are low birthweight and pre-term birth. Other factors which may be associated with perinatal mortality are smoking during pregnancy, infection, maternal nutrition and underutilisation of antenatal services. Data on these influencing factors is available from the National Perinatal Data Collection and the state and territory perinatal data collections.

Low birthweight/pre-term birth

- Over the period 2003–2005, babies born to Indigenous mothers were twice as likely to have low birthweight as babies born to non-Indigenous mothers (12% compared with 6%). In Australia (excluding Tasmania and the Northern Territory for 2003), 81% of perinatal deaths among babies born to Indigenous mothers had low birthweight compared with 78% among babies born to non-Indigenous mothers.
- Between 2003 and 2005, live-born babies of Indigenous mothers were also more likely to be pre-term than live-born babies born to non-Indigenous mothers (14% compared with 8%) (see Measure 1.01 for more information on low birthweight babies). Over the same period, approximately 59% of perinatal deaths of babies born to Indigenous mothers in Australia (excluding Tasmania and the Northern Territory for 2003) had a gestation period of less than 28 weeks. The proportion for babies born to non-Indigenous mothers was similar (58%) (see Measure 1.01 for more information on low birthweight infants).

Smoking during pregnancy

- Data on smoking during pregnancy show that in 2005 Indigenous mothers were three times more likely to smoke during pregnancy than non-Indigenous mothers (52% compared with 16%). Smoking during pregnancy rates were highest in South Australia (66%) followed by New South Wales and Western Australia (54%) (see Measure 2.19 for more information on smoking during pregnancy).

Underutilisation of antenatal care services

- In 2005, in the two jurisdictions where data are collected on the duration of pregnancy at first antenatal visit (New South Wales and the Northern Territory), Indigenous mothers were two to three times as likely as non-Indigenous mothers to be in their third trimester of pregnancy at their first antenatal session and less likely to be in their first trimester.
- In the three jurisdictions where data were collected in 2005 on the number of antenatal sessions attended during pregnancy (Queensland, South Australia and the Northern Territory), Indigenous mothers were less likely to have attended five or more antenatal sessions during pregnancy than non-Indigenous mothers (see Measure 3.01 for more information on antenatal care).

Data quality issues

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by late registration of deaths, identification of Indigenous deaths and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way. The National Perinatal Data Collection has more significant problems with compliance with the standard wording.

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with over 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, the Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007a).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death.

There are also current concerns about data quality for causes of death especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006).

Numerator and denominator

The perinatal mortality rate also relies on birth registration data. Unfortunately, as with deaths, some Indigenous births are not correctly identified as Indigenous. The estimated identification of births as Indigenous in 2002–06 was 95%. Identification for the states and territories ranged from 83% for the Australian Capital Territory to 107% for the Northern Territory (ABS 2007b). Given that the identification is higher in births than deaths, it is likely that Indigenous perinatal mortality rates are underestimated.

(continued)

Data quality issues (continued)

The numerator and denominator are not based on the same collection or the same method of collection. Births are registered by the parents whereas death registration forms are completed by doctors and funeral directors. Therefore there would be inconsistency of Indigenous identification between the numerator and denominator.

Cause of death coding

Causes of death are based on the 10th revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia on 1 January 1997.

International data

International data are available for New Zealand, the United States and Canada using the WHO definition of perinatal mortality. However, the WHO definition differs markedly from the Australian definition of the perinatal period (see above) which was developed to be relevant for the Australian context. Therefore, Australian data include babies of at least at 400 grams (at least 20 weeks if birthweight is unavailable) whereas the WHO definition starts at 500 grams (22 weeks if birthweight is unavailable). In addition, the WHO defines perinatal deaths as less than 7 days whereas Australia includes deaths up to 28 days (Laws & Sullivan 2004). It would be possible to analyse Australian data on the WHO definitional basis, but it is not recommended for this performance measure.

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1.21 Sudden infant death syndrome

The number of Aboriginal and Torres Strait Islander infants aged less than 12 months who die from sudden infant death syndrome (SIDS), expressed as a rate (per 1,000 live births) for that period

Data sources

Data for this measure come from the AIHW National Mortality Database.

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data, for which year of registration of death was used. Rates published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Analyses

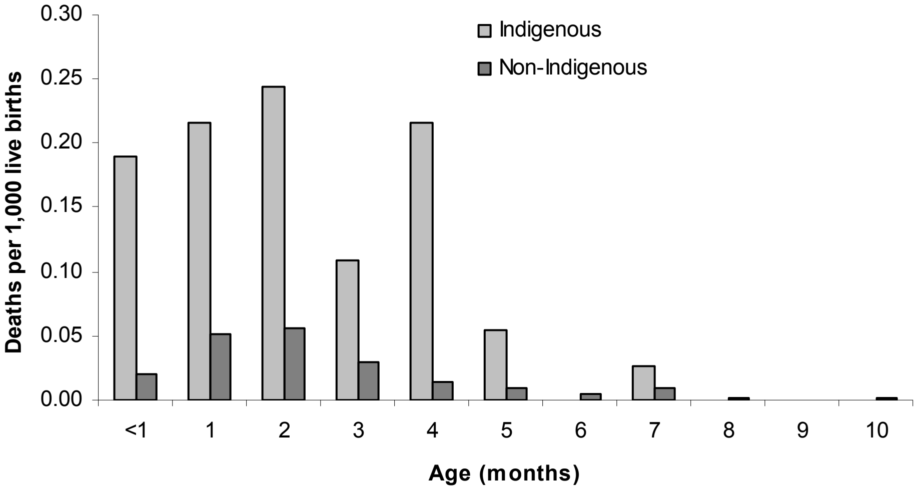
Mortality

- For the period 2002–2006, there were 133 deaths from SIDS in Queensland, Western Australia, South Australia and the Northern Territory, 39 (29%) of which were deaths of Aboriginal and Torres Strait Islander infants; in 5% Indigenous status was not stated.
- SIDS represented approximately 11% of all deaths of Aboriginal and Torres Strait Islander infants Australia-wide.

Mortality by age (months)

- For the period 2002–2006, the majority (62%) of all deaths from SIDS among Aboriginal and Torres Strait Islander infants in Queensland, Western Australia, South Australia and the Northern Territory combined occurred in the first 2 months of life.

- The highest mortality rates for SIDS occurred at around the age of 2–3 months for Indigenous and non-Indigenous infants (0.24 and 0.06 per 1,000 live births respectively) (Figure 1.21.1). Indigenous infants of this age died at over four times the rate of non-Indigenous infants.
- Mortality rate ratios between Indigenous and non-Indigenous infants were highest among those aged 4 months, where Indigenous infants died from SIDS at 16 times the rate of non-Indigenous infants.



Source: AIHW analysis of National Mortality Database.

Figure 1.21.1: SIDS mortality rates per 1,000 live births, by age in months and Indigenous status, Qld, WA, SA and NT, 2002–2006

Mortality by state/territory

Table 1.21.1 presents SIDS deaths, mortality rates and ratios for Queensland, Western Australia, South Australia and the Northern Territory for the period 2002–2006.

- In the four jurisdictions where recording of Indigenous deaths is most complete, mortality rates for SIDS ranged from 0.3 per 1,000 live births in South Australia to 1.8 per 1,000 live births in the Northern Territory, but these rates were not significantly different from one another.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous infants died from SIDS at over five times the rate of non-Indigenous infants.

Table 1.21.1: SIDS mortality rates per 1,000 live births, by Indigenous status, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)(e)(f)

	Indigenous				Non-Indigenous				
	Deaths	Rate(g)	LCL 95%(h)	UCL 95%(i)	Deaths	Rate(g)	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)
Qld	20	1.2	0.6	1.7	62	0.3	0.2	0.3	4.3*
WA	n.p.	0.5	0.01	0.9	n.p.	0.1	0.03	0.1	6.2*
SA	n.p.	0.3	–0.3	0.9	14	0.2	0.1	0.3	1.8
NT	14	1.8	0.9	2.8	n.p.	0.3	–0.04	0.6	6.5*
Qld, WA, SA & NT	**39**	**1.1**	**0.7**	**1.4**	**88**	**0.2**	**0.2**	**0.2**	**5.4***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

n.p. Not published where numbers are less than 5.

(a) ICD-10 code: R95.

(b) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure. The ABS calculated the completeness of identification of Indigenous deaths for the period 1999–2003 using population estimates as 51% for Queensland, 72% for Western Australia, 62% for South Australia and 90% for the Northern Territory. The completeness of Indigenous identification for SIDS may differ from the estimates for 'all causes'.

(c) Data exclude six registered infant deaths where Indigenous status was not stated over the period 2002–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

(d) Data are presented in 5-year groupings because of small numbers each year.

(e) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous infant deaths and, depending on the under-identification in births, may either underestimate or overestimate the rates.

(f) Deaths are by year of registration of death and state/territory of usual residence.

(g) No. per 1,000 live births.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:non-Indigenous.

Source: AIHW analysis of National Mortality Database.

Time series analysis

Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have 10 years of adequate identification of Indigenous deaths in their recording systems.

There is a consistent time series of population estimates from 1991. Because of changes in the classification and coding of causes of death from ICD–9 (used until 1996) to ICD–10 (used from 1997 onwards) which affects the comparability of the data, the analysis reported for this indicator has been done for two time periods—1991–1996 and 1997–2006. Data are presented in 3- to 4-year groupings because of low numbers of deaths from SIDS each year.

Because of the late inclusion of a 'not stated' category of Indigenous status in 1998 (before which 'not stated' responses were included with non-Indigenous deaths), Indigenous mortality rates have been compared with the mortality rates of other Australians (which include deaths of both non-Indigenous people and people for whom Indigenous status was not stated).

SIDS mortality rates, rate ratios and rate differences between Indigenous and other Australian mortality from SIDS over the period 1991–1993 to 1994–1996 and 1997–1999 to 2004–2006 are presented in Table 1.21.2 and Figure 1.21.2.

- Over the period 1991–1993 to 1994–1996, there were non-significant declines in mortality rates for SIDS for Indigenous infants in Western Australia, South Australia and the Northern Territory. Over the same period there were significant declines in mortality rates for SIDS for other infants (a decline of around 0.4 deaths per 1,000 live births) (Table 1.21.2).
- Over the period 1997–1999 to 2004–2006, there were significant declines in mortality rates for SIDS for both Indigenous and other infants in Western Australia, South Australia and the Northern Territory. The fitted trend implies an average yearly decline in the rate of around 0.5 per 1,000 births for Indigenous infants (equivalent to a 111% decline over the period) and 0.1 per 1,000 births for other infants (equivalent to a 105% decline) (Table 1.21.2).
- Over the same period, there was a significant decline in the mortality rate ratio between Indigenous and other infants of around 0.3 per 1,000 live births. There was also a significant decline in the mortality rate difference of around 0.4 per 1,000 live births.

Fluctuations in the level of Indigenous mortality over time partly reflect changing levels of identification of Indigenous deaths and population estimates. Given the variability in the measures of Indigenous mortality, caution should be exercised in assessing trends in Indigenous mortality over time and comparisons between jurisdictions and with the non-Indigenous population.

In addition, analysis of infant mortality data in Western Australia has found a shift away in recent years from a classification of 'SIDS' towards a classification of 'unascertainable', particularly for Aboriginal infants. This has implications for the analysis of trends in SIDS over time (Freemantle et al. 2005).

Table 1.21.2: SIDS mortality rates, rate ratios and rate differences per 1,000 live births, by Indigenous status, WA, SA and NT, 1991–1993 to 1994–1996 and 1997–1999 to 2004–2006

	Deaths		No. per 1,000[(a)]		Rate ratio[(c)]	Rate difference[(d)]
	Indigenous	Other[(b)]	Indigenous	Other[(b)]		
1991–1996						
1991–1993	62	149	6	1.1	5.5	4.9
1994–1996	44	92	4.3	0.7	6.2	3.6
Difference in rates[(e)]	. .	. .	–1.8	–0.4*	. .	. .
1997–2006						
1997–1999	38	70	3.7	0.5	6.8	3.1
2000–2003	25	42	1.6	0.3	6.5	1.4
2004–2006	6	13	0.5	0.1	5	0.4
Annual change[(f)]	. .	. .	–0.5*	–0.1*	–0.3*	–0.4*
% change over period[(9)]	. .	. .	–111.1	–105.1	–33.2	–112.2

* Represents statistically significant differences at the p < 0.05 level over the period 1991–1993 to 1994–1996 and 1997–1999 to 2004–2006.

(a) Rates are per 1,000 live births.

(b) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(c) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(d) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

(e) Mortality rate for 1994–1996 minus mortality rate for 1991–1993.

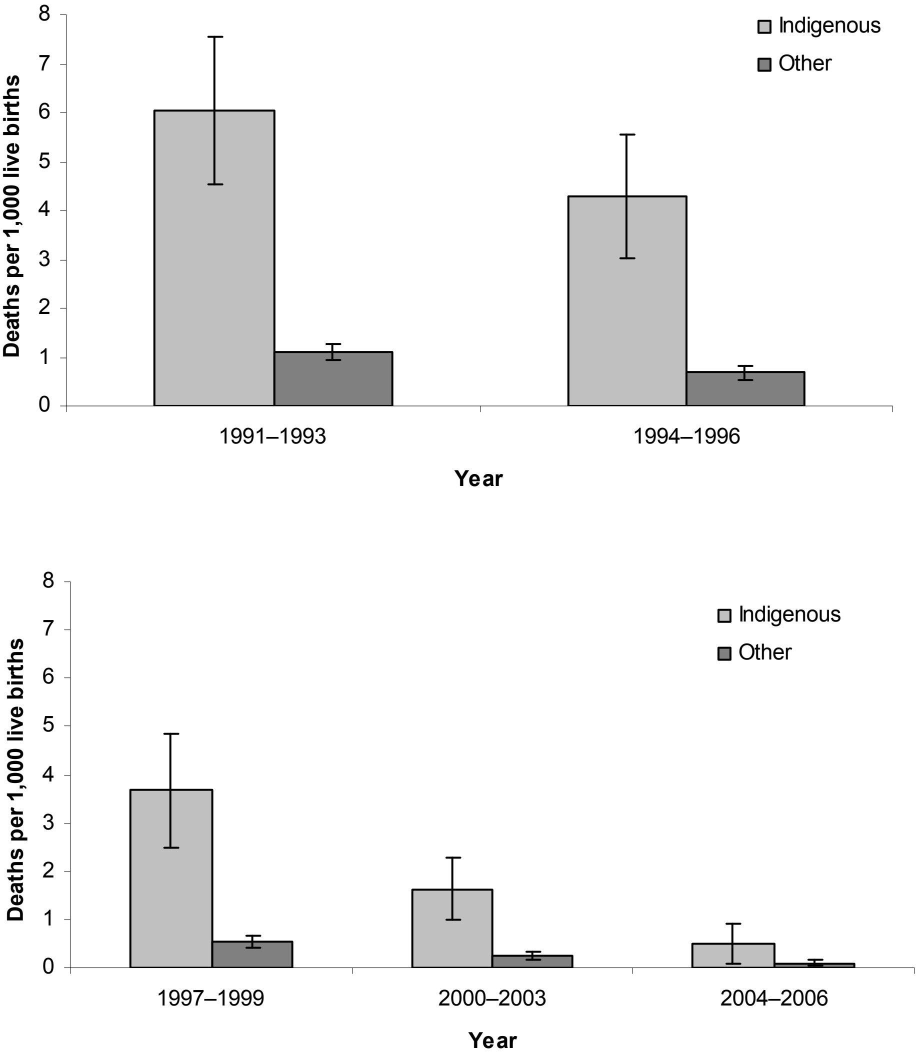
(f) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(g) Per cent change between 1997 and 2006 based on the average annual change over the period.

Notes

1. Data are presented in 3-year and 4-year groupings because of the small number of Indigenous deaths from SIDS each year.
2. The completeness of identification of Indigenous deaths can vary by age.
3. Deaths and rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.21.2: SIDS mortality rates per 1,000 live births, by Indigenous status, WA, SA and NT, 1991–1993 to 1994–1996 and 1997–1999 to 2004–2006

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous Australians in Table 1.21.3 and Figure 1.21.3. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

- Over the period 1998–1999 to 2004–2006, there were significant declines in mortality rates for SIDS for both Indigenous and non-Indigenous infants in Queensland, Western Australia, South Australia and the Northern Territory combined. The fitted trend implies an average yearly decline in the rate of around 0.3 per 1,000 births for Indigenous infants (equivalent to an 86% decline in the rate) and 0.1 per 1,000 births for non-Indigenous infants (equivalent to an 89% reduction in the rate) (Table 1.21.2).
- Over the same period, there was no significant change in the mortality rate ratios but there were significant declines in the mortality rate differences between Indigenous and non-Indigenous infants of around 85%.

Table 1.21.3: SIDS mortality rates, rate ratios and rate differences per 1,000 live births, by Indigenous status, Qld, WA, SA and NT, 1998–1999 to 2004–2006[(a)]

	1998–1999	2000–2001	2002–2003	2004–2006	Annual change[(b)]	% change over period[(c)]
Deaths						
Indigenous	37	24	24	15	. .	. .
Non-Indigenous	96	75	40	48	. .	. .
Rate (number per 1,000)[(d)]						
Indigenous	2.8	1.7	1.7	0.7	–0.3*	–85.7
Non-Indigenous	0.6	0.4	0.2	0.2	–0.1*	–89.0
Rate ratio[(e)]	**5.1**	**3.9**	**7.2**	**3.8**	**–0.1**	**–7.8**
Rate difference[(f)]	**2.3**	**1.2**	**1.4**	**0.5**	**–0.2***	**–84.9**

* Represents statistically significant differences at the $p < 0.05$ level over the period 1998–2006.

(a) Data exclude 13 registered infant deaths for which Indigenous status was not stated over the period 1998–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998 and 2006 based on the average annual change over the period.

(d) Rates are per 1,000 live births.

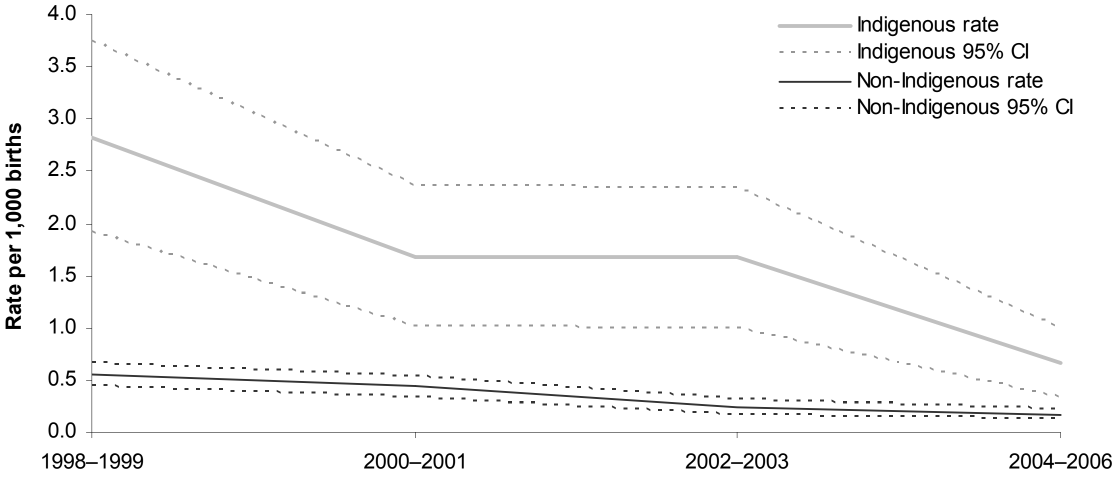
(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Notes

1. Data are presented in 2-year and 3-year groupings because of the small number of Indigenous deaths from SIDS each year.
2. The completeness of identification of Indigenous deaths can vary by age.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.21.3: SIDS mortality rates per 1,000 live births, by Indigenous status, Qld, WA, SA and NT, 1998–1999 to 2004–2006

International comparisons

International indigenous mortality data are available for New Zealand, the United States and Canada.

There are several common issues that adversely affect the quality of Indigenous mortality data in these three countries and Australia. These include the lack of an accurate denominator value for the Indigenous population (mainly because of undercounting) and the lack of agreement over which population denominator values to use if they do exist (for example, whether to use single ethnic response groups or the multiple ethnic response groups). There are differences in how Indigenous status is defined in the different countries. There have also been frequent modifications to the ethnicity question recorded in the censuses in some of these countries. These frequent changes in the census ethnicity question have led to difficulties in comparing mortality trends over time and have also produced difficulties in estimating population denominator counts between censuses.

The most important issue in relation to the quality of Indigenous mortality data is the undercounting of deaths (the numerator for mortality data). In each of the four countries, the undercounting of Indigenous deaths is likely to lead to an underestimation of the relative size of disparities that exist between Indigenous and non-Indigenous populations.

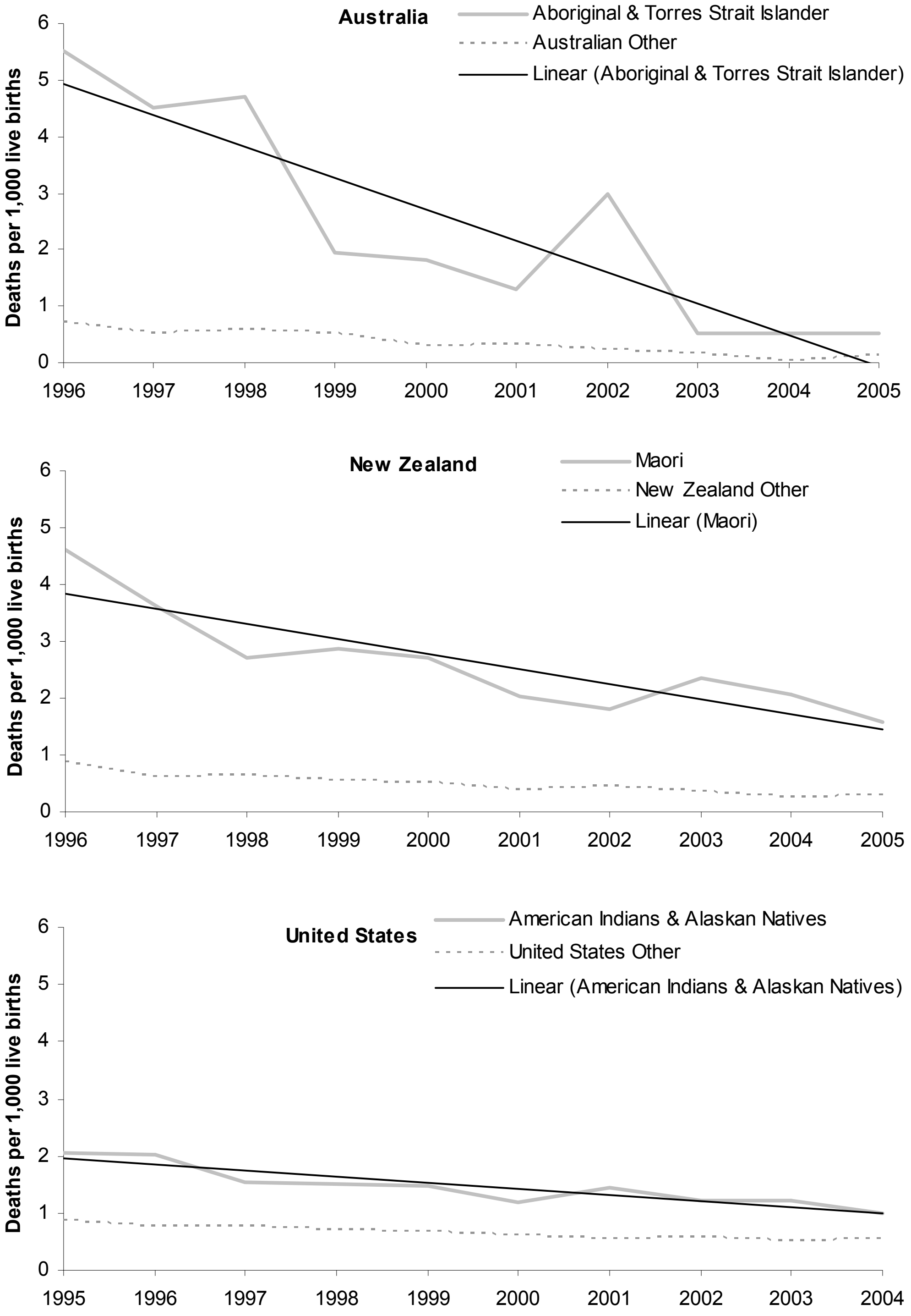
International statistics on infant mortality show that Indigenous infants in the United States have lower mortality rates for SIDS than other infants, and in New Zealand, Indigenous infants have higher mortality rates for SIDS than other infants, but the gap is not as great as for Aboriginal and Torres Strait Islander infants. The infant mortality rate for SIDS for Aboriginal and Torres Strait Islander infants is around five times that for non-Indigenous infants (1.1 per 1,000 live births compared with 0.2 per 1,000 live births). The latest available data from the United States and New Zealand are outlined below. Data are not provided for Canada, as information on the cause of death of infants is incomplete and not suitable for the calculation of rates. Note that the figures provided for Australia and New Zealand are based on births according to the race of the parents, whereas those provided for the United States are based on births according to the race of the mother.

- During the period 2002–2004, the death rate from SIDS was 1.2 per 1,000 live births among American Indians and Alaskan Natives compared with 0.5 per 1,000 live births for other people in the United States (United States Department of Health and Human Services unpublished data).
- For the period 2002–2005, the mortality rate for SIDS was 1.9 per 1,000 live births among New Zealand Maoris, compared with 0.3 per 1,000 live births among non-Indigenous people in New Zealand (Statistics New Zealand unpublished data).

Time series

SIDS mortality data are available from 1996 to 2005 for the Maori population in New Zealand, and from 1995 to 2004 for the American Indian and Alaskan Native population in the United States. These data are presented in Figure 1.21.4 along with data for Australia for the period 1996–2005.

- In New Zealand between 1996 and 2005 there were significant declines in mortality from SIDS in the Maori population. The fitted trend implies an average yearly decline in the rate of around 0.3 per 1,000 live births, which is equivalent to a 52% reduction in the rate over this period. There were also significant declines in non-Indigenous SIDS mortality rates between 1996 and 2005 (a reduction of 60%) (Statistics New Zealand unpublished data).
- In the United States between 1995 and 2004 there were significant declines in mortality from SIDS in the American Indian and Alaskan Native population. The fitted trend implies an average yearly decline in the rate of around 0.1 per 1,000 live births which is equivalent to a 46% reduction in the rate over this period. There were also significant declines in SIDS mortality rates for other persons in the United States between 1995 and 2004 (a reduction of 39%) (United States Department of Health and Human Services unpublished data).



Note: Australia data are for Western Australia, South Australia and the Northern Territory combined.

Source: AIHW analysis of National Mortality Database; Statistics New Zealand; United States department of Health and Human Services.

Figure 1.21.4: SIDS mortality rates per 1,000 live births, by Indigenous status, Australia (1996–2005), New Zealand (1996–2005) and the United States (1995–2004)

Data quality issues

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by late registration of deaths, identification of Indigenous deaths and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, the Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007a).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note alsothat the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death.

There are also current concerns about data quality for causes of death especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006).

Numerator and denominator

The perinatal mortality rate also relies on birth registration data. Unfortunately, as with deaths, some Indigenous births are not correctly identified as Indigenous. The estimated identification of births as Indigenous in 2002–06 was 95%. Identification for the states and territories ranged from 83% for the Australian Capital Territory to 107% for the Northern Territory (ABS 2007b). Given the identification is higher in births than deaths it is likely that Indigenous mortality rates are underestimated.

(continued)

Data quality issues (continued)

The numerator and denominator are not based on the same collection or the same method of collection. Births are registered by the parents whereas death registration forms are completed by doctors and funeral directors. Therefore, there would be inconsistency of Indigenous identification between the numerator and denominator.

SIDS identification

In addition to the data quality problems outlined above common to all Indigenous mortality data, there is an additional problem with SIDS data in Australia and internationally. There have been numerous initiatives to standardise the definitions and practices to distinguish between SIDS and other causes of unexpected infant death. However, problems still exist in the accurate identification of SIDS and there is no consistency of definition used by clinicians, researchers or pathologists in Australia. Research in Australia has shown poor-quality pathological examination of infants who died unexpectedly with 65% of autopsies studied failing minimum quality standards and another study where infant autopsies had been performed by non-pathologists in isolated regions. Without adequate rigour there is the danger of misclassification of infant deaths (Byard 2001). At this stage it is unknown whether there are any variations by state/territory and by Indigenous status in these problems. A study in Western Australia has found an increase in the number of 'unascertainable' deaths with a corresponding decrease in 'SIDS' deaths suggesting a change in the categorisation of deaths over time. A scrutiny of the autopsy reports indicates that in previous years a number of these 'unascertainable' deaths would have been classified as SIDS.

International comparisons

International Indigenous data are available for New Zealand, the United States and Canada. Data quality is an important issue in all countries with small Indigenous populations. The mortality rates are therefore likely to be underestimated to some degree for each of the Indigenous groups. The scope of data collections in Canada and the United States is often limited to the registered or reserve Indigenous populations and therefore does not cover the whole Indigenous population. International comparisons need to take into account that the definition of Indigenous status is specific to each country.

Cause of death coding

Causes of death are based on the 10th revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia on 1 January 1997.

References

ABS (Australian Bureau of Statistics) 1997. Occasional paper: Mortality of Aboriginal and Torres Strait Islander Australians. ABS cat. no. 3315.0. Canberra: ABS.

ABS 2006. Causes of death 2004. ABS cat. no. 3303.0. Canberra: ABS.

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ABS 2007b. Births Australia 2006. ABS cat. no. 3301.0. Canberra: ABS.

ABS & AIHW (Australian Institute of Health and Welfare) 2005. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2005. ABS cat. no. 4704.0, AIHW Cat. no. IHW 14. Canberra: ABS & AIHW.

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1.22 All causes age-standardised death rates

The number of Aboriginal and Torres Strait Islander Australian deaths, expressed as a rate by age group, age-standardised rate and rate ratio

Data sources

Data for this measure come from the AIHW National Mortality Database.

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data, for which year of registration of death was used. Rates published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Analyses

Age-standardised rates and ratios have been used as a measure of mortality in the Indigenous population relative to non-Indigenous Australians. Ratios of this type illustrate differences between the rates of mortality among Indigenous people and those of non-Indigenous Australians, taking into account differences in age distributions.

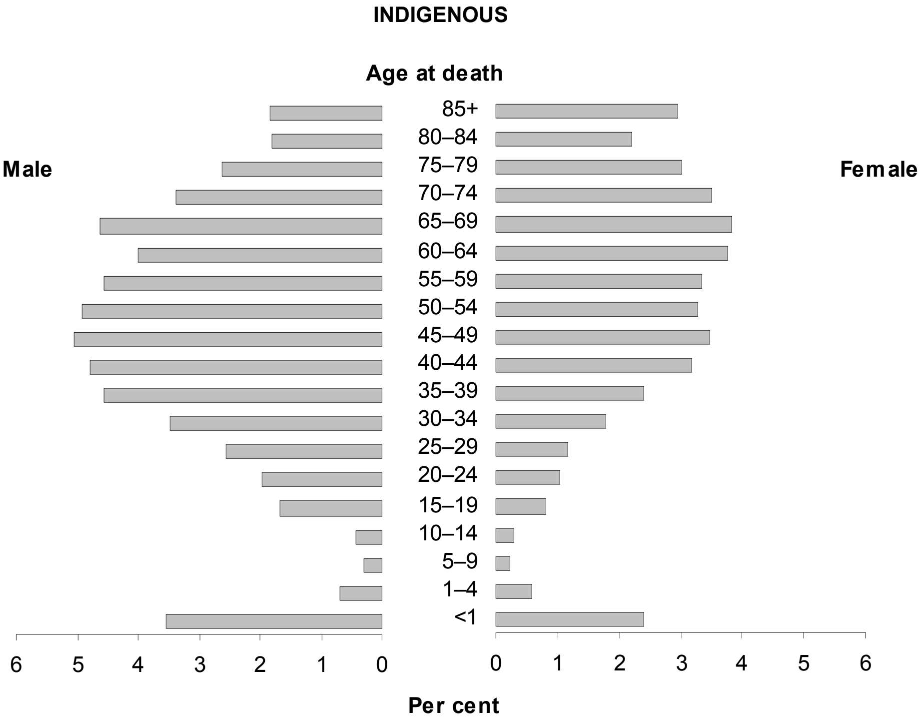
Mortality

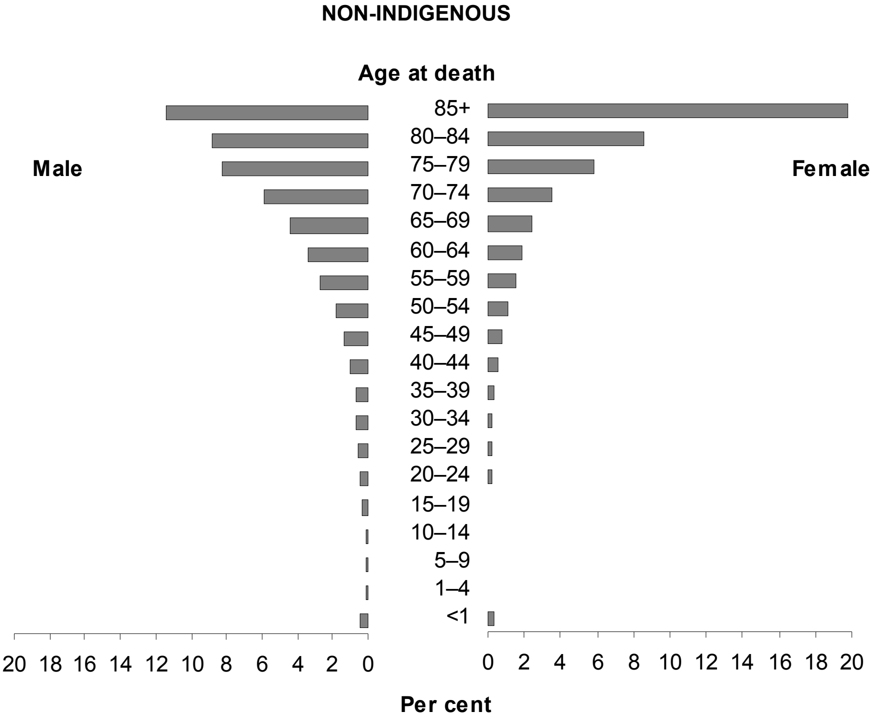
- For the period 2002–2006, there were 241,102 deaths in Queensland, Western Australia, South Australia and the Northern Territory, 7,692 (3.2%) of which were deaths of people who identified as Aboriginal or Torres Strait Islander origin and 3,313 (1.4%) of which were deaths for whom Indigenous status was not recorded.

Mortality by age and sex

Figure 1.22.1 presents the age distribution of deaths among Aboriginal and Torres Strait Islander peoples compared with non-Indigenous Australians, and Table 1.22.1 presents age-specific mortality rates for the period 2002–2006 for Queensland, Western Australia, South Australia and the Northern Territory combined.

- The age distribution of deaths among Aboriginal and Torres Strait Islander peoples is very different from that for non-Indigenous Australians. The Indigenous population has a high proportion of deaths occurring in the middle age groups as well as for infants. In comparison, the non-Indigenous population has the large majority of deaths occurring in the older age groups (Figure 1.22.1). Approximately 70% of deaths among Indigenous Australians occur before the age of 65 years compared with 21% of deaths among non-Indigenous Australians.
- For the period 2002–2006, in Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males and females had higher mortality rates than non-Indigenous males and females across all age groups (Table 1.22.1).
- The greatest difference in rates occurred in the 25–34, 35–44, and 45–54 year age groups where Indigenous males and females died at four, six and five times the rate respectively of non-Indigenous males and females in these age groups (Table 1.22.1).





Source: AIHW analysis of National Mortality Database.

Figure 1.22.1: Age distribution of deaths among Indigenous and non-Indigenous Australians, Qld, WA, SA and NT, 2002–2006

Table 1.22.1: All causes age-specific mortality rates per 100,000, by Indigenous status and sex, Qld, WA, SA and NT, 2002–2006[a] [b] [c] [d] [e]

	Males			Females			Persons		
	Indig. rate[f]	Non-Indig. rate[f]	Rate ratio[g]	Indig. rate[f]	Non-Indig. rate[f]	Rate ratio[g]	Indig. rate[f]	Non-Indig. rate[f]	Rate ratio[g]
Less than 1	1,452.8	448.9	3.2*	1,028.9	391.8	2.6*	1,246.3	421.2	3.0*
1–4	70.9	26.9	2.6*	62.2	21.3	2.9*	66.6	24.2	2.8*
0–4 years	*351.9*	110.1	3.2*	*256.5*	94.2	2.7*	*305.2*	102.4	3.0*
5–14	30.2	11.7	2.6*	22.8	9.2	2.5*	26.6	10.5	2.5*
15–24	193.2	72.4	2.7*	100.5	28.4	3.5*	147.2	50.9	2.9*
25–34	419.4	101.4	4.1*	192.1	37.9	5.1*	301.8	69.9	4.3*
35–44	829.2	136.6	6.1*	446.3	73.7	6.1*	627.8	105.1	6.0*
45–54	1,381.2	279.5	4.9*	847.7	170.3	5.0*	1,101.4	224.9	4.9*
55–64	2,358.4	692.6	3.4*	1,711.9	400.7	4.3*	2,013.7	549.2	3.7*
65–74	5,030.8	1,944.2	2.6*	3,627.8	1,105.2	3.3*	4,247.3	1,519.4	2.8*
75 and over	9,144.6	7,500.3	1.2*	8,180.6	6,190.6	1.3*	8,573.2	6,724.8	1.3*
Total[h]	**1,532.2**	**724.3**	**2.1***	**1,136.6**	**521.2**	**2.2***	**1,318.0**	**615.7**	**2.1***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 3,313 registered deaths where the Indigenous status is not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all causes mortality rate.

(e) Deaths are by year of registration.

(f) Age-specific rate per 100,000 population.

(g) Rate ratio Indigenous:non-Indigenous.

(h) Total rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Mortality Database.

Mortality by state/territory

Table 1.22.2 presents the number of deaths and mortality rates for the 5-year period 2002–2006 for Indigenous and non-Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians died at twice the rate of non-Indigenous Australians.
- In Queensland, Western Australia and South Australia, Indigenous Australians died at around twice the rate of non-Indigenous Australians. In the Northern Territory, Indigenous Australians died at 2.5 times the rate of non-Indigenous Australians.

Table 1.22.2: All causes mortality, by Indigenous status, Qld, WA, SA and NT, 2002–2006[a][b][c][d]

		Number of deaths			Indigenous			Non-Indigenous			
State/territory	**Implied coverage[e] (%)**	**Indigenous**	**Non-Indigenous**	**Not stated**	**No. per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**No. per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Ratio[i]**
Qld	51	2,841	115,542	1,656	1,184.3	1,129.4	1,239.2	620.0	616.4	623.5	1.9*
WA	72	1,958	54,173	630	1,357.8	1,283.7	1,432.0	592.9	587.9	597.9	2.3*
SA	62	641	58,077	988	1,089.4	982.6	1,196.2	627.6	622.5	632.7	1.7*
NT	90	2,252	2,305	39	1,661.1	1,574.1	1,748.0	664.4	632.7	696.0	2.5*
Qld, WA, SA & NT[j]	. .	**7,692**	**230,097**	**3,313**	**1,318.0**	**1,280.9**	**1,355.1**	**615.7**	**613.2**	**618.2**	**2.1***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all causes mortality rate.

(d) Deaths are by year of registration.

(e) Implied coverage is the estimation of the proportion of Indigenous deaths accurately identified as Indigenous in the mortality data collections—estimated to be 55% nationally. *Note:* Tasmania and Australian Capital Territory implied coverage rates were not calculated because of small numbers.

(f) Directly age-standardised using the 2001 Australian standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) These data exclude 3,313 registered deaths where the Indigenous status is not stated.

Source: AIHW analysis of National Mortality Database.

Time series analysis

Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have over 10 years of adequate identification of Indigenous deaths in their recording systems.

As there is a consistent time series of population estimates from 1991, data for the period 1991–2006 have been used for the analysis of Indigenous mortality in this measure.

Because of the late inclusion of a 'not stated' category of Indigenous status in 1998 (before which 'not stated' responses were included with non-Indigenous deaths), Indigenous mortality rates have been compared with the mortality rates of other Australians (which include deaths of both non-Indigenous people and people for whom Indigenous status was not stated).

Mortality rates, rate ratios and rate differences between Indigenous and other Australians over the period 1991–2006 are presented in Table 1.22.3 and Figure 1.22.2.

- In the period 1991–2006, there were significant declines in recorded mortality rates in Western Australia, South Australia and the Northern Territory combined for Indigenous Australians. The fitted trend implies an average yearly decline in the rate of around 14 per 100,000 (equivalent to a 13% reduction in the rate over this period). The fitted trend showed significant declines in recorded deaths for Indigenous males and females of 11 per 100,000 and 16 per 100,000 respectively (equivalent to a 9% and 15% reduction in the rate over this period) (Table 1.22.3). Most of the observed declines are attributable to significant declines in Indigenous mortality in Western Australia and the Northern Territory.
- There were also significant declines in recorded mortality rates for other males and females between 1991 and 2006. The fitted trend implies an average yearly decline in the rate of around 14 per 100,000 for other Australians (equivalent to a 27% reduction in the rate over this period).
- There were significant increases in the mortality rate ratios between Indigenous and other Australians for males and persons over the period 1991–2006, and a significant increase in the mortality rate difference for males over the same period.

Fluctuations in the level of Indigenous mortality over time partly reflect changing levels of coverage of Indigenous deaths and population estimates. Given the volatility in the measures of Indigenous mortality, caution should be exercised in assessing trends in Indigenous mortality over time and comparisons between jurisdictions and with the non-Indigenous population.

Table 1.22.3: Age-standardised mortality rates, rate ratios and rate differences, WA, SA and NT, 1991–2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[a]	% change[b]
Indigenous rate (no. per 100,000)[c]																		
Males	1,818.8	1,760.1	1,717.0	1,797.5	1,864.2	1,698.5	1,918.3	1,798.8	1,609.7	1,802.7	1,791.1	1,539.2	1,699.5	1,663.4	1,629.0	1,709.7	–10.5*	–8.7
Females	1,571.3	1,371.3	1,414.3	1,474.3	1,349.0	1,142.3	1,328.8	1,237.7	1,260.3	1,380.4	1,071.3	1,220.3	1,034.4	1,393.9	1,221.7	1,324.4	–16.0*	–15.3
Persons	1,694.8	1,560.0	1,562.3	1,631.4	1,590.6	1,404.2	1,594.1	1,496.1	1,429.5	1,575.4	1,395.5	1,364.7	1,337.2	1,525.0	1,410.5	1,505.0	–14.1*	–12.5
Other rate (no. per 100,000)[d]																		
Males	979.2	954.5	975.4	974.8	916.2	932.5	887.0	859.7	825.9	811.0	778.0	771.8	761.3	717.4	718.1	693.6	–20.8*	–31.9
Females	628.7	623.2	641.3	625.0	604.1	616.1	600.2	576.3	556.3	548.1	548.1	553.0	542.1	512.6	507.2	511.3	–9.3*	–22.1
Persons	782.5	769.1	789.0	778.6	743.0	757.0	728.5	704.2	677.8	666.6	652.8	652.8	642.2	607.2	605.3	596.4	–14.0*	–26.8
Rate ratio[e]																		
Males	1.9	1.8	1.8	1.8	2.0	1.8	2.2	2.1	1.9	2.2	2.3	2.0	2.2	2.3	2.3	2.5	0.04*	31.4
Females	2.5	2.2	2.2	2.4	2.2	1.9	2.2	2.1	2.3	2.5	2.0	2.2	1.9	2.7	2.4	2.6	0.01	6.2
Persons	2.2	2.0	2.0	2.1	2.1	1.9	2.2	2.1	2.1	2.4	2.1	2.1	2.1	2.5	2.3	2.5	0.02*	16.9
Rate difference[f]																		
Males	839.6	805.6	741.6	822.7	948.0	766.1	1,031.3	939.1	783.8	991.8	1,013.1	767.4	938.2	946.0	910.8	1,016.1	10.3*	18.4
Females	942.5	748.0	772.9	849.3	744.9	526.3	728.6	661.4	704.0	832.3	523.1	667.3	492.3	881.4	714.4	813.0	–6.8	–10.8
Persons	912.2	790.9	773.3	852.8	847.7	647.2	865.6	792.0	751.8	908.8	742.6	712.0	695.0	917.8	805.3	908.6	–0.1	–0.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1991–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1991 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

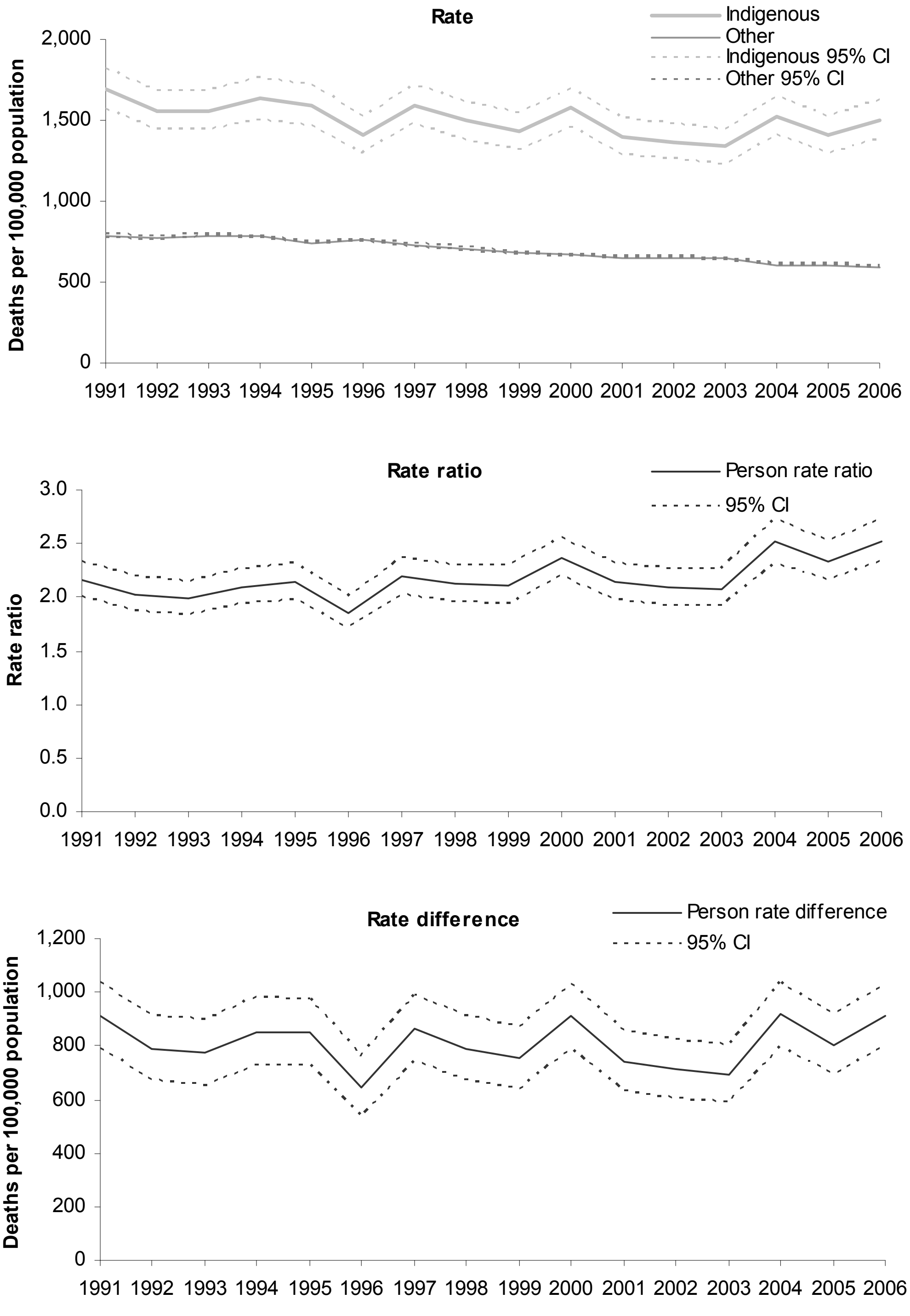
(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.22.2: Mortality rates, rate ratios and rate differences between Indigenous and other Australians, WA, SA and NT, 1991–2006

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous Australians in Table 1.22.4 and Figure 1.22.3. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

- Over the period 1998–2006, there were non-significant declines in recorded mortality rates in Queensland, Western Australia, South Australia and the Northern Territory combined for Indigenous Australians.
- Over the same period, there were significant declines in recorded mortality rates for non-Indigenous males and females in the four jurisdictions. The fitted trend implies an average yearly decline in the rate of around 14 per 100,000 for non-Indigenous persons (equivalent to a 16% reduction in the rate over this period).
- There were significant increases in the mortality rate ratios between Indigenous and non-Indigenous Australians over the period 1998–2006 (17% increase), and no significant changes in the mortality rate differences over the same period.

Table 1.22.4: Age-standardised mortality rates, rate ratios and rate differences, Qld, WA, SA and NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change[(b)]
Indigenous rate (no. per 100,000)[(c)]											
Males	1,616.7	1,493.6	1,613.0	1,625.5	1,491.8	1,562.1	1,560.6	1,428.3	1,618.3	–6.0	–2.9
Females	1,154.9	1,145.0	1,236.4	1,001.9	1,150.6	1,040.5	1,235.7	1,086.0	1,178.6	–0.8	–0.5
Persons	1,369.1	1,308.8	1,409.4	1,281.7	1,304.1	1,280.7	1,386.9	1,247.0	1,376.4	–3.4	–2.0
Non-indigenous rate (no. per 100,000)[(d)]											
Males	868.5	828.8	802.6	771.0	765.7	745.3	727.8	697.4	691.3	-21.3*	–19.6
Females	577.1	568.1	545.7	539.3	552.3	527.1	519.0	504.9	505.5	–9.0*	–12.5
Persons	709.2	687.3	662.5	645.9	650.8	627.8	616.1	594.9	592.6	–14.2*	–16.1
Rate ratio[(e)]											
Males	1.9	1.8	2.0	2.1	1.9	2.1	2.1	2.0	2.3	0.05*	20.9
Females	2.0	2.0	2.3	1.9	2.1	2.0	2.4	2.2	2.3	0.03	13.8
Persons	1.9	1.9	2.1	2.0	2.0	2.0	2.3	2.1	2.3	0.04*	16.9
Rate difference[(f)]											
Males	748.2	664.8	810.4	854.5	726.1	816.8	832.8	730.9	927.0	15.3	16.4
Females	577.8	576.9	690.8	462.6	598.3	513.5	716.7	581.1	673.1	8.3	11.5
Persons	659.9	621.6	746.8	635.9	653.3	652.9	770.7	652.0	783.7	10.9	13.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1998 and 2006 based on the average annual change over the period.

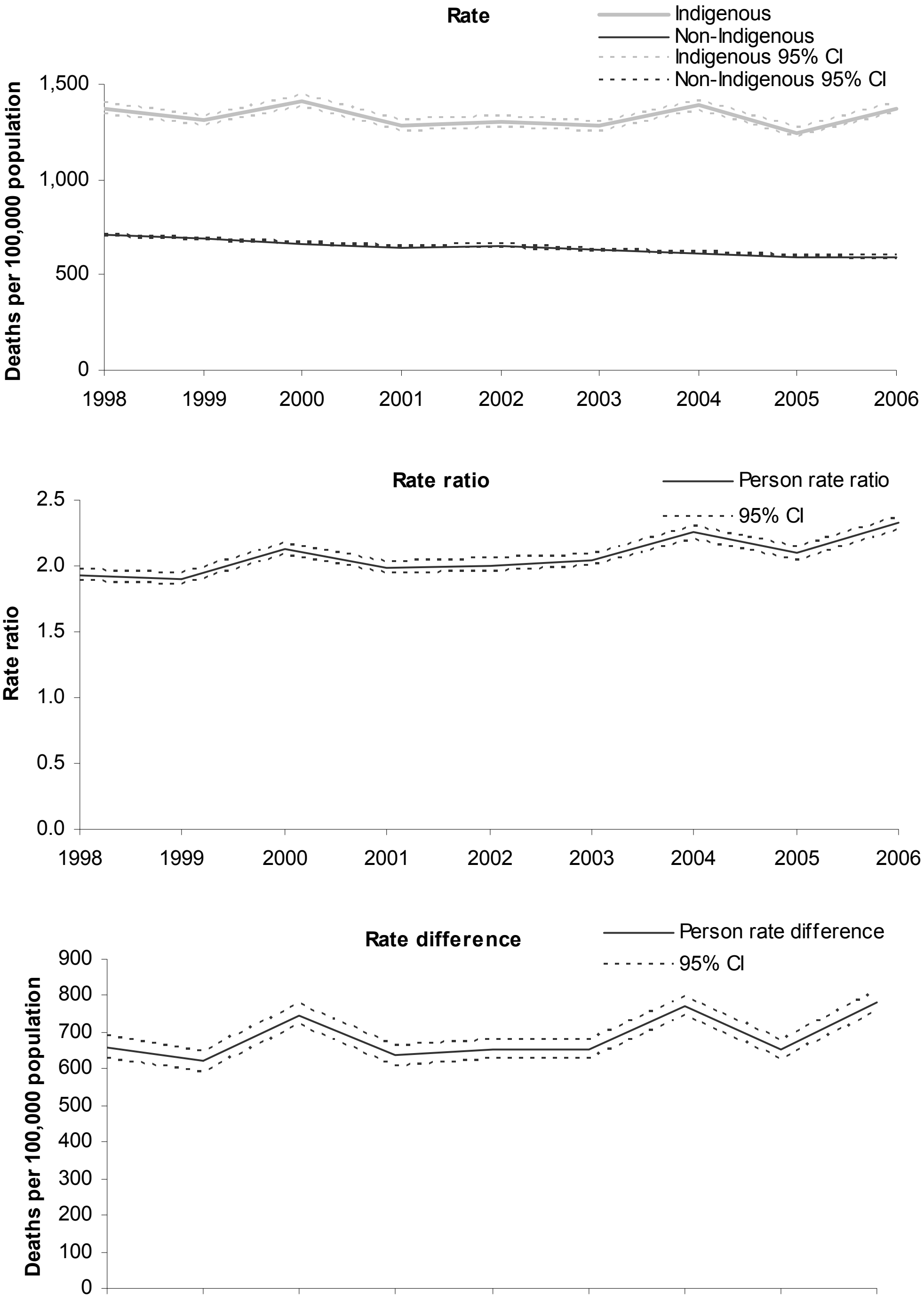
(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) Excludes deaths of those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.22.3: Mortality rates, rate ratios and rate differences between Indigenous and non-Indigenous Australians, Qld, WA, SA and NT, 1998–2006

Sensitivity of mortality trends to changes in identification

- The fitted trends described above for the period 1991–2006 in Western Australia, South Australia and the Northern Territory have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for coverage were posted—constant identification, increasing identification and decreasing identification.
  - Under the constant identification scenario, the numbers of deaths for the period under study were adjusted using the following under-identification estimates derived from the most recent ABS analyses (relating to the period 2002–2006):
    - Western Australia 72%
    - South Australia 62%
    - Northern Territory 90%.
  - Under the increasing identification scenario, deaths were adjusted by linearly increasing the identification through the periods under study—from 64% in 1991 to 72% in 2006 for Western Australia, from 52% to 62% for South Australia, and from 80% to 90% for the Northern Territory.
  - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 72% in 2006 for Western Australia, from 72% to 62% for South Australia, and from 100% to 90% for the Northern Territory.

The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in mortality might not persist. For all three scenarios, the population figures (used as denominators in the calculation of mortality rates) were re–estimated to reflect the altered number of deaths implied by each scenario.

- The observed declines in mortality rates over the period 1991–2006 for Indigenous males and persons overall remained statistically significant under the decreasing identification scenario only. The decline in mortality rates for Indigenous females over this period did not remain statistically significant under any identification scenario.
- The observed declines in mortality rates over the period 1991–2006 for other males and females remained statistically significant under all three identification scenarios.
- The increase in mortality rate ratios for males and persons and the increase in the mortality rate difference for males over the period 1991–2006 remained statistically significant under all three identification scenarios.

International comparisons

International indigenous data are available for New Zealand, the United States and Canada.

There are several common issues that adversely affect the quality of Indigenous mortality data in these three countries and Australia. These include the lack of an accurate denominator value for the Indigenous population and the lack of agreement over which population denominator values to use if they do exist. There are differences in how Indigenous status is defined in the different countries. There have also been frequent modifications to the ethnicity question recorded in the censuses in some of these countries. These frequent changes in the census ethnicity question have led to difficulties in comparing mortality trends over time and have also produced difficulties in estimating population denominator counts between censuses.

The most important issue in relation to the quality of Indigenous mortality data is the undercounting of deaths (the numerator for mortality data). In each of the four countries, the undercounting of Indigenous deaths is likely to lead to an underestimation of the relative size of disparities that exist between Indigenous and non-Indigenous populations.

The mortality rates presented below have been directly age-standardised to the WHO World Standard population 2001–2025 to allow for comparisons to be made between the four countries.

International statistics on all-cause mortality show that Indigenous people in the United States, Canada and New Zealand have higher mortality rates than the general population, but the gap is not as great as for Aboriginal and Torres Strait Islander Australians. The all-cause mortality rate for Aboriginal and Torres Strait Islander Australians is around twice that for non-Indigenous Australians (970 per 100,000 compared with 399 per 100,000 for Queensland, Western Australia, South Australia and the Northern Territory combined when directly age-standardised to the World Standard Population). The latest available data from the United States, New Zealand and Canada are outlined below.

- For the period 2002–2006 in New Zealand, the age-standardised all-cause mortality rate for the Maori population was 761 per 100,000, compared with 410 per 100,000 for the non-Indigenous population (Statistics New Zealand unpublished data).
- For the period 2002–2005 in the United States, the age-standardised all-cause mortality rate for American Indians/Alaskan Natives was 487 per 100,000, which was lower than the age standardised all-cause mortality rate for non-Indigenous persons over this period (552 per 100,000) (United States Department of Health and Human Services unpublished data).
- For the period 2001–2002 in Canada, the age standardised all-cause mortality rate for First Nations was 1,062 per 100,000 for males and 754 per 100,000 for females, which was higher than the age standardised all-cause mortality rate for total Canadian persons over this period (559 per 100,000 for males and 384 per 100,000 for females) (Health Canada unpublished data).

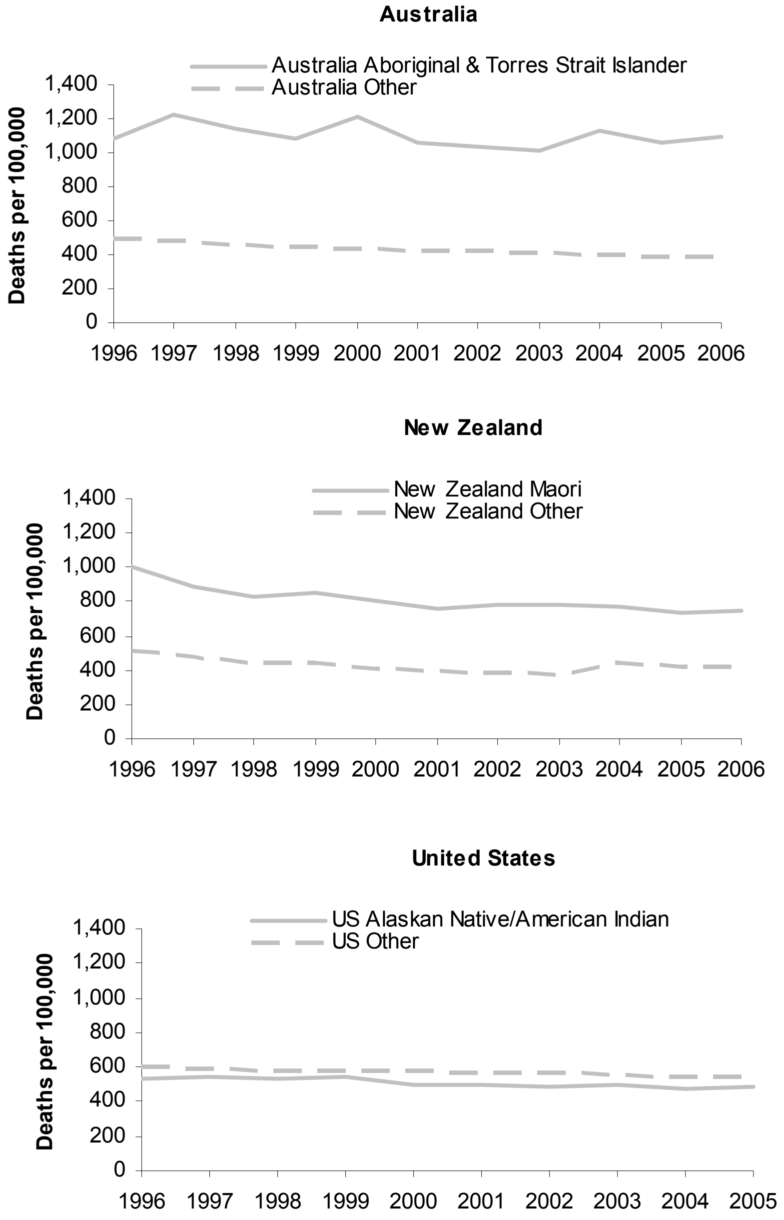
Time series

Mortality data are available from 1996 to 2006 for the Maori population in New Zealand and from 1991 to 2005 for the American Indian/Alaskan Native population in the United States. Reliable time series of mortality data for the First Nations population in Canada is not currently available.

- In New Zealand between 1996 and 2006 there was a significant decline in all-cause mortality rates for the Maori population. The fitted trend implies an average yearly decline in the rate of around 20 per 100,000 which is equivalent to a 20% reduction in the rate over this period. There was also a significant decline in non-Indigenous all-cause mortality rates in New Zealand between 1996 and 2006 (a reduction of 15%).
- In the United States between 1991 and 2005 there was a significant decline in all-cause mortality rates for American Indians/Alaskan Natives. The fitted trend implies an average yearly decline in the rate of around 5 per 100,000 which is equivalent to a 14% reduction in the rate over this period. There was also a significant decline in non-Indigenous all-cause mortality rates in the United States between 1991 and 2005 (a reduction of 13%).

Figure 1.22.4 presents the age-standardised all cause mortality rates for the Indigenous and non-Indigenous populations in Australia, New Zealand and the United States over the period 1996–2006.

- The age-standardised all-cause mortality rate for Aboriginal and Torres Strait Islander peoples was higher than that for Maori and American Indians/Alaskan Natives for all years between 1996 and 2006.



Notes

1. Australia data are for Western Australia, South Australia & the Northern Territory combined.
2. Rates are directly age-standardised to the World Standard Population 2001–2025.

Source: AIHW analysis of National Mortality Database; Statistics New Zealand; United States Department of Health and Human Services.

Figure 1.22.4: Age standardised mortality rates, by Indigenous status, Australia, New Zealand and the United States, 1996–2006

Data quality issues

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording to the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, the Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007).

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

International comparisons

International indigenous data are available for New Zealand, the United States and Canada. Data quality is an important issue in all countries with small Indigenous populations. The mortality rates are therefore likely to be underestimated to some degree for each of the Indigenous groups. The scope of data collections in Canada and the United States are often limited to the registered or reserve Indigenous populations and therefore do not cover the whole Indigenous population. International comparisons need to take into account that the definition of Indigenous status is specific to each country.

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1.23 Leading causes of mortality

Causes of death of Aboriginal and Torres Strait Islander Australians, expressed as a rate by age group, age-standardised rate and rate ratio

Data sources

Data for this measure come from the AIHW National Mortality Database.

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data, for which year of registration of death was used. Rates published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Analyses

Age-standardised rates and ratios have been used as a measure of mortality in the Indigenous population relative to non-Indigenous Australians. Ratios of this type illustrate differences between the rates of mortality among Indigenous people and those of non-Indigenous Australians, taking into account differences in age distributions.

Mortality

Mortality by cause of death

Tables 1.23.1 and 1.23.2 present data on the major causes of death of Indigenous Australians over the period 2002–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined.

- Over the period 2002–2006, the most common cause of death among Indigenous Australians was circulatory diseases (26%), followed by external causes (injury and poisoning) (16%). Indigenous Australians died from these causes of death at two and three times the rate of non-Indigenous Australians respectively (Table 1.23.1).

- Cancer was also a major cause of death among both Indigenous and non-Indigenous Australians, responsible for 15% of Indigenous and 30% of non-Indigenous deaths. Lung cancer is the most common type of cancer from which Indigenous Australians died at almost twice the rate of non-Indigenous Australians.
- Over the period 2002–2006, Indigenous Australians died from diabetes at nine times the rate of non-Indigenous Australians and from kidney diseases at four times the rate of non-Indigenous Australians.
- Deaths higher than the expected number are referred to as ‘excess deaths’. Excess deaths are calculated by subtracting the number of expected Indigenous deaths (based on the age, sex and cause-specific rates of non-Indigenous Australians) from the number of actual cause-specific deaths in the Indigenous population. This is usually expressed as a proportion of excess death from all causes. Diseases of the circulatory system accounted for the highest proportion of excess deaths among Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory over the period 2002–2006 (26% of deaths). Other major causes of excess deaths were external causes (injury and poisoning), endocrine, nutritional and metabolic diseases and diseases of the respiratory system. Deaths due to these causes were responsible for almost two-thirds (64%) of excess deaths among Indigenous persons (Table 1.23.2).

Table 1.23.1: Causes of mortality, by Indigenous status, Qld, WA, SA and NT, 2002–2006[a][b][c][d][e]

	Number			**Per cent**			**Indigenous**			**Non-Indigenous**			
Underlying cause of death	**Indig.**	**Non-Indig.**	**Not stated**	**Indig.**	**Non-Indig.**	**Not stated**	**No. per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**No. per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Ratio[i]**
Circulatory diseases (I00–I99)	2,008	82,697	1,223	26.1	35.9	36.9	411.7	390.1	433.2	221.4	219.9	222.9	1.9*
External causes (V01–Y98)	1,224	14,170	421	15.9	6.2	12.7	105.8	98.0	113.6	38.3	37.7	38.9	2.8*
Cancer (C00– D48)	1,184	68,882	603	15.4	29.9	18.2	240.0	224.2	255.8	183.2	181.9	184.6	1.3*
Lung cancer (C34)[j]	*276*	*13,237*	*114*	*3.6*	*5.8*	*3.4*	*57.7*	*50.1*	*65.3*	*35.2*	*34.6*	*35.8*	*1.6**
Cervical cancer (C53)[j][k]	*35*	*404*	*8*	*0.5*	*0.2*	*0.2*	*6.2*	*3.7*	*8.6*	*1.1*	*1.0*	*1.2*	*5.7**
Endocrine, metabolic & nutritional disorders (E00–E89)	694	8,198	96	9.0	3.6	2.9	151.1	138.2	164.0	22.0	21.5	22.4	6.9*
Diabetes (E10–E14)[j]	*609*	*5,702*	*60*	*7.9*	*2.5*	*1.8*	*133.6*	*121.6*	*145.7*	*15.3*	*14.9*	*15.7*	*8.8**
Respiratory diseases (J00–J99)	653	19,880	313	8.5	8.6	9.4	136.4	123.8	149.0	53.4	52.6	54.1	2.6*
Digestive diseases (K00–K93)	450	7,691	120	5.9	3.3	3.6	67.4	59.6	75.1	20.5	20.0	20.9	3.3*
Conditions originating in perinatal period (P00–P96)	213	963	21	2.8	0.4	0.6	7.7	6.7	8.7	2.8	2.6	2.9	2.8*
Nervous system diseases (G00–G99)	193	7,906	130	2.5	3.4	3.9	26.8	21.8	31.8	21.2	20.7	21.7	1.3*

(continued)

Table 1.23.1 (continued): Causes of mortality, by Indigenous status, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)(d)(e)]

	Number			Per cent			Indigenous			Non-Indigenous			
Underlying cause of death	**Indig.**	**Non-Indig.**	**Not stated**	**Indig.**	**Non-Indig.**	**Not stated**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**
Kidney diseases (N00–N29)	179	3,564	48	2.3	1.5	1.4	40.2	33.2	47.1	9.6	9.2	9.9	4.2*
Infectious & parasitic diseases (A00–B99)	168	2,737	38	2.2	1.2	1.1	22.9	18.4	27.3	7.3	7.0	7.6	3.1*
Other causes[(l)]	726	13,409	300	9.4	5.8	9.1	108.1	97.2	119.0	36.1	35.5	36.7	3.0*
All causes	**7,692**	**230,097**	**3,313**	**100.0**	**100.0**	**100.0**	**1318.0**	**1280.9**	**1355.1**	**615.7**	**613.2**	**618.2**	**2.1***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states and territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) Rates exclude 3,313 registered deaths where the Indigenous status is not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates because of these data quality issues.

(e) Deaths are by year of registration of death and state/territory of usual residence.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) Data for lung cancer and cervical cancer are a subset of the data presented for all cancers; data for diabetes are a subset of data presented for all endocrine, metabolic and nutritional disorders in this table.

(k) Rates for cervical cancer are for females only.

(l) Includes: diseases of the blood and blood-forming organs and certain disorders involving the immune system, mental & behavioural disorders, diseases of the eye and adnexa, diseases of the ear and mastoid process, diseases of the skin & subcutaneous tissue, diseases of the musculoskeletal system and connective tissue, diseases of the genitourinary system (excluding kidney diseases), pregnancy, childbirth & the puerperium, congenital malformations, deformations and chromosomal abnormalities, symptoms, signs and abnormal clinical findings not elsewhere classified.

Note: Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database.

Table 1.23.2: Main causes of excess Indigenous deaths, by sex, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)]

	Males				Females				Total			
Underlying cause of death	**Observed**	**Expected**	**Excess**	**% excess**	**Observed**	**Expected**	**Excess**	**% excess**	**Observed**	**Expected**	**Excess**	**% excess**
	No.	**No.**	**No.**	**%**	**No.**	**No.**	**No.**	**%**	**No.**	**No.**	**No.**	**%**
Circulatory diseases (I00–I99)	1,128	349	779	26.4	880	311	569	25.8	2,008	670	1,338	26.1
External causes (V01–Y98)	845	282	563	19.1	379	103	276	12.5	1,224	393	831	16.2
Endocrine, metabolic & nutritional disorders (E00–E89)	328	41	287	9.7	366	38	328	14.9	694	80	614	12.0
Diabetes (E10–E14)[(d)]	*291*	*26*	*265*	*9.0*	*318*	*23*	*295*	*13.4*	*609*	*50*	*559*	*10.9*
Respiratory diseases (J00–J99)	378	86	292	9.9	275	76	199	9.0	653	164	489	9.5
Cancer (C00–D48)	614	406	208	7.0	570	353	217	9.8	1,184	767	417	8.1
Lung cancer (C34)[(d)]	*162*	*84*	*78*	*2.6*	*114*	*52*	*62*	*2.8*	*276*	*139*	*137*	*2.7*
Cervical cancer (C53)[(d)]	. .	. .	. .	. .	*35*	*7*	*28*	*1.3*	*35*	*7*	*28*	*0.6*
Digestive diseases (K00–K93)	260	44	216	7.3	190	36	154	7.0	450	81	369	7.2
Kidney diseases (N00–N29)	80	13	67	2.3	99	14	85	3.9	179	26	153	3.0
Conditions originating in perinatal period (P00–P96)	127	40	87	2.9	86	35	51	2.3	213	75	138	2.7
Infectious & parasitic diseases (A00–B99)	94	20	74	2.5	74	14	60	2.7	168	34	134	2.6
Nervous system diseases (G00–G99)	129	42	87	3.0	64	45	19	0.9	193	86	107	2.1
Other causes[(e)]	386	94	292	9.9	340	95	245	11.1	726	190	536	10.5
All causes	**4,369**	**1,417**	**2,952**	**100.0**	**3,323**	**1,119**	**2,204**	**100.0**	**7,692**	**2,566**	**5,126**	**100.0**

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) Deaths are by year of registration of death and state/territory of usual residence.

(d) Data for lung cancer and cervical cancer are a subset of the data presented for all cancers; data for diabetes are a subset of data presented for all endocrine, metabolic and nutritional disorders in this table.

(e) Includes: diseases of the blood and blood-forming organs and certain disorders involving the immune system; mental & behavioural disorders; diseases of the eye and adnexa; diseases of the ear and mastoid process; diseases of the skin & subcutaneous tissue; diseases of the musculoskeletal system and connective tissue; diseases of the genitourinary system (excluding kidney diseases); pregnancy, childbirth & the puerperium; congenital malformations, deformations and chromosomal abnormalities; symptoms, signs and abnormal clinical findings not elsewhere classified.

Note: Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database.

Circulatory diseases

- Over the period 2002–2006, there were 2,008 deaths of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined from circulatory diseases. Indigenous Australians died from circulatory diseases at around twice the rate of non-Indigenous Australians (Table 1.23.3).
- The most common type of circulatory disease causing death among Indigenous Australians was ischaemic heart disease (including heart attack and angina), followed by cerebrovascular disease (including stroke). Indigenous Australians died from these diseases at around twice the rate of non-Indigenous Australians.
- Over the period 2002–2006, Indigenous Australians died from hypertensive disease at four times the rate of non-Indigenous Australians. Indigenous Australians died from rheumatic heart disease (which predominantly affects children) at 9 times the rate of non-Indigenous Australians.

Table 1.23.3: Deaths of Indigenous Australians from circulatory diseases, by sex, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)(e)

	Males						Females						Persons					
	No.	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**
Ischaemic heart disease (I20–I25)	714	63.3	277.1	252.0	302.2	1.9*	427	48.5	173.5	154.7	192.3	1.8*	1,141	56.8	221.3	206.0	236.6	1.9*
Acute myocardial infarction (I21)(j)	*349*	*30.9*	*136.3*	*118.6*	*153.9*	*1.8**	*192*	*21.8*	*84.4*	*70.9*	*97.9*	*1.6**	*541*	*26.9*	*108.6*	*97.8*	*119.5*	*1.7**
Cerebrovascular disease (I60–I69)	157	13.9	86.3	70.1	102.4	1.7*	173	19.7	83.0	69.0	96.9	1.5*	330	16.4	84.7	74.2	95.3	1.5*
Stroke (I60–I64)(j)	*126*	*11.2*	*65.6*	*51.8*	*79.3*	*1.7**	*146*	*16.6*	*66.5*	*54.2*	*78.8*	*1.5**	*272*	*13.5*	*66.4*	*57.2*	*75.6*	*1.6**
Other heart disease (I26–I52)	160	14.2	68.3	54.6	82.0	2.3*	127	14.4	50.7	40.3	61.1	1.8*	287	14.3	58.6	50.2	66.9	2.0*
Rheumatic heart disease (I00–I09)	30	2.7	6.2	3.2	9.1	6.1*	67	7.6	16.0	11.5	20.5	10.9*	97	4.8	11.5	8.7	14.3	9.0*
Hypertension disease (I10–I15)	36	3.2	17.5	10.9	24.1	3.4*	58	6.6	26.8	19.0	34.6	4.3*	94	4.7	23.1	17.7	28.4	3.9*
Other diseases of the circulatory system (I70–I99)	31	2.7	11.9	7.0	16.7	0.8	28	3.2	12.5	7.2	17.7	1.2	59	2.9	12.4	8.7	16.2	1.0
Total circulatory diseases	**1,128**	**100.0**	**467.2**	**433.2**	**501.2**	**1.9***	**880**	**100.0**	**362.4**	**334.8**	**390.1**	**1.8***	**2,008**	**100.0**	**411.7**	**390.1**	**433.2**	**1.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 1,223 deaths where the Indigenous status was not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all causes mortality rate.

(e) Deaths are by year of registration of death and state/territory of usual residence.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) Data presented for acute myocardial infarction are a subset of data presented for ischaemic heart disease; data presented for stroke are a subset of data presented for cerebrovascular disease in this table.

Note: Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database.

External causes (injury and poisoning)

- Over the period 2002–2006, there were 1,224 deaths of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined from external causes. Indigenous Australians died from external causes at almost three times the rate of non-Indigenous Australians (Table 1.23.4).
- The most common type of external cause of death among Indigenous Australians was intentional self-harm (suicide), followed by transport accidents and assault. Indigenous Australians died from intentional self-harm and transport accidents at 2 and 3 times the rate of non-Indigenous Australians respectively. Indigenous males and females died from assault at 9 and 10 times the rate of non-Indigenous males and females respectively.

Table 1.23.4: Deaths of Indigenous Australians from external causes of injury and poisoning, by sex, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)(e)

	Males						Females						Persons					
	No.	%	No. per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)	No.	%	No. per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)	No.	%	No. per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)
Intentional self-harm (X60–X84)	294	34.8	42.4	36.8	48.0	2.4*	65	17.2	7.7	5.7	9.6	1.8*	359	29.3	24.3	21.5	27.1	2.2*
Accidents																		
Transport accidents (V01–V99)	239	28.3	38.4	32.1	44.7	2.7*	116	30.6	18.1	14.2	22.0	4.1*	355	29.0	27.7	24.2	31.3	3.0*
Accidental drowning or accidental threats to breathing (W65–W84)	81	9.6	12.1	9.0	15.3	3.3*	33	8.7	5.0	2.5	7.5	3.5*	114	9.3	8.5	6.5	10.5	3.3*
Accidental poisoning by and exposure to noxious substances (X40–X49)	35	4.1	5.3	3.5	7.2	1.5*	21	5.5	3.7	2.0	5.3	2.2*	56	4.6	4.5	3.2	5.7	1.7*
Exposure to electric current/smoke/fire/animals/nature (W85–W99, X00–X39)	23	2.7	4.6	1.9	7.3	4.2*	14	3.7	2.1	0.7	3.4	3.9*	37	3.0	3.2	1.9	4.6	3.9*
Accidental falls (W00–W19)	22	2.6	7.1	3.2	11.1	1.7	14	3.7	5.5	2.0	9.0	1.8	36	2.9	6.3	3.7	9.0	1.7*
Exposure to inanimate mechanical forces (W20–W49)	16	1.9	2.0	0.9	3.0	1.5	6	1.6	0.7	0.1	1.4	3.8*	22	1.8	1.4	0.8	2.0	1.8*

(continued)

Table 1.23.4 (continued): Deaths of Indigenous Australians from external causes of injury and poisoning, by sex, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)(e)

	Males						Females						Persons					
	No.	%	No. per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)	No.	%	No. per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)	No.	%	No. per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)
Other external causes of accidental injury (W50–W64 X50–X59)	46	5.4	18.5	11.2	25.7	3.6*	34	9.0	11.1	6.4	15.7	2.5*	80	6.5	14.3	10.2	18.3	3.0*
Assault (X85–Y09)	66	7.8	10.4	7.6	13.1	9.5*	52	13.7	6.8	4.8	8.8	9.9*	118	9.6	8.5	6.8	10.1	9.5*
Complications of medical or surgical care (Y40–Y84)	3	0.4	2.0	–0.5	4.6	1.8	14	3.7	4.9	2.0	7.7	5.0*	17	1.4	3.6	1.6	5.5	3.4*
Other external causes(j)	20	2.4	5.3	1.9	8.7	3.7*	10	2.6	2.2	0.4	4.1	4.0*	30	2.5	3.6	1.8	5.4	3.6*
Total external causes	**845**	**100.0**	**148.2**	**134.5**	**161.9**	**2.7***	**379**	**100.0**	**67.6**	**58.7**	**76.5**	**3.0***	**1,224**	**100.0**	**105.8**	**98.0**	**113.6**	**2.8***

* Represents results with statistically significant differences in the Indigenous/non–Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5 -year groupings because of small numbers each year.

(c) These data exclude 421 deaths where the Indigenous status was not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all causes mortality rate.

(e) Deaths are by year of registration of death and state/territory of usual residence.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) Includes event of undetermined intent; legal intervention and operations of war; sequelae of external cause of mortality; supplementary factors related to causes of mortality not classified elsewhere.

Note: Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database.

Neoplasms (cancer)

- Over the period 2002–2006, there were 1,184 deaths of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined from cancer. Indigenous Australians died from cancer at around 1.3 times the rate of non-Indigenous Australians (Table 1.23.5).
- The most common type of cancer causing mortality among Indigenous Australians was cancer of the digestive organs, from which they died at 1.3 times the rate of non-Indigenous Australians.
- The second most common type of cancer causing mortality among Indigenous Australians was cancer of the respiratory and inthrathoracic organs, which comprises predominantly lung cancer. Indigenous Australians died from lung cancer at almost twice the rate of non-Indigenous Australians.
- Over the period 2002–2006, there were 35 deaths of Indigenous females in the four jurisdictions from cervical cancer. Indigenous females died from cervical cancer at almost six times the rate of non-Indigenous Australians.

Table 1.23.5: Deaths of Indigenous Australians from neoplasms (cancer), by sex, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)(e)

	Males						Females						Persons					
Site of neoplasm	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**
Digestive organs (C15–C26)	189	30.8	84.1	69.7	98.5	1.4*	118	20.7	46.3	36.9	55.7	1.2	307	25.9	63.2	55.0	71.3	1.3*
Respiratory and inthrathoracic organs (C30–C39)	179	29.2	86.7	72.1	101.2	1.6*	120	21.1	42.4	34.1	50.6	1.8*	299	25.3	61.6	53.8	69.4	1.7*
Bronchus & lung (C34)(j)	*162*	*26.4*	*80.1*	*66.0*	*94.1*	*1.6**	*114*	*20.0*	*40.6*	*32.4*	*48.7*	*1.8**	*276*	*23.3*	*57.7*	*50.1*	*65.3*	*1.6**
Ill-defined, secondary & unspecified site (C76–C80)	45	7.3	22.8	14.9	30.7	1.8*	50	8.8	22.7	15.7	29.6	2.3*	95	8.0	22.8	17.5	28.0	2.0*
Lymphoid, haematopoietic and related tissue (C81–C96)	48	7.8	22.2	14.4	30.1	0.9	43	7.5	13.9	9.0	18.9	0.9	91	7.7	17.4	13.1	21.7	0.9
Female genital organs (C51–C58)	. .	. .	. .	. .	. .	. .	86	15.1	30.1	22.8	37.4	2.4*	86	7.3	16.8	12.6	20.9	2.5*
Cervix (C53)(j)	. .	. .	. .	. .	. .	. .	*35*	*6.1*	*11.1*	*6.8*	*15.5*	*5.5**	*35*	*3.0*	*6.2*	*3.7*	*8.6*	*5.7**
Lip, oral cavity and pharynx (C00–C14)	54	8.8	20.3	14.0	26.6	4.2*	25	4.4	7.9	4.5	11.2	5.1*	79	6.7	13.4	10.1	16.8	4.3*
Breast (C50)	. .	. .	. .	. .	. .	. .	73	12.8	24.5	18.1	31.0	1.1	73	6.2	13.6	10.0	17.3	1.1

(continued)

Table 1.23.5 (continued): Deaths of Indigenous Australians from neoplasms (cancer), by sex, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)(d)(e)]

	Males						Females						Persons					
Site of neoplasm	**No.**	**%**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Rate ratio[(i)]**	**No.**	**%**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Rate ratio[(i)]**	**No.**	**%**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Rate ratio[(i)]**
Malignant neoplasms of urinary tract (C64–C68)	19	3.1	11.0	5.2	16.8	0.8	13	2.3	4.1	1.6	6.6	0.7	32	2.7	7.0	4.2	9.8	0.8
Male genital organs (C60–C63)	29	4.7	17.6	10.3	24.9	0.6*	. .	. .	. .	. .	. .	. .	29	2.4	7.5	4.5	10.6	0.5*
Other malignant neoplasms[(k)]	37	6.0	12.4	7.5	17.4	0.5*	30	5.3	8.8	4.9	12.7	0.7	67	5.7	10.5	7.4	13.6	0.6*
Non-malignant neoplasms (D00–D48)	14	2.3	7.8	2.7	13.0	1.6	12	2.1	5.0	1.7	8.3	1.6	26	2.2	6.2	3.3	9.0	1.6
Total neoplasms	**614**	**100.0**	**285.0**	**258.1**	**311.8**	**1.2***	**570**	**100.0**	**205.7**	**186.5**	**224.9**	**1.4***	**1,184**	**100.0**	**240.0**	**224.2**	**255.8**	**1.3***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 603 deaths where the Indigenous status was not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate.

(e) Deaths are by year of registration of death and state/territory of usual residence.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) Data presented for bronchus & lung cancer are a subset of data presented for all respiratory and inthrathoracic organs; data presented for cervix cancer are a subset of data presented for all cancers of the female genital organs in this table.

(k) Includes neoplasms of bone and articular cartilage; melanoma & other neoplasms of skin; neoplasms of mesothelial and soft tissue; neoplasms of eye, brain and other parts of central nervous system; neoplasms of thyroid and other endocrine glands.

Note: Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database.

Respiratory diseases

- Over the period 2002–2006, there were 653 deaths of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined from respiratory diseases. Indigenous Australians died from respiratory diseases at almost three times the rate of non-Indigenous Australians (Table 1.23.6).
- The most common type of respiratory disease causing death among Indigenous Australians was chronic lower respiratory diseases (including asthma, bronchitis and emphysema), followed by influenza and pneumonia. Indigenous Australians died at around three times and twice the rate of non-Indigenous Australians for these diseases respectively.

Table 1.23.6: Deaths of Indigenous Australians from respiratory diseases, by sex, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)(e)

	Males						Females						Persons					
	No.	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**
Chronic lower respiratory diseases (J40–J47)	209	55.3	111.1	93.3	128.8	3.2*	155	56.4	65.3	53.7	76.8	3.3*	364	55.7	85.0	75.0	95.0	3.2*
Pneumonia and influenza (J10–J18)	110	29.1	40.4	30.3	50.5	2.4*	85	30.9	29.4	21.5	37.2	1.9*	195	29.9	34.4	28.2	40.7	2.1*
Other respiratory disease (J00–06, J20–39, J60–99)	59	15.6	21.2	13.9	28.6	1.5*	35	12.7	13.6	8.4	18.8	1.6*	94	14.4	17.0	12.7	21.3	1.5*
Total respiratory diseases	**378**	**100.0**	**172.7**	**150.9**	**194.4**	**2.6***	**275**	**100.0**	**108.2**	**93.3**	**123.1**	**2.5***	**653**	**100.0**	**136.4**	**123.8**	**149.0**	**2.6***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 313 deaths where the Indigenous status was not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate.

(e) Deaths are by year of registration of death and state/territory of usual residence.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

Note: Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database.

Diseases of the genitourinary system

- Over the period 2002–2006, there were 220 deaths of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined from diseases of the genitourinary system. Indigenous Australians died from genitourinary disease at around four times the rate of non-Indigenous Australians (Table 1.23.7).
- The most common type of genitourinary disease causing mortality among Indigenous Australians was renal failure, from which they died at around four times the rate of non-Indigenous Australians.
- Over the period 2002–2006, Indigenous males and females died from renal tubulo-intestinal disorders at around nine and five times the rate of non-Indigenous males and females respectively. Over the same period, Indigenous males and females died from glomerular disease (a disease of the kidneys) at four and eight times the rate of non-Indigenous males and females respectively.

Table 1.23.7: Deaths of Indigenous Australians from diseases of the genitourinary system, by sex, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)(e)

	Males						Females						Persons					
	No.	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**	**No.**	**%**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Rate ratio(i)**
Renal failure (N17–N19)	64	66.7	35.2	24.8	45.5	3.7*	77	62.1	32.3	24.1	40.6	4.4*	141	64.1	33.4	27.0	39.9	4.0*
Other diseases of the urinary system (N30–N39)	11	11.5	8.2	2.8	13.5	2.9*	19	15.3	10.0	5.0	14.9	2.5*	30	13.6	9.2	5.6	12.9	2.6*
Renal tubulo-intestinal diseases (N10–N16)	8	8.3	4.1	0.6	7.6	8.7*	9	7.3	3.3	0.7	5.9	4.6*	17	7.7	3.6	1.6	5.7	6.0*
Glomerular disease (N00–N08)	8	8.3	1.9	0.5	3.2	4.3*	8	6.5	2.3	0.6	3.9	7.6*	16	7.3	2.1	1.0	3.2	5.9*
Other diseases of the genitourinary system(j)	5	5.2	4.0	0.1	7.8	3.5*	11	8.9	3.6	1.1	6.2	7.9*	16	7.3	3.7	1.5	5.8	5.0*
Total genitourinary diseases	**96**	**100.0**	**53.3**	**40.4**	**66.1**	**3.7***	**124**	**100.0**	**51.5**	**41.1**	**61.9**	**4.0***	**220**	**100.0**	**52.1**	**44.0**	**60.2**	**3.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude 73 deaths where the Indigenous status was not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all causes mortality rate.

(e) Deaths are by year of registration of death and state/territory of usual residence.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) Includes: urolithiasis; other disorders of the kidney & urether; disease of male genital organs; disorders of breast; inflammatory disorders of the female pelvic organs; non-inflammatory disorders of the female genital tract; other disorders of the genitourinary tract.

Note: Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database.

Time series analysis

Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have over 10 years of adequate identification of Indigenous deaths in their recording systems.

There is a consistent time series of population estimates from 1991. Because of changes in the classification and coding of causes of death from ICD-9 (used up until 1996) to ICD-10 (used from 1997 onwards) which affect the comparability of the data, the analysis reported for this measure is for two time periods—1991–1996 and 1997–2006.

Because of the late inclusion of a 'not stated' category of Indigenous status in 1998 (before which 'not stated' responses were included with non-Indigenous deaths), Indigenous mortality rates have been compared with the mortality rates of other Australians (which include deaths of both non-Indigenous people and people for whom Indigenous status was not stated).

Mortality rates, rate ratios and rate differences between Indigenous and other Australians for circulatory diseases, external causes (injury and poisoning), respiratory diseases, diabetes, cancer and kidney-related diseases over the period 1991–1996 and 1997–2006 are presented in tables 1.23.8a to 1.23.13a and Figure 1.23.1.

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous Australians in tables 1.23.8b to 1.23.13b. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

Circulatory diseases

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory combined, there were non-significant declines in mortality rates for circulatory diseases among Indigenous Australians and significant declines in mortality rates for circulatory diseases among other Australians (Table 1.23.8a).
- Over the period 1997–2006 there were significant declines in mortality rates for circulatory diseases among Indigenous and other Australians. The fitted trend implies an average yearly decline in the rate of around 21 deaths per 100,000 for Indigenous Australians (equivalent to a 31% reduction in the rate over this period) and 11 deaths per 100,000 for other Australians (equivalent to a 33% reduction on the rate over this period). Over the same period, there was no significant change in mortality rate ratios and a significant decline in the mortality rate difference between Indigenous and other Australians from circulatory diseases (Table 1.23.8a).
- Over the period 1998–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant declines in mortality rates for circulatory diseases among Indigenous Australians (20% decline) and non-Indigenous Australians (30% decline). There was a significant increase in the rate ratio between Indigenous and other Australians from circulatory diseases (13%) (Table 1.23.8b).

External causes (injury and poisoning)

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory, there were non-significant declines in mortality rates for injury and poisoning among Indigenous Australians. Over the same period there were no significant changes in the mortality rates for other Australians. There were also no significant changes in the mortality rate ratio or rate difference between Indigenous and other Australians from injury and poisoning over the period 1991–1996 (Table 1.23.9a).

- Over the period 1997–2006 there was an apparent increase in the mortality rate from injury and poisoning for Indigenous Australians, but this increase did not obtain statistical significance. Over the same period there was a significant decline in the mortality rate for injury and poisoning for other Australians (16% decline over the period). There were significant increases in both the mortality rate ratio and mortality rate difference between Indigenous and other Australians for injury and poisoning over the period 1996–2006 (Table 1.23.9a).
- Over the period 1998–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined, there was no significant change in mortality rates for external causes among Indigenous Australians. Over the same period there was a significant decline in mortality rates among non-Indigenous Australians (21% decline). There was a significant increase in the rate ratio between Indigenous and other Australians for external causes (23%) (Table 1.23.9b).

Cancer

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory, there was an apparent decline in the mortality rate for cancer for Indigenous Australians, however, this decline did not obtain statistical significance. Over the same period there was no significant change in the mortality rate for cancer for other Australians (Table 1.23.10a).
- Over the period 1997–2006, there were non-significant increases in mortality rates for cancer among Indigenous Australians and significant declines in mortality rates for cancer among other Australians (10% decline over the period). There were significant increases in the mortality rate ratios and rate differences between Indigenous and other Australians for cancer over the period 1997–2006 reflecting both a relative and an absolute increase in the gap between mortality rates for Indigenous and other Australians from cancer (Table 1.23.10a).
- Over the period 1998–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined, there were non-significant increases in mortality rates for cancer among Indigenous Australians and significant declines in mortality rates for cancer among non-Indigenous Australians (10% decline). There were significant increases in the mortality rate ratios and rate differences between Indigenous and other Australians for cancer over the period 1998–2006 (Table 1.23.10b).

Respiratory diseases

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory combined, there was a significant decline in mortality rates for respiratory diseases among Indigenous Australians (decrease of 18%) and a non-significant decline in mortality rates for respiratory diseases among other Australians. There was no significant change in the rate ratio but there was a significant decline in the rate difference between Indigenous and other Australians for respiratory diseases over the period 1991–1996 (Table 1.23.11a).
- Over the period 1997–2006, there were no significant changes in the mortality rates for respiratory diseases for Indigenous Australians, but there were significant declines in the mortality rates for respiratory diseases for other Australians (decline of 14%). There were no significant changes in either the mortality rate ratio or mortality rate difference

between Indigenous and other Australians for respiratory diseases over this period (Table 1.23.11a).

- Over the period 1998–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined, there were no significant changes in the mortality rates for respiratory diseases for Indigenous Australians or other Australians. There were no significant changes in either the mortality rate ratio or mortality rate difference between Indigenous and other Australians for respiratory diseases over this period (Table 1.23.11b).

Diabetes

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory combined, there were non-significant increases in mortality rates for diabetes among Indigenous Australians and significant increases in mortality rates for diabetes among other Australians (increase of 39%) (Table 1.23.12a).
- Over the period 1997–2006, there were no significant changes in the mortality rates for diabetes for Indigenous or other Australians (Table 1.23.12a).
- Over the period 1998–2006 in Queensland, Western Australia, South Australia and the Northern Territory combined, there was no significant change in mortality rates for diabetes among Indigenous Australians and significant increases in mortality rates for diabetes among non-Indigenous Australians (6% increase). There was no significant change in the mortality rate ratios or rate differences between Indigenous and non-Indigenous Australians over this period (Table 1.23.12b).

Kidney diseases

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory combined, there were no significant changes in mortality rates for kidney diseases among Indigenous Australians, but significant increases in mortality rates for kidney diseases among other Australians (increase of 30%). There were apparent declines in the mortality rate ratios and rate differences between Indigenous and other Australians from kidney diseases, but these did not obtain statistical significance (Table 1.23.13a).
- Over the period 1997–2006, there were non-significant declines in mortality rates for kidney diseases for Indigenous Australians and no significant change in mortality rates for kidney diseases for other Australians. There were apparent declines in the mortality rate ratios and rate differences between Indigenous and other Australians for kidney diseases, but these did not obtain statistical significance (Table 1.23.13a).
- Over the period 1998–2006, in Queensland, Western Australia, South Australia and the Northern Territory combined, there were no significant changes in mortality rates for kidney diseases for Indigenous or non-Indigenous Australians (Table 1.23.13a).

Note that fluctuations in the level of Indigenous mortality over time partly reflect changing levels of coverage of Indigenous deaths and population estimates. Given the volatility in the measures of Indigenous mortality, caution should be exercised in assessing trends in Indigenous mortality over time and comparisons between jurisdictions and with the non-Indigenous population.

Table 1.23.8a: Age-standardised mortality rates, rate ratios and rate differences, circulatory diseases, WA, SA and NT, 1991–1996 and 1997–2006

	1991	1992	1993	1994	1995	1996	Annual change(a)	% change(b)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Indigenous deaths per 100,000(c)	553.6	517.0	479.9	632.4	540.8	421.7	–12.5	–11.2	606.0	539.4	510.4	505.0	415.6	396.3	406.9	481.3	412.4	374.2	–20.8*	–30.9
Other(d) deaths per 100,000(c)	364.1	349.2	357.6	344.8	324.0	316.4	–9.3*	–12.8	297.6	285.0	267.3	251.6	245.2	236.5	229.9	210.3	208.2	198.3	–10.9*	–32.8
Rate ratio(e)	1.5	1.5	1.3	1.8	1.7	1.3	—	1.1	2.0	1.9	1.9	2.0	1.7	1.7	1.8	2.3	2.0	1.9	—	1.2
Rate difference(f)	189.5	167.8	122.3	287.7	216.8	105.3	–3.1	–8.2	308.3	254.4	243.1	253.4	170.4	159.7	177.0	271.0	204.2	175.9	–10.0*	–29.1

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the periods 1991–1996 and 1997–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1991 and 1996 and between 1997 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.

Table 1.23.8b: Age-standardised mortality rates, rate ratios and rate differences, circulatory diseases, Qld, WA, SA and NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Indigenous deaths per 100,000(c)	511.7	473.4	454.7	407.2	418.9	424.1	446.7	381.3	391.1	–12.6*	–19.8
Non-Indigenous deaths per 100,000(c)	291.5	278.5	257.2	249.4	243.7	231.1	221.1	210.5	203.5	–10.8*	–29.6
Rate ratio(d)	1.8	1.7	1.8	1.6	1.7	1.8	2.0	1.8	1.9	0.03*	13.0
Rate difference(e)	220.2	195.0	197.6	157.9	175.3	193.0	225.6	170.8	187.6	–1.9	–6.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1998 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.

Table 1.23.9a: Age-standardised mortality rates, rate ratios and rate differences, external causes, WA, SA and NT, 1991–1996 and 1997–2006

	1991	1992	1993	1994	1995	1996	Annual change(a)	% change(b)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Indigenous deaths per 100,000(c)	172.0	137.3	126.7	138.3	120.7	139.4	–5.7	–16.7	110.8	139.1	105.3	130.6	127.1	124.4	123.8	114.3	150.4	132.3	1.8	14.5
Other(d) deaths per 100,000(c)	43.6	42.5	43.8	41.9	41.2	44.4	–0.1	–0.7	41.8	47.7	41.8	43.8	41.1	38.8	39.9	37.9	39.8	37.8	–0.8*	–16.4
Rate ratio(e)	3.9	3.2	2.9	3.3	2.9	3.1	–0.1	–16.3	2.6	2.9	2.5	3.0	3.1	3.2	3.1	3.0	3.8	3.5	0.1*	34.3
Rate difference(f)	128.4	94.8	82.9	96.4	79.6	95.0	–5.7	–22.2	69.0	91.4	63.4	86.8	86.0	85.6	84.0	76.4	110.5	94.6	2.5*	33.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the periods 1991–1996 & 1997–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1991 and 1996 and between 1997 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.

Table 1.23.9b: Age-standardised mortality rates, rate ratios and rate differences, external causes, Qld, WA, SA and NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Indigenous deaths per 100,000(c)	122.7	90.8	106.5	105.8	102.8	108.5	97.1	120.8	100.5	–0.2	–1.6
Non-Indigenous deaths per 100,000(c)	46.8	43.0	44.8	41.6	39.7	39.5	38.6	37.9	35.8	–1.2*	–20.9
Rate ratio(d)	2.6	2.1	2.4	2.5	2.6	2.7	2.5	3.2	2.8	0.07*	22.6
Rate difference(e)	75.9	47.8	61.7	64.2	63.1	69.0	58.5	83.0	64.7	1.0	10.3

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1998 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.

Table 1.23.10a: Age-standardised mortality rates, rate ratios and rate differences, cancer, WA, SA and NT, 1991–1996 and 1997–2006

	1991	1992	1993	1994	1995	1996	Annual change(a)	% change(b)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Indigenous deaths per 100,000(c)	229.8	245.9	216.0	215.2	242.6	200.6	–4.5	–9.7	245.9	224.4	196.9	263.4	214.9	233.2	247.3	243.4	227.2	279.1	3.2	11.5
Other(d) deaths per 100,000(c)	206.3	200.8	211.2	211.9	203.1	207.0	0.3	0.8	203.2	194.4	195.3	192.4	190.4	191.4	187.7	181.7	180.9	182.7	–2.2*	–9.7
Rate ratio(e)	1.1	1.2	1.0	1.0	1.2	1.0	—	–10.5	1.2	1.2	1.0	1.4	1.1	1.2	1.3	1.3	1.3	1.5	0.03*	23.3
Rate difference(f)	23.5	45.1	4.9	3.3	39.5	–6.4	–4.8	–101.9	42.7	30.0	1.6	71.0	24.5	41.8	59.6	61.7	46.3	96.4	5.3*	112.4

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the periods 1991–1996 and1997–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1991 and 1996 and between 1997 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.

Table 1.23.10b: Age-standardised mortality rates, rate ratios and rate differences, cancer, Qld, WA, SA and NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Indigenous deaths per 100,000(c)	218.3	224.2	259.6	236.6	220.5	242.6	251.7	225.3	259.6	2.6	9.7
Non-Indigenous deaths per 100,000(c)	198.6	195.7	191.7	188.4	190.7	185.2	182.9	179.9	178.2	–2.5*	–10.1
Rate ratio(d)	1.1	1.1	1.4	1.3	1.2	1.3	1.4	1.3	1.5	0.03*	22.3
Rate difference(e)	19.8	28.5	67.9	48.2	29.8	57.4	68.8	45.4	81.4	5.1*	207.7

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1998 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.

Table 1.23.11a: Age-standardised mortality rates, rate ratios and rate differences, respiratory diseases, WA, SA and NT, 1991–1996 and 1997–2006

	1991	1992	1993	1994	1995	1996	Annual change(a)	% change(b)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Indigenous deaths per 100,000(c)	269.6	231.3	253.1	221.4	216.2	217.5	–9.6*	–17.9	152.9	193.2	143.5	164.2	164.8	162.1	142.7	193.6	137.1	175.0	–0.1	–0.4
Other(d) deaths per 100,000(c)	60.6	65.5	61.0	59.0	53.8	58.9	–1.3	–10.7	63.3	57.6	54.2	60.1	57.5	63.0	62.3	55.0	50.5	48.4	–1.0*	–14.4
Rate ratio(e)	4.5	3.5	4.1	3.8	4.0	3.7	–0.1	–8.8	2.4	3.4	2.6	2.7	2.9	2.6	2.3	3.5	2.7	3.6	0.1	20.4
Rate difference(f)	209.1	165.8	192.1	162.4	162.4	158.6	–8.3*	–20.0	89.7	135.6	89.3	104.2	107.3	99.1	80.4	138.6	86.5	126.7	0.9	9.5

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the periods 1991–1996 and1997–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1991 and 1996 and between 1997 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.

Table 1.23.11b: Age-standardised mortality rates, rate ratios and rate differences, respiratory diseases, Qld, WA, SA and NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Indigenous deaths per 100,000(c)	148.4	116.5	146.7	150.8	147.2	134.2	148.5	116.4	137.6	–0.9	–5.1
Non-Indigenous deaths per 100,000(c)	55.5	52.7	56.5	53.9	58.5	57.6	54.0	49.9	47.7	–0.7	–9.8
Rate ratio(d)	2.7	2.2	2.6	2.8	2.5	2.3	2.8	2.3	2.9	0.02	5.2
Rate difference(e)	92.9	63.8	90.2	96.9	88.7	76.6	94.5	66.5	89.8	–0.3	–2.3

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1998 and 2006 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.

Table 1.23.12a: Age-standardised mortality rates, rate ratios and rate differences, diabetes, WA, SA and NT, 1991–1996 and 1997–2006

	1991	1992	1993	1994	1995	1996	Annual change[a]	% change[b]	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[a]	% change[b]
Indigenous deaths per 100,000[c]	114.6	122.7	142.2	122.4	124.4	134.8	2.5	10.8	132.3	95.4	120.3	154.4	154.8	138.1	108.8	140.4	137.8	140.8	1.9	13.2
Other[d] deaths per 100,000[c]	13.7	13.9	16.0	17.4	16.9	19.1	1.1*	39.3	17.6	15.0	15.0	15.1	15.4	15.8	15.1	16.3	15.8	17.0	—	2.5
Rate ratio[e]	8.4	8.8	8.9	7.0	7.4	7.0	–0.4*	–21.9	7.5	6.3	8.0	10.2	10.0	8.8	7.2	8.6	8.7	8.3	0.1	11.3
Rate difference[f]	100.9	108.7	126.2	104.9	107.6	115.7	1.4	6.9	114.8	80.4	105.3	139.3	139.4	122.3	93.6	124.0	122.0	123.8	1.9	14.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the periods 1991–1996 and1997–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1991 and 1996 and between 1997 and 2006 based on the average annual change over the period.
(c) Rates have been directly age-standardised using the 2001 Australian standard population.
(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.
(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.
(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.

Table 1.23.12b: Age-standardised mortality rates, rate ratios and rate differences, diabetes, Qld, WA, SA and NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[a]	% change[b]
Indigenous deaths per 100,000[c]	120.6	124.3	158.9	125.7	135.7	107.1	147.4	122.1	156.7	1.6	10.6
Non-Indigenous deaths per 100,000[c]	14.9	14.8	15.1	14.5	14.9	14.5	15.5	15.5	16.0	0.1*	6.0
Rate ratio[d]	8.1	8.4	10.5	8.7	9.1	7.4	9.5	7.9	9.8	—	3.7
Rate difference[e]	105.7	109.5	143.7	111.2	120.8	92.5	132.0	106.7	140.7	1.5	11.3

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1998 and 2006 based on the average annual change over the period.
(c) Rates have been directly age-standardised using the 2001 Australian standard population.
(d) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.
(e) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.

Table 1.23.13a: Age-standardised mortality rates, rate ratios and rate differences, kidney diseases, WA, SA and NT, 1991–1996 and 1997–2006

	1991	1992	1993	1994	1995	1996	Annual change[(a)]	% change[(b)]	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change[(b)]
Indigenous deaths per 100,000[(c)]	56.1	23.1	48.4	19.8	44.8	50.1	0.2	1.7	53.1	70.9	87.4	83.0	29.1	45.7	64.6	38.9	38.4	79.7	–1.6	–27.6
Other[(d)] deaths per 100,000[(c)]	7.3	6.4	8.4	7.1	8.0	9.6	0.4*	30.0	11.1	10.5	9.8	10.2	10.9	10.7	10.5	10.5	9.9	10.6	—	–2.1
Rate ratio[(e)]	7.7	3.6	5.8	2.8	5.6	5.2	–0.3	–17.7	4.8	6.7	8.9	8.1	2.7	4.3	6.2	3.7	3.9	7.5	–0.2	–29.7
Rate difference[(f)]	48.8	16.7	40.0	12.7	36.8	40.5	–0.2	–2.5	42.0	60.4	77.6	72.8	18.2	35.0	54.1	28.4	28.4	69.1	–1.6	–34.4

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the periods 1991–1996 and1997–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1991 and 1996 and between 1997 and 2006 based on the average annual change over the period.
(c) Rates have been directly age-standardised using the 2001 Australian standard population.
(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.
(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.
(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.

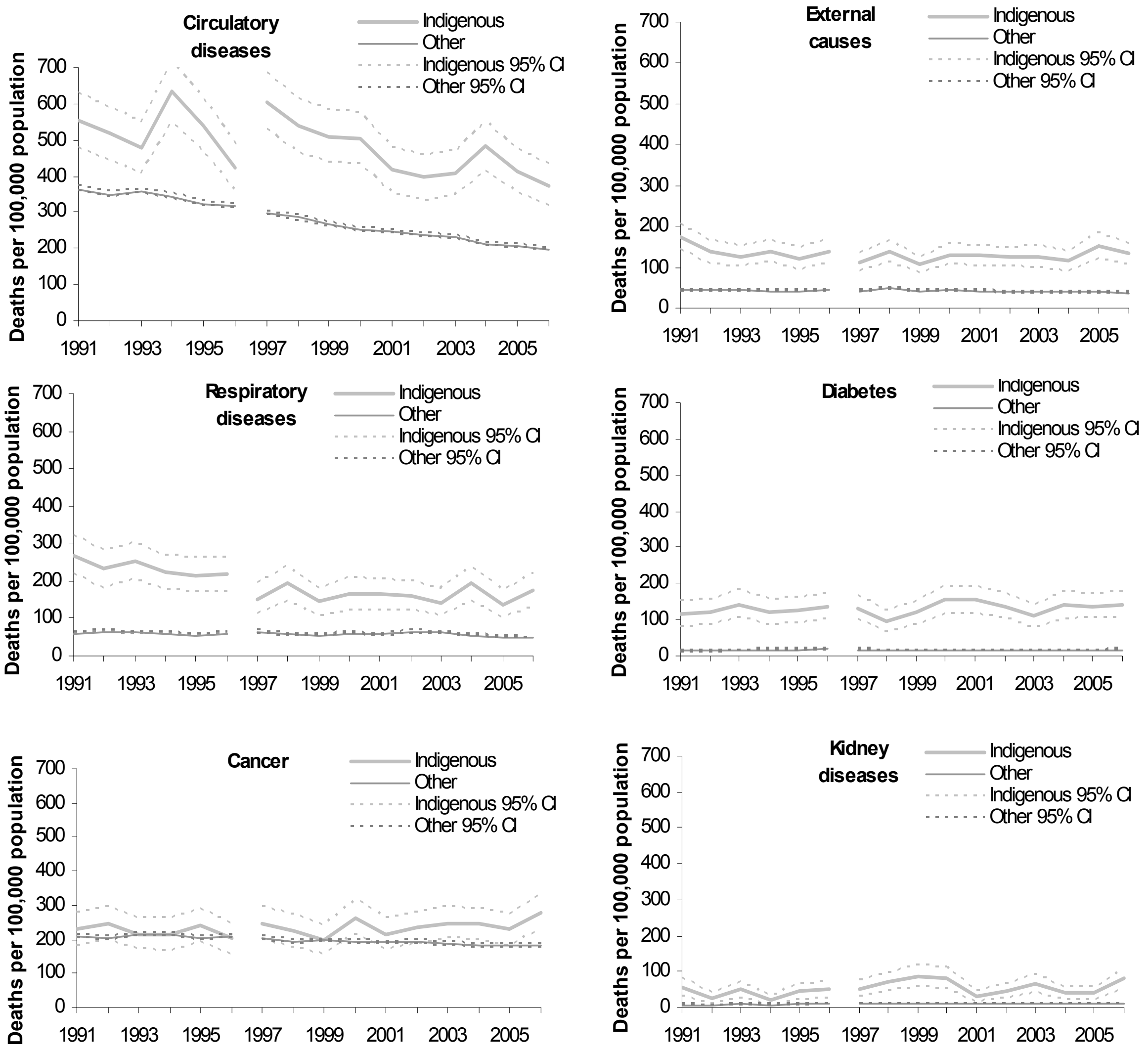
Table 1.23.13b: Age-standardised mortality rates, rate ratios and rate differences, kidney diseases, Qld, WA, SA and NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change[(b)]
Indigenous deaths per 100,000[(c)]	49.4	58.4	63.7	26.0	30.0	39.8	32.1	29.8	67.6	–1.0	–16.9
Non-Indigenous deaths per 100,000[(c)]	10.1	10.1	9.0	10.4	9.7	9.4	9.4	9.3	9.9	–0.1	–4.5
Rate ratio[(d)]	4.9	5.8	7.1	2.5	3.1	4.2	3.4	3.2	6.8	–0.1	–15.2
Rate difference[(e)]	39.4	48.3	54.7	15.6	20.3	30.4	22.7	20.4	57.7	–1.0	–20.1

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

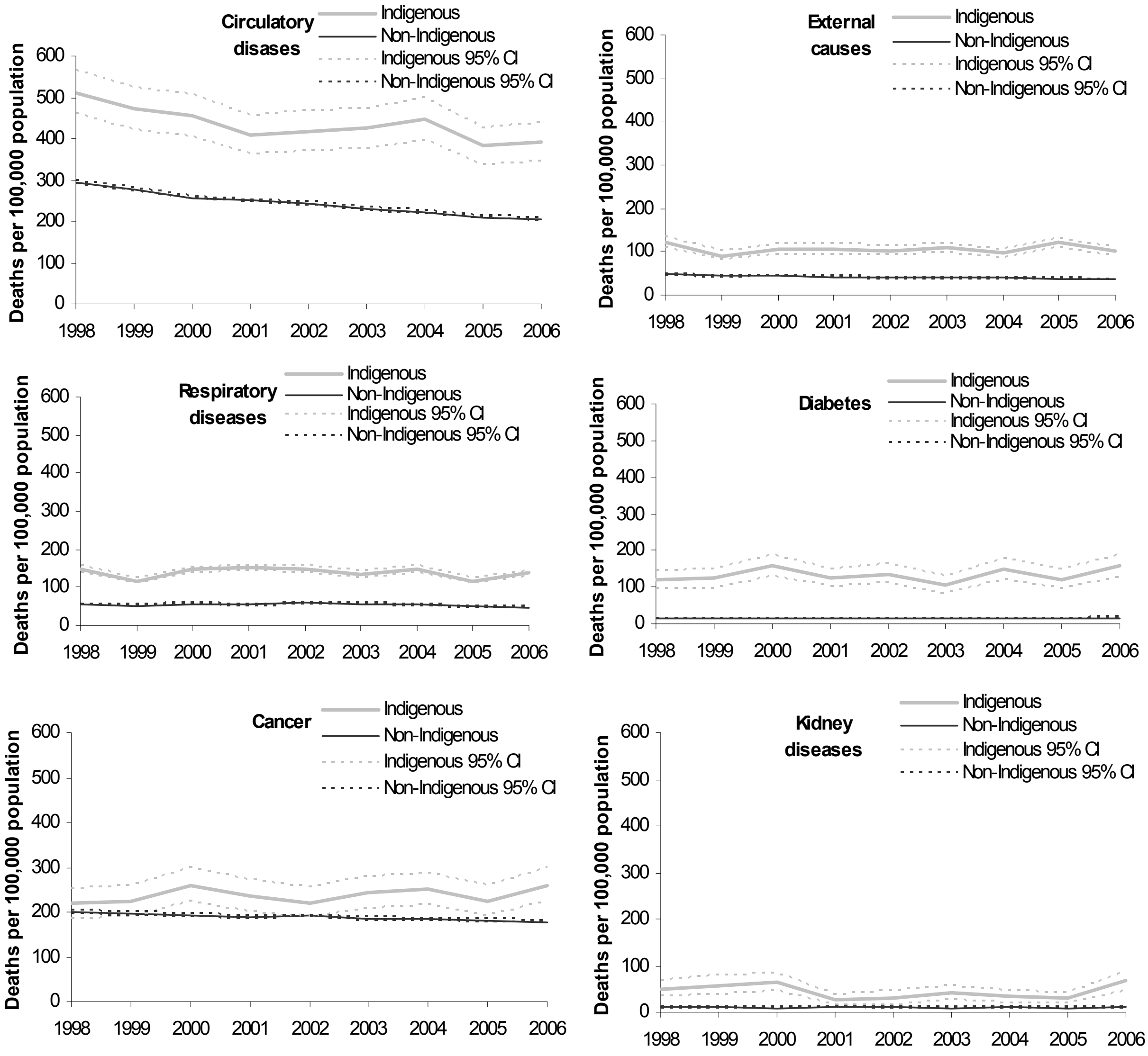
(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1998 and 2006 based on the average annual change over the period.
(c) Rates have been directly age-standardised using the 2001 Australian standard population.
(d) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.
(e) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.23.1: Mortality rates for Indigenous and other Australians, selected causes of death, WA, SA and NT, 1991–1996 and 1997–2006



Source: AIHW analysis of National Mortality Database.

Figure 1.23.2: Mortality rates for Indigenous and non-Indigenous Australians, selected causes of death, Qld, WA, SA and NT, 1998–2006

Sensitivity of mortality trends to changes in identification

- The fitted trends described above for the period 1991–2006 in Western Australia, South Australia and the Northern Territory for the two leading causes of mortality—circulatory diseases and external causes (injury and poisoning)—have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for coverage were posted—constant identification, increasing identification and decreasing identification.
  - Under the constant identification scenario, the numbers of deaths for the period under study were adjusted using the following under-identification estimates derived from the most recent ABS analyses (relating to the period 2002–2006):
    - Western Australia 72%
    - South Australia 62%
    - Northern Territory 90%.
  - Under the increasing identification scenario, deaths were adjusted by linearly increasing the identification through the periods under study—from 64% in 1991 to 72% in 2006 for Western Australia, from 52% to 62% for South Australia, and from 80% to 90% for the Northern Territory.
  - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 72% in 2006 for Western Australia, from 72% to 62% for South Australia, and from 100% to 90% for the Northern Territory.

The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in mortality might not persist. For all three scenarios, the population figures (used as denominators in the calculation of mortality rates) were re–estimated to reflect the altered number of deaths implied by each scenario.

- The observed declines in mortality rates for circulatory disease among other Australians over the period 1991–1996 remained statistically significant under all three identification scenarios. The observed declines in the mortality rates for circulatory diseases among Indigenous and other Australians over the period 1997–2006 also remained statistically significant under all three identification scenarios. The decline in the mortality rate difference over this later period did not remain statistically significant under any identification scenario.
- The observed decline in the mortality rate for other Australians for injury and poisoning over the period 1997–2006 remained statistically significant under the increasing and decreasing identification scenarios. The increase in the mortality rate ratio over this period remained significant under all three identification scenarios and the increase in the mortality rate difference remained significant under the constant and decreasing identification scenarios.

Data quality issues

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia 55% (ABS 2007).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death.

There are also current concerns about data quality for causes of death, especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006).

(continued)

Data quality issues (continued)

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

Cause of death coding

Causes of death are based on the 10th revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia on 1 January 1997.

References

ABS (Australian Bureau of Statistics) 1997. Occasional paper: Mortality of Aboriginal and Torres Strait Islander Australians. ABS cat. no. 3315.0. Canberra: ABS.

ABS 2004. Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009. ABS cat. no. 3238.0. Canberra: ABS.

ABS 2007. Deaths Australia 2006. ABS cat. no. 3302.0. Canberra: ABS.

ABS 2006. Causes of death 2004. ABS cat. no. 3303.0. Canberra: ABS.

ABS & AIHW (Australian Institute of Health and Welfare) 2005. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2005. ABS cat. no. 4704.0, AIHW Cat. no. IHW14. Canberra: ABS & AIHW.

1.24 Maternal mortality

Maternal deaths of Aboriginal and Torres Strait Islander women expressed as a rate per 100,000 Indigenous confinements and rate ratio

Data sources

Data for this measure come from the National Maternal Deaths Data collection and the publications *Maternal deaths in Australia 1997–1999* (AIHW: Slaytor et al. 2004), *Maternal deaths in Australia 2000–2002* (AIHW: Sullivan & King 2006) and *Maternal deaths in Australia 2003–2005* (AIHW: Sullivan et al. 2008) published by the AIHW National Perinatal Statistics Unit.

Each state and territory has a review process for maternal deaths. Death data are supplied on a request basis to the AIHW National Perinatal Statistics Unit in paper-based and electronic format using the national maternal death data form.

Information identifying Indigenous status has been available since 1970 but only for cases classified as direct maternal deaths. Information identifying Indigenous status for indirect and incidental deaths has been collected only since 1991. It has therefore been possible to calculate the maternal mortality rate for Aboriginal and Torres Strait Islander women since 1991.

Maternal deaths where Indigenous status was unknown have been included in rates with non-Indigenous deaths before the 1997–1999 triennium. All calculations of maternal mortality by Indigenous status from 1997–1999 onwards exclude deaths where Indigenous status is unknown. In 1997–1999, Indigenous status was reported for 77 (89%) of the 87 maternal deaths.

In line with international conventions, the maternal mortality rate is calculated using direct and indirect deaths, excluding incidental deaths, and uses the total number of confinements of at least 20 weeks gestation or 400 grams birthweight as the denominator.

Each state and territory has a perinatal collection based on birth notification forms completed by midwives and other staff, using information obtained from mothers and from hospital and other records. These data are provided in electronic format annually to the AIHW National Perinatal Statistics Unit, and are used to calculate the denominator for rates.

A maternal death is defined by the World Health Organization as 'The death of a woman while pregnant or within 42 days of the termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes' (WHO 1992). This definition includes deaths of women from pregnancy, terminations of pregnancy, spontaneous abortion, miscarriage and ectopic pregnancy, but it excludes deaths from assisted reproduction technologies where pregnancy has not occurred.

Direct deaths result from obstetric complications of the pregnant state (pregnancy, labour and puerperium), from interventions, omissions or incorrect treatment, or from a chain of events resulting from any of the above. They are complications of the pregnancy itself (for example, eclampsia, amniotic fluid embolism, rupture of the uterus, postpartum haemorrhage).

Indirect deaths result from pre-existing disease or disease that developed during pregnancy and was not due to direct obstetric causes, but which may have been aggravated by the physiological effects of pregnancy (for example, heart disease, diabetes, renal disease).

Incidental deaths result from conditions occurring during pregnancy, where the pregnancy is unlikely to have contributed significantly to the death, although it is sometimes possible to postulate a distant association (for example, road accidents, malignancies).

Late maternal deaths (defined as the death of a woman from direct or indirect obstetric causes more than 42 days but less than 1 year after termination of pregnancy) have not been included in the analysis as they have not been routinely collected in Australia until recently.

Analyses

Maternal mortality

- For the period 2003–2005, there were six maternal deaths of Aboriginal and Torres Strait Islander women, two direct maternal deaths and four indirect maternal deaths. These deaths accounted for 10.0% of the 60 maternal deaths where Indigenous status was known.
- The maternal mortality rate for Aboriginal and Torres Strait Islander women was 23 per 100,000 confinements in 1991–1993, 17 per 100,000 confinements in 1994–1996, 24 per 100,000 confinements in 1997–99, 46 per 100,000 in 2000–2002 and 22 per 100,000 in 2003–2005 (Table 1.24.1).
- The maternal mortality rates for Indigenous women were between two and five times the maternal mortality rates for non-Indigenous women over the past five 3-year groupings 1991–1993, 1994–1996, 1997–1999, 2000–2002 and 2003–2005.
- The maternal mortality rate for Indigenous women was variable over the past five3-year groupings. Although rates were similar for 1991–1993, 1997–1999 and 2003–2005 (between 22 and 24 per 100,000), the rate in 1994–1996 was lower at around 17 per 100,000 confinements and the rate for 2000–2002 was much higher at around 46 per 100,000 confinements. (Figure 1.24.1).
- These rates must be interpreted with caution because of the incomplete recording of Indigenous status and the small numbers of maternal deaths each year. As a result of incomplete ascertainment of Indigenous status, the Indigenous maternal mortality rates are likely to be underestimations of the true rates.

Table 1.24.1: Indigenous maternal mortality rates, 1991–1993 to 2003–2005

Years	Direct & indirect deaths	Total Indigenous confinements[(a)]	Indigenous maternal mortality rate[(a)]	Non-Indigenous maternal mortality rate[(a)(b)]	Rate ratio[(c)]
1991–1993	5	21,539	23.2	5.9	3.9
1994–1996	4	22,996	17.4	8.3	2.1
1997–1999	6	25,530	23.5	6.7	3.5
2000–2002	12	26,128	45.9	8.7	5.3*
2003–2005	6	27,901	21.5	7.4	2.9

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

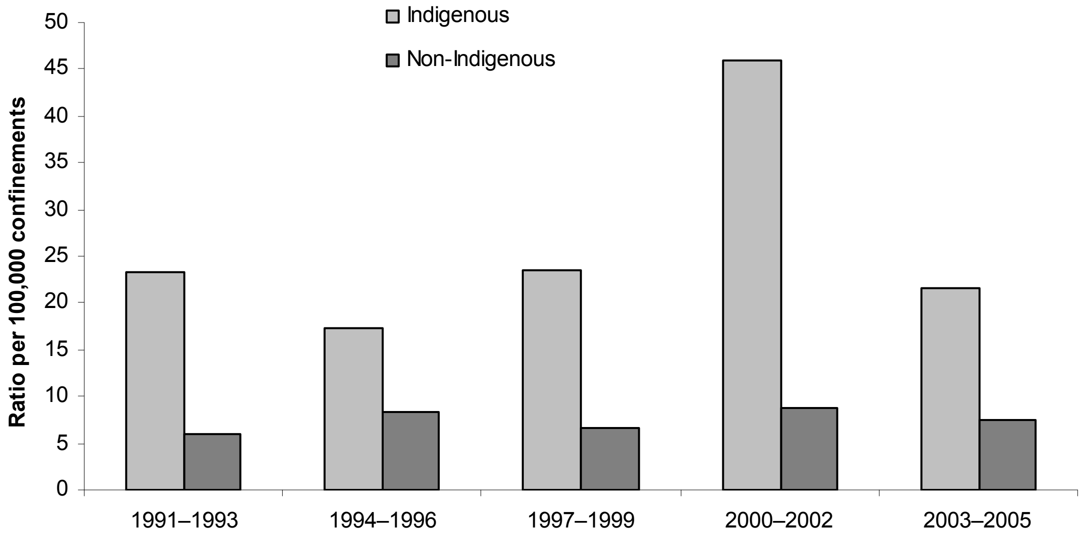
(a) Ratio per 100,000 confinements calculated using direct and indirect deaths only.

(b) For 1991–1993 and 1994–1996, the non-Indigenous maternal mortality rate includes non-Indigenous deaths and deaths where Indigenous status is unknown. For 1997–1999, 2000–2002 and 2003–2005, deaths where Indigenous status is unknown have been excluded.

(c) Maternal mortality rate for Indigenous mothers divided by maternal mortality rate for non-Indigenous mothers.

Note: Excludes incidental deaths.

Source: National Maternal Deaths Data Collection.



Notes

1. Ratio per 100,000 confinements calculated using direct and indirect deaths only.
2. For 1991–1993 and 1994–1996, the non-Indigenous maternal mortality rate includes non-Indigenous deaths and deaths where Indigenous status is unknown. For 1997–1999 and 2000–2002 and 2003–2005, deaths where Indigenous status is unknown have been excluded.

Source: National Maternal Deaths Data Collection.

Figure 1.24.1: Maternal mortality ratios, by Indigenous status, 1991–1993 to 2003–2005

Data quality concerns

Maternal mortality

Maternal deaths

Note that the small number of Indigenous maternal deaths may be statistically variable and caution must be used in comparison and interpretation of these statistics.

Indigenous status question

All states and territories have a specific data item in the National Maternal Mortality Database to record Indigenous status.

Under-identification

Incomplete recording of Indigenous status leads to under-coverage of Indigenous mothers in this data collection. Between 1997 and 1999, Indigenous status was recorded for 75 (83%) of the 90 maternal deaths during childbirth. This represents a decline in recording of Indigenous status from 92% in 1991–1993 (AIHW: Slaytor et al. 2004). It is hoped that Indigenous identification will improve in the future, so that the proportion of maternal deaths where Indigenous status was not recorded will be reduced.

All jurisdictions are working towards improving the quality of the Indigenous status data.

References

AIHW: Slaytor EK, Sullivan EA & King JF 2004. Maternal deaths in Australia 1997–1999. Maternal deaths series no. 1. Cat. no. PER 24. Sydney: AIHW (Australian Institute of Health and Welfare) National Perinatal Statistics Unit.

AIHW: Sullivan EA & King JF 2006. Maternal deaths in Australia 2000–2002. Maternal deaths series no. 2. Cat. no. PER 32. Sydney: AIHW National Perinatal Statistics Unit.

AIHW: Sullivan EA, Hall B & King JF 2008. Maternal deaths in Australia 2003–2005. Maternal deaths series no. 3. Cat. no. PER 42. Sydney: AIHW National Perinatal Statistics Unit.

WHO (World Health Organization) 1992. International statistical classification of disease and related health problems. Tenth Revision. Volume II. Geneva: WHO.

1.25 Avoidable and preventable deaths

The number of deaths of Aboriginal and Torres Strait Islander peoples aged 0–74 years from avoidable and preventable conditions, expressed as a standardised rate and rate ratio

Data sources

Data for this measure come from the AIHW National Mortality Database.

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data, for which year of registration of death was used. Rates published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Avoidable and preventable mortality

The ICD-9 and ICD-10 codes used for avoidable mortality in this measure come from the report *Australian and New Zealand atlas of avoidable mortality* (Page et al. 2006).

Avoidable and preventable mortality refers to deaths from certain conditions that are considered avoidable given timely and effective health care. This also includes deaths amenable to legal measures such as traffic safety (for example, speed limits and use of seat belts and motorcycle helmets). Avoidable and preventable conditions are sometimes further differentiated into conditions where death can be averted by prevention ('preventable') or by treatment ('amenable', 'treatable'):

Amenable conditions are defined as those from which it is reasonable to expect death to be averted even after the condition has developed, for example, through early detection and effective treatment (such as cervical cancer).

Preventable conditions include those for which there are effective ways of preventing the condition from occurring, for example, where the aetiology is to a considerable extent related to lifestyle factors (such as smoking).

Potentially avoidable deaths can sometimes be further assigned to primary (prevention), secondary (early intervention) and tertiary (medical treatment) levels of health intervention (National Health Performance Committee 2004).

Analyses

Age-standardised rates and ratios have been used as a measure of mortality in the Indigenous population relative to non-Indigenous Australians. Ratios of this type illustrate differences between the rates of mortality among Indigenous people and those of non-Indigenous Australians, taking into account differences in age distributions.

Mortality

- Over the period 2002–2006, there were 63,782 deaths of people aged 0–74 years from avoidable causes in Queensland, Western Australia, South Australia and the Northern Territory combined, 4,769 (7.5%) of which were deaths of Aboriginal and Torres Strait Islander peoples.
- Avoidable causes represented almost three-quarters (73%) of all deaths of Indigenous Australians aged 0–74 years in these four jurisdictions. This was slightly higher than the proportion of deaths from avoidable causes in the non-Indigenous population (68%).

Avoidable mortality by age, sex and state/territory

Data presented below are for deaths from avoidable causes for persons aged 0–74 years in Queensland, Western Australia, South Australia and the Northern Territory in the period 2002–2006.

- Indigenous males and females had higher mortality rates for avoidable causes than non-Indigenous males and females across all age groups. Indigenous males and females aged 35–44, 45–54 and 55–64 years died from avoidable causes at four to six times the rate of non-Indigenous males and females respectively (Table 1.25.1).
- Indigenous males and females died from avoidable causes at around 4 to 4.5 times the rate of non-Indigenous males and females.
- After adjusting for differences in age structure, Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory died from all avoidable causes at four times the rate of non-Indigenous Australians. This was similar to the difference between the two populations for all-cause mortality.
- In Queensland, Indigenous Australians aged 0–74 years died from avoidable causes at three times the rate of non-Indigenous Australians of the same age, and in Western Australia, South Australia and the Northern Territory, Indigenous Australians died from avoidable causes at around four times the rate of non-Indigenous Australians (Table 1.25.2).
- The proportion of deaths at ages 0–74 years from avoidable causes which are considered to be amenable to health care was approximately the same for Indigenous and non-Indigenous Australians (40%) (Table 1.25.3).
- Indigenous Australians aged 0–74 years died from primary, secondary and tertiary avoidable causes at four to five times the rate of non-Indigenous Australians of the same age (Table 1.25.4).

Table 1.25.1: Avoidable mortality, by Indigenous status, age group and sex, persons aged 0–74 years, Qld, WA, SA and NT, 2002–2006[a][b][c][d]

	Males			Females		
	Deaths per 100,000[e]			Deaths per 100,000[e]		
Age group (years)	Indigenous	Non-Indigenous	Rate ratio[f]	Indigenous	Non-Indigenous	Rate ratio[f]
Less than 1	699.7	239.6	2.9*	517.3	217.7	2.4*
1–4	34.1	15.7	2.2*	38.2	10.9	3.5*
5–14	15.1	5.9	2.6*	12.5	4.4	2.9*
15–24	150.7	55.8	2.7*	68.7	19.8	3.5*
25–34	325.5	74.9	4.3*	135.2	25.4	5.3*
35–44	606.5	98.5	6.2*	330.3	51.1	6.5*
45–54	1,066.6	196.9	5.4*	616.5	116.1	5.3*
55–64	1,891.1	476.0	4.0*	1,271.3	261.8	4.9*
65–74	3,808.0	1,313.8	2.9*	2,699.7	716.8	3.8*
Total[g][h]	**812.9**	**214.1**	**3.8***	**519.1**	**115.0**	**4.5***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of the small numbers each year.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all causes mortality rate.

(d) Deaths are by year of registration and state/territory of usual residence.

(e) Rates per 100,000 population. Total rates have been directly age-standardised using the 2001 Australian standard population.

(f) Rate ratio Indigenous:non-Indigenous.

(g) Totals exclude those aged 75 years and over and those for whom age was not stated.

(h) Directly age-standardised using the 2001 Australian standard population

Note: The completeness of identification of Indigenous deaths can vary by age.

Source: AIHW analysis of National Mortality Database.

Table 1.25.2: Avoidable mortality, by Indigenous status and state/territory, persons aged 0–74 years, 2002–2006[(a)(b)(c)(d)]

	Number[(e)]			Indigenous			Non-Indigenous			
State/territory	**Indigenous**	**Non-Indigenous**	**Not stated**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**
Qld	1,748	30,197	431	567.3	536.8	597.8	168.1	166.2	170.0	3.4*
WA	1,120	13,636	285	632.6	590.8	674.5	151.5	149.0	154.1	4.2*
SA	431	13,031	307	599.6	535.0	664.2	168.5	165.6	171.4	3.6*
NT	1,470	1,116	17	906.3	852.9	959.7	210.8	197.1	224.6	4.3*
Qld, WA, SA & NT	**4,769**	**57,980**	**1,040**	**656.3**	**635.0**	**677.6**	**164.5**	**163.1**	**165.8**	**4.0***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states/territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all causes mortality rate.

(d) Deaths are by year of registration.

(e) The ABS calculated the completeness of identification of Indigenous deaths for the period 2002–2006 using population estimates as 51% for Queensland, 72% for Western Australia, 62% for South Australia and 90% for the Northern Territory. The completeness of Indigenous identification for avoidable deaths may differ from the estimates for all causes.

(f) Directly age-standardised using the 2001 Australian standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

Note: For ICD-10 codes used, see Page et al. (2006).

Source: AIHW analysis of National Mortality Database

Table 1.25.3: Avoidable mortality, by Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2002–2006[a][b][c][d]

	Number			Per cent			No. per 100,000[e]		
Mortality category	**Indigenous**	**Non-Indigenous**	**Not stated**	**Indigenous**	**Non-Indigenous**	**Not stated**	**Indigenous**	**Non-Indigenous**	**Ratio[f]**
Avoidable mortality	4,769	57,980	1,040	72.8	67.6	70.4	656.3	164.5	4.0*
Amenable mortality as a percentage of avoidable mortality[g]	*1,916*	*23,308*	*357*	*40.2*	*40.2*	*34.3*	*270.8*	*66.1*	*4.1**
Amenable mortality as a percentage of total mortality[g]	*1,916*	*23,308*	*357*	*29.3*	*27.2*	*24.1*	*270.8*	*66.1*	*4.1**
Unavoidable mortality	1,778	27,810	438	27.2	32.4	29.6	219.8	79.1	2.8*
Total mortality	**6,547**	**85,790**	**1,478**	**100.0**	**100.0**	**100.0**	**876.1**	**243.5**	**3.6***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate.

(d) Deaths are by year of registration.

(e) Directly age-standardised using the 2001 Australian standard population.

(f) Rate ratio Indigenous:non-Indigenous.

(g) ICD 10 codes A15–A19, B90, A38–A41, A46, A48.1, C18–C21, C43, C44, C50, C53, C54, C55, C67, C73, C81, C91.0, C91,1, D10–D36, E00–E07, E10–E14, G40, G41, I01–I09, I11, I20–I25, I60–I69, I12, I13, N00–N09, N17–N19, N13, N20, N21, N35, N40, N99.1, J45, J46, K25–K28, K35–K38, K40–K46, K80–K83, K85, K86, K91.5, H31.1, P00, P04, Q00–Q99, P03, P05–P95.

Note: For full list of ICD10 codes used, see Page et al. (2006).

Source: AIHW analysis of National Mortality Database.

Table 1.25.4: Avoidable mortality, by subcategory, by Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)(d)]

	Number			Per cent			No. per 100,000[(e)]		
Mortality category	**Indigenous**	**Non-Indigenous**	**Not stated**	**Indigenous**	**Non-Indigenous**	**Not stated**	**Indigenous**	**Non-Indigenous**	**Ratio[(f)]**
Avoidable mortality	4,769	57,980	1,040	72.8	67.6	70.4	656.3	164.5	4.0*
Primary	*2,443*	*31,438*	*560*	*51.2*	*54.2*	*53.8*	*334.6*	*89.0*	*3.8**
Secondary	*1,205*	*13,174*	*232*	*25.3*	*22.7*	*22.3*	*177.7*	*37.4*	*4.8**
Tertiary	*1,117*	*13,249*	*245*	*23.4*	*22.9*	*23.6*	*143.3*	*37.7*	*3.8**
Unavoidable mortality	1,778	27,810	438	27.2	32.4	29.6	219.8	79.1	2.8*
Total mortality	**6,547**	**85,790**	**1,478**	**100.0**	**100.0**	**100.0**	**876.1**	**243.5**	**3.6***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate.

(d) Deaths are by year of registration.

(e) Directly age-standardised using the 2001 Australian standard population.

(f) Rate ratio Indigenous:non-Indigenous.

Note: For full list of ICD10 codes used, see Page et al. (2006).

Source: AIHW analysis of National Mortality Database.

Avoidable mortality by cause of death

Table 1.25.4 presents avoidable mortality by cause of death and Indigenous status for persons aged 0–74 years in Queensland, Western Australia, South Australia and the Northern Territory combined over the period 2002–2006.

- The most common types of avoidable conditions causing death among Aboriginal and Torres Strait Islander peoples were ischaemic heart disease (20%), followed by cancer (14%), in particular lung cancer, diabetes (11%) and suicide (8%). Indigenous Australians died from cancer and suicide at twice the rate of non-Indigenous Australians; and from Ischaemic heart disease and diabetes at 5 and 18 times the rate respectively of non-Indigenous Australians (Table 1.25.5).
- Indigenous Australians died from selected invasive bacterial and protozoal infections at around 8 times the rate of non-Indigenous Australians, from alcohol-related disease at 9 times the rate , from violence at 10 times the rate , from nephritis and nephrosis at 16 times the rate and from rheumatic heart disease and other valvular heart disease at 23 times the rate of non-Indigenous Australians.

Table 1.25.5: Avoidable mortality, by cause of death and Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2002–2006[(a)(b)(c)(d)]

	Number[(e)]			Per cent			Indigenous			Non-Indigenous			
Cause of death	**Indig.**	**Non-Indig.**	**Not stated**	**Indig.**	**Non-Indig.**	**Not stated**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**No. per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**
Ischaemic heart disease	956	11,541	211	20.0	19.9	20.3	149.7	139.3	160.1	32.7	32.1	33.3	4.6*
Cancer	658	21,721	213	13.8	37.5	20.5	115.2	105.8	124.7	60.8	60.0	61.6	1.9*
Lung cancer[(j)]	*245*	*7,576*	*80*	*5.1*	*13.1*	*7.7*	*47.0*	*40.8*	*53.3*	21.3	20.8	21.8	*2.2**
Diabetes	507	1,870	25	10.6	3.2	2.4	94.5	85.7	103.4	5.3	5.1	5.6	17.7*
Suicide	370	3,883	127	7.8	6.7	12.2	26.3	23.4	29.2	11.1	10.8	11.5	2.4*
Road traffic injuries	334	2,853	88	7.0	4.9	8.5	26.3	23.1	29.5	8.2	7.9	8.5	3.2*
Alcohol-related disease	309	1,505	29	6.5	2.6	2.8	37.1	32.6	41.5	4.1	3.9	4.4	9.0*
Selected invasive bacterial and protozoal infections	229	1,244	38	4.8	2.1	3.7	27.2	23.1	31.2	3.6	3.4	3.8	7.6*
Cerebrovascular disease	215	3,409	51	4.5	5.9	4.9	36.5	31.1	41.9	9.8	9.5	10.1	3.7*
Chronic obstructive pulmonary disease	182	2,784	49	3.8	4.8	4.7	39.2	33.2	45.1	8.0	7.7	8.3	4.9*
Nephritis and nephrosis	162	568	6	3.4	1.0	0.6	27.0	22.5	31.5	1.6	1.5	1.8	16.4*
Violence	117	313	15	2.5	0.5	1.4	9.0	7.2	10.8	0.9	0.8	1.0	10.0*

(continued)

Table 1.25.5 (continued): Avoidable mortality, by cause of death and Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)

	Number(e)			Per cent			Indigenous			Non-Indigenous			
Cause of death	**Indig.**	**Non-Indig.**	**Not stated**	**Indig.**	**Non-Indig.**	**Not stated**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**No. per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**
Birth defects	108	900	22	2.3	1.6	2.1	5.9	4.5	7.3	2.7	2.5	2.9	2.2*
Complications of perinatal period	108	448	6	2.3	0.8	0.6	4.2	3.4	5.0	1.4	1.2	1.5	3.1*
Rheumatic and other valvular heart disease	93	165	2	2.0	0.3	0.2	10.7	8.1	13.2	0.5	0.4	0.5	22.7*
Other(k)	421	4,776	158	8.8	8.2	15.2	47.6	42.3	52.8	13.6	13.3	14.0	3.5*
Total avoidable	**4,769**	**57,980**	**1,040**	**100.0**	**100.0**	**100.0**	**656.3**	**635.0**	**677.6**	**164.5**	**163.1**	**165.8**	**4.0***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all causes mortality rate. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates because of these data quality issues.

(d) Deaths are by year of registration and state/territory of usual residence.

(e) Different causes of death may have levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) Data for lung cancer are a subset of data for all cancers presented in this table.

(k) Other includes: tuberculosis, hepatitis, HIV/AIDS, viral pneumonia and influenza, thyroid disorders, illicit drug disorders, epilepsy, hypertensive heart disease, aortic aneurysm, obstructive uropathy & prostatic hyperplasia, deep vein thrombosis with pulmonary embolism, asthma, peptic ulcer disease, acute abdomen/appendicitis/intestinal obstruction/cholecystitis/lithiasis/pancreatitis/hernia, chronic liver disease, falls, fires/burns, accidental poisonings, drownings.

Note: For full list of ICD10 codes used, see Page et al. (2006).

Source: AIHW analysis of National Mortality Database.

Time series analysis

Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have over 10 years of adequate identification of Indigenous deaths in their recording systems.

There is a consistent time series of population estimates from 1991. Because of changes in the classification and coding of causes of death from ICD-9 (used up until 1996) to ICD-10 (used from 1997 onwards) which affect the comparability of the data, the analysis reported for this measure has been done for two time periods—1991–1996 and 1997–2006.

Because of the late inclusion of a 'not stated' category of Indigenous status in 1998 (before which 'not stated' responses were included with non-Indigenous deaths), Indigenous mortality rates have been compared with the mortality rates of other Australians (which include deaths of both non-Indigenous people and people for whom Indigenous status was not stated).

Mortality rates, rate ratios and rate differences between Indigenous and other Australians for avoidable causes over the periods 1991–1996 and 1997–2006 are presented in tables 1.25.6a, 1.25.6b and 1.25.7 and Figure 1.25.1.

- Over the period 1991–1996, in Western Australia, South Australia and the Northern Territory combined, there were significant declines in mortality rates for avoidable causes among Indigenous Australians aged 0–74 years. The fitted trend implies an average yearly decline in the rate of around 27 per 100,000, which is equivalent to a 13% reduction in the rate over this period. These declines were significant for Indigenous females but not for males.
- Over the same period, there were significant declines in mortality rates for avoidable causes for other Australians (10%).
- Over the period 1991–1996, there were significant declines in the mortality rate ratios and rate differences between Indigenous and other Australians for avoidable causes for females, but not for males.
- Over the period 1997–2006, in Western Australia, South Australia and the Northern Territory combined there were also significant declines in the mortality rates for avoidable causes among Indigenous Australians aged 0–74 years. The fitted trend implies an average yearly decline in the rate of around 23 per 100,000, which is equivalent to a 22% reduction in the rate over the period. These declines were significant for both males and females.
- Over the same period, there were significant declines in mortality rates for avoidable causes for other Australians (32%).
- Over the period 1997–2006, there were significant increases in the mortality rate ratios between Indigenous and other males for avoidable mortality (20%). There were significant declines in the mortality rate differences between Indigenous and other females, but not for males.

Table 1.25.6a: Age-standardised mortality rates, rate ratios and rate differences, avoidable causes, persons aged 0–74 years, WA, SA & NT, 1991–1996

	1991	1992	1993	1994	1995	1996	Annual change[(a)]	% change over period[(b)]
Indigenous rate (deaths per 100,000)[(c)]								
Males	1115.0	1030.4	1096.1	1173.5	1124.9	1003.6	–5.6	–2.5
Females	886.1	850.0	812.8	739.4	682.9	693.0	–44.0*	–24.8
Persons	1000.7	941.0	950.5	946.7	892.5	842.5	–26.9*	–13.4
Other[(d)] rate (deaths per 100,000)[(c)]								
Males	346.5	332.3	334.2	328.0	311.9	310.4	–7.1*	–10.2
Females	177.0	173.1	168.1	165.1	159.4	159.2	–3.8*	–10.8
Persons	259.5	250.5	249.0	244.7	234.1	233.7	–5.2*	–10.1
Rate ratio[(e)]								
Males	3.2	3.1	3.3	3.6	3.6	3.2	0.1	8.4
Females	5.0	4.9	4.8	4.5	4.3	4.4	–0.2*	–15.7
Persons	3.9	3.8	3.8	3.9	3.8	3.6	–0.03	–3.8
Rate difference[(f)]								
Males	768.6	698.1	761.9	845.6	813.0	693.2	1.5	1.0
Females	709.1	676.9	644.6	574.3	523.5	533.9	–40.2*	–28.3
Persons	741.1	690.5	701.5	702.0	658.4	608.8	–21.6*	–14.6

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1991–1996.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1991 and 1996 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database

Table 1.25.6b: Age-standardised mortality rates, rate ratios and rate differences, avoidable causes, persons aged 0–74 years, WA, SA & NT, 1997–2006

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change over period[(b)]
Indigenous rate(deaths per 100,000)[(c)]												
Males	1161.5	987.0	950.4	1034.8	1031.8	844.7	1016.8	918.6	911.7	841.8	–23.1*	–17.9
Females	761.6	728.8	609.3	752.9	532.5	667.8	529.9	615.5	541.3	542.1	–23.0*	–27.1
Persons	943.8	853.9	772.3	886.5	762.4	753.2	755.9	757.8	710.9	681.5	–23.2*	–22.2
Other[(d)] rate (deaths per 100,000)[(c)]												
Males	294.1	287.5	264.2	262.7	243.2	233.1	225.4	208.4	212.7	196.5	–10.9*	–33.4
Females	152.2	141.5	136.3	135.0	128.0	127.4	121.9	108.7	106.0	106.4	–5.1*	–30.1
Persons	222.1	213.6	199.6	198.2	185.2	179.8	173.3	158.3	159.2	151.3	–7.9*	–32.0
Rate ratio[(e)]												
Males	3.9	3.4	3.6	3.9	4.2	3.6	4.5	4.4	4.3	4.3	0.1*	19.5
Females	5.0	5.2	4.5	5.6	4.2	5.2	4.3	5.7	5.1	5.1	0.02	4.2
Persons	4.2	4.0	3.9	4.5	4.1	4.2	4.4	4.8	4.5	4.5	0.1*	12.7
Rate difference[(f)]												
Males	867.3	699.6	686.2	772.1	788.6	611.6	791.4	710.2	699.0	645.3	–12.1	–12.6
Females	609.4	587.4	473.0	617.8	404.4	540.4	407.9	506.8	435.3	435.7	–17.9*	–26.4
Persons	721.7	640.3	572.7	688.3	577.3	573.4	582.5	599.5	551.6	530.2	–15.3*	–19.1

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1997–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(b) Per cent change between 1997 and 2006 based on the average annual change over the period.

(c) Rates have been directly age–standardised using the 2001 Australian standard population.

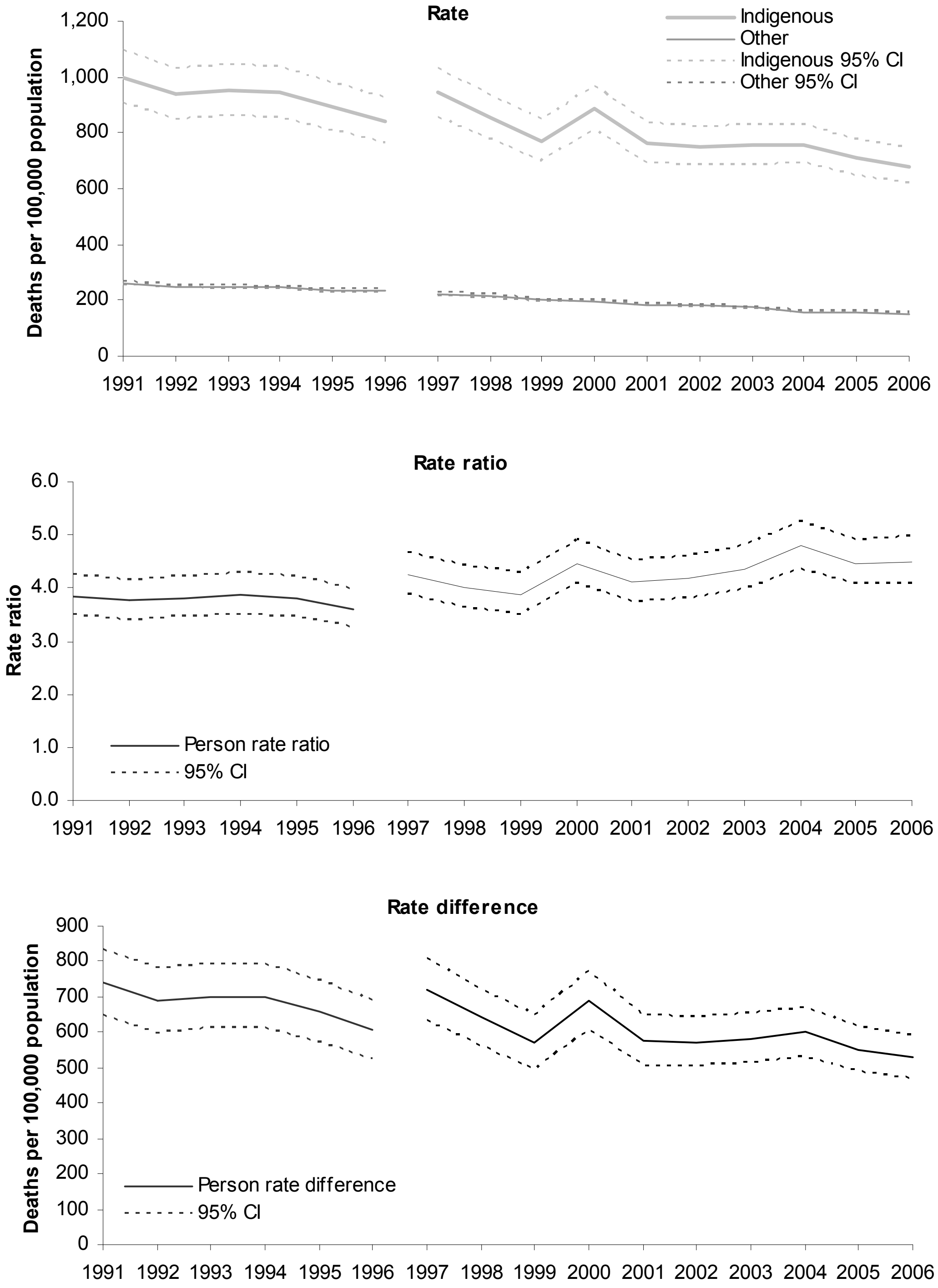
(d) ‘Other’ includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.25.1: Mortality rates, rate ratios and rate differences for avoidable causes of death, Indigenous and other Australians aged 0–74 years, WA, SA & NT, 1991–1996 and 1997–2006

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous Australians in Table 1.25.7 and Figure 1.25.2. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

- Over the period 1998–2006, in Queensland, Western Australia, South Australia and the Northern Territory combined there were significant declines in the mortality rates for avoidable causes among Indigenous Australians aged 0–74 years. The fitted trend implies an average yearly decline in the rate of around 18 per 100,000 which is equivalent to a 19% reduction in the rate over he period. These declines were significant for both males and females.
- Over the same period, there were significant declines in mortality rates for avoidable causes for non-Indigenous Australians (32%).
- Over the period 1997–2006, there were significant increases in the mortality rate ratios between Indigenous and non-Indigenous Australians for avoidable mortality (18%) but significant declines in the mortality rate differences (14%).

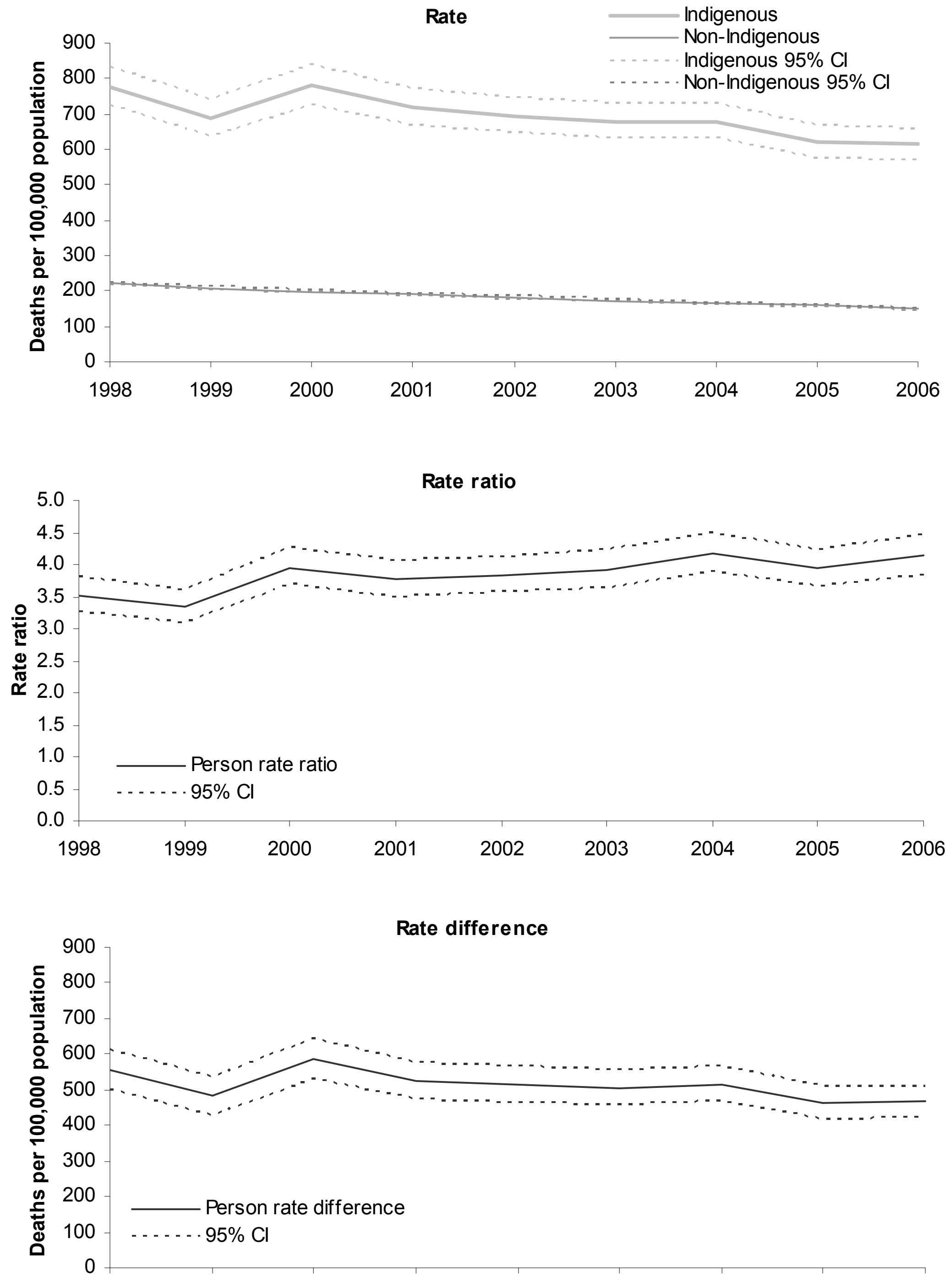
Table 1.25.7: Age-standardised mortality rates, rate ratios and rate differences, avoidable causes, persons aged 0–74 years, Qld, WA, SA & NT, 1998–2006

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	% change over period[(b)]
Indigenous rate (deaths per 100,000)[(c)]											
Males	921.1	850.2	909.9	956.5	780.9	896.1	832.4	802.1	760.2	–16.7*	–14.5
Females	647.6	544.1	669.1	513.0	614.5	489.4	546.5	465.2	489.1	–19.0*	–23.5
Persons	778.2	687.7	782.8	717.0	694.6	679.5	679.8	621.5	614.1	–18.3*	–18.8
Non-Indigenous[(d)] rate (deaths per 100,000)[(c)]											
Males	296.3	274.2	261.6	249.0	234.7	226.8	212.2	206.5	192.8	–12.3*	–33.2
Females	147.3	140.1	134.9	132.4	128.2	120.0	114.0	109.8	104.2	–5.3*	–28.7
Persons	221.1	206.6	197.8	190.4	181.2	173.3	163.0	158.1	148.5	–8.7*	–31.5
Rate ratio[(e)]											
Males	3.1	3.1	3.5	3.8	3.3	4.0	3.9	3.9	3.9	0.1*	28.7
Females	4.4	3.9	5.0	3.9	4.8	4.1	4.8	4.2	4.7	0.04	6.4
Persons	3.5	3.3	4.0	3.8	3.8	3.9	4.2	3.9	4.1	0.1*	18.4
Rate difference[(f)]											
Males	624.8	576.0	648.3	707.5	546.2	669.4	620.2	595.5	567.4	–4.4	–5.7
Females	500.3	404.1	534.2	380.6	486.3	369.4	432.6	355.4	384.9	–13.7	–21.9
Persons	557.1	481.1	584.9	526.6	513.4	506.2	516.8	463.4	465.6	–9.6*	–13.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Per cent change between 1998 and 2006 based on the average annual change over the period.
(c) Rates have been directly age-standardised using the 2001 Australian standard population.
(d) Rates exclude deaths of people for whom Indigenous status was not stated.
(e) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.
(f) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database



Source: AIHW analysis of National Mortality Database

Figure 1.25.2: Mortality rates, rate ratios and rate differences for avoidable causes of death, Indigenous and non-Indigenous Australians aged 0–74 years, Qld, WA, SA & NT, 1998–2006

Additional information

Years of potential life lost

Potential years of life lost (PYLL) is an indicator of premature mortality. It represents the total number of years not lived before a given age (e.g. 75 years). This indicator gives more importance to the causes of death that occurred at younger ages than those that occurred at older ages.

The PYLL due to death is calculated for each person who died before age 75. Deaths of people aged 75 years and over are not included in the calculation. Potential years of life lost correspond to the sum of the PYLL contributed for each individual.

The impact of avoidable mortality on the Indigenous population is more evident at ages below 45 years than it is for the non-Indigenous population, for whom the impact is more noticeable at older ages.

- The proportion of PYLL from amenable causes for Indigenous infants under 1 year of age was 1.5 times that of the non-Indigenous population (Table 1.25.8).
- For the 25–44 year age group, the proportion of PYLL from amenable mortality in the Indigenous population was almost twice that of the non-Indigenous population (31% compared with 17%).
- For the age groups 45–64 and 65–74 years, the proportions of PYLL in the Indigenous population were less than those for the non-Indigenous population.

Table 1.25.8: Potential years of life lost to amenable mortality by Indigenous status and age group, persons aged 0–74 years, Qld, WA, SA & NT, 2002–2006[(a)(b)(c)(d)(e)]

Age group (years)	Number		Per cent		
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Ratio[(f)]
Less than 1	16,013	74,550	28.8	18.9	1.5*
1–14	2,046	11,834	3.7	3.0	1.2*
15–24	1,812	11,120	3.3	2.8	1.2*
25–44	17,223	67,392	30.9	17.1	1.8*
45–64	16,383	177,466	29.4	44.9	0.7*
65–74	2,219	52,463	4.0	13.3	0.3*
Total[(g)]	**55,694**	**394,823**	**100.0**	**100.0**	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p <0.05 level.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states/territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous PYLL.

(c) It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates because of these data quality issues.

(d) Deaths are by year of registration and state/territory of usual residence.

(e) Data are presented in 5-year groupings because of the small numbers each year.

(f) Rate ratio Indigenous:non-Indigenous.

(g) Excludes those aged 75 years and over and those for whom age was not stated.

Note: ICD 10 codes A15–A19, B90, A38–A41, A46, A48.1, C18–C21, C43, C44, C50, C53, C54, C55, C67, C73, C81, C91.0, C91,1, D10–D36, E00–E07, E10–E14, G40, G41, I01–I09, I11, I20–I25, I60–I69, I12, I13, N00–N09, N17–N19, N13, N20, N21, N35, N40, N99.1, J45, J46, K25–K28, K35–K38, K40–K46, K80–K83, K85, K86, K91.5, H31.1, P00, P04, Q00–Q99, P03, P05–P95.

Source: AIHW analysis of National Mortality Database.

Data quality issues

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, the Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death.

There are also current concerns about data quality for causes of death especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006).

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991–2009 *(ABS 2004).*

(continued)

Data quality issues (continued)

Cause of death coding

Causes of death are based on the 10th revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia on 1 January 1997.

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Determinants of health (Tier 2)

2.01 Access to functional housing with utilities

Connection to water, sewerage and electricity services in Indigenous communities and functionality of Indigenous housing facilities required to support healthy living practices

Data sources

Data on water, sewerage and electricity services come from the 2006 Community Housing and Infrastructure Needs Survey and data on the functionality of housing facilities required to support healthy living practices come from the 2002 National Aboriginal and Torres Strait Islander Social Survey.

Community Housing and Infrastructure Needs Survey (CHINS)

The CHINS collects data from all Aboriginal and Torres Strait Islander housing organisations and discrete Aboriginal and Torres Strait Islander communities in Australia. The ABS conducted the CHINS on behalf of the Aboriginal and Torres Strait Islander Commission (ATSIC) and the Office for Aboriginal and Torres Strait Islander Health (OATSIH) in 1999 and 2001. The most recent CHINS was conducted by the ABS in 2006 on behalf of the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) through funding from FaHCSIA. Results from this survey were published in August 2007. Data from the CHINS is held by FaHCSIA and the ABS.

The 2006 information was collected on 496 Indigenous housing organisations which managed a total of 21,854 permanent dwellings. Information was also collected on 1,187 discrete Indigenous communities with a combined population of 92,960. Most of these communities were in Very Remote regions of Australia, with 73% (865) having a population of less than 50 people.

In the 2006 CHINS, a community questionnaire collected detailed infrastructure information from all discrete Indigenous communities with a reported usual population of 50 persons or more, as well as for communities which had a reported usual population of less than 50 persons but which were not administered by a larger discrete Indigenous community or Resource Agency (375 communities). The 812 other communities had reported usual populations of less than 50 persons and were asked a subset of questions from the community questionnaire form, the short community questionnaire (ABS 2007).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

The NATSISS asks respondents about the functionality of various household facilities. These include whether a household has working facilities for washing people, working facilities for washing clothes/bedding, working facilities for storing/preparing food, and working sewerage facilities. These four data items cover the first four Healthy Living Practices.

Healthy Living Practices

The National Indigenous Housing Guide (FaHCSIA 2003) lists nine Healthy Living Practices to help prevent the spread of infectious diseases. These are:

1. Washing people
2. Washing clothes and bedding
3. Removing waste safely
4. Improving nutrition: the ability to store, prepare and cook food
5. Reducing crowding and the potential for the spread of infectious disease
6. Reducing negative contact between people and animals, vermin or insects
7. Reducing the negative impact of dust
8. Controlling the temperature of the living environment
9. Reducing trauma (or minor injury) around the house and living environment.

Data analyses

Connection to services

The CHINS collects data on water, sewerage and electricity in discrete Indigenous communities. Data from the 2006 survey are presented below.

Water supply

- Of the 1,187 discrete Indigenous communities surveyed in the 2006 CHINS, 9 reported they had no organised water supply, compared with 21 communities in 2001. In 2006, communities with no organised water supply had a total population of 20 people (0.02%) compared with 90 people (0.1%) in 2001.
- Approximately 59% of discrete Indigenous communities (694 communities), with a reported population of 48,511 people, reported bore water as their main source of water supply (Table 2.01.3).
- Approximately 1% of discrete Indigenous communities in the Northern Territory were not connected to an organised water supply (Table 2.01.1).
- Approximately 18% of discrete Indigenous communities for which data on water interruptions were collected experienced five or more interruptions to water supply in the 12 months before the survey (Table 2.01.1).

Drinking water failed testing

- Drinking water failed water-quality tests for 24% of the reported usual population and 29% of all discrete Indigenous communities not connected to a town water supply for which water-testing data were collected. Nationally, 4,796 people in discrete Indigenous communities, not connected to a nearby town supply, lived in communities where drinking water was not sent away for testing in the 12 months before the survey (Table 2.01.4).

- Of communities not connected to a nearby town supply where water was sent away for testing, the proportion of communities for which drinking water failed testing in the 12 months before the survey ranged from 16% in Queensland to 80% in New South Wales (Table 2.01.4).
- Non-remote areas had the highest proportion of discrete communities not connected to nearby town supplies whose drinking water failed testing (55%) in the 2006 CHINS (Table 2.01.2).
- In 2006, in Australia overall, a slightly lower proportion of discrete Indigenous communities with a population of 50 or more reported their drinking water failed testing in the previous 12 months (29%) than in 1999 (34%) and 2001 (33%) (Figure 2.01.1). In Queensland and Western Australia in 2006 a lower proportion of communities reported their drinking water failed testing in the previous 12 months than in 1999 and 2001. In New South Wales in 2006 a much higher proportion of communities reported their drinking water failed testing in the previous 12 months than in 1999 and 2001.

Table 2.01.1: Water supply in discrete Indigenous communities, by state/territory, 2006

	NSW		Qld		WA		SA		NT		Australia[(a)]			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Reported usual pop'n	%
Communities with no organised water supply[(b)]	—	—	—	—	1	0.4	1	1.1	7	1.1	9	0.8	20	0.02
Permanent dwellings not connected to organised water supply[(c)(d)]	17	1.5	31	0.7	67	2.1	21	2.1	83	1.2	219	1.3	n.a.	n.a.
Communities experiencing 5 or more interruptions[(e)(f)(g)]	2	3.8	8	19.5	18	18.6	6	14.6	34	24.3	69	18.4	21,291	22.9
Communities experiencing interruptions to supply greater than 24 hours[(e)(f)(g)]	10	18.9	9	22.0	14	14.4	14	34.1	33	23.6	80	21.3	n.a.	n.a.
Communities with drinking water not tested[(g)(h)(i)]	1	16.7	8	27.6	3	5.7	11	45.8	22	22.7	45	21.4	4,796	n.a.
Communities with drinking water failed testing[(g)(h)(j)]	4	80.0	3	15.8	19	38.0	4	30.8	16	21.3	48	29.3	12,059	n.a.
Total no. of communities which completed the full community questionnaire[(e)]	**53**	. .	**41**	. .	**97**	. .	**41**	. .	**140**	. .	**375**	. .	**n.a.**	**n.a.**
Total no. of communities[(b)]	**57**	. .	**124**	. .	**271**	. .	**91**	. .	**641**	. .	**1,187**	. .	**92,960**	. .

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

(b) Calculation based on all discrete Indigenous communities.

(c) All permanent dwellings not connected to an organised water supply, including those in communities with and without community-organised water supply.

(d) Percentage calculated as a proportion of all permanent dwellings.

(e) All discrete Indigenous communities for which data on water interruptions were collected. All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(f) Percentage calculated as a proportion of all discrete communities for which data on water interruptions were collected.

(g) In the 12 months before the survey.

(h) Excludes communities connected to town supply.

(i) Testing means water was sent away for testing. Proportion calculated in relation to total communities not connected to a town supply.

(j) Testing means water was sent away for testing. Proportion calculated in relation to total communities not connected to a town supply where water was sent away for testing.

Sources: SCRGSP 2007; ABS 2007; FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Table 2.01.2: Water supply in discrete Indigenous communities, by remoteness, 2006

	Non-remote		Remote		Very Remote		*Subtotal Remote/non-remote*		Australia			
	No.	**%**	**No.**	**%**	**No.**	**%**	***No.***	***%***	**No.**	**%**	**Reported usual pop'n**	**%**
Communities with no organised water supply[(a)]	—	—	1	1.0	8	0.8	*9*	*0.8*	9	0.8	20	0.02
Permanent dwellings not connected to organised water supply[(b)]	20	n.a.	36	n.a.	163	n.a.	*199*	*n.a.*	219	1.3	n.a.	n.a.
Communities experiencing 5 or more interruptions[(c)(d)(e)]	4	6.3	18	42.9	47	17.4	*65*	*20.8*	69	18.4	21,291	22.9
Communities experiencing interruptions to supply greater than 24 hours[(c)(d)(e)]	12	19.0	13	31.0	55	20.4	*68*	*21.8*	80	21.3	n.a.	n.a.
Communities with drinking water not tested [(e)(f)(g)]	2	16.7	4	33.3	39	21.0	*43*	*21.7*	45	21.4	4,796	n.a.
Communities with drinking water failed testing [(e)(f)(h)]	6	54.5	1	12.5	41	28.3	*42*	*27.5*	48	29.3	12,059	n.a.
Total no. of communities which completed the full community questionnaire [(c)]	**63**	. .	**42**	. .	**270**	. .	***312***	. .	**375**	. .	**n.a.**	**n.a.**
Total[(a)]	**75**	. .	**104**	. .	**1,008**	. .	***1,112***	. .	**1,187**	. .	**92,960**	. .

(a) Calculation based on all discrete Indigenous communities.

(b) All permanent dwellings not connected to an organised water supply, including those in communities with and without community-organised water supply.

(c) All discrete Indigenous communities for which data on water interruptions were collected. All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(d) Proportion calculated as a proportion of all discrete communities for which data on water interruptions were collected.

(e) In the 12 months before the survey.

(f) Excludes communities connected to a town supply.

(g) Testing means water was sent away for testing. Proportion calculated in relation to total communities not connected to a town supply.

(h) Testing means water was sent away for testing. Proportion calculated in relation to total communities not connected to a town supply where water was sent away for testing.

Sources: SCRGSP 2007; ABS 2007; FaHCSIA and ABS analysis of 2006 Community Housing and Infrastructure Needs Survey.

Table 2.01.3: Main source of drinking water, discrete Indigenous communities, by state/territory, 2006

	NSW		Qld		WA		SA		NT		Australia[a]			
	Number of communities	%	Number of communities	%	Number of communities	%	Number of communities	%	Number of communities	%	Number of communities	%	Reported usual pop'n.	%
Connected to town supply	51	89.5	11	8.9	43	15.9	19	20.9	84	13.1	209	17.6	28,084	30.2
Bore water	2	3.5	32	25.8	197	72.7	48	52.7	414	64.6	694	58.5	48,511	52.2
Rain water tank(s)	2	3.5	24	19.4	—	—	6	6.6	8	1.2	41	3.5	2,378	2.6
River/reservoir	2	3.5	24	19.4	5	1.8	3	3.3	22	3.4	57	4.8	11,667	12.6
Well or spring	—	—	21	16.9	2	0.7	1	1.1	15	2.3	39	3.3	887	1.0
Carted water	—	—	4	3.2	2	0.7	—	—	21	3.3	27	2.3	637	0.7
Other organised water supply	—	—	1	0.8	1	0.4	1	1.1	—	—	3	0.3	104	0.1
No organised water supply	—	—	—	—	1	0.4	1	1.1	7	1.1	9	0.8	20	0.02
Total	**57**	**100.0**	**124**	**100.0**	**271**	**100.0**	**91**	**100.0**	**641**	**100.0**	**1,187**	**100.0**	**92,960**	**100.0**

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

Source: ABS 2007.

Table 2.01.4: Testing of drinking water in discrete Indigenous communities, by state/territory, 2006[(a)(b)(c)]

	NSW		Qld		WA		SA		NT		Australia[(a)]			
	Number of communities	%	Number of communities	%	Number of communities	%	Number of communities	%	Number of communities	%	Number of communities	%	Reported usual pop'n.	%
Did not fail testing [(e)]	1	20.0	9	47.4	30	60.0	9	69.2	51	68.0	100	61.0	29,104	58.2
Failed testing [(e)]	4	80.0	3	15.8	19	38.0	4	30.8	16	21.3	48	29.3	12,059	24.1
Total communities water sent away for testing [(f)(g)]	5	83.3	19	65.5	50	94.3	13	54.2	75	77.3	164	78.1	50,043	n.a.
Not tested [(g)]	1	16.7	8	27.6	3	5.7	11	45.8	22	22.7	45	21.4	4,796	n.a.

(a) In the 12 months before the survey.

(b) Excludes communities connected to town supply.

(c) All discrete Indigenous communities for which water testing data were collected. All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

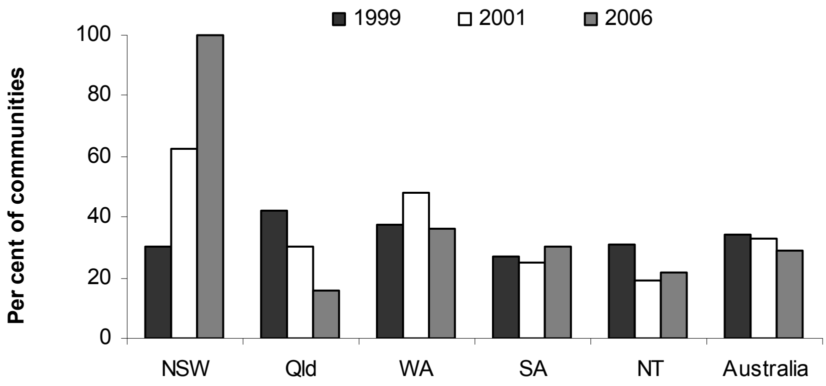
(d) Victoria and Tasmania included in Australia for confidentiality reasons.

(e) Testing means water was sent away for testing. Proportion calculated in relation to total communities not connected to a town supply where water was sent away for testing.

(f) Total includes don't know if failed testing.

(g) Testing means water was sent away for testing. Proportion calculated in relation to total communities not connected to a town supply.

Source: ABS 2007; FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.



Notes

- Communities with a population of 50 or more with an organised water supply (where the main source is not town water supply) that had their water tested.
- Victoria and Tasmania included in Australia for confidentiality reasons.

Source: AIHW analysis of ABS 2002; FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Figure 2.01.1: Proportion of discrete Indigenous communities, with reported usual population 50 or more, where drinking water failed testing in the previous 12 months, by state and territory, 1999, 2001 and 2006

Water restrictions and interruptions

- Of the discrete Indigenous communities not connected to a town water supply who completed the long community questionnaire in 2006, 76 (21%) experienced water restrictions in the 12 months before the CHINS (Table 2.01.5).
- Of the 182 communities that reported water interruptions in 2006, 29 reported only one interruption, whereas 69 reported interruptions on five or more occasions in the 12 months before the survey (Table 2.01.5).
- Approximately 28% of discrete Indigenous communities not connected to a town water supply that completed the long community questionnaire in 2006 reported the duration of the longest water interruption in the last 12 months as 1 day, and 1% reported the longest water interruption as more than 112 days (Table 2.01.6).

Table 2.01.5: Water restrictions and interruptions in discrete Indigenous communities[(a)(b)(c)], by reported usual population, 2006

	Communities with a population of							
	Less than 50	50–99	100–199	200 or more	All communities		Reported usual population	
	No.	No.	No.	No.	No.	%	No.	%
Water restrictions								
Experienced water restrictions due to								
Drought	7	8	12	7	34	9.3	8,267	10.0
Normal dry season	—	4	4	12	20	5.5	8,129	9.8
Lack of storage containment	—	3	2	6	11	3.0	6,853	8.3
Poor water quality	—	4	3	1	8	2.2	3,634	4.4
Other reason	3	4	5	7	19	5.2	7,222	8.7
Total communities experienced water restrictions[(d)]	*8*	*19*	*21*	*28*	*76*	*20.8*	*25,557*	*30.9*
Did not experience water restrictions	46	97	68	79	290	79.2	57,173	69.1
Water interruptions								
Experienced water interruptions due to								
Equipment breakdown	14	38	38	55	145	39.6	36,139	43.7
Ran out of water	2	6	5	6	19	5.2	3,879	4.7
Poor water quality	—	3	3	4	10	2.7	2,706	3.3
Lack of power	—	3	6	9	18	4.9	6,825	8.2
Planned interruption	4	18	18	26	66	18.0	18,943	22.9
Other water interruption	3	2	1	6	12	3.3	3,235	3.9
Total communities experienced water interruptions[(d)]	*17*	*52*	*47*	*66*	*182*	*49.7*	*44,563*	*53.9*
Did not experience water interruption	37	64	42	41	184	50.3	38,167	46.1
Frequency of water interruption								
Once	4	8	9	8	29	7.9	5,366	6.5
Twice	2	13	8	15	38	10.4	7,403	8.9
Three times	4	8	8	6	26	7.1	4,178	5.1
Four times	2	4	7	7	20	5.5	6,325	7.6
Five times or more	5	19	15	30	69	18.9	21,291	25.7
All communities	**54**	**116**	**89**	**107**	**366**	**100.0**	**82,730**	**100.0**

(a) In the 12 months before the survey.

(b) All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(c) Excludes communities connected to town supply.

(d) Component may not add to totals because more than one response may be specified.

Source: ABS 2007.

Table 2.01.6: Duration of longest water interruption in discrete Indigenous communities, by state/territory, 2006[(a)(b)(c)]

		1 day	2 days	3–7 days	8–14 days	15–28 days	29–56 days	57–112 days	>112 days	No restrictions	Total
Number of communities											
NSW	No.	6	3	4	1	—	—	1	1	37	53
Qld	No.	11	5	3	1	—	—	—	—	19	39
WA	No.	22	7	5	1	—	1	—	—	54	90
SA	No.	6	6	4	—	1	1	1	1	21	41
NT	No.	56	14	16	2	1	—	—	—	51	140
Aust[(d)]	**No.**	**102**	**35**	**32**	**5**	**2**	**2**	**2**	**2**	**184**	**366**
Proportion of communities											
NSW	%	11.3	5.7	7.5	1.9	—	—	1.9	1.9	69.8	100.0
Qld	%	28.2	12.8	7.7	2.6	—	—	—	—	48.7	100.0
WA	%	24.4	7.8	5.6	1.1	—	1.1	—	—	60.0	100.0
SA	%	14.6	14.6	9.8	—	2.4	2.4	2.4	2.4	51.2	100.0
NT	%	40.0	10.0	11.4	1.4	0.7	—	—	—	36.4	100.0
Aust[(d)]	**%**	**27.9**	**9.6**	**8.7**	**1.4**	**0.5**	**0.5**	**0.5**	**0.5**	**50.3**	**100.0**

(a) In the 12 months before the survey.

(b) All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(c) Excludes communities connected to town supply.

(d) Victoria and Tasmania included in Australia for confidentiality reasons.

Sources: ABS 2007; FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Electricity source and supply

- In 2006, community generators were the main source of electricity reported for 377 Indigenous communities (32%) followed by state grid or transmitted supply reported for 274 communities (23%) (Table 2.01.7). Communities with a reported population of 50 or more were more likely to be connected to a state grid or a transmitted supply than smaller communities.
- No organised electricity supply was reported for 32 discrete Indigenous communities in 2006 (3% of all communities surveyed) (Table 2.01.7).
- The proportion of communities with no organised electricity supply ranged from 0% in New South Wales to 4% in Queensland (Table 2.01.8).
- All dwellings not connected to an organised electricity supply were located in Remote and Very Remote areas, with the highest numbers in Very Remote areas (Table 2.01.9).

Table 2.01.7: Main source of electricity, all discrete Indigenous communities, by state/territory, 2006

	State grid/transmitted supply	Community generators	Domestic generators	Solar	Solar hybrid	Other organised electricity supply	No organised electricity supply	Total[(a)]
				Communities with a population of less than 50				
State/territory								
NSW	18	—	—	—	—	—	—	18
Qld	7	10	43	10	—	1	5	85
WA	29	56	71	3	11	1	5	189
SA	17	13	9	3	8	—	1	63
NT	61	138	49	86	83	3	20	510
Australia[(b)]	132	217	172	102	102	5	31	865
				Communities with a population of 50 or more				
State/territory								
NSW	39	—	—	—	—	—	—	39
Qld	15	23	—	—	—	1	—	39
WA	26	49	4	—	—	—	—	82
SA	14	10	1	—	1	1	1	28
NT	46	77	1	3	4	—	—	131
Australia[(b)]	142	160	6	3	5	3	1	322
				All communities				
State/territory								
NSW	57	—	—	—	—	—	—	57
Qld	22	33	43	10	—	2	5	124
WA	55	105	75	3	11	1	5	271
SA	31	23	10	3	9	1	2	91
NT	107	215	50	89	87	3	20	641
Australia[(b)]	**274**	**377**	**178**	**105**	**107**	**8**	**32**	**1,187**

(a) Includes main source of electricity not stated.

(b) Victoria and Tasmania included in Australia for confidentiality reasons.

Source: ABS 2007.

Table 2.01.8: Electricity supply in discrete Indigenous communities, by state/territory, 2006

	NSW		Qld		WA		SA		NT		Australia[(a)]			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Reported usual population	%
Communities with no organised electricity supply[(b)]	—	—	5	4.0	5	1.8	2	2.2	20	3.1	32	2.7	284	0.3
Permanent dwellings not connected to organised electricity supply[(c)(d)]	1	0.1	16	0.3	18	0.6	19	1.9	28	0.4	82	0.5	n.a.	n.a.
Communities experiencing 20 or more interruptions[(e)(f)(g)]	1	1.9	4	9.8	19	19.6	2	4.9	15	10.7	41	10.9	13,342	n.a.
Communities experiencing interruptions to supply longer than 24 hours[(e)(f)(g)]	7	13.2	14	34.1	27	27.8	15	36.6	32	22.9	96	25.6	n.a.	n.a.
Total no. of communities which completed the full community questionnaire [(e)]	**53**	. .	**41**	. .	**97**	. .	**41**	. .	**140**	. .	**375**	. .	n.a.	. .
Total no. of communities[(b)]	**57**	. .	**124**	. .	**271**	. .	**91**	. .	**641**	. .	**1187**	. .	**92,960**	. .

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

(b) Calculation based on all discrete Indigenous communities.

(c) All permanent dwellings not connected to an organised electricity supply, including those in communities with and without community-organised electricity supply.

(d) Percentage calculated as a proportion of all permanent dwellings.

(e) All discrete Indigenous communities for which data on electricity interruptions were collected. All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(f) Percentage calculated as a proportion of all discrete Indigenous communities for which data on electricity interruptions were collected.

(g) In the 12 months before the survey.

Sources: ABS 2007; FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Table 2.01.9: Electricity supply in discrete Indigenous communities, by remoteness area, 2006

	Major Cities		Inner Regional		Outer Regional		Remote		Very Remote		Australia			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Reported usual pop'n	%
Communities with no organised electricity supply[(a)]	—	—	—	—	—	—	1	1.0	31	3.1	32	2.7	284	0.3
Permanent dwellings not connected to organised electricity supply[(b)]	—	—	1	—	4	n.a.	14	n.a.	63	n.a.	82	0.5	n.a.	n.a.
Communities experiencing 20 or more interruptions[(c)(d)(e)]	—	—	—	—	1	2.4	6	14.3	34	12.6	41	10.9	13,342	n.a.
Communities experiencing interruptions to supply longer than 24 hours[(c)(d)(e)]	—	—	2	11.8	7	16.7	16	38.1	71	26.3	96	25.6	n.a.	n.a.
Total no. of communities which completed the full community questionnaire [(c)]	**4**	. .	**17**	. .	**42**	. .	**42**	. .	**270**	. .	**375**	. .	n.a.	. .
Total no. of communities[(a)]	**4**	. .	**19**	. .	**52**	. .	**104**	. .	**1,008**	. .	**1,187**	. .	**92,960**	. .

(a) Calculation based on all discrete Indigenous communities.

(b) All permanent dwellings not connected to an organised electricity supply, including those in communities with and without community-organised electricity supply.

(c) All discrete Indigenous communities for which data on electricity interruptions were collected. All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(d) Percentage calculated as a proportion of all discrete Indigenous communities for which data on electricity interruptions were collected.

(e) In the 12 months before the survey.

Sources: ABS 2007; FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Electricity interruptions

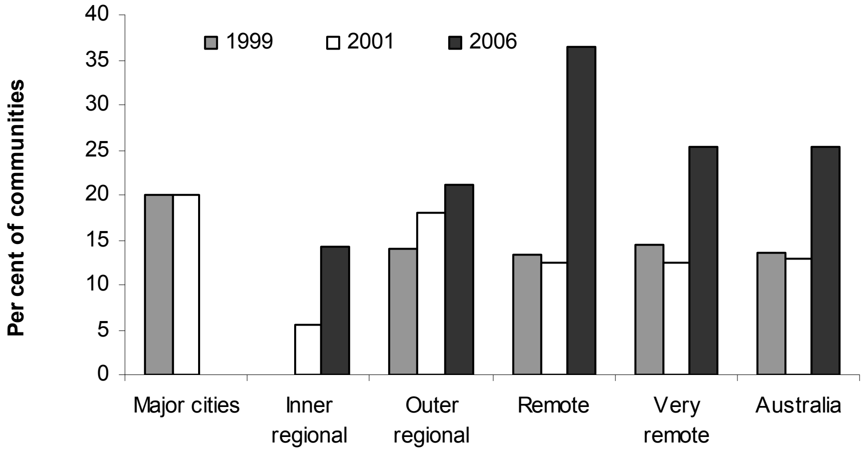
- In 2006, interruptions to the electricity supply in the 12 months before the CHINS occurred in 76% (246) of the 322 discrete Indigenous communities with a reported population of 50 or more (Table 2.01.10). This was slightly lower than in 2001 and 1999 when interruptions were reported for 82% and 81% respectively.
- Approximately one-third (32%) of communities experienced less than 5 electricity interruptions, and 12% experienced 20 or more interruptions in the 12 months before the survey.
- In 2006, approximately 25% of communities experienced interruptions to electricity supply lasting longer than 24 hours. This was higher than that reported in 2001 (13%) and 1999 (14%) (Figure 2.01.2).

Table 2.01.10: Electricity interruptions[(a)], communities with a population of 50 or more, 1999, 2001 and 2006

	2006					**2001**							**1999**			
	Communities with a population of					**Communities with a population of**										
Electricity interruptions	**50–99**	**100–199**	**200 or more**	**Total**	**%**	**50–99**	**100–199**	**200 or more**	**Total**	**%**	**Reported usual pop'n**	**%**	**Total**	**%**	**Reported usual pop'n**	**%**
1–4 times	37	31	35	103	32.0	35	32	33	100	30.6	25,403	26.7	120	34.5	25,159	26.4
5–9 times	21	19	21	61	18.9	19	11	39	69	21.1	23,508	24.7	55	15.8	25,812	27.1
10–14 times	10	7	13	30	9.3	6	7	21	34	10.4	13,246	13.9	33	9.5	10,345	10.8
15–19 times	4	2	7	13	4.0	2	1	5	8	2.4	2,750	2.9	16	4.6	5,221	5.5
20 times or more	10	9	20	39	12.1	13	13	28	54	16.5	17,113	18.0	57	16.4	18,490	19.4
Total with electricity interruption[(b)]	*82*	*68*	*96*	*246*	*76.4*	*75*	*64*	*128*	*267*	*81.7*	***82,670***	***87.0***	*281*	*80.7*	***84,027***	***88.1***
Did not experience electricity interruption	34	20	11	65	20.2	26	16	17	59	18.0	12,276	12.9	62	17.8	10,897	11.4
All communities[(c)(d)]	**123**	**92**	**107**	**322**	**100.0**	**102**	**80**	**145**	**327**	**100.0**	**94,996**	**100.0**	**348**	**100.0**	**95,423**	**100.0**

(a) In the 12 months before the survey.
(b) Includes 'Number of electricity interruptions' not stated.
(c) Includes communities with no organised electricity supply.
(d) Includes 'Whether experienced electricity interruption' not stated.

Source: ABS 2002, 2007.



Source: AIHW analysis of the 1999 and 2001 Community Housing and Infrastructure Needs Surveys; FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Figure 2.01.2: Proportion of discrete Indigenous communities, with reported usual population 50 or more, experiencing interruptions to electricity supply longer than 24 hours in the previous 12 months, by remoteness, 1999, 2001 and 2006

Sewerage systems

- In 2006, the majority of discrete Indigenous communities had septic tanks for their sewerage (694 communities; 58%) (Table 2.01.11).
- Approximately 1,969 people living in discrete Indigenous communities in 2006 did not have an organised sewerage system. A further 3,703 people relied on pit toilets for their sewerage.
- The proportion of discrete Indigenous communities in Very Remote areas without an organised sewerage system dropped from 8.3% (86 communities) in 2001 to 2.0% (20 communities) in 2006 (Table 2.01.12).
- The number of discrete Indigenous communities connected to a town sewerage system increased from 89 in 2001 to 121 in 2006 (Table 2.01.12).
- Approximately 2% of all discrete Indigenous communities (25 communities) in 2006 had no organised sewerage system. This ranged from 1% (7 communities) in the Northern Territory to 4% (5 communities) in Queensland. A further 17% (202 communities) relied on pit toilets (Table 2.01.14).
- In 2006, approximately 4% of communities in non-remote areas had no organised sewerage system, 1.9% in Remote areas and 2.0% in Very Remote areas (Table 2.01.15).

Sewerage system overflows and leakages

- In 2006, 38% of all discrete Indigenous communities which provided data on sewerage system leakages and overflows reported overflows or leakages in the 12 months before the CHINS. Of these 142 communities, 82 (22%) reported 1–4 overflows/leakages and 14 (4%) reported 20 or more overflows/leakages (Table 2.01.13).
- The proportion of discrete Indigenous communities experiencing sewerage system overflows/leakages in 2006 ranged from 23% (12 communities) in New South Wales to 44% (18 communities) in Queensland (Table 2.01.13).

- The proportion of communities with a population of 50 or more which experienced 10 or more sewerage overflows or leakages in the 12 months before the survey was lower in 2006 than in 2001 and 1999 across all remoteness areas, except in Inner Regional areas (Figure 2.01.3).

Table 2.01.11: Number of discrete Indigenous communities with different types of sewerage systems, by state/territory, 2006

	Town system	Community water-borne	Septic tanks: common effluent disposal	Septic tanks: leach drains	Pit toilets	Pan toilets	Other organised system	No organised system	Total no. communities [(a)]
Communities with a population of less than 50									
NSW	13	—	3	1	—	—	—	2	18
Queensland	1	—	3	38	27	—	8	4	85
WA	3	8	14	142	9	1	—	7	189
SA	—	3	13	34	9	—	—	3	63
NT	8	1	20	286	148	—	1	6	510
Australia[(b)]	25	12	53	501	193	1	9	22	865
Communities with a population of 50 or more									
NSW	29	2	6	3	—	—	—	—	39
Queensland	11	13	7	10	—	—	—	1	39
WA	14	33	14	27	1	—	—	1	82
SA	4	5	13	8	2	—	—	—	28
NT	38	40	8	44	6	—	—	1	131
Australia[(b)]	96	96	48	92	9	—	—	3	322
All communities									
NSW	42	2	9	4	—	—	—	2	57
Queensland	12	13	10	48	27	—	8	5	124
WA	17	41	28	169	10	1	—	8	271
SA	4	8	26	42	11	—	—	3	91
NT	46	41	28	330	154	—	1	7	641
Australia[(b)]	121	108	101	593	202	1	9	25	1,187

(a) Components may not add to totals as more than one response may be specified.

(b) Victoria and Tasmania included in Australia for confidentiality reasons.

Source: ABS 2007.

Table 2.01.12: Number of discrete Indigenous communities with different types of sewerage systems, by remoteness area, 2001 and 2006

	Town system	Community water-borne	Septic tanks: common effluent disposal.	Septic tanks: leach drains	Pit toilets	Pan toilets	Other organised system	No organised system	Total no. communities[(a)]
Non-remote									
2001	38	7	16	14	—	—	—	2	77
2006	43	10	12	13	—	—	—	3	75
Remote									
2001	26	10	15	46	7	2	—	3	109
2006	30	9	7	57	7	—	—	2	104
Very Remote									
2001	25	79	73	537	217	1	12	86	1,030
2006	48	89	82	523	195	1	9	20	1,008
Remote/Very Remote									
2001	*51*	*89*	*88*	*583*	*224*	*3*	*12*	*89*	*1,139*
2006	*78*	*98*	*89*	*580*	*202*	*1*	*9*	*22*	*1,112*
All communities									
2001	89	96	104	597	224	3	12	91	1,216
2006	121	108	101	593	202	1	9	25	1,187

(a) Components may not add to totals as more than one response may be specified.

Source: ABS 2007.

Table 2.01.13: Discrete Indigenous communities reporting sewerage system leakages and overflows[(a)(b)], by state/territory, 2006

	NSW		Qld		WA		SA		NT		Australia[(c)]	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Frequency of sewerage system leakages of overflows												
1–4 times	5	9.4	8	19.5	21	21.6	6	14.6	41	29.3	82	21.9
5–9 times	4	7.5	7	17.1	8	8.2	4	9.8	6	4.3	29	7.7
10–14 times	1	1.9	—	—	2	2.1	2	4.9	8	5.7	13	3.5
15–19 times	2	3.8	1	2.4	1	1.0	—	—	—	—	4	1.1
20 times or more	—	—	2	4.9	4	4.1	2	4.9	5	3.6	14	3.7
Total with overflows or leakages	*12*	*22.6*	*18*	*43.9*	*36*	*37.1*	*14*	*34.1*	*60*	*42.9*	*142*	*37.9*
No overflows	39	73.6	21	51.2	51	52.6	27	65.9	80	57.1	219	58.4
Total communities[(b)(d)]	**53**	**100.0**	**41**	**100.0**	**97**	**100.0**	**41**	**100.0**	**140**	**100.0**	**375**	**100.0**

(a) In the 12 months before the survey.

(b) All discrete Indigenous communities for which data on sewerage system leakages and overflows were collected. All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(c) Victoria and Tasmania are included in Australia for confidentiality reasons.

(d) Includes frequency not stated.

Source: FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Table 2.01.14: Sewerage in discrete Indigenous communities, by state/territory, 2006

	NSW		Qld		WA		SA		NT		Australia[(a)]	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
No organised sewerage system[(b)]	2	3.5	5	4.0	8	3.0	3	3.3	7	1.1	25	2.1
Pit toilets[(b)(c)]	—	—	27	21.8	10	3.7	11	12.2	154	24.0	202	17.0
Permanent dwellings not connected to organised sewerage system[(d)(e)]	17	1.5	26	0.6	175	5.5	12	1.2	151	2.1	381	2.2
Communities experiencing 10 or more overflows or leakages[(f)(g)(h)]	3	5.7	3	7.3	7	7.2	4	9.8	13	9.3	31	8.3
Communities experiencing overflows or leakages for longer than 48 hours[(f)(g)(h)]	10	18.9	11	26.8	23	23.7	11	26.8	24	17.1	81	21.6
Total no. of communities which completed the full community questionnaire[(f)]	**53**	. .	**41**	. .	**97**	. .	**41**	. .	**140**	. .	**375**	. .
Total no. of communities[(b)]	**57**	. .	**124**	. .	**271**	. .	**90**	. .	**641**	. .	**1,187**	. .

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

(b) Calculation based on all discrete Indigenous communities.

(c) May not be main type of sewerage system; more than one type could be specified.

(d) All permanent dwellings not connected to an organised sewerage system, including those in communities with and without community-organised sewerage system.

(e) Percentage calculated as a proportion of all permanent dwellings.

(f) All discrete Indigenous communities for which data on sewerage system leakages and overflows were collected. All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(g) Percentage calculated as a proportion of all discrete Indigenous communities for which data on sewerage system leakages and overflows were collected.

(h) In the 12 months before the survey.

Source: FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Table 2.01.15: Sewerage in discrete Indigenous communities, by remoteness, 2006

	Non-remote		**Remote**		**Very Remote**		***Remote/Very Remote***		**Australia**			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**Reported usual population**	**%**
No organised sewerage system[a]	3	4.0	2	1.9	20	2.0	*22*	*2.0*	25	2.1	1,969	2.1
Pit toilets[a][b]	—	—	7	6.7	195	19.3	*202*	*18.2*	202	17.0	3,703	4.0
Permanent dwellings not connected to organised sewerage system[c][d]	34	n.a	45	n.a	302	n.a	*347*	*n.a.*	381	2.2	n.a.	n.a.
Communities experiencing 10 or more overflows or leakages[e][f][g]	4	6.3	1	2.4	26	9.6	*27*	*8.7*	31	8.3	n.a.	n.a.
Communities experiencing overflows or leakages for longer than 48 hours[e][f][g]	14	22.2	9	21.4	58	21.5	*67*	*21.5*	81	21.6	n.a.	n.a.
Total no. of communities which completed the full community questionnaire [e]	**63**	. .	**42**	. .	**270**	. .	***312***	*. .*	**375**	. .	n.a.	n.a.
Total no. of communities[a]	**75**	. .	**104**	. .	**1,008**	. .	***1,112***	*. .*	**1,187**	. .	**92,960**	. .

(a) Calculation based on all discrete Indigenous communities.

(b) May not be main type of sewerage system; more than one type could be specified.

(c) All permanent dwellings not connected to an organised sewerage system, including those in communities with and without community-organised sewerage system.

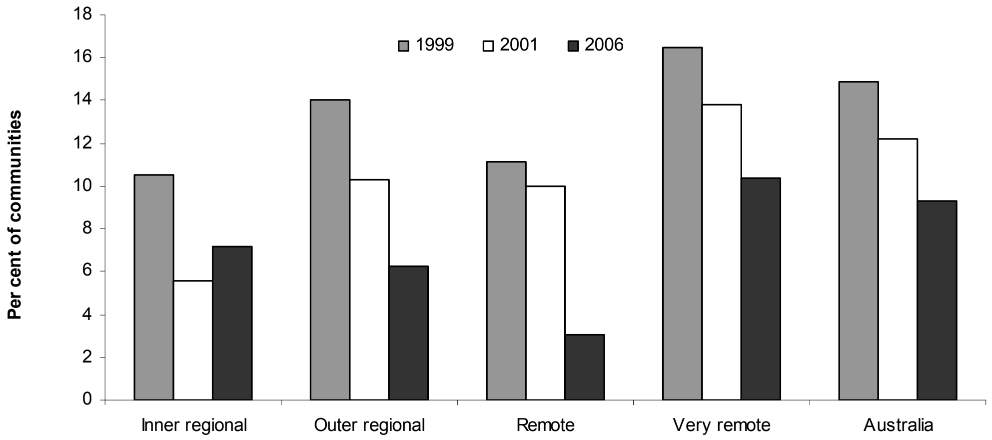
(d) Percentage calculated as a proportion of all permanent dwellings.

(e) All discrete Indigenous communities for which data on sewerage system leakages and overflows were collected. All discrete Indigenous communities with a reported usual population of 50 persons or more, and communities which have a reported usual population of less than 50 persons but which are not administered by a larger discrete Indigenous community or Resource Agency.

(f) Percentage calculated as a proportion of all discrete Indigenous communities for which data on sewerage system leakages and overflows were collected.

(g) In the 12 months before the survey.

Source: FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.



Source: AIHW analysis of the 1999 and 2001 Community Housing and Infrastructure Needs Surveys; FaHCSIA and AIHW analysis of 2006 Community Housing and Infrastructure Needs Survey.

Figure 2.01.3: Proportion of discrete Indigenous communities, with reported usual population 50 or more, experiencing 10 or more sewerage system overflows or leakages in previous 12 months, by remoteness, 1999, 2001 and 2006

Healthy Living Practices

Connection to services does not necessarily mean that the housing facilities (for example, toilets, baths, showers, washing machines, cooking facilities and refrigerators) are functional. The 2002 NATSISS collected information on the functionality of key household facilities required to support healthy living practices. This included the functionality of facilities required to support the following four Healthy Living Practices—washing people; washing clothes and bedding; removing waste safely; and improving nutrition: the ability to store, prepare and cook food. These data were self-reported by people in the households.

- In 2002, approximately 99% of Indigenous households reported that they had working facilities for washing people, 98% reported working facilities for washing clothes/bedding, 95% reported working facilities for storing/preparing food and 99% reported working sewerage systems (Table 2.01.16).
- The Northern Territory had the highest proportion of Indigenous households that reported that they did not have working facilities for washing people (6%), washing clothes/bedding (7%), storing/preparing food (24%) or working sewerage facilities (7%).
- The proportion of Indigenous households that reported that they did not have working facilities for washing people, washing clothes/bedding, storing/preparing food and working sewerage facilities was higher in remote areas (3.9%, 4.1%, 16.7% and 5.1% respectively) than in non-remote areas (0.4%, 1.7%, 2.5% and 0.3% respectively) (Table 2.01.17, Figure 2.01.4).
- A higher proportion of Indigenous households with three or more dependent children aged 0–4 years reported that they did not have working facilities for washing people or for storing/preparing food (3% and 16% respectively) than Indigenous households with no dependent children (1% and 4% respectively). The proportion of Indigenous households without working facilities for washing clothing/bedding and working sewerage facilities was similar for households with none, 1, 2 and 3 or more dependent children aged 0–4 years (Table 2.01.18).

Table 2.01.16: Indigenous households: access to functional facilities required to support the first four Healthy Living Practices, by state/territory, 2002[(a)]

	Unit	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Has working facilities for washing people(a)	%	99.4	100.0	99.2	99.2	99.3	99.7	99.6	94	99.0
Does not have working facilities for washing people	%	0.6(b)	—	0.8(c)	0.8(c)	0.7(b)	n.p.	0.4(b)	6.0(b)	1.0
Has working facilities for washing clothes/bedding(d)	%	98.5	97.8	98.6	96.9	98.8	98.8	97.1	93.1	97.9
Does not have working facilities for washing clothes/bedding	%	1.5(c)	2.2(c)	1.4(c)	3.1(b)	1.2(c)	1.2(b)	2.9(b)	6.9(b)	2.1
Has working facilities for storing/preparing food(e)	%	97.0	97.7	97.3	92.6	95.8	98.0	98.8	75.8	95.0
Does not have working facilities for storing/preparing food	%	3.0(c)	2.3(c)	2.7(c)	7.4	4.2(c)	2.0(c)	1.2(b)	24.2	5.0
Has working sewerage facilities(f)	%	99.5	n.p.	99.1	99.1	99.6	n.p.	n.p.	92.7	98.8
Does not have working sewerage facilities	%	0.5(b)	n.p.	0.9(c)	0.9(c)	0.4(b)	n.p.	n.p.	7.3(c)	1.2(c)
Total	**%**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100**	**100.0**
Total number	**'000**	**55.9**	**12.3**	**44.2**	**20.9**	**9.6**	**8.2**	**1.9**	**12.6**	**165.7**

(a) Comprises households with a working bath or shower.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(d) Comprises households with working washing machine and/or laundry tub.

(e) Comprises households with working stove/oven/cooking facilities and a kitchen sink and a working refrigerator.

(f) Comprises households with a working toilet.

Source: SCRGSP 2003; ABS 2002 NATSISS.

Table 2.01.17: Indigenous households: access to functional facilities required to support the first four Healthy Living Practices, by remoteness, 2002[(a)]

		Non-remote				Remote			
	Unit	**Major cities**	**Inner regional**	**Outer regional**	**Total**	**Remote**	**Very remote**	**Total**	**Total**
Has working facilities for washing people[(a)]	%	99.6	100.0	99.2	99.6	98.6	94.3	96.1	99.0
Does not have working facilities for washing people	%	0.4[(b)]	—	0.8[(c)]	0.4[(c)]	1.4[(c)]	5.7[(c)]	3.9[(c)]	1.0[(c)]
Has working facilities for washing clothes/bedding[(d)]	%	97.7	98.4	99.2	98.3	98.3	94.1	95.9	97.9
Does not have working facilities for washing clothes/bedding	%	2.3[(c)]	1.6[(b)]	0.8[(c)]	1.7	1.7[(c)]	5.9[(c)]	4.1[(c)]	2.1
Has working facilities for storing/preparing food[(e)]	%	97.3	97.4	97.8	97.5	94.7	75.2	83.3	95.0
Does not have working facilities for storing/preparing food	%	2.7[(c)]	2.6[(c)]	2.2	2.5	5.3	24.8	16.7	5.0
Has working sewerage facilities[(f)]	%	99.6	n.p	99.6	99.7	98.0	92.7	94.9	98.8
Does not have working sewerage facilities	%	0.4[(b)]	n.p	0.4[(c)]	0.3	2.0[(c)]	7.3[(c)]	5.1[(c)]	1.2[(c)]
All Indigenous households	**%**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
All Indigenous households (number)	**'000**	**59.0**	**37.8**	**39.7**	**136.5**	**12.1**	**17.0**	**29.2**	**165.7**

(a) Comprises households with a working bath or shower.
(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.
(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.
(d) Comprises households with working washing machine and/or laundry tub.
(e) Comprises households with working stove/oven/cooking facilities and a kitchen sink and a working refrigerator.
(f) Comprises households with a working toilet.

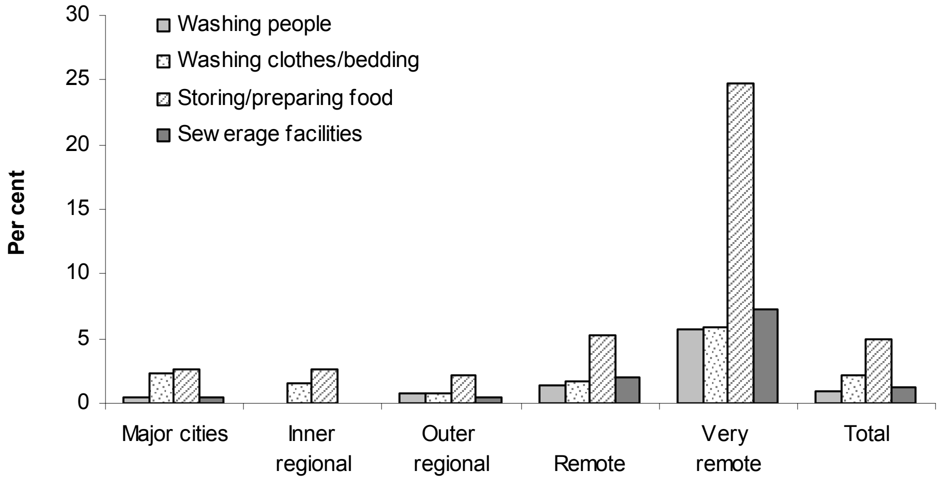
Source: SCRGSP 2003; ABS 2002 NATSISS.

Table 2.01.18: Indigenous households: access to functional facilities required to support the first four Healthy Living Practices, by number of children under 4 years in household, 2002

	Number of dependants aged 0–4 years in house									
	None		1		2		3+		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Has working facilities for washing people[(a)]	115,542	99.0	29,474	98.8	15,820	99.2	3,146	97.1	163,981	99.0
Does not have working facilities for washing people	1,127	1.0	347	1.2	125	0.8	95	2.9	1,693	1.0
Has working facilities for washing clothes/bedding[(b)]	113,924	97.6	29,239	98.1	15,824	99.2	3,212	99.1	162,200	97.9
Does not have working facilities for washing clothes/bedding	2,744	2.4	581	1.9	120	0.8	28	0.9	3,474	2.1
Has working facilities for storing/preparing food[(c)]	111,760	95.8	28,322	95.0	14,527	91.1	2,730	84.2	157,340	95.0
Does not have working facilities for storing/preparing food	4,908	4.2	1,498	5.0	1,417	8.9	510	15.8	8,334	5.0
Has working sewerage facilities[(d)]	115,428	98.9	29,286	98.2	15,821	99.2	3,199	98.7	163,735	98.8
Does not have working sewerage facilities	1,240	1.1	534	1.8	123	0.8	41	1.3	1,939	1.2

(a) Comprises households with a working bath or shower.
(b) Comprises households with working washing machine and/or laundry tub.
(c) Comprises households with working stove/oven/cooking facilities and a kitchen sink and a working refrigerator.
(d) Comprises households with a working toilet.

Source: AIHW analysis of 2002 NATSISS.



Source: AIHW analysis of 2002 NATSISS.

Figure 2.01.4: Proportion of Indigenous persons reporting lack of working facilities for each of the first four Healthy Living Practices, by remoteness, 2002

Data quality issues

Community Housing and Infrastructure Needs Survey (CHINS)

The 2006 CHINS collected information on a variety of topics from discrete Aboriginal and Torres Strait Islander communities throughout Australia, and on Indigenous organisations that provide rental housing to Aboriginal and Torres Strait Islander peoples. In 2006 CHINS information was collected on 496 Indigenous organisations which managed a total of 21,854 permanent dwellings. The majority of those dwellings were located in the Northern Territory (6,448), Queensland (6,230), New South Wales (4,176) and Western Australia (3,462) (ABS 2007).

The CHINS survey only covers discrete Indigenous communities. In 2006 the CHINS collected information from 1,187 discrete indigenous communities which included approximately 92,960 Aboriginal and Torres Strait Islanders or 18% of the total Indigenous population. CHINS data are collected every 5 years from key personnel in Indigenous communities and housing organisations knowledgeable about housing and infrastructure issues.

The estimates are not subject to sampling error as the CHINS was designed as a complete enumeration of discrete Indigenous communities. However, data could not be obtained from a small number of communities. In addition, the community population was often estimated by community representatives without reference to records.

Further information on the CHINS can be found in Housing and infrastructure in Aboriginal and Torres Strait Islander communities, 2006 *(ABS 2007).*

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSISS uses the standard Indigenous status question. The NATSISS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problems inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSISS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions (ABS 2004).

Non-Indigenous comparisons are available through the General Social Survey. Time series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey (ABS 1995).

In remote communities there were some modifications to the NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSISS data quality issues can be found in the NATSISS 2002 publication (ABS 2004).

National Reporting Framework for Indigenous Housing administrative data collection

The National Reporting Framework (NRF) for Indigenous Housing was developed to provide a framework for reporting across all Indigenous housing programs and on the implementation and outcomes of the national program Building a Better Future: Indigenous Housing to 2010. The NRF comprises a set of 38 performance indicators for national reporting on Indigenous housing. It includes the Indigenous-specific programs Indigenous Community Housing and State Owned and Managed Indigenous Housing, Indigenous access to mainstream housing programs, as well as broader measures such as tenure type and homelessness.

(continued)

Data quality issues (continued)

The NRF administrative data collection, which is essentially a data collection for Indigenous community housing, provides another source of data. For the purposes of this measure, the NRF data collection collects data on the number and proportion of dwellings not connected to water, sewerage and electricity. The data definitions used were the same as those used in CHINS (ABS & AIHW 2005).

There is a commitment by jurisdictions to further develop the administrative data on Indigenous community housing through the collection of data at the household and dwelling level. The Agreement on National Indigenous Housing Information provides a framework for improving the quality of the national data on Indigenous housing.

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2.02 Overcrowding in housing

The proportion of Aboriginal and Torres Strait Islander peoples living in overcrowded households

Data sources

Data for this measure come from the 2006 Census of Population and Housing and the 2004–05 National Aboriginal and Torres Strait Islander Health Survey, the 2002 National Aboriginal and Torres Strait Islander Social Survey and 2001 Census of Population and Housing.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at 5-yearly intervals with 2006 the most recent and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done for the statistics used in this measure.

Measures of overcrowding

There is no single standard measure of housing overcrowding in Australia. The Canadian National Occupancy Standard and the Proxy Occupancy Standard are commonly used to measure overcrowding and are described below.

Canadian National Occupancy Standard

The Canadian National Occupancy Standard is most widely used in Australia. This standard specifies the number of bedrooms required in a dwelling based on the numbers, age, sex and relationships of household members. Households that require one more bedroom to meet the standard are considered to experience 'a moderate degree of overcrowding', whereas households requiring two or more additional bedrooms are said to experience a 'high degree of overcrowding'.

The Canadian National Occupancy Standard states that:

- there should be no more than two persons per bedroom
- a household of one unattached individual may reasonably occupy a bed-sit (that is, have no bedroom)
- parents or couples may share a bedroom
- children less than 5 years of age of different sexes may reasonably share a bedroom
- children 5 years of age or over of the opposite sex should not share a bedroom
- children less than 18 years of age and of the same sex may reasonably share a bedroom
- single household members aged 18 years or over should have a separate bedroom (AIHW 2005).

Most of the data presented for this indicator are based on the Canadian National Occupancy Standard.

Proxy Occupancy Standard

The Proxy Occupancy Standard has been used recently to assess the extent of overcrowding in Commonwealth–State Housing Agreement data collections for State Owned and Managed Indigenous Housing, public housing and community housing. The Proxy Occupancy Standard has been endorsed by the Standing Committee on Indigenous Housing. Households that require two or more bedrooms to meet the Proxy Occupancy Standard are considered overcrowded.

The Proxy Occupancy Standard specifies that:

- a single adult or group of adults should have one bedroom per adult
- a couple with no children should have two bedrooms
- a sole parent or couple with one child should have two bedrooms
- a sole parent or couple with two or three children should have three bedrooms
- a sole parent or couple with four children should have four bedrooms (AIHW 2005).

The Proxy Occupancy Standard does not require information on the age and sex of children and it is therefore easier to collect the data required. However, it allows for children to share bedrooms only in some cases, which may lead to an overestimation of overcrowding. In the *National housing assistance data dictionary version 3* (AIHW 2006), the Proxy Occupancy Standard has been modified to adequately specify needs for large or multi-family households.

The revised criteria are that for sole-parent or couple households with more than four children, the dwelling size in terms of bedrooms should be the same value as the total number of children in the household. Where more than one of the groups specified in the occupancy standard is present, the needs of the two or more groups should be added together. For example, a sole parent with one child living with the sole parent's parents (three generations) would require four bedrooms, that is, two bedrooms for the sole parent and child and two bedrooms for the married couple (AIHW 2006).

Data analyses

Comparison of NATSIHS, NATSISS and Census data

Both the NATSIHS and the Census collected information on the number of additional bedrooms required, based on the Canadian National Occupancy Standard and the Proxy Occupancy Standard, as well as the number of usual residents per household for Indigenous and other Australians. The NATSISS collected information on the number of additional bedrooms required based on the Canadian National Occupancy Standard for Indigenous households only, as well as the number of usual residents per household.

When comparing the overcrowding data for Indigenous persons aged 18 years and over recorded in the Census with the NATSIHS, the results are similar. Both the 2004–05 NATSIHS and 2006 Census estimated that 25% of Indigenous persons aged 18 years and over lived in households that required one or more additional bedrooms as classified by the Canadian National Occupancy Standard, and 13–14% lived in households that required two or more additional bedrooms. Data from the 2002 NATSISS also showed similar findings—26% of Indigenous persons aged 15 years and over were estimated to be living in overcrowded households based on the Canadian National Occupancy Standard.

This measure presents data included in the 2006 edition of this report for persons aged 18 years and over (2004–05 NATSIHS data) and for persons aged 15 years and over (2002 NATSISS data), and new data from the 2006 Census for persons aged 18 years and over. Data on overcrowding from the NATSIHS and NATSISS are presented first followed by data from the 2006 Census.

NATSIHS and NATSISS data

The 2004–05 NATSIHS and the 2002 NATSISS collected information on the number of people and the number of bedrooms in each household. These data are presented in the following tables. Note that most tables in this measure show *total* figures for all additional bedrooms required ('one or more additional bedrooms required'), as well as figures for the 'high degree of overcrowding' ('two or more additional bedrooms required').

- The 2004–05 NATSIHS estimated that there were 62,924 Indigenous Australians aged 18 years and over living in overcrowded households according to the Canadian National Occupancy Standard (one or more additional bedroom required). This represented 25% of all Indigenous people aged 18 years and over. There were around 650,000 other Australians living in overcrowded households in 2004–05, representing 4% of all other people aged 18 years and over (Table 2.02.1). Approximately 13% of Indigenous people were living in households that required two or more additional bedrooms compared with 1% of other people.
- The 2002 NATSISS estimated that there were 72,600 Indigenous Australians aged 15 years and over living in overcrowded households according to the Canadian National

Occupancy Standard. This represented 26% of all Indigenous people aged 15 years and over (Table 2.02.2).

Overcrowding by state/territory

- In 2004–05, the Northern Territory had the highest proportion of Indigenous persons aged 18 years and over living in overcrowded households (64%) and New South Wales, Victoria, Tasmania and the Australian Capital Territory had the lowest (between 9% and 10%) (Table 2.02.1).
- In 2002, the Northern Territory had the highest proportion of Indigenous persons aged 15 years and over living in overcrowded households (63%), followed by Queensland (26%) and Western Australia (25%). Tasmania and the Australian Capital Territory had the lowest proportion of Indigenous persons living in overcrowded households (11% and 14% respectively) (Table 2.02.2; Figure 2.02.1).

Table 2.02.1: Number and proportion of people aged 18 years and over living in overcrowded households(a), by Indigenous status and state/territory, 2004–05

	NSW	Vic	Qld	WA	SA	Tas and ACT	NT(b)	Australia
			One or more additional bedrooms required					
Estimated number of Indigenous people living in overcrowded households	6,848	1,392	18,906	10,189	3,290	1,134	21,166	62,924
% of Indigenous people living in overcrowded households	9.3	8.6	26.9	27.5	22.7	9.7	63.8	24.5
Estimated number of other people living in overcrowded households	270,971	212,798	76,008	37,791	33,375	12,174	7,026	650,143
% of other people living in overcrowded households	5.5	5.7	2.7	2.7	2.9	2.1	7.8	4.4
Rate ratio	1.7	1.5	9.9	10.3	7.8	4.7	8.2	5.6
			Two or more additional bedrooms required					
Estimated number of Indigenous people living in overcrowded households	1,639	503	8,690	4,903	1,851	328	15,918	33,831
% of Indigenous people living in overcrowded households	2.2	3.1	12.4	13.2	12.8	2.8	48.0	13.2
Estimated number of other people living in overcrowded households	56,972	23,049	14,323	10,950	6,747	903	687	113,631
% of other people living in overcrowded households	1.1	0.6	0.5	0.8	0.6	0.2	0.8	0.8
Rate ratio	1.9	5.1	24.1	17.1	21.7	18.2	62.8	17.1

(a) Based on Canadian National Occupancy Standard.

Note: Proportions calculated from denominator excluding dwellings for which the number of bedrooms was not stated.

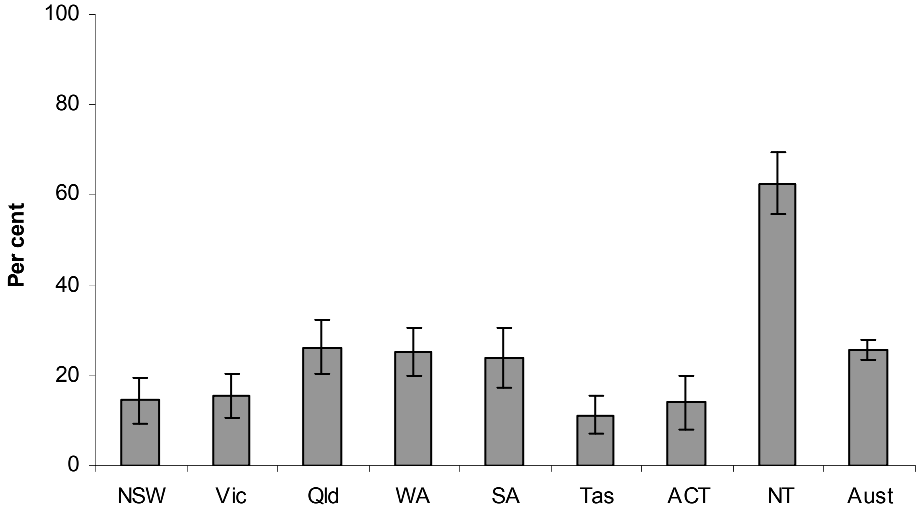
Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Table 2.02.2: Number and proportion of Indigenous Australians aged 15 years and over living in overcrowded households(a), by state/territory, 2002

State/territory	Number	Proportion (%)
New South Wales	12,000	14.4
Victoria	2,700	15.5
Queensland	20,000	26.2
Western Australia	9,900	25.1
South Australia	3,800	23.9
Tasmania	1,200	11.1
Australian Capital Territory	400	14.0
Northern Territory	22,600	62.5
Australia	**72,600**	**25.7**

(a) Based on Canadian National Occupancy Standard.

Source: SCRGSP 2005; ABS 2002 NATSISS.



Note: Overcrowding based on Canadian National Occupancy Standard.

Source: SCRGSP 2005: ABS 2002 NATSISS

Figure 2.02.1: Proportion of Indigenous Australians aged 15 years and over living in overcrowded housing, by state/territory, 2002

Overcrowding by remoteness

- In 2004–05, the proportion of Indigenous people aged 18 years and over living in overcrowded households was much higher in Remote and Very Remote areas (50%) than in Major Cities (12%) (Table 2.02.3).
- In 2002, overcrowding also increased with remoteness with 62% of Indigenous people aged 15 years and over living in overcrowded households in Very Remote areas, 31% in remote areas and only 16% in non-remote areas (Table 2.02.4; Figure 2.02.2).

Table 2.02.3: Number and proportion of people aged 18 years and over living in overcrowded households[(a)], by Indigenous status and remoteness, 2004–05

	Major Cities	Inner Regional	Outer Regional	Remote or Very Remote(b)	Australia
			One or more additional bedrooms required		
Estimated number of Indigenous people living in overcrowded households	9,548	5,439	12,012	35,925	62,924
% of Indigenous people living in overcrowded households(c)	12.2	10.6	21.9	49.6	24.5
Estimated number of other people living in overcrowded households	507,443	86,640	48,320	7,740	650,143
% of other people living in overcrowded households(c)	5.0	3.0	3.1	4.3	4.4
Rate ratio	2.4	3.5	7.1	11.6	5.6
			Two or more additional bedrooms required		
Estimated number of Indigenous people living in overcrowded households	3,910	1,291	4,792	23,838	33,831
% of Indigenous people living in overcrowded households(c)	5.0	2.5	8.7	32.9	13.2
Estimated number of other people living in overcrowded households	97,301	9,951	5,591	788	113,631
% of other people living in overcrowded households(c)	1.0	0.3	0.4	0.4	0.8
Rate ratio	5.2	7.3	24.3	75.3	17.1

(a) Based on Canadian National Occupancy Standard.

(b) The non-Indigenous sample does not contain the Very Remote classification.

(c) Proportions calculated from denominator excluding dwellings for which the number of bedrooms was not stated.

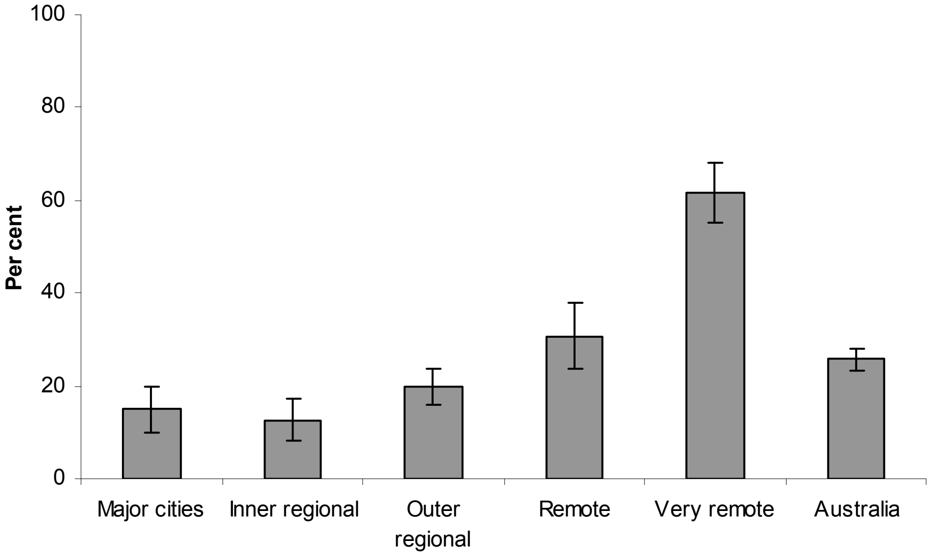
Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Table 2.02.4: Number and proportion of Indigenous Australians aged 15 years and over living in overcrowded households[(a)], by remoteness area, 2002

Remoteness category	Number	Proportion (%)
Major Cities	12,800	14.9
Inner Regional	6,900	12.6
Outer Regional	12,700	19.9
Total non-remote	*32,500*	*15.8*
Remote	7,500	30.8
Very Remote	32,600	61.7
Total remote	*40,100*	*52.0*
Total	**72,600**	**25.7**

(a) Based on Canadian National Occupancy Standard.

Source: SCRGSP 2005: ABS 2002 NATSISS



Note: Overcrowding based on Canadian National Occupancy Standard.

Source: SCRGSP 2005: ABS 2002 NATSISS.

Figure 2.02.2: Proportion of Indigenous Australians aged 15 years and over living in overcrowded housing, by remoteness, 2002

Overcrowding by tenure type

- In 2004–05, of Indigenous households that were overcrowded, 83% were renters and 13% were home owners (Table 2.02.5).

Table 2.02.5: Overcrowded Indigenous households using the Canadian National Occupancy Standard, by state/territory and tenure type, 2004–05

	NSW	Vic	Qld	WA	SA	Tas and ACT	NT	Aust
Owner without a mortgage	1.5	7.2	3.4	0.7	2.3	1.5	0.4	2.0
Owner with a mortgage	18.8	13.6	15.8	5.1	4.5	24.6	2.4	11.1
Renter (excludes boarders)	79.7	71.7	78.6	84.9	85.6	70.8	94.0	83.2
Other	—	7.5	2.2	6.6	3.1	2.2	2.0	2.8
Total[(a)]	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Includes not stated.

Note: Non-Indigenous comparisons are not available as information on tenure type was not collected in 2004–05 NHS.

Source: AIHW analysis of 2004–05 NATSIHS.

Overcrowding by selected health and socioeconomic characteristics

- In 2004–05, Indigenous Australians aged 15 years and over were more likely to be living in overcrowded households if their household income was in the lowest (1st) quintile rather than the highest (5th) quintile (27% compared with 1%); if the highest year of school completed was Year 9 or below than if Year 12 was the highest year of school completed (28% compared with 15%); and if they were unemployed or not in the labour force than if they were employed (34% and 29% compared with 18%) (Table 2.02.6).

Table 2.02.6: Proportion[(a)] of people aged 15 years and over living in overcrowded households[(b)], by Indigenous status, by selected population and socioeconomic characteristics, 2004–05

	Indigenous Australians		Non-Indigenous Australians	
	Overcrowded	**Not overcrowded**	**Overcrowded**	**Not overcrowded**
Self-assessed health status				
Excellent/very good	20.7	79.3	4.3	95.7
Good	25.1	74.9	5.1	94.9
Fair/poor	21.6	78.4	6.0	94.0
Household income				
1st quintile (lowest)	26.9	73.1	7.0	93.0
5th quintile (highest)	1.1	98.9	2.1	97.9
Highest year of school completed				
Year 12	14.6	85.4	4.4	95.6
Year 9 or below	27.9	72.1	10.0	90.0
Whether has non-school qualification				
Has a non-school qualification	18.3	81.7	4.4	95.6
Does not have a non-school qualification	25.5	74.5	5.4	94.6
Employment				
Employed	18.3	81.7	4.1	95.9
Unemployed	34.4	65.6	6.2	93.8
Not in the labour force	29.0	71.0	7.0	93.0

(d) Proportions are age-standardised using the Australian 2001 standard population.

(e) Based on Canadian National Occupancy Standard.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

All persons overcrowding

- The 2004–05 NATSIHS estimated that there were 127,546 Indigenous Australians living in overcrowded households according to the Canadian National Occupancy Standard (one or more additional bedrooms required). This represented 27% of all Indigenous persons. There were around 1 million other Australians living in overcrowded households in 2004–05, representing 5% of all other persons (Table 2.02.7). Approximately 14% of Indigenous people were living in households that required two or more additional bedrooms compared with 1% of other people.
- In 2004–05, the Northern Territory had the highest proportion of Indigenous people living in overcrowded households (65%); and New South Wales, Victoria, Tasmania and the Australian Capital Territory had the lowest (between 10% and 12%) (Table 2.02.7).
- In 2004–05, the proportion of Indigenous people living in overcrowded households was much higher in Remote and Very Remote areas (53%) than in Major Cities (14%) (Table 2.02.8).

Table 2.02.7: Number and proportion of all persons living in overcrowded households[(a)], by Indigenous status and state/territory, 2004–05

	NSW	Vic	Qld	WA	SA	Tas and ACT	NT[(b)]	Australia
				One or more additional bedrooms required				
Estimated number of Indigenous people living in overcrowded households	16,579	3,355	37,577	23,140	6,550	2,302	38,041	127,546
% of Indigenous people living in overcrowded households	11.9	11.4	28.9	33.6	24.6	10.4	65.3	26.9
Estimated number of other people living in overcrowded households	412,163	331,962	122,118	55,346	57,950	18,846	12,306	1,010,690
% of other people living in overcrowded households	6.4	6.8	3.3	3.0	3.9	2.4	9.8	5.2
Rate ratio	1.9	1.7	8.7	11.3	6.3	4.2	6.7	5.1
				Two or more additional bedrooms required				
Estimated number of Indigenous people living in overcrowded households	4,347	837	17,374	10,794	3,463	589	28,083	65,487
% of Indigenous people living in overcrowded households	3.1	2.8	13.4	15.7	13.0	2.7	48.2	13.8
Estimated number of other people living in overcrowded households	83,955	32,397	19,459	14,264	10,425	1,693	2,960	165,154
% of other people living in overcrowded households	1.3	0.7	0.5	0.8	0.7	0.2	2.4	0.9
Rate ratio	2.4	4.3	25.3	20.5	18.5	12.1	20.4	16.1

(a) Based on Canadian National Occupancy Standard.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Table 2.02.8: Number and proportion of all persons living in overcrowded households[(a)], by Indigenous status and remoteness, 2004–05

	Major Cities	Inner Regional	Outer Regional	Remote or Very Remote	Australia
			One or more additional bedrooms required		
Number of Indigenous persons	20,632	13,230	27,513	66,170	127,546
Proportion	14.3	13.8	25.3	52.5	26.9
Number of other persons	760,953	152,683	85,480	11,574	1,010,690
Proportion	5.8	3.9	4.1	5.0	5.2
Rate ratio	2.5	3.5	6.1	10.5	5.1
			Two or more additional bedrooms required		
Number of Indigenous persons	7,852	3,412	11,559	42,664	65,487
Proportion	5.4	3.6	10.6	33.9	13.8
Number of other persons	135,218	16,256	11,620	2,060	165,154
Proportion	1.0	0.4	0.6	0.9	0.9
Rate ratio	5.3	8.6	18.9	37.9	16.1

(a) Based on Canadian National Occupancy Standard.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Census data

The majority of tables presented below are based on the Canadian National Occupancy Standard (one or more additional bedrooms required).

- The 2006 Census estimated that there were 50,515 Indigenous Australians aged 18 years and over living in overcrowded households. This represented 25% of all Indigenous people aged 18 years and over. There were 608,846 other Australians living in overcrowded households in 2006, representing 5% of all other people aged 18 years and over (Table 2.02.9). Approximately 14% of Indigenous people were living in households that required two or more additional bedrooms compared with 1% of other people.

Overcrowding by state/territory

- In 2006, the Northern Territory had the highest proportion of Indigenous persons aged 18 years and over living in overcrowded households (64%) and Tasmania had the lowest (9%) (Table 2.02.9; Figure 2.02.3).
- Indigenous Australians were more likely than other Australians to be living in overcrowded households in all states and territories. The largest disparities were in Western Australia (rate ratio of 12) and the Northern Territory (rate ratio of 10).
- In 2006, the Northern Territory also had the highest proportion of Indigenous household which were overcrowded (39%) and Tasmania had the lowest (7%) (Table 2.02.10).

Table 2.02.9: Number and proportion of persons[a] aged 18 years and over living in overcrowded households[b], by Indigenous status and state/territory, 2006

	NSW and ACT	Vic	Qld	WA	SA	Tas	NT	Australia[c]
				One or more additional bedrooms required				
Estimated number of Indigenous people living in overcrowded households	8,639	1,593	13,716	7,349	2,435	732	16,028	50,515
% of Indigenous people living in overcrowded households[d]	13.7	11.6	24.7	30.2	21.4	9.0	64.2	25.1
Estimated number of other people living in overcrowded households	263,463	165,692	97,645	31,220	34,975	10,477	5,231	608,846
% of other people living in overcrowded households[d]	6.1	5.2	4.1	2.6	3.5	3.5	6.7	4.9
Rate ratio	2.2	2.2	6.0	11.6	6.1	2.6	9.6	5.1
				Two or more additional bedrooms required				
Estimated number of Indigenous people living in overcrowded households	2,397	397	6,619	4,128	1,173	166	12,571	27,468
% of Indigenous people living in overcrowded households[d]	3.8	2.9	11.9	17.0	10.3	2.0	50.3	13.7
Estimated number of other people living in overcrowded households	56,893	34,691	18,923	5,781	6,369	1,768	1,234	125,686
% of other people living in overcrowded households[d]	1.3	1.1	0.8	0.5	0.6	0.6	1.6	1.0
Rate ratio	2.9	2.6	14.9	34.0	17.2	3.3	31.4	13.7

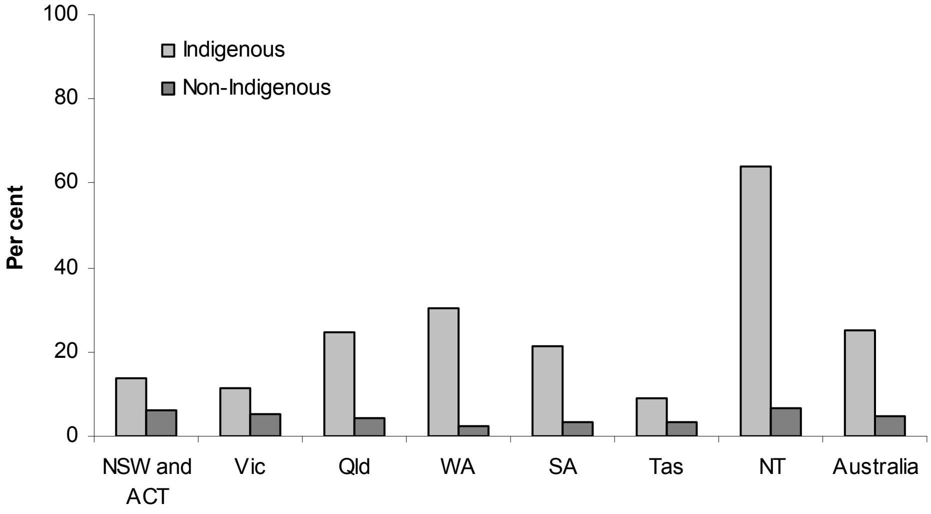
(a) Excludes visitors.

(b) Based on Canadian National Occupancy Standard.

(c) Includes other territories.

(d) Proportions calculated from denominator excluding dwellings for which the number of bedrooms was not stated.

Source: ABS and AIHW analysis of 2006 Census data.



Note: Overcrowding based on Canadian National Occupancy Standard.

Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.02.3: Proportion of persons aged 18 years and over living in overcrowded households, by Indigenous status and state/territory, 2006

Table 2.02.10: Number and proportion of overcrowded households[(a)], by Indigenous status and state/territory, 2006

	NSW & ACT	Vic	Qld	WA	SA	Tas	NT	Australia(b)
			One or more additional bedrooms required					
Number of overcrowded Indigenous households	5,336	1,170	6,227	2,615	1,061	532	3,777	20,725
% of Indigenous households overcrowded(c)	9.9	9.1	14.8	16.1	11.8	7.2	38.6	13.7
Number of overcrowded other households	86,046	52,321	32,414	10,309	11,516	3,722	1,754	198,117
% of other households overcrowded(c)	3.8	3.1	2.5	1.6	2.1	2.3	4.2	3.0
Rate ratio	2.6	2.9	5.9	10.1	5.6	3.1	9.2	4.6
			Two or more additional bedrooms required					
Number of overcrowded Indigenous households	1,097	240	2,094	1,062	331	95	2,398	7,319
% of Indigenous households overcrowded(c)	2.0	1.9	5.0	6.5	3.7	1.3	24.5	4.8
Number of overcrowded other households	14,532	8,685	5,100	1,565	1,698	515	331	32,428
% of other households overcrowded(c)	0.6	0.5	0.4	0.2	0.3	0.3	0.8	0.5
Rate ratio	3.3	3.8	12.5	32.5	12.3	4.3	30.6	9.6

(a) Based on Canadian National Occupancy Standard.

(b) Includes other territories.

(c) Proportions calculated from denominator excluding dwellings for which the number of bedrooms was not stated.

Source: ABS and AIHW analysis of 2006 Census data.

Overcrowding by remoteness

- In 2006, the proportion of Indigenous people aged 18 years and over living in overcrowded households (one or more additional bedrooms required) was much higher in Remote and Very Remote areas (54%) than in Major Cities (13%) (Table 2.02.11).
- Indigenous Australians were more likely to be living in overcrowded households than other Australians across all remoteness categories. Rate ratios ranged from 2 in Major Cities to 12 in Remote and Very Remote areas.
- In 2006, the proportion of Indigenous overcrowded households was also much higher in Remote and Very Remote areas (32%) than in Major Cities (9%) (Table 2.02.12).

Table 2.02.11: Number and proportion of persons[(a)] aged 18 years and over living in overcrowded households[(b)], by Indigenous status and remoteness, 2006

	Major Cities	Inner Regional	Outer Regional	Remote or Very Remote	Australia[(c)]
			One or more additional bedrooms required		
Estimated number of Indigenous people living in overcrowded households	8,480	5,884	8,776	27,374	50,514
% of Indigenous people living in overcrowded households[(d)]	12.6	13.9	21.2	54.2	25.1
Estimated number of other people living in overcrowded households	480,036	79,575	40,846	8,389	608,846
% of other people living in overcrowded households[(d)]	5.4	3.3	3.7	4.4	4.9
Rate ratio	2.3	4.2	5.7	12.3	5.1
			Two or more additional bedrooms required		
Estimated number of Indigenous people living in overcrowded households	2,252	1,760	3,502	19,954	27,468
% of Indigenous people living in overcrowded households[(d)]	3.4	4.2	8.5	39.5	13.7
Estimated number of other people living in overcrowded households	102,044	13,741	7,914	1,985	125,684
% of other people living in overcrowded households[(d)]	1.2	0.6	0.7	1.0	1.0
Rate ratio	2.8	7.0	12.1	39.5	13.7

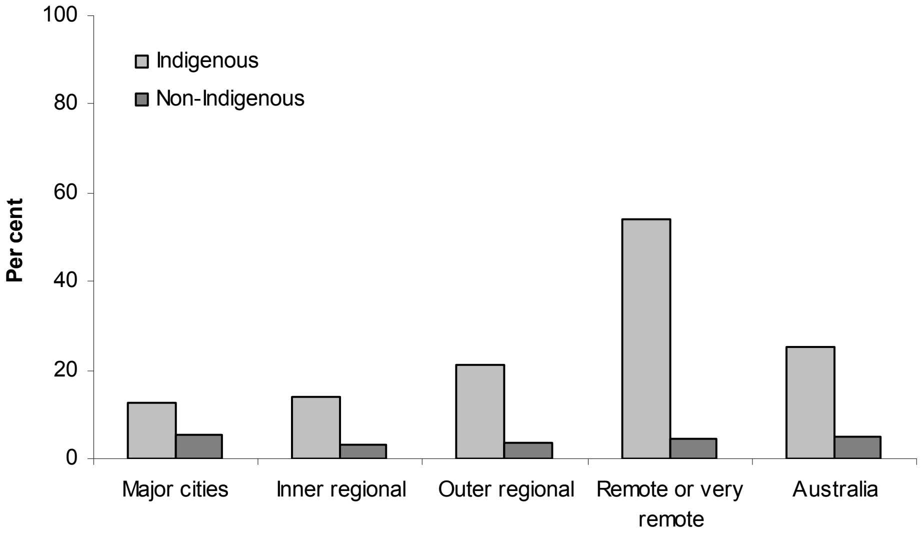
(a) Excludes visitors.

(b) Based on Canadian National Occupancy Standard.

(c) Includes migratory.

(d) Proportions calculated from denominator excluding dwellings for which the number of bedrooms was not stated.

Source: ABS and AIHW analysis of 2006 Census data.



Note: Overcrowding based on Canadian National Occupancy Standard.

Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.02.4: Proportion of persons aged 18 years and over living in overcrowded households, by Indigenous status and remoteness, 2006

Table 2.02.12: Number and proportion of overcrowded households[(a)], by Indigenous status and remoteness, 2006

	Major Cities	Inner Regional	Outer Regional	Remote or Very Remote	Australia[(b)]
	One or more additional bedrooms required				
Number of overcrowded Indigenous households	5,705	3,726	4,268	7,033	20,725
% of Indigenous households overcrowded[(c)]	9.4	10.0	13.4	32.3	13.7
Number of overcrowded other households	151,946	28,302	14,922	2,946	198,117
% of other households overcrowded[(c)]	3.3	2.1	2.4	2.8	3.0
Rate ratio	2.8	4.8	5.6	11.5	4.6
	Two or more additional bedrooms required				
Number of overcrowded Indigenous households	1,201	814	1,203	4,103	7,319
% of Indigenous households overcrowded[(c)]	2.0	2.2	3.8	18.9	4.8
Number of overcrowded other households	25,358	4,103	2,461	508	32,428
% of other households overcrowded[(c)]	0.6	0.3	0.4	0.5	0.5
Rate ratio	3.3	7.3	9.5	37.8	9.6

(a) Based on Canadian National Occupancy Standard.

(b) Includes migratory.

(c) Proportions calculated from denominator excluding dwellings for which the number of bedrooms was not stated

Source: ABS and AIHW analysis of 2006 Census data.

Overcrowding by tenure type

Canadian National Occupancy Standard

- In 2006, household overcrowding varied by tenure type. Approximately 40% of Indigenous households in co-operative/community/church group housing, 16% of state/territory housing authority households, 11% of private and other renter households and 7% of home owners or purchaser households were classified as overcrowded according to the Canadian National Occupancy Standard (Table 2.02.13).
- Comparatively, approximately 4% of non-Indigenous households in housing co-operative /community/church group housing, 5% of state/territory housing authority households, 6% of private renter households and 2% of home owners or purchaser households were classified as overcrowded according to the Canadian National Occupancy standard in 2006 (Table 2.02.13).
- In 2006, 32% of Indigenous Australians aged 18 years and over who were renters and 10% who were home owners/purchasers lived in overcrowded households according to the Canadian National Occupancy Standard. Comparatively, 9% of non-Indigenous Australians who were renters and 3% who were home owners/purchasers lived in overcrowded households (Table 2.02.14).

Proxy Occupancy Standard

- In 2006, household overcrowding varied by tenure type with 31% of Indigenous households in co-operative/community/church group housing being overcrowded, 9% of state/territory housing authority households, 5% of private and other renter households and 5% of home owners or purchaser households were classified as overcrowded according to the Proxy Occupancy Standard. Comparatively, for other households, overcrowding did not vary much with tenure type, with approximately 1–2% of other households classified as overcrowded for each tenure type according to the Proxy Occupancy Standard (Table 2.02.15).
- The proportion of Indigenous Australians aged 18 years and over living in overcrowded households varied by tenure type in 2006 according to the Proxy Occupancy Standard; 54% of Indigenous Australians living in housing co-operative/community of church group housing, 18% of Indigenous Australians in state/territory housing authority housing, 9% of private or other renters and 7% of home owners/purchases living in overcrowded households in 2006. Comparatively, the proportion of other Australians living in overcrowded households did not vary much by tenure type, with 3–5% living in overcrowded households for each tenure type (Table 2.02.16).

Table 2.02.13: Number and proportion of overcrowded households, using the Canadian National Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

Tenure type	NSW & ACT	Vic	Qld	WA	SA	Tas	NT	Aust[(a)]
			No. of overcrowded Indigenous households					
Home owner/purchaser	1,323	318	1,081	366	194	187	218	3,687
Renter								
State or territory housing authority	1,353	323	1,511	894	390	133	366	4,970
Housing co-operative/community/church group	478	50	1,253	811	223	6	2,743	5,567
Private and other[(b)]	1,930	411	1,997	392	198	174	232	5,337
Not stated	68	12	91	21	12	n.p.	26	233
Total rented	*3,829*	*796*	*4,852*	*2,118*	*823*	*316*	*3,367*	*16,107*
Other tenure types[(c)]	138	40	246	109	31	22	163	752
Total dwellings[(d)]	**5,339**	**1,170**	**6,232**	**2,615**	**1,064**	**530**	**3,775**	**20,734**
			Proportion of overcrowded Indigenous households[(e)]					
Home owner/purchaser	6.6	6.0	7.9	7.2	6.1	4.8	11.6	6.9
Renter								
State or territory housing authority	11.4	12.3	21.5	20.5	14.5	10.7	24.9	15.9
Housing co-operative/community/church group	17.9	15.6	33.0	41.7	36.9	8.7	60.8	39.9
Private and other[(b)]	11.0	10.1	12.8	9.5	9.1	9.2	16.4	11.4
Not stated	14.9	13.3	24.1	17.9	14.5	7.7	43.3	19.0
Total rented	11.8	*11.2*	*18.1*	*20.1*	*14.9*	*9.8*	*45.1*	*17.3*
Other tenure types[(c)]	11.2	11.4	20.7	19.4	14.6	11.4	39.9	18.1
Total dwellings[(d)]	**9.8**	**9.0**	**14.8**	**16.0**	**11.8**	**7.2**	**38.5**	**13.6**

Table 2.02.13 (continued): Number and proportion of overcrowded households, using the Canadian National Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

Tenure type	NSW & ACT	Vic	Qld	WA	SA	Tas	NT	Aust[(a)]
			No. of overcrowded non-Indigenous households					
Home owner/purchaser	38,645	27,167	14,395	5,183	6,066	1,980	858	94,314
Renter								
State or territory housing authority	5,378	3,338	1,877	595	941	413	138	12,692
Housing co-operative/community/church group	539	199	215	35	153	34	13	1,188
Private and other[(b)]	38,008	19,276	14,355	3,921	3,826	1,135	610	81,134
Not stated	431	255	219	74	80	22	7	1,091
Total rented	*44,356*	*23,068*	*16,666*	*4,625*	*5,000*	*1,604*	*768*	*96,105*
Other tenure types[(c)]	1,986	1,244	1,022	331	289	102	106	5,086
Total dwellings[(d)]	**86,058**	**52,334**	**32,418**	**10,308**	**11,515**	**3,722**	**1,752**	**198,151**
			Proportion of overcrowded non-Indigenous households[(e)]					
Home owner/purchaser	2.5	2.2	1.7	1.1	1.6	1.7	3.7	2.0
Renter								
State or territory housing authority	5.3	6.7	4.9	2.6	2.6	4.8	5.0	4.9
Housing co-operative/community/church group	4.7	3.0	3.9	1.3	2.8	3.5	3.7	3.6
Private and other[(b)]	7.4	5.7	4.4	2.9	4.1	4.0	4.7	5.6
Not stated	7.1	7.0	5.7	4.8	4.9	4.3	5.9	6.3
Total rented	*7.0*	*5.8*	*4.5*	*2.8*	*3.7*	*4.2*	*4.7*	*5.5*
Other tenure types[(c)]	4.2	3.8	3.5	1.9	2.1	2.6	5.4	3.5
Total dwellings[(d)]	**3.8**	**3.1**	**2.5**	**1.6**	**2.1**	**2.3**	**4.2**	**3.0**

(continued)

Table 2.02.13 (continued): Number and proportion of overcrowded households, using the Canadian National Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

(a) Includes other territories.

(b) Includes dwellings being rented from a real estate agent, parent/other relative or other person, dwellings being rented through a 'Residential park (includes caravan parks and marinas)', 'Employer—government (includes Defence Housing Authority)' and 'Employer—other employer' (private).

(c) Includes dwellings being purchased under a rent/buy scheme, occupied rent-free, occupied under a life tenure type and other tenure type not further defined.

(d) Includes tenure type not stated.

(e) Proportions have been calculated on all occupied private dwellings excluding those where number of bedrooms was not stated. Includes not stated state/territory.

Note: Households are considered overcrowded if one or more additional bedrooms are required to satisfy the Canadian National Occupancy Standard.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.02.14: Number and proportion of persons aged 18 years and over living in overcrowded households, using the Canadian National Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

Tenure type	**NSW & ACT**	**Vic**	**Qld**	**WA**	**SA**	**Tas**	**NT**	**Aust**[(a)]
				No. of Indigenous persons living in overcrowded households				
Home owner/purchaser	1,987	406	1,696	752	305	286	479	5,911
Renter								
State or territory housing authority	2,413	525	3,676	2,286	826	184	991	10,901
Housing co-operative/community/church group	1,384	104	4,357	3,216	908	9	13,364	23,351
Private and other[(b)]	2,429	469	2,893	666	264	209	415	7,345
Not stated	136	21	204	67	31	n.p.	107	569
Total renters	*6,362*	*1,119*	*11,130*	*6,235*	*2,029*	*405*	*14,877*	*42,166*
Other tenure types[(c)]	207	48	752	307	77	35	555	1,996
Total dwellings[(d)]	**8,639**	**1,593**	**13,716**	**7,349**	**2,435**	**732**	**16,028**	**50,515**
				Proportion of Indigenous persons living in overcrowded households [(e)]				
Home owner/purchaser	8.5	7.0	10.7	12.3	8.4	6.3	19.7	9.6
Renter								
State or territory housing authority	17.0	18.4	34.0	32.6	23.1	14.3	41.3	25.9
Housing co-operative/community/church group	28.9	25.1	49.6	60.4	60.5	11.8	77.9	61.3
Private and other[(b)]	13.5	11.9	16.9	14.5	12.4	11.0	23.3	14.9
Not stated	20.9	21.4	34.2	33.7	25.8	7.7	65.6	30.5
Total renters	*16.9*	*15.3*	*29.9*	*36.4*	*27.7*	*12.3*	*69.2*	*32.1*
Other tenure types[(c)]	14.7	12.2	38.6	34.8	28.2	16.2	62.5	33.1
Total dwellings[(d)]	**13.7**	**11.6**	**24.7**	**30.2**	**21.4**	**9.0**	**64.2**	**25.1**

(continued)

Table 2.02.14 (continued): Number and proportion of persons aged 18 years and over living in overcrowded households, using the Canadian National Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

Tenure type	**NSW & ACT**	**Vic**	**Qld**	**WA**	**SA**	**Tas**	**NT**	**Aust**[(a)]
			No. of non-Indigenous persons living in overcrowded households					
Home owner/purchaser	128,408	92,218	45,438	16,398	19,575	5,820	2,516	310,441
Renter								
State or territory housing authority	15,260	8,672	5,310	1,626	2,683	1,081	401	35,071
Housing co-operative/community/church group	1,442	501	669	114	394	89	76	3,285
Private and other[(b)]	104,005	54,393	40,311	10,898	10,330	2,906	1,704	224,554
Not stated	1,231	707	592	193	219	44	20	3,011
Total renters	*121,938*	*64,273*	*46,882*	*12,831*	*13,626*	*4,120*	*2,201*	*265,921*
Other tenure types[(c)]	5,278	3,471	2,793	876	749	253	306	13,744
Total dwellings[(d)]	**258,679**	**162,413**	**96,051**	**30,562**	**34,372**	**10,290**	**5,080**	**597,583**
			Proportion of non-Indigenous persons living in overcrowded households [(e)]					
Home owner/purchaser	4.2	3.8	2.7	1.9	2.7	2.6	5.6	3.4
Renter								
State or territory housing authority	9.8	11.8	9.1	5.0	5.3	8.4	9.4	9.0
Housing co-operative/community/church group	8.8	5.6	8.3	3.2	5.5	6.4	11.7	7.1
Private and other[(b)]	11.4	9.4	7.0	4.8	6.8	6.3	7.4	8.9
Not stated	12.9	12.6	9.7	8.5	9.4	6.3	10.1	11.3
Total renters	*11.1*	*9.6*	*7.2*	*4.8*	*6.4*	*6.7*	*7.8*	*8.9*
Other tenure types[(c)]	7.0	6.6	5.8	3.2	3.5	4.1	9.1	5.9
Total dwellings[(d)]	**6.0**	**5.1**	**4.0**	**2.6**	**3.5**	**3.5**	**6.6**	**4.8**

(continued)

Table 2.02.14 (continued): Number and proportion of persons aged 18 years and over living in overcrowded households, using the Canadian National Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

(a) Includes other territories.

(b) Includes dwellings being rented from a real estate agent, parent/other relative or other person, dwellings being rented through a 'Residential park (includes caravan parks and marinas)', 'Employer—government (includes Defence Housing Authority)' and 'Employer—other employer' (private).

(c) Includes dwellings being purchased under a rent/buy scheme, occupied rent-free, occupied under a life tenure type and other tenure type not further defined.

(d) Includes tenure type not stated.

(e) Proportions have been calculated on all occupied private dwellings excluding those where number of bedrooms was not stated. Includes state/territory not stated.

Note: Households are considered overcrowded if one or more additional bedrooms are required to satisfy the Canadian National Occupancy Standard.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.02.15: Number and proportion of overcrowded households, using the Proxy Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust[(a)]
					No. of overcrowded households				
Indigenous									
Home owner/purchaser	900	224	733	261	119	122	18	152	2,524
Renter—state or territory housing authority	698	150	1,027	601	249	48	22	255	3,046
Renter—housing co-operative/community/church group	305	31	930	629	174	5	—	2,410	4,480
Private and other renter[(b)]	866	176	1,030	242	110	66	9	140	2,643
Other[(c)]	66	27	175	76	14	11	—	121	497
Total[(d)]	2,860	618	3,928	1,818	672	253	46	3,105	13,302
Other									
Home owner/purchaser	24,571	18,171	9,021	3,249	3,793	1,105	496	435	60,848
Renter—state or territory housing authority	2,480	1,456	889	235	429	164	154	61	5,877
Renter—housing co-operative/community/church group	228	89	83	n.p.	49	15	7	9	490
Private and other renter[(b)]	15,031	7,373	5,498	1,449	1,402	392	199	230	31,586
Other[(c)]	900	586	450	170	124	38	10	35	2,322
Total[(d)]	**43,805**	**28,198**	**16,116**	**5,191**	**5,879**	**1,732**	**876**	**778**	**102,603**

(continued)

Table 2.02.15 (continued): Number and proportion of overcrowded households, using the Proxy Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust[(a)]
				Proportion of overcrowded households[(e)]					
Indigenous									
Home owner/purchaser	4.4	4.0	5.1	4.9	3.6	3.0	2.4	7.6	4.5
Renter—state or territory housing authority	5.8	5.5	13.7	12.8	8.7	3.7	4.6	16.0	9.2
Renter—housing co-operative/community/church group	11.0	9.0	23.7	32.0	28.4	6.7	—	53.4	31.4
Private and other renter[(b)]	4.7	4.1	6.2	5.5	4.7	3.3	1.9	9.0	5.3
Other[(c)]	5.2	7.3	14.1	12.8	6.2	5.3	—	28.5	11.4
Total[(d)]	5.2	4.6	8.9	10.6	7.1	3.3	2.6	30.6	8.4
Other									
Home owner/purchaser	1.6	1.4	1.0	0.7	0.9	0.9	0.6	1.8	1.3
Renter State or territory housing authority	2.6	2.9	2.2	1.0	1.2	1.8	1.8	2.1	2.2
Renter Housing co-operative/community/church group	2.0	1.3	1.5	0.1	0.9	1.5	1.8	2.6	1.5
Private and other renter[(b)]	2.9	2.1	1.6	1.0	1.4	1.3	0.8	1.7	2.1
Other[(c)]	1.9	1.8	1.5	0.9	0.9	0.9	0.7	1.7	1.5
Total[(d)]	**2.0**	**1.6**	**1.2**	**0.8**	**1.0**	**1.0**	**0.8**	**1.8**	**1.5**

(a) Includes other territories.

(b) Includes those renting privately with landlord not in same household and those renting from a real estate agent, relatives, employers, caravan park owners/managers and other landlords not elsewhere classified.

(c) Includes dwellings being purchased under a rent/buy scheme, occupied rent-free, occupied under a life tenure type and other tenure type not further defined.

(d) Includes those living rent-free; those in rent/buy schemes; being occupied under a life tenure scheme; other tenure type nfd.

(e) Includes tenure type not stated.

(f) Percentage calculated from denominator excluding dwellings for which the number of bedrooms was not stated.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.02.16: Number and proportion of persons aged 18 years and over living in overcrowded households, using the Proxy Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust[(a)]
					No. of persons living in overcrowded households				
Indigenous									
Home owner/purchaser	1,472	304	1,295	608	219	206	26	400	4,533
Renter—state or territory housing authority	1,498	289	2,896	1,827	595	89	32	827	8,053
Renter—housing co-operative/community/church group	1,054	71	3,642	2,775	817	—	n.p.	12,561	20,934
Private and other renter[(b)]	1,364	222	1,893	547	175	86	6	366	4,659
Other[(c)]	139	31	638	257	53	28	n.p.	474	1,630
Total[(d)]	**5,572**	**924**	**10,461**	**6,054**	**1,874**	**414**	**70**	**14,738**	**40,128**
Other									
Home owner/purchaser	99,001	72,842	34,163	12,416	14,430	3,961	2,026	1,639	240,528
Renter—state or territory housing authority	8,562	4,752	3,101	878	1,496	551	517	229	20,133
Renter—housing co-operative/community/church group	815	258	366	47	165	47	13	105	1,816
Private and other renter[(b)]	53,116	26,485	19,040	5,013	4,727	1,218	723	850	111,189
Other[(c)]	3,086	2,079	1,585	584	401	130	40	163	8,077
Total[(d)]	**166,789**	**108,302**	**58,875**	**19,174**	**21,473**	**5,973**	**3,358**	**3,008**	**387,080**

(continued)

Table 2.02.16 (continued): Number and proportion of persons aged 18 years and over living in overcrowded households, using the Proxy Occupancy Standard, by Indigenous status, tenure type and state/territory, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust[(a)]
				Proportion of persons living in overcrowded households[(e)]					
Indigenous									
Home owner/purchaser	6.2	5.0	7.8	9.3	5.8	4.4	3.2	15.5	7.0
Renter—state or territory housing authority	10.3	9.7	25.2	23.9	15.6	6.5	6.6	31.9	17.9
Renter—housing co-operative/community/church group	21.1	16.3	40.4	51.8	54.0	—	5.8	73.2	54.2
Private and other renter[(b)]	7.2	5.3	10.3	10.8	7.4	4.3	0.8	17.9	8.7
Other[(c)]	9.5	7.6	31.7	26.9	18.0	11.6	11.1	52.5	25.7
Total[(d)]	**8.7**	**6.4**	**18.0**	**23.5**	**15.7**	**4.9**	**3.6**	**57.9**	**19.1**
Other									
Home owner/purchaser	3.2	2.9	2.0	1.4	1.9	1.7	1.3	3.4	2.5
Renter—state or territory housing authority	5.7	6.1	5.0	2.5	2.8	4.0	3.9	5.0	4.9
Renter—housing co-operative/community/church group	4.9	2.7	4.3	1.3	2.2	3.2	2.5	14.9	3.7
Private and other renter[(b)]	5.7	4.3	3.1	2.1	2.9	2.5	1.7	3.5	4.2
Other[(c)]	4.0	3.8	3.2	2.0	1.8	2.0	1.6	4.6	3.3
Total[(d)]	**3.9**	**3.3**	**2.4**	**1.5**	**2.1**	**1.9**	**1.6**	**3.7**	**3.0**

(a) Includes Other Territories.

(b) Includes those renting privately with landlord not in same household and those renting from a real estate agent, relatives, employers, caravan park owners/managers and other landlords not elsewhere classified.

(c) Includes dwellings being purchased under a rent/buy scheme, occupied rent-free, occupied under a life tenure type and other tenure type not further defined.

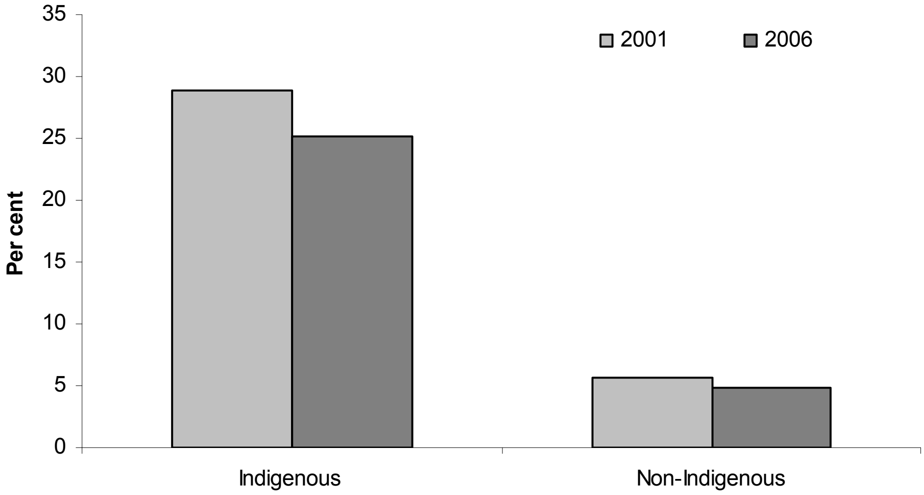
(d) Includes tenure type not stated.

(e) Percentage calculated from denominator excluding dwellings for which the number of bedrooms was not stated.

Source: ABS and AIHW analysis of 2006 Census data.

Time series

- Between 2001 and 2006, the proportion of Indigenous people aged 18 years and over living in overcrowded households declined from around 29% to 25%. Over the same period, the proportion of non-Indigenous people living in overcrowded households also declined, from around 6% to 5% (Figure 2.02.5).



Notes

(a) Overcrowding based on Canadian National Occupancy Standard.

(b) Proportions calculated from total excluding dwellings with number of bedrooms not stated.

Source: ABS and AIHW analysis of 2001 and 2006 Census data.

Figure 2.02.5: Proportion of people aged 18 years and over living in overcrowded households, by Indigenous status, 2001 and 2006

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in these surveys are essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS) and the 2002 General Social Survey. The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys and the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the 2004–05 NATSIHS and 2002 NATSISS publications (ABS 2006, 2004).

Overcrowding data

The NATSISS information on household type and number of bedrooms can only be used to assess overcrowding using the Canadian National Occupancy Standard.

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example, whether people are counted more than once or are undercounted (ABS 1996).*

Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done for the statistics used in this measure.

(continued)

Data quality issues (continued)

Housing data

The Census data may understate the number of households and residents in community rental housing. The Community Housing and Infrastructure Needs Survey counted 21,287 permanent dwellings managed by Indigenous housing organisations, of which 19,618 were occupied. The Census data for the same period found 15,733 households with Indigenous residents in community rental housing. It is likely that some households with Indigenous residents have recorded a state/territory housing authority or private owner as their landlord on the Census when they were actually renting community housing (SCRGSP 2003)

References

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2.03 Environmental tobacco smoke

The number and proportion of Aboriginal and Torres Strait Islander children aged 0–14 years who live in households with regular smokers and number and proportion of households with Indigenous children aged 0–17 years in which there were regular smokers

Data sources

Data for this indicator come from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Data analyses

Children living in households with smokers

- In 2004–05, there were around 119,000 Indigenous children aged 0–14 years living in households with a regular smoker. This represented 66% of all Indigenous children aged 0–14 years. In comparison, 35% of non-Indigenous children aged 0–14 years lived in households with a regular smoker (Table 2.03.1).
- In 2004–05, there were around 62,000 households with Indigenous children aged 0–17 years in which there were regular smokers. This represented 65% of all households with Indigenous children.
- Approximately 28% of Indigenous children aged 0–14 years were living in households with a regular smoker who smoked at home indoors compared with 9% of non-Indigenous children of the same age (Table 2.03.1; Figure 2.03.1).

Table 2.03.1: Children aged 0–14 years and households with Indigenous children aged 0–17 years: smoking status, by Indigenous status of children, 2004–05

	Indig. children aged 0–14	Non-Indig. children aged 0–14	Households with Indig. children 0–17
		Per cent	
Regular smoker in household			
No	*31	*65	31
Yes	*66	*35	65
Other[(a)]	*3	*0	4
Regular smokers smoke at home indoors			
No	*38	*26	36
Yes	*28	*9	29
Other[(b)]	*34	*65	35
Total households	. .	. .	**95,829**
Total number of children	**180,669**	**3,760,010**	. .

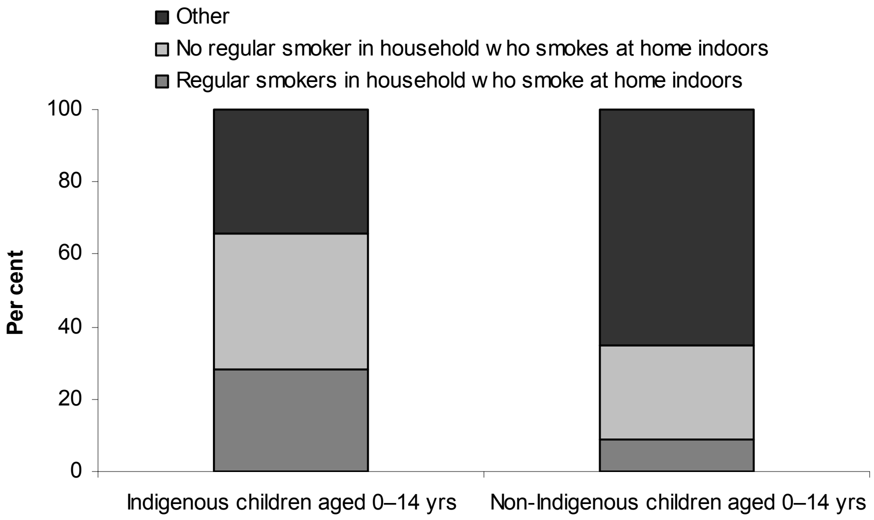
* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes not applicable, not stated, not known.

(b) Includes not applicable, not asked (single-person household), not stated, not known.

Note: Data for households with non-Indigenous children are not available.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.



Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Figure 2.03.1: Percentage of Indigenous and non-Indigenous children aged 0–14 years, by whether any regular smokers in household who smoke at home indoors, 2004–05

Children living in households with smokers by state/territory

- The proportion of Indigenous children aged 0–14 years who lived in households with regular smokers ranged from 53% in Victoria to 82% in the Northern Territory (Table 2.03.2).
- The proportion of Indigenous children aged 0–14 years who lived in households with a regular smoker who smoked at home indoors ranged from 24% in Queensland and Western Australia to 45% in the Northern Territory. The proportion of households with Indigenous children aged 0–17 years in which there were regular smokers who smoked at home indoors ranged from 23% in Western Australia to 39% in the Northern Territory (Table 2.03.3).
- In Queensland and Tasmania, Indigenous children were twice as likely as non-Indigenous children to live in households with a regular smoker who smoked at home indoors. In New South Wales and Victoria, Indigenous children were three time as likely, in Western Australia and South Australia, four times as likely and in the Australian Capital Territory six times as likely as non-Indigenous children to live in households with a regular smoker who smoked at home indoors.

Table 2.03.2: Children aged 0–14 years living in households with smokers, by Indigenous status and state/territory, 2004–05

			NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Proportion of children with regular smoker in household	Indigenous	%	63	53	67	64	63	70	58	82	66
	Non-Indigenous	%	36	35	37	29	37	43	23	n.a.	35
	Rate ratio		1.8*	1.5	1.8*	2.2*	1.7*	1.6*	2.5*	. .	1.9*
Proportion of children with regular smoker who smokes at home indoors in household	Indigenous	%	28	28	24	24	32	29	30	45	28
	Non-Indigenous	%	10	9	10	6	9	13	5	n.a.	9
	Rate ratio		2.9*	3.0*	2.4*	3.8*	3.6*	2.2*	6.4*	. .	3.1*
Total number of children	**Indigenous**	**%**	**54,144**	**10,842**	**51,505**	**25,505**	**9,857**	**6,816**	**1,566**	**20,434**	**180,669**
	Non-Indigenous	**%**	**1,263,735**	**940,021**	**737,688**	**364,806**	**272,771**	**89,756**	**62,392**	**. .**	**3,760,010**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.03.3: Households with Indigenous children aged 0–17 years: smoking status by state/territory, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
				Per cent				
Households with regular smoker in household	63	59	66	63	63	71	52	77
Households with regular smoker who smokes at home indoors in household	30	28	27	23	32	32	27	39
Total households[(a)]	**31,891**	**6,368**	**25,816**	**11,790**	**5,821**	**4,937**	**914**	**8,292**

(a) Includes not applicable, not asked (single-person household), not stated, not known, and households with no regular smokers/households with no regular smokers who smoke indoors.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Children living in households with smokers by remoteness

- A higher proportion of Indigenous children aged 0–14 years in Very Remote areas lived in households with a regular smoker (80%) and in households with a regular smoker who smoked at home indoors (41%) than Indigenous children in Major Cities, Inner Regional, Outer Regional or Remote areas (Table 2.03.4). The same pattern was evident for Indigenous households with Indigenous children aged 0–17 years (Table 2.03.5).
- Indigenous children in Major Cities and regional areas were four and two times as likely respectively to live in households with a regular smoker who smoked at home indoors than non-Indigenous children in Major Cities and regional areas.

Table 2.03.4: Children aged 0–14 years living in households with smokers, by Indigenous status and remoteness, 2004–05

	Major Cities			Inner Regional			Outer Regional			Remote			Very Remote			Australia		
	Indig.	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
	%	%		%	%		%	%		%	%		%	%		%	%	
Proportion of children with regular smoker in household	63	33	1.9*	63	40	1.6*	65	44	1.5*	61	n.a.	. .	80	n.a.	. .	66	35	1.9*
Proportion of children with regular smoker who smokes at home indoors in household	28	8	3.6*	29	12	2.4*	24	13	1.8*	20	n.a.	. .	41	n.a.	. .	28	9	3.1*
Total children	**54,807**	**2,479,384**	**. .**	**37,237**	**813,364**	**. .**	**42,849**	**423,977**	**. .**	**16,850**	**. .**	**. .**	**28,926**	**. .**	**. .**	**180,669**	**3,760,010**	**. .**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.03.5: Households with Indigenous children aged 0–17 years: smoking status by remoteness, 2004–05

	Major Cities	Inner Regional	Outer Regional	Remote	Very Remote	Australia
			Per cent			
Households with regular smoker in household	65	62	63	63	77	65
Households with regular smoker who smokes at home indoors in household	27	32	26	26	40	29
Total households[(a)]	**32,421**	**21,903**	**23,465**	**7,174**	**10,865**	**95,829**

(a) Includes not applicable, not asked (single-person household), not stated, not known, and households with no regular smokers/households with no regular smokers who smoke indoors.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Time series

- A higher proportion of Indigenous children aged 0–14 years lived in households with regular smokers in 2001 than in 2004–05 (70% compared with 66%). This was true in both non-remote and remote areas.
- Indigenous children aged 0–14 years were twice as likely as non-Indigenous children of the same age to live in households with regular smokers in 2001 and 2004–05 (Table 2.03.6).

Table 2.03.6: Proportion of children aged 0–14 years who live in households with regular smokers, by remoteness and Indigenous status, 2001 and 2004–05

	Non-remote			Remote			Total		
	Indig.	Non-Indig.	Ratio.	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
2001	65.4	n.a.	n.a.	81.0	n.a.	n.a.	69.7	35.8	1.9
2004–05	63.7	35.4	1.8	72.9	37.5	1.9	66.0	35.4	1.9

Note: Data on non-Indigenous Australians by remoteness classification are not available from the 2001 NHS (Indigenous supplement).

Source: AIHW analysis of 2004–05 NATSIHS, 2004–05 NHS and 2001 NHS (Indigenous supplement).

Data quality concerns

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

References

ABS (Australian Bureau of Statistics) 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. Canberra: ABS.

2.04 Years 3, 5 and 7 literacy and numeracy

The proportion of Year 3, 5 and 7 students achieving national benchmarks for literacy and numeracy achievement

Data sources

Data for this measure come from the *National report on schooling in Australia 2006*, published by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA 2006).

The benchmarks articulate nationally agreed minimum acceptable standards in literacy and numeracy for the year levels given above, and are part of a national literacy and numeracy plan agreed to by state, territory and Australian Government Ministers for Education. The benchmarks do not attempt to describe the whole of literacy and numeracy learning, nor the full range of what students are taught. They also do not try to describe the full range of student achievement. Instead, they represent important and essential elements of literacy and numeracy at a minimum acceptable level (Curriculum Corporation 2000).

A description of the national benchmarks for reading, writing and numeracy for Years 3, 5 and 7 can be found at the following addresses:

http://cms.curriculum.edu.au/litbench/intro.asp

http://cms.curriculum.edu.au/numbench/index.htm;

Data analyses

Reading, writing and numeracy benchmarks

Reading

- Nationally in 2006, approximately 79.7% of Indigenous students achieved the Year 3 reading benchmark compared with 93.0% of all students; 66.3% of Indigenous students achieved the Year 5 reading benchmark compared with 88.4% of all students; and 63.2% of Indigenous students achieved the Year 7 reading benchmark compared with 89.2% of all students.

Writing

- Nationally in 2006, approximately 77.9% of Indigenous students achieved the Year 3 writing benchmark compared with 93.9% of all students; 77.0% of Indigenous students achieved the Year 5 writing benchmark compared with 93.8% of all students; and 73.8% of Indigenous students achieved the Year 7 writing benchmark compared with 92.4% of all students.

Numeracy

- Nationally in 2006, approximately 76.2% of Indigenous students achieved the Year 3 numeracy benchmark compared with 93.0% of all students; 66.0% of Indigenous students achieved the Year 5 numeracy benchmark compared with 90.3% of all students; and 47.5% of Indigenous students achieved the Year 7 numeracy benchmark compared with 79.7% of all students.

Reading, writing and numeracy benchmarks by state/territory

The proportion of Indigenous students and total students who achieved the reading, writing and numeracy benchmarks in 2006 are presented in Tables 2.04.1, 2.04.2 and 2.04.3 by state and territory.

Reading

- The proportion of Indigenous students who achieved the Year 3 benchmark ranged from 40% in the Northern Territory to 91% in the Australian Capital Territory (Table 2.04.1).
- The proportion of Indigenous students who achieved the Year 5 benchmark ranged from 40% in the Northern Territory to 90% in Tasmania and the Australian Capital Territory.
- The proportion of Indigenous students who achieved the Year 7 benchmark was lowest in the Northern Territory (39%) and highest in Victoria (81%).

Table 2.04.1: Proportion of Year 3, 5 and 7 Indigenous and total students achieving the reading benchmark, by state/territory, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Per cent				
					Indigenous				
Year 3	81.6 (±4.3)*	81.5 (±5.1)*	88.5 (±3.3)*	75.7 (±5.8)*	75.2 (±6.3)*	88.5 (±3.5)*	90.7 (±6.1)	39.6 (±4.0)*	79.7 (±4.3)*
Year 5	73.6 (±3.0)*	69.7 (±4.9)*	60.7 (±5.7)*	70.8 (±4.9)*	58.8 (±5.0)*	90.3 (±3.4)	89.7 (±6.4)	39.7 (±3.8)*	66.3 (±4.4)*
Year 7	68.4 (±2.4)*	80.7 (±3.8)*	63.6 (±2.7)*	47.0 (±3.1)*	71.4 (±3.7)*	72.2 (±4.7)*	76.4 (±10.2)*	38.6 (±3.7)*	63.2 (±3.0)*
					All students				
Year 3	93.1 (±1.7)*	91.5 (±2.0)*	94.5 (±1.3)*	94.0 (±1.6)*	93.1 (±1.8)*	94.1 (±1.3)*	96.4 (±0.8)	70.8 (±2.6)*	93.0 (±1.7)*
Year 5	90.3 (±1.1)*	89.9 (±1.4)*	81.2 (±3.1)*	92.6 (±1.4)*	88.0 (±1.4)*	94.1 (±1.0)	95.6 (±0.6)	74.5 (±2.0)*	88.4 (±1.6)*
Year 7	88.4 (±0.9)*	94.9 (±0.5)*	85.6 (±1.0)*	84.4 (±0.8)*	93.3 (±0.4)*	86.5 (±1.1)*	94.2 (±0.9)*	72.3 (±2.0)*	89.2 (±0.8)*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

Notes

1. The achievement proportions reported in the table include 95% confidence intervals; for example, 80% (± 2.7) means that there is a 95% chance that the true percentage lies between 77.3% and 82.7%.
2. Students who were absent or withdrawn from testing are not classified as assessed students and are not included in the benchmark calculations. The proportion of absent and withdrawn students varies considerably across jurisdictions. Hence readers are urged to be cautious when comparing results.
3. Revised definitions and standards for the collection and reporting of student socioeconomic background information (sex, Indigenous status, socioeconomic background and language background) were introduced in 2005 through the school enrolment processes for all schools to ensure greater national consistency in reporting against characteristics from 2006.

Source: MCEETYA 2006.

Writing

- The proportion of Indigenous students who achieved the Year 3 benchmark ranged from 34% in the Northern Territory to 92% in Victoria (Table 2.04.2).
- The proportion of Indigenous students who achieved the Year 5 benchmark was lowest in the Northern Territory (30%) and highest in Victoria (94%).
- The proportion of Indigenous students who achieved the Year 7 benchmark ranged from 26% in the Northern Territory to 89% in Queensland.

Table 2.04.2: Proportion of Year 3, 5 and 7 Indigenous and total students achieving the writing benchmark, by state/territory, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Per cent				
					Indigenous				
Year 3	80.8 (±5.0)*	91.8 (±2.9)*	89.7 (±2.0)*	63.1 (±4.2)*	71.1 (±6.6)*	83.6 (±4.3)*	85.4 (±7.4)	33.5 (±4.7)*	77.9 (±3.8)*
Year 5	80.7 (±5.8)*	93.5 (±1.7)*	90.8 (±1.5)*	53.0 (±4.8)*	75.6 (±7.7)*	79.0 (±4.7)*	85.8 (±8.1)*	29.5 (±4.1)*	77.0 (±4.0)*
Year 7	77.5 (±5.4)*	83.3 (±3.9)*	88.6 (±1.3)*	54.2 (±3.7)*	59.3 (±10.2)*	69.4 (±5.4)*	75.6 (±10.6)*	25.9 (±3.5)*	73.8 (±3.9)*
					All students				
Year 3	93.8 (±1.9)*	96.6 (±0.5)*	95.3 (±0.6)*	90.2 (±1.4)*	92.2 (±2.4)*	90.8 (±1.6)*	93.8 (±1.8)	66.6 (±3.6)*	93.9 (±1.3)*
Year 5	93.9 (±2.0)*	97.6 (±0.1)*	96.0 (±0.4)*	84.7 (±2.3)*	92.7 (±2.8)*	87.5 (±1.8)*	95.5 (±1.2)*	66.1 (±3.1)*	93.8 (±1.3)*
Year 7	93.0 (±2.1)*	95.4 (±0.5)*	96.0 (±0.3)*	85.5 (±1.6)*	87.7 (±5.0)*	81.7 (±2.0)*	91.4 (±2.9)*	61.6 (±2.7)*	92.4 (±1.5)*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

Notes

1. The achievement proportions reported in the table include 95% confidence intervals; for example, 80% (± 2.7) means that there is a 95% chance that the true percentage lies between 77.3% and 82.7%.
2. Students who were absent or withdrawn from testing are not classified as assessed students and are not included in the benchmark calculations. The proportion of absent and withdrawn students varies considerably across jurisdictions. Hence readers are urged to be cautious when comparing results.
3. Revised definitions and standards for the collection and reporting of student socioeconomic background information (sex, Indigenous status, socioeconomic background and language background) were introduced in 2005 through the school enrolment processes for all schools to ensure greater national consistency in reporting against characteristics from 2006.

Source: MCEETYA 2006.

Numeracy

- The proportion of Indigenous students who achieved the Year 3 benchmark ranged from 60% in Western Australia to 91% in Victoria (Table 2.04.3).
- The proportion of Indigenous students who achieved the Year 5 benchmark was lowest in the Northern Territory (33%) and highest in Victoria (84%).
- The proportion of Indigenous students who achieved the Year 7 benchmark ranged from 30% in the Northern Territory to 67% in Tasmania and the Australian Capital Territory.

Table 2.04.3: Proportion of Year 3, 5 and 7 Indigenous and total students achieving the numeracy benchmark, by state/territory, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Indigenous									
Year 3	88.1 (±2.7)*	90.7 (±2.8)*	72.1 (±4.9)*	59.6 (±6.2)*	72.8 (±4.6)*	78.7 (±4.7)*	82.8 (±9.2)*	65.5 (±4.5)*	76.2 (±4.3)*
Year 5	78.0 (±3.5)*	84.4 (±4.3)*	62.8 (±3.4)*	52.9 (±4.3)*	63.0 (±6.1)*	81.9 (±4.0)*	83.0 (±10.9)	32.8 (±3.6)*	66.0 (±3.8)*
Year 7	39.8 (±2.4)*	60.0 (±4.0)*	53.3 (±2.5)*	48.2 (±2.7)*	55.4 (±5.0)*	66.9 (±5.1)*	67.2 (±11.3)*	30.0 (±3.7)*	47.5 (±2.9)*
All students									
Year 3	95.8 (±0.8)*	95.9 (±0.7)*	88.9 (±2.3)*	88.4 (±2.5)*	91.5 (±1.3)*	88.5 (±1.8)*	94.3 (±1.6)*	85.4 (±2.1)*	93.0 (±1.4)*
Year 5	92.6 (±1.2)*	94.9 (±0.9)*	85.4 (±1.6)*	86.0 (±1.5)*	88.3 (±1.7)*	88.7 (±1.5)*	93.0 (±1.4)	70.0 (±2.2)*	90.3 (±1.3)*
Year 7	72.7 (±1.6)*	84.6 (±0.7)*	79.8 (±1.2)*	84.5 (±0.7)*	87.3 (±0.8)*	80.4 (±1.2)*	89.5 (±1.2)*	67.3 (±1.9)*	79.7 (±1.1)*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

Notes

1. The achievement proportions reported in the table include 95% confidence intervals; for example, 80% (± 2.7) means that there is a 95% chance that the true percentage lies between 77.3% and 82.7%.
2. Students who were absent or withdrawn from testing are not classified as assessed students and are not included in the benchmark calculations. The proportion of absent and withdrawn students varies considerably across jurisdictions. Hence readers are urged to be cautious when comparing results.
3. Revised definitions and standards for the collection and reporting of student socioeconomic background information (sex, Indigenous status, socioeconomic background and language background) were introduced in 2005 through the school enrolment processes for all schools to ensure greater national consistency in reporting against characteristics from 2006.

Source: MCEETYA 2006.

Reading, writing and numeracy benchmarks by remoteness

Reading, writing and numeracy benchmarks by remoteness area and Indigenous status are presented in Table 2.04.4.

- In 2006, the proportion of Indigenous students who achieved the Year 3, Year 5 and Year 7 reading and writing benchmarks and the Year 5 and Year 7 numeracy benchmarks were highest in metropolitan areas and lowest in Very Remote areas of Australia. The proportion of Indigenous students who achieved the Year 3 numeracy benchmarks was highest in provincial areas, followed by metropolitan areas, and was lowest in Very Remote areas of Australia.
- The Indigenous Year 3 reading, writing and numeracy benchmarks were 86%, 85% and 80% respectively in metropolitan areas and 54%, 46% and 50% respectively in Very Remote areas.
- The Indigenous Year 5 reading, writing and numeracy benchmarks were 73%, 85% and 74% respectively in metropolitan areas and 35%, 42% and 29% in Very Remote areas.
- The Indigenous Year 7 reading, writing and numeracy benchmarks were 70%, 82% and 54% respectively in metropolitan areas and 28%, 39% and 20% in Very Remote areas.

Around half of the population living in Very Remote areas of Australia are Indigenous Australians, compared with only 1% of the population in Major Cities.

Table 2.04.4: Proportion of Year 3, 5 and 7 students achieving the reading, writing and numeracy benchmarks, by remoteness area and Indigenous status, 2006

	Metropolitan		Provincial		Remote		Very Remote	
	Indigenous	All students	Indigenous	All students	Indigenous	All students	Indigenous	All students
	Per cent							
Reading								
Year 3	86.1 (±4.3)*	93.8 (±1.5)*	83.3 (±4.7)*	92.0 (±2.0)*	68.0 (±7.9)*	87.9 (±3.7)*	53.8 (±7.1)*	71.4 (±5.3)*
Year 5	72.6 (±5.3)*	89.5 (±1.6)*	67.8 (±5.6)*	86.8 (±2.0)*	58.9 (±8.3)*	80.0 (±4.2)*	34.7 (±7.2)*	57.5 (±5.8)*
Year 7	70.1 (±3.5)*	90.3 (±0.8)*	67.1 (±4.2)*	87.8 (±1.1)*	45.2 (±7.9)*	78.3 (±3.3)*	27.7 (±5.4)*	54.3 (±4.8)*
Writing								
Year 3	84.9 (±4.1)*	94.8 (±1.2)*	82.6 (±5.0)*	93.2 (±1.6)*	64.4 (±7.2)*	86.1 (±3.2)*	46.0 (±6.2)*	65.8 (±4.9)*
Year 5	85.1 (±6.8)*	94.7 (±1.2)*	78.5 (±6.9)*	93.0 (±1.6)*	62.4 (±6.0)*	83.5 (±3.8)*	41.9 (±5.7)*	63.0 (±4.7)*
Year 7	82.1 (±4.3)*	93.7 (±1.4)*	76.3 (±5.0)*	90.8 (±1.9)*	53.1 (±7.7)*	80.8 (±4.1)*	39.3 (±4.9)*	62.4 (±4.8)*
Numeracy								
Year 3	79.8 (±4.7)*	93.6 (±1.2)*	82.7 (±4.5)*	92.7 (±1.6)*	64.6 (±8.6)*	85.6 (±3.8)*	50.2 (±7.5)*	67.2 (±5.5)*
Year 5	73.7 (±4.4)*	91.3 (±1.2)*	70.2 (±4.7)*	89.5 (±1.6)*	48.6 (±8.2)*	78.6 (±4.0)*	28.6 (±5.7)*	53.4 (±5.3)*
Year 7	53.9 (±3.7)*	81.1 (±1.1)*	49.4 (±4.3)*	77.4 (±1.4)*	35.4 (±7.5)*	71.7 (±3.6)*	20.2 (±4.9)*	47.1 (±5.3)*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

Notes

1. The achievement proportions reported in the table include 95% confidence intervals; for example, 80% (± 2.7) means that there is a 95% chance that the true percentage lies between 77.3% and 82.7%.
2. Students who were absent or withdrawn from testing are not classified as assessed students and are not included in the benchmark calculations. The proportion of absent and withdrawn students varies considerably across jurisdictions. Hence readers are urged to be cautious when comparing results.
3. Revised definitions and standards for the collection and reporting of student socioeconomic background information (sex, Indigenous status, socioeconomic background and language background) were introduced in 2005 through the school enrolment processes for all schools to ensure greater national consistency in reporting against characteristics from 2006.

Source: MCEETYA 2006.

Time series analyses

Data on students achieving reading and writing benchmarks for Year 3 and Year 5 are available from 1999 onwards and for Year 7 from 2001 onwards. Data on students achieving numeracy benchmarks for Year 3 and Year 5 are available from 2000 onwards, and for Year 7 from 2001 onwards. These data are presented in Table 2.04.5 and Figures 2.04.1, 2.04.2 and 2.04.3.

Reading

- Between 1999 and 2006 there was a significant increase in the proportion of Indigenous students achieving the Year 3 reading benchmark. The fitted trend implies an average yearly increase of around 1.0%, which is equivalent to a 10% increase over the period.
- Between 1999 and 2006 there was a significant increase in the proportion of total students achieving the Year 3 reading benchmark, with an average yearly increase of around 0.4%, which is equivalent to a 3% increase over the period.

Writing

- Between 1999 and 2006 there was a significant increase in the proportion of Indigenous students achieving the Year 3 writing benchmark. The fitted trend implies an average yearly increase of around 1.8%, which is equivalent to an 18% increase over the period.
- Over the same period there was also a significant increase in the proportion of total students achieving the Year 3 writing benchmark, with an average yearly increase of around 0.4%, which is equivalent to a 3% increase over the period.

Numeracy

- Between 2000 and 2006 there was a significant increase in the proportion of Indigenous students achieving the Year 5 numeracy benchmark, with an average yearly increase of around 0.7%, which is equivalent to a 7% increase over the period.
- Over the same period there was also a significant increase in the proportion of total students achieving the Year 5 numeracy benchmark, with an average yearly increase of around 0.2%, which is equivalent to a 1.4% increase over the period.

Table 2.04.5: Proportion of students achieving reading, writing and numeracy benchmarks, by Indigenous status, 1999–2006

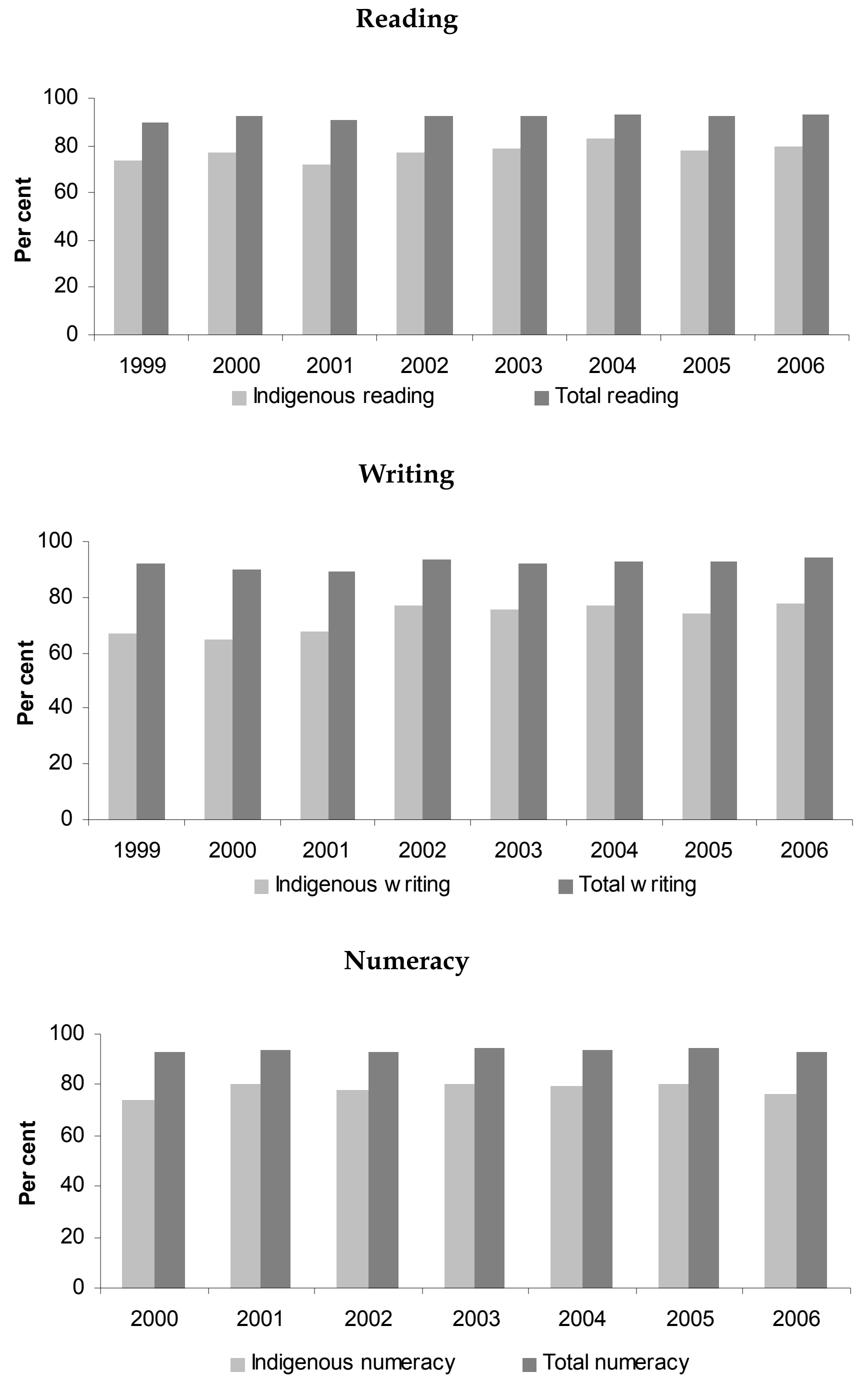
	1999	2000	2001	2002	2003	2004	2005	2006	Annual change(a)	% change(b)
Reading										
Indigenous										
Year 3	73.4	76.9	72.0	76.7	78.8	82.9	78.0	79.7	1.0*	9.6
Year 5	58.7	62.0	66.9	68.0	67.7	69.4	62.8	66.3	0.8	9.1
Year 7	n.a.	n.a.	60.1	65.3	66.5	71.0	63.8	63.2	0.4	3.7
All students										
Year 3	89.7	92.5	90.3	92.3	92.4	93.0	92.7	93.0	0.4*	3.0
Year 5	85.6	87.4	89.8	89.3	89.0	88.7	87.5	88.4	0.2	1.6
Year 7	n.a.	n.a.	88.4	89.1	89.4	91.0	89.8	89.2	0.2	1.2
Writing										
Indigenous										
Year 3	66.9	65.0	67.8	77.1	75.2	76.8	74.0	77.9	1.8*	18.3
Year 5	74.6	74.3	79.9	76.4	79.6	81.7	74.3	77.0	0.3	2.8
Year 7	n.a.	n.a.	74.3	71.6	74.4	78.8	72.3	73.8	0.1	0.8
All students										
Year 3	91.9	90.0	89.5	93.6	92.2	92.9	92.8	93.9	0.4*	3.3
Year 5	93.0	92.5	94.0	93.6	94.1	94.2	93.3	93.8	0.1	1.0
Year 7	n.a.	n.a.	92.6	90.7	92.1	93.6	92.2	92.4	0.1	0.8
Numeracy										
Indigenous										
Year 3	n.a.	73.7	80.2	77.6	80.5	79.2	80.4	76.2	0.3	2.8
Year 5	n.a.	62.8	63.2	65.6	67.6	69.4	66.5	66.0	0.7*	6.8
Year 7	n.a.	n.a.	48.6	51.9	49.3	51.9	48.8	47.5	—0.3	—3.6
All students										
Year 3	n.a.	92.7	93.9	92.8	94.2	93.7	94.1	93.0	0.1	0.5
Year 5	n.a.	89.6	89.6	90.0	90.8	91.2	90.8	90.3	0.2*	1.4
Year 7	n.a.	n.a.	82.0	83.5	81.3	82.1	81.8	79.7	—0.5	—2.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the periods for which data are available.

(d) Average annual change in proportions determined using linear regression analysis.

(e) Per cent change between 1999 and 2006 based on the average annual change over the period.

Source: AIHW analysis of *National report on schooling in Australia 2006*, available through MCEETYA.



Note: Year 3 numeracy benchmark not available for 1999.

Source: AIHW analysis of *National report on schooling in Australia 2006*, available through MCEETYA.

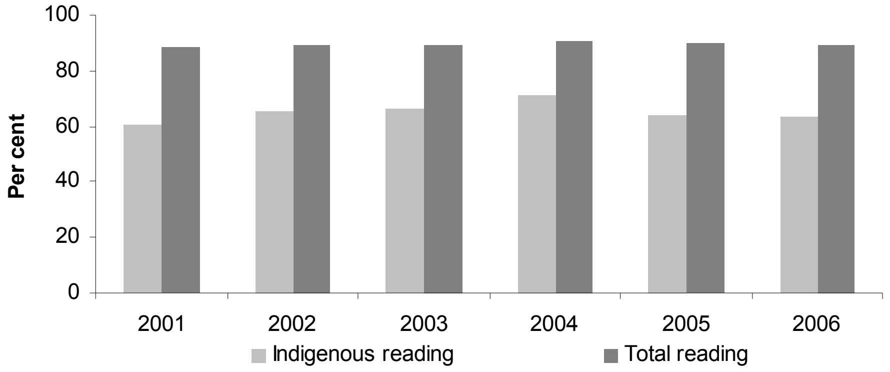
Figure 2.04.1: Proportion of Year 3 students achieving the reading, writing and numeracy benchmarks, by Indigenous status, 1999–2006

Note: Year 5 numeracy benchmark not available for 1999.

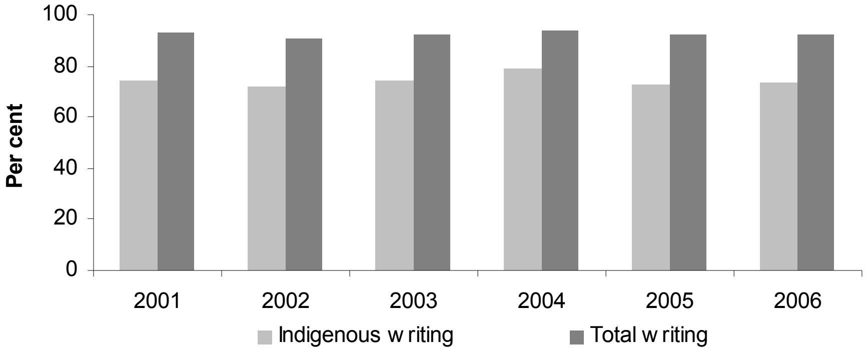
Source: AIHW analysis of *National report on schooling in Australia 2006*, available through MCEETYA.

Figure 2.04.2: Proportion of Year 5 students achieving the reading, writing and numeracy benchmarks, by Indigenous status, 1999–2006

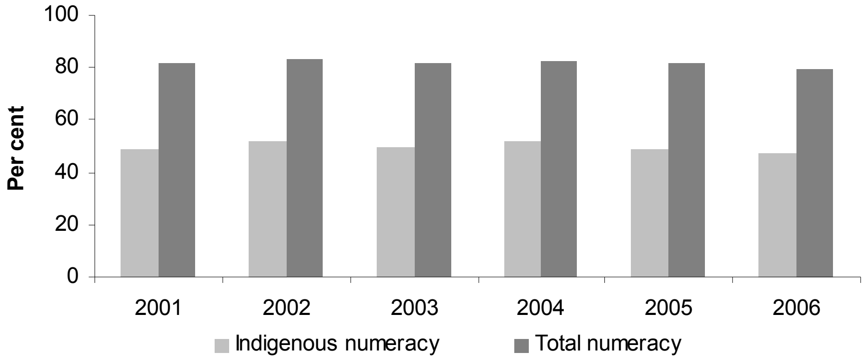
Reading



Writing



Numeracy



Note: Year 7 reading, writing and numeracy benchmarks available only from 2001.

Source: AIHW analysis of *National report on schooling in Australia 2006*, available through MCEETYA.

Figure 2.04.3: Proportion of Year 7 students achieving the reading, writing and numeracy benchmarks, by Indigenous status, 2001–2006

Data quality issues

Reading, writing and numeracy data

Indigenous status question

Note that the question and method used to identify Indigenous students varied between jurisdictions. For example, in New South Wales, Indigenous students were those who answered 'yes' to the question 'Are you an Aboriginal or Torres Strait Islander person?' In Queensland, Indigenous students were those who answered 'yes' to either or both of the questions 'Are you an Aboriginal person? Or are you a Torres Strait Islander person?' In South Australia and the Australian Capital Territory, Indigenous students were identified through enrolment information provided to schools by parents/guardians. In the Northern Territory and Tasmania, Indigenous students were identified by schools at the time of enrolment or by self-identification. In Victoria, students were identified as Indigenous on enrolment forms at the commencement of school and also those who answered 'yes' to the question 'Is this student Aboriginal or Torres Strait Islander?' on the front page of the student's test booklet. In Western Australia, Indigenous students were identified through enrolment data on School Information Systems.

National Report on Schooling in Australia

Points to be considered when interpreting the National report on schooling in Australia *data (MCEETYA 2006) are discussed below:*

- *Comparisons involving Remote and Very Remote students must be made with caution as the small numbers of students tested means that measurement uncertainty is relatively high.*
- *When comparing results across states and territories, it is important to note that there are many structural differences between the educational systems that influence the estimated proportions of students who are achieving the benchmarks. Relevant issues include major differences between jurisdictions in starting age, grade structures, and other arrangements that result in variations in the time students would have spent in relevant schooling before testing.*
- *There are differences between states and territories in relation to factors known to influence measured literacy and numeracy achievement. For example, achievement in literacy and numeracy is strongly correlated with the socioeconomic circumstances of students. As well, students who do not usually speak English, or who have just begun to speak English, would be expected to be at some disadvantage during assessment of aspects of English literacy. There are variations in the proportions of such students between states and territories, and also in the policies regarding their inclusion in the testing programs.*
- *Comparable national benchmarks are prepared using a nationally agreed procedure that was designed to equate state and territory tests. It is important to recognise that there are inevitable limits in the extent to which the measuring instruments can be assured to be perfectly comparable across time and jurisdictions. For example, it is not feasible for testing programs to fully assess the complete range of valued literacy and numeracy outcomes. As such, each state and territory's testing program includes a sample of valued outcomes, and this sampling can lead to variations in the outcomes, both over time and across states and territories.*

  Note that absent or withdrawn students are not included in the benchmark calculations.

  Exempted students, however, are reported as falling below the benchmark and are included in the benchmark calculation. The report provides information on the proportions of students exempted from testing as footnotes to the relevant tables.

(continued)

Data quality issues (continued)

- *The publication of confidence intervals with the benchmark results reflects the uncertainty associated with the measurement of student achievement and provides a way of making inferences about the achievement of students. The confidence intervals are calculated at 95% and account for three components of uncertainty: error associated with the location of the benchmark cut-score, sampling error (where applicable) and measurement error. Error associated with the location of the benchmark cut-score is the largest component.*
- *An additional component of error known as 'equating error' also potentially results. These sources of error are not currently reflected in the published confidence intervals.*

References

Curriculum Corporation 2000. Literacy and numeracy benchmarks. Viewed August 2008, <http://cms.curriculum.edu.au/litbench/build.asp?pg=0>.

MCEETYA (Ministerial Council on Education, Employment, Training and Youth Affairs) 2006. National report on schooling in Australia 2006: national benchmark results—reading, writing and numeracy, Year 3, 5 and 7. Melbourne: MCEETYA.

2.05 Years 10 and 12 retention and attainment

Years 10 and 12 retention rates and Year 12 attainment rates for Aboriginal and Torres Strait Islander peoples

Data sources

Data for this measure come from the ABS National Schools Statistics Collection (NSSC). The NSSC is a collaborative arrangement between all Australian government education authorities and the ABS. The NSSC is an annual collection of data on schools, students, staff and finance that is undertaken by the ABS in the government sector and by the Australian Government Department of Education, Science and Training in the non-government sector. Student data are collected through a school census in August of each year and selected results are published annually by the ABS in *Schools Australia*. Only full-time students were included in the analysis; part-time students were not included.

Care should be taken when comparing attainment outcomes for Indigenous students because of the small number of Indigenous students represented.

Apparent retention rates

Apparent retention rates are the percentage of full-time students of a given cohort group who continue from the start of secondary schooling to a specified year level. The term 'apparent' is used because the retention rate does not account for students repeating a year of school or migrating in or out of the Australian school student population or between states/territories. All full-time students enrolled at a school, including 'VET (vocational education and training) in Schools' students, are included in retention calculations.

- *Year 10 apparent retention rates:* Year 10 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7/8).
- *Year 12 apparent retention rates:* Year 12 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7/8) or as a proportion of the corresponding cohort from Year 10.
- *Year 12 attainment rate:* The proportion of Year 11 students who went on to achieve a Year 12 certificate.

Data analyses

Apparent retention rates

Table 2.05.1 presents the apparent retention rates of Indigenous and non-Indigenous students from Year 7/8 to Year 10, Year 11 and Year 12; and the apparent retention rate from Year 10 to Year 12.

- In 2007, there were approximately 10,090 Indigenous students in Year 10 (approximately 3.7% of all Year 10 students), 7,163 Indigenous students in Year 11 (approximately 3.0% of all students in Year 11) and 4,311 Indigenous students in Year 12 (approximately 2.2% of all students in Year 12).
- In 2007, the apparent retention rate of full-time Indigenous students from Year 7/8 to Year 10 was 90.5% compared with 99.4% for non-Indigenous students.
- In the same year the apparent retention rate of full-time Indigenous students from Year 7/8 to Year 11 was 71.2% compared with 91.0% for non-Indigenous students.
- The apparent retention rate of full-time Indigenous students from Year 7/8 to Year 12 was much lower—42.9% compared with 75.6% for non-Indigenous students.
- Similarly, the apparent retention rate of full-time Indigenous students from Year 10 to Year 12 was much lower—48.5% compared with 76.6% for non-Indigenous students.

Apparent retention rates by sex

- The apparent retention rates for Indigenous females were similar to those for Indigenous males from Year 7/8 to Year 10 (91% compared with 90%); and slightly higher than for Indigenous males from Year 7/8 to Year 11 (75% compared with 68%), Year 7/8 to Year 12 (46% compared with 39%) and Year 10 to Year 12 (51% compared with 46%).

Apparent retention rates by state/territory

- The Australian Capital Territory and Tasmania had the highest retention rates of Indigenous students from Year 7/8 to Year 10 (102% and 100% respectively), whereas the Northern Territory and New South Wales had the lowest (82% and 84% respectively).
- Retention rates of Indigenous students from Year 7/8 to Year 11 were highest in the Northern Territory and Victoria (96% and 80% respectively) and lowest in New South Wales and Tasmania (51% and 58% respectively).
- The Australian Capital Territory and Queensland had the highest retention rates of Indigenous students from Year 7/8 to Year 12 (60% and 57% respectively), and Western Australia and New South Wales had the lowest (30% and 34% respectively).
- Queensland and the Australian Capital Territory had the highest retention rates of Indigenous students from Year 10 to Year 12 (62% and 59% respectively), whereas Western Australia and New Wales had the lowest (32% and 42% respectively).
- Rates for Tasmania and the Australian Capital Territory should be interpreted with caution, because the small size of these jurisdictions means that relatively small changes in student numbers can create large movements in retention rates. Some rates exceeded 100%, largely reflecting the movement of students from non-government to government schools in Years 11 and 12; and in the Australian Capital Territory, some New South Wales residents from surrounding areas enrolled in Australian Capital Territory schools during secondary school.

Table 2.05.1: Apparent retention rates, by Indigenous status, sex and state/territory, 2007[(a)(b)(c)(d)]

	NSW		Vic		Qld		WA[(e)]		SA		Tas		ACT		NT		Australia	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
Males																		
Year 7/8 to Year 10[(g)]																		
Number	1,382	41,673	240	32,400	1,652	27,297	886	14,020	308	9,825	214	3,151	52	2,439	428	860	5,162	131,665
Per cent	**84.0**	**96.8**	**84.2**	**97.4**	**95.3**	**101.0**	**94.1**	**101.7**	**88.8**	**100.8**	**96.0**	**99.7**	**123.8**	**96.7**	**82.1**	**91.0**	**89.9**	**98.6**
Year 7/8 to Year 11[(g)]																		
Number	685	33,897	186	29,788	1,207	23,795	705	12,038	220	9,260	118	2,446	22	2,467	339	757	3,482	114,448
Per cent	**46.8**	**78.5**	**71.5**	**93.9**	**75.1**	**89.9**	**77.2**	**87.3**	**79.7**	**94.7**	**54.1**	**76.6**	**59.5**	**100.2**	**99.1**	**85.7**	**68.0**	**87.1**
Year 7/8 to Year 12[(g)]																		
Number	443	28,448	97	23,328	852	19,893	270	9,210	98	6,559	83	1,875	24	2,074	152	609	2,019	91,996
Per cent	**30.2**	**65.9**	**37.3**	**73.6**	**53.0**	**75.2**	**29.6**	**66.8**	**35.5**	**67.1**	**38.1**	**58.7**	**64.9**	**84.2**	**44.4**	**69.0**	**39.4**	**70.0**
Year 10 to Year 12[(h)]																		
Number	443	28,448	97	23,328	852	19,893	270	9,210	98	6,559	83	1,875	24	2,074	152	609	2,019	91,996
Percent	**39.1**	**68.3**	**49.7**	**76.1**	**60.4**	**75.5**	**32.7**	**65.9**	**42.1**	**67.7**	**36.9**	**59.1**	**64.9**	**86.0**	**46.3**	**69.7**	**46.0**	**71.5**
Females																		
Year 7/8 to Year 10[(g)]																		
Number	1,278	40,213	265	31,267	1,627	27,054	829	13,305	285	9,451	206	3,126	32	2,321	406	801	4,928	127,538
Per cent	**83.9**	**98.1**	**92.3**	**100.3**	**96.3**	**101.8**	**98.7**	**103.2**	**86.4**	**102.6**	**104.0**	**99.5**	**80.0**	**99.0**	**81.5**	**91.9**	**91.2**	**100.3**
Year 7/8 to Year 11[(g)]																		
Number	809	35,765	230	31,259	1,244	24,796	659	12,488	219	9,097	116	2,547	33	2,404	371	780	3,681	119,136
Per cent	**56.2**	**86.4**	**88.1**	**103.8**	**83.8**	**99.1**	**79.8**	**94.9**	**72.3**	**98.1**	**62.4**	**85.2**	**73.3**	**103.3**	**93.5**	**88.7**	**74.5**	**95.2**

(continued)

Table 2.05.1 (continued): Apparent retention rates, by Indigenous status, sex and state/territory, 2007[a][b][c][d]

	NSW		Vic		Qld		WA[e]		SA		Tas		ACT		NT		Australia	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
Year 7/8 to Year 12[g]																		
Number	544	31,552	143	26,389	893	21,202	243	10,440	156	7,458	101	2,246	25	2,027	187	595	2,292	101,909
Per cent	**37.8**	**76.2**	**54.8**	**87.6**	**60.2**	**84.7**	**29.4**	**79.3**	**51.5**	**80.5**	**54.3**	**75.1**	**55.6**	**87.1**	**47.1**	**67.7**	**46.4**	**81.4**
Year 10 to Year 12[h]																		
Number	544	31,552	143	26,389	893	21,202	243	10,440	156	7,458	101	2,246	25	2,027	187	595	2,292	101,909
Per cent	**45.4**	**78.4**	**62.7**	**87.9**	**62.5**	**83.7**	**30.8**	**77.9**	**58.0**	**80.5**	**52.6**	**74.7**	**54.3**	**86.8**	**54.0**	**73.5**	**51.0**	**81.9**
									Females									
Year 7/8 to Year 10[g]																		
Number	2,660	81,886	505	63,667	3,279	54,351	1,715	27,325	593	19,276	420	6,277	84	4,760	834	1,661	10,090	259,203
Per cent	**84.0**	**97.4**	**88.3**	**98.8**	**95.8**	**101.4**	**96.2**	**102.4**	**87.6**	**101.7**	**99.8**	**99.6**	**102.4**	**97.8**	**81.8**	**91.4**	**90.5**	**99.4**
Year 7/8 to Year 11[g]																		
Number	1,494	69,662	416	61,047	2,451	48,591	1,364	24,526	439	18,357	234	4,993	55	4,871	710	1,537	7,163	233,584
Per cent	**51.4**	**82.4**	**79.8**	**98.7**	**79.3**	**94.4**	**78.4**	**91.0**	**75.8**	**96.4**	**57.9**	**80.8**	**67.1**	**101.7**	**96.1**	**87.2**	**71.2**	**91.0**
Year 7/8 to Year 12[g]																		
Number	987	60,000	240	49,717	1,745	41,095	513	19,650	254	14,017	184	4,121	49	4,101	339	1,204	4,311	193,905
Per cent	**34.0**	**70.9**	**46.1**	**80.4**	**56.5**	**79.8**	**29.5**	**72.9**	**43.9**	**73.6**	**45.5**	**66.7**	**59.8**	**85.6**	**45.9**	**68.3**	**42.9**	**75.6**
Year 10 to Year 12[h]																		
Number	987	60,000	240	49,717	1,745	41,095	513	19,650	254	14,017	184	4,121	49	4,101	339	1,204	4,311	193,905
Per cent	**42.4**	**73.3**	**56.7**	**82.0**	**61.5**	**79.5**	**31.8**	**71.8**	**50.6**	**73.9**	**44.1**	**66.7**	**59.0**	**86.4**	**50.3**	**71.5**	**48.5**	**76.6**

(continued)

Table 2.05.1 (continued): Apparent retention rates, by Indigenous status, sex and state/territory, 2007(a)(b)(c)(d)

(a) Although most students are recorded, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the number of Aboriginal and Torres Strait Islander students. In addition, the standard Indigenous status question has not yet been implemented in some jurisdictions.

(b) The following factors have not been taken into account in these statistics: students repeating a year of education, migration and other net changes to the school population, enrolment policies (including year starting high school which contributes to different age/grade structures between states and territories), inter-sector transfer and interstate movements of students.

(c) In small jurisdictions, relatively small changes in student numbers can create apparently large movements in retention rates.

(d) The inclusion or exclusion of part-time students can also have a significant effect on apparent retention rates, especially in South Australia, Tasmania and the Northern Territory, which have relatively large proportions of part-time students.

(e) Data for Western Australia have been affected by changes in scope and coverage over time.

(f) Some ACT rates exceed 100%, largely reflecting the movement of students from non-government to government schools in Years 11 and 12, and of NSW residents from surrounding areas enrolling in ACT schools.

(g) Retention rate = Year 10, 11 or 12 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7/8).

(h) Retention rate = Year 12 students as a proportion of the corresponding cohort from Year 10.

Source: ABS and AIHW analysis of National Schools Statistics Collection.

Apparent retention rates over time

- Apparent retention rates for Indigenous full-time students, from Year 7/8 to Year 10, Year 11 and Year 12, as well as from Year 10 to Year 12, have continued to increase over the last 5 years (Table 2.05.2).
- The retention rate for Indigenous students from Year 7/8 to Year 10 increased from 86.4% in 2002 to 90.5% in 2007, compared with an increase from 98.5% to 99.4% for non-Indigenous students over the same period. From 2002 to 2007 the retention rate from Year 7/8 to Year 12 for Indigenous students increased from 38.0% to 42.9%, compared with a decrease from 76.3% to 75.6% for non-Indigenous students.
- The apparent retention rate for Indigenous students from Year 10 to Year 12 increased from 45.8% in 2002 to 48.5% in 2007. Over the same period there was a slight decrease in the non-Indigenous retention rate from 77.8% to 76.6%.

Table 2.05.2: Apparent retention rates, by Indigenous status, 2002 and 2007[b][c][d][e]

	2002	2007	Change
		Per cent	
Year 7/8 to Year 10			
Indigenous	86.4	90.5	4.1
Non-Indigenous	98.5	99.4	0.9
Year 7/8 to Year 11			
Indigenous	58.9	71.2	12.3
Non-Indigenous	88.7	91.0	2.3
Year 7/8 to Year 12			
Indigenous	38.0	42.9	4.9
Non-Indigenous	76.3	75.6	–0.7
Year 10 to Year 12			
Indigenous	45.8	48.5	2.7
Non-Indigenous	77.8	76.6	–1.2

(a) Although most students are recorded, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the number of Aboriginal and Torres Strait Islander students. In addition, the standard Indigenous status question has not yet been implemented in some jurisdictions.

(b) The following factors have not been taken into account in these statistics: students repeating a year of education, migration and other net changes to the school population, enrolment policies (including year starting high school which contributes to different age/grade structures between states and territories), inter-sector transfer and interstate movements of students.

(c) In small jurisdictions, relatively small changes in student numbers can create apparently large movements in retention rates.

(d) The inclusion or exclusion of part-time students can also have a significant effect on apparent retention rates, especially in South Australia, Tasmania and the Northern Territory, which have relatively large proportions of part-time students.

Source: ABS and AIHW analysis of National Schools Statistics Collection.

Table 2.05.3 and Figure 2.05.1a and 2.05.1b present apparent retention rates over the period 1998–2007.

- Between 1998 and 2007 there was a significant increase in apparent retention rates for Indigenous students from Year 7/8 to Year 10, Year 11 and Year 12 (Figure 2.05.1a). The fitted trend implies an average yearly increase in the rate of around 1.0% for Year 10 (equivalent to a 10% increase over the period), 1.9% for Year 11 (equivalent to a 33% increase over the period) and 1.0% for Year 12 (equivalent to a 28% increase over the period).

- Over the same period there was a significant increase in apparent retention rates for Indigenous students from Year 10 to Year 12 (Figure 2.05.1b). The fitted trend implies an average yearly increase in the rate of around 0.6%, which is equivalent to a 12% increase over the period.
- Between 1998 and 2007 there was also a significant increase in apparent retention rates for non-Indigenous students from Year 7/8 to Year 10, Year 11 and Year 12 (Figure 2.05.1a). The fitted trend implies an average yearly increase in the rate of around 0.2% for Year 10 (equivalent to a 2% increase over the period), 0.5% for Year 11 (equivalent to a 5% increase over the period) and 0.4% for Year 12 (equivalent to a 5% increase over the period).
- Over the same period there was a significant increase in apparent retention rates for non-Indigenous students from Year 10 to Year 12 (Figure 2.05.1b). The fitted trend implies an average yearly increase in the rate of around 0.3%, which is equivalent to a 4% increase over the period.

Table 2.05.3: Apparent Year 10 and year 12 retention rates, by Indigenous status, 1998–2007

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Annual change[(a)]	% change[(b)]
Year 7/8 to Year 10[(c)]												
Indigenous	83.3	82.0	83.0	85.7	86.4	87.2	85.8	88.3	91.4	90.5	1.0*	10.4
Non-Indigenous	97.4	97.9	98.0	98.4	98.5	98.9	98.5	98.6	98.9	99.4	0.2*	1.6
Year 7/8 to Year 11[(c)]												
Indigenous	52.3	56.0	53.6	56.1	58.9	61.4	61.1	62.3	67.7	71.2	1.9*	32.6
Non-Indigenous	85.4	86.4	86.2	87.6	88.7	89.5	89.0	88.3	88.9	91.0	0.5*	5.3
Year 7/8 to Year 12[(c)]												
Indigenous	32.1	34.7	36.4	35.7	38.0	39.1	39.8	39.5	40.1	42.9	1.0*	27.9
Non-Indigenous	72.7	73.2	73.3	74.5	76.3	76.5	76.9	76.6	76.0	75.6	0.4*	5.2
Year 10 to Year 12[(d)]												
Indigenous	42.4	43.1	43.8	43.6	45.8	45.7	46.0	45.3	46.8	48.5	0.6*	12.3
Non-Indigenous	74.8	75.0	75.2	76.2	77.8	77.7	78.1	77.5	78.3	76.6	0.3*	4.1

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2007.

(a) Average annual change in rates determined using linear regression analysis.

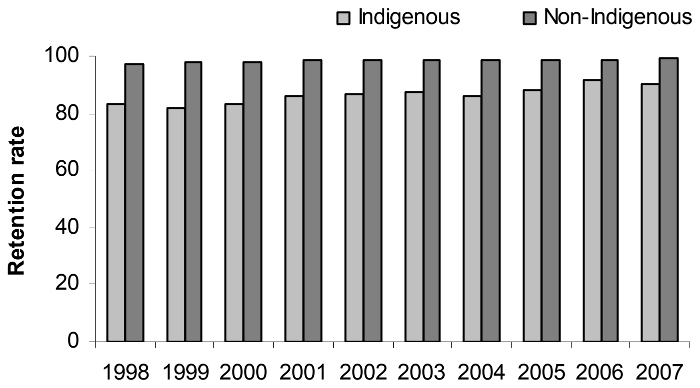
(b) Per cent change between 1998 and 2007 based on the average annual change over the period.

(c) Retention rate = Year 10, 11 or 12 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7/8).

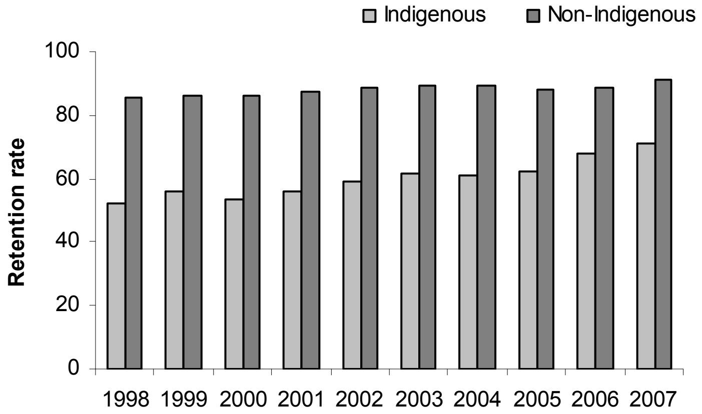
(d) Retention rate = Year 12 students as a proportion of the corresponding cohort from Year 10.

Source: ABS and AIHW analysis of National Schools Statistics Collection.

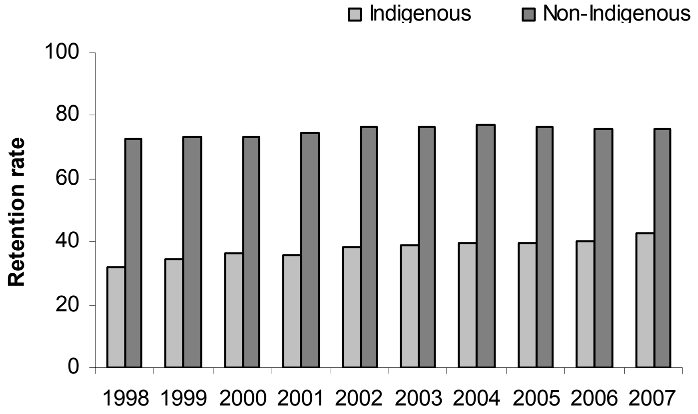
Year 7/8 to Year 10 apparent retention rates



Year 7/8 to Year 11 apparent retention rates

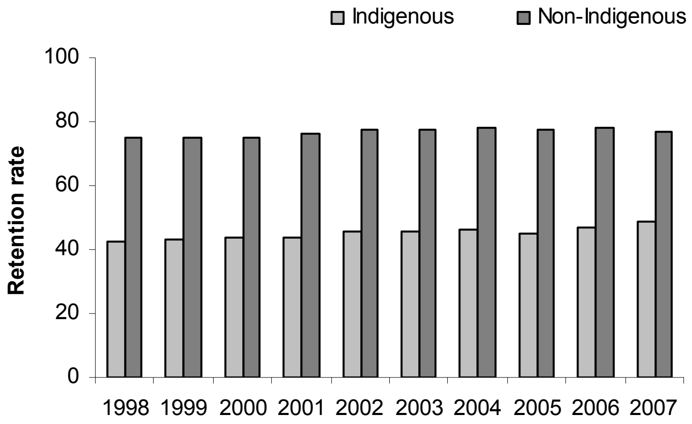


Year 7/8 to Year 12 apparent retention rates



Source: ABS 2006; ABS 2008; ABS and AIHW analysis of National Schools Statistics Collection.

Figure 2.05.1a: Apparent Year 7/8 to Year 10, 11 and 12 retention rates, full-time students, by Indigenous status, 1998–2007



Source: ABS 2006; ABS 2008; ABS and AIHW analysis of National Schools Statistics Collection.

Figure 2.05.1b: Apparent Year 10 to Year 12 retention rates, full-time students, by Indigenous status, 1998–2007

Attainment rates

Table 2.05.4 presents the attainment rates of Indigenous and non-Indigenous students in Year 12 by sex and state and territory.

- In 2007, approximately 63% of Indigenous Year 11 students went on to achieve a Year 12 certificate compared with 83% of non-Indigenous students.

Attainment rates by sex

- Attainment rates were higher for females than for males in both the Indigenous and non-Indigenous populations. Approximately 65% of Indigenous females in Year 11 went on to achieve a Year 12 certificate compared with 62% of Indigenous males, and approximately 86% of non-Indigenous females who began Year 11 went on to complete Year 12 compared with 81% of non-Indigenous males.

Attainment rates by state/territory

- Attainment rates of Indigenous students were highest in Tasmania (77%) and Queensland (76%), and were lowest in Western Australia (39%) and the Northern Territory (46%).

Table 2.05.4: Attainment rates,(a) by Indigenous status, sex and state/territory, 2007(b)(c)

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Australia	
	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig	Indig	Non-Indig
Males																		
Year 12																		
Number	443	28,448	97	23,328	852	19,893	270	9,210	98	6,559	83	1,875	24	2,074	157	609	2,019	91,996
Per cent	**67.7**	**85.4**	**65.1**	**82.6**	**76.0**	**77.8**	**40.4**	**73.0**	**54.1**	**72.6**	**72.2**	**80.9**	**70.6**	**86.6**	**44.7**	**74.5**	**61.9**	**80.5**
Females																		
Year 12																		
Number	544	31,552	143	26,389	893	21,202	243	10,440	156	7,458	101	2,246	25	2,027	187	595	2,292	101,909
Per cent	**72.2**	**89.0**	**73.3**	**90.0**	**75.7**	**80.9**	**37.3**	**81.5**	**71.9**	**83.1**	**80.8**	**89.0**	**71.4**	**87.0**	**47.6**	**76.0**	**64.6**	**86.1**
Persons																		
Year 12																		
Number	987	60,000	240	49,717	1,745	41,095	513	19,650	254	14,017	184	4,121	49	4,101	339	1,204	4,311	193,905
Per cent	**70.1**	**87.2**	**69.8**	**86.4**	**75.9**	**79.4**	**38.9**	**77.3**	**63.8**	**77.9**	**76.7**	**85.1**	**71.0**	**86.8**	**46.2**	**75.3**	**63.3**	**83.3**

(a) Attainment rate = proportion of Year 11 students who went on to achieve a Year 12 certificate.

(b) Only full-time students were included in this analysis; part-time students were not included.

(c) Because of the small number of Indigenous students represented, care should be taken when comparing attainment outcomes for Indigenous students.

Source: ABS and AIHW analysis of National Schools Statistics Collection.

Attainment rates over time

- Attainment rates for Indigenous male and female students were slightly lower in 2007 (61.9% and 64.6% respectively) than in 2000 (62.9% and 67.0% respectively) (Table 2.05.5).
- The attainment rates for non-Indigenous male and female students were 80.5% and 86.1% in 2007 compared with 81.7% and 87.8% in 2000.

Table 2.05.5: Attainment rates[(a)], by Indigenous status and sex, 2000 and 2007[(b)(c)]

	2000			2007			Per cent change		
	Males	**Females**	**Total**	**Males**	**Females**	**Total**	**Males**	**Females**	**Total**
Year 12									
Indigenous	62.9	67.0	65.0	61.9	64.6	63.3	–1.0	–2.4	–1.7
Non-Indigenous	81.7	87.8	84.8	80.5	86.1	83.3	–1.2	–1.7	–1.5

(a) Attainment rate = proportion of Year 11 students who went on to achieve a Year 12 certificate.

(b) Only full-time students were included in this analysis; part-time students were not included.

(c) Because of the small number of Indigenous students represented, care should be taken when comparing attainment outcomes for Indigenous students.

Source: ABS and AIHW analysis of National Schools Statistics Collection.

Table 2.05.6 and Figure 2.05.2 present Year 12 attainment rates over the period 1998–2007. There was no significant change for either Indigenous or non-Indigenous students over that time.

Table 2.05.6: Attainment rates, by Indigenous status, 1998–2007

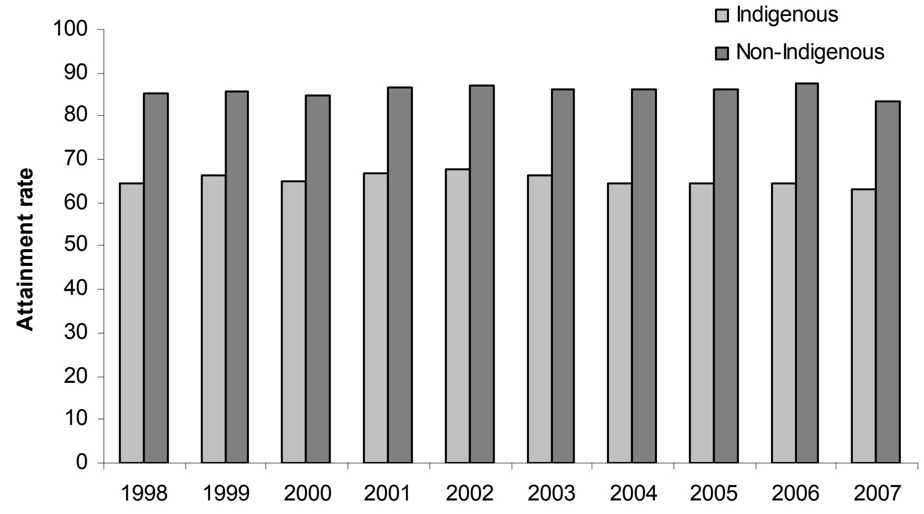
	1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**Annual change[(a)]**	**% change[(b)]**
Year 12												
Indigenous	64.7	66.2	65.0	66.6	67.8	66.4	64.7	64.7	64.4	63.3	–0.2	–2.8
Non-Indigenous	85.2	85.7	84.8	86.5	87.1	86.3	86	86.1	87.4	83.3	–0.01	–0.1

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2007.

(a) Average annual change in rates determined using linear regression analysis.

(b) Per cent change between 1998 and 2007 based on the average annual change over the period.

Source: ABS and AIHW analysis of National Schools Statistics Collection.



Source: AIHW analysis of National Schools Statistics Collection.

Figure 2.05.2: Year 12 attainment rates, full-time students, by Indigenous status, 1998–2007

Data quality issues

National Schools Statistics Collection

Indigenous identification

The incompleteness of Indigenous identification means the number of students recorded as Indigenous is an underestimate of the Aboriginal and Torres Strait Islander student population.

Standard Indigenous status question

Although the Ministerial Council on Education, Employment, Training and Youth Affairs agreed to use the standard Indigenous status question in the schools sector, this has still not been implemented in some jurisdictions.

Retention data

There is no Australia-wide standard method of allocating students and classes to a certain year of school education (grade) and a number of schools do not maintain a formal grade structure. Students at these schools have been allocated to equivalent grades where possible, but otherwise appear against the ungraded category in either the primary or secondary level of school education.

Care should be exercised in the interpretation of apparent retention rates, because the method of calculation does not take into account a range of factors. At the Australia level, these include students repeating a year of education, migration and other net changes to the school population. At lower levels of disaggregation, additional factors affecting the data, such as enrolment policies (which contribute to different age/grade structures between states and territories), inter-sector transfers and interstate movements of students, have not been taken into account. These and other factors affecting the interpretation of apparent retention rates are being looked at, where possible, in the ABS's review of apparent retention rates.

Particularly in small jurisdictions, relatively small changes in student numbers can create apparently large movements in retention rates. In addition, the rates in the smaller jurisdictions may also be noticeably affected by changes in such factors as the proportion of ungraded and/or mature aged students from year to year. The inclusion or exclusion of part-time students can also have a significant effect on apparent retention rates, especially in South Australia, Tasmania and the Northern Territory which have relatively large proportions of part-time students (ABS 2008).

Attainment data

The following points should be considered when interpreting attainment statistics:

- *only full-time students were included in this analysis; part-time students were not included.*
- *because of the small number of Indigenous students represented, care should be taken when comparing attainment outcomes for Indigenous students.*

References

ABS (Australian Bureau of Statistics) 2006. Schools Australia 2005. ABS cat. no. 4221.0. Canberra: ABS.

ABS 2008. Schools Australia 2007. ABS cat. no. 4221.0. Canberra: ABS.

2.06 Educational participation and attainment of Aboriginal and Torres Strait Islander adults

Educational participation (persons undertaking formal education or training) and educational attainment (persons who have completed a particular level of school education or non-school qualification)

Data sources

Data for this measure come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS), the 2006 Census of Population and Housing, the 2001 Census of Population and Housing, the National Centre for Vocational Education Research and the Department of Education, Science and Training Higher Education Statistics Collection.

Data presented have not been age-standardised, because education has not been found to be strongly associated with age in analysis of surveys such as the NATSIHS.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. The survey collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

National Centre for Vocational Education Research

The National Centre for Vocational Education Research is Australia's main provider of vocational education and training (VET) sector research and statistics. VET is a national system designed to give workers the skills for particular occupations and industries. The VET sector includes providers that receive public VET funding, such as technical and further education organisations, higher education institutions, other government providers (for example, agricultural colleges), community education providers, government-funded private registered training organisations, schools funded through government allocations for VET, and all other Commonwealth and state recurrent and specific-purpose funded VET, regardless of the location of the training organisation.

DEST Higher Education Statistics Collection

The Australian Government Department of Education, Science and Training (DEST) holds the Higher Education Statistics Collection, which includes information from higher education institutions such as universities and colleges of advanced education. Private institutions are not required to report statistical data to DEST and are therefore outside the scope of the collection (ABS 2003).

Although universities design and produce their own enrolment forms, DEST has provided institutions with suggested wording for questions relating to Indigenous status (ABS 2003).

Higher education data could not be provided by remoteness area because DEST does not collect information on where a student comes from. Postcode of home location is often used as a substitute, but it is a poor measure because many students report the campus postcode as their postcode of home location. Using this variable results in participation rates incorrectly biased towards Major Cities at the expense of regional and remote areas because most campuses are in Major Cities.

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at 5-yearly intervals, with 2006 being the most recent, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done for the statistics used in this measure.

Data analyses

Comparison of Census and NATSIHS data

The NATSIHS and the Census both collect information on educational institution currently attended, highest year of school completed and non-school qualifications for Indigenous Australians.

This measure presents data included in the 2006 edition of this report for persons aged 15 years and over (2004–05 NATSIHS data) and new data from the 2006 Census for persons aged 15–64 years. Data on educational participation and attainment from the NATSIHS is presented first followed by data from the 2006 Census.

A brief summary of the similarities and differences between the estimates for educational participation from the 2004–05 NATSIHS and the 2006 Census are presented below.

Educational institution currently attended

The proportion of persons whose attendance status at educational institutions was not stated was much higher in the Census data then in the NATSIHS data, especially for Indigenous persons. Therefore, these responses have been excluded from the Census calculations to allow for better comparison.

When comparing the educational institution attendance status of Indigenous persons recorded in the 2006 Census with the 2004–05 NATSIHS, the Census estimates are generally lower. The NATSIHS estimated that 19% of Indigenous persons aged 15 years and over were currently studying, whereas results from the Census showed that 16% were currently studying. The difference is larger for Indigenous females (17% Census compared with 21% NATSIHS) than Indigenous males (15% Census compared with 17% NATSIHS). Comparatively, the difference in estimates for non-Indigenous persons currently studying is smaller—NATSIHS estimated 15% compared with 14% from the Census.

Highest level of school completed

The proportion of persons whose attendance status at educational institutions was not stated was much higher in the Census data then in the NATSIHS data, especially for Indigenous persons. Therefore, these responses have been excluded from the Census calculations to allow for better comparison.

When comparing the highest level of school completed by Indigenous persons recorded in the 2006 Census with the 2004–05 NATSIHS, the results are fairly similar. The NATSIHS estimated that Year 12 was the highest level of school completed for 23% of Indigenous persons aged 18 years and over, Year 10 or 11 was the highest level completed for 42% and Year 9 or below was the highest level completed for 35%. Results from the Census showed that Year 12 was the highest level of school completed for 24% of Indigenous persons aged 18 years and over, Year 10 or 11 was the highest level completed for 42%, and Year 9 or below was the highest level completed for 34%.

Non-school qualifications

The proportion of persons whose attendance status at educational institutions was not stated was much higher in the Census data then in the NATSIHS data, especially for Indigenous persons. Therefore, these responses have been excluded from the Census calculations to allow for better comparison.

When comparing the non-school qualification status of Indigenous persons recorded in the 2006 Census with the 2004–05 NATSIHS, the Census estimates are generally lower. The NATSIHS estimated that 38% of Indigenous persons aged 25–64 years had a non-school qualification, whereas results from the Census showed that 30% had a non-school qualification. The main area of difference is in the results for Certificates—the NATSIHS estimated that 25% of Indigenous persons aged 25–64 years had a Certificate non-school qualification, which is higher than the Census estimate of 18%. The non-Indigenous results are also different—the NATSIHS estimated that 26% of non-Indigenous persons aged 25–64 years had a Certificate non-school qualification, compared with 21% shown by the Census.

Self-reported survey data—NATSIHS

The 2004–05 NATSIHS collected information on the educational institution currently attended, he highest level of school completed by Indigenous people aged 15 years, and the highest level of non-school qualification. These data are presented in Tables 2.06.1 to 2.06.18.

Educational institution currently attended

- In 2004–05, approximately 19% of Indigenous people and 15% of non-Indigenous people aged 15 years and over were currently studying. Indigenous Australians were twice as likely to be studying at secondary school (8%) or TAFE (7%) as non-Indigenous Australians (4% and 4% respectively). However, non-Indigenous Australians were twice as likely to be studying at university or in higher education as Indigenous Australians (6% compared with 3%) (Table 2.06.1).

Educational institution currently attended by age and sex

- A similar proportion of Indigenous and non-Indigenous Australians aged 15–24 years were currently attending secondary school (26% each) and TAFE (9% and 11% respectively). Only 4% of Indigenous Australians aged 15–24 years were currently attending university or higher education compared with 18% of non-Indigenous Australians of the same age.
- In 2004–05, a higher proportion of Indigenous females aged 15 years and over were currently studying (21%) than Indigenous males (17%). Approximately 15% of non-Indigenous males and 14% of non-Indigenous females of the same age were currently studying (Table 2.06.2).
- Approximately 2% of Indigenous males and 4% of Indigenous females were currently studying at university or other higher education compared with 5% and 6% of non-Indigenous males and females respectively.

Table 2.06.1: Educational institution currently attended, by Indigenous status and age group, persons aged 15 years and over, 2004–05

Educational participation	15–24 years			25–34 years			35–44 years			45 years and over			Total		
	Indig.	Non-Indig.	Rate ratio[(a)]	Indig.	Non-Indig.	Rate ratio[(a)]	Indig.	Non-Indig.	Rate ratio[(a)]	Indig.	Non-Indig.	Rate ratio[(a)]	Indig.	Non-Indig.	Rate ratio[(a)]
	%	%		%	%		%	%		%	%		%	%	
Secondary school	26	26	1.0	. .	. .	. .	. .	. .	. .	. .	. .	. .	8	4	1.8
TAFE/technical college/business college/industry skills centre	9	11	0.9	7	5	1.4	7	4	1.5*	2	1	2.0*	7	4	1.7*
University/other higher education	4	18	0.2*	4	7	0.6*	3	7	0.6*	1[(b)]	1	1.0	3	6	0.5*
Total currently studying[(c)]	**40**	**57**	**0.7***	**12**	**12**	**1.0**	**12**	**13**	**0.9***	**4**	**3**	**1.5**	**19**	**15**	**1.3***
Not studying	60	43	1.4*	88	87	1.0	88	91	1.0	96	97	1.0	81	85	1.0*
Total[(d)]	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number	92,067	2,636,199	. .	69,772	2,761,354	. .	59,057	2,899,566	. .	72,745	7,235,258	. .	293,641	15,532,377	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Indigenous rate divided by non-Indigenous rate.

(b) Estimate is subject to sampling variability too high for most practical purposes.

(c) Includes other educational institution.

(d) Includes 'not stated' educational institution currently attended.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.06.2: Educational institution currently attended, by Indigenous status and sex, persons aged 15 years and over, 2004–05

	Males			Females		
Educational participation	**Indigenous**	**Non-Indigenous**	**Rate ratio**[(a)]	**Indigenous**	**Non-Indigenous**	**Rate ratio**[(a)]
	%	%		%	%	
Secondary school	8	5	1.8*	8	6	1.8*
TAFE/technical college/business college/industry skills centre	6	4	1.3*	7	3	2.2*
University/other higher education	2	5	0.4	4	6	0.7*
Total currently studying[(b)]	***17***	***15***	***1.1***	***21***	***14***	***1.4****
Not studying	83	85	1.0*	79	85	0.9*
Not stated	—	—	—	—	—	—
Total[(b)]	**100**	**100**	. .	**100**	**100**	. .
Total number	139,595	7,666,352	. .	154,046	7,866,025	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Indigenous rate divided by non-Indigenous rate.

(b) Includes other educational institution and not asked (currently still at school).

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Educational institution currently attended by state/territory and remoteness

- The Australian Capital Territory had the highest proportion of Indigenous persons aged 15 years and over currently studying (33%) and the Northern Territory had the lowest proportion (14%) (Table 2.06.3).
- In all states and territories except the Northern Territory, there was a higher proportion of Indigenous persons currently studying than non-Indigenous persons.
- The proportion of Indigenous people currently studying who were attending secondary school ranged from 8% in New South Wales, Queensland, Western Australia and the Northern Territory to 13% in Tasmania. The proportion of Indigenous people currently studying who were attending TAFE colleges ranged from 2% in the Northern Territory to 11% in the Australian Capital Territory.
- A higher proportion of Indigenous Australians in non-remote areas were currently studying at secondary school (9%), TAFE colleges or equivalent (7%) and university or higher education (4%) than those in remote areas (6%, 4% and 2% respectively) (Table 2.06.4).

Table 2.06.3: Educational institution currently attended, by Indigenous status and state/territory, persons aged 15 years and over, 2004–05

	Educational participation		Secondary school	TAFE/technical college/business college/industry skills centre	University /other higher education	Total currently studying(a)	Not studying	Total(a)	Total number
NSW	Indigenous	%	8	7	3	19	81	100	85,426
	Non-Indigenous	%	4	4	5	14	86	100	5,222,355
	Rate ratio(d)		1.7*	1.9*	0.7*	1.4*	0.9*	. .	. .
Vic	Indigenous	%	9	7	3(b)	19	81	100	18,492
	Non-Indigenous	%	5	3	6	14	84	100	3,944,895
	Rate ratio(d)		1.8*	2.0*	0.4*	1.2*	1.0	. .	. .
Qld	Indigenous	%	8	7	3	18	82	100	79,351
	Non-Indigenous	%	4	4	6	15	85	100	2,949,876
	Rate ratio(d)		1.7*	1.8*	0.4*	1.2*	1.0	. .	. .
WA	Indigenous	%	8	9	3	21	79	100	42,043
	Non-Indigenous	%	4	4	5	14	85	100	1,498,665
	Rate ratio(d)		1.9*	2.2*	0.6*	1.5*	0.9	. .	. .
SA	Indigenous	%	11	7	2(b)	22	78	100	16,677
	Non-Indigenous	%	5	4	5	14	85	100	1,200,435
	Rate ratio(d)		2.4*	1.5*	0.5*	1.5*	0.9*	. .	. .
Tas	Indigenous	%	13	5	5(c)	24	76	100	11,256
	Non-Indigenous	%	5	4	5	15	85	100	366,280
	Rate ratio(d)		2.6*	1.1	1.1	1.6*	0.9*	. .	. .
ACT	Indigenous	%	10(b)	11	9(b)	33	67	100	2,596
	Non-Indigenous	%	5	5	11	22	78	100	252,744
	Rate ratio(d)		2	2.2*	0.8	1.5*	0.9*	. .	. .
NT	Indigenous	%	8	2(b)	3(b)	14	86	100	37,800
	Non-Indigenous	%	8(b)	1(c)	7	17(b)	83	100	97,127
	Rate ratio(d)		1.0	1.4	0.5*	0.8*	1.0	. .	. .
Aust.	Indigenous	%	8	7	3	19	81	100	293,641
	Non-Indigenous	%	4	4	6	15	85	100	15,532,377
	Rate ratio(d)		1.8*	1.7*	0.6*	1.3*	1.0*	. .	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes other educational institution, not asked (currently still at school) and not stated.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(d) Indigenous rate divided by non-Indigenous rate.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.06.4: Educational institution currently attended, by Indigenous status and remoteness, persons aged 15 years and over, 2004–05

	Major Cities	Inner Regional	Outer Regional	*Subtotal non-remote*	Remote	Very Remote	*Subtotal remote*	Total
				Per cent				
				Indigenous				
Secondary school	8	8	10	*9*	8	5	*6*	8
TAFE/technical college/business college/industry skills centre	8	7	6	*7*	7[(a)]	3	*4*	7
University/other higher education	5	2[(a)]	3	*4*	3[(a)]	1[(a)]	*2*	3
Total currently studying[(b)]	**22**	**18**	**21**	***21***	**18**	**11**	***13***	**19**
Not studying	8	82	79	*79*	82	89	*87*	81
Total[(c)]	100	100	100	*100*	100	100	*100*	100
Total number	**89,350**	**58,372**	**65,700**	***213,422***	**24,456**	**55,763**	**80,219**	**293,641**
				Non-Indigenous				
Secondary school	4	5	4	*5*	3[(a)]	n.a.	*n.a.*	4
TAFE/technical college/business college/industry skills centre	4	4	4	*4*	3[(a)]	n.a.	*n.a.*	4
University/other higher education	7	3	3	*6*	1[(d)]	n.a.	*n.a.*	6
Total currently studying[(b)]	**16**	**14**	**12**	***15***	**7[(a)]**	**n.a.**	***n.a.***	**15**
Not studying	84	86	88	*85*	93	n.a.	*n.a.*	85
Total[(c)]	100	100	100	*100*	100	n.a.	*n.a.*	100
Total number	**10,615,977**	**3,090,996**	**1,637,784**	***15,344,756***	**187,620**	**n.a.**	***n.a.***	**15,532,377**
				Ratio[(e)]				
Secondary school	1.9*	1.5*	2.4*	*2.0**	2.5*	n.a.	*n.a.*	1.8*
TAFE/technical college/business college/industry skills centre	2.3*	1.7*	1.5	*1.9**	2.4	n.a.	*n.a.*	1.7*
University/other higher education	0.8	0.6*	1.0	*0.7**	5.5*	n.a.	*n.a.*	0.6*
Total currently studying[(b)]	**1.4***	**1.3***	**1.7***	***1.4****	**2.6***	**n.a.**	***n.a.***	**1.3***
Not studying	0.9*	0.9*	0.9*	*0.9**	0.9*	n.a.	*n.a.*	1.0*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Includes other educational institution.

(c) Includes not stated whether currently studying.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(e) Indigenous rate divided by Indigenous rate.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Highest level of school completed

- In 2004–05, Indigenous adults aged 18 years and over were almost twice as likely to report that their highest level of schooling completed was Year 9 or below as non-Indigenous adults (35% compared with 19%). Year 10 or 11 was the highest level of schooling completed by 43% of Indigenous adults and 35% of non-Indigenous adults, and Year 12 was the highest level of school completed by 23% of Indigenous adults compared with 47% of non-Indigenous adults.

Highest level of school completed by age and sex

- Indigenous Australians aged 45 years and over were much more likely to report that their highest level of schooling completed was Year 9 or below (62%) than Indigenous Australians or younger ages (Table 2.06.5).
- Indigenous Australians aged 18–24, 25–34 and 35–44 years were between four and five times as likely to report Year 9 or below as their highest level of schooling as non-Indigenous adults.
- In 2004–05, males and females in the Indigenous population reported similar levels of school completed, as did males and females in the non-Indigenous population (Table 2.06.6).

Table 2.06.5: Highest level of school completed, by Indigenous status and age group, persons aged 18 years and over, 2004–05

	18–24			25–34			35–44			45 years and over			Total		
Highest level of school completed	**Indig.**	**Non-Indig.**	**Rate ratio[(a)]**	**Indig.**	**Non-Indig.**	**Rate ratio[(a)]**	**Indig.**	**Non-Indig.**	**Rate ratio[(a)]**	**Indig.**	**Non-Indig.**	**Rate ratio[(a)]**	**Indig.**	**Non-Indig.**	**Rate ratio[(a)]**
	%	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**	
Completed Year 12[(b)]	36	75	0.5*	30	69	0.4*	17	49	0.3*	10	30	0.3	23	47	0.5*
Completed Year 10 or 11	43	20	2.1*	47	27	1.8*	55	43	1.3*	28	38	0.7	42	35	1.2*
Completed Year 9 or below[(c)]	20	5	4.4*	23	4	5.4*	29	8	3.7*	62	32	1.9	35	19	1.9*
Total[(d)(e)]	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number of persons	55,850	1,803,237	. .	69,772	2,761,354	. .	59,057	2,899,566	. .	72,745	7,235,258	. .	257,424	14,699,415	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Indigenous rate divided by non-Indigenous rate.

(b) For Year 12, completion only requires attendance for the full year. For years up to and including Year 11, completion means to attend for the full school year such that progression to the following year of school is enabled.

(c) Includes persons who never attended school.

(d) May include persons for whom specific information could not be determined.

(e) Excludes those who are still attending secondary school.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.06.6: Highest year of school completed, by Indigenous status and sex, persons aged 18 years and over, 2004–05

Highest level of school completed	Male			Female			Total		
	Indig.	Non-Indig.	Rate ratio[(a)]	Indig.	Non-Indig.	Rate ratio[(a)]	Indig.	Non-Indig.	Rate ratio[(a)]
	%	%		%	%		%	%	
Completed Year 12[(b)]	22	47	0.5*	23	47	0.5*	23	47	0.5*
Completed Year 10 or 11	42	35	1.2*	44	34	1.3*	43	35	1.2*
Completed Year 9 or below[(c)]	36	18	2.0*	33	19	1.7*	35	19	1.9*
Total[(d)(e)]	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .
Total number of persons	120,095	7,232,422	. .	137,330	7,466,993	. .	257,424	14,699,415	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Indigenous rate divided by non-Indigenous rate.

(b) For Year 12, completion only requires attendance for the full year. For years up to and including Year 11, completion means to attend for the full school year such that progression to the following year of school is enabled.

(c) Includes persons who never attended school.

(d) May include persons for whom specific information could not be determined.

(e) Excludes those who are still attending secondary school.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Highest level of school completed by state/territory and remoteness

- The proportion of Indigenous adults reporting Year 12 as their highest level of school completed ranged from 12% in Western Australia to 46% in the Australian Capital Territory. The proportion of Indigenous students reporting Year 9 or below as their highest level of schooling ranged from 20% in the Australian Capital Territory to 48% in the Northern Territory (Table 2.06.7).
- A higher proportion of Indigenous Australians aged 18 years and over in non-remote areas reported Year 12 as their highest level of school completed than Indigenous Australians in remote areas of Australia (26% compared with 14%) (Table 2.06.8).
- In Major Cities, Inner Regional, Outer Regional and Remote areas of Australia, Indigenous Australians were more likely than non-Indigenous Australians to report that their highest level of schooling completed was Year 9 or below.

Table 2.06.7: Highest level of school completed, by state/territory and Indigenous status, persons aged 18 years and over, 2004–05

State/territory			Completed Year 12[(a)]	Completed Year 10 or below	Completed Year 9 or below[(b)]	Total[(c)(d)]	Total no. of persons
NSW	Indigenous	%	24	40	36	100	74,692
	Non-Indigenous	%	48	33	20	100	4,947,090
	Rate ratio[(e)]		0.5*	1.2*	1.8*	. .	. .
Vic	Indigenous	%	28	42	30	100	16,444
	Non-Indigenous	%	49	31	20	100	3,737,882
	Rate ratio[(e)]		0.6*	1.4*	1.4*	. .	. .
Qld	Indigenous	%	29	42	29	100	70,590
	Non-Indigenous	%	45	38	17	100	2,787,025
	Rate ratio[(e)]		0.6*	1.1	1.7*	. .	. .
WA	Indigenous	%	12	52	35	100	36,503
	Non-Indigenous	%	46	40	14	100	1,417,909
	Rate ratio[(e)]		0.3*	1.3*	2.5*	. .	. .
SA	Indigenous	%	18	44	38	100	14,324
	Non-Indigenous	%	40	42	18	100	1,135,705
	Rate ratio[(e)]		0.4*	1.1	2.1*	. .	. .
Tas	Indigenous	%	23	52	25	100	9,430
	Non-Indigenous	%	33	43	24	100	345,136
	Rate ratio[(e)]		0.7*	1.2	1.1	. .	. .
ACT	Indigenous	%	46	34	20	100	2,300
	Non-Indigenous	%	71	20	9	100	238,831
	Rate ratio[(e)]		0.6*	1.7*	2.3*	. .	. .
NT	Indigenous	%	15	36	48	100	33,141
	Non-Indigenous	%	41	42	16[(f)]	100	89,837
	Rate ratio[(e)]		0.4*	0.9	3.0*	. .	. .
Aust.	**Indigenous**	**%**	**23**	**43**	**35**	**100**	**257,424**
	Non-Indigenous	**%**	**47**	**35**	**19**	**100**	**14,699,415**
	Rate ratio[(e)]		**0.5***	**1.2***	**1.9***	**. .**	**. .**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) For Year 12, completion only requires attendance for the full year. For years up to and including Year 11, completion means to attend for the full school year such that progression to the following year of school is enabled.

(b) Includes persons who never attended school.

(c) May include persons for whom specific information could not be determined.

(d) Excludes those who are still attending secondary school.

(e) Indigenous rate divided by non-Indigenous rate.

(f) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.06.8: Highest level of school completed, by Indigenous status and remoteness area, persons aged 18 years and over, 2004–05

Highest level of school completed[(b)]	Major Cities			Inner Regional			Outer Regional			*Subtotal non-remote*			Remote			Very Remote[(a)]			*Subtotal remote*[(a)]
	Indig.	Non-Indig.	Rate ratio[(c)]	Indig.	Non-Indig.	Rate ratio[(c)]	Indig.	Non-Indig.	Rate ratio[(c)]	*Indig.*	*Non-Indig.*	Rate ratio[(c)]	Indig.	Non-Indig.	Rate ratio[(c)]	Indig.	Non-Indig.	Rate ratio[(c)]	*Indig.*
	%	%		%	%		%	%		*%*	*%*		%	%		%	%	%	*%*
Completed Year 12[(b)]	29	52	0.6*	21	36	0.6*	26	34	0.8*	*26*	*47*	*0.6**	14	34	0.4*	14	. .	. .	*14*
Completed Year 10 or 11	42	31	1.3*	45	42	1.1	40	41	1.0	*42*	*35*	*1.2**	53	47	1.1	39	. .	. .	*43*
Completed Year 9 or below[(d)]	28	17	1.7*	34	22	1.6*	34	25	1.3*	*32*	*19*	*1.7**	33	19	1.7*	46	. .	. .	*42*
Total[(e)(f)]	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	***100***	***100***	. .	**100**	**100**	. .	**100**	. .	. .	***100***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Non-Indigenous data not available for Very Remote Australia.

(b) For Year 12, completion only requires attendance for the full year. For years up to and including year 11, completion means to attend for the full school year such that progression to the following year of school is enabled.

(c) Indigenous rate divided by non-Indigenous rate.

(d) Includes persons who never attended school.

(e) Includes those for whom highest level of school completed was not stated.

(f) Excludes those who are still attending secondary school.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Highest year of school completed by whether woman has had children

- In 2004–05, Indigenous females aged 18 years and over who had not had children were twice as likely to report Year 12 as their highest level of school completed (40%) as Indigenous females who had children (20%). A much higher proportion of Indigenous females who had children reported Year 9 or below as their highest level of school completed (34%) than Indigenous females who had not had children (17%) (Table 2.06.9).

Table 2.06.9: Indigenous females aged 18 years and over, by highest year of school completed and whether the woman has ever had children, 2004–05

Highest level of school completed	Had children	Has not had children	Not stated/form not answered	Total
	%	%	%	%
Completed Year 12	20	40	24	24
Completed Year 10 or 11	47	43	42	45
Completed Year 9 or below [(a)]	34	17	35	30
Total[(b)(c)]	**100**	**100**	**100**	**100**
Total number	88,745	26,007	15,761	130,513

(a) Includes persons who never attended school.

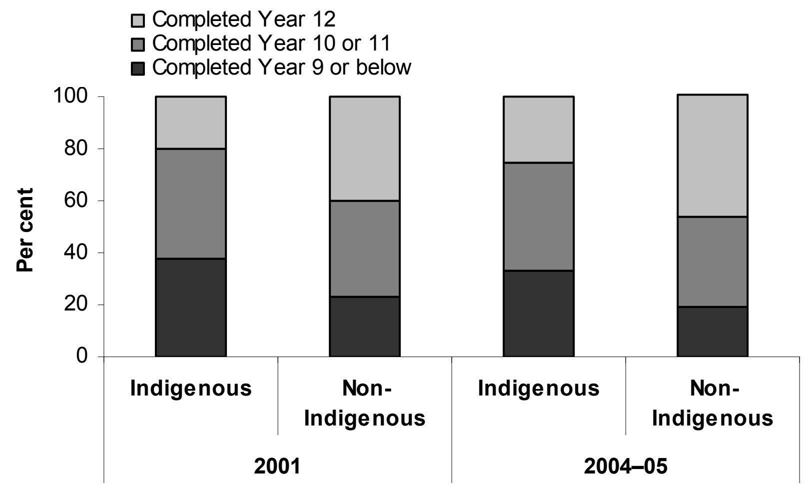
(b) Total may include persons for whom specific information could not be determined.

(c) Excludes those who are still attending secondary school and includes not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Time series analyses

- A slightly higher proportion of Indigenous Australians aged 15 years and over reported that the highest year of school completed was Year 12 in 2004–05 (22%) than in 2001 (18%). A higher proportion of non-Indigenous Australians aged 15 years and over in 2004–05 also reported that Year 12 was their highest year of school completed (47%) than in 2001 (40%) (Figure 2.06.1).



Note: 2001 data available for non-Indigenous Australians in non-remote areas only.

Source: ABS and AIHW analysis of 2001 NHS (Indigenous supplement), 2004–05 NATSIHS and 2004–05 NHS.

Figure 2.06.1: Highest level of school completed, by Indigenous status, non-remote areas, 2001 and 2004–05

Highest year of school completed by summary health and population characteristics

- Indigenous Australians who reported Year 9 or below as their highest year of school completed were more likely to report fair/poor health than Indigenous Australians who reported Year 12 as their highest year of school completed (35% compared with 25%) (Table 2.06.10).
- Around half of all Indigenous Australians who spoke a language other than English as their main language at home reported their highest level of school completed was Year 9 or below, compared with a third of Indigenous Australians who spoke English as their main language (Table 2.06.11).
- Indigenous Australians in the highest (5th) quintile of household income and index of disparity and who were employed were much more likely to have completed Year 12 than Indigenous Australians in the lowest quintiles of income and disparity and those who were unemployed or not in the labour force.

Table 2.06.10: Highest year of school completed, by summary health characteristics and Indigenous status, persons aged 25–64 years, 2004–05

Highest year of school completed	Self-assessed health status						Number of long-term conditions														
	Excellent/very good			Fair/poor			0			1			2			3			Total		
	Indig.	Non-Indig.	Ratio[(a)]	Indig.	Non-Indig.	Ratio[(a)]	Indig.	Non-Indig.	Ratio[(a)]	Indig.	Non-Indig.	Ratio[(a)]	Indig.	Non-Indig.	Ratio[(a)]	Indig.	Non-Indig.	Ratio[(a)]	Indig.	Non-Indig.	Ratio[(a)]
	%	%		%	%		%	%			%		%	%		%	%		%	%	
Completed Year 12	75	89	1.2*	25	11	0.5*	12	13	1.0	15	21	1.4*	17	20	1.1	55	46	0.8*	100	100	. .
Completed Year 10 or 11	74	84	1.1*	26	16	0.6*	14	14	1.0	16	19	1.2	16	18	1.1	55	50	0.9*	100	100	. .
Completed Year 9 or below[(b)]	65	71	1.1*	35	29	0.8*	16	13	0.8	14	17	1.3	17	14	0.8*	54	56	1.0	100	100	. .
Total[(c)(d)]	**70**	**84**	**1.2***	**30**	**16**	**0.5***	**14**	**13**	**0.9**	**15**	**19**	**1.3***	**17**	**18**	**1.1**	**54**	**48**	**0.9***	**100**	**100**	**. .**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Indigenous proportion divided by non-Indigenous proportion.

(b) Includes persons who never attended school.

(c) Includes not stated.

(d) Excludes those who are still attending secondary school.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.06.11: Highest year of school completed, by selected population characteristics and Indigenous status, persons aged 25–64 years, 2004–05

	Completed Year 12		Completed Yr 10 or 11		Completed Yr 9 or below[(a)]		Total[(b)(c)]	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
				Per cent				
Main language spoken at home								
English	24*	46*	44*	37*	32*	17*	100	100
Language other than English[(d)]	15*	58*	35*	12*	50*	30*	100	100
Location								
Remote[(e)]	14*	34*	43	47	42*	19*	100	100
Non-remote	26*	47*	42*	35*	32*	19*	100	100
Household income								
1st quintile	11*	25*	41*	32*	48	42	100	100
5th quintile	46*	68*	38*	26*	16*[(f)]	5*	100	100
Index of disparity								
1st quintile	16*	36*	44*	36*	40*	28*	100	100
5th quintile	60[(f)]	65	29[(f)]	26	11[(f)]	9	100	100
Employment								
Employed CDEP	19	. .	46	. .	35	. .	100	. .
Employed non-CDEP	35*	56*	47*	35*	18*	9*	100	100
Subtotal employed	32*	56*	46*	35*	22*	9*	100	100
Unemployed	16*	54*	54*	33*	30*	13*	100	100
Not in the labour force	12*	28*	35	33	53*	39*	100	100
Housing tenure type								
Owner	33*	43*	45*	37*	22	20	100	100
Renter[(g)]	19*	50*	42*	33*	39*	17*	100	100
Other[(h)]	31*[(f)]	62*	36	26	32*	12*	100	100
Treatment when seeking health care in last 12 months								
Worse	19	. .	41	. .	40	. .	100	. .
The same or better	23	. .	42	. .	35	. .	100	. .
Other	23	. .	45	. .	32	. .	100	. .
Total[(i)]	**23***	**47***	**43***	**35***	**35***	**19***	**100**	**100**
Total number ('000)	**10.4**	**2,298.5**	**10.6**	**1,062.4**	**48.3**	**2,770.9**	**71.4**	**6,252.8**

*Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes persons who never attended school.
(b) Total may include persons for whom specific information could not be determined.
(c) Excludes those who are still attending secondary school.
(d) Includes not stated, insufficient information to classify and non-verbal languages.
(e) Non-Indigenous data are for Remote areas only and do not include Very Remote areas.
(f) Estimate has a relative standard error of between 25% and 50% and should be used with caution.
(g) 'Renter' includes renter (excluding boarders) and boarder.
(h) 'Other' includes life tenure scheme, participant in rent/buy scheme, rent-free and other.
(i) Includes not known, not stated and not applicable.

Source: ABS and AIHW analyses of 2004–05 NATSIHS and 2004–05 National Health Survey.

Non-school qualifications

- In 2004–05, approximately 38% of Indigenous Australians aged 25–64 years reported they had a non-school qualification compared with 60% of non-Indigenous Australians of the same age (Table 2.06.12).
- A similar proportion of Indigenous and non-Indigenous people aged 25–64 years had completed a certificate course in 2004–05 (25% and 26% respectively). A much higher proportion of non-Indigenous Australians had a bachelor degree or diploma as their highest level of non-school qualification (22% and 10% respectively) compared with Indigenous Australians (6% and 6% respectively).

Non-school qualifications by age and sex

- For Indigenous Australians the age group with the highest rate of non-school qualifications was 35–44 years (41%). For non-Indigenous Australians the highest rate was in the 25–34 year group (67%) (Table 2.06.12).
- In 2004–05, a similar proportion of Indigenous males and females aged 25–64 years had a non-school qualification (38% and 37% respectively). Indigenous males were more likely to have completed a certificate course (29%) and less likely to have completed a diploma (3%) or bachelor degree or above (5%) than Indigenous females (22%, 8% and 6% respectively) (Table 2.06.13).

Table 2.06.12: Whether has a non-school qualification, by Indigenous status and age group, persons aged 25–64 years, 2004–05

Highest level of non-school qualification[(a)]	25–34 years			35–44 years			45–64 years			Total		
	Indigenous	Non-Indigenous	Rate ratio	Indigenous	Non-Indigenous	Rate ratio	Indigenous	Non-Indigenous	Rate ratio	Indigenous	Non-Indigenous	Rate ratio
	%	%		%	%		%	%		%	%	
Non-school qualification												
Bachelor degree or above[(b)]	4	28	0.1*	5	22	0.2*	8	18	0.5*	6	22	0.3*
Advanced diploma/diploma	4	10	0.4*	7	10	0.7*	6	10	0.6*	6	10	0.6*
Certificate	30	27	1.1	27	28	1.0	19	25	0.7*	25	26	1.0
Total with non-school qualification[(c)]	***38***	***67***	***0.6****	***41***	***61***	***0.7****	***34***	***55***	***0.6****	***38***	***60***	***0.6****
Does not have a non-school qualification	61	33	1.8*	59	39	1.5*	66	45	1.5*	62	40	1.5*
Total[(d)]	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .
Total number of persons	69,772	2,761,354	. .	59,057	2,899,566	. .	60,508	4,805,004	. .	189,337	10,465,924	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) As classified to the ABS Classification of Qualifications.

(b) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.

(c) Includes persons with a non-school qualification inadequately described.

(d) Includes those who did not state whether they had a non-school qualification.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.06.13: Whether has a non-school qualification, by sex and Indigenous status, persons aged 25–64 years, 2004–05

	Male			Female			Total		
Non-school qualification[a]	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio
	%	%		%	%		%	%	
Bachelor degree or above[b]	5	21	0.2*	6	23	0.3*	6	22	0.3*
Advanced diploma/diploma	3	9	0.3*	8	12	0.7*	6	10	0.6*
Certificate	29	32	0.9	22	21	1.1	25	26	1.0
Total with non-school qualification[c]	***38***	***63***	***0.6****	***37***	***57***	***0.7****	***38***	***60***	***0.6****
Does not have a non-school qualification	62	37	1.7*	63	43	1.4*	62	40	1.5*
Total[d]	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number of persons	88,344	5,201,663	. .	100,992	5,264,261	. .	189,337	10,465,924	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) As classified to the ABS Classification of Qualifications.

(b) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.

(c) Includes persons with a non-school qualification inadequately described.

(d) Includes those who did not state whether they had a non-school qualification.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Non-school qualifications by state/territory and remoteness

- The proportion of Indigenous Australians aged 25–64 years with a non-school qualification ranged from 26% in the Northern Territory to 57% in the Australian Capital Territory (Table 2.06.14). Approximately 27% of Indigenous Australians in the Australian Capital Territory had completed a bachelor degree or above, whereas in the other states and territories this proportion ranged between 2% and 10%.
- In 2004–05, a higher proportion of Indigenous Australians aged 25–64 years in non-remote areas reported having a non-school qualification (42%) than Indigenous Australians in remote areas (27%) (Table 2.06.15). In Major Cities, a similar proportion of Indigenous and non-Indigenous Australians had an advanced diploma/diploma and a higher proportion of Indigenous Australians had a certificate qualification than non-Indigenous Australians. In other remoteness categories, non-Indigenous Australians were more likely to have these qualifications.

Table 2.06.14: Whether has a non-school qualification, by state/territory and Indigenous status, persons aged 25–64 years, 2004–05

Highest non-school qualification(a)			Bachelor degree or above(b)	Advanced diploma/ diploma	Certificate	*Total with non-school qualification(c)*	Does not have a non-school qualification	Total(d)	Total number of persons
NSW	Indigenous	%	6(e)	7	25	*38*	62	100	55,638
	Non-Indigenous	%	23	12	27	*63*	37	100	3,503,114
	Rate ratio		0.2*	0.6*	0.9	*0.6*	1.7	. .	. .
Vic	Indigenous	%	10(e)	6(e)	30	*46*	54	100	11,901
	Non-Indigenous	%	24	10	23	*58*	42	100	2,653,502
	Rate ratio		0.4*	0.6*	1.3*	*0.8*	1.3	. .	. .
Qld	Indigenous	%	6	7	31	*45*	55	100	50,796
	Non-Indigenous	%	18	9	30	*58*	42	100	1,999,866
	Rate ratio		0.3*	0.8	1.0	*0.8*	1.3	. .	. .
WA	Indigenous	%	2(e)	3(e)	24	*29*	71	100	26,990
	Non-Indigenous	%	20	10	27	*58*	42	100	1,022,664
	Rate ratio		0.1*	0.2*	0.9	*0.5*	1.7	. .	. .
SA	Indigenous	%	6(e)	4(e)	26	*37*	63	100	10,689
	Non-Indigenous	%	20	8	29	*58*	42	100	790,578
	Rate ratio		0.3*	0.5*	0.9	*0.6*	1.5	. .	. .
Tas	Indigenous	%	6	5	26	*39*	61	100	6,972
	Non-Indigenous	%	17	7	28	*54*	46	100	243,364
	Rate ratio		0.4*	0.7	0.9	*0.7*	1.3	. .	. .
ACT	Indigenous	%	27	6(e)	24	*57*	43	100	1,762
	Non-Indigenous	%	39	11	20	*71*	29	100	1,77,134
	Rate ratio		0.7*	0.5	1.2	*0.8*	1.5	. .	. .
NT	Indigenous	%	4	4	16	*26*	73	100	24,589
	Non-Indigenous	%	19	7(e)	20(e)	*50*	50	100	75,702
	Rate ratio		0.2*	0.6	0.8	*0.5*	1.4	. .	. .
Total	**Indigenous**	**%**	**6**	**6**	**25**	***38***	**62**	**100**	**189,337**
	Non-Indigenous	**%**	**22**	**10**	**26**	***60***	**40**	**100**	**1,0465,924**
	Rate ratio		**0.3***	**0.6***	**1.0**	***0.6***	**1.6**	**. .**	**. .**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) As classified to the ABS Classification of Qualifications.

(b) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.

(c) Includes persons with a non-school qualification inadequately described.

(d) Includes those who did not state whether they had a non-school qualification.

(e) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.06.15: Whether has a non-school qualification, by Indigenous status, and remoteness area, persons aged 25–64 years, 2004–05

Highest level of non-school qualification(b)	Major Cities			Inner Regional			Outer Regional			*Subtotal non-remote*			Remote			Very Remote(a)			*Subtotal remote(a)*
	Indig.	Non-Indig.	Rate Ratio(c)	Indig.	Non-Indig	Rate Ratio(c)	Indig.	Non-Indig	Rate Ratio(c)	*Indig.*	*Non-Indig.*	Rate Ratio(c)	Indig.	Non-Indig.	Rate Ratio(c)	Indig.	Non-Indig.	Rate ratio(c)	*Indig.*
	%	%		%	%		%	%		%	%		%	%		%	%	%	%
Non-school qualification																			
Bachelor degree or above(d)	8	26	0.3*	7(e)	14	0.5*	5(e)	13	0.4*	*7*	*22*	*0.3**	4(b)	10(e)	0.3*	2(e)	. .	. .	*2*
Advanced diploma/ diploma	9	11	0.9	5(e)	9	0.6*	5	8	0.6*	*7*	*10*	*0.7**	3(b	6(e)	0.5*	3	. .	. .	*3*
Certificate	32	24	1.3*	23	31	0.7*	26	31	0.8*	*28*	*26*	*1.0*	26	29	0.9*	18	. .	. .	*20*
Total with non-school qualification(f)	**49**	**62**	**0.8***	**37**	**55**	**0.7***	**37**	**53**	**0.7***	***42***	***60***	***0.7****	**32**	**46**	**0.7***	**25**	. .	. .	***27***
Does not have a non-school qualification	51	38	1.3*	63	45	1.4*	63	47	1.4*	*58*	*40*	*1.4**	68	54	1.3*	75	. .	. .	*73*
Total(g)	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	***100***	***100***	. .	**100**	**100**	. .	**100**	. .	. .	***100***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Non-Indigenous estimates for Very Remote areas are not available from the National Health Survey and thus have not been presented here. They have also not been presented for the subtotal for Remote areas and a rate ratio is unable to be calculated.

(b) Indigenous rate divided by non-Indigenous rate.

(c) As classified to the ABS Classification of Qualifications.

(d) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.

(e) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(f) Includes persons with a non-school qualification inadequately described.

(g) Includes those who did not state whether they had a non-school qualification.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Non-school qualifications by whether woman has had children

- In 2004–05, Indigenous females aged 25–64 years who had not had children were much more likely to have a non-school qualification than Indigenous females who had children (51% compared with 35%). Indigenous females who had not had children were around twice as likely to have completed a diploma or bachelor degree or above as Indigenous females who had children (Table 2.06.16).

Table 2.06.16: Indigenous females aged 25–64 years, by non-school qualification and whether the woman has ever had children, 2004–05

Highest level of non-school qualification	Had children	Has not had children	Not stated/form not answered	Total
		Per cent		
Bachelor degree or above[(a)]	6	11	3[(b)]	6
Advanced diploma/ diploma	7	15[(c)]	5[(c)]	8
Certificate	21	25	29	22
Total with non-school qualification [(d)]	*35*	*51*	*37*	*37*
Does not have a non-school qualification	65	49	63	63
Total[(e)]	**100**	**100**	**100**	**100**
Total number	76,667	12,807	11,519	100,992

(a) Includes bachelor degree, doctorate, masters, graduate diploma, and graduate certificate.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

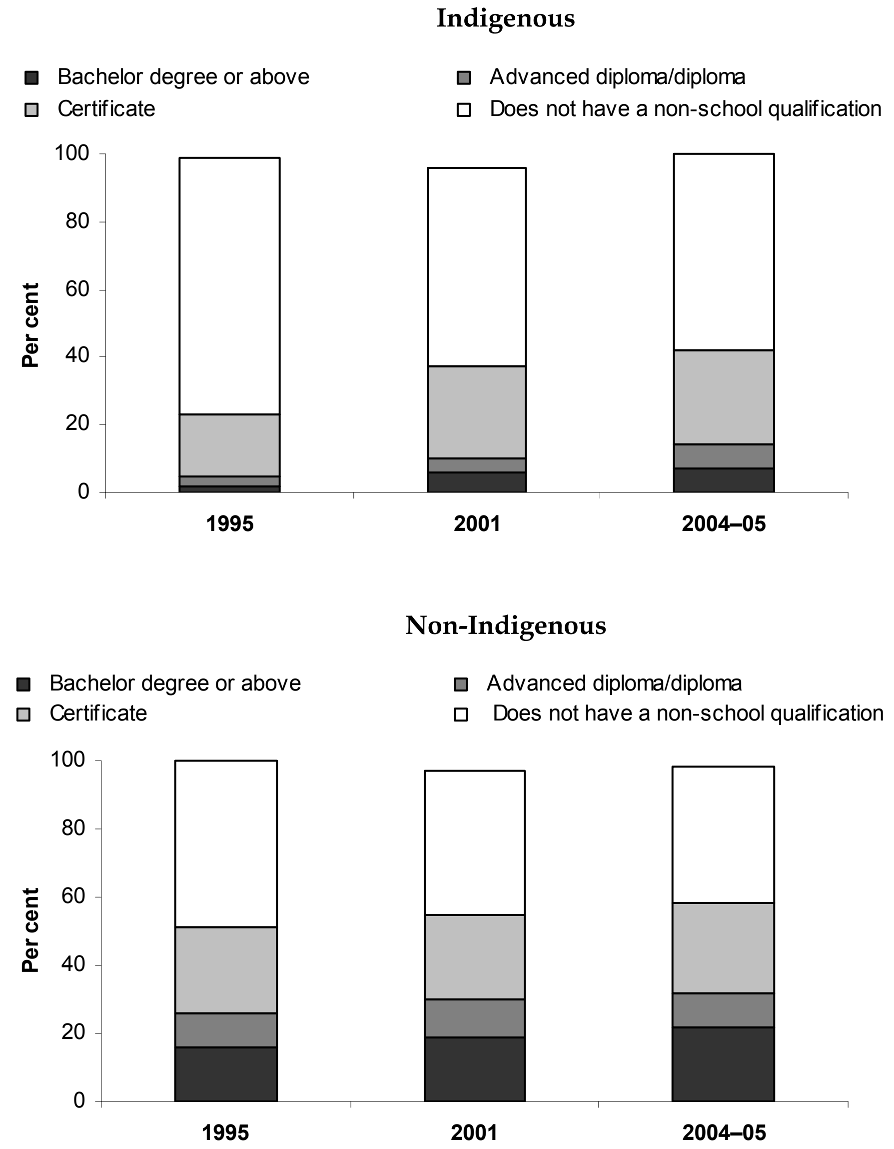
(d) Total may include persons for whom specific information could not be determined.

(e) Includes women who did not answer the form.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Time series analyses

- A higher proportion of Indigenous Australians aged 25–64 years in 2004–05 reported that they had a non-school qualification (42%) than in 2001 (37%) or 1995 (23%) (Figure 2.06.2). Approximately 7% of Indigenous Australians had a bachelor degree or higher in 2004–05, compared with 2% in 1995. A higher proportion of non-Indigenous Australians also had a non-school qualification in 2004–05 (58%) than in 2001 (55%) or 1995 (51%).



Note: 1995 data for Indigenous and non-Indigenous Australians available for non-remote areas only. 2001 data available for non-Indigenous Australians in non-remote areas only.

Source: ABS and AIHW anlaysis of 1995 and 2001 NHS (Indigenous supplements), 2004–05 NATSIHS and 2004–05 NHS.

Figure 2.06.2: Non-school qualifications, by Indigenous status, non-remote areas, 1995, 2001 and 2004–05

Non-school qualifications by summary health and population characteristics

Tables 2.06.17 and 2.06.18 present the proportion of Indigenous and non-Indigenous Australians with non-school qualifications by selected health and population characteristics.

- In 2004–05, Indigenous Australians aged 25–64 years without a non-school qualification were more likely to report fair/poor health status than Indigenous Australians with a non-school qualification (32% compared with 26%) (Table 2.06.17).
- A higher proportion of Indigenous Australians in the highest (5th) quintile of household income reported having a non-school qualification (63%) than Indigenous Australians in the lowest (1st) quintile of household income (26%) (Table 2.06.18).

- A higher proportion of Indigenous Australians who were employed reported having a non-school qualification than those who were unemployed or not in the labour force.
- Homeowners were also more likely to report having a non-school qualification than renters.

Table 2.06.17: Highest non-school qualification held, by summary health characteristics and Indigenous status, persons aged 25–64 years, 2004–05

	Self-assessed health status						Number of long-term conditions														
	Excellent/very good			Fair/poor			0			1			2			3			Total		
Non-school qualification	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**
	%	%		%	%		%	%		%	%		%	%		%	%		%	%	
Bachelor degree or above(a)	73	92	0.8*	27(b)	8	3.3*	7(b)	12	0.6*	18(b)	21	0.8	20	23	0.9	56	44	1.3	100	100	1.0
Advanced diploma/ diploma	82	91	0.9	18	9	1.9*	11(b)	12	0.9	13	23	0.5*	19	21	0.9	58	44	1.3	100	100	1.0
Certificate	74	86	0.9*	26	14	1.9*	10	13	0.8	16	22	0.7*	21	19	1.1	53	47	1.1	100	100	1.0
Total with non-school qualification(c)	***74***	***89***	***0.8****	***26***	***11***	***2.3****	***10***	***12***	***0.8***	***15***	***22***	***0.7****	***19***	***21***	***0.9***	***55***	***45***	***1.2***	***100***	***100***	***1.0***
Total with no non-school qualification	*68*	*82*	*0.8**	*32*	*18*	*1.8**	*15*	*15*	*1.0*	*16*	*20*	*0.8**	*17*	*18*	*0.9*	*52*	*47*	*1.1*	*100*	*100*	1.0
Total(d)	**70**	**86**	**0.8***	**30**	**14**	**2.1***	**13**	**13**	**1.0**	**16**	**21**	**0.8***	**18**	**20**	**0.9**	**53**	**46**	**1.2**	**100**	**100**	**1.0**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes bachelor degree, doctorate, masters, graduate diploma and graduate certificate.
(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.
(c) Includes other educational institution and persons for whom specific information could not be determined.
(d) Includes not stated.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.06.18: Highest non-school qualification held, by selected population characteristics and Indigenous status, persons aged 25–64 years, 2004–05

	Degree or higher[a]		Diploma		Certificate		Has non-school qualification[b]		No non-school qualification		Total	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
							Per cent					
Main language spoken at home												
English	6*	21*	6*	10*	27	28	40*	60*	60*	40*	100	100
Other[c]	3*[d]	29*	3*	13*	17	14	25*	56*	75*	44*	100	100
Location												
Remote[e]	2	. .	3	. .	20	. .	27	. .	73	. .	100	. .
Non-remote	7*	22*	7*	10*	28	26	42*	60*	58*	40*	100	100
Household income												
1st quintile	1*[d]	10*	3*[d]	7*	20*	26*	26*	43*	74*	57*	100	100
5th quintile	20*	40*	13[d]	11	27[h]	23	63	75	37*	25*	100	100
Index of disparity												
1st quintile	3*	12*	4*	7*	22	26	30*	46*	70*	54*	100	100
5th quintile	13*[f]	37*	10[f]	13	41[d]	21	68[d]	73	32[d]	27	100	100
Employment												
Employed CDEP	1[d]	. .	4[d]	. .	19	. .	25	. .	75	. .	100	. .
Employed non-CDEP	10*	25*	9	11	34*	28*	55*	65*	45*	35*	100	100
Subtotal employed	8*	25*	8*	11*	31	28	49*	65*	51*	35*	100	100
Unemployed	3*[d]	20*	6[d]	8	29	26	38*	56*	62*	44*	100	100
Not in the labour force	2*	12*	2*[d]	7*	17	22	22*	43*	78*	57*	100	100
Housing tenure type												
Owner	10*	22*	8	10	30	27	50*	61*	50*	39*	100	100
Renter[g]	4*	21*	5*	9*	24	25	34*	57*	66*	43*	100	100
Other[h]	8*[f]	25*	2*[d]	12*	20[d]	21	31*	58*	66*	42*	100	100
Treatment when seeking health care in last 12 months												
Worse	8[d]	. .	5[d]	. .	29	. .	43	. .	57	. .	100	. .
The same or better	5	. .	6	. .	26	. .	38	. .	62	. .	100	. .
Other	6[d]	. .	5[d]	. .	23	. .	35	. .	65	. .	100	. .
Total[i]	**6***	**22***	**6***	**10***	**25**	**26**	**38***	**60***	**62***	**40***	**100**	**100**
Total no. ('000)	**10.4**	**2,298.5**	**10.6**	**1,062.4**	**48.3**	**2,770.9**	**71.4**	**6,252.8**	**117.8**	**4,213.1**	**189.3**	**10,465.9**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes bachelor degree, doctorate, masters, graduate diploma and graduate certificate.

(b) Includes other educational institution and persons for whom specific information could not be determined.

(c) Includes not stated, insufficient information to classify and non-verbal languages.

(d) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(e) Non-Indigenous data are for Remote areas only and do not include Very Remote areas.

(f) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(g) 'Renter' includes renter (excluding boarders) and boarder.

(h) 'Other' includes life tenure scheme, participant in rent/buy scheme, rent-free and other.

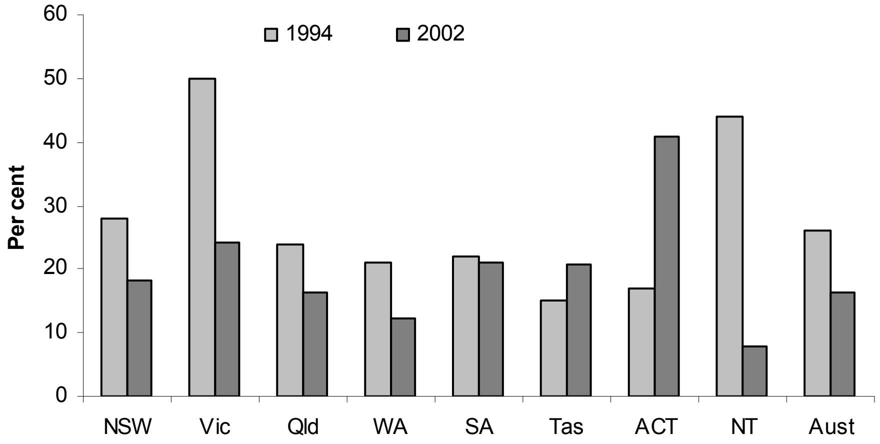
(i) Includes not known, not stated and not applicable.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Post-secondary attainment

The 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) and 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) collected information on the post-secondary attainment of Indigenous people. Figure 2.06.3 presents the proportion of Indigenous people aged 18 years and over who completed a post-secondary qualification of certificate III or above by state and territory for 1994 and 2002.

- Between 1994 and 2002, the proportion of Indigenous people aged 18 years and over with a qualification of certificate III or higher decreased from 26% in 1994 to 16% in 2002.
- The proportion of Indigenous people with a certificate III qualification or higher decreased between 1994 and 2002 in all states and territories except for Tasmania and the Australian Capital Territory where an increase was observed.



Notes

1. Excludes persons still at school.
2. The 1994 estimates for the Australian Capital Territory and Northern Territory have relative standard errors greater than 25% and should be used with caution.

Source: SCRGSP 2005a; ABS & AIHW analyses of ABS 1994 NATSIS and ABS 2002 NATSISS.

Figure 2.06.3: Post-secondary attainment of certificate III or above, by Indigenous people aged 18 years and over, 1994 and 2002

Census data

The 2006 Census of Population and Housing collected information on the educational institution currently attended, the highest level of non-school qualification and the highest level of school completed by Indigenous adults. These data are presented in the following tables.

Educational institution currently attended

- In 2006, approximately 16% of Indigenous people and 14% of non-Indigenous people aged 15 years and over were currently studying. Indigenous Australians were more likely to be studying at secondary school (7%) or Technical or further educational institutions (4%) than non-Indigenous Australians (5% and 3% respectively). However, non-Indigenous Australians were more likely to be studying at university or in higher education than Indigenous Australians (5% compared with 3%) (Table 2.06.19).

Educational institution currently attended by age and sex

- A lower proportion of Indigenous than non-Indigenous Australians aged 15–24 years were currently attending secondary school (22% and 26% respectively) and technical or further education institutions (6% and 8% respectively). Only 4% of Indigenous Australians aged 15–24 years were currently attending university or higher education compared with 18% of non-Indigenous Australians of the same age.
- In 2006, a higher proportion of Indigenous females aged 15 years and over were currently studying (17%) than Indigenous males (15%). Approximately 13% of non-Indigenous males and 15% of non-Indigenous females of the same age were currently studying (Table 2.06.20).
- Approximately 2% of Indigenous males and 3% of Indigenous females were currently studying at university or other higher education compared with 5% and 6% of non-Indigenous males and females respectively.

Table 2.06.19: Educational institution currently attended, by Indigenous status and age group, persons aged 15 years and over, 2006

	15–24 years			25–34 years			35–44 years			45 years and over			Total		
Educational participation	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
	%	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**	
Secondary school	22	26	0.8	. .	. .	. .	. .	. .	. .	. .	. .	. .	7	5	1.5
Technical or further education(a)	6	8	0.8	4	4	1.1	3	3	1.3	2	1	2.4	4	3	1.4
University/other higher education	4	18	0.2	3	7	0.5	3	3	0.9	1	1	1.6	3	5	0.5
Total currently studying(b)	***37***	***56***	***0.7***	***9***	***12***	***0.7***	***8***	***7***	***1.2***	***5***	***2***	***2.1***	***16***	***14***	***1.2***
Not attending	63	44	1.4	91	88	1.0	92	93	1.0	95	98	1.0	84	86	1.0
Total(c)	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number(c)	79,540	2,414,604	. .	56,057	2,402,389	. .	52,484	2,664,383	. .	70,609	6,789,677	. .	258,690	14,271,053	. .
Attendance unknown(d)	8	2	4.2	10	2	4.9	9	2	4.0	9	4	2.2	9	3	2.9

. . Not applicable

(a) Includes TAFE colleges.

(b) Includes other educational institution and type of educational institution not stated.

(c) Excludes attendance at educational institution unknown.

(d) Persons whose attendance at an educational institution was unknown as a proportion of total persons.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.06.20: Educational institution currently attended, by Indigenous status and sex, persons aged 15 years and over, 2006

	Males			Females		
Educational participation	**Indigenous**	**Non-Indigenous**	**Rate ratio**	**Indigenous**	**Non-Indigenous**	**Rate ratio**
	%	%		%	%	
Secondary school	7	5	1.6	7	4	1.5
Technical or further education[(a)]	4	3	1.2	4	3	1.5
University/other higher education	2	5	0.4	3	6	0.6
Total currently studying[(b)]	***15***	***13***	***1.1***	***17***	***15***	***1.2***
Not attending	85	87	1.0	83	85	1.0
Total[(c)]	**100**	**100**	. .	**100**	**100**	. .
Total number[(c)]	**122,024**	**6,947,041**	. .	**136,669**	**7,324,010**	. .
Attendance unknown[(d)]	11	3	3.6	7	3	2.3

. . Not applicable

(a) Includes TAFE colleges.

(b) Includes other educational institution and type of educational institution not stated.

(c) Excludes attendance at educational institution unknown.

(d) Persons whose attendance at an educational institution was unknown as a proportion of total persons.

Source: ABS and AIHW analysis of 2006 Census data.

Educational institution currently attended by state/territory and remoteness

- The Australian Capital Territory had the highest proportion of Indigenous persons aged 15 years and over currently studying (22%) and the Northern Territory had the lowest proportion (11%) (Table 2.06.21).
- In all states and territories except the Northern Territory, there was a higher proportion of Indigenous persons currently studying than non-Indigenous persons.
- The proportion of Indigenous people currently studying who were attending technical or further education institutions ranged from 1% in the Northern Territory to 7% in Tasmania. The proportion of Indigenous people currently studying who were attending a university or other tertiary institution ranged from 2% in Western Australian and the Northern Territory to 7% in the Australian Capital Territory.
- A higher proportion of Indigenous Australians in non-remote areas were currently studying at secondary school (8%), technical or further education institutions (5%) and university or higher education (3%) than in remote areas (5%, 2% and 1% respectively) (Table 2.06.22).

Table 2.06.21: Educational institution currently attended, by Indigenous status and state/territory, persons aged 15 years and over, 2006

	Educational participation		Secondary school	Technical or further education[(a)]	University or other tertiary institution	*Total currently studying*[(b)]	Not attending	Total[(c)]	Total number[(c)]	Attendance unknown[(d)]
NSW	Indig.	%	7	5	3	18	82	100	78,126	8
	Non-Indig.	%	5	3	5	14	86	100	4,696,887	3
	Rate ratio		1.6	1.6	0.6	1.3	1.0			2.7
Vic	Indig.	%	8	5	4	20	80	100	17,351	9
	Non-Indig.	%	5	3	5	15	85	100	3,627,895	3
	Rate ratio		1.6	1.9	0.7	1.4	0.9			2.7
Qld	Indig.	%	8	3	3	16	84	100	71,912	8
	Non-Indig.	%	4	2	5	13	87	100	2,755,536	3
	Rate ratio		1.8	1.4	0.6	1.3	1.0			2.6
WA	Indig.	%	6	3	2	14	86	100	32,939	11
	Non-Indig.	%	4	3	5	13	87	100	1,382,971	3
	Rate ratio		1.5	1.1	0.5	1.0	1.0			3.7
SA	Indig.	%	8	5	3	18	82	100	14,935	8
	Non-Indig.	%	5	3	5	13	87	100	1,126,978	3
	Rate ratio		1.7	1.7	0.6	1.4	0.9			2.8
Tas	Indig.	%	8	7	3	19	81	100	10,129	5
	Non-Indig.	%	4	3	4	13	87	100	341,194	4
	Rate ratio		1.8	1.9	0.6	1.5	0.9			1.5
ACT	Indig.	%	8	5	7	22	78	100	2,382	4
	Non-Indig.	%	5	3	9	19	81	100	242,905	2
	Rate ratio		1.6	1.5	0.7	1.1	1.0			2.0
NT	Indig.	%	5	1	2	11	89	100	30,760	12
	Non-Indig.	%	4	2	6	13	87	100	95,268	2
	Rate ratio		1.2	0.7	0.3	0.8	1.0			5.0
Aust.[(e)]	Indig.	%	7	4	3	16	84	100	258,693	9
	Non-Indig.	%	5	3	5	14	86	100	14,271,050	3
	Rate ratio		1.5	1.4	0.5	1.2	1.0			2.9

(a) Includes TAFE colleges.

(b) Includes other educational institution and type of educational institution not stated.

(c) Excludes attendance at educational institution unknown.

(d) Persons whose attendance at an educational institution was unknown as a proportion of total persons.

(e) Includes other territories.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.06.22: Educational institution currently attended, by Indigenous status and remoteness, persons aged 15 years and over, 2006

		Major Cities	Inner Regional	Outer Regional	*Subtotal non-remote*	Remote	Very Remote	*Subtotal remote*	Total
					Indigenous				
Secondary school	%	8	8	8	8	6	4	5	7
Technical or further education[(a)]	%	5	5	4	5	3	2	2	4
University/other higher education	%	5	3	2	3	1	1	1	3
Total currently studying[(b)]	%	***19***	***19***	***16***	***18***	***12***	***9***	***10***	***16***
Not attending	%	81	81	84	82	88	91	90	84
Total[(c)]	%	100	100	100	100	100	108	110	100
Total number[(c)]	**no.**	**85,039**	**54,430**	**54,471**	**193,940**	**22,326**	**41,356**	**63,682**	**258,692**
Attendance unknown[(d)]	%	8	9	10	9	11	8	9	9
					Non-Indigenous				
Secondary school	%	5	5	4	5	3	2	3	5
Technical or Further Education[(a)]	%	3	3	3	3	2	2	2	3
University/other higher education	%	6	3	2	5	2	2	2	5
Total currently studying[(b)]	%	***15***	***12***	***10***	***14***	***8***	***7***	***8***	***14***
Not attending	%	**85**	**88**	**90**	86	**92**	**93**	**92**	**86**
Total[(c)]	%	100	104	100	100	100	100	100	100
Total number[(c)]	**no.**	**9,932,022**	**2,789,706**	**1,282,265**	**14,003,993**	**176,616**	**58,566**	**235,182**	**14,271,055**
Attendance unknown[(d)]	%	3	4	3	9	11	3	9	3
					Rate ratio				
Secondary school		1.7	1.6	1.8	1.7	1.7	1.9	1.5	1.5
Technical or Further Education[(a)]		1.5	1.9	1.6	1.6	1.1	0.9	0.9	1.4
University/other higher education		0.7	0.9	0.9	0.6	0.8	0.3	0.5	0.5
Total currently studying[(b)]		1.3	***1.6***	***1.6***	***1.3***	***1.4***	***1.3***	***1.2***	***1.2***
Not attending		0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0
Attendance unknown[(d)]		2.7	2.5	3.1	1.0	1.0	2.6	1.0	2.9

(a) Includes TAFE colleges.

(b) Includes other educational institution and type of educational institution not stated.

(c) Excludes attendance at educational institution unknown.

(d) Persons whose attendance at an educational institution was unknown as a proportion of total persons.

Source: ABS and AIHW analysis of 2006 Census data.

Highest level of school completed

- In 2006, Indigenous adults aged 18 years and over were more than twice as likely as non-Indigenous adults to report that their highest level of schooling completed was Year 9 or below (34% compared with 16%). Year 10 was the highest level of schooling completed by 31% of Indigenous adults and 25% of non-Indigenous adults, Year 11 was the highest level of school completed by 11% of Indigenous adults and 10% of non-Indigenous adults, and Year 12 was the highest level of school completed by 24% of Indigenous adults compared with 49% of non-Indigenous adults (Table 2.06.23).

Highest level of school completed by age and sex

- Indigenous Australians aged 45 years and over were much more likely to report that their highest level of schooling completed was Year 9 or below (54%) compared with Indigenous Australians of younger ages (Table 2.06.23).
- Indigenous Australians aged 18–24, 25–34 and 35–44 years were between four and six times as likely to report Year 9 or below as their highest level of schooling as non-Indigenous adults.
- In 2006, males and females in the Indigenous population reported similar levels of school completed, as did males and females in the non-Indigenous population (Table 2.06.24).

Table 2.06.23: Highest level of school completed, by Indigenous status and age group, persons aged 18 years and over, 2006

Highest level of school completed		18–24			25–34			35–44			45 years and over			Total		
		Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio
Completed Year 12 or equivalent	%	36	74	0.5	32	70	0.5	19	51	0.4	12	35	0.3	24	49	0.5
Completed Year 11 or equivalent	%	15	9	1.6	14	10	1.5	12	14	0.9	5	9	0.6	11	10	1.1
Completed Year 10 or equivalent	%	28	13	2.1	30	16	1.9	40	28	1.4	29	29	1.0	31	25	1.3
Completed Year 9 or below(a)	%	22	4	6.0	24	4	5.3	28	8	3.7	54	26	2.1	34	16	2.1
Total(b)(c)	**%**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number of persons(c)	no.	47,956	1,608,316	. .	54,720	2,385,869	. .	50,918	2,639,254	. .	66,634	6,559,510	. .	220,228	13,192,949	. .
Highest year of school not stated (d)	%	10	3	3.9	12	3	4.6	12	3	3.7	14	7	1.9	12	5	2.4

. . Not applicable

(a) Includes persons who never attended school.

(b) Excludes persons currently attending primary and secondary educational institutions.

(c) Excludes persons who did not state the highest year of school completed.

(d) Persons who did not state the highest year of school completed as a proportion of total persons.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.06.24: Highest year of school completed, by Indigenous status and sex, persons aged 18 years and over, 2006

Highest level of school completed	Male			Female			Total		
	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio
	%	%		%	%		%	%	
Year 12 or equivalent	23	49	0.5	25	50	0.5	24	49	0.5
Year 11 or equivalent	11	10	1.0	12	10	1.2	11	10	1.1
Year 10 or equivalent	31	25	1.3	31	24	1.3	31	25	1.3
Year 9 or below[(a)]	35	16	2.3	32	16	2.0	34	16	2.1
Total[(b)(c)]	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number of persons[(c)]	102,494	6,406,636	. .	117,731	6,786,312	. .	220,228	13,192,949	. .
Highest year of school not stated[(d)]	14	5	2.9	10	5	1.9	12	5	2.4

. . Not applicable

(a) Includes persons who never attended school.

(b) Excludes persons currently attending primary and secondary educational institutions.

(c) Excludes persons who did not state the highest year of school completed.

(d) Persons who did not state the highest year of school completed as a proportion of total persons.

Source: ABS and AIHW analysis of 2006 Census data.

Highest level of school completed by state/territory and remoteness

- The proportion of Indigenous adults aged 18 years and over reporting Year 12 as their highest level of school completed ranged from 11% in the Northern Territory to 47% in the Australian Capital Territory. The proportion of Indigenous students reporting Year 9 or below as their highest level of schooling ranged from 16% in the Australian Capital Territory to 60% in the Northern Territory (Table 2.06.25).
- A higher proportion of Indigenous Australians aged 18 years and over in non-remote areas reported Year 12 as their highest level of school completed than Indigenous Australians in remote areas of Australia (27% compared with 14%) (Table 2.06.26).
- In all remoteness areas, Indigenous Australians were more likely than non-Indigenous Australians to report their highest level of schooling completed was Year 9 or below.

Table 2.06.25: Highest level of school completed, by state/territory and Indigenous status, persons aged 18 years and over, 2006

State/ territory			Year 12	Year 11	Year 10	Year 9 or below[(a)]	Total[(b)(c)]	Total no. of persons[(c)]	Highest year of school not stated[(d)]
NSW	Indig.	%	23	8	35	34	100	66,233	12
	Non-Indig.	%	50	5	28	16	100	4,338,253	5
	Rate ratio		0.5	1.5	1.2	2.1	. .	. .	2.2
Vic	Indig.	%	29	16	26	29	100	14,780	12
	Non-Indig.	%	51	15	17	18	100	3,344,922	5
	Rate ratio		0.6	1.1	1.6	1.7	. .	. .	2.2
Qld	Indig.	%	31	11	32	27	100	61,551	11
	Non-Indig.	%	48	8	29	15	100	2,554,880	5
	Rate ratio		0.6	1.4	1.1	1.9	. .	. .	2.2
WA	Indig.	%	21	14	36	29	100	27,687	16
	Non-Indig.	%	50	11	27	12	100	1,278,663	5
	Rate ratio		0.4	1.2	1.3	2.5	. .	. .	3.2
SA	Indig.	%	18	21	27	30	100	12,482	13
	Non-Indig.	%	44	21	19	16	100	1,044,597	5
	Rate ratio		0.4	1.0	1.4	1.9	. .	. .	2.7
Tas	Indig.	%	23	11	43	23	100	8,716	6
	Non-Indig.	%	37	8	36	18	100	314,375	6
	Rate ratio		0.6	1.2	1.2	1.3	. .	. .	1.1
ACT	Indig.	%	47	9	27	16	100	2,083	5
	Non-Indig.	%	70	5	17	8	100	226,947	3
	Rate ratio		0.7	1.9	1.6	2.2	. .	. .	1.8
NT	Indig.	%	11	10	19	60	100	26,548	15
	Non-Indig.	%	50	15	24	11	100	88,985	4
	Rate ratio		0.2	0.7	0.8	5.7	. .	. .	3.8
Aust.[(e)]	**Indig.**	**%**	**24**	**11**	**31**	**34**	**100**	**220,228**	**12**
	Non-Indig.	**%**	**49**	**10**	**25**	**16**	**100**	**13,192,949**	**5**
	Rate ratio		**0.5**	**1.1**	**1.3**	**2.1**	**. .**	**. .**	**2.4**

. . Not applicable

(a) Includes persons who never attended school.
(b) Excludes persons currently attending primary and secondary educational institutions.
(c) Excludes persons who did not state the highest year of school completed.
(d) Persons who did not state the highest year of school completed as a proportion of total persons.
(e) Includes other territories.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.06.26: Highest level of school completed, by Indigenous status and remoteness area, persons aged 18 years and over, 2006

			Year 12	Year 11	Year 10	Year 9 or below[a]	Total[b][c]	Total no. of persons[c]	Highest year of school not stated[d]
Major Cities	Indig.	%	32	11	32	24	100	72,645	11
	Non-Indig.	%	55	9	22	14	100	9,198,201	5
	Rate ratio		0.6	1.2	1.5	1.7	. .	. .	2.2
Inner Regional	Indig.	%	24	11	35	31	100	45,856	12
	Non-Indig.	%	37	11	32	19	100	2,560,665	6
	Rate ratio		0.6	0.9	1.1	1.6	. .	. .	2.1
Outer Regional	Indig.	%	23	13	33	31	100	45,526	14
	Non-Indig.	%	36	12	32	20	100	1,181,968	6
	Rate ratio		0.6	1.1	1.0	1.5	. .	. .	2.6
Subtotal non-remote	*Indig.*	*%*	*27*	*12*	*33*	*28*	*100*	*164,027*	*12.2*
	Non-Indig.	*%*	*50*	*10*	*25*	*16*	*100*	*12,940,834*	*5.2*
	Rate ratio		*0.5*	*1.1*	*1.4*	*1.8*	. .	. .	2.4
Remote	Indig.	%	17	13	30	40	100	18,969	16
	Non-Indig.	%	39	14	31	17	100	165,719	5
	Rate ratio		0.4	0.9	1.0	2.4	. .	. .	3.4
Very Remote	Indig.	%	13	9	23	54	100	36,279	10
	Non-Indig.	%	41	12	30	16	100	55,840	4
	Rate ratio		0.3	0.7	0.8	3.4	. .	. .	2.4
Subtotal remote	*Indig.*	*%*	*14*	*10*	*26*	*49*	*100*	*55,248*	*12*
	Non-Indig.	*%*	*39*	*13*	*31*	*17*	*100*	*221,559*	*5*
	Rate ratio		*0.4*	*0.8*	*0.8*	*3.0*	. .	. .	2.7
Aust.[e]	**Indig.**	**%**	**24**	**11**	**31**	**34**	**100**	**220,229**	**12**
	Non-Indig.	**%**	**49**	**10**	**25**	**16**	**100**	**13,192,949**	**5**
	Rate ratio		**0.5**	**1.1**	**1.3**	**2.1**	**. .**	**. .**	2.4

. . Not applicable

(a) Includes persons who never attended school

(b) Excludes persons currently attending primary or secondary educational institutions.

(c) Excludes persons who did not state the highest year of school completed.

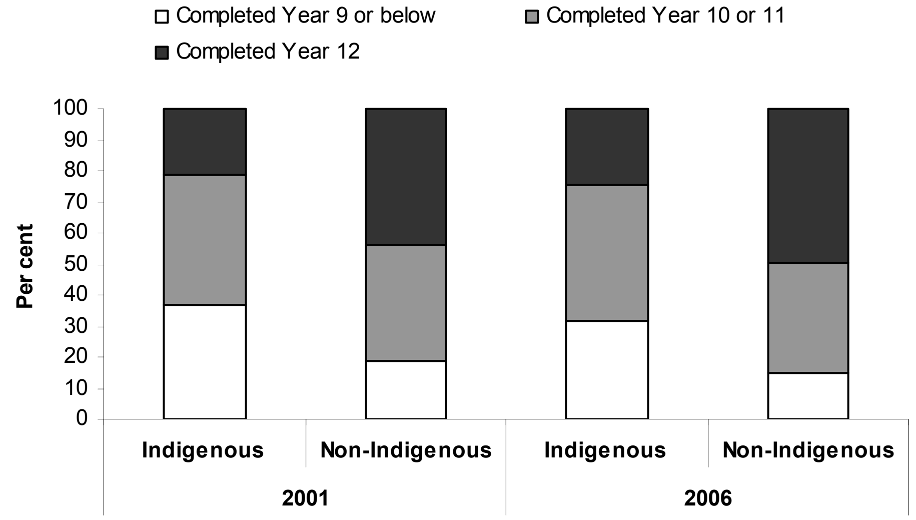
(d) Persons who did not state the highest year of school completed as a proportion of total persons.

(e) Includes migratory and no usual address.

Source: ABS and AIHW analysis of 2006 Census data.

Time series analyses

- A slightly higher proportion of Indigenous Australians aged 18 years and over reported that the highest year of school completed was Year 12 in 2006 (25%) than in 2001 (21%). A higher proportion of non-Indigenous Australians aged 18 years and over in 2006 also reported that Year 12 was their highest year of school completed (50%) than in 2001 (44%) (Figure 2.06.4).



Source: ABS and AIHW analysis of 2001 and 2006 Census data.

Figure 2.06.4: Highest level of school completed, by Indigenous status, persons aged 18 years and over, 2001 and 2006

Non-school qualifications

- In 2006, approximately 30% of Indigenous Australians aged 25–64 years reported they had a non-school qualification compared with 55% of non-Indigenous Australians of the same age (Table 2.06.27).
- A higher proportion of non-Indigenous than Indigenous people aged 25–64 years had completed a certificate course in 2006 (21% and 18% respectively). A much higher proportion of non-Indigenous Australians had a bachelor degree or diploma as their highest level of non-school qualification (23% and 10% respectively) compared with Indigenous Australians (6% and 5% respectively).

Non-school qualifications by age and sex

- For Indigenous Australians the age group with the highest rate of non-school qualifications was 35–44 years (32%). For non-Indigenous Australians the highest rate was in the 25–34 year group (63%) (Table 2.06.27).
- In 2006, a higher proportion of Indigenous males than females aged 25–64 years had a non-school qualification (32% and 29%, respectively). Indigenous males were more likely to have completed a certificate course (22%) and less likely to have completed a diploma (4%) or bachelor degree or above (5%) than Indigenous females (14%, 6% and 7% respectively) (Table 2.06.28).

Table 2.06.27: Whether has non-school qualification, by Indigenous status and age group, persons aged 25–64, 2006

Highest level of non-school qualification[(a)]	25–34 years Indig.	25–34 years Non-Indig.	25–34 years Rate ratio	35–44 years Indig.	35–44 years Non-Indig.	35–44 years Rate ratio	45–64 years Indig.	45–64 years Non-Indig.	45–64 years Rate ratio	Total Indig.	Total Non-Indig.	Total Rate ratio
	%	%		%	%		%	%		%	%	
Non-school qualification												
Bachelor degree or above[(b)]	5	30	0.2	6	23	0.3	7	19	0.4	6	23	0.3
Advanced diploma/diploma	4	9	0.4	5	10	0.5	6	9	0.6	5	10	0.5
Certificate	21	22	0.9	19	22	0.8	14	20	0.7	18	21	0.8
Total with non-school qualification[(c)]	***31***	***63***	***0.5***	***32***	***57***	***0.6***	***28***	***50***	***0.6***	***30***	***55***	***0.6***
Does not have a non-school qualification[(d)]	69	37	1.9	68	43	1.6	72	50	1.4	70	45	1.6
Total[(e)]	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number of persons[(e)]	53,174	2,356,291	. .	49,532	2,600,129	. .	53,687	4,368,476	. .	156,393	9,324,896	. .
Not stated[(f)]	15	4	3.7	14	5	3.1	14	6	2.5	14	5	2.9

. . Not applicable

(a) As classified to the ABS Classification of Qualifications.
(b) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.
(c) Includes inadequately described responses and cases where no response was given to the level of qualification.
(d) Includes persons with a qualification outside the scope of the Australia Standard Classification of Education.
(e) Excludes those who did not state whether they had a non-school qualification.
(f) Persons who did not state whether they had a non-school qualification as a proportion of total persons.

Source: AIHW analysis of 2006 Census data.

Table 2.06.28: Whether has a non-school qualification, by sex and Indigenous status, persons aged 25–64 years, 2006

	Male			Female			Total		
Non-school qualification[(a)]	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio
	%	%		%	%		%	%	
Bachelor degree or above[(b)]	5	21	0.2	7	24	0.3	6	23	0.3
Advanced diploma/diploma	4	8	0.5	6	11	0.6	5	10	0.5
Certificate	22	29	0.8	14	14	1.1	18	21	0.8
Total with non-school qualification[(c)]	***32***	***60***	***0.5***	***29***	***51***	***0.6***	***30***	***55***	***0.6***
Does not have a non-school qualification[(d)]	68	40	1.7	71	49	1.4	70	45	1.6
Total[(e)]	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number of persons[(e)]	72,441	4,590,867	. .	83,952	4,734,029	. .	156,393	9,324,896	. .
Not stated[(f)]	16	5	3.5	13	5	2.4	14	5	2.9

(a) As classified to the ABS Classification of Qualifications.

(b) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.

(c) Includes inadequately described responses and cases where no response was given to the level of qualification.

(d) Includes persons with a qualification outside the scope of the Australia Standard Classification of Education.

(e) Excludes those who did not state whether they had a non-school qualification.

(f) Persons who did not state whether they had a non-school qualification as a proportion of total persons.

Source: ABS and AIHW analysis of 2006 Census data.

Non-school qualifications by state/territory and remoteness

- In 2006, the proportion of Indigenous Australians aged 25–64 years with a non-school qualification ranged from 17% in the Northern Territory to 50% in the Australian Capital Territory (Table 2.06.29). Approximately 22% of Indigenous Australians in the Australian Capital Territory had completed a bachelor degree or above, whereas in the other states and territories this proportion ranged between 3% and 9%.
- In 2006, a higher proportion of Indigenous Australians aged 25–64 years in non-remote areas reported having a non-school qualification (35%) than Indigenous Australians in remote areas (18%) (Table 2.06.30). In Major Cities, approximately the same proportion of Indigenous and non-Indigenous Australians had a certificate qualification (20%). In other remoteness categories, non-Indigenous Australians were more likely to have this qualification.

Table 2.06.29: Whether has a non-school qualification, by state/territory and Indigenous status, persons aged 25–64 years, 2006

Highest non-school qualification[a]			Bachelor degree or above[b]	Advanced diploma/ diploma	Certificate	*Total with non-school qualification[c]*	Does not have a non-school qualification[d]	Total[e]	Total no. of persons[e]	Not stated[f]
NSW	Indig.	%	7	5	20	34	66	100	46,944	14
	Non-Indig.	%	24	10	22	58	42	100	3,046,285	5
	Rate ratio		0.3	0.5	0.9	0.6	1.6	. .	. .	2.6
Vic	Indig.	%	9	7	20	38	62	100	10,482	14
	Non-Indig.	%	25	10	19	55	45	100	2,362,297	5
	Rate ratio		0.4	0.7	1.0	0.7	1.4	. .	. .	2.7
Qld	Indig.	%	6	5	19	31	69	100	44,017	13
	Non-Indig.	%	19	9	23	52	48	100	1,823,942	5
	Rate ratio		0.3	0.6	0.8	0.6	1.4	. .	. .	2.8
WA	Indig.	%	5	4	15	25	75	100	19,627	18
	Non-Indig.	%	21	10	22	55	45	100	913,931	5
	Rate ratio		0.3	0.4	0.7	0.5	1.7	. .	. .	3.6
SA	Indig.	%	6	5	18	30	70	100	8,754	15
	Non-Indig.	%	19	9	22	51	49	100	720,956	5
	Rate ratio		0.3	0.6	0.8	0.6	1.4	. .	. .	3.2
Tas	Indig.	%	6	5	23	35	65	100	6,160	8
	Non-Indig.	%	17	8	22	49	51	100	220,658	5
	Rate ratio		0.4	0.6	1.0	0.7	1.3	. .	. .	1.6
ACT	Indig.	%	22	8	18	50	50	100	1,516	7
	Non-Indig.	%	41	11	16	68	32	100	164,713	3
	Rate ratio		0.6	0.8	1.1	0.7	1.6	. .	. .	2.2

(continued)

Table 2.06.29 (continued): Whether has a non-school qualification, by state/territory and Indigenous status, persons aged 25–64 years, 2006

Highest non-school qualification[(a)]			Bachelor degree or above[(b)]	Advanced diploma/ diploma	Certificate	*Total with non-school qualification[(c)]*	Does not have a non-school qualification[(d)]	Total[(e)]	Total no. of persons[(e)]	Not stated[(f)]
NT	Indig.	%	3	3	11	17	83	100	18,792	17
	Non-Indig.	%	22	10	25	59	41	100	71,055	5
	Rate ratio		0.1	0.3	0.4	0.3	2.0	. .	. .	3.7
Aust.	**Indig.**	**%**	**6**	**5**	**18**	**30**	**70**	**100**	**156,393**	**14**
	Non-Indig.	**%**	**23**	**10**	**21**	**55**	**45**	**100**	**9,324,896**	**5**
	Rate ratio		**0.3**	**0.5**	**0.8**	**0.6**	**1.6**	**. .**	**. .**	**2.9**

(a) As classified to the ABS Classification of Qualifications.

(b) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.

(c) Includes inadequately described responses and cases where no response was given to the level of qualification.

(d) Includes persons with a qualification outside the scope of the Australia Standard Classification of Education.

(e) Excludes those who did not state whether they had a non-school qualification.

(f) Persons who did not state whether they had a non-school qualification as a proportion of total persons.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.06.30: Whether has a non-school qualification, by Indigenous status and remoteness area, persons aged 25–64 years, 2006

Highest non-school qualification[a]			Bachelor degree or above[b]	Advanced diploma/ diploma	Certificate	*Total with non-school qualification[c]*	Does not have a non-school qualification[d]	Total[e]	Total no. of persons[e]	Not stated[f]
Major Cities	Indig.	%	10	7	20	39	61	100	51,396	13
	Non-Indig.	%	26	10	20	58	42	100	6,502,768	5
	Rate ratio		0.4	0.7	1.0	0.7	1.5			2.6
Inner Regional	Indig.	%	6	5	21	34	66	100	32,354	14
	Non-Indig.	%	15	8	25	51	49	100	1,780,797	5
	Rate ratio		0.4	0.6	0.8	0.7	1.3			2.6
Outer Regional	Indig.	%	4	5	18	29	71	100	33,088	16
	Non-Indig.	%	13	8	24	47	53	100	849,820	5
	Rate ratio		0.3	0.6	0.7	0.6	1.3			3.1
Subtotal non-remote	***Indig.***	***%***	***7***	***6***	***20***	***35***	***65***	***100***	***116,838***	***14***
	Non-Indig.	***%***	***23***	***10***	***21***	***55***	***45***	***100***	***9,133,385***	***5***
	Rate ratio		***0.3***	***0.6***	***0.9***	***0.6***	***1.5***			***2.7***
Remote	Indig.	%	3	3	15	23	77	100	13,666	18
	Non-Indig.	%	13	7	24	46	54	100	125,494	5
	Rate ratio		0.2	0.5	0.6	0.5	1.4			3.6
Very Remote	Indig.	%	2	2	10	15	85	100	25,189	13
	Non-Indig.	%	15	8	25	49	51	100	43,662	5
	Rate ratio		0.1	0.3	0.4	0.3	1.7			2.6
Subtotal remote	**Indig.**	**%**	***2***	***3***	***12***	***18***	***82***	***100***	***38,855***	***17***
	Non-Indig.	**%**	***13***	***8***	***24***	***47***	***53***	***100***	***169,156***	***5***
	Rate ratio		***0.2***	***0.4***	***0.5***	***0.4***	***1.5***			***3.3***

(continued)

Table 2.06.30 (continued): Whether has a non-school qualification, by Indigenous status and remoteness area, persons aged 25–64 years, 2006

(a) As classified to the ABS Classification of Qualifications.

(b) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.

(c) Includes inadequately described responses and cases where no response was given to the level of qualification.

(d) Includes persons with a qualification outside the scope of the Australia Standard Classification of Education.

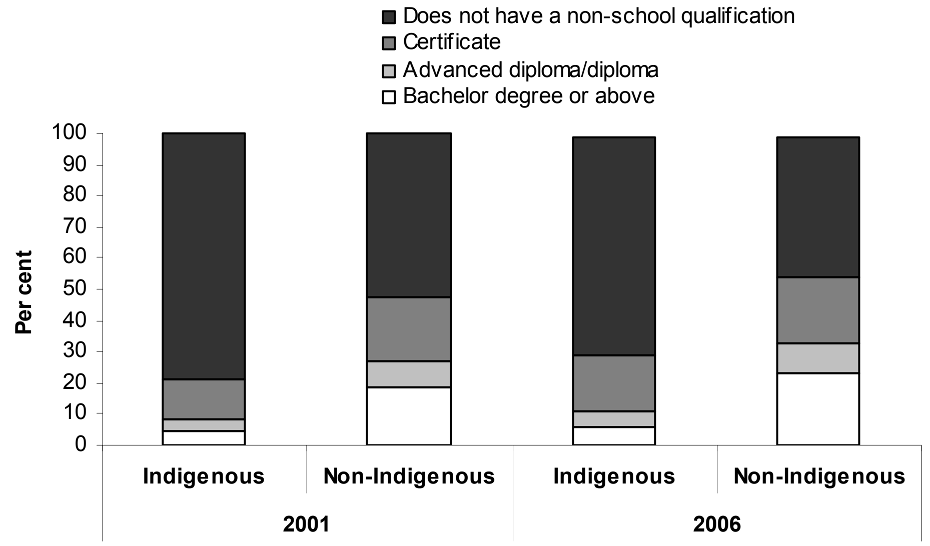
(e) Excludes those who did not state whether they had a non-school qualification.

(f) Persons who did not state whether they had a non-school qualification as a proportion of total persons.

Source: ABS and AIHW analysis of 2006 Census data.

Time series analyses

- A higher proportion of Indigenous Australians aged 25–64 years in 2006 reported that they had a non-school qualification (30%) than in 2001 (21%). Approximately 6% of Indigenous Australians had a bachelor degree or higher in 2006, compared with 5% in 2001. A higher proportion of non-Indigenous Australians also had a non-school qualification in 2006 (55%) than in 2001 (47%) (Figure 2.06.5).



Source: ABS and AIHW anlaysis of 2001 and 2006 Census data.

Figure 2.06.5: Non-school qualifications, persons aged 25–64 years, by Indigenous status, 2001 and 2006

Vocational education and training (VET) data

Educational attainment

Data on educational attainment in the vocational education and training sector are available from the National Centre for Vocational Education Research's National VET Provider Collection. Data collected in 2006 are presented below.

- During the year 2006, there were approximately 13,924 course completions in the VET sector by Indigenous Australians aged 15 years and over. This constitutes 4.4% of the Indigenous population aged 15 years and over. In comparison, approximately 2.3% of the non-Indigenous population aged 15 years and over completed a course in the VET sector in 2006.
- A similar proportion of Indigenous and other Australians aged 15 years and over had completed a certificate III course (0.7% and 0.6% respectively) or certificate IV, diploma or higher (0.4% and 0.5% respectively) in 2006. A higher proportion of Indigenous Australians aged 15 years and over had completed a certificate I/II (1.1%) or other certificate course (2.1%) than other Australians (0.5% and 0.8% respectively).

Educational attainment by age and sex

- A higher proportion of Indigenous Australians had completed a VET course than other Australians in all age groups (Table 2.06.31).
- Overall, a higher proportion of Indigenous males had completed a course in the VET sector in 2006 than Indigenous females (4.6% compared with 4.2%). However, Indigenous females were more likely to have completed a certificate III course or higher than Indigenous males.

Table 2.06.31: Educational attainment in the VET sector, by Indigenous status, sex and age group, 2006

Qualification		15–24 years		25–34 years		35–44 years		45–54 years		55 years and over		Total aged 15 and over	
		Indig.	Other[a]	Indig.	Other[a]	Indig.	Other[a]	Indig.	Other[a]	Indig.	Other[a]	Indig.	Other[a]
								Males					
Certificate IV, diploma or higher	No.	77	13,758	116	7,768	150	6,425	107	4,347	35	1,568	485	33,866
	%	0.1	1.0	0.3	0.5	0.5	0.4	0.5	0.3	0.2	0.1	0.3	0.4
Certificate III	No.	435	24,484	195	9,428	139	5,941	78	3,731	18	1,770	865	45,354
	%	0.8	1.7	0.5	0.7	0.5	0.4	0.4	0.3	0.1	0.1	0.6	0.6
Certificate I/Certificate II	No.	1,056	19,789	423	6,576	283	5,224	163	3,719	52	1,851	1,977	37,159
	%	2.0	1.4	1.2	0.5	1.0	0.4	0.8	0.3	0.3	0.1	1.3	0.5
Other certificates (b)	No.	1,805	21,948	822	13,517	633	12,631	340	10,589	141	7,387	3,741	66,072
	%	3.5	1.5	2.3	1.0	2.1	0.8	1.7	0.8	0.8	0.3	2.4	0.8
Total completions	**No.**	**3,373**	**79,979**	**1,556**	**37,289**	**1,205**	**30,221**	**688**	**22,386**	**246**	**12,576**	**7,068**	**182,451**
	%	**6.5**	**5.6**	**4.4**	**2.6**	**4.1**	**2.0**	**3.3**	**1.6**	**1.4**	**0.5**	**4.6**	**2.3**
								Females					
Certificate IV, diploma or higher	No.	170	18,667	208	9,744	272	8,865	194	6,775	56	1,771	900	45,822
	%	0.3	1.4	0.6	0.7	0.8	0.6	0.9	0.5	0.3	0.1	0.6	0.6
Certificate III	No.	570	23,559	288	9,483	295	10,321	204	7,511	58	2,075	1,415	52,949
	%	1.1	1.7	0.8	0.7	0.9	0.7	0.9	0.5	0.3	0.1	0.9	0.6
Certificate I/Certificate II	No.	852	18,947	246	5,729	283	6,645	210	4,956	77	2,000	1,668	38,277
	%	1.7	1.4	0.7	0.4	0.8	0.4	0.9	0.3	0.4	0.1	1.0	0.5
Other certificates (b)	No.	1,065	17,503	615	10,336	605	13,659	393	11,697	184	6,779	2,862	59,974
	%	2.1	1.3	1.6	0.7	1.8	0.9	1.8	0.8	0.9	0.3	1.8	0.7
Total completions	**No.**	**2,657**	**78,676**	**1,357**	**35,292**	**1,455**	**39,490**	**1,001**	**30,939**	**375**	**12,625**	**6,845**	**197,022**
	%	**5.3**	**5.8**	**3.6**	**2.5**	**4.3**	**2.6**	**4.5**	**2.2**	**1.9**	**0.5**	**4.2**	**2.4**

(continued)

Table 2.06.31 (continued): Educational attainment in the VET sector, by Indigenous status, sex and age group, 2006

		15–24 years		25–34 years		35–44 years		45–54 years		55 years and over		Total aged 15 and over	
Qualification		**Indig.**	**Other[(a)]**	**Indig.**	**Other[(a)]**	**Indig.**	**Other[(a)]**	**Indig.**	**Other[(a)]**	**Indig.**	**Other[(a)]**	**Indig.**	**Other[(a)]**
								Persons					
Certificate IV, diploma or higher	No.	248	32,431	324	17,528	422	15,296	301	11,132	91	3,343	1,386	79,730
	%	0.2	1.2	0.4	0.6	0.7	0.5	0.7	0.4	0.2	0.1	0.4	0.5
Certificate III	No.	1,006	48,066	483	18,923	434	16,279	282	11,253	76	3,847	2,281	98,368
	%	1.0	1.7	0.7	0.7	0.7	0.5	0.7	0.4	0.2	0.1	0.7	0.6
Certificate I/Certificate II	No.	1,914	38,778	669	12,312	567	11,876	375	8,678	129	3,854	3,654	75,498
	%	1.9	1.4	0.9	0.4	0.9	0.4	0.9	0.3	0.4	0.1	1.1	0.5
Other certificates[(b)]	No.	2,870	39,455	1,437	23,853	1,238	26,292	733	22,286	325	14,166	6,603	126,052
	%	2.8	1.4	2.0	0.8	2.0	0.9	1.7	0.8	0.9	0.3	2.1	0.8
Total completions	**No.**	**6,038**	**158,730**	**2,913**	**72,616**	**2,661**	**69,743**	**1,691**	**53,349**	**621**	**25,210**	**13,924**	**379,648**
	%	**5.9**	**5.7**	**4.0**	**2.6**	**4.2**	**2.3**	**4.0**	**1.9**	**1.7**	**0.5**	**4.4**	**2.3**

(a) Includes non-Indigenous Australians and persons for whom Indigenous status was not stated.

(b) Includes statements of attainment.

Note: Percentages are calculated using the Indigenous and non-Indigenous estimated resident population for 2006.

Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2006.

Educational attainment by state/territory and remoteness

- In 2006, the proportion of Indigenous Australians aged 15 years and over who completed a VET course ranged from 2% in the Northern Territory to 8% in New South Wales (Table 2.06.32). The Australian Capital Territory had the highest proportion of Indigenous Australians who completed a certificate IV, diploma or higher in 2006 (2%).
- The proportion of Indigenous and other students who completed a VET course in 2006 was similar in Tasmania and the Northern Territory, whereas in New South Wales, Victoria, Queensland, South Australia, Western Australia and the Australian Capital Territory, the proportion of students who completed a course in the VET sector was higher among Indigenous Australians.
- The proportion of Indigenous Australians aged 15 years and over who completed a course in the VET sector in 2006 was highest in Outer Regional areas (6%) and lowest in Major Cities and Very Remote areas of Australia (4%). Higher proportions of Indigenous Australians living in Major Cities and Inner and Outer Regional areas had completed a certificate III, certificate IV, diploma or higher than Indigenous Australians in Remote and Very Remote areas (Table 2.06.33).

Table 2.06.32: Educational attainment in the VET sector, by Indigenous status, sex and state/territory, 2006

	Indigenous										Other(a)									
	Certificate IV, diploma or higher		Certificate III		Certificate I/ Certificate II		Other certificates (b)		Total completions		Certificate IV, diploma or higher		Certificate III		Certificate I/ Certificate II		Other certificates (b)		Total completions	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
											Males									
NSW	187	0.4	309	0.7	553	1.2	2,298	5.1	3,347	7.5	12,605	0.5	15,353	0.6	11,250	0.4	44,475	1.7	83,683	3.2
Vic	35	0.4	61	0.6	146	1.5	2	0.0	244	2.5	9,610	0.5	14,743	0.7	10,302	0.5	1,397	0.1	36,052	1.8
Qld	100	0.2	190	0.5	309	0.7	1,446	3.5	2,045	4.9	4,318	0.3	6,739	0.4	6,299	0.4	19,754	1.3	37,110	2.4
WA	69	0.3	94	0.4	580	2.6	0	0.0	743	3.3	3,878	0.5	3,837	0.5	5,576	0.7	0	0.0	13,291	1.7
SA	26	0.3	81	0.9	78	0.9	1	0.0	186	2.1	1,372	0.2	2,333	0.4	2,022	0.3	273	0.0	6,000	1.0
Tas	20	0.3	36	0.6	52	0.9	2	0.0	110	1.9	1,052	0.6	1,496	0.8	1,406	0.8	297	0.2	4,251	2.3
ACT	13	0.9	5	0.4	39	2.8	4	0.3	61	4.4	1,108	0.8	697	0.5	499	0.4	1,233	0.9	3,537	2.7
NT	35	0.2	93	0.5	271	1.4	118	0.6	517	2.6	152	0.2	401	0.6	333	0.5	45	0.1	931	1.5
Australia	**485**	**0.3**	**869**	**0.6**	**2,028**	**1.3**	**3,871**	**2.5**	**7,253**	**4.7**	**34,095**	**0.4**	**45,599**	**0.6**	**37,687**	**0.5**	**67,474**	**0.8**	**184,855**	**2.3**
											Females									
NSW	300	0.6	463	1.0	585	1.3	2,225	4.8	3,573	7.6	16,208	0.6	17,604	0.6	15,635	0.6	45,884	1.7	95,331	3.5
Vic	72	0.7	82	0.8	124	1.2	7	0.1	285	2.8	13,533	0.6	15,530	0.7	8,943	0.4	1,968	0.1	39,974	1.9
Qld	216	0.5	369	0.8	288	0.6	678	1.5	1,551	3.4	5,578	0.3	8,120	0.5	5,614	0.4	11,838	0.7	31,150	2.0
WA	124	0.5	212	0.9	283	1.2	0	0.0	619	2.6	5,361	0.7	6,235	0.8	4,420	0.6	0	0.0	16,016	2.0
SA	74	0.8	124	1.3	117	1.2	0	0.0	315	3.4	1,813	0.3	2,303	0.4	1,651	0.3	31	0.0	5,798	0.9
Tas	38	0.6	70	1.2	49	0.8	0	0.0	157	2.6	1,575	0.8	2,028	1.0	1,252	0.6	4	0.0	4,859	2.5
ACT	30	2.1	24	1.7	55	3.9	5	0.4	114	8.1	1,716	1.3	1,095	0.8	748	0.5	1,319	1.0	4,878	3.6
NT	55	0.3	75	0.4	209	1.0	49	0.2	388	1.9	309	0.6	310	0.6	401	0.7	11	0.0	1,031	1.8
Australia	**909**	**0.6**	**1,419**	**0.9**	**1,710**	**1.0**	**2,964**	**1.8**	**7,002**	**4.3**	**46,093**	**0.6**	**53,225**	**0.6**	**38,664**	**0.5**	**61,055**	**0.7**	**199,037**	**2.4**

(continued)

Table 2.06.32 (continued): Educational attainment in the VET sector, by Indigenous status, sex and state/territory, persons aged 15 years and over, 2006

	Indigenous										Other[a]									
	Certificate IV, diploma or higher		Certificate III		Certificate I/ Certificate II		Other certificates[b]		Total completions		Certificate IV, diploma or higher		Certificate III		Certificate I/ Certificate II		Other certificates [b]		Total completions	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
											Persons									
NSW	487	0.5	772	0.8	1,142	1.2	4,523	4.9	6,924	7.6	28,822	0.5	32,968	0.6	26,906	0.5	90,359	1.7	179,055	3.3
Vic	107	0.5	143	0.7	270	1.3	9	0.0	529	2.6	23,147	0.6	30,292	0.7	19,248	0.5	3,368	0.1	76,055	1.8
Qld	316	0.4	559	0.6	597	0.7	2,124	2.4	3,596	4.1	9,897	0.3	14,860	0.5	11,918	0.4	31,601	1.0	68,276	2.2
WA	193	0.4	306	0.7	864	1.9	0	0.0	1,363	2.9	9,239	0.6	10,077	0.6	10,010	0.6	0	0.0	29,326	1.8
SA	100	0.6	205	1.1	198	1.1	1	0.0	504	2.8	3,193	0.3	4,668	0.4	3,694	0.3	306	0.0	11,861	0.9
Tas	58	0.5	106	0.9	101	0.9	2	0.0	267	2.3	2,634	0.7	3,534	0.9	2,660	0.7	305	0.1	9,133	2.4
ACT	44	1.6	30	1.1	95	3.4	9	0.3	178	6.4	2,856	1.1	1,799	0.7	1,255	0.5	2,552	0.9	8,462	3.1
NT	90	0.2	168	0.4	480	1.2	167	0.4	905	2.2	462	0.4	711	0.6	735	0.6	57	0.0	1,965	1.7
Australia	**1,395**	**0.4**	**2,289**	**0.7**	**3,747**	**1.2**	**6,835**	**2.1**	**14,266**	**4.5**	**80,250**	**0.5**	**98,909**	**0.6**	**76,426**	**0.5**	**128,548**	**0.8**	**384,133**	**2.4**

(a) Includes persons for whom Indigenous status was not stated.

(b) Includes statements of attainment.

Note: Percentages are calculated using the Indigenous and non-Indigenous estimated resident population for 2006.

Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2006.

Table 2.06.33: Educational attainment in the VET sector, by Indigenous status, sex and remoteness area, 2006

		Major Cities		Inner Regional		Outer Regional		Remote		Very Remote	
Qualification		**Indigenous**	**Other**	**Indigenous**	**Other**	**Indigenous**	**Other**	**Indigenous**	**Other**	**Indigenous**	**Other**
						Males					
Certificate IV, diploma or higher	No.	181	20,776	115	5,986	110	2,361	31	366	46	254
	%	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.6
Certificate III	No.	273	25,294	174	10,551	233	5,860	64	891	99	383
	%	0.6	0.5	0.5	0.6	0.6	0.7	0.5	0.7	0.4	0.9
Certificate I/Certificate II	No.	550	19,009	344	9,158	469	6,036	253	1,274	393	735
	%	1.1	0.4	1.1	0.5	1.3	0.7	1.8	1.1	1.4	1.7
Other certificates[(a)]	No.	703	30,657	676	16,131	1,393	16,814	350	1,974	716	813
	%	1.5	0.6	2.1	1.0	3.9	2.1	2.5	1.7	2.6	1.9
Total completions	**No.**	**1,707**	**95,736**	**1,309**	**41,826**	**2,205**	**31,071**	**698**	**4,505**	**1,254**	**2,185**
	%	**3.6**	**1.8**	**4.0**	**2.5**	**6.1**	**3.8**	**5.0**	**3.8**	**4.5**	**5.1**
						Females					
Certificate IV, diploma or higher	No.	301	27,236	188	9,072	234	4,093	72	507	102	269
	%	0.6	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.4	0.8
Certificate III	No.	463	30,176	269	12,680	416	6,871	103	873	149	397
	%	0.9	0.5	0.8	0.7	1.1	0.9	0.7	0.9	0.5	1.2
Certificate I/Certificate II	No.	502	21,296	302	9,160	424	5,790	188	872	277	415
	%	1.0	0.4	0.9	0.5	1.1	0.7	1.3	0.9	1.0	1.3
Other certificates[(a)]	No.	587	32,137	536	13,411	1,157	12,588	365	1,647	288	547
	%	1.1	0.6	1.7	0.8	3.1	1.6	2.5	1.6	1.0	1.7
Total completions	**No.**	**1,853**	**110,845**	**1,295**	**44,323**	**2,231**	**29,342**	**728**	**3,899**	**816**	**1,628**
	%	**3.6**	**2.0**	**4.0**	**2.6**	**5.9**	**3.8**	**4.9**	**3.8**	**2.8**	**5.1**

(continued)

Table 2.06.33 (continued): Educational attainment in the VET sector, by Indigenous status, sex and remoteness, persons aged 15 years and over, 2006

		Major Cities		Inner Regional		Outer Regional		Remote		Very Remote	
Qualification		**Indigenous**	**Other**	**Indigenous**	**Other**	**Indigenous**	**Other**	**Indigenous**	**Other**	**Indigenous**	**Other**
						Persons					
Certificate IV, diploma or higher	No.	482	48,050	304	15,076	344	6,456	103	873	148	523
	%	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.7
Certificate III	No.	736	55,519	444	23,254	649	12,740	167	1,766	248	780
	%	0.7	0.5	0.7	0.7	0.9	0.8	0.6	0.8	0.4	1.0
Certificate I/Certificate II	No.	1,055	40,356	647	18,332	895	11,833	441	2,148	673	1,150
	%	1.1	0.4	1.0	0.5	1.2	0.7	1.5	1.0	1.2	1.5
Other certificates[(a)]	No.	1,290	62,800	1,212	29,546	2,550	29,410	715	3,621	1,004	1,361
	%	1.3	0.6	1.9	0.9	3.5	1.9	2.5	1.6	1.8	1.8
Total completions	**No.**	**3,563**	**206,725**	**2,607**	**86,208**	**4,438**	**60,439**	**1,426**	**8,408**	**2,073**	**3,814**
	%	**3.6**	**1.9**	**4.0**	**2.5**	**6.0**	**3.8**	**4.9**	**3.8**	**3.7**	**5.1**

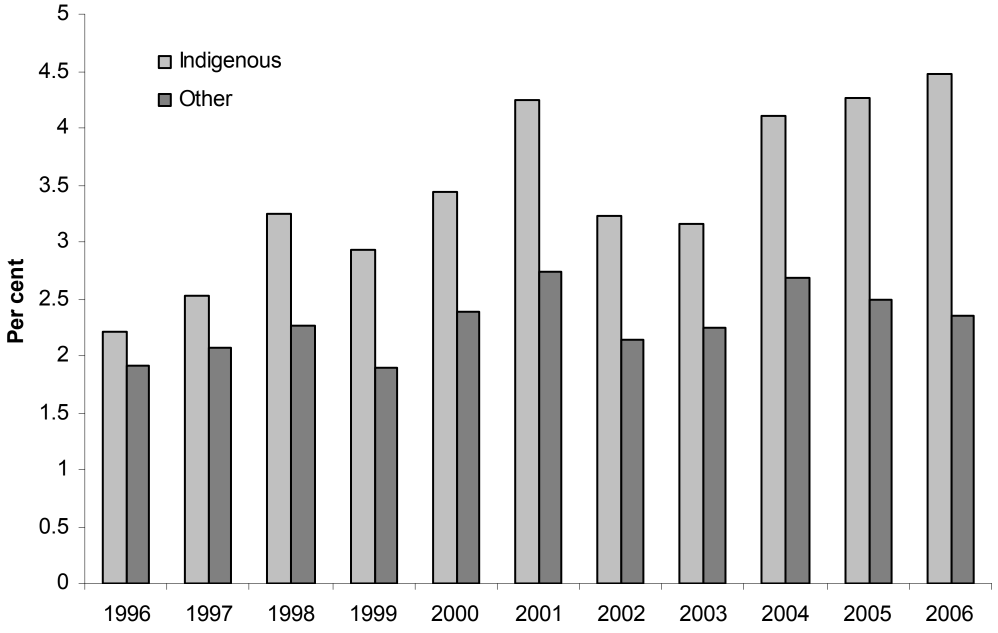
(a) Includes statements of attainment.

Note: Percentages are calculated using the 2006 Indigenous and non-Indigenous estimated resident populations by ASGC remoteness category.

Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2006.

Time series analyses

- Between 1996 and 2006, there was a statistically significant increase in the proportion of Indigenous students and other students who had completed a course in the VET sector, but the magnitude of the increase among Indigenous students was considerably higher (Figure 2.06.6). The fitted trend implies an average yearly increase in the proportion of 0.19% for Indigenous students and 0.05% for other students.



Note: Includes statements of attainment.

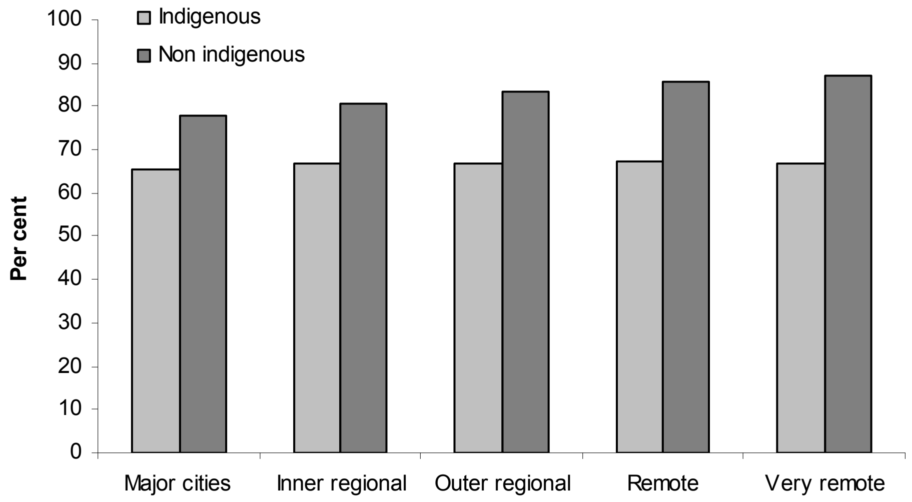
Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2006.

Figure 2.06.6: Total completions in the VET sector, by Indigenous status, persons aged 15 years and over, 1996–2006

VET load pass rate

The VET load pass rate indicates the extent to which students pass assessment in an assessable module or unit of competency. Load pass rates are calculated as the number of nominal hours supervised in assessable modules or units of competency completed with a pass assessment divided by the total nominal hours supervised in assessable modules or units of competency.

- In 2006, the VET load pass rate for Indigenous students was 67% compared with 80% for non-Indigenous students. The rate was lower for Indigenous students than for non-Indigenous students across all geographical regions (Figure 2.06.7).



Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2006.

Figure 2.06.7: VET load pass rate, by remoteness, 2006

Higher education data

Educational attainment

Data on the educational attainment of Indigenous Australians in the higher education sector are available from the Australian Government Department of Education, Science and Training (DEST). Data collected for the year 2006 are presented in the following tables.

- During the year 2006, approximately 0.6% of Indigenous Australians completed a course in the higher education sector compared with 1.0% of other Australians. Approximately 0.4% of Indigenous Australians completed an undergraduate degree and 0.1% of Indigenous Australians completed a postgraduate degree. This compared with 0.7% and 0.3% for other Australians.

Educational attainment by age and sex

- Indigenous Australians aged 22–24 years were more likely to complete a higher education course in 2006 (1.7%) than those in other age groups. Other Australians aged 22–24 years were also more likely to complete a higher education course in 2006 than those in other age groups (10%) (Table 2.06.34).
- In 2006, a higher proportion of Indigenous females than Indigenous males completed an undergraduate degree (0.6% compared with 0.3%) and a postgraduate degree (0.2% compared with 0.1%).

Table 2.06.34: Completions in the higher education sector, by Indigenous status, sex and age group, 2006

	22–24				25–34				35–44				45–54				55+				Total[(a)]			
	Indigenous		**Other[(b)]**		**Indigenous**		**Other[(b)]**		**Indigenous**		**Other[(b)]**		**Indigenous**		**Other[(b)]**		**Indigenous**		**Other[(b)]**		**Indigenous**		**Other[(b)]**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
												Males												
Doctorate or higher	0	0.0	36	0.0	2	0.0	1,089	0.1	0	0.0	522	0.0	2	0.0	347	0.0	0	0.0	215	0.0	4	0.0	2,209	0.0
Master's degree	1	0.0	1,371	0.3	20	0.1	4,622	0.2	16	0.1	2,855	0.2	10	0.0	1,399	0.1	4	0.0	360	0.0	51	0.0	10,607	0.1
Postgrad. diploma or certificate[(c)]	5	0.0	1,607	0.4	17	0.0	3,596	0.2	14	0.0	2,711	0.2	5	0.0	1,397	0.1	3	0.0	330	0.0	44	0.0	9,641	0.1
Subtotal postgraduate	*6*	*0.0*	*3,014*	*0.7*	*39*	*0.1*	*9,307*	*0.4*	*30*	*0.1*	*6,088*	*0.4*	*17*	*0.1*	*3,143*	*0.2*	*7*	*0.0*	*905*	*0.0*	*99*	*0.1*	*22,457*	*0.3*
Bachelor's degree	104	0.8	31,258	7.2	82	0.2	7,672	0.4	49	0.2	2,354	0.2	36	0.2	912	0.1	6	0.0	295	0.0	277	0.2	42,491	0.5
Other undergraduate[(d)]	17	0.1	785	0.2	18	0.1	487	0.0	15	0.1	288	0.0	9	0.0	107	0.0	5	0.0	33	0.0	64	0.1	1,700	0.0
Subtotal undergraduate	*121*	*0.9*	*32,043*	*7.3*	*100*	*0.3*	*8,159*	*0.4*	*64*	*0.2*	*2,642*	*0.2*	*45*	*0.2*	*1,019*	*0.1*	*11*	*0.1*	*328*	*0.0*	*341*	*0.3*	*44,191*	*0.6*
All graduates[(e)]	**127**	**1.0**	**35,057**	**8.0**	**139**	**0.4**	**17,466**	**0.8**	**94**	**0.3**	**8,730**	**0.6**	**62**	**0.3**	**4,162**	**0.3**	**18**	**0.1**	**1,233**	**0.1**	**440**	**0.4**	**66,648**	**0.9**
												Females												
Doctorate or higher	0	0.0	40	0.0	3	0.0	1,146	0.1	3	0.0	506	0.0	5	0.0	397	0.0	3	0.0	194	0.0	14	0.0	2,283	0.0
Master's degree	8	0.1	2,024	0.5	19	0.1	4,736	0.2	22	0.1	2,583	0.2	11	0.0	1,856	0.1	7	0.0	442	0.0	67	0.1	11,641	0.1
Postgrad. diploma or certificate[(c)]	16	0.1	4,187	1.0	44	0.1	5,978	0.3	32	0.1	3,593	0.2	23	0.1	2,415	0.2	2	0.0	461	0.0	117	0.1	16,636	0.2
Subtotal postgraduate	*24*	*0.2*	*6,251*	*1.5*	*66*	*0.2*	*11,860*	*0.6*	*57*	*0.2*	*6,682*	*0.4*	*39*	*0.2*	*4,668*	*0.3*	*12*	*0.1*	*1,097*	*0.0*	*198*	*0.2*	*30,560*	*0.4*
Bachelor's degree	265	2.0	47,234	11.2	132	0.4	9,714	0.5	121	0.4	4,711	0.3	58	0.3	2,200	0.2	16	0.1	491	0.0	592	0.5	64,350	0.8
Other undergraduate[(d)]	19	0.1	749	0.2	40	0.1	320	0.0	39	0.1	195	0.0	25	0.1	113	0.0	7	0.0	50	0.0	130	0.1	1,427	0.0
Subtotal undergraduate	*284*	*2.2*	*47,983*	*11.4*	*172*	*0.5*	*10,034*	*0.5*	*160*	*0.5*	*4,906*	*0.3*	*83*	*0.4*	*2,313*	*0.2*	*23*	*0.1*	*541*	*0.0*	*722*	*0.6*	*65,777*	*0.8*
All graduates[(e)]	**308**	**2.3**	**54,234**	**12.9**	**238**	**0.6**	**21,894**	**1.0**	**217**	**0.6**	**11,588**	**0.8**	**122**	**0.5**	**6,981**	**0.5**	**35**	**0.2**	**1,638**	**0.1**	**920**	**0.7**	**96,337**	**1.2**

(continued)

Table 2.06.34 (continued): Completions in the higher education sector, by Indigenous status, sex and age group, 2006

	22–24				**25–34**				**35–44**				**45–54**				**55+**				**Total(a)**			
	Indigenous		**Other(b)**		**Indigenous**		**Other(b)**		**Indigenous**		**Other(b)**		**Indigenous**		**Other(b)**		**Indigenous**		**Other(b)**		**Indigenous**		**Other(b)**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
												Persons												
Doctorate or higher	0	0.0	76	0.0	5	0.0	2,235	0.1	3	0.0	1,028	0.0	7	0.0	744	0.0	3	0.0	409	0.0	18	0.0	4,492	0.0
Master's degree	9	0.0	3,395	0.4	39	0.1	9,358	0.2	38	0.1	5,438	0.2	21	0.0	3,255	0.1	11	0.0	802	0.0	118	0.0	22,248	0.1
Postgrad. diploma or certificate(c)	21	0.1	5,794	0.7	61	0.1	9,574	0.2	46	0.1	6,304	0.2	28	0.1	3,812	0.1	5	0.0	791	0.0	161	0.1	26,277	0.2
Subtotal postgraduate	*30*	*0.1*	*9,265*	*1.1*	*105*	*0.1*	*21,167*	*0.5*	*87*	*0.1*	*12,770*	*0.4*	*56*	*0.1*	*7,811*	*0.3*	*19*	*0.1*	*2,002*	*0.0*	*297*	*0.1*	*53,017*	*0.3*
Bachelor's degree	369	1.4	78,492	9.2	214	0.3	17,386	0.4	170	0.3	7,065	0.2	94	0.2	3,112	0.1	22	0.1	786	0.0	869	0.4	106,841	0.7
Other undergraduate(d)	36	0.1	1,534	0.2	58	0.1	807	0.0	54	0.1	483	0.0	34	0.1	220	0.0	12	0.0	83	0.0	194	0.1	3,127	0.0
Subtotal undergraduate	*405*	*1.5*	*80,026*	*9.3*	*272*	*0.4*	*18,193*	*0.4*	*224*	*0.4*	*7,548*	*0.3*	*128*	*0.3*	*3,332*	*0.1*	*34*	*0.1*	*869*	*0.0*	*1,063*	*0.4*	*109,968*	*0.7*
All graduates(e)	**435**	**1.7**	**89,291**	**10.4**	**377**	**0.5**	**39,360**	**0.9**	**311**	**0.5**	**20,318**	**0.7**	**184**	**0.4**	**11,143**	**0.4**	**53**	**0.1**	**2,871**	**0.1**	**1,360**	**0.6**	**162,985**	**1.0**

(a) Numbers are for all persons completing courses in higher education. Proportions have been calculated from persons aged 22 years and over, as this is the age group most applicable to higher education course completion.
(b) Includes Indigenous status not stated.
(c) Includes postgrad. qual/prelim., grad.(post) dip.—new area, grad.(post) dip.—ext. area, and graduate certificate.
(d) Includes associate degree, advanced diploma (AQF), diploma (AQF) and other undergraduate award courses.
(e) Includes enabling courses and non-award courses.

Notes

1. Percentages are calculated using the Indigenous and non-Indigenous estimated resident populations for 2006.
2. Note that the numbers reported in the 2006 edition of this report under the higher education data section were for course enrolments rather than for completions as presented here.

Source: AIHW analysis of DEST Higher Education Statistics Collection data.

Educational attainment by state/territory

- The proportion of Indigenous persons who completed a course in the higher education sector ranged from 0.2% in the Northern Territory to 1.4% in the Australian Capital Territory (Table 2.06.35). The Australian Capital Territory also had the highest proportion of Indigenous persons who completed a postgraduate degree in 2006.
- A lower proportion of Indigenous persons completed a higher education course than other Australians in all states and territories.

Table 2.06.35: Completions in the higher education sector(a) by Indigenous status, sex and state/territory, 2006(a)

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Australia	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
									Indigenous									
Males																		
Doctorate or higher	1	0.0	2	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.0
Master's degree	16	0.0	11	0.1	15	0.0	5	0.0	1	0.0	0	0.0	3	0.3	0	0.0	51	0.0
Postgrad. dip. or certificate(b)	11	0.0	10	0.1	15	0.0	1	0.0	5	0.1	0	0.0	0	0.0	1	0.0	44	0.0
Subtotal postgraduate	*28*	*0.1*	*23*	*0.3*	*31*	*0.1*	*6*	*0.0*	*6*	*0.1*	*0*	*0.0*	*3*	*0.3*	*1*	*0.0*	*99*	*0.1*
Bachelor's degree	97	0.3	30	0.4	71	0.2	33	0.2	22	0.3	9	0.2	5	0.5	9	0.1	277	0.2
Other undergraduate(c)	7	0.0	2	0.0	4	0.0	20	0.1	7	0.1	7	0.2	0	0.0	10	0.1	64	0.1
Subtotal undergraduate	*104*	*0.3*	*32*	*0.4*	*75*	*0.2*	*53*	*0.3*	*29*	*0.4*	*16*	*0.4*	*5*	*0.5*	*19*	*0.1*	*341*	*0.3*
All graduates(d)	**132**	**0.4**	**55**	**0.7**	**106**	**0.3**	**59**	**0.3**	**35**	**0.5**	**16**	**0.4**	**8**	**0.8**	**20**	**0.1**	**440**	**0.4**
Females																		
Doctorate or higher	4	0.0	1	0.0	3	0.0	2	0.0	1	0.0	1	0.0	1	0.1	0	0.0	14	0.0
Master's degree	23	0.1	14	0.2	11	0.0	3	0.0	5	0.1	4	0.1	6	0.6	1	0.0	67	0.1
Postgrad. dip. or certificate(b)	40	0.1	19	0.2	23	0.1	16	0.1	7	0.1	1	0.0	3	0.3	5	0.0	117	0.1
Subtotal postgraduate	*67*	*0.2*	*34*	*0.4*	*37*	*0.1*	*21*	*0.1*	*13*	*0.2*	*6*	*0.1*	*10*	*0.9*	*6*	*0.0*	*198*	*0.2*
Bachelor's degree	205	0.6	54	0.7	131	0.4	68	0.4	40	0.6	30	0.7	12	1.1	29	0.2	592	0.5
Other undergraduate(c)	36	0.1	2	0.0	6	0.0	29	0.2	6	0.1	1	0.0	0	0.0	22	0.1	130	0.1
Subtotal undergraduate	*241*	*0.7*	*56*	*0.7*	*137*	*0.4*	*97*	*0.5*	*46*	*0.6*	*31*	*0.7*	*12*	*1.1*	*51*	*0.3*	*722*	*0.6*
All graduates(d)	**308**	**0.9**	**90**	**1.2**	**174**	**0.5**	**118**	**0.6**	**59**	**0.8**	**37**	**0.8**	**22**	**2.0**	**57**	**0.4**	**920**	**0.7**

(continued)

Table 2.06.35 (continued): Completions in the higher education sector, by Indigenous status, sex and state/territory, 2006

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Aust	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%[(a)]	No.	%
Persons																		
Doctorate or higher	5	0.0	3	0.0	4	0.0	2	0.0	1	0.0	1	0.0	1	0.0	0	0.0	18	0.0
Master's degree	39	0.1	25	0.2	26	0.0	8	0.0	6	0.0	4	0.0	9	0.4	1	0.0	118	0.0
Postgrad. dip. or certificate[(b)]	51	0.1	29	0.2	38	0.1	17	0.0	12	0.1	1	0.0	3	0.1	6	0.0	161	0.1
Subtotal postgraduate	*95*	*0.1*	*57*	*0.4*	*68*	*0.1*	*27*	*0.1*	*19*	*0.1*	*6*	*0.1*	*13*	*0.6*	*7*	*0.0*	*297*	*0.1*
Bachelor's degree	302	0.4	84	0.5	202	0.3	101	0.3	62	0.4	39	0.4	17	0.8	38	0.1	869	0.4
Other undergraduate[(c)]	43	0.1	4	0.0	10	0.0	49	0.1	13	0.1	8	0.1	0	0.0	32	0.1	194	0.1
Subtotal undergraduate	*345*	*0.5*	*88*	*0.6*	*212*	*0.3*	*150*	*0.4*	*75*	*0.5*	*47*	*0.5*	*17*	*0.8*	*70*	*0.2*	*1,063*	*0.4*
All graduates	**440**	**0.6**	**145**	**0.9**	**280**	**0.4**	**177**	**0.5**	**94**	**0.7**	**53**	**0.6**	**30**	**1.4**	**77**	**0.2**	**1,360**	**0.6**
									Other[(e)]									
Males																		
Doctorate or higher	706	0.0	596	0.0	360	0.0	189	0.0	173	0.0	53	0.0	109	0.1	5	0.0	2,209	0.0
Master's degree	4,582	0.2	2,517	0.1	1,577	0.1	681	0.1	474	0.1	77	0.0	484	0.4	17	0.0	10,607	0.1
Postgrad. dip. or certificate[(b)]	2,960	0.1	2,482	0.1	1,701	0.1	1,084	0.1	638	0.1	116	0.1	320	0.2	78	0.1	9,641	0.1
Subtotal postgraduate	*8,248*	*0.3*	*5,595*	*0.3*	*3,638*	*0.2*	*1,954*	*0.3*	*1,285*	*0.2*	*246*	*0.1*	*913*	*0.7*	*100*	*0.2*	*22,457*	*0.3*
Bachelor's degree	12,764	0.5	11,492	0.6	7,459	0.5	4,161	0.5	3,311	0.6	986	0.5	1,638	1.3	144	0.2	42,491	0.5
Other undergraduate[(c)]	757	0.0	290	0.0	186	0.0	20	0.0	88	0.0	311	0.2	5	0.0	1	0.0	1,700	0.0
Subtotal undergraduate	*13,521*	*0.5*	*11,782*	*0.6*	*7,645*	*0.5*	*4,181*	*0.5*	*3,399*	*0.6*	*1,297*	*0.7*	*1,643*	*1.3*	*145*	*0.2*	*44,191*	*0.6*
All graduates[(d)]	**21,769**	**0.8**	**17,377**	**0.9**	**11,283**	**0.7**	**6,135**	**0.8**	**4,684**	**0.8**	**1,543**	**0.9**	**2,556**	**2.0**	**245**	**0.4**	***66,648***	**0.9**

(continued)

Table 2.06.35 (continued): Completions in the higher education sector, by Indigenous status, sex and state/territory, 2006

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Aust	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Females																		
Doctorate or higher	699	0.0	650	0.0	333	0.0	210	0.0	195	0.0	61	0.0	110	0.1	6	0.0	2,283	0.0
Master's degree	4,878	0.2	2,845	0.1	1,847	0.1	694	0.1	586	0.1	95	0.1	387	0.3	39	0.1	11,641	0.1
Postgrad. dip. or certificate(b)	4,627	0.2	4,801	0.2	2,674	0.2	1,734	0.2	1,336	0.2	196	0.1	479	0.4	125	0.2	16,636	0.2
Subtotal postgraduate	*10,204*	*0.4*	*8,296*	*0.4*	*4,854*	*0.3*	*2,638*	*0.3*	*2,117*	*0.3*	*352*	*0.2*	*976*	*0.7*	*170*	*0.3*	*30,560*	*0.4*
Bachelor's degree	19,659	0.7	16,233	0.8	11,775	0.8	6,253	0.8	5,160	0.8	1,436	0.8	2,133	1.6	318	0.6	64,350	0.8
Other undergraduate(c)	549	0.0	389	0.0	215	0.0	66	0.0	104	0.0	19	0.0	19	0.0	4	0.0	1,427	0.0
Subtotal undergraduate	*20,208*	*0.8*	*16,622*	*0.8*	*11,990*	*0.8*	*6,319*	*0.8*	*5,264*	*0.8*	*1,455*	*0.8*	*2,152*	*1.6*	*322*	*0.6*	*65,777*	*0.8*
All graduates(d)	**30,412**	**1.1**	**24,918**	**1.2**	**16,844**	**1.1**	**8,957**	**1.2**	**7,381**	**1.2**	**1,807**	**1.0**	**3,128**	**2.3**	**492**	**0.9**	**96,337**	**1.2**
Persons																		
Doctorate or higher	1,405	0.0	1,246	0.0	693	0.0	399	0.0	368	0.0	114	0.0	219	0.1	11	0.0	4,492	0.0
Master's degree	9,460	0.2	5,362	0.1	3,424	0.1	1,375	0.1	1,060	0.1	172	0.0	871	0.3	56	0.0	22,248	0.1
Postgrad. dip. or certificate(b)	7,587	0.1	7,283	0.2	4,375	0.1	2,818	0.2	1,974	0.2	312	0.1	799	0.3	203	0.2	26,277	0.2
Subtotal postgraduate	*18,452*	*0.4*	*13,891*	*0.3*	*8,492*	*0.3*	*4,592*	*0.3*	*3,402*	*0.3*	*598*	*0.2*	*1,889*	*0.7*	*270*	*0.2*	*53,017*	*0.3*
Bachelor's degree	32,423	0.6	27,725	0.7	19,234	0.6	10,414	0.7	8,471	0.7	2,422	0.7	3,771	1.4	462	0.4	106,841	0.7
Other undergraduate(c)	1,306	0.0	679	0.0	401	0.0	86	0.0	192	0.0	330	0.1	24	0.0	5	0.0	3,127	0.0
Subtotal undergraduate	*33,729*	*0.6*	*28,404*	*0.7*	*19,635*	*0.6*	*10,500*	*0.7*	*8,663*	*0.7*	*2,752*	*0.7*	*3,795*	*1.4*	*467*	*0.4*	*109,968*	*0.7*
All graduates(d)	**52,181**	**1.0**	**42,295**	**1.1**	**28,127**	**0.9**	**15,092**	**1.0**	**12,065**	**1.0**	**3,350**	**0.9**	**5,684**	**2.2**	**737**	**0.6**	**162,985**	**1.0**

(a) Numbers are for all persons completing courses in higher education. Proportions have been calculated from persons aged 22 years and over, as this is the age group most applicable to higher education course completion.

(b) Includes postgrad. qual/prelim., grad.(post) dip.—new area, grad.(post) dip.—ext. area, and graduate certificate.

(c) Includes associate degree, advanced diploma (AQF), diploma (AQF) and other undergraduate award courses.

(d) Includes enabling courses and non-award courses.

(e) Includes Indigenous status not stated.

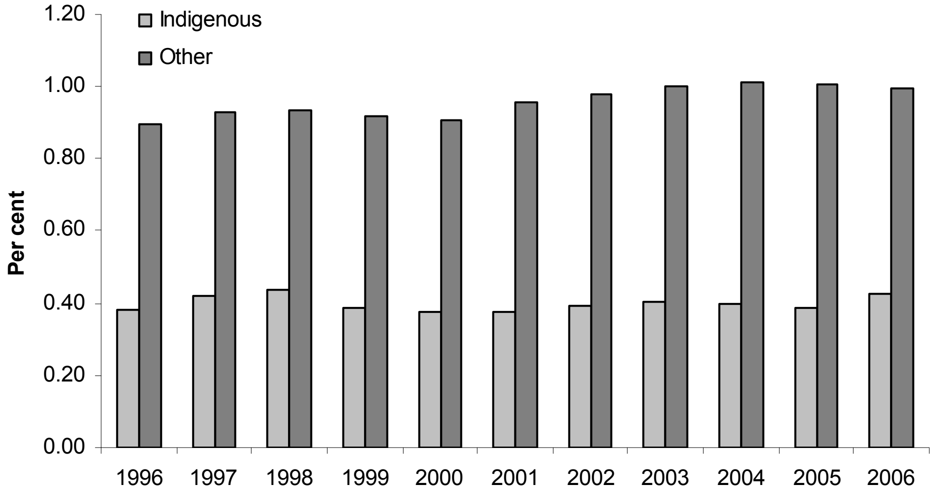
Notes

1. Percentages are calculated using the Indigenous and non-Indigenous estimated resident populations for 2006.
2. Note that the numbers reported in the 2006 edition of this report under the higher education data section were for course enrolments rather than for completions as presented here.

Source: AIHW analysis of DEST Higher Education Statistics Collection.

Time series analyses

- Between 1996 and 2006, there was little change in the proportion of domestic Indigenous or other students who completed a higher education award course (Figure 2.06.8).



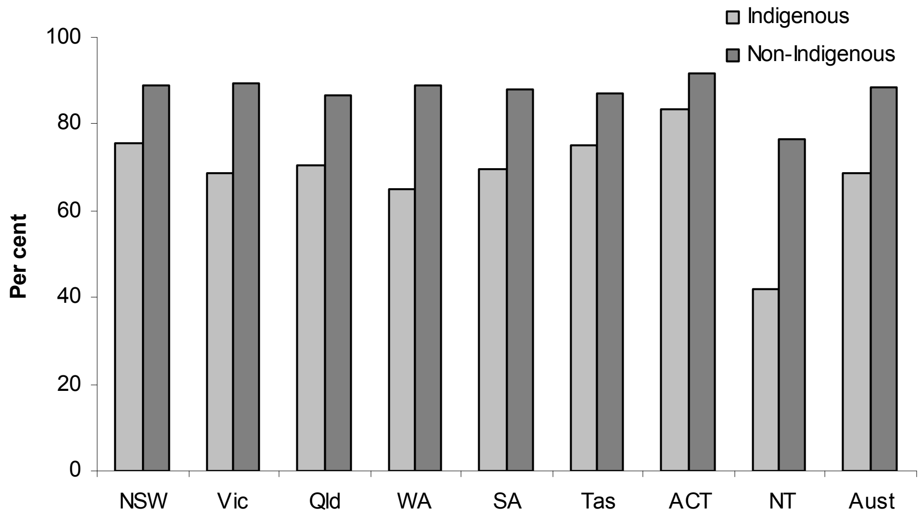
Source: AIHW analysis of DEST Higher Education Statistics Collection.

Figure 2.06.8: Higher education award course completions for domestic students, by Indigenous status, 1996–2006

Success rate

The success rate for higher education institutions is based on the proportion of units passed within a year compared with the total units enrolled.

- In 2006, the success rate for Indigenous students varied by state and territory, ranging from 42% in the Northern Territory to 83% in the Australian Capital Territory. The success rate for non-Indigenous students was similar in most states and territories (between 86% and 92%), except for the Northern Territory (77%) (Figure 2.06.9).



Source: AIHW analysis of DEST Higher Education Statistics Collection.

Figure 2.06.9: Higher education success rates, by Indigenous status and state/territory, 2006

Additional information

Reasons for leaving school early

The 2002 National Aboriginal and Torres Strait Islander Social Survey collected information on main reasons Indigenous persons left school before completing Year 12 or equivalent. Data are presented by remoteness area in Table 2.06.36.

- In 2002, of Indigenous persons aged 15–24 years who reported they had left school before completing Year 12, the most common main reason given for this was that they did not like school (26%). The second most common main reason was that they got a job or apprenticeship or wanted a job or apprenticeship (16%). Other personal/family reasons accounted for 13% of Indigenous respondents leaving school before Year 12. When all personal/family reasons are combined, they account for 17% of Indigenous students leaving school early. Approximately 10% of Indigenous persons reported leaving school early because they did not do well at school (Table 2.06.36).
- A higher proportion of Indigenous persons aged 15–24 years in Remote and Very Remote areas than in non-remote areas reported the main reasons for leaving school before completing Year 12 were that Year 12 or equivalent was not available (8.3%

compared with 1%) or they felt they had done enough at school (10% compared with 6%).

- A higher proportion of Indigenous persons in non-remote areas reported not doing well at school as the main reason for leaving school early than Indigenous persons in remote areas (13% compared with 5%).

Table 2.06.36: Main reason left school before completing Year 12 or equivalent, by remoteness, Indigenous persons aged 15–24 years, 2002

Main reason left school	Major Cities	Inner Regional	Outer Regional	*Subtotal non-remote*	*Remote & Very Remote*	Australia
			Per cent			
School-related reasons						
Did not like school	21.7	35.3	25.3	26.2	25.6	26.0
Did not do well	19.0	5.0	7.9	12.5	4.9	10.1
Feel had done enough	6.9	4.3	7.1	6.3	10.1	7.5
Changed to other type of study	0.6	2.4	4.4	2.0	0.6	1.6
Other school-related reason	9.7	9.0	11.1	9.9	7.9	9.3
Work-related reasons						
Got/wanted a job/apprenticeship	12.2	20.1	19.1	16.0	14.5	15.5
Little difference to work prospects	3.1	0.0	0.4	1.6	1.5	1.6
Other work-related reason	0.3	0.3	2.5	0.9	0.7	0.8
Personal/family reasons						
Caring for family members	2.8	3.5	1.3	2.6	2.2	2.5
Own ill health or disability	0.6	2.4	2.9	1.6	1.6	1.6
Other personal/family reason	16.7	11.8	12.7	14.4	9.7	12.9
Other reasons						
Location/transport reasons	0.2	1.0	0.4	0.5	0.9	0.6
Financial reasons	0.0	1.1	0.6	0.4	0.6	0.5
Year 12 or equivalent not available	2.1	0.0	0.0	1.0	8.3	3.3
Other reason	4.0	3.8	4.3	4.0	3.2	3.8
Not stated	0.0	0.0	0.0	0.0	7.6	2.4
Total who left school before completing Year 12 or equivalent	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	16,100	8,734	8,413	33,247	15,259	48,506

Source: AIHW analysis of NATSISS 2002.

New apprenticeships

DEST (2006) reported an increase in the participation rates of Indigenous Australians in new apprenticeships in 2004.

- Indigenous people represented 3.3% (8,570) of all new apprenticeship commencements in 2004, an increase from 2.9% (7,970) in 2003.
- Overall, the Indigenous participation rate in new apprenticeships increased from 2.2% (8,500) in 2003 to 2.5% (9,470) in 2004.
- In 2004, the majority (63%) of Indigenous Australians participating in new apprenticeships were male.
- Indigenous students represented 2.4% of new apprenticeships completions, which is in line with their overall participation rate of 2.5%.

Data quality issues

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example, whether people are counted more than once, or are undercounted (ABS 1996).*

For the 2002 NATSISS, it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in these surveys is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS) and the 2002 General Social Survey. The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys and the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the 2004–05 NATSIHS and the 2002 NATSISS publications (ABS 2006, 2004a).

National Centre for Vocational Education Research data

This collection gathers information from providers (in receipt of public VET funding) about activity of the VET system in Australia. The collection encompasses all delivery funded wholly or in part from public funds.

Non-identification rates for Indigenous students in these data are high. Care also needs to be taken when comparing data across jurisdictions for load pass rates, as average module durations vary across jurisdictions (SCRGSP 2005b).

(continued)

Data quality issues (continued)

DEST Higher Education Schools Statistics Collection

The Higher Education Schools Statistics Collection only includes information from higher education institutions in Australia as determined under the Higher Education Funding Act 1988. *This includes:*

- *institutions that receive block operating grant funding for teaching and research activities*
- *other public higher education institutions that receive some level of operating grant funding*
- *the Australian Film, Television and Radio School, the National Institute of Dramatic Art and the Australian Defence Force Academy.*

Private institutions are not required to report statistical data to DEST and are therefore outside the scope of the collection (ABS 2003). The collection of data from private higher education institutions is being trialled (ABS 2004b).

Institutions receive detailed written documentation about what information is required to be furnished in the form of an electronic help file. Universities design and produce their own statistical information (enrolment) forms. These are designed to be used by institutions to collect the required information from students. DEST has provided institutions with suggested wording for questions relating to Indigenous status, language spoken at home and disability (ABS 2003).

Approximately 3% of students in this data collection have a 'not stated' Indigenous status. At the moment these are recorded as non-Indigenous, although plans are under way to separately record the 'not stated' responses.

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2.07 Employment status including CDEP participation

The employment status of Aboriginal and Torres Strait Islander peoples aged 15–64 years

Data sources

Data for this measure come from the 2006 Census of Population and Housing and the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

Census of Population and Housing

The Census of Population and Housing is conducted by the ABS at 5-yearly intervals with 2006 the most recent, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member. Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done for the statistics used in this measure.

The following labour force categories and terminologies apply to 2006 Census data:

- **Employed**—Persons aged 15 years and over who worked for payment or profit, as an unpaid helper in a family business for a minimum of 1 hour per week, during the week before Census night. Also includes those who were absent from a job or business and Community Development Employment Projects (CDEP) participants.
- **Full-time workers**—Employed persons who reported working 35 hours or more in the week before Census night.
- **Part-time workers**—Employed persons who reported working less than 35 hours in the week before Census night.
- **Unemployed**—Persons aged 15 years who were not employed, but were actively looking for work and were available to start work, in the 4 weeks before Census night.
- **Not in the labour force**—persons who are not employed or unemployed as defined above, including persons who:
  - are retired
  - no longer work
  - do not intend to work in the future
  - are permanently unable to work
  - have never worked and never intend to work.
- **Participation rate**—for any group, the labour force expressed as a percentage of the civilian population in the same group.
- **Employment to population ratio**—for any group, the number of employed persons expressed as a percentage of the civilian population in the same group.

2006 Census data on participation in CDEP was not available, but data on Indigenous participation in CDEP was collected as part of the 2004–05 NATSIHS and is discussed at the end of the indicator.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

The labour force categories and terminologies for the 2004–05 NATSIHS are similar to those for the 2006 Census that have been used in this measure, except that the reference periods are in relation to the 2004–05 NATSIHS rather than the Census.

The 2004–05 NATSIHS also collected data on Indigenous participation in the CDEP scheme:

- **Community Development Employment Projects (CDEP) scheme**—enables participants (usually members of Aboriginal or Torres Strait Islander communities) to exchange unemployment benefits for opportunities to undertake work and training in activities that are managed by a local Aboriginal or Torres Strait Islander community organisation. Participants in the program are therefore classified as employed.

ABS Labour Force Survey

The Labour Force Survey (LFS) is run monthly by the ABS and is the main source of information about the labour force status of Australia's civilian population. From April 2001, the monthly LFS has included a question on Indigenous status. Results from the survey on Indigenous Australians are published annually by the ABS in the *Labour force characteristics of Aboriginal and Torres Strait Islander Australians, experimental estimates from the Labour Force Survey* publications, the latest of which was published in 2008. The labour force estimates for Indigenous Australians in this publication were produced by combining the LFS samples for each of the 12 months of a calendar year to produce annual estimates.

Data analyses

Comparison of Census and NATSIHS data

Both the NATSIHS and the Census collect information on the labour force status of Indigenous Australians, but the Census does not collect information on participation in Community Development Employment Projects (CDEP) from all Indigenous persons as does the NATSIHS. In the Census, participation in CDEP is asked as a separate question only on the interviewer household forms and is not applicable to people enumerated on mainstream forms. Therefore, information on CDEP participation in the Census cannot be used as a count of all persons who are participating in the programs and is not presented here.

When comparing the labour force status of Indigenous persons recorded in the Census with that in the NATSIHS, the results are fairly similar. The 2004–05 NATSIHS estimated that 51% of Indigenous persons aged 15–64 years were employed, 9% were unemployed and 40% were not in the labour force. Results from the 2006 Census showed that 48% of Indigenous persons aged 15–64 years were employed, 9% were unemployed and 43% were not in the labour force.

This measure presents data included in the 2006 edition of this report for persons aged 15–64 years (2004–05 NATSIHS) and new data from the 2006 Census for persons aged 15–64 years. Data from the NATSIHS are presented first followed by data from the 2006 Census. Although analyses of the NATSIHS presents crude and age-standardised proportions, analyses from the Census presents crude proportions only. This is because the ABS has recently recommended that labour force data do not require age standardisation, as analysis has shown that labour force status is not highly associated with age, and age standardisation therefore has very little effect on the resulting proportions of Indigenous and non-Indigenous Australians.

NATSIHS data

- In 2004–05, the labour force participation rate for the Indigenous population aged 15–64 years was estimated to be 60%—51% employed (40% in non-CDEP and 11% in CDEP) and 9% unemployed. The remaining 40% were not in the labour force.
- After adjusting for differences in age structure, Indigenous Australians aged 15–64 years were less likely than non-Indigenous Australians to be in the labour force (58% compared with 78%), less likely to be employed (51% compared with 75%) and more than twice as likely to be unemployed (8% compared with 3%) (Table 2.07.1).

Employment status by age and sex

- Indigenous Australians aged 25–34 and 35–44 years were most likely to be employed (58% and 63% respectively) than those in the younger and older age groups (Table 2.07.1). Indigenous Australians aged 15–24 were most likely to be unemployed (16%).
- A higher proportion of Indigenous males reported they were employed than Indigenous females (58% compared with 44%) (Table 2.07.2). Indigenous males were also more likely than Indigenous females to be unemployed (11% compared with 8%).

Table 2.07.1: Persons aged 15–64 years: labour force status, by Indigenous status and age, 2004–05

	15–24		25–34		35–44		45–54		55–64		Non age-standardised total		Age-standardised total		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Rate ratio
								Number							
In the labour force	51,413	1,972,397	46,523	2,342,043	40,922	2,435,089	23,748	2,236,395	6,194	1,177,087	168,801	10,163,011	. .	. .	. .
Employed CDEP	8,130	. .	9,938	. .	7,556	. .	3,793	. .	1,138	. .	30,555	. .	. .	. .	. .
Employed non-CDEP	28,999	1,790,270	30,852	2,242,187	29,610	2,365,122	17,783	2,179,872	4,823	1,145,136	112,067	9,722,586	. .	. .	. .
Total employed	*37,129*	*1,790,270*	*40,790*	*2,242,187*	*37,166*	*2,365,122*	*21,576*	*2,179,872*	*5,961*	*1,145,136*	*142,622*	*9,722,586*	. .	. .	. .
Unemployed	14,285	182,127	5,733	99,857	3,756	69,967	2,172	56,523	233	31,951	26,179	440,425	. .	. .	. .
Not in the labour force	40,654	663,802	23,249	419,311	18,135	464,476	15,830	469,185	14,735	922,338	112,603	2,939,112	. .	. .	. .
Total	**92,067**	**2,636,199**	**69,772**	**2,761,354**	**59,057**	**2,899,566**	**39,578**	**2,705,580**	**20,930**	**2,099,424**	**281,404**	**13,102,123**	**. .**	**. .**	**. .**
								Per cent							
In the labour force	56*	75*	67*	85*	69*	84*	60*	83*	30*	56*	60*	78*	58	78	0.7*
Employed CDEP	9	. .	14*	. .	13*	. .	10	. .	5	. .	11	. .	11	. .	. .
Employed non-CDEP	31*	68*	44*	81*	50*	82*	45*	81*	23*	55*	40*	74*	40	75	0.5*
Total employed	*40**	*68**	*58**	*81**	*63**	*82**	*55**	*81**	*28**	*55**	*51**	*74**	*51*	*75*	*0.7**
Unemployed	16*	7*	8*	4*	6*	2*	5*	2*	1[(a)]	2	9*	3*	8	3	2.3*
Not in the labour force	44*	25*	33*	15*	31*	16*	40*	17*	70*	44*	40*	22*	42	22	1.9*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**. .**

* Represents results with statistically significant differences between the Indigenous and non-Indigenous populations.

(a) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.07.2: Labour force status of Indigenous persons aged 15–64 years, by sex, 2004–05

	Males	Females	Persons
Labour force status	**%**	**%**	**%**
In the labour force	69	51	60
Employed CDEP	13	9	11
Employed non-CDEP	46	35	40
Total employed	*58*	*44*	*51*
Unemployed	11	8	9
Not in the labour force	31	49	40
Total	**100**	**100**	**100**

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.07.3: Labour force status of persons aged 15–64 years, by Indigenous status and sex, 2004–05

	Males			Females			Persons		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%	
In the labour force	68	86	0.8*	50	71	0.7*	58	78	0.7*
Employed CDEP	12	. .	. .	9	. .	. .	11	. .	. .
Employed non-CDEP	46	82	0.6*	35	67	0.5*	40	75	0.5*
Total employed	*59*	*82*	*0.7**	*44*	*67*	*0.6**	*51*	*75*	*0.7**
Unemployed	9	4	2.5*	7	3	2.0*	8	3	2.3*
Not in the labour force	32	14	2.2*	50	29	1.7*	42	22	1.9*
Total	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .

* Represents results with statistically significant differences between the Indigenous and non-Indigenous populations.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Employment status by state/territory and remoteness

- The proportion of Indigenous Australians who were unemployed ranged from 12% in Tasmania to 6% in the Northern Territory and Australian Capital Territory (Table 2.07.4). The proportion of Indigenous Australians not in the labour force ranged from 29% in the Australian Capital Territory to 50% in the Northern Territory. The Northern Territory had the highest proportion of Indigenous Australians employed in CDEP (24%).
- In every state and territory except the Australian Capital Territory where proportions were not statistically different, a higher proportion of Indigenous Australians than non-Indigenous Australians were unemployed. In every state and territory a higher proportion of Indigenous Australians than non-Indigenous Australians were not in the labour force (Table 2.07.5).

- Indigenous Australians in remote areas were more likely than Indigenous Australians in non-remote areas to be employed in CDEP (29% compared with 4%) and less likely to be employed in non-CDEP (23% compared with 46%) (Table 2.07.6; Figure 2.07.1).

Table 2.07.4: Labour force status of Indigenous persons aged 15–64 years, by state/territory, 2004–05

Labour force status	**NSW**	**Vic**	**Qld**	**WA**	**SA**	**Tas**	**ACT**	**NT**	**Australia**
					Per cent				
In the labour force	59	64	66	60	55	61	71	**50**	60
Employed CDEP	5	4[(a)]	9	21	12	0[(b)]	1[(b)]	**24**	11
Employed non-CDEP	45	51	46	29	36	48	64	**19**	40
Total employed	*50*	*54*	*55*	*50*	*48*	*49*	*65*	**43**	*51*
Unemployed	9	9	11	9	7	12	6[(a)]	**6**	9
Not in the labour force	41	36	34	40	45	39	29	**50**	40
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.07.5: Labour force status of persons aged 15–64 years, by Indigenous status and state/territory, 2004–05

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Australia	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
									Number									
In the labour force	48,614	3,371,351	11,256	2,568,214	49,751	1,983,571	23,988	989,308	8,768	769,523	6,567	219,869	1,812	187,635	18,044	73,540	168,801	10,163,011
Employed CDEP	3,929	. .	645	. .	6,918	. .	8,326	. .	1,984	. .	38	. .	18	. .	8,697	. .	30,555	. .
Employed non-CDEP	37,297	3,221,271	8,942	2,454,330	34,360	1,893,972	11,848	952,823	5,680	738,449	5,237	208,252	1,646	180,483	7,058	73,007	112,067	9,722,586
Total employed	*41,226*	*3,221,271*	*9,588*	*2,454,330*	*41,278*	*1,893,972*	*20,174*	*952,823*	*7,663*	*738,449*	*5,275*	*208,252*	*1,664*	*180,483*	*15,755*	*73,007*	*142,622*	*9,722,586*
Unemployed	7,388	150,080	1,668	113,885	8,473	89,599	3,815	36,485	1,105	31,075	1,292	11,617	148	7,151	2,289	533	26,179	440,425
Not in the labour force	33,690	1,002,445	6,393	753,306	25,766	534,436	16,306	293,391	7,161	217,577	4,241	82,044	741	36,425	18,305	19,490	112,603	2,939,112
Total	**82,304**	**4,373,796**	**17,649**	**3,321,520**	**75,517**	**2,518,007**	**40,294**	**1,282,698**	**15,930**	**987,100**	**10,808**	**301,913**	**2,553**	**224,060**	**36,349**	**93,030**	**281,404**	**13,102,123**

(continued)

Table 2.07.5 (continued): Labour force status of persons aged 15–64 years, by Indigenous status and state/territory, 2004–05

	NSW		Vic		Qld		SA		WA		Tas		ACT		NT		Australia	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
									Per cent									
In the labour force	58*	78*	62*	78*	63*	79*	54*	79*	58*	77*	60*	74*	71*	84*	51*	79*	58*	78*
Employed CDEP	4	. .	3(a)	. .	9	. .	12	. .	20	. .	0(b)	. .	1(b)	. .	25	. .	11	. .
Employed non-CDEP	46*	74*	51*	74*	44*	76*	36*	76*	30*	75*	50*	70*	65*	81*	21*	79*	40*	75*
Total employed	*51**	*74**	*54**	*74**	*53**	*76**	*48**	*76**	*50**	*75**	*50**	*70**	*66**	*81**	*46**	*79**	*51**	*75**
Unemployed	7*	3*	8	3	10*	4*	6*	3*	8*	3*	9*	4*	5(a)	3	5*	1*(b)	8*	3*
Not in the labour force	42*	22*	38*	22*	37*	21*	46*	21*	42*	23*	40*	26*	29*	16*	49*	21*	42*	22*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

* Represents results with statistically significant differences between the Indigenous and non-Indigenous populations.

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.07.6: Labour force status of Indigenous persons aged 15–64 years, by remoteness, 2004–05

Labour force status	**Remote**	**Non-remote**	**Australia**
		Per cent	
In the labour force	58	61	60
Employed CDEP	29	4	11
Employed non-CDEP	23	46	40
Total employed	*51*	*50*	*51*
Unemployed	7	10	9
Not in the labour force	42	39	40
Total	**100**	**100**	**100**

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.07.7: Labour force status of persons aged 15–64 years, by Indigenous status and remoteness, 2004–05

	Remote			**Non-remote**			**Total**		
	Indig.	**Non-Indig.**	**Ratio**[(a)]	**Indig.**	**Non-Indig.**	**Ratio**[(a)]	**Indig.**	**Non-Indig.**	**Ratio**[(a)]
Labour force status	**%**	**%**		**%**	**%**		**%**	**%**	
In the labour force	58	82	0.7*	58	78	0.7*	58	78	0.7*
Employed CDEP	28	. .	. .	4	. .	. .	11	. .	. .
Employed non-CDEP	24	80	0.3*	46	75	0.6*	40	75	0.5*
Total employed	*52*	*80*	*0.7**	*50*	*75*	*0.7**	*51*	*75*	*0.7**
Unemployed	6	3[(b)]	2.3*	8	3	2.4*	8	3	2.3*
Not in the labour force	42	18	2.4*	42	22	1.9*	42	22	1.9*
Total[(c)]	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**

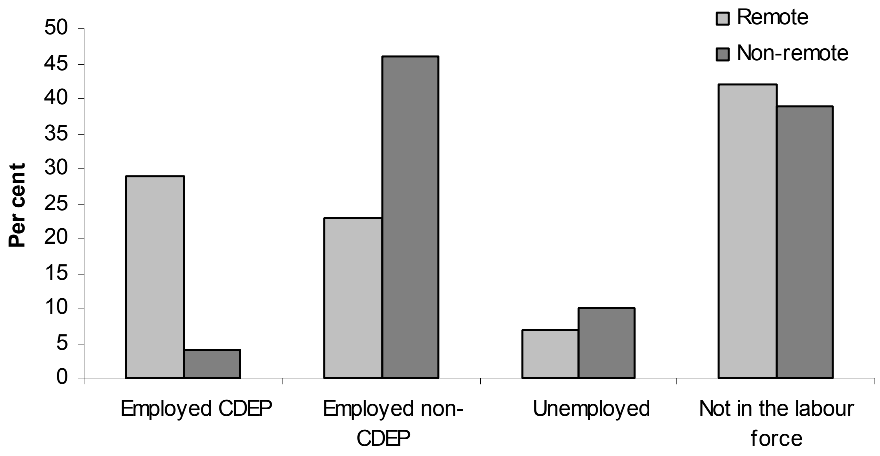
(a) Indigenous proportion divided by the non-Indigenous proportion.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Includes labour force status not stated.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

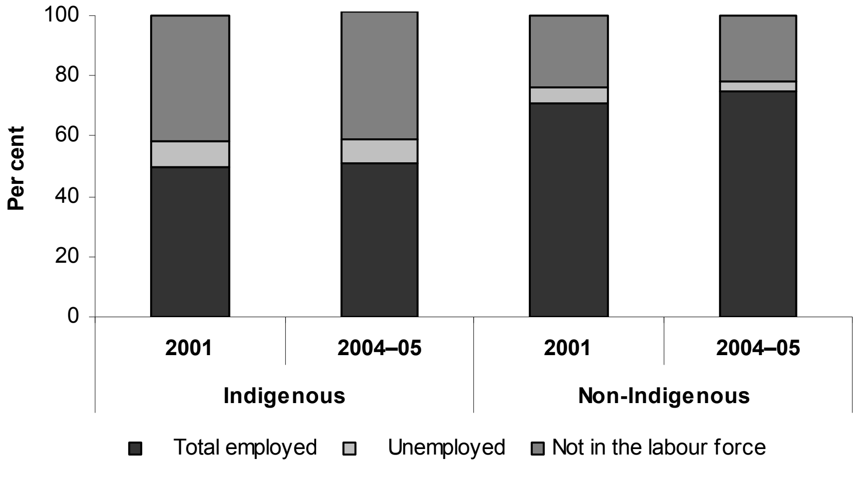


Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Figure 2.07.1: Labour force status, by remoteness, Indigenous persons aged 15–64 years, 2004–05

Time series analyses

Various data sources suggest different trends in employment status. Data from the NATSIHS and National Health Surveys presented in Figure 2.07.2 suggest that there has been little change in the labour force status of Indigenous and non-Indigenous Australians between 2001 and 2004–05. However, data from the 1994 NATSIS and 2002 NATSISS indicate that, nationally, the labour force participation rate for Indigenous Australians aged 15–64 years increased from 57% in 1994 to 64% in 2002 and the unemployment rate fell from 30% to 20% in the same period (SCRGSP 2005).



Source: ABS and AIHW analysis of 2001 NHS (Indigenous supplement), 2004–05 NATSIHS and 2004–05 NHS.

Figure 2.07.2: Labour force status of persons aged 15–64 years, by Indigenous status, 2001 and 2004–05

Employment status by summary health characteristics

The 2004–05 NATSIHS collected information on the labour force status and selected health characteristics of Indigenous Australians. Results are shown in tables 2.07.8a and 2.07.8b.

- In 2004–05, approximately 65% of Indigenous Australians aged 15–64 years with reported excellent/very good/good health were in the labour force (55% employed) compared with 43% of Indigenous Australians with reported fair/poor health (35% employed) (Table 2.07.8a). Approximately 13% of Indigenous Australians with no long-term health conditions were unemployed compared with 7% of Indigenous Australians with three or more long-term conditions.
- Indigenous Australians with no long-term health conditions were three times as likely as non-Indigenous Australians with no long-term health conditions to be unemployed. Indigenous Australians with three or more long-term health conditions were twice as likely as non-Indigenous Australians with three or more long-term health conditions to be unemployed (Table 2.07.8b).

Table 2.07.8a: Labour force status of Indigenous persons aged 15–64 years, by summary health characteristics, 2004–05[(a)]

	Self-assessed health status		Number of long term conditions				
	Excellent/very good/good	Fair/poor	0	1	2	3+	Total[(b)]
			Per cent				
In the labour force	65	43	60	65	65	56	60
Employed CDEP	12	7	16	12	9	8	11
Employed non-CDEP	43	28	31	43	47	40	40
Total employed	*55*	*35*	*47*	*55*	*56*	*49*	*51*
Unemployed	10	8	13	10	9	7	9
Not in the labour force	35	57	40	35	35	44	40
Total[(c)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	222,665	58,668	66,107	53741	49,337	112,219	281,404

(a) Proportions are calculated of those in each category of self-assessed health status and number of long-term conditions, the proportion in each labour force status category.

(b) Includes self-assessed health status not stated and number of long-term conditions not stated.

(c) Includes labour force status not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.07.8b: Labour force status of persons aged 15–64 years, by summary health characteristics and Indigenous status, 2004–05

	Self-assessed health status						**Number of long-term health conditions**														
	Excellent/very good/good			**Fair/Poor**			**0**			**1**			**2**			**3+**			**Total**		
	Indig.	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
	%	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**	
In the labour force	64	81	0.8*	45	61	0.7*	61	79	0.8*	64	82	0.8*	62	82	0.8*	56	76	0.7*	58	78	0.7*
Employed CDEP	12	. .	. .	7	. .	. .	17	. .	. .	12	. .	. .	9	. .	. .	8	. .	. .	11	. .	. .
Employed non-CDEP	45	. .	. .	29	. .	. .	35	. .	. .	44	. .	. .	46	. .	. .	40	. .	. .	40	. .	. .
Total employed	*57*	*78*	*0.7**	*36*	*56*	*0.6**	*52*	*76*	*0.7**	*56*	*79*	*0.78*	*55*	*79*	*0.7**	*48*	*72*	*0.7**	*51*	*75*	*0.7**
Unemployed	7	3	2.2*	9	5	1.8*	9	3	2.7*	8	3	2.4*	7	3	2.5*	8	4	1.9*	8	3	2.3*
Not in the labour force	36	19	1.9*	55	39	1.4*	39	21	1.9*	36	18	2.1*	38	18	2.1*	44	24	1.8*	42	22	1.9*
Total[(a)]	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes labour force status not stated.

Note: Data are age standardised

Source: ABS & AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey & 2004–05 National Health Survey.

Census data

- In 2006, Indigenous Australians aged 15–64 years were less likely than non-Indigenous Australians to be employed (48% compared with 72%), particularly in full-time work (26% of Indigenous Australians employed full-time compared with 46% of non-Indigenous Australians) (Table 2.07.9).
- A much higher proportion of Indigenous Australians were not in the labour force (43%) compared with non-Indigenous Australians (25%).

Employment status by age and sex

- Indigenous Australians aged 35–44 and 45–54 years were more likely to be employed (55% and 56% respectively) than those in the younger and older age groups (Table 2.07.9). Indigenous Australians aged 15–24 were most likely to be unemployed (11%).
- In 2006, Indigenous Australians had a 54% labour force participation rate, compared with 75% for non-Indigenous Australians (Figure 2.07.3).
- Indigenous Australians had a employment to population ratio of 0.5, compared with the non-Indigenous ratio of 0.7 (Figure 2.07.4).
- A higher proportion of Indigenous males than Indigenous females reported they were employed (53% compared with 43%) (Table 2.07.10). Indigenous males were also more likely than Indigenous females to be unemployed (10% compared with 8%).

Table 2.07.9: Persons aged 15–64 years: labour force status, by Indigenous status and age, 2006

	15–24		25–34		35–44		45–54		55–64		Total	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
						Number						
Employed												
Employed, worked full-time	14,038	721,919	16,801	1,368,405	16,875	1,429,557	12,719	1,400,982	4,261	708,193	64,694	5,629,056
Employed, worked part-time	14,218	641,896	10,359	414,020	10,416	589,654	6,798	523,203	2,750	349,029	44,541	2,517,802
Employed, away from work[(a)]	3,711	108,469	3,067	123,119	2,761	124,325	1,922	115,414	842	76,810	12,303	548,137
Total employed	*31,967*	*1,472,284*	*30,227*	*1,905,544*	*30,052*	*2,143,536*	*21,439*	*2,039,599*	*7,853*	*1,134,032*	*121,538*	*8,694,995*
Unemployed												
Unemployed, looking for full-time work	6,475	85,035	4,086	66,697	3,297	58,208	1,652	50,181	456	29,012	15,966	289,133
Unemployed, looking for part-time work	2,736	76,188	1,580	30,956	1,375	33,823	652	23,888	233	17,241	6,576	182,096
Total unemployed	*9,211*	*161,223*	*5,666*	*97,653*	*4,672*	*92,031*	*2,304*	*74,069*	*689*	*46,253*	*22,542*	*471,229*
Not in the labour force	39,953	795,814	23,034	422,149	19,865	461,434	14,392	442,778	12,142	846,835	109,386	2,969,010
Labour force status not stated	4,885	29,354	3,386	27,156	3,175	29,610	2,380	26,082	1,515	29,350	15,341	141,552
Total	**86,016**	**2,458,675**	**62,313**	**2,452,502**	**57,764**	**2,726,611**	**40,515**	**2,582,528**	**22,199**	**2,056,470**	**268,807**	**12,276,786**

(continued)

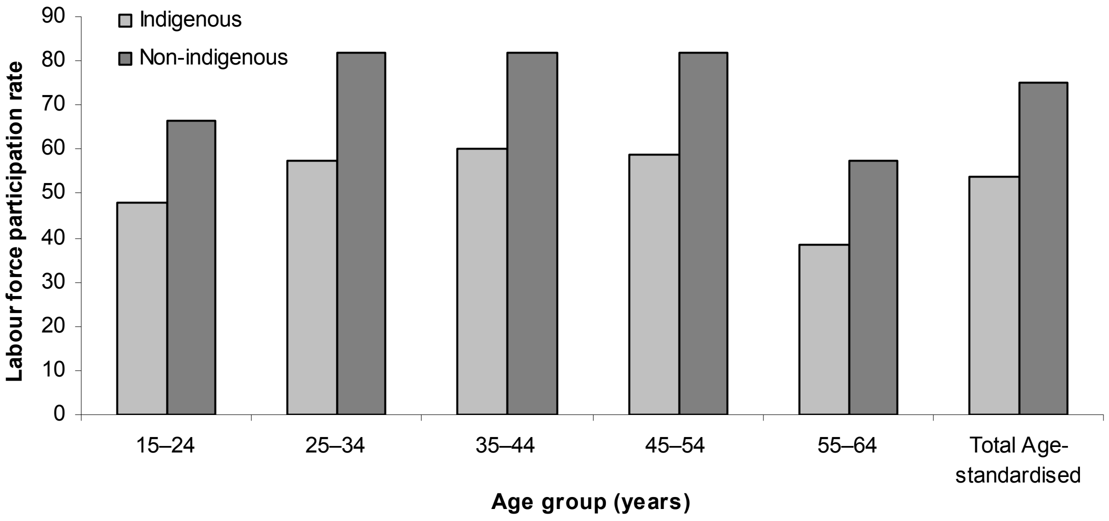
Table 2.07.9 (continued): Persons aged 15–64 years: labour force status, by Indigenous status and age, 2006

	15–24		25–34		35–44		45–54		55–64		Total	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
							Per cent[(b)]					
Employed												
Employed, worked full-time	17.3	29.7	28.5	56.4	30.9	53.0	33.3	54.8	20.6	34.9	25.5	46.4
Employed, worked part-time	17.5	26.4	17.6	17.1	19.1	21.9	17.8	20.5	13.3	17.2	17.6	20.7
Employed, away from work(a)	4.6	4.5	5.2	5.1	5.1	4.6	5.0	4.5	4.1	3.8	4.9	4.5
Total employed	*39.4*	*60.6*	*51.3*	*78.6*	*55.1*	*79.5*	*56.2*	*79.8*	*38.0*	*55.9*	*48.0*	*71.7*
Unemployed												
Unemployed, looking for full-time work	8.0	3.5	6.9	2.7	6.0	2.2	4.3	2.0	2.2	1.4	6.3	2.4
Unemployed, looking for part-time work	3.4	3.1	2.7	1.3	2.5	1.3	1.7	0.9	1.1	0.9	2.6	1.5
Total unemployed	*11.4*	*6.6*	*9.6*	*4.0*	*8.6*	*3.4*	*6.0*	*2.9*	*3.3*	*2.3*	*8.9*	*3.9*
Not in the labour force	49.2	32.8	39.1	17.4	36.4	17.1	37.7	17.3	58.7	41.8	43.2	24.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Includes persons who stated they worked but who did not state the number of hours worked.

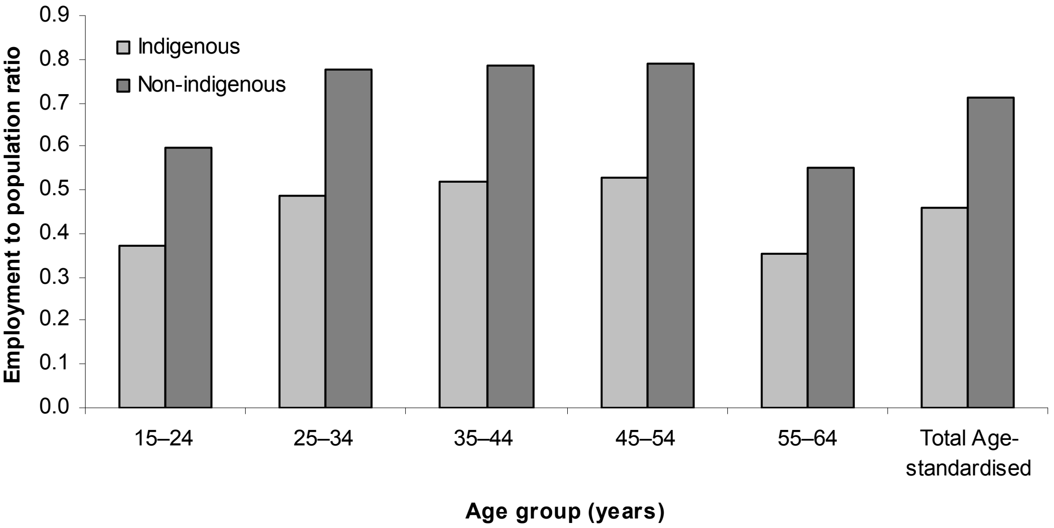
(b) Because of the large proportion of Indigenous respondents for whom labour force status was not stated, all proportions are calculated without including ‘not stated’ in total.

Source: ABS and AIHW analysis of 2006 Census data.



Note: Total directly age-standardised using the Australian 2001 standard population.
Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.07.3: Age-specific labour force participation rates, by Indigenous status, 2006



Note: Total directly age-standardised using the Australian 2001 standard population.
Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.07.4: Age-specific employment to population ratios, by Indigenous status, 2006

Table 2.07.10: Labour force status[(a)] of persons aged 15–64 years, by Indigenous status and sex, 2006

	Males			Females			Persons		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%	
Employed									
Employed, worked full-time	32.4	60.5	0.5	19.1	32.6	0.6	25.5	46.4	0.5
Employed, worked part-time	15.0	12.6	1.2	20.0	28.7	0.7	17.6	20.7	0.9
Employed, away from work[(b)]	5.6	4.8	1.2	4.2	4.3	1.0	4.9	4.5	1.1
Total employed	*53.0*	*77.8*	*0.7*	*43.2*	*65.6*	*0.7*	*48.0*	*71.7*	*0.7*
Unemployed									
Unemployed, looking for full-time work	7.9	3.1	2.5	4.8	1.7	2.8	6.3	2.4	2.6
Unemployed, looking for part-time work	2.0	1.1	1.8	3.1	1.9	1.6	2.6	1.5	1.7
Total unemployed	*10.0*	*4.2*	*2.4*	*7.9*	*3.6*	*2.2*	*8.9*	*3.9*	*2.3*
Not in the labour force	37.0	18.0	2.1	48.9	30.8	1.6	43.2	24.5	1.8
Total	**100.0**	**100.0**	. .	**100.0**	**100.0**	. .	**100.0**	**100.0**	. .

(a) Because of the large proportion of Indigenous respondents for whom labour force status was not stated, all proportions are calculated without including 'not stated' in total.

(b) Includes persons who stated they worked but who did not state the number of hours worked.

Source: ABS and AIHW analysis of 2006 Census data.

Employment status by state/territory and remoteness

- The proportion of Indigenous Australians who were unemployed ranged from 11% in New South Wales to 7% in the Northern Territory (Table 2.07.11). The proportion of Indigenous Australians not in the labour force ranged from 28% in the Australian Capital Territory to 55% in the Northern Territory.
- In every state and territory, a higher proportion of Indigenous Australians than non-Indigenous Australians were unemployed, and were not in the labour force (Table 2.07.11).
- Indigenous Australians in non-remote areas were more likely than those in remote areas to be employed full-time and more likely to be unemployed (Table 2.07.12; Figure 2.07.5).

Table 2.07.11: Labour force status of persons aged 15–64 years, by Indigenous status and state/territory, 2006

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
								Number								
Employed																
Employed, worked full-time	19,634	1,814,135	5,091	1,406,228	20,684	1,134,235	7,320	573,598	3,236	413,792	3,043	117,002	1,018	115,093	4,633	54,266
Employed, worked part-time	12,059	788,717	2,564	648,126	13,399	495,486	6,233	257,289	2,505	206,632	1,887	62,556	366	44,812	5,509	13,992
Employed, away from work[(a)]	3,241	173,530	794	137,297	3,689	104,382	1,919	61,412	743	42,082	429	13,308	114	10,761	1,370	5,286
Total employed	*34,934*	*2,776,382*	*8,449*	*2,191,651*	*37,772*	*1,734,103*	*15,472*	*892,299*	*6,484*	*662,506*	*5,359*	*192,866*	*1,498*	*170,666*	*11,512*	*73,544*
Unemployed																
Unemployed, looking for full-time work	5,953	107,087	1,119	76,972	3,954	50,311	1,882	19,095	928	22,690	605	8,632	135	3,019	1,386	1,291
Unemployed, looking for part-time work	2,437	63,831	475	48,935	1,786	33,257	708	14,199	314	13,587	250	4,673	53	2,873	550	714
Total unemployed	*8,390*	*170,918*	*1,594*	*125,907*	*5,740*	*83,568*	*2,590*	*33,294*	*1,242*	*36,277*	*855*	*13,305*	*188*	*5,892*	*1,936*	*2,005*
Not in the labour force	33,412	1,013,711	6,818	766,165	27,015	550,470	14,774	269,832	6,810	235,572	3,670	78,918	669	39,831	16,129	14,203
Labour force status not stated	3,685	49,605	946	36,802	3,603	27,650	2,267	12,818	822	9,043	239	3,165	52	1,274	3,728	1,184
Total	**80,421**	**4,010,616**	**17,807**	**3,120,525**	**74,130**	**2,395,791**	**35,103**	**1,208,243**	**15,358**	**943,398**	**10,123**	**288,254**	**2,407**	**217,663**	**33,305**	**90,936**

(continued)

Table 2.07.11 (continued): Labour force status of persons aged 15–64 years, by Indigenous status and state/territory, 2006

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
	Per cent[b]															
Employed																
Employed, worked full-time	25.6	45.8	30.2	45.6	29.3	47.9	22.3	48.0	22.3	44.3	30.8	41.0	43.2	53.2	15.7	60.5
Employed, worked part-time	15.7	19.9	15.2	21.0	19.0	20.9	19.0	21.5	17.2	22.1	19.1	21.9	15.5	20.7	18.6	15.6
Employed, away from work[a]	4.2	4.4	4.7	4.5	5.2	4.4	5.8	5.1	5.1	4.5	4.3	4.7	4.9	5.0	4.6	5.9
Total employed	*45.5*	*70.1*	*50.1*	*71.1*	*53.6*	*73.2*	*47.1*	*74.6*	*44.6*	*70.9*	*54.2*	*67.7*	*63.6*	*78.9*	*38.9*	*81.9*
Unemployed																
Unemployed, looking for full-time work	7.8	2.7	6.6	2.5	5.6	2.1	5.7	1.6	6.4	2.4	6.1	3.0	5.7	1.4	4.7	1.4
Unemployed, looking for part-time work	3.2	1.6	2.8	1.6	2.5	1.4	2.2	1.2	2.2	1.5	2.5	1.6	2.2	1.3	1.9	0.8
Total unemployed	*10.9*	*4.3*	*9.5*	*4.1*	*8.1*	*3.5*	*7.9*	*2.8*	*8.5*	*3.9*	*8.7*	*4.7*	*8.0*	*2.7*	*6.5*	*2.2*
Not in the labour force	43.5	25.6	40.4	24.8	38.3	23.2	45.0	22.6	46.9	25.2	37.1	27.7	28.4	18.4	54.5	15.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Includes persons who stated they worked but who did not state the number of hours worked.

(b) Because of the large proportion of Indigenous respondents for whom labour force status was not stated, all proportions are calculated without including 'not stated' in total.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.07.12: Labour force status of persons aged 15–64 years, by Indigenous status and remoteness, 2006

	Major Cities		Inner Regional		Outer Regional		Remote		Very Remote	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
					Number					
Employed										
Employed, worked full-time	26,616	4,016,276	13,646	984,065	13,216	500,521	4,926	85,310	6,059	33,428
Employed, worked part-time	12,970	1,757,281	8,931	506,119	8,574	215,640	3,716	27,634	10,262	7,719
Employed, away from work[(a)]	3,979	377,815	2,308	104,370	2,690	53,008	1,274	8,300	1,976	3,225
Total employed	*43,565*	*6,151,372*	*24,885*	*1,594,554*	*24,480*	*769,169*	*9,916*	*121,244*	*18,297*	*44,372*
Unemployed										
Unemployed, looking for full-time work	5,457	195,403	4,025	61,430	3,721	26,593	1,134	2,701	1,501	734
Unemployed, looking for part-time work	2,245	130,705	1,613	35,468	1,525	13,547	551	1,295	614	342
Total unemployed	*7,702*	*326,108*	*5,638*	*96,898*	*5,246*	*40,140*	*1,685*	*3,996*	*2,115*	*1,076*
Not in the labour force	32,781	2,040,528	23,627	614,240	24,096	265,035	10,096	29,712	18,299	7,760
Labour force status not stated	3,964	98,653	2,375	25,635	3,326	13,642	2,022	2,010	3,489	838
Total	**88,012**	**8,616,661**	**56,525**	**2,331,327**	**57,148**	**1,087,986**	**23,719**	**156,962**	**42,200**	**54,046**

(continued)

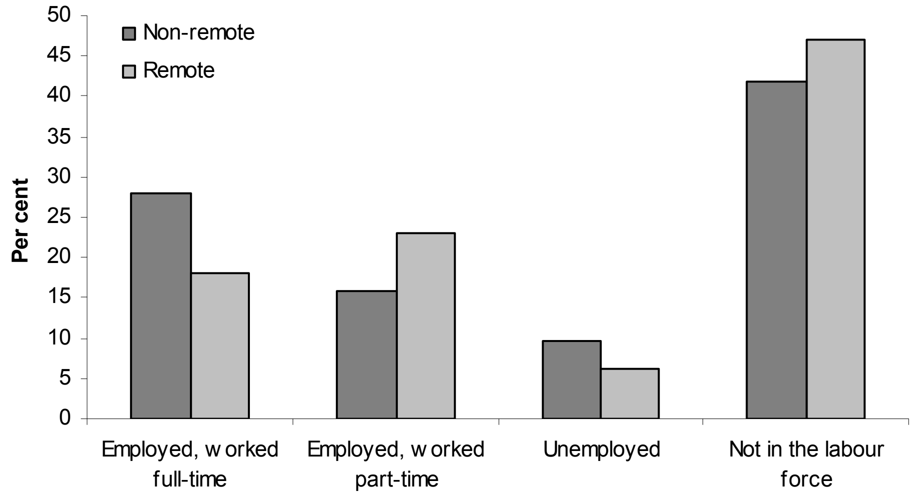
Table 2.07.12 (continued): Labour force status of persons aged 15–64 years, by Indigenous status and remoteness, 2006

	Major Cities		Inner Regional		Outer Regional		Remote		Very Remote	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
	Per cent[b]									
Employed										
Employed, worked full-time	31.7	47.2	25.2	42.7	24.6	46.6	22.7	55.1	15.7	62.8
Employed, worked part-time	15.4	20.6	16.5	22.0	15.9	20.1	17.1	17.8	26.5	14.5
Employed, away from work[a]	4.7	4.4	4.3	4.5	5.0	4.9	5.9	5.4	5.1	6.1
Total employed	*51.8*	*72.2*	*46.0*	*69.2*	*45.5*	*71.6*	*45.7*	*78.2*	*47.3*	*83.4*
Unemployed										
Unemployed, looking for full-time work	6.5	2.3	7.4	2.7	6.9	2.5	5.2	1.7	3.9	1.4
Unemployed, looking for part-time work	2.7	1.5	3.0	1.5	2.8	1.3	2.5	0.8	1.6	0.6
Total unemployed	*9.2*	*3.8*	*10.4*	*4.2*	*9.7*	*3.7*	*7.8*	*2.6*	*5.5*	*2.0*
Not in the labour force	39.0	24.0	43.6	26.6	44.8	24.7	46.5	19.2	47.3	14.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Includes persons who stated they worked but who did not state the number of hours worked.

(b) Because of the large proportion of Indigenous respondents for whom labour force status was not stated, all proportions are calculated without including 'not stated' in total.

Source: ABS and AIHW analysis of 2006 Census data.



Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.07.5: Labour force status, by remoteness, Indigenous persons aged 15–64 years, 2006

Employment by sector, hours worked and occupation

- In 2006, approximately 59% of Indigenous persons aged 15–64 years employed in the labour force were working full-time compared with 69% of non-Indigenous persons of the same age (Table 2.07.13).
- Around three-quarters (74%) of Indigenous employed persons were working in the private sector, 12% were working for state/territory government, 10% were working for local government and 4% were working for the Commonwealth Government. In comparison, approximately 85% of non-Indigenous persons were working in the private sector, 9% in state/territory government, 1% in local government and 4% in the Commonwealth Government.
- In 2006, the most common occupations for Indigenous employed persons were labourers (24%), community and personal service workers (16%), and clerical and administrative workers (13%). For non-Indigenous employed persons the most common occupations were professionals (20%), clerical and administrative workers (15%) and technicians and trades workers (15%).

Table 2.07.13: Employed persons aged 15–64 years, by hours worked, sector and occupation, 2006

	Number		Proportion	
	Indigenous	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Hours worked				
Employed, worked full-time	64,693	5,629,054	59.2	69.1
Employed, worked part-time	44,541	2,517,804	40.8	30.9
Total[(a)]	*109233*	*8146857*	*100*	*100.0*
Sector				
Commonwealth Government	5,001	356,294	4.3	4.1
State/territory government	13,873	781,959	11.9	9.1
Local government	11,224	121,053	9.6	1.4
Private sector	86,566	7,331,451	74.2	85.3
Total[(b)]	*116674*	*8590759*	*100.0*	*100.0*
Occupation				
Managers	6,726	1,130,708	5.6	13.1
Professionals	13,647	1,742,161	11.5	20.2
Technicians and trades workers	14,631	1,262,162	12.3	14.6
Community and personal service workers	18,565	766,997	15.6	8.9
Clerical and administrative workers	15,167	1,316,622	12.7	15.3
Sales workers	8,250	865,948	6.9	10.0
Machinery operators and drivers	9,906	575,147	8.3	6.7
Labourers	28,854	890,635	24.2	10.3
Inadequately described	3,409	81,442	2.9	0.9
Total[(c)]	**119,152**	**8,631,817**	**100.0**	**100.0**

(a) Total excludes hours worked not stated.

(b) Total excludes sector not stated.

(c) Total excludes occupation not stated.

Source: ABS and AIHW analysis of 2006 Census data.

Time series analyses

Various data sources suggest different trends in employment status.

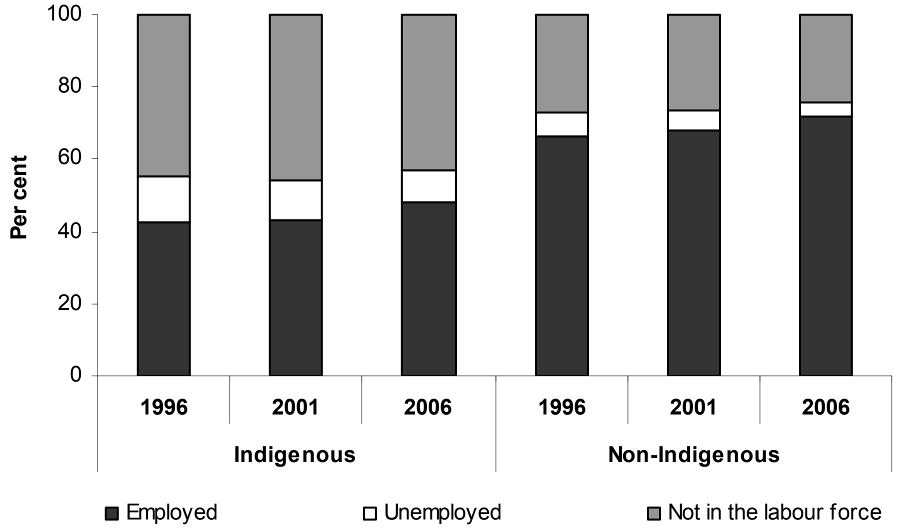
- Census data from 1996, 2001 and 2006 presented in Table 2.07.14 and Figure 2.07.6 suggest that there have been only slight changes in the labour force status of Indigenous Australians aged 15–64 years between 1996 and 2006. Over this period the employment rate for Indigenous Australians increased from 43% to 48% and the unemployment rate fell slightly from 13% to 9%.
- Similarly, data from the ABS Labour Force Survey over the 5-year period 2002–2006 also indicate that there has been only minor change in the labour force status of Indigenous Australians aged 15–64 years (Figure 2.07.7).
- However, data from the 1994 NATSIS and 2002 NATSISS indicate that, nationally, the labour force participation rate for Indigenous Australians aged 18–64 years increased from 57% in 1994 to 64% in 2002 and the unemployment rate fell from 30% to 20% in the same period (SCRGSP 2005).

Table 2.07.14: Labour force status of persons aged 15–64 years, by Indigenous status, 1996, 2001 and 2006

	Indigenous			Non-Indigenous		
	1996	**2001**	**2006**	**1996**	**2001**	**2006**
			Per cent			
Employed	42.5	43.2	47.9	66.2	68.0	71.7
Unemployed	12.5	10.8	8.9	6.6	5.3	3.8
Not in the labour force	45.0	45.9	43.2	27.2	26.7	24.5
Total[(a)]	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

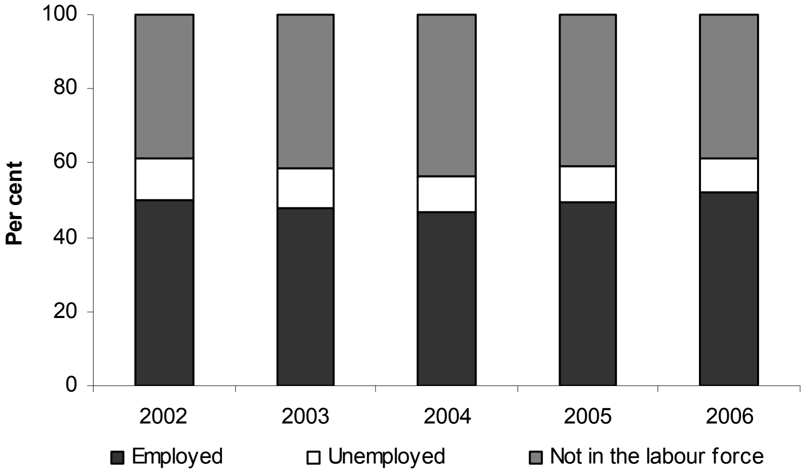
(a) Total excludes labour force status not stated.

Source: ABS and AIHW analysis of 1996, 2001 and 2006 Census data.



Source: ABS and AIHW analysis of 1996, 2001 and 2006 Census data.

Figure 2.07.6: Labour force status of persons aged 15–64 years, by Indigenous status, 1996, 2001 and 2006



Source: ABS 2007.

Figure 2.07.7: Labour force status of Indigenous persons aged 15–64 years, 2002, 2003, 2004, 2005 and 2006

Data quality issues

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example whether people are counted more than once, or are undercounted (ABS 1996).*

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

ABS Labour Force Survey

The ABS monthly Labour Force Survey (LFS) included a question on Indigenous status from April 2001. The reliability of estimates from the survey is affected by the relatively small size of the Indigenous population, the small number of Indigenous persons in the LFS sample, and particular collection difficulties in remote areas (ABS 2008). Indigenous estimates from the LFS have methodological and definitional differences from other sources such as the Census of Population and Housing. The differences in the methodologies used affect the comparability of the data.

Results from the survey on Indigenous Australians are published annually by the ABS in the Labour force characteristics of Aboriginal and Torres Strait Islander Australians, experimental estimates from the Labour Force Survey *publications (ABS 2008). The ABS considers the estimates in this publication experimental because of the experimental nature of the Indigenous population projections used in producing these estimates and the small sample of Indigenous people in the LFS.*

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2.08 Income

Equivalised gross household and individual income of Aboriginal and Torres Strait Islander people

Data sources

Data for this measure come from the 2006 Census of Population and Housing, the 2004–05 National Aboriginal and Torres Strait Islander Health Survey, and the 2002 National Aboriginal and Torres Strait Islander Social Survey.

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at 5-yearly intervals with 2006 the most recent, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done for statistics used in this measure.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Equivalised income

Equivalence scales are used to adjust the actual incomes of households in a way that enables the analysis of the relative economic wellbeing of people living in households of different size and composition. When household income is adjusted according to an equivalence scale, the equivalised income can be viewed as an indicator of the economic resources available to each individual in a household. For a lone-person household, it is equal to income received.

In this measure, a 'modified OECD' equivalence scale has been used, the scale widely accepted among Australian analysts of income distribution. This scale allocates 1.0 point for the first adult (aged 15 years or over) in a household; 0.5 for each additional adult; and 0.3 for each child. Equivalised household income is derived by dividing total household income by the sum of the equivalence points allocated to household members.

Equivalised gross household income quintiles are groupings of 20% of the total population of Australia when ranked in ascending order according to equivalised gross household income. The population used for this purpose includes all people living in private dwellings, including children and other persons over the age of 15 years.

Data analyses

Comparisons of NATSIHS, NATSISS and Census data

The NATSIHS, NATSISS and Census all collect information on household and individual income. Information on mean equivalised gross household income is available from the NATSISS and the Census. Information on equivalised gross household income quintiles is available from all three data sources. Information on individual equivalised household income is also available from all three data sources; however, individual income quintiles were unable to be constructed for the 2006 Census data because of difficulties in grouping the data into even quintile groups.

When comparing the **mean equivalised gross household income** of Indigenous persons aged 18 years and over from the 2002 NATSISS with data from the 2006 Census, the mean income is lower using estimates from the NATSISS ($394) than when using estimates from the Census ($512). This may be explained by the different time periods of the two surveys, because mean income is generally increasing with time.

When comparing **equivalised gross household income quintiles** for Indigenous Australians aged 18 years and over with a stated income from the 2004–05 NATSIHS, the 2002 NATSISS and the 2006 Census, the results are very similar. For example, the proportions of Indigenous persons in the lowest income quintile from the NATISHS, NATSISS and Census were 41%, 42% and 40% respectively, and the proportions of Indigenous persons in the highest income quintile for the three data sources were 6%, 6% and 8% respectively.

When comparing the proportion of Indigenous Australians aged 18 years and over **below the 20th and 50th percentiles for equivalised gross household income** from the three data sources, the estimates are slightly lower from the NATSIHS than from the NATSISS and the Census. The proportions of Indigenous Australians below the 20th percentile were 35%, 42% and 40% for the NATSIHS, NATSISS and Census respectively, and the proportions of Indigenous Australians below the 50th percentile were 64%, 77% and 72% for the three data sources respectively.

This measure presents data included in the 2006 edition of this report for persons aged 15 years and over (2004–05 NATSIHS data) and for persons aged 18 years and over (2002 NATSISS data) and new data from the 2006 Census for persons aged 18 years and over. Data from the NATSIHS and NATSISS are presented first followed by data from the 2006 Census.

NATSIHS/NATSISS data

Household income

Mean equivalised household income

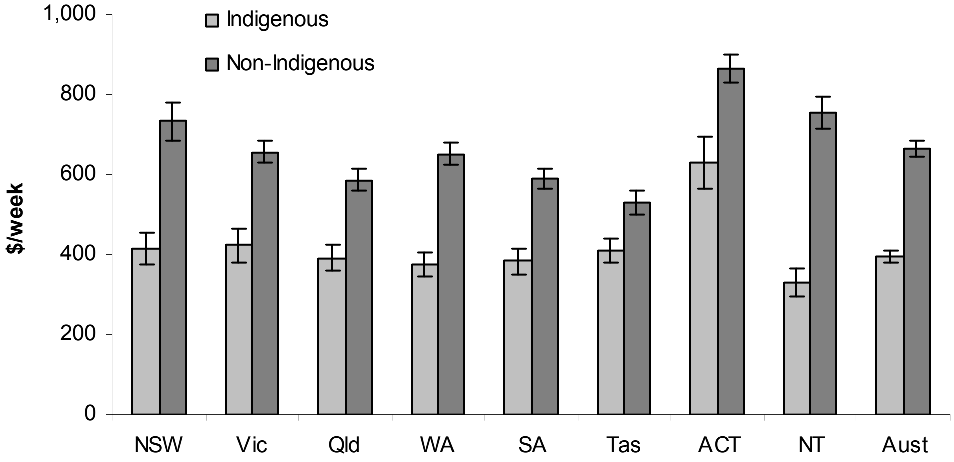
Data on the mean equivalised household income of Indigenous and non-Indigenous persons are available from the 2002 NATSISS and 2002 GSS.

- The 2002 NATSISS estimated that the mean equivalised gross household income was $394 per week for Indigenous persons aged 18 years and over compared with $665 per week for non-Indigenous persons (Table 2.08.1).
- The mean equivalised gross household income for Indigenous persons varied by state and territory, ranging from $329 in the Northern Territory to $631 in the Australian Capital Territory (Figure 2.08.1).
- There has been little change in the mean equivalised gross household income for Indigenous persons between 1994 and 2002. Nationally, the mean equivalised gross household income was $374 in 1994, increasing to $394 in 2002, but this difference was not statistically significant (Figure 2.08.2).
- There was little difference in the mean equivalised gross household income of Indigenous Australians by remoteness (Figure 2.08.3).

Table 2.08.1: Mean equivalised gross household income ($ per week), by Indigenous status and state/territory, persons aged 18 years and over, 2002

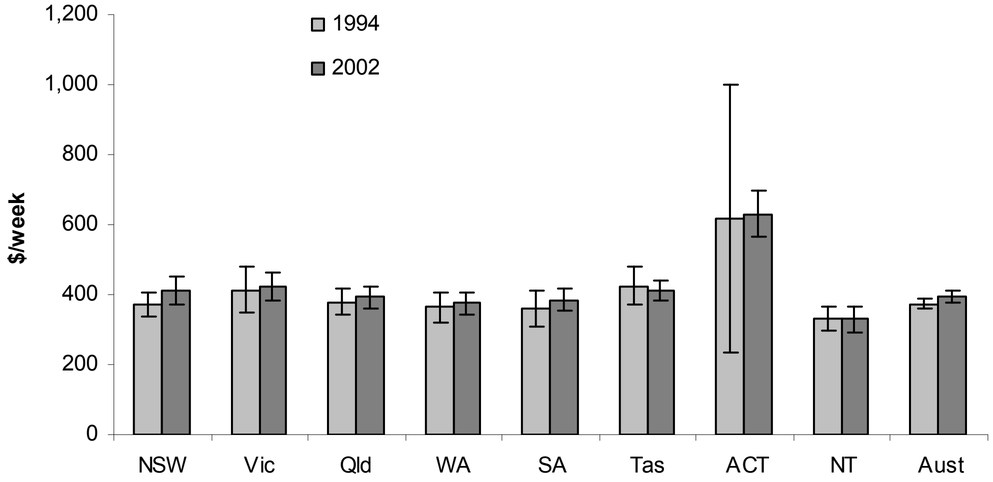
State/territory	Indigenous	Non-Indigenous
New South Wales	414	733
Victoria	423	657
Queensland	392	587
Western Australia	376	652
South Australia	384	590
Tasmania	411	531
Australian Capital Territory	631	865
Northern Territory	329	755
Australia	**394**	**665**

Source: SCRGSP 2005:



Source: SCRGSP 2005.

Figure 2.08.1: Mean gross weekly equivalised household income, by Indigenous status and state/territory, persons aged 18 years and over, 2002

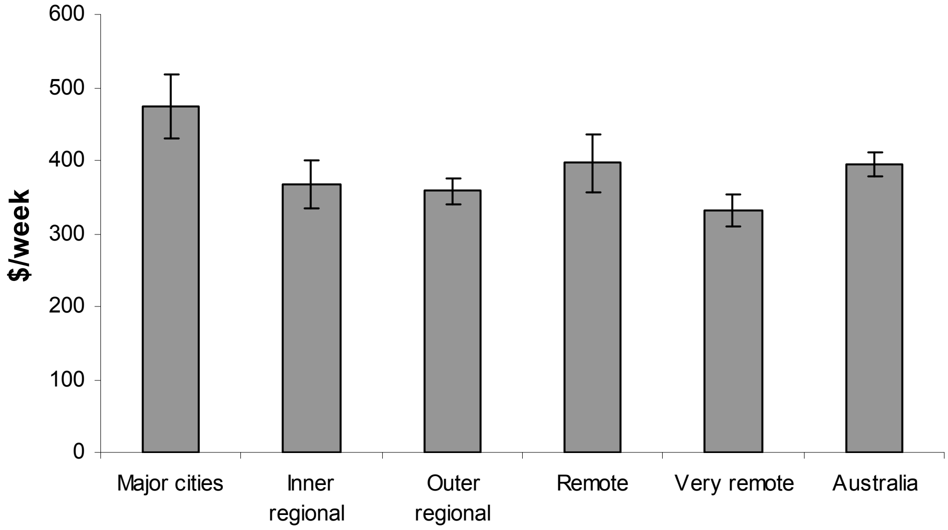


Notes

1. Adjusted for inflation using the Consumer Price Index for the June quarter 1994 and the December quarter 2002.
2. The ACT estimate for 1994 has a relative standard error greater than 25% and should be used with caution.

Source: SCRGSP 2005.

Figure 2.08.2: Mean gross weekly equivalised household income, Indigenous Australians aged 18 years and over, by state/territory, 1994 and 2002



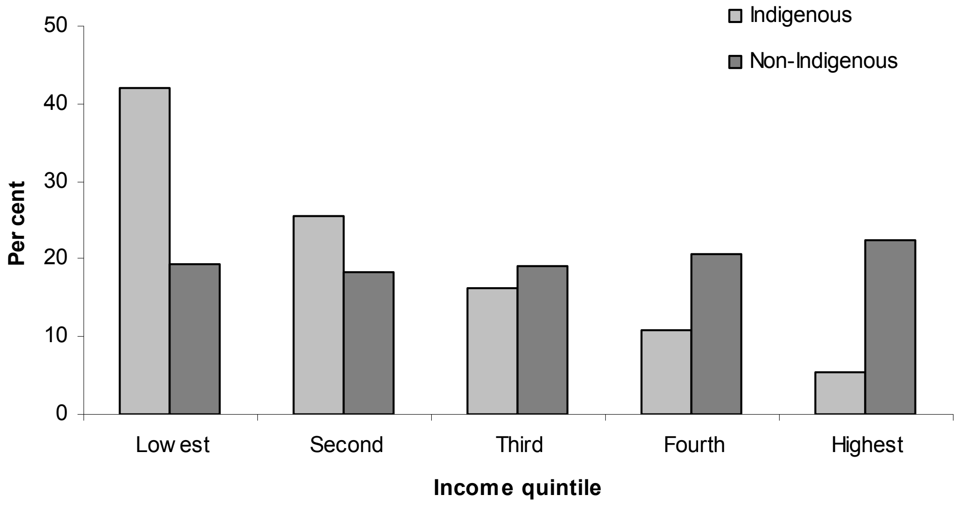
Source: SCRGSP 2005.

Figure 2.08.3: Mean gross weekly equivalised household income, Indigenous Australians aged 18 years and over, by remoteness, 2002

Equivalised household income quintiles/percentiles

Data presented below on equivalised household income quintiles and percentiles come from the 2004–05 NATSIHS.

- In 2004–05, of those who stated their household income, approximately 42% of Indigenous Australians aged 15 years and over were in the lowest (1st) quintile of equivalised gross weekly household income compared with 21% of non-Indigenous Australians. Only 6% of Indigenous Australians were in the highest quintile of equivalised gross weekly household income compared with 22% of non-Indigenous Australians (Table 2.08.2; Figure 2.08.4).
- Indigenous Australians were much more likely than non-Indigenous Australians to be in the lowest (1st) quintile of equivalised gross weekly household income (42% compared with 19%) and much less likely to be in the highest quintile (6% compared with 22%) (Table 2.08.3).
- Approximately 35% of Indigenous Australians aged 15 years and over were below the 20th percentile of household income and 64% were below the 50th percentile of household income (Table 2.08.3).



Note: Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2004–05 NHS are: lowest quintile less than $294; second quintile $295–$478; third quintile $479–$688; fourth quintile $689–$996; highest quintile $997 or more. These have been applied to both the Indigenous and non-Indigenous populations.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Figure 2.08.4: Proportion of Indigenous persons aged 15 years and over in equivalised gross weekly household income quintiles, by Indigenous status, 2004–05

Equivalised household income quintiles/percentiles by state/territory and remoteness

- The Northern Territory had the highest proportion of Indigenous Australians in the lowest quintile of equivalised gross weekly household income (57%) and Tasmania and the Australian Capital Territory had the highest proportion of Indigenous Australians in the highest income quintile (8%).
- In 2004–05, approximately 36% of Indigenous Australians aged 15 years and over living in Major Cities were in the lowest quintile of equivalised gross weekly household income compared with 49% of Indigenous Australians in Remote or Very Remote areas. Around 13% and 7% of Indigenous Australians in Major Cities were in the fourth and highest quintiles of income respectively compared with 6% and 4% of Indigenous Australians in Remote/Very Remote areas (Table 2.08.4).

Table 2.08.2: Number and proportion of persons aged 15 years and over in each equivalised gross weekly household income quintile,[(a)] by Indigenous status and state/territory, 2004–05

		Indigenous		Non-Indigenous	
	Income quintile	Number	Proportion (%)	Number	Proportion (%)
NSW	1st	28,523	39.6	847,839	19.5
	2nd	16,956	23.5	763,152	17.5
	3rd	12,425	17.2	767,401	17.6
	4th	9,507	13.2	884,691	20.3
	5th	4,658	6.5	1,085,435	25.0
	Total stated[(b)]	72,068	100.0	4,348,518	100.0
	Not known/not stated	12,500	17.3	869,513	20.0
	Total[(c)]	**84,568**	**100.0**	**5,218,031**	**100.0**
Vic	1st	6,252	40.2	645,370	20.5
	2nd	3,380	21.7	582,718	18.5
	3rd	3,355	21.6	628,366	20.0
	4th	1,559	10.0	628,289	20.0
	5th	1,019	6.5	660,939	21.0
	Total stated[(b)]	15,565	100.0	3,145,683	100.0
	Not known/not stated	2,957	19.0	803,475	25.5
	Total[(c)]	**18,522**	**100.0**	**3,949,158**	**100.0**
Qld	1st	25,114	36.7	477,089	19.2
	2nd	18,531	27.1	479,335	19.3
	3rd	13,438	19.7	503,228	20.2
	4th	7,233	10.6	525,798	21.1
	5th	4,045	5.9	504,226	20.3
	Total stated[(b)]	68,362	100.0	2,489,677	100.0
	Not known/not stated	10,860	15.9	456,147	18.3
	Total[(c)]	**79,222**	**100.0**	**2,945,824**	**100.0**
WA	1st	17,326	47.8	224,912	18.0
	2nd	9,995	27.6	239,672	19.2
	3rd	4,649	12.8	246,339	19.8
	4th	2,984	8.2	270,729	21.7
	5th	1,319	3.6	265,314	21.3
	Total stated[(b)]	36,273	100.0	1,246,966	100.0
	Not known/not stated	6,522	18.0	249,959	20.0
	Total[(c)]	**42,795**	**100.0**	**1,496,925**	**100.0**

(continued)

Table 2.08.2 (continued): Number and proportion of persons aged 15 years and over in each equivalised gross weekly household income quintile,[a] by Indigenous status and state/territory, 2004–05

		Indigenous		Non-Indigenous	
		Number	Proportion (%)	Number	Proportion (%)
SA	1st	5,978	46.0	203,637	20.7
	2nd	2,972	22.9	195,514	19.9
	3rd	1,509	11.6	190,926	19.4
	4th	1,695	13.0	203,545	20.7
	5th	847	6.5	189,083	19.2
	Total stated[b]	13,000	100.0	982,706	100.0
	Not known/not stated	3,582	27.6	222,656	22.7
	Total[c]	**16,582**	**100.0**	**1,205,362**	**100.0**
Tas/ACT	1st	4,466	34.7	93,430	16.6
	2nd	3,675	28.5	102,272	18.2
	3rd	2,354	18.3	103,332	18.4
	4th	1,416	11.0	118,309	21.1
	5th	962	7.5	144,601	25.7
	Total stated[b]	12,873	100.0	561,944	100.0
	Not known/not stated	982	7.6	57,541	10.2
	Total[c]	**13,856**	**100.0**	**619,484**	**100.0**
NT[d]	1st	16,422	56.7	6,488	n.p.
	2nd	7,660	26.5	7,507	n.p.
	3rd	2,217	7.7	26,260	n.p.
	4th	1,999	6.9	22,234	n.p.
	5th	640	2.2	22,545	n.p.
	Total stated[b]	28,937	100.0	85,034	n.p.
	Not known/not stated	8,749	30.2	12,558	n.p.
	Total[c]	**37,686**	**100.0**	**97,592**	**100.0**
Australia	1st	104,081	42.1	2,498,767	19.4
	2nd	63,169	25.6	2,370,171	18.4
	3rd	39,947	16.2	2,465,851	19.2
	4th	26,393	10.7	2,653,594	20.6
	5th	13,489	5.5	2,872,144	22.3
	Total stated[b]	247,079	100.0	12,860,527	100.0
	Not known/not stated	46,152	18.7	2,671,849	20.8
	Total[c]	**293,231**	**100.0**	**15,532,377**	**100.0**

(continued)

Table 2.08.2 (continued): Number and proportion of persons aged 15 years and over in each equivalised gross weekly household income quintile,[(a)] by Indigenous status and state/territory, 2004–05

n.p. Not available for publication.

(a) Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2004–05 NHS are: lowest quintile less than $294; second quintile $295–$478; third quintile $479–$688; fourth quintile $689–$996; highest quintile $997 or more. These have been applied to both the Indigenous and non-Indigenous populations.

(b) Total with household income stated shown as a proportion of the total.

(c) Excluding cases where the classification of income category is not applicable.

(d) Sample does not support non-Indigenous estimates for the Northern Territory.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.08.3: Proportion of Indigenous persons aged 15 years and over who were below the 20th and 50th percentiles of equivalised gross weekly household income quintiles, 2004–05

	Below 20th percentile	**Below 50th percentile**
New South Wales	34	60
Victoria	34	65
Queensland	32	65
Western Australia	40	70
South Australia	36	57
Tasmania/Australian Capital Territory	32	69
Northern Territory	44	68
Australia	**35**	**64**

Notes

1. Equivalised gross weekly household income is not available from the 2001 and 1995 NHS (Indigenous supplement).
2. Excludes those for whom income was unknown or not stated.

Source: AIHW analysis of 2004–05 NATSIHS.

Table 2.08.4: Proportion of persons aged 15 years and over in each gross weekly household income quintile[(a)], by Indigenous status and remoteness, 2004–05

	First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile	Total stated[(b)]	Not stated[(c)]	Total number
				Indigenous				
Major Cities	35.9	23.4	21.0	13.0	6.7	100.0	15.6	89,030
Inner Regional	41.6	24.3	16.4	10.0	7.8	100.0	11.9	58,355
Outer Regional	43.1	23.1	16.5	13.6	3.8	100.0	15.2	65,677
Remote or Very Remote	49.0	31.2	10.1	6.1	3.6	100.0	19.1	80,169
Total	**42.1**	**25.6**	**16.2**	**10.7**	**5.5**	**100.0**	**15.7**	**293,231**
				Non-Indigenous				
Major Cities	17.7	16.7	18.3	21.7	25.5	100.0	19.0	10,615,977
Inner Regional	21.4	22.6	21.9	18.5	15.6	100.0	14.1	3,090,996
Outer Regional	25.6	21.6	19.6	17.6	15.6	100.0	11.5	1,637,784
Remote or Very Remote[(d)]	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	14.9	187,620
Total	**19.4**	**18.4**	**19.2**	**20.6**	**22.3**	**100.0**	**17.2**	**15,532,377**

n.p. Not available for publication.

(a) Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2004–05 NHS are: lowest quintile less than $294; second quintile $295–$478; third quintile $479–$688; fourth quintile $689–$996; highest quintile $997 or more. These have been applied to both the Indigenous and non-Indigenous populations.

(b) Comprises persons living in households where household income was stated. Note that equivalised gross weekly household income quintiles are calculated as a proportion of households with stated household income.

(c) Total with household income not stated shown as a proportion of the total.

(d) Data for Very Remote areas of Australia were not collected in the 2004–05 National Health Survey.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Equivalised household income by summary health and population characteristics

The 2004–05 NATSIHS collected data on equivalised gross weekly household income quintiles and selected population characteristics.

- Indigenous Australians with fair/poor health status were more likely to be in the lowest quintile of household income than those with excellent/very good health status.
- Indigenous Australians whose highest year of schooling completed was Year 12 or who had a non-school qualification were more likely to be in the fourth or fifth quintiles of household income than those who reported Year 9 or below as their highest year of schooling or did not have a non-school qualification.
- Indigenous Australians who were employed or homeowners were also more likely to be in the fourth or fifth quintiles of household income than those who were unemployed or renters (Table 2.08.5).

Table 2.08.5: Equivalised gross weekly household income quintiles[(a)], by selected population characteristics, Indigenous persons aged 15 years and older, 2004–05

	Income quintiles						
	Lowest	Second	Third	Fourth	Fifth	*Fourth and fifth*	Total
Self-assessed health status							
Excellent/very good	30	21	16	11	5	*17*	100
Good	36	22	14	9	5	*13*	100
Fair/poor	45	21	9	5	3	*8*	100
Financial stress							
Unable to raise $2,000 within a week for something important	20	19	20	16	9	25	100
Location							
Remote	40	25	8	5	3	*8*	100
Non-remote	34	20	16	11	5	*16*	100
Highest year of school completed							
Year 12	17	21	21	16	10	*26*	100
Year 11	32	24	15	10	5	*15*	100
Year 10	35	23	14	8	4	*12*	100
Year 9 or below	48	19	8	5	2	*7*	100
Whether has non-school qualification							
Has a non-school qualification	24	20	18	14	8	*22*	100
Does not have a non-school qualification	41	22	12	7	3	*10*	100
Employment							
Employed	15	24	22	16	9	*24*	100
Unemployed	53	20	7	1	1	*1*	100
Not in the labour force	56	20	5	3	1	*4*	100
Housing							
Owner	14	18	22	18	11	*29*	100
Renter	44	23	11	6	2	*8*	100
Stressors in last 12 months[(b)]							
Serious illness or disability	33	21	13	11	7	*18*	100
Other stressors	37	23	13	7	4	*11*	100
Total experienced stressors	36	22	13	8	5	*14*	100
No stressors	31	20	17	11	5	*16*	100
All persons aged 15+ years	**35**	**22**	**14**	**9**	**5**	***14***	**100**
Total number aged 15+ yrs	104,081	63,169	39,947	26,393	13,489	*39,882*	293,231

(a) Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2004–05 NHS are: lowest quintile less than $294; second quintile $295–$478; third quintile $479–$688; fourth quintile $689–$996; highest quintile $997 or more. These have been applied to both the Indigenous and non-Indigenous populations.

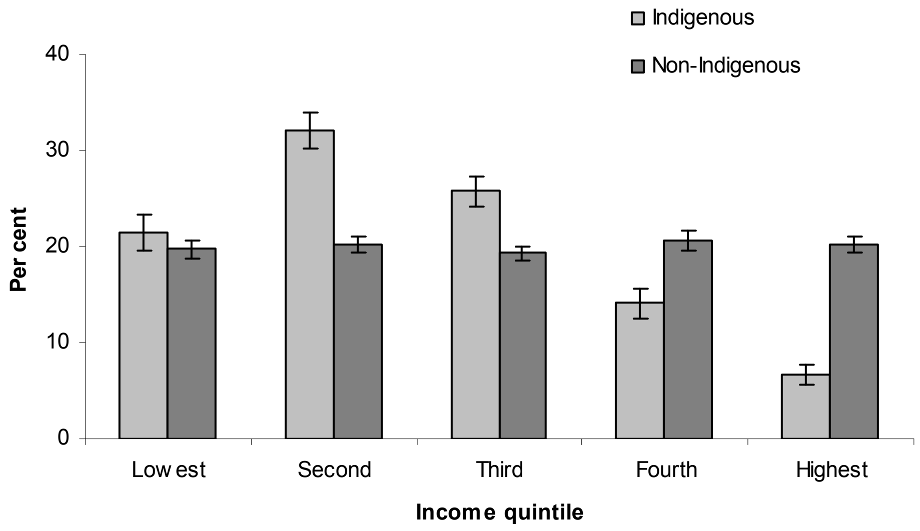
(b) Persons aged 18 years and over

Source: AIHW analysis of 2004–05 NATSIHS.

Individual income

As with the gross weekly equivalised household income, the individual income quintile boundaries are based on the total population as derived from the 2002 GSS and have been applied to both the Indigenous and non-Indigenous populations.

- In 2002, Indigenous people aged 18 years and over were more likely to be in the three lowest individual income quintiles, although the difference between Indigenous and non-Indigenous people for the lowest quintile was not statistically significant. Only 7% of Indigenous Australians aged 18 years and over were in the highest individual income quintile compared with 20% of non-Indigenous Australians (Figure 2.08.5).



Notes

1. Based on persons aged 18 years and over.
2. Individual income quintile boundaries for the total population were defined by the ABS 2002 GSS as follows: lowest quintile less than $178 per week; second quintile $178–$295 per week; third quintile $296–$549 per week; fourth quintile $550–$850 per week; highest quintile $851 or more per week. These have been applied to both the Indigenous and non-Indigenous populations.

Source: SCRGSP 2005.

Figure 2.08.5: Gross weekly individual income quintiles, by Indigenous status, 2002

Census data

Household income

Mean equivalised household income

Data on the mean equivalised household income of Indigenous and non-Indigenous persons aged 18 years and over are available from the 2006 Census of Population and Housing.

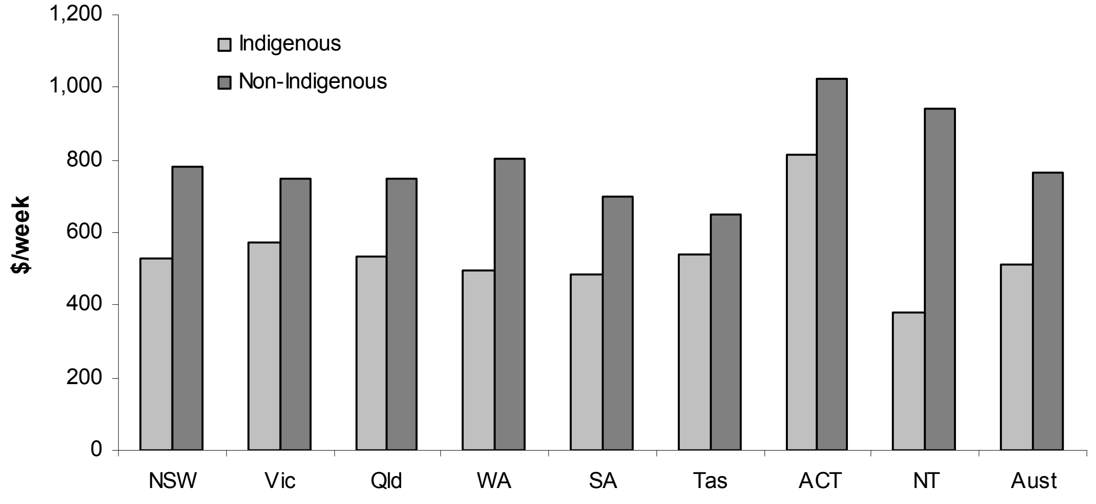
- The mean equivalised gross household income was $512 per week for Indigenous persons aged 18 years and over compared with $766 per week for non-Indigenous persons aged 18 years and over (Table 2.08.6).
- The mean equivalised gross household income for Indigenous males ($537) was slightly higher than for Indigenous females ($490) (ABS unpublished data).
- The mean equivalised gross household income for Indigenous persons varied by state and territory, ranging from $379 in the Northern Territory to $812 in the Australian Capital Territory (Table 2.08.6; Figure 2.08.6).
- The mean equivalised gross household income of Indigenous Australians decreased with remoteness, from $617 per week in Major Cities to $348 per week in Very Remote areas (Figure 2.08.7).

Table 2.08.6: Mean equivalised gross household income ($ per week), by Indigenous status and state/territory, persons aged 18 years and over[(a)], 2006

State/territory	Indigenous	Non-Indigenous
	$	$
New South Wales	530	782
Victoria	571	751
Queensland	534	751
Western Australia	496	804
South Australia	482	701
Tasmania	537	651
Australian Capital Territory	812	1,025
Northern Territory	379	940
Australia	512	766

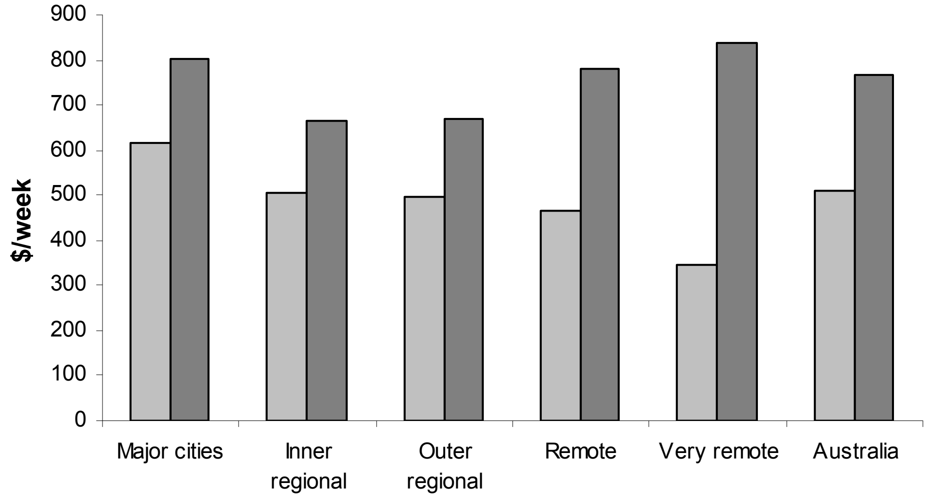
(a) Persons in households aged 18 years and over in which there were no temporarily absent adults and all incomes were fully stated

Source: ABS and AIHW analysis of 2006 Census data.



Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.08.6: Mean gross weekly equivalised household income, by Indigenous status and state/territory, persons aged 18 years and over, 2006

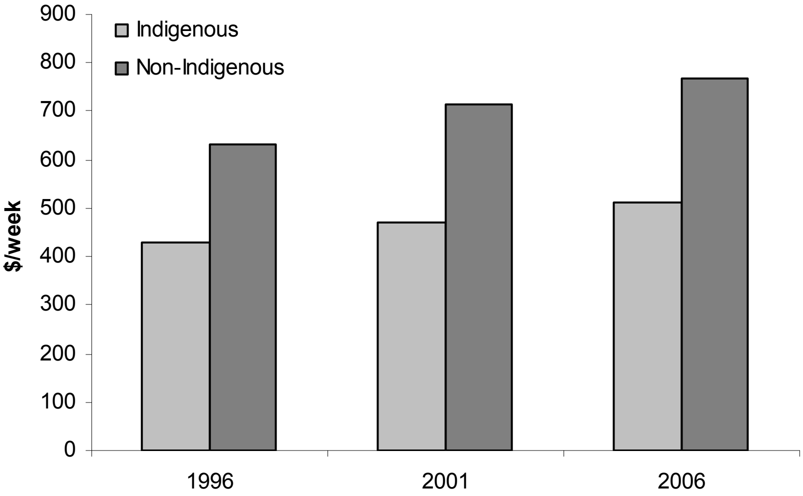


Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.08.7: Mean gross weekly equivalised household income, by Indigenous status and remoteness, persons aged 18 years and over, 2006

Time series

- There was an increase in the mean equivalised gross household income for Indigenous persons aged 18 years and over between 1996 and 2001 ($43; 10% increase) and between 2001 and 2006 ($41; 9% increase) (Figure 2.08.8).
- There was also an increase in the mean equivalised gross household income for non-Indigenous persons aged 18 years and over between 1996 and 2006 ($84; 13% increase) and between 2001 and 2006 ($52; 7% increase) (Figure 2.08.8).



Note: Mean weekly equivalised gross household income for 1996 and 2001 has been adjusted for inflation to approximate 2006 dollar value using CPI.

Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.08.8: Mean gross weekly equivalised household income, Indigenous Australians aged 18 years and over, 1996, 2001 and 2006

Equivalised household income quintiles/percentiles

Data presented below on equivalised household income quintiles and percentiles come from the 2006 Census of Population and Housing.

- In 2006, of those who stated their household income, approximately 40% of Indigenous Australians aged 18 years and over were in the lowest (1st) quintile of equivalised gross weekly household income compared with 20% of non-Indigenous Australians. Only 8% of Indigenous Australians were in the highest quintile of equivalised gross weekly household income compared with 22% of non-Indigenous Australians (Table 2.08.7; Figure 2.08.9).
- There was little difference in the proportion of Indigenous males and females in each equivalised household income quintile.

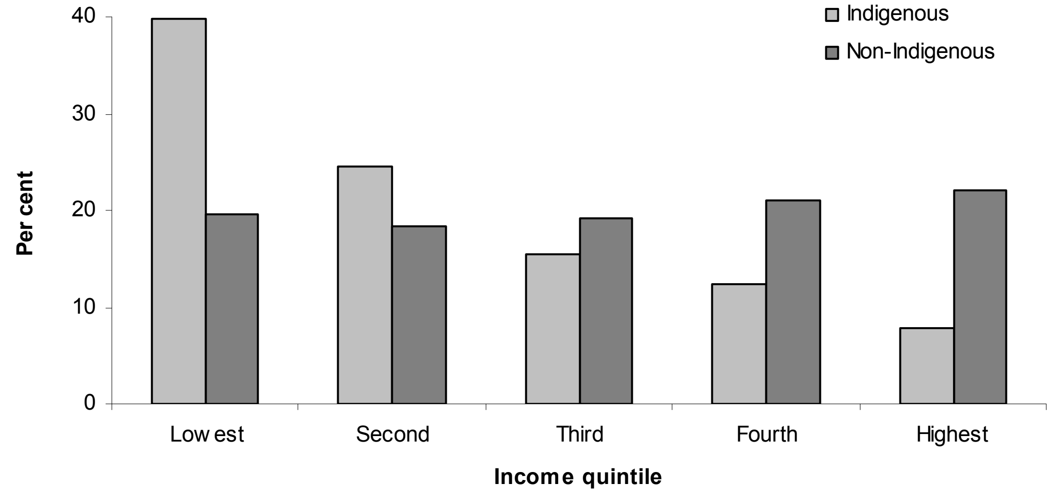
Table 2.08.7: Proportion of persons aged 18 years and over in each equivalised gross weekly household income quintile[(a)], by Indigenous status and sex, 2006

		Males		Females		Persons	
Income quintile		**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
1st (Lowest)	%	36.6	17.0	42.5	21.9	39.8	19.5
2nd	%	24.7	17.8	24.1	18.6	24.5	18.3
3rd	%	16.3	19.6	14.8	18.8	15.4	19.1
4th	%	13.2	21.3	11.1	19.5	12.4	21.0
5th (Highest)	%	9.3	24.2	7.4	21.3	7.9	22.0
Total stated[(b)]	**%**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Not known/not stated	%	16.8	10.2	18.1	10.9	17.5	10.6

(a) Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2006 Census are: lowest quintile less than $315; second quintile $315–$515; third quintile $516–$742; fourth quintile $743–$1,077; highest quintile $1,078 or more. These have been applied to both the Indigenous and non-Indigenous population.

(b) Total with household income stated shown as a proportion of the total.

Source: ABS and AIHW analysis of 2006 Census data.



Note: Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2006 Census are: lowest quintile less than $315; second quintile $315–$515; third quintile $516–$742; fourth quintile $743–$1,077; highest quintile $1,078 or more. These have been applied to both the Indigenous and non-Indigenous populations.

Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.08.9: Proportion of Indigenous persons aged 18 years and over in equivalised gross weekly household income quintiles, by Indigenous status, 2006

Equivalised household income quintiles by state/territory and remoteness

- In 2006, the Northern Territory had the highest proportion of Indigenous Australians aged 18 years and over in the lowest (1st) quintile of equivalised gross weekly household income (59%) and the Australian Capital Territory had the highest proportion of Indigenous Australians in the highest income quintile (29%) (Table 2.08.8).
- In every state and territory, a higher proportion Indigenous Australians were more likely to be in the lowest quintile of equivalised gross weekly household income and less likely to be in the highest quintile of equivalised gross weekly household income than non-Indigenous Australians.
- In 2006 approximately 40% of Indigenous persons aged 18 years and over were below the 20th percentile of equivalised gross weekly household income and 72% were below the 50th percentile of equivalised gross weekly household income (Table 2.08.9). The Northern Territory had the highest proportions of Indigenous Australians below the 20th and 50th percentiles (59% and 87%).
- There was little difference in the proportion of Indigenous persons age 18 years and over below the 20th and 50th percentiles of equivalised gross weekly household income in 1996, 2001 and 2006.
- In 2006, approximately 30% of Indigenous Australians aged 18 years and over living in Major Cities were in the lowest (1st) quintile of equivalised gross weekly household income compared with 60% of Indigenous Australians in Very Remote areas. Around 18% and 13% of Indigenous Australians in Major Cities were in the fourth and fifth quintiles of income respectively compared with 3% and 2% respectively of Indigenous Australians in Very Remote areas (Table 2.08.10).

Table 2.08.8: Number and proportion of persons aged 18 years and over[(a)] in each equivalised gross weekly household income quintile[(b)], by Indigenous status and state/territory, 2006

		Indigenous		Non-Indigenous	
	Income quintile	**Number**	**Proportion (%)**	**Number**	**Proportion (%)**
NSW	1st (lowest)	21,670	38.8	780,472	20.3
	2nd	12,927	23.1	688,440	17.9
	3rd	8,909	16.0	689,952	17.9
	4th	7,382	13.2	767,724	19.9
	5th (highest)	4,958	8.9	922,536	24.0
	Total stated	55,846	100.0	3,849,124	100.0
	Not known/not stated[(c)]	11,129	16.6	463,285	10.7
	Total	**66,975**	**100.0**	**4,312,409**	**100.0**
Vic	1st (lowest)	4,269	34.0	590,821	19.9
	2nd	2,786	22.2	554,241	18.7
	3rd	2,251	17.9	582,092	19.6
	4th	1,940	15.4	618,146	20.8
	5th (highest)	1,312	10.4	621,297	20.9
	Total stated	12,558	100.0	2,966,597	100.0
	Not known/not stated[(c)]	2,529	16.8	360,066	10.8
	Total	**15,087**	**100.0**	**3,326,663**	**100.0**
Qld	1st (lowest)	16,728	33.1	409,910	18.3
	2nd	13,783	27.3	423,681	18.9
	3rd	9,140	18.1	458,234	20.5
	4th	6,980	13.8	501,218	22.4
	5th (highest)	3,861	7.6	446,857	19.9
	Total stated	50,492	100.0	2,239,900	100.0
	Not known/not stated[(c)]	10,269	16.9	260,060	10.4
	Total	**60,761**	**100.0**	**2,499,960**	**100.0**
WA	1st (lowest)	9,668	44.4	190,335	17.2
	2nd	4,931	22.6	184,076	16.7
	3rd	3,056	14.0	209,508	19.0
	4th	2,417	11.1	248,530	22.5
	5th (highest)	1,720	7.9	272,373	24.7
	Total stated	21,792	100.0	1,104,822	100.0
	Not known/not stated[(c)]	5,813	21.1	138,006	11.1
	Total	**27,605**	**100.0**	**1,242,828**	**100.0**

(continued)

Table 2.08.8 (continued): Number and proportion of persons aged 18 years and over[(a)] in each equivalised gross weekly household income quintile[(b)], by Indigenous status and state/territory, 2006

		Indigenous		Non-Indigenous	
		Number	Proportion (%)	Number	Proportion (%)
SA	1st (lowest)	4,487	43.3	207,426	22.3
	2nd	2,510	24.2	186,106	20.0
	3rd	1,500	14.5	185,743	20.0
	4th	1,162	11.2	192,926	20.8
	5th (highest)	708	6.8	156,840	16.9
	Total stated	10,367	100.0	929,041	100.0
	Not known/not stated[(c)]	2,246	17.8	95,546	9.3
	Total	**12,613**	**100.0**	**1,024,587**	**100.0**
Tas	1st (lowest)	2,447	32.0	68,589	24.7
	2nd	2,062	27.0	63,070	22.7
	3rd	1,476	19.3	56,851	20.4
	4th	1,148	15.0	52,667	18.9
	5th (highest)	516	6.7	36,964	13.3
	Total stated	7,649	100.0	278,141	100.0
	Not known/not stated[(c)]	1,041	12.0	30,635	9.9
	Total	**8,690**	**100.0**	**308,776**	**100.0**
ACT	1st (lowest)	392	22.5	18,411	9.4
	2nd	212	12.2	20,059	10.2
	3rd	225	12.9	28,211	14.4
	4th	403	23.1	46,197	23.5
	5th (highest)	509	29.2	83,391	42.5
	Total stated	1,741	100.0	196,269	100.0
	Not known/not stated[(c)]	240	12.1	19,870	9.2
	Total	**1,981**	**100.0**	**216,139**	**100.0**
NT	1st (lowest)	12,957	58.6	6,848	9.4
	2nd	5,546	25.1	8,092	11.1
	3rd	1,502	6.8	12,635	17.4
	4th	1,224	5.5	19,868	27.3
	5th (highest)	885	4.0	25,205	34.7
	Total stated	22,114	100.0	72,648	100.0
	Not known/not stated[(c)]	5,421	19.7	9,449	11.5
	Total	**27,535**	**100.0**	**82,097**	**100.0**

(continued)

Table 2.08.8 (continued): Number and proportion of persons aged 18 years and over[(a)] in each equivalised gross weekly household income quintile[(b)], by Indigenous status and state/territory, 2006

		Indigenous		Non-Indigenous	
		Number	Proportion (%)	Number	Proportion (%)
Australia	1st (lowest)	72,662	39.8	2,272,946	19.5
	2nd	44,795	24.5	2,127,948	18.3
	3rd	28,087	15.4	2,223,472	19.1
	4th	22,672	12.4	2,447,521	21.0
	5th (highest)	14,469	7.9	2,565,718	22.0
	Total stated	182,685	100.0	11,637,605	100.0
	Not known/not stated[(c)]	38,695	17.5	1,377,098	10.6
	Total	**221,380**	**100.0**	**13,014,703**	**100.0**

(a) Persons in households aged 18 years and over in which there were no temporarily absent adults and all incomes were fully stated

(b) Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2006 Census are: lowest quintile less than $315; second quintile $315–$515; third quintile $516–$742; fourth quintile $743–$1,077; highest quintile $1,078 or more. These have been applied to both the Indigenous and non-Indigenous populations.

(c) Total with household income not stated shown as a proportion of the total.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.08.9: Percentage of Indigenous persons[(a)] age 18 years and over who were below the 20th and 50th percentiles of equivalised gross weekly household income quintiles, 1996, 2001 and 2006

	1996		2001		2006	
	Below 20th percentile	Below 50th percentile	Below 20th percentile	Below 50th percentile	Below 20th percentile	Below 50th percentile
	%	%	%	%	%	%
NSW	34.8	68.7	35.5	69.1	38.8	70.2
Vic	29.6	63.1	30.2	63.2	34.0	65.3
Qld	32.2	72.2	34.2	73.7	33.1	70.0
WA	37.7	76.6	42.9	78.2	44.4	74.4
SA	38.9	72.9	40.5	77.0	43.3	75.0
Tas	30.5	66.0	33.6	69.9	32.0	69.3
ACT	23.6	44.6	19.4	42.0	22.5	40.5
NT	46.9	87.4	57.5	89.3	58.6	87.2
Australia	**35.7**	**72.8**	**38.9**	**74.1**	**39.8**	**72.3**

(a) Persons in households aged 18 years and over in which there were no temporarily absent adults and all incomes were fully stated.

Source: ABS and AIHW analysis of 2006 Census data.

Table 2.08.10: Proportion of persons aged 18 years and over in each equivalised gross weekly household income quintile(b), by Indigenous status and remoteness, 2006

	First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile	Total stated(b)	Not stated(c)	Total number
				Indigenous				
Major Cities	29.9	20.9	18.4	17.8	13.0	100.0	16.2	**73,653**
Inner Regional	37.6	25.9	17.3	12.7	6.5	100.0	16.7	**45,939**
Outer Regional	39.6	25.4	16.7	12.0	6.3	100.0	19.5	**46,285**
Remote	46.1	25.0	12.5	9.5	6.8	100.0	22.3	**19,342**
Very Remote	59.6	28.7	6.7	3.0	2.0	100.0	15.9	**36,164**
Total	39.8	24.5	15.4	12.4	7.9	100.0	17.5	**221,383**
				Non-Indigenous				
Major Cities	17.8	16.8	18.6	21.8	25.0	100.0	10.6	**9,163,828**
Inner Regional	23.5	22.2	20.7	19.3	14.3	100.0	10.3	**2,502,197**
Outer Regional	24.6	21.7	19.8	18.9	15.0	100.0	11.0	**1,146,330**
Remote	20.4	17.3	17.9	20.2	24.1	100.0	12.1	**154,249**
Very Remote	17.8	15.9	17.0	21.2	28.2	100.0	12.7	**48,098**
Total	19.5	18.3	19.1	21.0	22.0	100.0	10.6	**13,014,702**

(a) Gross weekly equivalised cash income of household quintile boundaries for the total population as derived from the 2006 Census are: lowest quintile less than $315; second quintile $315–$515; third quintile $516–$742; fourth quintile $743–$1,077; highest quintile $1,078 or more. These have been applied to both the Indigenous and non-Indigenous populations.

(b) Comprises persons living in households where household income was stated. Note that equivalised gross weekly household income quintiles are calculated as a proportion of households with stated household income.

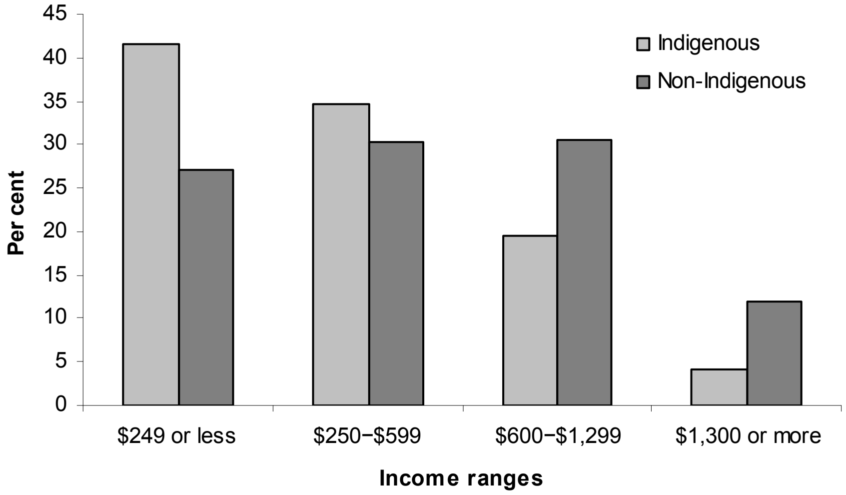
(c) Total with household income not stated shown as a proportion of the total.

Source: ABS and AIHW analysis of 2006 Census data.

Individual income

Individual income quintiles were unable to be constructed for the 2006 Census data because of the difficulty in grouping the data in even 20% groups owing to the proportions in each income range. Instead, a break-down into income ranges is presented in Figure 2.08.10.

- In 2006 the median gross weekly individual income for Indigenous Australians was $318 compared with $504 for non-Indigenous Australians.
- In 2006, Indigenous people aged 18 years and over were more likely than non-Indigenous people of the same age to have a gross weekly individual income of $249 or less (42% compared with 27%). Only 4% of Indigenous Australians aged 18 years and over had a gross weekly individual income of $1,300 or more compared with 12% of non-Indigenous Australians (Figure 2.08.10).



Note: The '$249 or less' category includes those with negative or nil income.

Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.08.10: Proportion of persons aged 18 years and over in gross weekly individual income ranges, by Indigenous status, 2006

Additional information

Financial stress

The 2004–05 NATSIHS collected information on whether Indigenous households could raise $2,000 within an emergency, and whether the household had days without money for basic living expenses in the 2 weeks before the survey and in the 12 months before the survey.

- In 2004–05, approximately 46% of Indigenous Australians aged 15 years and over were living in households which reported they could not raise $2,000 within a week in a time of crisis. Indigenous people in remote areas were more likely to report that they could not raise $2,000 within a week than Indigenous people in non-remote areas (67% compared with 41% respectively).
- Around one-quarter of Indigenous persons aged 15 years and over reported they had days without money for basic living expenses in the 2 weeks before the survey and 37%

reported having days without money for basic living expenses in the 12 months before the survey.

- Indigenous Australians who reported they were unable to raise $2,000 within a week for something important or had days without money for basic living expenses in the 2 weeks or 12 months before the survey were more likely to be in the lowest quintile of household income than in the higher income quintiles.

Data quality issues

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example, whether people are counted more than once or are undercounted (ABS 1996).*

For the 2002 National Aboriginal and Torres Strait Islander Social Survey it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in these surveys is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS) and the 2002 General Social Survey. The NHS was conducted in Major Cities and regional and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys and the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the 2004–05 NATSIHS and 2002 NATSISS publications (ABS 2006, 2004).

References

ABS (Australian Bureau of Statistics) 1996. Occasional paper. Population issues: Indigenous Australians. ABS cat. no. 4708.0. Canberra: ABS.

ABS 2004. National Aboriginal and Torres Strait Islander Social Survey 2002. ABS cat. no. 4714.0. Canberra: ABS.

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2005. Overcoming Indigenous disadvantage: key indicators 2005 report. Productivity Commission.

2.09 Housing tenure type

The tenure status of a person's occupancy of a residence: owning without a mortgage; owning with a mortgage; renting public housing; renting community housing; and renting privately

Data sources

Data presented for this measure come predominantly from 2006 Census data. The 2004–05 National Aboriginal and Torres Strait Islander Health Survey is used for the analysis of housing tenure type by selected health characteristics. The 2002 National Aboriginal and Torres Strait Islander Social Survey is used for the analysis of housing tenure type by selected population characteristics.

Census of Population and Housing

The Census of Population and Housing is conducted by the ABS at 5-yearly intervals with 2006 being the most recent, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done for the statistics used in this measure.

The Census includes data on housing tenure type that are published at a household level. For the purposes of data analysis, Indigenous households can be defined in two different ways:

- a household where the reference person or the spouse is Indigenous
- a household containing one or more Indigenous people.

For this measure, the second definition of an Indigenous household is used, that is, a household containing one or more Indigenous people. This is the definition used in the *National housing assistance data dictionary* (AIHW 2006).

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of

Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Data analyses

Comparisons between NATSIHS, NATSISS and Census

The NATSIHS, NATSISS and Census collect information on housing tenure. The 2006 Census collected comparable information on housing tenure for both Indigenous and non-Indigenous persons and households. The 2002 NATSISS collected information on Indigenous Australians using different rental tenure type categories from the 2002 General Social Survey and therefore Indigenous and non-Indigenous comparisons are not available for some tenure type categories from this survey. The 2004–05 NATSIHS did not include a question on landlord type and therefore does not provide data on rentals broken down by private, state/territory housing authority and community housing. The 2004–05 National Health Survey did not include any questions on housing tenure, so non-Indigenous comparisons are also not available from this survey.

When comparing data on tenure type for Indigenous persons aged 18 years and over from the 2002 NATSISS and 2006 Census, the estimates for most tenure type categories are very similar. For example, the proportion of home owners was 27% in the NATSISS and 31% in the Census; the proportion of renters was 70% and 68% in the two surveys respectively. The largest differences were for home purchasers (17% and 21% respectively), renters of community or cooperative housing (25% and 19% respectively) and other tenure type (4% and 1% respectively). The difference in the proportions for 'other tenure type' between the two surveys is likely to be due to differences in the tenure types included under this category.

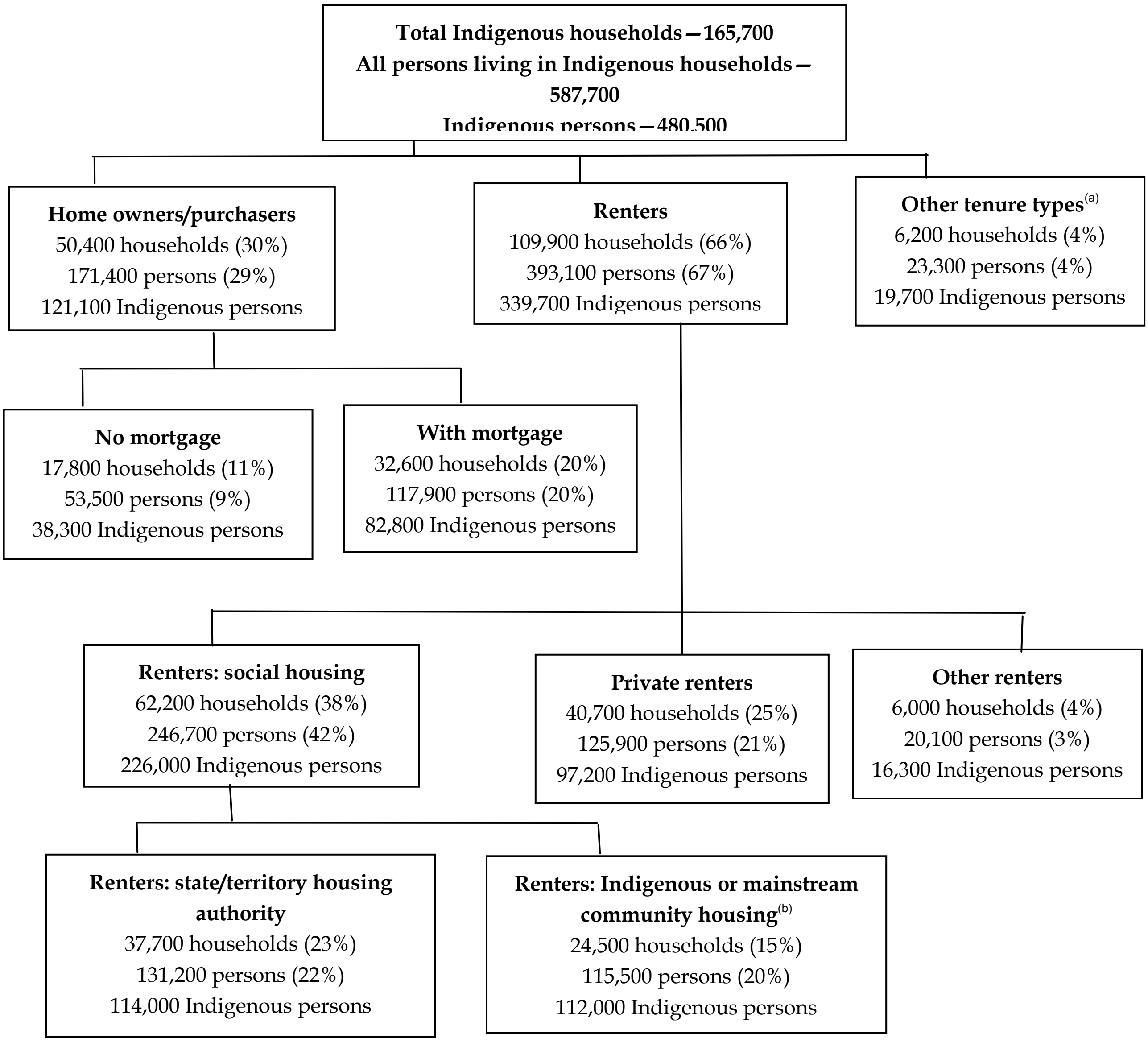
This measure presents data included in the 2006 edition of this report for persons aged 18 years and over (2002 NATSISS data) and for persons aged 15 years and over (2004–05 NATSIHS data) and new data from the 2006 Census for persons aged 18 years and over. Data from the NATSISS and NATSIHS are presented first followed by data from the 2006 Census.

NATSIHS and NATSISS data

Tenure type

- Among the estimated 165,700 Indigenous households in 2002, 31% were home owners or purchasers, 28% were private and other renters, and 38% were renters of some form of social housing (Figure 2.09.1). This can be compared with non-Indigenous households where 71% were home owners or purchasers, and 27% were renters (Table 2.09.1).
- Home ownership provides a relatively secure form of housing tenure but there are much lower rates of home ownership among Indigenous households. This is indicative of the lower socioeconomic status of many Indigenous households and the fact that many Indigenous people who live in remote areas live on Aboriginal and Torres Strait Islander community land where individual home ownership is generally not possible. In 2002, 11% of Indigenous households owned their homes outright and 20% were purchasing their homes.

- In 2002, the majority of Indigenous households lived in some form of rental accommodation (66%). The largest group were renters of social housing, which included those renting from state or territory housing authorities (that is, those in public housing and State Owned and Managed Indigenous Housing, SOMIH) (23%) and those renting from Indigenous community housing organisations and, to a lesser extent, from mainstream community housing organisations (15%). Around one-quarter of Indigenous households were in the private rental market.
- In 2002, approximately 27% of Indigenous persons aged 18 years and over were home owners and 70% were renters. Around one-quarter of Indigenous adults were renters of community or cooperative housing (24.5%). In comparison, 73% of non-Indigenous adults were home owners, and 24% were renters (Table 2.09.1).



(a) Includes households and persons in rent/buy schemes, living rent-free or under a life tenure scheme.

(b) Indigenous community housing managed by Indigenous community housing organisations and community housing within mainstream programs.

Source: 2002 NATSISS.

Figure 2.09.1: Indigenous households, by tenure type, 2002

Table 2.09.1: Households and persons, by tenure type and Indigenous status, 2002

	Persons[a]				Households			
	Indigenous		Non-Indigenous		Indigenous		Non-Indigenous	
	Number	%	Number	%	Number	%	Number	%
Home owners								
Owned without a mortgage	25,248	10.0*	5,527,272	38.5*	17,833	10.8*	2,903,901	39.2*
Being purchased	41,456	16.5*	4,971,283	34.6*	32,610	19.7*	2,315,629	31.3*
Total home owners	*66,703*	*26.5**	*10,498,555*	*73.1**	*50,443*	*30.5**	*5,219,530*	*70.5**
Renters								
Private and other landlord types[b]	61,943	23.9	n.p.	n.p.	46,780	28.2	n.p.	n.p.
State/territory housing authority	53,184	21.2	n.p.	n.p.	37,673	22.7	n.p.	n.p.
Community or cooperative housing	59, 904	24.5	n.p.	n.p.	24,493	14.8	n.p.	n.p.
Total renters[c]	*175,031*	*69.6**	*3,491,054*	*24.3**	*108,946*	*65.7**	*1,988,918*	*26.8**
Other[d]	9,664	3.9	364,181	2.6	6,163	3.7	200,129	2.7
Total[e]	**251,398**	**100.0**	**14,353,790**	**100.0**	**165,674**	**100.0**	**7,408,577**	**100.0**

* Represents statistically significant differences in the Indigenous and non-Indigenous comparisons.

(a) Persons aged 18 years and over.

(b) Includes real estate agents, unrelated persons, relatives, owner/managers of caravan parks, employers and other landlords.

(c) Includes landlord type not stated.

(d) Includes persons living under life tenure schemes, those living rent-free and participants in rent/buy schemes.

(e) Includes tenure type not stated.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Tenure type by age

- In 2002, the highest proportion of Indigenous home owners were aged 45–54 years (37%), whereas non-Indigenous Australians aged 55 years and over were most likely to be home owners (86%) (Table 2.09.2).
- Indigenous and non-Indigenous Australians aged 18–24 years were more likely to be renting in 2002 (80% and 40% respectively) than those in the older age groups.
- Across all age groups, Indigenous Australians were more likely to be renting and less likely to be home owners than non-Indigenous Australians in 2002.

Table 2.09.2: Proportion of Indigenous and non-Indigenous persons,[(a)] by tenure type and age group, 2002

	18–24		25–34		35–44		45–54		55+	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
Home owners										
Owned without a mortgage	*6	*25	*5	*13	*8	*19	*16	*41	*24	*74
Being purchased	*11	*32	*18	*46	*22	*53	*21	*39	*8	*12
Total home owners	**17*	**57*	**23*	**59*	**29*	**73*	**37*	**80*	**32*	**86*
Renters										
Private and other renter[(b)]	34	n.p.	27	n.p.	23	n.p.	18	n.p.	12	n.p.
Renter—state/territory housing authority	20	n.p.	20	n.p.	22	n.p.	20	n.p.	25	n.p.
Renter—Indigenous/mainstream community housing	26	n.p.	26	n.p.	23	n.p.	20	n.p.	26	n.p.
Subtotal renters[(c)]	**80*	**40*	**73*	**38*	**67*	*24*	**58*	**17*	**63*	**12*
Other[(d)]	2	3	4	2	4	3	6	3	5	2
Total[(e)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Persons aged 18 years and over.

(b) Includes real estate agents, unrelated persons, relatives, owner/managers of caravan parks, employers and other landlords.

(c) Includes landlord type not stated.

(d) Includes persons living under life tenure schemes, those living rent-free and participants in rent/buy schemes.

(e) Includes tenure type not stated.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Tenure type by state/territory

- In 2002, the Northern Territory had the lowest proportion of Indigenous households who were home owners (13%) and the highest proportion living in Indigenous or community housing (49%). For those living in Indigenous communities, the dwellings are owned by the community (Table 2.09.3).
- The proportion of Indigenous persons aged 18 years and over who were home owners/purchasers was highest in Tasmania (57%) and the Australian Capital Territory (41%).
- Western Australia (32%) and South Australia (27%) had a relatively high proportion of households renting from the state housing authority, that is, those in public housing and SOMIH. Western Australia also had a relatively high proportion of households in the 'other' category, which includes those living rent-free (6%).

Table 2.09.3: Proportion of households and persons, by tenure type, Indigenous status and state/territory, 2002

	NSW		Vic		Qld		WA		SA		Tas		NT		ACT	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
								Persons(a)								
Owned without a mortgage	*14	*39	*12	*41	*10	*35	*6(b)	*34	*8	*40	*24	*42	*3(b)	*15	*10	*36
Being purchased	*19	*33	*23	*35	*17	*33	*13	*41	*19	*34	33	34	*5(b)	*38	32	39
Total home owners	*32	*73	*35	*77	*27	*68	*19	*74	*26	*74	*57	*77	*8	*52	*41	*75
Private and other renter*(c)*	30	n.p.	30	n.p.	28	n.p.	22	n.p.	18	n.p.	20	n.p.	7(b)	n.p.	29	n.p.
Renter—state/territory housing authority	21	n.p.	22	n.p.	20	n.p.	31	n.p.	26	n.p.	17	n.p.	10	n.p.	27	n.p.
Renter—Indigenous/ mainstream community housing	12	n.p.	10	n.p.	23	n.p.	24	n.p.	27	n.p.	3(d)	n.p.	68	n.p.	2(d)	n.p.
Total renters(e)	*63	*25	*62	*21	*71	*30	*76	*22	*72	*24	*39	*21	*86	*44	*58	*24
Other(f)	4(b)	2	3(b)	3	2(b)	2	5	4	2(b)	2	4(b)	2	7(b)	4	1(d)	1(b)
Total(g)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

(continued)

Table 2.09.3 (continued): Proportion of households and persons, by tenure type, Indigenous status and state /territory, 2002

	NSW		Vic		Qld		WA		SA		Tas		NT		ACT	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
									Households							
Owned without a mortgage	*13	*40	*12	*42	*10	*36	*7(b)	*34	*8	*40	*23	*42	*5(b)	*14	*9	*35
Being purchased	*19	*29	*24	*33	*20	*29	*17	*37	*21	*30	33	32	*8(b)	*36	31	36
Total home owners	*32	*70	*36	*75	*30	*66	*24	*71	*29	*71	*55	*73	*13(b)	*49	*39	*72
Private and other renter(c)	32	n.p.	30	n.p.	31	n.p.	25	n.p.	22	n.p.	21	n.p.	15(b)	n.p.	30	n.p.
Renter—state/territory housing authority	22	n.p.	21	n.p.	20	n.p.	32	n.p.	27	n.p.	18	n.p.	18	n.p.	29	n.p.
Renter—Indigenous/ mainstream community housing	9	n.p.	9	n.p.	16	n.p.	14	n.p.	20	n.p.	3(b)	n.p.	49	n.p.	1(d)	n.p.
Total renters(e)	*64	*28	*60	*22	*68	*32	*70	*26	*69	*27	*41	*24	*81	*46	*60	*27
Other(f)	4(b)	3	4(b)	3	2(b)	2	6	4	2(b)	3	4(b)	2	6(b)	5	1(d)	1
Total(g)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Persons aged 18 years and over.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Includes real estate agents, unrelated persons, relatives, owner/managers of caravan parks, employers and other landlords.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(e) Includes landlord type not stated.

(f) Includes persons living under life tenure schemes, those living rent-free and participants in rent/buy schemes.

(g) Includes tenure type not stated.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Tenure type by remoteness

- In 2002, a total of 29,200 Indigenous households lived in remote areas of Australia and 136,500 lived in non-remote areas. Tenure type varied by remoteness, reflecting the availability of different housing options for Indigenous people and their lower socioeconomic status (Table 2.09.4).
- Among Indigenous households living in remote areas of Australia, half (50%) were renters of Indigenous or community housing, 17% were renters of state or territory housing and 14% were home owners.
- In comparison, among Indigenous households in non-remote areas, the highest proportion were home owners (34%) followed by private or other renters (32%) and renters of state and territory housing (24%).

Table 2.09.4: Indigenous households and persons, by tenure type and remoteness, 2002

	Persons[a]		Households	
Tenure type	**Remote**	**Non-remote**	**Remote**	**Non-remote**
		Per cent		
Home owners				
Owned without a mortgage	3.8	12.0	5.9	11.8
Being purchased	4.8	21.3	7.7	22.2
Total home owners	*8.6*	*33.3*	*13.6*	*34.0*
Renters				
Private and other landlord types	8.5	28.9	12.3	31.6
State/territory housing authority	13.2	25.4	17.1	24.0
Community or cooperative housing	63.9	9.3	50.0	7.3
Total renters	*85.6*	*63.7*	*79.4*	*62.9*
Other[b]	5.8	3.0	7.0	3.0
Total[c]	**100.0**	**100.0**	**100.0**	**100.0**

(a) Persons aged 15 years and over.

(b) Includes other, life tenure, rent/buy/shared equity scheme.

(c) Includes tenure type not stated.

Source: ABS and AIHW analysis of 2002 NATSISS.

Time series

- Between 1994 and 2002, there was an increase in the proportion of Indigenous households and persons aged 18 years and over who were home owners. Over the same period, there was an increase in the proportion of households and persons who were private or other renters, a decline in the proportion of renters of state/territory housing, and an increase in those renting community or cooperative housing (Table 2.09.5).

Table 2.09.5: Indigenous households and persons, by tenure type, 1994 and 2002

	Persons[(a)]				Households			
	1994		2002		1994		2002	
	Number	%	Number	%	Number	%	Number	%
Home owners								
Owned without a mortgage	20,837	10.9	25,248	10.0	13,831	12.7	17,833	10.8
Being purchased	20,195	10.6	41,456	16.5	13,881	12.8	32,610	19.7
Total home owners	*41,032*	*21.5*	*66,703*	*26.5*	*27,712*	*25.5*	*50,443*	*30.5*
Renters								
Private and other landlord types[(b)]	40,346	21.1	60,842	24.2	24,952	23.0	46,780	28.2
State/territory housing authority	63,583	33.3	53,184	21.2	37,796	34.8	37,673	22.7
Community or cooperative housing	31,559	16.5	60,788	24.2	11,900	11.0	24,493	14.8
Total renters[(c)]	*136,384*	*71.5*	*175,031*	*69.6*	*75,029*	*69.1*	*108,946*	*65.7*
Other[(d)]	10,016	5.2	9,664	3.9	4,210	3.9	6,163	3.7
Total[(e)]	**190,843**	**100.0**	**251,398**	**100.0**	**108,579**	**100.0**	**165,674**	**100.0**

(a) Persons aged 18 years and over.

(b) Includes real estate agents, unrelated persons, relatives, owner/managers of caravan parks, employers and other landlords.

(c) Includes landlord type not stated.

(d) Includes persons living under life tenure schemes, those living rent-free and participants in rent/buy schemes.

(e) Includes tenure type not stated.

Source: ABS and AIHW analysis of 1994 National Aboriginal and Torres Strait Islander Survey and 2002 NATSISS.

Tenure type by selected health and population characteristics

- In 2004–05, a higher proportion of Indigenous Australians with reported fair/poor health status were renters than Indigenous Australians with excellent/very good health status (79% compared with 67%). A lower proportion of Indigenous Australians with no long-term health conditions were home owners than Indigenous Australians with one or more long-term health conditions (Table 2.09.6).
- In 2002, a higher proportion of Indigenous Australians who were renters than home owners or purchasers spoke a language other than English, were in the lowest (1st) quintile of household income, were unable to raise $2,000 within a week for something important, were unemployed, had housing problems (that is, structural problems, repairs or maintenance) and had moved in the last 12 months (Table 2.09.7).

Table 2.09.6: Summary health characteristics and housing tenure, by Indigenous status: 2004–05(a)

	Self-assessed health status						Number of long-term health conditions														
	Excellent/very good /good			Fair/poor			0			1			2			3+			All persons		
	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio
	%	%		%	%		%	%		%	%		%	%		%	%		%	%	
Owners without a mortgage	12	30	0.4*	8	27	0.3*	6(a)	19	0.3*	11(b)	25	0.4*	8	27	0.3*	10	25	0.4*	10	26	0.4*
Owner with a mortgage	19	37	0.5*	11	26	0.4*	13(b)	42	0.3*	14	41	0.3*	19	41	0.5*	16	37	0.4*	16	39	0.4*
Subtotal owners	*30*	*68*	*0.4**	*19*	*53*	*0.4**	*19(b)*	*61*	*0.3**	*24*	*67*	*0.4**	*28*	*68*	*0.4**	*27*	*63*	*0.4**	*26*	*65*	*0.4**
Renter	67	22	3.0*	79	33	2.4*	79	27	2.9*	73	24	3.1*	69	23	3.0*	70	27	2.6*	70	24	2.9*
Boarder	—(a)	4	0.1*	—(a)	7	0.1*	— (a)	4	0.1*	n.p.	4	np	n.p.	4(b)	n.p.	— (b)	4	0.1*	—	4(b)	0.1*
Other tenure type (c)	2(b)	6	0.4*	2(b)	7	0.2*	2(a)	8	0.2*	2(b)	6	0.4*	2(b)	6(b)	0.4*	2b(b)	7	0.4*	2	6	0.4*
Total(d)	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Includes persons living under life tenure schemes, those living rent-free and participants in rent/buy schemes.

(d) Includes tenure type not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.09.7: Tenure type by selected population characteristics, persons aged 18 years and over, by Indigenous status, 2002

	Home owner/purchaser		Renter		Total[(a)]	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
			Per cent			
Main language spoken at home						
English	*98	*84	81	84	86	84
Language other than English	*2[(b)]	*16	19	16	*14	*16
Household income						
1st quintile	17	16	*42	*24	*35	*18
5th quintile	*13	*23	*2	*17	*5	*21
Index of disparity						
1st quintile (lowest)	*29	*15	*53	*29	*46	*19
5th quintile (highest)	*5[(b)]	*25	*3[(b)]	*16	*3	*23
Financial stress						
Unable to raise $2,000 within a week for something important	*21	*8	*67	*30	*54	*14
Employment[(c)]						
Employed CDEP	3[(b)]	. .	16	. .	13	. .
Employed non-CDEP	64	. .	26	. .	38	. .
Total employed	*68	*77	*42	*66	*50	*74
Unemployed	*6	*3	*14	*8	*11	*4
Subtotal in labour force	*74*	*81*	**56*	**75*	**62*	**79*
Not in labour force	*26	*19	*44	*25	*38	*21
Housing						
Dwelling has major structural problems	23	. .	46	. .	39	. .
Repairs and maintenance carried out in last 12 months	69	. .	60	. .	62	. .
Dwelling requires additional bedroom(s)	10[(b)]	. .	31	. .	25	. .
Mobility		. .		. .		. .
Moved dwellings in last 12 months	19	. .	35	. .	31	. .
Total	**100**	**100**	**100**	**100**	**100**	**100**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes persons living under life tenure schemes, those living rent-free and participants in rent/buy schemes.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

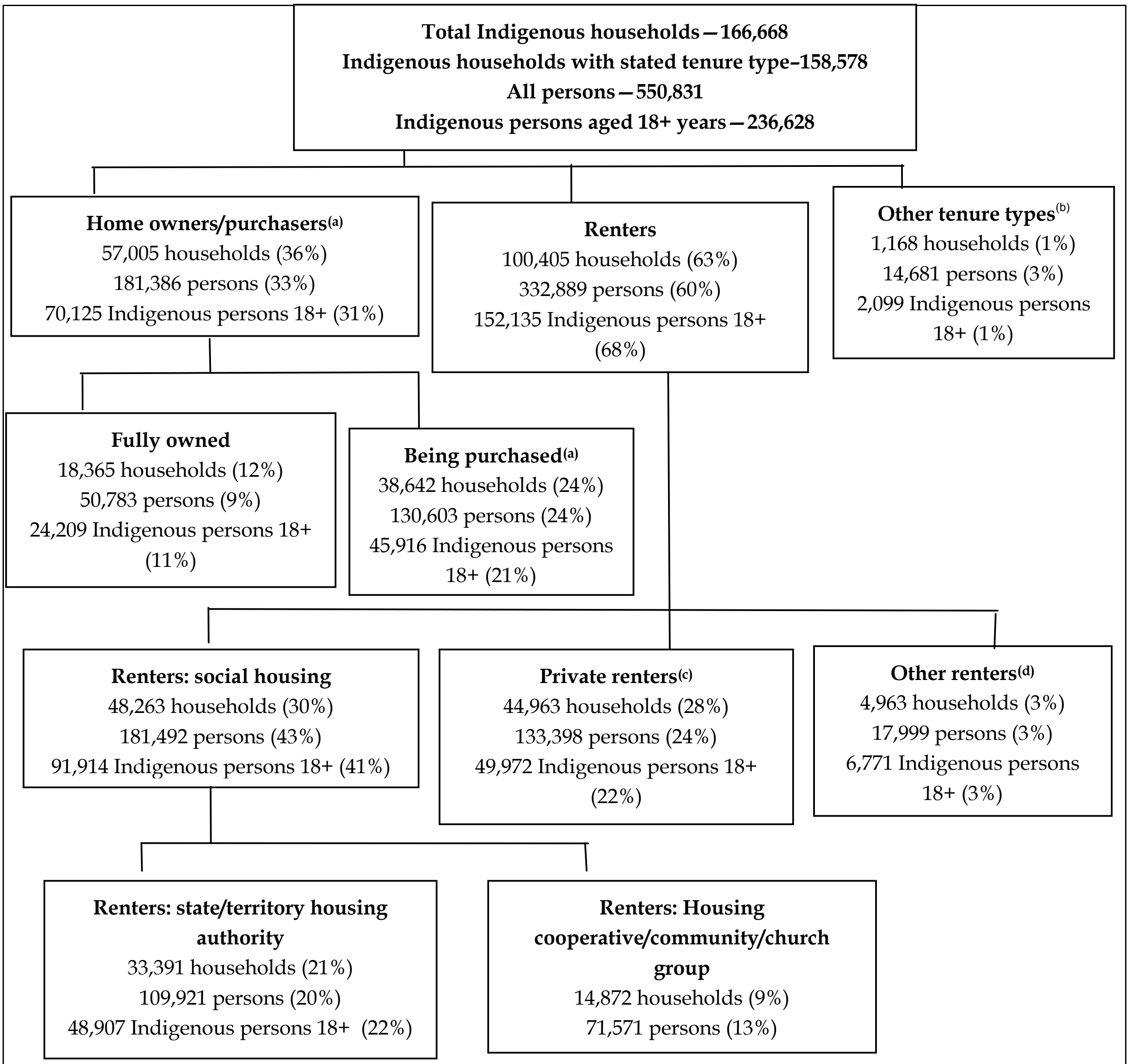
(c) Persons aged 15–64 years.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Census data

Tenure type

- In 2006 there were 166,668 Indigenous households with 550,831 total persons. There were 411,334 total Indigenous persons and 236,682 Indigenous persons aged 18 years and over living in Indigenous households.
- Among the 158,578 Indigenous households where tenure type was stated in 2006, 36% were home owners or purchasers, 31.5% were private and other renters, and 30% were renters of some form of social housing (Figure 2.09.2). This can be compared with non-Indigenous households where 71% were home owners or purchasers, and 28% were renters (Table 2.09.8).
- Home ownership provides a relatively secure form of housing tenure but there are much lower rates of home ownership among Indigenous households. This is indicative of the lower socioeconomic status of many Indigenous households and the fact that many Indigenous households live in remote areas on Indigenous land where individual home ownership is generally not possible. In 2006, 12% of Indigenous households owned their homes outright and 24% were purchasing their homes.
- In 2006, the majority of Indigenous households lived in some form of rental accommodation (63%). The largest group were renters of social housing, which included those renting from state or territory housing authorities (that is, those in public housing and SOMIH (21%) and those renting from housing cooperatives, communities or church groups (9%). Around 28% of Indigenous households were in the private rental market.
- In 2006, approximately 31% of Indigenous persons aged 18 years and over were home owners and 68% were renters. Around 19% of Indigenous adults were renters of housing cooperative, community or church group housing. In comparison, 74% of non-Indigenous adults were home owners, and 26% were renters (Table 2.09.8).



(a) Includes households and persons in rent/buy schemes.

(b) Includes households and persons under a life tenure scheme.

(c) Includes households and persons renting from real estate agents, unrelated persons and relatives.

(d) Includes households and persons renting through a residential park (includes caravan parks and marinas), employer—government (includes Defence Housing Authority) and employer—other (private).

Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.09.2: Indigenous households and persons, by tenure type, 2006

Table 2.09.8: Households and persons, by tenure type and Indigenous status, 2006

	Persons[a]				Households			
	Indigenous		Non-Indigenous		Indigenous[b]		Non-Indigenous	
	Number	%	Number	%	Number	%	Number	%
Home owners								
Fully owned	24,209	10.8	4,708,619	35.7	18,365	11.6	2,412,368	35.6
Being purchased	45,916	20.5	4,990,162	37.8	38,642	24.4	2,397,477	35.4
Total home owners	*70,125*	31.3	*9,698,781*	73.5	*57,005*	35.9	*4,809,842*	71.0
Renters								
State or territory housing authority	48,907	21.8	422,469	3.2	33,391	21.1	271,024	4.0
Housing cooperative/ community/church group	43,007	19.2	52,117	0.4	14,872	9.4	35,282	0.5
Private[c]	49,972	22.3	2,641,717	20.0	44,963	28.4	1,453,235	21.4
Other[d]	6,771	3.0	182,002	1.4	4,963	3.1	94,474	1.4
Total renters[e]	*152,135*	67.8	*3,394,685*	25.7	*100,405*	63.3	*1,910,044*	28.2
Other tenure types[f]	2,099	0.9	98,090	0.7	1,168	0.7	58,914	0.9
Total stated	**224,359**	**100.0**	**13,191,556**	**100.0**	**158,578**	**100.0**	**6,778,800**	**100.0**
Tenure type not stated	12,269	5.2	304,791	2.3	8,090	4.9	198,624	2.8
Total[g]	**236,628**	**100.0**	**13,496,347**	**100.0**	**166,668**	**100.0**	**6,977,424**	**100.0**

(a) Persons aged 18 years and over.

(b) A household with Indigenous person(s) is any household that had at least one person of any age as a resident at the time of the Census who identified as having Aboriginal and/or Torres Strait Islander origins.

(c) Includes dwellings being rented from a parent/other relative or other person.

(d) Includes dwellings being rented through a residential park (includes caravan parks and marinas), employer—government (includes Defence Housing Authority), employer—other employer (private), and not stated.

(e) Total includes rental type status not stated.

(f) Includes dwellings being purchased under a rent/buy scheme, being occupied rent-free, being occupied under a life tenure scheme, other tenure type not further defined.

(g) Includes not stated.

Source: ABS and AIHW analysis of 2006 Census data.

Tenure type by age

- Indigenous and non-Indigenous Australians aged 55 years and over were most likely to be home owners in 2006 (41% and 84% respectively) than those in the other age groups (Table 2.09.9).
- In 2006, the highest proportion of Indigenous renters were aged 18–24 years (74%), and the highest proportion of non-Indigenous renters were aged 25–34 years (41%).
- Across all age groups Indigenous Australians were more likely to be renting and less likely to be home owners than non-Indigenous Australians in 2006.

Table 2.09.9: Proportion of Indigenous and non-Indigenous persons[(a)], by tenure type and age group, 2006

	18–24		25–34		35–44		45–54		55+		Total	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
							Per cent					
Home owners												
Fully owned	7.2	21.9	5.1	12.8	7.2	17.2	13.4	33.0	28.3	67.6	10.8	35.7
Being purchased	17.9	36.9	20.0	45.7	25.1	55.7	24.7	47.2	13.0	16.6	20.5	37.8
Total home owners	25.1	58.8	25.1	58.5	32.3	72.9	38.2	80.2	41.3	84.1	31.3	73.5
Renters												
State or territory housing authority	20.9	3.2	21.4	2.4	22.2	2.9	21.6	3.2	23.5	3.9	21.8	3.2
Housing cooperative/ community/ church group	19.8	0.4	20.5	0.3	19.0	0.3	17.4	0.3	18.2	0.6	19.2	0.4
Private[(b)]	28.8	34.7	27.4	35.4	20.9	21.2	17.3	14.1	11.6	8.3	22.3	20.0
Other[(c)]	3.1	1.8	3.2	2.1	3.2	1.6	2.9	1.2	2.2	0.8	3.0	1.4
Total renters[(d)]	74.1	40.8	74.0	41.0	66.7	26.6	60.8	19.3	57.4	14.4	67.8	25.7
Other tenure types[(e)]	0.7	0.4	0.9	0.4	1.0	0.4	1.0	0.4	1.2	1.4	0.9	0.7
Total stated	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Tenure type not stated	4.7	2.1	4.9	1.7	5.0	1.6	5.2	1.6	6.7	3.4	5.2	2.3
Total number[(f)]	**51,155**	**1,637,271**	**57,824**	**2,393,620**	**54,156**	**2,670,759**	**38,508**	**2,527,839**	**34,987**	**4,266,856**	**236,630**	**13,496,345**

(a) Persons aged 18 years and over.

(b) Includes dwellings being rented from a real estate agent, parent/other relative or other person.

(c) Includes dwellings being rented through a residential park (includes caravan parks and marinas), employer—government (includes Defence Housing Authority), employer—other employer (private), and not stated.

(d) Total includes rental type status not stated.

(e) Includes being purchased under a rent/buy scheme, being occupied rent-free, being occupied under a life tenure scheme, other tenure type not further defined.

(f) Includes tenure type not stated.

Source: ABS and AIHW analysis of 2006 Census data.

Tenure type by state/territory

- In 2006, the proportion of Indigenous persons aged 18 years and over who were home owners/purchasers was highest in Tasmania (57%) and the Australian Capital Territory (43%) (Table 2.09.10).
- In 2006, the Northern Territory had the lowest proportion of Indigenous households who were home owners (20%) and the highest proportion living in housing cooperative, community or church group housing (46%) (Table 2.09.10).
- South Australia (31%) and Western Australia (28%) had a relatively high proportion of households renting from the state housing authority, that is, those in public housing and SOMIH.

Table 2.09.10: Proportion of households and persons aged 18 years and over, by tenure type, Indigenous status and state/territory, 2006

	NSW		Vic		Qld		WA		SA		Tas		NT		ACT	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
									Persons[a]							
Home owners																
Fully owned	14.3	36.5	15.3	37.6	9.7	32.9	7.0	33.4	9.5	36.9	20.8	39.6	3.3	20.1	9.2	31.3
Being purchased[b]	23.0	35.9	27.9	38.9	19.3	37.4	19.2	41.3	22.4	38.6	35.8	36.9	7.2	39.2	33.4	40.9
Total home owners	*37.3*	*72.3*	*43.2*	*76.6*	*29.0*	*70.4*	*26.2*	*74.7*	*31.9*	*75.5*	*56.6*	*76.5*	*10.5*	*59.3*	*42.6*	*72.1*
Renters																
State or territory housing authority	23.1	3.6	21.3	2.4	20.2	2.5	29.9	2.8	32.7	5.2	16.2	4.4	10.6	5.8	26.7	6.2
Housing cooperative/ community/church group	7.9	0.4	3.4	0.3	16.5	0.4	21.7	0.3	13.8	0.8	1.0	0.5	68.3	0.9	3.1	0.3
Private renter[c]	26.8	21.2	27.7	18.6	27.3	23.2	15.8	18.5	16.6	15.3	22.1	15.6	5.8	21.6	24.8	19.1
Other landlord type[d]	2.4	1.1	2.1	0.9	4.3	2.0	3.5	2.0	2.8	1.4	2.2	1.4	2.1	10.1	1.3	1.4
Total renters[e]	*62.0*	*27.0*	*55.8*	*22.8*	*70.0*	*28.9*	*72.5*	*24.4*	*67.4*	*23.4*	*42.7*	*22.8*	*88.3*	*39.9*	*56.7*	*27.4*
Other tenure type[f]	0.7	0.7	1.0	0.6	1.0	0.8	1.3	0.9	0.8	1.1	0.6	0.7	1.2	0.8	0.7	0.5
Total stated	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Tenure type not stated	4.4	2.3	6.0	2.4	4.7	2.1	6.7	2.1	6.3	2.3	2.8	2.3	6.5	2.2	1.8	1.4
Total number ('000)	**71.3**	**4,454.5**	**16.2**	**3,449.3**	**64.7**	**2,596.5**	**29.9**	**1,293.8**	**13.6**	**1,065.3**	**9.1**	**324.1**	**29.5**	**87.1**	**2.1**	**224.4**

(continued)

Table 2.09.10 (continued): Proportion of households and persons aged 18 years and over, by tenure type, Indigenous status and state /territory, 2006

	NSW		Vic		Qld		WA		SA		Tas		NT		ACT	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
								Households								
Home owners																
Fully owned	13.8	36.4	14.0	37.5	10.2	33.2	8.2	32.9	9.9	36.2	18.6	39.9	4.9	18.8	8.9	30.7
Being purchased[b]	24.0	33.1	28.3	36.7	23.2	35.1	24.3	39.0	26.0	36.0	35.5	34.4	15.2	37.6	33.5	39.3
Total home owners	*37.8*	*69.5*	*42.3*	*74.1*	*33.4*	*68.3*	*32.5*	*72.0*	*35.9*	*72.2*	*54.1*	*74.3*	*20.0*	*56.4*	*42.4*	*70.0*
Renters																
State or territory housing authority	22.0	4.4	20.7	3.0	17.1	3.1	27.7	3.6	30.6	6.7	17.1	5.4	15.9	6.9	26.9	7.7
Housing cooperative/ community/church group	5.1	0.5	2.6	0.4	9.5	0.4	12.0	0.4	6.9	1.0	0.9	0.6	46.0	0.9	2.2	0.4
Private renter[c]	30.7	22.8	30.4	20.2	33.6	24.3	21.7	20.1	21.8	16.6	23.8	16.6	11.7	22.9	25.8	19.6
Other landlord type[d]	2.3	1.1	2.0	0.8	4.3	2.0	4.0	2.0	2.8	1.3	2.2	1.4	3.8	10.6	1.3	1.4
Total renters[e]	*61.6*	*29.6*	*56.8*	*25.2*	*65.9*	*30.8*	*66.7*	*27.0*	*63.3*	*26.4*	*45.3*	*24.9*	*78.9*	*42.9*	*56.8*	*29.4*
Other tenure type[f]	0.6	0.9	0.9	0.7	0.7	0.9	0.9	1.1	0.8	1.3	0.6	0.8	1.1	0.7	0.7	0.5
Total stated	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Tenure type not stated	4.2	2.9	5.3	3.0	4.3	2.7	6.4	2.7	5.6	2.9	2.7	3.0	8.7	2.7	1.7	1.7
Total number ('000)	**57.2**	**2,271.0**	**14.2**	**1,767.5**	**45.9**	**1,345.7**	**18.4**	**684.8**	**10.0**	**574.0**	**7.9**	**174.0**	**11.2**	**44.7**	**1.8**	**115.1**

(a) Persons aged 18 years and over. Excludes visitors to private dwellings.

(b) Includes dwellings being purchased under a rent/buy scheme.

(c) Includes dwellings being rented from a real estate agent, parent/other relative or other person.

(d) Includes dwellings being rented through a residential park (includes caravan parks and marinas), employer—government (includes Defence Housing Authority) and employer—other employer (private).

(e) Total includes rental type status not stated.

(f) Includes dwellings occupied under a life tenure scheme.

Source: ABS and AIHW analysis of 2006 Census data.

Tenure type by remoteness

- In 2006, the proportion of Indigenous persons in the different tenure types varied by remoteness. Of the estimated 56,089 Indigenous persons aged 18 years and over in remote areas for whom tenure type was stated, 59% were renters of housing cooperative, community or church group housing, 17% were renters of state/territory housing, 5% were renters through private landlords and 11% were home owners. In comparison, among the estimated 167,548 Indigenous persons aged 18 years and over in non-remote areas for whom tenure type was stated, 6% were renters of housing cooperative, community or church group housing, 23% were renters of state/territory housing, 28% were renters through private landlords and over one-third (38%) were homeowners (Table 2.09.11).
- In 2006, the proportion of non-Indigenous persons in the different tenure types also varied by remoteness, but not as much as among Indigenous persons. Among non-Indigenous persons aged 18 years and over in remote areas for whom tenure type was stated, approximately 62% were home owners and 37% were renters. This compared with 74% and 26% respectively of non-Indigenous adults in non-remote areas (Figure 2.09.3).

Table 2.09.11: Households and persons, by tenure type, Indigenous status and remoteness, 2006

	Remote				Non-remote				Total			
	Indigenous		Non-Indigenous		Indigenous		Non-Indigenous		Indigenous		Non-Indigenous	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Persons[(a)]												
Home owners												
Fully owned	2,905	5.2	74,085	35.2	21,188	12.6	4,624,346	35.7	24,209	10.8	4,708,619	35.7
Being purchased	3,232	5.8	55,641	26.4	42,589	25.4	4,929,751	38.0	45,916	20.5	4,990,162	37.8
Total home owners	*6,137*	*10.9*	*129,726*	*61.6*	*63,777*	*38.1*	*9,554,097*	*73.7*	*70,125*	*31.3*	*9,698,781*	*73.5*
Renters												
State or territory housing authority	9,434	16.8	9,080	4.3	39,233	23.4	411,809	3.2	48,907	21.8	422,469	3.2
Housing cooperative/community/ church group	33,090	59.0	2,173	1.0	9,882	5.9	49,730	0.4	43,007	19.2	52,117	0.4
Private[(b)]	2,916	5.2	29,658	14.1	46,884	28.0	2,606,561	20.1	49,972	22.3	2,641,717	20.0
Other[(c)]	2,386	4.3	29,586	14.0	4,354	2.6	151,324	1.2	6,771	3.0	182,002	1.4
Total renters[(d)]	*48,964*	*87.3*	*77,441*	*36.8*	*102,683*	*61.3*	*3,308,283*	*25.5*	*152,135*	*67.8*	*3,394,685*	*25.7*
Other tenure types[(e)]	988	1.8	3,415	1.6	1,088	0.6	94,167	0.7	2,099	0.9	98,090	0.7
Total stated	**56,089**	**100.0**	**210,582**	**100.0**	**167,548**	**100.0**	**12,956,547**	**100.0**	**224,359**	**100.0**	**13,191,556**	**100.0**
Tenure type not stated	3,596	6.0	5,936	2.7	8,579	4.9	297,599	2.2	12,269	5.2	304,791	2.3
Total[(f)]	**59,685**	**100.0**	**216,518**	**100.0**	**176,127**	**100.0**	**13,254,146**	**100.0**	**236,628**	**100.0**	**13,496,347**	**100.0**

(continued)

Table 2.09.11 (continued): Households and persons, by tenure type, Indigenous status and remoteness, 2006

	Remote				Non-remote				Total			
	Indigenous		Non-Indigenous		Indigenous		Non-Indigenous		Indigenous		Non-Indigenous	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Households[(g)]												
Home owners												
Fully owned	1,804	8.0	39,461	35.3	16,555	12.2	2,372,911	35.6	18,365	11.6	2,412,368	35.6
Being purchased	2,222	9.8	27,345	24.4	36,415	26.8	2,370,129	35.6	38,642	24.4	2,397,477	35.4
Total home owners	*4,028*	17.8	*66,807*	59.7	*52,973*	39.0	*4,743,036*	71.1	*57,005*	35.9	*4,809,842*	71.0
Renters												
State or territory housing authority	4,460	19.7	5,558	5.0	28,939	21.3	265,471	4.0	33,391	21.1	271,024	4.0
Housing cooperative/community/church group	9,758	43.0	1,183	1.1	5,118	3.8	34,098	0.5	14,872	9.4	35,282	0.5
Private[(b)]	1,987	8.8	16,268	14.5	42,971	31.6	1,436,964	21.6	44,963	28.4	1,453,235	21.4
Other[(c)]	1,560	6.9	16,330	14.6	3,402	2.5	78,145	1.2	4,963	3.1	94,474	1.4
Total renters[(d)]	*18,292*	80.7	*43,339*	38.7	*82,110*	60.4	*1,866,707*	28.0	*100,405*	63.3	*1,910,044*	28.2
Other tenure types[(e)]	360	1.6	1,777	1.6	811	0.6	57,136	0.9	1,168	0.7	58,914	0.9
Total stated	**22,680**	**100.0**	**111,923**	**100.0**	**135,894**	**100.0**	**6,666,879**	**100.0**	**158,578**	**100.0**	**6,778,800**	**100.0**
Tenure type not stated	1,657	6.8	4,002	3.5	6,433	4.5	194,622	2.8	8,090	4.9	198,624	2.8
Total[(f)]	**24,337**	**100.0**	**115,925**	**100.0**	**142,327**	**100.0**	**6,861,501**	**100.0**	**166,668**	**100.0**	**6,977,424**	**100.0**

(a) Persons aged 18 years and over.

(b) Includes dwellings being rented from a real estate agent, parent/other relative or other person.

(c) Includes dwellings being rented through a residential park (includes caravan parks and marinas), employer—government (includes Defence Housing Authority), employer—other employer (private), and not stated.

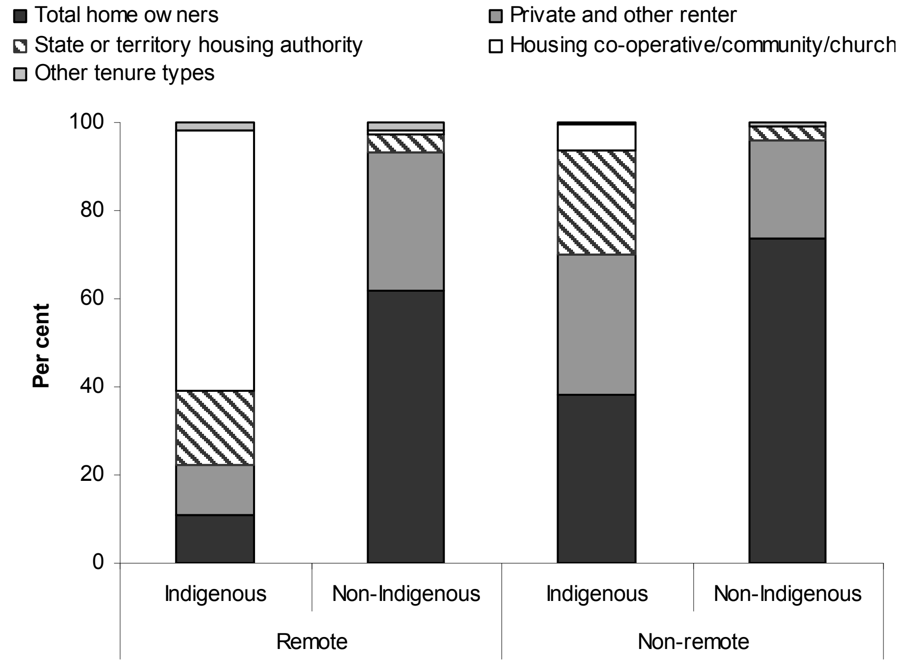
(d) Total includes rental type status not stated.

(e) Includes dwellings being purchased under a rent/buy scheme, occupied rent-free, occupied under a life tenure scheme, other tenure type not further defined.

(f) Includes tenure type not stated.

(g) A household with Indigenous person(s) is any household that had at least one person of any age as a resident at the time of the Census who identified as having Aboriginal and/or Torres Strait Islander origins.

Source: ABS and AIHW analysis of 2006 Census data.



Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.09.3: Percentage of persons aged 18 years and over, by tenure type, Indigenous status and remoteness, 2006

Time series

- Between 1996 and 2006, there was a decrease in the proportion of Indigenous households and Indigenous persons aged 18 years and over who were home owners without a mortgage, but an increase in the proportion of Indigenous households who were purchasing their homes.
- Over the same period, there was a slight decrease in the proportion of Indigenous households and Indigenous persons who were renters (Table 2.09.12).

Table 2.09.12: Indigenous households and persons, by tenure type, 1996, 2001 and 2006

	1996		2001		2006	
	Number	%	Number	%	Number	%
			Persons(a)			
Home owners						
Owned without a mortgage	19,757	12.6	24,019	11.8	24,212	10.3
Being purchased	22,729	14.5	32,940	16.2	44,545	19.0
Total home owners	*42,486*	*27.0*	*56,959*	*28.1*	*68,757*	*29.3*
Renters						
Private	34,543	22.0	44,721	22.0	49,307	21.0
State or territory housing authority	36,920	23.5	42,645	21.0	48,751	20.8
Housing cooperative/ community/church group	27,098	17.2	44,834	22.1	41,723	17.8
Total renters(b)	*112,872*	*71.8*	*142,542*	*70.3*	*153,509*	*65.4*
Other tenure type(c)	1,802	1.1	3,346	1.6	12,636	5.4
Total stated	157,160	100.0	202,847	100.0	234,902	100.0
Tenure type not stated	11,863	7.0	7,152	3.4	1,727	0.7
Total	**169,023**	**100.0**	**209,999**	**100.0**	**236,629**	**100.0**
			Households			
Home owners						
Owned without a mortgage	15,016	13.3	18,184	13.0	18,364	11.6
Being purchased	20,711	18.3	28,035	20.0	37,663	23.8
Total home owners	*35,727*	*31.6*	*46,219*	*33.0*	*56,027*	*35.3*
Renters						
Private	31,943	28.3	39,601	28.3	44,406	28.0
State or territory housing authority	26,869	23.8	29,517	21.1	33,294	21.0
Housing cooperative/ community/church group	10,576	9.4	15,733	11.2	14,458	9.1
Total renters(b)	*76,202*	*67.4*	*91,878*	*65.6*	*101,387*	*63.9*
Other tenure type(c)	1,075	1.0	1,892	1.4	1,164	0.7
Total stated	113,004	100.0	139,989	100.0	158,578	100.0
Tenure type not stated	5,135	4.3	4,743	3.3	8,092	4.9
Total	**118,140**	**100**	**144,731**	**100**	**166,670**	**100**

(a) Persons aged 18 years and over.

(b) Includes dwellings being rented through a residential park (includes caravan parks and marinas), employer—government (includes Defence Housing Authority), employer—other employer' (private), rent/buy schemes, rent-free dwellings and landlord type not stated.

(c) Includes dwellings occupied under a life tenure scheme.

Note: The figures for 2006 in this table differ slightly from those in the other tables in this measure which use 2006 Census data. This is because the categories of tenure type used in this table have been altered from those in other tables to enable consistency across the three Census years.

Source: ABS and AIHW analysis of 2006 Census data.

Additional information

The Supported Accommodation Assistance Program (SAAP) is part of Australia's overall response to homelessness. The SAAP funds non-government, community or local government agencies that provide accommodation and support services to a range of groups—single men, single women, young people, families, women and children escaping domestic violence, or a combination of client groups (AIHW 2008).

- In 2006–07 it is estimated that 187,900 people who were homeless or at risk of becoming homeless received some form of assistance from SAAP.
- Indigenous people were over-represented as SAAP clients relative to their population size: 2% of Australians aged 10 years and over were estimated to be Aboriginal and/or Torres Strait Islander at 30 June 2006, but they made up 18% of all SAAP clients in 2006–07. The rate of use was particularly high for accompanying Aboriginal and Torres Strait Islander children (1 in 13) compared with all children (1 in 71).

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in these surveys is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS) and the 2002 General Social Survey. The NHS was conducted in Major Cities and regional and Remote areas, but Very Remote areas were excluded from the sample.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the 2004–05 NATSIHS and the 2002 NATSISS publications (ABS 2006, 2004).

Housing tenure data

The 2004–05 NATSIHS does not include a question on landlord type. Therefore, it does not provide data on rentals broken down by private, state/territory housing authority and community housing. The 2004–05 National Health Survey did not include any questions on housing tenure, so non-Indigenous comparisons are not available from these surveys.

The NATSISS can provide non-Indigenous comparisons with the General Social Survey (GSS).

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example whether people are counted more than once or are undercounted (ABS 1996).*

(continued)

Data quality issues (continued)

For the 2002 NATSISS it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

Housing tenure data

It is likely that the Census data understate the number of households and residents in community rental housing. The Community Housing and Infrastructure Needs Survey counted 21,854 permanent dwellings managed by Indigenous housing organisations, of which 20,407 were occupied. The Census data for the same period found 14,879 households with Indigenous residents in community rental housing. It is likely that some households with Indigenous residents have recorded a state/territory housing authority or private owner as their landlord on the Census when they were actually renting community housing (SCRGSP 2003).

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2.10 Index of disadvantage

An analysis of the relative disadvantage within the Aboriginal and Torres Strait Islander population compared with the non-Indigenous population.

Data sources

Data for this measure come from the 2001 Census of Population and Housing and the 2006 Census of Population and Housing.

Census of Population and Housing

The Census of Population and Housing is conducted by the ABS at 5-yearly intervals with 2006 the most recent, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

Socio-Economic Indexes for Areas (SEIFA)

The ABS has developed indexes to allow measurement of relative socioeconomic status at a small area level. These indexes summarise a range of socioeconomic variables associated with disadvantage.

Index of Advantage/Disadvantage

This index is a continuum of advantage to disadvantage and is available for both urban and rural areas. Low values indicate areas of disadvantage, and high values indicate areas of advantage. It takes into account variables such as the proportion of families with high incomes, people with a tertiary education, and employees in skilled occupations (ABS 2003).

Data analyses

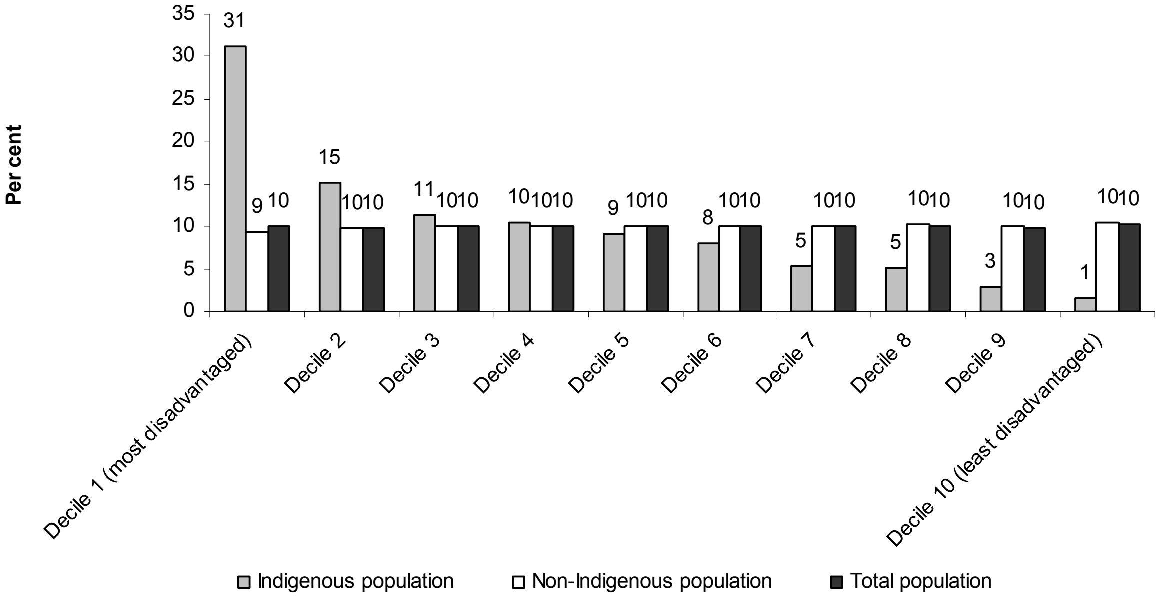
Following the concepts and methodology of the SEIFA Index of Advantage/Disadvantage, persons surveyed were ranked according to their SEIFA score of advantage/disadvantage and then split into deciles or quintiles based on total population.

Analysis of the SEIFA results at small area levels has found that within any area there will be individuals and subpopulations with very different characteristics to the overall population of the area. When judgments are made about the individual or subpopulation based on the characteristics of the area, there is considerable potential for error. This issue is particularly relevant for the Indigenous population, because they make up a small proportion of the population in most areas in Australia. Kennedy and Firman (2004) found that Indigenous Australians suffer a high level of social and economic disadvantage regardless of whether they live in high or low socioeconomic status areas. They found that 93.3% of Indigenous people in Queensland are in the lowest decile for disadvantage. Of the approximately 126,000 Indigenous people living in Queensland, less than 2,000 have SEIFA scores in the top five deciles, even though 35,000 live in areas coded to SEIFA scores in the top five deciles. Therefore, the traditional approach to analysing SEIFA at an area level masks the socioeconomic status of Indigenous Australians who make up a small proportion of most areas. Kennedy and Firman (2004) also call into question the view that Aboriginal and Torres Strait Islander peoples living in urban areas are generally better off than those in remote areas.

Note: For the next version of this report it is hoped to be able to produce SEIFA scores for individuals to compare Indigenous and non-Indigenous Australians excluding the problems associated with statistical local areas.

SEIFA

- Indigenous Australians are over-represented in the three most disadvantaged deciles; for example, 31% of the Indigenous population are in the most disadvantaged decile compared with 9% of the non-Indigenous population (Figure 2.10.1).
- Only 1% of the Indigenous population are in the least disadvantaged decile compared with 10% of the non-Indigenous population.



Source: AIHW analysis of 2006 Census data.

Figure 2.10.1: Population distribution by SEIFA advantage/disadvantage decile, by Indigenous status, 2006

SEIFA by state/territory

- In 2006, in all states and territories a greater proportion of the Indigenous population were in the most disadvantaged quintile than the non-Indigenous population. The Northern Territory had the highest proportion (58%) (Figure 2.10.2c) and the Australian Capital Territory had the lowest proportion (27%) of the Indigenous population in the most disadvantaged quintile (Figure 2.10.2b).
- New South Wales had the lowest proportion (3%) and the Australian Capital Territory had the highest proportion (10%) of the Indigenous population in the least disadvantaged quintile (Figure 2.10.2a & Figure 2.10.2b).

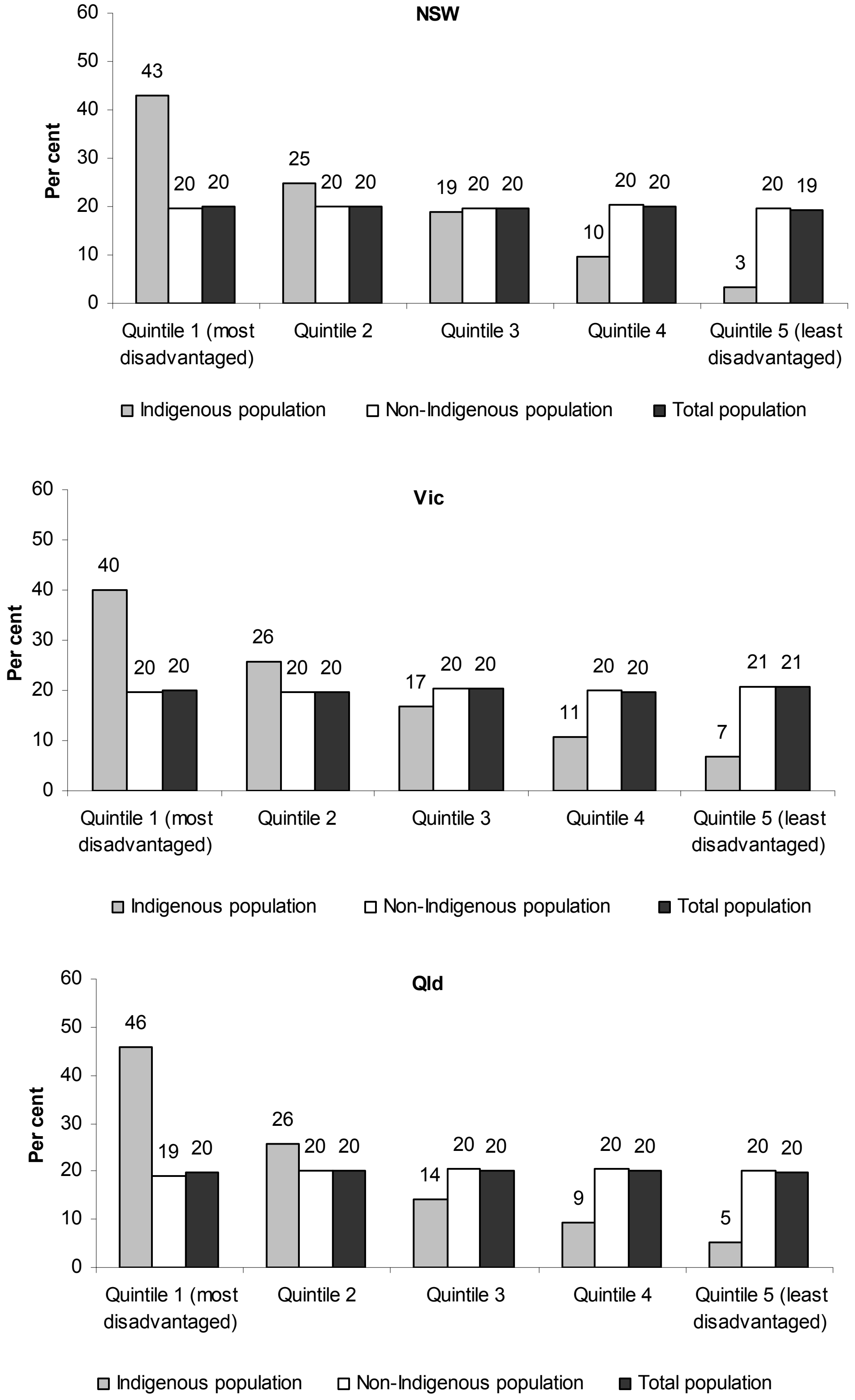


Figure 2.10.2a: Population distribution by SEIFA advantage/disadvantage quintiles, by Indigenous status, NSW, Vic & Qld, 2006

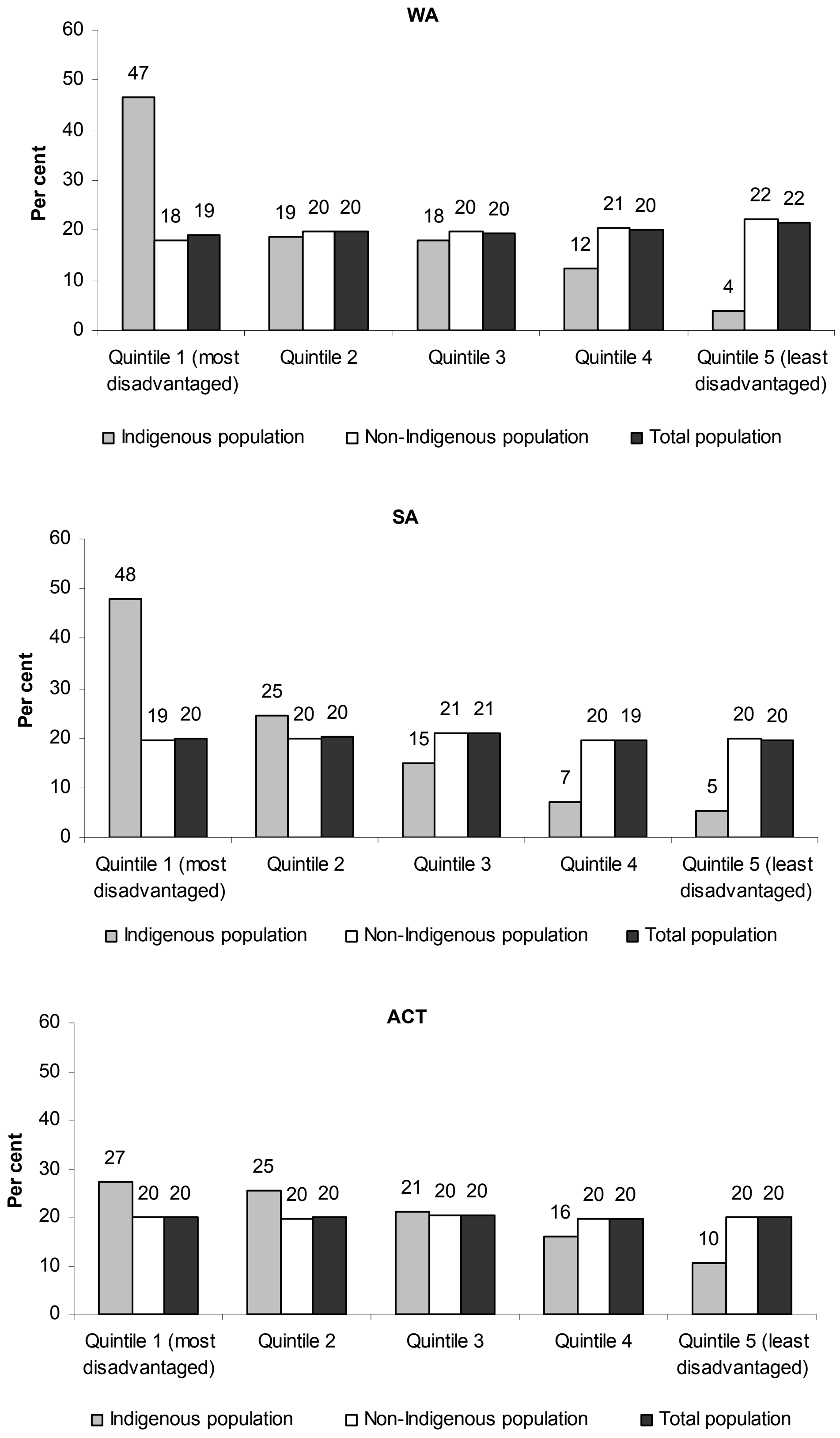
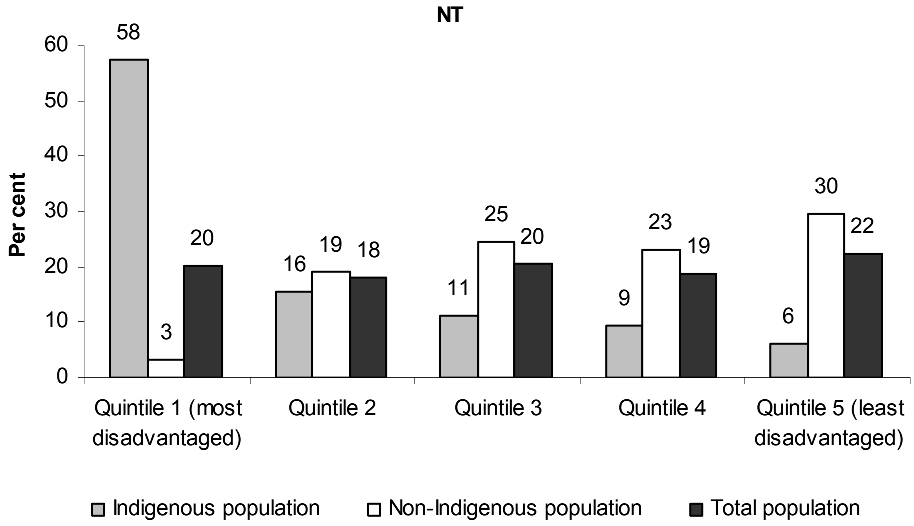


Figure 2.10.2b: Population distribution by SEIFA advantage/disadvantage quintiles, by Indigenous status, WA, SA & ACT, 2006



Note: The population of some states/territories was unable to be split into exact quintiles based on the SEIFA index of advantage/disadvantage. In all except one of these cases, the best approximate quintiles were calculated. Approximate population quintiles based on the SEIFA Index of Advantage/Disadvantage were unable to be calculated for Tasmania because of the population spread.

Source: AIHW analysis of ABS 2006 Census data.

Figure 2.10.2c: Population distribution by SEIFA advantage/disadvantage quintiles, by Indigenous status, NT, 2006

Data quality issues

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example whether people are counted more than once or are undercounted (ABS 1996).*

Socio-Economic Indexes for Areas (SEIFA)

There are a range of data items that can be included in an index on socioeconomic disadvantage and the Census does not collect all of the variables identified as being related to socioeconomic status. Some of the variables may be context-specific (e.g. a low mortgage in Sydney may be high in another city) and some are associated with age (e.g. income), yet the methodology does not allow for age-standardisation. This is particularly relevant in the context of this performance measure where we are comparing two populations that have different age structures.

Analysis of SEIFA results at small area levels has found that within any area there will be individuals and subpopulations with very different characteristics from the overall population of the area. When judgments are made about the individual or subpopulation based on the characteristics of the area, there is considerable potential for error (Baker & Adhikari 2007). This issue is particularly relevant for the Indigenous population, because they make up a small proportion of the population in most areas of Australia.

Kennedy and Firman (2004) found that the traditional approach to analysing SEIFA at an area level masks the socioeconomic status of Indigenous Australians who make up a small proportion of most areas. They found that stratifying SEIFA scores by Indigenous and non-Indigenous households in each area shows that Indigenous populations suffer a high level of social and economic disadvantage regardless of whether they live in high or low socioeconomic areas.

References

ABS (Australian Bureau of Statistics) 1996. Occasional paper: Population issues, Indigenous Australians. ABS cat. no. 4708.0. Canberra: ABS.

ABS 2003. Information paper: Census of Population and Housing, Socio-Economic Indexes for Areas, Australia 2001. ABS cat. no. 2039.0. Canberra: ABS.

Baker J & Adhikari P 2007. Research paper: Socio-economic indexes for individuals and families. ABS cat. no. 1352.0.55.86. Canberra: ABS.

Kennedy B & Firman D 2004. Indigenous SEIFA—revealing the ecological fallacy. Paper presented at the 12th Biennial Conference of the Australian Population Association, Canberra, September.

2.11 Dependency ratio

The dependency ratio is expressed as a percentage derived as follows:

$$\frac{\text{Percentage of population aged under 15 years + percentage of population aged 65 years and over}}{\text{Percentage of population aged 15–64 years}}$$

It is used as a substitute for the ratio between those who are not economically active (and therefore dependent) and those who are economically active.

The youth and aged dependency ratios can be calculated separately if required:

Youth dependency ratio $\frac{\text{Percentage of population aged under 15 years}}{\text{Percentage of population aged 15–64years}}$

Aged dependency ratio $\frac{\text{Percentage of population aged 65 years and over}}{\text{Percentage of population aged 15–64 years}}$

Data sources

The majority of data for this measure come from the ABS estimated resident populations for the Indigenous and total Australian populations from the 2006 Census of Population and Housing. Data from the Census are adjusted for a number of factors, including undercounting and Indigenous status not stated, to produce population estimates by Indigenous status, age and geographic regions.

The time series data presented for this measure come from the ABS Indigenous-specific 'low series' population estimates and projections based on the 2001 Census of Population and Housing. The Census year estimate of the Indigenous population is used as the basis for revising Indigenous population figures for previous years. This adjustment removes the effects of unexplained growth between censuses from Indigenous time series, and presents growth in terms of demographic factors alone (following the development of the 2001 Indigenous population estimates, the size and structure of the Indigenous population for 1991 to 2000 were recalculated based on the 2001 estimates). Indigenous population estimates and projections are not yet available based on the 2006 Census.

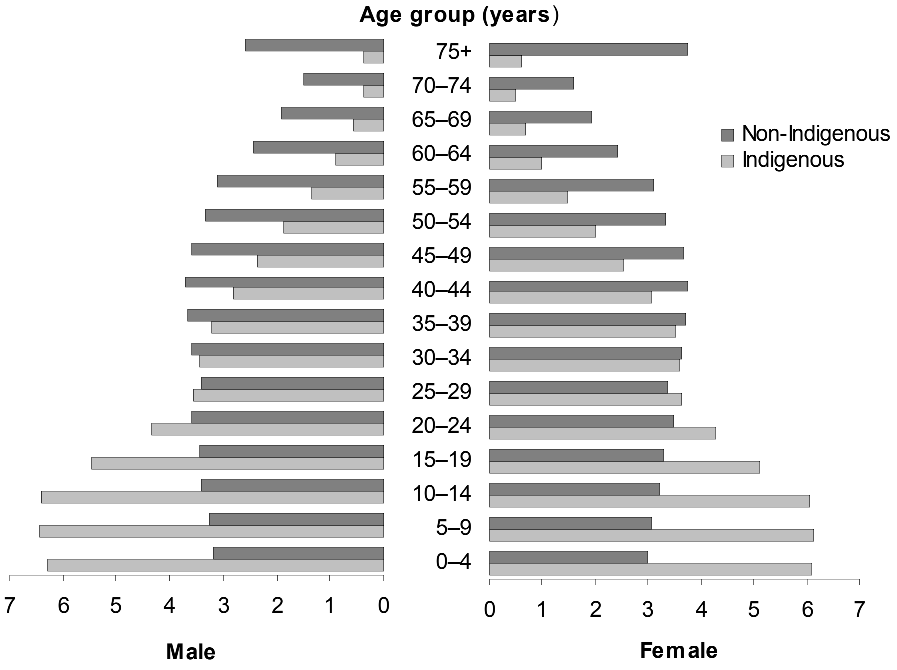
Because Indigenous population estimates by remoteness region are available only for the Census years 2001 and 2006, data by remoteness are presented for these years only.

Data analyses

Age distribution of population

- In the total Australian population, 20% of people are aged under 15 years, 66% are aged 15–64 years and 13% are aged 65 years and over.

- The Indigenous population has a younger age structure than the non-Indigenous population, which is shown in the population pyramid in Figure 2.11.1. In 2006, 38% of Indigenous people were aged under 15 years compared with 19% of non-Indigenous people. People aged 65 years and over made up 3% of the Indigenous population and 13% of the non-Indigenous population. These figures reflect higher rates of fertility and deaths occurring at younger ages among the Indigenous population.
- The age structures of the Indigenous and non-Indigenous populations are similar across most states and territories (Table 2.11.1). The main variations from the national average are that, compared with other states and territories, the Australian Capital Territory has a lower proportion of Indigenous people aged 65 years and over (2%) and the Northern Territory has a lower proportion of non-Indigenous people aged 65 years and over (4%).



Source: AIHW analysis of ABS population estimates based on 2006 Census.

Figure 2.11.1: Population profile, by Indigenous status, age and sex, 2006

Table 2.11.1: Age distribution of population, by age group, state/territory and Indigenous status, 2006

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Australia[(a)]	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
										Per cent								
0–4	12.5	6.3	11.8	6.1	13.1	6.3	11.9	6.1	11.7	5.6	11.5	6.0	11.4	6.1	11.9	6.8	12.4	6.2
5–9	12.7	6.3	12.5	6.2	13.0	6.5	12.6	6.4	12.3	6.0	11.9	6.3	12.1	6.1	11.7	6.4	12.6	6.3
10–14	13.0	6.5	12.3	6.5	12.8	6.9	12.0	6.8	12.1	6.4	12.9	6.8	12.3	6.4	11.1	6.5	12.5	6.6
15–19	10.7	6.6	10.5	6.8	10.5	6.8	10.5	7.0	11.0	6.6	11.9	6.7	10.9	7.3	10.2	6.1	10.6	6.7
20–24	8.2	6.9	8.5	7.2	8.5	7.2	8.7	7.2	8.9	6.9	8.7	6.3	9.9	8.9	9.5	7.4	8.6	7.1
25–29	6.5	6.9	6.9	7.0	7.2	6.7	7.7	6.7	7.0	6.2	6.3	5.6	7.6	8.2	8.4	8.5	7.2	6.8
30–34	6.6	7.3	6.8	7.4	7.1	7.2	7.3	7.1	7.1	6.5	5.9	6.2	7.6	7.9	8.0	8.8	7.1	7.2
35–39	6.5	7.3	6.7	7.6	6.7	7.4	6.9	7.6	6.7	7.1	6.6	6.8	7.6	7.6	7.3	8.8	6.8	7.4
40–44	5.9	7.4	5.9	7.4	5.7	7.5	5.9	7.7	6.1	7.4	5.9	7.3	6.2	7.4	5.9	8.6	5.9	7.5
45–49	5.0	7.2	4.9	7.2	4.6	7.3	5.0	7.5	5.0	7.4	5.4	7.6	4.8	7.3	4.9	8.3	4.9	7.3
50–54	4.0	6.6	4.1	6.5	3.6	6.7	3.9	6.9	4.0	6.9	4.1	7.1	4.3	6.8	3.8	7.6	3.9	6.7
55–59	3.0	6.1	3.1	6.0	2.7	6.3	2.7	6.4	2.7	6.6	3.3	6.9	2.3	6.2	2.5	6.5	2.8	6.2
60–64	2.1	4.9	2.1	4.7	1.7	5.0	1.8	4.7	1.9	5.1	2.1	5.5	1.4	4.3	1.9	4.1	1.9	4.8
65–69	1.4	3.9	1.5	3.8	1.1	3.8	1.2	3.7	1.3	4.1	1.4	4.4	0.7	3.0	1.2	2.5	1.3	3.8
70–74	1.0	3.2	0.9	3.1	0.7	2.9	0.8	2.9	0.9	3.5	0.9	3.5	0.4	2.3	0.8	1.3	0.8	3.1
75+	1.0	6.6	1.5	6.5	0.9	5.7	1.0	5.5	1.2	7.7	1.1	7.1	0.4	4.3	0.9	1.7	1.0	6.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Includes other territories.

Source: AIHW analysis of ABS population estimates based on 2006 Census.

Dependency ratios

The dependency ratio is the percentage of the population aged under 15 years and aged 65 years and over divided by the percentage of the population aged 15–64 years. The dependency ratio for the Indigenous population is influenced mainly by the proportion of children, whereas the dependency ratio for the non-Indigenous population is much more strongly influenced by the proportion of older people. Therefore, it is necessary to look at the youth dependency ratio (percentage of the population aged under 15 years divided by the percentage of the population aged 15–64 years) and the aged dependency ratio (percentage of the population aged 65 years and over divided by the percentage of the population aged 15–64 years) separately for the Indigenous and non-Indigenous populations.

- In 1996, the dependency ratio for Indigenous Australians was 0.75 compared with 0.50 for non-Indigenous Australians. In 2001 the ratios were 0.72 and 0.49 respectively, and in 2006 they were 0.68 and 0.48 respectively (Table 2.11.2).
- In 2006, the youth dependency ratio was higher for Indigenous Australians than for non-Indigenous Australians (0.63 compared with 0.28), whereas the aged dependency ratio was lower for Indigenous Australians than for non-Indigenous Australians (0.05 compared with 0.20).
- In 2006, the youth dependency ratio for Indigenous people ranged from 0.56 in the Northern Territory to 0.67 in Queensland, and the aged dependency ratio for Indigenous people was 0.02 in the Australian Capital Territory and between 0.05 and 0.07 in all other states and territories (Table 2.11.2).
- In 2001 and 2006, the youth dependency ratio for Indigenous people was lowest in Remote and Very Remote areas (0.63 and 0.60) and highest in Inner and Outer Regional areas (0.75 and 0.70). In contrast, the aged dependency ratio was lowest in Major Cities (0.04) and highest in Remote and Very Remote areas (0.06) (Table 2.11.3).
- For non-Indigenous Australians, the youth dependency ratio in 2001 and 2006 was similar across all remoteness categories (0.3). The aged dependency ratio for non-Indigenous Australians was lowest in Remote and Very Remote areas (between 0.1 and 0.15), and highest in Major Cities and Inner and Outer Regional areas (around 0.2).

Table 2.11.2: Total, youth and aged dependency ratios, by state/territory and Indigenous status, 1996, 2001 and 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia[(a)]
					1996				
Indigenous									
Dependency ratio	0.77	0.75	0.77	0.75	0.75	0.82	0.71	0.68	0.75
Youth dependency ratio	0.72	0.69	0.71	0.70	0.69	0.77	0.70	0.63	0.70
Aged dependency ratio	0.05	0.06	0.05	0.06	0.05	0.05	0.01	0.05	0.05
Non-Indigenous									
Dependency ratio	0.50	0.50	0.49	0.48	0.52	0.53	0.41	0.36	0.50
Youth dependency ratio	0.31	0.31	0.32	0.32	0.3	0.33	0.31	0.31	0.31
Aged dependency ratio	0.19	0.19	0.17	0.16	0.22	0.20	0.10	0.05	0.18
					2001				
Indigenous									
Dependency ratio	0.75	0.72	0.74	0.72	0.75	0.73	0.64	0.63	0.72
Youth dependency ratio	0.69	0.66	0.69	0.67	0.69	0.68	0.63	0.58	0.67
Aged dependency ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.05	0.05
Non-Indigenous									
Dependency ratio	0.50	0.49	0.48	0.47	0.52	0.53	0.41	0.35	0.49
Youth dependency ratio	0.30	0.30	0.31	0.30	0.3	0.31	0.28	0.30	0.30
Aged dependency ratio	0.20	0.19	0.18	0.17	0.22	0.22	0.12	0.06	0.19
					2006				
Indigenous									
Dependency ratio	0.71	0.68	0.71	0.65	0.66	0.66	0.59	0.60	0.68
Youth dependency ratio	0.65	0.61	0.67	0.60	0.60	0.60	0.57	0.56	0.63
Aged dependency ratio	0.06	0.07	0.05	0.05	0.06	0.06	0.02	0.05	0.05
Non-Indigenous									
Dependency ratio	0.49	0.48	0.47	0.46	0.50	0.52	0.39	0.34	0.48
Youth dependency ratio	0.28	0.28	0.29	0.28	0.27	0.29	0.26	0.26	0.28
Aged dependency ratio	0.20	0.20	0.18	0.18	0.23	0.23	0.13	0.07	0.20

(a) Includes other territories.

Source: AIHW analysis of ABS population estimates based on 1996, 2001 and 2006 Census.

Table 2.11.3: Total, youth and aged dependency ratios, by remoteness and Indigenous status, 2001 and 2006

	Major Cities	Inner Regional	Outer Regional	Remote	Very Remote
			2001		
Indigenous					
Dependency ratio	0.70	0.79	0.75	0.69	0.66
Youth dependency ratio	0.65	0.75	0.70	0.63	0.60
Aged dependency ratio	0.04	0.05	0.05	0.06	0.06
Non-Indigenous					
Dependency ratio	0.47	0.56	0.53	0.47	0.39
Youth dependency ratio	0.28	0.33	0.33	0.34	0.29
Aged dependency ratio	0.18	0.22	0.20	0.14	0.10
			2006		
Indigenous					
Dependency ratio	0.66	0.74	0.72	0.64	0.62
Youth dependency ratio	0.61	0.69	0.66	0.58	0.56
Aged dependency ratio	0.05	0.05	0.06	0.06	0.06
Non-Indigenous					
Dependency ratio	0.45	0.55	0.52	0.46	0.37
Youth dependency ratio	0.27	0.31	0.31	0.31	0.26
Aged dependency ratio	0.18	0.23	0.21	0.15	0.11

Source: AIHW analysis of ABS population estimates based on the 2001 and 2006 Census.

Time series analyses

Table 2.11.4 and Figure 2.11.2 present the youth and aged dependency ratios for Indigenous and non-Indigenous Australians over the period 1996–2006.

- Over the period 1996–2006, there was a significant decline in the youth dependency ratio for both Indigenous and non-Indigenous Australians. The fitted trend implies an average yearly decline in the ratio of around 0.01 for Indigenous Australians (equivalent to a 15% decline over the period) and 0.003 for non-Indigenous Australians (equivalent to a 10% decline over the period).
- Over the same period, there was a significant decline in the aged dependency ratio for Indigenous Australians, with an average yearly decline in the ratio of around 0.001, and a significant increase in the aged dependency ratio for non-Indigenous Australians, with an average yearly increase in the ratio of around 0.001. This was equivalent to a 14% decline over the period for Indigenous Australians and a 7% decline over the period for non-Indigenous Australians.

Table 2.11.4: Youth dependency ratio and aged dependency ratio, by Indigenous status, 1996–2006

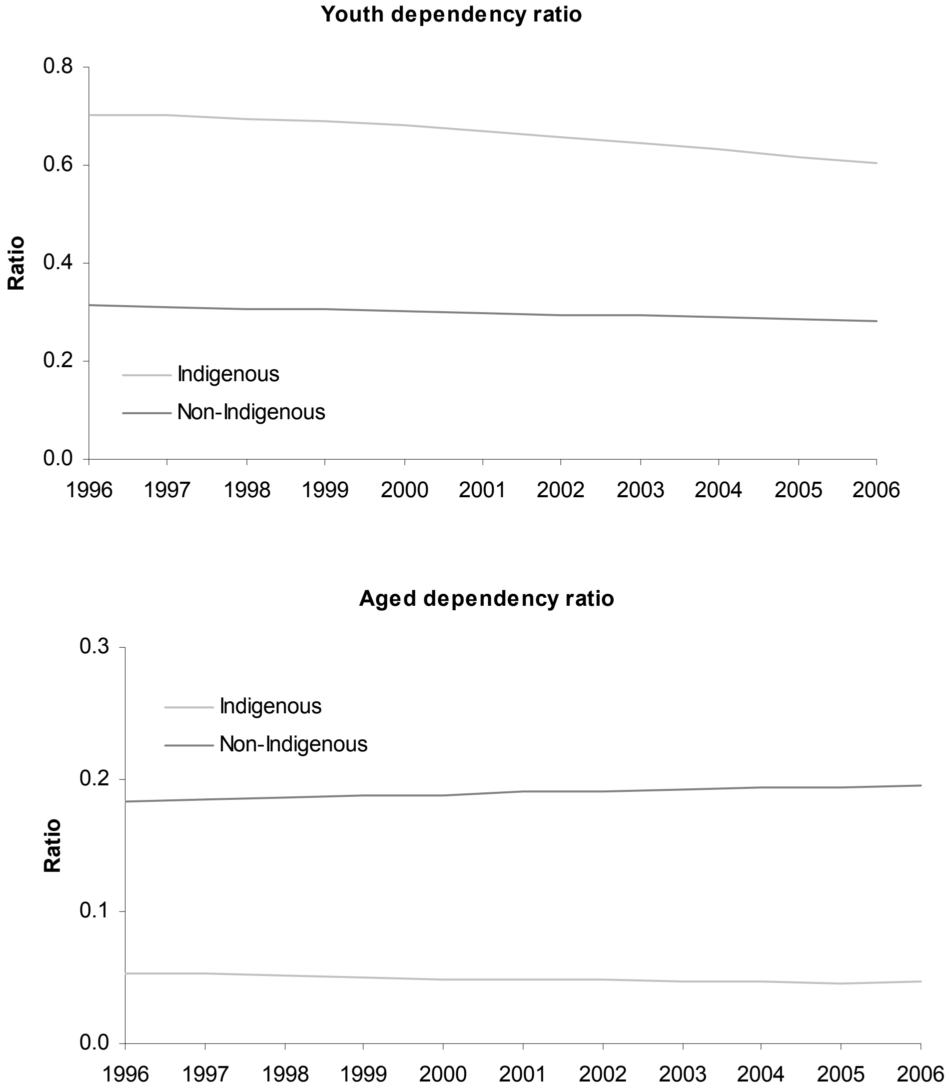
Ratio	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change[(a)]	Per cent change[(b)]
Indigenous													
Youth dependency	0.70	0.70	0.70	0.69	0.68	0.67	0.66	0.64	0.63	0.62	0.60	–0.01*	–14.6
Aged dependency	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	–0.001*	–13.6
Non-Indigenous													
Youth dependency	0.31	0.31	0.31	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.28	–0.003*	–9.8
Aged dependency	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.001*	6.7

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1996–2006.

(a) Average annual change in ratios determined using linear regression analysis.

(b) Per cent change between 1996 and 2006 based on the average annual change.

Source: AIHW analysis of ABS population estimates and projections based on the 2001 Census.



Source: AIHW analysis of ABS population estimates and projections based on the 2001 Census.

Figure 2.11.2: Youth dependency rate and aged dependency rate, by Indigenous status, 1996–2006

Data quality issues

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example whether people are counted more than once, or are undercounted (ABS 1996).*

ABS population estimates

The ABS refers to Indigenous population estimates and projections as 'experimental' because of concerns about the quality of the data on which they are based, particularly the quality of the Indigenous status identification in the Census and in birth and death records (ABS 2004).

The ABS's policy of backcasting data from successive censuses retrospectively takes into account changes in the level of Indigenous identification, as occurred between the 1991 and 1996 censuses and, to a smaller extent, between the 1996 and 2001 censuses. Changes in the level of Indigenous identification between the 2001 and 2006 censuses will be taken into account in the revision of Indigenous population estimates and projections based on the 2006 Census.

References

ABS (Australian Bureau of Statistics) 1996. Occasional paper. Population issues: Indigenous Australians. ABS cat. no. 4708.0. Canberra: ABS.

ABS 2004. Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009. ABS cat. no. 3238.0. Canberra: ABS.

2.12 Single-parent families

Household composition, in particular single-parent families, in the Aboriginal and Torres Strait Islander population

Data sources

Data for this measure come from the ABS 2006 Census of Population and Housing and the 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Census of Population and Housing

The Census of Population and Housing is conducted by the ABS at 5-yearly intervals with 2006 being the most recent and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

The Census collects data on family type, household type, household composition and relationships in the household. Indigenous households are defined as households with at least one Indigenous person of any age resident on Census night. One-parent (single-parent) families are defined as families containing a person who has no spouse or partner usually resident in the household but who forms a parent–child relationship with at least one child usually resident in the household. The child may be either dependent or non-dependent.

Care should be taken in interpreting information on relationships among people in a household, because the standard Census relationship classifications may not fully represent the complexity of family relationships in Aboriginal and Torres Strait Islander cultures.

Data analyses

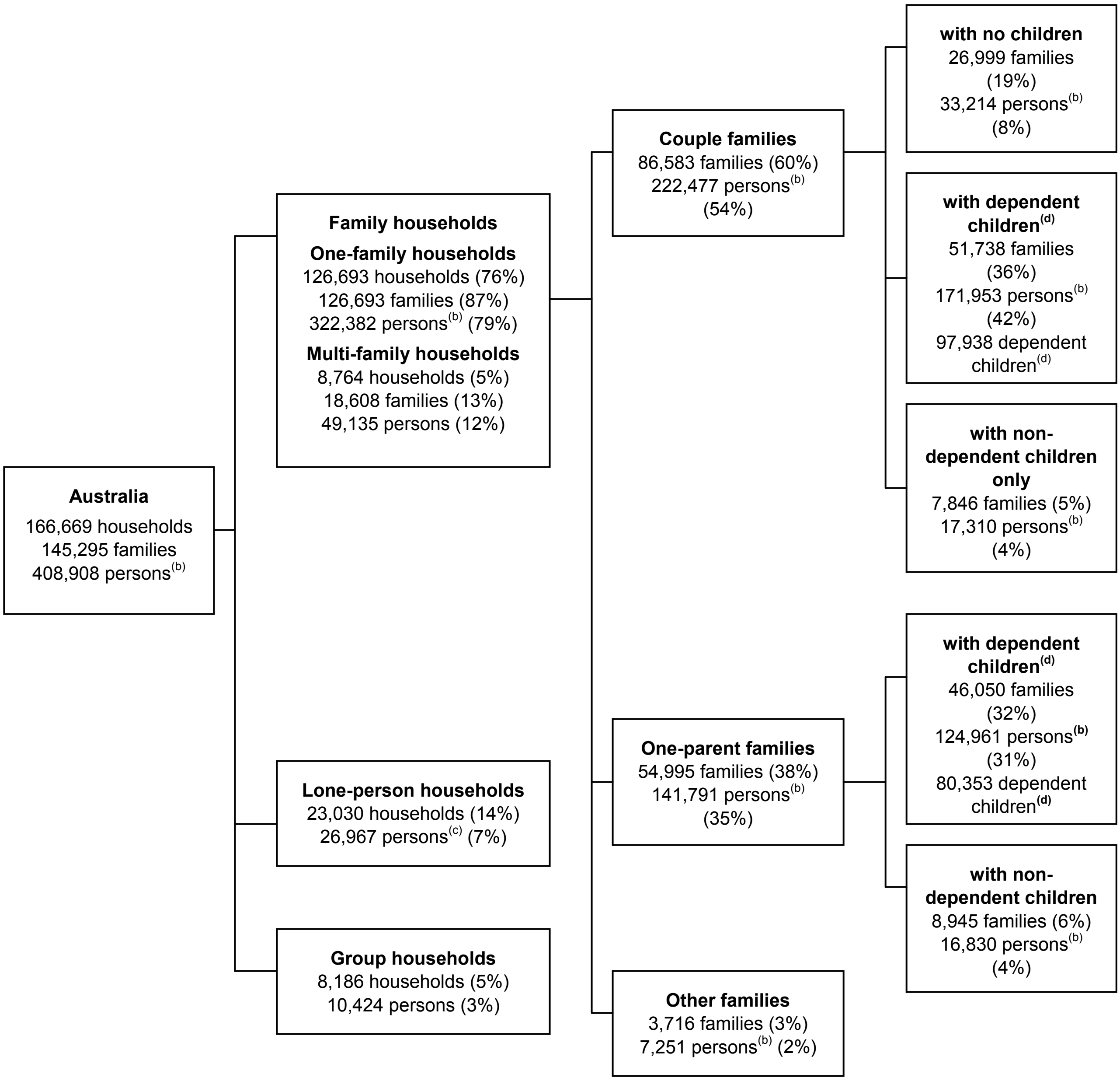
Household composition, family composition and persons

Figures 2.12.1 and 2.12.2 show the household composition, family composition and number of persons in Indigenous households and total households.

- In 2006, of the 166,669 Indigenous households, 126,693 (76%) were one-family households, 23,030 (14%) were lone-person households, 8,186 (5%) were group households and 8,764 (5%) were multi-family households (Figure 2.12.1). The proportions for total households in Australia were 70%, 24%, 3% and 1% respectively (Figure 2.12.2).
- Of the 135,457 Indigenous family households, 86,583 (60%) were couple families, 54,995 (38%) were one-parent families and 3,716 (3%) were other families (Figure 2.12.1). The proportions for total family households in Australia were 83%, 16% and 2% respectively (Figure 2.12.2).

One-parent families

- In 2006, there were 52,300 Indigenous households containing Indigenous one-parent families (31%), representing 54,995 families (38%) and 141,791 persons (35%). In comparison there were 759,370 other households containing non-Indigenous/other one-parent families (11%), representing 768,256 families (15%) and 2,012,830 persons (12%) (Table 2.12.1).
- Approximately 32% (46,050) of Indigenous families were one-parent families with dependent children, representing 124,961 persons (31%). Around 6% of Indigenous families (8,945) were one-parent families with non-dependent children, representing 16,830 persons (4%) (Figure 2.12.1). In comparison, 11% of total families were one-parent families with dependent children and 5% were one-parent families with non-dependent children (Figure 2.12.2).



(a) Excludes Visitors only and Other not classifiable households.

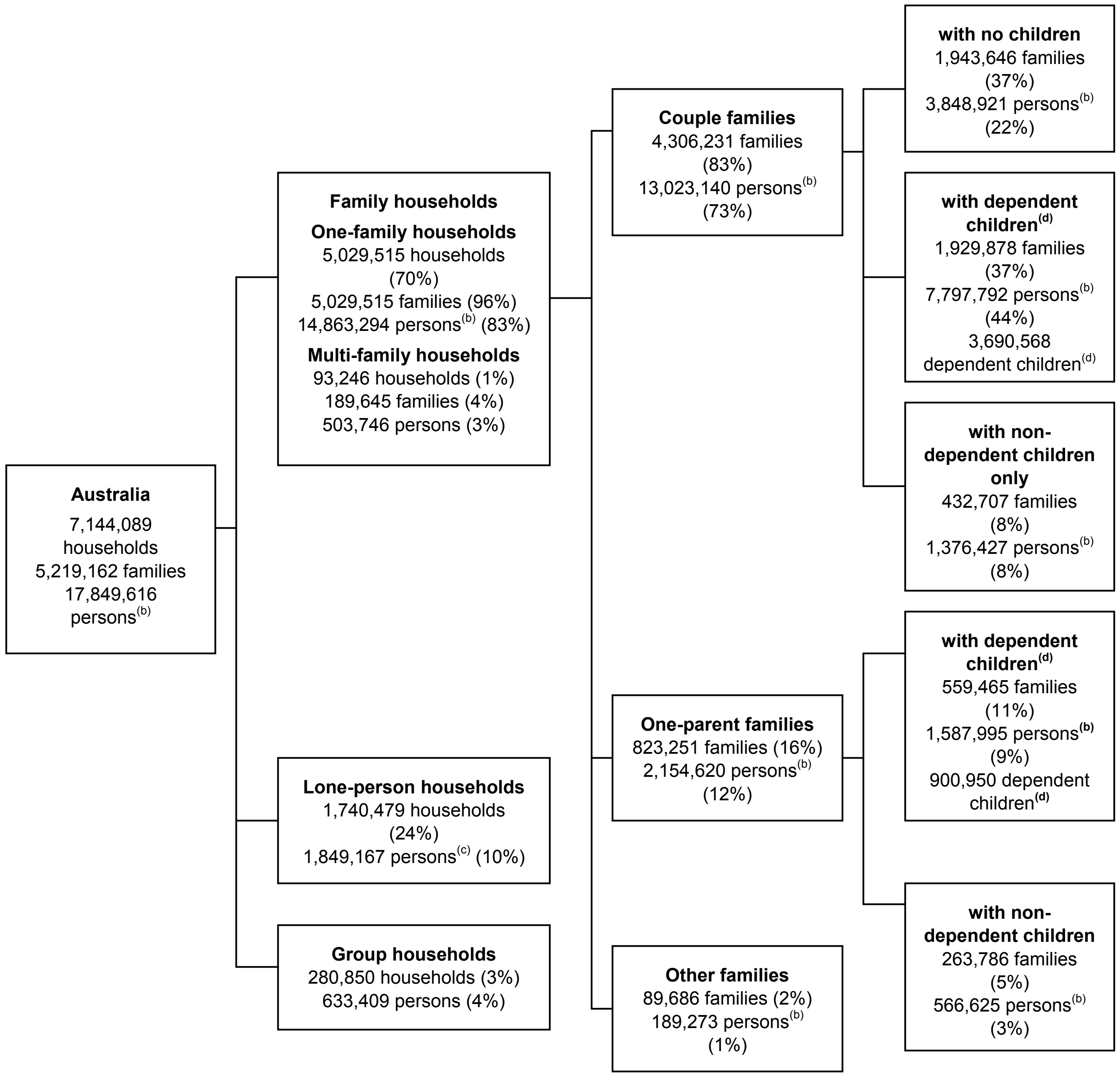
(b) Excludes unrelated individuals living in the family household.

(c) Includes persons not enumerated at home.

(d) Children under 15 years of age and full-time dependent students aged 15–24 years.

Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.12.1: Household composition, family composition and persons[(a)], Indigenous population, 2006



(a) Excludes Visitors only and Other not classifiable households.

(b) Excludes unrelated individuals living in the family household.

(c) Includes persons not enumerated at home.

(d) Children under 15 years of age and full-time dependent students aged 15–24 years.

Source: ABS and AIHW analysis of 2006 Census data.

Figure 2.12.2: Household composition, family composition and persons[(a)], total population, 2006

Table 2.12.1: One-parent families by Indigenous status, 2006

	Indigenous one-parent families[a]	Non-Indigenous/other one-parent families[b]	Total one-parent families
		Number	
Households	52,300	759,370	811,677
Families	54,995	768,256	823,251
Persons	141,791	2,012,830	2,154,620
		Per cent[c]	
Households	31.4	10.9	11.4
Families	37.9	15.1	15.8
Persons	34.7	11.5	12.1

(a) One-parent families where the parent and/or child(ren) are Indigenous

(b) One parent families where neither the parent nor child(ren) is Indigenous

(c) Proportion of Indigenous households, families and persons; proportion of non-Indigenous households, families and persons; total one-parent families as a proportion of all households, families and persons.

Source: ABS and AIHW analyses of 2006 Census data.

Relationship in household

- In 2006, among Indigenous persons in occupied private dwellings, approximately 39% were children under the age of 15 years. This compared with 20% among non-Indigenous persons. Indigenous persons were also almost twice as likely as non-Indigenous persons to be classified as a lone parent (9% compared with 5%) and half as likely to be classified as a husband, wife or partner in a couple relationship (24% compared with 48%) (Table 2.12.2).
- Approximately 6% of Indigenous persons were classified as extended family members (other related individual) living with relatives other than their spouse/partner or children compared with 2% of non-Indigenous persons (Table 2.12.2).
- There was little change in the relationship composition in Indigenous households between 2001 and 2006 (Figure 2.12.3).

Table 2.12.2: Relationship in household[(a)], persons in occupied private dwellings, 2006

	Indigenous persons		Non-Indigenous persons		All persons[(b)]	
	No.	**%**	**No.**	**%**	**No.**	**%**
Husband, wife or partner[(c)]	99,396	24.2	8,209,643	47.8	8,401,489	47.0
Lone parent	36,646	8.9	776,987	4.5	823,253	4.6
Child under 15 years	161,115	39.2	3,446,995	20.1	3,685,435	20.6
Dependent student (15–24 years)	17,177	4.2	876,873	5.1	906,122	5.1
Non-dependent child	33,219	8.1	1,104,538	6.4	1,159,209	6.5
Other related individual						
Brother/sister	7,403	1.8	178,877	1.0	188,961	1.1
Father/mother	2,950	0.7	92,077	0.5	96,631	0.5
Grandchild	2,898	0.7	19,259	0.1	22,655	0.1
Grandfather/grandmother	677	0.2	10,969	0.1	11,855	0.1
Cousin	2,135	0.5	12,988	0.1	15,370	0.1
Uncle/aunt	1,368	0.3	7,434	0.0	8,928	0.0
Nephew/niece	3,767	0.9	18,552	0.1	22,748	0.1
Other	2,763	0.7	19,024	0.1	24,392	0.1
Total	23,961	5.8	359,180	2.1	391,540	2.2
Unrelated individual	6,348	1.5	146,111	0.9	156,447	0.9
Group household member	9,211	2.2	563,699	3.3	581,600	3.3
Lone person	23,484	5.7	1,697,431	9.9	1,770,464	9.9
Total[(d)]	**410,557**	**100.0**	**17,181,457**	**100.0**	**17,875,559**	**100.0**

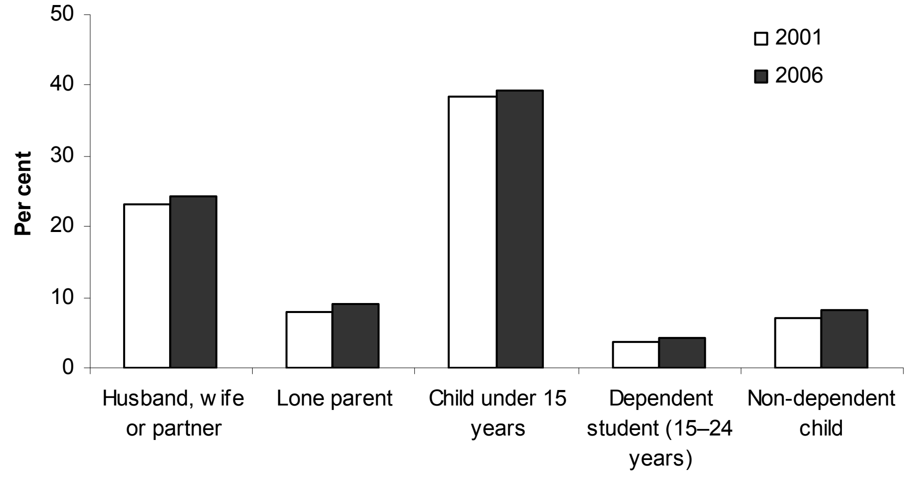
(a) Based on place of enumeration, includes usual residents enumerated at home and excludes visitors and usual residents temporarily absent.

(b) Includes Indigenous status not stated.

(c) Includes people in tribal marriages and same-sex couples.

(d) Includes persons not at home on Census night, and those in other not classifiable households.

Source: ABS and AIHW analysis of 2006 Census data.



Source: ABS and AIHW analysis of 2001 and 2006 Census data.

Figure 2.12.3: Selected relationships as a proportion of all Indigenous persons, 2001 and 2006

Lone parents

Information on lone parents is available from the 2004–05 NATSIHS and is presented below.

- In 2004–05, an estimated 46,600 Indigenous persons aged 15 years and over were lone parents (16%).
- Around three-quarters of Indigenous lone parents were living in one-family households with only the family members present (Table 2.12.3).
- Indigenous lone parents were around four times as likely as non-Indigenous lone parents to be living in households with two or more families with only the family members present.

Table 2.12.3: Lone parents, by number of families in household and Indigenous status, 2004–05

	Indigenous	Non-Indigenous	Rate ratio
	%	%	
One-family household with only family members present[(a)]	75.2	90.4	0.8
One or more family household with non-family members present	1.5	4.1	0.4
Two or more family household with only family members present	23.3	5.6	4.2
Total	**100.0**	**100.0**	**1.0**
Total number	46,635	810,581	857,216

(a) Including lone-person households.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Tables 2.12.4a and 2.12.4b present lone parents by selected population characteristics (for Indigenous persons aged 15 years and over). Table 2.12.4a presents the proportion of lone parents in the Indigenous population who have each of the selected characteristics. Table 2.12.4b presents the proportion of Indigenous persons with each of the selected characteristics who are lone parents.

- A higher proportion of Indigenous lone parents (25%) reported fair/poor health status than other Indigenous persons (21%) (Table 2.12.4a).
- A higher proportion of lone parents (61%) were unable to raise $2,000 within a week than other Indigenous persons (49%).
- Lone parents were less likely to have completed Year 12 than other Indigenous persons (16% compared with 21%) and more likely to not be in the labour force (61% compared with 39%).
- A higher proportion of lone parents were renters (85%) than other Indigenous persons (69%).
- Approximately 82% of Indigenous lone parents had experienced stressors in the previous 12 months compared with 76% of other Indigenous persons (Table 2.12.4a).
- A higher proportion of Indigenous persons whose highest year of school completed was Year 11 or below were lone parents (19%) than were Indigenous persons who completed Year 12 (12%) (Table 2.12.4b).
- Approximately 10% of Indigenous persons who were employed were lone parents whereas 23% of Indigenous persons who were not in the labour force were lone parents.
- A higher proportion of renters than home owners were lone parents (19% and 8% respectively) (Table 2.12.4b).

Table 2.12.4a: Lone parents, by selected population characteristics: Indigenous persons aged 15 years and over[(a)], 2004–05

	Lone parent	Other Indig. persons	Total
		Per cent	
Self-assessed health status			
Excellent/very good/good	74.9	78.7	78.1
Fair/poor	25.1	21.3	21.9
Financial stress—unable to raise $2,000 within a week for something important	60.9	48.6	50.6
Location			
Remote	22.6	28.2	27.3
Non-remote	77.4	71.8	72.7
Highest year of school completed			
Year 12	15.7	21.1	20.3
Year 11 or below	84.3	69.4	71.8
Whether has non-school qualification			
Has a non-school qualification	30.9	29.4	29.6
Does not have a non-school qualification	69.1	61.1	62.4
Employment			
Employed	31.2	52.3	49.0
Unemployed	7.8	9.1	8.9
Not in the labour force	61.0	38.5	42.1
Housing			
Owner	12.6	27.2	24.9
Renter	84.6	69.3	71.7
Stressors in last 12 months			
Serious illness or disability	25.6	29.0	28.4
Other stressors	56.6	46.7	48.4
Total experienced stressors	*82.2*	*75.7*	*76.9*
No stressors	17.2	23.5	22.4
Total	*100.0*	*100.0*	*100.0*
Total number of persons aged 15 years and over	46,635	247,006	293,641

(a) Proportion of Indigenous lone parents who have each of the selected characteristics.

Source: AIHW analysis of 2004–05 NATSIHS.

Table 2.12.4b: Lone parents, by selected population characteristics: Indigenous persons aged 15 years and over[(a)], 2004–05

	Lone parent	Other Indig. persons	Total
		Per cent	
Self-assessed health status			
Excellent/very good/good	15.2	84.8	100.0
Fair/poor	18.2	81.8	100.0
Financial stress—unable to raise $2,000 within a week for something important	19.1	80.9	100.0
Location			
Remote	13.2	86.8	100.0
Non-remote	16.9	83.1	100.0
Highest year of school completed			
Year 12	12.3	87.7	100.0
Year 11 or below	18.6	81.4	100.0
Whether has non-school qualification			
Has a non-school qualification	16.6	83.4	100.0
Does not have a non-school qualification	17.6	82.4	100.0
Employment			
Employed	10.1	89.9	100.0
Unemployed	13.8	86.2	100.0
Not in the labour force	23.0	77.0	100.0
Housing			
Owner	8.1	91.9	100.0
Renter	18.7	81.3	100.0
Stressors in last 12 months			
Serious illness or disability	16.1	83.9	100.0
Other stressors	19.6	80.4	100.0
Total experienced stressors	*19.1*	*80.9*	*100.0*
No stressors	13.8	86.2	100.0
Total	*17.9*	*82.1*	*100.0*
Total persons aged 15 years and over	**15.9**	**84.1**	**100.0**
Total number of persons aged 15 years and over	46,635	247,006	293,641

(a) Proportion of Indigenous persons with each of the selected characteristics who are lone parents.

Source: AIHW analysis of 2004–05 NATSIHS.

Dependent children

- In 2006, approximately 38,394 families in Indigenous households were one-parent families with dependent children. This was 41.6% of all Indigenous families with dependent children. Approximately 19.9% of other Australian families (non-Indigenous and status not stated) with dependent children were one-parent families (Table 2.12.5).
- Approximately 15% of Indigenous families with dependent children had four or more children compared with 5% of other households. Indigenous one-parent families with dependent children were 2.6 times as likely to have four children and 8.4 times as likely to have seven or more children as other one-parent families (Table 2.12.5).

Table 2.12.5: Number and percentage of households[(a)] in occupied private dwellings, by number of dependent children[(b)] and Indigenous status, 2006

	Number of households					
	One-family households					
Number of dependent children	Couples with dependent children	One-parent families with dependent children	Total	Two-family households	Three-family households	All households with dependent children
			Households with Indigenous person(s)			
1	14,609	15,485	30,094	1,543	33	31,670
2	16,396	11,952	28,348	1,851	100	30,299
3	9,204	6,395	15,599	1,192	155	16,946
4	4,324	2,999	7,323	708	183	8,214
5	1,466	1,068	2,534	366	134	3,034
6	587	324	911	212	101	1,224
7 or more	374	171	545	223	211	979
Total	**46,960**	**38,394**	**85,354**	**6,095**	**917**	**92,366**
Percentage	**50.8**	**41.6**	**92.4**	**6.6**	**1.0**	**100.0**
Rate ratio[(c)]	**0.7**	**2.1**	**0.9**	**2.7**	**15.9**	**1.0**
			Other households			
1	631,632	242,889	874,521	25,377	309	900,207
2	798,694	157,329	956,023	20,910	454	977,387
3	311,046	53,687	364,733	7,570	345	372,648
4	77,606	14,061	91,667	2,501	203	94,371
5	14,574	3,759	18,333	809	86	19,228
6	4,189	764	4,953	280	48	5,281
7 or more	2,041	250	2,291	210	33	2,534
Total	**1,839,782**	**472,739**	**2,312,521**	**57,657**	**1,478**	**2,371,656**
Percentage	**77.6**	**19.9**	**97.5**	**2.4**	**0.1**	**100.0**
			All households			
1	646,241	258,374	904,615	26,920	342	931,877
2	815,090	169,281	984,371	22,761	554	1,007,686
3	320,250	60,082	380,332	8,762	500	389,594
4	81,930	17,060	98,990	3,209	386	102,585
5	16,040	4,827	20,867	1,175	220	22,262
6	4,776	1,088	5,864	492	149	6,505
7 or more	2,415	421	2,836	433	244	3,513
Total	**1,886,742**	**511,133**	**2,397,875**	**63,752**	**2,395**	**2,464,022**
Percentage	**76.6**	**20.7**	**97.3**	**2.6**	**0.1**	**100.0**

(continued)

Table 2.12.5 (continued): Number and percentage of households[(a)] in occupied private dwellings, by number of dependent children[(b)] and Indigenous status, 2006

Percentages and rate ratio						
	One-family households					
Number of dependent children	Couples with dependent children	One-parent families with dependent children	Total	Two-family households	Three-family households	All households with dependent children
			Households with Indigenous person(s)			
1	31.1	40.3	35.3	25.3	3.6	34.3
2	34.9	31.1	33.2	30.4	10.9	32.8
3	19.6	16.7	18.3	19.6	16.9	18.3
4	9.2	7.8	8.6	11.6	20.0	8.9
5	3.1	2.8	3.0	6.0	14.6	3.3
6	1.3	0.8	1.1	3.5	11.0	1.3
7 or more	0.8	0.4	0.6	3.7	23.0	1.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			Other households			
1	34.3	51.4	37.8	44.0	20.9	38.0
2	43.4	33.3	41.3	36.3	30.7	41.2
3	16.9	11.4	15.8	13.1	23.3	15.7
4	4.2	3.0	4.0	4.3	13.7	4.0
5	0.8	0.8	0.8	1.4	5.8	0.8
6	0.2	0.2	0.2	0.5	3.2	0.2
7 or more	0.1	0.1	0.1	0.4	2.2	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			Rate ratio[(c)]			
1	0.9	0.8	0.9	0.6	0.2	0.9
2	0.8	0.9	0.8	0.8	0.4	0.8
3	1.2	1.5	1.2	1.5	0.7	1.2
4	2.2	2.6	2.2	2.7	1.5	2.2
5	3.9	3.5	3.7	4.3	2.5	4.1
6	5.5	5.2	5.0	7.2	3.4	6.0
7 or more	7.2	8.4	6.4	10.0	10.3	9.9
Total	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

(a) Persons enumerated at home.

(b) Under 15 years of age. Includes up to three temporarily absent children.

(c) Rate ratio Indigenous:other.

Source: ABS and AIHW analysis of 2006 Census data.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example whether people are counted more than once or are undercounted (ABS 1996).*

Population data

The Census questions were designed to elicit population data according to Western social categories. Care should be taken when interpreting information as the standard Census relationship classifications used do not fully represent the complexity of family relationships in Aboriginal and Torres Strait Islander cultures (ABS 2003).

References

ABS (Australian Bureau of Statistics) 1996. Occasional paper: Population issues, Indigenous Australians. ABS cat. no. 4708.0. Canberra: ABS.

ABS 2003. Population characteristics: Aboriginal and Torres Strait Islander Australians, 2001. ABS cat. no. 4713.0. Canberra: ABS.

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

2.13 Community safety

Three parameters of community safety are considered for this measure:

1. **experience of personal injury or death as a result of violence**
2. **experience of threatened violence or a social setting in which violence is common**
3. **experience of a social setting where there is a lack of security and a perception of danger; for example, where crimes against property or disorderly behaviour are common.**

Data sources

Data for this measure come from the National Aboriginal and Torres Strait Islander Social Survey, the AIHW National Hospital Morbidity Database, the AIHW National Mortality Database and the Australian Institute of Criminology National Homicide Monitoring Program.

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

National Hospital Morbidity Database

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of not stated or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

National Mortality Database

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, South Australia, Western Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data, for which year of registration of death was used. Data published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

National Homicide Monitoring Program (NHMP)

The Australian Institute of Criminology collects data on all homicides recorded in Australia under the National Homicide Monitoring Program (NHMP). The NHMP was established in 1990 and reports annually by financial year on all homicides recorded in Australia. The Indigenous status of the victim is based on police identification of 'racial appearance' and therefore will underestimate the level of homicide involving Indigenous persons. In addition, data for Victoria, Tasmania and the Australian Capital Territory are not reported. Nevertheless, the NHMP includes useful information on the circumstances surrounding homicides involving Indigenous persons, such as motive for killing, and victim and perpetrator relationship.

Data analyses

Age-standardised rates and ratios have been used where appropriate as a measure of the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported data

The 2002 NATSISS collected information on physical and threatened violence, personal stressors experienced in the 12 months before the survey and neighbourhood community problems, which is presented in the following tables and figures.

Victim of physical or threatened violence and personal stressors

- In 2002, approximately 24% of Indigenous Australians aged 15 years and over and 22% aged 18 years and over reported they were a victim of physical or threatened violence in the previous 12 months.
- After adjusting for differences in age structure, Indigenous Australians aged 18 years and over were twice as likely to report being victims of physical or threatened violence in the previous 12 months as non-Indigenous Australians.
- In 2002, approximately 83% of Indigenous Australians aged 18 years and over experienced at least one stressor in the previous 12 months, compared with 57% of non-Indigenous Australians (Table 2.13.1). The most common stressors experienced by Indigenous Australians were death of a family member or close friend (47%), alcohol or drug-related problems (25%) and overcrowding at home (21%).

Victim of physical or threatened violence and personal stressors by age

- Indigenous Australians aged 18–24, 25–34 and 35–44 years were more likely to be victims of physical or threatened violence than those in the older age groups (Table 2.13.1). Indigenous Australians aged 18–54 years were twice as likely and those aged 55 years and over were four times as likely as non-Indigenous Australians of the same age to be victims of physical or threatened violence.
- Indigenous Australians aged 55 years and over were slightly less likely to experience stressors than those in the younger age groups. Indigenous Australians were more likely to have experienced at least one stressor in the previous 12 months than non-Indigenous Australians across all age groups (Table 2.13.1).

Table 2.13.1: Issues of community safety, by Indigenous status and age group, persons aged 18 years and over, 2002

	18–24			25–34			35–44			45–54			55+			Total	Total age-standardised(a)		
	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Indig.	Non-Indig.	Rate ratio
	%	%		%	%		%	%		%	%		%	%		%	%	%	
Victim of physical or threatened violence in last 12 months	33	15	2.2*	26	13	2.0*	23	10	2.3*	16	8	2.0*	11	3	3.7*	22	20	9	2.2*
Mental illness(b)	14	9	1.6*	17	9	1.9*	17	9	1.9*	19	9	2.1*	12	6	2.0*	16	11	8	1.4
Death of family member or close friend	45	20	2.3*	46	21	2.2*	46	21	2.2*	47	21	2.2*	50	17	2.9*	47	47	20	2.4*
Alcohol or drug-related problems	25	12	2.1*	25	10	2.5*	27	7	3.9*	25	8	3.1*	20	4	5.0*	25	24	7	3.4*
Abuse or violent crime	13	5	2.6*	12	4	3.0*	13	4	3.3*	10	4	2.5*	7	1	7.0*	11	10	3	3.3*
Witness to violence	17	4	4.3*	16	4	4.0*	16	3	5.3*	13	3	4.3*	12	0(c)	31.7*	15	14	3	4.7*
Trouble with the police	24	6	4.0*	18	4	4.5*	19	3	6.3*	15	3	5.0*	10	1	10.0*	18	16	3	5.3*
Member of family sent to jail/in jail	21	n.a.	n.a.	22	n.a.	n.a.	19	n.a.	n.a.	18	n.a.	n.a.	14	n.a.	n.a.	20	18	n.a.	n.a.
Overcrowding at home	27	n.a.	n.a.	21	n.a.	n.a.	20	n.a.	n.a.	18	n.a.	n.a.	16	n.a.	n.a.	21	20	n.a.	n.a.
Discrimination/racism	16	n.a.	n.a.	19	n.a.	n.a.	22	n.a.	n.a.	18	n.a.	n.a.	13	n.a.	n.a.	18	17	n.a.	n.a.
Total experienced stressors(d)(e)	*84*	*59*	*1.4**	*85*	*60*	*1.4**	*82*	*61*	*1.3**	*82*	*61*	*1.3**	*77*	*50*	*1.5**	*83*	*81*	*57*	*1.4**
No stressors reported	16	41	0.4*	15	40	0.4*	18	39	0.5*	18	39	0.5*	23	50	0.5*	17	19	43	0.4*
Total	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**. .**	**100**	**100**	**100**	**. .**

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Totals are age-standardised, as this measure was found to be associated with age.

(b) Data available for non-remote areas only.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(d) Sum of components may be more than total, as persons may have reported more than one type of stressor.

(e) Includes divorce or separation, serious illness or disability, serious accident, not able to get job, lost job, gambling problem and pressure to fulfil cultural responsibilities.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Victim of physical or threatened violence and personal stressors by sex

- A slightly higher proportion of Indigenous males aged 18 years and over than Indigenous females aged 18 years and over reported being a victim of physical or threatened violence (21% compared with 19%). Indigenous males and females were twice and three times as likely to be a victim of physical or threatened violence as non-Indigenous males and females respectively (Table 2.13.2).
- A higher proportion of Indigenous females aged 18 years and over reported experiencing at least one stressor in the previous 12 months than Indigenous males (85% compared with 80%) (Table 2.13.2).

Table 2.13.2: Issues of community safety, persons aged 18 years and over, by Indigenous status and sex, 2002

	Males			Females		
	Indig.	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
	%	%		%	%	
Victim of physical or threatened violence in last 12 months[(a)]	21	11	1.9*	19	7	2.7*
Personal stressors experienced in last 12 months						
Mental illness[(b)]	12	7	1.7*	20	9	2.2*
Death of family member or close friend	45	19	2.4*	48	21	2.3*
Alcohol or drug-related problems	22	7	3.1*	27	8	3.4*
Abuse or violent crime	9	2	4.5*	13	4	3.3*
Witness to violence	14	2	7.0*	17	3	5.7*
Trouble with the police	17	3	5.7*	19	3	6.3*
Member of family sent to jail/currently in jail	19	n.a.	n.a.	20	n.a.	n.a.
Overcrowding at home	18	n.a.	n.a.	23	n.a.	n.a.
Discrimination/racism	17	n.a.	n.a.	19	n.a.	n.a.
Total experienced stressors[(c)(d)]	*80*	*56*	*1.4**	*85*	*59*	*1.4**
No stressors reported	20	44	0.5*	15	41	0.4*
Total	**100**	**100**	**..**	**100**	**100**	**..**

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Proportions are age-standardised, as this measure was found to be associated with age.

(b) Data collected for non-remote areas only.

(c) Sum of components may be more than total, as persons may have reported more than one type of stressor.

(d) Includes divorce or separation, serious illness or disability, serious accident, not able to get job, lost job, gambling problem and pressure to fulfil cultural responsibilities.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Victim of physical or threatened violence and personal stressors by state/territory

- The proportion of Indigenous Australians aged 18 years and over who were victims of physical or threatened violence in the last 12 months ranged from 14% in the Northern Territory to 27% in the Australian Capital Territory (Table 2.13.3).
- Indigenous Australians were two to four times as likely to be a victim of physical or threatened violence as non-Indigenous Australians in all states and territories with the exception of the Northern Territory where the rates were similar (14% and 15%) (Table 2.13.3).
- The proportion of Indigenous Australians aged 18 years and over who experienced stressors in the previous 12 months ranged from 75% in Tasmania to 88% in the Northern Territory and the Australian Capital Territory (Table 2.13.3).

Table 2.13.3: Issues of community safety, persons aged 18 years and over, by Indigenous status and state/territory, 2002

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
									Per cent							
Victim of physical or threatened violence in last 12 months(a)	18*	8*	26*	8*	22*	11*	22*	10*	26*	8*	17*	8*	27*	7*	14*	15*
Selected types of personal stressors experienced in last 12 months																
Mental illness(b)	14*	8*	20*	8*	17*	8*	18*	8*	19*	9*	15*	8*	24*	11*	10(c)	7
Death of family member or close friend	44*	20*	42*	20*	49*	19*	47*	18*	47*	22*	35*	20*	51*	21*	53*	21*
Alcohol or drug-related problems	21*	7*	24*	7*	27*	8*	25*	8*	25*	7*	13*	7*	31*	10*	34*	8*
Abuse or violent crime	9*	3*	13*	3*	13*	3*	12*	4*	11*	3*	6*	3*	22*	5*	12*	5*
Witness to violence	9*	3*	13*	2*	17*	3*	14*	3*	16*	2*	6*	2*	16*	3*	29*	5*
Trouble with the police	18*	3*	18*	2*	20*	4*	18*	4*	19*	4*	7*	3*	28*	4*	15*	4*
Member of family sent to jail/currently in jail	17	n.a.	16	n.a.	20	n.a.	26	n.a.	19	n.a.	7	n.a.	21	n.a.	23	n.a.
Overcrowding at home	11	n.a.	14	n.a.	25	n.a.	19	n.a.	20	n.a.	7	n.a.	18	n.a.	45	n.a.
Discrimination/racism	20	n.a.	19	n.a.	18	n.a.	20	n.a.	24	n.a.	7	n.a.	41	n.a.	10	n.a.
Total experienced stressors(d)	_79*_	_56*_	_83*_	_56*_	_86*_	_59*_	_81*_	_59*_	_81*_	_58*_	_75*_	_59*_	_88*_	_62*_	_88*_	_59*_
No stressors reported	_21*_	_44*_	_17*_	_44*_	_14*_	_41*_	_19*_	_41*_	_19*_	_42*_	_25*_	_41*_	_12*_	_38*_	_12*_	_41*_
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	74,650	4,849,277	15,629	3,655,501	67,531	2,654,470	35,182	1,406,411	14,070	1,124,503	9,518	337,113	2,255	229,260	32,564	97,255

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Proportions are age-standardised, as this measure was found to be associated with age.

(b) Data collected for non-remote areas only.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(d) Sum of components may be more than total, as persons may have reported more than one type of stressor.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Victim of physical or threatened violence and personal stressors by remoteness

- The proportions of Indigenous Australians aged 15 years and over who were victims of physical or threatened violence were similar in remote and non-remote areas (23% and 25% respectively) (Table 2.13.4; Figure 2.13.1).
- Indigenous persons in remote areas were more likely to report having experienced at least one stressor than Indigenous persons in non-remote areas (86% compared with 81%) (Table 2.13.4). Indigenous Australians were more likely to have experienced stressors than non-Indigenous Australians across all remoteness areas (Table 2.13.5).

Table 2.13.4: Issues of community safety, Indigenous persons aged 15 years and over, by sex, 2002

	Remote	Non-remote	Total
		Per cent	
Victim of physical or threatened violence in last 12 months	22.7	25.0	24.3
Personal stressors experienced in last 12 months			
Mental illness[(a)]	n.a.	15.6	n.a.
Death of family member or close friend	55.3	42.1	45.7
Alcohol or drug-related problems	36.5	20.5	24.9
Abuse or violent crime	17.2	8.9	11.2
Witness to violence	30.0	10.3	15.7
Trouble with the police	21.7	17.1	18.4
Member of family sent to jail/currently in jail	25.0	17.4	19.5
Overcrowding at home	41.6	12.6	20.5
Discrimination/racism	16.3	18.2	17.7
Total experienced stressors[(b)(c)]	*85.5*	*81.0*	*82.3*
No stressors reported	14.5	19.0	17.7
Total	**100.0**	**100.0**	**100.0**

(a) Data collected for non-remote areas only.

(b) Sum of components may be more than total as persons may have reported more than one type of stressor.

(c) Includes divorce or separation, serious illness or disability, serious accident, not able to get job, lost job, gambling problem and pressure to fulfil cultural responsibilities.

Source: ABS 2004a.

Table 2.13.5: Issues of community safety, persons aged 18 years and over, by Indigenous status and remoteness, 2002

	Major Cities			Inner Regional			Outer Regional			*Total non-remote*		Remote			Very Remote(a)		*Total remote*	
	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	*Indig.*	*Non-Indig.*	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	*Indig.*	*Non-Indig.*
	%	%		%	%		%	%		%	%	%	%		%	%	%	%
Victim of physical or threatened violence in last 12 months(b)	19	9	2.1*	21	10	2.1*	20	8	2.5*	20*	9*	20	8	2.5*	20	n.p.	20	n.p.
Personal stressors experienced in last 12 months																		
Mental illness(c)	19	8	2.4*	18	8	2.3*	11	7	1.6*	16*	8*	n.a.	6(d)	n.a.	n.a.	n.p.	n.a.	n.p.
Death of family member or close friend	42	20	2.1*	43	20	2.2*	44	21	2.1*	43*	20*	51	15(d)	3.4*	58	n.p.	56	n.p.
Alcohol- or drug-related problems	22	8	2.8*	20	7	2.9*	19	6	3.2*	21*	7*	26	8(d)	3.3*	41	n.p.	37	n.p.
Abuse or violent crime	11	3	3.7*	7	3	2.3*	8	3	2.7*	9*	3*	13	6(d)	2.2*	19	n.p.	17	n.p.
Witness to violence	11	3	3.7*	7	3	2.3*	10	2	5.0*	10*	3*	19	3(d)	6.3*	34	n.p.	30	n.p.
Trouble with the police	18	3	6.0*	15	3	5.0*	16	4	4.0*	16*	3*	18	4(d)	4.5*	23	n.p.	22	n.p.
Member of family sent to jail/currently in jail	20	n.a.	n.a.	14	n.a.	n.a.	17	n.a.	n.a.	17	n.a.	19	n.a.	n.a.	28	n.p.	25	n.p.
Overcrowding at home	16	n.a.	n.a.	9	n.a.	n.a.	11	n.a.	n.a.	13	n.a.	25	n.a.	n.a.	50	n.p.	42	n.p.
Discrimination/racism	22	n.a.	n.a.	15	n.a.	n.a.	17	n.a.	n.a.	19	n.a.	17	n.a.	n.a.	17	n.p.	17	n.p.
Total experienced stressors(e)(f)	83	58	1.4*	81	58	1.4*	79	56	1.4*	81*	57*	80	51	1.6*	88	n.p.	86	n.p.
No stressors reported	17	42	0.4*	19	42	0.5*	21	44	0.5*	19*	43*	20	49	0.4*	12	n.p.	14	n.p.
Total	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	**100**	**100**	. .	**100**	**n.p.**	**100**	**n.p.**

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Non-Indigenous estimates not available for Very Remote Australia.

(b) Proportions for victim of physical or threatened violence are age-standardised as this measure was found to be associated with age.

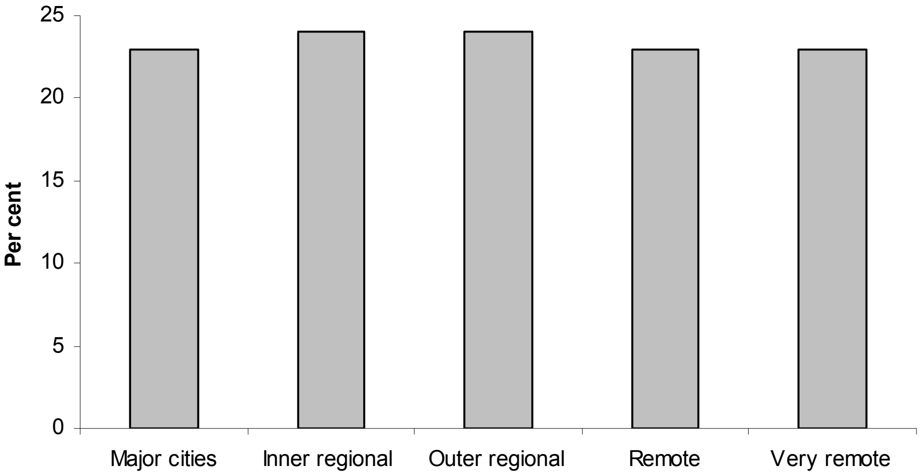
(c) Data collected for non-remote areas only in the NATSISS.

(d) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(e) Sum of components may be more than total as persons may have reported more than one type of stressor.

(f) Includes divorce or separation, serious illness or disability, serious accident, not able to get job, lost job, gambling problem and pressure to fulfil cultural responsibilities.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

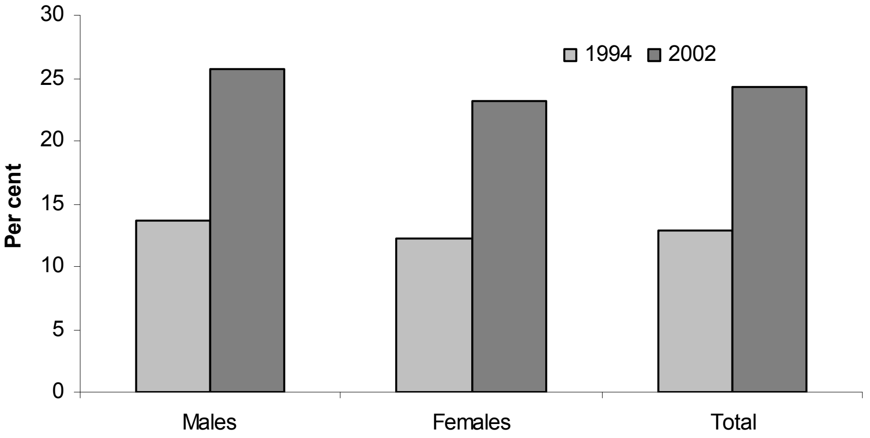


Source: ABS and AIHW analysis of 2002 NATSISS.

Figure 2.13.1: Proportion of Indigenous persons aged 18 years and over reporting they were a victim of physical or threatened violence in previous 12 months, by remoteness, 2002

Time series analyses

- A higher proportion of Indigenous persons aged 15 years and over reported being victims of physical or threatened violence in the previous 12 months in 2002 than in 1994 (24% compared with 13%) (Figure 2.13.2).



Source: ABS and AIHW analysis of 1994 National Aboriginal and Torres Strait Islander Survey and 2002 NATSISS.

Figure 2.13.2: Proportion of Indigenous persons aged 15 years and over reporting they were victims of physical or threatened violence in previous 12 months, by sex, 1994 and 2002

Victim of physical or threatened violence and witness to violence by selected health and population characteristics

- Indigenous Australians with fair/poor health, a disability or long-term health condition and in the lowest (1st) quintile of household income were more likely to have been a victim of physical or threatened violence as those with excellent health, with no disability and in the highest (5th) quintile of household income (Table 2.13.6).
- Approximately 15% of Indigenous Australians aged 18 years and over had been a witness to violence in the previous 12 months. Indigenous Australians were five times as likely as non-Indigenous Australians to have been a witness to violence. Indigenous Australians in remote areas were nine times as likely to have been a witness to violence as non-Indigenous Australians in remote areas.

Table 2.13.6: Victim of and witness to violence, by selected health and population characteristics and Indigenous status, persons aged 18 years and older, 2002

	Victim of physical or threatened violence				Witness to violence			
	Indigenous	Indigenous age-standardised	Non-Indigenous	Rate ratio	Indigenous	Indigenous age-standardised	Non-Indigenous	Rate ratio
	Proportion who were victim of physical or threatened violence				Proportion who were a witness to violence			
Self-assessed health status								
Excellent/good	20	15	9	1.7*	14	13	3	4.3*
Good	24	20	13	1.5*	17	16	4	4.0*
Fair/poor	27	29	16	1.8*	15	16	3	5.3*
Disability or long-term health condition[(a)]								
Has disability or long-term health condition	27	26	12	2.2*	12	11	4	2.8*
No disability or long-term condition	20	14	8	1.8*	7	8	2	4.0*
Household income								
1st quintile	27	24	13	1.8*	13	13	4	3.3*
5th quintile	18(d)	14(d)	9	1.6	9(d)	14(d)	2	7.0*
Index of disparity								
1st quintile	24	21	10	2.1*	18	17	4	4.3*
5th quintile	26(d)	18(d)	7	2.6*	8(d)	11(d)	2	5.5*
Financial stress—unable to raise $2,000 within a week for something important	27	23	13	1.8*	20	19	4	4.8*
Location								
Remote	23	20	7	2.9*	30	28	3	9.3*
Non-remote	23	20	9	2.2*	10	9	3	3.0*
Law and justice[(b)]								
Used legal services in last 12 months	69	n.a.	n.a.	n.a.	22	n.a.	n.a.	n.a.
Arrested by police in last 5 years	45	n.a.	n.a.	n.a.	21	n.a.	n.a.	n.a.

(continued)

Table 2.13.6 (continued): Victim of and witness to violence, by selected health and population characteristics and Indigenous status, persons aged 18 years and older, 2002

	Victim of physical or threatened violence				Witness to violence			
	Indigenous	Indigenous age-standardised	Non-Indigenous	Rate ratio	Indigenous	Indigenous age-standardised	Non-Indigenous	Rate ratio
	Proportion who were victim of physical or threatened violence				Proportion who were a witness to violence			
Incarcerated in last 5 years	43	n.a.	n.a.	n.a.	21	n.a.	n.a.	n.a.
Housing								
Owner	15	14	8	1.8*	7	15	2	7.5*
Renter	27	23	13	1.8*	19	9	4	2.3*
Dwelling has structural problems	27	24	n.a.	n.a.	23	10	n.a.	n.a.
Dwelling requires additional bedrooms[(c)]	25	21	n.a.	n.a.	26	12	n.a.	n.a.
Family and culture[(b)]								
Involved in social activities in last 3 mths	24	n.a.	n.a.	n.a.	16	n.a.	n.a.	n.a.
Had undertaken voluntary work in last 12 months	26	n.a.	n.a.	n.a.	17	n.a.	n.a.	n.a.
Able to get support in time of crisis from someone outside the household	3	n.a.	n.a.	n.a.	15	n.a.	n.a.	n.a.
Person removed from natural family	37	n.a.	n.a.	n.a.	16	n.a.	n.a.	n.a.
Relative removed from natural family	9	n.a.	n.a.	n.a.	16	n.a.	n.a.	n.a.
Currently lives in homelands	23	n.a.	n.a.	n.a.	21	n.a.	n.a.	n.a.
Attended cultural event(s) in last 12 mths	26	n.a.	n.a.	n.a.	20	n.a.	n.a.	n.a.
Total	**23**	**20**	**9**	**2.2***	**15**	**14**	**3**	**4.7***
Total number	**58,621**	**n.a.**	**1,288,673**	**n.a.**	**38,236**	**n.a.**	**373,693**	**n.a.**

(continued)

Table 2.13.6 (continued): Victim of and witness to violence, by selected health and population characteristics and Indigenous status, persons aged 18 years and older, 2002

(a) Data collected in non-remote areas only.

(b) Data collected for Indigenous Australians only.

(c) Based on Canadian National Occupancy Standard for housing appropriateness.

(d) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Neighbourhood/community problems

- In 2002, approximately 74% of Indigenous Australians aged 15 years and over reported that neighbourhood or community problems were present (Table 2.13.7).
- Dangerous or noisy driving was the most common neighbourhood/community problem reported (45%), followed by theft (43%). Problems involving youth, vandalism/graffiti/damage to property, alcohol and illegal drugs were also common problems reported.

Neighbourhood/community problems by age and sex

- The proportion of Indigenous Australians reporting neighbourhood/community problems was lowest among those aged 55 years and over (69%) (Table 2.13.7) and similar for males and females (73% and 74% respectively) (Table 2.13.8).

Table 2.13.7: Neighbourhood/community problems, Indigenous persons aged 15 years and over, by age group, 2002

	15–24	25–34	35–44	45–54 s	55 years and over	Total
				Per cent		
Neighbourhood/community problem present						
Theft	42.5	41.9	46.0	46.5	37.4	43.0
Problems involving youth	32.3	32.3	32.3	32.3	32.3	32.3
Prowlers/loiterers[(a)]	15.0	15.3	16.2	14.4	11.5	14.8
Vandalism/graffiti/damage to property	33.9	30.5	37.3	32.4	28.5	32.9
Dangerous or noisy driving[(a)]	40.4	48.6	50.5	47.0	40.2	45.4
Alcohol	35.1	33.9	36.0	31.9	26.3	33.5
Illegal drugs	35.9	31.1	34.0	31.1	23.7	32.3
Family violence	20.7	22.4	23.6	21.0	15.4	21.2
Assault	21.5	19.4	21.7	19.1	14.2	19.9
Sexual assault	9.3	7.5	8.8	7.9	5.2	8.1
Problems with your neighbours[(a)]	15.8	13.7	15.0	12.5	9.1	13.9
Levels of neighbourhood conflict	16.3	14.8	16.2	14.1	9.8	14.9
Level of personal safety day or night[(a)]	11.8	12.6	10.0	8.4	8.5	10.8
Total with neighbourhood/community problems	*73.6*	*74.3*	*75.4*	*73.4*	*68.7*	*73.6*
No neighbourhood/community problems reported	24.9	24.9	24.0	25.8	29.4	25.3
Total[(b)]	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	**82,749**	**71,139**	**57,741**	**38,375**	**32,201**	**282,205**

(a) Data collected in non-remote areas only.

(b) Includes people who did not know or state their neighbourhood/community problems.

Source: AIHW analysis of 2002 NATSISS.

Table 2.13.8: Neighbourhood/community problems, Indigenous persons aged 15 years and over, by sex, 2002

	Male	Female
	Per cent	
Neighbourhood/community problem present		
Theft	43.0	43.0
Problems involving youth	33.0	31.8
Prowlers/loiterers[(a)]	15.6	14.2
Vandalism/graffiti/damage to property	33.1	32.7
Dangerous or noisy driving[(a)]	43.8	46.9
Alcohol	33.1	33.9
Illegal drugs	32.2	32.3
Family violence	19.6	22.6
Assault	20.7	19.1
Sexual assault	7.6	8.6
Problems with your neighbours[(a)]	14.6	13.3
Levels of neighbourhood conflict	15.2	14.5
Level of personal safety day or night[(a)]	10.3	11.2
Total with neighbourhood/community problems	*72.9*	*74.1*
No neighbourhood/community problems reported	26.0	24.8
Total[(b)]	**100.0**	**100.0**
Total number	**135,199**	**147,006**

(a) Data collected in non-remote areas only.

(b) Includes people who did not know or state their neighbourhood/community problems.

Source: AIHW analysis of 2002 NATSISS.

Neighbourhood/community problems by state/territory

- Of the four states and territories for which data on neighbourhood/community problems are presented (New South Wales, Victoria, Queensland, Western Australia), Western Australia had the lowest proportion of Indigenous persons reporting neighbourhood/community problems overall (72%). Queensland had the highest proportion of Indigenous persons reporting illegal drugs, family violence, assault and sexual assault as a problem (Table 2.13.9).

Table 2.13.9: Neighbourhood/community problems, Indigenous persons aged 15 years and over, NSW, Vic, Qld and WA, 2002

	NSW	Vic	Qld	WA
		Per cent		
Neighbourhood/community problem present				
Theft	45.5	43.9	43.4	39.2
Problems involving youth	28.0	29.3	33.6	33.0
Prowlers/loiterers[(a)]	15.0	14.7	13.5	17.6
Vandalism/graffiti/damage to property	32.6	31.2	31.5	32.8
Dangerous or noisy driving[(a)]	43.1	44.6	45.6	50.6
Alcohol	30.4	23.1	36.0	35.9
Illegal drugs	31.6	28.6	35.6	30.7
Family violence	15.0	13.1	25.7	21.9
Assault	14.6	12.9	20.9	19.9
Sexual assault	6.3	5.3	12.6	7.2
Problems with your neighbours[(a)]	16.9	12.2	12.2	10.6
Levels of neighbourhood conflict	10.8	8.5	17.1	14.2
Level of personal safety day or night[(a)]	11.6	9.7	8.7	14.7
Total with neighbourhood/community problems	*75.0*	*73.2*	*74.8*	*72.3*
No neighbourhood/community problems reported	24.7	23.2	24.1	26.5
Total[(b)]	**100.0**	**100.0**	**100.0**	**100.0**
Total number	**83,585**	**36,189**	**75,975**	**15,813**

(a) Data collected in non-remote areas only.

(b) Includes people who did not know or state their neighbourhood/community problems.

Note: Data for South Australia, Northern Territory, Tasmania and Australian Capital Territory not available for publication because of survey output restrictions.

Source: AIHW analysis of 2002 NATSISS.

Neighbourhood/community problems by remoteness

- A higher proportion of Indigenous people aged 15 years and over in remote areas reported most types of neighbourhood/community problems than those in non-remote areas (Table 2.13.10).

Table 2.13.10: Neighbourhood/community problems, Indigenous persons aged 15 years and older, by remoteness, 2002

	Remote	Non-remote
	Per cent	
Neighbourhood/community problem present		
Theft	41.5	43.6
Problems involving youth	47.9	26.5
Prowlers/loiterers[(a)]	n.a.	14.8
Vandalism/graffiti/damage to property	43.5	28.9
Dangerous or noisy driving[(a)]	n.a.	45.4
Alcohol	54.1	25.8
Illegal drugs	46.1	27.1
Family violence	40.9	13.8
Assault	41.1	11.9
Sexual assault	16.7	4.8
Problems with your neighbours[(a)]	n.a.	13.9
Levels of neighbourhood conflict	30.8	8.9
Level of personal safety day or night[(a)]	n.a.	10.8
Total with neighbourhood/community problems	*74.2*	*73.3*
No neighbourhood/community problems reported	24.9	25.5
Total[(b)]	**100.0**	**100.0**
Total number	**77,100**	**205,100**

(a) Data collected in non-remote areas only.

(b) Includes people who did not know or state their neighbourhood/community problems.

Source: ABS 2004a.

Neighbourhood/community problems by selected health and population characteristics

- Indigenous Australians with a disability or long-term health condition and in the lowest (1st) quintile of household income were more likely to report family violence, assault, sexual assault or personal safety as neighbourhood/community problems than those with no disability/long-term condition and those in the highest quintile of household income (Table 2.13.11, Table 2.13.12).

Table 2.13.11: Neighbourhood/community problems, Indigenous persons aged 15 years and over, by selected health and population characteristics, 2002

	Neighbourhood/community problem reported			
	Family violence	Assault	Sexual assault	Personal safety day or night[(a)]
	Percent			
Self-assessed health status				
Excellent/good	40.1	44.8	46.4	40.6
Good	33.8	30.3	23.6	30.0
Fair/poor	25.7	24.4	30.0	29.5
Disability or long-term health condition[(b)]				
Yes	57.8	55.8	56.1	56.5
No	42.2	44.2	43.9	43.5
Household income				
1st quintile	34.5	35.3	36.3	42.6
5th quintile	2.9	2.5	2.7	3.0
Financial stress—unable to raise $2,000 within a week for something important	71.4	71.4	52.8	55.6
Location				
Remote	52.8	56.6	56.5	n.a.
Non-remote	47.2	43.4	43.5	n.a.
Law and justice				
Used legal services in last 12 months	27.1	24.7	28.4	29.6
Arrested by police in last 5 years	21.6	22.5	20.9	21.5
Incarcerated in last 5 years	9.5	9.9	6.9	7.6
Housing				
Owner	12.6	11.5	10.4	23.7
Renter	85.1	86.1	86.6	73.6
Dwelling has structural problems	58.4	59.4	61.0	49.5
Dwelling requires additional bedrooms[(c)]	88.7	88.7	88.8	84.2
Family and culture				
Involved in social activities in last 3 months	93.6	94.8	94.3	93.3
Had undertaken voluntary work in last 12 months	29.1	25.7	27.6	41.6
Able to get support in time of crisis from someone outside family	67.6	69.8	68.4	78.2
Has been removed from natural family	8.7	8.4	7.8	14.4
Relative removed from natural family	36.6	35.1	39.7	48.9
Currently lives in homelands	29.5	31.7	27.3	18.5
Attended cultural event(s) in last 12 months[(a)]	82.5	80.3	81.2	64.5
Total[(d)]	**100.0**	**100.0**	**100.0**	**100.0**
Total number	**59,731**	**56,046**	**22,849**	**22,121**

(a) Data collected in non-remote areas only.

(b) Excludes people who chose ‘not applicable’ regarding their disability status.

(c) Based on Canadian National Occupancy Standard for housing appropriateness.

(d) Includes ‘not known’ or ‘not stated’ cases.

Source: AIHW analysis of 2002 NATSISS.

Table 2.13.12: Selected health and population characteristics, Indigenous persons aged 15 years and over, by whether reported neighbourhood/community problems, 2002

	Neighbourhood/community problem reported			
	Family violence	Assault	Sexual assault	Personal safety day or night[(a)]
	Per cent			
Self-assessed health status				
Excellent/good	19.3	20.2	8.5	9.9
Good	23.3	20.8	8.2	13.0
Fair/poor	22.1	18.6	7.5	10.3
Disability or long-term health condition[(b)]				
Yes	16.8	14.0	5.8	12.9
No	11.0	9.9	4.0	8.9
Household income				
1st quintile (lowest)	20.4	19.6	8.2	12.2
5th quintile (highest)	12.5	9.9	4.4	5.4
Financial stress—unable to raise $2,000 within a week for something important	27.8	26.1	10.8	12.7
Location				
Remote	40.9	41.1	16.7	n.a.
Non-remote	13.8	11.9	4.8	n.a.
Law and justice				
Used legal services in last 12 months	28.9	24.7	11.6	15.5
Arrested by police in last 5 years	27.8	27.2	10.3	14.3
Incarcerated in last 5 years	28.4	27.8	7.9	12.5
Housing				
Owner	10.1	8.6	3.2	7.7
Renter	25.9	24.5	10.1	12.5
Dwelling has structural problems	31.3	29.8	12.5	16.4
Dwelling requires additional bedrooms[(c)]	22.9	21.5	8.8	11.4
Family and culture				
Involved in social activities in last 3 months	22.0	20.9	8.5	11.2
Had undertaken voluntary work in last 12 months	22.3	18.5	8.1	14.0
Has been removed from natural family	21.7	19.7	7.5	16.6
Relative removed from natural family	21.7	19.6	9.0	13.7
Currently lives in homelands	28.5	28.8	10.1	12.6
Attended cultural event(s) in last 12 months[(a)]	25.6	23.4	9.7	11.4

(a) Data collected in non-remote areas only.

(b) Excludes people who chose ‘not applicable’ regarding their disability status.

(c) Based on Canadian National Occupancy Standard for housing appropriateness.

Source: AIHW analysis of 2002 NATSISS.

Hospitalisations

- For the period July 2004 to June 2006, there were 9,677 hospitalisations of Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined in which assault was recorded as the principal diagnosis. This represented approximately 2.1% of total hospitalisations of Indigenous Australians in these states and territories.
- Overall, in the six states and territories combined, Indigenous Australians were hospitalised for assault at around 12 times the rate of other Australians.

Hospitalisations by age and sex

- Hospitalisation rates for assault were highest among those aged 25–34 and 35–44 years in the Indigenous population and among those aged 15–24 and 25–34 years in the other Australian population. Indigenous males aged 35–44, 45–54, 55–64 and 65 years and over were hospitalised for assault at over 10 times the rate of other males, and Indigenous females aged 25–34 and 35–44 years were hospitalised for assault at over 40 times the rate of other females (Table 2.13.13).

Table 2.13.13: Hospitalisations for principal diagnosis of assault, by Indigenous status, sex and age, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)][(b)][(c)][(d)]

	Indigenous				Other[(e)]				
	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
					Males				
0–4	73	1.2	0.9	1.5	220	0.2	0.2	0.2	6.8*
5–14	100	0.8	0.7	1.0	555	0.2	0.2	0.2	3.9*
15–24	1,204	12.7	12.0	13.4	10,142	3.8	3.7	3.9	3.3*
25–34	1,443	21.2	20.1	22.3	7,506	2.8	2.7	2.8	7.7*
35–44	1,229	22.1	20.9	23.3	4,963	1.7	1.7	1.8	12.7*
45–54	426	11.3	10.2	12.4	2,558	1.0	0.9	1.0	11.7*
55–64	101	5.1	4.1	6.1	979	0.5	0.4	0.5	10.8*
65+	27	2.4	1.5	3.3	418	0.2	0.2	0.2	12.8*
Total[(j)]	**4,603**	**10.7**	**10.4**	**11.1**	**27,343**	**1.4**	**1.4**	**1.5**	**7.5***
					Females				
0–4	98	1.7	1.4	2.1	157	0.1	0.1	0.2	12.7*
5–14	85	0.8	0.6	0.9	185	0.1	0.1	0.1	9.9*
15–24	1,252	13.6	12.9	14.4	1,405	0.5	0.5	0.6	24.8*
25–34	1,852	25.6	24.4	26.8	1,526	0.6	0.5	0.6	45.6*
35–44	1,269	20.3	19.2	21.5	1,387	0.5	0.5	0.5	42.1*
45–54	410	10.1	9.1	11.0	691	0.3	0.2	0.3	38.8*
55–64	79	3.6	2.8	4.4	266	0.1	0.1	0.1	28.1*
65+	29	2.0	1.2	2.7	248	0.1	0.1	0.1	21.9*
Total[(j)]	**5,074**	**10.9**	**10.6**	**11.3**	**5,866**	**0.3**	**0.3**	**0.3**	**35.3***
					Persons				
0–4	171	1.5	1.3	1.7	377	0.2	0.1	0.2	9.2*
5–14	185	0.8	0.7	0.9	740	0.1	0.1	0.2	5.4*
15–24	2,456	13.2	12.6	13.7	11,547	2.2	2.2	2.2	6.0*
25–34	3,295	23.5	22.7	24.3	9,032	1.7	1.6	1.7	14.1*
35–44	2,498	21.2	20.3	22.0	6,350	1.1	1.1	1.1	19.1*
45–54	836	10.7	9.9	11.4	3,249	0.6	0.6	0.6	17.4*
55–64	180	4.3	3.7	5.0	1,245	0.3	0.3	0.3	14.4*
65+	56	2.1	1.6	2.7	666	0.1	0.1	0.1	16.2*
Total[(j)]	**9,677**	**10.8**	**10.6**	**11.1**	**33,209**	**0.9**	**0.9**	**0.9**	**12.3***

(continued)

Table 2.13.13 (continued): Hospitalisations for principal diagnosis of assault, by Indigenous status, sex and age, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Excludes private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006). Causes of injury are based on the first reported external cause as ‘assault’ ICD-10-AM codes X85–Y09, where the principal diagnosis was ‘injury and poisoning’ (S00–T98).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Age-specific rate per 1,000 population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

(j) Directly age-standardised rates using the Australian 2001 standard population.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by state/territory

Table 2.13.14 presents hospitalisations for assault for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are included in the table. The Australia data are adjusted by applying a completeness factor of 89.4% which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised for assault at 12 times the rate of other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised for assault at 14 times the rate of other Australians.
- Indigenous Australians were hospitalised for assault in New South Wales and Victoria at five times the rate of other Australians, in Queensland at 8 times the rate, in South Australia at 18 times the rate, in the Northern Territory at 20 times the rate, and in Western Australia at 23 times the rate.

Table 2.13.14: Hospitalisations for principal diagnosis of assault, by Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

	Indigenous				Other(e)				
	Number	No. per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Number	No. per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Ratio(i)
NSW	1,345	4.9	4.6	5.1	11,761	0.9	0.9	0.9	5.4*
Vic	225	3.8	3.3	4.3	8,172	0.8	0.8	0.8	4.7*
Qld	2,030	7.9	7.5	8.2	7,192	0.9	0.9	1.0	8.4*
WA	2,641	19.3	18.5	20.1	3,247	0.8	0.8	0.9	23.2*
SA	821	15.1	14.0	16.2	2,477	0.9	0.8	0.9	17.7*
NT	2,615	22.4	21.5	23.4	360	1.1	1.0	1.2	19.9*
NSW, Vic, Qld, WA, SA & NT	**9,677**	**10.8**	**10.6**	**11.1**	**33,209**	**0.9**	**0.9**	**0.9**	**12.3***
Australia unadjusted(j)	9,788	10.5	10.2	10.7	35,153	0.9	0.9	0.9	11.7*
Australia adjusted(j)(k)	10,938	11.7	11.4	11.9	34,003	0.9	0.9	0.9	13.6*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(m) Data are from public and most private hospitals. Excludes private hospitals in the Northern Territory.

(n) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006). Causes of injury are based on the first reported external cause as 'assault' ICD-10-AM codes X85–Y09, where the principal diagnosis was 'injury and poisoning' (S00–T98).

(o) Financial year reporting.

(p) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(q) Includes hospitalisations of non-Indigenous patients and those for whom Indigenous status was not stated.

(r) Directly age-standardised using the Australian 2001 standard population.

(s) LCL = lower confidence limit.

(t) UCL = upper confidence limit.

(u) Rate ratio Indigenous:other.

(v) Includes Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(w) Australian hospitalisation numbers and rates have been adjusted using a national Indigenous under-identification factor of 0.89.

Note: A person can have more than one hospital episode associated with a single assault.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analyses

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards; therefore, they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australian hospitalisation for assault over the 7-year period 1998–99 to 2005–06 are presented in Table 2.13.15 and Figure 2.13.3.

- Over the period 1998–99 to 2005–06, there were significant declines in the hospitalisation rate for assault among Indigenous males and females. The fitted trend implies an average yearly decline in the rate of around 0.3 per 1,000 which is equivalent to a 12% decline in the rate over the period.
- Over the same period there were no significant changes in the hospitalisation rate for assault for other Australians.
- There were significant declines in both the hospitalisation rate ratios and rate differences between Indigenous and other Australians for assault over the period 1998–99 to 2005–06 (13%), which reflects both a relative and absolute decline in the gap between rates for Indigenous and other Australian hospitalisations from assault.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all affect the level of hospitalisation over time. Caution should be used in interpreting changes over time as it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rate at which Indigenous people are hospitalised. An increase in hospitalisations may reflect better access rather than a worsening of health.

Table 2.13.15: Age-standardised hospitalisation rates, rate ratios and rate differences for assault, Qld, WA, SA and NT, 1998–99 to 2005–06

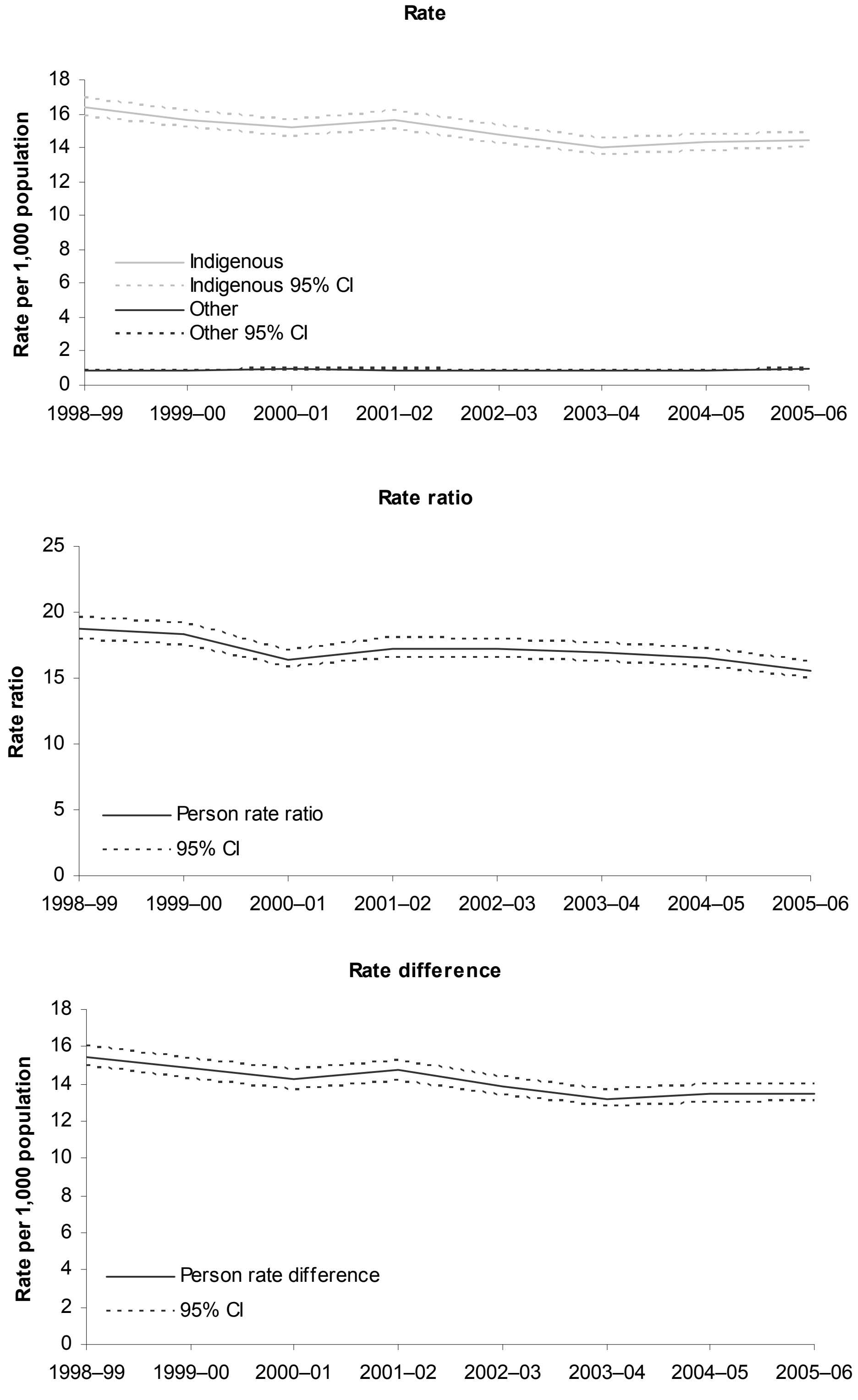
	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(a)]	% change over period[(c)]
Indigenous number per 1,000										
Males	16.2	15.3	15.2	15.8	14.6	13.6	13.6	13.8	–0.4*	–16.1
Females	16.6	16.1	15.1	15.5	15.0	14.5	15.0	15.1	–0.2*	–9.1
Persons	16.4	15.7	15.1	15.6	14.8	14.1	14.3	14.4	–0.3*	–12.4
Other Australian[(c)] number per 1,000										
Males	1.4	1.4	1.5	1.5	1.4	1.3	1.4	1.5	—	1.9
Females	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	—	–3.6
Persons	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	—	1.1
Rate ratio[(d)]										
Males	11.5	11.1	10.2	10.8	10.5	10.1	9.6	9.1	–0.3*	–17.4
Females	51.4	50.5	45.1	46.5	48.1	46.6	50.5	45.6	–0.4	–5.5
Persons	18.7	18.3	16.4	17.3	17.2	16.9	16.6	15.5	–0.4*	–13.2
Rate difference[(e)]										
Males	14.8	13.9	13.7	14.4	13.2	12.3	12.2	12.3	–0.4*	–17.8
Females	16.2	15.7	14.7	15.2	14.7	14.2	14.7	14.7	–0.2*	–9.2
Persons	15.5	14.8	14.2	14.7	13.9	13.2	13.4	13.5	–0.3*	–13.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(f) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(g) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.
(h) Includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
(i) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.
(j) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 2.13.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from assault, Qld, WA, SA and NT, 1998–99 to 2005–06

Mortality

Tables 2.13.16 and 2.13.17 present deaths from assault in Queensland, Western Australia, South Australia and the Northern Territory over the 5-year period 2002–2006.

- Over the period 2002–2006, there were 118 deaths of Indigenous people from assault (homicide) in Queensland, Western Australia, South Australia and the Northern Territory combined. This represented approximately 1.5% of total deaths of Aboriginal and Torres Strait Islander peoples in these states and territories.
- Indigenous Australians in the four states and territories combined died from assault at nine and a half times the rate of non-Indigenous Australians.

Mortality by age and sex

- Mortality rates for assault were highest among those aged 15–24, 25–34 and 35–44 years in both the Indigenous and non-Indigenous populations (Figure 2.13.4). Indigenous males in these age groups died from assault at between 5 and 16 times the rate of non-Indigenous Australians of the same age, and Indigenous females in these age groups died from assault at between 9 and 21 times the rate of non-Indigenous females of the same age (Table 2.13.16).

Table 2.13.16: Deaths from assault (homicide), by Indigenous status, sex and age, Qld, WA, SA and NT, 2002–2006[a][b][c][d][e]

	Indigenous				Non-Indigenous				
	Number	No. per 100,000[f]	LCL 95%[g]	UCL 95%[h]	Number	No. per 100,000[f]	LCL 95%[g]	UCL 95%[h]	Ratio[i]
					Males				
0–4	n.p.	n.p.	n.p.	n.p.	9	0.8	0.3	1.3	n.p.
5–14	n.p.	n.p.	n.p.	n.p.	6	0.2	0.0	0.4	n.p.
15–24	11	7.7	3.1	12.2	38	1.5	1.0	1.9	5.2*
25–34	21	19.1	11.0	27.3	39	1.5	1.0	2.0	12.7*
35–44	22	25.5	14.9	36.2	43	1.6	1.1	2.0	16.4*
45–54	5	9.0	1.1	17.0	31	1.2	0.8	1.6	7.6*
55–64	n.p.	n.p.	n.p.	n.p.	21	1.0	0.6	1.5	n.p.
65+	n.p.	n.p.	n.p.	n.p.	15	0.7	0.4	1.1	n.p.
Total[j]	**66**	**10.4**	**7.6**	**13.1**	**202**	**1.1**	**0.9**	**1.2**	**9.5***
					Females				
0–4	n.p.	n.p.	n.p.	n.p.	11	1.0	0.4	1.6	n.p.
5–14	n.p.	n.p.	n.p.	n.p.	6	0.2	0.0	0.4	n.p.
15–24	14	9.9	4.7	15.1	21	0.8	0.5	1.2	11.7*
25–34	19	16.2	8.9	23.4	20	0.8	0.4	1.1	20.7*
35–44	10	10.5	4.0	16.9	32	1.2	0.8	1.6	9.1*
45–54	n.p.	n.p.	n.p.	n.p.	17	0.7	0.3	1.0	n.p.
55–64	n.p.	n.p.	n.p.	n.p.	7	0.4	0.1	0.6	n.p.
65+	n.p.	n.p.	n.p.	n.p.	11	0.4	0.2	0.7	n.p.
Total[j]	**52**	**6.8**	**4.8**	**8.8**	**125**	**0.7**	**0.6**	**0.8**	**9.9***
					Persons				
0–4	5	2.8	0.3	5.2	20	0.9	0.5	1.3	3.2*
5–14	n.p.	n.p.	n.p.	n.p.	12	0.2	0.1	0.4	n.p.
15–24	25	8.8	5.3	12.2	59	1.2	0.9	1.5	7.5*
25–34	40	17.6	12.1	23.1	59	1.1	0.9	1.4	15.4*
35–44	32	17.6	11.5	23.7	75	1.4	1.0	1.7	13.0*
45–54	9	7.7	2.7	12.8	48	0.9	0.7	1.2	8.4*
55–64	n.p.	n.p.	n.p.	n.p.	28	0.7	0.4	1.0	n.p.
65+	n.p.	n.p.	n.p.	n.p.	26	0.6	0.3	0.8	n.p.
Total[j]	**118**	**8.5**	**6.8**	**10.1**	**327**	**0.9**	**0.8**	**1.0**	**9.5**

(continued)

Table 2.13.16 (continued): Deaths from assault (homicide), by Indigenous status, sex and age, Qld, WA, SA and NT, 2002–2006[a][b][c][d][e]

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

n.p. Not published where numbers are less than 5.

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(b) Data are presented in 5-year groupings because of small numbers each year.

(c) These data exclude a total of 15 deaths where Indigenous status was not stated.

(d) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate.

(e) Deaths are by year of registration.

(f) Age-specific rate per 100,000 population.

(g) LCL = lower confidence limit.

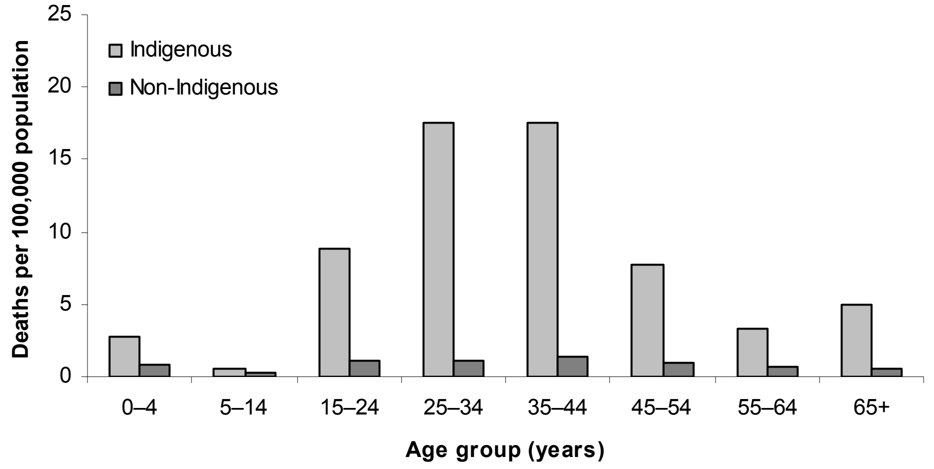
(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

(j) Total includes age not stated. Total rates have been directly age-standardised using the Australian 2001 standard population.

Note: The completeness of identification of Indigenous deaths can vary by age.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 2.13.4: Age-specific mortality rates for assault (homicide), by Indigenous status, Qld, WA, SA and NT, 2002–2006

Mortality by state/territory

- In Queensland and South Australia, Indigenous Australians died from assault at 5 and 6 times the rate of non-Indigenous Australians. In the Northern Territory and Western Australia, the rate was 9 and 14 times respectively that of non-Indigenous Australians (Table 2.13.17).

Table 2.13.17: Deaths from assault (homicide), by Indigenous status, Qld, WA, SA and NT, 2002–2006(a)(b)(c)(d)

	Indigenous				Non-Indigenous				
	Number	No. per 100,000(e)	LCL 95%(f)	UCL 95%(g)	Number	No. per 100,000(e)	LCL 95%(f)	UCL 95%(g)	Ratio(h)
Qld	28	4.5	2.7	6.2	168	0.9	0.8	1.0	5.0*
WA	30	9.7	5.9	13.4	67	0.7	0.5	0.9	13.9*
SA	7	6.1	1.2	11.0	77	1.0	0.8	1.3	5.9*
NT	53	16.4	11.6	21.3	15	1.8	0.9	2.8	9.0*
Qld, WA, SA, NT (i)	**118**	**8.5**	**6.8**	**10.1**	**327**	**0.9**	**0.8**	**1.0**	**9.5***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(j) Data are presented in 5-year groupings because of small numbers each year.

(k) These data exclude a total of 15 deaths where Indigenous status was not stated.

(l) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate.

(m) Deaths are by year of registration.

(n) Directly age-standardised using the Australian 2001 standard population.

(o) LCL = lower confidence limit.

(p) UCL = upper confidence limit.

(q) Rate ratio Indigenous:non-Indigenous.

(r) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure. The ABS calculated the completeness of identification of Indigenous deaths for the period 2002–2006 using population estimates as 51% for Queensland, 72% for Western Australia, 62% for South Australia and 90% for the Northern Territory. The completeness of Indigenous identification for avoidable deaths may differ from the estimates for all causes.

Source: AIHW analysis of National Mortality Database.

Time series analyses

Longer term mortality trend data are limited to three jurisdictions—Western Australia, South Australia and the Northern Territory, which have over 10 years of reasonable coverage of Indigenous deaths in their recording systems.

There is a consistent time series of population estimates from 1991. Because of changes in the classification and coding of causes of death from ICD-9 (used up until 1996) to ICD-10 (used from 1997 onwards) which affect the comparability of the data, the analysis reported for this indicator has been done for two time periods—1991–1996 and 1997–2006. Data are presented in 3-year or 4-year groupings because of low numbers of deaths from assault each year.

Because of the late inclusion of a 'not stated' category of Indigenous status in 1998 (before which 'not stated' responses were included with non-Indigenous deaths), Indigenous mortality rates have been compared with the mortality rates of other Australians (which include deaths of both non-Indigenous people and deaths for which Indigenous status was not stated).

Mortality rates, rate ratios and rate differences between Indigenous and other Australians for assault over the period 1991–1993 to 1994–1996 and 1997–1999 to 2004–2006 are presented in Table 2.13.18 and Figure 2.13.5.

- Over the period 1991–1993 to 1994–1996, there were non-significant declines in recorded mortality for assault for Indigenous Australians in Western Australia, South Australia and the Northern Territory combined. Over the same period there were non-significant increases in mortality rates for assault for other Australians.

- Over the period 1997–1999 to 2004–2006, there were non-significant increases in the mortality rates from assault for Indigenous Australians and significant declines in mortality rates from assault for other Australians over this period.

Fluctuations in the level of Indigenous mortality over time partly reflect changing levels of coverage of Indigenous deaths and population estimates. Given the volatility in the measures of Indigenous mortality, caution should be exercised in assessing trends in Indigenous mortality over time and comparisons between jurisdictions and with the non-Indigenous population.

Table 2.13.18: Age-standardised mortality rates, rate ratios and rate differences for deaths from assault (homicide), WA, SA and NT, 1991–1993 to 1994–1996 and 1997–1999 to 2004–2006

	Deaths		No. per 100,000[(a)]			
	Indigenous	Other[(b)]	Indigenous	Other[(b)]	Rate ratio[(c)]	Rate difference[(d)]
1991–1996						
1991–1993	78	147	23.2	1.5	15.0	21.7
1994–1996	66	171	18.1	1.7	10.6	16.4
Difference in rates[(e)]	. .	. .	–5.1	0.2	. .	. .
1997–2006						
1997–1999	39	156	9.5	1.5	6.2	7.9
2000–2003	101	171	18.3	1.2	14.9	17.1
2004–2006	47	88	10.9	0.8	13.5	10.1
Annual change[(f)]	. .	. .	0.2	–0.1*	1.1	0.3
% change over period[(g)]	. .	. .	20.0	–60.8	153.3	35.6

* Represents statistically significant differences at the $p < 0.05$ level over the periods 1991–1993 to 1994–1996 and 1997–1999 to 2004–2006.

(h) Directly age-standardised using the Australian 2001 standard population.

(i) Includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(j) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(k) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

(l) Mortality rate for 1994–1996 minus mortality rate for 1991–1993.

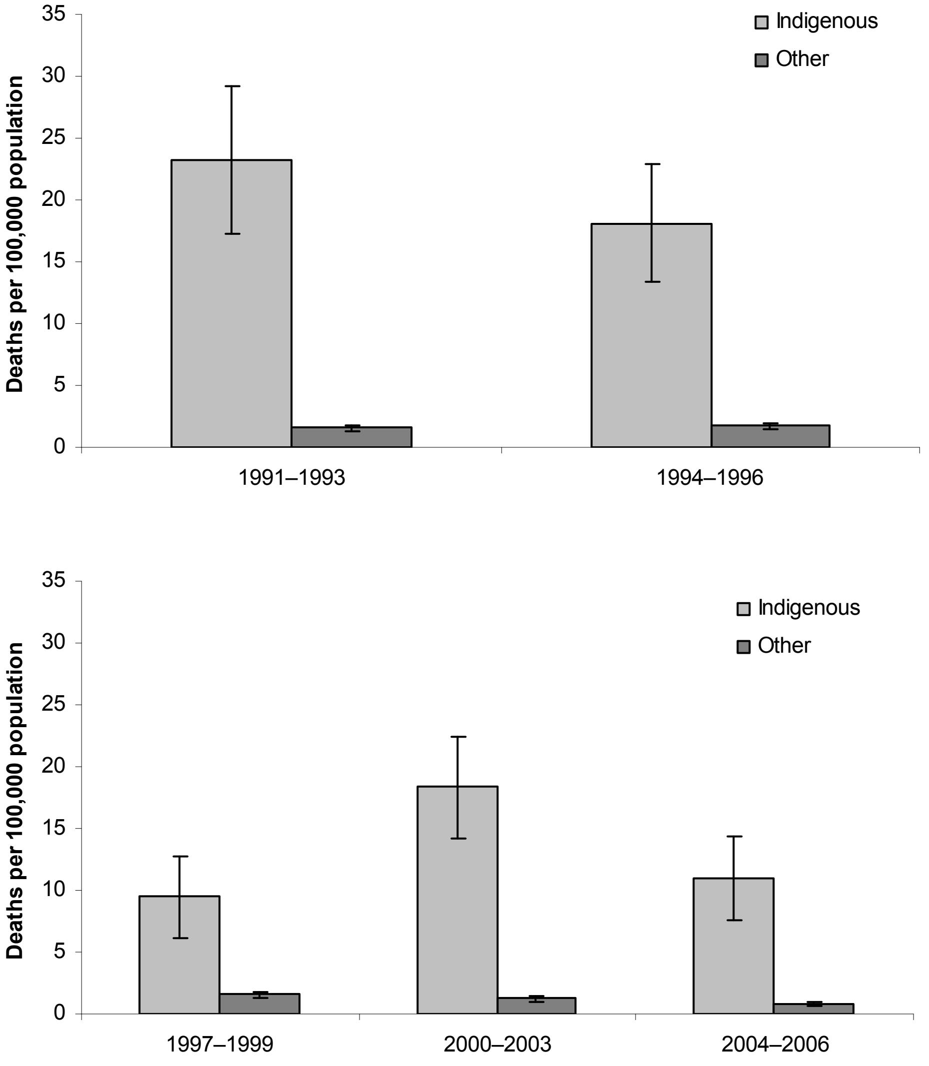
(m) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(n) Per cent change between 1997 and 2006 based on the average annual change over the period.

Notes

4. Data are presented in 3-year and 4-year groupings because of the small number of Indigenous deaths from assault each year.
5. The completeness of identification of Indigenous deaths can vary by age.
6. Deaths and rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.



Note: Because of coding changes from 1CD–9 to ICD–10 between 1996 and 1997, data from 1991–1996 cannot be strictly compared with data from 1997 onwards.

Source: AIHW analysis of National Mortality Database.

Figure 2.13.5: Age-standardised mortality rates from assault (homicide), by Indigenous status, 1991–1993 to 1994–1996 and 1997–1999 to 2004–2006

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous Australians in Table 2.13.19 and Figure 2.13.6. Data are presented in 2- or 3-year groupings because of low numbers of deaths from assault each year. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

- Over the period 1998–1999 to 2004–2006, there were non-significant declines in recorded mortality rates in Queensland, Western Australia, South Australia and the Northern Territory combined for Indigenous Australians.
- Over the same period, there were significant declines in recorded mortality rates for non-Indigenous males, females and persons in the four jurisdictions (64% decrease).
- There was a significant decrease in the mortality rate ratios between Indigenous and non-Indigenous Australians over the period 1998–1999 to 2004–2006 (12% decrease), and no significant changes in the mortality rate differences over the same period.

Table 2.13.19: Age-standardised mortality rates, rate ratios and rate differences for deaths from assault (homicide), Qld, WA, SA and NT, 1998–2006

	1998–1999	2000–2001	2002–2003	2004–2006	Annual change[(a)]	% change[(b)]
Indigenous deaths per 100,000[(c)]						
Males	12.4	18.9	13.8	8.1	–0.9	–56.6
Females	9.6	14.1	7.7	6.2	–0.8	–65.4
Persons	10.9	16.6	10.7	7.1	–0.8	–61.7
Non-Indigenous deaths per 100,000[(d)]						
Males	1.8	1.7	1.6	0.8	–0.2*	–66.4
Females	1.1	1.0	0.9	0.5	–0.1*	–58.5
Persons	1.5	1.3	1.2	0.7	–0.1*	–63.8
Rate ratio[(e)]						
Males	6.7	11.4	8.9	10.1	0.4	42.1
Females	9.1	14.7	8.3	11.9	0.1	8.2
Persons	7.5	12.7	8.6	10.7	–0.1*	–12.4
Rate difference[(f)]						
Males	10.5	17.2	12.2	7.3	–0.7	–54.9
Females	8.6	13.2	6.8	5.7	–0.7	–66.2
Persons	9.4	15.3	9.4	6.4	–0.7	–61.3

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–1999 to 2004–2006.

(g) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(h) Per cent change between 1998 and 2006 based on the average annual change over the period.

(i) Rates have been directly age-standardised using the 2001 Australian standard population.

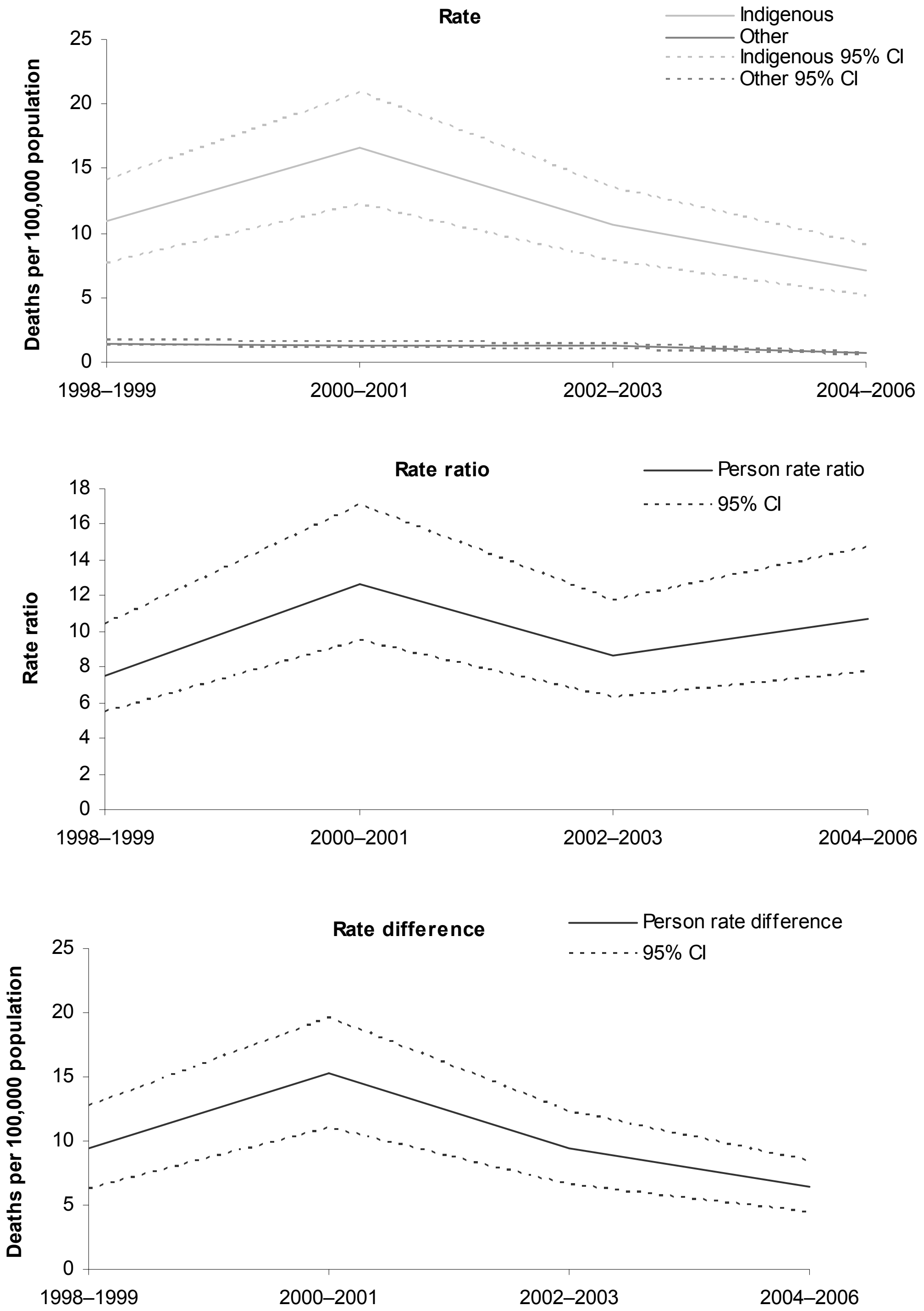
(j) Excludes deaths of those for whom Indigenous status was not stated.

(k) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(l) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Note: Data are presented in 3-year and 4-year groupings because of the small number of Indigenous deaths from assault each year.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 2.13.6: Mortality rates, rate ratios and rate differences for deaths from assault (homicide) between Indigenous and non-Indigenous Australians, Qld, WA, SA and NT, 1998–1999 to 2004–2006

Victims of homicide

The National Homicide Monitoring Program collects data on all homicides recorded in Australia. Data for the 5-year periods 1994–95 to 1998–99 and 2001–02 to 2005–06 are presented in Table 2.13.20.

- Over the 5-year period 2001–02 to 2005–06, there were 216 Indigenous victims of homicide recorded, which was higher than the number recorded for the period 1994–95 to 1998–99 (196).
- Indigenous victims represented 14% of total victims of homicide over the period 2001–02 to 2005–06 compared with 12% over the period 1994–95 to 1998–99.
- For approximately 43% of homicides in the period 2001–02 to 2005–06 in which the victim was Indigenous, the homicide involved a male offender and a male victim, and for 34% the homicide involved a male offender and a female victim.
- For approximately 83% of homicides in the period 2001–02 to 2005–06 where the victim was Indigenous, both the offender and the victim were not working. This compared with 41% of homicides where the victim was non-Indigenous.
- Domestic altercation was the most common circumstance surrounding homicides in the period 2001–02 to 2005–06 in which the victim was Indigenous (37%). Alcohol-related arguments surrounded 22% of homicides where the victim was Indigenous. The most common circumstance surrounding homicides in which the victim was non-Indigenous was other arguments (other than domestic or alcohol-related) (41%).
- For approximately 63% of homicides in which the victim was Indigenous, the homicide involved intimate partners or other family members and for 27% the homicide involved friends and acquaintances. The corresponding proportions for homicides involving non-Indigenous victims were 45% and 31% respectively.

Table 2.13.20: Victims of homicide for all jurisdictions where data are available, by Indigenous status, with selected data on circumstances surrounding the homicide, 1994–95 to 1998–99 and 2001–02 to 2005–06

	1994–95 to 1998–99[(a)]						2001–02 to 2005–06[(a)]					
	Indigenous victims		Non-Indigenous victims		Total victims[(b)]		Indigenous victims		Non-Indigenous victims		Total victims[(b)]	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sex[(c)]												
Male offender/male victim	79	41	733	55	812	53	89	43	670	54	759	52
Male offender/female victim	73	38	408	31	481	32	69	34	390	31	459	32
Female offender/male victim	34	18	139	10	173	11	40	20	127	10	167	12
Female offender/female victim	6	3	48	4	54	4	7	3	56	5	63	4
Total	**192**	**100**	**1,328**	**100**	**1,520**	**100**	**205**	**100**	**1,243**	**100**	**1,448**	**100**
Employment status[(c)]												
Offender & victim both working	3	2	133	13	136	12	5	3	208	22	213	19
Neither working	135	85	516	51	651	55	134	83	394	41	528	47
Offender working only	11	7	139	14	150	13	10	6	156	16	166	15
victim working only	9	6	228	22	237	20	12	7	202	21	214	19
Total	**158**	**100**	**1,016**	**100**	**1,174**	**100**	**161**	**100**	**960**	**100**	**1,121**	**100**
Circumstance												
Domestic altercation	76	39	354	24	430	26	79	37	367	27	446	28
Alcohol-related argument	53	27	111	8	164	10	48	22	116	9	164	10
Other argument	40	20	709	48	749	45	49	23	549	41	598	38
No apparent motive/unknown	27	14	296	20	323	19	40	19	318	24	358	23
Total	**196**	**100**	**1,470**	**100**	**1,666**	**100**	**216**	**100**	**1,350**	**100**	**1,566**	**100**

(continued)

Table 2.13.20 (continued): Victims of homicide for all jurisdictions where data are available by Indigenous status, with selected data on circumstances surrounding the homicide, 1994–95 to 1998–99 and 1999–2000 to 2003–04

	1994–95 to 1998–99[(a)]						2001–02 to 2005–06[(a)]					
	Indigenous victims		Non-Indigenous victims		Total victims[(b)]		Indigenous victims		Non-Indigenous victims		Total victims[(c)]	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Victim–offender relationship[(d)]												
Intimate partners and other family	111	59	509	40	620	42	128	63	529	45	657	47
Friends & acquaintances	60	32	427	34	487	33	54	27	367	31	421	30
Strangers	6	3	249	20	255	17	16	8	207	18	223	16
Other relationship	10	5	79	6	89	6	1	0	63	5	64	5
Unknown	1	1	7	1	8	1	3	1	16	1	19	1
Total	**188**	**100**	**1,271**	**100**	**1,459**	**100**	**202**	**100**	**1,182**	**100**	**1,384**	**100**
Total[(b)]	**196**	**12**	**1,470**	**88**	**1,666**	**100**	**216**	**14**	**1,350**	**86**	**1,566**	**100**

(a) Where an offender has been identified.

(b) Excludes victims where racial appearance, sex, employment status, circumstances or victim–offender relationship data were unknown.

(c) Where more than one offender, victim counted twice across categories if multiple offenders were of different sex or different employment status.

(d) Refers only to relationship between victim and first offender, where identified.

Source: AIHW analysis of Australian Institute of Criminology, National Homicide Monitoring Program, 1989–2006 data.

Data quality issues

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSISS uses the standard Indigenous status question. The NATSISS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problems inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSISS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions (ABS 2004a).

Non-Indigenous comparisons are available through the General Social Survey. Time series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSISS data quality issues can be found in the 2002 NATSISS publication (ABS 2004a).

Community safety and family violence data

The sensitive nature of many of the issues surrounding community safety could also influence responses to these questions. Any data that are self-reported are likely to underestimate circumstances in which the respondent may feel frightened or ashamed or be unwilling to admit to the data collector, such as experience of family violence involvement with the police. Any such self-reported figures are likely to underestimate the occurrence of the circumstance in question.

In addition, the NATSISS question on 'family violence' does not directly measure experience of family violence, because it asks about whether certain issues are a problem in the neighbourhood/community. However, these data do provide useful information about the social setting for family violence.

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery. In terms of mental health service delivery, there are a number of different service delivery models ranging from ambulatory care in community mental health services and hospitals to non-ambulatory care in hospitals and residential services.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

(continued)

Data quality issues (continued)

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data. It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009 *(ABS 2004b).*

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

(continued)

Data quality issues (continued)

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are under-estimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all states and territory registration systems, four jurisdictions (Queensland, South Australia, Western Australia and the Northern Territory) have been assessed by the ABS and AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (South Australia, Western Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007).

Note that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death. There are also current concerns about data quality for causes of death especially relating to external causes of death to all Australians (not just Indigenous) (ABS 2006).

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009 *(ABS 2004b).*

Cause of death coding

Causes of death based on the tenth revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia from 1 January 1997.

National Homicide Monitoring Program (NHMP)

The NHMP was established in 1990 and reports annually by financial year on all homicides recorded in Australia. The Indigenous status of the victim is based on police identification of 'racial appearance', and therefore will underestimate the level of homicide involving Indigenous persons. In addition, data for Victoria, Tasmania and the Australian Capital Territory are not reported. Nevertheless, the NHMP includes useful information on the circumstances surrounding homicides involving Indigenous persons.

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2.14 Contact with criminal justice system

The prevalence of Aboriginal and Torres Strait Islander peoples in prison custody, other contact with the criminal justice system, including police custody and juvenile justice, and relationships with health and social factors

Data sources

Data for this measure come from the ABS National Prison Census, National Policy Custody Survey, the Australian Institute of Criminology (AIC) National Deaths in Custody Program annual report, AIHW Juvenile Justice National Minimum Data Set, the ABS National Aboriginal and Torres Strait Islander Social Survey and the AIC Drug Use Monitoring in Australia survey.

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

National Prison Census

The ABS collects data from administrative records on persons in prison custody on 30 June each year in all jurisdictions. This Census includes all prisoners in adult corrective services, but not persons in juvenile institutions, psychiatric care or police custody. The Census collects information on the number of people in custody, legal status (sentenced or unsentenced), prior imprisonment, the most serious offence committed and length of sentence.

Most jurisdictions collect Indigenous status information from individual prisoners. It is uncommon for corrective services agencies to collect indigenous status from anyone other than the prisoner themselves. The accuracy of this data has not been assessed.

National Police Custody Survey

The latest National Police Custody Survey conducted in 2002 collected information on the numbers of people who passed through police custody (as opposed to custody in the prison system) in the month of October 2002 in all jurisdictions. Survey findings are reported on: how many people go into and out of police cells over the course of one month; why people are placed in police custody; the types of offences associated with police custody; the length of time that people are in police custody; the proportions of incidents in which Indigenous people are involved; rates of Indigenous and non-Indigenous custody per population; and whether these patterns change over time.

The Indigenous status of the victim or perpetrator or both is based on police identification.

There are some inconsistencies in the method of data collection between jurisdictions and thus care should be taken in comparing data between states and territories.

Deaths in custody in Australia: National Deaths in Custody Program annual report

As a requirement of the Deaths in Custody Royal Commission, the Australian Institute of Criminology (AIC) collects data on deaths in custody each year for all jurisdictions. Data collected include custodial authority (police, prison, juvenile justice/welfare), legal status (sentenced or unsentenced), cause of death, manner of death, location of death, most serious offence.

Indigenous status is determined by previous self-identification to prison authorities.

Drug Use Monitoring in Australia (DUMA) survey

DUMA is an annual survey which has been conducted by the AIC since 1999 at some locations across Australia. The survey reports on drug use among police detainees at nine police stations in metropolitan areas in Australia. The survey is by a voluntary questionnaire and drug use is confirmed by a urine sample provided by the detainee.

The survey is conducted at police stations in selected metropolitan areas and does not provide regional coverage. The number of detainees questioned is quite low and thus includes a very small Indigenous sample.

The Indigenous status of the detainee is established by the following question: 'What is your ethnic background?' (if the respondent mentions 'Australian' but not 'Aboriginal', prompt: 'Do you consider yourself an Aboriginal or Torres Strait Islander?').

Analysis is presented by state/territory, as the figures do not permit national coverage.

Juvenile Justice National Minimum Data Set

The Juvenile Justice National Minimum Data Set is held by the AIHW and contains data on young people under juvenile justice supervision, juvenile justice episodes and juvenile justice centres.

These data, which include both community-based and detention-based supervision, are collected by the AIHW from the departments in each state and territory with particular responsibility for juvenile justice. Data are available by financial year from 2000–01.

The standard ABS question on Indigenous status is included in this National Minimum Data Set.

Data analyses

People in prison custody

Data on Indigenous people in prison custody come from the ABS National Prison Census which collected information about persons held in Australian prisons on the night of 30 June 2007. These data are published in the ABS publication *Prisoners in Australia 2007* (ABS 2007).

- As at 30 June 2007, there were 6,630 Indigenous prisoners (6,623 aged 18 years and over) recorded in the National Prison Census (Table 2.14.1). Indigenous prisoners represented approximately 24% of the total prisoner population.

- After adjusting for differences in age structure, the age-standardised rate of imprisonment for Indigenous prisoners was 1,787 per 100,000 adult population compared with 134 per 100,000 adult population for non-Indigenous prisoners, making Indigenous prisoners more than 13 times more likely than non-Indigenous persons to be in prison at 30 June 2007 (Table 2.14.2).
- Indigenous Australians were imprisoned at a rate of 2,256 per 100,000.

People in prison custody by age and sex

- The median age of Indigenous prisoners was 31 years compared with 34 years for non-Indigenous prisoners (Table 2.14.1).
- Imprisonment rates were highest among those aged 25–29 and 30–34 in the Indigenous and non-Indigenous populations.
- Approximately 91% of Indigenous prisoners were male, and only 9% were female. Imprisonment rates were much higher for Indigenous males than Indigenous females (4,231 per 100,000 compared with 405 per 100,000).

Table 2.14.1: People in prison custody, by Indigenous status, sex and age group, as at 30 June 2007

Age group (years)	Males			Females			Persons		
	No.	%	Rate[(a)]	No.	%	Rate[(a)]	No.	%	Rate[(a)]
				Indigenous					
Under 18	7	0.1	6.2	—	—	—	7	0.1	3.2
18	106	1.8	1,861.3	4	0.7	72.9	110	1.7	984.0
19	201	3.3	3,674.6	18	2.9	339.2	219	3.3	2,032.1
20–24	1,305	21.7	5,380.6	148	24.1	622.9	1,453	21.9	3,026.2
25–29	1,261	21.0	6,707.1	142	23.1	742.3	1,403	21.2	3,698.7
30–34	1,165	19.4	6,786.3	116	18.9	623.2	1,281	19.3	3,580.1
35–39	900	15.0	5,467.1	88	14.3	476.0	988	14.9	2,826.8
40–44	559	9.3	4,017.8	57	9.3	361.6	616	9.3	2,075.8
45–49	308	5.1	2,571.0	25	4.1	189.3	333	5.0	1,322.1
50–54	115	1.9	1,260.7	8	1.3	81.0	123	1.9	647.5
55–59	46	0.8	663.9	6	1.0	78.8	52	0.8	357.5
60–64	22	0.4	495.6	3	0.5	62.3	24	0.4	259.3
65 and over	21	0.3	333.3	—	—	—	21	0.3	146.0
Total[(b)]	**6,016**	**100.0**	**4,230.6**	**614**	**100.0**	**404.6**	**6,630**	**100.0**	**2,255.5**
Mean age	31.8	. .	. .	31.5	. .	. .	31.8	. .	. .
Median age	30.6	. .	. .	29.9	. .	. .	30.5	. .	. .
				Non-Indigenous					
Under 18	20	0.1	0.9	—	—	—	21	0.1	0.4
18	133	0.7	99.5	10	0.7	7.1	143	0.7	51.9
19	296	1.6	220.1	11	0.8	7.8	307	1.5	111.2
20–24	2,814	14.8	397.9	148	11.0	20.2	2,962	14.5	205.5
25–29	3,496	18.4	504.3	271	20.2	38.4	3,767	18.5	269.2
30–34	3,408	17.9	471.1	242	18.0	33.7	3,650	17.9	253.3
35–39	2,982	15.7	388.8	241	18.0	31.9	3,223	15.8	211.7
40–44	2,127	11.2	282.5	174	13.0	23.4	2,301	11.3	153.9
45–49	1,487	7.8	197.5	106	7.9	14.4	1,593	7.8	106.8
50–54	911	4.8	132.9	69	5.1	10.2	980	4.8	71.9
55–59	645	3.4	102.6	45	3.4	7.2	690	3.4	55.0
60–64	359	1.9	69.6	15	1.1	2.9	374	1.8	36.1
65 and over	367	1.9	24.5	9	0.7	0.7	376	1.8	13.8
Total[(b)]	**19,045**	**100.0**	**237.5**	**1,342**	**100.0**	**17.3**	**20,387**	**100.0**	**129.2**
Mean age	35.9	. .	. .	35.9	. .	. .	35.9	. .	. .
Median age	34	. .	. .	34.6	. .	. .	34.1	. .	. .

(continued)

Table 2.14.1 (continued): People in prison custody, by Indigenous status, sex and age group, as at 30 June 2007

Age group (years)	Males			Females			Persons		
	No.	%	Rate(a)	No.	%	Rate(a)	No.	%	Rate(a)
Total(c)									
Under 18	27	0.1	1.1	3	0.2	0.1	28	0.1	0.6
18	248	1.0	177.9	14	0.7	9.5	262	1.0	91.4
19	503	2.0	359.4	31	1.6	21.1	534	2.0	186.1
20–24	4,157	16.5	568.4	301	15.2	39.7	4,458	16.4	299.4
25–29	4,788	19.0	672.4	418	21.1	57.6	5,206	19.1	362.2
30–34	4,595	18.2	620.4	361	18.2	49.0	4,956	18.2	335.5
35–39	3,904	15.5	498.4	334	16.8	43.1	4,238	15.6	272.1
40–44	2,703	10.7	352.4	234	11.8	30.9	2,937	10.8	192.6
45–49	1,818	7.2	237.7	134	6.8	17.8	1,952	7.2	128.7
50–54	1,034	4.1	148.9	78	3.9	11.3	1,112	4.1	80.5
55–59	691	2.7	108.8	52	2.6	8.2	743	2.7	58.5
60–64	382	1.5	73.4	17	0.9	3.2	399	1.5	38.2
65 and over	390	1.5	26.0	9	0.5	0.7	399	1.5	14.6
Total(b)	**25,240**	**100.0**	**309.3**	**1,984**	**100.0**	**25.1**	**27,224**	**100.0**	**169.4**
Mean age	34.9	. .	. .	34.4	. .	. .	34.9	. .	. .
Median age	33.1	. .	. .	33.2	. .	. .	33.1	. .	. .

(a) Number per 100,000 population.

(b) Number per 100,000 adult population.

(c) Includes prisoners whose Indigenous status is unknown.

Source: ABS 2007.

People in prison custody by state/territory

- The proportion of prisoners who were Indigenous was highest in the Northern Territory (84%) and lowest in Victoria (6%).
- Western Australia and South Australia recorded the highest age-standardised ratios of Indigenous to non-Indigenous rates of imprisonment, with Indigenous persons being 21 and 15 times as likely to be in prison as non-Indigenous Australians in these jurisdictions respectively (Table 2.14.2).

Table 2.14.2: People in prison custody, by Indigenous status, sex and state/territory, 30 June 2007

	Indigenous					Non-Indigenous					
	Number					Number					
	Males	Females	Persons(a)	Crude rate(b)	Age-standardised rate(c)	Males	Females	Persons(a)	Crude rate(b)	Age-standardised rate(c)	Age-standardised rate ratio(d)
NSW(e)	1,823	227	2,049	2,467.4	1,987.7	7,410	529	7,939	155.0	161.8	12.3
Vic	222	19	238	1,288.5	999.5	3,706	242	3,945	99.1	100.8	9.9
Qld	1,343	111	1,454	1,761.4	1,405.4	3,815	299	4,113	132.0	136.1	10.3
WA	1,468	182	1,652	3,886.2	3,077.2	2,051	144	2,195	141.8	146.1	21.1
SA	359	28	389	2334.7	1,839.5	1,289	90	1,379	113.6	124.9	14.7
Tas	53	6	67	632.7	521.1	433	20	454	124.4	140.6	3.7
ACT(f)	16	—	20	774.9	672.8	201	18	217	83.8	80.5	8.4
NT	727	35	761	2,046.6	1,602.9	137	6	145	126.1	117.0	13.7
Aust	**6,016**	**614**	**6,630**	**2,255.5**	**1,786.7**	**19,045**	**1,342**	**20,387**	**129.2**	**133.5**	**13.4**

* Represents significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes sex not stated.

(b) Number per 100,000 adult population.

(c) Number per 100,000 adult population directly age standardised to 2001 Australian standard population.

(d) The ratio of Indigenous to non-Indigenous imprisonment is calculated by dividing the Indigenous age-standardised rate by the non-Indigenous age-standardised rate.

(e) Numbers and rates for New South Wales exclude ACT prisoners held in New South Wales.

(f) Rates for Australian Capital Territory include ACT prisoners held in New South Wales as well as ACT prisoners held in the Australian Capital Territory.

Source: ABS 2007.

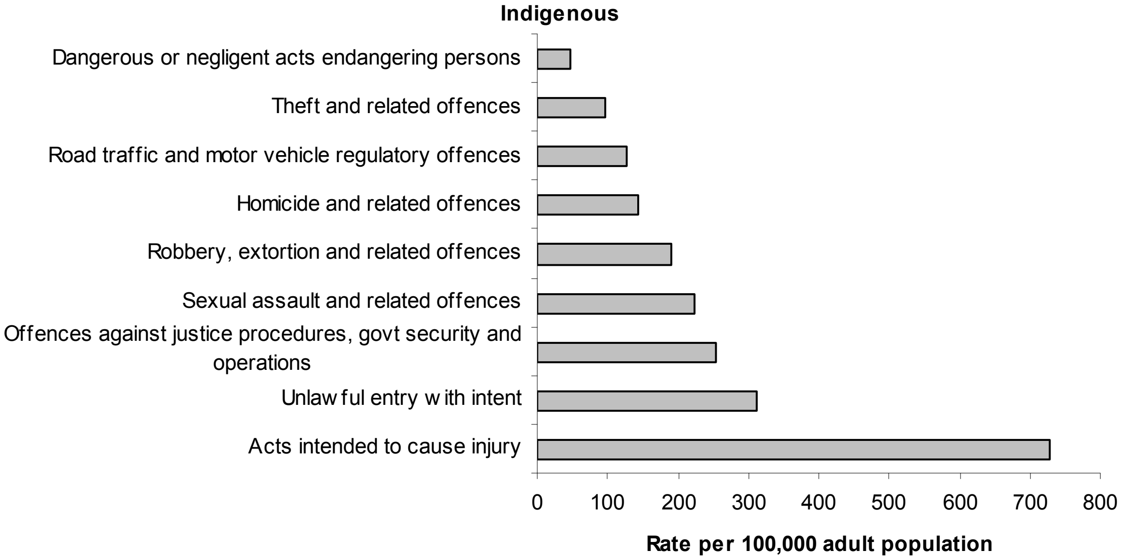
People in prison custody by legal status and most serious offence/charge

- As at 30 June 2007, approximately 77% of Indigenous and 78% of non-Indigenous people in prison custody were sentenced to prison (Table 2.14.3).
- Around one-third (32%) of all Indigenous people in prison custody were charged with acts intended to cause injury as the most serious offence. This offence accounted for 14% of non-Indigenous people in prison custody (Table 2.14.3).
- Unlawful entry was recorded as the most serious offence for 14% of Indigenous people in prison custody and 11% of non-Indigenous people in prison custody. Offences against justice procedures, government security and operations were the most serious offence for 11% of Indigenous prisoners and 8% of non-Indigenous prisoners. A higher proportion of non-Indigenous people in prison custody were charged with illicit drug offences as their most serious charge (13%) compared with Indigenous people in prison custody (2%).
- Indigenous Australians were taken into prison custody for acts intended to cause injury and unlawful entry with intent at rates of 727 and 312 per 100,000 adult population respectively (Figure 2.14.1a).
- Non-Indigenous Australians were taken into prison custody for acts intended to cause injury and unlawful entry with intent at rates of 18 and 15 per 100,000 adult population respectively (Figure 2.14.1b).

Table 2.14.3: People in prison custody, by Indigenous status, legal status and most serious offence/charge, 30 June 2007

	Indigenous		Non-Indigenous	
	No.	%	No.	%
Legal status				
Sentenced	5,100	76.9	15,984	78.4
Unsentenced	1,530	23.1	4,403	21.6
Most serious offence/charge				
Acts intended to cause injury	2,138	32.2	2,869	14.1
Unlawful entry with intent	916	13.8	2,329	11.4
Offences against justice procedures, govt security and operations	749	11.3	1,629	8.0
Sexual assault and related offences	660	10.0	2,443	12.0
Robbery, extortion and related offences	558	8.4	1,995	9.8
Homicide and related offences	422	6.4	2,218	10.9
Road traffic and motor vehicle regulatory offences	370	5.6	1,042	5.1
Theft and related offences	284	4.3	1,220	6.0
Dangerous or negligent acts endangering persons	139	2.1	239	1.2
Illicit drug offences	100	1.5	2,569	12.6
Property damage and environmental pollution	88	1.3	273	1.3
Deception and related offences	54	0.8	821	4.0
Public order offences	47	0.7	188	0.9
Abduction and related offences	36	0.5	175	0.9
Weapons and explosives offences	30	0.5	180	0.9
Miscellaneous offences	39	0.6	171	0.8
Total	**6,630**	**100.0**	**20,387**	**100.0**

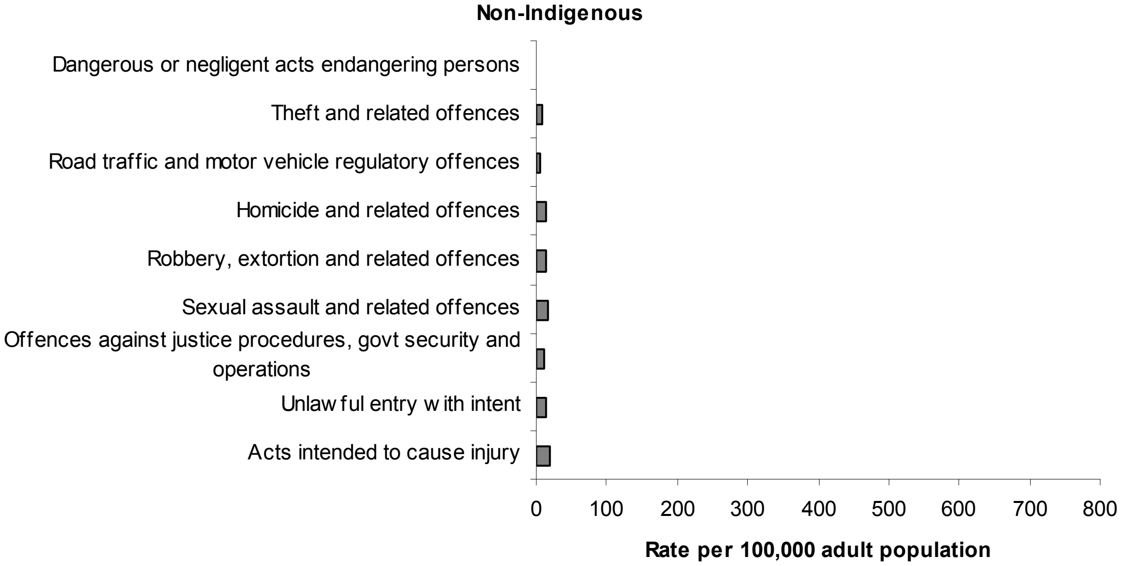
Source: ABS 2007.



Note: Rates (number per 100,000 adult population) have not been age-standardised.

Source: AIHW analysis of ABS 2007.

Figure 2.14.1a: Most serious offence/charge, crude rates, Indigenous adults, 30 June 2007



Note: Rates (number per 100,000 adult population) have not been age-standardised.

Source: AIHW analysis of ABS 2007.

Figure 2.14.1b: Most serious offence/charge, crude rates, non-Indigenous adults, 30 June 2007

People in prison custody by sentence length

- As at 30 June 2007, the median sentence length for Indigenous sentenced prisoners was 24 months. The longest median sentence lengths were for homicide and related offences (113 months, or 9 years), sexual assault and related offences (84 months, or 7 years) and abduction and related offences (72 months, or 6 years) (Table 2.14.4).
- The mean (64 months) and median (42 months) sentence lengths for non-Indigenous sentenced prisoners was longer than those for Indigenous sentenced prisoners (44 months and 24 months, respectively) (ABS 2007).
- The mean (5.5 months) and median (3.1 months) time on remand for non-Indigenous unsentenced prisoners was longer than for Indigenous unsentenced prisoners (4.2 months and 2.2 months, respectively) (ABS 2007).

Table 2.14.4: Number of Indigenous sentenced prisoners, by sentence length(a) and most serious offence, 30 June 2007

Most serious offence	Periodic detention	<3 months	3 to <6 months	6 to <12 months	1 to <2 years	2 to <5 years	5 to <10 years	10 to <15 years	15 to <20 years	20+ years	Life	Other	Total	Total (%)	Mean(b) (months)	Median(b) (months)
Homicide and related offences	—	—	—	—	5	15	96	34	37	32	109	9	337	6.6	141.7	112.7
Acts intended to cause injury	25	95	115	208	461	391	135	21	10	3	3	8	1,475	29.0	27.8	18.0
Sexual assault and related offences	3	—	—	4	25	112	196	111	32	16	7	14	520	10.2	97.2	84.1
Dangerous or negligent acts endangering persons	—	6	4	23	59	34	3	—	—	—	—	—	129	2.5	20.3	15.0
Abduction and related offences	—	—	—	—	3	7	13	3	—	—	—	—	26	0.5	73.4	72.0
Robbery, extortion and related offences	—	—	5	3	23	149	177	43	17	7	—	3	427	8.4	77.4	64.9
Unlawful entry with intent	9	14	29	59	185	285	124	20	6	—	—	—	731	14.4	39.7	28.4
Theft and related offences	10	23	30	25	52	40	24	3	—	—	3	—	210	4.1	27.1	13.0
Deception and related offences	4	3	—	5	9	10	5	—	—	—	—	—	36	0.7	29.6	20.6
Illicit drug offences	6	5	4	5	10	24	16	—	—	—	—	—	70	1.4	40.3	33.0
Weapons and explosives offences	—	3	—	—	8	5	—	—	—	—	—	—	16	0.3	27.2	17.9
Property damage and environmental pollution	—	8	8	10	15	13	3	—	—	—	—	—	57	1.1	20.0	12.0
Public order offences	—	6	7	3	12	4	—	—	—	—	—	—	32	0.6	20.0	12.0
Road traffic and motor vehicle regulatory offences	20	46	67	63	118	38	—	—	—	—	—	—	352	6.9	12.0	10.5
Offences against justice procedures, govt security and operations	3	60	101	155	231	86	8	3	—	—	4	—	651	12.8	14.8	12.0
Miscellaneous offences	—	3	—	—	9	4	5	3	—	—	—	—	24	0.5	48.4	25.0
Total	**80**	**272**	**370**	**563**	**1,225**	**1,217**	**805**	**241**	**102**	**58**	**126**	**34**	**5,093**	**100.0**	**43.5**	**24.0**

(continued)

Table 2.14.4 (continued): Number of Indigenous sentenced prisoners, by sentence length[(a)] and most serious offence, 30 June 2007

(a) Aggregate sentence length.

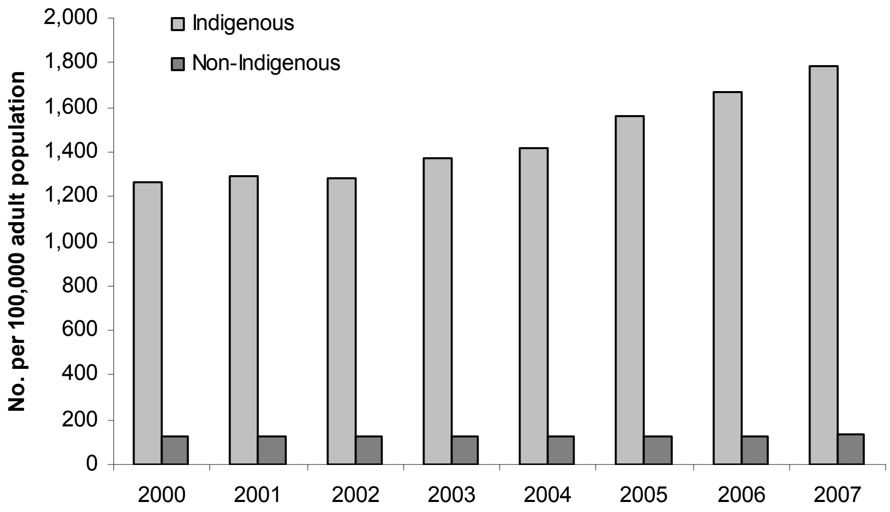
(b) Mean is average number of months; median is the number at which half the sample lies above and half the sample lies below.

Source: ABS 2007.

Time series analyses

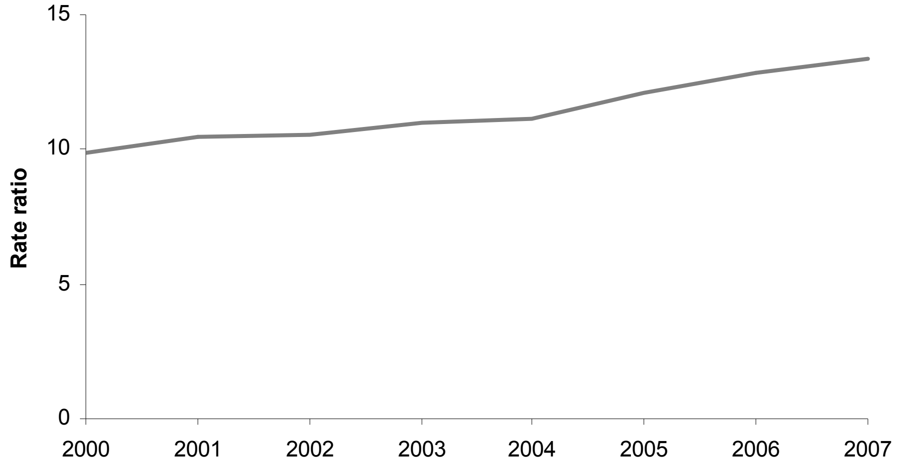
Data on the imprisonment rates of Indigenous and non-Indigenous people aged 18 years and over are presented below for the period 2000–2007.

- There was a significant increase in the imprisonment rate of Indigenous Australians, with an average yearly increase in the rate of around 77 per 100,000. In contrast, the average yearly increase in the imprisonment rate for non-Indigenous Australians was 1 per 100,000 over the same period (Figure 2.14.2).
- There was a significant increase in the rate ratio between Indigenous and non-Indigenous imprisonment rates. The fitted trend implies an average yearly increase in the ratio of around 0.5 (Figure 2.14.3).



Source: AIHW analysis of ABS 2007 data.

Figure 2.14.2: Age-standardised imprisonment rates, by Indigenous status, 2000–2007



Source: AIHW analysis of ABS 2007 data.

Figure 2.14.3: Age-standardised rate ratio Indigenous to non-Indigenous persons in prison custody, 2000–2007

People in police custody

Information on people in police custody comes from the National Police Custody Survey, which was conducted in 1992, 1995 and 2002, and collected information on the numbers of people who passed through police custody (as opposed to custody in the prison system). Data from these surveys are presented below.

Note that rates presented below will differ slightly from those published by the AIC, because ABS low series Indigenous population estimates have been used in the calculation of rates, as opposed to the high series Indigenous population estimates that are used by the AIC.

People in police custody by selected characteristics

- In 2002, there were approximately 7,111 Indigenous people in police custody. Indigenous people accounted for approximately 26% of all people in prison custody in 2002 (Table 2.14.5).
- Indigenous people were taken into police custody at a rate of 2,061 per 100,000, which was 17 times the rate of other Australians.
- Indigenous Australians aged 17–19 had the highest rate of being taken into police custody (3,293 per 100,000) followed closely by the 25–34 year age group (3,285 per 100,000).
- Around three-quarters (77%) of all Indigenous people in prison custody were males.
- Rates for Indigenous people taken into police custody were highest in South Australia (3,644 per 100,000) and Western Australia (3,514 per 100,000). Indigenous people in these states were taken into police custody at 26–27 times the rate of other people in these states and territories.
- Public order offences such as trespass, offensive language or behaviour were the most common offences associated with being in police custody for Indigenous people. Indigenous people were taken into police custody for these offences at 23 times the rate

of other people. Assault and intent to injure was the second most common offence associated with being in police custody, for which Indigenous people were taken into custody at 22 times the rate of other people.

- Approximately 1,375 Indigenous people were taken into police custody for public drunkenness in 2002. Indigenous people were taken into custody for this offence at 43 times the rate of other people. The median length of time Indigenous people were in police custody for public drunkenness was 5.7 hours compared with 4.2 hours for other Australians.

Table 2.14.5: People in police custody, by Indigenous status and selected characteristics, 2002

	Indigenous		Other		
	No.	No. per 100,000[(a)]	No.	No per 100,000[(a)]	Rate ratio[(b)]
Sex					
Males	5,494	3,245.3	17,055	207.0	15.7
Females	1,617	920.3	2,881	34.1	27.0
Persons	7,111	2,061.2	19,936	119.5	17.2
Age					
Less than 17	904	1,146.8	1,346	73.6	15.6
17–19	920	3,292.9	2,683	339.1	9.7
20–24	1,176	3,047.6	4,213	326.4	9.3
25–34	2,387	3,285.2	6,281	223.9	14.7
35 and over	1,724	1,357.1	5,414	54.3	25.0
State/territory					
NSW	1,738	1,730.9	8,935	158.1	10.9
Vic	187	882.8	2,099	49.9	17.7
Qld	1,416	1,508.7	4,387	141.3	10.7
WA	1,755	3,514.1	2,072	128.3	27.4
SA	710	3,643.5	1,865	142.4	25.6
Tas	19	144.8	145	36.6	4.0
ACT	36	1,226.2	151	54.7	22.4
NT	1,250	2,848.4	282	234.7	12.1
Most serious offence associated with being in custody					
Homicide	15	4.3	51	0.3	14.2
Assault/intent to injure	737	213.6	1,643	9.9	21.7
Sexual assault	48	13.9	176	1.1	13.2
Dangerous acts	184	53.3	480	2.9	18.5
Abduction	4	1.2	39	0.2	5.0
Robbery/extortion	45	13.0	177	1.1	12.3
Break and enter	364	105.5	697	4.2	25.2
Theft	377	109.3	1,394	8.4	13.1
Deception/fraud	28	8.1	340	2.0	4.0
Drug offences	93	27.0	717	4.3	6.3
Weapons	59	17.1	164	1.0	17.4
Property damage	151	43.8	402	2.4	18.2
Public order offences[(c)]	1,069	309.9	2,212	13.3	23.4
Traffic offences	351	101.7	1,329	8.0	12.8
Justice offences[(d)]	499	144.6	1,228	7.4	19.6
Miscellaneous	77	22.3	202	1.2	18.4
Other not definable	448	129.9	1,744	10.5	12.4
Not stated[(e)]	1,156	335.1	5,529	33.2	10.1
Not applicable[(f)]	1,407	407.8	1,411	8.5	48.2

(continued)

Table 2.14.5 (continued): People in police custody, by Indigenous status and selected characteristics, 2002

	Indigenous		Other		
	No.	No. per 100,000[(a)]	No.	No. per 100,000[(a)]	Rate ratio[(b)]
Length of time in custody for public drunkenness offences					
> 48 hours	5	1.4	4	0.0	60.4
> 24–48 hours	8	2.3	8	0.0	48.3
> 12–24 hours	15	4.3	16	0.1	45.3
> 6–12 hours	476	138.0	219	1.3	105.1
> 4–6 hours	533	154.5	588	3.5	43.8
> 2–4 hours	194	56.2	506	3.0	18.5
30 minutes–2 hours	90	26.1	122	0.7	35.7
Up to 30 minutes	54	15.7	93	0.6	28.1
Total public drunkenness	**1,375**	**398.6**	**1,556**	**9.3**	**42.7**
Total	**7,111**	**2,061.2**	**19,936**	**119.5**	**17.2**
Median	5.7 hours		4.2 hours		

(a) Number of incidents in policy custody per 100,000 population aged 10 years and over using the ABS low series estimated resident Indigenous and non-Indigenous populations as at 31 December 2002. Note that these rates will differ from those published by the AIC, where high series population estimates are used.

(b) The rate ratio is calculated by dividing Indigenous rate by non-Indigenous rate. If rates are age-standardised, the rates for Indigenous Australians are likely to reduce somewhat, which would result in the rate ratios being slightly lower than those presented here.

(c) Includes trespass, offensive language, offensive behaviour, criminal intent, conspiracy, disorderly conduct, betting and gambling offences, liquor and tobacco offences, censorship offences, prostitution offences and other public order offences.

(d) Includes breaches of justice orders, subverting the course of justice, resisting or hindering police or government officials, offences against government security and operations.

(e) These incidents were not included in the calculation of percentages.

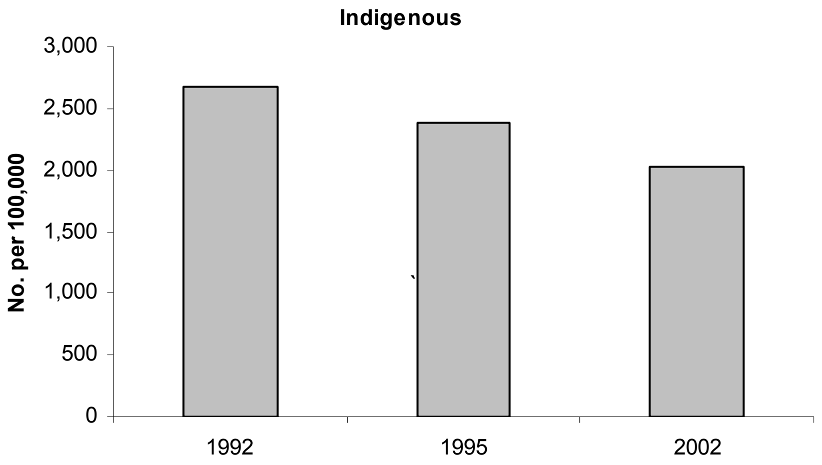
(f) Includes incidents of protective custody for those states where public drunkenness is not an offence, as well as where the word 'arrest' or 'warrant' was written but nothing else. These incidents were not included in the calculation of percentages.

Note: Shading indicates that rates for Indigenous and non-Indigenous have not been age-standardised and thus are not strictly comparable.

Source: AIHW analysis of AIC National Police Custody Survey 2002 data.

Time series analyses

- Rates for Indigenous people in police custody were lower in 2002 (2,061 per 100,000) than in 1995 (2,381 per 100,000) and in 1992 (2,689 per 100,000) (Figure 2.14.4a).
- Rates for other Australians in police custody were 126 per 100,000 in 1992, 100 per 100,000 in 1995 and 120 per 100,000 in 2002 (Figure 2.14.4b).

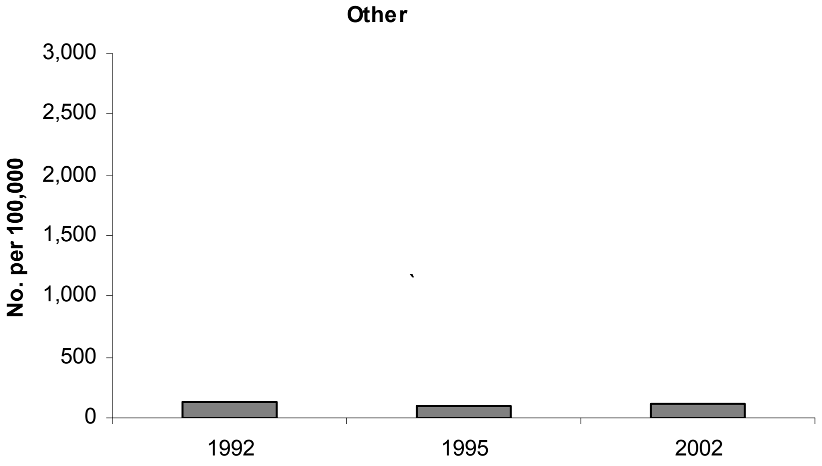


Notes

1. Number of incidents per 100,000 population aged 10 years and over.
2. Rates calculated using *Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009* (ABS 2004a) and ABS *Population by age and sex* (cat. no. 3201.0).
3. Rates have not been age-standardised. Scale differs from that used for other Australians in Figure 2.14.4b.

Source: AIHW analysis of AIC National Police Custody Survey.

Figure 2.14.4a: Rates of people in police custody, Indigenous Australians, 1992, 1995 and 2002



Notes

1. Number of incidents per 100,000 population aged 10 years and over.
2. Rates calculated using *Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009* (ABS 2004a) and ABS *Population by age and sex* (cat. no. 3201.0).
3. Rates have not been age-standardised. Scale differs from that used for Indigenous Australians in Figure 2.14.4a.
4. Rates for 'other' include non-Indigenous people and people for whom Indigenous status is unknown.

Source: AIHW analysis of AIC National Police Custody Survey.

Figure 2.14.4b: Rates of people in police custody, other Australians, 1992, 1995 and 2002

Deaths in custody

Data on deaths in custody in Australia come from the Australian Institute of Criminology (AIC) National Deaths in Custody Program and are presented below.

Deaths by selected characteristics

- Over the three-year period 2004–2006, there were 176 deaths in custody, 40 (23%) of which were of Indigenous persons, 134 (76%) of which were of non-Indigenous persons and 2 (1%) of which had a 'not stated' Indigenous status.
- Of the 40 Indigenous deaths in police, prison and juvenile justice/welfare custody, 53% were in police custody and 45% were in prison custody (Table 2.14.6).
- The majority of Indigenous deaths in custody occurred among those aged 25–39 years (19 deaths; 48%). Approximately 30% of Indigenous persons who died in custody were aged 25 years or less compared with 15% of non-Indigenous persons.
- Western Australia had the highest proportion of Indigenous deaths in custody (35%). All the deaths in custody that occurred in the Northern Territory between 2004 and 2006 were of Indigenous people (6 deaths in total).
- The majority of deaths in custody of Indigenous people were due to accident (45%) or natural causes (37%). In comparison, for non-Indigenous persons, the majority of deaths were due to natural causes (39%) and self-inflicted (37%).
- The most common offence of Indigenous and non-Indigenous people who died in custody between 2004 and 2006 was violence (46% and 63% respectively). Theft-related offences were the second most common offence (28% and 19%).

Table 2.14.6: Deaths in custody (police and prison), by Indigenous status and selected characteristics, 2004–2006

	Indigenous		Non-Indigenous	
	No.	%	No.	%
Custodial authority				
Police	21	52.5	48	35.8
Prison	18	45.0	86	64.2
Juvenile justice/welfare	1	2.5	—	—
Legal status				
Sentenced	14	35.9	55	41.0
Unsentenced	10	25.6	39	29.1
Other[(a)]	15	38.5	40	29.9
Sex				
Males	34	87.2	125	93.3
Females	5	12.8	9	6.7
Age				
Less than 25	12	30.0	20	14.9
25–39	19	47.5	48	35.8
40–54	8	20.0	33	24.6
55+	1	2.5	33	24.6
State/territory				
NSW	9	22.5	51	38.1
Vic	3	7.5	24	17.9
Qld	6	15.0	22	16.4
WA	14	35.0	16	11.9
SA	2	5.0	16	11.9
Tas	—	—	3	2.2
ACT	—	—	2	1.5
NT	6	15.0	—	—
Manner of death(b)				
Self-inflicted	7	18.4	49	37.1
Natural causes	14	36.8	52	39.4
Justifiable homicide	—	—	12	9.1
Unlawful homicide	—	—	3	2.3
Accident	17	44.7	16	12.1
Most serious offence(c)				
Violent	18	46.2	78	62.9
Theft-related	11	28.2	23	18.5
Good order	5	12.8	3	2.4
Drug-related	—	—	5	4.0
Traffic	5	12.8	8	6.5
Other	—	—	7	5.6
Total	**40**	**100.0**	**134**	**100.0**

Table 2.14.6 (continued): Deaths in custody (police and prison), by Indigenous status and selected characteristics, 2004–2006

(a) Includes situations where the deceased had not been physically apprehended (for example, sieges, motor vehicle pursuits)

(b) Two Indigenous cases and two non-Indigenous cases have been excluded because of missing data.

(c) One Indigenous case and 10 non-Indigenous cases have been excluded because of missing data.

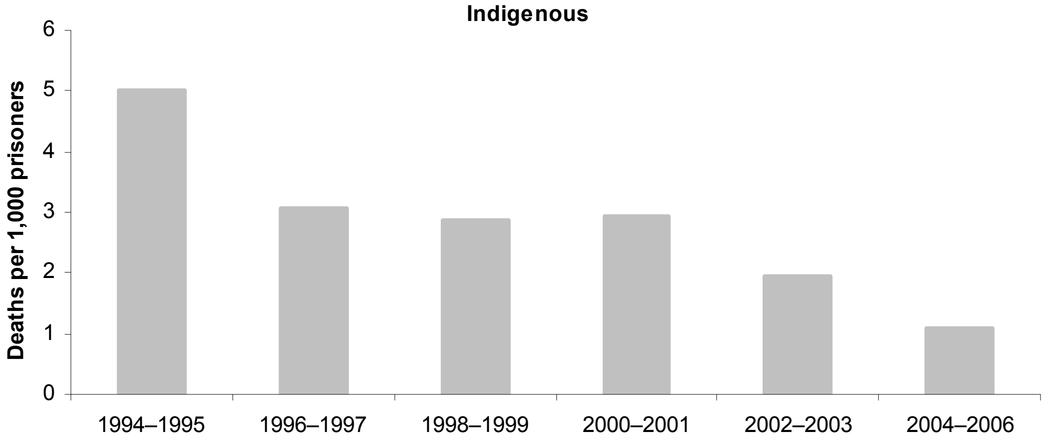
Note: One death occurring in juvenile custody during this period has been excluded from the data.

Source: AIHW analysis of AIC National Deaths in Custody Program 2004–2006.

Time series analyses

Figures 2.14.5a and 2.14.5b present the crude death rates for Indigenous and other Australians in prison custody over the period 1994–1995 to 2004–2006.

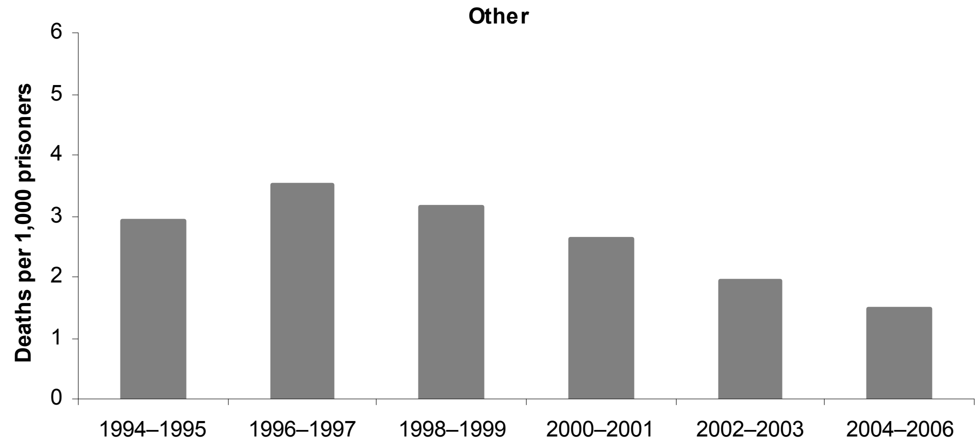
- Over the period 1994–1995 to 2004–2006 there has been a significant decline in the rate of Indigenous deaths in prison custody. The fitted trend implies an average yearly decline in the rate of around 0.3 per 1,000 prison population, which is equivalent to a 76% reduction in the rate over the period (Figure 2.14.5a).
- Over the same period, there has also been a significant decline in the rate of deaths of other Australians in prison custody, with an average yearly decline in the rate of 0.2 per 1,000 prison population. This is equivalent to a 71% reduction in the rate over the period (Figure 2.14.5b).



Note: Rates are per 1,000 prison population and have not been age-standardised.

Source: AIHW analysis of AIC National Deaths in Custody Program data.

Figure 2.14.5a: Crude rates of deaths in prison custody, Indigenous Australians, 1994–1995 to 2004–2006



Note: Rates are per 1,000 prison population and have not been age-standardised.

Source: AIHW analysis of AIC National Deaths in Custody Program data.

Figure 2.14.5b: Crude rates of deaths in prison custody, Other Australians, 1994–1995 to 2004–2006

Contact with police

Information on police contact by Indigenous persons is available from the 2002 NATSISS.

- In 2002, approximately 35% of Indigenous persons aged 15 years and over had been formally charged by the police, 16% had been arrested by the police in the previous 5 years and 7% had been incarcerated in the previous 5 years (Table 2.14.7).

Contact with police by selected characteristics

- Indigenous persons aged 25–34 and 35–44 years were most likely to be formally charged, and Indigenous persons aged 15–24 and 25–34 years were most likely to be arrested by the police or incarcerated in the previous 5 years.
- A higher proportion of Indigenous males than females had been formally charged (50% compared with 21%), arrested by police in the previous 5 years (24% compared with 9%) and incarcerated in the previous 5 years (11% compared with 3%).
- Western Australia and South Australia had the highest proportions of Indigenous people aged 15 years and over in contact with the police in 2002.
- Indigenous Australians with a disability or long-term health condition were more likely to be formally charged, arrested or incarcerated than Indigenous people without a disability.
- Indigenous Australians aged 15 years and over who were current daily smokers, had consumed alcohol at moderate or high risk levels in the previous 12 months and had used substances in the previous 12 months were more likely to have had police contact than Indigenous Australians who had not engaged in these activities.
- In 2002, a higher proportion of Indigenous Australians in the lowest (1st) quintile of household income had been formally charged, arrested by the police or incarcerated in the previous 5 years than Indigenous Australians in the highest (5th) quintile of household income.

- The majority of Indigenous Australians who had been formally charged by police reported that the age at which they were first formally charged was between 15 and 24 years (63%) (Figure 2.14.6).
- The proportion of Indigenous persons aged 15 years and over who reported being arrested in the last 5 years was much higher in 2002 than in 1994 (33% compared with 16%). In 2002 approximately 7% of Indigenous persons had been arrested once and 9% had been arrested on two or more occasions, compared with 12% and 21% respectively for Indigenous persons in 1994 (ABS 1995; ABS unpublished data).

Table 2.14.7: Contact with the police, by selected population characteristics, Indigenous persons aged 15 years and over, 2002

	Formally charged	Arrested by police in last 5 years	Incarcerated in last 5 years[(a)]
		Per cent	
Sex			
Males	50.4	24.2	11.4
Females	20.8	9.2	3.1
Persons	35.0	16.4	7.1
Age			
15–24	30.0	21.2	8.1
25–34	38.3	20.8	9.3
35–44	42.1	15.4	7.6
45–54	37.4	10.4	5.3*
55 and over	24.8	3.4*	0.9*
State/Territory			
NSW	36.1	17.4	6.5
Vic	35.5	17.0	6.7
Qld	32.7	14.3	6.2
WA	46.8	22.1	10.6
SA	39.5	19.5	8.2
Tas	29.5[(b)]	12.9	7.7
ACT	29.5 [(b)]	14.5	5.1*
NT	24.0	18.9	2.9*
Self-assessed health status			
Excellent/good	29.8	14.7	6.3
Good	34.9	18.4	7.7
Fair/poor	44.6	17.1	7.8
Has disability or long-term health condition			
Yes	41.8	18.6	7.4
No	30.4	14.0	5.9
Smoker status			
Current daily smoker	47.5	25.4	11.7
Not current daily smoker	23.1	7.9	2.7
Risky/high-risk alcohol consumption in last 12 months			
Yes	49.7	25.6	11.8
No	27.0	11.4	4.6
Whether used substances in last 12 months			
Yes	56.2	34.6	15.7
No	43.4	14.7	5.9

(continued)

Table 2.14.7 (continued): Contact with the police, by selected population characteristics, Indigenous persons aged 15 years and over, 2002

	Formally charged	Arrested by police in last 5 years	Incarcerated in last 5 years[(a)]
		Per cent	
Household income			
1st quintile	41.5	20.6	8.5
5th quintile	17.7	2.5	0.9
Employment			
Employed CDEP	42.4	24.8	11.7
Employed non-CDEP	29.0	8.4	3.4
Total employed	*32.5*	*12.7*	*5.6*
Unemployed	51.8	34.8	16.4
Not in the labour force	32.0	14.4	5.7
Location			
Remote	32.8	16.9	8.5
Non-remote	35.8	16.2	6.6
Has non-school qualification			
Yes	34.2	14.7	6.2
No	35.2	17.0	7.4
Completed Year 12			
Yes	20.7	7.9	3.2
No	37.9	18.1	7.9
Housing			
Owner	24.8	6.3	2.4
Renter	38.9	20.3	8.7
Dwelling has major structural problems	38.8	20.7	8.4
Dwelling requires additional bedrooms[(c)]	34.1	16.6	7.1
Family and culture			
Involved in social activities in last 3 months	34.4	16.1	7.1
Had undertaken voluntary work in last 12 months	33.5	14.6	5.7
Able to get support in time of crisis from someone outside the household	33.9	15.5	6.4
Person removed from natural family	50.0	26.7	15.4
Relative removed from natural family	40.3	20.0	9.8
Currently lives in homelands/traditional country	39.1	20.8	10.7
Attended cultural event(s) in last 12 months	35.2	16.8	7.5

(continued)

Table 2.14.7 (continued): Contact with the police, by selected population characteristics, Indigenous persons aged 15 years and over, 2002

	Formally charged	Arrested by police in last 5 years	Incarcerated in last 5 years[(a)]
		Per cent	
Victim of physical or threatened violence in last 12 months			
Yes	52.0	31.8	12.9
No	29.5	11.5	5.2
Stressors experienced in last 12 months			
At least one stressor experienced in last 12 months	36.3	17.8	8.0
No stressors experienced in last 12 months	28.5	9.7	3.1
Age first formally charged by the police[(d)]			
8–14	17.7	24.8	28.4
15–24	63.1	61.1	57.7
25–34	11.3	8.6	7.9
35 and over	6.6	4.5	5.5
Total[(e)]	100.0	100.0	100.0
Total	**35.0**	**16.4**	**7.1**
Total number	98,655	46,268	20,024

(a) May include persons held in protective custody.

(b) Rate for Tasmania and Australian Capital Territory combined.

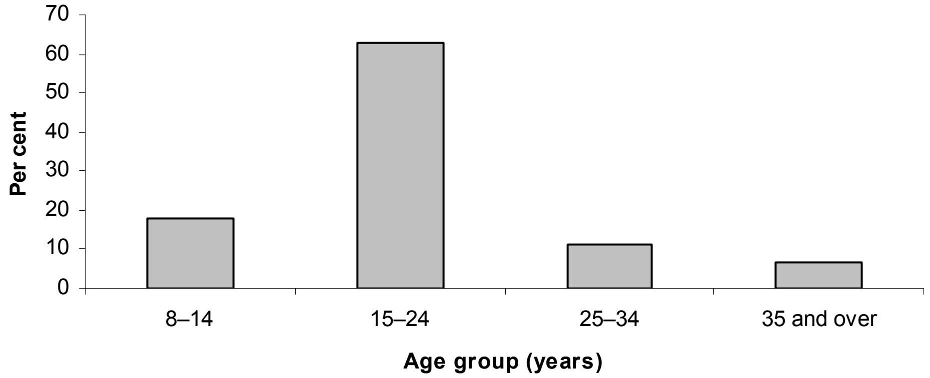
(c) Based on Canadian National Occupancy Standard for housing appropriateness.

(d) Proportions are of those formally charged, arrested by police in previous 5 years and incarcerated in previous 5 years, not of total persons.

(e) Includes those who don't know age at which first formally charged, and age not stated.

Note: CDEP = Community Development Employment Projects Scheme.

Source: AIHW analysis of 2002 NATSISS.



Source: AIHW analysis of 2002 NATSISS.

Figure 2.14.6: Age at which first formally charged by police, Indigenous Australians aged 15 years and over, 2002

Detainees and drug use

The AIC Drug Use Monitoring in Australia (DUMA) survey reports on drug use among police detainees at nine police stations in metropolitan areas in Australia. The survey is by a voluntary questionnaire and drug use is confirmed by a urine sample provided by the detainee. Data from the 2006 survey are presented in Table 2.14.8.

- In 2006, a higher proportion of Indigenous detainees tested positive to drugs than non-Indigenous detainees in all nine police stations surveyed.
- Between 61% and 100% of Indigenous detainees at selected police stations in South Australia, New South Wales, Queensland, Western Australia, the Northern Territory and Victoria tested positive to drugs compared with between 50% and 74% of non-Indigenous detainees.
- Cannabis was the most common drug for which both Indigenous and non-Indigenous detainees tested positive. Methyl amphetamines and benzodiazepines were also common drugs to which Indigenous and non-Indigenous detainees tested positive. Between 9% and 80% of Indigenous detainees and between 15% and 49% of non-Indigenous detainees tested positive for multiple drugs.

Table 2.14.8: Detainees at selected police stations, by drug use and Indigenous status, 2006

	Adelaide + Elizabeth (SA)		Bankstown + Parramatta (NSW)		Brisbane + Southport (Qld)		East Perth (WA)		Darwin (NT)		Footscray/Sunshine (Vic)	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
Tested positive to a drug						**Per cent**						
Benzodiazepines	37.4	16.7	25.8	19.1	24.3	23.0	12.6	25.5	5.9	17.5	60.0	34.9
Cannabis	81.3	58.3	77.4	40.7	66.2	45.9	68.9	56.1	60.8	35.0	80.0	50.0
Cocaine	0.6	0.7	16.1	5.2	1.5	1.4	0.0	0.0	0.0	0.0	0.0	0.7
Heroin	6.0	6.0	29.0	11.8	16.9	9.7	4.4	7.2	3.3	10.0	60.0	32.9
Methylamphetamine	26.5	29.7	41.9	15.9	23.5	24.1	28.9	34.2	3.9	7.5	20.0	25.3
Multiple drugs	45.2	30.8	51.6	24.0	35.3	28.5	28.2	34.5	9.2	15.0	80.0	49.3
Total tested positive to a drug[(a)]	*87.4*	*73.1*	*100.0*	*55.9*	*75.7*	*64.6*	*83.7*	*74.1*	*61.4*	*50.0*	*100.0*	*73.3*
Did not test positive to a drug	12.7	26.9	—	44.1	24.3	35.4	16.3	25.9	38.6	50.0	—	26.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	166	717	31	383	136	1,027	135	278	153	40	5	146

(a) Proportion who tested positive to a least one drug. Sum of components will add to more than the subtotal because detainees can test positive to more than one type of drug.

Source: AIC Drug Use Monitoring in Australia (DUMA) survey 2006.

Young people under juvenile justice supervision

Data on young people in juvenile justice facilities or under juvenile justice supervision come from the AIHW Juvenile Justice National Minimum Data Set. Data on juvenile justice were first collected in 2000–01 and the latest available data are for 2005–06.

Note that rates presented below will differ slightly from those published by the AIHW in *Juvenile justice in Australia 2005–06* (AIHW 2007a). This is because rates presented here are calculated using the ABS low series Indigenous estimated resident population projections, whereas rates presented in the AIHW report were calculated using the high series Indigenous estimated resident population projections.

- In 2005–06, there were 4,592 Indigenous persons aged 10–17 years under juvenile justice supervision. This represented approximately 41% of all people aged 10–17 years under juvenile justice supervision (Table 2.14.9).
- Overall, Indigenous people aged 10–17 years were under juvenile justice supervision at a rate of 47.8 per 1,000 population, compared with 2.9 per 1,000 for non-Indigenous people of the same age.

Young people under juvenile justice by selected characteristics

- Approximately 74% of Indigenous persons and 84% of non-Indigenous persons aged 10–17 years under juvenile justice supervision were male.
- The rates of juvenile justice supervision for Indigenous young people were higher than for non-Indigenous young people at all ages from 10 to 17 years (Figure 2.14.7). Around half (48%) of all Indigenous young people under juvenile justice supervision were aged 16–17 years.
- Western Australia, South Australia and the Australian Capital Territory had the highest rates of Aboriginal and Torres Strait Islander young people under juvenile justice supervision (113, 54 and 54 per 1,000 young people respectively).

Table 2.14.9: Young people aged 10–17 years under juvenile justice supervision, by Indigenous status and selected characteristics, 2005–06

	Indigenous		Non-Indigenous			Not stated	
	No.	**No. per 1,000** [(a)]	**No.**	**No. per 1,000**[(a)]	**Rate ratio**[(b)]	**No.**	**%**[(c)]
Sex							
Males	3,655	73.7	5,169	4.7	15.7	441	4.8
Females	936	20.2	956	0.9	22.0	105	5.3
Persons[(d)]	4,592	47.8	6,126	2.9	16.8	547	4.9
Age							
10	20	1.6	8	0.0	52.8	0	0.0
11	65	5.2	31	0.1	45.0	5	5.0
12	170	13.7	64	0.2	57.5	2	0.8
13	430	34.9	280	1.0	33.6	19	2.6
14	736	60.3	675	2.5	24.2	45	3.1
15	948	80.1	1,207	4.4	18.0	113	5.0
16	1,129	99.5	1,835	6.8	14.6	175	5.6
17	1,094	99.5	2,026	7.6	13.1	188	5.7
Total	**4,592**	**47.8**	**6,126**	**2.9**	**16.8**	**547**	**4.9**
State/territory							
NSW	1,091	38.5	1,789	2.5	15.1	253	8.1
Vic	159	26.5	1,070	2.0	13.3	142	10.4
Qld	1,171	43.1	1,279	3.0	14.5	0	0.0
WA	1,539	113.4	899	4.1	27.4	39	1.6
SA	287	53.9	612	3.9	14.0	51	5.4
Tas	68	17.9	251	4.9	3.7	62	16.3
ACT	41	53.5	175	5.0	10.7	0	0.0
NT	236	21.5	51	3.3	6.4	0	0.0
Aust	**4,592**	**47.8**	**6,126**	**2.9**	**16.8**	**547**	**4.9**

(a) Number per 1,000 population aged 10–17 years.

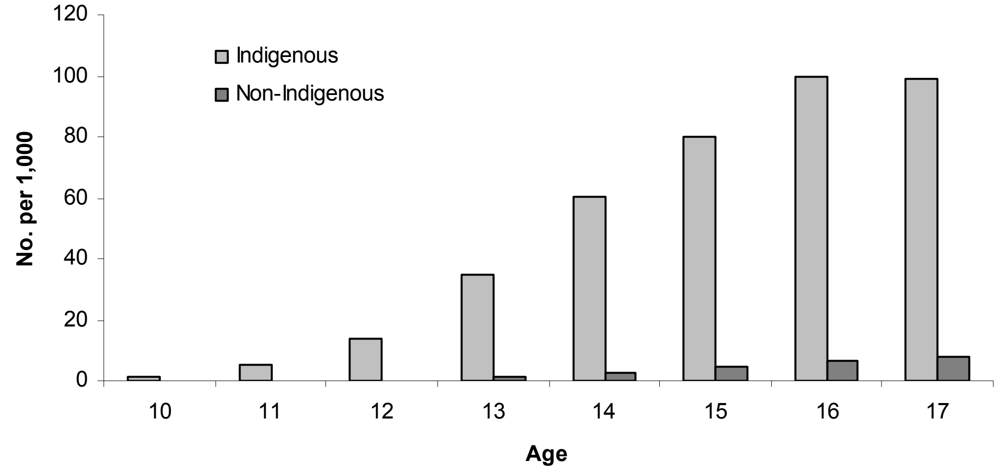
(b) Rate ratio is calculated by dividing the Indigenous rate by the rate for non-Indigenous Australians.

(c) Proportion of ‘not stated’ records out of total within each variable category.

(d) Includes those for whom sex was unknown.

Note: Rates presented here will differ from those published in the AIHW report *Juvenile justice in Australia 2005–06* (AIHW 2007a). This is because rates presented here are calculated using the average of 2005 and 2006 low series Indigenous estimated resident population projections and Australian June quarter 2006 estimated resident population. Rates presented in the AIHW report were calculated using the 2006 high series Indigenous population projections.

Source: AHW analysis of Juvenile Justice National Minimum Data Set.



Note: Excludes those for whom Indigenous status was unknown.

Source: AIHW analysis of Juvenile Justice National Minimum Data Set.

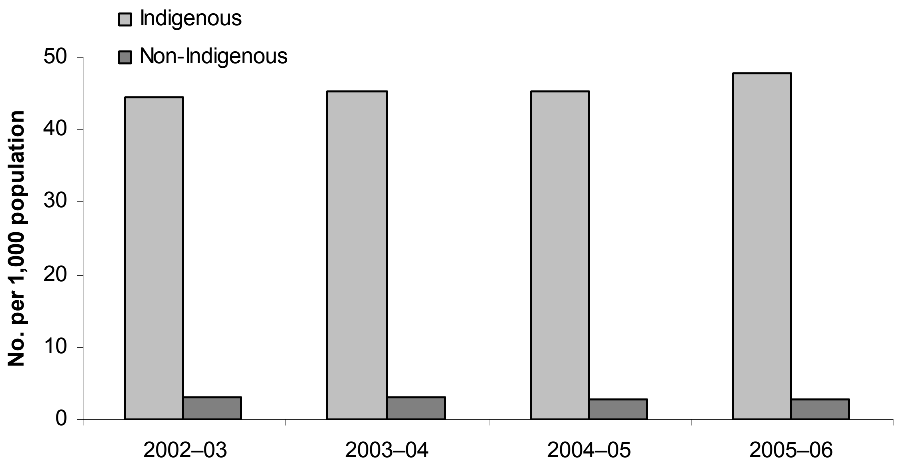
Figure 2.14.7: Rate of young people aged 10–17 years under juvenile justice supervision, by Indigenous status and age, 2005–06

Characteristics of supervision periods of young people under juvenile justice

- In 2005–06 Indigenous young people had a higher proportion of two or more supervision periods during the year than non-Indigenous young people. Around 23% of Indigenous young people completed two or more supervision periods during the year, compared with around 15% of non-Indigenous young people (AIHW 2007a).
- On average, Indigenous young people completed shorter supervision periods during 2005–06 than non-Indigenous young people. Almost two-thirds (64%) of supervision periods completed by Indigenous young people during 2005–06 were less than 6 months, compared with 56% of those completed by non-Indigenous young people (AIHW 2007a).
- In 2005–06, 56% of supervision periods experienced by Indigenous young people contained episodes of pre-sentence detention (remand), compared with 50% for non-Indigenous young people. Supervision periods of Indigenous young people were slightly more likely than those of non-Indigenous people to contain episodes of sentenced detention (11% and 9%, respectively) but less likely to contain episodes of sentenced community supervision (44% and 48%, respectively) (AIHW 2007a).
- The proportion of pre-sentence detention episodes of Indigenous young people in 2005–06 ending with release on bail was less than the proportion for non-Indigenous young people (56% and 68%, respectively). A higher proportion of Indigenous young people had a detention episode immediately following a pre-sentence detention episode ending with 'sentenced' than non-Indigenous young people (11% and 8%, respectively) (AIHW 2007a).

Time series analyses

- Over the period 2002–03 to 2005–06 there was a significant increase in the rate of juvenile justice supervision for Indigenous young people aged 10–17 years, and no significant change in the rate of juvenile justice supervision for non-Indigenous young people (Figure 2.14.8).



Notes

1. Excludes those for whom Indigenous status was unknown.
2. Rates for 2002–03 do not include Australian Capital Territory data. *Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009* (ABS 2004a) used in the calculation of rates.

Source: AIHW analysis of Juvenile Justice National Minimum Data Set.

Figure 2.14.8: Rates of young people aged 10–17 years under juvenile justice supervision, by Indigenous status, 2002–03 to 2005–06

Additional information

Health status of prisoners

In the general population there are large differences between the health of the Indigenous population and the non-Indigenous population across a range of health status measures. There are inadequate data to determine the applicability of this statement to the incarcerated population, but there have been two recent prisoner health surveys where Indigenous status was recorded, enabling some health comparisons to be made. These are the 2001 NSW Inmate Health Survey and the 2002 Queensland Women Prisoners' Health Survey.

- More than half of all male and female prisoners surveyed reported a history of injecting drug use. Regular drug use at the time of incarceration, which may include injecting, was reported by 67% of male prisoners in New South Wales, as well as 74% and 63% of female prisoners in New South Wales and Queensland respectively.
- In both surveys, high proportions of prisoners tested positive for communicable diseases, particularly hepatitis C, which is strongly associated with injecting drug use. In New South Wales, the rate of hepatitis C among Indigenous male prisoners rose from 30% in 1996 to 58% in 2004. In comparison, the rate of hepatitis C among non-Indigenous male prisoners has increased only slightly over the same period, from 35% in 1996 to 39% in 2004. The rate of hepatitis C among female Indigenous prisoners also increased slightly, from 72% in 1996 to 75% in 2004. There has been a reduction in the rate of hepatitis C among non-Indigenous female prisoners, from 64% in 1996 to 58% in 2004.
- Approximately 82% of Indigenous prisoners were current smokers compared with 77% of non-Indigenous prisoners, which was over four times the rate of the general population.
- Mental health concerns were common among inmates. In New South Wales, 41% of males and 54% of female inmates reported having received some form of psychiatric treatment during their lifetime; in Queensland 61% of female inmates had received treatment. Incarceration may be both a risk factor for, and a result of, emotional distress and mental illness. The 1991 Royal Commission into Aboriginal Deaths in Custody found that Aboriginal people who were imprisoned 'often experience depressive symptoms and unresolved anger which sometimes leads them to attempt or commit suicide whilst in custody' (HREOC 1993:698).
- The incarceration of young Indigenous men and juveniles during their formative years left them 'permanently alienated from their communities', so that on release from prison, they were likely to turn to substance abuse and violence (HREOC 1993:698).
- Released Aboriginal and Torres Strait Islander prisoners in Western Australia have risk of death almost 10 times that of the general Western Australian population and almost 3 times that of their peers in the community. The main causes of death include suicide, drug and alcohol events, and motor vehicle accidents (Krieg 2006).

Data quality issues

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSISS uses the standard Indigenous status question. The NATSISS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problems inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSISS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions (ABS 2004b).

Non-Indigenous comparisons are available through the General Social Survey. Time series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSISS data quality issues can be found in the 2002 NATSISS publication (ABS 2004b).

Criminal justice data

Although the NATSISS provides information on contact by Indigenous people with the police and incarceration, comparative data are not available for non-Indigenous people from the ABS surveys, such as the General Social Survey.

National Prison Census

Most jurisdictions collect Indigenous status from individual prisoners. It is uncommon for corrective services agencies to collect Indigenous status from anyone other than the prisoners themselves. However, the accuracy of these data has not been assessed.

The Prison Census provides a picture of persons in prison at a point in time (30 June) and does not represent the flow of prisoners during the year. The majority of prisoners in the annual Prison Census were serving long-term sentences for serious offences, whereas the flow of offenders in and out of prisons consists mainly of persons serving shorter sentences for lesser offences.

National Police Custody Survey 2002

The Indigenous status of the victim or perpetrator or both is based on police identification, and therefore will underestimate the level of custody involving Indigenous persons. There are also some inconsistencies in the method of collection of data between the jurisdictions (electronic versus manual) and no guarantee that the reporting is complete. However, the comparisons between the prison custody figures and the police custody figures are useful to have and should be reported.

(continued)

Data quality issues (continued)

Deaths in custody in Australia: National Deaths in Custody Program annual report

As a requirement of the Deaths in Custody Royal Commission, the AIC collects data on deaths in custody each year for all jurisdictions. Indigenous status is by previous self-identification to prison authorities (see above).

AIC Drug Use Monitoring in Australia (DUMA) survey

The Indigenous status of the detainee is established in the questionnaire by the following questions:

'What is your ethnic background?'(if the respondent mentions 'Australian' but not 'Aboriginal', prompt: 'Do you consider yourself an Aboriginal or Torres Strait Islander?').

It is likely that this question will underestimate the number of Indigenous persons being detained through a reluctance on the part of detainees to identify as Indigenous.

This survey is conducted at police stations in selected metropolitan areas and does not provide regional coverage. In addition, the actual number of detainees questioned is quite low, which does not permit great analysis of the Indigenous data. Finally, the figures do not permit national coverage, but instead analysis by state is recommended.

Juvenile Justice National Minimum Data Set

'Responsibility for juvenile justice rests at state and territory level, and there is marked diversity in the legislation, policy and practices among jurisdictions. The age when young people are considered juveniles or adults by the justice system, key policy directions, diversionary options, possible court outcomes, and specific programs and services available to young people are all areas of variation throughout Australia' (AIHW 2007a). Therefore caution is required in comparing data across the jurisdictions.

The coverage of data in this national minimum data set is 'complete for the period 2003–04 to 2005–06, with data for 2001–02 to 2002–03 missing only from the Australian Capital Territory. In all other instances, it is believed that 100% of young people within scope of the collection were included in the data' (AIHW 2006).

The Aboriginal and Torres Strait Islander population is younger than the rest of the Australian population. The proportion of Indigenous Australians who are aged 10–17 years (19%) is almost twice that of the non-Indigenous population (11%). Further, the proportion of Indigenous people differs across jurisdictions, with the Indigenous population forming a particularly high proportion (about 30%) of the total Northern Territory population (AIHW 2007a). Therefore, for this measure, comparisons will take account of age differences and present some data at the state/territory level.

'Differences in data collection methods, data recording systems within jurisdictions and an unwillingness of some young people to respond to questions around Indigenous status all impact on the quality of Indigenous data. As in the whole of the community services sector, there is a commitment to improving Indigenous status data in juvenile justice. Over the last few years there has been a general decline in the number of young people with an 'unknown/not recorded' Indigenous status in most jurisdictions' (AIHW 2007a).

References

ABS (Australian Bureau of Statistics) 1995. National Aboriginal and Torres Strait Islander Survey 1994: detailed findings. ABS cat. no. 4190.0. Canberra: ABS.

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ABS 2004b. National Aboriginal and Torres Strait Islander Social Survey 2002. ABS cat. no. 4714.0. Canberra: ABS.

ABS 2007. Prisoners in Australia 2007. ABS cat. no. 4517.0. Canberra: ABS.

AIHW (Australian Institute of Health and Welfare) 2006. Juvenile justice in Australia 2001–01 to 2003–04. Cat. no. JUV 1. Canberra: AIHW.

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HREOC (Human Rights and Equal Opportunities Commission) 1993. Human rights and mental illness, vols 1 & 2. Canberra; AGPS.

Krieg AS 2006. Aboriginal incarceration: health and social impacts. Medical Journal of Australia 184:534–6.

2.15 Child protection

Aboriginal and Torres Strait Islander children in substantiations, on care and protection orders and in out-of-home care

Data sources

Data for this measure come from three national child protection data collections:

- child protection notifications, investigations and substantiations
- children on care and protection orders
- children in out-of-home care.

These data are collected each year by the AIHW from the relevant departments in each state and territory. Most of the data presented here cover the 2006–07 financial year and have been published in the AIHW report *Child protection in Australia 2006–07* (AIHW 2008). Some data on trends in child protection are also included.

Each state and territory has its own legislation, policies and practices in relation to child protection, which accounts for some of the differences between jurisdictions in the data provided. Australian totals have not been provided for those data that are not comparable across the states and territories.

The practices used to identify and record the Indigenous status of children vary across states and territories, with some jurisdictions recording large numbers of unknowns. No state or territory can validate the data on Aboriginal and Torres Strait Islander children by other means and the quality of the data is therefore unknown.

In this collection, children are counted as Indigenous if they are identified as such in the state and territory collections. Children whose Indigenous status is recorded as 'unknown' are counted as non-Indigenous and included in the category 'other children'. The counts for Aboriginal and Torres Strait Islander children are therefore likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

Note that Tasmania and the Australian Capital Territory have very small numbers, and statistics from these jurisdictions are susceptible to random fluctuations.

Reported rates for Aboriginal and Torres Strait Islander children in the child protection system for 2004–05 to 2006–07 cannot be compared directly with those from previous years in earlier AIHW *Child protection in Australia* publications. In previous years, rates were calculated using ABS Indigenous population data from the 1996 Census; these later projections are based on the data from the 2001 Census. For time series analyses presented in this measure, rates have been recalculated using revised ABS population estimates and projections for the relevant years based on the 2001 Census.

Data analyses

Children in substantiated notifications

The data presented below on child protection substantiated notifications relate to those notifications received by departments responsible for child protection and support services. Only child protection matters that were notified to state and territory child protection and support services are included in this national collection. Notifications made to other organisations, such as the police or non-government welfare agencies, are included only if these notifications were also referred to state and territory child protection and support services.

Substantiations are defined as situations where, after investigation. the relevant authorities concluded that there was reasonable cause to believe that the child has been, was being or was likely to be abused, neglected or otherwise harmed. Substantiation does not necessarily require sufficient evidence for a successful prosecution and does not imply that treatment or case management was provided (AIHW 2008).

Note that because a child can be the subject of more than one notification, investigation or substantiation in a year, there are fewer children than there are total notifications, investigations and substantiations.

- In 2006–07, Aboriginal and Torres Strait Islander children were more than five times as likely as other children to be the subject of a substantiated notification.

Children in substantiated notifications by age

- In 2006–07, the highest numbers of Indigenous children who were the subject of a substantiated notification were between 1 and 9 years of age, and the highest numbers of other children who were the subject of a substantiated notification were between 5 and 14 years of age (Table 2.15.1).

Table 2.15.1: Children in substantiated notifications, by age, Indigenous status and state/territory, 2006–07

Age group (years)	NSW[(a)]	Vic[(b)]	Qld[(c)(d)]	WA	SA	Tas[(e)(f)]	ACT	NT
				Number				
Indigenous children								
< 1	558	109	197	77	81	5	11	65
1–4	909	183	325	108	132	5	21	125
5–9	839	191	315	137	123	10	21	91
10–14	817	177	297	109	89	7	18	96
15–17	160	37	80	8	16	3	5	18
Unknown	1	—	—	—	1	1	—	—
Total	**3,284**	**697**	**1,214**	**439**	**442**	**31**	**76**	**395**
Other children[(g)]								
< 1	1,375	929	707	102	216	110	56	10
1–4	2,572	1,441	1,509	188	386	170	138	26
5–9	2,903	1,502	1,722	195	365	187	128	52
10–14	2,859	1,604	1,743	196	299	163	129	47
15–17	769	418	507	40	42	33	37	12
Unknown	7	—	—	—	7	106	—	—
Total	**10,485**	**5,894**	**6,188**	**721**	**1,315**	**769**	**488**	**147**

(a) There has been an increase in the number of Indigenous and other children recorded in substantiated notifications in New South Wales in recent years because of the introduction of a new client information system in 2002–03 and the establishment of an information quality and revised reporting framework in 2004–05, which have resulted in significant improvements to the coverage and quality of information on child protection notifications.

(b) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data. See AIHW (2008) for more information.

(c) 2006–07 data for Queensland are interim and will be revised in 2008.

(d) 2006–07 substantiation figures for Queensland are affected by a change in recording practice. From March 2007, any new child protection concerns received by the department that relate to an open notification or investigation and assessment are recorded as an additional concern and linked to the open notification/investigation and assessment. Previously, any new child protection concerns received by the department were recorded as an additional notification. If an investigation relating to these notifications was substantiated, each notification was recorded as a separate substantiation. Because new concerns are now recorded as additional concerns, and not notifications, only the original notification is counted as substantiation, where the investigation outcome is substantiated.

(e) Data relating to substantiations in Tasmania for 2006–07 should be interpreted carefully because of the high proportion of investigations in process by 31 August 2007.

(f) The high number of children in substantiation with an unknown Indigenous status in Tasmania makes the counts for both Indigenous children and other children unreliable.

(g) 'Other children' includes those children whose Indigenous status is unknown.

Notes

1. Finalised investigations, and thus substantiations, refer only to cases which were notified during the year, not the total number of investigations finalised by 31 August 2007.
2. The counts of Indigenous children are likely to be an underestimate of the actual number of Indigenous children in the child protection system.
3. Totals differ slightly from those provided in Table 2.15.2 because 17 year olds are included.

Source: AIHW 2008.

Substantiated notifications by state/territory

Aboriginal and Torres Strait Islander children are more likely to be the subjects of substantiated notifications than other children. In 2006–07, in all jurisdictions except Tasmania the substantiation rate for Indigenous children was higher than the rate for other children. Across Australia, Indigenous children were more than five times as likely as other children to be the subject of a substantiated notification (Table 2.15.2; Figure 2.15.1).

The reasons for the over-representation of Aboriginal and Torres Strait Islander children in child protection substantiations are complex. The report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from their Families (HREOC 1997) examined the effect of child welfare policies on Indigenous people. It noted that some of the underlying causes of the over-representation of Aboriginal and Torres Strait Islander children in the child welfare system include:

- the legacy of past policies of the forced removal of Aboriginal children from their families
- intergenerational effects of previous separations from family and culture
- poor socioeconomic status
- cultural differences in child-rearing practices.

Table 2.15.2: Children aged 0–16 years who were the subjects of substantiated notifications: number and rates per 1,000 children, by Indigenous status and state/territory, 2006–07

	Number of children			No. per 1,000 children			
State/territory	**Indigenous**	**Other**	**Total**	**Indigenous**	**Other**	**Total**	**Rate ratio[(a)]**
New South Wales	3,276	10,414	13,690	53.5	7.1	9.0	7.5
Victoria[(b)]	697	5,891	6,588	56.6	5.3	5.9	10.6
Queensland[(c)]	1,203	6,138	7,341	20.3	6.9	7.7	3.0
Western Australia	438	716	1,154	15.0	1.6	2.4	9.3
South Australia	439	1,314	1,753	39.0	4.1	5.3	9.4
Tasmania[(d)(e)]	31	768	799	4.0	7.5	7.2	0.5
Australian Capital Territory	75	483	558	41.3	6.9	7.8	6.0
Northern Territory	395	145	540	16.8	4.2	9.3	4.0
Australia	**6,554**	**25,869**	**32,423**	**31.8**	**5.8**	**7.0**	**5.4**

(a) Rate ratio Indigenous:non-Indigenous

(b) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data. See AIHW (2008) for more information.

(c) 2006–07 data for Queensland are interim and will be revised in 2008.

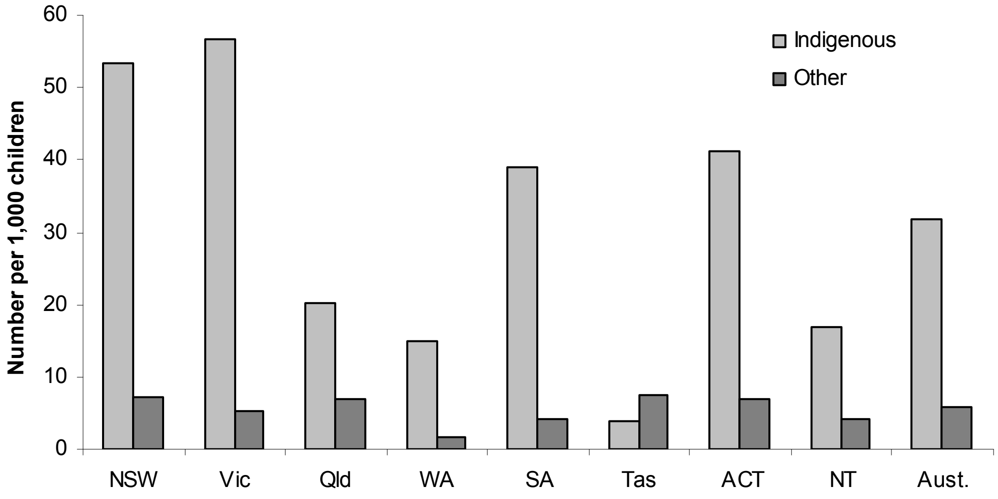
(d) Data relating to the substantiations in Tasmania for 2006–07 should be interpreted carefully because of the high proportion of investigations in process by 31 August 2007.

(e) The high number of children in substantiation with an unknown Indigenous status in Tasmania makes the counts for both Indigenous children and other children unreliable.

Notes

1. Due to the small number involved, children aged 17 years were not included in this table. However, children whose age was unknown are included.
2. 'Other' includes non-Indigenous children and those children whose Indigenous status is unknown.
3. Data from Tasmania should be interpreted carefully because of a lower rate of recording Indigenous status at the time of the substantiation.
4. Rates for other (Australian) children were calculated by subtracting the identified Aboriginal and Torres Strait Islander children from the number of children in the total population.
5. The counts of Aboriginal and Torres Strait Islander children are likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.
6. Rate ratios are calculated by dividing the unrounded rate of Indigenous children who were the subject of substantiations by the unrounded rate of other children who were the subject of substantiations. The resulting number is a measure of how many Indigenous children were the subject of a substantiation for every one other child who was the subject of a substantiation.

Source: AIHW 2008.



Source: AIHW analysis of National Child Protection Data collections.

Figure 2.15.1: Children aged 0–16 years who were the subjects of substantiated notifications: rates per 1,000 children, by Indigenous status and state/territory, 2006–07

Substantiated notifications by types of abuse and neglect

Substantiated notifications are classified into four categories: physical abuse, sexual abuse, emotional abuse and neglect. Where more than one type of abuse or neglect has occurred, the substantiation is classified to the type most likely to be the most severe in the short term or most likely to place the child at risk in the short term, or if such an assessment is not possible, to the most obvious form of abuse or neglect. Therefore, the data presented on the type of abuse suffered by Indigenous children who were the subject of substantiations can not be considered to be the total number of cases for each type of abuse.

- The overall pattern of substantiated abuse and neglect for Aboriginal and Torres Strait Islander children was similar to that of other children. However, the proportion of substantiations for Indigenous children recorded as neglect was generally higher than that of other children. For example, in Western Australia, 50% of Indigenous children in substantiated notifications were the subject of neglect, compared with 36% of other children (Table 2.15.3).

Table 2.15.3: Children aged 0–17 years who were the subject of substantiated notifications: type of abuse or neglect, by Indigenous status and state/territory, 2006–07 (per cent)

Type of abuse or neglect	NSW	Vic[(a)]	Qld[(b)]	WA	SA	Tas[(c)(d)]	ACT	NT
				Indigenous children				
Physical abuse	16.5	31.3	22.6	19.6	10.0	9.7	15.8	30.1
Sexual abuse	8.7	4.6	4.9	12.5	2.7	19.4	3.9	9.9
Emotional abuse	37.1	44.8	39.5	17.5	50.0	9.7	39.5	30.1
Neglect	37.7	19.4	33.0	50.3	37.3	61.3	40.8	29.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
				Other children				
Physical abuse	20.8	34.8	22.7	24.3	15.9	22.6	13.3	42.9
Sexual abuse	16.6	7.4	6.7	22.5	5.9	12.1	3.1	14.3
Emotional abuse	36.9	42.3	46.4	16.9	46.7	28.7	50.4	29.9
Neglect	25.7	15.5	24.2	36.3	31.5	36.5	33.2	12.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data. See AIHW (2008) for more information.

(b) 2006–07 data for Queensland are interim and will be revised in 2008.

(c) Data relating to substantiations in Tasmania for 2006–07 should be interpreted carefully because of the high proportion of investigations in process by 31 August 2007.

(d) The high number of children with an ‘unknown’ Indigenous status at substantiation in Tasmania makes the counts for both Indigenous children and other children unreliable.

Notes

1. If a child was the subject of more than one type of abuse or neglect as part of the same notification, the type of abuse or neglect reported is the one considered by the child protection workers to cause the most harm to the child. Where a child is the subject of more than one substantiation during the year, the type of abuse or neglect reported is the one associated with the first substantiation decision during the year.
2. In Tasmania and the Australian Capital Territory, the proportion of Indigenous children who were the subject of a substantiation should be interpreted with caution because of the small number.
3. ‘Other’ includes non-Indigenous children and those children whose Indigenous status is unknown.
4. Percentages in tables may not add to 100 due to rounding.
5. The counts of Aboriginal and Torres Strait Islander children are likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

Source: AIHW 2008.

Time series analyses

- Over the period 1998–99 to 2006–07, the rates of Aboriginal and Torres Strait Islander children in substantiated notifications appear to have increased overall; however, the rates have fluctuated over this period. For example, between 2005–06 and 2006–07 the rate rose in New South Wales, Western Australia, South Australia and the Northern Territory but fell in Victoria, Queensland, Tasmania and the Australian Capital Territory (Table 2.15.4).

Improvements in the quality of the data on Indigenous status are one of the issues to be considered when analysing trends for Aboriginal and Torres Strait Islander children. Increases in the rates of Aboriginal and Torres Strait Islander children in the child protection system over time may be due to a combination of improvements in the identification of Indigenous status in the data as well as to increases in the number of children in the child protection system.

Table 2.15.4: Number and rates of Aboriginal and Torres Strait Islander children aged 0–16 years who were the subject of substantiated notifications, per 1,000 children, by state/territory, 1998–99 to 2006–07

Year	NSW(a)	Vic(b)	Qld(c)	WA	SA	Tas(d)(e)(f)	ACT(f)	NT	Aust(g)
					Number				
1998–99	864	n.a. (h)	492	598	269	8	23	n.a.(i)	n.a.
1999–00	761	568	502	329	337	4	6	172	n.a.
2000–01	875	602	680	355	317	2	20	153	n.a.
2001–02	913	579	795	386	346	2	11	222	n.a.
2002–03	1,910	667	881	275(j)	351	19	33	198	n.a.
2003–04	n.a.(k)	700	1,192	322	441	12	44	375	n.a.
2004–05	1,642	770	1,186	353	481	37	99	319	n.a.
2005–06	2,696	834	1,340	316	360	34	99	354	6,033
2006–07	3,276	697	1,203	438	439	31	75	395	6,554
					Number per 1,000				
1998–99	15.2	n.a. (h)	9.3	10.9	25.6	1.1	14.3	n.a.(i)	n.a.
1999–00	13.2	48.5	9.3	11.9	31.6	0.5	3.7	7.7	n.a.
2000–01	14.9	50.9	12.4	12.6	29.4	0.3	12.1	6.8	n.a.
2001–02	15.4	48.4	14.3	13.6	31.8	0.3	6.6	9.7	n.a.
2002–03	31.9	55.3	15.6	9.6 (j)	32.0	2.5	19.4	8.6	n.a.
2003–04	n.a.(k)	57.7	20.8	11.2	39.9	1.6	25.3	16.2	n.a.
2004–05	27.1	63.0	20.4	12.2	43.2	4.8	56.0	13.7	n.a.
2005–06	44.2	67.7	23.0	10.9	32.3	4.4	56.8	15.2	29.4
2006–07	53.5	56.6	20.3	15.0	39.0	4.0	41.3(l)	16.8	31.8

(a) New South Wales data for 2002–03 and previous years should not be compared with data from 2003–04 onwards. New South Wales implemented a modification to the data system to support legislation and practice changes during 2002–03 which would make any comparison inaccurate. In conjunction with the new system, an information quality and revised reporting framework was established in 2004–05 which resulted in significant improvements to the coverage and quality of information from 2004–05 onwards.

(b) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data. See AIHW (2008) for more information.

(c) 2006–07 data for Queensland are interim and will be revised in 2008.

(d) Data relating to substantiations in Tasmania for 2005–06 and 2006–07 should be interpreted carefully because of the high proportion of investigations in process by 31 August.

(e) Because of the high number of children with Indigenous status unknown in Tasmania, Indigenous children may be considerably under-reported.

(f) Rates from Tasmania and the Australian Capital Territory should be interpreted with care because of the small numbers. Any fluctuation in the numbers of children has a large impact on the rates.

(g) Australia data were not available before 2005–06.

(h) Indigenous data were not available from Victoria in 1998–99.

(i) Data for 1998–99 were not available from the Northern Territory.

(j) The decline in the number of substantiations is due to the decreased number of notifications in Western Australia.

(k) New South Wales data for 2003–04 were not available because of the introduction of a new client information system.

(l) The decrease in the number of substantiated notifications reflects a requirement of staff to substantiate emotional abuse or neglect only if there was, or is likely to be, significant harm and there was no-one with parental responsibility willing and able to protect the child/young person. Recording an outcome of an appraisal as not substantiated does not exclude ongoing work with the child or young person.

Notes

1. Because of the small number involved, children aged 17 years were not included in this table. The substantiation rate for 17 year olds is, compared with the rate for younger children, very low. Including 17 year olds would decrease the average substantiation rate for all age groups in an unrepresentative way. However, children whose age was unknown are included.
2. Rates calculated using ABS Indigenous population estimates and projections (low series) based on the 2001 Census.
3. Improvements in the quality of the data on Indigenous status are one of the major issues to be considered when analysing trends for Aboriginal and Torres Strait Islander children. Increases in the rates of Aboriginal and Torres Strait Islander children in the child protection system over time may be due to improvements in the quality of the data.

Source: AIHW 1999; 2000; 2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008.

Care and protection orders

If a child has been the subject of a child protection substantiation, there is often a need for state and territory child protection and support services to have continued involvement with the family. The relevant department generally attempts to protect the child through the provision of appropriate support services to the child and family. In situations where further intervention is required, the department may apply to the relevant court to place the child on a care and protection order.

Recourse to the court is usually a last resort—for example, where supervision and counselling are resisted by the family, where other avenues for resolution of the situation have been exhausted, or where removal of the child to out-of-home care needs legal authorisation. However, not all applications for an order will be granted. The term 'care and protection order' refers not only to legal orders but also to other legal processes relating to the care and protection of children, including administrative arrangements or care applications (AIHW 2008).

Care and protection orders by age

- In 2006–07, the highest numbers of Indigenous and other children who were on care and protection orders were between 1 and 14 years of age (Table 2.15.5).

Table 2.15.5: Children on care and protection orders, by age, Indigenous status and state/territory, 2006–07

Age group (years)	NSW[(a)]	Vic[(b)]	Qld[(c)]	WA[(d)]	SA	Tas	ACT	NT
				Number				
Indigenous children								
<1	80	17	n.a	63	23	7	5	12
1–4	677	199	n.a	295	105	37	18	89
5–9	917	189	n.a	372	120	54	31	91
10–14	883	144	n.a	272	130	41	40	73
15–17	321	74	n.a	89	62	25	19	35
Unknown	2	0	n.a	0	0	0	0	0
Total	**2,880**	**623**	**1,690**	**1,091**	**440**	**164**	**113**	**300**
Other children[(g)]								
<1	252	137	n.a	75	53	32	13	6
1–4	1,463	1,303	n.a	385	295	152	105	42
5–9	2,412	1,360	n.a	452	384	232	133	43
10–14	2,528	1,294	n.a	417	440	216	136	43
15–17	1,100	764	n.a	209	269	101	74	17
Unknown	4	698	n.a	0	0	0	0	0
Total	**7,759**	**5,556**	**4,466**	**1,538**	**1,441**	**733**	**461**	**151**

(continued)

Table 2.15.5 (continued): Children on care and protection orders, by age, Indigenous status and state/territory, 2006–07

Age group (years)	NSW[(a)]	Vic[(b)]	Qld[(c)]	WA[(d)]	SA	Tas	ACT	NT
				Per cent[(e)(f)]				
Indigenous children								
< 1	2.8	2.7	n.a	5.8	5.2	4.3	4.4	4.0
1–4	23.5	31.9	n.a	27.0	23.9	22.6	15.9	29.7
5–9	31.9	30.3	n.a	34.1	27.3	32.9	27.4	30.3
10–14	30.7	23.1	n.a	24.9	29.5	25.0	35.4	24.3
15–17	11.2	11.9	n.a	8.2	14.1	15.2	16.8	11.7
Total	**100.0**	**100.0**	n.a	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Other children[(g)]								
< 1	3.2	2.8	n.a	4.9	3.7	4.4	2.8	4.0
1–4	18.9	26.8	n.a	25.0	20.5	20.7	22.8	27.8
5–9	31.1	28.0	n.a	29.4	26.6	31.7	28.9	28.5
10–14	32.6	26.6	n.a	27.1	30.5	29.5	29.5	28.5
15–17	14.2	15.7	n.a	13.6	18.7	13.8	16.1	11.3
Total	**100.0**	**100.0**	n.a	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) New South Wales data do not include supervisory orders

(b) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data. See AIHW (2008) for more information.

(c) 2006–07 data for Queensland are interim and will be revised in 2008.

(d) Includes 24 children who were placed on Enduring Parental Responsibility orders. Data relating to substantiations in Tasmania for 2006–07 should be interpreted carefully because of the high proportion of investigations in process by 31 August 2007.

(e) Percentages exclude children of unknown age.

(f) Percentages in tables may not add to 100 because of rounding.

(g) Includes those children whose Indigenous status is unknown.

Source: AIHW analysis of National Child Protection Data Collection.

Care and protection orders by state/territory

- As at June 2007, the rates of Aboriginal and Torres Strait Islander children on care and protection orders varied considerably across jurisdictions, ranging from 12.1 per 1,000 in the Northern Territory to 58.9 per 1,000 in the Australian Capital Territory (Table 2.15.6; Figure 2.15.2).
- In all jurisdictions, the rate of Indigenous children on care and protection orders was higher than the rate for other children, ranging from 3 to 11 times as high across jurisdictions. Across Australia, the rate of Indigenous children on orders was more than 7 times higher than that of other children.

Table 2.15.6: Children on care and protection orders: number and rate (number per 1,000 children aged 0–17 years), by Indigenous status and state/territory, at 30 June 2007

	Number of children			Number per 1,000 children			
State/territory	**Indigenous**	**Other**	**Total**	**Indigenous**	**Other**	**Total**	**Rate ratio**
New South Wales[(a)]	2,880	7,759	10,639	44.5	5.0	6.6	8.9
Victoria[(b)]	623	5,556	6,179	47.6	4.7	5.2	10.1
Queensland[(c)]	1,690	4,466	6,156	27.0	4.7	6.0	5.8
Western Australia[(d)]	1,091	1,538	2,629	35.2	3.2	5.2	10.8
South Australia	440	1,441	1,881	36.9	4.3	5.4	8.7
Tasmania	164	733	897	19.9	6.7	7.6	3.0
Australian Capital Territory[(e)]	113	461	574	58.9	6.2	7.5	9.5
Northern Territory	300	151	451	12.1	4.1	7.3	2.9
Australia	**7,301**	**22,105**	**29,406**	**33.4**	**4.7**	**6.0**	**7.1**

(a) New South Wales data do not include supervisory orders.

(b) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable with previous years data. See AIHW (2008) for more information.

(c) 2006–07 for Queensland are interim and will be revised in 2008.

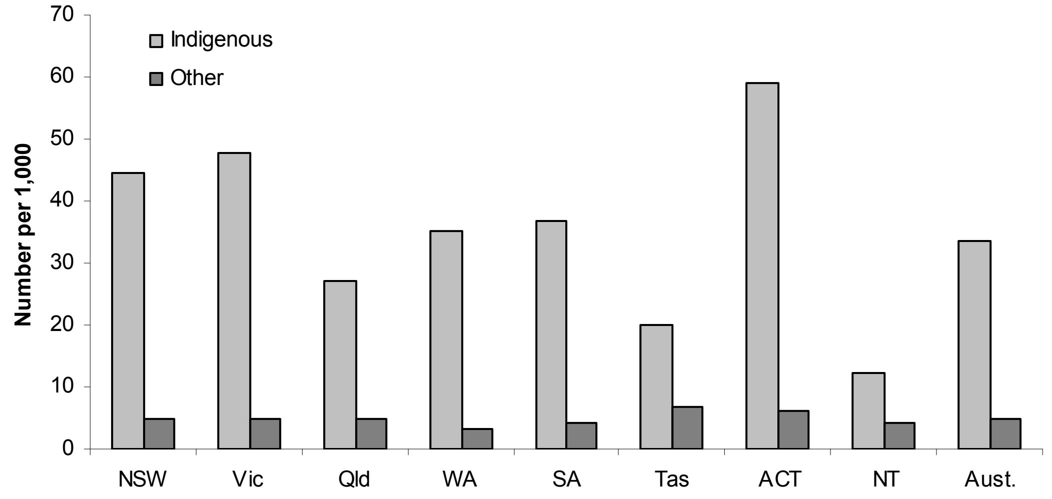
(d) Includes 24 children who were placed on Enduring Parental Responsibility orders.

(e) Additional systems have been put in place to tackle the Indigenous status recording issue, including quarterly monitoring.

Notes

1. 'Other' includes non-Indigenous children and those children whose Indigenous status is unknown. This includes 1,229 children whose Indigenous status was recorded as unknown.
2. Rate ratios are calculated by dividing the unrounded rate of Indigenous children who were on a care and protection order by the unrounded rate of other children who were on a care and protection order. The resulting number is a measure of how many Indigenous children were on a care and protection order for every one other child who was on a care and protection order.
3. Rates for other (Australian) children were calculated by subtracting the identified Aboriginal and Torres Strait Islander children from the number of children in the total population.
4. The counts of Aboriginal and Torres Strait Islander children are likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

Source: AIHW 2008.



Source: AIHW analysis of National Child Protection Data collections.

Figure 2.15.2: Children on care and protection orders: rate (number per 1,000 children aged 0–17 years), by Indigenous status and state/territory, at 30 June 2007

Types of care and protection orders

There were more orders issued during 2006–07 than children admitted to orders because more than one order can be issued for any one child. For example, a child will often be admitted to a temporary or interim order followed by a guardianship or custody order. The orders issued in 2006–07 for Indigenous and other children are presented in Table 2.15.7.

- As at 30 June 2007, most Indigenous children on care and protection orders were on guardianship and custody orders or arrangements (83%). The types of orders that Indigenous children were on compared with other children were very similar except in the Australian Capital Territory where Indigenous children were relatively less likely to be on supervisory orders or interim/temporary orders than other children.

Table 2.15.7: Children on care and protection orders, by type of order, by state/territory and Indigenous status, 30 June 2007

Type of order	NSW	Vic[(a)]	Qld[(b)]	WA[(c)(d)(e)]	SA	Tas	ACT	NT[(f)]	Total
Indigenous children					**Number**				
Guardianship or custody orders/arrangements	2,505	436	n.a.	818	416	134	98	274	4,681
Supervisory orders	n.a.	164	n.a.	23	—	6	6	—	199
Interim and temporary orders	375	23	n.a.	250	24	24	9	26	731
Total	**2,880**	**623**	**—**	**1,091**	**440**	**164**	**113**	**300**	**5,611**
					Per cent				
Guardianship or custody orders/arrangements	87.0	70.0	. .	75.0	94.5	81.7	86.7	91.3	83.4
Supervisory orders	. .	26.3	. .	2.1	—	3.7	5.3	—	3.5
Interim and temporary orders	13.0	3.7	. .	22.9	5.5	14.6	8.0	8.7	13.0
Total	**100.0**	**100.0**	. .	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Other children					**Number**				
Guardianship or custody orders/arrangements	6,614	3,905	n.a.	1,206	1,379	620	337	134	14,195
Supervisory orders	n.a.	1,463	n.a.	42	—	26	53	—	1,584
Interim and temporary orders	1,145	188	n.a.	290	62	87	71	17	1,860
Total	**7,759**	**5,556**	**—**	**1,538**	**1,441**	**733**	**461**	**151**	**17,639**
					Per cent				
Guardianship or custody orders/arrangements	85.2	70.3	. .	78.4	95.7	84.6	73.1	88.7	80.5
Supervisory orders	. .	26.3	. .	2.7	—	3.5	11.5	—	9.0
Interim and temporary orders	14.8	3.4	. .	18.9	4.3	11.9	15.4	11.3	10.5
Total	**100.0**	**100.0**	. .	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data. See AIHW (2008) for more information.

(b) Data have not been provided because of the recent transition to a new information management system.

(c) Implementation of the Western Australian *Children and Community Services Act 2004* in March 2006 required the legal status of children in care to be reviewed and protection orders were sought for a number of children already in care but not under care and protection orders.

(d) Includes 24 children who were placed on Enduring Parental Responsibility orders.

(e) In Western Australian, the application for a care and protection order to be issued for a child is counted as an interim order for national reporting purposes, but there is, in fact, no order issued during this stage. It is thus not relevant to compare the number of orders by a percentage basis or the ratio of orders issued per child.

(f) Data from the Northern Territory include all children admitted to care and protection orders for the first time since October 1998 (when the client information system was commissioned) and exclude those children with a current care and protection order at that time.

Notes

1. New South Wales could not provide data on children on supervisory orders.
2. 'Other children' includes those children whose Indigenous status is unknown. This includes 1,229 children whose Indigenous status was recorded as unknown.
3. Percentages in tables may not add to 100 because of rounding.
4. The counts of Aboriginal and Torres Strait Islander children are likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

Source: AIHW 2008.

Length of time on care and protection orders

- In 2006–07, in New South Wales, Western Australia and the Northern Territory, Indigenous children were most likely to be on care and protection orders for less than 1 month. In South Australia and the Australian Capital Territory, Indigenous children were most likely to be on care and protection orders for 1 to less than 3 months. In Victoria and Tasmania, Indigenous children were most likely to be on care and protection orders for 6 to less than 12 months and 1 to less than 2 years respectively (Table 2.15.8).
- A similar pattern was evident for other children on care and protection orders in 2006–07.

Table 2.15.8: Children discharged from care and protection orders, by length of time on an order, for selected states and territories, 2006–07

	Length of time continually on an order at time of discharge								
	Months				Years				
	<1	1 to <3	3 to <6	6 to <12	1 to <2	2 to <4	4 to <8	8 or more	Total
	Number								
Indigenous children									
New South Wales[(a)]	167	74	45	34	36	32	40	30	**458**
Victoria[(b)]	3	38	54	114	41	32	1	0	**283**
Queensland[(c)]	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	**. .**
Western Australia	79	2	3	10	5	15	29	14	**157**
South Australia	5	22	0	3	6	18	4	14	**72**
Tasmania	2	6	0	1	11	5	0	3	**28**
Australian Capital Territory	5	6	3	0	2	4	2	2	**24**
Northern Territory	87	17	16	5	31	10	5	1	**172**
Other children									
New South Wales[(a)]	510	193	146	127	129	128	135	141	**1,509**
Victoria[(b)]	20	241	482	828	323	253	79	0	**2,226**
Queensland[(c)]	. .	. .	. .	. .	. .	. .	. .	. .	**. .**
Western Australia	96	17	13	26	16	26	35	36	**265**
South Australia	6	54	1	12	41	38	26	36	**214**
Tasmania	52	58	30	13	58	28	12	17	**268**
Australian Capital Territory	25	9	7	4	21	47	6	10	**129**
Northern Territory	39	17	4	2	10	8	5	3	**88**

(continued)

Table 2.15.8 (continued): Children discharged from care and protection orders, by length of time on an order, for selected states and territories, 2006–07

	Length of time continually on an order at time of discharge								
	Months				Years				
	<1	1 to <3	3 to <6	6 to <12	1 to <2	2 to <4	4 to <8	8 or more	Total
					Per cent				
Indigenous children									
New South Wales[a]	36.5	16.2	9.8	7.4	7.9	7.0	8.7	6.6	**100.0**
Victoria[b]	1.1	13.4	19.1	40.3	14.5	11.3	0.4	0.0	**100.0**
Queensland[c]	. .	. .	. .	. .	. .	. .	. .	. .	**. .**
Western Australia	50.3	1.3	1.9	6.4	3.2	9.6	18.5	8.9	**100.0**
South Australia	6.9	30.6	0.0	4.2	8.3	25.0	5.6	19.4	**100.0**
Tasmania[d]	7.1	21.4	0.0	3.6	39.3	17.9	0.0	10.7	**100.0**
Australian Capital Territory[d]	20.8	25.0	12.5	0.0	8.3	16.7	8.3	8.3	**100.0**
Northern Territory	50.6	9.9	9.3	2.9	18.0	5.8	2.9	0.6	**100.0**
Other children[e]									
New South Wales[a]	33.8	12.8	9.7	8.4	8.5	8.5	8.9	9.3	**100.0**
Victoria[b]	0.9	10.8	21.7	37.2	14.5	11.4	3.5	0.0	**100.0**
Queensland[c]	. .	. .	. .	. .	. .	. .	. .	. .	**. .**
Western Australia	36.2	6.4	4.9	9.8	6.0	9.8	13.2	13.6	**100.0**
South Australia	2.8	25.2	0.5	5.6	19.2	17.8	12.1	16.8	**100.0**
Tasmania[d]	19.4	21.6	11.2	4.9	21.6	10.4	4.5	6.3	**100.0**
Australian Capital Territory[d]	19.4	7.0	5.4	3.1	16.3	36.4	4.7	7.8	**100.0**
Northern Territory	44.3	19.3	4.5	2.3	11.4	9.1	5.7	3.4	**100.0**

(a) New South Wales data do not include supervisory orders.

(b) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data.

(c) Data have not been provided because of the recent transition to a new information management system.

(d) Percentages for Tasmania and the Australian Capital Territory should be interpreted with care because of the small numbers. Any fluctuation in the number of children has a large impact on the percentages.

(e) Other children' includes those children whose Indigenous status is unknown.

Notes

1. If a child is discharged from an order and a new care and protection order/arrangement is applied within 5 days of the discharge, the orders are deemed to be consecutive (i.e. the length of time continuously on an order will include both orders).
2. If a child is on multiple care and protection orders/arrangements, all orders/arrangements must be discharged before a discharge for the purposes of this table is counted.
3. Length of time continuously on an order is counted only for the first order/arrangement that the child is discharged from during the year.
4. Totals exclude discharges of unknown length.
5. Percentages in tables may not add to 100 due to rounding.

Source: AIHW analysis of National Child Protection Data Collection.

Time series analyses

- At 30 June 2007 there were more Indigenous children on care and protection orders than in previous years for all jurisdictions, except Victoria and the Northern Territory where the highest numbers were recorded in 2005–06 (Table 2.15.9).
- In 2006–07 there were more other Australian children on care and protection orders than in previous years for all jurisdictions, except Queensland and the Northern Territory.

Since 1997 the number of both Indigenous and other children on care and protection orders across Australia has increased significantly (Figure 2.15.3). The increase in the number of children on care and protection orders may be attributed to a greater awareness of child abuse and neglect but also to the cumulative effect of the growing number of children who enter the child protection system at a young age and remain on orders until they are 18 years of age. Departmental analyses across the states and territories indicate that children are being admitted to orders for increasingly complex factors associated with parental substance abuse, mental health and family violence (VDHS 2002).

Table 2.15.9: Number of children on care and protection orders: children aged 0–17 years, by Indigenous status and state/territory, at 30 June 1998 to 30 June 2007

State/ territory	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
					Indigenous					
NSW[(a)]	1,195	1,562	1,826	2,070	1,992	2,265	n.a.	2,113	2,409	2,880
Vic[(b)]	294	n.a.	448	512	510	534	574	682	740	623
Qld[(c)]	852	880	856	803	880	953	1,146	1,342	1,667	1,690
WA[(d)]	215	298	327	355	468	509	583	660	798	1,091
SA	160	158	215	221	233	261	275	322	378	440
Tas	34	34	31	27	23	59	83	94	125	164
ACT[(e)]	46	36	40	32	32	48	53	70	100	113
NT	72	93	118	126	126	174	230	281	303	300
Australia	**2,868**	**n.a.**	**3,861**	**4,146**	**4,264**	**4,803**	**n.a.**	**5,564**	**6,520**	**7,301**
					Other[(f)]					
NSW[(a)]	4,792	6,948	5,835	6,035	6,237	6,710	n.a.	6,507	6,804	7,759
Vic[(b)]	3,921	4,358	4,304	4,270	4,465	4,504	4,677	4,976	5,244	5,556
Qld[(c)]	2,581	3,609	2,756	2,770	2,885	3,154	3,804	4,515	4,779	4,466
WA[(d)]	584	1,019	778	831	916	961	1,056	1,123	1,248	1,538
SA	942	1,024	995	1,039	1,053	1,117	1,180	1,231	1,293	1,441
Tas	486	440	439	426	440	541	551	622	708	733
ACT[(e)]	209	236	192	187	229	240	300	394	458	461
NT	66	177	102	79	68	100	115	133	134	151
Australia	**13,581**	**17,811**	**15,401**	**15,637**	**16,293**	**17,327**	**n.a.**	**19,501**	**20,668**	**22,105**

(a) New South Wales data do not include supervisory orders. New South Wales was unable to provide data for 2003–04 because of the ongoing implementation of the new data system.

(b) Because of new service and data reporting arrangements, the Victorian child protection data from 2006–07 may not be fully comparable with previous years data. See AIHW (2008) for more information.

(c) 2006–07 data for Queensland are interim and will be revised in 2008.

(d) 2006–07 data include 24 children who were placed on Enduring Parental Responsibility orders.

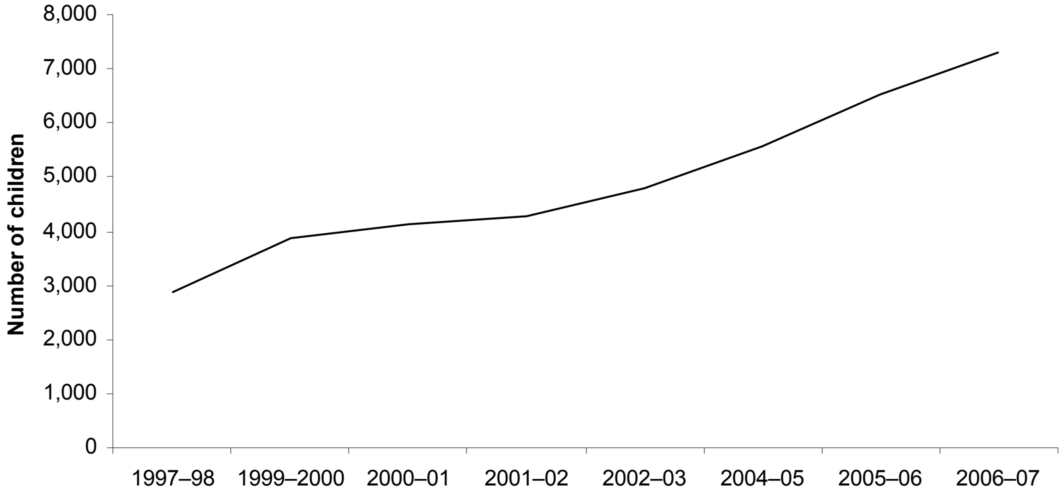
(e) Additional systems have been put in place to tackle the Indigenous status recording issues, including quarterly monitoring.

(f) 'Other' includes non-Indigenous children and those children whose Indigenous status is unknown. This includes 1,229 children whose Indigenous status was recorded as 'unknown'.

Notes

1. During 2001–02, practices were introduced to improve the identification of Indigenous status that resulted in an increase in the number of Indigenous clients.
2. The counts of Aboriginal and Torres Strait Islander children are likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

Source: AIHW 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008.



Source: AIHW analysis of National Child Protection Data collections.

Figure 2.15.3: Indigenous children aged 0–17 years on care and protection orders as at 30 June 1998 to 20 June 2007

Out-of-home-care

Out-of-home care is one of a range of services provided to children who are in need of care and protection. This service provides alternative accommodation to children and young people who are unable to live with their parents. These arrangements include foster care, placements with relatives or kin, and residential care. In most cases, children in out-of-home care are also on a care and protection order of some kind (AIHW 2008).

Some children are placed in out-of-home care because they are the subject of a child protection substantiation and require a more protective environment. Other situations in which a child may be placed in out-of-home care include those where parents are incapable of providing adequate care for the child, or where alternative accommodation is needed during times of family conflict. There are no national data available, however, on the reasons children are placed in out-of-home care. It is hoped that this will change with the introduction of the unit record file collection which is currently being developed. More information will be collected on the child and each placement the child has throughout his or her time in out-of-home care.

Out-of-home care by state/territory

- At 30 June 2007, there were 7,892 Aboriginal and Torres Strait Islander children aged 0–17 years in out-of-home care. The rate was 36.1 per 1,000, ranging from 10.8 in the Northern Territory to 57.0 in New South Wales (Table 2.15.10).
- In all jurisdictions there were higher rates of Indigenous children in out-of-home care than other children. The national rate of Indigenous children in out-of-home care was eight times the rate for other children.

Table 2.15.10: Children in out-of-home care: number and rate (number per 1,000 children aged 0–17 years), by Indigenous status and state/territory, at 30 June 2007

	Number of children			Number per 1,000 children			
State/territory	**Indigenous**	**Other**	**Total**	**Indigenous**	**Other**	**Total**	**Rate ratio**
New South Wales	3,689	8,154	11,843	57.0	5.3	7.3	10.8
Victoria[(a)]	626	4,426	5,052	47.8	3.8	4.3	12.7
Queensland[(b)]	1,724	4,310	6,034	27.5	4.5	5.9	6.1
Western Australia	978	1,393	2,371	31.6	2.9	4.7	10.7
South Australia	405	1,273	1,678	34.0	3.8	4.8	9.0
Tasmania[(c)]	113	554	667	13.7	5.1	5.7	2.7
Australian Capital Territory[(d)]	89	310	399	46.4	4.1	5.2	11.2
Northern Territory	268	129	397	10.8	3.5	6.4	3.1
Australia	**7,892**	**20,549**	**28,441**	**36.1**	**4.4**	**5.8**	**8.3**

(a) Because of new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data. See AIHW (2008) for more information.

(b) 2006–07 data for Queensland are interim and will be revised in 2008.

(c) The number of children in out-of-home care as at 30 June 2007 is not comparable to that reported for previous years for Tasmania because of exclusion of a cohort of children who did not meet the definition of out-of-home care.

(d) Additional systems have been put in place to tackle the Indigenous status recording issue, including quarterly monitoring.

Notes

1. 'Other children' includes those children whose Indigenous status is unknown. This includes 200 children whose Indigenous status was recorded as unknown.
2. Rates for other (Australian) children were calculated by subtracting the identified Aboriginal and Torres Strait Islander children from the number of children in the total population.
3. The counts of Aboriginal and Torres Strait Islander children are likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

Source: AIHW 2008.

Out-of-home care by Indigenous status of caregivers

The Aboriginal Child Placement Principle outlines a preference for the placement of Aboriginal and Torres Strait Islander children with other Aboriginal and Torres Strait Islander people when they are placed outside their family (Lock 1997:50). The Principle has the following order of preference for the placement of Aboriginal and Torres Strait Islander children:

- with the child's extended family
- within the child's Indigenous community
- with other Indigenous people.

All jurisdictions have adopted the Aboriginal Child Placement Principle either in legislation or policy. The impact of the Principle is reflected in the relatively high proportions of Aboriginal and Torres Strait Islander children who were placed either with Indigenous caregivers or with relatives in many jurisdictions.

It is important to note that the Aboriginal Child Placement Principle is just one of the many considerations taken into account when making decisions on placements for Indigenous children. As such, placement in accordance with the Principle is not always the best for a child's safety and wellbeing. In cases where children are not placed in accordance with the Principle, this decision has been made only after extensive consultation with Indigenous individuals or organisations.

- As at 30 June 2007, except for Tasmania, the proportion of Aboriginal and Torres Strait Islander children who were placed with either an Indigenous carer or a relative was at least 56%. For example, in New South Wales, 86% of Indigenous children were placed with Indigenous caregivers or in Indigenous residential care (Table 2.15.11).

Table 2.15.11: Aboriginal and Torres Strait Islander children in out-of-home care: Indigenous status and relationship of carer, by state/territory, at 30 June 2007

Relationship	**NSW**	**Vic**[(a)]	**Qld**[(b)]	**WA**[(c)]	**SA**	**Tas**[(d)]	**ACT**	**NT**
				Number				
Indigenous relative/kin	2,233	125	463	512	140	9	29	89
Other Indigenous caregiver	637	103	403	156	136	16	16	61
Other relative/kin[(e)]	293	102	186	82	40	15	14	—
Indigenous residential care	12	19	3	21	—	—	2	—
Total placed with relative/kin, other Indigenous caregivers or Indigenous residential care	*3,175*	*349*	*1,055*	*771*	*316*	*40*	*61*	*150*
Other caregiver	470	199	643	133	63	58	20	118
Other residential care	31	16	26	62	18	10	8	—
Total not placed with relative/kin, other Indigenous caregivers or Indigenous residential care	*501*	*215*	*669*	*195*	*81*	*68*	*28*	*118*
Total	**3,676**	**564**	**1,724**	**966**	**397**	**108**	**89**	**268**
				Per cent				
Indigenous relative/kin	60.7	22.2	26.9	53.0	35.3	8.3	32.6	33.2
Other Indigenous caregiver	17.3	18.3	23.4	16.1	34.3	14.8	18.0	22.8
Other relative/kin	8.0	18.1	10.8	8.5	10.1	13.9	15.7	—
Indigenous residential care	0.3	3.4	0.2	2.2	—	—	2.2	—
Total placed with relative/kin, other Indigenous caregivers or Indigenous residential care	*86.4*	*61.9*	*61.2*	*79.8*	*79.6*	*37.0*	*68.5*	*56.0*
Other caregiver	12.8	35.3	37.3	13.8	15.9	53.7	22.5	44.0
Other residential care	0.8	2.8	1.5	6.4	4.5	9.3	9.0	—
Total not placed with relative/kin, other Indigenous caregivers or Indigenous residential care	*13.6*	*38.1*	*38.8*	*20.2*	*20.4*	*63.0*	*31.5*	*44.0*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Due to new service and data reporting arrangements, the Victorian child protection data for 2006–07 may not be fully comparable to previous years data. See AIHW (2008) for more information.

(b) 2006–07 for Queensland are interim and will be revised in 2008.

(c) A small number of children are placed with externally managed foster carers who are also their relative and have been recorded in the foster care category.

(d) The number of children in out-of-home care at 30 June 2007 is not comparable to that reported for previous years for Tasmania because of exclusion of a cohort of children on orders who did not meet the definition of out-of-home care.

(e) In the Northern Territory, children placed with family members have all been included in the 'Indigenous relative/kin' category.

Notes

1. This table does not include Indigenous children who were living independently or whose living arrangements were unknown.
2. Percentages in tables may not add to 100 due to rounding.
3. The relationship of the caregiver to children placed with other caregivers was not available and these children were placed in the 'other Indigenous caregiver' category.

Source: AIHW 2008.

Data quality issues

Child protection data

Reported rates for Aboriginal and Torres Strait Islander children in the child protection system for 2004–05 to 2006–07 cannot be compared directly with those from previous years in earlier AIHW Child protection in Australia *publications. In previous years, rates were calculated using ABS Indigenous population data from the 1996 Census; the later projections are based on the data from the 2001 Census. For time series analyses presented in this measure, rates have been recalculated using revised ABS population estimates and projections for the relevant years based on the 2001 Census.*

State/territory comparisons

As each state or territory has a different legal regime and different human services policies around child protection, the states and territories cannot be compared with each other, and national totals should not be used. Tasmania and the Australian Capital Territory have very small numbers, and statistics from these jurisdictions are susceptible to random fluctuations.

Child protection is an area in which legislation and human services practice changes often; notification rates vary owing to public awareness of child abuse, and practice in relation to the intensity of follow-up of notifications also varies owing to a number of factors. For these reasons time series comparisons may not be statistically valid.

In addition, one-off global changes may occur in the legal and procedural regime of a particular jurisdiction, which may make comparisons between time series data from before and after the change invalid.

Child abuse

A new development in child protection policy and practice that has emerged in the last decade has been the broadening of the definition of child abuse and a focus on early interventions and provision of support for families identified by family services departments as being in risk categories for child abuse. However, depending on how these policies have been implemented, this new focus could mean either an increase in substantiated notifications (as in New South Wales) because authorities intervene earlier, or a decrease, if child protection practice no longer relies to such an extent on the notification/substantiation process (as in Western Australia). (Western Australia child protection now uses a 'Child Concern Report' as a first step in the legal child protection process; many of these reports do not proceed to the substantiated notification stage.)

Care and protection orders

Care should be exercised in interpreting data on child protection orders, because an individual child may be subject to more than one protection order at the same time.

Substantiations

Since 1997 the number of substantiated notifications of child abuse across Australia has increased significantly. Therefore, interpretation of the figures for Indigenous children should be in the light of the increasing number of all children subject to these substantiated notifications.

The practices used to identify and record the Indigenous status of children vary across states and territories, with some jurisdictions recording large numbers of unknowns. No state or territory can validate the data on Aboriginal and Torres Strait Islander children by other means and the quality of the data is therefore unknown. In this collection, children are counted as Indigenous if they are identified as such in the state and territory collections. Children whose Indigenous status is recorded as unknown are counted as non-Indigenous and included in the category 'other children'.

(continued)

Data quality issues (continued)

The counts for Aboriginal and Torres Strait Islander children are therefore likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

During 1998–99 a new method for counting Indigenous status was implemented in New South Wales, which improved the accuracy of this information. The apparent increase in the rate of Indigenous clients was a reflection of the improved recording of Indigenous status rather than an increase in the number of Indigenous clients. Western Australia also introduced new practices to improve the identification of Indigenous clients in 2001–02.

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2.16 Transport

The use of transport, including walking, access to motor vehicles and perceived difficulty with transport among Aboriginal and Torres Strait Islander peoples

Data sources

Data for this measure come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey, the 2002 National Aboriginal and Torres Strait Islander Social Survey and the 2006 ABS Census of Population and Housing.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Census of Population and Housing

The Census of Population and Housing is conducted by the ABS at 5-yearly intervals with 2006 the most recent, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

Indigenous households are defined as households with at least one Indigenous person, of any age, resident on Census night.

Data analyses

Motor vehicle access

The Census collects details on the number of registered motor vehicles garaged at the household.

- In 2006, households with Indigenous persons were less likely than non-Indigenous households to have at least one motor vehicle. Approximately 72% of Indigenous households and 87% of non-Indigenous households had at least one motor vehicle (Table 2.16.1).
- Excluding motorbikes, the ratio of persons aged 17 years and over to vehicles in 2006 was 1.6 in Indigenous households and 1.2 in non-Indigenous households (Table 2.16.1).

Motor vehicle access by state/territory and remoteness

- In 2006, the ratio of persons to vehicles for Indigenous households was highest in the Northern Territory (3.5) and lowest in Tasmania (1.1).
- The ratio of persons of driving age to vehicles in Indigenous households was higher in Very Remote areas (4.3) than in Major Cities (1.4).
- The Northern Territory had the lowest proportion of Indigenous households with at least one vehicle (50%) and Tasmania had the highest (86%).
- Approximately 75% of Indigenous households in non-remote areas reported having at least one vehicle compared with 52% of Indigenous households in remote areas in 2006. In contrast, in non-Indigenous households, access to motor vehicles was similar in both non-remote and remote areas (87% and 90% respectively).
- Indigenous households in Remote and Very Remote areas were most likely to report having no vehicle (Figure 2.16.1). In contrast, non-Indigenous households in Major Cities were most likely to report having no vehicle.

Table 2.16.1: Households with at least one vehicle, by Indigenous status and state/territory, 2006

	Ratio of persons 17 years and over in occupied private dwellings to vehicle[(a)]			Proportion of households[(b)] with at least one vehicle		
	Indigenous[(c)]	**Other[(d)]**	**Total**	**Indigenous[(c)]**	**Other[(d)]**	**Total**
State/territory						
NSW[(e)]	1.55	1.29	1.29	71.8	84.8	84.5
Vic	1.35	1.18	1.18	75.3	87.4	87.3
Qld	1.56	1.14	1.15	74.5	89.2	88.7
WA	1.57	1.07	1.08	70.0	90.2	89.7
SA	1.55	1.15	1.15	71.5	87.4	87.2
Tas	1.13	1.10	1.10	85.7	87.7	87.6
ACT	1.19	1.16	1.16	82.9	90.7	90.6
NT	3.50	1.10	1.37	49.8	89.1	81.2
Australia[(f)]	1.59	1.19	1.19	71.9	87.2	86.9
Remoteness area						
Major Cities	1.43	1.25	1.25	75.4	86.2	86.0
Inner Regional	1.39	1.08	1.09	77.1	89.5	89.1
Outer Regional	1.49	1.03	1.05	73.0	89.9	89.0
Total non-remote	*1.43*	*1.19*	*1.19*	*75.3*	*87.2*	*87.0*
Remote	2.02	0.96	1.04	62.1	90.3	87.2
Very Remote	4.34	0.98	1.51	44.1	87.6	73.6
Total remote	*3.01*	*0.97*	*1.15*	*52.4*	*89.7*	*83.2*
Australia[(f)]	1.59	1.19	1.19	71.9	87.2	86.9
Total number of households	**166,671**	**6,977,425**	**7,144,096**	**166,671**	**6,977,425**	**7,144,096**

(a) Excludes motorbikes.

(b) Defined as all households (excluding visitor households), in an occupied private dwelling, being Australian usual residents.

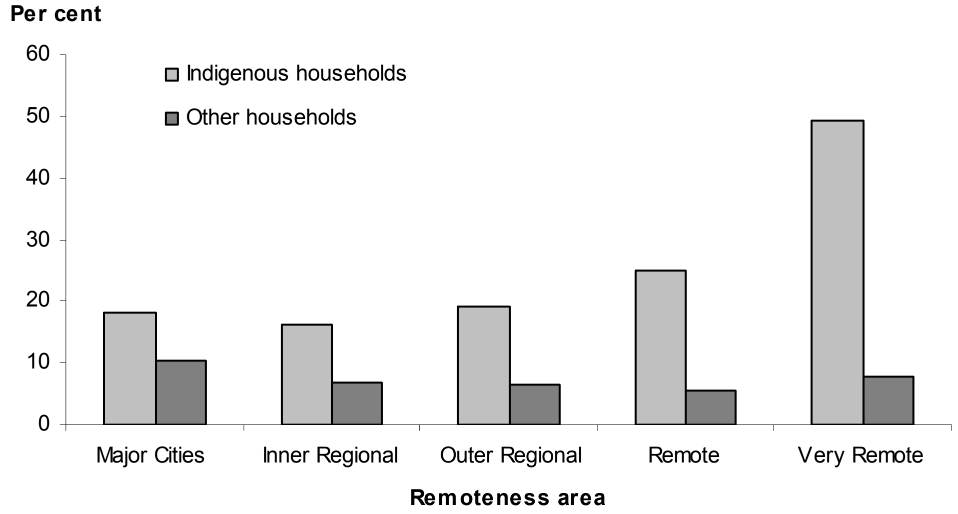
(c) An Indigenous household is defined where a family within the household contains one or more persons of Aboriginal or Torres Strait Islander origin or where a lone person is of Aboriginal or Torres Strait Islander origin.

(d) Includes households where Indigenous status was not stated.

(e) Includes Territory of Jervis Bay.

(f) Includes Territories of Christmas Island and Cocos Islands.

Source: ABS and AIHW analysis of 2006 Census data.



Notes

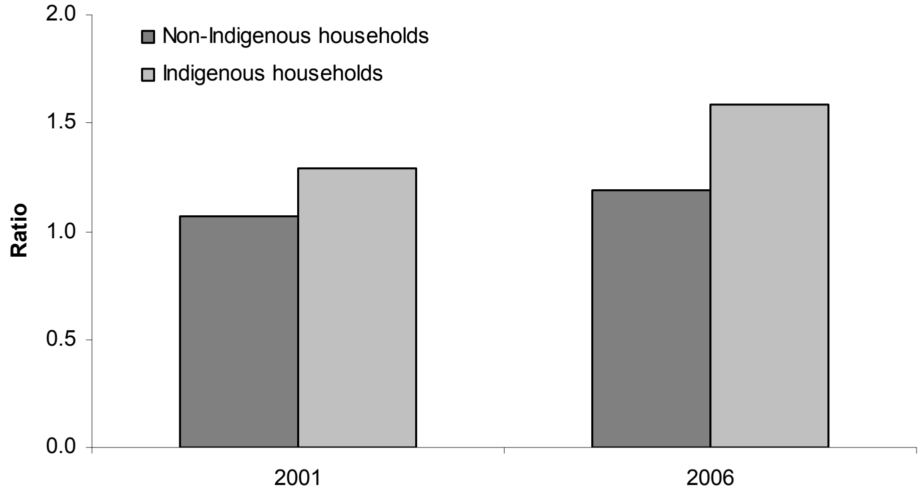
1. Includes dwellings in Offshore and Migratory Community Districts.
2. Excludes 'Visitors only' and 'Other not classifiable' households.

Source: ABS & AIHW 2008.

Figure 2.16.1: Proportions of households without access to motor vehicles, by Indigenous status and remoteness, 2006

Motor vehicle access over time

- Access to vehicles has decreased over time, with the ratio of persons to vehicles in both Indigenous and non-Indigenous households being higher in 2006 than in 2001 (Figure 2.16.2). The difference between the Indigenous and non-Indigenous rates has also increased over the same period.



Note: Excludes motorbikes.

Source: ABS and AIHW analysis of 2001 and 2006 Census data.

Figure 2.16.2: Ratio of persons aged 17 years and over in occupied private dwellings to vehicles, by Indigenous status, 2001 and 2006

Transport access by age

- In 2006, around 67% of Indigenous people aged 17 years and over had access to a motor vehicle to drive compared with 91% of non-Indigenous people (Table 2.16.2).
- Indigenous people aged 55 years and over were slightly less likely to have access to a motor vehicle (65%) than Indigenous people in younger age groups.

Table 2.16.2: Access to motor vehicles for persons aged 17 years and over, by Indigenous status and age, 2006

		Access to motor vehicle		
Age group		Proportion	Number	Total number of persons
17–24	Indig.	67.0	37,169	55,472
	Non-Indig.	90.3	1,617,600	1,791,840
	Ratio	0.7	. .	. .
25–34	Indig.	66.8	36,038	53,981
	Non-Indig.	91.7	2,116,688	2,308,185
	Ratio	0.7	. .	. .
35–44	Indig.	68.3	34,974	51,182
	Non-Indig.	93.9	2,448,809	2,608,363
	Ratio	0.7	. .	. .
45–54	Indig.	69.1	25,163	36,398
	Non-Indig.	94.0	2,316,540	2,463,193
	Ratio	0.7	. .	. .
55 years and over	Indig.	64.6	21,247	32,905
	Non-Indig.	86.6	3,530,166	4,078,200
	Ratio	0.7	. .	. .
Total	**Indig.**	**67.2**	**154,591**	**229,938**
	Non-Indig.	**90.8**	**12,029,803**	**13,249,781**
	Ratio	**0.7**	**. .**	**. .**

Source: ABS and AIHW analysis of 2006 Census data.

Transport access, difficulty and use

The 2002 NATSISS collected data on access to motor vehicles, perceived level of difficulty with transport, use of transport (including public transport) in the 2 weeks before the survey, modes of transport, and reasons for not using public transport. These data are presented below.

- In 2002, around 60% of Indigenous people aged 18 years and over had access to a motor vehicle to drive compared with 85% of non-Indigenous people (Table 2.16.3).
- Around 12% of Indigenous Australians aged 18 years and over reported that they could not get to or often had difficulty getting to the places they needed to, compared with only 4% of non-Indigenous Australians (Table 2.16.3).
- Approximately 26% of Indigenous Australians aged 18 years and over used public transport in the previous 2 weeks and a further 69% used other forms of transport (Table 2.16.3).
- Of those who used transport in the previous 2 weeks, the most common mode of transport was a car or 4WD as a passenger (60%), followed by a car/4WD, motorcycle/scooter as a driver (58%) and walking (57%).
- The main reasons given for not using public transport in the previous 2 weeks were 'prefer to use own transport or walk' (42%) and 'no service available at all' (40%).
- Approximately 43% of Indigenous Australians who said they often had difficulty getting to places needed reported they used public transport in the previous 2 weeks whereas 22% of Indigenous Australians who reported they could easily get to places needed used public transport (Table 2.16.8).

Transport difficulty and use by age

- Indigenous Australians aged 18–24 years were more likely to have used public transport in the previous 2 weeks (32%) than those in older age groups (Table 2.16.3).

Table 2.16.3: Transport, by Indigenous status and age group, persons aged 18 years and over, 2002

	18–24 years			25–34 years			35–44 years			45–54 years			55 years and over			Total		
	Indig.	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**
	%	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**	
Access to motor vehicle																		
Access to motor vehicle	47.8	77.8	0.6	63.7	89.2	0.7	67.8	92.4	0.7	64.9	91.5	0.7	49.6	76.5	0.6	59.7	85.2	0.7
No access	52.0	22.2	2.3	36.0	10.8	3.3	31.8	7.6	4.2	34.9	8.5	4.1	49.7	23.5	2.1	39.9	14.8	2.7
Total[a]	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**
Total number ('000)[a]	52	1,869	. .	71	2,848	. .	58	2,907	. .	38	2,630	. .	32	4,099	. .	251	14,354	. .
Perceived level of difficulty with transport																		
Can easily get to the places needed	66.5	74.3	0.9	72.3	85.5	0.8	71.5	88.3	0.8	76.2	87.7	0.9	70.2	83.5	0.8	71.2	84.4	0.8
Sometimes have difficulty getting to the places needed	21.8	22.1	1.0	15.3	11.6	1.3	16.7	9.0	1.9	13.7	9.2	1.5	15.1	10.9	1.4	16.7	11.8	1.4
Cannot or often have difficulty getting to the places needed	11.5	3.6	3.2	12.4	3.0	4.1	11.7	2.7	4.3	9.4	3.1	3.0	4.2	4.4	1.0	11.6	3.6	3.2
Total[b]	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100**	**100.0**	**1.0**
Use of transport in last 2 weeks[c]																		
Used transport in last 2 weeks	93.6	n.a.	n.a.	95.5	n.a.	n.a.	95.3	n.a.	n.a.	95.0	n.a.	n.a.	94.4	n.a.	n.a.	94.8	n.a.	n.a.
Did not use transport in last 2 weeks	6.4	n.a.	n.a.	4.5	n.a.	n.a.	4.7	n.a.	n.a.	5.0	n.a.	n.a.	5.6	n.a.	n.a.	5.2	n.a.	n.a.
Grand total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**

(continued)

Table 2.16.3 (continued): Transport, by Indigenous status and age group, persons aged 18 years and over, 2002

	18–24 years			25–34 years			35–44 years			45–54 years			55 years and over			Total		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%		%	%		%	%		%	%	
Use of public transport in last 2 weeks[(c)]																		
Used public transport in last 2 weeks	32.1	n.a.	n.a.	24.7	n.a.	n.a.	25.4	n.a.	n.a.	22.8	n.a.	n.a.	23.4	n.a.	n.a.	25.9	n.a.	n.a.
Used transport but not public transport in last 2 weeks	61.4	n.a.	n.a.	70.8	n.a.	n.a.	69.9	n.a.	n.a.	72.1	n.a.	n.a.	71.0	n.a.	n.a.	68.9	n.a.	n.a.
Did not use any transport in last 2 weeks	6.4	n.a.	n.a.	4.5	n.a.	n.a.	4.7	n.a.	n.a.	5.0	n.a.	n.a.	5.6	n.a.	n.a.	5.2	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**
Modes of transport[(c)(d)]																		
Bus	30.4	n.a.	n.a.	22.7	n.a.	n.a.	21.5	n.a.	n.a.	21.1	n.a.	n.a.	22.0	n.a.	n.a.	23.6	n.a.	n.a.
Train, tram/light rail[(e)]	19.0	n.a.	n.a.	11.5	n.a.	n.a.	12.5	n.a.	n.a.	11.6	n.a.	n.a.	8.8	n.a.	n.a.	12.9	n.a.	n.a.
Taxi	24.2	n.a.	n.a.	17.4	n.a.	n.a.	14.4	n.a.	n.a.	14.5	n.a.	n.a.	19.6	n.a.	n.a.	17.9	n.a.	n.a.
Car/4WD/motorcycle/ motorised scooter as driver	46.1	n.a.	n.a.	62.6	n.a.	n.a.	66.7	n.a.	n.a.	62.1	n.a.	n.a.	44.1	n.a.	n.a.	57.7	n.a.	n.a.
Car/4WD as passenger	69.6	n.a.	n.a.	56.2	n.a.	n.a.	56.8	n.a.	n.a.	54.1	n.a.	n.a.	61.8	n.a.	n.a.	59.5	n.a.	n.a.
Bicycle	10.5	n.a.	n.a.	7.2	n.a.	n.a.	4.7	n.a.	n.a.	3.7	n.a.	n.a.	1.1	n.a.	n.a.	6.0	n.a.	n.a.
Walk	67.5	n.a.	n.a.	59.8	n.a.	n.a.	57.0	n.a.	n.a.	48.1	n.a.	n.a.	42.6	n.a.	n.a.	56.7	n.a.	n.a.
Other	3.3	n.a.	n.a.	3.0	n.a.	n.a.	4.1	n.a.	n.a.	4.7	n.a.	n.a.	3.6	n.a.	n.a.	3.7	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**
Total number used transport	48,592	n.a.	n.a.	67,929	n.a.	n.a.	55,028	n.a.	n.a.	36,439	n.a.	n.a.	30,406	n.a.	n.a.	238,394	n.a.	n.a.

(continued)

Table 2.16.3 (continued): Transport, by Indigenous status and age group, persons aged 18 years and over, 2002

	18–24 years			25–34 years			35–44 years			45–54 years			55 years and over			Total		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%		%	%		%	%		%	%	
Main reason did not use public transport[c] [f]																		
Prefer to use own transport or walk	42.8	n.a.	n.a.	45.1	n.a.	n.a.	41.5	n.a.	n.a.	42.5	n.a.	n.a.	34.0	n.a.	n.a.	41.9	n.a.	n.a.
No service available at all	39.3	n.a.	n.a.	38.9	n.a.	n.a.	39.3	n.a.	n.a.	43.6	n.a.	n.a.	43.5	n.a.	n.a.	40.4	n.a.	n.a.
No service available at right/convenient time	4.0	n.a.	n.a.	6.1	n.a.	n.a.	7.3	n.a.	n.a.	6.4	n.a.	n.a.	6.6	n.a.	n.a.	6.1	n.a.	n.a.
Takes too long	3.1	n.a.	n.a.	1.9	n.a.	n.a.	1.1	n.a.	n.a.	1.1	n.a.	n.a.	1.3	n.a.	n.a.	1.7	n.a.	n.a.
Concerned about own personal safety	0.3	n.a.	n.a.	0.2	n.a.	n.a.	0.7	n.a.	n.a.	0.8	n.a.	n.a.	0.3	n.a.	n.a.	0.5	n.a.	n.a.
Cost considerations	3.7	n.a.	n.a.	1.6	n.a.	n.a.	1.3	n.a.	n.a.	1.2	n.a.	n.a.	0.9	n.a.	n.a.	1.8	n.a.	n.a.
Racial discrimination	0.0	n.a.	n.a.	0.0	n.a.	n.a.	0.3	n.a.	n.a.	0.1	n.a.	n.a.	0.0	n.a.	n.a.	0.1	n.a.	n.a.
Other	6.7	n.a.	n.a.	6.2	n.a.	n.a.	8.5	n.a.	n.a.	4.2	n.a.	n.a.	13.4	n.a.	n.a.	7.4	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**
Total number who did not use public transport[g]	35,247	n.a.	n.a.	53,594	n.a.	n.a.	43,096	n.a.	n.a.	29,611	n.a.	n.a.	24,673	n.a.	n.a.	186,221	n.a.	n.a.

(a) Includes persons who did not state whether they have access to a motor vehicle.
(b) Includes persons who were housebound.
(c) Data collected for Indigenous Australians only.
(d) Proportion out of people who used transport in previous 2 weeks.
(e) Calculation based on non-remote areas only.
(f) Proportion calculation excludes 'used public transport in last 2 weeks' or 'not applicable'.
(g) Number includes people who chose 'not applicable' for ‘Main reason did not use public transport’.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Transport access, difficulty and use by sex

- A higher proportion of Indigenous males than Indigenous females reported having access to a motor vehicle (65% compared with 55%) (Table 2.16.4).
- A higher proportion of Indigenous females reported using public transport in the previous 2 weeks than Indigenous males (29% compared with 22%) (Table 2.16.4).

Table 2.16.4: Transport, by Indigenous status and sex, persons aged 18 years and older, 2002

	Males			Females			Total		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%	
Access to motor vehicle									
Access to motor vehicle	64.9	89.9	0.7	55.0	80.6	0.7	59.7	85.2	0.7
No access	34.7	10.1	3.4	44.7	19.4	2.3	39.9	14.8	2.7
Total[(a)]	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**
Total number ('000)[(a)]	119	7,118	. .	132	7,236	. .	251	14,354	. .
Perceived level of difficulty with transport									
Can easily get to the places needed	72.4	86.8	0.8	70.2	82.1	0.9	71.2	84.4	0.8
Sometimes have difficulty getting to the places needed	16.0	10.4	1.5	17.4	13.2	1.3	16.7	11.8	1.4
Cannot or often have difficulty in getting to the places needed	11.4	2.7	4.2	11.8	4.5	2.6	11.6	3.6	3.2
Total[(b)]	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**	**100.0**	**100.0**	**1.0**
Use of transport in last 2 weeks[(c)]									
Used transport in last 2 weeks	95.2	n.a.	n.a.	94.5	n.a.	n.a.	94.8	n.a.	n.a.
Did not use transport in last 2 weeks	4.8	n.a.	n.a.	5.5	n.a.	n.a.	5.2	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**
Use of public transport in last 2 weeks[(c)]									
Used public transport in last 2 weeks	22.4	n.a.	n.a.	29.1	n.a.	n.a.	25.9	n.a.	n.a.
Used transport but not public transport in last 2 weeks	72.8	n.a.	n.a.	65.4	n.a.	n.a.	68.9	n.a.	n.a.
Did not use any transport in last 2 weeks	4.8	n.a.	n.a.	5.5	n.a.	n.a.	5.2	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**

(continued)

Table 2.16.4 (continued): Transport, by Indigenous status and sex, persons aged 18 years and over, 2002

	Males			Females			Total		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%	
Modes of transport[(c)(d)]									
Bus	19.8	n.a.	n.a.	27.2	n.a.	n.a.	23.6	n.a.	n.a.
Train, tram/light rail[(e)]	11.0	n.a.	n.a.	14.7	n.a.	n.a.	12.9	n.a.	n.a.
Taxi	14.5	n.a.	n.a.	21.0	n.a.	n.a.	17.9	n.a.	n.a.
Car/4WD/motorcycle/ motorised scooter as driver	63.8	n.a.	n.a.	52.2	n.a.	n.a.	57.7	n.a.	n.a.
Car/4WD as passenger	56.0	n.a.	n.a.	62.6	n.a.	n.a.	59.5	n.a.	n.a.
Bicycle	9.1	n.a.	n.a.	3.1	n.a.	n.a.	6.0	n.a.	n.a.
Walk	49.0	n.a.	n.a.	54.2	n.a.	n.a.	51.7	n.a.	n.a.
Other	4.1	n.a.	n.a.	3.3	n.a.	n.a.	3.7	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**
Total number used transport	113,572	n.a.	n.a.	124,822	n.a.	n.a.	238,394	n.a.	n.a.
Main reason did not use public transport[(c)(f)]									
Prefer to use own transport or walk	40.9	n.a.	n.a.	43.0	n.a.	n.a.	41.9	n.a.	n.a.
No service available at all	41.6	n.a.	n.a.	39.3	n.a.	n.a.	40.4	n.a.	n.a.
No service available at right/convenient time	6.2	n.a.	n.a.	6.0	n.a.	n.a.	6.1	n.a.	n.a.
Takes too long	2.1	n.a.	n.a.	1.3	n.a.	n.a.	1.7	n.a.	n.a.
Concerned about own personal safety	0.1	n.a.	n.a.	0.8	n.a.	n.a.	0.5	n.a.	n.a.
Cost considerations	1.7	n.a.	n.a.	1.9	n.a.	n.a.	1.8	n.a.	n.a.
Racial discrimination	0.1	n.a.	n.a.	0.1	n.a.	n.a.	0.1	n.a.	n.a.
Other	7.1	n.a.	n.a.	7.7	n.a.	n.a.	7.4	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**
Total number who did not use public transport[(g)]	92,518	n.a.	n.a.	93,704	n.a.	n.a.	186,221	n.a.	n.a.

(a) Includes persons who did not state whether they have access to a motor vehicle.

(b) Includes persons who were housebound.

(c) Data collected for Indigenous Australians only.

(d) Proportion out of people who used transport in previous 2 weeks.

(e) Calculation based on non-remote areas only.

(f) Proportion calculation excludes 'used public transport in last 2 weeks' or 'not applicable'.

(g) Number includes people who chose 'not applicable' for ‘Main reason did not use public transport’.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Transport access, difficulty and use by state/territory

- Indigenous Australians in every state and territory were much more likely than non-Indigenous Australians to report not having access to a motor vehicle and having difficulty getting to the places they needed to. Indigenous Australians living in the Northern Territory were five times as likely, and in Western Australia four times as likely, to be without access to a motor vehicle as non-Indigenous Australians in these states and territories (Table 2.16.5).
- Indigenous Australians in the Northern Territory were less likely to have used transport in the 2 weeks before the survey than those in other states and territories.
- Around 72% of Indigenous Australians in the Northern Territory reported that the main reason they did not use public transport in the last 2 weeks was because no service was available at all. This was higher than in the other states and territories (Table 2.16.5).

Table 2.16.5: Transport, by Indigenous status and state/territory, persons aged 18 years and over, 2002

	NSW			Vic			Qld			WA			SA			Tas[a]			ACT[a]			NT		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%		%	%		%	%		%	%		%	%		%	%	
Access to motor vehicle																								
Access to motor vehicle	61.4	82.0	0.7	67.5	85.2	0.8	59.7	87.6	0.7	60.0	90.0	0.7	61.2	85.8	0.7	80.2	86.5	0.9	77.5	89.4	0.9	44.0	89.8	0.5
No access	38.6	18.0	2.1	32.5	14.8	2.2	40.3	12.4	3.3	39.9	10.0	4.0	38.8	14.2	2.7	19.8	13.5	1.5	22.5	10.6	2.1	53.4	10.2	5.2
Total[b]	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**
Perceived level of difficulty with transport																								
Can easily get to the places needed	74.9	81.0	0.9	72.5	84.6	0.9	70.2	86.7	0.8	66.9	86.6	0.8	68.2	87.7	0.8	78.4	87.9	0.9	82.4	90.9	0.9	67.6	88.8	0.8
Sometimes have difficulty getting to the places needed	16.2	14.5	1.1	15.6	11.6	1.3	17.7	9.8	1.8	19.5	9.9	2.0	19.4	10.1	1.9	13.9	8.2	1.7	12.6	7.9	1.6	13.3	8.7	1.5
Cannot or often have difficulty	8.8	4.4	2.0	11.2	3.7	3.0	11.6	3.2	3.6	13.2	3.4	3.9	12.3	2.1	5.9	7.7	3.6	2.1	5.0	1.2	4.2	18.2	2.4	7.6
Total[c]	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**	**100**	**100**	**1.0**
Use of transport in last 2 weeks[d]																								
Used transport in last 2 weeks	96.6	n.a.	n.a.	97.4	n.a.	n.a.	96.5	n.a.	n.a.	97.0	n.a.	n.a.	98.0	n.a.	n.a.	98.8	n.a.	n.a.	98.8	n.a.	n.a.	80.9	n.a.	n.a.
Did not use transport in last 2 weeks	3.4	n.a.	n.a.	2.6	n.a.	n.a.	3.5	n.a.	n.a.	3.0	n.a.	n.a.	2.0	n.a.	n.a.	1.2	n.a.	n.a.	1.2	n.a.	n.a.	19.1	n.a.	n.a.
Total	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**

(continued)

Table 2.16.5 (continued): Transport, by Indigenous status and state/territory, persons aged 18 years and over, 2002

	NSW			Vic			Qld			WA			SA			Tas(a)			ACT(a)			NT		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%		%	%		%	%		%	%		%	%		%	%	
Use of public transport in last 2 weeks(b)(c)																								
Used public transport in last 2 weeks	27.1	n.a.	n.a.	32.6	n.a.	n.a.	28.1	n.a.	n.a.	26.0	n.a.	n.a.	35.9	n.a.	n.a.	22.5	n.a.	n.a.	22.5	n.a.	n.a.	12.7	n.a.	n.a.
Used transport but not public transport in last 2 weeks	69.6	n.a.	n.a.	64.8	n.a.	n.a.	68.5	n.a.	n.a.	71.0	n.a.	n.a.	62.1	n.a.	n.a.	76.4	n.a.	n.a.	76.4	n.a.	n.a.	68.2	n.a.	n.a.
Did not use any transport in last 2 weeks	3.4	n.a.	n.a.	2.6	n.a.	n.a.	3.5	n.a.	n.a.	3.0	n.a.	n.a.	2.0	n.a.	n.a.	1.2	n.a.	n.a.	1.2	n.a.	n.a.	19.1	n.a.	n.a.
Total	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**
Modes of transport(d)(e)																								
Bus	23.7	n.a.	n.a.	23.3	n.a.	n.a.	25.0	n.a.	n.a.	23.3	n.a.	n.a.	32.6	n.a.	n.a.	20.7	n.a.	n.a.	20.7	n.a.	n.a.	17.5	n.a.	n.a.
Train, tram/light rail(f)	12.9	n.a.	n.a.	21.6	n.a.	n.a.	11.1	n.a.	n.a.	20.0	n.a.	n.a.	15.6	n.a.	n.a.	2.0	n.a.	n.a.	2.0	n.a.	n.a.	0	n.a.	n.a.
Taxi	18.5	n.a.	n.a.	19.0	n.a.	n.a.	23.1	n.a.	n.a.	15.2	n.a.	n.a.	17.5	n.a.	n.a.	10.9	n.a.	n.a.	10.9	n.a.	n.a.	10.1	n.a.	n.a.
Car/4WD/motorcycle /motorised scooter as driver	58.7	n.a.	n.a.	61.8	n.a.	n.a.	58.1	n.a.	n.a.	55.7	n.a.	n.a.	55.9	n.a.	n.a.	73.8	n.a.	n.a.	73.8	n.a.	n.a.	48.4	n.a.	n.a.
Car/4WD as passenger	58.2	n.a.	n.a.	55.1	n.a.	n.a.	57.1	n.a.	n.a.	65.2	n.a.	n.a.	63.4	n.a.	n.a.	61.8	n.a.	n.a.	61.8	n.a.	n.a.	60.8	n.a.	n.a.
Bicycle	5.0	n.a.	n.a.	5.2	n.a.	n.a.	9.1	n.a.	n.a.	6.5	n.a.	n.a.	3.4	n.a.	n.a.	4.3	n.a.	n.a.	4.3	n.a.	n.a.	3	n.a.	n.a.
Walk	46.1	n.a.	n.a.	43.6	n.a.	n.a.	54.0	n.a.	n.a.	50.4	n.a.	n.a.	52.0	n.a.	n.a.	41.7	n.a.	n.a.	41.7	n.a.	n.a.	71.8	n.a.	n.a.
Other	2.9	n.a.	n.a.	2.1	n.a.	n.a.	4.2	n.a.	n.a.	2.4	n.a.	n.a.	5.1	n.a.	n.a.	5.6	n.a.	n.a.	5.6	n.a.	n.a.	5.4	n.a.	n.a.
Total	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**
Total number used transport	72,166	n.a.	n.a.	15,212	n.a.	n.a.	64,885	n.a.	n.a.	34,088	n.a.	n.a.	13,839	n.a.	n.a.	11,607	n.a.	n.a.	11,607	n.a.	n.a.	26,599	n.a.	n.a.

(continued)

Table 2.16.5 (continued): Transport, by Indigenous status and state/territory, persons aged 18 years and over, 2002

	NSW			Vic			Qld			WA			SA			Tas[(a)]			ACT[(a)]			NT		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%		%	%		%	%		%	%		%	%		%	%	
Main reason did not use public transport[(c)(d)(g)]																								
Prefer to use own transport or walk	49.1	n.a.	n.a.	55.1	n.a.	n.a.	41.5	n.a.	n.a.	37.5	n.a.	n.a.	42.2	n.a.	n.a.	56.1	n.a.	n.a.	56.1	n.a.	n.a.	23.4	n.a.	n.a.
No service available at all	29.9	n.a.	n.a.	18.8	n.a.	n.a.	38.0	n.a.	n.a.	45.8	n.a.	n.a.	45.1	n.a.	n.a.	23.6	n.a.	n.a.	23.6	n.a.	n.a.	71.9	n.a.	n.a.
No service available at right/convenient time	6.1	n.a.	n.a.	10.8	n.a.	n.a.	7.2	n.a.	n.a.	6.1	n.a.	n.a.	3.8	n.a.	n.a.	10.3	n.a.	n.a.	10.3	n.a.	n.a.	1.9	n.a.	n.a.
Takes too long	2.5	n.a.	n.a.	2.9	n.a.	n.a.	1.4	n.a.	n.a.	0.6	n.a.	n.a.	1.2	n.a.	n.a.	2.3	n.a.	n.a.	2.3	n.a.	n.a.	1.3	n.a.	n.a.
Concerned about own personal safety	0.3	n.a.	n.a.	0.9	n.a.	n.a.	0.3	n.a.	n.a.	1.2	n.a.	n.a.	0.3	n.a.	n.a.	1.4	n.a.	n.a.	1.4	n.a.	n.a.	0.0	n.a.	n.a.
Cost considerations	2.9	n.a.	n.a.	2.0	n.a.	n.a.	2.1	n.a.	n.a.	1.0	n.a.	n.a.	0.7	n.a.	n.a.	1.0	n.a.	n.a.	1.0	n.a.	n.a.	0.2	n.a.	n.a.
Racial discrimination	0.2	n.a.	n.a.	0.0	n.a.	n.a.	0.0	n.a.	n.a.	0.1	n.a.	n.a.	0.0	n.a.	n.a.	0.0	n.a.	n.a.	0.0	n.a.	n.a.	0.0	n.a.	n.a.
Other	8.9	n.a.	n.a.	9.4	n.a.	n.a.	9.5	n.a.	n.a.	7.6	n.a.	n.a.	6.7	n.a.	n.a.	5.3	n.a.	n.a.	5.3	n.a.	n.a.	1.2	n.a.	n.a.
Total	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**	**100**	**n.a.**	**n.a.**
Total number who did not use public transport[(h)]	54,486	n.a.	n.a.	10,532	n.a.	n.a.	48,348	n.a.	n.a.	26,024	n.a.	n.a.	9,048	n.a.	n.a.	9,100	n.a.	n.a.	9,100	n.a.	n.a.	28,683	n.a.	n.a.

(a) Data for 'Use of transport', 'Use of public transport', 'Mode of transport' and 'Reasons did not use public transport' for Tasmania and the Australian Capital Territory are combined, because of small numbers in each jurisdiction.

(b) Includes persons who did not state whether they have access to a motor vehicle.

(c) Includes persons who were housebound.

(d) Data collected for Indigenous Australians only.

(e) Proportion out of people who used transport in previous 2 weeks.

(f) Calculation based on non-remote areas only.

(g) Proportion calculation excludes 'used public transport in last 2 weeks' or 'not applicable'.

(h) Number includes people who chose 'not applicable' for 'Main reason did not use public transport'.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Transport access, difficulty and use by remoteness

- In non-remote areas, a higher proportion of Indigenous Australians reported having access to a motor vehicle to drive than Indigenous Australians (64% compared with 48%) (Table 2.16.6).
- In remote areas, Indigenous Australians were more likely to report that they could not get to or often had difficulty getting to the places they needed to (16%) than Indigenous Australians (10%) (Figure 2.16.3).
- In remote areas, Indigenous Australians were much more likely to report not having used transport in the previous 2 weeks (14%) and no service available (74%) as the main reasons they did not use public transport than Indigenous Australians (2% and 25% respectively) (Table 2.16.6).

Table 2.16.6: Transport, by Indigenous status and remoteness, persons aged 18 years and over, 2002

	Non-remote			Remote			Total		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%	
Access to motor vehicle									
Access to motor vehicle	64.4	85.1	0.8	47.5	n.a.	n.a.	59.7	85.2	0.7
No access	35.6	14.9	2.4	51.3	n.a.	n.a.	39.9	14.8	2.7
Total[(a)]	100.0	100.0	. .	100.0	n.a.	n.a.	100.0	100.0	. .
Total number ('000)[(a)]	182.1	14,164.1	. .	21.2	n.a.	n.a.	251	14,354.0	. .
Perceived level of difficulty with transport									
Can easily get to the places needed	73.5	84.3	0.9	65.2	n.a.	n.a.	71.2	84.4	0.8
Sometimes have difficulty getting to the places needed	16.3	11.9	1.4	17.7	n.a.	n.a.	16.7	11.8	1.4
Cannot or often have difficulty	9.8	3.2	1.4	16.4	n.a.	n.a.	11.6	3.6	3.2
Total[(b)]	100.0	100.0	. .	100.0	n.a.	n.a.	100.0	100.0	. .
Use of transport in last 2 weeks[(c)]									
Used transport in last 2 weeks	98.0	n.a.	n.a.	86.4	n.a.	n.a.	94.8	n.a.	n.a.
Did not use transport in last 2 weeks	2.0	n.a.	n.a.	13.6	n.a.	n.a.	5.2	n.a.	n.a.
Total	100.0	n.a.	n.a.	100.0	n.a.	n.a.	100.0	n.a.	n.a.
Use of public transport in last 2 weeks[(c)]									
Used public transport in last 2 weeks	30.6	n.a.	n.a.	13.8	n.a.	n.a.	25.9	n.a.	n.a.
Used transport but not public transport in last 2 weeks	67.5	n.a.	n.a.	72.7	n.a.	n.a.	68.9	n.a.	n.a.
Did not use any transport in last 2 weeks	2.0	n.a.	n.a.	13.6	n.a.	n.a.	5.2	n.a.	n.a.
Total	100	n.a.	n.a.	100	n.a.	n.a.	100	n.a.	n.a.

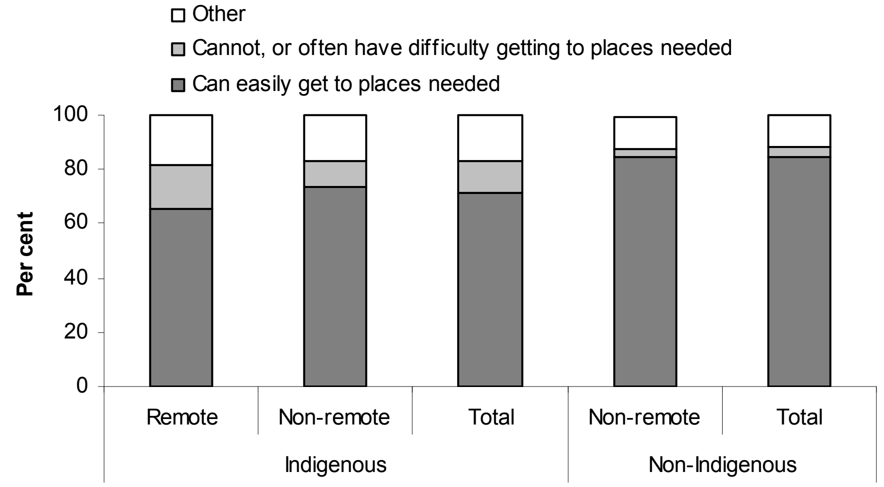
(continued)

Table 2.16.6 (continued): Transport, by Indigenous status and remoteness, persons aged 18 years and over, 2002

	Non-remote			Remote			Total		
	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%		%	%		%	%	
Modes of transport[(c)(d)]									
Bus	26.3	n.a.	n.a.	15.6	n.a.	n.a.	23.6	n.a.	n.a.
Train, tram/light rail[(e)]	12.9	n.a.	n.a.	n.a.	n.a.	n.a.	12.9	n.a.	n.a.
Taxi	19.8	n.a.	n.a.	12.2	n.a.	n.a.	17.9	n.a.	n.a.
Car/4WD/motorcycle/motorised scooter as driver	60.6	n.a.	n.a.	49.2	n.a.	n.a.	57.7	n.a.	n.a.
Car/4WD as passenger	57.4	n.a.	n.a.	65.7	n.a.	n.a.	59.5	n.a.	n.a.
Bicycle	6.7	n.a.	n.a.	3.9	n.a.	n.a.	6.0	n.a.	n.a.
Walk	45.8	n.a.	n.a.	69.4	n.a.	n.a.	51.7	n.a.	n.a.
Other	3.0	n.a.	n.a.	5.6	n.a.	n.a.	3.7	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**
Total number used transport	178,479	n.a.	n.a.	59,915	n.a.	n.a.	238,394	n.a.	n.a.
Main reason did not use public transport[(c)(f)]									
Prefer to use own transport or walk	51.9	n.a.	n.a.	20.7	n.a.	n.a.	41.9	n.a.	n.a.
No service available at all	24.6	n.a.	n.a.	74.0	n.a.	n.a.	40.4	n.a.	n.a.
No service available at right/convenient time	7.8	n.a.	n.a.	2.5	n.a.	n.a.	6.1	n.a.	n.a.
Takes too long	2.5	n.a.	n.a.	0.2	n.a.	n.a.	1.7	n.a.	n.a.
Concerned about own personal safety	0.7	n.a.	n.a.	0.0	n.a.	n.a.	0.5	n.a.	n.a.
Cost considerations	2.4	n.a.	n.a.	0.4	n.a.	n.a.	1.8	n.a.	n.a.
Racial discrimination	0.1	n.a.	n.a.	0.0	n.a.	n.a.	0.1	n.a.	n.a.
Other	9.9	n.a.	n.a.	2.1	n.a.	n.a.	7.4	n.a.	n.a.
Total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**
Total number who did not use public transport[(g)]	126,420	n.a.	n.a.	59,801	n.a.	n.a.	186,221	n.a.	n.a.

(a) Includes persons who did not state whether they have access to a motor vehicle.
(b) Includes persons who were housebound.
(c) Data collected for Indigenous Australians only.
(d) Proportion out of people who used transport in previous 2 weeks.
(e) Calculation based on non-remote areas only.
(f) Proportion calculation excludes 'used public transport in last 2 weeks' or 'not applicable'.
(g) Number includes people who chose 'not applicable' for ‘Main reason did not use public transport’.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.



Note: 'Other' includes sometimes has difficulty getting to places needed and never go out/housebound.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Figure 2.16.3: Difficulty with transport, by Indigenous status and remoteness, persons aged 18 years and over, 2002

Transport difficulty by selected health and population characteristics

- A higher proportion of both Indigenous and non-Indigenous Australians aged 18 years and over who could not get to places when needed reported fair/poor health status and having a disability or long-term health condition than Australians who could easily get to places when needed (Table 2.16.7).
- A higher proportion of Indigenous Australians who could not get to places when needed were in the lowest (1st) quintile of household income and reported they could not raise $2,000 within a week for something important than Indigenous Australians who could easily get to places when needed.

Table 2.16.7: Perceived level of difficulty with transport, by selected health and population characteristics and Indigenous status, persons aged 18 years and over, 2002

	Can easily get to the places needed		Sometimes have difficulty getting to the places needed		Often have difficulty getting to the places needed		Can't get to the places needed	
	Indigenous	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
					Per cent			
Self-assessed health status								
Excellent/very good	40*	62*	24*	44*	21*	36*	27	25(a)
Good	31*	24*	34	29	30	23	31	41(a)
Fair/poor	28*	13*	41*	27*	49	40	41	35
Disability or long-term health condition(b)								
Has disability or long-term health condition	51*	37*	68*	52*	76*	61*	70	73
No disability or long-term conditions	49*	63*	32*	48*	24*	39*	30	27(c)
Household income								
1st quintile	30*	15*	44*	28*	53*	38*	47	45
5th quintile	7*	22*	2*(c)	17*	4*(c)	7*	1*(c)	6*(c)
Index of disparity								
1st quintile	27*	16*	32*	20*	31*	28*	48*	20*(c)
5th quintile	23	23	13*	22*	12*	15*	9	11(c)
Financial stress – unable to raise $2,000 within a week for something important	47*	11*	68*	25*	72*	36*	82*	33*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	179,089	12,117,472	42,025	1,695,668	10,792	456,762	18,472	63,211

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Persons in non-remote areas only.

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Note: Data for self-assessed health status and disability or long-term health condition are age-standardised.

Source: ABS and AIHW analysis of 2002 NATSISS and 2002 GSS.

Table 2.16.8: Perceived level of difficulty with transport, by selected transport characteristics and Indigenous status, persons aged 18 years and over, 2002

	Can easily get to the places needed		Sometimes have difficulty getting to the places needed		Often have difficulty getting to the places needed		Can't get to the places needed/never go out/housebound	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
				Per cent				
Access to motor vehicle								
Access to motor vehicle	72*	91*	35*	59*	21*	39*	26	36(a)
No access	28*	9*	65*	41*	79	61	74	64(a)
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number(b)	179,089	1,2117,472	42,025	1,695,668	10,792	456,762	18,472	63,211
Use of public transport in last 2 weeks(c)								
Used public transport in last 2 weeks	21.6	n.a.	39.1	n.a.	42.6	n.a.	27.6	n.a.
Used transport but not public transport in last 2 weeks	75.1	n.a.	55.6	n.a.	50.5	n.a.	51.2	n.a.
Did not use any transport in last 2 wks	3.3	n.a.	5.3	n.a.	6.9	n.a.	21.2	n.a.
Total	**100.0**	**n.a.**	**100.0**	**n.a.**	**100.0**	**n.a.**	**100.0**	**n.a.**
Main reason did not use public transport(c) (d)								
Prefer to use own transport or walk	48.6	n.a.	23.5	n.a.	11.4	n.a.	21.4	n.a.
No service available at all	35.2	n.a.	51.7	n.a.	52.2	n.a.	68.3	n.a.
No service available at time	6.1	n.a.	7.5	n.a.	6.6	n.a.	3.6	n.a.
Takes too long	1.8	n.a.	2.1	n.a.	0.2	n.a.	0.8	n.a.
Concerned about own personal safety	0.3	n.a.	0.5	n.a.	2.4	n.a.	0.7	n.a.
Cost considerations	1.2	n.a.	4.6	n.a.	3.1	n.a.	1.7	n.a.
Racial discrimination	0.1	n.a.	0.1	n.a.	0.0	n.a.	0.0	n.a.
Other	6.6	n.a.	9.9	n.a.	24.0	n.a.	3.5	n.a.
Total	**100.0**	**n.a.**	**100.0**	**n.a.**	**100.0**	**n.a.**	**100.0**	**n.a.**
Total no. who did not use public transport(e)	140,320	n.a.	14,117	n.a.	6,196	n.a.	25,589	n.a.

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Includes 'not stated'.

(c) Data collected for Indigenous Australians only.

(d) Proportion calculation excludes 'used public transport in last 2 weeks' or 'not applicable'.

(e) Number includes people who chose 'not applicable' for 'Main reason did not use public transport'.

Source: ABS and AIHW analysis of 2002 NATSIS and 2002 GSS.

The data on vehicles per household and per person suggest that non-Indigenous Australians have better access to personal transport than Indigenous Australians and would therefore be more readily able to reach a health facility or service. Public transport may compensate for the lack of personal transport, and clinics may provide a transport service for their patients, but these services are not available everywhere. The main reason given by 52% of those who sometimes or often had difficulty in getting to the places they needed to and did not use public transport in the 2 weeks before the survey was that no service was available at all (Table 2.16.8).

Transport/distance as a barrier to accessing health services

The 2004–05 NATSIHS collected information on reasons Indigenous Australians didn't visit a dentist, doctor, other health professional or hospital when needed, including transport/distance. These data are presented below.

- In 2004–05, Indigenous Australians reported that transport/distance was the main reason they didn't visit a dentist (11%), doctor (14%), other health professional (8%) or hospital (19%) in the last 12 months when needed.
- A higher proportion of Indigenous people living in remote areas than in non-remote areas reported transport/ distance as a reason for not accessing health services.
- Indigenous Australians aged 0–14 years were more likely than those in older age groups to report transport as the main reason they didn't access health services when needed.
- Indigenous females were more likely than males to report transport/distance as the main reason they didn't access a doctor or hospital in the previous 12 months when needed.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in these surveys are essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS) and the 2002 General Social Survey. The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys and the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the 2004–05 NATSIHS and 2002 NATSISS publications (ABS 2006, 2004).

Transport data

Concerns have been expressed about the appropriateness of the questions in the transport module in the NATSISS and hence the value of the answers (Holcombe 2005).

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example whether people are counted more than once or are undercounted (ABS 1996).*

For the 2002 NATSISS it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

References

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Holcombe S 2005. Transport: what can the NATSISS tell us? In Indigenous socioeconomic outcomes: assessing recent evidence. Canberra: Australian National University/Centre for Aboriginal Policy Research.

2.17 Indigenous people with access to their traditional lands

The proportion of Aboriginal and Torres Strait Islander peoples living on or visiting traditional areas of land with which they have ancestral and/or cultural links

Data sources

Data for this indicator come from the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS).

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Data analyses

Access to traditional lands

- In 2002, approximately 30% of Indigenous Australians aged 15 years and over reported they did not recognise their homeland or traditional country. Approximately 22% reported they lived on their homeland, 46% were allowed to visit their homeland and 1.5% were not allowed to visit their homeland/traditional country.

Access to traditional lands by age group

- In 2002, the proportion of Indigenous Australians aged 15 years and over who reported they did not recognise their homelands was highest among those aged 15–34 years (34%) and lowest among those aged 55 years and over (23%) (Table 2.17.1).
- A higher proportion of those aged 55 years and over reported they either lived on their homeland (26%) or were allowed to visit their homeland (50%) than the younger age groups.

Table 2.17.1: Access to homelands/traditional country, by age group, Indigenous Australians, 2002

	Does not recognise homelands/ traditional country	Recognises homelands/traditional country			Total
		Lives on homelands/ traditional country	Allowed to visit homelands/ traditional country	Not allowed to visit	
	Per cent				
15–34 years	34.1	20.2	44.4	1.3	100.0
35–44 years	25.8	23.0	48.6	2.6[(a)]	100.0
45–55 years	28.9	23.7	46.6	0.8[(a)]	100.0
55 years and over	23.1	25.7	49.6	1.6[(a)]	100.0
Australia	**30.4**	**21.9**	**46.2**	**1.5**	**100.0**

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: AIHW analysis of 2002 NATSISS.

Access to traditional lands by state/territory

- The proportion of Indigenous Australians who reported they did not recognise their homelands varied by jurisdiction, being highest in Tasmania and the Australian Capital Territory (51%) and lowest in the Northern Territory (9%) (Table 2.17.2).
- The proportion of Indigenous Australians who lived on their homeland was highest in the Northern Territory (38%) and lowest in Queensland (13%).
- The proportion of Indigenous people who were allowed to visit their homelands/traditional country was highest in Queensland (58%) and lowest in Tasmania/Australian Capital Territory (31%).

Table 2.17.2: Access to homelands/traditional country, by state/territory, Indigenous Australians aged 15 years and over, 2002

State/ territory	Does not recognise homelands/ traditional country	Recognises homelands/traditional country			Total
		Lives on homelands/ traditional country	Allowed to visit homelands/ traditional country	Not allowed to visit	
	Per cent				
NSW	39.1	23.8	35.3	1.8	100.0
Vic	36.5	14.9	46.4	2.2[(a)]	100.0
Qld	27.6	13.4	57.8	1.3[(a)]	100.0
WA	27.9	26.4	44.5	1.2[(a)]	100.0
SA	29.4	16.1	52.2	2.3[(a)]	100.0
Tas/ACT	50.5	17.3	30.5	1.6[(a)]	100.0
NT	9.1	38.0	51.8	1.1[(a)]	100.0
Australia	**30.4**	**21.9**	**46.2**	**1.5**	**100.0**
Number	85,879	61,700	130,287	4,338	282,205

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: AIHW analysis of 2002 NATSISS.

Access to traditional lands by remoteness

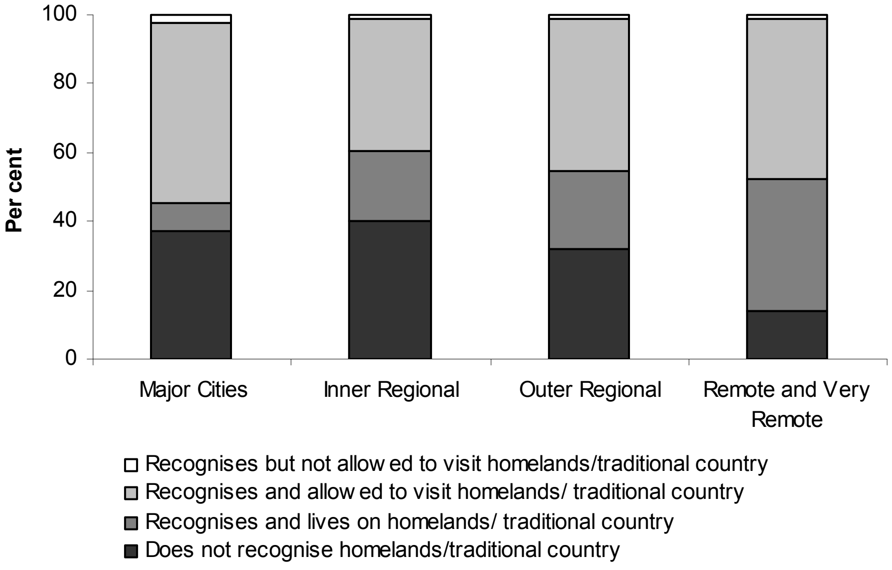
- In 2002, the proportion of Indigenous Australians aged 15 years and over who reported they did not recognise their homelands was highest in Inner Regional areas (40%) and lowest in Remote and Very Remote areas (14%) (Table 2.17.3; Figure 2.17.1).
- Approximately 8% of Indigenous Australians reported they lived on their homeland in Major Cities, 20% in Inner Regional, 23% in Outer Regional and 38% in Remote and Very Remote areas.
- The proportion of Indigenous people who were allowed to visit their homelands/traditional country but did not live there was highest in Major Cities (52%).
- Around 2% of Indigenous people in Major Cities and around 1% of Indigenous people in other areas were not allowed to visit their traditional country.

Table 2.17.3: Access to homelands/traditional country, by remoteness, Indigenous Australians aged 15 years and over, 2002

	Does not recognise homelands/ traditional country	Recognises homelands/traditional country			
		Lives on homelands/ traditional country	Allowed to visit homelands/ traditional country	Not allowed to visit	Total
			Per cent		
Major Cities	37.5	8.1	52.1	2.4[(a)]	100.0
Inner Regional	40.1	20.1	38.5	1.3[(a)]	100.0
Outer Regional	32.2	22.5	43.8	1.4[(a)]	100.0
Remote and Very Remote	14.2	38.0	46.9	0.9[(a)]	100.0
Australia	**30.4**	**21.9**	**46.2**	**1.5**	**100.0**
Number	85,879	61,700	130,287	4,338	282,205

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: AIHW analysis of 2002 NATSISS.



Source: AIHW analysis of 2002 NATSISS.

Figure 2.17.1: Proportion of Indigenous people who recognise or do not recognise homelands/traditional country, by remoteness, 2002

Access to traditional lands by selected health characteristics

- In 2002, 79% of Indigenous Australians aged 15 years and over who did not recognise their homelands reported excellent/very good/good health status, compared with 72% of Indigenous Australians who recognised their homelands but were not allowed to visit. (Table 2.17.4). Around 76% of Indigenous Australians who recognised their homelands and either lived there or were allowed to visit reported excellent/very good/good health status.
- Approximately 18% of Indigenous Australians who lived on their homelands reported medium/high-risk alcohol consumption compared with 12% of Indigenous Australians who recognised their homelands but were not allowed to visit.
- Approximately 42% of Indigenous Australians who lived on their homelands reported they did not consume alcohol in the 12 months before the survey compared with 29% of Indigenous Australians who recognised their homelands but were not allowed to visit.
- A higher proportion of Indigenous Australians who recognised their homelands but were not allowed to visit were current smokers (59%), compared with 49% who did not recognise their homelands.

Table 2.17.4: Access to homelands/traditional country, by health status and risk factors, Indigenous Australians aged 15 years and over, 2002

	Self-assessed health status			Alcohol consumption				Smoking		
	Excellent/ very good/ good	Fair/ poor	Total[(a)]	Medium/ high risk alcohol consumption	Low risk alcohol consumption	Did not consume alcohol	Total[(a)]	Current smoker	Ex-smoker or never smoked	Total[(a)]
	Per cent									
Does not recognise homelands/ traditional country	79.2	20.8	100.0	13.9	51.4	34.7	100.0	48.6	51.4	100.0
Recognises and lives on homelands/ traditional country	75.6	24.4	100.0	18.3	40.1	41.5	100.0	54.8	45.2	100.0
Recognises and allowed to visit homelands/traditional country but does not live there	75.7	24.3	100.0	14.8	45.7	39.5	100.0	51.0	49.0	100.0
Recognises homelands/traditional country but does not live there and not allowed to visit	71.6	28.4[(b)]	100.0	11.8*	59.6	28.6	100.0	59.1	40.9	100.0
Total	**76.6**	**23.4**	**100.0**	**15.3**	**46.4**	**38.3**	**100.0**	**51.2**	**48.8**	**100.0**

(a) Excludes not stated.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: AIHW analysis of 2002 NATSISS.

Access to traditional lands by community cohesion

- In 2002, approximately 13% of Indigenous Australians who recognised their homelands but were not allowed to visit did not have support in a time of crisis, compared with around 9% of those who recognised their homelands but were allowed to visit (Table 2.17.5).
- A higher proportion of Indigenous Australians who recognised their homelands but were not allowed to live there reported neighbourhood problems (85%), compared with 71% who did not recognise their homelands.

Table 2.17.5: Access to homelands/traditional country, by community cohesion, Indigenous Australians aged 15 years and over, 2002

	Support in time of crisis			Presence of neighbourhood/community problems		
	Does not have support in time of crisis	Has support in time of crisis	Total	Neighbourhood/ community problems reported	No neighbourhood/ community problems reported	Total [(a)]
				Per cent		
Does not recognise homelands/ traditional country	9.1	90.9	100.0	71.4	28.6	100.0
Recognises and lives on homelands/traditional country	11.8	88.2	100.0	75.2	24.8	100.0
Recognises and allowed to visit homelands/traditional country but does not live there	8.8	91.2	100.0	75.5	24.5	100.0
Recognises homelands/ traditional country but does not live there and not allowed to visit	13.0*	87.0	100.0	84.7	15.3[(b)]	100.0
Total	**9.6**	**90.4**	**100.0**	**74.4**	**25.6**	**100.0**

(a) Excludes not stated.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: AIHW analysis of 2002 NATSISS.

Access to traditional lands by personal stressors

- In 2002, 30% of Indigenous Australians who lived on their homelands reported overcrowding, 25% reported a member of the family was sent to jail and 30% reported alcohol/drug problems (Table 2.17.6).
- Around 27% of Indigenous people who recognised their homelands but were not allowed to visit reported divorce or separation, 41% reported they were not able to get a job and 27% reported involuntary loss of a job.

Table 2.17.6: Access to traditional lands, by type of personal stressors in last 12 months, Indigenous Australians aged 15 years and over, 2002

		Recognises homelands/traditional country		
Type of stressor	**Does not recognise homelands/ traditional country**	**Lives on homelands/ traditional country**	**Allowed to visit homelands/ traditional country**	**Not allowed to visit**
Serious illness or disability	25.2	33.0	33.5	30.9
Serious accident	8.4	15.0	12.0	11.4(a)
Death of family member or close friend	37.1	51.5	49.0	37.1
Member of family sent to jail/currently in jail	11.4	25.4	22.2	16.0(a)
Overcrowding at home	10.8	29.8	22.8	11.2(a)
Divorce or separation	11.7	12.3	17.0	27.4
Not able to get a job	25.3	28.8	26.8	41.1
Involuntary loss of job	7.3	7.2	9.1	26.9
Alcohol/drug problems	16.2	30.3	28.1	23.2(a)
Witness to violence	8.5	21.7	17.4	20.4(a)
Abuse or violent crime	7.2	14.6	12.2	14.0(a)
Trouble with police	13.9	20.7	20.1	21.8(a)
Gambling problem	7.4	19.8	16.9	16.2(a)
Total(b)	**100.0**	**100.0**	**100.0**	**100.0**
Number	**85,879**	**61,700**	**130,287**	**4,338**

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Sum of components will not sum to 100% as multiple stressors can be reported.

Source: AIHW analysis of 2002 NATSISS.

Data quality issues

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSISS uses the standard Indigenous status question. The NATSISS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problems inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSISS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions (ABS 2004).

Non-Indigenous comparisons are available through the General Social Survey. Time series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSISS data quality issues can be found in the 2002 NATSISS publication (ABS 2004).

Homelands/traditional country data

Sources of non-self-reported data in regard to those living on their homelands/traditional country exist for some states/territories, for example ABS data on the population of statistical local areas for land categorised as 'Aboriginal land' under the land rights legislative regimes of South Australia, the Northern Territory and possibly New South Wales. But no such precision is usually possible for land to which Indigenous Australians have a traditional connection under native title legislation, or for land to which use/access has been denied to Indigenous Australians but to which they nevertheless feel a traditional connection.

A further problem exists in regard to obtaining objectively derived data because of variations in the understanding by different groups of what is meant by 'homelands/traditional country'. In some parts of Australia, for example the Northern Territory, 'homelands' refers only to small communities of very closely related kin living on their specific clan estate, and is differentiated from the larger conglomerated settlements (usually former missions, but nevertheless situated on Aboriginal-owned land) where a number of clans live together on other clans' estates. This meaning may not exist in all parts of Australia. The subjective understandings inherent in self-reported data, and publication of data on a state/territory basis, may be the only ways to deal with such definitional variations.

References

ABS (Australian Bureau of Statistics) 2004. National Aboriginal and Torres Strait Islander Social Survey 2002. ABS cat. no. 4714.0. Canberra: ABS.

2.18 Tobacco use

The proportion of Indigenous Australians who are current regular smokers

Data sources

Data for this indicator come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey and 2004 National Drug Strategy Household Survey.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Drug Strategy Household Survey (NDSHS)

The NDSHS is conducted by the AIHW every 3 years and collects information relating to drug use in Australia. The sample size for the 2004 survey was 29,445 persons aged 12 years and over.

The NDSHS does not have an enhanced Indigenous sample. Therefore, only a small number of Indigenous respondents are picked up in this survey. In 2004, approximately 150 Indigenous respondents were included. The sample size for Indigenous Australians is very small and therefore the estimates should be interpreted with caution (ABS & AIHW 2005). This small Indigenous sample size also limits the reliability of time series analyses.

NDSHS data are reportable at the national level only. Data are not available for remoteness areas, regional areas and state and territory levels.

Data analyses

Smoking status

- In 2004–05, approximately 46% of Indigenous Australians aged 18 years and over reported they were current daily smokers compared with 21% of non-Indigenous Australians. Around 24% of Indigenous adults were ex-smokers compared with 30% of non-Indigenous adults.

Smoking status by age group and sex

- A higher proportion of Indigenous and non-Indigenous males were current daily smokers (48% and 24% respectively) than Indigenous and non-Indigenous females (45% and 18% respectively) (Table 2.18.1).

- Indigenous adults aged 25–34 and 35–44 years were most likely to report being current daily smokers (55%). The lowest proportion of Indigenous adults who were current daily smokers were aged 55 years and over (30%).

Table 2.18.1: Smoker status, by Indigenous status, sex and age group, 2004–05

	18–24		25–34		35–44		45–54		55 and over		Total		Total age-standardised(a)	
Smoker status	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
								Per cent						
								Males						
Current smoker	53	33	57	32	59	31	52	27	36	15	53	26	50	26
Daily	50	29	56	29	57	29	50	25	35	14	51	24	48	24
Other	3(c)	4	1(c)	3	2(c)	2	2(c)	2	1(d)	1(c)	2	2	2	2
Ex-smoker	13	13	15	24	15	28	30	37	43	55	20	35	26	35
Never smoked	34	54	28	43	25	41	19	36	21	30	26	39	24	39
Total number(b)	**26,714**	**939,483**	**32,574**	**1,368,120**	**27,186**	**1,439,208**	**18,812**	**1,340,599**	**15,193**	**2,170,272**	**139,595**	**7,666,352**	**139,595**	**7,666,352**
								Females						
Current smoker	52	25	55	26	59	25	52	21	27	10	51	20	47	20
Daily	51	23	54	23	54	23	51	20	26	9	49	18	45	18
Other	1(c)	2(c)	1(c)	3	5(c)	2	1(d)	1(c)	1(c)	1	2(c)	2	2(c)	2
Ex-smoker	12	14	18	24	19	25	19	29	33	29	19	25	22	25
Never smoked	36	62	27	50	22	50	29	50	40	62	30	55	31	55
Total number(b)	**30,009**	**917,595**	**37,198**	**1,393,234**	**31,871**	**1,460,358**	**20,766**	**1,364,981**	**17,974**	**2,359,406**	**154,046**	**7,866,025**	**154,046**	**7,866,025**
								Persons						
Current smoker	52	29	56	29	59	28	51	23	31	13	51	23	48	23
Daily	50	26	55	26	55	26	50	22	30	12	49	21	46	21
Other	2(c)	3	1	3	4(c)	2	1(c)	2	1(c)	1	2(c)	2	2	2
Ex-smoker	12	13	16	24	17	27	24	33	37	41	19	30	24	30
Never smoked	35	58	28	47	24	45	24	43	32	46	30	47	28	47
Total number(b)	**56,723**	**1,857,078**	**69,772**	**2,761,354**	**59,057**	**2,899,566**	**39,578**	**2,705,580**	**33,167**	**4,529,678**	**293,641**	**15,532,377**	**293,641**	**15,532,377**

(a) Directly age-standardised proportions.

(b) Includes smoker status not known.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Source: ABS 2006.

Smoking status by state/territory

- In 2004–05, the proportion of Indigenous persons aged 18 years and over who were current smokers ranged from 44% in the Australian Capital Territory to 56% in South Australia and the Northern Territory (Table 2.18.2).
- The proportion of Indigenous ex-smokers in 2004–05 ranged from 14% in the Northern Territory to 24% in Victoria.
- The proportion of Indigenous adults who reported that they had never smoked was similar across most states and territories.

Table 2.18.2: Smoker status, by state/territory, Indigenous persons aged 18 years and over, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
Current smoker	53	52	51	48	56	51	44	56	52
Daily	51	50	50	44	53	50	41	54	50
Other	2(a)	2(a)	1(a)	4(a)	3(a)	1(a)	3(b)	2	2
Ex-smoker	20	24	20	22	17	22	25	14	20
Never smoked	27	24	29	30	27	27	31	30	28
Total(c)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	75,000	16,500	70,600	36,500	14,500	9,500	2,300	33,400	258,300

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Includes smoker status not known.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Smoking status by remoteness

Table 2.18.3 presents the smoking status of Indigenous and non-Indigenous adults by remoteness area for 2004–05.

- The proportion of Indigenous adults who reported they were current smokers was similar across all remoteness areas.
- The rate ratio of Indigenous to non-Indigenous current smokers was higher in Major Cities (2.1) than in Remote areas of Australia (1.4). This is because, although the proportion of Indigenous adults who smoked was similar, the proportion of non-Indigenous Australians who reported they were current smokers was higher in Remote areas (34%) than in Major Cities (22%).

Table 2.18.3: Smoker status, by remoteness area and Indigenous status, persons aged 18 years and over, 2004–05

	Major Cities			Inner Regional			Outer Regional			Remote			Very Remote(a)			Australia		
Smoker status	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
	%	%		%	%		%	%		%	%		%	%		%	%	
Current smoker	46	22	2.1*	47	26	1.8*	50	27	1.9*	47	34	1.4*	51	n.a.	—	48	23	2.1*
Daily	45	20	2.3*	46	24	1.9*	48	25	1.9*	45	32	1.4*	48	n.a.	—	46	21	2.2*
Other	2(d)	2	0.9	1(c)	2	0.6	2(c)	2	1.0	2(c)	2(c)	1.4	3(c)	n.a.	—	2	2	1.0
Ex-smoker	27	30	0.9	25	31	0.8*	22	31	0.7*	25	27	0.9	18	n.a.	—	24	30	0.8*
Never smoked	26	49	0.5*	28	44	0.6*	29	42	0.7*	28	40	0.7*	31	n.a.	—	28	47	0.6*
Total(b)	**100.0**	**100.0**	. .	**100.0**	**100.0**	. .	**100.0**	**100.0**	. .	**100.0**	**100.0**	. .	**100.0**	**n.a.**	. .	**100.0**	**100.0**	. .

* Represents statistically significant differences in the Indigenous/ non-Indigenous comparisons.

(a) The National Health Survey did not collect data in Very Remote Australia.

(b) Includes smoker status not known.

(c) Estimate is subject to sampling variability too high for most practical purposes.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Note: Data are directly age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Smoking status over time

- The proportion of Indigenous adults who reported they were current smokers was similar in 2001 and 2004–05 (51% and 48%) (Table 2.18.4).
- The rate ratios of Indigenous to non-Indigenous smokers, ex-smokers and non-smokers were also similar in 2001 and 2004–05.
- Data on the smoking status of Indigenous Australians were collected in the 1995 National Health Survey, but they are available for non-remote areas only. The proportion of Indigenous adults in non-remote areas who reported they were current daily smokers was similar in 1995, 2001 and 2004–05 (50%, 48% and 49% respectively) (ABS 2006).

Table 2.18.4: Smoker status, by Indigenous status, persons aged 18 years and over, 2001 and 2004–05

	2001			2004–05		
	Indigenous	**Non-Indigenous**	**Rate ratio**	**Indigenous**	**Non-Indigenous**	**Rate ratio**
			Per cent			
Current smoker	51	24	2.1*	48	23	2.1*
Daily	49	22	2.2*	46	21	2.2*
Other	2[(a)]	2	1.2	2	2	1.0
Ex-smoker	21	26	0.8*	24	30	0.8*
Never smoked	28	50	0.6*	28	47	0.6*
Not known	—	—	—	—	—	—
Total	**100.0**	**100.0**	. .	**100.0**	**100.0**	. .

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Note: Data are directly age-standardised.

Source: ABS and AIHW analysis of 2001 NHS (Indigenous supplement), 2004–05 NATSIHS and 2004–05 NHS.

Prevalence by selected population and health characteristics

- In 2004–05, Indigenous Australians aged 18 years and over were more likely to report being a current smoker if they were in the lowest (1st) household income quintile than if they were in the highest (55% compared with 32%); were in the most disadvantaged SEFIA (socio-economic index for areas) quintile (1st) than if they were in the least disadvantaged (52% compared with 25%); and if they were unemployed than if they were employed (76% compared with 42%). Similar trends were reported for non-Indigenous Australians (Table 2.18.5).
- Indigenous Australians were more likely to report being a current smoker if they did not have a non-school qualification than if they did (52% compared with 41%) or if the highest year of schooling completed was Year 9 or below than if they completed Year 12 (58% compared with 29%).
- A higher proportion of Indigenous Australians aged 18 years and over with a self-assessed health status of fair/poor reported being a current smoker than those with a self-assessed health status of excellent/very good (57% compared with 40%). Indigenous Australians were slightly more likely to report being an ex-smoker if they had diabetes than if they did not (27% compared with 22%) and if they had cancer than if they did not (29% compared with 24%). A higher proportion of Indigenous Australians without cancer reported they had never smoked (28%) than those with cancer (21%).
- Indigenous Australians aged 18 years and over were more likely to report being a current smoker if they drank at short- or long-term risky/high-risk levels than if they did not (long-term 66% compared with 45%, short-term 67% compared with 49%).
- Indigenous Australians aged 18 years and over were more likely to report being a current smoker if they reported their exercise level as low/sedentary rather than high (49% compared with 32%); if they reported not eating fruit daily (65%) compared with those who did (46%); if they reported not eating vegetables daily (56%) compared with those who did (48%); and if they were normal or underweight rather than if they were overweight or obese (57% compared with 43%).

Table 2.18.5: Proportion[(a)] of Indigenous and non-Indigenous Australians aged 18 years and over, by smoking status and selected population characteristics, 2004–05

	Indigenous Australians			Non-Indigenous Australians		
	Current smoker	Ex-smoker	Never smoked	Current smoker	Ex-smoker	Never smoked
Household income						
1st quintile (lowest)	55.3*	22.4*	22.3*	32.4*	26.0*	41.7*
5th quintile (highest)	31.7*	26.4	41.9*	18.3*	31.6	50.1*
SEIFA (Socio-economic Indexes for Areas)						
1st quintile (most disadvantaged)	52.3*	21.2*	26.5*	31.4*	28.2*	40.4*
5th quintile (least disadvantaged)	24.7*	34.8[(b)]	40.6*	15.7*	32.0	52.3*
Employment						
Employed	41.5*	25.9	32.6*	23.0*	30.1	46.8*
Unemployed	75.9*	14.1*	10.0*	41.5*	23.7*	34.8*
Not in the labour force	53.7*	21.9*	24.3*	26.0*	27.8*	46.2*
Has non-school qualification						
Yes	40.7*	26.5	32.7*	19.6*	31.8	48.7*
No	52.1*	22.2	25.7*	28.5*	28.0	43.5*
Highest year of school completed						
Year 12	28.6*	28.7	42.7*	17.0*	30.1	52.9*
Year 9 or below	57.9*	21.0*	21.1*	37.5*	26.2*	36.3*
Housing						
Owner	37.4	23.4	39.2	n.a.	n.a.	n.a.
Renter	57.4	18.4	24.2	n.a.	n.a.	n.a.
Self-assessed health status						
Excellent/very good	40.4*	25.0	34.6*	18.9*	30.1	51.0*
Good	49.7*	22.1*	28.2*	27.1*	28.9*	44.0*
Fair/poor	56.8*	22.5*	20.7*	35.3*	27.4*	37.2*
Number of long-term health conditions						
None	52.1*	18.8	29.1*	28.8*	18.3	52.8*
One	54.8*	14.9*	30.2*	24.2*	26.1*	49.7*
Two	44.4*	23.0	32.7*	20.8*	27.5	51.6*
Three or more	48.9*	25.6*	25.4*	25.6*	31.7*	42.7*
Circulatory problems						
Yes	50.8*	23.5*	25.7*	22.2*	31.1*	46.6*
No	47.4*	23.6*	29.0*	24.1*	28.7*	47.2*
Has diabetes						
Yes	45.4*	26.7	27.9*	21.1*	31.4	47.5*
No	49.9*	22.2*	28.0*	23.2*	29.6*	47.2*

(continued)

Table 2.18.5 (continued): Proportion[(a)] of Indigenous and non-Indigenous Australians aged 18 years and over, by smoking status and selected population characteristics, 2004–05

	Indigenous Australians			Non-Indigenous Australians		
	Current smoker	Ex-smoker	Never smoked	Current smoker	Ex-smoker	Never smoked
Has cancer						
Yes	49.5*	29.1[(c)]	21.4*	29.1*	35.1	35.8*
No	48.1*	23.5*	28.4*	23.0*	29.7*	47.3*
Has respiratory problems						
Yes	47.5*	24.3*	28.1*	22.6*	31.0*	46.4*
No	48.7*	23.2*	28.2*	23.3*	29.3*	47.3*
Stressors in last 12 months						
Serious illness or disability	50.9	20.3	28.8	n.a.	n.a.	n.a.
Total experienced stressors	53.7	19.7	26.6	n.a.	n.a.	n.a.
No stressors	46.5	20.3	33.2	n.a.	n.a.	n.a.
Long-term risky/high-risk alcohol consumption						
Yes	65.8*	16.6[(b)]*	17.5*	36.9*	35.5*	27.6*
No	44.8*	25.0*	30.2*	20.9*	29.0*	50.1*
Short-term risky/high-risk alcohol consumption						
Yes	67.2*	16.4*	16.3	43.9*	34.8*	21.3
No	48.6*	24.6*	26.8*	22.2*	31.8*	46.1*
Physical activity[(c)]						
Low/sedentary	49.3*	24.0	26.7*	24.7*	28.6	46.7*
Moderate	42.9*	32.1	25.1*	20.0*	33.2	46.7*
High	31.7*	19.1[(b)]	49.1	14.6*	33.5	51.9
Eats fruit daily						
Yes	45.7*	24.7*	29.6*	21.4*	30.3*	48.3*
No	64.7*	16.0*	19.3*	48.0*	23.3*	28.7*
Eats vegetables daily						
Yes	47.7*	23.8*	28.5*	22.9*	29.9*	47.2*
No	55.7*	20.5	23.8*	43.0*	28.2	28.9*
Overweight/obesity						
Yes	43.0*	26.2*	30.8*	22.9*	32.2*	44.8*
No	57.0*	19.9*	23.0*	23.4*	27.4*	49.2*
Total (age-standardised)	**48.1***	**23.7***	**28.2***	**23.1***	**29.9***	**47.1***
Total (crude)	**52.1***	**19.7***	**28.3***	**22.8***	**30.1***	**47.1***
Total number persons aged 18 years and over	134,537	50,748	72,964	3,365,115	4,444,458	6,943,683

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Proportions are age-standardised except for data for housing tenure and stressors experienced in the previous 12 months for which crude proportions are presented, because data for non-Indigenous Australians are not available.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Non-remote areas only.

Source: AIHW analysis of 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Additional information

Smoking status among those aged 12 years and over

The 2004 National Drug Strategy Household Survey collected information on smoking status of Indigenous and non-Indigenous Australians aged 12 years and over.

- In 2004 approximately 52% of Indigenous people aged 12 years and over had smoked 100 cigarettes in their lifetime (or equivalent amount of tobacco), and 35% had smoked in the 12 months before the survey. For other Australians, 45% had smoked at least 100 cigarettes in their lifetime, and 20% had smoked in the previous 12 months (AIHW 2005).

These data should be interpreted with caution, because as the sample size for Indigenous Australians was very small (463).

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

Smoking data

The survey included smoking status, starting age of tobacco use, Indigenous status, age and sex. The NATSIHS has a large Indigenous sample size resulting in reliable estimates.

The question on smoking is asked of persons aged 18 years and over. Since most Australians start smoking before the age of 18, this limits our understanding of teenage smoking patterns. Teenagers are one of the main groups that smoking prevention programs focus on.

National Drug Strategy Household Survey (NDSHS)

The NDSHS collects information relating to drug use in Australia. The sample size for the 2004 survey was 29,445 persons aged 12 years and over.

The NDSHS does not have an enhanced Indigenous sample. Therefore, only a small number of Indigenous respondents are picked up in this survey. In 2004, approximately 150 Indigenous respondents were included. The sample size for Indigenous Australians is very small and therefore the estimates should be interpreted with caution (ABS & AIHW 2005). This small Indigenous sample size also limits the reliability of time series analyses.

NDSHS data are reportable at the national level only. Data are not available for remoteness areas, regional areas and state and territory levels.

Smoking data

The survey includes smoking status, age of starting tobacco use, sex and age. The survey collects data from persons aged 12 years and over (with parent/guardian consent). Children are one of the main groups to focus on when trying to reduce the uptake of smoking tobacco.

References

ABS (Australian Bureau of Statistics) 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

ABS & AIHW (Australian Institute of Health and Welfare) 2005. Recent developments in the collection of Indigenous health and welfare statistics 2005. ABS cat. no. 4704.0, AIHW Cat. no. IHW 14. Canberra: ABS and AIHW.

AIHW 2005. Statistics on drug use in Australia 2004. Drug statistics series no. 15. Cat. no. PHE 62. Canberra: AIHW.

2.19 Tobacco smoking during pregnancy

The proportion of Indigenous mothers who smoked during pregnancy

Data sources

Data for this measure mainly come from the AIHW National Perinatal Data Collection.

National Perinatal Data Collection

There is currently no data element in the Perinatal National Minimum Data Set (NMDS) for smoking during pregnancy but a program for national data development has been under way since 2006 and it is expected that smoking during pregnancy will be added as a data element in the NMDS by 2009 or 2010. From 2005, data are available for seven jurisdictions (New South Wales, Queensland, Western Australia, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory). Queensland began collecting smoking data from 1 July 2005, so data are available for 6 months only in 2005. Data for Victoria on smoking during pregnancy is not currently collected.

Note that the definitions used for smoking during pregnancy differ among the jurisdictions. Seven of the states and territories currently collect at least one smoking question as part of their routine perinatal data collections. The smoking questions currently collected by the states and territories are presented in Table 2.19.1 below.

Table 2.19.1: Current smoking questions and data domains on perinatal forms, by state and territory

	NSW	Vic	Qld[(a)]	WA	SA	Tas[(a)]	ACT	NT
Question 1	Did the mother smoke at all during pregnancy?	n.a.	Did the mother smoke at all during this pregnancy?	Smoking during pregnancy	Tobacco smoking status at first visit	During this pregnancy has the mother smoked tobacco	Did mother smoke during pregnancy?	Smoking at 1st antenatal visit
Data domain	Yes/no	—	Yes/no	Yes/no	Smoker Quit in pregnancy before first visit Non-smoker Unknown smoking status	Yes/no	Yes/no	Yes/no /unknown
Question 2	If yes, how many cigarettes each day on average in the second half of pregnancy?	—	If yes, how many cigarettes were smoked each day on average after 20 weeks gestation?	—	Average number of tobacco cigarettes smoked per day in 2nd half of pregnancy	If yes, amount of tobacco smoked	Average number of cigarettes per day during the second half of pregnancy	Smoking at 36 weeks

(continued)

Table 2.19.1(continued): Current smoking questions and data domains on perinatal forms, by state and territory

	NSW	Vic	Qld[(a)]	WA	SA	Tas[(a)]	ACT	NT
Data domain	None ≤ 10 per day > 10 per day Unknown	—	None ≤ 10 per day > 10 per day Unknown	—	None No. per day = ……….. < 1 (occasional) Unknown no.	< 10 cigarettes per day > 10 cigarettes per day	NN (numeric field)	Yes/no /unknown

(a) For Tasmania and Queensland, questions on smoking have been collected since 1 January 2005 and 1 July 2005 respectively.

n.a. Not available. For Victoria, data on smoking in pregnancy are not currently collected as part of the perinatal collection. Victoria currently uses other mechanisms to monitor smoking in pregnancy.

Source: AIHW: Laws et al 2006.

Given the different questions currently asked in the seven jurisdictions, comparisons between states and territories should be interpreted with caution (AIHW: Leeds et al. 2007).

Data on mothers for whom Indigenous status was not stated have been excluded from analysis.

Data analyses

Proportions have been directly age-standardised to account for differences in the age structure of the Indigenous and non-Indigenous female populations who give birth.

Smoking during pregnancy

- Approximately 4.6% of mothers in New South Wales, Queensland, Western Australia, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory identified as Aboriginal or Torres Strait Islander in 2005. Approximately 4,108 Indigenous mothers in these jurisdictions reported they smoked during pregnancy, 3,392 reported they did not and for 237 Indigenous mothers, smoking status was not known.
- When the effect of age was controlled for, Aboriginal and Torres Strait Islander mothers in the seven jurisdictions smoked during pregnancy at around three times the rate of non-Indigenous mothers in these jurisdictions (52% compared with 16%).

Smoking during pregnancy by state/territory

The number and proportion of mothers who smoked during pregnancy are presented by Indigenous status and state/territory for 2005 in Table 2.19.2 and Figure 2.19.1.

- Aboriginal and Torres Strait Islander mothers in New South Wales and Western Australia smoked during pregnancy at around four times the rate of non-Indigenous mothers, in Queensland and South Australia at around three times the rate, and in Tasmania, the Australian Capital Territory and the Northern Territory at twice the rate.

Table 2.19.2: Tobacco smoking status of mothers during pregnancy, by Indigenous status, NSW, Qld, WA, SA, Tas, ACT and NT, 2005[(a)(b)]

Smoking status	NSW	Qld(c)	WA	SA(d)	Tas	ACT	NT(e)	Total
				Number				
Indigenous								
Smoked	1,367	803	820	319	115	45	639	4,108
Did not smoke	1,106	646	787	150	101	58	544	3,392
Not stated	1	19	0	18	2	0	197	237
Total	**2,474**	**1,468**	**1,607**	**487**	**218**	**103**	**1,380**	**7,737**
Non-Indigenous								
Smoked	11,365	4,740	3,704	3,830	1,490	680	492	26,301
Did not smoke	75,073	20,719	21,218	13,385	4,018	4,212	1,688	140,313
Not stated	131	233	0	194	94	0	78	730
Total	**86,569**	**25,692**	**24,922**	**17,409**	**5,602**	**4,892**	**2,258**	**167,344**
				Proportion(f)				
Indigenous								
Smoked	54.2	52.3	53.6	65.9	44.9	35.9	42.5	51.9
Did not smoke	45.8	46.4	46.4	31.4	53.9	60.7	42.2	45.2
Total(g)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Non-Indigenous								
Smoked	13.5	18.0	14.9	21.7	24.4	15.3	21.2	15.8
Did not smoke	86.3	81.1	85.1	77.2	73.8	84.7	75.3	83.7
Total(g)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
				Ratio(h)				
Smoked	4.0	2.9	3.6	3.0	1.8	2.3	2.0	3.3
Did not smoke	0.5	0.6	0.5	0.4	0.7	0.7	0.6	0.5

(a) Excludes births where the mother's Indigenous status was not stated.

(b) State-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here; for example, a high proportion of births in ACT hospitals are for mothers resident in New South Wales.

(c) For Queensland, smoking status data were collected from 1 July 2005; therefore, the numbers and proportions shown are for the July–December 2005 period only.

(d) For South Australia, 'smoked' includes women who quit before the first antenatal visit.

(e) For the Northern Territory, smoking status was recorded at the first antenatal visit.

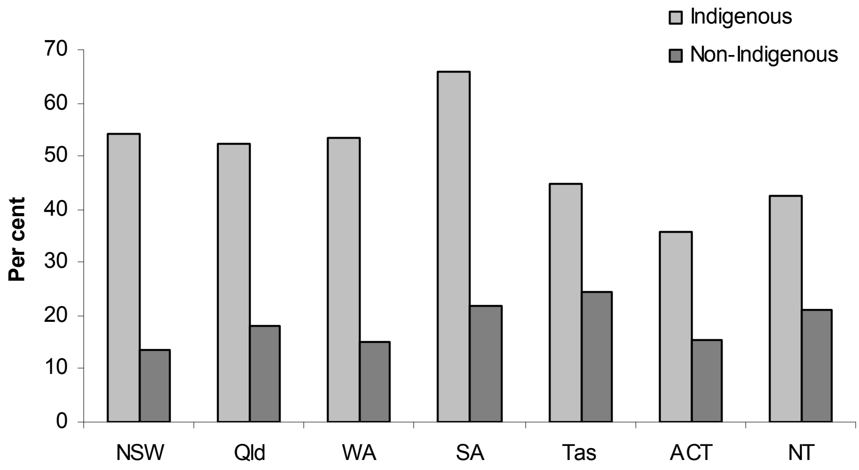
(f) Proportions are directly age-standardised using the Australian female population aged 15–44 years who gave birth in 2005.

(g) Includes mothers for whom smoking status was not stated.

(h) Rate ratio is the rate for Indigenous mothers divided by the rate for non-Indigenous mothers.

Note: Data not available for Victoria.

Source: AIHW analysis of National Perinatal Statistics Unit (NPSU) National Perinatal Data Collection.



Source: AIHW analysis of NPSU National Perinatal Data Collection.

Figure 2.19.1: Proportion of mothers who smoked during pregnancy, by Indigenous status and selected states/territories, 2005

Smoking during pregnancy by maternal characteristics

- In 2005, the proportion of Indigenous mothers who smoked during pregnancy was very similar across geographic areas ranging from 51% in Major Cities and Very Remote areas to 56% in Inner Regional and 55% in Outer Regional areas. In Remote areas, 54% of Indigenous mothers smoked during pregnancy (Table 2.19.3). In contrast, for non-Indigenous mothers there are large differences in smoking rates by remoteness, with 13% smoking in Major Cities to 24% in Outer Regional areas.
- Indigenous mothers in Major Cities were almost four times as likely as non-Indigenous mothers to smoke during pregnancy. In Inner Regional, Remote and Very Remote areas Indigenous mothers were almost three times as likely, and in Outer Regional areas twice as likely, to smoke during pregnancy as non-Indigenous mothers.
- The rate of smoking by Indigenous mothers varies little by age group. Those aged 20–24 were most likely to smoke during pregnancy (56%), followed by those aged 40 years and over (55%) and those aged less than 20 years (54%). For non-Indigenous mothers there was a very significant difference in smoking rates by age group, with 39% of those under 20 years smoking compared with 10% of those 40 years and over.
- Indigenous mothers aged 30 years and over were five times as likely as their non-Indigenous counterparts to smoke during pregnancy. Those aged 20–24 years were twice as likely, and those aged 25–29 years were three times as likely to do so as their non-Indigenous counterparts (Table 2.19.3).

Table 2.19.3: Smoking during pregnancy by Indigenous status and maternal characteristics, NSW, Qld, WA, SA, Tas, ACT and NT, 2005

	Indigenous proportion			Non-Indigenous proportion			Rate ratio[(a)]
	Smoked	Did not smoke	Not stated	Smoked	Did not smoke	Not stated	Smoked
Remoteness[(b)]							
Major Cities	50.8	48.6	0.6	12.6	87.1	0.3	3.6
Inner Regional	56.2	43.3	0.5	21.8	77.6	0.6	2.6
Outer Regional	54.9	42.7	2.4	24.4	74.8	0.7	2.4
Remote	53.5	42.5	4.0	21.2	77.8	0.9	2.6
Very Remote	51.0	40.7	8.3	19.3	79.8	0.9	2.9
Total[(b)]	**53.1**	**43.8**	**3.0**	**15.7**	**83.9**	**0.4**	**3.3**
Age of mother							
< 20	53.7	42.9	3.4	39.3	60.2	0.5	1.4
20–24	55.7	40.8	3.5	28.7	70.9	0.4	1.9
25–29	50.8	47.0	2.2	15.8	83.9	0.4	3.2
30–34	51.1	45.7	3.2	10.5	89.1	0.4	4.9
35–39	51.3	46.5	2.2	10.4	89.2	0.4	4.9
40+	54.9	42.7	2.4	10.3	89.3	0.4	5.3
Total[(b)]	**53.1**	**43.9**	**3.0**	**15.7**	**83.9**	**0.4**	**3.3**

(a) Rate ratio: proportion for Indigenous divided by proportion for non-Indigenous.

(b) Rate ratios for remoteness categories and the total are derived from the directly age-standardised proportions for Indigenous and non-Indigenous using the Australian female population aged 15–44 years in all states excluding Victoria and the first 6 months of 2005 for Queensland who gave birth in 2005 as the standard.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Smoking during pregnancy by baby outcomes

- In 2005, approximately 16% of live-born babies born to Indigenous mothers who smoked during pregnancy were of low birthweight compared with 9% of babies born to Indigenous mothers who did not smoke during pregnancy (Table 2.19.4). Babies born to Indigenous mothers had higher rates of low birthweight overall compared with babies born to non-Indigenous mothers. In addition, the relationship between smoking and low birthweight was stronger for non-Indigenous mothers. These findings indicate that smoking is only one of the many factors influencing low birthweight.
- A similar proportion of babies born to Indigenous mothers who smoked during pregnancy and babies born to Indigenous mothers who did not smoke during pregnancy had an Apgar score of less than 7 at 5 minutes after birth (1.9% and 2.3%).
- The perinatal death rate for babies born to Indigenous mothers who smoked during pregnancy was 18 per 1,000 births. This was the same rate as for babies born to Indigenous mothers who did not smoke during pregnancy.
- A higher proportion of babies born to Indigenous mothers who smoked during pregnancy were born pre-term than babies born to Indigenous mothers who did not smoke during pregnancy (15% compared with 12%).
- The perinatal death rate of babies born to Indigenous mothers who smoked during pregnancy and babies born to Indigenous mothers who did not smoke during pregnancy was similar (around 18 per 1,000 live births).

These data suggest that smoking status has little bearing on baby outcomes, but rather Indigenous status is more of a predictor of poor baby outcomes.

Table 2.19.4: Smoking during pregnancy by Indigenous status and baby outcomes, NSW, Qld, WA, SA, Tas, ACT and NT, 2005

	Indigenous proportion		Non-Indigenous proportion		Ratio[(a)]
	Smoked	Did not smoke	Smoked	Did not smoke	Smoked
Pre-term birth	15.3	11.5	10.1	7.2	1.5*
Low birthweight[(b)]	15.9	9.4	10.0	5.2	1.6*
Apgar score[(b)]					
0–3	0.4	0.6	0.4	0.3	1.2
4–6	1.5	1.7	1.3	1.0	1.2
7+	97.6	97.4	98.1	98.7	1.0
Perinatal deaths per 1,000 births	17.6	18.3	12.5	8.3	1.4*

(a) Rate ratio: proportion for Indigenous divided by proportion for non-Indigenous.

(b) Live births only.

Note: Excludes Victoria and the first 6 months of 2005 for Queensland.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Smoking during pregnancy by average number of cigarettes smoked per day

Data on the average number of cigarettes smoked per day during the second half of pregnancy is available from New South Wales, South Australia and the Australian Capital Territory for the period 2003–2005 and is presented in Table 2.19.5.

- Of Indigenous mothers who reported smoking during pregnancy in the three jurisdictions combined, almost half (47%) smoked an average of more than 10 cigarettes per day.
- In New South Wales, approximately 51% of Indigenous mothers who smoked during pregnancy smoked an average of more than 10 cigarettes per day. In South Australia and the Australian Capital Territory, 30% smoked an average of more than 10 cigarettes per day.

Table 2.19.5: Indigenous mothers who smoked during pregnancy, by average number of cigarettes per day during second half of pregnancy, by state/territory, 2003–2005

Average number of cigarettes smoked per day	NSW	SA	ACT	Total[(a)]
		Number		
None	74	54	0	128
10 or less	1,656	468	69	2,193
More than 10	1,990	258	34	2,282
Not stated	181	91	12	284
Total	**3,901**	**871**	**115**	**4,887**
		Proportion		
None	1.9	6.2	0.0	2.6
10 or less	42.5	53.7	60.0	44.9
More than 10	51.0	29.6	29.6	46.7
Not stated	4.6	10.4	10.4	5.8
Total	**100.0**	**100.0**	**100.0**	**100.0**

(a) Includes New South Wales, South Australia and the Northern Territory only.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Data quality issues

Perinatal data

Under-identification

All jurisdictions collect the Indigenous status of the mother. However, this does not provide the Indigenous status of the baby and will underestimate Indigenous births. In addition, not all jurisdictions use the standard wording for the Indigenous status question in the National Perinatal Data Collection. This affects the quality and comparability of the data collected. There are also problems with the accuracy of the identification of Indigenous mothers.

Studies linking perinatal data with birth registration data and hospital admissions show that Indigenous women are under-identified. However, there has not been a systematic audit of the accuracy of these data across the nation. Therefore, at this stage, it is not possible to quantify or adjust for errors in identification. All jurisdictions are working towards improving the quality of the Indigenous status data (AIHW: Laws & Sullivan 2004).

Smoking during pregnancy data

Smoking during pregnancy data are not currently included in the Perinatal National Minimum Data Set (NMDS). Data on smoking during pregnancy are currently available from seven states and territories (New South Wales, Queensland, Western Australia, South Australia, the Australian Capital Territory and the Northern Territory). Tasmania and Queensland began collecting data in 2005. Victoria collects information on smoking during pregnancy using mechanisms other than their perinatal data collection.

Work has been under way from 2006 to develop a national definition for inclusion in the Perinatal NMDS.

Under-reporting of smoking status has been found to range from 5% to 25% depending on the circumstances (AIHW: Laws &Sullivan 2004). In addition, the accuracy of recall could be a problem depending on when the questions are asked.

Given the small numbers involved, small errors in Indigenous identification can result in large proportional differences and changes over time and between jurisdictions. Fluctuations in the smoking status during pregnancy of Indigenous mothers over time partly reflect changing levels of identification of Indigenous women in the perinatal data. Caution should be exercised in assessing trends over time or comparisons with the non-Indigenous population. Given the different questions currently asked in the seven jurisdictions, it is recommended that no comparisons between jurisdictions be undertaken at this stage.

References

AIHW (Australian Institute of Health and Welfare): Laws PJ & Sullivan EA 2004. Report on the evaluation of the Perinatal National Minimum Data Set. Perinatal statistics series no. 14. Cat. no. PER 27. Sydney: AIHW National Perinatal Statistics Unit.

AIHW: Leeds K, Gourley M, Laws P, Zhang J, Al-Yaman F & Sullivan EA 2007. Indigenous mothers and their babies 2001–04. Perinatal statistics series no. 19. Cat. no. PER 38. Canberra: AIHW.

AIHW: Laws PJ, Grayson N & Sullivan EA 2006. Smoking and pregnancy. Cat. no. PER 33. Sydney: AIHW National Perinatal Statistics Unit.

2.20 Risky and high-risk alcohol consumption

The proportion of Aboriginal and Torres Strait Islander peoples who consume alcohol at risky or high-risk levels

Data sources

Data for this measure come from the National Aboriginal and Torres Strait Islander Health Survey, the National Hospital Morbidity Database, the National Mortality Database and the Bettering the Evaluation and Care of Health Survey.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

The NATSIHS collected information on risky and high-risk alcohol consumption, which is defined as that which exceeds the National Health and Medical Research Council (NHMRC) guidelines for low risk drinking, in the short-term or long-term. These guidelines are outlined below.

Risky/high-risk drinking—adult males

- Short-term risky drinking for males is consumption in excess of 6 but less than 11 standard drinks on any one day.
- Short-term high-risk drinking for males is consumption of 11 or more standard drinks on any one day.
- Long-term risky drinking is average consumption in excess of 4 but less than 6 standard drinks per day amounting to 29 but less than 42 standard drinks per week.
- Long-term high-risk drinking is average consumption in excess of 6 standard drinks per day amounting to 43 or more standard drinks per week.

Risky/high-risk drinking—adult females

- Short-term risky drinking is consumption in excess of 4 but less than 7 standard drinks on any one day.
- Short-term high-risk drinking is consumption in excess of 7 or more standard drinks on any one day.
- Long-term risky drinking is average consumption in excess of 2 but less than 5 standard drinks per day amounting to 15 but less than 28 standard drinks per week.
- Long-term high-risk drinking is consumption in excess of 4 standard drinks per day which amounts to 29 or more standard drinks per week.

Bettering the Evaluation and Care of Health (BEACH) survey

Information about encounters in general practice is available from the Bettering the Evaluation and Care of Health (BEACH) survey which is conducted by the AIHW Australian GP Statistics and Classification Centre, University of Sydney. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be underestimated. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Because of a late inclusion of a 'not stated' category of Indigenous status in 2001–02 (before which 'not stated' responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2002–03 to 2006–07, during which there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.5% of total GP encounters in the survey.

The National Hospital Morbidity Database

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

The National Mortality Database

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death, or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Data have been combined for the 5-year period 2002–2006 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data for which year of registration of death was used. Data published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Data analyses

Age-standardised rates and ratios have been used as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported alcohol consumption and risk levels

The 2004–05 NATSIHS collected information on alcohol consumption and risk level of Aboriginal and Torres Strait Islander peoples.

- In 2004–05, approximately 50% of Indigenous Australians aged 18 years and over reported having consumed alcohol in the week before the survey, and around one-quarter (24%) of Indigenous adults reported they had not consumed alcohol in the previous 12 months.
- Overall, approximately 17% of Indigenous adults reported drinking at long-term risky/high-risk levels. Of those who consumed alcohol in the week before the survey, around one-third (34%) reported drinking at long-term risky/high-risk levels.
- Approximately 55% of Indigenous adults drank at short-term risky/high-risk levels in the previous 12 months and 19% drank at short-term risky/high-risk levels at least once a week in the previous 12 months.
- After adjusting for differences in age structure, Indigenous Australians were twice as likely as non-Indigenous Australians to drink at short-term risky/high-risk levels at least once a week in the previous 12 months. Overall, Indigenous and non-Indigenous Australians were equally as likely to drink at long-term risky/high-risk levels in the

week before the survey (15% and 14% respectively); however, of those who drank, Indigenous adults were around 1.5 times as likely as non-Indigenous adults to drink at long-term risky/high-risk levels. Indigenous adults were twice as likely as non-Indigenous Australians to have abstained from alcohol consumption in the previous 12 months.

Alcohol risk levels by age

- Indigenous Australians aged 35–44 years were most likely to report drinking at long-term risky/high-risk levels in the previous week (20%) (Table 2.20.1).
- Indigenous Australians were more likely than non-Indigenous Australians to report drinking at short-term risky/high-risk levels at least once in the previous 12 months across all age groups, although the levels are close for the age group 18–24 years.
- A significantly higher proportion of Indigenous Australians aged 25–34 and 35–44 years drank at long-term risky/high-risk levels in the previous week than non-Indigenous Australians of the same age.

Table 2.20.1: Alcohol risk levels,(a) by Indigenous status and age, persons aged 18 years and over, 2004–05

	Age group (years)													
	18–24		25–34		35–44		45–54		55 and over		Total non age-standardised		Total age-standardised		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Rate ratio
	Per cent														
Abstainers(b)	16*	12*	18*	12*	22*	12*	31*	15*	46*	22*	24*	15*	29	15	1.9*
Short-term risk(c)															
Drank at risky/high-risk levels in last 12 months(d)	64	63	64*	56*	59*	46*	45*	35*	22	16	55*	39*	47	40	1.2*
Drank at risky/high-risk levels at least once a week(e)	23*	15*	20*	9*	22*	9*	16*	8*	9*	4*	19*	8*	17	8	2.1*
Long-term risk(f)															
Low	33*	47*	36*	51*	34*	52*	31*	50*	21*	47*	32*	49*	30	49	0.6*
Risky or high-risk	16	14	17*	13*	20*	15*	17	16	10	12	17*	14*	15	14	1.1
Total long-term risk(g)	*50**	*61**	*53**	*64**	*54**	*66**	*48**	*66**	*32**	*58**	*49**	*63**	*46*	*63*	*0.7**
Total(h)(i)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	. .
Total number ('000)	**56.7**	**1,857.1**	**69.8**	**2,761.4**	**59.1**	**2,899.6**	**39.6**	**2,705.6**	**33.2**	**4,529.7**	**258.3**	**14,753.3**	**258.3**	**14,753.3**	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) No alcohol consumed in previous 12 months.

(c) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(f) Risk level based on consumption in week before the interview.

(g) Includes persons whose risk level was reported as 'not known'.

(h) Includes persons who consumed alcohol more than 1 week but less than 12 months before the survey.

(i) Includes persons who reported time since last consumed alcohol 'not known'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Alcohol risk levels by sex

- A higher proportion of Indigenous females than Indigenous males reported abstaining from alcohol consumption in the 12 months prior to survey (30% compared with 17%) (Table 2.20.2).
- Indigenous males were more likely to report drinking at short-term and long-term risky/high-risk levels than Indigenous females.
- A higher proportion of Indigenous females than Indigenous males reported they had not consumed alcohol in the previous 12 months (30% compared with 17%).
- Indigenous males and females were two and three times as likely as non-Indigenous males and females to report drinking at short-term risky/high-risk levels at least once a week in the previous 12 months.
- Indigenous males were more likely to report drinking at long-term risky/high-risk levels in the week before the survey than non-Indigenous males (18% compared with 15%). The proportions of Indigenous and non-Indigenous females reporting drinking at long-term risky/high-risk levels were similar.

Table 2.20.2: Alcohol risk levels,(a) by Indigenous status and sex, persons aged 18 years and over, 2004–05 (per cent)

	Non age-standardised proportions				Age-standardised proportions					
	Males		Females		Males			Females		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%	%	%	%	%		%	%	
Abstainers(b)	17*	11*	30*	20*	22*	1	2.1*	35	20	1.8*
Short-term risk(c)										
Drank at risky/high-risk levels in last 12 months(d)	64*	48*	46*	30*	56	48	0.8*	40	31	1.3*
Drank at risky/high-risk levels at least once a week(e)	24*	12*	15*	4*	21	12	1.8*	14	5	3.0*
Long-term risk(f)										
Low	38*	56*	27*	43*	36	50	0.7*	24	43	0.6*
Risky or high-risk	20*	15*	14	12	18	15	1.2*	13	12	1.1
Total long-term risk(g)	*58**	*71**	*41**	*55**	*55*	*71*	*0.8**	*38*	*55*	*0.7**
Total(h)(i)	**100**	**100**	**100**	**100**	**100**	**100**		**100**	**100**	
Total number	**120,479**	**7,257,683**	**137,818**	**7,495,573**	**120,479**	**7,257,683**	. .	**137,818**	**7,495,573**	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) No alcohol consumed in previous 12 months.

(c) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(f) Risk level based on consumption in week before the interview.

(g) Includes persons whose risk level was reported as 'not known'.

(h) Includes persons who consumed alcohol more than 1 week but less than 12 months before the survey.

(i) Includes persons who reported time since last consumed alcohol 'not known'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Alcohol risk levels by state/territory

- The proportion of Indigenous adults who drank at long-term risky/high-risk levels ranged from 8% in the Northern Territory to 19% in Queensland and Western Australia (Table 2.20.3a).
- Indigenous Australians were more likely than non-Indigenous Australians to report drinking at short-term risky/high-risk levels at least once a week in all states and territories. The proportion of Indigenous and non-Indigenous Australians reporting drinking at long-term risky/high-risk levels in the previous week was similar across all states and territories (Table 2.20.3b).

Table 2.20.3a: Alcohol risk levels,(a) Indigenous persons aged 18 years and over, by state/territory, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Per cent				
Abstainers(b)	19	16	21	26	23	11	12	48	24
Short-term risk(c)									
Drank at risky/high-risk levels in last 12 months(d)	56	58	59	57	49	54	59	40	55
Drank at risky/high-risk levels at least once a week(e)	19	17	18	27	19	14	17	16	19
Long-term risk(f)									
Drank at risky/high-risk levels in last week	17	16	19	19	17	13	11	8	16
Total number	**75,001**	**16,516**	**70,623**	**36,542**	**14,480**	**9,477**	**2,300**	**33,358**	**258,297**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) No alcohol consumed in previous 12 months.

(c) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(f) Risk level based on consumption in the week before the interview.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.20.3b: Alcohol risk levels,[(a)] persons aged 18 years and over, by Indigenous status and state/territory, 2004–05

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT[(b)]	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
	Per cent															
Abstainers[(c)]	23*	17*	19	16	28*	13*	30*	14*	34*	13*	14	11	11[(g)]	11	51	n.a.
Short-term risk[(d)]																
Drank at risky/high-risk levels in last 12 months[(e)]	49*	37*	50*	38*	51*	42*	43	42	47	43	47	44	51*	40*	37	n.a.
Drank at risky/high-risk levels at least once a week[(f)]	17*	7*	17*	7*	16*	9*	18*	8*	22*	10*	13	10	15*[(g)]	6*	15	n.a.
Long-term risk[(h)]																
Drank at risky/high-risk levels in last week	17	13	17[(h)]	12	18	14	16	15	16	16	13	12	9[(g)]	14	7	n.a.
Total number	**75,001**	**4,970,170**	**16,516**	**3,758,032**	**70,623**	**2,790,801**	**14,480**	**1,138,920**	**36,542**	**1,418,543**	**9,477**	**347,075**	**2,300**	**239,879**	**33,358**	**n.a.**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) Non-Indigenous data not available for the Northern Territory because of small sample size. Northern Territory records for non-Indigenous people contribute to the national estimates but are insufficient to support reliable estimates for the Northern Territory.

(c) No alcohol consumed in previous 12 months.

(d) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(f) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(g) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(h) Risk level based on consumption in the week before the interview.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Alcohol risk levels by remoteness

- Indigenous adults in remote areas were more likely than those in non-remote areas to report drinking at short-term risky/high risk-levels in the week before the interview. Similar proportions of Indigenous Australians in remote and non-remote areas reported drinking at long-term risky/high-risk levels in the week before the interview (15% and 17%) (Table 2.20.4). Indigenous adults in remote areas were much more likely to have abstained from alcohol consumption in the previous 12 months than Indigenous adults in non-remote areas (38% compared with 19%).

Table 2.20.4: Alcohol risk levels,[(a)] by remoteness, Indigenous persons aged 18 years and over, 2004–05

	Non-remote	Remote	Total
		Per cent	
Abstainers[(b)]	19	38	24
Short-term risk[(c)]			
Drank at risky/high-risk levels in last 12 months[(d)]	57	49	55
Drank at risky/high-risk levels at least once a week in last 12 months[(e)]	18	23	19
Long-term risk[(f)]			
Drank at risky or high-risk levels in last week	17	15	16
Total number	**185,515**	**72,782**	**25,8297**

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) No alcohol consumed in previous 12 months.

(c) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(f) Risk level based on consumption in the week before the interview.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Alcohol risk levels by selected health and population characteristics

- The proportion of Indigenous Australians aged 18 years and over who drank at long-term risky/high-risk levels and reported their health as fair/poor was similar to the proportion of Indigenous Australians in the total population who reported their health as fair/poor (Table 2.20.5).
- Indigenous Australians who spoke English as their main language at home or were in the highest (4th and 5th) quintiles of household income were more likely to drink at long-term risky/high-risk levels than Indigenous Australians who spoke a language other than English as their main language or were in the lowest (1st) quintile of household income (Table 2.20.6).
- Indigenous Australians who were not in the labour force were less likely to report drinking at short-term or long-term risky/high-risk levels than Indigenous Australians who were employed or unemployed (Table 2.20.6).

Table 2.20.5: Alcohol risk levels,[(a)] by self-assessed health status, Indigenous persons aged 18 years and over, 2004–05

	Long-term[(b)]	Short-term[(c)]		Total population
Health status	**Drank at risky/high-risk levels in last week**	**Drank at risky/high-risk levels in last 12 months[(d)]**	**Drank at risky/high-risk levels at least once a week in last 12 months[(e)]**	**Indigenous persons aged 18 years and over**
		Per cent		
Excellent/very good	35	41	36	40
Good	40	38	42	36
Fair/poor	25	21	22	24
Total	**100**	**100**	**100**	**100**

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(c) Risk level based on consumption in the week before the interview.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.20.6: Alcohol risk level, by selected population characteristics, Indigenous persons aged 18 years and over, 2004–05

	Long-term risk[a]	Short-term risk[b]	
	Drank at risky/high-risk levels in last week	Drank at risky/high-risk levels in last 12 months[c]	Drank at risky/high-risk levels at least once a week in last 12 months[d]
		Per cent	
Main language spoken at home			
English	18	57	20
Language other than English	9	39	16
Location			
Remote	15	49	23
Non-remote	17	57	18
Household income			
1st quintile (lowest)	15	49	20
4th and 5th quintile (highest)	20	63	15
Employment			
Employed CDEP	21	60	32
Employed non-CDEP	19	62	18
Total employed	*19*	*61*	*21*
Unemployed	20	67	23
Not in the labour force	12	43	16
Housing tenure type			
Owner[e]	19	55	14
Renter	15	54	21
Other[f]	25[g]	65	22
Treatment when seeking health care in last 12 months compared with non-Indigenous people			
Worse	16	56	19
The same or better	16	53	19

(a) Risk level based on Australian Alcohol Guidelines 2000 for risk of harm in the long-term.

(b) Based on responses to questions in 2004–05 National Health Survey/NATSIHS about frequency of consumption of specified number of standard drinks in the previous year. The number of standard drinks is based on NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(c) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months

(e) Includes owners with a mortgage and owners without a mortgage.

(f) Includes persons living under life tenure schemes, participants of rent/buy (or shared equity) schemes, persons living rent-free, boarders and other tenure type.

(g) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

CDEP = Community Development Employment Projects scheme.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Hospitalisations

Table 2.20.7 presents hospitalisations of Indigenous and other Australians for principal diagnoses related to alcohol use in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, over the period July 2004 to June 2006.

- There were 6,542 hospitalisations of Indigenous Australians in the six jurisdictions combined with a principal diagnosis related to alcohol use. This represented approximately 1.4% of all hospitalisations of Indigenous Australians in these jurisdictions.
- Indigenous males were hospitalised for diagnoses related to alcohol use at five times the rate of other males, and Indigenous females were hospitalised for alcohol-related conditions at three times the rate of other females.
- Over three-quarters (79%) of all hospitalisations of Indigenous Australians that were related to alcohol use had a principal diagnosis of mental and behavioural disorders due to alcohol use (5,182 hospitalisations). The most common type of mental and behavioural disorder due to alcohol use was acute intoxication, for which Indigenous Australians were hospitalised at eight times the rate of other Australians. Indigenous Australians were hospitalised at 10 times the rate of other Australians for mental and behavioural disorders due to withdrawal state and 23 times the rate of other Australians for psychotic disorder.
- Indigenous Australians were hospitalised for alcoholic liver disease and for accidental poisoning by alcohol at five times the rate of other Australians.

Table 2.20.7: Hospitalisations for principal diagnoses related to alcohol use, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

	Males					Females					Persons				
	Number		No. per 1,000(e)			Number		No. per 1,000(e)			Number		No. per 1,000(e)		
Principal diagnosis	**Indig.**	**Other(f)**	**Indig.**	**Other(f)**	**Ratio(g)**	**Indig.**	**Other(f)**	**Indig.**	**Other(f)**	**Ratio(g)**	**Indig.**	**Other(f)**	**Indig.**	**Other(f)**	**Ratio(g)**
Mental & behavioural disorders due to alcohol use (F10)															
Acute intoxication (F10.0)	1,447	10,404	4.3	0.5	8.0*	1,017	6,324	2.6	0.3	7.7*	2,464	16,728	3.4	0.4	7.7*
Dependence syndrome (F10.2)	900	20,504	2.6	1.0	2.5*	357	18,073	1.0	0.9	1.1	1,257	38,577	1.8	1.0	1.8*
Withdrawal state (F10.3, F10.4)	747	3,892	2.2	0.2	11.1*	155	1,203	0.4	0.1	6.3*	902	5,095	1.3	0.1	9.6*
Psychotic disorder (F10.5)	177	418	0.5	0.0	21.9*	62	96	0.1	0.0	29.2*	239	514	0.3	0.0	22.7*
Harmful use (F10.1)	156	1,453	0.4	0.1	5.5*	83	970	0.2	0.1	3.9*	239	2,423	0.3	0.1	4.8*
Other(h) (F10.6– F10.9)	53	837	0.2	0.0	5.5*	28	222	0.1	0.0	11.6*	81	1,059	0.2	0.0	6.8*
Total F10 categories	*3,480*	*37,508*	*10.3*	*1.9*	*5.3**	*1,702*	*26,888*	*4.4*	*1.4*	*3.2**	*5,182*	*64,396*	*7.2*	*1.6*	*4.4**
Alcoholic liver disease (K70)	457	6,818	1.4	0.3	4.1*	339	2,019	1.0	0.1	9.8*	796	8,837	1.2	0.2	5.4*
Intentional self-poisoning by alcohol (X65)	110	3,329	0.3	0.2	1.7*	192	4,672	0.5	0.2	1.9*	302	8,001	0.4	0.2	1.8*
Accidental poisoning by alcohol (X45)	141	1,030	0.4	0.1	7.2*	45	1,008	0.1	0.1	2.1*	186	2,038	0.2	0.1	4.6*
Poisoning by alcohol undetermined intent (Y15)	36	670	0.1	0.0	2.7*	40	789	0.1	0.0	2.2*	76	1,459	0.1	0.0	2.4*
Total	**4,224**	**49,355**	**12.5**	**2.5**	**4.9***	**2,318**	**35,376**	**6.0**	**1.8**	**3.3***	**6,542**	**84,731**	**9.1**	**2.2**	**4.2***

(continued)

Table 2.20.7 (continued): Hospitalisations for principal diagnoses related to alcohol use, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(l) Data are from public and most private hospitals. Exclude private hospitals in the Northern Territory.

(m) Categories are based on ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(n) Financial year reporting.

(o) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia. the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(p) Directly age-standardised using the Australian 2001 standard population.

(q) Includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(r) Rate ratio Indigenous:other.

(s) Includes amnesic syndrome, residual or late onset psychotic disorder, other and unspecified mental and behavioural disorders due to alcohol use.

Source: AIHW analysis of National Hospital Morbidity Database.

Mortality

Table 2.20.8 presents deaths related to alcohol use of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory over the period 2002–2006.

- In Queensland, Western Australia, South Australia and the Northern Territory, there were 304 deaths of Indigenous Australians related to alcohol use (Table 2.20.8). This represented approximately 4.0% of total deaths of Indigenous Australians in these states and territories.
- Of all deaths related to alcohol use among Indigenous people, the majority were for alcoholic liver disease (212 deaths).
- Overall, Indigenous males died from alcohol-related causes at 7 times the rate of non-Indigenous males and Indigenous females died from alcohol-related causes at 12 times the rate of non-Indigenous females.
- Indigenous Australians died from mental and behavioural disorders due to alcohol use at 10 times the rate of non-Indigenous Australians, from alcoholic liver disease at 8 times the rate and from poisoning by alcohol at 9 times the rate.

Table 2.20.8: Deaths related to alcohol use, Qld, WA, SA and NT, 2002–2006[a][b][c][d][e]

	Males					Females					Persons				
	Number		No. per 100,000[f]			Number		No. per 100,000[f]			Number		No. per 100,000[f]		
Principal diagnosis	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio[g]**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio[g]**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio[g]**
Alcoholic liver disease (K70)	131	939	30.8	5.0	6.2*	81	289	18.0	1.5	12.1*	212	1,228	24.1	3.2	7.6*
Mental & behavioural disorders due to alcohol use (F10)	57	312	16.8	1.7	9.8*	26	75	4.8	0.4	12.7*	83	387	10.2	1.0	10.0*
Poisoning by alcohol (X45, X65, Y15)	5	25	0.8	0.1	6.0*	n.p.	11	n.p.	0.1	n.p.	9	36	0.9	0.1	9.2*
Total	**193**	**1,276**	**48.4**	**6.8**	**7.1***	**111**	**375**	**23.8**	**1.9**	**12.3***	**304**	**1,651**	**35.2**	**4.3**	**8.2***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Data are presented in 5-year groupings because of small numbers each year.

(b) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous all-causes mortality rate.

(d) Deaths are by year of registration.

(e) Excludes 35 deaths for which Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) Rate ratio Indigenous:non-Indigenous.

Note: Different causes of death may have different levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: AIHW analysis of National Mortality Database

General practitioner encounters

Information about GP encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey.

- In the period 2002–03 to 2006–07 there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 11,219 problems were managed. Of these, 0.7% (83) were problems related to alcohol abuse.
- After adjusting for differences in the age distribution of Indigenous patients, alcohol abuse was managed at GP encounters with Indigenous patients at around three times the management rate at encounters with other patients.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006a).

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

(continued)

Data quality issues (continued)

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data. It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of those jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009 *(ABS 2004).*

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording from the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

(continued)

Data quality issues (continued)

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all states and territory registration systems, four jurisdictions (Queensland, South Australia, Western Australia and the Northern Territory) have been assessed by the ABS and AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (South Australia, Western Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems. The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous. The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death. There are also current concerns about data quality for causes of death especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006b).

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in death records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009 *(ABS 2004).*

Cause of death coding

Causes of death are based on the 10th revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia on 1 January 1997.

General practitioner data

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey, 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

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2.21 Drug and other substance use including inhalants

The use of drugs and other substances including inhalants among Aboriginal and Torres Strait Islander people

Data sources

Data for this measure come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey, the 2002 National Aboriginal and Torres Strait Islander Social Survey, the 2004 National Drug Strategy Household Survey, the National Hospital Morbidity Database and the Australian Institute of Criminology Drug Use Monitoring in Australia (DUMA) survey.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years and over who were usual residents of private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

National Drug Strategy Household Survey (NDSHS)

The NDSHS is conducted by the AIHW every 3 years and collects information relating to drug use in Australia. The sample size for the 2007 survey was almost 25,000 persons aged 12 years and over.

The NDSHS does not have an enhanced Indigenous sample. Therefore, only a small number of Indigenous respondents are picked up in this survey. In 2007, 372 Indigenous respondents were included. The sample size for Indigenous Australians is very small and therefore the estimates should be interpreted with caution (ABS & AIHW 2005). This small Indigenous sample size also limits the reliability of time series analyses.

NDSHS data are reportable at the national level only. Data are not available for remoteness areas, regional areas, and state and territory levels.

National Hospital Morbidity Database

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions which have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Drug Use Monitoring in Australia (DUMA) survey

DUMA is an annual survey that has been conducted since 1999 by the Australian Institute of Criminology (AIC) at some locations across Australia. The survey reports on drug use among police detainees at nine police stations in metropolitan areas in Australia. The survey is by a voluntary questionnaire, and drug use is confirmed by a urine sample provided by the detainee.

The survey is conducted at police stations in selected metropolitan areas and does not provide regional coverage. The number of detainees questioned is quite low and thus includes a very small Indigenous sample.

The Indigenous status of the detainee is established by the following question: 'What is your ethnic background?' (if the respondent mentions 'Australian' but not 'Aboriginal' prompt: 'Do you consider yourself an Aboriginal or Torres Strait Islander?').

Analysis is presented by state/territory as the figures do not permit national coverage.

Data analyses

Age-standardised rates and ratios have been used as a measure of morbidity in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous people and those of other Australians, taking into account differences in age distributions.

Illicit substance use can be divided into two categories: use of substances which are illegal to possess (for example, heroin) and non-medical use of substances that are legally available (for example, petrol inhalation and misuse of prescription drugs).

Self-reported illicit drug use

Self-reported data on illicit substance use among the Aboriginal and Torres Strait Islander population come from the 2002 NATSISS, the 2004–05 NATSIHS and the 2004 NDSHS. Data from these surveys are presented below.

Note that equivalent data on substance use for non-Indigenous Australians are not available from the 2002 General Social Survey or the 2004–05 National Health Survey and thus are not presented here.

- In 2004–05, 50% of Indigenous Australians aged 18 years and over and 49% aged 15 years and over reported illicit substance use at least once in their lifetime.
- In 2004–05, approximately 28% of Indigenous Australians aged 18 years and over and 28% aged 15 years and over reported illicit substance use in the 12 months before the surveys.

Substance use by age and sex

- In 2004–05, the age groups with the highest proportions of Indigenous persons who used substances in the previous 12 months were aged 18–24 years (39%) and 25–34 years (38%). (Table 2.21.1).
- In 2004–05, a higher proportion of Indigenous males than females in non-remote areas reported having ever used illicit substances (54% compared with 45%) and substance use in the previous 12 months (32% compared with 25%) (Table 2.21.2a).

Type of substance use

- Marijuana was the most commonly reported illicit drug used by Indigenous Australians aged 15 years and over in non-remote areas in 2004–05. Around 43% reported having tried marijuana and 23% had used marijuana in the previous 12 months. Amphetamines/speed was the next most frequently reported substance either experimented with (15%) or recently used (7%) followed by ecstasy or designer drugs (Table 2.21.2a).
- Marijuana was also the most commonly used illicit drug in 2002 (34% reported having ever used the drug and 19% had used the drug in the previous 12 months) (Table 2.21.2b; Figure 2.21.1).

Table 2.21.1: Substance use, by age and sex, Indigenous persons aged 15 years and over[(a)], non-remote areas, 2004–05.

Age (years)	Never used substances			Used substances but not in last 12 months			Used substances in last 12 months		
	Males	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
				Proportion of total persons (%)					
15–17(b)	14	10	12	5(c)	4(c)	5(c)	11(c)	10(c)	10
18–24	19	18	18	13	18	16	28	28	28
25–34	17	18	18	29	35	32	34	32	33
35–44	20	19	19	23	30	27	18	16	17
45–54	12	18	16	23	10	16	8	9(c)	9
55+	17	17	17	8(c)	3(c)	5(c)	1(d)	4(d)	3(c)
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
				Proportion of age group (%)					
15–17(b)	57	61	59	9(c)	10(c)	10(c)	31(c)	28(c)	30
18–24	41	47	44	13	18	16	44	34	39
25–34	31	38	35	24	28	26	45	32	38
35–44	44	49	47	24	29	27	29	19	24
45–54	41	68	56	35	13	23	20	16(c)	18
55+	71	82	77	15(c)	5(c)	9(c)	4(d)	10(d)	7(c)
Total	**44**	**53**	**49**	**21**	**20**	**20**	**32**	**25**	**28**
Total number	33,468	47,796	81,265	15,894	17,794	33,687	24,560	22,153	46,714

(a) People who accepted the substance use form.

(b) Excludes data obtained through child proxy.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.21.2a: Substance use, by type of substance and sex, Indigenous Australians aged 15 years and over, non-remote areas, 2004–05

	Males		**Females**		**Persons**	
	No.	**%**	**No.**	**%**	**No.**	**%**
Has ever used substances						
Marijuana	38,203	50.2	33,240	37.1	71,442	43.2
Amphetamines or speed	14,293	18.8	11,199	12.5	25,493	15.4
Ecstasy or designer drugs	7,896	10.4	6,729	7.5	14,625	8.8
LSD or synthetic hallucinogens	7,687	10.1	5,360	6.0	13,047	7.9
Pain-killers or analgesics for non-medical purposes	3,496	4.6	7,969	8.9	11,465	6.9
Naturally occurring hallucinogens	6,451	8.5	3,403	3.8	9,854	6.0
Cocaine	5,553	7.3	2,344	2.6	7,897	4.8
Other inhalants	4,019	5.3	2,414	2.7	6,433	3.9
Tranquillisers or sleeping pills for non-medical purposes	2,313	3.0	3,630	4.1	5,944	3.6
Heroin	2,771	3.6	1,910	2.1	4,681	2.8
Petrol	3,329	4.4	1,040	1.2	4,369	2.6
Methadone for non-medical purposes	547	0.7	323	0.4	869	0.5
Total has ever used substances	*41,088*	*54.0*	*40,244*	*45.0*	*81,331*	*49.1*
Has not used substances	33,468	44.0	47,796	53.4	81,265	49.1
Not stated	1,507	2.0	1,446	1.6	2,953	1.8
Total form answered	***76,064***	***100.0***	***89,486***	***100.0***	***165,550***	***100.0***
Form not answered	25,807	13.0	22,066	11.5	47,872	12.3
Total	**198,428**	**100.0**	**191,112**	**100.0**	**389,541**	**100.0**
Has used substances in the last 12 months						
Marijuana	21,541	28.3	15,938	17.8	37,479	22.6
Amphetamines or speed	7,208	9.5	4,294	4.8	11,502	6.9
Analgesics	2,566	3.4	6,481	7.2	9,047	5.5
Ecstasy or designer drugs	4,761	6.3	2,677	3.0	7,438	4.5
Sedatives and hypnotics	2,383	3.1	1,475	1.6	3,859	2.3
Other stimulants and hallucinogens	1,741	2.3	742	0.8	2,483	1.5
Volatile solvents	419	0.6	67	0.1	486	0.3
Total has used substances in last 12 months	*24,560*	*32.3*	*22,153*	*24.8*	*46,714*	*28.2*
Has not used substances in last 12 months	15,894	20.9	17,794	19.9	33,687	20.3
Never used substances	33,468	44.0	47,796	53.4	81,265	49.1
Not stated	2,141	2.8	1,742	1.9	3,884	2.3
Total form answered	***76,064***	***100.0***	***89,486***	***100.0***	***165,550***	***100.0***
Form not answered	25,807	18.1	22,066	15.4	47,872	16.8
Total	**142,490**	**100.0**	**143,226**	**100.0**	**285,715**	**100.0**

Source: AIHW analysis of 2004–05 NATSIHS.

Table 2.21.2b: Substance use, by type of substance and sex, Indigenous persons aged 15 years and over, non-remote areas, 2002

	Males		Females		Persons	
	Number	%	Number	%	Number	%
Has ever used substances						
Marijuana, hashish or cannabis resin	37,700	38.6	31,900	29.7	69,600	33.9
Amphetamines or speed	11,900	12.2	10,400	9.7	22,400	10.9
Pain-killers/analgesics[(a)]	6,900	7.1	7,200	6.7	14,100	6.9
LSD or synthetic hallucinogens	7,800	8.0	4,900	4.5	12,700	6.2
Ecstasy or designer drugs	6,200	6.4	4,200	3.9	10,400	5.1
Naturally occurring hallucinogens	7,300	7.4	2,800	2.6	10,000	4.9
Other inhalants	4,600	4.7	2,900	2.7	7,500	3.6
Cocaine	4,100	4.2	3,200	3.0	7,300	3.6
Tranquillisers/sleeping pills[(a)]	2,500	2.6	4,800	4.4	7,300	3.6
Petrol	5,100	5.2	2,200	2.0[(b)]	7,200	3.5
Heroin	3,500	3.5	3,700	3.4	7,100	3.5
Kava	4,400	4.6	2,500	2.4	7,000	3.4
Total has ever used substances	*42,200*	*43.3*	*39,500*	*36.7*	*81,700*	*39.8*
Has not used substances	47,100	48.3	58,200	54.2	105,400	51.4
Non-response	7,700	7.9	9,500	8.9	17,200	8.4
Total[(c)]	**97,600**	**100.0**	**107,500**	**100.0**	**205,100**	**100.0**
Has used substances in last 12 months						
Marijuana, hashish or cannabis resin	22,400	23.0	16,700	15.5	39,100	19.1
Amphetamines or speed	4,800	4.9	4,800	4.5	9,600	4.7
Pain-killers/analgesics[(a)]	4,000	4.1	5,000	4.6	9,000	4.4
Ecstasy or designer drugs	2,200	2.2	1,700	1.6	3,800	1.9
Tranquillisers/sleeping pills[(a)]	700	0.7	2,300	2.2[(b)]	3,000	1.5
Cocaine	500	0.5[(b)]	900	0.8[(b)]	1,300	0.6[(b)]
LSD or synthetic hallucinogens	700	0.7[(b)]	700	0.6[(b)]	1,300	0.7[(b)]
Heroin	500	0.5[(b)]	600	0.6[(b)]	1,100	0.5[(b)]
Kava	500	0.5[(b)]	600	0.6[(b)]	1,100	0.6[(b)]
Other inhalants	500	0.5[(b)]	400	0.4[(b)]	900	0.5[(b)]
Naturally occurring hallucinogens	400	0.5[(b)]	200	0.2[(d)]	600	0.3[(b)]
Petrol	400	0.4[(d)]	100	0.1[(d)]	500	0.3[(b)]
Total used substances in last 12 months	*26,000*	*26.6*	*22,300*	*20.7*	*48,300*	*23.5*

(continued)

Table 2.21.2b (continued): Substance use, by type of substance and sex, Indigenous persons aged 15 years and over, non-remote areas, 2002

	Males		Females		Persons	
	Number	%	Number	%	Number	%
Has not used substances in last 12 months	16,000	16.4	17,000	15.9	33,000	16.1
Never used substances	47,100	48.3	58,200	54.2	105,400	51.4
Non-response	7,700	7.9	9,500	8.9	17,200	8.4
Total[(c)]	**97,600**	**100.0**	**107,500**	**100.0**	**205,100**	**100.0**

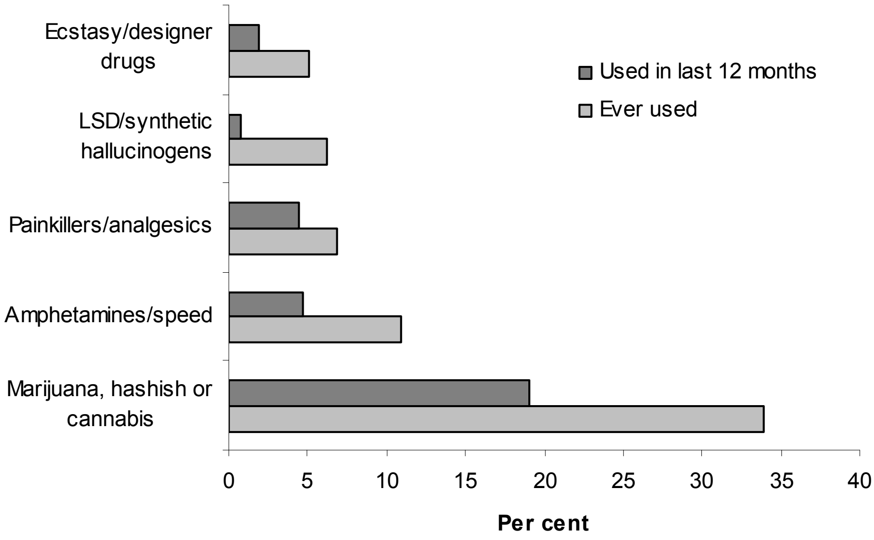
(a) For non-medicinal use.

(b) Estimates with a relative standard error of between 25% and 50% should be used with caution.

(c) Includes 'not stated' responses.

(d) Estimates with a relative standard error greater than 50% are considered too unreliable for general use.

Source: AIHW analysis of 2002 NATSISS.



Notes

1. Pain-killers/analgesics are for non-medicinal use.
2. Estimate for LSD or synthetic hallucinogens in last 12 months has a relative standard error of between 25% and 50% and should be used with caution.

Source: AIHW analysis of 2002 NATSISS.

Figure 2.21.1: Illicit substance use, Indigenous persons aged 15 years and over, non-remote areas, 2002

Substance use by Indigenous status

- The 2007 National Drug Strategy Household Survey found that illicit drug use among Indigenous people aged 14 years and over was higher than for their non-Indigenous counterparts. For example, 24% of Indigenous people had used drugs or other substances in the previous 12 months compared with 13% of non-Indigenous people, and 12% of Indigenous people had used substances other than marijuana/cannabis in the previous 12 months compared with 8% of non-Indigenous people (Table 2.21.3).

Table 2.21.3: Drugs or other substances including inhalant use status, persons aged 14 years and over, 2007

	Never used	Ex-users	Recent users
		Per cent	
Drugs or other substances, including marijuana/cannabis			
Indigenous	46.8	29.0	24.2
Non-Indigenous	62.2	24.8	13.0
Drugs or other substances, excluding marijuana/cannabis			
Indigenous	73.9	14.0	12.1
Non-Indigenous	82.1	10.3	7.6

Note: Due to the sampling frame of the 2007 National Drug Strategy Household Survey, Aboriginal and Torres Strait Islander peoples living in remote areas or communities may be under represented in these findings.

Source: AIHW 2008 forthcoming.

Time series analyses

- For Indigenous people aged 18 years and over who accepted the form on substance use, reported rates of illicit substance use in the 12 months before survey were slightly higher in 2004–05 than in 2002 (28% compared with 25%) (Table 2.21.4).
- A higher proportion of Indigenous adults reported having ever used substances in 2004–05 than in 2002 (50% compared with 44%).
- The proportion of Indigenous Australians who reported marijuana use in the previous 12 months was higher in 2004–05 than in 2002 (23% compared with 20%).
- The proportion of Indigenous males who reported use of amphetamines/speed in the last 12 months in 2004–05 was twice that reported in 2002 (10% compared with 5%).

Table 2.21.4: Indigenous persons aged 18 years and over in non-remote areas[a], substance use, by sex, 2002 and 2004–05

	2002[b]			2004–05		
Substance use	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
				Per cent		
Used substances in last 12 months						
Analgesics and sedatives for non-medical use[c]	5	7	6	4	8	6
Amphetamines or speed	5	5	5	10	5	7
Marijuana, hashish or cannabis resin	25	16	20	29	17	23
Kava	1[d]	1[d]	1[d]	2[d]	—[d]	1[d]
Total used substances in last 12 months[e][f]	**29**	**22**	**25**	**32**	**24**	**28**
Used substances but not in last 12 months	19	18	19	22	21	22
Total used substances[g]	**48**	**40**	**44**	**56**	**46**	**50**
Never used substances	51	59	55	42	53	48
Not stated[h]	1[d]	—[d]	—[d]	2[d]	2[d]	2
Total	**100**	**100**	**100**	**100**	**100**	**100**
Substance use form status						
Form accepted	93	92	93	78	83	80
Form non-response[i]	7	8	7	9	7	8
Form status not known	. .	. .	. .	13	10	12
Total	**100**	**100**	**100**	**100**	**100**	**100**

(a) People who accepted the substance use form.

(b) Data from 2002 NATSISS.

(c) Includes pain-killers, tranquillisers and sleeping pills.

(d) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(e) Includes heroin, cocaine, petrol, LSD/synthetic hallucinogens, naturally occurring hallucinogens, ecstasy/designer drugs, and other inhalants. Includes methadone in 2004–05.

(f) Sum of components may be more than the total as persons may have reported more than one type of substance used in previous 12 months.

(g) Includes 'whether used substances in last 12 months' not known.

(h) Includes 'whether ever used substances' not known.

(i) Includes refusals.

Source: ABS 2006.

Substance use by selected health and population characteristics

- In 2004–05, a higher proportion of Indigenous persons aged 15 years and over who were recent substance users (that is, used substances in the previous 12 months) reported they were currently daily smokers and drank at risky/high-risk levels than those who had never used illicit substances (Table 2.21.5).
- Indigenous persons who were recent substance users were also more likely to be unemployed, renters and have experienced stressors in the last 12 months than persons who had never used illicit substances.

Table 2.21.5: Substance use status, by selected health and population characteristics, persons aged 15 years and over,[a][b] non-remote areas, 2004–05

	Never used illicit substances	Ever used substances[a]	Recent substance use[b]
		Per cent	
Self-assessed health status			
Excellent/very good	46	51	35
Good	31	31	40
Fair/poor	23	18	25
Total	*100*	*100*	*100*
Other substance use[c]			
Current daily smoker	37	50	69
Risky/high-risk alcohol consumption (3 day)	31	41	56
Risky/high-risk alcohol consumption (7 day)	12	15	27
Gross weekly equivalised income			
1st quintile (lowest)	34	31	35
4th and 5th quintile (highest)	18	20	17
Financial stress—unable to raise $2,000 within a week for something important	**42**	**37**	**49**
Highest year of school completed[d]			
Year 12	28	28	24
Year 11	9	16	14
Year 10	29	32	32
Year 9 or below[e]	35	24	30
Total[d]	*100*	*100*	*100*
Whether has non-school qualification[e]			
Has a non-school qualification	38	41	37
Does not have a non-school qualification	62	59	63
Total[d]	*100*	*100*	*100*

(continued)

Table 2.21.5 (continued): Substance use status, by selected health and population characteristics, persons aged 15 years and over, non-remote areas, 2004–05.

	Never used illicit substances	Ever used substances[(a)]	Recent substance use[(b)]
		Per cent	
Employment			
Employed CDEP	4	3	5
Employed non-CDEP	44	58	45
Total employed	*49*	*61*	*50*
Unemployed	9	7	11
Not in the labour force	43	33	39
Total	*100*	*100*	*100*
Housing			
Owner	37	36	24
Renter[(f)]	61	63	73
Stressors in last 12 months[(c)]			
Serious illness or disability	27	31	33
Witness to violence	8	11	15
Abuse or violent crime	8	14	14
Other stressors	68	73	81
Total experienced stressors	*75*	*79*	*86*
No stressors	25	20	14
Total[(g)]	*100*	*100*	*100*

(a) People who accepted the substance use form.
(b) Excludes data obtained through child proxy.
(c) Persons aged 18 years and over.
(d) Persons not still at school.
(e) Includes persons who never attended school.
(f) Excludes boarders.
(g) Includes whether experienced stressor not stated and refusals.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Multiple drug use

- In 2004–05, approximately 20% of Indigenous males and 17% of Indigenous females aged 15 years and over had used one substance in the previous 12 months and 12% of Indigenous males and 7% of Indigenous females had used two or more substances in the previous 12 months (Table 2.21.6).

Table 2.21.6: Multiple drug use, by sex, Aboriginal and Torres Strait Islander persons aged 15 years and over, 2004–05[(a)(b)] (per cent)

	Did not use substances in last 12 months [(c)]	Used one substance[(d)]	Used 2 or more substances[(d)]
		Per cent	
Males	65	20	12
Females	73	17	7
Persons	69	18	10
Total number	**114,952**	**30,592**	**16,121**

(a) Persons who responded to the substance use forms.

(b) Self-reported data.

(c) Includes never used a substance and persons who used substances but not in the previous 12 months.

(d) Number of substances used in the previous 12 months.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Detainees and drug use

The AIC Drug Use Monitoring in Australia (DUMA) survey reports on drug use among police detainees at nine police stations in metropolitan areas in South Australia, New South Wales, Queensland, Western Australia the Northern Territory and Victoria. The survey is by a voluntary questionnaire and drug use is confirmed by a urine sample provided by the detainee. Data from the 2006 survey are presented in Table 2.21.7.

- In 2006, a higher proportion of Indigenous detainees tested positive to drugs than non-Indigenous detainees in all nine police stations surveyed.
- Between 61% and 100% of Indigenous detainees at selected police stations in South Australia, New South Wales, Queensland, Western Australia, the Northern Territory and Victoria tested positive to drugs compared with between 50% and 74% of non-Indigenous detainees.
- Cannabis was the most common drug for which both Indigenous and non-Indigenous detainees tested positive. Methylamphetamines and benzodiazepines were also common. Between 9% and 80% of Indigenous detainees and between 15% and 49% of non-Indigenous detainees tested positive for multiple drugs.

Table 2.21.7: Detainees at selected police stations, by drug use and Indigenous status, 2006

	Adelaide + Elizabeth (SA)		**Bankstown + Parramatta (NSW)**		**Brisbane + Southport (Qld)**		**East Perth (WA)**		**Darwin (NT)**		**Footscray/ Sunshine (Vic)**	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
Tested positive to a drug							**Per cent**					
Benzodiazepines	37.4	16.7	25.8	19.1	24.3	23.0	12.6	25.5	5.9	17.5	60.0	34.9
Cannabis	81.3	58.3	77.4	40.7	66.2	45.9	68.9	56.1	60.8	35.0	80.0	50.0
Cocaine	0.6	0.7	16.1	5.2	1.5	1.4	—	—	—	—	—	0.7
Heroin	6.0	6.0	29.0	11.8	16.9	9.7	4.4	7.2	3.3	10.0	60.0	32.9
Methylamphetamine	26.5	29.7	41.9	15.9	23.5	24.1	28.9	34.2	3.9	7.5	20.0	25.3
Multiple drugs	45.2	30.8	51.6	24.0	35.3	28.5	28.2	34.5	9.2	15.0	80.0	49.3
***Tested positive to a drug*(a)**	*87.4*	*73.1*	*100.0*	*55.9*	*75.7*	*64.6*	*83.7*	*74.1*	*61.4*	*50.0*	*100.0*	*73.3*
Did not test positive to a drug	12.7	26.9	—	44.1	24.3	35.4	16.3	25.9	38.6	50.0	—	26.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	166	717	31	383	136	1,027	135	278	153	40	5	146

(a) Proportion who tested positive to a least one drug. Sum of components will add to more than the total testing positive, as detainees can test positive to more than one type of drug.

Source: AIC 2006 DUMA survey.

Hospitalisations

Table 2.21.8a presents hospitalisations with principal diagnoses related to drug use for the period July 2004 to June 2006 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory.

- During the period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory there were 4,214 hospitalisations of Indigenous Australians relating to substance use (Table 2.21.8a). This represented 0.9% of total hospitalisations of Indigenous Australians in these jurisdictions.
- Indigenous Australians were hospitalised for conditions relating to substance use at around twice the rate of other Australians.
- Poisoning due to anti-epileptic, sedative-hypnotic and anti-Parkinson's drugs, poisoning due to psychotropic drugs, and poisoning due to antibiotics and hormones were responsible for 15%, 13% and 13% respectively of all hospitalisations of Indigenous Australians relating to substance use over the period June 2004 to July 2006. Indigenous Australians were hospitalised for these three types of poisoning at twice the rate of other Australians.
- Mental and behavioural disorders due to use of cannabis and use of multiple drug and psychoactive substances were responsible for 15% and 11% respectively of all hospitalisations of Indigenous Australians relating to substance use. Indigenous Australians were hospitalised for these disorders at five and four times the rate of other Australians respectively.
- Indigenous Australians were hospitalised for mental and behavioural disorders from use of volatile solvents at around 32 times the rate of other Australians.

Table 2.21.8b presents hospitalisations for external causes related to drug use for the period July 2004 to June 2006 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory.

- Indigenous Australians were hospitalised for external causes related to drug use at almost twice the rate of other Australians (Table 2.21.8b).

Table 2.21.8a: Hospitalisations with principal diagnoses related to drug use in NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Number		Per cent		Indigenous			Other[(e)]			
	Indig.	Other[(e)]	Indig.	Other[(e)]	No. per 1,000[(f)]	95% LCL[(g)]	95% UCL[(h)]	No. per 1,000[(f)]	95% LCL[(g)]	95% UCL[(h)]	Rate Ratio[(i)]
Poisoning											
Antiepileptic, sedative-hypnotic and anti-Parkinson's drugs (T42)	646	16,588	15.3	22.3	0.8	0.7	0.8	0.4	0.4	0.4	1.8*
Psychotropic drugs, includes antidepressants (T43)	561	13,465	13.3	18.1	0.6	0.5	0.7	0.4	0.3	0.4	1.7*
Antibiotics and hormones (T36–T39)	525	13,164	12.5	17.7	0.6	0.5	0.6	0.3	0.3	0.4	1.6*
Narcotics, including opium, heroin, methadone and cocaine (T40)	175	4,282	4.2	5.8	0.2	0.2	0.2	0.1	0.1	0.1	1.8*
Toxic effect of organic solvents (T52)	63	465	1.5	0.6	—	—	0.1	—	—	—	3.6*
Mental/behavioural disorders											
From use of cannabinoids (F12)	647	5,117	15.4	6.9	0.6	0.6	0.7	0.1	0.1	0.1	4.6*
From use of multiple drug and psychoactive substances (F19)	470	5,080	11.2	6.8	0.5	0.4	0.5	0.1	0.1	0.1	3.5*
From use of other stimulants (F15)	408	5,275	9.7	7.1	0.4	0.4	0.5	0.1	0.1	0.1	2.9*
From use of opioids (F11)	392	7,204	9.3	9.7	0.4	0.4	0.5	0.2	0.2	0.2	2.3*
From use of volatile solvents (F18)	135	118	3.2	0.2	0.1	0.1	0.1	—	—	—	32.3*
From use of sedatives (F13)	59	2,048	1.4	2.8	0.1	0.1	0.1	0.1	0.1	0.1	1.3
From use of cocaine (F14)	8	421	0.2	0.6	—	—	—	—	—	—	0.7
Other											
Neonatal withdrawal symptoms from maternal use of drugs of addiction (P96.1)	107	887	2.5	1.2	0.1	—	0.1	—	—	—	2.5*
Acute hepatitis C (B17.1)	13	172	0.3	0.2	—	—	—	—	—	—	3.2*
Maternal care for suspected damage to foetus by drugs (035.5)	5	37	0.1	—	—	—	—	—	—	—	4.8*
Total	**4,214**	**74,323**	**100.0**	**100.0**	**4.4**	**4.3**	**4.6**	**2.0**	**1.9**	**2.0**	**2.2***

(continued)

Table 2.21.8a (continued): Hospitalisations with principal diagnoses related to drug use in NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Data are from public and most private hospitals. Exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

Source: AIHW analysis of National Hospital Morbidity Database.

Table 2.21.8b: Hospitalisations for external causes relating to drug use in NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Number		Indigenous			Other[(e)]			
	Indig.	**Other[(e)]**	**No. per 1,000[(f)]**	**95% LCL[(g)]**	**95% UCL[(h)]**	**No. per 1000[(f)]**	**95% LCL[(g)]**	**95% UCL[(h)]**	**Rate Ratio[(i)]**
Accidental poisoning									
Antidepressants and barbiturates (X41)	397	8,024	0.4	0.4	0.5	0.2	0.2	0.2	2.0*
Unspecified (includes glues and paints) (X49)	215	6,859	0.2	0.2	0.3	0.2	0.2	0.2	1.3*
Narcotics (includes cannabis, cocaine, heroin, opium and methadone) and hallucinogens (X42)	140	3,422	0.2	0.1	0.2	0.1	0.1	0.1	1.9*
Organic solvents, including petroleum derivatives (X46)	36	420	—	—	—	—	—	—	2.2*
Total	**788**	**18,725**	**0.8**	**0.7**	**1.0**	**0.5**	**0.5**	**0.5**	**1.7***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Data are from public and most private hospitals. Exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:other.

Source: AIHW analysis of National Hospital Morbidity Database.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in these surveys are essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS) and the 2002 General Social Survey. The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys and the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the 2004–05 NATSIHS and the 2002 NATSISS publications (ABS 2006, 2004a).

Substance use data

The sensitive nature of many of the issues surrounding substance use could also influence responses to these questions. Any data that are self-reported are likely to underestimate circumstances that the respondent may feel frightened or ashamed of or be unwilling to admit to the data collector, such as drugs or other substances including inhalant and substance use.

The substance use questions in the 2002 NATSISS were based on the National Drug Strategy Household Survey (NDSHS) questions and had a response rate of over 90%. In non-community areas a voluntary self-enumerated form was used to collect this information whereas in community areas respondents were required to respond verbally to questions asked by an interviewer. The very low prevalence of substance use reported in community areas was assumed to be the result of the use of direct questioning areas leading to a significant adverse effect on both the level of response and the quality of responses to questions on substance use. For this reason, information on substance use in remote areas was considered to be unreliable and was not released.

Data on illicit substance use in the 2004–05 NATSIHS were collected only in non-remote areas using a voluntary self-completed form. This allowed respondents privacy in reporting this information, although this may have been affected by the presence of other household members at interview.

(continued)

Data quality issues (continued)

Where proxies were used for people aged 15–17 years, permission was requested to provide the form to the child. If permission was not received, the form was not completed. Forms were not provided to proxies.

Items that distinguished between non-medical use and medical use were pain-killers, tranquillisers and methadone.

Data may be compared with the 2002 NATSISS (excluding information regarding methadone which was collected only in the 2004–05 survey). Account of the difference in the non-response rate should also be considered, with NATSIHS having a 22% non-response rate compared with 10% for NATSISS.

National Drug Strategy Household Survey (NDSHS)

The NDSHS collects information relating to drug use in Australia. The sample size for the 2004 survey was 29,445 persons aged 12 years and over.

The NDSHS does not have an enhanced Indigenous sample. Therefore, only a small number of Indigenous respondents are picked up in this survey. In 2004, 463 Indigenous respondents were included. The sample size for Indigenous Australians is very small and therefore the estimates should be interpreted with caution (ABS & AIHW 2005). This small Indigenous sample size also limits the reliability of time series analyses.

NDSHS data are reportable by the national level only. Data are not available for remoteness areas, regional areas and state and territory levels.

AIC Drug Use Monitoring in Australia (DUMA)

The Indigenous status of the detainee is established in the questionnaire by the following question:

'What is your ethnic background?' (if the respondent mentions 'Australian' but not 'Aboriginal' prompt: 'Do you consider yourself an Aboriginal or Torres Strait Islander?').

It is likely that this question will underestimate the number of Indigenous persons being detained through a reluctance on the part of detainees to identify as Indigenous.

This survey is conducted at police stations in selected metropolitan areas and does not provide regional coverage. In addition, the actual number of detainees questioned is quite low, which does not permit great analysis of the Indigenous data. Finally, the figures do not permit national coverage, but instead analysis by state is recommended.

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005a).

(continued)

Data quality issues (continued)

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander peoples. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data. It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data from South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of those jurisdictions not included..*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009 *(ABS 2004b).*

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2.22 Level of physical activity

The proportion of the Aboriginal and Torres Strait Islander adult population classified as having sedentary, low, moderate or high physical activity levels

Data sources

Data for this measure come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

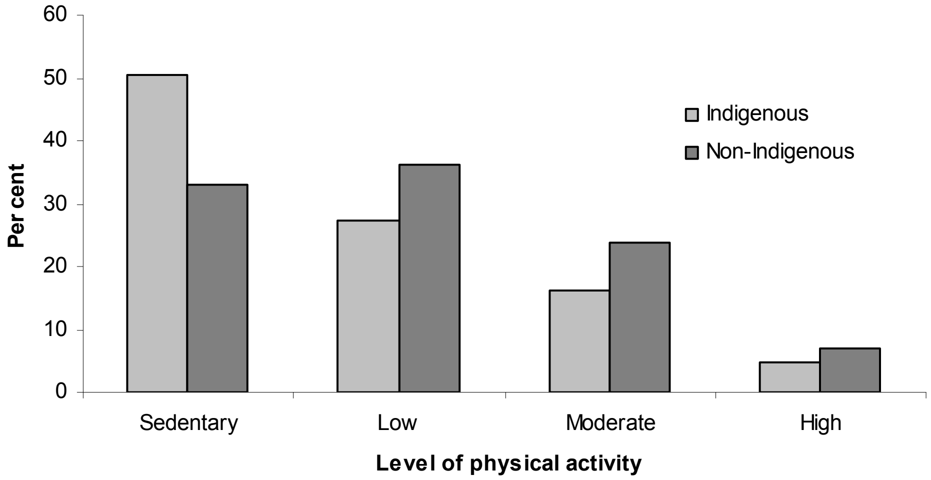
The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Data analyses

Physical activity

Information on the level of physical activity of Indigenous and non-Indigenous Australians aged 15 years and over in the 2 weeks before the survey was collected in non-remote areas only and is presented below.

- In 2004–05, approximately 47% of Indigenous persons reported their exercise level as sedentary, 28% as low, 18% as moderate and 7% as high.
- After adjusting for differences in age structure, approximately 51% reported their exercise level as sedentary (very low or no exercise), 27% as low and 21% as moderate or high, compared with 33%, 36% and 31% respectively of non-Indigenous Australians (Figure 2.23.1).



Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Figure 2.22.1: Level of physical activity, by Indigenous status, persons aged 15 years and over, non-remote areas, 2004–05

Physical activity by age and sex

- Sedentary or low levels of physical activity were highest among Indigenous people aged 45–54 years and 55 years and over (83% and 85% respectively); moderate or high levels of physical activity were highest among those aged 15–24 and 25–34 years (32% and 27% respectively) (Table 2.22.1).
- A higher proportion of Indigenous females than Indigenous males reported that their level of exercise was sedentary (51% compared with 42%).
- A higher proportion of males exercised at moderate or high levels than females across all age groups in both the Indigenous and non-Indigenous populations.

Table 2.22.1: Level of physical activity, by Indigenous status, sex and age group, non-remote areas, 2004–05

Physical activity level	15–24		25–34		35–44		45–54		55+		Total		Total age-standardised(a)	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
Per cent														
Males														
Sedentary	31*	23*	39*	26*	45*	34*	57*	36*	60*	39*	42*	32*	48*	32*
Low	25	30	24*	35*	30	35	20*	34*	24	30	25*	33*	24*	33*
Moderate	24	26	27	25	19	23	19(b)	24	14*	27*	22	25	20*	25*
High	19	20	9*	13*	6(b)	8	3(b)	5	n.p.	3	10	9	7*	9*
Total number(c)	**35,604**	**1,330,358**	**23,150**	**1,352,832**	**18,468**	**1,418,963**	**13,654**	**1,323,380**	**10,995**	**2,147,296**	**101,870**	**7,572,828**	**101,870**	**7,572,828**
Females														
Sedentary	46*	31*	50*	29*	51*	32*	55*	32*	60*	41*	51*	34*	53*	34*
Low	33	39	30*	42*	33*	42*	32*	42*	26	34	31*	39*	30*	39*
Moderate	15*	22*	16*	23*	14*	22*	10*	22*	12*	22*	14*	22*	13*	22 *
High	5(c)	8	3*(b)	6*	2(d)	4	n.p.	3	n.p.	2	3*	4*	2*	4*
Total number(c)	**34,789**	**1,275,738**	**26,616**	**1,372,860**	**22,114**	**1,440,884**	**15,246**	**1,347,588**	**12,787**	**2,334,857**	**111,552**	**7,771,928**	**111,552**	**7,771,928**
Persons														
Sedentary	39*	27*	45*	28*	48*	33*	56*	34*	60*	40*	47*	33*	51*	33*
Low	29*	34*	27*	39*	31*	39*	27*	38*	25*	32*	28*	36*	27*	36*
Moderate	20*	24*	21	24	16*	22*	14*	23*	13*	25*	18*	24*	16*	24*
High	12	14	6*	10*	4*(b)	6*	3(b)	4	1(d)	3	7	7	5*	7*
Total number(c)	**70,393**	**2,606,096**	**49,766**	**2,725,692**	**40,582**	**2,859,847**	**28,900**	**2,670,968**	**23,781**	**4,482,153**	**213,422**	**15,344,756**	**213,422**	**15,344,756**

* Represents statistically significant differences in the Indigenous and non-Indigenous comparisons.

(a) Directly age-standardised proportions.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Includes physical activity level not stated.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Physical activity by state/territory

- Sedentary or low levels of physical activity among Indigenous Australians aged 15 years and over ranged from 70% in Tasmania to 78% in New South Wales (Table 2.22.2a).
- A higher proportion of Indigenous Australians than non-Indigenous Australians reported their exercise level as sedentary in all states and territories. Data were not available for non-Indigenous Australians in the Northern Territory (Table 2.22.2b).

Table 2.22.2a: Level of physical activity, by state/territory, Indigenous persons aged 15 years and over, non-remote areas, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust.
					Per cent				
Sedentary	51	38	46	46	48	37	37	40	47
Low	27	33	27	25	25	33	34	34	28
Moderate	16	22	15	24	18	22	19	20	18
High	5	6(a)	9	5	6(a)	8	10	7(a)	7
Total(b)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number(b)	81,264	18,399	57,337	21,965	12,473	10,929	2,596	6,264	211,226

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Includes physical activity level not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.22.2b: Level of physical activity, by state/territory and Indigenous status, persons aged 15 years and over, non-remote areas, 2004–05

	New South Wales		**Victoria**		**Queensland**		**Western Australia**		**South Australia**		**Tasmania**		**Australian Capital Territory**		**Northern Territory(a)**		**Australia**	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
									Per cent									
Sedentary	54*	35*	42*	31*	51*	35*	52*	30*	52*	34*	38	33	37*	24*	51	n.a.	51*	33*
Low	27*	36*	32	37	27*	34*	23*	37*	25*	38*	35	36	34	40	29	n.a.	27*	36*
Moderate	15*	23*	22	24	14*	23*	22	26	17	22	21	25	23	27	16	n.a.	16*	24*
High	4*	7*	4(b)	7	6	7	3*	8*	4(b)	6	6	7	7	9	5(b)	n.a.	5*	7*
Total(c)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number(c)	81,264	5,208,965	18,399	3,944,895	57,337	2,899,135	21,965	1,448,876	12,473	1,164,894	10,929	352,957	2,596	252,744	6,264	n.a.	211,226	15,344,756

* Represents statistically significant differences in the Indigenous and non-Indigenous comparisons.

(a) The National Health Survey sample does not support a non-Indigenous Northern Territory estimate.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Includes physical activity level not stated.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Physical activity by selected health characteristics

- Approximately 58% of Indigenous Australians in non-remote areas with fair/poor health status reported exercising at sedentary levels compared with 48% of Indigenous Australians with excellent/very good/good health status (Table 2.22.3). Over three-quarters (78%) of Indigenous people aged 15 years and over who were overweight or obese reported exercising at low or sedentary levels. Approximately 79% of Indigenous Australians with a long-term health condition reported sedentary or low levels of physical activity.
- Approximately 59% of Indigenous Australians aged 18 years and over in non-remote areas who were current smokers reported sedentary levels of physical activity, compared with 45% of Indigenous Australians who never smoked (Table 2.22.4).

Table 2.22.3: Level of physical activity, summary health characteristics, by Indigenous status, persons aged 15 years and over, non-remote areas, 2004–05

	Self-assessed health status						Long-term conditions												Overweight/obesity		
	Excellent/very good			Fair/poor			Diabetes/high sugar levels			Heart & circulatory problems			High blood pressure			Total with long-term health condition			Overweight/obese		
	Indig.	Non-Indig.	Rate ratio(a)	Indig.	Non-Indig.	Rate ratio(a)	Indig.	Non-Indig.	Rate ratio(a)	Indig.	Non-Indig.	Rate ratio(a)	Indig.	Non-Indig.	Rate ratio(a)	Indig.	Non-Indig.	Rate ratio(a)	Indig.	Non-Indig.	Rate ratio(a)
	%	%		%	%		%	%		%	%		%	%		%	%		%	%	
Sedentary	48	30	1.6*	58	48	1.2*	50	35	1.4*	54	35	1.5*	59	34	1.7*	51	33	1.5*	50	32	1.5*
Low	28	37	0.8*	25	34	0.8*	26	35	0.7	29	37	0.8*	30	39	0.8	28	37	0.8*	28	37	0.8*
Moderate	18	25	0.7*	14	16	0.9	17(b)	23	0.7	14	23	0.6*	9(b)	23	0.4*	16	24	0.7*	15	24	0.6*
High	5	7	0.7*	2(b)	3	0.6	5(c)	6(b)	0.8	2(c)	5	0.4*	—(c)	4(b)	0.1*	4	7	0.7*	6	7	0.9
Total(d)	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Indigenous rate divided by non-Indigenous rate.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(d) Includes physical activity level not stated.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.22.4: Level of physical activity by smoker and Indigenous status, persons aged 18 years and over, non-remote areas, 2004–05

	Current smoker			Ex-smoker			Never smoked		
	Indigenous	**Non-Indigenous**	**Rate ratio[(a)]**	**Indigenous**	**Non-Indigenous**	**Rate ratio[(a)]**	**Indigenous**	**Non-Indigenous**	**Rate ratio[(a)]**
	%	**%**		**%**	**%**		**%**	**%**	
Sedentary	59	44	1.3	46	29	1.6	45	32	1.4
Low	24	32	0.7	30	38	0.8	32	38	0.9
Moderate	14	20	0.7	20	26	0.8	14	23	0.6
High	3	4	0.7	4	7	0.5	7	7	1.0
Total[(b)]	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .

(a) Indigenous rate divided by non-Indigenous rate.

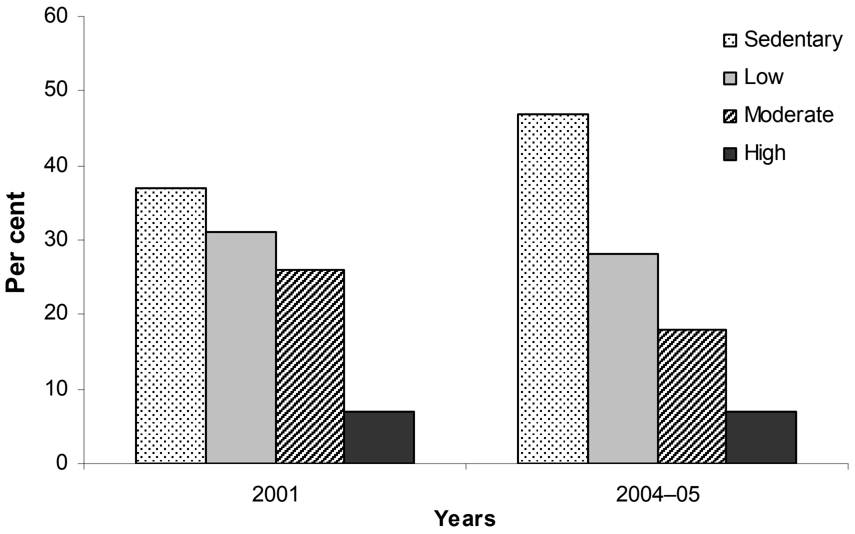
(b) Includes physical activity level not stated.

Note: Data are age-standardised.

Source: AIHW analysis of 2004–05 NATSIHS.

Time series analyses

- The level of sedentary physical activity for Indigenous Australians aged 15 years and over increased between 2001 and 2004–05 from 37% to 47%. The level of low and moderate physical activity declined over the period (from 57% in 2001 to 46% in 2004–05), and the level of high physical activity remained the same (7%) (Figure 2.22.2).
- After adjusting for differences in age structure, the disparity between Indigenous and non-Indigenous Australians in the proportion reporting sedentary levels of exercise was larger in 2004–05 than in 2001 (Table 2.22.5).



Source: ABS and AIHW analysis of 2001 NHS (Indigenous supplement) and 2004–05 NATSIHS.

Figure 2.22.2: Level of physical activity, Indigenous persons aged 15 years and over, non-remote areas, crude proportions, 2001 and 2004–05

Table 2.22.5: Level of physical activity, persons aged 15 years and over, by Indigenous status, non-remote areas, age standardised proportions, 2001 and 2004–05[(a)]

	2001		2004–05	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
		(per cent)		
Sedentary	42	31	51	33
Low	29	38	27	36
Moderate	24	24	16	24
High	5	7	5	7
Total number	**197,086**	**14,744,464**	**213,422**	**15,344,756**

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2001 NHS (Indigenous supplement), 2004–05 NATSIHS and 2004–05 NHS.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

Physical activity data

The information is 'as reported' by respondents and reflects their perception of the activity undertaken, the intensity of their participation, their level of fitness, etc. Information about physical activity undertaken by persons aged 15 to 17 years was reported by an adult within the household, usually a parent. The child may or may not have been consulted. As a result, data for this age group should be interpreted with particular care.

In general, the use of a 2-week reference period was not considered to pose significant recall problems for respondents. For many people, participation in exercise is regular and/or for a set period each session. However, to the extent that persons undertook exercise in less formal circumstances or that the reference period was atypical of usual exercise patterns, the accuracy of the information provided may have been affected.

Recent developments in the area of statistics on exercise or physical activity have tended to move away from the use of metabolic equivalent level (MET) values in deriving exercise level, and have placed more emphasis on measures of time spent exercising. Retention of the exercise level approach as described above was mainly for the purpose of consistency and comparability with data from the 1995 and 2001 National Health Surveys. However, measures of time exercising are also available as outputs from this survey (ABS 2005).

Survey respondents are required to recall recent activity in minutes without being primed and without independent checks. Diary recording (as used in the ABS Time Use Survey) or independent observation would probably produce higher quality data; however, these are more resource-intensive.

(continued)

Data quality issues (continued)

Respondents are required to provide an estimate of time spent on certain types of activity. Many come up with a broad rounded estimate or guess. Others attempt to add together in their heads the time spent in each exercise session, possibly for several different activities.

The differences of intensity between different activities is not always clear for respondents, although explanatory instructions are included. Mutual exclusivity of concepts remains a problem.

A well-recognised reporting issue for self-report surveys is the tendency of respondents to report in a socially desirable way. For example, the less active may want to over-report activity to appear healthier.

Survey questions about duration of exercise differ slightly in the questionnaire for remote areas and may affect the comparability of results.

Despite the limitations of the survey data, users have generally considered the data produced to be of sufficient quality for the very broad measures of physical activity required (ABS 2005).

A reliable tool for measuring Aboriginal and Torres Strait Islander physical activity levels has not yet been developed. A study to determine the reliability of the Active Australian Survey in measuring Aboriginal and Torres Strait Islander populations revealed that it was not a reliable tool (not culturally appropriate)(Marshall & Miller 2004). The Active Australian Survey uses very similar questions to the National Health Survey to determine physical activity levels. For this reason the data should be interpreted cautiously.

References

ABS (Australian Bureau of Statistics) 2005. Physical activity: review of strategic statistical issues for future National Health Surveys. Discussion paper. Canberra: ABS.

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

Marshall A & Miller R 2004. Measuring physical activity in urban Indigenous Australians. Final report. Brisbane: University of Queensland.

2.23 Dietary behaviour

The dietary behaviour of Aboriginal and Torres Strait Islander people including fruit and vegetable consumption, type of milk consumed and salt intake

Data sources

Data for this measure come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

The questions on dietary behaviour in the NATSIHS are complex because respondents needed to understand and apply the inclusions/exclusions, understand the concept of a serve and assess their consumption levels accordingly, and think about their total consumption in what would constitute an average day. Data for all those aged 12–14 years, and 68% of those aged 15–17 years, were provided by a proxy, usually a parent. As a result, the data reflect the parent's knowledge of the child's consumption; this is likely to be less accurate for usual consumption of fruit items than for the type of milk and usual consumption of vegetable items collected in non-remote areas.

In remote areas the questions on vegetable and fruit intake were amended to whether usually ate fruit and/or vegetables each day. Therefore it is not possible to produce indicators based on usual serves for remote areas from the 2004–05 NATSIHS, or for certain states and territories that have output restrictions for non-remote data items from the NATSIHS (South Australia, Tasmania, the Australian Capital Territory and the Northern Territory).

Data analyses

Dietary habits

- In 2004–05, the majority of Indigenous people aged 12 years and over reported eating vegetables (95%) and/or fruit (86%) daily.
- After adjusting for differences in age structure between the Indigenous and non-Indigenous populations, Indigenous persons aged 12 years and over were twice as likely to report no usual daily fruit consumption and 7 times as likely to report no usual daily vegetable consumption as non-Indigenous persons of the same age (Table 2.23.1).
- The National Health and Medical Research Council guidelines recommend a minimum of five serves of vegetables per day and two serves of fruit per day. In 2004–05, in non-remote areas, 41% of Indigenous Australians were eating the recommended daily intake

of fruit and 10% the recommended daily intake of vegetables. Information on the daily intake of fruit and vegetables is not available for remote areas.

- Around 25% of Indigenous people aged 12 years and over reported they sometimes added salt after cooking and a further 46% reported they usually added salt after cooking.
- Approximately 79% of Indigenous people aged 12 years and over reported they usually drank whole (full-cream) milk and 16% reported drinking reduced fat or skim milk.
- After adjusting for differences in age structure, Indigenous Australians aged 15 years and over were twice as likely to report no usual daily fruit intake, no usual daily vegetable intake and whole milk as the usual type of milk consumed as non-Indigenous Australians (Table 2.23.2b).

Dietary habits by age group

- In non-remote areas, Indigenous Australians aged 35–44 years were most likely to report a daily intake of five or more serves of vegetables (13%) and Indigenous Australians aged 55 years and over were most likely to report a daily fruit intake of two serves or more (Table 2.23.2a).
- In non-remote areas, the intake of vegetables was similar for Indigenous and non-Indigenous people across most age groups. The intake of fruit was less for Indigenous Australians than non-Indigenous Australians across most age groups (Tables 2.23.2a, 2.23.2b).
- Indigenous and non-Indigenous people aged 12–14 years were more likely to report drinking whole milk (88% and 69% respectively) than those in the older age groups (Table 2.23.2a).
- The proportion of Indigenous people who reported usually adding salt after cooking increased with age (Table 2.23.2b).
- In non-remote areas, Indigenous people were much more likely to drink full-cream milk than non-Indigenous people across all age groups.

Table 2.23.1: Age standardised proportion[(a)] of persons aged 12 years and over reporting no usual daily vegetable consumption and no usual daily fruit consumption, Australia 2004–05

	Indigenous	Non-Indigenous	Ratio
	%	%	
Does not eat vegetables daily	5.3	0.8	6.8
Does not eat fruit daily	13.2	6.6	2.0

(a) Proportions are directly age standardised to the 2001 Australian standard population.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS

Table 2.23.2a: Selected dietary habits, by Indigenous status and age, persons aged 12 years and over in non-remote areas, 2004–05

	12–14		**15–24**		**25–34**		**35–44**		**45–54**		**55 and over**		**Total non-age-standardised**		**Total age-standardised**		
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio**
									Per cent								
Usual daily intake of vegetables																	
Does not eat vegetables	2(a)	1(a)	2(a)	1	1(a)	1	1(a)	1	2(a)	—(a)	2(a)	—	2	1	2	1	2.1
1 serve or less	20	23	24	27	27	24	21	20	21	18	16	13	23	20	21	20	1.1
Sub-total low usual daily vegetable intake	*22*	*24*	*27*	*29*	*28*	*25*	*22*	*21*	*23*	*18*	*18*	*14*	*24*	*21*	*23*	*21*	*1.1*
2–4 serves	66	67	65	63	63	65	65	66	66	65	71	67	65	66	66	66	1.0
5 serves or more (recommended daily intake)	12	9	8	9	9	11	13	13	11	16	11	19	10	14	11	14	0.8
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	
Usual daily intake of fruit																	
Does not eat fruit	5(a)	5	14	10	13	8	12	8	12	6	7(a)	3	12	7	11	7	1.6
1 serve or less	41	39	46	44	48	45	53	42	43	38	37	32	46	39	45	40	1.1
Sub-total low usual daily fruit intake	*46*	*44*	*61*	*53*	*61*	*53*	*65*	*50*	*55*	*44*	*43*	*36*	*58*	*46*	*55*	*46*	*1.2*
2–4 serves	51	51	37	43	37	43	32	46	41	52	53	58	40	50	42	50	0.8
5 serves or more	2(a)	5	3*	4	2(a)	3	2(a)	4	4(a)	4	4(a)	6	3	4	3	4	0.7
Sub-total recommended daily intake (2 serves or more)	*54*	*56*	*39*	*47*	*39*	*47*	*35*	*50*	*45*	*56*	*57*	*64*	*42*	*54*	*45*	*54*	*0.8*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	

(continued)

Table 2.23.2a (continued): Selected dietary habits, by Indigenous status and age, persons aged 12 years and over in non-remote areas, 2004–05

	12–14		**15–24**		**25–34**		**35–44**		**45–54**		**55 and over**		**Total non-age-standardised**		**Total age-standardised**		
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio**
									Per cent								
Usual type of milk																	
Whole	88	69	81	55	76	49	73	48	68	37	58	35	76	45	71	45	1.6
Low/reduced fat	8	22	11	25	12	28	17	29	16	38	24	35	14	31	17	31	0.5
Skim	1(b)	4	4	11	6	13	7	13	6	13	11	17	5	13	7	13	0.5
Soy	np	np	—(b)	3	2(a)	4	n.p.	4	2(b)	5	2(a)	5	1	4	1	4	0.3
None of the above(c)	np	np	—(b)	1(a)	—(a)	1	n.p.	1	3(b)	1	1(b)	1	1	1	1	1	0.7
Total drinks milk	*98*	*98*	*97*	*95*	*96*	*96*	*98*	*95*	*96*	*94*	*95*	*94*	*97*	*95*	*96*	*95*	*1.0*
Does not drink milk	2*	2*	3	5	3	4	2(a)	5	4	6	5(a)	6	3	5	4	5	0.7
Total(d)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Includes evaporated or sweetened condensed milk.

(d) Includes usual type of milk not known.

Source: ABS and AIHW analysis 2004–05 NATSIHS and 2004–05 NHS.

Table 2.23.2b: Selected dietary habits, by Indigenous status and age, persons aged 15 years and over in non-remote areas, 2004–05

	15–24		25–34		35–44		45–54		55 and over		Total non-age-standardised		Total age-standardised		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio
								Per cent							
Usual daily intake of vegetables															
Does not eat vegetables	2	1	1	1	1	1	2	0	2	0	2	1	2	1	2.1
1 serve or less	24	27	27	24	21	20	21	18	16	13	23	20	22	20	1.1
2–4 serves	65	63	63	65	65	66	66	65	71	67	65	66	66	65	1.0
5 serves or more	8	9	9	11	13	13	11	16	11	19	10	14	11	14	0.8
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**1.0**
Usual daily intake of fruit															
Does not eat fruit	14	10	13	8	12	8	12	6	7	3	12	7	11	7	1.6
1 serve or less	46	44	48	45	53	42	43	38	37	32	47	39	46	40	1.1
2–4 serves	37	43	37	43	32	46	41	52	53	58	38	50	40	49	0.8
5 serves or more	3	4	2	3	2	4	4	4	4	6	3	4	3	4	0.7
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**1.0**

(continued)

Table 2.23.2b (continued): Selected dietary habits, by Indigenous status and age, persons aged 15 years and over in non-remote areas, 2004–05

	15–24		25–34		35–44		45–54		55 and over		Total non-age-standardised		Total age-standardised		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio
								Per cent							
Usual type of milk															
Whole	81	55	76	49	73	48	68	37	58	35	74	44	71	45	1.6
Low/reduced fat	11	25	12	28	17	29	16	38	24	35	15	32	16	31	0.5
Skim	4	11	6	13	7	13	6	13	11	17	6	14	7	13	0.5
Soy	0	3	2	4	1	4	2	5	2	5	1	5	2	4	0.3
None of the above[(a)]	0	1	0	1	0	1	3	1	1	1	1	1	1	1	0.7
Total drinks milk	*97*	*95*	*96*	*96*	*98*	*95*	*96*	*94*	*95*	*94*	*97*	*95*	*96*	*95*	*1.0*
Does not drink milk	3	5	3	4	2	5	4	6	5	6	3	5	4	5	0.7
Total[(b)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**1.0**
Salt added after cooking															
Never/rarely	38	n.a.	35	n.a.	32	n.a.	25	n.a.	27	n.a.	33	n.a.	. .	n.a.	n.a.
Sometimes	24	n.a.	23	n.a.	18	n.a.	24	n.a.	21	n.a.	22	n.a.	. .	n.a.	n.a.
Usually	38	n.a.	42	n.a.	50	n.a.	51	n.a.	52	n.a.	44	n.a.	. .	n.a.	n.a.
Total[(c)]	**100**	**n.a.**	**100**	**n.a.**	**100**	**n.a.**	**100**	**n.a.**	**100**	**n.a.**	**100**	**n.a.**	**100**	**n.a.**	**n.a.**

(a) Includes evaporated or sweetened condensed milk.

(b) Includes usual type of milk not known.

(c) Includes frequency salt is added after cooking not known.

Source: AIHW analysis 2004–05 NATSIHS and 2004–05 NHS.

Dietary habits by sex

- A higher proportion of Indigenous males aged 12 years and over reported not eating fruit daily than Indigenous females (16% compared with 12%) (Table 2.23.3).
- Indigenous females were twice as likely as Indigenous males to report drinking skim milk as the usual type of milk consumed (6% compared with 3%).
- There was little difference in the proportion of Indigenous males and females reporting eating vegetables daily or adding salt after cooking.

Table 2.23.3: Selected dietary habits, by sex, Indigenous persons aged 12 years and over, 2004–05

Dietary behaviours	Males	Females	Persons
		Per cent	
Vegetable intake			
Eats vegetables daily	93	95	95
Does not eat vegetables daily	6	5	5
Total[(a)]	**100**	**100**	**100**
Fruit intake			
Eats fruit daily	84	88	86
Does not eat fruit daily	16	12	14
Total[(a)]	**100**	**100**	**100**
Usual type of milk consumed			
Whole	81	76	79
Low/reduced fat	10	12	11
Skim	3	6	5
Soy	1	1	1
None of the above[(b)]	1	1	1
Total drinks milk	*96*	*96*	*96*
Does not drink milk	4	4	4
Total[(c)]	**100**	**100**	**100**
Salt added after cooking			
Never/rarely	27	32	30
Sometimes	25	24	25
Usually	47	44	46
Total[(d)]	**100**	**100**	**100**

(a) Includes whether eats fruit/vegetables not known.
(b) Includes evaporated or sweetened condensed milk.
(c) Includes usual type of milk not known.
(d) Includes frequency salt is added after cooking not known.

Source: AIHW analysis of 2004–05 NATSIHS.

Table 2.23.4: Selected dietary habits, by Indigenous status and sex, persons aged 15 years and over in non-remote areas, 2004–05

	Males					Females					Persons				
	Non-age-standardised		Age-standardised			Non-age-standardised		Age-standardised			Non-age-standardised		Age-standardised		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio
	%	%	%	%		%	%	%	%		%	%	%	%	
Usual daily intake of vegetables															
Does not eat vegetables	2	1	2	1	2.2	1	1	1	1	1.9	2	1	2	1	2.1
1 serve or less	25	23	25	24	1.0	21	16	19	17	1.1	23	20	22	20	1.1
2–4 serves	64	64	65	64	1.0	67	67	67	67	1.0	65	66	66	65	1.0
5 serves or more	9	12	9	12	0.7	11	16	12	15	0.8	10	14	11	14	0.8
Total	**100**	**100**	**100**	**100**	**1.0**	**100**	**100**	**100**	**100**	**1.0**	**100**	**100**	**100**	**100**	**1.0**
Usual daily intake of fruit															
Does not eat fruit	14	9	14	9	1.5	11	5	9	5	1.9	12	7	11	7	1.6
1 serve or less	47	44	47	44	1.1	46	35	44	36	1.2	47	39	46	40	1.1
2–4 serves	36	44	36	43	0.9	41	55	43	54	0.8	38	50	40	49	0.8
5 serves or more	3	4	3	4	0.8	3	5	3	5	0.7	3	4	3	4	0.7
Total	**100**	**100**	**100**	**100**	**1.0**	**100**	**100**	**100**	**100**	**1.0**	**100**	**100**	**100**	**100**	**1.0**

(continued)

Table 2.23.4 (continued): Selected dietary habits, by Indigenous status and sex, persons aged 15 years and over in non-remote areas, 2004–05

	Males					Females					Persons				
	Non age-standardised		Age-standardised			Non age-standardised		Age-standardised			Non age-standardised		Age-standardised		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio
	%	%	%	%		%	%	%	%		%	%	%	%	
Usual type of milk															
Whole	77	51	74	52	1.4	71	37	68	37	1.8	74	44	71	45	1.6
Low/reduced fat	13	29	15	28	0.5	16	34	18	34	0.5	15	32	16	31	0.5
Skim	4	10	6	10	0.6	7	17	8	17	0.5	6	14	7	13	0.5
Soy	1	4	1	4	0.4	1	5	2	5	0.3	1	5	2	4	0.3
None of the above[(a)]	1	1	1	1	1.4	0	1	0	1	0.3	1	1	1	1	0.7
Total drinks milk	*97*	*94*	*97*	*95*	*1.0*	*96*	*95*	*96*	*95*	*1.0*	*97*	*95*	*96*	*95*	*1.0*
Does not drink milk	3	6	3	5	0.6	4	5	4	5	0.8	3	5	4	5	0.7
Total[(b)]	**100**	**100**	**100**	**100**	**1.0**	**100**	**100**	**100**	**100**	**1.0**	**100**	**100**	**100**	**100**	**1.0**
Salt added after cooking															
Never/rarely	31	n.a.	. .	n.a.	n.a.	36	n.a.	. .	n.a.	n.a.	33	n.a.	. .	n.a.	n.a.
Sometimes	22	n.a.	. .	n.a.	n.a.	22	n.a.	. .	n.a.	n.a.	22	n.a.	. .	n.a.	n.a.
Usually	47	n.a.	. .	n.a.	n.a.	42	n.a.	. .	n.a.	n.a.	44	n.a.	. .	n.a.	n.a.
Total[(c)]	**100**	**n.a.**	**. .**	**n.a.**	**n.a.**	**100**	**n.a.**	**. .**	**n.a.**	**n.a.**	**100**	**n.a.**	**100**	**n.a.**	**n.a.**

(a) Includes evaporated or sweetened condensed milk.

(b) Includes usual type of milk not known.

(c) Includes frequency salt added after cooking not known.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Dietary habits by state/territory

Dietary habits of Indigenous and non-Indigenous Australians are presented in Tables 2.23.5a and 2.23.5b below. Note that data on the number of daily serves of vegetables and fruit are presented for New South Wales, Victoria, Queensland and Western Australia only because of output restrictions for these data items.

- In 2004–05, the proportion of Indigenous Australians aged 15 years and over who reported eating five serves or more of vegetables daily was 8% in New South Wales, 9% in Queensland, 12% in Victoria and 14% in Western Australia (Table 2.23.5a).
- The proportion of Indigenous Australians aged 15 years and over reporting eating two or more serves of fruit a day was 41% in New South Wales and Queensland, 43% in Victoria and 45% in Western Australia.
- The proportion of Indigenous persons reporting drinking whole milk as the usual type of milk consumed was highest in Queensland (80%) and lowest in Victoria (62%).
- The proportion of Indigenous persons reporting usually adding salt after cooking was highest in Western Australia (57%) and lowest in Victoria (35%) and Tasmania/the Australian Capital Territory (37%).
- Non-Indigenous Australians were more likely to report eating five serves or more of vegetables than Indigenous Australians in New South Wales, Queensland and Western Australia. Rates were similar for Indigenous and non-Indigenous Australians in Victoria (Table 2.23.5b).
- Non-Indigenous Australians were more likely to report eating five serves of fruit or more than Indigenous Australians in three of the four jurisdictions for which data are presented (New South Wales, Victoria and Queensland) (Table 2.23.5b).
- Indigenous Australians were more likely to report whole milk as the usual type of milk consumed in the four jurisdictions for which data are presented.

Table 2.23.5a: Selected dietary habits, by state/territory, Indigenous persons aged 15 years and over, non-remote areas, 2004–05

Dietary behaviours	NSW	Vic	Qld	WA	SA	Tas/ACT	NT	Aust.
				Per cent				
Vegetable intake								
Does not eat vegetables	1	3	2	2	n.p.	n.p.	n.p.	2
1 serve or less	24	22	19	29	n.p.	n.p.	n.p.	23
2–4 serves	67	62	70	55	n.p.	n.p.	n.p.	66
5 serves or more	8	12	9	14	n.p.	n.p.	n.p.	10
Total[(a)]	**100**	**100**	**100**	**100**	**n.p.**	**n.p.**	**n.p.**	**100**
Fruit intake								
Does not eat fruit	13	11	13	9	n.p.	n.p.	n.p.	12
1 serve or less	46	45	46	46	n.p.	n.p.	n.p.	47
2–4 serves	39	40	38	39	n.p.	n.p.	n.p.	38
5 serves or more	2	3	3	6	n.p.	n.p.	n.p.	3
Total[(a)]	**100**	**100**	**100**	**100**	**n.p.**	**n.p.**	**n.p.**	**100**
Usual type of milk consumed								
Whole	75	62	80	68	69	64	75	74
Low/reduced fat	13	22	10	22	15	21	14	15
Skim	6	6	6	3	9	9	6	6
Other[(b)]	1	6	2	1	2	2	2	2
Total drinks milk	*95*	*89*	*96*	*94*	*92*	*94*	*95*	*94*
Does not drink milk	4	4	2	5	5	4	4	4
Total[(c)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Salt added after cooking								
Never/rarely	34	33	31	23	36	45	29	33
Sometimes	20	31	22	19	23	18	27	22
Usually	45	35	47	57	41	37	44	45
Total[(d)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

n.p. Not published because of output restrictions for non-remote data items for these states and territories.

(a) Includes whether eats fruit/vegetables not known.

(b) Includes soy milk and evaporated or sweetened condensed milk.

(c) Includes usual type of milk not known.

(d) Includes frequency salt is added after cooking not known.

Source: AIHW analysis of 2004–05 NATSIHS.

Table 2.23.5b: Selected dietary habits, by Indigenous status, persons aged 15 years and over, non-remote areas, NSW, Vic, Qld and WA, 2004–05

	NSW			Vic			Qld			WA		
Dietary behaviours	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**	**Indig.**	**Non-Indig.**	**Ratio**
	%	%		%	%		%	%		%	%	
Vegetable intake												
Does not eat veg	1	1	1.2	2	1	4.5	2	1	3.2	1	1	2.2
1 serve or less	22	22	1.0	22	21	1.0	18	19	1.0	28	16	1.8
2–4 serves	68	65	1.0	62	63	1.0	71	66	1.1	56	66	0.8
5 serves or more	9	11	0.8	14	15	0.9	9	14	0.7	15	18	0.8
Total[(a)]	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .
Fruit intake												
Does not eat fruit	12	7	1.6	10	7	1.5	13	8	1.6	9	6	1.5
1 serve or less	44	40	1.1	45	39	1.2	45	41	1.1	46	39	1.2
2–4 serves	42	49	0.9	42	50	0.8	39	47	0.8	38	50	0.8
5 serves or more	2	4	0.6	3	5	0.7	3	4	0.7	6	5	1.3
Total[(a)]	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .
Whole	74	47	1.6	59	41	1.4	76	48	1.6	64	41	1.6
Low/reduced fat	14	27	0.5	23	35	0.7	12	30	0.4	26	39	0.7
Skim	7	14	0.5	6	13	0.5	7	12	0.6	3	10	0.3
Other[(b)]	2	6	0.2	8	6	1.3	2	5	0.4	1	4	0.3
Total drinks milk	*95*	*88*	*3.0*	*88*	*89*	*3.0*	*95*	*90*	*3.0*	*94*	*90*	*3.0*
Does not drink milk	4	5	0.7	4	5	0.8	3	5	0.5	5	5	0.9
Total[(c)]	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .	**100**	**100**	. .

(a) Includes whether eats fruit/vegetables not known.

(b) Includes soy milk and evaporated or sweetened condensed milk.

(c) Includes usual type of milk not known.

Note: Data for South Australia, Tasmania, the Australian Capital Territory and the Northern Territory are not presented because of output restrictions for non-remote data items for these states and territories.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Dietary habits by remoteness

- Fruit and vegetables may be less accessible to Indigenous people in remote areas. In remote areas 20% of Indigenous Australians aged 12 years and over reported no usual daily fruit intake compared with 12% in non-remote areas. The disparity was even greater for vegetables, where 15% of Indigenous people in remote areas reported no usual daily intake compared with 2% in non-remote areas (Table 2.23.6).
- Indigenous people in remote areas were more likely to report drinking whole milk (87%) than those in non-remote areas (76%).
- Indigenous people in remote areas were more likely than those in non-remote areas to report sometimes or usually adding salt after cooking (83% compared with 66%) (Table 2.23.6).

Table 2.23.6: Selected dietary habits, by remoteness, Indigenous persons aged 12 years and over, 2004–05

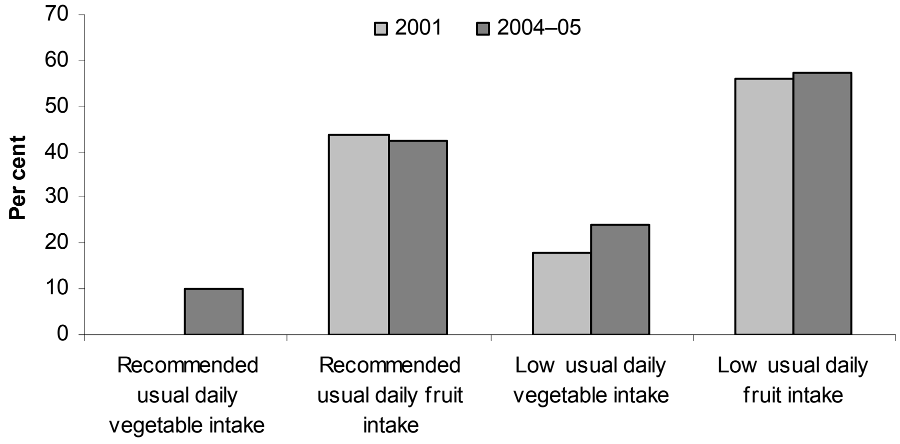
Dietary behaviours	Remote	Non-remote	Total
		Per cent	
Vegetable intake			
Eats vegetables daily	84	98	95
Does not eat vegetables daily	15	2	5
Total[(a)]	**100**	**100**	**100**
Fruit intake			
Eats fruit daily	80	88	86
Does not eat fruit daily	20	12	14
Total[(a)]	**100**	**100**	**100**
Usual type of milk consumed			
Whole	87	76	79
Low/reduced fat	4	14	11
Skim	2	5	5
Soy	—(b)	1	1
None of the above(c)	1(b)	1(b)	1(b)
Total drinks milk	*95*	*97*	*96*
Does not drink milk	5	3	4
Total(d)	**100**	**100**	**100**
Salt added after cooking			
Never/rarely	16	35	30
Sometimes	30	23	25
Usually	53	43	46
Total(e)	**100**	**100**	**100**

(a) Includes whether eats fruit/vegetables not known.
(b) Estimate is subject to sampling variability too high for most practical purposes.
(c) Includes evaporated or sweetened condensed milk.
(d) Includes usual type of milk not known.
(e) Includes frequency salt is added after cooking not known.

Source: ABS 2006a.

Time series analyses

- In 2004–05, approximately 24% of Indigenous Australians aged 12 years and over reported a low usual daily vegetable intake (one or less serves per day) compared to 17% in 2001 (ABS 2002). The proportion reporting a low usual daily fruit intake (one or less serves per day) was similar in 2001 and 2004–05 (57% and 58% respectively) (Figure 2.23.1).



Notes

1. Recommended usual daily vegetable intake = 5 or more serves per day.
2. Recommended usual daily fruit intake = 2 or more serves per day.
3. Low usual daily vegetable intake = one or less serves per day including not eating vegetables at all.
4. Low usual daily fruit intake = one or less serves per day including not eating fruit at all.
5. Recommended usual daily vegetable intake not available for 2001 as there was no category for 5 serves or more.

Source: ABS and AIHW analysis of 2001 NHS (Indigenous supplement) and 2004–05 NATSIHS.

Figure 2.23.1: Proportion of Indigenous Australians aged 12 years and over reporting the recommended and low usual daily intake of vegetables and fruit, non-remote areas, 2001 and 2004–05

Fruit and vegetable intake by selected health and population characteristics

- In 2004–05, a higher proportion of Indigenous Australians with fair/poor health reported no usual daily vegetable intake and/or no usual daily fruit intake than those with excellent/very good health status (Table 2.23.7).
- Indigenous Australians aged 15 years and over in the lowest (1st) quintile of household income were much more likely than those in the highest quintile to report no usual daily fruit and/or vegetable intake.
- Indigenous Australians who reported Year 9 or below as their highest year of school completed and did not have a non-school qualification were much more likely to report no usual daily fruit and/or vegetable intake than those whose highest year of school completed was Year 12 and who had a non-school qualification.
- A higher proportion of Indigenous people who were renting reported no usual daily vegetable intake (7%) and no usual daily fruit intake (16%) than those who were home owners (1% and 11% respectively).

Table 2.23.7: Dietary risk behaviours, by selected health and population characteristics, Indigenous persons aged 15 years and over, 2004–05

	No usual daily vegetable intake	No usual daily fruit intake
	Per cent	
Self-assessed health status		
Excellent/very good	4.7	12.9
Good	6.3	16.6
Fair/poor	6.5	16.2
Household income		
1st quintile (lowest)	7.8	16.8
5th quintile (highest)	0.2	5.8
Financial stress—unable to raise $2,000 within a week for something important	2.6	10.4
Highest year of school completed		
Year 12	3.8	9.4
Year 9 or below	7.7	16.9
Whether has non-school qualification		
Has a non-school qualification	3.3	13.3
Does not have a non-school qualification	7.2	16.1
Employment		
Employed	5.0	14.3
Unemployed	4.0	14.4
Not in the labour force	6.8	15.6
Housing		
Owner	0.5	11.1
Renter	7.4	16.4
Stressors in last 12 months(a)		
Serious illness or disability	6.2	14.6
Other stressors	5.7	14.7
Total experienced stressors	*5.8*	*14.7*
No stressors	4.6	15.3
All persons aged 15 years and over	**5.7**	**14.9**
Total number persons aged 15 years and over	16,681	43,610

(a) Persons aged 18 years and over.

Source: AIHW analysis of 2004–05 NATSIHS.

Fruit and vegetable intake by selected chronic diseases and health risk factors

- In 2004–05 Indigenous Australians with cancer were more likely to eat vegetables and fruit on a daily basis than those without, and those with diabetes were less likely to eat vegetables daily (Table 2.23.8).
- Indigenous Australians who reported low/sedentary levels of physical activity were slightly less likely to eat vegetables (2%) and fruit (13%) on a daily basis than those with high levels of physical activity (0.5% and 10% respectively)(non-remote data only).
- Indigenous Australians in the overweight/obese weight ranges were more likely to have a daily intake of vegetables and fruit than not.
- Indigenous Australians aged 18 years and over with reported short-term risky/high-risk alcohol consumption were less likely than those not reporting risky behaviour to eat fruit (22% compared with 13%) and vegetables (8% compared to 4%) on a daily basis.
- Indigenous Australians aged 18 years and over who reported being current smokers were more likely than Indigenous persons who were ex-smokers or who had never smoked to report no usual daily fruit intake (19% compared with 10%) and no usual daily vegetable intake (6% compared with 5%).

Table 2.23.8: Dietary risk behaviours, by selected chronic diseases and other risk factors, Indigenous persons aged 15 years and over, 2004–05

	No usual daily vegetable intake	No usual daily fruit intake
	Per cent	
Circulatory problems		
Yes	4.7	13.3
No	5.9	15.2
Has Diabetes		
Yes	8.5	13.1
No	5.4	15.0
Has Cancer		
Yes	1.7	10.3
No	5.7	14.9
Physical activity(a)		
Low/sedentary	1.7	13.4
Moderate	1.8	7.3
High	0.5	10.1
Overweight/obesity		
Yes	4.8	14.8
No	7.2	15.1
Long-term risky/high-risk alcohol consumption(b)		
Yes	5.9	19.6
No	5.5	13.9
Short-term risky/high-risk alcohol consumption(b)		
Yes	7.8	21.5
No	3.6	13.1
Smoking status(b)		
Current	6.4	19.3
Ex-smoker	4.9	10.0
Never smoked	4.6	9.9
All persons aged 15 years and over	**5.7**	**14.9**
Total number persons aged 15 years and over	16,681	43,610

(a) Non-remote areas only.

(b) Persons aged 18 years and over.

Source: AIHW analysis of 2004–05 NATSIHS.

Whether ran out of food in the 12 months before the survey

- In 2004–05, approximately 24% of Indigenous Australians aged 15 years and over reported they ran out of food in the 12 months before the survey compared with 5% of non-Indigenous Australians (Table 2.23.9).
- Approximately 8% of Indigenous people reported they went without food when they couldn't afford to buy more compared with 2% of non-Indigenous people.
- Indigenous Australians aged 15–24, 25–34 and 35–44 years were most likely to report they went without food when they couldn't afford to buy more.
- The proportion of Indigenous Australians who reported they ran out of food in the previous 12 months was much higher in the Northern Territory (45%) than the other states and territories (between 18% and 29%).
- Indigenous Australians aged 15 years and over living in remote areas were more likely to report having run out of food in the last 12 months (36%) than those in non-remote areas (20%).

Table 2.23.9: Proportion of persons aged 15 years and over who ran out of food and couldn't afford to buy more at some time over the previous 12 months,[(a)] by Indigenous status 2004–05

	Ran out of food											
	Went without food when couldn't afford to buy any more			**Did not go without food**			**Total ran out of food**			**Did not run out of food**		
	Indig.	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
	%	%		%	%		%	%		%	%	
Sex												
Males	7	2	3.7	14	3	5.7	21	4	4.9	79	96	0.8
Females	8	2	4.1	18	3	5.7	27	5	5.1	73	95	0.8
Persons	*8*	*2*	*4.0*	*17*	*3*	*5.7*	*24*	*5*	*5.0*	*76*	*95*	*0.8*
Age												
15–24	8	4	2.1	17	5	3.2	24	9	2.7	76	91	0.8
25–34	8	3	3.0	19	4	4.5	27	7	4.0	73	93	0.8
35–44	9	2	4.4	17	4	4.6	26	6	4.5	74	94	0.8
45–54	7	2	3.3	14	2	6.3	21	4	4.9	79	96	0.8
55+	5	1	8.7	12	1	13.2	17	2	11.4	83	98	0.8
State/territory												
NSW	7	2	3.9	11	2	4.8	18	4	4.4	82	96	0.9
Victoria	10	2	5.1	12	3	3.9	21	5	4.4	79	95	0.8
Qld	7	2	3.3	13	4	3.8	21	6	3.6	79	94	0.8
WA	8	2	4.3	18	3	5.7	26	5	5.2	74	95	0.8
SA	9	2	4.4	20	3	6.7	29	5	5.7	71	95	0.8
Tas/ACT	9	2	4.1	10	4	2.7	19	6	3.2	81	94	0.9
NT	7	—	—	38	3	14.7	45	3	17.4	55	97	0.6
Australia	*8*	*2*	*4.0*	*17*	*3*	*5.7*	*24*	*5*	*5.0*	*76*	*95*	*0.8*
Remoteness area												
Remote	7	1	5.1	28	4	8.1	36	5	7.2	64	95	0.7
Non remote	8	2	4.0	12	3	4.1	20	5	4.1	80	95	0.8
Total no.	**19,676**	**283,628**	. .	**42,674**	**425,252**	. .	**62,350**	**708,880**	. .	**195,913**	**1.4 mill**	. .

(a) Information for some persons aged 15–17 years was provided by a parent or guardian.

Source: AIHW analysis of 2004–05 NATSIHS.

Additional information

Research on traditional and non-traditional diets of Aboriginal and Torres Strait Islander peoples

Available research suggests that traditional Aboriginal hunter-gatherers consumed a varied diet in which animal foods were a major component. Their diet was not high in fat because the wild animal meat consumed was extremely lean. A wide variety of uncultivated plant foods were eaten which were generally high in fibre and contained carbohydrates which were slowly digested. Traditional foods generally had a low energy density and high level of nutrients. The low-energy intake of the diet and the labour intensity of procuring food would have protected Aboriginal people against obesity and associated health conditions such as diabetes (O'Dea 1991).

Today, many Aboriginal people consume a diet high in fat, sugar and energy-dense foods. Poverty and food insecurity have been recognised as important factors in the poor-quality diet of many Indigenous people, especially those living in remote communities. Food prices are generally higher in remote areas for many types of food. The price of basic healthy foods is at least 50% higher in remote locations than in major cities (NHMRC 2003). Foods of better nutritional choice, including fresh fruits and vegetables, are often expensive because of transport and overhead costs, or only minimally available (Shannon 2002). Remote stores on the whole sell half the fruit and one-quarter of the vegetable intake per capita of that of the overall Australian community (Lee et al. 1994). In comparison, takeaway and convenience food items, often energy-dense and high in fat or sugar, are less affected by issues of cost and availability.

There is evidence to suggest that people living in poverty tend to maximise calories per dollar spent on food. Energy-dense foods rich in fats, refined starches and sugars represent the lowest cost options, whereas healthy diets based on lean meats, whole grains and fresh vegetables and fruits are more costly (Drewnowski & Spencer 2004). A study which analysed the store turnover of food supplies at six remote Aboriginal communities in the Northern Territory found a very high consumption of energy, fat and sugar, with fatty meats making the largest contribution to fat intake. In comparison to national consumption data, intake of sweetened carbonated beverages and sugar was much higher in these communities. The proportion of energy derived from refined sugars was approximately four times the recommended intake. The diets of people living in these communities had high levels of animal fat (mainly from poor-quality meat) and very low levels of fruit and vegetables (Lee et al. 1994).

A study which looked at the therapeutic potential of a traditional lifestyle and diet involved a trial of a group of 10 middle-aged Indigenous people with diabetes who were overweight or obese in the West Kimberly region of Western Australia. The group reverted to a traditional hunter-gatherer diet for 7 weeks. After this short time living off their traditional lands the Aboriginal people involved in the study lost an average of 7 kg and the metabolic abnormalities of diabetes and risk factors for heart disease (blood pressure, blood cholesterol, triglycerides) all improved markedly (O'Dea 1984).

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006a).

Dietary behaviour data

The questions on dietary behaviour are complex as respondents needed to understand and apply the inclusions/exclusions, understand the concept of a serve and assess their consumption levels accordingly, and think about their total consumption in what would constitute an average day. Overall, it is considered that the indicators of vegetable and fruit intake in the non-remote component of the 2004–05 NATSIHS are of a lower quality than most other items from the survey, but are considered sufficiently reliable for the purposes of assessing broad intake levels for population groups, and for comparisons between population groups. Using the data for other purposes should be done with care. Data for all those aged 12–14 years, and 68% of those aged 15–17 years, were provided by a proxy, usually a parent. As a result, the data reflect the parent's knowledge of the child's consumption; this is likely to be less accurate for usual consumption of fruit items than for the type of milk and usual consumption of vegetables items collected in non-remote areas (ABS 2006b).

Picture prompt cards were used to help non-remote respondents understand the concept of a serve; one prompt card showed six examples of single serves of different vegetables and another card showed six single serves of fruit. If respondents had difficulty in reporting, interviewers were encouraged to prompt in terms of asking respondents about their usual consumption of vegetables and fruit at breakfast, lunch and dinner and for snacks. Remote respondents were asked whether they usually ate fruit and/or vegetables each day. In addition to products excluded in non-remote areas, fruit or vegetables considered to be bush tucker were also excluded.

In remote areas the questions on vegetable and fruit intake were amended to whether the respondents usually ate fruit and/or vegetables each day. Therefore it is not possible to produce indicators based on usual serves for remote areas from the 2004–05 NATSIHS.

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2.24 Breastfeeding practices

The breastfeeding status of Aboriginal and Torres Strait islander infants, breastfeeding duration, breastfeeding and other sources of food and reasons mothers stopped breastfeeding

Data sources

Data for this measure come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Definitions of breastfeeding terms

Breastfeeding. The child receives some breastmilk but can also receive any food or liquid including non-human milk.

Breastfeeding duration. The total length of time an infant received any breastmilk at all from initiation until weaning is complete.

Ever breastfed. An infant has been put to the breast, even if only once, and/or an infant has received expressed breastmilk but has never been put to the breast.

Exclusively breastfed. An infant has received only breastmilk from his/her mother or a wet nurse or expressed breastmilk and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.

Predominantly breastfed. An infant's predominant source of nourishment has been breastmilk but the infant has also received water and water-based drinks (sweetened and flavoured water, teas, infusions, etc.); fruit juice; oral rehydration solution; drops and syrup forms of vitamins, minerals and medicines; and/or ritual foods (in limited quantities). All other food-based fluids are excluded, in particular non-human milk.

Fully breastfed. An infant is fully breastfed if he/she receives breastmilk as the main source of nourishment. This includes infants who are either (a) exclusively breastfed or (b) predominantly breastfed—that is, infants with no other liquids or solids (except vitamins, mineral supplements, or medicines) or infants who receive breastmilk and water, water-based drinks, fruit juice, oral rehydration solution, but do not receive breast milk substitutes or solids. The fully breastfed rate is the combined rate of exclusively breastfed and predominantly breastfed (Webb et al. 2001).

Data analyses

Breastfeeding status

- In 2004–05, approximately 79% of Indigenous infants aged 0–3 years had ever been breastfed compared with 88% of non-Indigenous infants.
- Approximately 13% of Indigenous infants were currently being breastfed compared with 16% of non-Indigenous infants.
- A similar proportion of Indigenous and non-Indigenous infants had been breastfed for 12 months or more (13% and 14% respectively).
- The maximum duration of breastfeeding among fully breastfed children was 130 weeks for Indigenous children compared with 156 weeks for non-Indigenous children (Table 2.24.1).

Breastfeeding status by state/territory

- In Queensland a significantly lower proportion of Indigenous infants had ever been breastfed (79%) compared with non-Indigenous infants (89%) (Table 2.24.1; Figure 2.24.1).

Table 2.24.1: Breastfeeding status, by state/territory and Indigenous status, infants aged 0–3 years in non-remote areas, 2004–05

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Australia(a)	
Breastfeeding measure	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indig**	**Non-Indig**	**Indi**	**Non-Indig**	**Indig**	**Non-Indig**
									Per cent									
Child has been breastfed																		
0 to less than 6 months	35	33	43	39	31	39	22	34	27	33	51	35	41	29	32	n.p.	33	36
For 6 to 12 months	21	25	22(c)	25	19(b)	20	14(b)	16	16(c)	19	15(b)	18	16(b)	24	15(b)	n.p.	19	22
12 months or more(d)	11	13	10(c)	14	18(b)	13	15(b)	16	10(c)	17	9(c)	15	17(b)	23(b)	13(b)	n.p.	13	14
Currently breastfeeding	8(f)	13	9(b)	15	12(b)	17	30(b)	24	18(c)	13	11(c)	17	17(b)	21(b)	29(b)	n.p.	13	16
Ever breastfed	*76*	*84*	*84*	*93*	*79**	*89**	*81*	*90*	*70*	*81*	*86*	*86*	*92*	*96*	*89*	*n.p.*	*79**	*88**
Never breastfed	24	16	15*(b)	7*	20	10	19(b)	10(b)	30(b)	19	14(b)	14(f)	5(c)	4(b)	11(b)	n.p.	21*	12*
Total(e)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	n.p.	100	100
Total no. of infants	**13,418**	**310,805**	**2,373**	**240,930**	**10,325**	**182,712**	**3,552**	**85,191**	**2,019**	**69,745**	**1,762**	**22,526**	**433**	**16,702**	**1,082**	**4,402**	**34,964**	**933,013**
									Weeks									
Maximum duration of breastfeeding among fully breastfed children (weeks)(f)	78(g)	104(g)	56(g)	104(g)	117(g)	87(g)	83(g)	109(g)	52(g)	104(g)	65(g)	84(g)	78(g)	70(g)	78(g)	n.p.	130	156
Minimum duration of breastfeeding among fully breastfed children (weeks)(f)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	n.p.	1	1

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Non-Indigenous results are not provided because the non-Indigenous sample for this area was insufficient for purposes of estimation of these characteristics.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Estimate has a relative standard error greater than 50% and are considered too unreliable for general use.

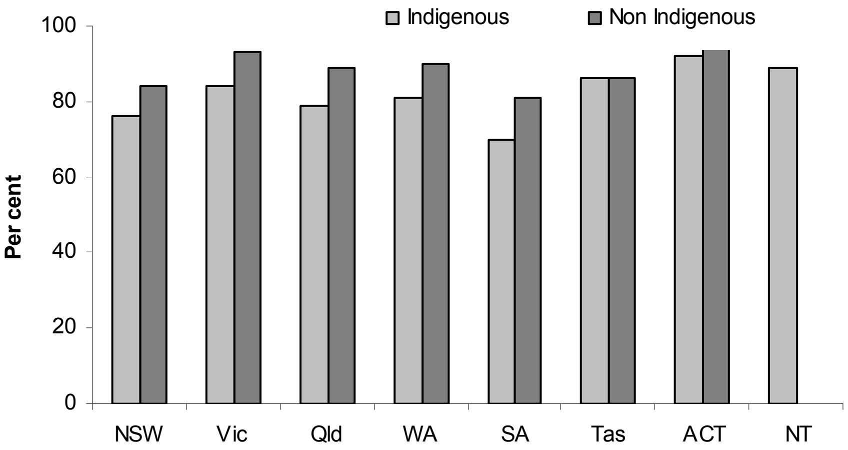
(d) Includes length of time child has been breastfed not known.

(e) Includes breastfeeding status not known.

(f) Excludes children currently breastfed and children who had been fully breastfed for less than 1 week.

(g) Indicates that the maximum length of time breastfed in weeks is greater than this value, but for confidentiality reasons the maximum length of time cannot be released.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.



Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Figure 2.24.1: Ever breastfed, by Indigenous status and state/territory, infants aged 0–3 years, non-remote areas, 2004–05

Breastfeeding status by remoteness

- In 2004–05, approximately 20% of Indigenous infants aged 0–3 years were currently being breastfed, 60% had previously been breastfed but not currently, and 19% had never been breastfed (Table 2.24.2).
- Breastfeeding status varied by remoteness, with a higher proportion of Indigenous infants in remote areas currently being breastfed than those in non-remote areas (Figure 2.24.2). Approximately 42% of Indigenous infants in remote areas were currently being breastfed, 43% had previously been breastfed and 14% had never been breastfed. This compared with 13%, 65% and 21% respectively of Indigenous infants in non-remote areas.
- At ages 0–6 months, 6–12 months and 1–3 years, a higher proportion of Indigenous infants in remote areas were breastfeeding than those in non-remote areas.

Table 2.24.2: Breastfeeding status, by remoteness and age of infant, Indigenous persons aged 0–3 years, 2004–05

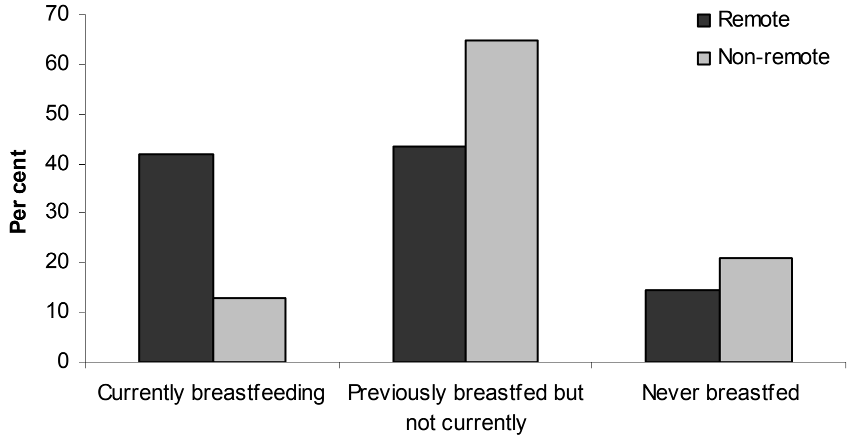
	Less than 6 months			6 months to < 12 months			12 months to 3 years			Total aged 0–3 years		
Breastfeeding status	**Remote**	**Non-remote**	**Total**	**Remote**	**Non-remote**	**Total**	**Remote**	**Non-remote**	**Total**	**Remote**	**Non-remote**	**Total**
						Per cent						
Currently breastfeeding	85.4	55.6	61.2	82.2	31.1(a)	46.5	30.4	4.0	10.7	42.0	13.0	20.3
Previously breastfed but not currently	6.6(b)	30.8(a)	26.2(a)	9.0(a)	56.5	42.17	53.2	72.2	67.4	43.4	64.6	60.0
Never breastfed	8.0(b)	13.6(a)	12.6(a)	8.9(a)	12.4(a)	11.3(a)	15.9	23.3	21.5	14.3	21.0	19.3
Total(c)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total no. of infants	**964**	**4,160**	**5,124**	**1,585**	**3,662**	**5,247**	**9,165**	**27,142**	**36,307**	**11,713**	**34,964**	**46,677**

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use

(c) Includes previously breastfed but current status not known, not stated and not known if breastfed.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.



Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Figure 2.24.2: Breastfeeding status, by remoteness, Indigenous children aged 0–3 years, 2004–05

Breastfeeding status when first taken home from hospital

- In 2004–05, approximately 96% of Aboriginal and Torres Strait Islander infants aged 0–3 years in non-remote areas were breastfed when they were first taken home from hospital (Table 2.24.3).
- The proportion ranged from 89% in the Australian Capital Territory to 98% in the Northern Territory.

Table 2.24.3: Breastfeeding status when first taken home from hospital, by state/territory, Aboriginal and Torres Strait Islander infants aged 0–3 years who were breastfed, non-remote areas, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
Breastfed when first taken home	97	96	95	96	92	95	89	98	96
Not breastfed when first taken home	2(a)	4(a)	—	3(a)	2(a)	4(a)	11(a)	—	2(b)
No hospital	—	—	—	1(a)	—	—(a)	—	2(a)	—(a)
Total ever breastfed	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number ever breastfed	10,186	1,983	8,014	2,871	1,449	1,507	396	962	27,369

(a) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Additional information

Breastfeeding and other sources of food

- In 2004–05, approximately 45% of Indigenous infants aged less than 6 months in non-remote areas were fully breastfed in the 24 hours before the survey. Approximately 31% were breastfed exclusively, 8% received solid or semi-solid food and 13% received breastmilk substitutes (Table 2.24.4).

Table 2.24.4: Breastfeeding and other sources of food in last 24 hours, Aboriginal and Torres Strait Islander Australians aged less than 6 months currently breastfed in non-remote areas, 2004–05

Breastfeeding and other sources of food in previous 24 hours	Number	Proportion (%)
Breastfed exclusively(a)	1,277	31
Solid or semi-solid food	325	8(b)
Breastmilk replacement(c)	526	13(b)
Fully breastfed(d)	1,867	45

(a) An infant has received only breastmilk from his/her mother or a wet nurse or expressed breastmilk and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.

(b) Estimate has a relative standard error of between 25% and 50% should be used with caution.

(c) Includes infants fed infant formula and/or tinned, powdered or fresh milk.

(d) Fully breastfed comprises those infants who receive breastmilk as the main source of food and are either breastfed exclusively or breastfed predominantly. Infants breastfed predominantly are those who received breastmilk and water, water-based drinks, fruit juice and oral rehydration solution, but do not receive breastmilk substitutes or solids.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Age at which first given solid food

- Indigenous infants aged 0–3 months were almost twice as likely to be given solid food as non-Indigenous infants (18% compared with 10%) (Table 2.24.5).
- Indigenous infants aged 3–6 months and 6–9 months were less likely to be given solid food than non-Indigenous infants of the same age.

Table 2.24.5: Age at which first given solid food regularly, by Indigenous status, persons aged 0–3 years in non-remote areas, 2004–05

	Indigenous	Non-Indigenous	Ratio
	%	%	
1–<3 months	18	10	1.8*
3–<6 months	34	40	0.9*
6–<9months	28	34	0.8*
9+months	8	6	1.3
Total given solid food[(a)]	*91*	*90*	*1.0*
Solid food not given regularly	8	10	0.8
Total[(b)]	**100**	**100**	**. .**
Total persons	34,964	933,013	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Includes age first given solid food not known.

(b) Includes whether given solid food not known.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Reasons for stopping breastfeeding

- In 2004–05, the main reason mothers of Indigenous infants aged 0–3 years in non-remote areas stopped breastfeeding was that they were no longer producing any or adequate milk (32%). Approximately 21% of Indigenous infants were no longer breastfed because mothers felt it was time to stop, and for 6% the mother was pregnant again (Table 2.24.6) Approximately 16% of Indigenous infants were no longer breastfed because of other problems with breastfeeding (for example, cracked nipples).

Table 2.24.6: Aboriginal and Torres Strait Islander infants aged 0–3 years, by main reason stopped breastfeeding, non-remote areas, 2004–05

Main reason stopped breastfeeding	%
Not producing any/adequate milk	32
Felt it was time to stop	21
Pregnant	6[(a)]
Teething	5[(a)]
Resumed work	4[(a)]
Child bored	1[(b)]
Other problems with breastfeeding (e.g. cracked nipples)	16
Not stated	2[(b)]
Total	**100**
Total no. of infants	**22,941**

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Breastfeeding by selected population and risk factors

- In 2004–05, approximately 29% of Indigenous infants aged 0–3 years in the lowest (1st) income quintile were never breastfed, compared with 10% in the highest income quintile. Approximately 25% in the lowest (1st) socioeconomic (SEIFA) quintile were never breastfed, compared with only 1% of Indigenous infants in the highest quintile (Table 2.24.7).
- A higher proportion of Indigenous infants living in households owned or being purchased by a member of the household were breastfed compared with those living in rented households (88% compared with 75%).
- Approximately 84% of Indigenous infants living in a household with no regular smokers were breastfed compared with 76% of those living in a household with at least one regular smoker.

Table 2.24.7: Breastfeeding status, Indigenous infants aged 0–3 years in non-remote areas, by selected household characteristics, 2004–05

	Breastfeeding measure: Child has been breastfed					
	0 to less than 6 months	For 6 months to 12 months	12 months or more[(a)]	Currently breastfeeding	*Ever breastfed*	Never breastfed
	Per cent					
Household income						
1st quintile (lowest)	30	12	12	17	*70*	29
5th quintile (highest)	58	12	17	3	*90*	10
SEIFA (Socio-economic index for areas)[(b)]						
1st quintile (lowest)	34	13	14	14	*74*	25
5th quintile (highest)	28	39	23	8	*99*	1
Housing						
Owner	34	25	18	10	*88*	11
Renter	33	16	12	14	*75*	24
Regular smoker in households						
Yes	38	16	10	12	*76*	24
No	25	24	22	13	*84*	15
All infants aged 0–3 years	**33**	**19**	**13**	**13**	***79***	**21**
Total no. of infants 0–3 years	**11,571**	**6,571**	**4,799**	**4,540**	***27,481***	**7,349**

(a) Includes length of time child has been breastfed not known.

(b) SEIFA refers to Socio-Economic Indexes for Areas developed by the ABS. The SEIFA Indexes allow ranking of regions/areas which provide a method of determining the level of socioeconomic wellbeing in that region.

Source: AIHW analysis of 2004–05 NATSIHS.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problems inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the General Social Survey. Time series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006a).

Breastfeeding data

The following points should be considered when interpreting data on breastfeeding from the NATSIHS:

- *The sample size of infants less than 6 months of age will affect the reliability of estimates.*
- *Information is 'as reported' by respondents. No analysis has been undertaken regarding the accuracy of these reported data and whether the accuracy of recall by the adult respondent declines as the child gets older.*
- *In addition, the accuracy of the data may be reduced in cases where an adult other than the child's mother responded regarding the child; this occurred for around 27% of infants aged 0–3 years (21% non-remote, 33% remote).*
- *Issues relating to the benefits of breastfeeding have been widely promoted in the community and some respondents may have tended to report recommended practices rather than actual practices (ABS 2006b).*
- *In addition, respondents may not have interpreted the concept 'regularly' in relation to the solids question correctly, where they did not seek clarification from the interviewer. It should also be kept in mind that the inclusion both of infants who are still breastfeeding at the time of the survey and of infants who have ceased breastfeeding may produce estimates that are lower than expected.*

References

ABS (Australian Bureau of Statistics) 2006a. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

ABS 2006b. National Aboriginal and Torres Strait Islander Health Survey 2004–05: user's guide. ABS cat. no. 4715.0.55.004. Canberra: ABS.

Webb K, Marks G, Lund-Adams M, Rutishauser IHE & Abraham B 2001. Towards a national system for monitoring breastfeeding in Australia. Canberra: Australian Food and Nutrition Monitoring Unit.

2.25 Unsafe sexual practices

Proportion of Aboriginal and Torres Strait Islander peoples engaging in unsafe sexual practices

Data sources

Data are available from the National Perinatal Data Collection and the National Notifiable Diseases Surveillance System held at the Department of Health and Ageing.

National Notifiable Diseases Surveillance System (NNDSS)

A set of 56 diseases and conditions are notifiable nationally. Data on all these cases are forwarded to the NNDSS, managed by the Australian Government Department of Health and Ageing.

Identification of Indigenous notifications in all states and territories is incomplete, but three jurisdictions (Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in the NNDSS (AIHW & ABS 2006). Data on Indigenous status for certain notifiable diseases are not available for the Australian Capital Territory, New South Wales or Tasmania.

National Perinatal Data Collection

Data for this measure come from the National Perinatal Data Collection of the AIHW National Perinatal Statistics Unit (NPSU).

Each state and territory has a perinatal collection based on birth notification forms completed by midwives and other staff, using information obtained from mothers and from hospital and other records. These data are provided annually in electronic format to the NPSU and are compiled into the National Perinatal Data Collection. Perinatal notification forms are completed in Australia for all births of 20 weeks or more gestation, or a birthweight of 400 grams or more.

Data are presented for all states and territories for the year 2005, the first year for which data from Tasmania have been included in analyses of Indigenous perinatal data.

Data on mothers for whom Indigenous status was not stated have been excluded from analysis. In 2005, there were 128 births where Indigenous status was not stated (0.05%).

Analyses

Notifications for chlamydia, syphilis, gonorrhoea and donovanosis

Notifications of sexually transmissible infections is one indicator of unsafe sexual practices. It does not measure all cases, just those involving sexually transmissible infections.

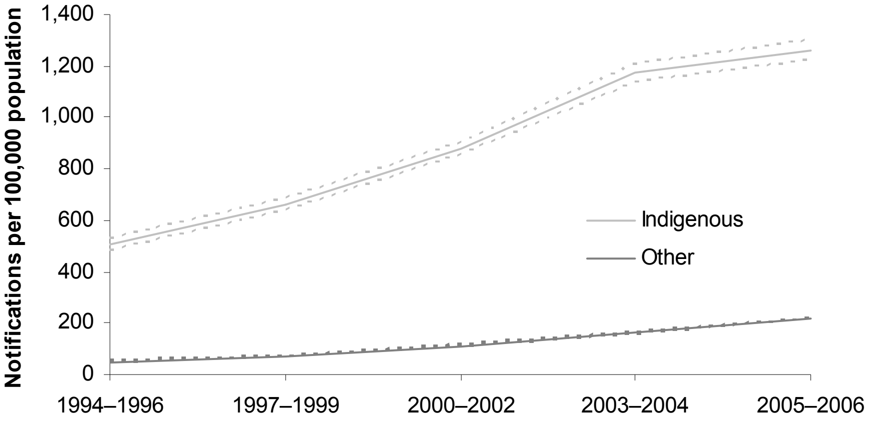
Notification data for chlamydia, syphilis, gonorrhoea and donovanosis are presented below.

Chlamydia

For the 3-year period 2004–2006, there were 29,245 notifications for chlamydia in Western Australia, South Australia and the Northern Territory, 26% of which were notifications of Aboriginal and Torres Strait Islander persons. Notifications rates of chlamydia among Indigenous males and females were six times those of other Australian males and females.

Time series

- Over the period 1994–1996 to 2005–2006 in Western Australia, South Australia and the Northern Territory combined there were significant increases in notification rates for chlamydia among Indigenous Australians (from around 630 to 1616 notifications per 100,000) (Table 2.25.1). The fitted trend line shows an average yearly increase in the rate of around 99 per 100,000, which is equivalent to a 188% increase in the rate over the period.
- There were also significant increases in notification rates for chlamydia among other Australians during the same period (from around 50 to 218 notifications per 100,000; 379% increase) (Table 2.25.1; Figure 2.25.1).
- Notification rate ratios between Indigenous and other Australians for chlamydia showed significant declines over the 12-year period.



Source: AIHW analysis of NNDSS data.

Figure 2.25.1: Age-standardised notification rates for chlamydia, WA, SA and NT, 1994–1996 to 2005–2006

Table 2.25.1: Crude and age-standardised notification rates, rate ratios and rate differences for chlamydia, WA, SA and NT, 1994–1996 to 2005–2006

	1994–1996	1997–1999	2000–2002	2003–2004	2005–2006	Annual change[(a)]	% change over period[(b)]
Indigenous crude rate (no. per 100,000)							
Males	414.8	579.5	767.5	1,064.3	1,190.1	76.3*	220.7
Females	846.2	1047.6	1,413.7	1,838.9	1,974.0	114.7*	162.6
Persons	630.3	813.4	1,091.7	1,469.9	1,616.3	98.7*	187.8
Indigenous age-standardised rate (no. per 100,000)							
Males	357.4	497.5	647.5	888.1	961.5	60.1*	201.9
Females	657.2	829.7	1,113.1	1,435.2	1,515.2	87.6*	160.0
Persons	507.3	661.9	878.7	1,171.0	1,260.1	75.8*	179.4
Other Australian age-standardised rate (no. per 100,000)[(c)]							
Males	35.5	58.0	91.1	131.4	176.7	13.2*	446.3
Females	64.3	86.4	132.0	191.4	260.9	18.4*	343.5
Persons	49.9	71.8	111.5	160.8	218.1	15.8*	379.0
Rate ratio[(d)]							
Males	10.1	8.6	7.1	6.8	5.4	–0.4*	–49.8
Females	10.2	9.6	8.4	7.5	5.8	–0.4*	–47.5
Persons	10.2	9.2	7.9	7.3	5.8	–0.4*	–47.3
Rate difference[(e)]							
Males	321.8	439.4	556.4	756.6	784.8	46.9*	175.0
Females	592.8	743.3	981.1	1,243.7	1,254.3	69.2*	140.1
Persons	457.4	590.1	767.2	1,010.2	1,041.9	60.1*	157.6

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1994–1996 to 2005–2006.

(f) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(g) Per cent change between 1994–1996 and 2005–2006 based on the annual rate of change over the period.

(h) Includes notifications for non–Indigenous people and those for whom Indigenous status was not stated.

(i) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(j) Notification rate for Indigenous Australians minus the notification rate for other Australians.

Note: Rates have been directly age-standardised using the Australian 2001 standard population.

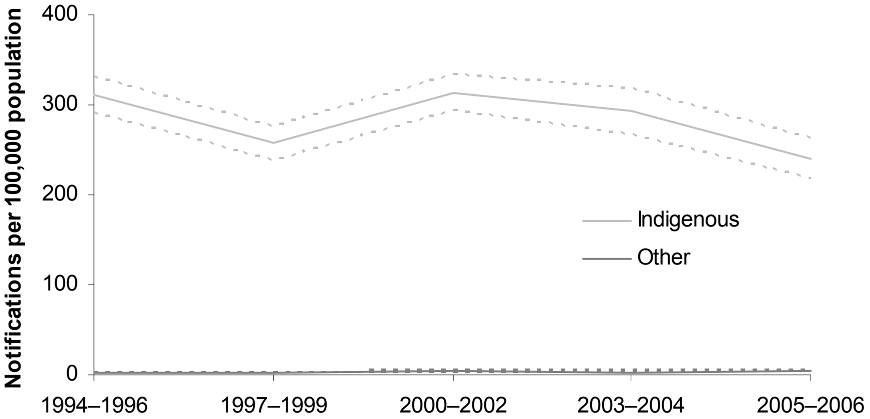
Source: AIHW analysis of NNDSS data.

Syphilis

For the period 2004–2006, there were 1,464 notifications for syphilis in Western Australia, South Australia and the Northern Territory combined, 73% of which were notifications of Aboriginal and Torres Strait Islander persons. Notification rates for syphilis among Indigenous males and females were 53 and 115 times the rates for other Australian males and females.

Time series

- Over the period 1994–1996 to 2005–2006 in Western Australia, South Australia and the Northern Territory combined, there were significant decreases in notification rates for syphilis among Indigenous Australians (from around 333 to 207 notifications per 100,000). The fitted trend line shows an average yearly decline in the rate of around 9 per 100,000 which is equivalent to a 33% reduction in the rate over the period (Table 2.25.2).
- There were significant increases in notification rates for syphilis among other Australians during the same period (from 2 to 4 per 100,000; 62% increase) (Table 2.25.2; Figure 2.25.2).
- There were significant declines in notification rate ratios between Indigenous and other Australians for syphilis over the 12-year period.



Source: AIHW analysis of NNDSS data.

Figure 2.25.2: Age-standardised notification rates for syphilis, WA, SA and NT, 1994–1996 to 2005–2006

Table 2.25.2: Crude and age-standardised notification rates, rate ratios and rate differences for syphilis, WA, SA and NT, 1994–1996 to 2005–2006

	1994–1996	1997–1999	2000–2002	2003–2004	2005–2006	Annual change(a)	% change over period(b)
Indigenous crude rate (no. per 100,000)							
Males	337.2	257.7	308.7	254.2	190.3	–10.8*	–38.5
Females	328.2	241.0	294.6	254.4	209.0	–8.3	–30.2
Persons	333.2	249.6	301.6	255.0	206.6	–9.1*	–32.7
Indigenous age-standardised rate (no. per 100,000)							
Males	328.7	286.4	340.5	311.9	243.7	–5.0	–18.1
Females	296.9	231.5	289.1	275.9	229.3	–3.2	–12.9
Persons	311.6	256.9	313.5	292.4	240.5	–3.7	–14.2
Other Australian age-standardised rate (no. per 100,000)(c)							
Males	2.7	3.7	4.7	4.3	5.3	0.2*	99.0
Females	2.0	1.5	2.2	1.7	2.3	0.0	15.6
Persons	2.3	2.7	3.5	3.0	3.8	0.1*	62.2
Rate ratio(d)							
Males	122.9	76.4	72.6	72.2	46.0	–6.0*	–58.4
Females	149.8	151.2	131.9	166.4	100.1	–2.9	–23.3
Persons	132.6	96.5	89.6	98.0	63.3	–5.1*	–46.6
Rate difference(e)							
Males	326.0	282.6	335.8	307.6	238.4	–5.2	–19.1
Females	295.0	230.0	286.9	274.2	227.0	–3.2	–13.1
Persons	309.2	254.2	310.0	289.5	236.7	–3.8	–14.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1994–1996 to 2005–2006.

(f) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(g) Per cent change between 1994–1996 and 2005–2006 based on the annual rate of change over the period.

(h) Includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(i) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(j) Notification rate for Indigenous Australians minus the notification rate for other Australians.

Note: Rates have been directly age-standardised using the Australian 2001 standard population.

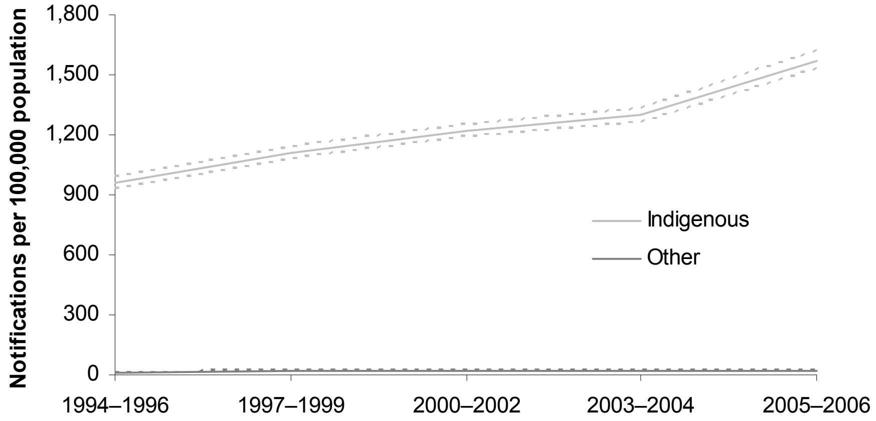
Source: AIHW analysis of NNDSS data.

Gonorrhoea

For the period 2004–2006, there were 11,105 notifications for gonorrhoea in Western Australia, South Australia and the Northern Territory combined, 79% of which were notifications of Aboriginal and Torres Strait Islander persons. Notification rates of gonorrhoea among Indigenous males and females were 47 and 134 times the rates of other Australian males and females respectively.

Time series

- Over the period 1994–1996 to 2005–2006 in Western Australia, South Australia and the Northern Territory combined, there were significant increases in notification rates for gonorrhoea among Indigenous Australians (from around 1,127 to 1,917 notifications per 100,000; 74% increase) (Table 2.25.3).
- There were also significant increases in notification rates for gonorrhoea among other Australians over the same period (from around 13 to 22 per 100,000; 68% increase) (Table 2.25.3; Figure 2.25.3).
- Notification rate ratios between Indigenous and other Australians for gonorrhoea showed no significant changes over the 12-year period.



Source: AIHW analysis of NNDSS data.

Figure 2.25.3: Age-standardised notification rates for gonorrhoea, WA, SA and NT, 1994–1996 to 2005–2006

Table 2.25.3: Crude and age-standardised notification rates, rate ratios and rate differences for gonorrhoea, WA, SA and NT, 1994–1996 to 2005–2006

	1994–1996	1997–1999	2000–2002	2003–2004	2005–2006	Annual change[(a)]	% change over period[(b)]
Indigenous crude rate (no. per 100,000)							
Males	1,308.1	1,257.5	1,381.8	1,500.8	1,833.9	46.6*	42.8
Females	938.5	1,371.9	1,531.7	1,678.3	1,916.3	85.5*	109.3
Persons	1,126.9	1,315.4	1,456.9	1,608.3	1,916.5	69.4*	73.9
Indigenous age-standardised rate (no. per 100,000)							
Males	1,168.0	1,114.6	1,207.4	1,255.8	1,575.0	34.0*	34.9
Females	761.2	1,113.7	1,234.1	1,314.8	1,518.0	64.9*	102.3
Persons	962.5	1,110.1	1,216.9	1,296.1	1,574.1	52.1*	64.9
Other Australian age-standardised rate (no. per 100,000)[(c)]							
Males	18.5	26.0	30.3	32.3	32.0	1.3*	84.1
Females	7.7	16.1	15.8	12.3	11.1	0.2	24.7
Persons	13.3	21.2	23.5	22.5	22.0	0.8*	68.3
Rate ratio[(d)]							
Males	63.2	42.9	39.9	38.9	49.2	–1.4	–25.7
Females	98.5	69.3	78.1	107.0	136.9	4.0	48.3
Persons	72.6	52.5	51.8	57.7	71.5	–0.1	–1.2
Rate difference[(e)]							
Males	1,149.6	1,088.6	1,177.1	1,223.6	1,543.0	32.7*	34.1
Females	753.5	1,097.6	1,218.3	1,302.5	1,506.9	64.7*	103.1
Persons	949.2	1,089.0	1,193.4	1,273.6	1,552.0	51.3*	64.9

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1994–1996 to 2005–2006.

(f) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(g) Per cent change between 1994–1996 and 2005–2006 based on the annual rate of change over the period.
(h) Includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.
(i) Notification rate for Indigenous Australians divided by the notification rate for other Australians.
(j) Notification rate for Indigenous Australians minus the notification rate for other Australians.

Note: Rates have been directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of NNDSS data.

Donovanosis

For the period 2004–2006, there were 27 notifications for donovanosis in Australia, 93% (25) of which were notifications of Aboriginal and Torres Strait Islander persons. All of these recorded notifications took place in Queensland, Western Australia and the Northern Territory. Rates have not been calculated for these jurisdictions because of the small numbers of notifications.

Teenage pregnancies

Teenage pregnancy is one indicator of unsafe sexual practices. It does not measure all cases, just those involving pregnancies in the under 20 year age group. Note that not all unsafe sexual practices result in teenage pregnancy and not all teenage pregnancies are unplanned. So this measure overestimates unplanned pregnancies and underestimates all cases of unsafe sexual practices.

Information on births to teenage mothers is available from the National Perinatal Data Collection.

- In 2005, there were 2,138 mothers aged less than 20 years who identified as Aboriginal or Torres Strait Islander. This represented 22% of all Indigenous mothers at a rate of 48 per 1,000 women. In comparison, only 4% of all non-Indigenous mothers were aged less than 20 years at a rate of 9 per 1,000 women (Table 2.25.4; Table 2.25.5).
- The majority of teenage mothers were aged 17–19 years for both Indigenous and non-Indigenous mothers. However, 9% of Indigenous teenage mothers were aged less than 16 years compared to only 3% of non-Indigenous mothers (Table 2.25.4).
- The rate of Indigenous women who gave birth at 12 and 13 years, 14 years and 15 years was 13, 17 and 18 times respectively the rate of non-Indigenous women who gave birth at these ages (Table 2.25.4).
- The rate of Indigenous women aged less than 20 years who gave birth varied across jurisdictions. The Northern Territory and Western Australia had the highest rates (72 and 66 per 1,000 women respectively) and Tasmania had the lowest (25) (Table 2.25.5).
- Indigenous women aged less than 20 years gave birth at seven times the rate of non-Indigenous women in Western Australia, six times the rate in Victoria, five times the rate in New South Wales, four times the rate in the Northern Territory, the Australian Capital Territory Queensland and South Australia, and twice the rate in Tasmania (Table 2.25.5).

Table 2.25.4: Women aged less than 20 years who gave birth, by Indigenous status, 2005

Age (years)	Indigenous	Non-Indigenous	
	Number		
12 and 13	10	17	
14	35	48	
15	144	191	
16	271	754	
17	413	1,703	
18	569	2,707	
19	696	4,236	
Total < 20 years	**2,138**	**9,656**	
	Per cent		
12 and 13	0.5	0.2	
14	1.6	0.5	
15	6.7	2.0	
16	12.7	7.8	
17	19.3	17.6	
18	26.6	28.0	
19	32.6	43.9	
Total < 20 years	**100.0**	**100.0**	
	Number per 1,000 women		
	Indigenous	**Non-Indigenous**	**Rate ratio**
12 and 13	0.8	0.1	12.9
14	6.0	0.4	16.6
15	26.0	1.5	17.9
16	49.2	5.8	8.5
17	77.5	13.2	5.9
18	112.2	21.0	5.3
19	138.7	31.9	4.3
Total < 20 years	**48.4**	**9.2**	**5.2**

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Table 2.25.5: Women aged less than 20 years who gave birth, by Indigenous status and state/territory, 2005

	Number		Per cent		Rate (no. per 1,000 women aged 12 to < 20 years)		
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Ratio
NSW	504	2,936	20.4	3.4	38.8	8.6	4.5
Vic	109	1,722	20.6	2.7	38.2	6.6	5.8
Qld	592	2,477	19.3	4.8	48.2	11.9	4.0
WA	418	1,068	26.0	4.3	66.0	10.1	6.5
SA	102	821	20.9	4.7	40.0	10.5	3.8
Tas	43	392	19.7	7.0	24.5	15.8	1.6
ACT	10	120	9.7	2.5	27.5	6.7	4.1
NT	360	120	26.1	5.3	71.9	16.9	4.3
Aust	**2,138**	**9,656**	**21.7**	**3.7**	**48.4**	**9.2**	**5.2**

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Table 2.25.6 presents information on teenage mothers by selected maternal characteristics.

- In 2005, Very Remote areas had the highest proportion of Indigenous mothers who were teenagers (26%) and Major Cities had the lowest (20%). For non-Indigenous mothers, Outer Regional areas had the highest proportion of teenage mothers (6%) and Major Cities had the lowest (3%).
- For those jurisdictions where data on smoking during pregnancy were available, approximately 43% of Indigenous teenage mothers reported smoking during pregnancy in 2005, 34% reported they did not smoke during pregnancy and 23% did not state their smoking status. Excluding those who did not state whether they smoked during pregnancy, 56% of Indigenous teenage mothers smoked during pregnancy compared with 39% of non-Indigenous teenage mothers. When the effect of age was controlled, Aboriginal and Torres Strait Islander mothers across all age groups smoked during pregnancy at around three times the rate of non-Indigenous mothers in these jurisdictions (52% compared with 16%).
- Almost three-quarters (73%) of Indigenous teenage mothers in 2005 were first time mothers, 23% were having their second baby and 4% were having their third baby. For non-Indigenous teenage mothers, 85% were first time mothers, 14% were having their second baby and 1% were having their third baby.

Table 2.25.6: Women aged less than 20 years who gave birth, by Indigenous status and selected maternal characteristics, 2005

	Number		Per cent	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
Remoteness				
Major Cities	466	5,314	19.7	3.0
Inner Regional	401	2,677	21.4	5.4
Outer Regional	547	1,414	20.1	5.7
Remote	241	185	22.4	4.6
Very Remote	481	55	26.2	4.0
Total	**2,138**	**9,656**	**21.7**	**3.7**
Smoked during pregnancy[(a)]				
Smoked	920	2,614	43.0	27.1
Did not smoke	734	4,005	34.3	41.5
Not stated	484	3,037	22.6	31.5
Parity[(b)]				
None	1,557	8,224	72.8	85.2
One	482	1,305	22.5	13.5
Two	93	117	4.3	1.2
Three or more	6	8	0.3	0.1
Total mothers < 20 years	**2,138**	**9,656**	. .	. .

(a) Excludes Victoria and six months of Queensland.

(b) Parity refers to number of previous pregnancies resulting in live births or stillbirths, excluding the current pregnancy.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Table 2.25.7 presents information on teenage mothers by selected birth outcomes.

- In 2005, approximately 13% of Indigenous teenage mothers had births that were pre-term and 13% gave birth to low birthweight babies. Around 10% of non-Indigenous teenage mothers had pre-term births and 8% gave birth to low birthweight babies. Babies of Indigenous mothers were twice as likely to be of low birthweight as babies born to non-Indigenous mothers (12% compared to 6%). This was true across all age groups.
- Around 2.5% of Indigenous teenage mothers gave birth to a baby with an Apgar score of less than 7 at 5 minutes, compared with 2% of non-Indigenous teenage mothers.
- The perinatal mortality rate in 2005 was similar for babies born to Indigenous and non-Indigenous teenage mothers (18 and 20 per 1,000).

Table 2.25.7: Women aged less than 20 years who gave birth, by Indigenous status and selected birth outcomes, 2005

	Number		Per cent	
	Indigenous	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Pre-term births	285	939	13.2	9.6
Low birthweight(a)	284	769	13.4	8.0
Apgar score at 5 minutes(a)				
0–6	53	179	2.5	1.9
7–10	2,065	9,403	97.2	98.0
	Number		**Rate (no. per 1,000 births)**	
	Indigenous	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Perinatal deaths	39	194	18.1	19.9

(a) For live births.

Source: AIHW analysis of NPSU National Perinatal Data Collection.

Data quality issues

Notification data

Notifications

Incidence of sexually transmissible infections is one indicator of unsafe sexual practices. It does not measure all cases, just those involving sexually transmissible infections.

Notification statistics do not measure the incidence or prevalence of these infections in the community. Under-reporting of these infections can occur at a number of stages:

- *a person infected may not feel ill*
- *a person may not seek medical care*
- *a false negative result may occur*
- *there may be a positive test result but for some reason a notification may not occur*
- *the case may not be reported to the National Notifiable Diseases Surveillance System (NNDSS).*

The level of under-reporting can vary by disease, jurisdiction and by time. The method of surveillance can vary between jurisdictions with different requirements for notification by medical practitioners, laboratories and hospitals. The case definitions for surveillance also vary among jurisdictions. These can also change over time.

Notification statistics can provide insights into the health of the population which has been diagnosed with a notifiable illness and changes over time.

Indigenous status question

In the NNDSS, New South Wales, Queensland and Tasmania use the standard ABS question of Indigenous status. Other states and territories can provide data for the categories 'Indigenous', 'non-Indigenous' and 'not stated' but do not identify Torres Strait Islanders separately (AIHW & ABS 2006).

Under-identification

The incompleteness of Indigenous identification means the number of notifications recorded as Indigenous is an underestimate of Aboriginal and Torres Strait Islander notifications rates. In 2003, Indigenous status was reported for only 43% of sexually transmittable infections notifications nationally (DoHA 2005).

The accuracy of Indigenous identification in notifiable disease registries varies between the states and territories. Jurisdictional comparisons must be undertaken with care and it is not possible to provide reliable measures of change over time for most of these measures (SIMC 2004).

The identification of Indigenous notifications is incomplete in all states and territories, but three jurisdictions (Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in the NNDSS (AIHW & ABS 2006). Data on Indigenous status for certain notifiable diseases are not available for the Australian Capital Territory, New South Wales or Tasmania. For HIV/AIDS the recording of Indigenous status in the National Centre in HIV Epidemiology and Clinical Research data is considered reliable (SIMC 2004).

(continued)

Data quality issues (continued)

Numerator and denominator

Rate and ratio calculations rely on good population estimates. The changes in the completeness of identification of Indigenous people in notification records may take place at different rates from changes in the identification of Indigenous people in the population estimates. Denominators used here are sourced from Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009 *(ABS 2004).*

National Perinatal Data Collection

Teenage pregnancy is one indicator of unsafe sexual practices. It does not measure all cases, just those involving births in the under 20 year age group. Note that not all unsafe sexual practices result in teenage pregnancy and not all teenage pregnancies are unplanned. So this measure overestimates unplanned pregnancies and underestimates all cases of unsafe sexual practices.

Indigenous status question

A standard data item for Indigenous status is specified in the Perinatal National Minimum Data Set. However, at this stage not all states and territories use this standard wording for the Indigenous status question on their forms. This affects the quality and comparability of the data collected (ABS & AIHW 2005).

Under-identification

Birth notification forms are completed for all births of 20 weeks or more gestation, or a birthweight of 400 grams or more. The National Perinatal Data Collection includes all births in Australia in hospitals, birth centres and the community.

All jurisdictions are working towards improving the quality of the Indigenous status data. Data on Indigenous status are not reported for Tasmania before 2005, because the 'not stated' category for Indigenous status was included with the non-Indigenous category. The 'not stated' category for birthweight was found to be small nationally in the evaluation of the Perinatal National Minimum Data Set (Laws & Sullivan 2004). Therefore, the exclusion of 'not stated' for birthweight will not have a significant impact on these data.

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2.26 Prevalence of overweight and obesity

The prevalence of overweight and obesity among Aboriginal and Torres Strait Islander adults and children

Data sources

Data on the prevalence of overweight and obesity among Aboriginal and Torres Strait Islander adults come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11.

Data for this measure are based on information collected on self-reported height and weight. These measures were used to calculate body mass index (BMI) and categorise respondents into categories of underweight, acceptable weight, overweight and obese. Note that, for approximately 16% of Indigenous Australians and 8% of non-Indigenous Australians, self-reported height and weight were not known or not stated.

Based on the *National health data dictionary*, BMI cut-offs for adults are as follows:

- overweight is a BMI of at least 25 kg/m^2 and less than 30 kg/m^2
- obese is a BMI of at least 30 kg/m^2.

For children, overweight and obesity are defined using the same BMI cut-offs as for adults after age and sex adjustment.

Data analyses

No data are currently available on the prevalence of overweight and obesity among Aboriginal and Torres Strait Islander children.

Prevalence of overweight and obesity

- In 2004–05, of those with a known body mass index, approximately 4% of Indigenous Australians aged 18 years and over were underweight, 36% were of acceptable weight, 29% were overweight and 31% were obese (Table 2.26.1).
- After adjusting for differences in age structure, in 2004–05 Indigenous adults were slightly more likely than non-Indigenous adults to be underweight (4% compared with 3%); less likely to be of acceptable weight (32% compared with 44%); less likely to be overweight (31% compared with 36%) and much more likely to be obese (34% compared with 18%) (Table 2.26.1; Figure 2.26.1).

Prevalence of overweight and obesity by age and sex

- Both Indigenous and non-Indigenous adults were most likely to be overweight or obese at ages 45–54 years and 55 years and over. In these age groups, between 69% and 74% of Indigenous people, and between 59% and 61% of non-Indigenous people, were overweight or obese.
- A higher proportion of Indigenous males were overweight (34%) compared with Indigenous females (24%). However, Indigenous females were more likely to be obese than Indigenous males (34% compared with 28%), and also more likely to be underweight than Indigenous males (6% compared with 3%) (Table 2.26.1).

Table 2.26.1: Proportion of adults who are underweight, of acceptable weight, overweight or obese, by Indigenous status, sex and age group, 2004–05

	Age group (years)													
	18–24		25–34		35–44		45–54		55 and over		Total non age-standardised		Total age-standardised	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
							Per cent							
							Males							
Underweight	4.9(b)	3.1	2.8(b)	0.6(c)	1.3(b)	0.6(b)	3.0(b)	0.3(c)	1.5(b)	1.1	2.8*	1.0*	2.4*	1.0*
Acceptable weight	47.9*	61.5*	36.7	39.4	32.1	29.3	26.7	29.0	24.2*	35.0*	35.0*	37.0*	31.7*	36.9*
Overweight	30.0	28.3	36.9	42.6	30.9*	47.3*	37.9*	45.9*	38.6*	44.9*	34.4*	43.0*	35.5*	43.0*
Obese	17.2*	7.1*	23.6	17.5	35.7*	22.9*	32.4	24.7	35.6*	19.1*	27.8*	19.0*	30.4*	19.1*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	**23,659**	**872,938**	**30,298**	**1,319,692**	**24,815**	**1,349,293**	**17,084**	**1,263,596**	**12,976**	**2,065,028**	**108,832**	**6,870,547**	**108,832**	**6,870,547**
							Females							
Underweight	10.0	10.2	5.0(b)	4.9	6.8(b)	3.5	3.5(b)	2.0	3.1(b)	3.3	6.0	4.2	5.2	4.3
Acceptable weight	51.0*	62.4*	38.4*	56.8*	30.0*	54.1*	29.2*	47.6*	24.0*	43.1*	35.9*	51.0*	32.4*	51.3*
Overweight	20.0	19.4	22.0	24.5	25.3	26.1	26.4	30.2	30.0	33.2	24.0*	27.9*	25.6*	27.8*
Obese	18.9*	8.0*	34.7*	13.9*	37.8*	16.3*	40.9*	20.2*	42.9*	20.4*	34.1*	16.8*	36.8*	16.7*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	**23,241**	**821,509**	**30,492**	**1,274,595**	**25,199**	**1,321,853**	**17,191**	**1,216,939**	**13,759**	**2,072,681**	**109,881**	**6,707,577**	**109,881**	**6,707,577**

(continued)

Table 2.26.1 (continued): Proportion of adults who are underweight, of acceptable weight, overweight or obese, by Indigenous status, sex and age group, 2004–05

	Age group (years)													
	18–24		**25–34**		**35–44**		**45–54**		**55 and over**		**Total non age-standardised**		**Total age-standardised**	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
							Per cent							
							Persons							
Underweight	7.4	6.5	3.9	2.7	4.1(b)	2.0	3.2(b)*	1.2*	2.3	2.2	4.4*	2.6*	3.8*	2.6*
Acceptable weight	49.4*	61.9*	37.6*	47.9*	31.0*	41.6*	28.0*	38.1*	24.1*	39.0*	35.5*	43.9*	32.1*	44.0*
Overweight	25.1	24.0	29.4*	33.7*	28.1*	36.8*	32.1*	38.2*	34.2*	39.1*	29.2*	35.5*	30.5*	35.5*
Obese	18.0*	7.5*	29.1*	15.7*	36.8*	19.6*	36.7*	22.5*	39.4*	19.8*	30.9*	17.9*	33.6*	17.9*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	**46,899**	**1,694,448**	**60,790**	**2,594,286**	**50,014**	**2,671,146**	**34,275**	**2,480,535**	**26,735**	**4,137,709**	**218,714**	**13,578,124**	**218,714**	**13,578,124**
% not known	*17.3*	*8.8*	*12.9*	*6.1*	*15.3*	*7.9*	*13.4*	*8.3*	*19.4*	*8.7*	*15.3*	*8.0*	*15.9*	*7.9*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

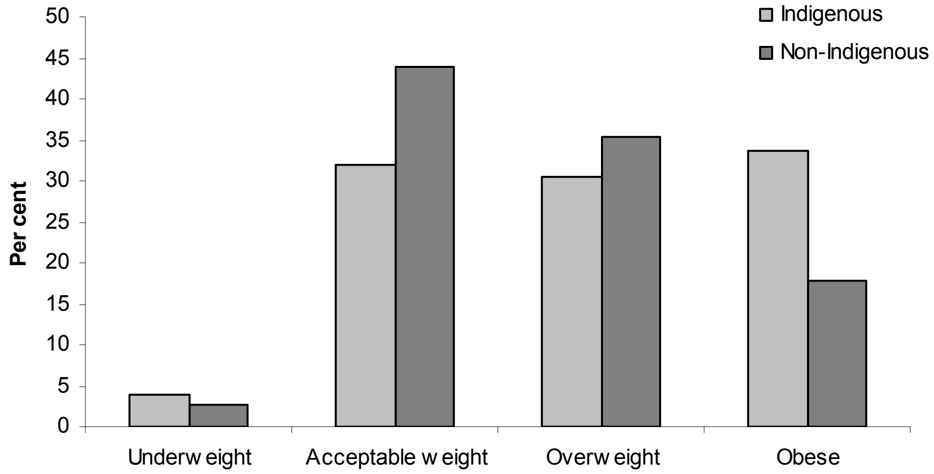
(a) Directly age-standardised proportions to the Australian 2001 standard population.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Note: Proportions exclude those for whom BMI was unknown (39,583 or 15% for Indigenous and 1,175,132 or 8% for non-Indigenous).

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.



Note: Excludes those with a BMI not known or not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Figure 2.26.1: Proportion of adults underweight, acceptable weight, overweight and obese, by Indigenous status, 2004–05

Prevalence by selected population and health characteristics

- In 2004–05, Indigenous Australians aged 18 years and over were more likely to be overweight/obese if they had a self-assessed health status of fair/poor rather than excellent/very good (68% compared with 55%); reported three or more long-term health conditions rather than long term-health conditions (65% compared with 56%); reported circulatory problems (72% compared with 57% with no circulatory problems); had diabetes (83% compared with 57%); or did not have cancer (60% compared with 42%) (Table 2.26.2).
- A higher proportion of Indigenous adults in the highest (5th) household income quintile were overweight/obese compared with the lowest (1st) (61% compared with 59%). Those in the lowest income quintile were more likely to be underweight (7%) than those in the highest (3%).
- There was little difference between the proportions of overweight/obese Indigenous adults in the lowest (1st) socioeconomic (SEIFA) quintile (61%) and those in the highest (5th) (60%).
- Indigenous adults whose highest year of school completed was Year 12 were more likely to be overweight/obese than those whose highest year of school completed was Year 9 or below (64% compared with 57%).
- In 2004–05, Indigenous adults who were employed were slightly more likely to be overweight/obese (61%) than those who were unemployed (59%) or not in the labour force (60%).

- Indigenous adults who reported being current smokers were more likely to be underweight (6%) and less likely to be overweight/obese (54%) than those who reported never smoking (3% and 65%, respectively) or being an ex-smoker (2% and 69% respectively).
- Indigenous adults who reported no daily vegetable intake were more likely to be underweight (8%) and less likely to be overweight/obese (49%) than those who reported eating vegetables daily (4% and 61%, respectively).

Table 2.26.2: Proportion of Indigenous adults aged 18 years and over who are underweight, of acceptable weight, overweight or obese, by selected health outcomes, population characteristics and risk factors, 2004–05

	Under-weight	Acceptable weight	Overweight	Obese	*Overweight or Obese*	Total
			Per cent			
Self-assessed health status						
Excellent/very good	4.9	40.6	29.9	24.6	*54.5*	100.0
Good	4.0	34.4	28.1	33.4	*61.6*	100.0
Fair/poor	4.1	27.9	29.7	38.3	*68.0*	100.0
Number of long-term conditions						
None	6.1	38.1	31.4	24.3	*55.7*	100.0
One	4.3	38.6	30.9	26.1	*57.0*	100.0
Two	5.7	39.2	30.4	24.7	*55.1*	100.0
Three or more	3.2	31.6	27.1	38.0	*65.2*	100.0
Circulatory problems						
Yes	3.4	25.0	27.7	43.9	*71.6*	100.0
No	4.7	38.5	29.6	27.1	*56.8*	100.0
Has diabetes						
Yes	0.8	16.0	35.1	48.1	*83.2*	100.0
No	4.8	37.9	28.5	28.8	*57.3*	100.0
Has cancer						
Yes	0.6	57.9	18.5	23.1	*41.6*	100.0
No	4.4	35.2	29.3	31.0	*60.3*	100.0
Household income						
1st quintile	6.6	34.3	28.3	30.8	*59.1*	100.0
5th quintile	3.3	35.3	29.5	31.9	*61.4*	100.0
SEIFA (Socio-economic indexes for areas)[(b)]						
1st quintile (lowest)	5.2	33.4	30.3	31.1	*61.3*	100.0
5th quintile (highest)	3.7	36.0	28.2	32.1	*60.3*	100.0
Highest year of school completed						
Year 12	5.0	31.3	29.7	34.1	*63.7*	100.0
Year 9 or below	3.4	39.9	28.9	27.8	*56.8*	100.0

(continued)

Table 2.26.2 (continued): Proportion of Indigenous adults aged 18 years and over who are underweight, of acceptable weight, overweight or obese, by selected health outcomes, population characteristics and risk factors, 2004–05

	Under-weight	Acceptable weight	Overweight	Obese	*Overweight or Obese*	Total
			Per cent			
Has non-school qualification						
Yes	2.1	34.9	30.4	32.6	*63.0*	100.0
No	5.7	35.6	28.6	30.1	*58.7*	100.0
Employment						
Employed	3.3	36.1	30.6	30.0	*60.6*	100.0
Unemployed	4.9	35.8	24.2	35.1	*59.3*	100.0
Not in the labour force	6.0	34.4	28.0	31.6	*59.6*	100.0
Long-term risky/high-risk alcohol consumption						
Yes	3.3	39.0	33.2	24.5	*57.7*	100.0
No	4.6	34.8	28.4	32.2	*60.6*	100.0
Short-term risky/high-risk alcohol consumption						
Yes	3.1	37.4	31.6	27.9	*59.5*	100.0
No	4.1	36.7	30.1	29.1	*59.3*	100.0
Smoking status						
Current smoker	6.0	39.8	28.3	26.0	*54.2*	100.0
Ex-smoker	1.9	29.2	33.2	35.7	*68.9*	100.0
Never smoked	3.2	32.1	28.1	36.6	*64.7*	100.0
Physical activity[(a)]						
Low/sedentary	3.2	36.0	28.6	32.3	*60.8*	100.0
Moderate	3.4	42.5	28.3	25.9	*54.1*	100.0
High	0.7	31.2	36.5	31.7	*68.1*	100.0
Eats fruit daily						
Yes	4.1	35.6	29.1	31.2	*60.4*	100.0
No	6.2	35.0	29.6	29.3	*58.8*	100.0
Eats vegetables daily						
Yes	4.1	35.0	29.5	31.3	*60.8*	100.0
No	8.3	42.3	24.9	24.5	*49.4*	100.0
Total persons aged 18+ years	**4.4**	**35.5**	**29.2**	**30.9**	***60.1***	**100.0**
Total number	**9,618**	**77,568**	**63,872**	**67,655**	***131,527***	**218,714**

(e) Non-remote areas only.

(f) SEIFA refers to Socio-Economic Indexes for Areas developed by the ABS. The SEIFA Indexes allow ranking of regions/areas which provide a method of determining the level of socioeconomic wellbeing in that region.

Note: Excludes those with an unknown BMI (39,583 or 15%).

Source: AIHW analysis of 2004–05 NATSIHS.

Time series analyses

- There has been no significant change in the prevalence of overweight and obesity among Indigenous Australians between 2001 and 2004–05 (59% and 60% respectively among those with a known BMI).
- In non-remote areas of Australia, approximately 51% of Indigenous Australians were overweight or obese in 1995, which was lower than the proportions reported in 2001 (56%) and 2004–05 (60%) (Table 2.26.3).
- For non-Indigenous Australians, there was a slight increase in the proportion who were overweight or obese between 2001 and 2004–05 (48% and 53% respectively among those with a known BMI) (ABS unpublished data).

Table 2.26.3: Proportion of Indigenous Australians aged 18 years and over who are overweight/ obese, by remoteness, 1995, 2001 and 2004–05

	1995	2001	2004–05
		Per cent	
Remote	n.a.	61	60
Non-remote	51	56	60
Total	**n.a.**	**59**	**60**
Total number who reported a BMI	**116,340**	**195,191**	**218,714**

Note: Excludes those with a BMI not known or not stated.

Source: ABS and AIHW analysis of the 1995 and 2001 NHS (Indigenous supplement) and 2004–05 NATSIHS.

Additional information

Studies of the links between obesity, poverty and nutrition in the Indigenous population

A number of studies have investigated the links between obesity and factors such as poverty and diet in the Indigenous population.

Available data show that when Aboriginal people lived a traditional lifestyle, they generally had a low body mass index compared with what is considered normal for European Australians, and their weight did not tend to increase with age (O'Dea 2008; MIMS Consumer Health Group 2003). Aboriginal Australians have a naturally lighter build than European Australians, with relatively long legs, short bodies, narrow chests, and narrow hips and shoulders, which are factors associated with a tendency for central obesity (O'Dea 2008).

There is a small body of research to suggest that Aboriginal people are at particular risk of weight gain when eating a non-traditional diet because of their naturally light body build and metabolism geared towards making them efficient hunter-gatherers.

Available research suggests that traditional Aboriginal hunter-gatherers consumed a varied diet in which animal foods were a major component. Their diet was not high in fat because the wild animal meat consumed was extremely lean. A wide variety of uncultivated plant foods were eaten which were generally high in fibre and contained carbohydrates which were slowly digested. Traditional foods generally had a low energy density and high level of nutrients. The low-energy intake of the diet and the labour intensity of procuring food would have protected Aboriginal people against obesity and associated health conditions such as diabetes (O'Dea 1991).

Today, many Aboriginal people consume a diet high in fat, sugar and energy-dense foods which has lead to the high rates of overweight and obesity prevalent among Indigenous Australians today. Poverty and food insecurity have been recognised as important factors in the poor-quality diet of many Indigenous people, especially those living in remote communities. Food prices are generally higher in remote areas for many types of food. The price of basic healthy foods is at least 50% higher in remote locations than in major cities (NHMRC 2003). Foods of better nutritional choice, including fresh fruits and vegetables, are often expensive because of transport and overhead costs, or only minimally available (Shannon 2002). Remote stores on the whole sell half the fruit and one-quarter of the vegetable intake per capita of that of the overall Australian community (Lee et al. 1994). In comparison, takeaway and convenience food items, often energy-dense and high in fat or sugar, are less affected by issues of cost and availability.

There is evidence to suggest that people living in poverty tend to maximise calories per dollar spent on food. Energy-dense foods rich in fats, refined starches and sugars represent the lowest cost options, whereas healthy diets based on lean meats, whole grains and fresh vegetables and fruits are more costly (Drewnowski & Spencer 2004). A study which analysed the store turnover of food supplies at six remote Aboriginal communities in the Northern Territory found a very high consumption of energy, fat and sugar, with fatty meats making the largest contribution to fat intake. In comparison to national consumption data, intake of sweetened carbonated beverages and sugar was much higher in these communities. The proportion of energy derived from refined sugars was approximately four times the recommended intake. The diets of people living in these communities had high levels of animal fat (mainly from poor-quality meat) and very low levels of fruit and vegetables (Lee et al. 1994).

A number of studies have looked at the effect of traditional and non-traditional diets on BMI and weight gain in the Indigenous population. A study which looked at the therapeutic potential of a traditional lifestyle and diet involved a trial of a group of 10 middle-aged Indigenous people with diabetes who were overweight or obese in the West Kimberly region of Western Australia. The group reverted to a traditional hunter-gatherer diet for 7 weeks. After this short time living off their traditional lands the Aboriginal people involved in the study lost an average of 7 kg. In addition, the metabolic abnormalities of diabetes and risk factors for heart disease (blood pressure, blood cholesterol, triglycerides) all improved markedly (O'Dea 1984). The Indigenous people involved in the trial also became more confident and assertive while they were in the bush and became proud of their local knowledge and skills. These were deemed important factors in improving the BMI and physical health of Aboriginal people (O'Dea 1984). Successful prevention of obesity in some Indigenous outstations has been associated with greater physical activity, consumption of bush foods and ownership of and access to traditional homelands (Rowley et al. 2000, cited in O'Dea et al. 2007).

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS overcomes many of the problems of under-identification in the administrative data collections because the Indigenous status question is asked of all respondents. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. The NATSIHS also uses the standard Indigenous status question.

Information recorded in this survey is essentially 'as reported' by respondents. Responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey. The survey was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in remote areas and compute-assisted interview instruments were used in non-remote areas.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

Overweight and obesity data

The quality of BMI as a measure of overweight and obesity has a number of issues: the reliability of self-reported height and weight; under-reporting; mixed methods of collection of weight and height; and interpretation of BMI cut-offs in children.

Self-reported height and weight has been found to over-estimate height and under-estimate weight, thus under-estimating the resultant BMI. An analysis of the 1995 National Health Survey and 1995 National Nutrition Survey (ABS 1998), in which both self-reported and measured height and weight data were collected, found that 27% of males and 28% of females would have been classified to a different, predominately heavier, BMI category. This analysis did not explore data from the Aboriginal and Torres Strait Islander respondents; however, there was little difference between different ethnic and socioeconomic groups. The report concludes:

Based on the findings from this study, there may be grounds for questioning the reliability, and hence the use and interpretation, of BMI results based on self-reported height and weight.

In the 2004–05 NATSIHS and 2004–05 National Health Survey, height and weight information could not be obtained for approximately 16% of Indigenous Australians and 8% of non-Indigenous Australians. With a large non-response rate there may be issues with bias. In the 1994 NATSIHS an assessment of potential bias due to non-measurement concluded that there would have been only small differences if the whole population was measured; however, this assessment was based on an imputation method that assumed that people with similar characteristics had similar weight and height (Cunningham & Mackerras 1998).

Height and weight were self-reported in the 2004–05 National Health Survey except in remote areas where respondents to the Indigenous survey were offered the opportunity to be weighed or measured if they were unsure of their weight or height (ABS 2006). Given the known problems with self-reporting of height and weight, care needs to be exercised in interpretation of results given the mixed methods used, especially when the analysis is split by remoteness.

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Health system performance (Tier 3)

3.01 Antenatal care

Number, rate and percentage of Indigenous women who used antenatal care provided by skilled birth attendants for reasons related to pregnancy at least once during pregnancy among all women who gave birth, whether resulting in a live or still birth, if the birthweight was at least 400 grams or the gestational age was 20 weeks or more

Data sources

State/territory Perinatal Collections

Data for this measure come from the state/territory-based perinatal collections ('midwives collections').

Each state and territory has a perinatal collection based on birth notification forms completed by midwives, and other staff, using information obtained from mothers and other hospital records. All jurisdictions record some aspects of most antenatal care, but the data collected vary by jurisdiction.

The Australian Capital Territory, Queensland and South Australia collect data on the number of antenatal visits attended during pregnancy and the type of health-care professional consulted. New South Wales, the Australian Capital Territory and the Northern Territory record the duration of pregnancy at the first antenatal session.. Data on the use of antenatal care services were not available for Victoria, Western Australia or Tasmania.

The World Health Organization (WHO) defines low birth weight as less than 2,500 grams.

Healthy for Life Program

The Healthy for Life (HFL) program is an ongoing program funded by the Office for Aboriginal and Torres Strait Islander Health (OATSIH) of the Australian Government Department of Health and Ageing (DoHA). The program aims to improve the capacity and performance of primary health-care services to deliver high-quality maternal and children's health services and chronic disease care to Aboriginal and Torres Strait Islander peoples through population health approaches using best-practice and quality improvement principles.

Services participating in the HFL program are required to submit de-identified, aggregate service data for 11 essential indicators covering maternal health, child health and chronic disease care on a regular basis (6 and 12 months) as well as information about the characteristics of their service and organisational infrastructure. For the January to June 2007 reporting period, 59 HFL services submitted data to the AIHW.

Analyses

Data on the use of antenatal care services are available for New South Wales, Queensland, South Australia, the Australian Capital Territory and the Northern Territory. Data for the year 2005 are presented for all of these states and territories except for the Australian Capital Territory which reported that the quality of antenatal care data in the Territory for the year 2005 was poor and was not reliable enough to publish.

Use of antenatal care services

- In 2005, in New South Wales, Queensland, South Australia and the Northern Territory, approximately 96% of Indigenous mothers, and 99% of non-Indigenous mothers, attended at least one antenatal care session.

Use of antenatal care services by state/territory

Data on the use of antenatal care for Indigenous mothers in New South Wales, Queensland, South Australia and the Northern Territory for 2005 are presented below.

- In 2005, in New South Wales, Queensland, South Australia and the Northern Territory, the rate at which Indigenous mothers attended at least one antenatal care session during pregnancy was similar to non-Indigenous mothers (Table 3.01.1).
- The rate at which Indigenous mothers attended at least one antenatal care session ranged from 832 per 1,000 in South Australia to 976 per 1,000 in New South Wales.
- In the two jurisdictions where data are collected on the duration of pregnancy at first antenatal visit and the data were reliable enough to present (New South Wales and the Northern Territory), Indigenous mothers were 2 to 3 times as likely as non-Indigenous mothers to be in their third trimester of pregnancy at their first antenatal session and less likely to be in their first trimester.
- In Queensland, South Australia and the Northern Territory, Indigenous mothers were less likely to have attended five or more antenatal sessions during pregnancy than non-Indigenous mothers.

Table 3.01.1: Use of antenatal services by mothers, by Indigenous status, NSW, Qld, SA and NT, 2005(a)(b)(c)

		NSW			Qld(d)			SA			NT		
		No.	**No. per 1,000(e)**	**Rate ratio(f)**	**No.**	**No. per 1,000(e)**	**Rate ratio(f)**	**No.**	**No. per 1,000(e)**	**Rate ratio(f)**	**No.**	**No. per 1,000(e)**	**Rate ratio(f)**
Total attended at least one antenatal session													
	Indigenous	2,415	976.2	1.0	2,986	973.0	1.0	405	831.6	0.9	1,321	953.8	1.0
	Non-Indigenous	86,128	994.9		51,081	996.4		15,724	903.2		2,257	996.0	
No. sessions attended(g)													
1	Indigenous	n.a.	n.a.	n.a.	162	52.8	8.0*	19	39.0	11.1*	44	31.8	10.3*
	Non-Indigenous	n.a.	n.a.		340	6.6		60	3.5		7	3.1	
2–4	Indigenous	n.a.	n.a.	n.a.	605	197.1	3.5*	76	156.1	7.3*	218	157.4	4.2*
	Non-Indigenous	n.a.	n.a.		2,922	57.0		375	21.5		85	37.5	
5 or more	Indigenous	n.a.	n.a.	n.a.	2,219	723.0	0.8*	310	636.6	0.7*	1,059	764.6	0.8*
	Non-Indigenous	n.a.	n.a.		47,819	932.8		15,289	878.2		2,165	955.4	
Duration of pregnancy at first antenatal visit(h)													
First trimester (<13 weeks)	Indigenous	1,324	528.1	0.8*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	479	345.8	0.6*
	Non-Indigenous	55,001	625.0		n.a.	n.a.		n.a.	n.a.		1,231	543.2	
Second trimester (13–20 weeks)	Indigenous	553	220.6	0.9*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	293	211.6	0.8*
	Non-Indigenous	22,821	259.3		n.a.	n.a.		n.a.	n.a.		632	278.9	
Third trimester (20 or more weeks)	Indigenous	571	227.8	2.1*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	499	360.3	2.5*
	Non-Indigenous	9,725	110.5		n.a.	n.a.		n.a.	n.a.		323	142.5	

(continued)

Table 3.01.1 (continued): Use of antenatal services by mothers, by Indigenous status, NSW, Qld, SA, and NT, 2005(a)(b)(c)

*Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.

(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are for NSW mothers.

(c) Data not available from Victoria, Western Australia and Tasmania.

(d) For Qld, 1 session is determined by: number of visits category '<2 visits' and care type 'no antenatal care'.

(e) Number per 1,000 women who gave birth in the period, whether resulting in a live or still birth, if the birthweight is at least 400grams or the gestational age is 20 weeks or more.

(f) Rate ratio—Indigenous rate divided by the non-Indigenous rate.

(g) Data for Qld, SA and NT only. Data not collected in NSW.

(h) Data for NSW and NT only. Data not collected in Qld or SA.

Source: AIHW analysis of state/territory perinatal collections.

Use of antenatal care services by remoteness

- In 2005, there was little difference in the proportion of Indigenous mothers who attended at least one antenatal care session by remoteness (around 96% in major cities, 97–98% in regional areas and 94–95% in remote areas) (Table 3.01.2).
- Indigenous mothers in Very Remote areas were most likely to attend five or more antenatal sessions (78%), although Indigenous mothers in Remote areas were least likely to attend five or more antenatal sessions (70%).
- Indigenous mothers living in Inner Regional areas were most likely to attend their first antenatal session in their first trimester (58%) and Indigenous mothers living in Very Remote areas were least likely to attend their first antenatal session in their first trimester (35%).
- Indigenous mothers were less likely than non-Indigenous mothers to attend five or more antenatal sessions in all remoteness categories except for Very Remote areas where proportions were similar.
- Indigenous mothers were less likely than non-Indigenous mothers to attend their first antenatal session in their first trimester of pregnancy and more likely to attend their first antenatal session in their third trimester of pregnancy across all remoteness categories.

Table 3.01.2: Use of antenatal services by mothers, by remoteness and Indigenous status, NSW, Qld, SA and NT, 2005 combined [(a)(b)(c)]

	Major Cities		Inner Regional		Outer Regional		*Sub-total Non-remote*		Remote		Very Remote		*Sub-total remote*		Total	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	*Indig.*	*Non-Indig.*	Indig.	Non-Indig.	Indig.	Non-Indig.	*Indig.*	*Non-Indig.*	Indig.	Non-Indig.
								Per cent								
Total attended at least one antenatal session	96.0	98.6	97.5	98.9	97.2	99.2	97.0	98.7	94.5	88.0	94.1	87.9	94.2*	88.0*	96.2*	98.5*
Number of sessions attended[(d)]																
0	3.9*	0.3*	1.5*	0.2*	2.0*	0.1*	2.4*	0.2*	4.2	—	2.4	3.0	3.1*	0.6*	2.6*	0.2*
1	4.4*	0.5*	5.2*	0.7*	4.7*	0.7*	4.7*	0.6*	7.0*	0.2*	2.4	0.8	4.1*	0.3*	4.5*	0.6*
2–4	18.2*	4.4*	20.5*	5.4*	20.4*	5.6*	19.9*	4.8*	16.4*	2.8*	13.9*	4.5*	14.9*	3.2*	18.2*	4.8*
5+	71.8*	92.4*	71.2*	91.8*	72.4*	92.9*	72.0*	92.4*	69.6*	80.9*	77.8	79.7	74.6*	80.7*	72.7*	92.1*
No sessions not stated	1.7	2.4	1.6	1.9	0.6	0.7	1.1*	2.0*	2.9*	16.0*	3.5*	12.0*	3.3*	15.2*	1.9*	2.4*
Duration of pregnancy at first antenatal visit[(e)]																
First trimester (<13 weeks)	38.2*	57.2*	58.4*	71.1*	51.1*	71.4*	50.2*	62.0*	49.1*	71.5*	34.7*	59.2*	39.9*	68.7*	46.3*	62.2*
Second trimester (13 to <20 weeks)	33.7	30.1	18.3	19.3	19.2	17.8	22.8*	26.2*	18.5	18.6	20.8	23.5	19.9	19.7	21.7*	26.0*
Third trimester (20 or more weeks)	26.1*	12.2*	21.3*	9.2*	25.1*	9.5*	24.0*	11.2*	27.2*	8.5*	36.6*	15.0*	33.2*	9.9*	27.5*	11.2*
Gestation not stated	—	—	—	—	1.3*	0.6*	0.5*	0.1*	2.8*	1.3*	2.8	1.0	2.8*	1.2*	1.3*	0.1*
Total women who gave birth[(a)]	**1,481**	**98,855**	**1,498**	**36,131**	**2,381**	**18,742**	**5,360**	**153,728**	**850**	**2,120**	**1,093**	**531**	**1,943**	**2,651**	**7,390**	**157,159**

*Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.

(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are for NSW mothers.

(c) Data not available from Victoria, Western Australia and Tasmania.

(d) Data for Qld, SA and NT only. Data not collected in NSW.

(e) Data for NSW and NT only. Data not collected in Qld or SA.

Source: AIHW analysis of state/territory perinatal collections.

Use of antenatal care services and birth outcomes

Tables 3.01.3, 3.01.4 and 3.01.5 present information on babies with specific birth outcomes by the number of antenatal sessions the mother attended and duration of pregnancy at first visit. Table 3.01.3a and 3.01.3b presents information on birthweight, Table 3.01.4a and 3.01.4b presents information on pre-term (less than 37 weeks gestation) and non pre-term births and Table 3.01.5a and Table 3.01.5b presents information on perinatal deaths.

- In 2005, in New South Wales, Queensland, South Australia and the Northern Territory combined, the proportion of live births to Indigenous mothers that were of low birthweight was much higher among mothers who attended no antenatal sessions than among mothers who attended at least one antenatal session (13% compared with 39%). (Table 3.01.3b).
- In Queensland, South Australia and the Northern Territory combined, the proportion of live births to Indigenous mothers that were of low birthweight was higher among mothers who attended no antenatal sessions or one antenatal session (42% and 29%, respectively) than among mothers who attended five or more antenatal sessions (10%) (Table 3.01.3b).
- In New South Wales and the Northern Territory combined, a slightly lower proportion of live births to Indigenous mothers that were of low birthweight were born to mothers who attended their first antenatal session in the first trimester of pregnancy (12%) than mothers who attended their first antenatal session in their second or third trimester of pregnancy (13%) (Table 3.01.3b).
- Similar patterns to those described above were evident for births to Indigenous mothers that were pre-term (Table 3.01.4b).
- The proportion of babies born to Indigenous mothers that died in the perinatal period (the perinatal period commences at 20 completed weeks, or 140 days, of gestation and ends 28 completed days after birth) was much higher for mothers who attended no antenatal sessions compared with mothers who attended five or more antenatal sessions (13% compared with 0.5%) (Table 3.01.5b).

Table 3.01.3a: Low birthweight babies, by use of antenatal services by mothers and Indigenous status, NSW, Qld, SA and NT combined, 2005[(a)(b)(c)]

	Low birthweight			Non-low birthweight			Total live births		
	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio
	%	%		%	%		%	%	
Attended at least one antenatal session	89.4	95.3	0.9	97.4	98.8	1.0	96.3	98.5	1.0
Number of sessions attended[(d)]									
0	7.4	1.0	7.3*	1.7	0.2	9.6*	2.5	0.2	10.7*
1	9.2	2.2	4.1*	3.7	0.4	9.5*	4.5	0.5	8.6*
2–4	25.7	14.0	1.8*	16.6	3.9	4.3*	17.8	4.6	3.9*
5+	52.5	76.6	0.7*	76.8	93.4	0.8*	73.4	92.3	0.8*
Duration of pregnancy at first antenatal visit[(e)]									
First trimester (<13 weeks)	40.5	58.4	0.7*	47.3	62.6	0.8*	46.4	62.3	0.7*
Second trimester (13 to <20 weeks)	21.7	25.5	0.9	21.8	26.0	0.8*	21.8	26.0	0.8*
Third trimester (20 or more weeks)	26.0	13.6	1.9*	27.8	11.0	2.5*	27.6	11.1	2.5*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.

(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are for NSW mothers.

(c) Data not available from Victoria, Western Australia and Tasmania.

(d) Data for Qld, SA and NT only. Data not collected in NSW.

(e) Data for NSW and NT only. Data not collected in Qld or SA.

Source: AIHW analysis of state/territory perinatal collections.

Table 3.01.3b: Low birthweight babies by use of antenatal services by mothers and Indigenous status, NSW, Qld, SA and NT combined, 2005[a][b][c]

	Low birthweight			Non-low birthweight			Total live births		
	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio
	%	%		%	%		%	%	
Attended at least one antenatal session	12.6	6.3	2.0*	87.4	93.7	0.9*	100.0	100.0	. .
Attended no antenatal sessions	39.1	20.7	1.9*	60.9	79.3	0.8*	100.0	100.0	. .
Number of sessions attended[d]									
0	42.1	30.3	1.4	57.9	69.7	0.8	100.0	100.0	. .
1	28.8	29.7	1.0	71.2	70.3	1.0	100.0	100.0	. .
2–4	20.2	21.2	1.0	79.8	78.8	1.0	100.0	100.0	. .
5+	10.0	5.7	1.7*	90.0	94.3	1.0	100.0	100.0	. .
Duration of pregnancy at first antenatal visit[e]									
First trimester (<13 weeks)	11.7	5.8	2.0*	88.3	94.2	0.9*	100.0	100.0	. .
Second trimester (13 to <20 weeks)	13.4	6.0	2.2*	86.6	94.0	0.9*	100.0	100.0	. .
Third trimester (20 or more weeks)	12.6	7.5	1.7*	87.4	92.5	0.9	100.0	100.0	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.
(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are for NSW mothers.
(c) Data not available from Victoria, Western Australia and Tasmania.
(d) Data for Qld, SA and NT only. Data not collected in NSW.
(e) Data for NSW and NT only. Data not collected in Qld or SA.

Source: AIHW analysis of state/territory perinatal collections.

Table 3.01.4a: Pre-term babies by use of antenatal services by mothers, and Indigenous status, NSW, Qld, SA and NT combined, 2005[(a)(b)(c)]

	Pre-term			Non-pre-term			Total births		
	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio
	%	%		%	%		%	%	
Attended at least one antenatal session	90.1	95.6	0.9	97.1	98.7	1.0	96.1	98.5	1.0
Number of sessions attended[(d)]									
0	6.5	0.9	7.2*	2.0	0.2	10.6*	2.6	0.2	10.7*
1	10.2	2.1	4.9*	3.6	0.4	8.4*	4.6	0.6	8.0*
2–4	26.8	12.5	2.1*	16.6	4.0	4.1*	18.1	4.8	3.8*
5+	51.7	78.8	0.7*	76.3	93.2	0.8*	72.7	92.0	0.8*
Duration of pregnancy at first antenatal visit[(e)]									
First trimester (<13 weeks)	40.4	60.8	0.7*	47.2	62.4	0.8*	46.3	62.3	0.7*
Second trimester (13 to <20 weeks)	21.3	24.1	0.9	21.8	26.1	0.8*	21.7	26.0	0.8*
Third trimester (20 or more weeks)	27.2	12.7	2.1*	27.5	11.0	2.5*	27.5	11.1	2.5*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.

(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are for NSW mothers.

(c) Data not available from Victoria, Western Australia and Tasmania.

(d) Data for Qld, SA and NT only. Data not collected in NSW.

(e) Data for NSW and NT only. Data not collected in Qld or SA.

Source: AIHW analysis of state/territory Perinatal Collections.

Table 3.01.4b: Pre-term babies by use of antenatal services by mothers, and Indigenous status, NSW, Qld, SA and NT combined, 2005[(a)(b)(c)]

	Pre-term			Non-pre-term			Total births		
	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio
	%	%		%	%		%	%	
Attended at least one antenatal session	12.8	7.5	1.7*	87.2	92.5	0.9*	100.0	100.0	. .
Attended no antenatal sessions	35.3	22.4	1.6*	64.7	77.6	0.8*	100.0	100.0	. .
Number of sessions attended[(d)]									
0	36.2	31.3	1.2	63.8	68.8	0.9	100.0	100.0	. .
1	32.5	30.9	1.1	67.5	69.1	1.0	100.0	100.0	. .
2–4	21.5	22.3	1.0	78.5	77.7	1.0	100.0	100.0	. .
5+	10.4	7.3	1.4*	89.6	92.7	1.0	100.0	100.0	. .
Duration of pregnancy at first antenatal visit[(e)]									
First trimester (<13 weeks)	11.4	6.9	1.6*	88.6	93.1	1.0	100.0	100.0	. .
Second trimester (13 to <20 weeks)	12.8	6.6	1.9*	87.2	93.4	0.9	100.0	100.0	. .
Third trimester (20 or more weeks)	12.9	8.1	1.6*	87.1	91.9	0.9	100.0	100.0	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.
(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are for NSW mothers.
(c) Data not available from Victoria, Western Australia and Tasmania.
(d) Data for Qld, SA and NT only. Data not collected in NSW.
(e) Data for NSW and NT only. Data not collected in Qld or SA.

Source: AIHW analysis of state/territory perinatal collections.

Table 3.01.5a: Perinatal deaths, by use of antenatal services by mothers and Indigenous status, NSW, Qld, SA and NT combined, 2005[a][b][c]

	Perinatal deaths[d]			Non-perinatal deaths			Total births		
	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio
	%	%		%	%		%	%	
Attended at least one antenatal session	80.2	93.4	0.9	96.4	98.5	1.0	96.1	98.5	1.0
Number of sessions attended[e]									
0	17.0	2.1	8.0*	2.4	0.2	10.4*	2.6	0.2	10.7*
1	13.6	7.0	2.0*	4.4	0.5	8.7*	4.6	0.6	8.0*
2–4	38.6	31.7	1.2	17.8	4.5	4.0*	18.1	4.8	3.8*
5+	20.5	52.8	0.4*	73.6	92.4	0.8*	72.7	92.0	0.8*
Duration of pregnancy at first antenatal visit[f]									
First trimester (<13 weeks)	47.4	55.1	0.9	46.3	62.4	0.7*	46.3	62.3	0.7*
Second trimester (13 to <20 weeks)	19.3	26.4	0.7	21.8	26.0	0.8*	21.7	26.0	0.8*
Third trimester (20 or more weeks)	22.8	13.5	1.7	27.6	11.1	2.5*	27.5	11.1	2.5*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.

(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are for NSW mothers.

(c) Data not available from Victoria, Western Australia and Tasmania.

(d) Perinatal deaths data for NT only includes stillbirths.

(e) Data for Qld, SA and NT only. Data not collected in NSW.

(f) Data for NSW and NT only. Data not collected in Qld or SA.

Source: AIHW analysis of state/territory perinatal collections.

Table 3.01.5b: Perinatal deaths, by use of antenatal services by mothers and Indigenous status, NSW, Qld, SA and NT combined, 2005[(a)(b)(c)]

	Perinatal deaths[(d)]			Non-perinatal deaths			Total births		
	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio
	%	%		%	%		%	%	
Attended at least one antenatal session	1.4	0.9	1.6*	98.6	99.1	1.0	100.0	100.0	. .
Attended no antenatal sessions	8.7	4.0	2.2*	91.3	96.0	1.0	100.0	100.0	. .
Number of sessions attended[(e)]									
0	13.0	9.3	1.4	88.5	91.5	1.0	100.0	100.0	. .
1	5.6	13.5	0.4	94.7	88.1	1.1	100.0	100.0	. .
2–4	3.9	6.9	0.6	96.2	93.5	1.0	100.0	100.0	. .
5+	0.5	0.6	0.9	99.5	99.4	1.0	100.0	100.0	. .
Duration of pregnancy at first antenatal visit[(f)]									
First trimester (<13 weeks)	1.5	0.8	2.0*	98.5	99.2	1.0	100.0	100.0	. .
Second trimester (13 to <20 weeks)	1.3	0.9	1.5	98.7	99.1	1.0	100.0	100.0	. .
Third trimester (20 or more weeks)	1.2	1.0	1.2	98.8	99.0	1.0	100.0	100.0	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ level.

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.

(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Cross-border issues need to be considered here, e.g. a high proportion of births in ACT hospitals are for NSW mothers.

(c) Data not available from Victoria, Western Australia and Tasmania.

(d) Perinatal deaths data for NT only includes stillbirths.

(e) Data for Qld, SA and NT only. Data not collected in NSW.

(f) Data for NSW and NT only. Data not collected in Qld or SA.

Source: AIHW analysis of state/territory perinatal collections.

Time series analyses

Data on the antenatal care used by Indigenous mothers are available for 1998–2005 for New South Wales, South Australia and Queensland, 1998–2003 for the Australian Capital Territory and 2000, 2001, 2003, 2004 and 2005 for the Northern Territory.

- Over the period 1998–2005, in New South Wales, Queensland and South Australia combined there was a significant increase in the rate at which Indigenous mothers attended at least one antenatal care session during pregnancy. The fitted trend implies an average annual increase in the rate of around three mothers per 1,000 which is equivalent to a 2% increase in the rate over the period. Over the same period, there was also a significant increase in the rate at which non-Indigenous mothers attended at least one antenatal care session during pregnancy (2% increase) (Table 3.01.6; Figure 3.01.2).
- In New South Wales, over the period 1998–2005, there was a significant increase in the rate at which Indigenous mothers attended at least one antenatal care session during pregnancy. The fitted trend implies an average annual increase in the rate of around 4.5 per 1,000 which is equivalent to a 3.4% increase in the rate over the period. Over the same period, there was also a significant increase in the rate at which non-Indigenous mothers attended at least one antenatal care session during pregnancy (0.9% increase) (Table 3.01.6; Figure 3.01.1).
- In Queensland, over the period 1998–2005, there were no significant changes in the rates at which Indigenous mothers or non-Indigenous mothers attended at least one antenatal care session during pregnancy.
- In South Australia, over the period 1998–2005, there was a significant increase in the rate at which Indigenous mothers attended at least one antenatal care session during pregnancy. The fitted trend implies an average annual increase in the rate of around 18 per 1,000, which is equivalent to an 18.1% increase in the rate over the period. Over the same period, there was also a significant increase in the rate at which non-Indigenous mothers attended at least one antenatal care session during pregnancy (12.7% increase).
- In the Australian Capital Territory over the period 1998–2003, there were apparent declines in the rate at which Indigenous and non-Indigenous mothers attended at least one antenatal care session during pregnancy. However, these declines were not statistically significant. Most of this decline is attributable to a high proportion of 'missing' responses recorded in 2003. It should also be noted that between 1998 and 2003 in the Australian Capital Territory, 10–15% of mothers who gave birth in the Territory were non-residents.
- In the Northern Territory, data were provided for 2000, 2001, 2003, 2004 and 2005. This was because a system error occurred in 1998, 1999 and 2002, when a large number of women had birthing records created with no antenatal data attached.
- There were no significant changes in the rate ratio between Indigenous and non-Indigenous mothers who attended at least one antenatal care session in New South Wales, Queensland, South Australia or the Australian Capital Territory for the periods under study.

Table 3.01.6: Mothers who attended at least one antenatal care session, by Indigenous status, NSW, Qld, SA, ACT and NT, 1998–2005(a)(b)

	1998	1999	2000	2001	2002	2003	2004	2005	Annual change(c)	% change(d)
					Number					
NSW										
Indigenous	1,909	1,947	1,968	1,980	2,008	2,073	2,191	2,415	. .	. .
Non-Indigenous	81,536	83,103	83,543	81,560	81,683	82,441	81,490	86,128	. .	. .
Qld										
Indigenous	2,657	2,783	2,735	2,636	2,644	2,808	2,696	2,986	. .	. .
Non-Indigenous	44,559	44,998	45,443	45,977	45,451	46,485	47,107	51,108	. .	. .
SA										
Indigenous	289	325	307	296	331	355	385	405	. .	. .
Non-Indigenous	14,418	15,160	14,588	14,920	14,976	15,333	15,446	15,724	. .	. .
NSW, Qld and SA combined										
Indigenous	**4,855**	**5,055**	**5,010**	**4,912**	**4,983**	**5,236**	**5,272**	**5,806**	. .	. .
Non-Indigenous	**140,513**	**143,261**	**143,574**	**142,457**	**142,110**	**144,259**	**144,043**	**152,933**	. .	. .
ACT(e)										
Indigenous	56	56	53	51	69	67	n.p.	n.p.	. .	. .
Non-Indigenous	4,490	4,442	4,549	4,305	4,453	4,088	n.p.	n.p.	. .	. .
NT(f)										
Indigenous	n.p.	n.p.	1,252	1,421	n.p.	1,344	1,269	1,321	. .	. .
Non-Indigenous	n.p.	n.p.	2,145	2,209	n.p.	2,204	2,095	2,257	. .	. .
					Number per 1,000(g)					
NSW										
Indigenous	934.4	945.6	934.9	938.4	931.8	959.3	949.3	976.2	4.5*	3.4
Non-Indigenous	984.9	990.5	990.9	991.9	991.5	995.3	994.4	994.9	1.2*	0.9
Qld										
Indigenous	972.9	976.8	976.4	978.8	971.7	981.8	974.3	973.0	—	—
Non-Indigenous	996.6	995.7	994.1	995.0	996.9	996.6	996.3	996.4	0.1	0.1
SA										
Indigenous	694.7	727.1	688.3	741.9	743.8	758.5	795.5	831.6	18.0*	18.1
Non-Indigenous	800.8	852.4	851.5	876.2	882.2	899.3	922.4	903.2	14.5*	12.7
NSW, Qld and SA combined										
Indigenous	**935.5**	**944.0**	**936.1**	**944.3**	**936.5**	**953.9**	**948.4**	**962.9**	**3.1***	**2.3**
Non-Indigenous	**965.7**	**975.4**	**975.7**	**979.4**	**980.4**	**984.5**	**986.8**	**985.1**	**2.6***	**1.9**
ACT(e)(h)										
Indigenous	933.3	949.2	1,000.0	980.8	958.3	837.5	n.p.	n.p.	–13.5	–7.2
Non-Indigenous	998.0	999.1	998.9	997.7	999.3	874.1	n.p.	n.p.	–17.7	–8.9

(continued)

Table 3.01.6 (continued): Mothers who attended at least one antenatal care session, by Indigenous status, NSW, Qld, SA, ACT and NT, 1998–2005[(a)(b)]

	1998	1999	2000	2001	2002	2003	2004	2005	Annual change[(c)]	% change[(d)]
					Number per 1,000[(g)]					
NT[(f)]										
Indigenous	n.p.	n.p.	946.3	959.5	n.p.	962.8	952.7	953.8	n.p.	n.p.
Non-Indigenous	n.p.	n.p.	968.0	988.4	n.p.	991.9	994.8	996.0	n.p.	n.p.
					Rate ratio[(i)]					
NSW	0.9	1.0	0.9	0.9	0.9	1.0	1.0	1.0	—	2.5
Qld	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	–0.1
SA	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.9	—	–0.3
NSW, Qld and SA combined	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**—**	**0.4**
ACT[(e)(h)]	0.9	1.0	1.0	1.0	1.0	1.0	n.p.	n.p.	—	1.9
NT[(f)]	n.p.	n.p.	1.0	1.0	n.p.	1.0	1.0	1.0	n.p.	n.p.

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2005

(a) Indigenous and non-Indigenous data exclude births where the mother's Indigenous status is not stated.

(b) Jurisdiction-level data are based on place where birth occurred, not place of usual residence. Data not available from Victoria, Western Australia and Tasmania.

(c) Average annual change in rates and rate ratios determined using linear regression analysis.

(d) Per cent change between 1998 and 2005 based on the average annual change over the period.

(e) A high proportion of births in ACT hospitals are for non-ACT mothers (10–15%).

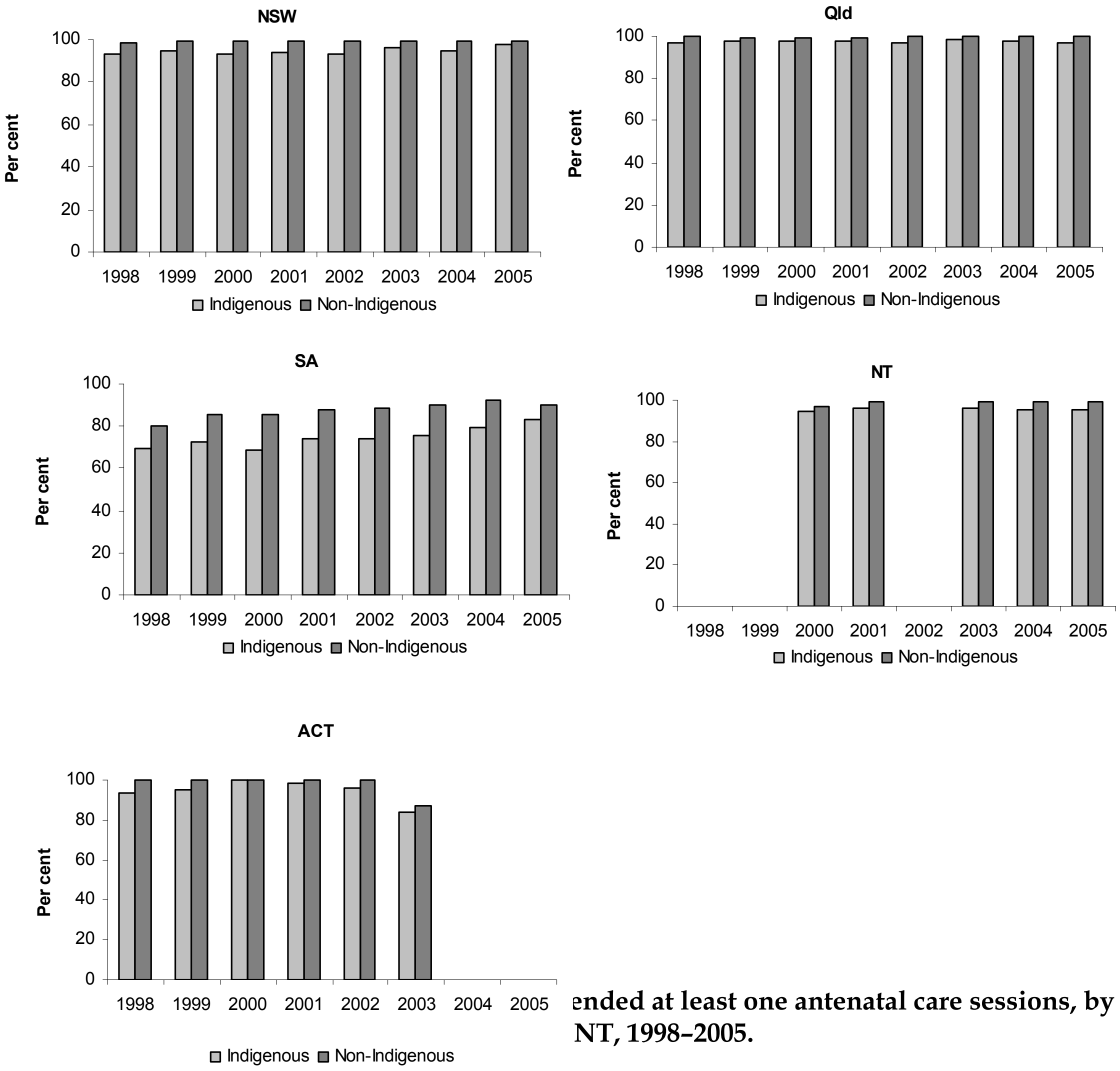
(f) In the NT in 1998, 1999 and 2002, a system error occurred where a large number of women had birthing records created with no antenatal data attached.

(g) Number per 1,000 women who gave birth in the period, whether resulting in a live or still birth, if the birthweight is at least 400 grams or the gestational age was 20 weeks or more.

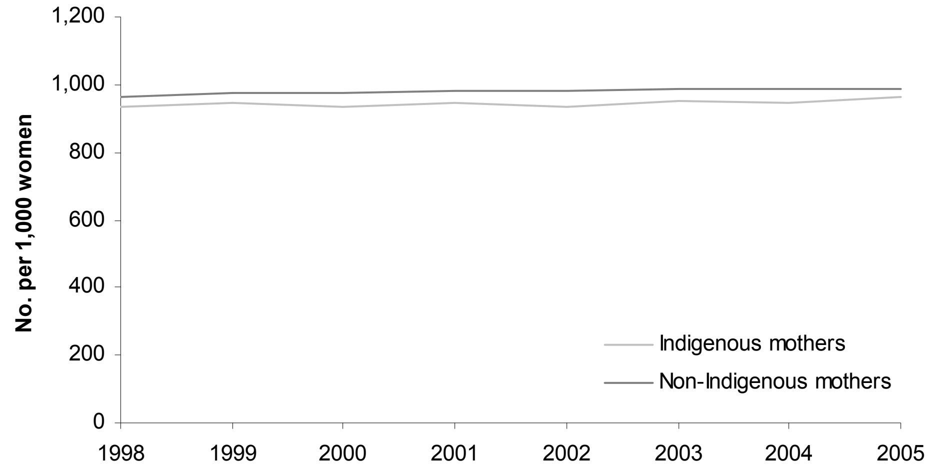
(h) ACT average annual change in rates and rate ratios and per cent change based on the period 1998 to 2003.

(i) Rate ratio—Indigenous: non-Indigenous.

Source: AIHW analysis of state/territory perinatal collections.



ended at least one antenatal care sessions, by NT, 1998–2005.



Source: AIHW analysis of state/territory perinatal collections.

Figure 3.01.2: Percentage of mothers who attended at least one antenatal care session, by Indigenous status, NSW, Qld and SA combined, 1998–2005.

Additional information

Information on the antenatal care of mothers who attended services funded through the Healthy for Life Program is available from the AIHW Healthy for Life data collection.

- In 2006–07, 16 Indigenous primary heath-care services which were part of the Healthy for Life Program provided data on antenatal care. Of the 498 Indigenous mothers who gave birth who were regular clients of these services, 41% attended their first antenatal visit before 13 weeks of pregnancy and 31% attended an antenatal visit before 20 weeks of pregnancy (Table 3.01.7).
- Of the Indigenous women who gave birth in the reporting period, a higher proportion of mothers from urban areas attended their first antenatal visit in their first trimester of pregnancy (before 13 weeks) than mothers in regional or remote areas (59% compared with 24% and 43%, respectively) (Table 3.01.7).
- The proportions of Indigenous mothers who attended their first antenatal visit before 20 weeks were 83% in urban areas, 71% in regional areas and 69% in remote areas.

Table 3.01.7: Number and proportion of Indigenous women[(a)] who gave birth in the current reporting period who attended an antenatal visit, by timing of first antenatal visit, by remoteness, 2006–07

Timing of first antenatal visit	Urban	Regional	Remote	Total
	Number of women who attended an antenatal visit			
Before 13 weeks	34	23	146	203
Between 13 and 20 weeks [(b)]	14	47	91	152
Before 20 weeks	*48*	*70*	*237*	*355*
	Total number of women who gave birth			
	58	98	342	498
	Proportion of women who attended an antenatal visit (%)			
Before 13 weeks	59	24	43	41
Between 13 and 20 weeks [(b)]	24	48	27	31
Before 20 weeks	*83*	*71*	*69*	*71*

(a) Women who are regular clients of HFL services.

(b) Includes antenatal visits at 13 weeks or after, but before 20 weeks of pregnancy.

Notes

1. Data were provided by 16 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

Data quality issues

Antenatal care data

All jurisdictions record self-reported information on some aspects of antenatal health status. The inventory of antenatal medical conditions reported on varies from jurisdiction to jurisdiction and they are not comparable.

The current situation with regard to information on antenatal care visits is as follows:

Victoria, Tasmania and Western Australia do not collect such information in their perinatal collections.

The Australian Capital Territory, Queensland and South Australia collect data on the number of antenatal care visits during pregnancy and the type of health-care professional consulted. However, the categories for the latter are not comparable.

New South Wales, the Australian Capital Territory and the Northern Territory record the duration of pregnancy at first antenatal visit.

The Northern Territory has experienced IT problems which make reporting difficult (personal communication), and data suffers from under-recording in Aboriginal communities.

Only the Australian Capital Territory reports on all the aspects of routine antenatal care which, ideally, should be assessed in this context.

All jurisdictions are working towards improving the quality of the Indigenous status data.

Healthy For Life data

For the January to June 2007 reporting period, 59 services submitted data as part of the Healthy For Life Program. Not all of these services were able to provide data for all of the essential indicators and service profile questions.

3.02 Immunisation (child and adult)

Vaccination coverage rates among Indigenous Australian children and adults

Data sources

Data for this measure come mainly from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and the Australian Childhood Immunisation Register (ACIR).

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The NATSIHS survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next survey to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

The Australian Childhood Immunisation Register (ACIR)

The Australian Childhood Immunisation Register (ACIR), which is managed by Medicare Australia, holds information on childhood immunisation coverage. All children under 7 years of age, who are enrolled in Medicare, are automatically included on the ACIR. Children who are not eligible to enrol in Medicare can be added to the ACIR when details of a vaccination are received from a doctor or immunisation provider.

Only data from New South Wales, Victoria, Western Australia, South Australia and the Northern Territory are used to calculate vaccination coverage rates of Indigenous children and have been presented in this measure. Data from the Australian Capital Territory, Queensland and Tasmania have not been included in this measure because Indigenous status data from these jurisdictions are not routinely reported or transferred to the ACIR.

Note that coverage estimates for Aboriginal and Torres Strait Islander children include only those who identify as such and are registered on the ACIR. Children identified as Indigenous on the ACIR may not be representative of all Aboriginal and Torres Strait Islander children, and thus coverage estimates should be interpreted with caution.

Children for whom Indigenous status was not stated are included with the 'non-Indigenous' under the 'other' category.

Vaccination coverage is a measure of the proportion of people in a target population who have received the recommended course of vaccinations at a particular age.

Analyses

Immunisation register data

The ACIR collects information on childhood immunisation coverage.

Childhood immunisation

In May 2005, the National Immunisation Program (NIP) schedule replaced the Australian Vaccination Schedule, with all recommended vaccines to be funded. From November 2005, the NIP schedule for Aboriginal and Torres Strait Islander children included vaccines for hepatitis B, diptheria-tetanus-pertussis (DTP), haemophilus influenza type B (Hib), measles, mumps, rubella (MMR) and polio (NCIRS 2008).

Vaccination coverage rates for children aged 1 year, 2 years and 6 years as at 31 December 2007 for New South Wales, Victoria, Western Australia, South Australia and the Northern Territory are presented below.

- As at 31 December 2007, Aboriginal and Torres Strait Islander children had lower coverage for all vaccines at 1 year of age (83% compared with 92%), although at 2 and 6 years of age they had similar vaccination coverage to non-Indigenous children (91% and 93% at 2 years of age and 85% and 89% at 6 years of age). This suggests that there is either a greater delay in the receipt of vaccines for Indigenous children or in the transfer of data to ACIR for Indigenous children.
- Vaccination coverage for Indigenous children aged 1 year was lower than for non-Indigenous children for DTP and polio and was similar for hepatitis B and HIB. At 2 and 6 years of age, the proportion of Indigenous and non-Indigenous children who were fully vaccinated against these diseases was similar (Table 3.02.1).
- Vaccination coverage for all vaccines for Indigenous children aged 1 year ranged from 78% in Western Australia to 87% in the Northern Territory (Table 3.02.2).
- In New South Wales and Western Australia, Indigenous children aged 1 year had significantly lower coverage for all vaccines than non-Indigenous children (Table 3.02.2). In Victoria, South Australia and the Northern Territory, Indigenous children aged 1 year had lower coverage for all vaccines than non-Indigenous children, but these differences were not statistically significant.
- Vaccination coverage for all vaccines for Indigenous children aged 2 years ranged from 87% in Western Australia and South Australia to 94% in the Northern Territory (Table 3.02.3).
- Vaccination coverage rates were similar for Indigenous and non-Indigenous children aged 2 years in each state and territory.
- Vaccination coverage rates for all vaccines for Indigenous children aged 6 years ranged from 69% in South Australia to 93% in the Northern Territory (Table 3.02.4).
- Vaccination coverage rates for DTP, polio and MMR were lower for Indigenous children aged 6 years than non-Indigenous children aged 6 years in South Australia. In New South Wales, Western Australia, Victoria and the Northern Territory, vaccination coverage rates for Indigenous and non-Indigenous children aged 6 years were similar.

Table 3.02.1: Vaccination coverage estimates for children at age 1, 2 and 6 years, by Indigenous status, NSW, Vic, WA, SA and NT combined, as at 31 December 2007[(a)(b)]

	1 year			2 years			6 years		
Vaccine	**Indigenous**	**Non-Indigenous**	**Ratio(c)**	**Indigenous**	**Non-Indigenous**	**Ratio(c)**	**Indigenous**	**Non-Indigenous**	**Ratio(c)**
	%	%		%	%		%	%	
Hepatitis B	91.8	94.6	1.0	96.7	96.1	1.0	. .	. .	. .
DTP	83.5	92.3	0.9*	94.0	95.4	1.0	86.1	89.9	1.0
Polio vaccine	83.4	92.3	0.9*	93.9	95.4	1.0	86.1	90.0	1.0
HIB	91.2	94.6	1.0	92.2	95.2	1.0	. .	. .	. .
MMR	. .	. .	. .	93.3	94.4	1.0	86.6	89.9	1.0
All vaccines	82.7	91.8	0.9*	90.6	93.2	1.0	85.2	89.3	1.0

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Three-month cohorts, for cohorts born between 1 July and 30 September 2006, 1 July and 30 September 2005, and 1 July and 30 September 2001, respectively.

(b) Data from the Australian Capital Territory, Queensland and Tasmania have not been included in this measure because Indigenous status data from these jurisdictions are not routinely reported or transferred to the ACIR.

(c) Ratio—coverage estimate for Indigenous children divided by coverage estimate for non-Indigenous children.

Source: AIHW analysis of ACIR Medicare Australia data.

Table 3.02.2: Vaccination coverage estimates for selected diseases for children 'fully vaccinated' at 1 year of age, by Indigenous status, NSW, Vic, WA, SA and NT, as at 31 December 2007[(a)(b)]

	State/territory																	
	NSW			Vic			WA			SA			NT			NSW, Vic, WA, SA, NT(c)		
Vaccines	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)
	%	%		%	%		%	%		%	%		%	%		%	%	
Hepatitis B	92.7	94.9	1.0	93.8	94.8	1.0	88.6	93.2	1.0	87.2	94.7	0.9	94.5	96.1	1.0	91.8	94.6	1.0
DTP	83.8	92.3	0.9*	87.0	93.2	0.9	79.6	90.1	0.9*	82.6	92.6	0.9	86.6	94.2	0.9	83.5	92.3	0.9*
Polio vaccine	83.5	92.3	0.9*	87.0	93.1	0.9	79.6	90.0	0.9*	82.6	92.6	0.9	86.6	94.2	0.9	83.4	92.3	0.9*
HIB	92.7	94.9	1.0	93.8	94.8	1.0	86.5	93.1	0.9	86.6	94.9	0.9	94.2	96.1	1.0	91.2	94.6	1.0
MMR	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
All vaccines	**83.5**	**92.0**	**0.9***	**86.4**	**92.3**	**0.9**	**78.2**	**89.5**	**0.9***	**78.5**	**92.0**	**0.9**	**86.6**	**93.8**	**0.9**	**82.7**	**91.8**	**0.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Three-month cohort, for cohort born between 1 July and 30 September 2006.

(b) Data from the Australian Capital Territory, Queensland and Tasmania have not been included in this measure because Indigenous status data from these jurisdictions are not routinely reported or transferred to the ACIR.

(c) Data for these five jurisdictions should not be assumed to represent the immunisation experience in the other jurisdictions.

(d) Ratio—coverage estimate for Indigenous children divided by coverage estimate for non-Indigenous children.

Source: AIHW analysis of ACIR Medicare Australia data.

Table 3.02.3: Vaccination coverage estimates for selected diseases for children ‘fully vaccinated’ at 2 years of age, by Indigenous status, NSW, Vic, WA, SA and NT, as at 31 December 2007 (a)(b)

Vaccines	State/territory																	
	NSW			Vic			WA			SA			NT			NSW, Vic, WA, SA, NT (c)		
	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)	Indig.	Non-Indig.	Ratio(d)
	%	%		%	%		%	%		%	%		%	%		%	%	
Hepatitis B	96.4	96.0	1.0	96.9	96.6	1.0	95.9	95.2	1.0	96.6	95.6	1.0	97.9	96.6	1.0	96.7	96.1	1.0
DTP	93.0	95.3	1.0	93.8	96.0	1.0	93.5	94.6	1.0	95.0	95.2	1.0	96.1	95.5	1.0	94.0	95.4	1.0
Polio vaccine	92.9	95.3	1.0	93.8	95.9	1.0	93.5	94.6	1.0	95.0	95.1	1.0	96.1	95.5	1.0	93.9	95.4	1.0
HIB	92.9	95.5	1.0	91.9	95.1	1.0	89.5	94.7	0.9	89.1	94.4	0.9	94.8	94.8	1.0	92.2	95.2	1.0
MMR	92.7	94.1	1.0	95.7	95.3	1.0	91.9	93.3	1.0	89.9	94.3	1.0	96.1	95.2	1.0	93.3	94.4	1.0
All vaccines	**90.9**	**93.0**	**1.0**	**91.3**	**94.1**	**1.0**	**87.3**	**91.7**	**1.0**	**87.4**	**93.0**	**0.9**	**94.1**	**94.1**	**1.0**	**90.6**	**93.2**	**1.0**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Three-month cohort, for cohort born between 1 July and 30 September 2005.

(b) Data from the Australian Capital Territory, Queensland and Tasmania have not been included in this measure because Indigenous status data from these jurisdictions are not routinely reported or transferred to the ACIR.

(c) Data for these five jurisdictions should not be assumed to represent the immunisation experience in the other jurisdictions.

(d) Ratio—coverage estimate for Indigenous children divided by coverage estimate for non-Indigenous children.

Source: AIHW analysis of ACIR Medicare Australia data.

Table 3.02.4: Vaccination coverage estimates for selected diseases for children 'fully vaccinated' at 6 years of age, by Indigenous status, NSW, Vic, WA, SA and NT, as at 31 December 2007(a)(b)

	State/territory																	
	NSW			Vic(c)			WA			SA			NT			NSW, Vic, WA, SA,NT (d)		
Vaccines	Indig.	Non-Indig.	Rate ratio(e)	Indig.	Non-Indig.	Rate ratio(e)	Indig.	Non-Indig.	Rate ratio(e)	Indig.	Non-Indig.	Rate ratio(e)	Indig.	Non-Indig.	Rate ratio(e)	Indig.	Non-Indig.	Rate ratio(e)
	%	%		%	%		%	%		%	%		%	%		%	%	
Hepatitis B	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
DTP	88.1	89.8	1.0	88.5	91.8	1.0	80.5	86.3	0.9	69.9	88.5	0.8*	93.6	85.3	1.1	86.1	89.9	1.0
Polio vaccine	87.7	89.8	1.0	88.5	92.0	1.0	81.2	86.7	0.9	69.2	88.7	0.8*	93.6	85.5	1.1	86.1	90.0	1.0
HIB	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
MMR	88.9	89.8	1.0	89.2	91.9	1.0	81.2	86.5	0.9	69.9	88.7	0.8*	93.6	85.1	1.1	86.6	89.9	1.0
All vaccines	**86.7**	**89.1**	**1.0**	**88.5**	**91.4**	**1.0**	**79.5**	**85.5**	**0.9**	**69.2**	**88.1**	**0.8***	**93.3**	**84.7**	**1.1**	**85.2**	**89.3**	**1.0**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Three-month cohort, for cohort born between 1 July and 30 September 2001.

(b) Data from the Australian Capital Territory, Queensland and Tasmania have not been included in this measure because Indigenous status data from these jurisdictions are not routinely reported or transferred to the ACIR.

(c) Data for Vic contain an error in the number of Aboriginal children aged 72–75 months appearing on the register. Vaccination coverage rates presented here should therefore be interpreted with caution. Vaccination coverage rates for all vaccines were reported as 87.3% for Aboriginal children and 86.1% for non-Aboriginal children in 2004–05 in the report, Victorian Government Department of Human Services 2006, *Aboriginal Services Plan key indicators 2004–05*.

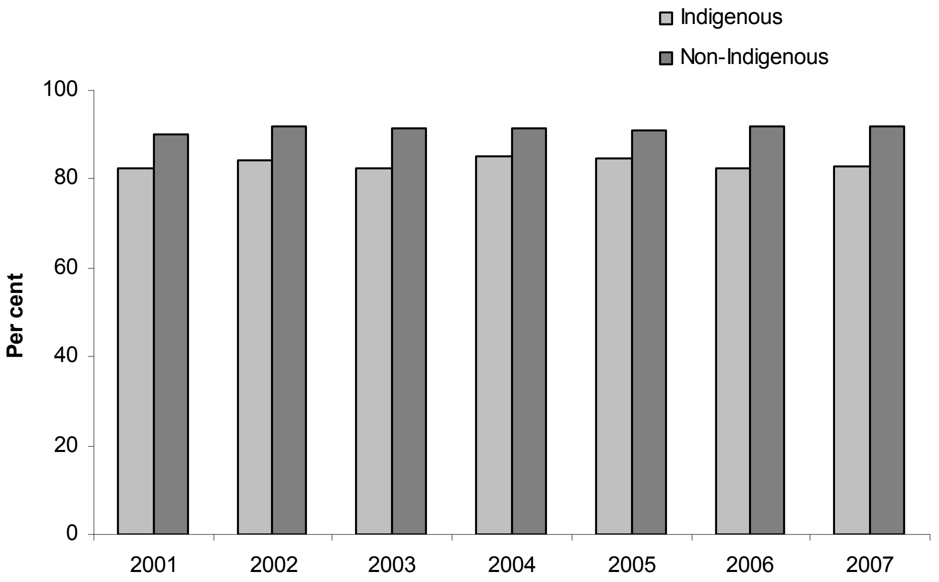
(d) Data for these five jurisdictions should not be assumed to represent the immunisation experience in the other jurisdictions.

(e) Ratio—coverage estimate for Indigenous children divided by coverage estimate for non-Indigenous children.

Source: AIHW analysis of ACIR Medicare Australia data.

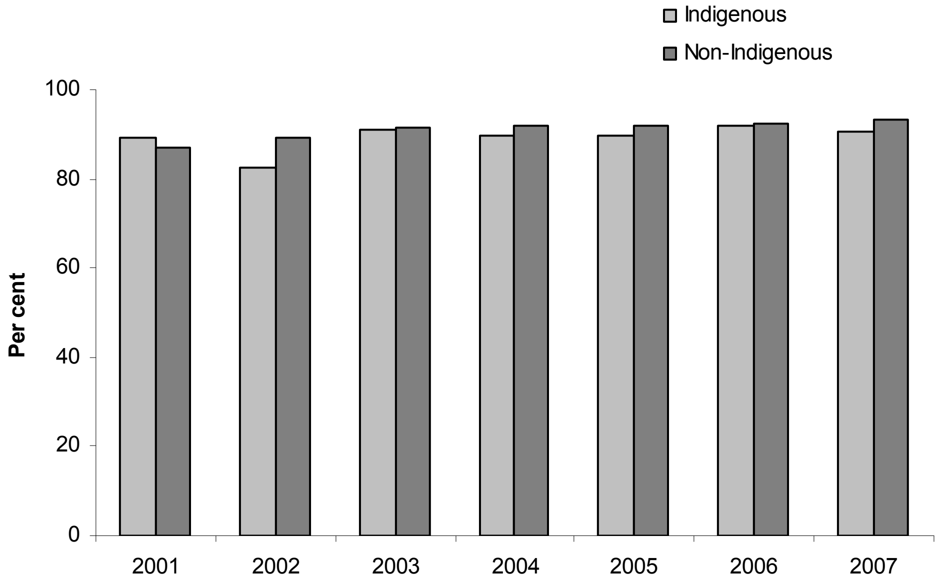
Time series analyses

- Between 2001 and 2007, there were no significant changes in the proportion of Indigenous and non-Indigenous children who were fully vaccinated at 1 year of age (Figure 3.02.1).
- Between 2001 and 2007, there was a non-significant increase in the proportion of Indigenous children who were fully immunised at 2 years of age and a significant increase in the proportion of non-Indigenous children who were fully immunised at 2 years of age (Figure 3.02.2).
- Between 2002 and 2007, there were significant increases in the proportion of Indigenous children and non-Indigenous children who were fully immunised at 6 years of age (Figure 3.02.3).



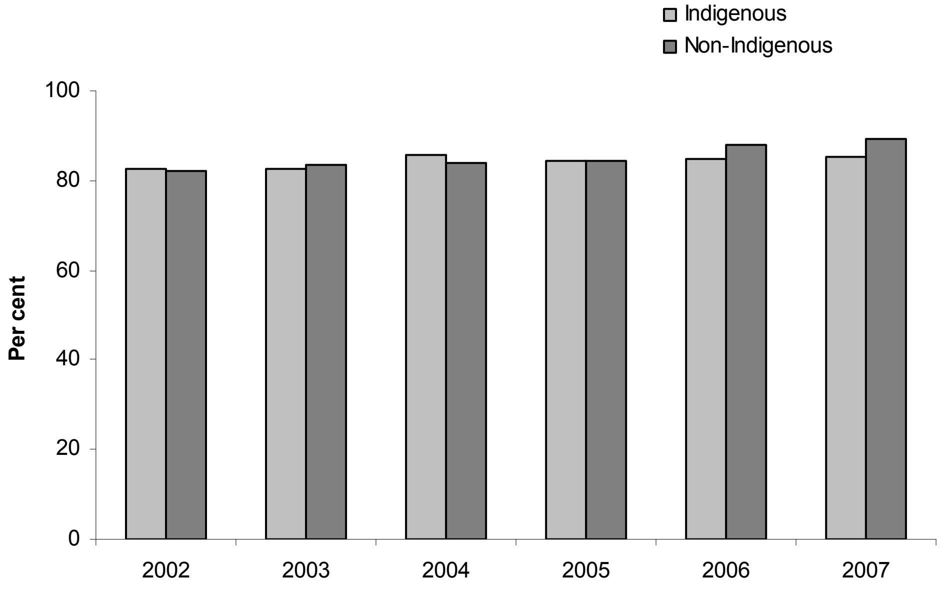
Source: AIHW analysis of ACIR Medicare Australia data.

Figure 3.02.1: Coverage rates for children fully vaccinated at age 1 year in NSW, Vic, WA, SA and NT combined, by Indigenous status, 2001–2007



Source: AIHW analysis of ACIR Medicare Australia data.

Figure 3.02.2: Coverage rates for children fully vaccinated at age 2 years in NSW, Vic, WA, SA and NT combined, by Indigenous status, 2001–2007



Note: Data not available for children at age 6 years for 2001.

Source: AIHW analysis of ACIR Medicare Australia data.

Figure 3.02.3: Coverage rates for children fully vaccinated at age 6 years in NSW, Vic, WA, SA and NT combined, by Indigenous status, 2002–2007

Self-reported data

Childhood immunisation

The 2004–05 NATSIHS provides information on the immunisation status of Indigenous children aged 0–6 years in non-remote areas of Australia. Data from this survey, and the 2001 NHS, which collected information on the immunisation status of Indigenous and non-Indigenous children are presented below.

- Of Indigenous children aged 0–6 years in non-remote areas who had immunisation records available, approximately 94% were fully immunised in 2001 and 93% were fully immunised in 2004–05. Around 4% of Indigenous children aged 0–6 years were partially immunised in 2001 and 7% were partially immunised in 2004–05 (Table 3.02.5).
- In 2004–05, 78% of Indigenous children aged 0–6 years in non-remote areas were fully immunised against diphtheria/tetanus, 74% against whooping cough, 82% against hepatitis B, 78% against polio, 72% against HIB and 84% against measles, mumps and rubella.
- The proportion of Indigenous children fully immunised in 2001 was similar to 2004–05 for all diseases, with the exception of polio, for which coverage was higher in 2001 (88%), and HIB, for which coverage was lower in 2001 (67%).
- In 2001, in non-remote areas, the proportion of Indigenous and non-Indigenous children who were fully immunised was similar, but Indigenous children were around twice as likely to be partially immunised.
- The most common factors influencing the decision to immunise children aged 0–6 years for Indigenous people in non-remote areas in 2004–05 were for the child's health (88%), it was believed to be the right thing to do (51%) and the child must be immunised to go to child care/school (29%) (Table 3.02.6). Similar proportions of Indigenous and non-Indigenous people in non-remote areas reported these factors as influencing their decision to immunise children in 2001.

Table 3.02.5: Immunisation status of children aged 0–6 years in non-remote areas, by Indigenous status, 2001 and 2004–05

	2001			2004–05
Immunisation status	Indigenous	Non-Indigenous	Ratio[(a)]	Indigenous
	%	%		%
Self-reported status				
Immunisation records not available				
Fully immunised	88	92	1.0	89
Partially immunised	6[(b)]	3	2.1	7[(b)]
Not immunised	3[(c)]	5[(b)]	0.7	2[(c)]
Not known if immunised	2[(c)]	1[(b)]	2.7	2[(b)]
Total	**100**	**100**	. .	**100**
Immunisation records available				
Fully immunised	94	97	1.0	93
Partially immunised	4[(b)]	2	1.9	7[(b)]
Not immunised	n.p.	1[(b)]	—	—
Not known if immunised	n.p.	—[(b)]	—	—
Total[(e)]	**100**	**100**	. .	**100**
Status for selected vaccinations[(f)(g)]				
Diphtheria, tetanus				
Fully immunised	79	85	0.9	78
Partially immunised	19	14	1.4	16
Not immunised	1[(c)]	1[(b)]	1.4	—[(c)]
Total[(e)]	**100**	**100**	. .	**100**
Whooping cough				
Fully immunised	74	79	0.9	74
Partially immunised	24	19	1.3	23
Not immunised	1[(c)]	1	1.3	1[(b)]
Total[(e)]	**100**	**100**	. .	**100**
Hepatitis B[(d)]				
Fully immunised	78	78	1.0	82
Partially immunised	18[(b)]	16	1.1	12
Not immunised	n.p.	3[(b)]	n.p.	1[(c)]
Total[(e)]	**100**	**100**	. .	**100**
Polio				
Fully immunised	88	90	1.0	78
Partially immunised	9[(b)]	8	1.2	18
Not immunised	2[(c)]	1	1.3	2[(b)]
Total[(e)]	**100**	**100**	. .	**100**

(continued)

Table 3.02.5 (continued): Immunisation status of children aged 0–6 years in non-remote areas, by Indigenous status, 2001 and 2004–05

	2001			2004–05
Immunisation status	**Indigenous**	**Non-Indigenous**	**Ratio**[(a)]	**Indigenous**
	%	%		%
HIB				
Fully immunised	67	82	0.8	72
Partially immunised	16	9	1.8	15
Not immunised	13[(b)]	5	2.7	8
Total[(e)]	**100**	**100**	. .	**100**
Measles, mumps, rubella				
Fully immunised	88	90	1.0	84
Partially immunised	5[(b)]	7	0.7	10[(b)]
Not immunised	6[(b)]	2	2.4	4[(b)]
Total[(e)]	**100**	**100**	. .	**100**

(a) Ratio—immunisation rate for Indigenous children divided by immunisation rate for non-Indigenous children.
(b) Estimate has a relative standard error of 25% to 50% and should be used with caution.
(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.
(d) Introduced in the recommended immunisation schedule from 1 May 2000 and therefore only applies to children born from that date.
(e) Includes immunisation status not known.
(f) Children who had immunisation records available.
(g) Status derived based on vaccination schedule started.

Source: ABS 2006 (2001 NHS and 2004–05 NATSIHS).

Table 3.02.6: Factors influencing decision to immunise children aged 0–6 years in non-remote areas, by Indigenous status, 2001 and 2004–05

	2001			2004–05
Factors influencing decision to immunise	Indigenous (non-remote)	Non-Indigenous	Rate ratio[(a)]	Indigenous (non-remote)
	%	%		%
For child's health	88	91	1.0	88
The right thing to do	45	49	0.9	51
Child must be immunised to go to child care/school	23	25	0.9	29
More awareness of immunisation schedule	6[(b)]	8	0.7	11
Reminder notification	5[(b)]	3	2.0	8
Local access to clinic or doctor	4[(b)]	3	1.2	6[(b)]
Promotion through TV/radio/other media/clinic	3[(b)]	4	0.9	5[(b)]
Payment	0[(c)]	1	0.3	3[(b)]
Other	3[(b)]	3	0.9	3[(b)]
Total	**100**	**100**	**. .**	**100**
Total number	46,344	1,402,291	. .	48,903

(a) Ratio Indigenous: non-Indigenous.

(b) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Note: The sum of components will add to more than 100% as more than one factor can be reported.

Source: AIHW analysis of ABS 2001 NHS (Indigenous supplement) and 2004–05 NATSIHS.

Adolescent immunisation

From September 2003, the NIP schedule recommended catch-up hepatitis B vaccination for adolescents of one cohort within the age range of 10–13 years who had no prior history of disease or vaccination (NCIRS 2008).

The 2004–05 NATSIHS and NHS provide data on coverage for the hepatitis B vaccine for adolescents aged 10–17 years living in non-remote areas, which is not covered by the ACIR.

- In 2004–05, the proportions of Indigenous and non-Indigenous adolescents who had completed hepatitis B vaccination were comparable (51% and 50%, respectively).
- There were some variations across the states/territories, and generally the coverage estimates were lower in Indigenous adolescents, although the differences were not statistically significant (NCIRS 2008).

Adult immunisation

Aboriginal and Torres Strait Islander adults aged 50 years or more, and those aged 15 to 49 years with medical conditions putting them at high risk of disease or complications, are recommended for vaccination against influenza and pneumococcal disease. These two vaccines have been provided through the National Indigenous Pneumococcal and Influenza Immunisation (NIPII) Program since 1999. For other (non-Indigenous) adult Australians, the recommended age to receive these two vaccines is 65 years or over, and is funded through the Influenza vaccine program for older Australians since 1999 and Pneumococcal vaccination program for older Australians since January 2005 (NCIRS 2008).

The 2004–05 NATSIHS and NHS provide data on coverage for the influenza and pneumococcal vaccines in adults, as well as the presence of high-risk medical conditions that are indicators for vaccination in younger adults.

Risk factors

Influenza

The risk factors for which the influenza vaccine is recommended include at least one of many chronic medical conditions including severe asthma, diabetes mellitus, and chronic cardiovascular, respiratory and kidney conditions (NCIRS 2008).

- In 2004–05, approximately 17% of Indigenous Australians aged 18–49 years reported at least one of the chronic medical conditions that were considered risk factors of influenza for which vaccination was recommended. The proportion with at least one risk factor rose to 29% when current asthma was included (Table 3.02.7).
- Influenza vaccination coverage varied across jurisdictions. The highest influenza vaccination coverage was reported in the Northern Territory, where 55% of those who reported at least one risk factor, and 48% of the total Indigenous population aged 18–49 years, reported having the influenza vaccination in the last 12 months (Table 3.02.7).
- Of the 23% of the Indigenous population aged 18–49 who reported having the influenza vaccination in the last 12 months, 8.4% had at least one risk factor and 14.6% had no risk factors (NCIRS 2008).

Table 3.02.7 Prevalence of self-reported risk factors and proportion of population who had influenza vaccination in 12 months prior to survey, Indigenous adults aged 18 to 49 years, by state/territory, 2004–05

	NSW/ACT	Vic	Qld	WA	SA	Tas	NT	Aust
				Per cent				
Prevalence of risk factor(s)								
Chronic conditions	15	16	17	20	16	15	22	17
Chronic conditions and asthma	28	29	31	29	25	30	26	29
Proportion who had influenza vaccination in the last 12 months								
Of those who reported at least one risk factor	14	23	35	31	33	17	55	29
Of total population	10	16	29	20	21	11	48	23

Source: NCIRS 2008.

Pneumococcal

The risk factors for which the pneumococcal vaccine is recommended include at least one of many chronic medical conditions (but not including asthma), heavy alcohol use and tobacco smoking (NCIRS 2008).

- In 2004–05, the proportion of Indigenous Australians aged 18–49 years who reported at least one of the chronic medical conditions or heavy alcohol use was 32%, and then rose to 66% when tobacco smoking was added (Table 3.02.8).
- Pneumococcal vaccination coverage varied across jurisdictions. The highest pneumococcal vaccination coverage was reported in the Northern Territory, where 25% of those who reported at least one risk factor, and 26% of the total Indigenous population aged 18–49 years reported having the influenza vaccination in the last 5 years (Table 3.02.8).

- Of the 12% of the Indigenous population aged 18–49 who reported having the pneumococcal vaccination in the last 5 years, 8.6% reporting had at least one risk factor and 3.4% had no risk factors (NCIRS 2008).

Table 3.02.8 Prevalence of self-reported risk factors and proportion of population who had pneumococcal vaccination in 5 years prior to survey, Indigenous adults aged 18 to 49 years, by state/territory, 2004–05

	NSW/ACT	Vic	Qld	WA	SA	Tas	NT	Aust
				Per cent				
Prevalence of risk factor(s)								
Chronic conditions	15	16	17	20	16	15	22	17
Chronic conditions and heavy alcohol	31	30	34	38	30	26	28	32
Chronic conditions, heavy alcohol and tobacco	67	62	65	67	67	62	69	66
Proportion who had pneumococcal vaccination in the last 5 years								
Of those who reported at least one risk factor	4	10	20	9	10	3	25	13
Of total population	4	8	17	7	12	3	26	12

Source: NCIRS 2008.

Immunisation for adults aged 50 years and over

Data on immunisation of Indigenous persons aged 50 years and over come from the 2004–05 NATSIHS and are presented below.

Immunisation status by sex and Indigenous status

- In 2004–05, approximately 60% of Indigenous persons aged 50 years and over had been vaccinated against influenza in the last 12 months and 15% had been vaccinated against influenza but not in the last 12 months. These proportions were higher than those reported in 2001 (51% and 10%, respectively) (Table 3.02.9).
- A slightly higher proportion of Indigenous females aged 50 years and over had been vaccinated against influenza in the last 12 months (61%) than Indigenous males (58%).
- A significantly higher proportion of Indigenous persons aged 50 years and over in remote areas had been vaccinated against influenza in the last 12 months (80%) than in non-remote areas (52%).
- In 2004–05, approximately 34% of Indigenous persons aged 50 years and over had been vaccinated against pneumonia in the last 5 years, which was significantly higher than the proportion recorded in 2001 (25%).
- A higher proportion of Indigenous females aged 50 years and over had been vaccinated against pneumonia in the last 5 years (37%) than Indigenous males (31%).
- Indigenous persons aged 50 years and over in remote areas were more than twice as likely to have been vaccinated against pneumonia in the last 5 years as Indigenous persons in non-remote areas (56% compared with 26%).
- In 2004–05, a higher proportion of Indigenous persons aged 65 years and over had been vaccinated against influenza and pneumonia (84% and 48, respectively) than non-Indigenous persons of the same age (73% and 43%, respectively) (Table 3.02.10).
- However, comparisons of vaccination coverage among Indigenous and non-Indigenous Australians for pneumococcal and influenza need to take into account differences in the

age at which vaccinations are funded and provided free to charge for the different population groups. In 2004–05, a lower proportion of Indigenous persons aged 50 years and over had been vaccinated against influenza in the last 12 months and pneumonia in the last 5 years (60% and 34%, respectively) than non-Indigenous persons aged 65 years and over (73% and 43%, respectively) (Figure 3.02.4).

Table 3.02.9: Immunisation status, by sex and remoteness, Indigenous persons aged 50 years and over, 2001 and 2004–05

	2001			2004–05		
Immunisation status	**Remote**	**Non-remote**	**Total**	**Remote**	**Non-remote**	**Total**
				Per cent		
				Males		
Had vaccination for influenza in last 12 months	75	39	46	81	49	58
Had vaccination for influenza but not in last 12 months	5[(a)]	14[(b)]	12[(b)]	8[(b)]	18	15
Never had vaccination for influenza	19[(b)]	46	40	10	32	26
Total[(c)]	**100**	**100**	**100**	**100**	**100**	**100**
Had vaccination for pneumonia in last 5 years	58	16[(b)]	24	53	23	31
Had vaccination for pneumonia but not in last 5 years	n.p.	8[(a)]	6[(a)]	—	n.p.	n.p.
Never had vaccination for pneumonia	34[(b)]	74	66	38	70	61
Total[(d)]	**100**	**100**	**100**	**100**	**100**	**100**
				Females		
Had vaccination for influenza in last 12 months	74	51	56	80	54	61
Had vaccination for influenza but not in last 12 months	6[(b)]	9[(b)]	8[(b)]	8[(b)]	17	15
Never had vaccination for influenza	13[(b)]	40	34	12	28	24
Total[(c)]	**100**	**100**	**100**	**100**	**100**	**100**
Had vaccination for pneumonia in last 5 years	39	22	26	59	28	37
Had vaccination for pneumonia but not in last 5 years	—	n.p.	n.p.	—	1[(a)]	1[(a)]
Never had vaccination for pneumonia	41	76	68	36	65	56
Total[(d)]	**100**	**100**	**100**	**100**	**100**	**100**

(continued)

Table 3.02.9 (continued): Immunisation status, by sex and remoteness, Indigenous persons aged 50 years and over, 2001 and 2004–05

	2001			2004–05		
Immunisation status	**Remote**	**Non-remote**	**Total**	**Remote**	**Non-remote**	**Total**
			Per cent			
			Persons			
Had vaccination for influenza in last 12 months	75	45	51	80	52	60
Had vaccination for influenza but not in last 12 months	6[(a)]	11	10	8	18	15
Never had vaccination for influenza	16[(b)]	43	37	11	30	25
Total[(c)]	**100**	**100**	**100**	**100**	**100**	**100**
Had vaccination for pneumonia in last 5 years	48	19	25	56	26	34
Had vaccination for pneumonia but not in last 5 years	n.p.	4[(a)]	3[(a)]	—	1[(b)]	1[(b)]
Never had vaccination for pneumonia	38	75	67	37	67	58
Total[(d)]	**100**	**100**	**100**	**100**	**100**	**100**

(a) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(b) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(c) Includes ‘influenza vaccination status’ not known and not applicable.

(d) Includes ‘pneumonia vaccination status’ not known and not applicable.

Source: AIHW analysis of 2004–05 NATSIHS.

Table 3.02.10: Immunisation status, Indigenous persons aged 50 years and over and non-Indigenous persons aged 65 years and over, 2004–05

	Indigenous		Non-Indigenous
Immunisation status	**50–64 years**	**65+ years**	**65+ years**
		Per cent	
Had vaccination for influenza in last 12 months	52	84	73
Had vaccination for influenza but not in last 12 months	18	7[(a)]	11
Had influenza vaccination but not known if in last 12 months[(b)]	0[(a)]	1[(c)]	1[(a)]
Never had vaccination for influenza	30	9[(a)]	15
Total	**100**	**100**	**100**
Had vaccination for pneumonia in last 5 years	30	48	43
Had vaccination for pneumonia but not in last 5 years	1[(a)]	n.p.	1
Had vaccination for pneumonia but not known if in last 5 years[(d)]	7	n.p.	3
Never had vaccination for pneumonia	63	45	53
Total	**100**	**100**	**100**
Total number	36,917	12,237	2,430,253

(a) Estimate has a relative standard error of 25% to 50% and should be used with caution.

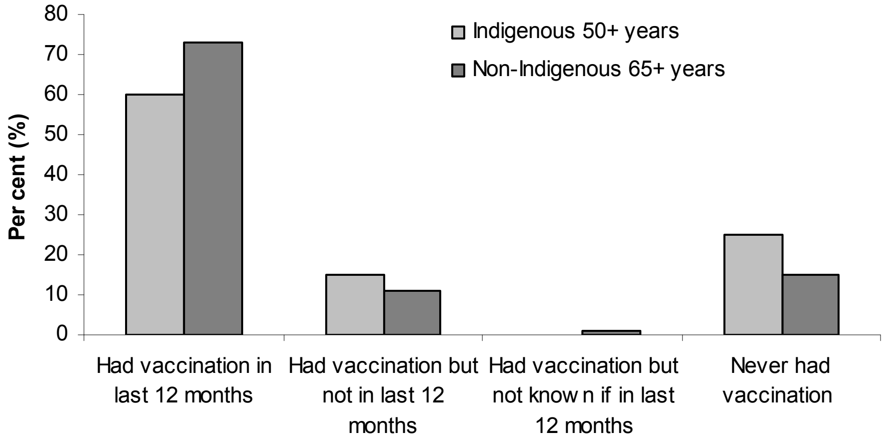
(b) Includes not known if ever had influenza vaccination.

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

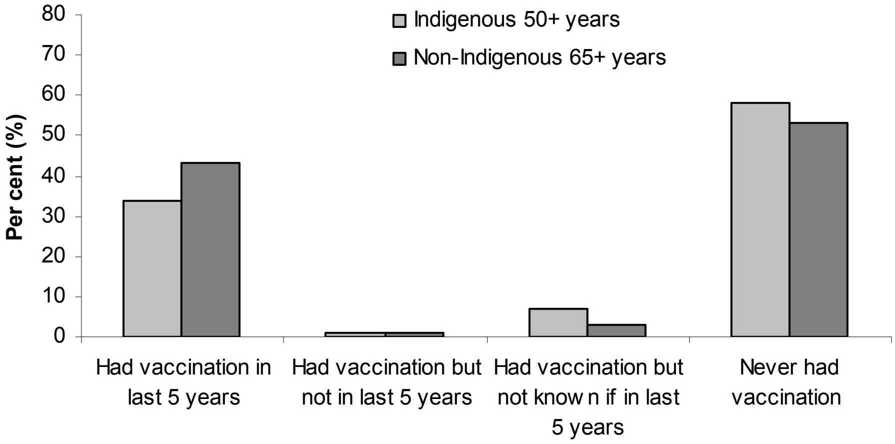
(d) Includes not known if ever had pneumonia vaccination.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Influenza



Pneumonia



Source: AIHW analysis of ABS 2004–05 NATSIHS and 2004–05 NHS.

Figure 3.02.4: Immunisation status, Indigenous persons aged 50 years and over and non-Indigenous persons aged 65 years and over, 2004–05

Immunisation status by access to health care and selected population characteristics

- In 2004–05, over half of all Indigenous Australians who had never been vaccinated against influenza or pneumonia had accessed health care in the last 2 weeks (53% and 58%, respectively). Approximately 25% of Indigenous Australians who had never been vaccinated against influenza had been admitted to hospital in the last 12 months and 26% had consulted with other health professionals in the last 2 weeks. Approximately 26% of Indigenous people aged 50 years and over who had never been vaccinated against pneumonia had been admitted to hospital in the last 12 months, 34% had consulted with a doctor in the last 2 weeks and 22% had consulted with other health professionals (Table 3.02.11).
- A higher proportion of Indigenous Australians who spoke a language other than English at home had had an influenza vaccination in the last 12 months and a pneumonia vaccination in the last 5 years than Indigenous Australians who spoke English as their main language at home (Table 3.02.12). Indigenous Australians who were in the lowest quintile of household income and index of disparity and were renters were more likely to have had influenza and pneumonia vaccinations than those in the highest quintiles of income and disparity and who were home owners.

Table 3.02.11: Immunisation status, by access to health care, Indigenous persons aged 50 years and over, non-remote areas, 2004–05(a)

	Influenza				Pneumonia			
Accessing health care(b)	**Had vaccination in last 12 months**	**Had vaccination but not in last 12 months**	**Never had vaccination**	**Total**	**Had vaccination in last 5 years**	**Had vaccination but not in last 5 years**	**Never had vaccination**	**Total**
				Percent				
Admitted to hospital	30	28(c)	25(c)	28	33	56(d)	26	28
Visited casualty	3(c)	1(d)	0(d)	2(c)	2(c)	0	2(c)	2(c)
Visited outpatients	8	8(d)	3(c)	7	9(c)	0	5(c)	7
Visited day clinic	6(c)	3(d)	3(d)	4	8(c)	7(d)	3(c)	4
Doctor consultation (GP)	45	30	29	37	43	61(d)	34	37
Specialist consultation	12(c)	14(c)	4(c)	10	12(c)	8(d)	9(c)	10
Dental consultation	6(c)	1(d)	5(d)	5(c)	4(c)	0	6(c)	5(c)
Consultation with other health professional	20	17(c)	26(c)	21	20	13(d)	22	21
Total accessing health care(e)	**67**	**55**	**53**	**61**	**67**	**71(d)**	**58**	**61**
Not accessing /not stated	33	45	47	39	33	29(d)	42	39
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	18,119	6,224	10,599	35,128	8,963	304	23,498	35,128

(a) Self-reported data from the 2004–05 NATSIHS.

(b) Health-related actions in last 2 weeks, except hospital admissions (in last 12 months).

(c) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(e) Components may not add to total as persons may have reported more than one type of action.

Source: AIHW analysis of 2004–05 NATSIHS

Table 3.02.12: Immunisation status, by selected population characteristics, Indigenous persons aged 50 years and over, 2004–05

	Influenza				Pneumonia			
Accessing health care(a)	**Had vaccination in last 12 months**	**Had vaccination but not in last 12 months(b)**	**Never had vaccination**	**Total(c)**	**Had vaccination in last 5 years**	**Had vaccination but not in last 5 years(d)**	**Never had vaccination**	**Total(e)**
				Per cent				
Main language spoken at home								
English	55	17	28	100	29	1(f)	63	100
Language other than English	84	5(f)	11(f)	100	60	—	33	100
Household income								
1st quintile (lowest income)	66	13	20	100	39	n.p.	54	100
4th and 5th quintile (highest income)	41	23(f)	36	100	19(f)	n.p.	76	100
Index of disparity								
1st quintile (most disadvantaged)	63	16	20	100	38	n.p.	54	100
5th quintile (least disadvantaged)	46(g)	3(g)	51(g)	100	10(g)	n.p.	90(f)	100
Location								
Remote	80	8	11	100	56	—(f)	37	100
Non-remote	52	18	30	100	26	1(f)	67	100
Private health insurance								
With private cover	38(f)	19(f)	43(f)	100	16(f)	n.p.	80	100
Without private cover	54	18	28	100	27	1(f)	65	100
Employment								
Employed CDEP	71	14(g)	14(f)	100	52	—	41	100
Employed non-CDEP	41	21	38	100	18	1(g)	75	100
Subtotal employed	47	19	33	100	25	1(g)	68	100
Unemployed	75((g)	8(g)	17(g)	100	25(g)	—	75(f)	100
Not in the labour force	65	13	21	100	39	—	53	100
Housing tenure type								
Owner	42	14	43	100	18	n.p.	77	100
Renter	67	15	17	100	42	1(f)	50	100
Other(h)	68(f)	16(g)	15(g)	100	40(f)	n.p.	56(f)	100

(continued)

Table 3.02.12 (continued): Immunisation status, by selected population characteristics, Indigenous persons aged 50 years and over, 2004–05

Accessing health care[(a)]	Influenza: Had vaccination in last 12 months	Influenza: Had vaccination but not in last 12 months[(b)]	Influenza: Never had vaccination	Influenza: Total[(c)]	Pneumonia: Had vaccination in last 5 years	Pneumonia: Had vaccination but not in last 5 years[(d)]	Pneumonia: Never had vaccination	Pneumonia: Total[(e)]
				Per cent				
Treatment when seeking health care in last 12 months compared with non-Indigenous people								
Worse	55[(f)]	26[(f)]	19[(f)]	100	46[(f)]	n.p.	46[(f)]	100
The same or better	62	13	25	100	36	1[(g)]	58	100
Other[(a)]	42	28[(f)]	28[(f)]	100	18	n.p.	68	100
Total	**60**	**15**	**25**	**100**	**34**	**1[(f)]**	**58**	**100**
Total number	29,394	7,397	12,173	49,154	16,880	28,695	304	49,154

(a) Includes 'don't know' responses.
(b) Includes 'Had influenza vaccination but not known if in the last 12 months'.
(c) Includes 'not known if ever had influenza vaccination' and 'not applicable' responses.
(d) Includes 'Had pneumonia vaccination but not known if in the last 12 months'.
(e) Includes 'not known if ever had pneumonia vaccination' and 'not applicable' responses.
(f) Estimate has a relative standard error of 25% to 50% and should be used with caution.
(g) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.
(h) Includes life tenure scheme, participant or rent/buy scheme, boarder, rent free, other and not stated.

Source: AIHW analysis of 2004–05 NATSIHS.

How influenza vaccination was obtained

- In 2004–05, for approximately 43% of Indigenous Australians aged 50 years and over in non-remote areas, influenza vaccinations were provided free of charge (Table 3.02.13). In 2001, approximately 30% of Indigenous Australians aged 50 years and over in non-remote areas received influenza vaccinations free of charge compared with 67% of non-Indigenous Australians.

Table 3.02.13: How influenza vaccination was obtained, persons aged 50 years and over, by Indigenous status, 2001 and 2004–05

Whether influenza vaccination free	2001 Indigenous remote	 Indigenous (non-remote)	 Non-Indigenous (non-remote)	 Rate ratio[(a)] (non-remote)	2004–05 Indigenous non-remote
			Per cent		
Not applicable	68	55	25	2.2*	48
Influenza and vaccination free of charge	27(a)	30	67	0.5*	43
Influenza vaccination not free	n.p.	15	7	2.0*	6
Not stated	n.a.	n.a.	n.a.	n.a.	n.p.
Not known	n.p.	—	1(b)	n.a.	n.p.
Total	**100**	**100**	**100**	**. .**	**100**
Total number	10,219	378,78	2,223,805	. .	35,128

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Ratio Indigenous: non-Indigenous.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Source: AIHW analysis of 2001 NHS (Indigenous supplement) and 2004–05 NATSIHS.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 NHS.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Immunisation data

The 2004–05 NATSIHS collected immunisation status data for Indigenous Australian children in non-remote areas only. The 2004–05 NHS did not collect child immunisation data, so no comparative data are available for non-Indigenous children. The 2004–05 NHS collected influenza and pneumococcal vaccination status data for all adults aged 50 years or more. The 2004–05 NATSIHS collected influenza and pneumococcal vaccination data for persons aged 15 years and over.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

Australian Childhood Immunisation Register

Registrations

The ACIR was established in 1996. When a vaccination is given to a child, details of that vaccination are sent to the Register by the immunisation provider. These details can be sent via a number of means:

- *Medicare Australia online claiming – a software application that allows the transmission of ACIR data via the immunisation provider's desktop software*
- *the internet – approved immunisation providers can record an immunisation encounter through the ACIR secure area within Medicare Australia's website*
- *electronically – by using electronic data interchange*
- *manually – by completing either an immunisation encounter form or an immunisation history form and sending it to Medicare Australia.*

(continued)

Data quality issues (continued)

Some immunisation providers send vaccination details to the ACIR via their state or territory health department. Immunisation providers are encouraged to send vaccination details to the Register on a weekly basis (Australian Government: Medicare Australia 2006).

The ACIR automatically includes all children aged under 7 years who are enrolled in Medicare as its denominator to calculate vaccine coverage rate (ABS and AIHW 2006). It is estimated that approximately 99% of children are registered with Medicare by 12 months of age. However, it is not currently possible to accurately determine whether this is true of the Indigenous Australian child population, or whether Indigenous Australian children are less likely to be enrolled in Medicare. Children not registered with Medicare are added to the ACIR when details of an eligible immunisation are supplied by a recognised immunisation provider (DoHA 2006).

Indigenous status question

Indigenous identification is collected via a 'yes/no' flag on immunisation encounter forms, and through Medicare offices when any changes are made to personal details. Medicare uses the standard definition of Indigenous status; however, these details are converted to a 'yes' or 'no' when reports on vaccination coverage are produced from the ACIR. The immunisation encounter form method of Indigenous identification is voluntary and relies on the immunisation provider seeking the information. Improving Indigenous identification on the ACIR database is an issue currently being investigated by the Australian Government.

Under-identification

General limitations of data available from the ACIR must be considered when used to estimate vaccination coverage. ACIR coverage estimates could overestimate or underestimate coverage, depending on whether those children not identified as Indigenous Australian have higher or lower than average vaccination coverage. A recent study (Rank and Menzies 2007) found that the reporting of Indigenous status on the ACIR has improved from 42% of the estimated national cohort of Indigenous children aged 12 to 14 months in 2002 to 95% in 2005. The ACIR holds records only for children up to 7 years of age.

At the time of writing its report Vaccine preventable diseases and vaccination coverage in Aboriginal and Torres Strait Islander people, Australia 1999 to 2002 *the National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases stated that: 'Indigenous status is currently either not routinely reported or not transferred to the ACIR from the Australian Capital Territory, Queensland and Tasmania, so these jurisdictions were not included in this report' (Menzies et al. 2004).*

Vaccination coverage data from the ACIR and the NATSIHS are not directly comparable because of the differences in the cohort used, population coverage, data collection method, method of calculating 'fully immunised' and vaccines included.

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3.03 Early detection and early treatment

The early detection and early treatment of disease among the Indigenous population measured by the health assessment and disease screening of Aboriginal and Torres Strait Islander peoples

Data sources

Data for this measure come from the Medicare database, the AIHW BreastScreen Australia database, the National Bowel Cancer Screening Register, the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), the AIHW's National Mortality Database, and the Service Activity Reporting (SAR) database.

Medicare database

Medicare enrolment application forms are lodged by persons wishing to enrol with Medicare at Medicare offices in each state/territory or by mail. Information from these forms is entered directly into the Medicare database, which is held by the DoHA.

In November 2002, the ABS standard question on Indigenous identification was included on this form. Because the Indigenous identifier was only introduced recently, the coverage of Indigenous Australians in this data set is not complete. Aboriginal and Torres Strait Islander persons who had identified as Indigenous in this database as at 1 July 2005 numbered 80,658.

BreastScreen Australia

The BreastScreen Australia program consists of a network of dedicated screening and assessment services throughout urban, rural and remote areas of all states and territories. The program provides free biennial mammographic screening and follow-up of any suspicious lesions identified at screening to the point of diagnosis. It is aimed specifically at asymptomatic women aged 50–69 years, with a participation target of 70%. However, women aged 40–49 years and 70 years and older are able to attend for screening (AIHW 2006). The national program was established in 1991. It is funded through the Australian Government Department of Health and Ageing (DoHA) and each of the state and territory governments, and is administered through state coordination units. The AIHW monitors and reports biennially on the performance of BreastScreen Australia.

The standard ABS question is used to record Indigenous status in this database. 'Not stated' values for Indigenous status are not separately quantified, but are included in the 'non-Indigenous' numbers.

The participation rate for Indigenous women in breast screening should be treated with caution as it is not known how many women do not report their Indigenous status.

Mortality

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner who certified the death, or by a coroner. The data are updated each calendar year.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

National Bowel Cancer Screening Register

The National Bowel Cancer Screening Program (NBCSP) was implemented in August 2006 by the Australian Government, in partnership with state and territory governments, as part of its Strengthening Cancer Care initiative. The goals of the NBCSP are to reduce the incidence of and mortality due to bowel cancer through screening to detect abnormalities of the colon and rectum at an early stage and, where bowel cancer has developed, to detect cancers at an early stage in order to maximise the effectiveness of treatment (AIHW & DoHA 2008).

From 7 August 2006 people across Australia turning 55 or 65 years of age between 1 May 2006 and 30 June 2008 were invited to screen for bowel cancer. Invitation packs, including a faecal occult blood test (FOBT), were sent directly to participants by Medicare Australia. Data are collected about participants and their screening outcomes from a variety of sources and stored in the National Bowel Cancer Screening Register, which is maintained by Medicare Australia. The data are collected on questionnaires completed by participants, general practitioners, colonoscopists, pathologists and other specialists. The AIHW produces monitoring reports for DoHA on a 6-monthly basis to assist in management of the NBCSP.

The Australian Government announced in the May 2008 Budget a continuation of this program to provide testing to people aged 50, 55 and 65 years over 3 years commencing in 2008.

Data in this indicator are based on data recorded in the Register for the period 7 August 2006 to 31 July 2007 and presented in the NBCSP monitoring report 2007 (AIHW & DoHA 2008).

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 NHS. The NATSIHS was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the survey at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11.

Service Activity Reporting (SAR) database

The SAR database collects data from approximately 150 Australian Government-funded Aboriginal and Torres Strait Islander primary heath-care services and is held at DoHA. It is estimated that these services provide GP services to around 40% of the Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a 12-month period.

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health-care services in 2005–06 were around 99%.

Note that the SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Analyses

Medicare Benefits Schedule health assessments/checks

Over the last few years, the Australian Government has introduced a number of new Indigenous health checks and health assessments within the Medicare Benefits Schedule (MBS) to help improve early intervention and diagnosis for treatable conditions. The MBS now provides items specifically for regular health checks or assessments for Aboriginal and Torres Strait Islander people of all ages.

A health assessment includes an assessment of a patient's health and physical, psychological and social function and whether preventative health care and education should be offered to the patient. The assessment also includes keeping a record of the health assessment and offering the patient a written report about the health assessment, with recommendations about matters covered by the health assessment.

Data on child and adult health assessments come from the Medicare Database. The Medicare database includes information on the number of health assessments for Indigenous and non-Indigenous Australians of different ages (Item numbers 700, 702, 704, 706, 708 and 710).

- Annual health checks for Aboriginal and Torres Strait Islander children aged 0–14 years were introduced into the MBS in May 2006 (Medicare Item number 708). For the period July 2006 to June 2007, there were 6,315 health assessments of Indigenous children in Australia (a rate of 34 per 1,000 Indigenous children) (Table 3.03.1). The rate at which Indigenous children aged 0–14 years received health assessments under the MBS ranged from 1 per 1,000 in Tasmania to 54 per 1,000 in the Northern Territory.
- Two yearly health checks for Aboriginal and Torres Strait Islanders aged 15–54 years were introduced in the MBS in May 2004 (Medicare Item no. 710). Between July 2006 and June 2007, there were 12,776 health assessments of Indigenous Australians aged 15–54 years, which was a rate of 45 per 1,000 population. The rate at which Indigenous Australians aged 15–54 years received health assessments under the MBS ranged from 1 per 1,000 in Tasmania to 73 per 1,000 in the Northern Territory.
- Annual health assessments for Aboriginal and Torres Strait Islander Australians aged 55 years and over were introduced in November 1999 (Medicare Item numbers 704 and 706). Between July 2006 and June 2007, there were 3,473 health assessments of Indigenous Australians aged 55 years and over (a rate of 93 per 1,000 population). The rate of MBS health assessments for Indigenous Australians aged 55 years and over ranged from 5 per 1,000 in Tasmania to 138 per 1,000 in the Northern Territory.
- Between July 2006 and June 2007, Indigenous Australians aged 55 years and over received MBS health assessments at a rate of 93 per 1,000 (Medicare Item nos. 704 and 706). This was much lower than the rate at which all Australians aged 75 years and over received assessments during this period (208 per 1,000) (Medicare Item numbers 700 and 702) (Table 3.03.2).
- The rate of MBS health assessments for Indigenous Australians aged 55 years and over increased between the first quarter of 2000 and the second quarter of 2007 (from 27 per

1,000 in January to March 2000 to 93 per 1,000 in April to June 2007). The average yearly increase in the rate was around 9 per 1,000. The rate of MBS assessments for Indigenous Australians aged 15–54 years increased between the third quarter 2004 and the second quarter 2007 (from 30 per 1,000 to 47 per 1,000). The rate of MBS assessments for Indigenous Australians aged 0–14 years increased between the second quarter 2006 and the second quarter 2007 (from 9 per 1,000 to 42 per 1,000) (Figure 3.03.1).

Table 3.03.1: Medicare Benefits Schedule health assessments and health checks for Indigenous Australians aged 0–14 years, 15–54 years and 55 years and over, by state/territory, 2006–07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Aboriginal and Torres Strait Islander child health checks aged 0–14 years (MBS Item 708)[(a)]									
Number	1,653	149	2,396	700	200	1	86	1,130	6,315
No. per 1,000	30.3	13.7	45.4	26.9	20.1	0.1	52.8	54.3	34.4
Aboriginal and Torres Strait Islander health checks aged 15–54 years (MBS Item 710)[(b)]									
Number	3,043	482	3,750	2,274	509	8	76	2,634	12,776
No. per 1,000	37.9	26.7	47.9	54.8	31.3	0.8	29.4	72.5	44.8
Aboriginal and Torres Strait Islander Health Assessments aged 55 years and older (MBS Item 704/706)[(c)]									
Number	995	237	989	461	140	7	15	629	3,473
No. per 1,000	87.3	99.5	100.7	85.2	66.1	5.1	65.9	138.4	92.6

(a) Child health checks commenced in May 2006. Data provided are for the period 1 July 2006 to 30 June 2007. Rates are calculated using the average of 2006 and 2007 Indigenous population projections for those aged 0–14 years. Issues of take-up and administrative requirements will affect these data.

(b) These adult health checks were introduced in May 2004 as a biennial assessment. Data provided are for the period 1 July 2006 to 30 June 2007. Rates are calculated using the average of 2006 and 2007 Indigenous population projections for those aged 15–54 years. Monthly patterns of take-up for this item had become more stable by July 2005.

(c) Health assessments for older patients were introduced in November 1999. Data provided are for the period 1 July 2006 to 30 June 2007. Rates are calculated using the average of 2006 and 2007 Indigenous population projections for those aged 55 years and over.

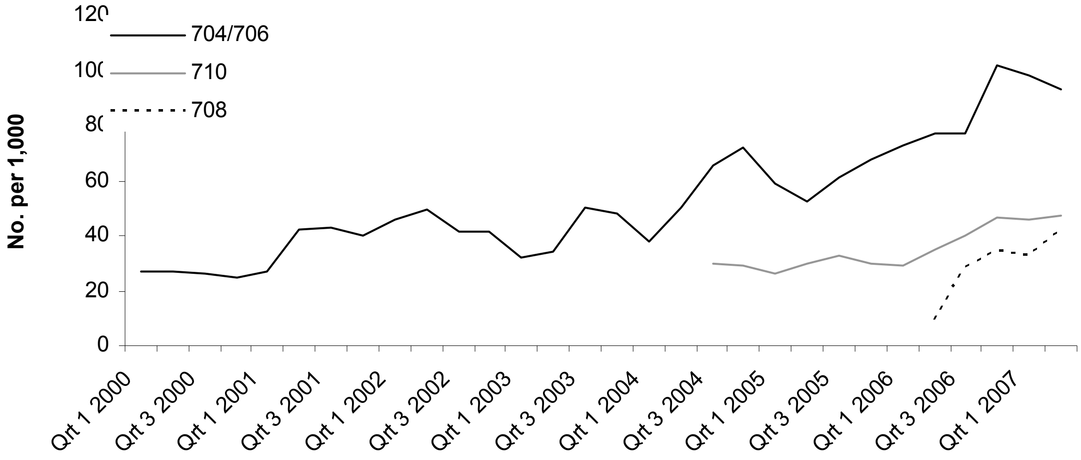
Source: AIHW analysis of Medicare data.

Table 3.03.2: Health assessments for older patients: Indigenous persons 55 years and older and all Australians aged 75 years and older, 2006–07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Aboriginal and Torres Strait Islander health assessments aged 55 years and older (MBS Item 704/706)									
Number	995	237	989	461	140	7	15	629	3,473
No. per 1,000[(a)]	87.3	99.5	100.7	85.2	66.1	5.1	65.9	138.4	92.6
All Australian health assessments aged 75 years and older (MBS Item 700/702)									
Number	97,145	64,817	51,188	17,810	24,831	7,918	1,760	183	265,652
No. per 1,000[(a)]	219.5	196.3	225.9	162.1	209.3	236.0	123.8	60.6	207.7

(a) Data provided are for the period 1 July 2006 to 30 June 2007. Rates are calculated using the average of 2006 and 2007 Indigenous population projections for those aged 55 years and over and the total Australian population estimates for those aged 75 years and over.

Source: AIHW analysis of Medicare data.



Notes

1. Item 704/706 commenced in November 1999.Rates for Item 704/706 were calcualted using the Indigenous population estimates for 2000–2007, divided by four to obtain quarterly rates for each year.
2. Item 710 commenced in May 2004. Rates for Item 710 were calcualted using the Indigenous population estimates for 2004–2007, divided by four to obtain quarterly rates for each year.
3. The rate for Item 708 was calculated using the Indigenous population estimates for 2006–2007, dividied by four to obtain quartely rates for each year.

Source: AIHW analysis of Medicare data.

Figure 3.03.1: Rate of MBS health checks/assessments for Indigenous Australians aged 0–14 years (Item 708), Indigenous Australians aged 15–54 years (Item 710) and Indigenous Australians aged 55 years and over (Item 704/706), January–March 2000 to April–June 2007

Breast cancer screening

BreastScreen Australia—which is jointly funded by the Australian, state and territory governments—undertakes nationwide breast cancer screening. It targets women aged 50–69 years for screening once every 2 years. The program aims to have 70% or more of women aged 50–69 years participating in screening over a 24-month period. All recruitment activities undertaken by BreastScreen Australia specifically focus on women in this age group, although women aged 40–49 years and those over 70 years may also use the service.

- Of the 1,614,871 women aged 40 years and over participating in screening through the BreastScreen Australia program in 2004–2005, 12,580 (0.8%) identified as Aboriginal or Torres Strait Islander. Although 11,898 women in 2004–2005 were classified as not stating their Indigenous status, the true not stated figure is higher because some jurisdictions classified these women as 'non-Indigenous' (AIHW 2008a).
- For the 2-year period 2004–2005, the participation rate for BreastScreen Australia programs was highest among those aged 60–69 years for Indigenous women. The participation rate measures the proportion of the eligible population attending the screening program within a 24-month period.
- The age-standardised participation rate for Indigenous women aged 50–69 years was 36%, which was also markedly lower than the national rate for all females in that age group (56%). The participation rate for Indigenous women aged 40 years and over was also lower than for non-Indigenous women of the same age (24% compared with 35% for all women) (Table 3.03.3).

- The breast screening participation rates for Indigenous women aged 50–69 years ranged from 15% in the Northern Territory to 50% in Queensland (Table 3.03.3).
- The participation rate for Indigenous women aged 40 years and over increased slightly between 1999–2000 (22%) to 2005–06 (25%). The participation rate for Indigenous women aged 50–69 years was higher in 2005–2006 (38%) than in 1999–2000 (32%). There was little change in the participation rate for all women over the period 1999–2000 to 2005–2006 (Figure 3.03.2).

Care needs to be taken when comparing Indigenous and non-Indigenous participation rates due to under-identification of Indigenous women in the BreastScreen Australia program. Caution also needs to be taken in comparing data across jurisdictions, given differences in the collection of data by Indigenous status across jurisdictions.

Breast cancer mortality

Data have been combined for the 5-year periods 1996–2000 and 2001–2005 because of the small number of deaths from each year.

- In 2001–2005, the age-standardised breast cancer mortality rate for Indigenous women in the target age group (50–69 years) in Queensland, Western Australia, South Australia and the Northern Territory combined (45 deaths per 100,000 women) was not significantly different from the rate for non-Indigenous women (52 deaths per 100,000 women (AIHW 2008a).
- From 1996–2000 to 2001–2005, the national breast cancer mortality rate of women in the target age group (50–69 years) decreased significantly from 57 to 53 deaths per 100,000. Over the same time period the breast cancer mortality rate for Indigenous women of all ages in Queensland, Western Australia, South Australia and the Northern Territory combined decreased from 56 in 1996–2000 to 45 deaths in 2001–2005, but this decrease was not significant (AIHW 2008a).

Table 3.03.3: Age-specific participation rates[(a)] in BreastScreen Australia programs of Indigenous and all women, by state/territory, 2004–2005

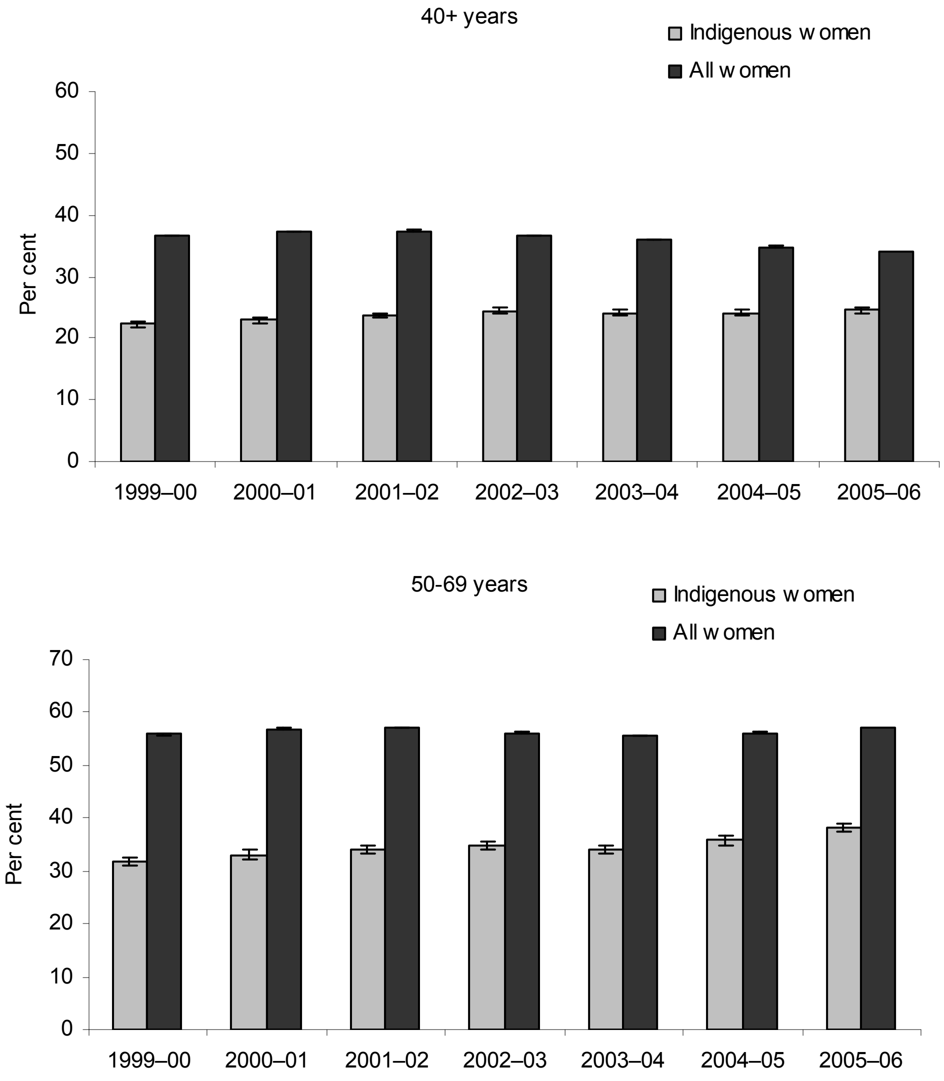
Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT[(b)]	Australia
					Per cent				
Indigenous women									
40–49 years	7.7	4.6	27.5	11.0	7.6	17.8	4.4	4.7	13.3
50–59 years	30.2	36.5	49.1	25.9	31.5	37.3	33.9	13.9	33.5
60–69 years	40.5	40.7	52.1	34.7	36.3	32.4	58.6	17.6	39.3
70+	13.9	18.3	25.3	17.1	10.0	18.0	7.5	8.0	16.4
40+ (age-standardised rate)[(c)]	**21.0**	**22.7**	**37.4**	**20.6**	**19.8**	**25.8**	**22.9**	**10.2**	**24.2**
50–69 years (age-standardised rate)[(c)]	**34.3**	**38.1**	**50.3**	**29.4**	**33.4**	**35.4**	**43.7**	**15.4**	**35.8**
All women									
40–44 years	8.8	6.3	25.3	11.1	10.7	19.7	0.9	6.8	11.9
45–49 years	16.8	11.5	38.3	22.4	21.4	33.4	11.7	16.7	20.9
50–54 years	48.5	55.9	55.3	52.5	60.7	52.3	45.7	36.3	53.0
55–59 years	53.5	57.5	59.5	56.9	61.6	61.0	59.1	45.1	56.9
60–64 years	55.4	61.3	61.0	58.6	63.7	60.3	61.4	45.3	59.1
65–69 years	54.2	58.5	60.8	58.1	62.4	59.1	59.9	41.4	57.7
70–74 years	24.9	51.1	53.3	19.9	23.1	47.6	21.1	17.1	36.6
75–79 years	17.4	15.4	18.4	9.8	12.5	10.4	7.6	10.7	15.7
80–84 years	8.1	2.9	4.9	3.5	4.0	3.4	3.2	7.7	5.2
85+ years	1.8	0.6	1.4	0.8	0.7	0.5	0.8	2.2	1.2
40+ (age-standardised rate)[(c)]	**31.4**	**34.2**	**42.7**	**33.2**	**36.1**	**39.4**	**29.3**	**25.0**	**35.0**
50–69 years (age-standardised rate)[(c)]	**52.3**	**58.0**	**58.6**	**56.0**	**61.9**	**57.6**	**55.2**	**41.5**	**56.2**

(a) Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the 2004 and 2005 ABS estimated resident population.

(b) BreastScreen Australia services are not provided in some remote areas of the Northern Territory. This may affect the Northern Territory's participation rate.

(c) Rates are directly age-standardised to the Australian 2001Standard population.

Source: AIHW 2008a; AIHW analysis of BreastScreen Australia data.



Source: AIHW analysis of BreastScreen Australia data

Figure 3.03.2: Participation rates BreastScreen Australia programs of women 40+ years and women 50–69 years, Indigenous and all women, 1999–2000 to 2005–2006

Bowel Cancer screening

The NBCSP aims to reduce the incidence of and mortality due to bowel cancer through screening to detect abnormalities of the colon and rectum at an early stage and, where bowel cancer has developed, to detect cancers at an early stage in order to maximise the effectiveness of treatment. From 7 August 2006, people across Australia turning 55 or 65 years of age between 1 May 2006 and 30 June 2008 were invited to screen for bowel cancer. Screening packs, including a FOBT, were sent directly to participants by Medicare Australia between 7 August 2006 and 31 July 2006.

Participation in screening

- Between 7 August 2006 and 31 July 2007, 436,153 eligible Australians were invited to screen for bowel cancer; of these, 149,262 agreed to participate.
- There were 490 people who identified as Indigenous who responded to the invitation to screen. Of these, 303 were aged 55 years and 187 were aged 65 years (Table 3.03.4).

Table 3.03.4: People responding to the National Bowel Cancer screening invitations[(a)], by age, sex and Indigenous status

	Indigenous		Non-Indigenous		Total	
	Number	Rate (no. per 100 persons invited)[(b)]	Number	Rate (no. per 100 persons invited)[(b)]	Number	Rate (no. per 100 persons invited)[(b)]
Males						
55 years	127	n.a.	23,133	n.a.	23,260	n.a.
65 years	88	n.a.	19,814	n.a.	19,902	n.a.
Total	**215**	**n.a.**	**42,947**	**n.a.**	**43,162**	**n.a.**
Females						
55 years	176	n.a.	29,847	n.a.	30,023	n.a.
65 years	99	n.a.	21,545	n.a.	21,644	n.a.
Total	**275**	**n.a.**	**51,392**	**n.a.**	**51,667**	**n.a.**
Persons						
55 years	303	n.a.	52,980	n.a.	53,283	n.a.
65 years	187	n.a.	41,359	n.a.	41,546	n.a.
Total	**490**	**n.a.**	**94,339**	**n.a.**	**94,829**	**n.a.**

(a) Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and who returned a participant details form and/or a completed FOBT kit.

(b) Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation. These are unable to be calculated until the end of the first phase of the NBCSP.

Note: There were 54,433 respondents and 305,910 invitees with Indigenous status 'not stated'. These are treated as missing data and excluded from this analysis. Hence the sum of the columns may be less than the national total.

Source: AIHW & DoHA 2008

FOBT positivity numbers and rates

Only correctly completed FOBT kits were analysed. If no significant blood is found in either of the samples the FOBT result is negative. If significant levels of blood are present in at least one of two samples, the FOBT result is considered positive.

- Positivity rates were higher in people identified as Indigenous (8.6%) than non-Indigenous (6.3%) (Table 3.03.5). However, the number of positive results in Indigenous was very small compared with non-Indigenous, and care must be exercised in interpreting these results (AIHW & DoHA 2008).

Colonoscopy procedures

Table 3.03.6 provides a summary of the number of colonoscopy procedures up to 31 July 2007 as part of the NBCSP.

- At this point in the NBCSP, the numbers of colonoscopies recorded in the Register for Aboriginal and Torres Strait Islander peoples were too small to draw any conclusions on colonoscopy rates (AIHW & DoHA 2008).

Table 3.03.5: FOBT positivity rates from national bowel screening, by age, sex and Indigenous status

		Indigenous	Non-Indigenous	Total
Males				
55 years	Positive results	13	1,415	1,428
	Valid results	124	22,257	22,381
	Per cent	10.5	6.4	6.4
65 years	Positive results	11	1,718	1,729
	Valid results	86	19,102	19,188
	Per cent	12.8	9.0	9.0
Total	**Positive results**	**24**	**3,133**	**3,157**
	Valid results	**210**	**41,359**	**41,569**
	Per cent	**11.4**	**7.6**	**7.6**
Females				
55 years	Positive results	11	1,287	1,298
	Valid results	170	28,578	28,748
	Per cent	6.5	4.5	4.5
65 years	Positive results	6	1,269	1,275
	Valid results	95	20,687	20,782
	Per cent	6.3	6.1	6.1
Total	**Positive results**	**17**	**2,556**	**2,573**
	Valid results	**265**	**49,265**	**49,530**
	Per cent	**6.4**	**5.2**	**5.2**
Persons				
55 years	Positive results	24	2,702	2,726
	Valid results	294	50,835	51,129
	Per cent	8.2	5.3	5.3
65 years	Positive results	17	2,987	3,004
	Valid results	181	39,789	39,970
	Per cent	9.4	7.5	7.5
Total	**Positive results**	**41**	**5,689**	**5,730**
	Valid results	**475**	**90,624**	**91,099**
	Per cent	**8.6**	**6.3**	**6.3**

Notes

1. There were 4,382 positive FOBT results and 52,119 valid FOBT results where Indigenous status was not stated. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.
2. Indigenous status is defined by the participant.
3. Percentages are the number of FOBT positive results as a proportion of the total number of valid results.
4. A valid result is either positive or negative. Inconclusive results are excluded.

Source: AIHW & DoHA 2008

Table 3.03.6: Colonoscopies reported following a positive FOBT result from National Bowel Cancer Screening, by age, sex and Indigenous status

	Indigenous		Non-Indigenous		Total	
	Number	Rate (no. per 100 positive FOBTs)	Number	Rate (no. per 100 positive FOBTs)	Number	Rate (no. per 100 positive FOBTs)
Males						
55 years	n.p.	n.p.	n.p.	n.p.	417	29.2
65 years	n.p.	n.p.	n.p.	n.p.	488	28.2
Total	**7**	**29.2**	**898**	**28.7**	**905**	**28.7**
Females						
55 years	n.p.	n.p.	n.p.	n.p.	365	28.1
65 years	n.p.	n.p.	n.p.	n.p.	377	29.6
Total	**5**	**29.4**	**737**	**28.8**	**742**	**28.8**
Persons						
55 years	n.p.	n.p.	n.p.	n.p.	782	28.7
65 years	n.p.	n.p.	n.p.	n.p.	865	28.8
Total	**12**	**29.3**	**1,635**	**28.7**	**1,647**	**28.7**

Notes

1. There were 414 recorded colonoscopies following a positive FOBT result and 4,382 valid FOBT results where Indigenous status was not stated. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.
2. Indigenous status is defined by the participant.
3. Rates of colonoscopies performed are the number of colonoscopies recorded following a positive FOBT as a percentage of the total number of positive FOBTs.

Source: AIHW & DoHA 2008

Mortality from bowel cancer

A major objective of the NBCSP is to reduce mortality from bowel cancer in Australia through early detection and treatment of bowel cancers and through identifying and treating polyps and adenocarcinomas, which might develop into cancer.

- The age-standardised rate of deaths from bowel cancer was significantly lower (7.4 deaths per 100,000 population) in Indigenous in 2001–05 than in non-Indigenous people (21.7 people per 100,000) in Queensland, Western Australia, South Australia and the Northern Territory (AIHW & DoHA 2008).

Cervical cancer screening

A cervical cancer may take 10 or more years to develop, but before this the cervical cells may show pre-cancerous changes. These early changes can be detected by a Pap smear, and if they are promptly treated, cervical cancer can be prevented. Self-reported data from the NATSIHS on the occurrence and regularity of pap smears among Aboriginal and Torres Strait Islander women are presented in the tables and figure below.

- In 2004–05, approximately 85% of Indigenous women aged 18 years and over reported ever having a pap smear test and 58% reported having regular pap smear tests (Table 3.03.7).
- In 2004–05, only 4% of Indigenous women aged 18 years and over reported that they had not heard of a pap smear test.

Pap smears by age and sex

- The 25–34 and 35–44 year age groups had the highest proportion (both 68%), and the 18–24 and 55 years and over age groups had the lowest proportion (both 43%) of Indigenous women who reported having regular pap smear tests (Table 3.03.7).

Table 3.03.7: Indigenous women aged 18 years and over reporting whether had a pap smear test[(a)], by age group, 2004–05

	18–24	25–34	35–44	45–54	55 and over	Total
			Per cent			
Has never had a pap smear test	32.1	8.7	6.0	5.5	13.6	13.2
Has had a pap smear test	65.8	90.7	91.9	92.5	82.2	84.9
Only had one pap smear test	17.0	5.0	3.7	4.1	5.8	7.2
More than one pap smear test but not regular	6.3	17.7	20.0	25.3	32.6	18.8
Has regular pap smear tests	42.5	67.8	68.0	61.6	42.9	58.4
At least annually	11.3	20.5	19.3	17.3	9.3	16.4
More than 1 year, up to and including 2 years	28.7	44.4	41.1	38.4	30.4	37.6
More than 2 years apart	2.5	2.9	7.6	5.7	3.2	4.4
All Indigenous women aged 18 and over[(b)]	**26,193**	**33,330**	**29,487**	**18,831**	**15,454**	**123,295**

(a) Should exclude data from women who have had a hysterectomy; however, this data was not collected in the NATSIHS.

(b) Excludes women who did not complete the NATSIHS form.

Source: AIHW analysis of 2004–05 NATSIHS

Pap smears by state/territory

- In 2004–05, the proportion of Indigenous women who reported never having had a pap smear test was highest in Western Australia (16%) and lowest in Victoria (11%) (Table 3.03.8).
- The proportion of Indigenous women who reported having regular pap smear tests was highest in the Northern Territory (72%) and lowest in New South Wales and Western Australia (both 52%).

Pap smears by remoteness and time series

- In 2004–05, the proportion of Indigenous women who reported never having had a pap smear test was lowest in Inner Regional areas (7%) and highest in Major Cities and Outer Regional areas (both 15%) (Table 3.03.9).
- The proportion of Indigenous women who reported having regular pap smear tests was highest in the Remote/Very Remote areas (65%) and lowest in Major Cities (54%).
- Over the period 2001 to 2004–05, the proportion of Indigenous women who reported having regular pap smear tests increased in Remote areas (from 56% to 65%) and decreased in non-remote areas (from 52% to 47%), although this difference is not statistically significant (ABS 2006) (Figure 3.03.3).

Table 3.03.8: Indigenous women aged 18 years and over reporting whether had a pap smear test[(a)], by state/territory, 2004–05

	NSW	Vic	Qld	WA	SA	NT	Tas/ACT[(b)]	Aust
				Per cent				
Has never had a pap smear test	11.6	10.9	12.7	16.0	14.5	14.8	11.7	13.2
Has had a pap smear test	87.9	89.1	84.9	79.1	82.2	83.8	88.3	84.9
Only had one pap smear test	8.7	7.6	4.0	11.9	7.5	6.0	5.6	7.2
More than one pap smear test but not regular	26.2	18.2	20.3	15.2	15.3	6.0	21.4	18.8
Has regular pap smear tests	52.1	63.4	60.2	52.0	58.4	71.6	60.9	58.4
At least annually	17.7	18.2	17.9	9.2	13.9	17.5	20.0	16.4
More than 1 year, up to and including 2 years	30.3	35.4	39.3	35.2	38.4	51.6	38.0	37.6
More than 2 years apart	4.0	9.2	3.0	7.6	6.2	2.5	3.0	4.4
All Indigenous women aged 18 and over[(c)]	**34,014**	**6,607**	**34,938**	**18,457**	**6,770**	**17,214**	**5,296**	**123,295**

(a) Should exclude data from women who have had a hysterectomy. However, this data was not collected in the NATSIHS.

(b) Due to confidentiality considerations, the samples from Tasmania and the Australian Capital Territory have been combined.

(c) Excludes women who did not complete the NATSIHS form.

Source: AIHW analysis of 2004–05 NATSIHS

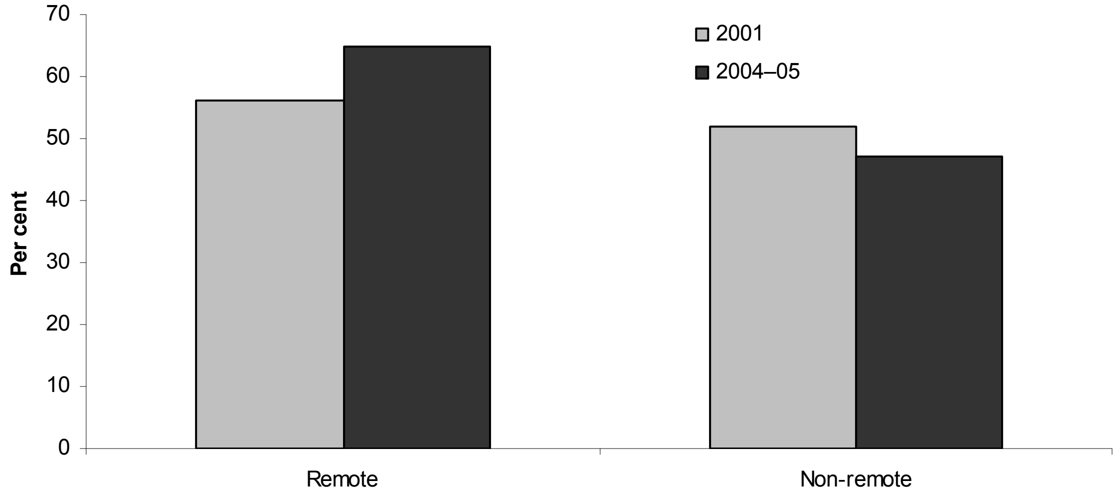
Table 3.03.9: Indigenous women aged 18 years and over reporting whether had a pap smear test[(a)], by remoteness, 2004–05

	Major Cities	Inner Regional	Outer Regional	Remote/Very Remote	Aust
			Per cent		
Has never had a pap smear test	15.0	7.2	14.8	13.7	13.2
Has had a pap smear test	84.2	92.8	84.7	81.2	84.9
Only had one pap smear test	9.3	4.6	7.9	6.2	7.2
More than one pap smear test but not regular	20.5	29.1	20.5	10.4	18.8
Has regular pap smear tests	53.8	58.6	55.5	64.6	58.4
At least annually	20.3	15.6	15.1	13.9	16.4
More than 1 year, up to and including 2 years	28.8	39.8	35.7	46.1	37.6
More than 2 years apart	4.7	3.1	4.7	4.6	4.4
All Indigenous women aged 18 and over[(b)]	**37,224**	**22,125**	**25,028**	**38,917**	**123,295**

(a) Should exclude data from women who have had a hysterectomy. However, this data was not collected in the NATSIHS.

(b) Excludes women who did not complete the NATSIHS form.

Source: AIHW analysis of 2004–05 NATSIHS



Source: ABS 2006.

Figure 3.03.3: Indigenous women aged 18 years and over who had regular pap smear tests, by remoteness, 2001 and 2004-05

Mortality from cervical cancer

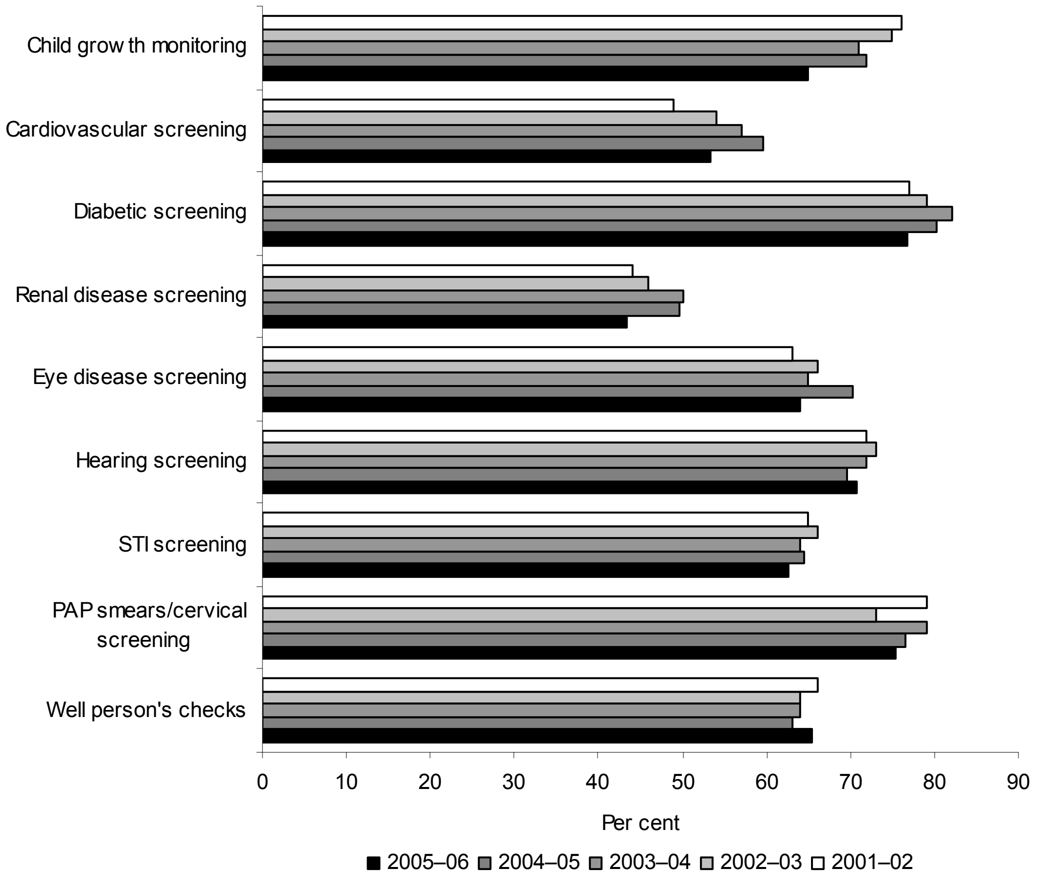
Data on the mortality of Indigenous women from cervical cancer are presented below.

- Over the period 2002–2005 in Queensland, Western Australia, South Australia and the Northern Territory combined there were 23 deaths of Indigenous women from cervical cancer. Indigenous women died at around 5 times the rate of non-Indigenous women in these states and territories (9.4 per 100,000 compared with 2.0 per 100,000) (AIHW 2008b).
- The age-standardised rate for Indigenous women aged 20–69 years, which is the target age for cervical cancer screening, was 8.3 per 100,000 compared with 2.0 per 100,000 for non-Indigenous women of the same age.

Other screening activities

The SAR includes data on health-related activities undertaken or facilitated by Aboriginal and Torres Strait Islander primary heath-care services, including a range of 'screening' programs.

- In 2005–06, approximately 77% of respondent Aboriginal and Torres Strait Islander primary heath-care services provided diabetic screening, 75% provided pap smear/cervical screening, 71% provided hearing screening, 65% provided appropriate well persons checks, 64% provided eye disease screening, 63% provided sexually transmitted infection (STI) screening, 53% provided cardiovascular screening, 43% provided renal disease screening, and 65% provided child growth monitoring (Figure 3.03.4).
- Between 2001–02 and 2005–06, there was little change in the proportion of Aboriginal and Torres Strait Islander primary heath-care services providing most screening services.



Source: DoHA Service Activity Report 2005–06, 2004–05, 2003–04, 2002–03, 2001–02.

Figure 3.03.4: Percentage of respondent Aboriginal and Torres Strait Islander primary heath-care services providing screening activities, 2001–02, 2002–03, 2003–04, 2004–05 and 2005–06

Additional information

Studies on early detection, diagnosis and survival rates for cancer in Indigenous Australians

There have been a number of studies that have investigated the stage of diagnosis and survival rates for cancer for Indigenous Australians.

A study by Condon et al. (2005) on the stage at diagnosis and cancer survival of Indigenous and non-Indigenous people in the Northern Territory between 1991 and 2000 found that Indigenous people were more likely than non-Indigenous people to be diagnosed with advanced disease for cancers of the colon and rectum, breast, cervix and non-Hodgkin's lymphoma. The difference in the proportion of people diagnosed with localised disease ranged from 13 percentage points for cervical cancer (Indigenous 63% compared with non-Indigenous 76%) to 29 percentage points for non-Hodgkin's lymphoma (6% compared with 35%). However, for cancer of the lung, Indigenous people were more likely to be diagnosed with localised disease (41% compared with 31%)—possibly because many older Indigenous people have regular chest X-rays for clinical management of chronic respiratory disease and as part of contact-tracing and long-term follow-up by the tuberculosis control program.

Indigenous people had lower cancer survival than non-Indigenous people for all five cancer sites. The difference in age-stage-adjusted 5-year survival rates was greatest for non-Hodgkin's lymphoma (Indigenous 16% compared with non-Indigenous 65%) and least for lung cancer (5% compared with 12%). With few exceptions, Indigenous people had lower survival than non-Indigenous people with the same stage at diagnosis for each cancer site. The relative risk of cancer death (Indigenous compared with non-Indigenous) was greater for people diagnosed at younger than older age for cancers of the colon and rectum, lung and breast, but not for cervical cancer or non-Hodgkin's lymphoma. For colorectal and lung cancers the relative risk was greater for people diagnosed with localised compared with advanced disease; this was not the case for the other three cancer sites.

Compared with non-Indigenous people diagnosed with the same cancer, Indigenous people are doubly disadvantaged because they are not only diagnosed later, with more advanced disease, but also have lower survival for every stage at diagnosis (Condon et al. 2005).

In relation to the cancer survival differential it is relevant to note that the 'absolute difference in cancer survival is greatest for cancers with the highest survival in non-Indigenous people—cancers of the thyroid, breast, prostate and bowel. For cancer of the thyroid, 5-year survival for all Australian cases is over 90% and for breast cancer over 80%, compared with only 60% and 42%, respectively for Indigenous cases in the Northern Territory. These cancers are amenable to early diagnosis, effective treatment and a high probability of cure. Better access to, and higher quality of, health care offers the possibility of disease cure for many Indigenous people with these cancers' (Condon 2004).

A recent study of 815 Indigenous and 810 non-Indigenous patients diagnosed with cancer in Queensland between 1997 and 2002 found that after adjustment for stage at diagnosis, treatment and comorbidities, non-Indigenous Australians had better survival than Indigenous patients (hazard ratio = 1.3, 95% CI 1.1–1.5). The stage at diagnosis was significantly different, with 47% of Indigenous patients with localised cancers compared with 53% of non-Indigenous patients. Comorbidities such as diabetes or chronic renal disease were more common in Indigenous patients. Indigenous patients were less likely to have had treatment for cancer (surgery, chemotherapy or radiotherapy) and waited longer for surgery (hazard ratio = 0.84, 95% CI 0.72–0.97) than non-Indigenous patients (Valery et al. 2006).

Exploring the experience of Indigenous people and their outcomes in relation to cancer incidence, stage of disease at presentation, access to treatment, survival and mortality can help illustrate aspects of Indigenous Australians' access to, and interaction with, the health system. This provides an opportunity to monitor health system performance for Indigenous Australians in relation to both primary care and specialist services, and the interaction between them (Condon 2004).

Data quality issues

Medicare data

MBS items

The MBS items included in this measure have been introduced over the last few years with the child health check item commencing in May 2006. The take-up of new MBS items is influenced by the speed at which practitioners and the population become aware of the new items and how to use them. Also take-up can be influenced by administrative processes and the time taken to change computer systems to incorporate these new items. Analysis of monthly statistics on Items 704 and 706 suggest that it took several years for these statistics to stabilise into a fairly regular pattern. Item 710 was introduced in May 2004 and monthly statistics had become relatively stable within 12 months.

Standard Indigenous status question

In November 2002, the ABS standard question on Indigenous identification was included on Medicare enrolment forms.

Under-identification

Because the Indigenous identifier was only introduced recently, the coverage of Indigenous Australians in this data set is not complete. Aboriginal and Torres Strait Islanders who had identified as Indigenous in this database as at 1 July 2005 numbered 80,658.

Breast screening

Data are available on breast screening from the BreastScreen Australia program by Indigenous status. It would also be useful to have Indigenous data for the other breast cancer indicators monitored nationally, including breast cancer incidence, detection rate of small invasive cancers, interval cancer rate, program sensitivity (screen-detected cancers), detection of ductal carcinoma in situ, recall to assessment and mortality rates for breast cancer.

Under-identification

The AIHW reports that the participation rate for Indigenous women in breast screening should be treated with caution as it is not known how many women did not report their Indigenous status. The comparison of participation rates between Indigenous and non-Indigenous women should therefore be treated with caution (AIHW 2008a).

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Due to the small size of the Indigenous population, these factors can significantly impact on trends over time and between jurisdictions.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording to the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). Although the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

(continued)

Data quality issues (continued)

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded/recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are under-estimates of the true differences.

Although the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems (ABS & AIHW 2005). The quality of the time series data is also influenced by the late inclusion of a not stated category for Indigenous status in 1998. Before this time, the not stated responses were probably included with the non-Indigenous.

National Bowel Cancer Screening Register

Data on bowel cancer screening are available from the NBCSR by Indigenous status. Data are collected about participants and their screening outcomes from a variety of sources and stored in the Register. The data are collected on questionnaires completed by participants, GPs, colonoscopists, pathologists and other specialists.

The data presented in this indicator are based on data recorded in the Register for the period 7 August 2006 to 31 July 2007. Because of both time lags in reporting and underreporting by clinicians, data on primary health care consultations, colonoscopies and colonoscopy outcomes in this report under-state the true performance of the NBCSP in this period and should be treated with caution (AIHW & DoHA 2008).

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 NHS.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities, and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

(continued)

Data quality issues (continued)

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

Service Activity Reporting data

Response rates to the SAR by Aboriginal and Torres Strait Islander primary heath-care services were around 99% for the 2005–06 period. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.*
- *The SAR questionnaire collects a broad set of indicators for the services and did not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *These data provide a rough guide to service activity in this area but do not attempt to measure quantity or quality.*
- *These data also do not differentiate between services provided by the service and those facilitated by the service.*

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3.04 Chronic disease management

The management of chronic disease among the Aboriginal and Torres Strait Islander population

Data sources

Data on chronic disease management come from the Service Activity Reporting (SAR) data collection and the Healthy For Life data collection.

Healthy for Life Program

Healthy for Life (HFL) program is an ongoing program funded by the Office for Aboriginal and Torres Strait Islander Health (OATSIH) of the Australian Government Department of Health and Ageing (DoHA). The program aims to improve the capacity and performance of primary heath-care services to deliver high-quality maternal and children's health services and chronic disease care to Aboriginal and Torres Strait Islander people through population health approaches using best practice and quality improvement principles.

Services participating in the HFL Program are required to submit de-identified, aggregate service data for 11 essential indicators covering maternal health, child health and chronic disease care on a regular basis (6 and 12 months) as well as information about the characteristics of their service and organisational infrastructure. For the January to June 2007 reporting period 59 HFL services submitted data to the AIHW.

Divisions of General Practice National Performance Indicators

The National Performance Indicators (NPI) are reported in the Divisions of General Practice Annual Reports submitted to DoHA, and are part of the National Quality Performance System (NQPS). The NQPS is an integral aspect of the Government's primary health policy framework, which focuses on five National Priority Areas (NPAs): governance; prevention and early intervention; access; integration; and chronic disease (diabetes, mental health and asthma). The NPAs are tackled through 51 NPIs, which reflect expectations of the Divisions network, and assist members to measure progress and improve planning processes. Data on the first full cycle of reporting were submitted in the 2005–06 Annual Reports, and provide a benchmark for Division performance.

Service Activity Reporting database

The SAR collects data from approximately 150 Australian Government-funded Aboriginal and Torres Strait Islander primary heath-care services and is held at the DoHA. It is estimated that these services provide GP services to around 40% of the Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a
12-month period.

Response rates to the SAR by Aboriginal and Torres Strait Islander primary heath-care services in 2005–06 were around 99%.

Note that the SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Data on the management of specific chronic diseases, such as rheumatic heart disease, coronary artery disease and Type II diabetes, were unable to be provided at present.

For the purpose of this measure, chronic disease management is defined as the clinical management of a disease that has been diagnosed.

Analyses

Aboriginal and Torres Strait Islander primary heath-care services

Healthy For Life data

In 2006–07, 59 services that were funded through the HFL program provided data on chronic disease management in 2006–07.

- In 2006–07, the most commonly used strategies for chronic disease management by Healthy For Life services were use of recognised guidelines (76%) and systematic or opportunistic follow-up of abnormal results (both 75%) (Table 3.04.1).
- Client education (68%) was the most common strategy for client self-management of clients' chronic disease, followed by goal setting (58%) and staff training (54%).
- Over two-thirds (68%) of services provided routine clinical reviews and 71% provided a team-based approach to chronic disease management.

Table 3.04.1: Proportion of services funded through the HFL program that had strategies for chronic disease management, 2006–07

Criteria assessed	Yes	No	No response
		Per cent	
1. A population-based approach			
a. A condition register used for recall and reminder	64	15	20
b. Use of recognised guidelines	76	5	19
2. A team-based approach	71	12	17
3. Clinical review, behavioural, social and environmental risk assessment			
a. Systematic	61	22	17
b. Opportunistic	70	10	20
6. Routine clinical reviews	68	14	19
7. Follow-up of abnormal results			
a. Systematic	75	9	17
b. Opportunistic	75	5	20
9. Systematic approach to client self-management			
a. Staff training	54	27	19
b. Goal setting	58	24	19
c. Client education	68	15	17
d. Hand held records	27	53	20
e. Support for involvement of family	49	29	22
f. Peer support	31	46	24

(a) 'Management' includes health promotion, prevention of complications, clinical care and advocacy.

Note: Data were provided by 59 services.

Source: AIHW, Healthy for Life data collection.

Type II diabetes clients—HbA1c levels

HbA1c levels reflect the mean glycaemia over the preceding 2–3 months and the test is performed in accredited laboratories.

HbA1c levels are defined in accordance with the NPCC as:

a. Less than or equal to 7% (normal)
b. Greater than 7% but less than or equal to 8%
c. Greater than 8% but less than 10%
d. Greater than or equal to 10%

The recommended HbA1c levels are less than or equal to 7% for diabetics—a higher target is to be expected for the elderly (65 years and over), pregnant women, and for patients with severe hypoglycaemia.

For the period 1 January to 30 June 2007, 25 services who were part of the HFL program provided data on whether HbA1c tests were undertaken for Indigenous clients with Type II diabetes in the last 6 months and 11 services provided data on the HbA1c test results of Indigenous clients.

- Of the 4,522 Indigenous adults with Type II diabetes who are regular clients of the HFL services, 1,991 (44%) had an HbA1c test in the last 6 months. The proportion of Indigenous adults with Type II diabetes who had an HbA1c test in the last 6 months varied by remoteness, being highest in remote areas (54%) and lowest in urban areas (30%) (Table 3.04.2).

Table 3.04.2: Number and proportion of Indigenous regular clients[(a)] who are diagnosed with Type II diabetes who had an HbA1c test in the last 6 months, by remoteness, 1 January to 30 June 2007

	Urban	Regional	Remote	Total
Number of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months	457	860	674	1,991
Total number of Indigenous regular clients with Type II diabetes	1,534	1,730	1,258	4,522
Proportion of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months (%)	30	50	54	44

(a) Indigenous adults aged 15 years and over who are regular clients of the HFL service.

Notes

1. Data were provided by 25 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

- Of the 840 Indigenous adults with Type II diabetes who are regular clients of the HFL service and had a HbA1c test in the last 6 months (and for which information was available on their HbA1c result), 28% had a HbA1c result less than or equal to 7%, and 31% had a result greater than or equal to 10% (Table 3.04.3).
- Clients living in remote areas had the highest proportion of HbA1c results that were greater than or equal to 10% (33%).

Table 3.04.3: Number and proportion of Indigenous regular clients[(a)] diagnosed with Type II diabetes, by HbA1c result[(b)], by remoteness, 1 January to 30 June 2007

	Urban	Regional	Remote	Total
	Number of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months			
≤ 7%	56	13	168	237
> 7% to ≤ 8%	43	6	98	147
> 8% to < 10%	36	15	148	199
≥ 10%	42	9	206	257
Total	**177**	**43**	**620**	**840**
	Proportion of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months (%)			
≤ 7%	32	30	27	28
> 7% to ≤ 8%	24	14	16	17
> 8% to < 10%	20	35	24	24
≥ 10%	24	21	33	31
Total	**100.0**	**100.0**	**100.0**	**100.0**

(a) Indigenous adults aged 15 years and over who are regular clients of the HFL service.
(b) HbA1c result in the last 6 months.

Notes

1. Data were provided by 11 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

In 2006–07, 14 HFL services reported information on the average HbA1c result of clients diagnosed with Type II diabetes who had an HbA1c test in the last 6 months. This data is presented in Table 3.04.4 below.

- Of the 890 Indigenous regular clients of HFL services with Type II diabetes who had an HbA1c test in the last 6 months whose last HbA1c result was recorded, the average HbA1c result was 8.4%.
- The average HbA1c result was 8.9% in urban areas, 8.3% in remote areas and 7.8% in regional areas.

Table 3.04.4: Average HbA1c result for Indigenous regular clients[(a)] diagnosed with Type II diabetes who had an HbA1c test in the last 6 months, by remoteness, 1 January–30 June 2007

	Urban	Regional	Remote	Total
Total number of Indigenous regular clients with Type II diabetes who had an HbA1c test in the last 6 months whose last HbA1c result was recorded	177	112	601	890
Average HbA1c result (%)	8.9	7.8	8.3	8.4

(a) Indigenous adults aged 15 years and over who are regular clients of the HFL service.

Notes

1. Data were provided by 14 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

Type II diabetes clients —blood pressure tests

Blood pressure is elevated in many people with Type II diabetes. Increased blood pressure levels have been associated with a spectrum of health problems occurring later in people with diabetes—notably cardiovascular disease (especially stroke), eye damage and kidney damage.

The target blood pressure for people with Type II diabetes is less than or equal to 130/80 mm Hg (Jerums & Colagiuri 2004).

For the period 1 January to 30 June 2007, 22 services that were part of the HFL program provided data whether blood pressure tests were undertaken for Indigenous clients with Type II diabetes in the last 6 months.

- Of the 2,402 Indigenous adults with Type II diabetes who are regular clients of the HFL services, 1,472 (61%) had a blood pressure test in the last 6 months. Around two-thirds (66%) of Indigenous adults with Type II diabetes living in remote areas had a blood pressure test in the last 6 months, compared with 59% in regional areas and 58% in urban areas (Table 3.04.5).

Table 3.04.5: Number and proportion of Indigenous regular clients[(a)] diagnosed with Type II diabetes who had a blood pressure test in the last 6 months, by remoteness, 1 January–30 June 2007

	Urban	Regional	Remote	Total
Number of Indigenous regular clients with Type II diabetes who had a blood pressure test in the last 6 months	169	801	502	1,472
Total number of Indigenous regular clients with Type II diabetes	291	1,350	761	2,402
Proportion of Indigenous regular clients with Type II diabetes who had a blood pressure test in the last 6 months (%)	58	59	66	61

(a) Indigenous adults aged 15 years and over who are regular clients of the HFL service.

Notes

1. Data were provided by 22 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

- Of the 2,797 Indigenous adults with Type II diabetes who are regular clients of the HFL service and had a blood pressure test in the last 6 months, 1,377 (49%) had a blood pressure less than or equal to 130/80 mmHg. The proportion of Indigenous adults with Type II Diabetes who had a blood pressure less than or equal to 130/80 mmHg was highest for clients living in remote areas (58%), followed by regional areas (37%) and urban areas (30%) (Table 3.04.6).

Table 3.04.6: Number and proportion of Indigenous regular clients[(a)] diagnosed with Type II diabetes who had a blood pressure test in the last 6 months whose result was less than or equal to 130/80mmHg, by remoteness, 1 January–30 June 2007

	Urban	Regional	Remote	Total
Number of Indigenous regular clients with Type II diabetes with a blood pressure test less than or equal to 130/80mmHg	50	330	997	1,377
Number of Indigenous regular clients with Type II diabetes	169	899	1,729	2,797
Proportion of Indigenous regular clients with Type II diabetes with a blood pressure test less than or equal to 130/80mmHg (%)	30	37	58	49

(a) Indigenous adults aged 15 years and over who are regular clients of the HFL service.

Notes

1. Data were provided by 26 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

Coronary heart disease clients—blood pressure tests

A client has high blood pressure if their systolic blood pressure is greater than or equal to 140 mmHg; and their diastolic blood pressure is greater than or equal to 90mmHg (NPCC Guidelines).

For the period 1 January to 30 June 2007, 27 services who were part of the Healthy For Life program provided data whether blood pressure tests were undertaken for Indigenous clients with coronary heart disease in the last 6 months and 24 services provided data on blood pressure test results of Indigenous clients.

- Of the 1,865 Indigenous adults with coronary heart disease who are regular clients of the HFL service, 1,267 (70%) had a blood pressure (BP) test in the last 6 months. The proportion of coronary heart disease clients who had a blood pressure test in the last 6 months was highest among clients living in urban areas (71%), followed by remote areas (70%) and regional areas (57%) (Table 3.04.7).

Table 3.04.7: Number and proportion of Indigenous regular clients[(a)] diagnosed with coronary heart disease who had a blood pressure test in the last 6 months, by remoteness, 1 January–30 June 2007

	Urban	Regional	Remote	Total
Number of Indigenous regular clients with coronary heart disease who had a BP test in the last 6 months	539	177	551	1,267
Total number of Indigenous regular clients with coronary heart disease	764	312	789	1,865
Proportion of Indigenous regular clients with coronary heart disease who had a BP test in the last 6 months (%)	71	57	70	68

(a) Indigenous adults aged 15 years and over who are regular clients of the HFL service.

Notes

1. Data were provided by 27 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

- Of the 964 Indigenous adults with coronary heart disease who are regular clients of the HFL service and had a blood pressure test in the last 6 months, 533 (55%) had a blood pressure of less than 140/90 mmHg. Proportions were highest among clients living in urban areas (59%), followed by regional areas (57%) and remote areas (53%) (table 3.04.8).

Table 3.04.8: Number and proportion of Indigenous regular clients[(a)] diagnosed with coronary heart disease who had a blood pressure test in the last 6 months that was less than or equal to 140/90mmHg, by remoteness, 1 January–30 June 2007

	Urban	Regional	Remote	Total
Number of Indigenous regular clients with coronary heart disease who had a blood pressure test less than or equal to 140/90mmHg	138	102	293	533
Total number of Indigenous regular clients with coronary heart disease who had a blood pressure test in the last 6 months	234	179	551	964
Proportion of Indigenous regular clients with coronary heart disease who had a blood pressure test less than or equal to 140/90mmHg (%)	59	57	53	55

(a) Indigenous adults aged 15 years and over who are regular clients of the HFL service.

Notes

1. Data were provided by 24 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

Divisions of General Practice National Performance Indicators data

Information on the management of patients with diabetes is available from the Divisions of General Practice National Performance Indicators. In 2005–06, 40% of Divisions of General Practice in Australia had a systematic approach to support general practices and GPs to capture and record Indigenous status for patients with diabetes who were on the practice register/recall/reminder systems. A further 29% of Divisions were in the process of developing a system for general practices to record Indigenous status for patients with diabetes, 5% did not have a system in place or one in development, and 26% did not report on this Indicator (DoHA 2007).

Specific information on HbA1c and cholesterol results among patients with diabetes is available for the 2006–07 period and is presented below.

- Of the 107 Divisions for whom online reports were available in 2006–07, 80 (75%) reported data on the most recent HbA1c result in the past 12 months among patients with diabetes on practice reminder systems. Of these:
  - 51% had recorded their Indigenous diabetes patients' most recent HbA1c result. About 19% of Indigenous patients on the practice diabetes register had an HbA1c result of 7% or less. When patient's for whom HbA1c was not measured or recorded was excluded, 37% of Indigenous patients on the practice diabetes register had a result of 7% or less.
  - 75% had recorded their non-Indigenous diabetes patients' most recent HbA1c status in the past 12 months. Approximately 43% of non-Indigenous patients on the practice diabetes register had an HbA1c result of 7% or less. When patient's for whom HbA1c was not measured or recorded was excluded, 58% of non-Indigenous patients on the practice diabetes register had a result of 7% or less (Table 3.04.9).
- Of the 107 Divisions who reported on the diabetes domain in 2006–07, 78 (73%) reported data on the most recent total cholesterol among patients with diabetes. Of these:
  - 56% had the cholesterol recorded for their Indigenous patients. About 15% of Indigenous patients on the practice diabetes register had a cholesterol result of less than 4.0 mmol/L. When patient's for whom cholesterol was not measured or recorded was excluded, 26% of Indigenous patients with diabetes had a cholesterol result of less than 4.0 mmol/L.

- 35% had the cholesterol recorded for their non-Indigenous patients. Approximately 10% had a cholesterol result of less than 4.0 mmol/L. When patient's for whom cholesterol was not measured or recorded was excluded, 28% of non-Indigenous patients with diabetes had a cholesterol result of less than 4.0 mmol/L (Table 3.04.10).

Table 3.04.9: Most recent HbA1c in past 12 months among patients on practice diabetes register, by Indigenous status, 2006–07

	Indigenous	Non-Indigenous	Origin Missing
		Per cent	
7% or less	19.1	43.4	35.6
Between 7% and 10%	24.1	28.3	22.5
10% or more	8.0	3.7	3.7
Total measured/ recorded	**51.2**	**75.4**	**61.8**
Not measured/ recorded	48.8	24.6	38.2

Source: National Performance Indicators for Divisions of General Practice.

Table 3.04.10: Most recent cholesterol test in past 12 months among patients with diabetes on register, by Indigenous status, 2006–07

	Indigenous	Non-Indigenous	Origin Missing
		Per cent	
Less than 4.0mmol/L	14.5	9.9	15.5
4.0mmol/L or more	41.5	24.9	31.0
Total measured/ recorded	**55.9**	**34.8**	**46.5**
Not measured/ recorded	44.1	65.2	53.5

Source: National Performance Indicators for Divisions of General Practice

Service Activity Reporting data

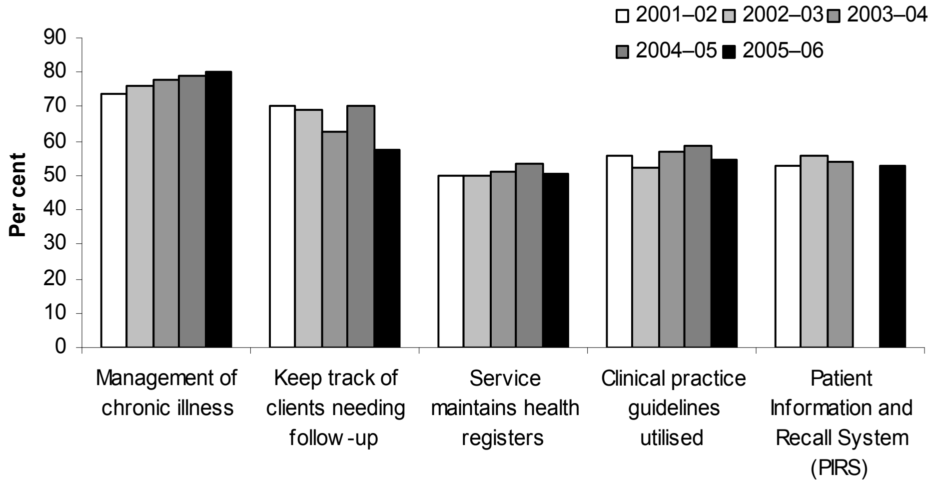
- In 2005–06, there were 150 respondent Aboriginal and Torres Strait Islander primary heath-care services included in the SAR. Not all services provide clinical care. Approximately 82% of these services had a doctor working at the service.
- Approximately 80% of Indigenous primary heath-care services provided management of chronic illness, 57% reported keeping track of clients needing follow-up (for example, through monitoring sheets/follow-up files), 51% reported they maintained health registers (for example, chronic disease register) and 55% utilised clinical practice guidelines. About 53% of Indigenous primary heath-care services reported they used the Patient Information and Recall Systems (PIRS), which automatically provide reminders for follow-up and routine health checks.
- There were 1,235 chronic disease management groups run by Indigenous primary heath-care services around Australia, attended by 13,490 people. More than half of Indigenous primary heath-care services provided the chronic disease management activities of chronic disease management groups (57%), mothers and babies groups (56%), sport/ recreation/ exercise groups (51%), cooking and nutrition (51%), and men's groups (60%) (Table 3.04.11).
- There was a slight increase in the proportion of Indigenous primary heath-care services providing management of chronic illness between 2001–02 and 2005–06 (from 74% to 80%) (Figure 3.04.1). There was a drop from 70% to 57% in the proportion of services

keeping track of clients needing follow-up during this period. There was little change in the proportion of Indigenous primary heath-care services providing other chronic disease management activities between 2001–02 and 2005–06.

Table 3.04.11: Percentage of respondent Indigenous primary heath-care services providing chronic disease management activities and use of the Patient Information and Recall System, 2005–06

	Per cent
Chronic disease management activities	
Management of chronic illness	80
Keep track of clients needing follow-up (e.g. through monitoring sheets/follow-up files)	57
Maintains health registers (e.g. chronic disease register)	51
Clinical practice guidelines used (e.g. Central Australian Remote Practitioners Association, diabetes guidelines)	55
Patient Information and Recall Systems (PIRS)	
PIRS which automatically provides reminders for follow-up and routine health checks	53
Chronic disease management groups	
Counselling groups	46
Chronic disease management groups	57
Antenatal groups	31
Mothers and babies group	56
Tobacco use treatment/prevention groups	39
Alcohol use treatment/prevention groups	47
Other substance use treatment/prevention	35
Cultural groups	49
Sport/recreation/physical exercise groups	51
Cooking and nutrition groups	51
Men’s groups	60
Other groups	54

Source: DoHA Service Activity Report 2005–06.



Note: Data on services providing PIRS was not available in 2004–05.

Source: DoHA Service Activity Report 2005–06, 2004–05, 2003–04, 2002–03, 2001–02.

Figure 3.04.1: Percentage of respondent Indigenous primary heath-care services that provide management of chronic disease, 2001–02, 2002–03, 2003–04, 2004–05 and 2005–06

Additional information

Acute rheumatic fever and rheumatic heart disease

Registrations of acute rheumatic fever

- During 2004 there were 35 registrations of people with acute rheumatic fever (ARF) in the Top End of the Northern Territory and 24 in Central Australia. All registrations in Central Australia, and all but two in the Top End, were for Indigenous Australians. In both registers, 29% of cases were recurrences.
- The peak age of incidence of acute rheumatic fever is 5–14 years. In 2004, 63% of all cases of acute rheumatic fever occurred in this age group and all cases reported occurred in Indigenous children.

For more information on acute rheumatic fever see Measure 1.06.

Secondary prevention of rheumatic heart disease

The immediate aim in the management of acute rheumatic fever/rheumatic heart disease (RHD) is to identify cases of acute rheumatic fever, and once identified, to prevent the progression to rheumatic heart disease through secondary prevention measures. Secondary prevention refers to the early detection of disease and implementation of measures to prevent recurrent and worsening of disease and poorer outcomes.

Secondary prophylaxis with benzathine penicillin G (BPG) is the only RHD control strategy shown to be cost effective at both community and population levels and is recommended for all people with a history of ARF or RHD. Four-weekly BPG dosages is the current treatment of choice, except in patients considered to be at high risk, for whom 3-weekly administration is recommended. Pharmacokinetic data suggest that prolonging the dosing interval beyond 4 weeks may increase the risk of breakthrough ARF, so regular and timely adherence to the dosing regimen is important. Where BPG is contraindicated, alternatives are available, although these are considered to be less effective. Secondary prophylaxis should be continued in all people with ARF or RHD for a minimum of 10 years after the last episode of ARF or until the age of 21 years (whichever is the longer period). Those with moderate or severe RHD should continue secondary prophylaxis up to the age of 35–40 years. The fundamental goal for the long-term management of chronic RHD is to prevent, or at least forestall valve, surgery. Prophylaxis with BPG to prevent recurrent ARF is therefore a crucial strategy in managing patients with a history of ARF and RHD (NHFA and CSANZ 2006).

Adherence to secondary prophylaxis has been problematic in remote Aboriginal and Torres Strait Islander communities. For example, in 2005 in the Top End of the Northern Territory, 28% of patients on secondary prophylaxis missed half or more of their scheduled BPG injections over a 12-month period, although around half of all episodes of ARF were recurrences. This suggests that adherence to prophylaxis is very poor. The main reason for poor adherence in remote Indigenous communities is thought to be related to the availability and acceptability of health services, rather than personal factors such as injection refusal, pain of injections, or a lack of knowledge and understanding of ARF and RHD (NHFA and CSANZ 2006).

Data quality issues

Healthy For Life data

For the January to June 2007 reporting period, 59 services submitted data as part of the Healthy For Life Program. Not all of these services were able to provide data for all of the essential indicators and service profile questions.

Divisions of General Practice National Performance Indicators data

The National Performance Indicators (NPI) are reported in the Divisions of General Practice Annual Reports submitted to DoHA, and are part of the National Quality Performance System (NQPS). Although no single Division reported against all the NPIs, all indicators were reported against in the 2005–06 Annual Report. Much of the data provided involved inconsistencies, errors or omissions, however, and could not be used. Divisions were required to report on at least one domain within the chronic disease priority area, and of the 119 Divisions across Australia 104 completed at least some part of the diabetes sections.

Service Activity Reporting (SAR) data collection

Response rates to the SAR by Aboriginal and Torres Strait Islander primary heath-care services were around 99% in 2005–06. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.*
- *The SAR questionnaire collects a broad set of indicators for the services and did not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *Data provided are often estimates and, although these are thought to be reasonable, there has been no audit to check the accuracy of these figures.*

In relation to the statistics for this performance measure, these data provide a rough guide to service activity in this area, but do not attempt to measure quantity or quality.

References

DoHA (Department of Health and Ageing) 2007. A report of the aggregation and analysis of the 2005/06 National Performance Indicators for Divisions of General Practice.

Jerums & G, Colagiuri R. 2004. Evidence based guidelines for Type 2 diabetes: blood pressure control. Canberra: Diabetes Australia & NHMRC. <http://www.diabetesaustralia.com.au>.

NHFA (National Heart Foundation of Australia) and CSANZ (Cardiac Society of Australia and New Zealand) 2006. Diagnosis and management of acute rheumatic fever and rheumatic heart disease in Australia: an evidence-based review. National Heart Foundation of Australia (RF/RHD Guideline Development Working Group).

3.05 Differential access to key hospital procedures

The key hospital procedure differentials between Aboriginal and Torres Strait Islander peoples and other Australians as measured through standardised rates, ratios and rate differences in hospital separations with the same principal diagnosis

Data sources

Data for this measure come from the AIHW's National Hospital Morbidity Database.

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions that have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (AIHW unpublished). These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of patients was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period from July 2004 to June 2006. An aggregate of 2 years of data has been used because the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Analyses

Age-standardised rates and ratios have been used for this indicator as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

Hospitalisations with a procedure recorded

Table 3.05.1 presents the proportion of hospitalisations with a procedure recorded in public hospitals between June 2004 and July 2006 by a number of demographic variables. This table includes all states and territories because the proportions are of those in hospital and not population rates and, as such, are not affected by Indigenous under-identification issues as are other data on hospital admissions.

- Between July 2004 and June 2006, there were around 11.6 million hospitalisations with a procedure reported in Australia, 2.9% (338,278) of which were hospitalisations recorded for Indigenous patients. Excluding hospitalisations for care involving dialysis, there were around 9.9 million hospitalisations with a procedure reported, 1.5% (146,315) of which were hospitalisations recorded for Indigenous patients. Over one-third (36%) of all hospitalisations of Indigenous Australians had more than one procedure performed.
- Although Indigenous Australians were more likely to be hospitalised than other Australians, they were less likely to undergo a procedure once admitted to hospital. Between July 2004 and June 2006, excluding hospitalisations for care involving dialysis, 55% of Indigenous hospitalisations had a procedure recorded, compared with 80% of other hospitalisations (Table 3.05.1).
- The proportion of hospitalisations with a procedure recorded was highest for Indigenous patients aged 55–64 years and 65 years and over (both 59%).
- Patients who were hospitalised in Remote or Very Remote areas were less likely to undergo a procedure (44% and 46% of Indigenous patients and 66% and 62% of other patients) compared with those hospitalised in Major Cities (69% and 82% for Indigenous and other patients, respectively).
- Both Indigenous and other patients hospitalised in private hospitals were much more likely to undergo a procedure (88% and 92%, respectively) than Indigenous and other patients hospitalised in public hospitals (54% and 70%, respectively).
- Indigenous patients hospitalised in Queensland and South Australia were least likely to receive a procedure (52% and 53%) and Indigenous patients hospitalised in Tasmania were most likely to receive a procedure (71%).
- For Indigenous Australians, 5% of hospitalisations with a procedure recorded occurred in private hospitals compared with 50% for non-Indigenous Australians.

Table 3.05.1: Number and proportion of hospitalisations with a procedure recorded[(a)], by Indigenous status, Australia, July 2004 to June 2006

	Indigenous		Other[(b)]	
	No.	%	No.	%
Overall	146,315	55.3	9,770,726	79.6
Sex				
Males	61,582	54.8	4,443,619	79.9
Females	84,730	55.8	5,327,032	79.4
Age group (years)				
Under 1	7,345	43.0	130,753	51.3
1–14	20,687	49.3	480,341	64.6
15–34	50,392	50.8	1,726,711	73.3
35–54	42,133	52.4	2,399,282	82.0
55–64	13,272	58.6	1,555,140	85.9
65+	12,486	58.5	3,478,492	83.2
State/territory of residence				
NSW	36,459	54.6	3,003,963	79.0
Vic	7,544	64.9	2,699,089	79.4
Qld	37,239	51.5	1,922,453	78.9
WA	28,435	56.3	976,138	84.7
SA	9,784	53.1	803,636	79.6
Tas	2,645	70.7	196,827	76.1
ACT	877	67.9	112,090	81.6
NT	23,332	55.6	56,530	75.5
Remoteness of residence				
Major Cities	39,055	68.9	6,661,310	81.7
Inner Regional	27,065	62.6	2,062,589	78.0
Outer Regional	34,788	50.3	905,532	71.9
Remote	16,750	44.4	97,471	66.2
Very Remote	28,181	46.3	32,150	61.8
Sector				
Public	139,646	54.2	4,933,686	70.2
Private	6,669	87.7	4,837,040	92.2
Same-day admission				
Yes	41,810	57.2	5,166,717	85.0
No	104,505	54.4	4,604,009	74.3
Patient accommodation				
Public	136,056	54.4	4,263,895	69.5
Private	10,234	77.5	5,494,629	89.8

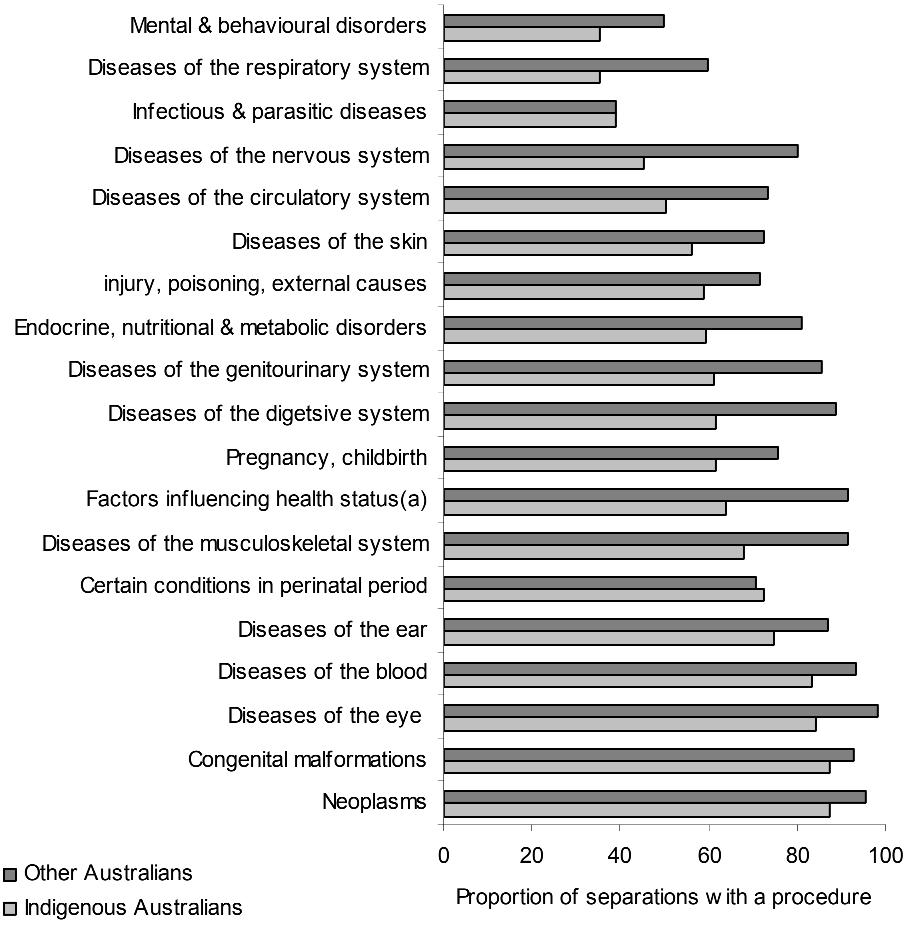
(a) Hospitalisations with a principal diagnosis of care involving dialysis (Z49) have been excluded.

(b) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

Note: Proportions are age-standardised using the age-specific rates of other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.05.1 shows that between July 2004 and June 2006 in Australia, the proportion of separations with a procedure reported by principal diagnosis was lower for Indigenous patients than for other patients for almost all of the diagnosis chapters. For example, for diseases of the nervous system, 46% of separations for Indigenous patients had a procedure reported, compared with 80% of separations for other patients. Certain conditions originating in the perinatal period was the only chapter for which the proportion of separations with procedures was higher for Indigenous patients.



(a) Excludes care involving dialysis

Note: Proportions are age-standardised using the age- and cause-specific rates of other Australians.

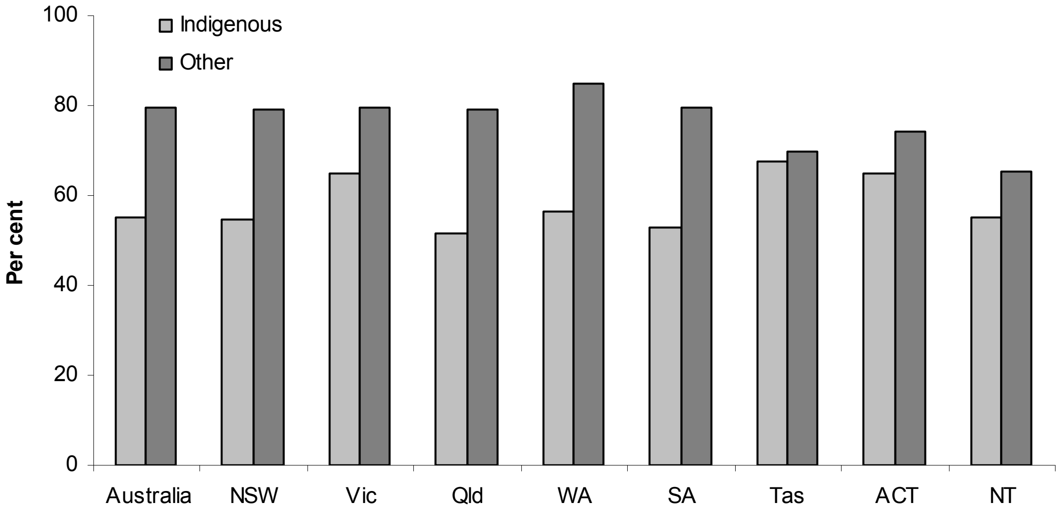
Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.05.1: Proportion of separations with a procedure reported, by principal diagnosis and Indigenous status, Australia, July 2004 to June 2006

Detailed analyses (univariate and multivariate regression) of hospitalisations with a procedure reported

In 2007–08, the AIHW undertook a series of univariate and multivariate regression analyses to examine the relative importance of selected variables, including Indigenous status, in affecting the outcome of whether a patient hospitalised underwent a procedure for the period 2004–05 to 2005–06 in Australia.

The first series of univariate analyses revealed that there were variations in the likelihood of receiving a procedure by state/territory and principal diagnosis chapter. As shown in Figure 3.05.2, in all states and territories, Indigenous Australians were less likely to receive a procedure than other Australians. For Indigenous Australians, the lowest proportions were in Queensland and South Australia, with the highest proportions in Tasmania, Victoria, and the ACT. The greatest disparities were observed in NSW, Qld, WA and SA—all with ratios of 0.7. There was little disparity between Indigenous patients and other patients in Tasmania.



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.05.2. Proportion of hospitalisations with a procedure performed, by Indigenous status and state/territory (excluding care involving dialysis), 2004–05 to 2005–06

The univariate analyses found that the principal diagnoses that had the lowest proportions of procedures reported for Indigenous patients were symptoms, signs, n.e.c. (31.1%), mental and behavioural disorders (35.1%), diseases of the respiratory system (35.5%), and infectious and parasitic diseases (38.8%). The highest proportions of procedures reported for Indigenous patients were factors involving health status (96.2%), neoplasms (87.3%), congenital malformations (87.3%) and diseases of the eye (84.2%).

The disease categories with the greatest levels of inequality in procedures reported between Indigenous Australians and other Australians were diseases of the nervous system, diseases of the respiratory system, and signs, symptoms, n.e.c. – all with ratios of 0.6. There was no disparity between Indigenous Australians and other Australians in procedures reported for infectious and parasitic diseases, certain conditions in perinatal period and factors influencing health status (ratio of 1.0).

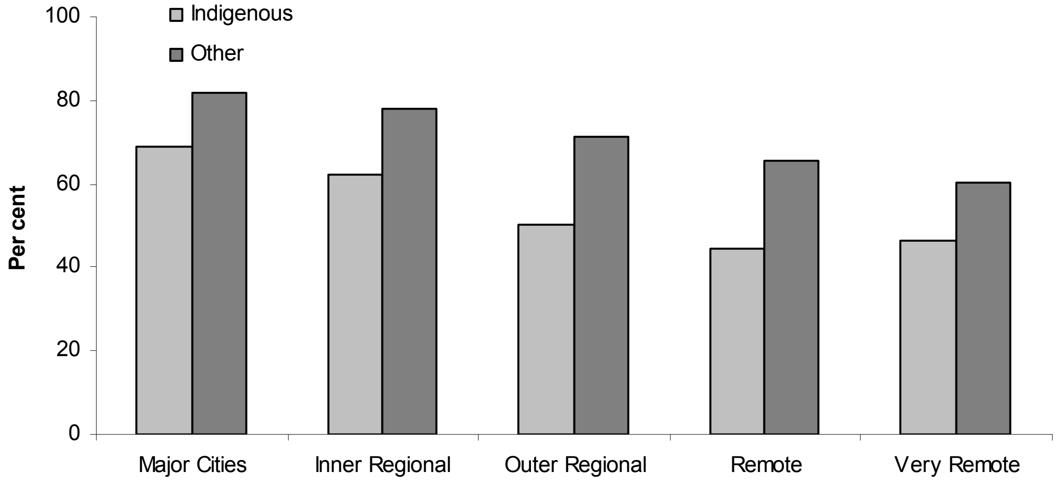
Further analyses by state/territory found that, across all states and territories, the proportion of separations for 'factors influencing health status and contact with health services' with a procedure recorded was higher for Indigenous patients or similar to the proportions for other Australians.

In South Australia and Victoria, separations for infectious and parasitic diseases and conditions originating in the perinatal period also had higher procedure rates for Indigenous patients than for other patients.

In the Northern Territory, several diagnosis chapters had a higher proportion of separations with a procedure reported for Indigenous patients, including mental and behavioural disorders, infectious and parasitic diseases, conditions originating in the perinatal period, diseases of the blood, and congenital malformations.

Tasmania and the ACT also had higher proportions of separations with a procedure reported for Indigenous patients than for other patients for numerous disease categories, including diseases of the blood and congenital malformations.

A second series of univariate analyses focused on differences by state/territory, diagnosis chapter, and remoteness category. Figure 3.05.3 demonstrates that the proportion of separations with a procedure reported is lower for Indigenous patients in all remoteness categories.



Source: AIHW analysis of National Hospital Morbidity Database

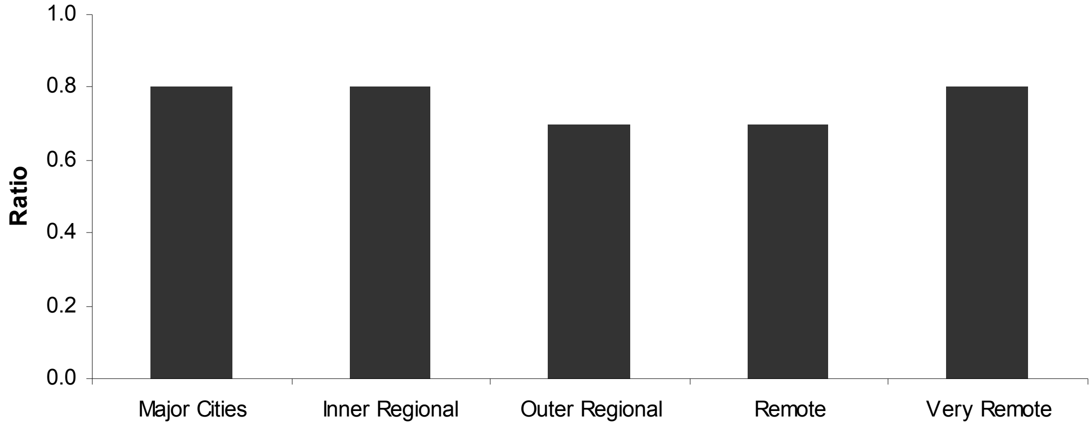
Figure 3.05.3: Proportion of hospitalisations with a procedure reported, by Indigenous status and remoteness (care excluding dialysis), 2004–05 to 2005–06

The lowest proportion of hospitalisations with procedures reported for Indigenous patients was in Remote areas, although for other patients the lowest proportion was in Very Remote areas.

The breakdown by state/territory shows that in Qld, NT, NSW and Tas, the overall proportions of separations with a procedure reported were lowest in Remote areas, followed by Very Remote areas. In WA and SA, the lowest proportions were in Very Remote areas, followed by Outer Regional and Remote areas. In Victoria, the proportions for Indigenous patients were lowest in Remote areas followed by Outer Regional areas.

In all states and territories, Indigenous patients were less likely to undergo a procedure across all remoteness categories, with the exception of Tasmania and the ACT where proportions were similar for all relevant remoteness categories, and the Northern Territory where the proportion of hospitalisations with a procedure reported for Indigenous and other patients in Outer Regional areas was similar.

As shown in Figure 3.05.4, the greatest disparities between Indigenous Australians and other Australians were found in Outer Regional and Remote areas, with Indigenous Australians being 30% less likely to receive a procedure while in hospital.



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.05.4: Disparity in the likelihood of receiving a procedure in hospital, by remoteness (care excluding dialysis), 2004–05 to 2005–06

In Qld, WA, SA and NSW, disparities were greatest in Outer Regional, Remote, and Very Remote areas (ratios of 0.6 to 0.7). In NT, disparities were greatest in Remote areas (0.8) and in Victoria, the ratio of Indigenous to other Australian separations with a procedure reported was similar in Major Cities, Inner Regional and Outer Regional areas (ratios of 0.8).

The data were further broken down by remoteness category and principal diagnosis. The proportions of separations for which Indigenous patients received procedures were lowest in Remote and Very Remote areas for most principal diagnoses.

The diagnostic chapters with the lowest proportions of Indigenous separations receiving a procedure were fairly consistent across remoteness categories. The same four principal diagnoses (symptoms, signs, n.e.c., mental and behavioural disorders, infectious and parasitic diseases, and diseases of the respiratory system) had the lowest proportion of Indigenous separations receiving a procedure in each remoteness category. *Within* each of the categories, the likelihood of receiving a procedure decreased with remoteness (Table 3.05.2).

Table 3.05.2: Diagnosis chapters with the lowest proportions of Indigenous separations receiving a procedure, Australia, 2004–05 to 2005–06

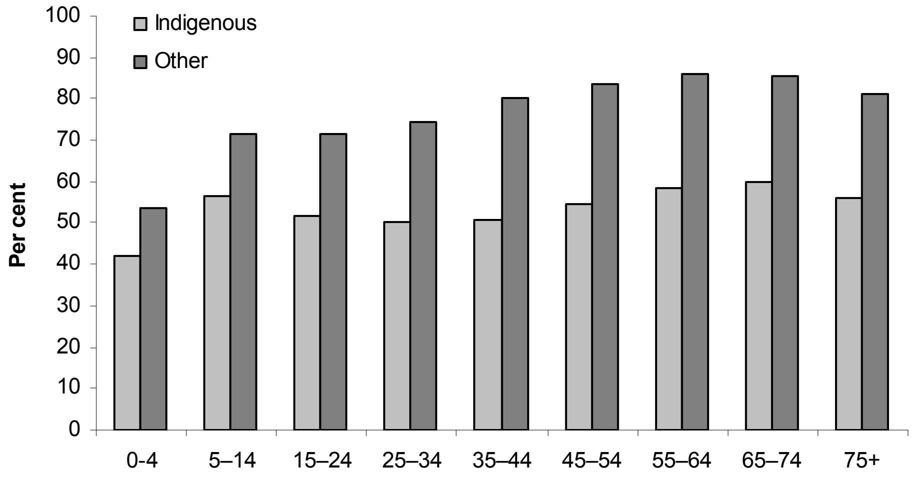
Remoteness category	Lowest proportion	Second lowest proportion	Third lowest proportion
Major Cities	Symptoms, signs, n.e.c. (45.3%)	Mental and behavioural disorders (48.2%)	Infectious and parasitic (50.5%)
Inner Regional	Symptoms, signs, n.e.c. (35.6%)	Infectious and parasitic (37.6%)	Mental and behavioural disorders (39.9%)
Outer Regional	Symptoms, signs, n.e.c. (24.7%)	Mental and behavioural disorders (29.1%)	Diseases of the respiratory system (30.8%)
Remote	Symptoms, signs, n.e.c. (21.5%)	Mental and behavioural disorders (22.1%)	Diseases of the respiratory system (27.3%)
Very Remote	Mental and behavioural disorders (17.3%)	Diseases of the respiratory system (25.7%)	Symptoms, signs, n.e.c. (25.9%)

Source: AIHW analysis of National Hospital Morbidity Database

A third series of more-detailed univariate analysis looked at the association between receiving a procedure once hospitalised and other variables aside from state/territory, remoteness and principal diagnosis such as age, sex, same day admission, sector of hospital, volume of procedures, diagnosis subcategory and procedure block.

This analysis showed that the proportion of Indigenous males and females who received a procedure once in hospital was similar (51% and 52%, respectively). The disparity between Indigenous males and other males and Indigenous females and other females in the proportion who received a procedure once in hospital was similar (ratios of 0.9 including separations for dialysis, and ratios of 0.7 excluding separations for dialysis).

Half of all Indigenous patients who received a procedure once in hospital were aged 15–44 years (50%). In comparison, only 29% of other patients aged 15–44 years received a procedure once in hospital. The majority of other patients who received a procedure once in hospital were aged 55 years and over (52%). Within each age group, the highest proportion of hospitalisations of Indigenous and other patients for which a procedure was reported were for those aged 55–64 and 65–74 years (59% to 60% for Indigenous and 86% for other patients) (Figure 3.05.5). Indigenous patients were less likely to receive a procedure once in hospital than other patients across all age groups. The greatest disparity was observed for 35–44 years (ratio of 0.6).

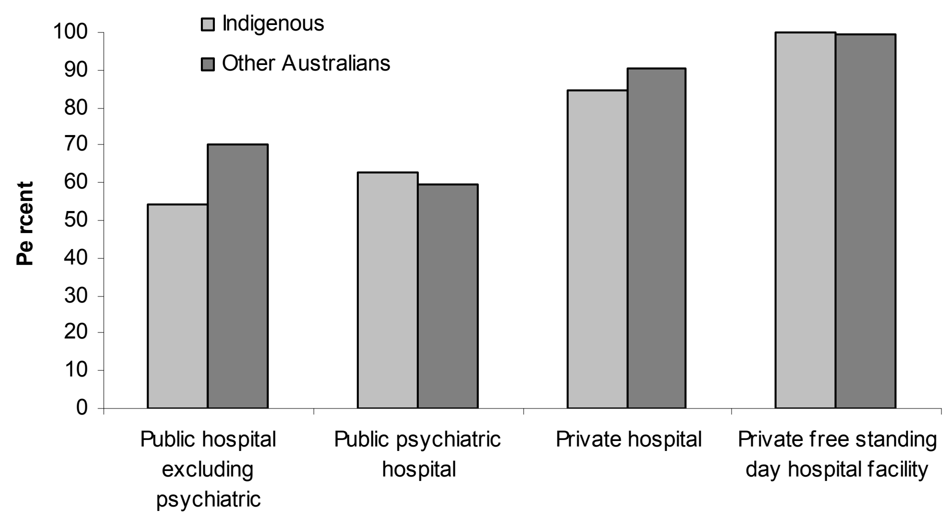


Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.05.5: Proportion of separations with a procedure reported (excluding care involving dialysis), by Indigenous status and age group, Australia, 2004–05 to 2005–06

The proportion of separations with a procedure reported was slightly higher for Indigenous patients who were admitted to hospital for one day only (57%) compared with Indigenous patients who remained in hospital for more than one day (54%). The disparity between Indigenous and other Australians in the proportion of separations with a procedure reported was similar for those who had a same-day admission and those who were in hospital for more than one day (ratios of 0.7).

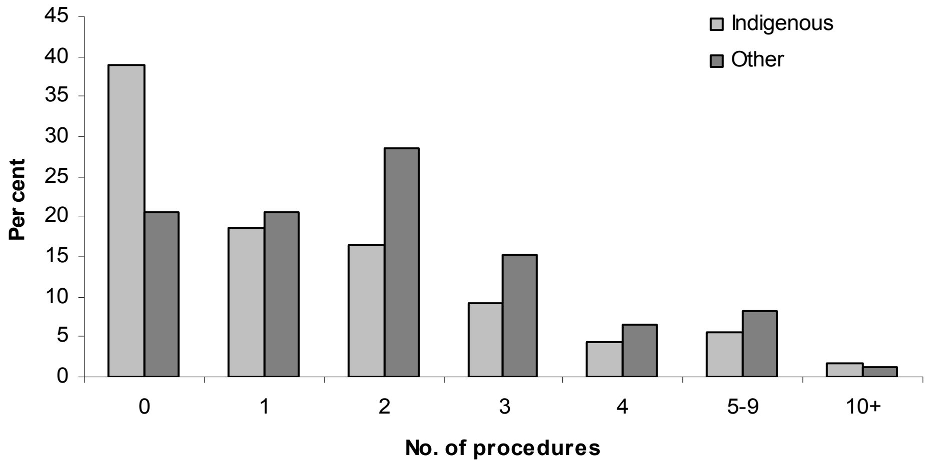
The proportion of separations with a procedure reported was much higher for Indigenous patients admitted to private hospitals than for Indigenous patients admitted to public hospitals (87% compared with 51%). The proportion of separations of Indigenous patients with a procedure reported was higher for public psychiatric hospitals than other public hospitals (62% compared with 51%). Although Indigenous and other patients admitted to private hospitals or public psychiatric hospitals were equally as likely to receive a procedure once in hospital, Indigenous patients admitted to public hospitals, excluding psychiatric hospitals were less likely to receive a procedure than other patients admitted to public hospitals (ratio of 0.8) (Figure 3.05.6).



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.05.6: Proportion of separations with a procedure reported (excluding care involving dialysis), by Indigenous status and sector of hospital, Australia, 2004–05 to 2005–06

Around 39% of all hospitalisations of Indigenous Australians did not have a procedure reported. Around 19% of Indigenous hospitalisations had one procedure reported, 16% had two procedures reported, 9% had three procedures reported and 12% had four or more procedures reported. Indigenous Australians were twice as likely as other Australians to have no procedures reported and less likely than other Australians to have 1 to 9 procedures reported. They were, however, more likely to have 10 or more procedures reported, which probably reflect the higher rates of comorbidities and more problematic hospitalisations (Figure 3.05.7).



Note: Data have been indirectly age-standardised.

Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.05.7: Proportion of separations with a procedure reported (excluding care involving dialysis), by Indigenous status and number of procedures reported, Australia, 2004–05 to 2005–06

Indigenous males and females were equally or less likely to receive a procedure than other Australians if they were hospitalised for any of the top 20 most common disease categories. The greatest disparities in the proportion of separations with a procedure reported between Indigenous and other males among the top 20 most common diagnosis subcategories were for other forms of heart disease (ratio of 0.4), schizophrenia, schizotypal and delusional disorders (ratio of 0.5), and disorders related to length of gestation and fetal growth (ratio of 0.5). The greatest disparities in the proportion of separations with a procedure reported between Indigenous and other females among the top 20 most common diagnosis subcategories were for symptoms, signs involving the digestive system and abdomen (ratio of 0.5), and diseases of the oesophagus, stomach and duodenum (ratio of 0.6).

Whether a person hospitalised for each principal diagnosis chapter received a procedure corresponding to that principal diagnosis (based on related procedure block chapters) was also examined. For all of the 13 principal diagnosis chapters that had a corresponding procedure block chapter (diseases of the circulatory system; diseases of the digestive system; diseases of the respiratory system; diseases of the nervous system; diseases of the eye and adnexa; diseases of the ear and mastoid process; pregnancy, childbirth and the puerperium; diseases of the musculoskeletal system; diseases of the skin and subcutaneous tissue; neoplasms; diseases of the musculoskeletal system; diseases of the blood; and endocrine, metabolic and nutritional disorders), Indigenous males and females were less likely overall to receive a relevant procedure than other males and females except for neoplasms, where Indigenous males and females were slightly more likely to receive a radiation oncology procedure than other males and females. When specific procedures within the relevant procedure block corresponding to the principal diagnosis were analysed, the results showed that Indigenous Australians were more likely than other Australians to receive some specific procedures and less likely to receive others.

In order to test whether compositional differences between Indigenous Australians and other Australians were driving the differences in the likelihood of having a procedure reported, a series of multivariate analyses were run, which included sociodemographic characteristics, state and territory variables, remoteness, hospital sector (public or private), principal diagnosis, and total number of additional diagnoses.

After controlling for these other variables, Indigenous status was the twelfth most significant variable (third if the principal diagnosis chapters were not included) contributing to whether a patient would receive a procedure once in hospital. The probability of receiving a procedure for Indigenous Australians was about 39% less than the probability for other Australians.

The most significant variable contributing to whether a patient would receive a procedure once in hospital was hospital sector. The odds of a person in a private hospital receiving a procedure was more than 4 times the odds for a patient in a public hospital.

The second most significant variable was the number of additional diagnoses. Patients hospitalised with additional diagnoses recorded were more likely to receive a procedure than those without additional diagnoses recorded.

Of the diagnostic categories, neoplasms was the most significant in increasing the likelihood of receiving a procedure, followed by diseases of the skin, diseases of the eye and adnexa, diseases of the genitourinary system, diseases of the blood, pregnancy and childbirth, and diseases of the ear and mastoid process.

Remoteness of usual residence ranked after Indigenous status in terms of importance, and was more significant than state/territory of usual residence. The odds of receiving a procedure for patients residing in Remote and Very Remote areas were around half as great as the odds for patients residing in Major Cities.

Age group and sex were also significant variables in predicting whether a person would receive a procedure once in hospital.

A series of multivariate analyses also examined whether a person hospitalised for each principal diagnosis chapter underwent a procedure corresponding to that principal diagnosis. The results showed that after controlling for age, sex, sector, state/territory of usual residence, remoteness of usual residence, and number of additional diagnoses, Indigenous status was still significant except for diseases of the genitourinary system, diseases of the digestive system, and diseases of the ear and mastoid process.

For most principal diagnosis chapters, Indigenous status ranked after sector of hospital, number of additional diagnoses, sex, age group, and state/territory of usual residence. For eight of the 13 principal diagnosis chapters, Indigenous status ranked above remoteness of usual residence of the patient in terms of importance.

Given that the control variables did have a significant impact on the outcome variable, separate multivariate regressions were run for Indigenous and other Australians to test whether the impact of these variables was similar for both groups, such as whether living in a remote area has the same effect for other Australians that it does for Indigenous Australians.

Results from the overall analysis showed that after adjusting for age, sex, sector, state/territory of usual residence of patient, Remoteness of usual residence of patient, principal diagnosis and number of additional diagnoses, for both Indigenous and other Australians the four most significant variables contributing to whether a patient would receive a procedure once in hospital was the number of additional diagnoses, a principal diagnosis of neoplasms, principal diagnosis of diseases of the skin and hospital sector. The sector was the most significant variable for other Australians (it was the fourth most significant variable for Indigenous Australians).

Remoteness of usual residence of the patient was more significant in contributing to the outcome of whether a patient would receive a procedure than state/territory of usual residence of the patient for both Indigenous and other Australians. The likelihood of receiving a procedure for patients residing in Remote and Very Remote areas was around half the likelihood for patients residing in Major Cities. Remoteness of usual residence of the patient ranked higher in terms of importance for Indigenous Australians than for other Australians (sixth compared with thirteenth).

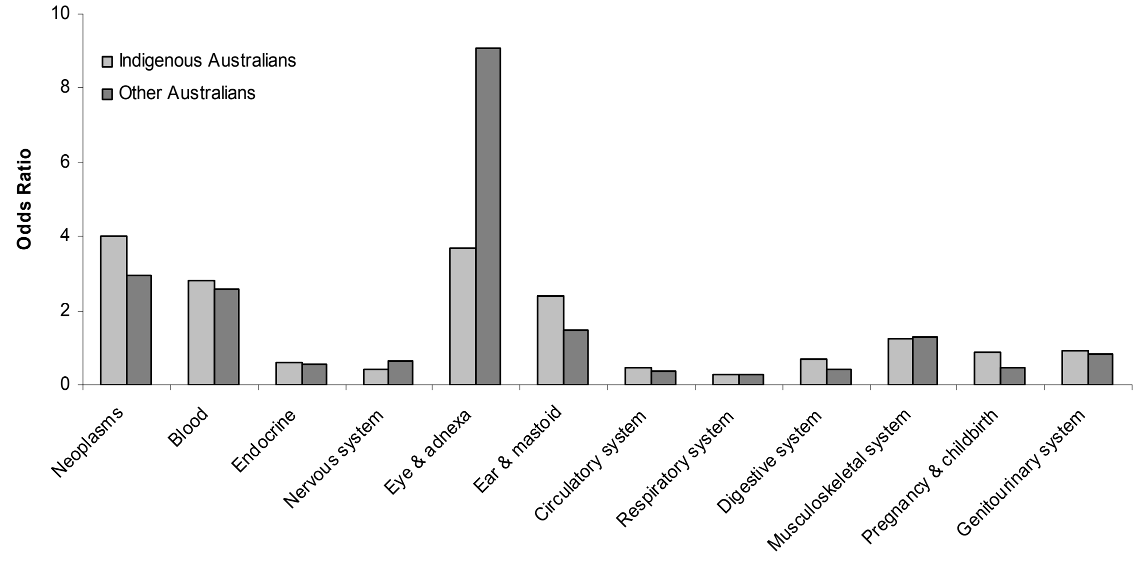
Age group and sex were both significant variables in affecting whether a patient would receive a procedure once in hospital for Indigenous and other Australians.

Results from the set of analyses that examined the outcome of whether a person hospitalised for each principal diagnosis chapter underwent a procedure corresponding to that principal diagnosis chapter, showed that for Indigenous Australians for most principal diagnosis chapters, the variables age, sector, remoteness of usual residence and number of additional diagnoses were most significant in affecting the outcome of whether a person underwent a procedure, and the variables sex and state/territory of usual residence were less significant.

Given the statistical and theoretical importance of principal diagnosis chapters on the likelihood of receiving a procedure once in hospital, a further set of analyses were conducted with the principal diagnosis chapters recoded as categorical variables in order to test their relative importance against the category of 'diseases of the skin'. The models—run separately for Indigenous Australians and other Australians—included the same set of variables (age group, sector of hospital, remoteness of usual residence, state/territory of usual residence, total number of additional diagnoses, and sex) as the previous analyses.

Results showed that after adjusting for these variables, principal diagnosis and number of additional diagnoses, the four most significant variables contributing to whether a patient would receive a procedure once in hospital was the number of additional diagnoses, hospital sector, remoteness of usual residence of the patient and principal diagnosis for both Indigenous and other Australians. The number of additional diagnoses was the most significant variable for Indigenous Australians and sector was the most significant variable for other Australians. Remoteness of usual residence of the patient was more significant in affecting the outcome of whether a patient would receive a procedure once in hospital than state/territory of usual residence for both Indigenous and other Australians.

Figure 3.05.8 shows the impact of the individual principal diagnosis categories on the likelihood of receiving a procedure in hospital for both Indigenous Australians and other Australians. All the results that are less than 1 indicate that patients with that principal diagnosis were less likely than those with diseases of the skin to receive a procedure. Figure 3.05.8 shows that for Indigenous Australians, patients with diseases of the respiratory system, nervous system, and circulatory system were the least likely to receive a procedure. Two of the same three chapters—diseases of the respiratory system and the circulatory system—were also among the lowest for other Australians, along with diseases of the digestive system. For Indigenous Australians and other Australians, patients with neoplasms and those with diseases of the eye and adnexa were the most likely to receive procedures.



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.05.8. Impact of principal diagnosis on the likelihood of receiving a procedure in hospital (relative to diseases of the skin), by Indigenous status, 2004–05 to 2005–06

Although these exploratory analyses have been critical in identifying some of the factors underlying the disparity between Indigenous and other Australians in the likelihood of receiving a procedure once in hospital, they were not able to fully account for the differences between Indigenous Australians and other Australians. Further research is needed to explore the mechanisms underlying these disparities.

Hospital procedures

Procedures are clinical interventions that are surgical in nature, carry a procedural risk, carry an anaesthetic risk, require specialised training, and/or require special facilities or equipment that is only available in an acute-care setting. Procedures, therefore, encompass surgical procedures and non-surgical investigative and therapeutic procedures such as X-rays and chemotherapy. Client-support interventions that are neither investigative nor therapeutic (such as anaesthesia) are also included.

- Over the period July 2004 to June 2006, there were 591,135 hospital procedures performed on Indigenous patients in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined. Approximately one third (33%) of these procedures were for haemodialysis (Table 3.05.3).
- Procedures on the urinary system was the most frequently reported procedure chapter for Indigenous patients (200,703). The number of haemodialysis procedures per 1,000 population for persons identified as Indigenous was about 11 times that for other persons. For procedures on the respiratory system the rate for persons identified as Indigenous was twice that for other persons and for procedures on the cardiovascular system the rate was 1.2 times that of other persons.
- Procedures for which the rate for Indigenous persons was less than that for other persons included procedures on the nervous system; procedures on the nose, mouth and pharynx; procedures on the male genital organs; dental services; procedures on the digestive system; and gynaecological procedures.

Table 3.05.3: Hospital procedures, by type of procedure reported and Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Number		Per cent		No. per 1,000[(e)]		
	Indigenous	Other[(f)]	Indigenous	Other[(f)]	Indigenous	Other[(f)]	Ratio[(g)]
Procedures on urinary system	200,703	2,015,370	34.0	7.5	423.2	50.3	8.4*
Haemodialysis	193,874	1,472,083	32.8	5.5	409.1	36.7	11.1*
Non-invasive, cognitive and other interventions, not elsewhere classified	187,142	12,550,102	31.7	47.0	290.7	317.1	0.9*
Obstetric procedures	26,382	888,929	4.5	3.3	23.5	23.9	0.98*
Dental services	26,087	929,743	4.4	3.5	18.8	25.0	0.8*
Imaging services	24,926	1,331,001	4.2	5.0	43.1	33.4	1.3*
Dermatological and plastic procedures	21,772	1,113,201	3.7	4.2	27.2	28.2	0.96*
Procedures on digestive system	21,426	2,496,615	3.6	9.3	37.2	62.8	0.6*
Procedures on musculoskeletal system	20,989	1,258,061	3.6	4.7	26.6	32.1	0.8*
Procedures on cardiovascular system	17,687	1,031,668	3.0	3.9	31.9	25.7	1.2*
Gynaecological procedures	13,164	937,983	2.2	3.5	16.1	24.6	0.7*
Procedures on respiratory system	11,485	332,840	1.9	1.2	15.8	8.5	1.9*
Procedures on nervous system	3,880	381,628	0.7	1.4	5.1	9.7	0.5*
Procedures on ear and mastoid process	3,826	109,780	0.6	0.4	3.0	3.0	1.0
Procedures on eye and adnexa	3,731	497,749	0.6	1.9	10.0	12.4	0.8*
Procedures on nose, mouth and pharynx	3,604	361,832	0.6	1.4	3.6	9.5	0.4*
Procedures on male genital organs	1,725	188,170	0.3	0.7	2.2	4.8	0.5*
Procedures on blood and blood-forming organs	1,012	96,497	0.2	0.4	1.7	2.4	0.7*
Procedures on breast	973	126,739	0.2	0.5	1.6	3.2	0.5*
Radiation oncology procedures	336	28,648	0.1	0.1	0.6	0.7	0.9
Procedures on endocrine system	280	25,337	—	0.1	0.5	0.6	0.8*
Total (excluding haemodialysis)	***397,256***	***25,229,810***	***67.2***	***94.5***	***573.3***	***641.1***	***0.9****
Total (including haemodialysis)[(h)]	**591,135**	**26,702,144**	**100.0**	**100.0**	**982.5**	**677.9**	**1.4***

(continued)

Table 3.05.3 (continued): Hospital procedures, by type of procedure reported and Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(x) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(y) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(z) Financial year reporting.

(aa) Data are presented by state/territory of usual residence of the patient and are reported for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(bb) Directly age-standardised using the Australian 2001 standard population.

(cc) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(dd) Rate ratio—Indigenous: other.

(ee) Includes procedures where the category was not stated.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analyses

Time series data is presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, and so they were included as part of the current period analysis (2004–05 to 2005–06) but not as part of the time series analyses.

Hospital procedure rates, rate ratios and rate differences between Indigenous and other Australians in Queensland, Western Australia, South Australia and the Northern Territory combined over the 7-year period 1998–99 to 2005–06, excluding haemodialysis procedures, are presented in Table 3.05.4 and Figure 3.05.9.

- Over the period 1998–99 to 2005–06, there were significant increases in hospital procedure rates, excluding dialysis for both Indigenous and other Australians. The fitted trend implies an average yearly increase in the rate of around 36 per 1,000 for Indigenous Australians (equivalent to a 65% increase over the period) and 35 per 1,000 for other Australians (equivalent to a 57% increase over the period).
- There were no significant changes in the hospitalisation rate ratios or rate differences between Indigenous and other Australians over the period.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital procedures for Indigenous Australians. Also, changes in access, hospital policies and practices all have an impact on the level of hospitalisation over time. Caution should be used in interpreting changes over time because it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in procedures may reflect better access to hospitals/hospital procedures rather than a worsening of health.

Table 3.05.4: Age-standardised hospital procedure rates, rate ratios and rate differences (excluding haemodialysis), Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

	1998–99	1999–00	2001–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	Per cent change over period[(c)]
Indigenous no. per 1,000										
Persons	389.1	406.4	504.0	519.1	561.4	599.7	595.9	641.5	36.2*	65.2
Other Australian[(d)] no. per 1,000										
Persons	432.4	413.6	560.5	580.2	624.4	630.9	641.9	654.0	35.1*	56.8
Rate ratio[(e)]										
Persons	0.9	1.0	0.9	0.9	0.9	1.0	0.9	1.0	—	4.2
Rate difference[(f)]										
Persons	–43.4	–7.2	–56.5	–61.1	–63.1	–31.2	–46.0	–12.5	1.1	18.4

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

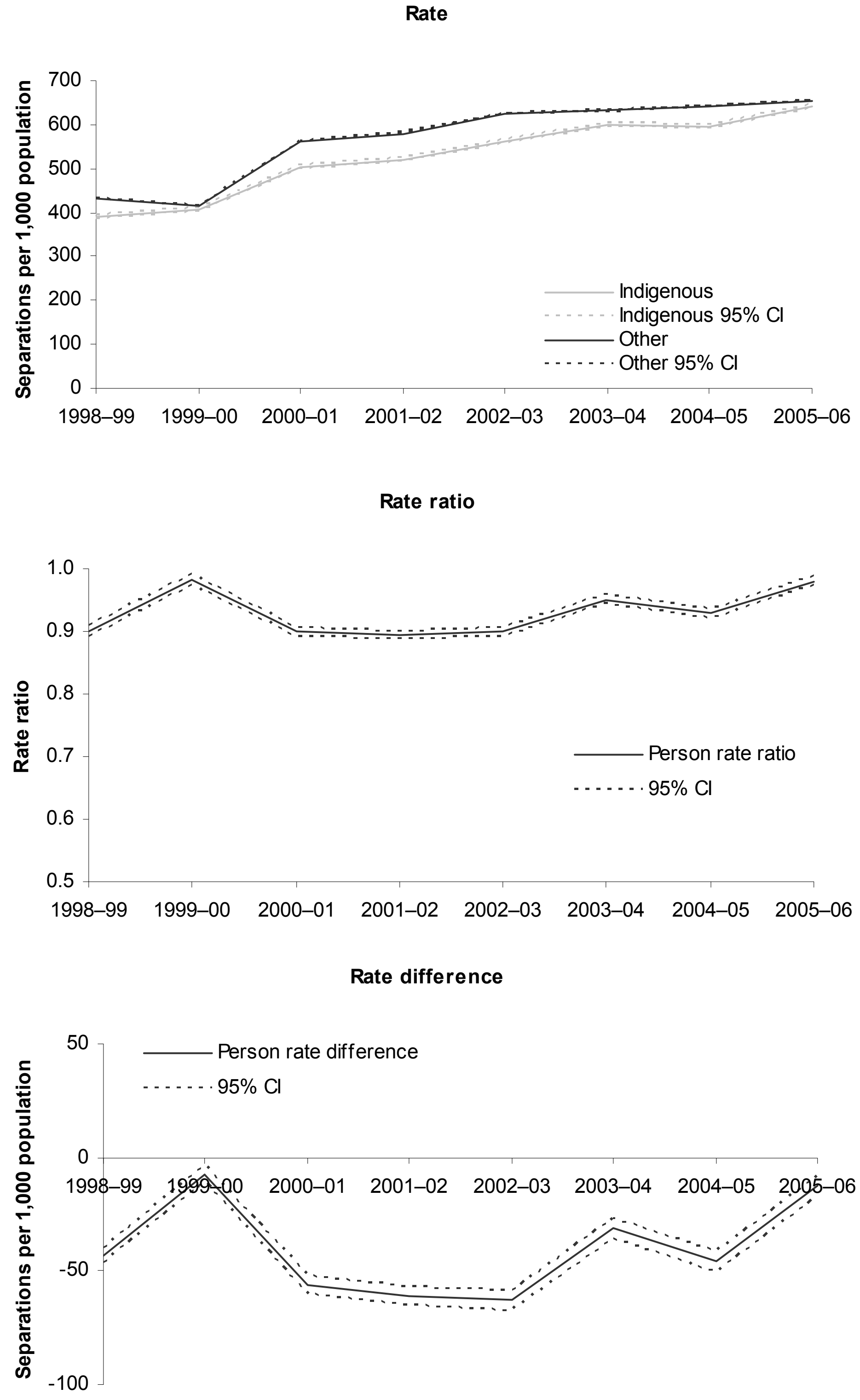
(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.
(d) 'Other Australian' includes hospitalisations for non-Indigenous Australians and those for whom Indigenous status was not stated.
(e) Hospitalisation rates for Indigenous Australians divided by hospitalisation rates for other Australians.
(f) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Notes:

a. Rates have been directly age-standardised using the Australian 2001 standard population.

b. Excludes procedures for haemodialysis (block no. 1060 for 2002–03 to 2005–06 and block no. 1059 for 1998–99 to 2001–02).

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.05.9: Hospital procedure rates, rate ratios and rate differences (excluding haemodialysis) between Indigenous and other Australians, Qld, WA, SA and NT, 1998–99 to 2005–06

Additional information

Coronary heart disease hospital procedures

The AIHW report *Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment* (AIHW 2006) looked at the disparities between Aboriginal and Torres Strait Islander people and other Australians in the health status and treatment of coronary heart disease, including the use of coronary procedures in hospital. The key findings from this report are outlined below.

- In 2002–03, among those Australians hospitalised with coronary heart disease, Indigenous Australians were less likely to receive coronary procedures such as coronary angiography and revascularisation procedures than other Australians. This was evident across all age groups (Table 3.05.5). The detailed age-specific rates indicate that, in both relative and absolute terms, the largest differences for both angiography and revascularisation occurred in the 55–64 and 65–74 year age groups, where the rates for other Australians were around double that of Indigenous Australians and the rate difference was over 20 percentage points for angiography and over 10 percentage points for revascularisation. Revascularisation procedures include percutaneous coronary intervention (PCI) and coronary artery by-pass grafts (CABG).
- After taking the different population age structures into account, the angiography and revascularisation rate for Aboriginal and Torres Strait Islanders was 40% lower than the rate for other Australians (rate ratio of 0.6 for both).
- Similar results were observed when PCI and CABG were analysed separately, with Indigenous Australians generally less likely to receive these procedures than other Australians across all age groups for those hospitalised for coronary heart disease (Table 3.05.6). The age-adjusted procedure rate for PCI is around 40% lower than other Australians, although the age-adjusted rate for CABG is 20% lower (age-standardised rate ratio of 0.6 and 0.8, respectively).
- Indigenous Australians with coronary heart disease tended to have more complex cases (measured by the number of comorbidities). In 2002–03 Indigenous people with coronary heart disease were less likely to undergo a coronary procedure across all levels of complexity. The largest difference in procedure rates between Indigenous Australians and other Australians occurred in the least complex groups (no or 1–2 comorbidities present). In these groups, Indigenous Australians were just over half as likely to have a coronary procedure.
- The complexity of cases did not explain the lower procedure rate in Indigenous Australians compared with other Australians.

Table 3.05.5: Use of coronary procedures for those hospitalised with coronary heart disease, by Indigenous status, Qld, WA, SA and NT, 2002–03

	Indigenous Australians		Other Australians		Inequality measures	
Age group	**Number**	**Per cent**[(a)]	**Number**	**Per cent**[(a)]	**Rate ratio**[(b)]	**Rate difference**[(c)]
Coronary angiography						
25–34	53	23.8	222	39.2	0.6*	–15.4
35–44	241	27.7	1,664	39.5	0.7*	–11.8
45–54	344	26.1	6,746	44.8	0.6*	–18.6
55–64	247	24.4	11,905	45.9	0.5*	–21.6
65–74	100	20.7	13,081	42.5	0.5*	–21.7
75+	28	13.4	9,471	25.9	0.5*	–12.5
All ages[(d)]						
Crude	1,016	24.6	43,106	38.1	0.6*	–13.5
ASR[(e)]	—	—	—	—	0.6*	—
Revascularisation (PCI and CABG)						
25–34	33	14.8	91	16.0	0.9	–1.3
35–44	135	15.5	954	22.7	0.7*	–7.1
45–54	211	16.0	4,036	26.8	0.6*	–10.8
55–64	160	15.8	7,153	27.6	0.6*	–11.8
65–74	58	12.0	7,688	25.0	0.5*	–12.9
75+	12	5.7	5,379	14.7	0.4*	–9.0
All ages[(d)]						
Crude	609	14.8	25,306	22.4	0.7*	–7.6
ASR[(e)]	—	—	—	—	0.6*	—

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Per cent refers to the proportion of hospitalisations with coronary heart disease as the principal diagnosis receiving either coronary angiography or coronary revascularisation.

(b) Rate ratio–Indigenous: other.

(c) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

(d) Includes those aged less than 25 years.

(e) ASR refers to indirectly age-standardised rate using ‘other Australians’ population as the standard population.

Source: AIHW 2006.

Table 3.05.6: Inequalities in the use of PCI and CABG procedures for those hospitalised with a principal diagnosis of coronary heart disease, Qld, WA, SA and NT, 2002–03

	Age group (years)						All ages[(a)]	
	25–34	35–44	45–54	55–64	65–74	75+	Crude	ASR[(b)]
PCI								
Rate ratio[(c)]	0.9	0.6*	0.5*	0.5*	0.4*	0.4*	0.6*	0.6*
Rate difference[(d)] (%)	–2.0	–6.2	–9.6	–8.8	–9.2	–6.0	–5.3	—
CABG								
Rate ratio[(c)]	1.6	0.8	0.9	0.7*	0.7*	0.4	0.7*	0.8*
Rate difference[(d)] (%)	1.2	–0.9	–1.1	–3.1	–3.7	–3.0	–2.3	—

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Includes those aged less than 25 years.

(b) ASR refers to indirectly age-standardised rate using 'other Australians' population as the standard population.

(c) Rate ratio–Indigenous: other.

(d) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Source: AIHW 2006.

Digestive system hospital procedures

A study looking at hospital procedures performed for diseases of the digestive tract between July 2003 to June 2006 showed that Aboriginal and Torres Islander peoples were significantly less likely to receive a corresponding procedure during hospital admissions for complicated or uncomplicated hernias, diseases of the extrahepatic biliary tree and non-neoplastic diseases of the anus or rectum. Aboriginal and Torres Strait Islander peoples were as likely as other Australians to receive an appendicectomy for a principal diagnosis recorded as appendicitis, and only marginally less likely to receive a large intestinal resection for admissions where a malignant neoplasm of the large intestine/rectum was recorded as the principal diagnosis (Table 3.05.7). These results were statistically adjusted for age, sex, hospital type, urgency of admission, remoteness of usual residence and several comorbidities (Moore et al. 2008)

Table 3.05.7: Relative odds of receiving corresponding procedure for Aboriginal and Torres Strait Islander peoples versus other Australians for hospital admissions involving diagnoses of the digestive tract

Principal Diagnoses	(Adjusted OR)	95% confidence interval	p value
Appendicitis	1.11	0.96 – 1.28	= 0.1677 not significant
Complicated and uncomplicated hernias	0.67	0.57 – 0.78	< 0.001
Diseases of extrahepatic biliary tree	0.81	0.73 – 0.89	< 0.001
Non-neoplastic anorectal disease	0.85	0.74 – 0.97	< 0.001
Malignant neoplasm of the large intestine/rectum	0.73	0.53 – 1.00	= 0.05 marginally significant

Source: Moore et al. 2008.

Cancer research work

A recent study of 815 Indigenous and 810 non-Indigenous patients diagnosed with cancer in Queensland between 1997 and 2002 found that after adjustment for stage at diagnosis, treatment and comorbidities, non-Indigenous Australians had better survival than Indigenous patients (hazard ratio = 1.3, 95% CI 1.1–1.5). Indigenous patients were less likely to have had treatment for cancer (surgery, chemotherapy, radiotherapy) and waited longer for surgery (hazard ratio = 0.84, 95% CI 0.72–0.97) than non-Indigenous patients (Valery et al. 2006).

A study in Western Australian of patients who had a cancer registration in the state between 1982 and 2001 found that Indigenous people were less likely to receive surgery for lung cancer and prostate cancer, but not breast cancer (Hall et al. 2004).

Data quality issues

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. For several years, Queensland, South Australia, Western Australia and the northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data for Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data for South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from the Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

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3.06 Ambulatory care sensitive hospital admissions

The number of hospital admissions for ambulatory care sensitive conditions for Aboriginal and Torres Strait Islander people expressed as a rate by age group, age-standardised rate and ratio

Data sources

Data for this measure come from the AIHW's National Hospital Morbidity Database.

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions that have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (AIHW unpublished data). These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions because public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period from July 2004 to June 2006. An aggregate of 2 years of data has been used as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Ambulatory care sensitive conditions are those for which, in theory, hospitalisation is thought to be avoidable through health care in ambulatory settings. Ambulatory settings include primary health care including general practice, community care, emergency department care and outpatient care. The conditions selected for this measure are those thought to be sensitive to preventative care, adequate management of chronic conditions, and timely care for an acute illness in ambulatory settings, particularly primary health care.

Ambulatory care sensitive conditions can be broken down into three categories:

- vaccine-preventable conditions, including influenza, pneumonia, tetanus, measles, mumps, rubella, diphtheria, pertussis and polio
- potentially preventable acute conditions, including dehydration, gastroenteritis, kidney infection, perforated ulcer, cellulitis, pelvic inflammatory disease, ear, nose and throat infections, and dental conditions
- potentially preventable chronic conditions, including diabetes, asthma, angina, hypertension, congestive heart failure and chronic obstructive pulmonary disease.

Analyses

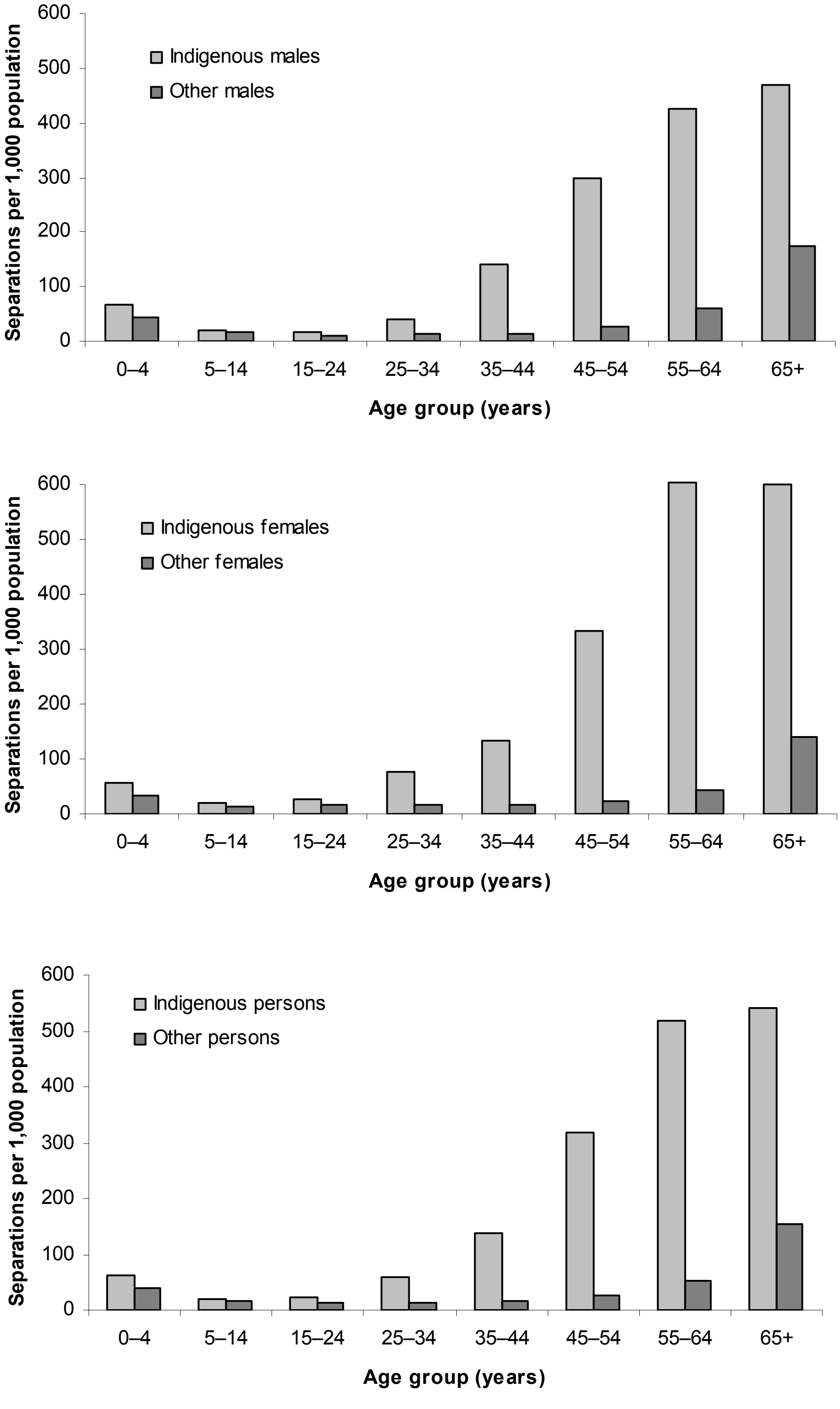
Age-standardised rates and ratios have been used for this indicator as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

Hospitalisations

- For the 2-year period from July 2004 to June 2006, there were 1,634,239 ambulatory care sensitive hospital admissions in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, 101,253 (6.2%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples.
- Ambulatory care sensitive conditions represented 22% of all hospital admissions of Indigenous Australians in the six jurisdictions.

Hospitalisations by age and sex

- In the 2-year period from July 2004 to June 2006, Indigenous males and females had higher hospitalisation rates than other males and females for ambulatory care sensitive conditions across all age groups (Figure 3.06.1).
- Differences in rates between Indigenous and other Australians were particularly marked in the older age groups. For males, the greatest difference in rates occurred in the 35–44 and 45–54 year age groups where Indigenous males were hospitalised for ambulatory care sensitive conditions at 10–12 times the rate of other males. For females, the greatest difference in rates occurred in the 45–54 and 55–64 year age group, where Indigenous females were hospitalised at 14 times the rate of other females in both these age groups.
- For both Indigenous and other Australian males and females, hospitalisation rates increased with age from age 15–24 years onwards, being highest among those aged 55–64 and 65 years and over.
- About 43% of Indigenous Australians hospitalised for ambulatory care sensitive conditions were males (43,662) and 57% were females (57,590).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.06.1: Age-specific hospitalisation rates for ambulatory care sensitive hospital admissions, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006

Hospitalisations by state/territory

Table 3.06.1 presents the number of ambulatory care sensitive hospital admissions for the 2-year period from July 2004 to June 2006 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2004–06, unadjusted and adjusted national level data are included in the hospitalisations by state and territory table. The Australia data is adjusted by applying a completeness factor of 89.5%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period from July 2004 to June 2006, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised for ambulatory care sensitive conditions at around 5 times the rate of other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised for ambulatory care sensitive conditions at 5.6 times the rate of other Australians.
- Indigenous Australians in New South Wales and Victoria were hospitalised for ambulatory care sensitive conditions at around 3 times the rate of other Australians. In Queensland, South Australia and the Northern Territory Indigenous Australians were hospitalised for ambulatory care sensitive conditions at 4 to 5 times the rate of other Australians. In Western Australia, Indigenous Australians were hospitalised at around 13 times the rate of other Australians.

Table 3.06.1: Hospitalisations for ambulatory care sensitive hospital admissions, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
NSW									
Males	8,036	99.8	96.7	102.8	248,849	38.2	38.1	38.4	2.6*
Females	9,268	112.8	109.9	115.7	241,133	32.7	32.6	32.8	3.4*
Persons	17,305	107.0	104.9	109.1	490,005	35.2	35.1	35.3	3.0*
Vic									
Males	2,158	123.3	116.7	129.8	219,681	45.3	45.1	45.4	2.7*
Females	2,178	136.2	129.5	142.9	216,592	38.9	38.8	39.1	3.5*
Persons	4,336	132.3	127.5	137.1	436,273	41.7	41.6	41.8	3.2*
Qld									
Males	9,086	135.2	131.4	139.0	154,340	41.7	41.5	42.0	3.2*
Females	10,830	153.3	149.7	156.9	139,598	34.6	34.5	34.8	4.4*
Persons	19,916	145.6	143.0	148.2	293,938	37.9	37.8	38.0	3.8*
WA									
Males	16,653	474.2	465.7	482.6	91,583	50.1	49.8	50.5	9.5*
Females	25,776	649.4	640.6	658.2	81,713	41.0	40.7	41.2	15.9*
Persons	42,429	567.0	560.8	573.1	173,296	45.2	44.9	45.4	12.6*
SA									
Males	2,349	147.1	139.6	154.5	65,725	41.8	41.5	42.1	3.5*
Females	2,824	164.1	156.9	171.3	66,810	37.1	36.8	37.4	4.4*
Persons	5,173	156.5	151.3	161.7	132,535	39.1	38.9	39.4	4.0*
NT									
Males	5,380	152.3	147.2	157.4	4,297	40.4	38.9	41.9	3.8*
Females	6,714	175.7	170.8	180.6	2,642	27.7	26.5	28.9	6.3*
Persons	12,094	164.6	161.1	168.1	6,939	34.5	33.6	35.5	4.8*
NSW, Vic, Qld, WA, SA and NT									
Males	**43,662**	**177.4**	**175.3**	**179.5**	**784,475**	**42.2**	**42.1**	**42.3**	**4.2***
Females	**57,590**	**218.2**	**216.1**	**220.3**	**748,488**	**35.9**	**35.8**	**35.9**	**6.1***
Persons	**101,253**	**199.2**	**197.7**	**200.7**	**1,532,986**	**38.7**	**38.6**	**38.8**	**5.1***
Australia unadjusted[(j)]									
Males	44,432	173.8	171.7	175.9	816,950	42.2	42.1	42.3	4.1*
Females	58,366	211.5	209.5	213.5	778,097	35.8	35.7	35.9	5.9*
Persons	102,799	193.8	192.4	195.3	1,595,072	38.7	38.6	38.7	5.0*
Australia adjusted[(j)(k)]									
Males	49,653	194.2	192.0	196.4	811,729	42.0	41.9	42.0	4.6*
Females	65,224	236.3	234.2	238.5	771,239	35.5	35.4	35.6	6.7*
Persons	114,878	216.6	215.0	218.1	1,582,993	38.4	38.3	38.4	5.6*

(continued)

Table 3.06.1 (continued): Hospitalisations for ambulatory care sensitive hospital admissions, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p < 0.05 level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006): ICD-10-AM codes J10 J11 J13 J14 J153 J154 J157 J159 J168 J181 J188 A35 A36 A37 A80 B05 B06 B161 B169 B180 B181 B26 G000 M014 J45 J46 I50 I110 J81 E101 E102 E103 E104 E105 E106 E107 E108 E110 E111 E112 E113 E114 E115 E116 E117 E118 E130 E131 E132 E133 E134 E135 E136 E137 E138 E140 E141 E142 E143 E144 E145 E146 E147 E148 J20 J41 J42 J43 J44 J47 I20 I240 I248 I249 D501 D508 D509 I10 I119 E40 E41 E42 E43 E550 E643 E86 K522 K528 K529 N390 N10 N12 N11 N136 K250 K251 K252 K254 K255 K256 K260 K261 K262 K264 K265 K266 K270 K271 K272 K274 K275 K276 K280 K281 K282 K284 K285 K286 L03 L04 L08 L980 L88 L983 N70 N73 N74 H66 H67 J02 J03 J06 J312 K02 K03 K04 K05 K06 K08 K098 K099 K12 K13 K35 K36 K37 O15 G40 G41 R56 R02. Note some of these codes are for principal diagnosis only, some are for principal or additional diagnosis, and some are principal diagnosis with the exclusion of some procedure codes. For more information on coding used, refer to AIHW and National Health Performance Committee 2004, *The national report on health sector performance indicators 2003*.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Other includes hospitalisations of Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio—Indigenous: other.

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Note: Person numbers and rates include hospitalisations for which sex was indeterminate or 'not stated'.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by diagnosis

Table 3.06.2 presents data on the top 10 ambulatory care sensitive hospital admissions for Aboriginal and Torres Strait Islander peoples in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined for the 2-year period July 2004 to June 2006.

- In the 2-year period July 2004 to June 2006, diabetes complications were the most common type of ambulatory sensitive condition among Indigenous Australians in these six jurisdictions, followed by convulsions and epilepsy, and chronic obstructive pulmonary disease (COPD). Indigenous Australians were hospitalised at around 9 times the rate of other Australians for diabetes complications and around 5 times the rate of other Australians for convulsions and epilepsy and COPD.
- Ear, nose and throat infections was the fourth most common ambulatory sensitive condition for which Indigenous Australians were hospitalised, at more than twice the rate of other Australians.
- For most ambulatory care sensitive conditions, the average length of stay in hospital was higher among other Australians compared with Indigenous Australians (4.8 days compared with 3.4 days for total ambulatory care sensitive conditions). This is similar to the pattern of length of stay for all conditions combined which was higher for other Australians (3.4) than for Indigenous Australians (2.9).
- Of these conditions, COPD and congestive heart failure were responsible for the greatest average number of days in hospital, with Indigenous Australians staying an average of around 6 days in hospital compared with around 7 days for other Australians.

Table 3.06.2: Top 10 ambulatory care sensitive hospital admissions, by Indigenous status, NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006[(a)(b)(c)(d)]

	Separations						Average bed days		Total bed days	
	Number Indigenous	Indigenous no. per 1,000[(e)]	LCL 95%[(f)]	UCL 95%[(g)]	Other no. per 1,000[(e)(h)]	Ratio[(i)]	Indigenous	Other[(h)]	Indigenous	Other[(h)]
Diabetes complications	65,120	147.0	145.7	148.3	16.9	8.7*	3.5	6.1	230,102	4,171,241
Convulsions and epilepsy	5,929	7.5	7.3	7.8	1.5	5.2*	2.3	2.9	13,855	161,507
Chronic obstructive pulmonary disease	4,526	13.2	12.7	13.6	2.6	5.1*	5.7	7.2	25,655	764,282
Ear, nose and throat infections	4,129	3.5	3.3	3.6	1.6	2.1*	1.9	1.8	7,665	107,715
Asthma	4,077	4.4	4.3	4.6	1.9	2.4*	2.2	2.3	9,018	161,219
Dental problems	3,657	2.9	2.8	3.0	2.6	1.1*	1.5	1.2	5,539	115,255
Cellulitis	3,542	4.7	4.5	4.9	1.4	3.2*	3.4	5.1	12,088	291,781
Pyelonephritis	3,343	6.2	5.9	6.5	2.1	3.0*	3.6	4.7	11,960	386,872
Congestive cardiac failure	2,426	6.6	6.3	6.9	1.9	3.4*	5.7	7.7	13,877	613,472
Angina	2,397	5.4	5.2	5.7	1.9	2.8*	2.4	2.6	5,746	202,471
Total[(j)]	**101,253**	**199.2**	**197.7**	**200.7**	**38.7**	**5.1***	**3.4**	**4.8**	**339,870**	**7,322,059**

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Directly age-standardised using the Australian 2001 standard population.

(f) LCL = lower confidence limit.

(g) UCL = upper confidence limit.

(h) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was 'not stated'.

(i) Rate ratio—Indigenous: other.

(j) All ambulatory care sensitive hospital admissions. Note that the sum of the number of hospitalisations for each condition exceeds the total as more than one ambulatory care sensitive condition can be diagnosed for each hospital separation.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by diagnosis and age group

Table 3.06.3 presents data on the top three ambulatory care sensitive hospital admissions by age group for Aboriginal and Torres Strait Islander peoples in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined for the 2-year period from July 2004 to June 2006.

- In the 2-year period from July 2004 to June 2006, ear, nose and throat infections were the most common type of ambulatory sensitive condition among Indigenous Australians aged less than 1 year of age, followed by convulsions and epilepsy. Indigenous infants were hospitalised at around 3 times the rate of other infants for ear, nose and throat infections and at twice the rate for convulsions and epilepsy. Ear, nose and throat infections and pyelonephritis accounted for about 5% and 1% of all hospitalisations of Indigenous infants.
- Dental conditions were the most common reason for hospitalisation among Indigenous Australians aged 1–14 years of age. This group was hospitalised at 1.4 times the rate of other Australians at this age. Dental conditions accounted for 6% of total hospitalisations of Indigenous Australians in this age group.
- Convulsions and epilepsy were the most common reason for hospitalisation among Aboriginal and Torres Strait Islander peoples aged 15–24 years. Indigenous Australians of this age were hospitalised at over twice the rate of other Australians for this condition. Convulsions and epilepsy accounted for approximately 1% of total hospitalisations of Indigenous Australians aged 15–24 years.
- Diabetes complications were the most common ambulatory care sensitive condition among Indigenous Australians aged 25–44, 45–64 and 65 years and older. Indigenous Australians were hospitalised at between 5 and 20 times the rate of other Australians for diabetes complications in these age groups. Diabetes complications were responsible for 10%, 23% and 23% of total hospitalisations of Indigenous Australians in these age groups, respectively.
- Chronic obstructive pulmonary disease (COPD) was another common potentially preventable condition responsible for hospitalisation among Indigenous Australians aged 45–64 and 65 years and over. Indigenous Australians were hospitalised at up to 8 times the rate of other Australians for this condition. COPD accounted for 1% and 3% of total hospitalisations of Indigenous Australians aged 45–64 and 65 years and over, respectively.

Table 3.06.3: Major ambulatory care sensitive hospital admissions, by age group and Indigenous status, NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006[(a)(b)(c)(d)]

		Indigenous				Other[(e)]				
Age group (years)	Condition	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Rate ratio[(i)]
<1	Ear, nose and throat infections	767	32.3	30.0	34.5	5,693	12.0	11.7	12.3	2.7*
	Convulsions and epilepsy	220	9.3	8.0	10.5	2,174	4.6	4.4	4.8	2.0*
	Pyelonephritis	193	8.1	7.0	9.3	3,382	7.1	6.9	7.4	1.1
1–14	Dental conditions	2,540	7.8	7.5	8.1	39,588	5.7	5.7	5.8	1.4*
	Asthma	2,110	6.5	6.2	6.8	37,736	5.5	5.4	5.5	1.2*
	Ear, nose and throat infections	2,108	6.5	6.2	6.8	27,898	4.0	4.0	4.1	1.6*
15–24	Convulsions and epilepsy	524	2.8	2.6	3.0	6,065	1.2	1.1	1.2	2.4*
	Appendicitis	512	2.7	2.5	3.0	13,457	2.6	2.5	2.6	1.1
	Diabetes complications	507	2.7	2.5	3.0	6,116	1.2	1.1	1.2	2.3*
25–44	Diabetes complications	14,177	54.9	54.0	55.8	30,609	2.7	2.7	2.8	20.0*
	Convulsions and epilepsy	2,624	10.2	9.8	10.5	13,289	1.2	1.2	1.2	8.5*
	Cellulitis	1,305	5.1	4.8	5.3	10,445	0.9	0.9	1.0	5.4*
45–64	Diabetes complications	39,231	327.1	323.8	330.3	185,838	19.7	19.6	19.8	16.6*
	COPD	2,144	17.9	17.1	18.6	21,758	2.3	2.3	2.3	7.8*
	Angina	1,390	11.6	11.0	12.2	24,636	2.6	2.6	2.6	4.4*
65+	Diabetes complications	11,034	421.3	413.5	429.2	458,048	90.9	90.7	91.2	4.6*
	COPD	1,566	59.8	56.8	62.8	81,712	16.2	16.1	16.3	3.7*
	Congestive cardiac failure	724	27.6	25.6	29.7	70,457	14.0	13.9	14.1	2.0*

(continued)

Table 3.06.3 (continued): Major ambulatory care sensitive hospital admissions, by age group and Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Other includes hospitalisations for Indigenous people and those for whom Indigenous status was not stated.

(f) Age specific number per 1,000 population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio—hospitalisation rate for Indigenous Australians divided by hospitalisation rate for other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analyses

Time series data is presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, and so they were included as part of the current period analysis (2004–05 to 2005–06), but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australian's for ambulatory care sensitive conditions are presented below.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all have an impact on the level of hospitalisation over time. Caution should be used in interpreting changes over time because it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may reflect better access rather than a worsening of health but is likely to be a combination of both.

All ambulatory care sensitive conditions

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for total ambulatory care sensitive conditions over the 5-year period 2000–01 to 2005–06 are presented in Table 3.06.4 and Figure 3.06.2. This period has been used for analysis as coding changes were made to diabetes complications (the most common ambulatory care sensitive condition) in July 1999 and July 2000. Coding for diabetes is only consistent from 2000–01 onwards and thus data for earlier years should not be included in the analysis of trends involving diabetes complications.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates for ambulatory care sensitive conditions among Indigenous Australians during the period 2000–01 to 2005–06. The fitted trend implies an average yearly increase in the rate for Indigenous Australians of around 30 per 1,000 which is equivalent to a 114% increase in the rate over the period. The increases in hospitalisation rates were significant for both males and females.

- Over the same period, there were significant increases in hospitalisation rates for ambulatory care sensitive conditions among other Australians, with an average yearly increase in the rate of around 2.3 per 1,000. This is equivalent to a 38% increase in the rate over this period. The increases in hospitalisation rates were also significant for both males and females.
- There were significant increases in both the hospitalisation rate ratios and rate differences between Indigenous and other Australians over the period 2000–01 to 2005–06 (57% increase in the rate ratio and 136% increase in the rate difference), reflecting both a relative and absolute increase in the gap between hospitalisation rates of Indigenous and other Australians for ambulatory care sensitive conditions over the period.

Table 3.06.4: Age-standardised hospitalisation rates, rate ratios and rate differences for all ambulatory care sensitive hospital admissions, Qld, WA, SA and NT, 2000–01 to 2005–06[(a)(b)]

	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(c)]	% change over period[(d)]
Indigenous number per 1,000								
Males	123.5	119.8	129.1	173.4	208.9	237.8	25.2*	102.2
Females	138.0	143.6	154.8	203.8	262.5	294.7	34.0*	123.1
Persons	131.6	133.3	143.4	189.4	237.7	268.7	29.9*	113.5
Other Australians number per 1,000[(e)]								
Males	32.1	32.6	33.1	35.1	41.9	45.4	2.8*	43.0
Females	28.7	28.6	29.0	30.3	35.4	37.8	1.9*	33.6
Persons	30.2	30.4	30.9	32.4	38.4	41.3	2.3*	38.4
Rate ratio[(f)]								
Males	3.8	3.7	3.9	4.9	5.0	5.2	0.3*	44.2
Females	4.8	5.0	5.3	6.7	7.4	7.8	0.7*	69.7
Persons	4.4	4.4	4.6	5.8	6.2	6.5	0.5*	56.9
Rate difference[(g)]								
Males	91.4	87.2	96.0	138.3	166.9	192.4	22.5*	122.9
Females	109.3	115.1	125.8	173.5	227.1	257.0	32.1*	146.6
Persons	101.4	102.9	112.5	157.0	199.4	227.5	27.5*	135.8

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 2001–01 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Rates in this table may differ slightly to those published in the 2006 edition of the Health Performance Framework because the codes for non-vaccine preventable pneumonia (J13, J14, J153, J154, J157, J159, J168, J181) are now included for consistency with other published data.

(c) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(d) Per cent change between 2000–01 and 2005–06 based on the average annual change over the period.

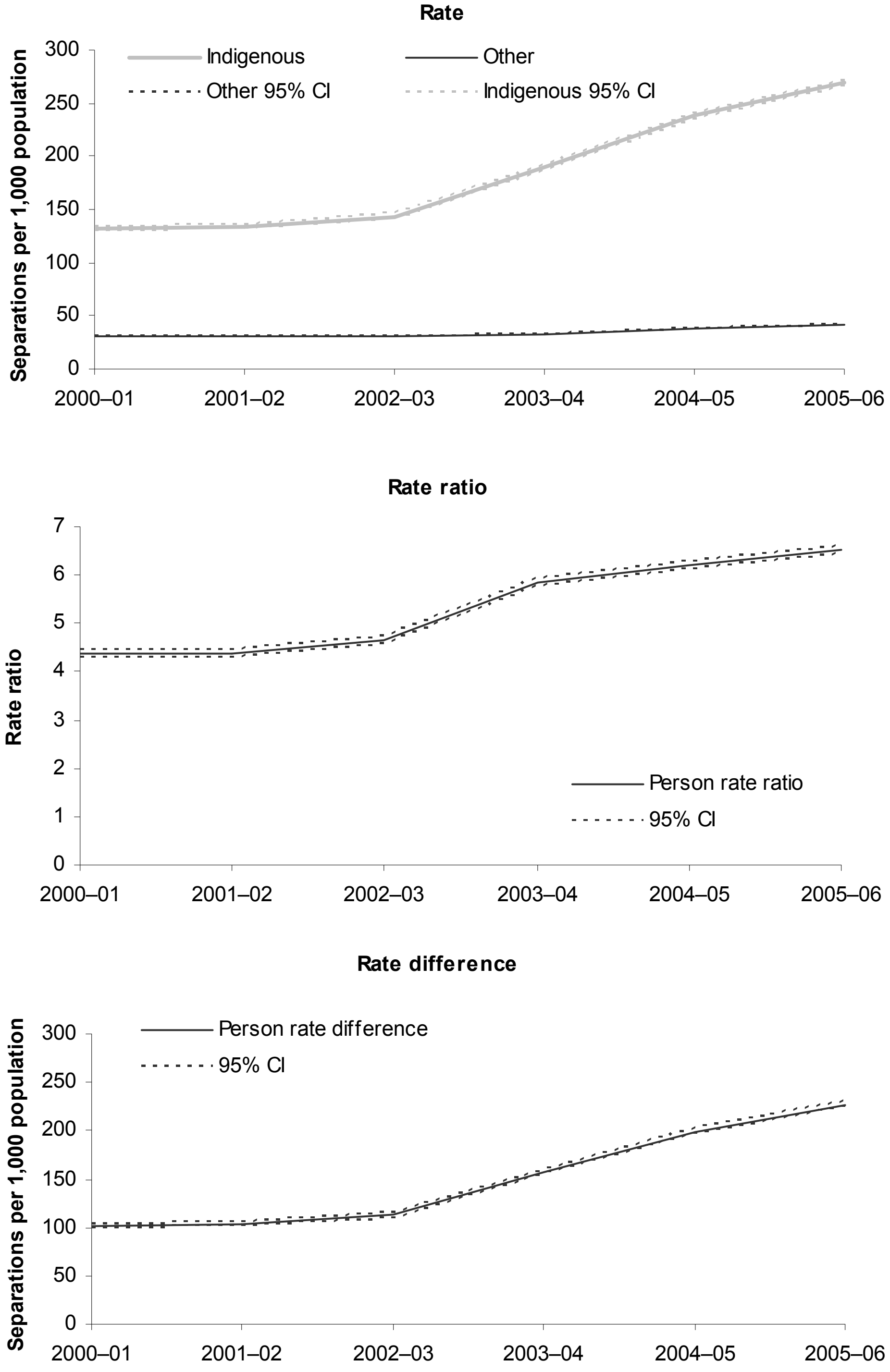
(e) 'Other Australians' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Hospitalisation rates for Indigenous Australians divided by hospitalisation rates for other Australians.

(g) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Note: Rates in these graphs may differ slightly to those published in the 2006 edition of the Health Performance Framework as the codes for non-vaccine preventable pneumonia (J13, J14, J153, J154, J157, J159, J168, J181) are now included for consistency with other published data.

Figure 3.06.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for total ambulatory care sensitive conditions, Qld, WA, SA and NT combined, 2000–01 to 2005–06

Vaccine-preventable conditions

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for vaccine-preventable conditions, such as influenza, pneumonia, diphtheria, measles, mumps and rubella, over the period 1998–99 to 2005–06 are presented in Table 3.06.5 and Figure 3.06.3.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were statistically significant declines in hospitalisation rates for vaccine-preventable conditions among Indigenous Australians during the period 1998–99 to 2005–06. The fitted trend implies an average yearly decline in the rate of around 1.4 per 1,000 for Indigenous Australians, which was equivalent to a 56% decline in the rate over the period.
- Over the same period, there were statistically significant declines in hospitalisation rates for other Australian males and females. The fitted trend implies an average yearly decline in the rate of around 0.3 per 1,000 for other Australians, which is equivalent to a 56% decline in the rate over the period.
- Most of the declines in rates for vaccine-preventable hospitalisations over this period were attributable to a sharp decline in hospitalisation rates from 1998–99 to 1999–00. This is likely to be the result of the introduction of a number of vaccination programs and changes to the Australian Standard Vaccination Schedule in 1999 and 2000. Such changes include: funding for influenza and pneumococcal vaccine for Indigenous adults aged 50 years and over and for those aged 15–49 years who are at high risk from these diseases; funding of influenza vaccine for non-Indigenous Australians aged 65 years and over; inclusion of diphtheria-tetanus-pertussis—hepatitis B vaccine on the childhood immunisation schedule; and the new requirement for full immunisation against hepatitis B and haemophilus influenza type B (Hib) at 12 months of age (Menzies et al. 2004).
- There was no significant change in the hospitalisation rate ratio between Indigenous and other Australians for vaccine-preventable conditions over the period 1998–99 to 2005–06. There was a significant decline in the hospitalisation rate difference between Indigenous and other Australians for vaccine-preventable conditions over the period 1998–99 to 2005–06 (56%).

Table 3.06.5: Age-standardised hospitalisation rates, rate ratios and rate differences for vaccine preventable conditions, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)(b)]

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(c)]	% change over period[(d)]
Indigenous number per 1,000										
Males	19.7	4.7	4.2	4.0	3.6	3.3	2.9	3.2	–1.5*	–54.0
Females	15.5	5.0	3.8	3.7	2.9	2.7	2.7	2.4	–1.3*	–57.7
Persons	17.4	4.9	4.0	3.9	3.2	3.0	2.8	2.8	–1.4*	–55.9
Other Australians number per 1,000[(e)]										
Males	4.7	1.1	0.8	0.8	0.7	0.7	0.5	0.6	–0.4*	–56.4
Females	3.3	0.9	0.7	0.7	0.6	0.6	0.5	0.5	–0.3*	–55.3
Persons	3.9	1.0	0.7	0.7	0.7	0.6	0.5	0.6	–0.3*	–55.9
Rate ratio[(f)]										
Males	4.2	4.3	5.2	5.1	5.0	4.8	5.3	5.3	0.1*	22.3
Females	4.7	5.8	5.6	5.5	4.7	4.6	5.8	4.7	—	–5.7
Persons	4.5	5.0	5.4	5.3	4.8	4.6	5.5	5.0	—	7.1
Rate difference[(g)]										
Males	15.0	3.6	3.4	3.2	2.9	2.7	2.3	2.6	–1.1*	–53.3
Females	12.2	4.1	3.1	3.0	2.3	2.1	2.2	1.9	–1.0*	–58.3
Persons	13.5	3.9	3.3	3.1	2.6	2.3	2.3	2.2	–1.1*	–55.9

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) For consistency with other published data, ICD10-AM codes for non-vaccine preventable pneumonia (J13, J14, J153, J154, J157, J159, J168, J181) have been included in the vaccine-preventable conditions category. These codes were not included in this category in the 2006 edition of the Health Performance Framework.

(c) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(d) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

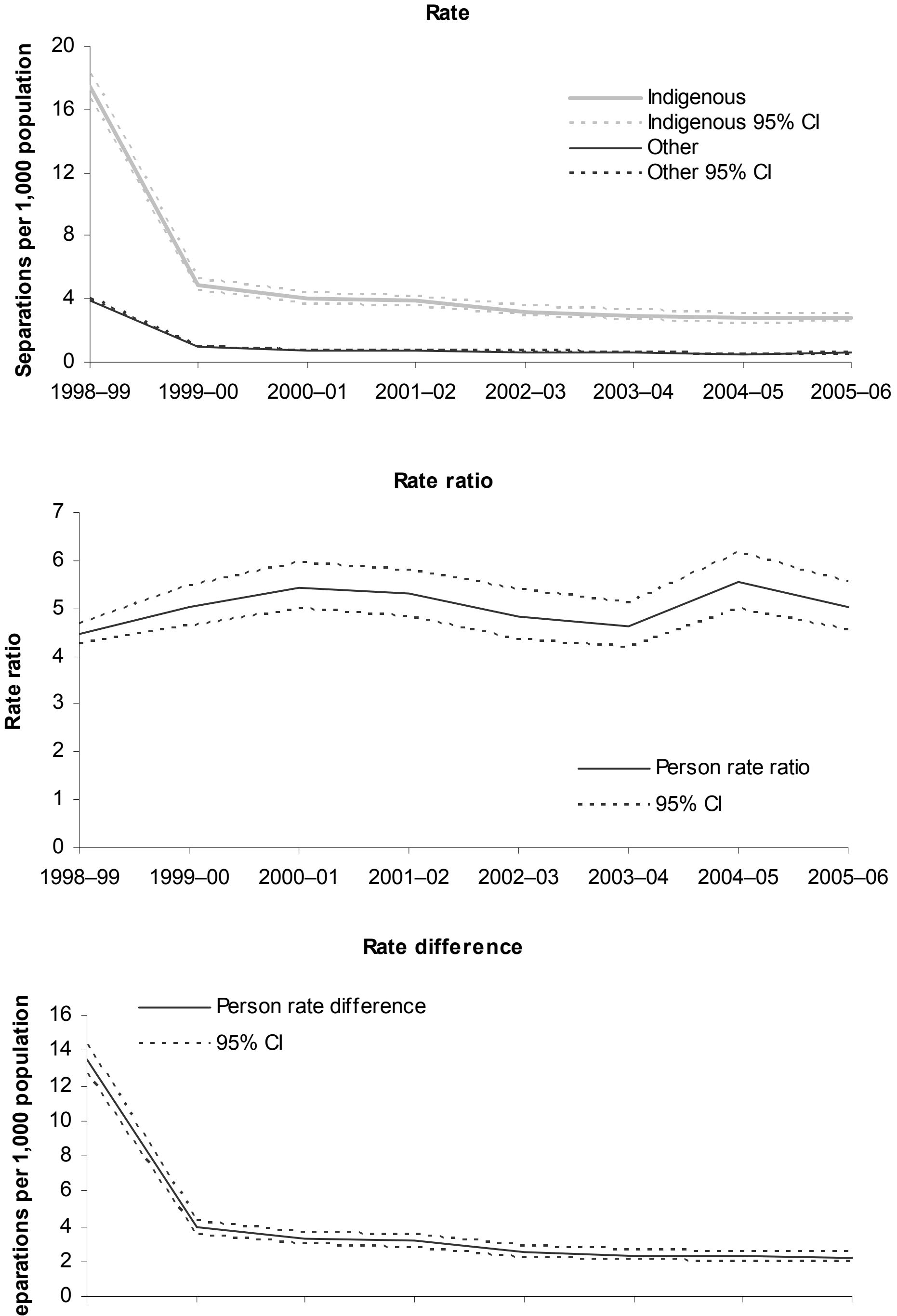
(e) 'Other Australians' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Hospitalisation rates for Indigenous Australians divided by hospitalisation rates for other Australians.

(g) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Note: For consistency with other published data, ICD10-AM codes for non-vaccine preventable pneumonia (J13, J14, J153, J154, J157, J159, J168, J181) have been included in the vaccine-preventable conditions category. These codes were not included in this category in the 2006 edition of the Health Performance Framework.

Figure 3.06.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for vaccine-preventable conditions, Qld, WA, SA and NT combined, 1998–99 to 2005–06

Potentially preventable chronic conditions

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for potentially preventable chronic conditions such as diabetes, asthma, angina, hypertension and chronic obstructive pulmonary disease over the period 2000–01 to 2005–06 are presented in Table 3.06.6 and Figure 3.06.4. This period has been used for analysis because coding changes were made to diabetes complications (the most common potentially preventable chronic condition) in July 1999 and July 2000. Coding for diabetes is only consistent from 2000–01 onwards and thus data for earlier years should not be included in the analysis of trends involving diabetes complications.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates for potentially preventable chronic conditions (predominantly diabetes) among Indigenous Australians during the period 2000–01 to 2005–06. The fitted trend implies an average yearly increase in the rate of around 31 per 1,000 (equivalent to an increase of 161% over the period), most of which is attributable to an increase in rates after 2002–03. These increases in hospitalisation rates were significant for both males and females.
- There were also significant increases in hospitalisation rates for potentially preventable chronic conditions for other Australians, with an average yearly increase in the rate of around 2.3 per 1,000. This is equivalent to an increase of 67% in the rate over the period. These increases were statistically significant for both males and females.
- There were significant increases in both the hospitalisation rate ratios and rate differences between Indigenous and other Australians over the period 2000–01 to 2005–06 (an increase of 61% in the rate ratio and 181% in the rate difference). This reflects a relative and absolute increase in the gap between hospitalisation rates for Indigenous and other Australians for potentially preventable chronic conditions over the period 2000–01 to 2005–06.

Table 3.06.6: Age-standardised hospitalisation rates, rate ratios and rate differences for potentially preventable chronic conditions, Qld, WA, SA and NT, 2000–01 to 2005–06[(a)]

	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change(b)	% change over period(c)
Indigenous number per 1,000								
Males	88.5	84.5	94.8	138.4	176.2	204.7	25.7*	145.3
Females	100.9	106.3	119.0	168.0	229.4	263.3	35.2*	174.2
Persons	95.4	96.8	108.3	154.0	204.8	236.5	30.7*	161.0
Other Australians number per 1,000(d)								
Males	19.4	19.6	20.2	21.8	29.2	32.4	2.7*	70.2
Females	14.8	14.5	14.9	15.7	21.4	23.6	1.9*	62.8
Persons	16.9	16.8	17.3	18.5	25.0	27.7	2.3*	67.1
Rate ratio(e)								
Males	4.6	4.3	4.7	6.3	6.0	6.3	0.4	48.9
Females	6.8	7.3	8.0	10.7	10.7	11.1	1.0	72.8
Persons	5.6	5.8	6.3	8.3	8.2	8.5	0.7*	60.6
Rate difference(f)								
Males	69.0	64.9	74.7	116.6	146.9	172.3	23.0*	166.4
Females	86.1	91.8	104.1	152.3	208.0	239.7	33.3*	193.4
Persons	78.5	80.0	90.9	135.5	179.8	208.8	28.4*	181.2

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 2001–01 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 2000–01 and 2005–06 based on the average annual change over the period.

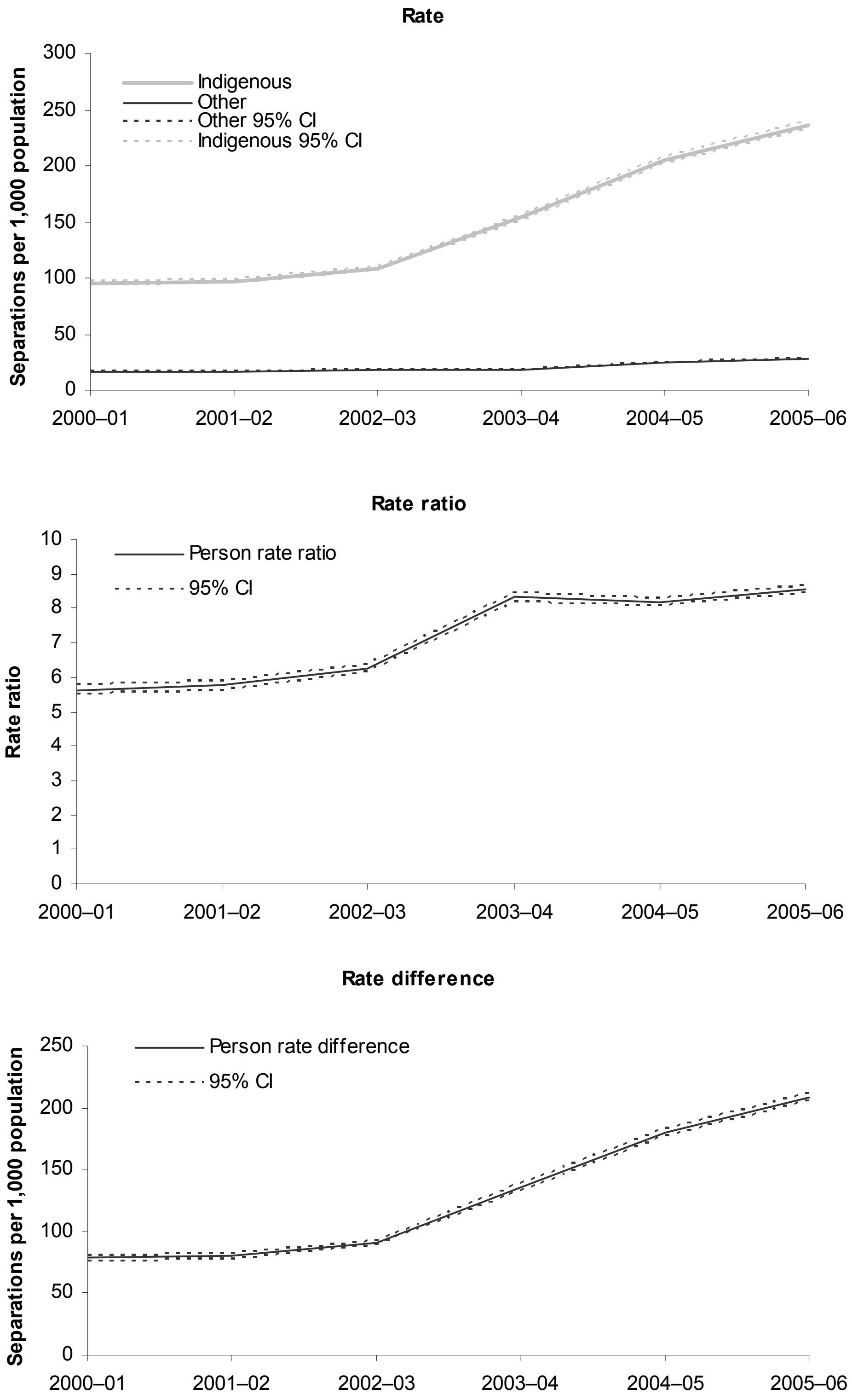
(d) ‘Other Australians’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.06.4: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for potentially preventable chronic conditions, Qld, WA, SA and NT combined, 2000–01 to 2005–06

Potentially preventable acute conditions

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for potentially preventable acute conditions, such as kidney infection, perforated ulcer, cellulitis, pelvic inflammatory disease, ear, nose and throat infections and dental conditions, over the period 1998–99 to 2005–06 are presented in Table 3.06.7 and Figure 3.06.5.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were apparent declines in hospitalisation rates for potentially preventable acute conditions among Indigenous females during the period 1998–99 to 2005–06, but the trend was not statistically significant.
- There were significant increases in hospitalisation rates for other Australians during the same period, with an average yearly increase in the rate of 0.3 per 1,000. This is equivalent to a 16% increase in the rate over the period.
- There were significant declines in the hospitalisation rate ratios between Indigenous and other Australians over the period 1998–99 to 2005–06 (16%). The declines in hospitalisation rate ratios were significant for both males and females. There were apparent declines in the hospitalisation rate differences between Indigenous and other Australians over the period 1998–99 to 2005–06 (11%), but the decline was only significant for females (16%).

Table 3.06.7: Age-standardised hospitalisation rates, rate ratios and rate differences for potentially preventable acute conditions, Qld, WA, SA and NT, 1998–99 to 2005–06[(a)]

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change[(b)]	% change over period[(c)]
Indigenous number per 1,000										
Males	36.2	35.0	33.0	33.4	33.4	36.0	34.3	36.4	0.1	1.5
Females	42.1	40.0	37.0	37.0	37.0	37.4	38.8	38.5	–0.4	−5.9
Persons	39.4	37.7	35.2	35.4	35.4	36.8	36.9	37.6	–0.1	−2.6
Other Australians number per 1,000[(d)]										
Males	11.4	11.9	12.2	12.5	12.6	13.0	12.7	13.1	0.2*	13.7
Females	12.0	12.6	13.4	13.6	13.8	14.3	14.1	14.3	0.3*	18.6
Persons	11.7	12.2	12.8	13.1	13.2	13.6	13.4	13.7	0.3*	16.4
Rate ratio[(e)]										
Males	3.2	3.0	2.7	2.7	2.7	2.8	2.7	2.8	–0.05*	−10.3
Females	3.5	3.2	2.8	2.7	2.7	2.6	2.8	2.7	–0.1*	−1.7
Persons	3.4	3.1	2.8	2.7	2.7	2.7	2.7	2.7	–0.1*	−15.6
Rate difference[(f)]										
Males	24.8	23.2	20.9	21.0	20.8	23.0	21.6	23.3	–0.1	−4.2
Females	30.1	27.4	23.7	23.3	23.3	23.1	24.7	24.2	–0.7*	−15.7
Persons	27.7	25.5	22.4	22.4	22.2	23.1	23.4	23.9	–0.4	−10.5

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

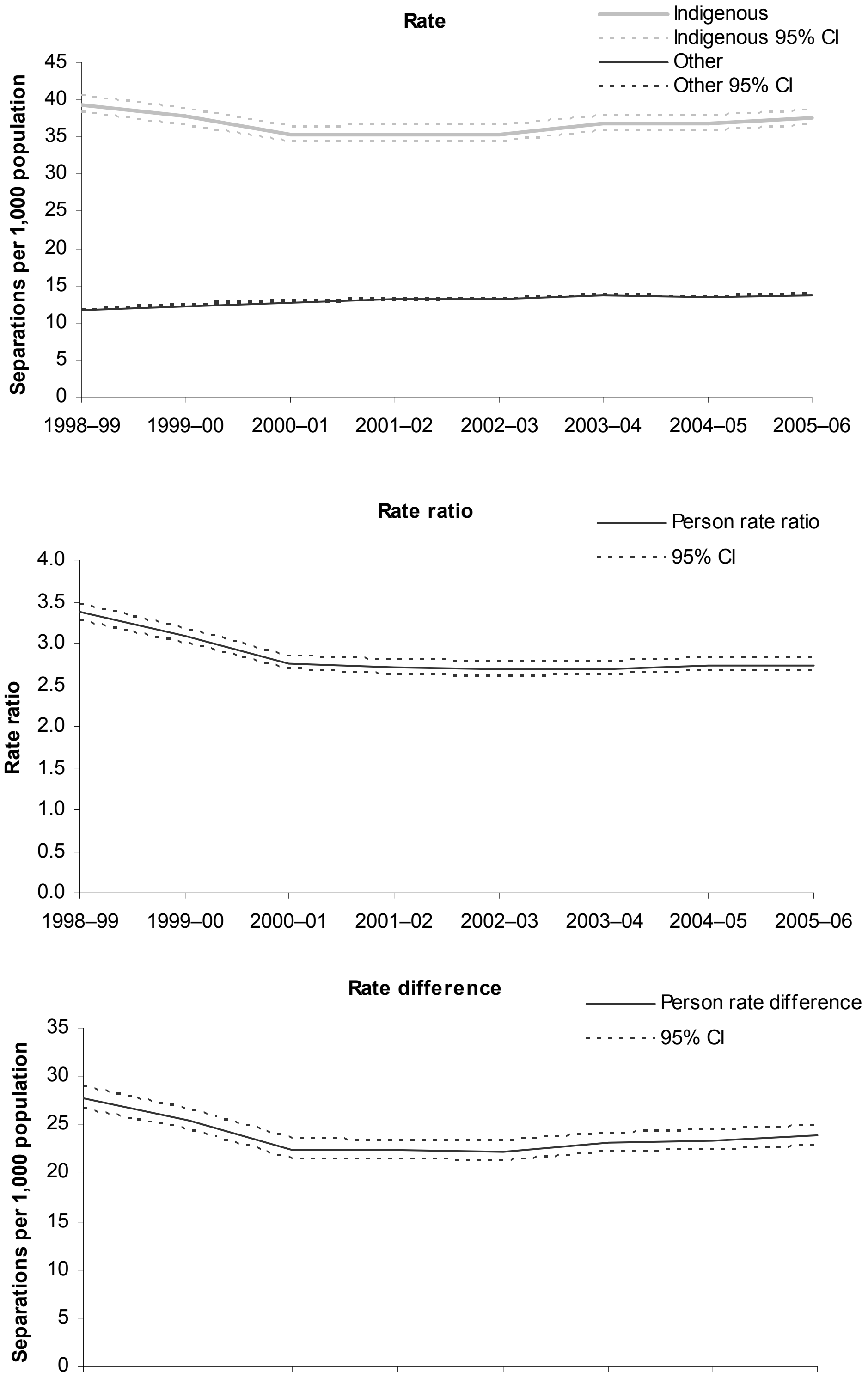
(d) 'Other Australians' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the Australian 2001 standard population.

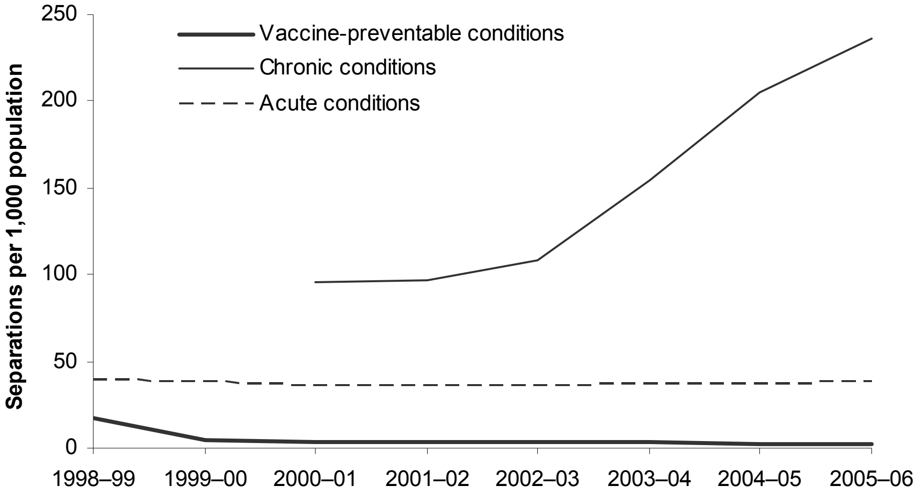
Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.06.5: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for potentially preventable acute conditions, Qld, WA, SA and NT combined, 1998–99 to 2005–06

Figure 3.06.6 presents hospitalisation rates for Indigenous Australians for vaccine preventable, potentially preventable chronic and potentially preventable acute conditions for the period 1998–99 to 2005–06. Indigenous Australians are hospitalised at much higher rates for chronic conditions than acute conditions or vaccine preventable conditions.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.06.6: Hospitalisation rates for vaccine-preventable conditions, potentially preventable chronic conditions and potentially preventable acute conditions, Indigenous Australians, Qld, WA, SA and NT combined, 1998–99 to 2005–06

Data quality issues

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The not stated category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. For several years, Queensland, South Australia, Western Australia and the northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data for Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data for South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from the Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

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3.07 Health promotion

Interventions provided by clinicians and health promotion initiatives funded by governments and provided by a range of health professionals in the wider community for the Aboriginal and Torres Strait Islander population.

Data sources

Health expenditure data

The report on expenditures on health services for Aboriginal and Torres Strait Islander peoples is produced every 3 years. The latest report covers expenditure for the 2004–05 financial year and was published in the AIHW report *Expenditures on health for Aboriginal and Torres Strait Islander people 2004–05* (AIHW 2008).

There are a number of difficulties in reporting on this measure, including the issue of under-identification of Indigenous Australians in health databases (such as for hospital separations). Although adjustments are made to the data to allow for under-identification, the adjusted estimates may be an overestimate or underestimate of actual health service use and expenditure by Indigenous people.

In some areas of expenditure, surveys have been used to estimate service use by Indigenous people, which, in turn, have been used in the estimates of expenditure. Consequently, the reliability of the expenditure estimates is affected by sampling error.

There may also be some limitations associated with the scope and definition of health expenditures and there may be inconsistencies in reporting and categorisation of expenditure on health goods and services across data providers.

The attribution of expenditure to Indigenous people either on an overall population or per capita basis should be treated with caution as it is an estimate (AIHW 2008).

Expenditure is a measure of met need. Indigenous Australians have a significantly poorer health status (measured in terms of life expectancy, mortality rates and morbidity) than non-Indigenous Australians. It could therefore be expected that per capita investment of health resources to achieve equality for Aboriginal and Torres Strait Islanders should be higher than for other Australians.

Divisions of GP Survey

Since 1997–98, the Annual Survey of Divisions (ASD) has been conducted by the Primary Health Care Research and Information Service (PHC RIS) on behalf of the DoHA. Along with the Annual Report, the ASD forms a component of the reporting requirements for all Divisions of General Practice. The ASD consists of a standardised questionnaire about Division membership, activities and infrastructure.

Bettering the Evaluation and Care of Health (BEACH) Survey

Information about encounters in general practice is available from the BEACH survey, which is conducted by the AIHW Australian GP Statistics and Classification Centre, University of Sydney. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be an underestimate. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Due to a late inclusion of a 'not stated' category of Indigenous status in 2001–02 (before which not stated responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2002–03 to 2006–07, during which there were 7,542 GP encounters with Indigenous patients recorded in the survey, representing 1.5% of total GP encounters in the survey.

Community Housing and Infrastructure Needs Survey (CHINS)

The CHINS collects data from all Aboriginal and Torres Strait Islander housing organisations and discrete Indigenous communities in Australia. The ABS conducted the CHINS on behalf of the Aboriginal and Torres Strait Islander Commission (ATSIC) and the Office for Aboriginal and Torres Strait Islander Health (OATSIH) in 1999 and 2001. The most recent CHINS was conducted by the ABS in 2006 on behalf of the Australian Government Department of Families, Community Services and Indigenous Affairs (FaCSIA) through funding from FaCSIA. Results from this survey were published in August 2007. Data from the CHINS is held by FaCSIA and the ABS.

The 2006 information was collected on 496 Indigenous housing organisations, which managed a total of 21,854 permanent dwellings. Information was also collected on 1,187 discrete Indigenous communities, with a combined population of 92,960. Most of these communities were in Very Remote regions of Australia, with 73% (865) having a population of less than 50 people.

In the 2006 CHINS, a community questionnaire collected detailed infrastructure information from all discrete Indigenous communities with a reported usual population of 50 persons or more, as well as for communities, which had a reported usual population of fewer than 50 persons but which were not administered by a larger discrete Indigenous community or Resource Agency (375 communities). The 812 other communities had reported usual populations of fewer than 50 persons and were asked a subset of questions from the community questionnaire form, the short community questionnaire (ABS 2007).

Service Activity Reporting (SAR) database

The SAR collects data from approximately 150 Australian Government-funded Aboriginal and Torres Strait Islander primary heath-care services and is held at the Australian Government Department of health and Ageing (DoHA). It is estimated that these services provide GP services to around 40% of the Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a 12-month period. Response rates to the SAR by Indigenous primary heath-care services are usually between 97% and 99%.

Note that the SAR only includes Indigenous health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Drug and Alcohol Service Reporting (DASR)

The DASR collects data from approximately 40 Australian Government-funded Indigenous substance use services and is held at the DoHA. Service-level data on substance use and related activities are collected by survey questionnaire over a 12 month period. Response rates to the DASR by Indigenous substance use services are usually between 93% and 100%.

Note that the DASR only includes Indigenous health organisations that receive at least some Australian Government funding to facilitate access to substance use services.

Analyses

Government expenditure

Government expenditure on selected public health activities for Indigenous and non-Indigenous Australians in 2004–05 is presented in Table 3.07.1 and Figure 3.07.1 below.

- In 2004–05, total government expenditure on selected public health activities (selected health promotion, environmental health, food standards and hygiene, and prevention of hazardous and harmful drug use) was $31 million for Indigenous Australians and $511 million for non-Indigenous Australians.
- Total government expenditure per person on selected public health activities was $63 for Indigenous persons and $26 for non-Indigenous persons (ratio of 2.4). State/territory government expenditure per person on selected public health activities was higher for Indigenous persons than non-Indigenous persons ($58 compared with $19), Australian Government expenditure per person on selected public health activities was lower for Indigenous persons than non-Indigenous persons ($5 compared with $7).
- State and territory governments provided the majority of government expenditure for selected health promotion; environmental health; food standards and hygiene; and prevention of hazardous and harmful drug use (Table 3.07.1).
- ● The Indigenous share of Australian Government expenditure was around 2% for selected health promotion, environment health, and food standards and hygiene and around 1% for prevention of hazardous and harmful drug use. The Indigenous share of state/territory government expenditure was around 4% for selected health promotion, 9% for environment health, 5% for food standards and hygiene and 11% for prevention of hazardous and harmful drug use.
- Of the four selected public health activities, prevention of hazardous and harmful drug use received the most government expenditure per person for Indigenous Australians ($29).
- Total government expenditure per person was higher for Indigenous Australians than for non-Indigenous Australians for all four selected public health activities (Figure 3.07.1). The ratio of Indigenous to non-Indigenous per person expenditure was 1.68 for selected health promotion, 3.24 for environmental health, 1.53 for food standards and hygiene and 3.13 for prevention of hazardous and harmful drug use.

Table 3.07.1: Expenditure for Indigenous Australian and non-Indigenous people on selected public health activities[(a)], Australian Government, state and territory governments and Total, 2004–05

	Expenditure ($ million)			Expenditure per person ($)		
Selected public health activities	Indigenous	Non-Indigenous	Indigenous share %	Indigenous	Non-Indigenous	Ratio
Australian government expenditure[(b)]						
Selected health promotion	1.0	39.4	2.4	2.0	2.0	1.00
Environmental health	0.4	16.6	2.4	0.8	0.8	1.00
Food standards and hygiene	0.3	13.8	1.9	0.5	0.7	0.78
Prevention of hazardous and harmful drug use	0.7	67.3	1.0	1.5	3.4	0.43
Total selected public health activities	**2.4**	**137.1**	**1.8**	**4.8**	**7.0**	**0.7**
State/territory government expenditure[(c)]						
Selected health promotion[(d)]	8.3	182.9	4.3	17.0	9.3	1.83
Environmental health	5.8	60.6	8.7	11.8	3.1	3.85
Food standards and hygiene	0.9	17.8	5.0	1.9	0.9	2.11
Prevention of hazardous and harmful drug use	13.3	112.8	10.5	27.2	5.7	4.75
Total selected public health activities	**28.3**	**374.1**	**7.6**	**57.9**	**19.0**	**3.1**
Total expenditure						
Selected health promotion	9.3	222.3	4.2	19.0	11.3	1.68
Environmental health	6.2	77.2	8.0	12.7	3.9	3.24
Food standards and hygiene	1.2	31.6	3.8	2.4	1.6	1.53
Prevention of hazardous and harmful drug use	14.0	180.1	7.8	28.6	9.1	3.13
Total selected public health activities	**30.7**	**511.2**	**6.0**	**62.7**	**25.9**	**2.4**

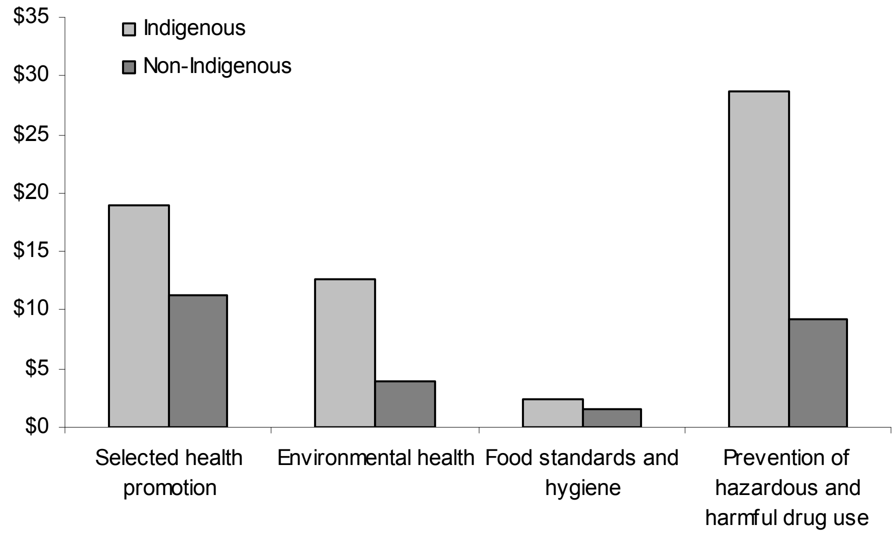
(a) The four selected activities (selected health promotion, environmental health, food standards and hygiene and prevention of hazardous and harmful drug use) are from the nine core public health activities reported in AIHW's national public health expenditure reports.

(b) Australian Government Indigenous expenditure estimates were derived from both Indigenous specific expenditure and Indigenous population proportions.

(c) State and territory jurisdictions used differing methods to estimate the Indigenous expenditure estimates.

(d) Excludes $1.2 million Indigenous health-related expenditure from Victoria.

Source: AIHW 2008.



Source: AIHW 2008.

Figure 3.07.1: Total expenditure per person for selected public health activities, by Indigenous status, 2004–05.

GP prevention and early intervention programs

The Annual Survey of Divisions collects data on prevention and early intervention programs run by Divisions of General Practice. The number and proportion of Divisions of General Practice aiming at Indigenous Australians for selected prevention and early intervention programs and activities in 2005–06 is presented in Table 3.07.2 and Figures 3.07.2a and b.

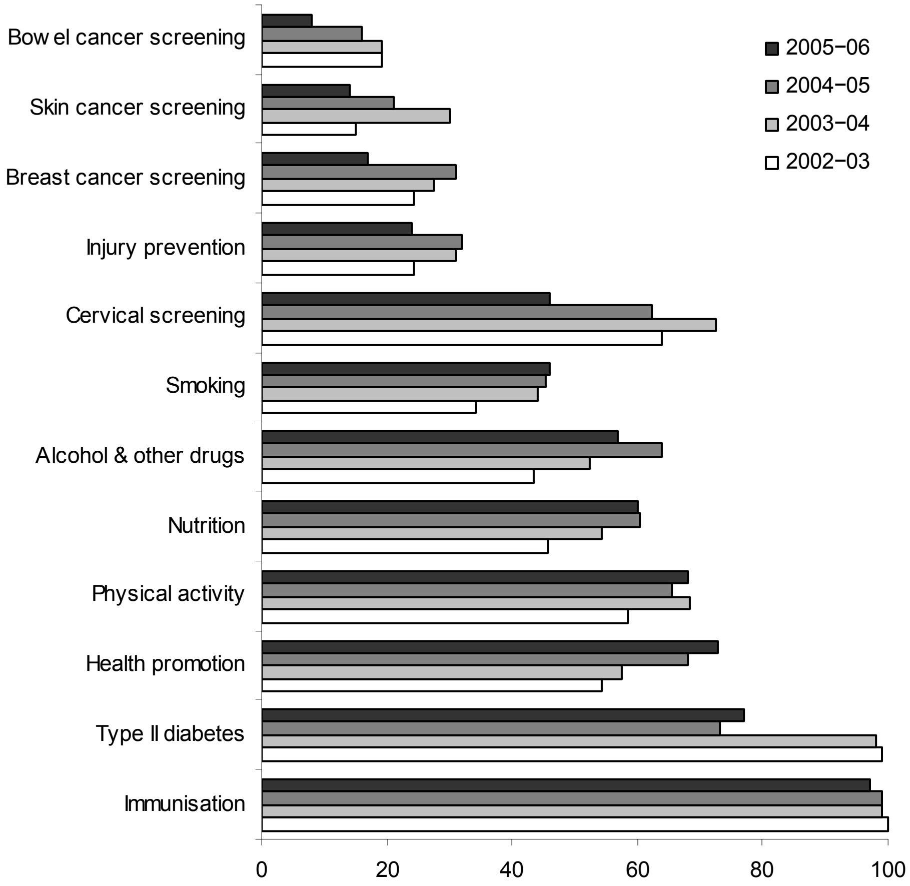
- In 2005–06, around three-quarters of general practice divisions ran programs for Type II diabetes, life-scripts and health promotion; 68% ran programs for physical activity, 60% for nutrition, 57% for alcohol and other drugs, 46% for smoking and 24% for injury prevention.
- In 2005–06, around 28% of Divisions focused on Indigenous Australians in their health promotion programs, 31% in nutrition programs, around one-quarter in their type II diabetes and smoking programs, 16% in their life-scripts programs, 19% in physical activity programs, and 18% in their alcohol and other drugs programs. Only 7% of Divisions with activities or programs for injury prevention aimed at Indigenous Australians.

Table 3.07.2: Number and proportion of Divisions of General Practice with selected prevention/early intervention programs and number and proportion of Divisions aiming at Indigenous Australians in their prevention and early intervention programs, 2005–06.

	Divisions with program/activity		Indigenous Australians	
Selected prevention programs	Number	Per cent	Number	Per cent
Type II diabetes	92	77	24	26
Life-scripts	91	76	15	16
Health promotion	87	73	24	28
Physical activity	81	68	15	19
Nutrition	71	60	22	31
Alcohol and other drugs	68	57	12	18
Smoking	55	46	13	24
Injury prevention	28	24	2	7
Total	**119**	**100**	**119**	**100**

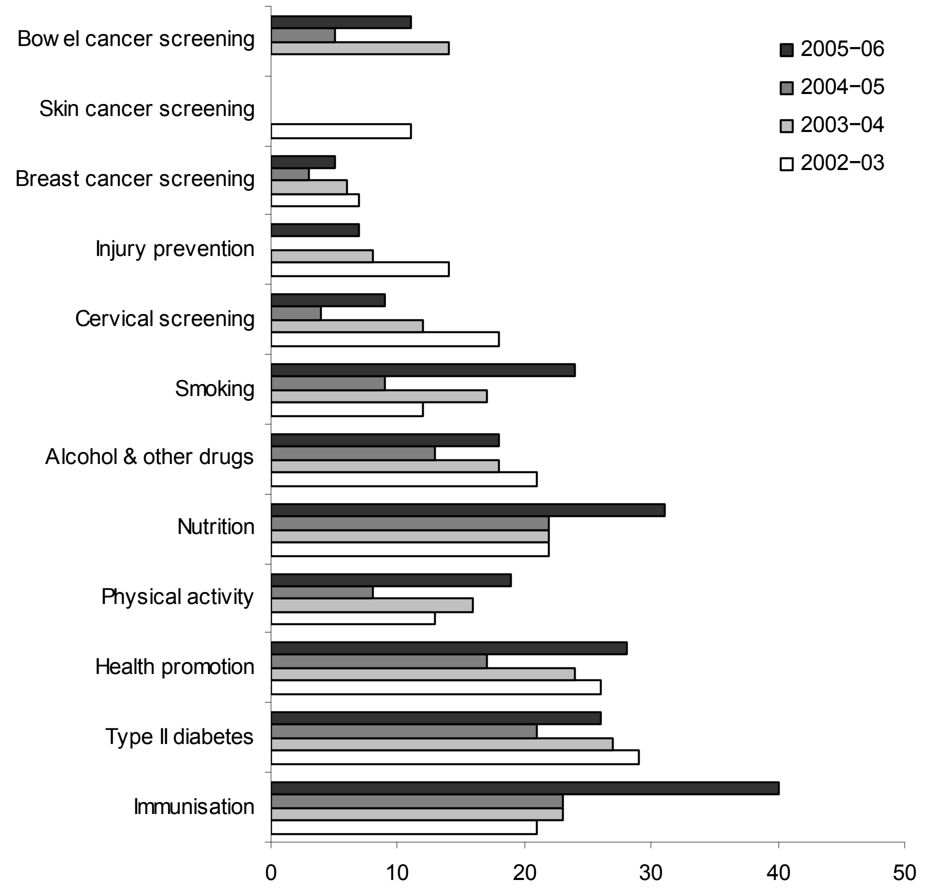
Source: Hordacre et al. 2007.

- Between 2002–03 and 2005–06 there has been a decrease in the proportion of Divisions with Type II diabetes programs and bowel cancer screening and an increase in the number of Divisions with health promotion, physical activity, nutrition, alcohol and other drugs and smoking programs (Figure 3.07.2a).
- Over the same period, there has been and increase in the proportion of Divisions that focussed on Indigenous Australians in their immunisation, physical activity, nutrition and smoking programs and a decrease in the proportion of Divisions that focussed on Indigenous Australians in their Type II diabetes, alcohol and other drugs, cervical cancer, injury prevention, and breast cancer screening programs (Figure 3.07.2b).



Source: Kalucy et al. 2004; Kalucy et al. 2005; Hordacre et al. 2006; Hordacre et al. 2007.

Figure 3.07.2a: Proportion of Divisions of General Practice with selected prevention/early intervention programs, 2002–03 to 2005–06.



Source: Kalucy et al. 2004; Kalucy et al. 2005; Hordacre et al. 2006; Hordacre et al. 2007.

Figure 3.07.2b: Proportion of Divisions focussing on Indigenous Australians in their selected prevention/early intervention programs, 2002–03 to 2005–06.

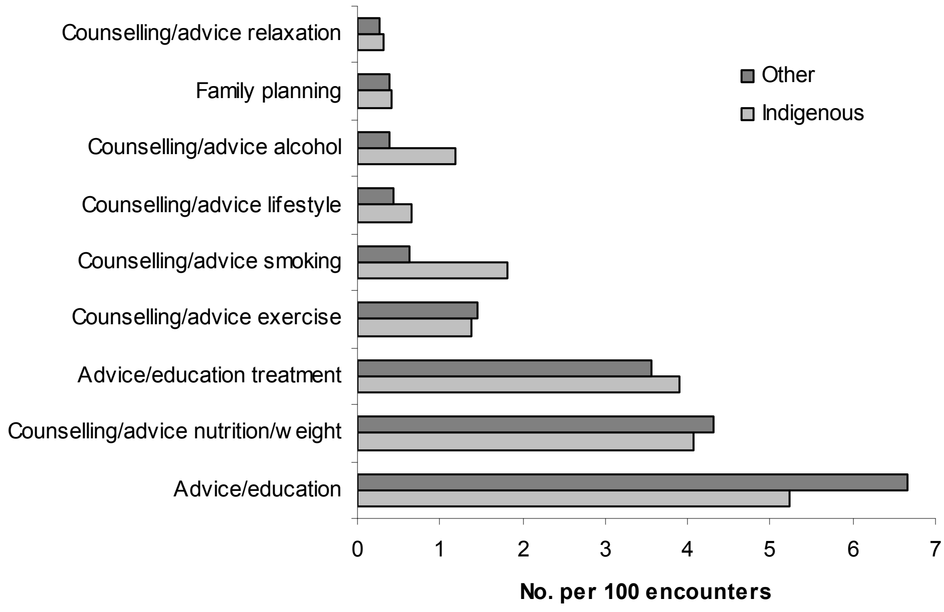
Clinical treatments provided by general practitioners

Information on clinical treatments provided by general practitioners such as advice, education and counselling for factors such as smoking, alcohol, nutrition, weight, exercise and lifestyle are available from the BEACH survey. Data for the 5-year period 2002–03 to 2006–07 are provided below.

- Over the period 2002–03 to 2006–07, of the 4,441 clinical treatments provided to Indigenous patients surveyed in the BEACH, 9% were for advice/education, 7% were for advice/education related to treatment, 7% were for counselling/advice related to nutrition and weight, 3% were for counselling/advice related to smoking, 2% were for counselling/advice related to exercise or alcohol, 1% were for counselling/advice related to lifestyle or family planning and 0.5% were for counselling/advice related to relaxation (Table 3.07.3).
- The selected clinical treatments related to health promotion outlined above were provided at a rate of 19.5 per 100 encounters for Indigenous patients. Of these general advice/education was the most common treatment provided (6 per 100 encounters)

followed by advice/education related to treatment and counselling/advice related to nutrition and weight (4 per 100 encounters) (Table 3.07.3).

- Indigenous patients were more likely than other patients to receive clinical treatments of counselling/advice related to alcohol and smoking (both ratio of 3). For the other selected clinical treatments related to health promotion provided, Indigenous patients were less likely than, or equally as likely as, other patients to receive these from general practitioners (Figure 3.07.3).
- At encounters with Indigenous patients, some clinical treatments were provided more often in 2006–07 than in 1998–99, including for general advice/education, counselling/advice related to nutrition and weight, lifestyle, alcohol, relaxation and family planning. Advice and education related to treatment was provided less often in 2006–07 than in 1998–99 for Indigenous patients (Table 3.07.4).
- Over the period 1998–99 to 2006–07, clinical treatments related to health promotion were most commonly provided by GPs to Indigenous patients in the management of endocrine/metabolic disorders (29 per 100 problems managed), followed by psychological problems (13 per 100 problems managed). For other patients, the clinical treatments related to health promotion most commonly provided by GPs were in the management of endocrine/metabolic problems (31 per 100 problems managed) and cardiovascular problems (13 per 100 problems managed) (Table 3.07.5).



Source: AIHW analysis of BEACH survey of general practice AGPSCC.

Figure 3.07.3: Rate (no. per 100 encounters) for selected clinical treatments provided by general practitioners, by Indigenous status, 2002–03 to 2006–07.

Table 3.07.3: Selected clinical treatments provided by general practitioners, by Indigenous status, 2002–03 to 2006–07(a) (b)

	Number		Proportion		Crude rate (no. per 100 encounters)						Age standardised rate (no. per 100 encounters)(c)		
	Indig	**Other**	**Indig**	**Other**	**Indig**	**95% LCL(d)**	**95% UCL(e)**	**Other**	**95% LCL(d)**	**95% UCL(e)**	**Indig**	**Other**	**Rate ratio(f)**
Advice/education	419	32,377	9.4	12.4	5.6	4.3	6.8	6.7	6.4	7.0	5.2	6.7	0.8
Counselling/advice—nutrition/weight	287	20,987	6.5	8.0	3.8	3.0	5.2	4.3	3.4	3.7	4.1	4.3	0.9
Advice/education—treatment	309	17,311	7.0	6.6	4.1	1.2	2.4	3.6	0.6	0.7	3.9	3.6	1.1
Counselling/advice—exercise	105	7,133	2.4	2.7	1.4	0.9	1.8	1.5	0.4	0.4	1.4	1.5	0.9
Counselling/advice—smoking	134	3,034	3.0	1.2	1.8	1.0	1.8	0.6	1.4	1.6	1.8	0.6	2.9
Counselling/advice—life style	44	2,147	1.0	0.8	0.6	0.3	0.9	0.4	0.4	0.5	0.7	0.4	1.5
Counselling/advice—alcohol	102	1,890	2.3	0.7	1.4	3.0	4.6	0.4	4.2	4.5	1.2	0.4	3.1
Family planning	44	1,901	1.0	0.7	0.6	0.2	0.5	0.4	0.3	0.3	0.4	0.4	1.0
Counselling/advice—relaxation	24	1,326	0.5	0.5	0.3	0.4	0.8	0.3	0.4	0.4	0.3	0.3	1.1
Total selected clinical treatments	***1,468***	***88,106***	***33.1***	***33.7***	***19.5***	***14.2***	***24.7***	***18.2***	***17.4***	***19.1***	18.9	18.1	1.0
Other clinical treatments	2,973	173,055	66.9	66.3	39.4	31.8	47.0	35.8	35.2	36.4	39.2	35.5	1.1
Total	**4,441**	**261,161**	**100.0**	**100.0**	**58.9**	**46.0**	**71.8**	**54.0**	**52.5**	**55.5**	58.2	53.6	1.1

(a) These survey results are likely to undercount the number of visits to GPs by Indigenous Australians.

(b) Combined financial year data for 5 years.

(c) Directly age-standardised rate using the total number of encounters for the period as the standard.

(d) LCL = Lower confidence limit

(e) UCL = Upper confidence limit

(f) Rate for Indigenous divided by rate for other Australians.

Source: AIHW analysis of BEACH survey of general practice AGPSCC.

Table 3.07.4: Selected clinical treatments provided by general practitioners, by Indigenous status, 1998–99 and 2006–07(a)(b)

	1998–99									2006–07								
	Crude rate (no. per 100 encounters)						Age-standardised rate (no. per 100 encounters)(c)			Crude rate (no. per 100 encounters)						Age-standardised rate (no. per 100 encounters		
Selected clinical treatments	**Indig.**	**95% LCL(d)**	**95% UCL(e)**	**Other**	**95% LCL(d)**	**95% UCL(e)**	**Indig**	**Other**	**Rate ratio**	**Indig**	**95% LCL(d)**	**95% UCL(e)**	**Other**	**95% LCL(d)**	**95% UCL(e)**	**Indig**	**Other**	**Rate ratio**
Advice/education	2.4	1.1	3.6	3.7	3.2	4.2	1.9	3.7	0.5	4.5	2.3	6.8	6.2	5.4	6.9	3.5	6.1	0.6
Counselling/advice—nutrition/weight	3.5	3.8	8.6	3.7	5.8	6.8	3.8	3.7	1.0	3.8	0.9	4.1	3.5	2.5	3.1	3.9	3.5	1.1
Advice/education—treatment	6.2	0.5	1.9	6.3	0.6	0.7	5.5	6.2	0.9	2.5	0.6	2.3	2.8	0.5	0.6	2.6	2.8	0.9
Counselling/advice—exercise	1.1	0.3	1.3	1.5	0.3	0.4	2.1	1.4	1.5	1.3	0.4	2.5	1.2	0.3	0.4	1.3	1.1	1.1
Counselling/advice—smoking	1.2	0.4	1.8	0.6	1.2	1.7	1.6	0.6	2.6	1.4	0.5	2.0	0.5	1.0	1.3	1.7	0.5	3.2
Counselling/advice—life style	0.2	0.0	0.4	0.3	0.3	0.4	0.1	0.3	0.4	0.6	0.0	1.1	0.4	0.3	0.5	0.7	0.4	1.6
Counselling/advice—alcohol	0.8	2.3	4.7	0.4	3.4	4.0	0.8	0.4	2.2	1.4	2.0	5.5	0.3	3.2	3.9	1.5	0.3	4.4
Family planning	0.3	0.1	0.8	0.3	0.3	0.4	0.2	0.3	0.7	0.8	0.1	1.8	0.4	0.3	0.4	0.6	0.4	1.4
Counselling/advice—relaxation	0.4	0.0	0.6	0.4	0.2	0.3	0.4	0.4	1.1	1.0	0.2	1.4	0.4	0.3	0.5	1.0	0.3	2.8
Total selected clinical treatments	***16.1***	***8.4***	***23.8***	***17.1***	***15.2***	***18.9***	***16.5***	***16.9***	***1.0***	***17.3***	***7.1***	***27.5***	***15.7***	***13.8***	***17.7***	***16.5***	***15.6***	***1.1***
Other clinical treatments	23.0	17.3	28.8	27.8	26.7	28.9	23.4	27.6	0.8	38.1	19.5	56.7	35.1	33.7	36.6	39.2	34.9	1.1
Total	**39.1**	**25.8**	**52.5**	**44.9**	**41.9**	**47.8**	**39.9**	**44.5**	**0.9**	**55.4**	**26.5**	**84.2**	**50.9**	**47.5**	**54.3**	**55.7**	**50.5**	**1.1**

Table 3.07.4 (continued): Selected clinical treatments provided by general practitioners, by Indigenous status, 1998–99 and 2006–07(a)(b)

(a) These survey results are likely to undercount the number of visits to GPs by Indigenous Australians.

(b) Combined financial year data for 5 years.

(c) Directly age-standardised rate using total encounters in the period as the standard.

(d) LCL = Lower confidence limit

(e) UCL = Upper confidence limit

Source: AIHW analysis of BEACH survey of general practice AGPSCC.

Table 3.07.5: Selected clinical treatments provided by general practitioners: rate (no. per problems managed), by Indigenous status, 1998–99 to 2006–07[(a)(b)]

	Indigenous							Other						
Selected clinical treatments	Respira-tory	Musculo-skeletal	Cardio-vascular	Endocrine/ metabolic	Psychol ogical	Other[(c)]	Total	Respir-atory	Musculo -skeletal	Cardio-vascular	Endocrine/ metabolic	Psycho-logical	Other[(c)]	Total
							No. per 100 problems managed[(d)]							
Advice/education	3.2	4.7	2.9	1.6	2.7	3.8	3.3	4.3	5.6	3.9	2.7	3.6	4.9	4.5
Counselling/advice—nutrition/weight	0.0	0.3	2.3	14.9	0.4	1.5	2.5	0.2	0.7	4.7	19.5	0.5	1.9	2.9
Advice/education—treatment	2.9	2.7	1.2	4.9	1.3	2.0	2.5	4.8	2.9	1.0	1.7	0.7	2.1	2.4
Counselling/advice—exercise	0.1	1.1	1.0	4.9	0.1	0.2	0.9	0.1	1.7	2.1	5.7	0.3	0.3	1.0
Counselling/advice—smoking	3.7	0.0	0.9	0.3	4.8	0.3	1.1	1.1	0.0	0.4	0.1	2.0	0.1	0.4
Counselling/advice—lifestyle	0.1	0.3	0.6	1.5	0.2	0.2	0.4	0.0	0.1	1.0	1.2	0.2	0.2	0.3
Counselling/advice—alcohol	0.2	0.1	0.6	0.6	2.8	0.5	0.7	0.0	0.0	0.2	0.2	1.6	0.2	0.3
Family planning	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.3
Counselling/advice—relaxation	0.2	0.1	0.1	0.0	0.9	0.1	0.2	0.0	0.0	0.1	0.0	1.6	0.1	0.2
Total selected clinical treatments	***10.3***	***9.3***	***9.5***	***28.6***	***13.3***	***9.1***	***11.9***	***10.7***	***11.1***	***13.3***	***31.1***	***10.5***	***10.1***	***12.1***
Other clinical treatments	22.9	26.7	14.4	15.9	35.7	27.8	24.8	20.4	26.6	12.5	12.8	36.2	27.1	23.7
Total treatments	**33.2**	**36.0**	**23.9**	**44.5**	**49.0**	**36.9**	**36.7**	**31.1**	**37.7**	**25.9**	**43.9**	**46.7**	**37.2**	**35.8**
No treatments/not stated	66.8	64.0	76.1	55.5	51.0	63.1	63.3	68.9	62.3	74.1	56.1	53.3	62.8	64.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(continued)

Table 3.07.5 (continued): Selected clinical treatments provided by general practitioners: rate (no. per problems managed), by Indigenous status, 1998–99 to 2006–07(a)(b)

(a) These survey results are likely to undercount the number of visits to GPs by Indigenous Australians.

(b) Combined financial year data for 5 years.

(c) ‘Other clinical treatments’ include: skin, general and unspecified, digestive, female genital system, ear, pregnancy and family planning, neurological, urology, eye, male genital system, blood and social.

(d) Directly age-standardised rate using total encounters in the period as the standard.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.

Indigenous communities

Health promotion programs

Health promotion programs are defined in the CHINS as 'a series of planned group activities conducted by a health professional within the community'. They are designed to change knowledge, attitudes, beliefs, behaviours or susceptibility to disease through a combination of educational and environmental measures, screening or immunisation (ABS 2007).

For the 2006 CHINS, data on health promotion programs were only collected from communities which completed the long community questionnaire. The health promotion questions in the CHINS do not collect information on the extent or quality of these activities —only that they have occurred. Therefore, these data are limited in their contribution to our understanding of the health promotion activities occurring in these discrete Indigenous communities.

- In 2006, most discrete Indigenous communities reported that one or more health promotion programs (67%) had been conducted, with women's health programs reported by 58%, well babies programs by 54%, immunisation programs by 54%and men's health programs by 52% of communities (Table 3.07.6; Figure 3.07.4).
- The proportion of discrete Indigenous communities reporting at least one health promotion program varied across jurisdictions. Queensland had the highest proportion (89%) and New South Wales the lowest proportion (50%) of communities who reported one or more health promotion programs had been conducted (Table 3.07.7).
- The proportion of discrete Indigenous communities, with a population of 50 or more located more than 10 kilometres from a hospital, that reported conducting at least one health promotion program conducted decreased from 82% in 2001 to 75% in 2006 (Table 3.07.8; Figure 3.07.5.
- The three programs run in the most communities in 2001 and 2006 were women's health, well babies and immunisation (Table 3.07.8; Figure 3.07.5).

Table 3.07.6: Discrete Indigenous communities[(a)] located 10 kilometres or more from a hospital: selected health promotion programs conducted in community, 2006

	Health promotion program conducted		Health promotion program not conducted	
	Communities (No.)	Communities (%)	Communities (No.)	Communities %
Well babies	155	53.8	132	45.8
Women's health	168	58.3	119	41.3
Men's health	149	51.7	138	47.9
Youth's health	88	30.6	199	69.1
Sexual health	119	41.3	168	58.3
Substance misuse	89	30.9	198	68.8
Immunisation	154	53.5	133	46.2
Trachoma control	69	24.0	218	75.7
Eye health	91	31.6	196	68.1
Ear health	107	37.2	180	62.5
Nutrition	129	44.8	158	54.9
Stop smoking	74	25.7	213	74.0
Domestic and personal hygiene	92	31.9	195	67.7
Emotional and social wellbeing or mental health	84	29.2	203	70.5
Sub-total	*194*(b)	*67.4*	*93*(c)	*32.3*
Not stated	1	0.3	1	0.3
Total no. communities(d)	**288**	**100.0.**	**288**	**100.0.**

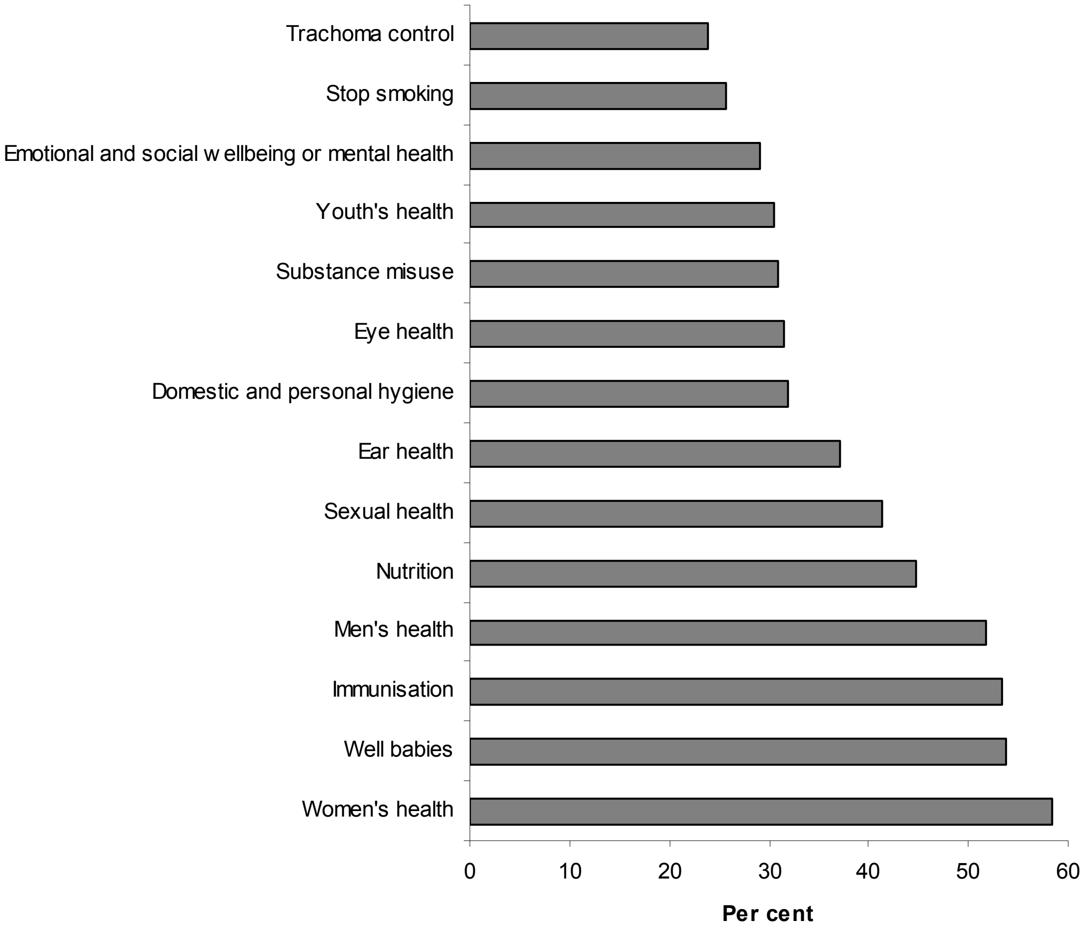
(a) With a population of 50 or more, or a reported usual population of less than 50 but which were not linked to a parent community or resource agency.

(b) Number of communities where at least one health promotion program was conducted.

(c) Number of communities where no health promotion programs were conducted.

(d) Excludes communities where distance to nearest hospital was not stated.

Source: AIHW analysis of 2006 CHINS.



Source: AIHW analysis of 2006 CHINS.

Figure 3.07.4: Proportion of discrete Indigenous communitites located 10 kilometres or more with each type of health promotion program conducted, 2006.

Table 3.07.7: Discrete Indigenous communities[(a)] located 10 kilometres or more from a hospital: selected health promotion programs conducted in community, by state/territory, 2006

	NSW		Qld		WA		SA		NT		Australia[(b)]	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Well babies	10	33.3	19	70.4	29	40.8	14	42.4	80	64.5	155	53.8
Women's health	14	46.7	23	85.2	34	47.9	17	51.5	77	62.1	168	58.3
Men's health	10	33.3	17	63.0	28	39.4	16	48.5	75	60.5	149	51.7
Youth's health	9	30.0	10	37.0	19	26.8	9	27.3	39	31.5	88	30.6
Sexual health	10	33.3	19	70.4	27	38.0	4	12.1	57	46.0	119	41.3
Substance misuse	10	33.3	13	48.1	20	28.2	5	15.2	39	31.5	89	30.9
Immunisation	13	43.3	20	74.1	37	52.1	15	45.5	67	54.0	154	53.5
Trachoma control	2	6.7	4	14.8	25	35.2	1	3.0	36	29.0	69	24.0
Eye health	4	13.3	12	44.4	21	29.6	5	15.2	46	37.1	91	31.6
Ear health	9	30.0	12	44.4	31	43.7	4	12.1	48	38.7	107	37.2
Nutrition	10	33.3	14	51.9	28	39.4	4	12.1	70	56.5	129	44.8
Stop smoking	2	6.7	11	40.7	23	32.4	3	9.1	33	26.6	74	25.7
Domestic and personal hygiene	4	13.3	9	33.3	23	32.4	4	12.1	50	40.3	92	31.9
Emotional and social wellbeing or mental health	7	23.3	13	48.1	24	33.8	6	18.2	31	25.0	84	29.2
Total with at least one health promotion program	***15***	***50.0***	***24***	***88.9***	***43***	***60.6***	***18***	***54.5***	***91***	***73.4***	***194***	***67.4***
Total with no health promotion programs	***15***	***50.0***	***2***	***7.4***	***28***	***39.4***	***15***	***45.5***	***33***	***26.6***	***93***	***32.3***
Not stated	—	—	1	3.7	—	—	—	—	—	—	1	0.3
Total[(c)]	**30**	**100.0**	**27**	**100.0**	**71**	**100.0**	**33**	**100.0**	**124**	**100.0**	**288**	**100.0**

(a) With a population of 50 or more, or a reported usual population of less than 50 but which were not linked to a parent community or resource agency

(b) Victoria and Tasmania included in Australia for confidentiality reasons.

(c) Excludes communities where distance to nearest hospital was not stated.

Source: AIHW analysis of 2006 CHINS.

Table 3.07.8: Discrete Indigenous communities with a population of 50 or more located 10 kilometres or more from a hospital: selected health promotion programs conducted in community, 2001 and 2006

	Health promotion program conducted		Health promotion program not conducted	
	2001	**2006**	**2001**	**2006**
	%	**%**	**%**	**%**
Well babies	66	61	33	39
Women's health	72	65	27	35
Men's health	62	58	36	42
Youth's health	52	34	47	66
Sexual health	65	46	33	54
Substance misuse	52	34	47	66
Immunisation	74	61	26	39
Eye health inc. trachoma(a)	60	44	39	37
Ear health	64	42	35	58
Nutrition(b)	n.a.	49	n.a.	51
Stop smoking(b)	n.a.	29	n.a.	71
Domestic and personal hygiene(b)	n.a.	35	n.a.	65
Emotional and social wellbeing or mental health	50	32	49	68
Sub-total	**82(c)**	**75(c)**	**17(d)**	**25(d)**
Not stated	1	—	1	—
Total no. communities(e)	**242**	**237**	**242**	**237**

(a) 2006 data is the sum of communities with health promotion programs for eye health and/or trachoma. In 2001 data was not collected separately for Eye health and Trachoma control programs.

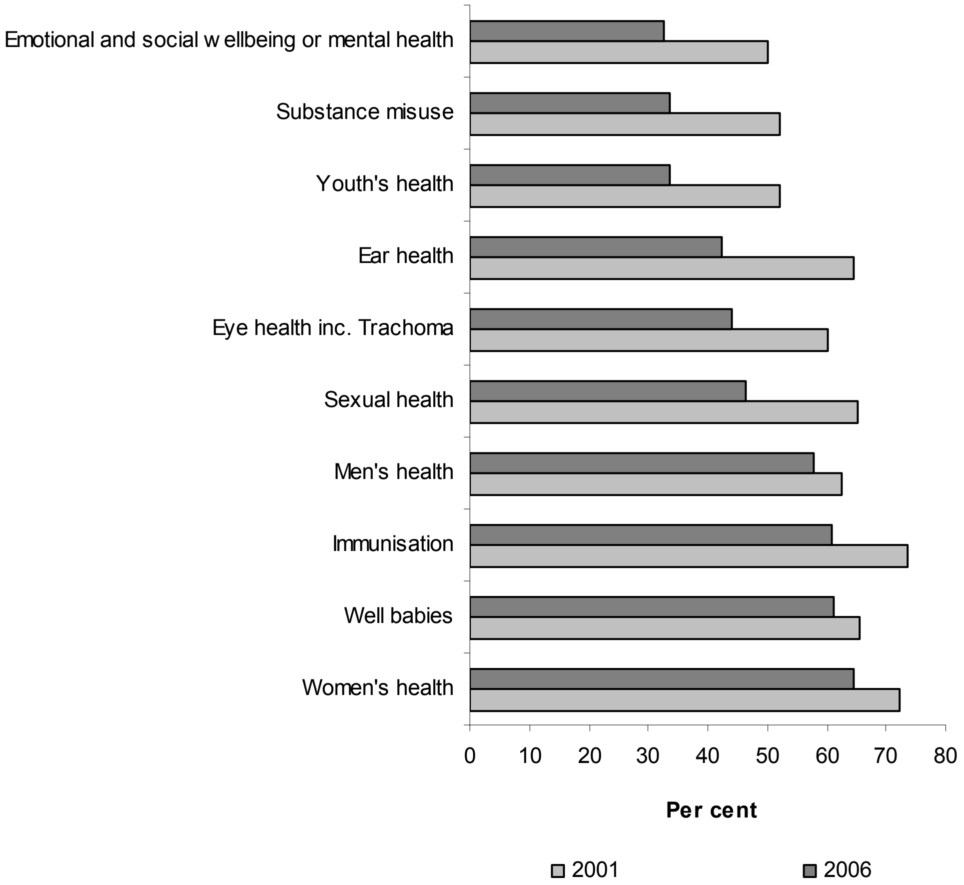
(b) Data on nutrition, stop smoking and domestic and personal hygiene programs were not collected in 2001.

(c) Number of communities where at least one health promotion program was conducted.

(d) Number of communities where no health promotion programs were conducted.

(e) Excludes communities where distance to nearest hospital was not stated.

Source: ABS 2002; AIHW analysis of 2006 CHINS.



Source: AIHW analysis of 2001 and 2006 CHINS.

Figure 3.07.5: Proportion of communitites with each type of health promotion program conducted, 2001 and 2006.

Frequency of health promotion programs

- The frequency with which health promotion programs were conducted varied. The majority of programs were most likely to be conducted weekly or monthly, except for trachoma control and eye health, both of which were most likely to be conducted less than three monthly (Table 3.07.9).

Table 3.07.9: Discrete Indigenous communities[(a)] located 10 kilometres or more from a hospital: frequency of selected health promotion programs conducted in community, 2006

	Frequency of program						
Health promotion programs	Weekly	Fortnightly	Monthly	Three monthly	Less than three monthly	Not conducted	All communities[(b)(c)]
			Number				
Well babies	66	7	39	28	15	132	288
Women's health	49	10	44	39	26	119	288
Men's health	42	5	35	34	33	138	288
Youth's health	32	1	23	13	19	199	288
Sexual health	36	6	26	16	35	168	288
Substance misuse	30	5	19	12	23	198	288
Immunisation	59	8	42	26	19	133	288
Trachoma control	11	4	8	8	38	218	288
Eye health	15	4	11	27	34	196	288
Ear health	32	6	24	15	30	180	288
Nutrition	36	11	27	27	28	158	288
Stop smoking	29	4	15	13	13	213	288
Domestic and personal hygiene	34	6	17	9	26	195	288
Emotional and social wellbeing or mental health	26	5	21	12	20	203	288

(a) With a population of 50 or more, or a reported usual population of less than 50 but which were not linked to a parent community or resource agency.

(b) Includes 'whether selected health promotion program conducted' not stated.

(c) Excludes communities where distance to nearest hospital not stated.

Source: AIHW analysis of 2006 CHINS.

Service Activity Reporting data

Programs/activities provided

All Indigenous primary heath-care services undertake a number of extended care roles to support their communities. The data in this section refer to the proportion of Indigenous primary heath-care services included in the SAR data collection that undertake these roles through the provision of programs and activities but not the extent to which they are undertaken or the amount of resources used to carry out these activities.

In 2005–06, there were 150 respondent Indigenous primary heath-care services included in the SAR. Figure 3.07.6a shows the proportion of Indigenous primary heath-care services that offered selected preventative health-care programs in 2005–06. Figure 3.07.6b shows the proportion of Indigenous primary heath-care services that offered selected traditional health-care programs, substance use programs, mental health/emotional and social wellbeing activities and health-related and community support services in 2005–06.

Preventative health care

- In 2005–06, a majority of Indigenous primary heath-care services undertook each of the preventative care programs: 91% offered health promotion/education programs, 84% offered women's health programs, around three quarters (74%) offered dietary and nutrition programs and 69% offered men's health programs. The two programs offered by less that half of Indigenous primary heath-care services were working with food stores to encourage healthy eating (25%) and advice and advocacy in relation to environmental health issues (39%) (Figure 3.07.6a).

Traditional health care

- In 2005–06, 18% of Aboriginal and Torres Strait Islander primary heath-care services offered bush tucker nutrition programs (Figure 3.07.6b).

Substance use programs

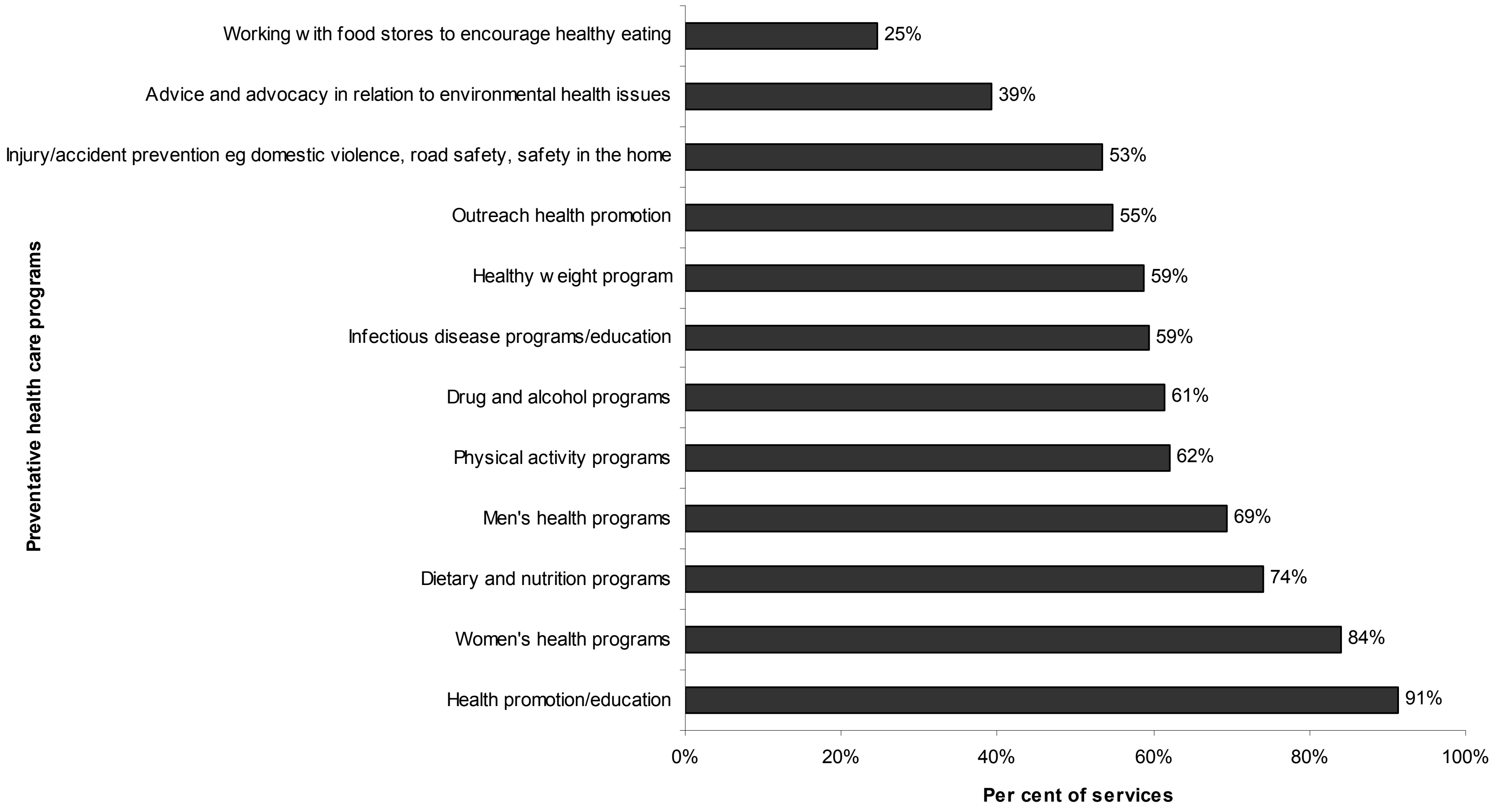
- In 2005–06, 82% of Aboriginal and Torres Strait Islander primary heath-care services offered information/education about substance use programs, 69% offered community education/activities and 52% offered mental health promotion activities (Figure 3.07.6b).

Mental health/emotional and social wellbeing activities

- In 2005–06, 82% of Indigenous primary heath-care services offered information/education about substance use programs, 69% offered community education/activities and 52% offered mental health promotion activities (Figure 3.07.6b).

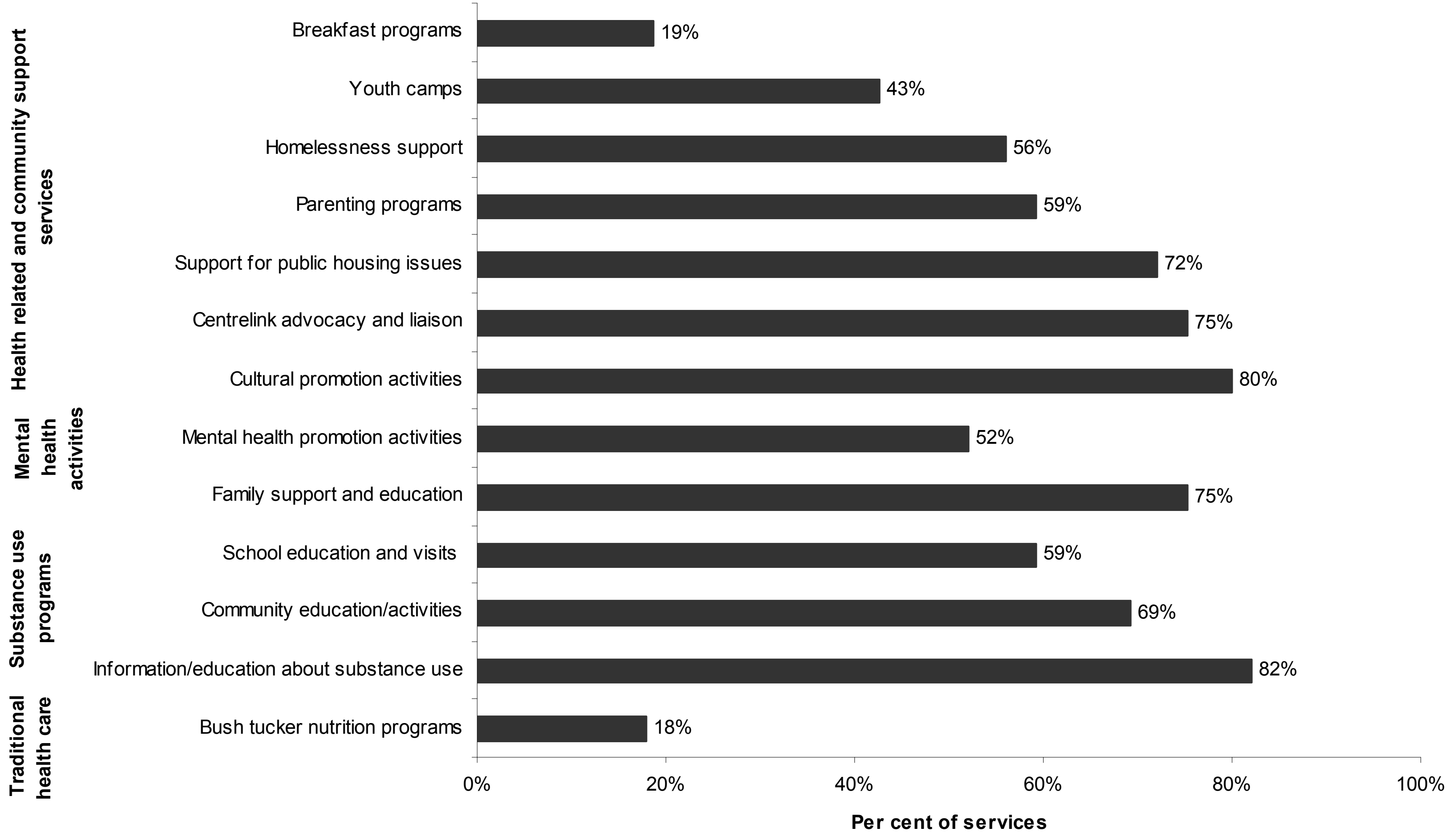
Health-related and community support services

- In 2005–06, only two of the six health-related and community support services were not offered by the majority of Indigenous primary heath-care services; 43% offered youth camps and 19% offered breakfast programs (Figure 3.07.6b).



Source: Service Activity Reporting 2005–06

Figure 3.07.6a: Proportion of Aboriginal and Torres Strait Islander primary heath-care services that undertake selected preventative health care and screening activities, 2005–06

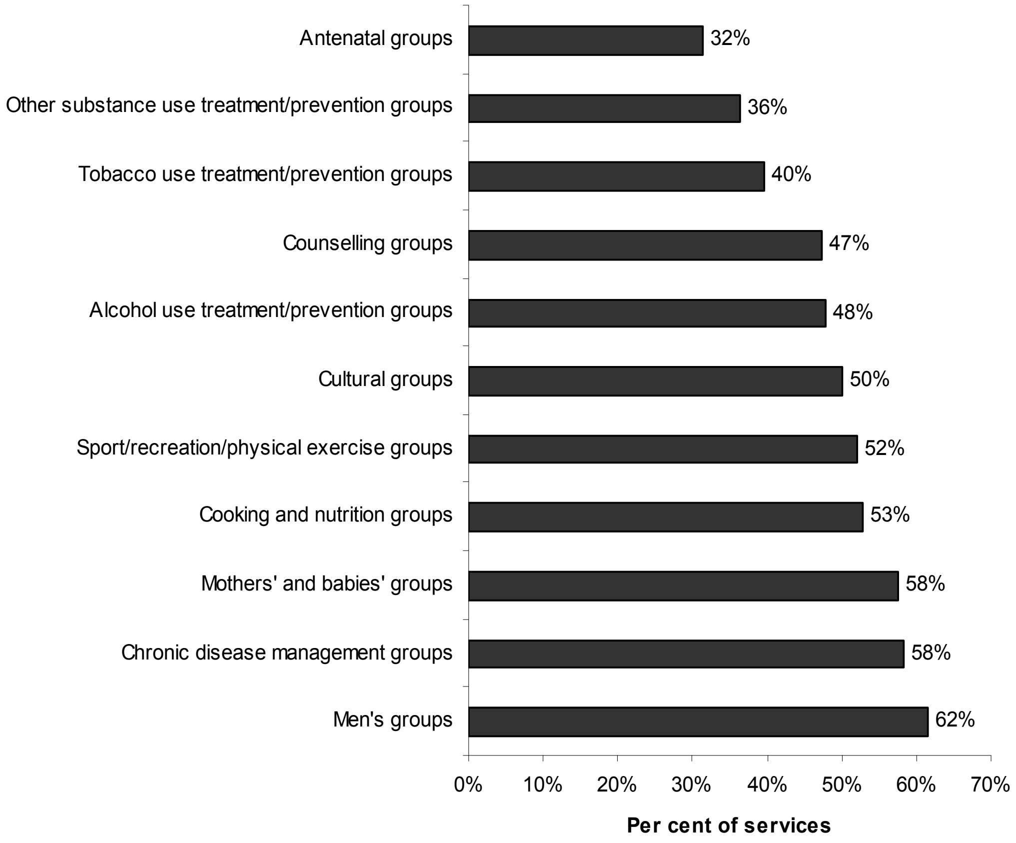


Source: Service Activity Reporting 2005–06

Figure 3.07.6b: Proportion of Aboriginal and Torres Strait Islander primary heath-care services that undertake selected health care and screening activities, 2005–06

Health promotion/prevention group activities

- In 2005–06, 62% of services ran at least one health promotion/prevention group activity.
- In 2005–06, the most common health promotion/prevention group activity run by Aboriginal and Torres Strait Islander primary heath-care services was men's groups (62%), followed by chronic disease managements groups (58%) and mothers and babies groups (58%) (Figure 3.07.7).
- Less than half of services ran alcohol use treatment /prevention groups (48%), counselling groups (47%), tobacco use/treatment prevention groups (40%), other substance use treatment/prevention groups (36%) and antenatal groups (32%).



Source: Service Activity Reporting 2005–06.

Figure 3.07.7: Proportion of Aboriginal and Torres Strait Islander primary heath-care services that ran health promotion/prevention group activities during 2005–06.

Drug and Alcohol Service Reporting data

Programs/Activities Provided

In 2006–07, there were 41 Australian Government-funded Aboriginal and Torres Strait Islander substance-use-specific services, including 29 residential and 11 non-residential services. Forty (98%) responded to the 2006–07 DASR.

The 2006–07 DASR collected information about types of care provided by services under four main categories: cultural activities; community activities, lifestyle training/activities and social health programs. Figure 3.07.8 shows the proportion of Aboriginal and Torres Strait Islander substance-use-specific services that offered selected health promotion programs.

Residential services

Cultural activities

- Bush outings were the most common type of cultural activity provided by residential services in 2006–07 (93%), followed by traditional arts and crafts (79%) and mentor programs (55%).

Community activities

- Community-based education was the most common type of community activity provided by residential services in 2006–07 (72%). About 41% of services provided school education and visits and 38% of services provided youth programs.

Healthy lifestyle training/activities

- In 2006–07, a majority of residential services provided each of the five lifestyle training/activities; 100% provided living skills training, 90% offered sport and recreation/physical exercise, 90% provided nutrition/cooking, 83% provided help with budgeting and 79% offered work skills training.

Social health programs

- In 2006–07, education about the health consequences of substance use was provided by 79% of residential services. Around two-thirds of residential services provided education about safe sex (66%). Only 31% of services offered information about safe injecting practices, and 14% helped clients access methadone management and helped clients to access needle exchange programs.

Non-Residential services

Cultural activities

- Bush outings and mentor program were the most common types of cultural activities provided by non-residential services in 2006–07 (73%), followed by traditional arts and crafts (46%).

Community activities

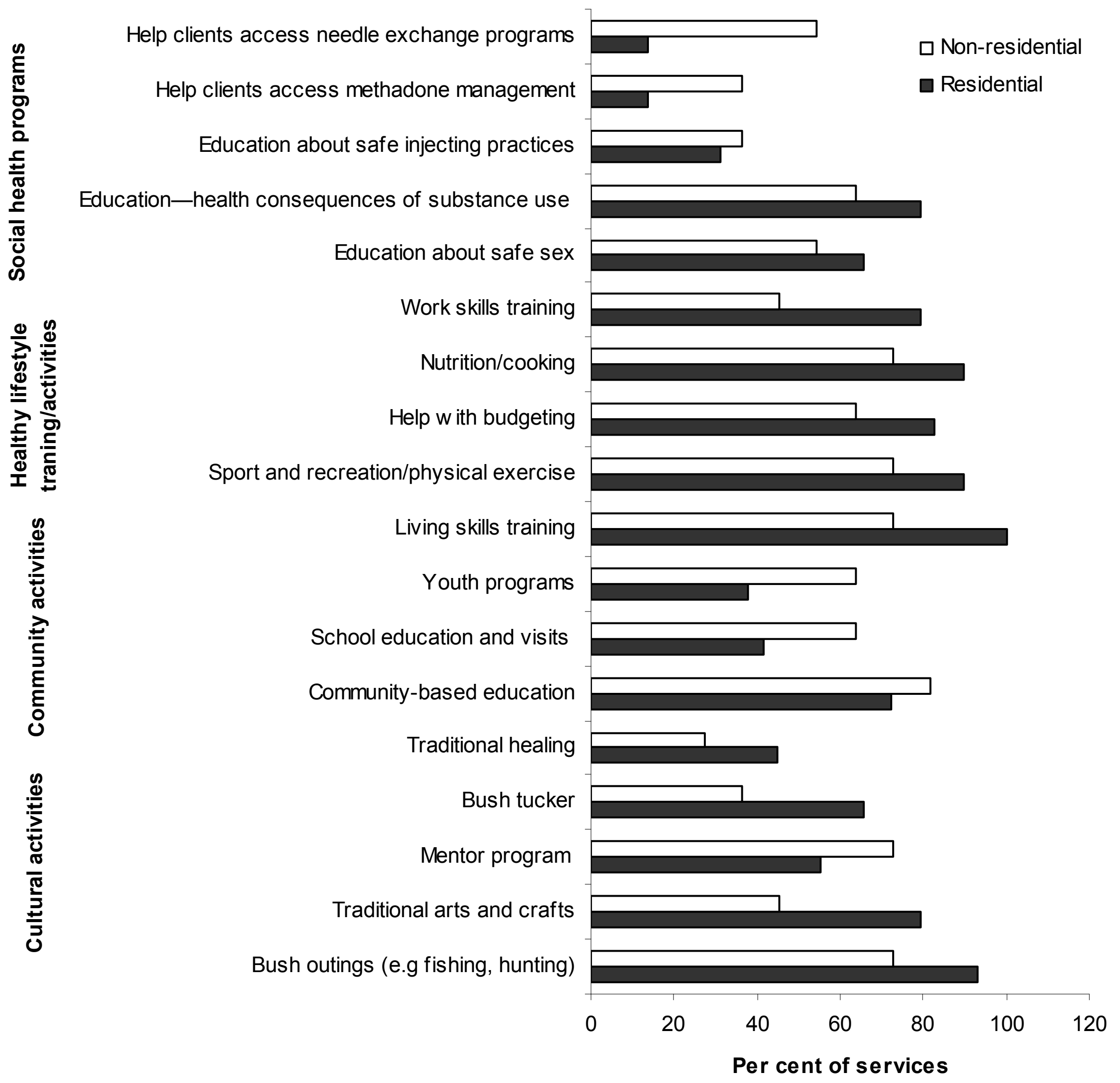
- Community-based education was the most common type of community activity provided by non-residential services in 2006–07 (82%). Approximately 64% of services provided school education/visits and youth programs.

Healthy lifestyle training/activities

- In 2006–07, almost three-quarters of non-residential services provided living skills training, sport and recreation, and nutrition/cooking (73%). Approximately 64% of services provided help with budgeting and 46% offered work skills training.

Social health programs

- In 2006–07, education about the health consequences of substance use was provided by 64% of non-residential services. Just over half of non-residential services provided education about safe sex, and helped clients to access needle exchange programs (55%). Only 36% of services offered information about safe injecting practices, and helped clients access methadone management.



Source: Drug and Alcohol Service Activity Reporting 2006–07

Figure 3.07.8: Proportion of services conducting selected drug and alcohol service counselling approaches and cultural activities, 2006–07.

Health promotion program information

Residential

- In 2006–07, approximately 21 residential Aboriginal and Torres Strait Islander substance-use-specific services ran community-based education programs (72%).

Non-residential

- In 2006–07, 11 non-residential Indigenous substance-use-specific services ran community-based education programs (100%).

Health promotion Groups

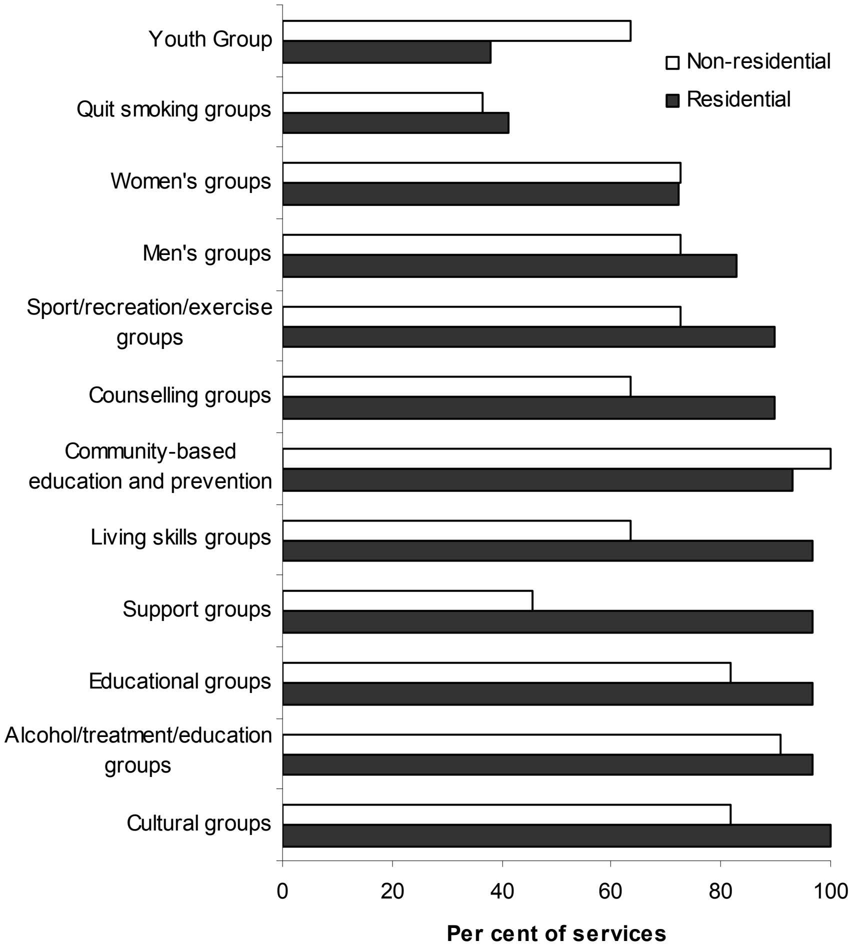
The DASR also collects information on the types of groups run by Aboriginal and Torres Strait Islander substance-use-specific services.

Residential

- In 2006–07, cultural groups was the most common type of group ran by residential Indigenous substance use services (100%), followed by alcohol/treatment/education groups, education groups, support groups, and living skills groups (97%) (Figure 3.07.9).
- Less than 50% of residential Aboriginal and Torres Strait Islander substance use services ran youth groups or quit smoking groups in 2006–07.

Non-Residential

- In 2006–07, alcohol/treatment/education groups was the most common type of group ran by non-residential Indigenous substance use services (91%), followed by cultural groups and education groups (both 82%) (Figure 3.07.9).
- Less than 50% of non-residential Indigenous substance use services ran quit smoking groups and support groups in 2006–07.



Source: Drug and Alcohol Service Activity Reporting 2006–07.

Figure 3.07.9: Proportion of Aboriginal and Torres Strait Islander substance-use-specific services that ran selected groups during 2006–07.

Additional information

Information on services funded through the HFL program that had health promotion programs for behavioural risk reduction is available from the AIHW Healthy For Life data collection.

- In 2006–07, of the 59 services that were included in the HFL program and reported information on health promotion programs, 76% provided brief intervention programs for smoking and 70% provided other advice on smoking.
- Three-quarters of services funded through the HFL program provided brief intervention programs for alcohol and two-thirds provided other advice on alcohol.
- About 75% of HFL Services provided programs for nutrition and physical activity and 70% provided emotional wellbeing advice.

Table 3.07.10: Proportion of services funded through the Healthy For Life program that had health promotion programs, 2006–07

Health promotion program	Yes	No	No response
		Per cent	
Behavioural risk reduction			
Smoking			
Brief intervention	76.3	6.8	16.9
Other advice	69.5	11.9	18.6
Nutrition	74.6	6.8	18.6
Alcohol			
Brief intervention	74.6	8.5	16.9
Other advice	66.1	13.6	20.3
Physical activity	74.6	8.5	16.9
Emotional wellbeing	69.5	11.9	18.6
Other(a)	28.8	30.5	40.7

(a) Includes drugs (kava and gunja); alcohol; mental health; men's and women's support; environmental exposures, decreasing social isolation; hygiene; home issues, pregnancies, men's issues (impotence) and welfare (budgeting and finances).

Note: Data were provided by 59 services

Source: AIHW, Healthy for Life data collection.

Data quality issues

Health expenditure data

Health expenditure data is affected by most of the reservations about data relating to Aboriginal and Torres Strait Islander peoples. The issue of poor Indigenous identification means that the attribution of expenditure to Indigenous people either on a population or per capita basis must be treated with caution. This single factor is arguably the major important data quality issue, affecting as it does nearly all health and population based measures. Reliable Indigenous status data is a major requirement to produce reliable, consistent and valid information on most aspects of Indigenous health. The "completeness of identification of Indigenous Australians varies significantly across states and territories" and in administrative health data collections (SCRGSP 2006).

Quality of data on Indigenous service use

For many publicly funded health services, there are few details available about service users and, in particular, about their Indigenous status. For privately funded services, this information is frequently unavailable. For those services that do collect this information, recording Indigenous status accurately for all people does not always occur. The result is that there is some margin of error in the estimations of health expenditure for Indigenous people and their corresponding service use.

Expenditure estimates

There may be some limitations associated with the scope and definition of health expenditures included in this measure. Other (non-health) agency contributions to health expenditure, such as 'health' expenditures incurred within education departments and prisons, are not included.

Furthermore, although every effort has been made to ensure consistent reporting and categorisation of expenditure on health goods and services, in some cases there may be inconsistencies across data providers. These may result from limitations of financial reporting systems, and/or different reporting mechanisms (AIHW 2005).

Divisions of GP Survey

The data in the Survey are self-reported by Divisions and represent estimates and answers to questions about Division activities, staffing and other matters. Although validity checks are implemented as part of the data collection and cleaning processes, the accuracy and quality is ultimately determined by Division data collection methods and influenced by Division staff turnover and skills (Hordacre et al. 2007).

General Practitioner data (BEACH)

Information about general practitioner encounters is available from the 'Bettering the Evaluation and Care of Health' (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey, 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

(continued)

Data quality issues (continued)

Community Housing and Infrastructure Needs Survey (CHINS)

The 2006 CHINS collected information on a variety of topics from discrete Aboriginal and Torres Strait Islander communities throughout Australia and on Indigenous organisations that provide rental housing to Indigenous people. In 2006, CHINS information was collected on 496 Indigenous organisations, which managed a total of 21,854 permanent dwellings. The majority of those dwellings were located in the Northern Territory (6,448), Queensland (6,230), New South Wales (4,176) and Western Australia (3,462) (ABS 2007).

The CHINS survey covers only discrete Indigenous communities. In 2006 the CHINS collected information from 1,187 discrete indigenous communities which included approximately 92,960 Aboriginal and Torres Strait Islanders or 18% of the total Indigenous population. CHINS data is collected every 5 years. The data are collected from key personnel in Indigenous communities and housing organisations that are knowledgeable about housing and infrastructure issues.

The estimates are not subject to sampling error because the CHINS was designed as a complete enumeration of discrete Indigenous communities. However, data could not be obtained from a small number of communities. In addition, the community population was often estimated by community representatives without reference to records.

Further information on the CHINS can be found in the publication Housing and infrastructure in Aboriginal and Torres Strait Islander communities *(ABS 2007).*

Service Activity Reporting (SAR) and Drug and Alcohol Service Reporting (DASR)

Response rates to the SAR and DASR are usually above 90%. The SAR and DASR collect service level data on health care and health-related activities by survey questionnaire over a 12 month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

The SAR and DASR only include Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding.

The SAR and DASR questionnaires collect a broad set of indicators for the services and do not aim to provide a comprehensive set of statistics on the activities of the services or their needs.

Data provided are often estimates and, although these are thought to be reasonable, there has been no audit to check the accuracy of these figures.

In relation to the statistics for this performance measure – these data provide a rough guide to service activity in this area, but do not attempt to measure quantity or quality. They also do not differentiate between service provided by the service and those facilitated by the service.

References

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3.08 Discharge against medical advice

The rate at which Aboriginal and Torres Strait Islander peoples leave hospital against medical advice or are discharged at their own risk

Data sources

Data for this measure come from the AIHW's National Hospital Morbidity Database.

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions that have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (AIHW unpublished). These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions because public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period from July 2004 to June 2006. An aggregate of 2 years of data has been used as the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Analyses

Age-standardised rates and ratios have been used for this indicator as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

Proportion of hospitalisations involving discharge against medical advice

The tables below present the crude and age standardised proportions of hospitalisations that involved discharge against medical advice in Australia.

- For the period from July 2004 to June 2006, there were 57,056 hospitalisations in Australia where the patient left hospital against medical advice or was discharged at their own risk, 11,926 (21%) of which were hospitalisations of Indigenous patients.
- For approximately 2.6% of all hospitalisations of Indigenous Australians, the patient was discharged against medical advice. The Northern Territory had the highest proportion of Indigenous persons hospitalised who discharged against medical advice (4%).
- After adjusting for differences in age structure, Indigenous persons were six times as likely as other persons to discharge from hospital against medical advice. Disparities were greatest in South Australia and Western Australia where Indigenous persons discharged from hospital against medical advice at 10 and 8 times the rate of other persons respectively (Table 3.08.1).
- Indigenous males were more likely than Indigenous females to discharge against medical advice (3% compared to 2%) (Table 3.08.2).

Table 3.08.1: Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), July 2004 to June 2006(a)(b)(c)(d)

	Number		Proportion	Age standardised proportion		
	Indigenous	Other	Indigenous	Indigenous	Other	Ratio(a)
New South Wales	2,081	21,725	2.4	1.9	0.5	3.6
Victoria	267	8,126	1.6	1.4	0.2	6.2
Queensland	1,852	7,853	1.6	1.3	0.3	4.2
Western Australia	2,602	3,450	2.7	2.1	0.3	7.6
South Australia	1,078	2,812	3.4	2.6	0.3	10.1
Tasmania	34	624	0.8	0.7	0.4	1.8
Australian Capital Territory	10	221	0.6	0.5	0.2	2.2
Northern Territory	4,002	319	4.0	3.5	0.6	5.7
Australia	**11,926**	**45,130**	**2.6**	**2.1**	**0.3**	**6.2**

(a) Ratio= observed hospitalisations divided by the expected number of hospitalisations based on the age and sex specific proportions for other Australians.

Notes:

1. Excludes private hospitals in Tasmania, the Northern Territory and the Australian Capital Territory.
2. Other includes separations for non-Indigenous Australians and those for whom Indigenous status was not stated.
3. Data are based on state/territory of usual residence.

Source: AIHW National Hospital Morbidity Database.

Table 3.08.2: Discharges from hospital against medical advice, by Indigenous status (excluding mental and behavioural disorders), Australia, July 2004 to June 2006(a)(

	Number		Proportion	Age standardised proportion		
	Indigenous	Other	Indigenous	Indigenous	Other	Ratio(a)
Males	5,854	25,614	3.0	2.3	0.4	5.5
Females	6,072	19,586	2.3	1.4	0.2	5.9
Persons	**11,926**	**45,130**	**2.6**	**2.1**	**0.3**	**6.2**

(a) Ratio= observed hospitalisations divided by the expected number of hospitalisations based on the age and sex specific proportions for other Australians.

Notes:

4. Excludes private hospitals in Tasmania, the Northern Territory and the Australian Capital Territory.
5. Other includes separations for non-Indigenous Australians and those for whom Indigenous status was not stated.
6. Data are based on state/territory of usual residence.

Source: AIHW National Hospital Morbidity Database.

Rates (hospitalisations per 1,000 population) of discharge against medical advice

The following tables present the number of hospitalisations involving discharge against medical advice per 1,000 population in the six jurisdictions with adequate Indigenous identification in their hospital recording systems (New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory).

Hospitalisations by age and sex

- A slightly higher proportion of Indigenous males were discharged from hospital against medical advice (3.0%) than Indigenous females (2.4%) (Table 3.08.3).
- Indigenous Australians aged 35–44 and 45–54 years were most likely to be discharged from hospital against medical advice, at a rate 20 times that of other Australians (Table 3.08.4).

Table 3.08.3: Discharges from hospital against medical advice, by Indigenous status and sex (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Number		Per cent[(e)]		Indigenous			Other[(f)]			
	Indigenous	Other[(f)]	Indigenous	Other[(f)]	No. per 1000[(g)]	95% LCL[(h)]	95% UCL[(i)]	No. per 1,000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate Ratio[(j)]
Males	5,820	25,082	3.0	0.4	15.9	15.4	16.3	1.3	1.3	1.3	12.0*
Females	6,047	19,168	2.4	0.3	14.0	13.6	14.4	1.0	1.0	1.0	14.3*
Persons	**11,867**	**44,250**	**2.6**	**0.3**	**14.9**	**14.6**	**15.2**	**1.1**	**1.1**	**1.2**	**13.0***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).
(c) Financial year reporting.
(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.
(e) Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2004–05 to 2005–06.
(f) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
(g) Directly age-standardised using the Australian 2001 standard population.
(h) LCL = lower confidence limit.
(i) UCL = upper confidence limit.
(j) Rate ratio—Indigenous: other.

Source: AIHW analysis of National Hospital Morbidity Database.

Table 3.08.4: Discharges from hospital against medical advice, by Indigenous status and age group (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

Age group (years)	Number		Per cent(e)		Indigenous			Other(f)			
	Indigenous	Other(f)	Indigenous	Other(f)	No. per 1,000(g)	95% LCL(h)	95% UCL(i)	No. per 1,000(g)	95% LCL(h)	95% UCL(i)	Rate Ratio(j)
0–4	637	1,335	1.7	0.2	5.5	5.1	5.9	0.6	0.5	0.6	9.7*
5–14	237	712	1.1	0.1	1.0	0.9	1.1	0.1	0.1	0.2	7.2*
15–24	2,076	6,269	4.5	0.2	11.1	10.6	11.6	1.2	1.2	1.2	9.3*
25–34	3,098	8,689	5.6	0.2	22.1	21.3	22.9	1.6	1.6	1.6	13.8*
35–44	3,160	7,671	4.1	0.2	26.8	25.9	27.7	1.3	1.3	1.4	20.0*
45–54	1,894	6,317	2.1	0.1	24.2	23.1	25.2	1.2	1.2	1.2	20.3*
55–64	563	5,052	0.8	0.0	13.6	12.4	14.7	1.2	1.2	1.3	11.1*
65+	202	8,205	0.4	0.0	7.7	6.6	8.8	1.6	1.6	1.7	4.7*
Total(k)	**11,867**	**44,250**	**2.6**	**0.3**	**14.9**	**14.6**	**15.2**	**1.1**	**1.1**	**1.2**	**13.0***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2004–05 to 2005–06.

(f) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(g) Age-specific rate.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio—Indigenous: other.

(k) Directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by state/territory

Table 3.08.5 presents hospitalisations for which patients were discharged against medical advice for the 2-year period from July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are included in the hospitalisations by state and territory table. The Australia data is adjusted by applying a completeness factor of 89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Overall, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were discharged from hospital against medical advice at 13 times the rate of other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were discharged from hospital against medical advice at around 15 times the rate of other Australians.
- In New South Wales, Victoria and Queensland Indigenous Australians were discharged from hospital against medical advice at 5, 7 and 8 times the rate of other Australians in these jurisdictions, respectively. In Western Australia, South Australia and the Northern Territory, Indigenous Australians were discharged from hospital against medical advice at 24, 25 and 32 times the rate of other Australians in these jurisdictions, respectively (Table 3.08.5; Figure 3.08.1).

Table 3.08.5: Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Number		Per cent[(e)]		Indigenous			Other[(f)]			
	Indig.	Other	Indig.	Other	No. per 1,000[(g)]	95% LCL[(h)]	95% UCL[(i)]	No. per 1000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate Ratio[(j)]
NSW	2,074	21,700	2.4	0.5	8.8	8.4	9.2	1.6	1.6	1.6	5.4*
Vic	267	8,117	1.6	0.2	5.4	4.7	6.2	0.8	0.8	0.8	6.8*
Qld	1,852	7,852	1.6	0.3	8.2	7.8	8.6	1.0	1.0	1.0	8.1*
WA	2,602	3,450	2.7	0.3	21.2	20.3	22.1	0.9	0.9	0.9	24.0*
SA	1,078	2,812	3.4	0.3	23.3	21.8	24.9	0.9	0.9	1.0	25.4*
NT	3,994	319	4.0	0.6	37.0	35.7	38.2	1.2	1.0	1.3	32.0*
NSW, Vic, Qld, WA, SA and NT	**11,867**	**44,250**	**2.6**	**0.3**	**14.9**	**14.6**	**15.2**	**1.1**	**1.1**	**1.2**	**13.0***
Australia unadjusted[(k)]	12,008	45,750	2.6	0.3	14.4	14.1	14.6	1.1	1.1	1.1	12.6
Australia adjusted[(k)(l)]	13,419	44,339	2.6	0.3	16.0	15.7	16.3	1.1	1.1	1.1	14.6

(continued)

Table 3.08.5 (continued): Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2004–05 to 2005–06.

(f) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(g) Directly age-standardised using the Australian 2001 standard population.

(h) LCL = lower confidence limit.

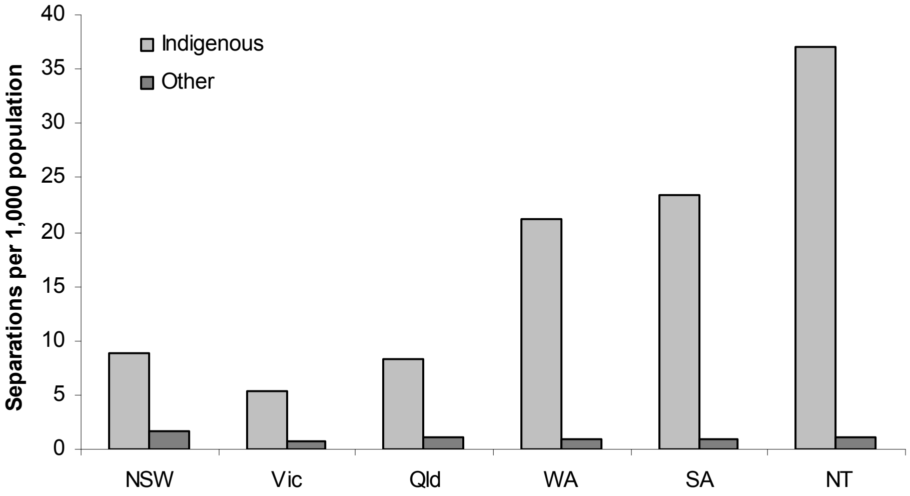
(i) UCL = upper confidence limit.

(j) Rate ratio—Indigenous: other.

(k) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(l) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.08.1: Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Hospitalisations by principal diagnosis

- The most common principal diagnoses of hospitalisations of Indigenous Australians who were discharged against medical advice were injury and poisoning (2,578 separations) followed by respiratory diseases (1,677 separations). These two groups of diagnoses represented 36% of all hospitalisations discharged against medical advice. As a proportion of all Indigenous separations for each specific diagnoses group, discharge against medical advice was also highest for injury and poisoning (7.1%), followed by diseases of the skin (6.7%) and symptoms, signs and abnormal clinical and laboratory findings (6.4%) (Table 3.08.6).
- Indigenous Australians who were hospitalised for injury and poisoning were discharged from hospital against medical advice at 13 times the rate of other Australians. Indigenous Australians who were hospitalised for respiratory diseases were discharged against medical advice at 26 times the rate of other Australians and Indigenous Australians who were hospitalised for diseases of the skin were discharged from hospital against medical advice at 25 times the rate of other Australians.

Table 3.08.6: Discharges from hospital against medical advice, by Indigenous status and principal diagnosis (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

	Number		Per cent(e)		Indigenous			Other(f)			
	Indigenous	Other(f)	Indigenous	Other(f)	No. per 1,000(g)	95% LCL(h)	95% UCL(i)	No. per 1000(g)	95% LCL(h)	95% UCL(i)	Rate Ratio(j)
Injury, poisoning and certain other consequences of external causes (S00–Y98)	2,578	8,548	7.1	1.0	3.0	2.9	3.1	0.2	0.2	0.2	13.3*
Diseases of the respiratory system (J00–J99)	1,677	3,324	5.5	0.5	2.2	2.1	2.4	0.1	0.1	0.1	26.1*
Diseases of the digestive system (K00–K93)	1,296	4,764	5.2	0.3	1.7	1.6	1.8	0.1	0.1	0.1	13.7*
Symptom, signs and abnormal clinical and laboratory findings, n.e.c. (R00–R99)	1,290	6,883	6.4	0.8	1.7	1.6	1.8	0.2	0.2	0.2	9.8*
Complications of pregnancy, childbirth and the puerperium (O00–O99)	860	3,238	2.5	0.4	0.8	0.7	0.8	0.1	0.1	0.1	8.8*
Diseases of the skin and subcutaneous tissue (L00–L99)	731	1,310	6.7	0.6	0.9	0.8	0.9	—	—	—	25.4*
Diseases of the circulatory system (I00–I99)	586	3,602	3.8	0.4	1.0	0.9	1.0	0.1	0.1	0.1	10.6*
Endocrine, nutritional and metabolic diseases (E00–E90)	532	1,317	5.9	0.6	0.8	0.7	0.9	—	—	—	23.9*
Certain infectious and parasitic diseases (A00–B99)	476	895	4.9	0.5	0.5	0.4	0.5	—	—	—	20.3*
Diseases of the genitourinary system (N00–N99)	369	1,629	3.0	0.2	0.5	0.4	0.5	—	—	—	11.0*
Diseases of the musculoskeletal system (M00–M99)	365	1,643	4.5	0.2	0.5	0.4	0.5	—	—	—	10.8*
Other(k)	1,107	7,097	0.5	0.1	1.4	1.3	1.5	0.2	0.2	0.2	7.9*
Total(l)	**11,867**	**44,250**	**2.6**	**0.3**	**14.9**	**14.6**	**15.2**	**1.1**	**1.1**	**1.2**	**13.0***

(continued)

Table 3.08.6 (continued): Discharges from hospital against medical advice, by Indigenous status and principal diagnosis (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2004–05 to 2005–06.

(f) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(g) Directly age-standardised using the Australian 2001 standard population.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio—Indigenous: other.

(k) Includes: neoplasms, diseases of the nervous system, certain conditions originating in the perinatal period, diseases of the ear and mastoid process, diseases of the eye and adnexa, diseases of the blood and blood-forming organs and certain disorders involving the immune system, and congenital malformations, deformations and chromosomal abnormalities and factors influencing health status and contact with health services.

(l) Includes hospitalisations for which no principal diagnosis was recorded. Excludes mental and behavioural disorders (F00–F99).

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analyses

Time series data is presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, and so they were included as part of the current period analysis (2004–05 to 2005–06), but not as part of the time series analyses.

The number and rate of hospitalisations for which Indigenous and other Australians were discharged against medical advice over the 7-year period 1998–99 to 2005–06 are presented in Table 3.08.7 and Figure 3.08.2.

- Over the period 1998–99 to 2005–06, in Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in the rate at which Indigenous Australians were discharged from hospital against medical advice. The fitted trend implies an average annual increase in the rate of around 0.4 per 1,000 which is equivalent to a 16% increase in the rate over the period.
- Over the same period, there were no significant changes in the rates at which other Australians were discharged from hospital against medical advice.
- There was a significant increase in the rate ratio between Indigenous and other Australian rates of discharge from hospital against medical advice between 1998–99 and 2005–06 (9% increase over the period).

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all have an impact on the level of hospitalisation over time. Caution should be used in interpreting changes over time because it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may reflect better access to hospitals, rather than a worsening of health.

Table 3.08.7: Discharges against medical advice, by Indigenous status (excluding mental and behavioural disorders), Qld, WA, SA and NT, 1998–99 to 2005–06[(a)(b)(c)(d)]

	Number		Indigenous			Other[(e)]			
	Indigenous	Other[(e)]	No. per 1,000[(f)]	95% LCL[(g)]	95% UCL[(h)]	No. per 1,000[(f)]	95% LCL[(g)]	95% UCL[(h)]	Rate Ratio[(i)]
1998–99	3,917	6,089	16.6	16.0	17.2	0.9	0.9	0.9	18.5*
1999–00	4,196	6,383	17.5	16.9	18.1	0.9	0.9	1.0	18.8*
2000–01	4,206	6,520	17.4	16.8	18.0	0.9	0.9	1.0	18.5*
2001–02	4,387	6,531	17.5	16.9	18.1	0.9	0.9	1.0	18.8*
2002–03	4,343	6,222	17.3	16.8	17.9	0.9	0.8	0.9	19.9*
2003–04	4,514	6,534	17.8	17.2	18.3	0.9	0.9	0.9	19.8*
2004–05	4,753	7,092	18.7	18.1	19.3	1.0	0.9	1.0	19.6*
2005–06	5,178	7,554	20.1	19.5	20.7	1.0	1.0	1.0	20.2*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Queensland, Western Australia, South Australia, and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

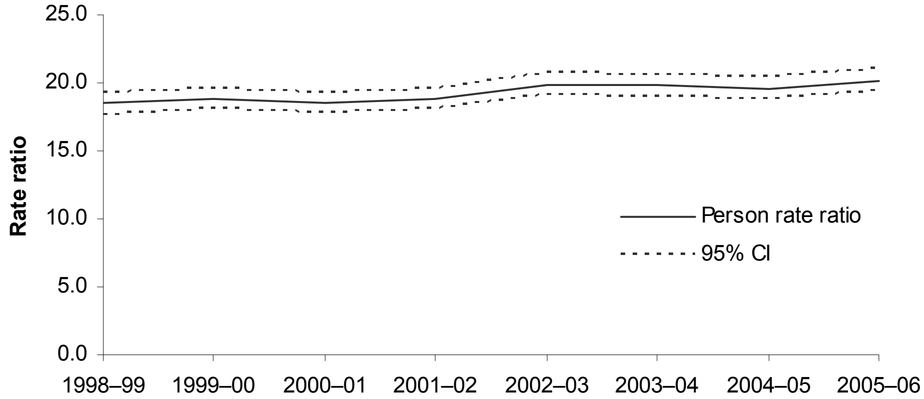
(h) UCL = upper confidence limit.

(i) Rate ratio—Indigenous: Other.

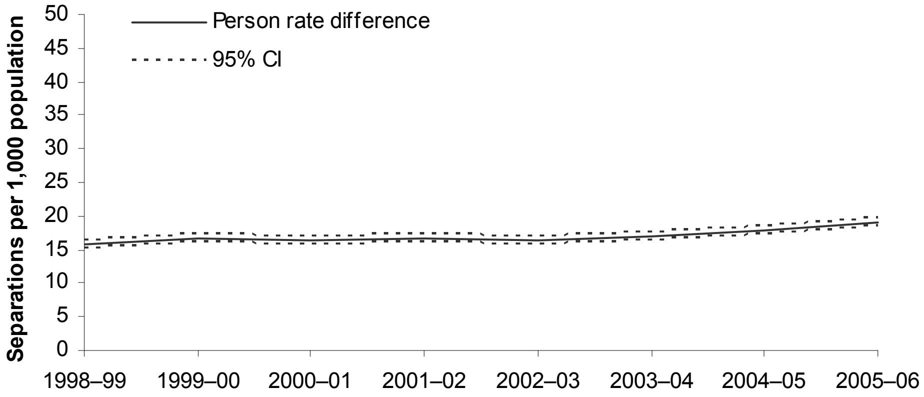
Source: AIHW analysis of National Hospital Morbidity Database.

Rate

Rate ratio



Rate difference



Source: AIHW analysis of National Hospital Morbidity Database.

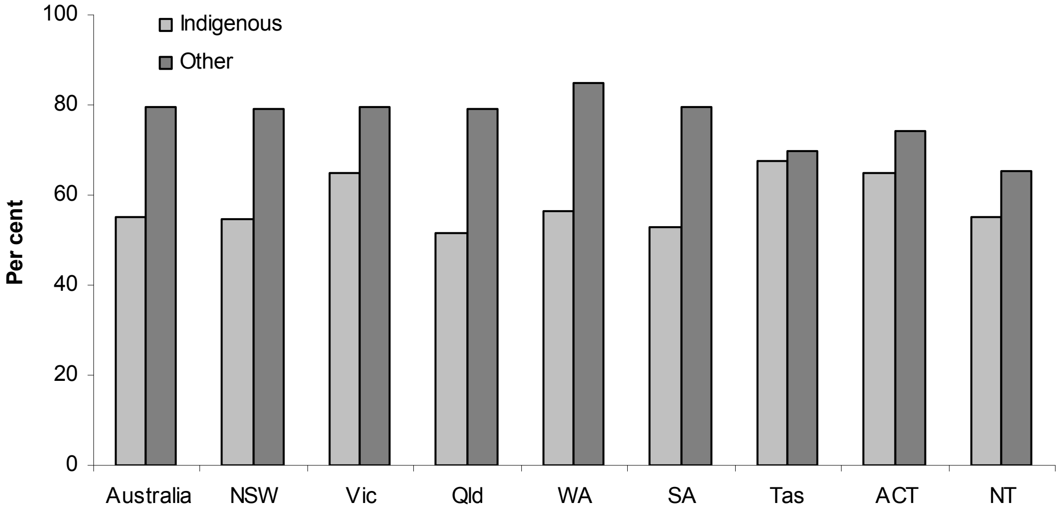
Figure 3.08.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians involving discharge against medical advice, Qld, WA, SA and NT combined, 1998–99 to 2005–06

Additional information

Detailed analysis (univariate and multivariate regression) of discharge from hospital against medical advice

In 2007–08 the AIHW undertook a series of univariate and multivariate regression analyses to examine the relative importance of selected variables including Indigenous status in affecting the outcome of whether a patient discharged themselves from hospital against medical advice for the period 2004–05 to 2005–06 in Australia. All eight states and territories were included in the detailed analyses.

The first series of univariate analyses revealed that there were variations in the likelihood of discharging against medical advice by state and principal diagnosis chapter. As shown in Figure 3.08.3, in all states and territories Indigenous Australians were more likely to leave hospital against medical advice than other Australians. For Indigenous Australians, the highest proportions were in the Northern Territory, South Australia, Western Australia, and New South Wales, with the lowest in the Australian Capital Territory and Tasmania.

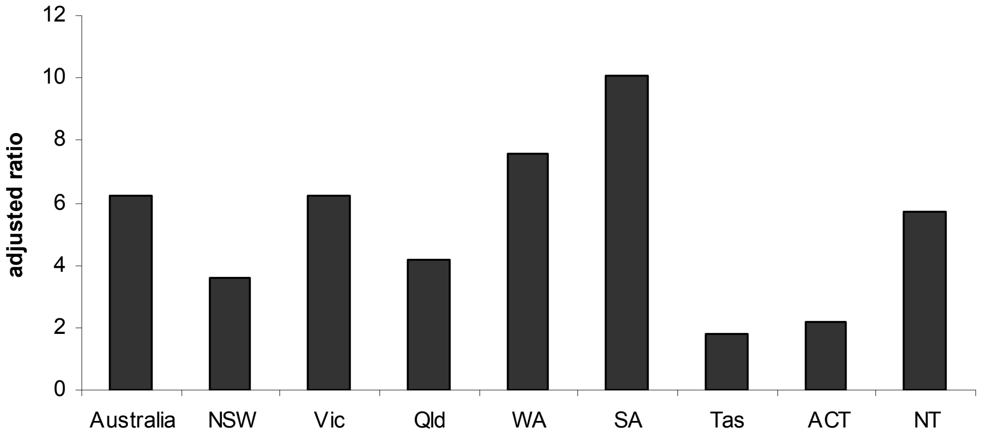


Note: Age-standardised proportions.

Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.3: Proportion of hospitalisations ending in discharge against medical advice, by state/territory, 2004–05 to 2005–06

Figure 3.08.4 shows that the greatest disparities were observed in South Australia and Western Australia, where Indigenous patients were 8 to 10 times as likely to be discharged against medical advice as other patients. The lowest disparities were in Tasmania and the ACT.

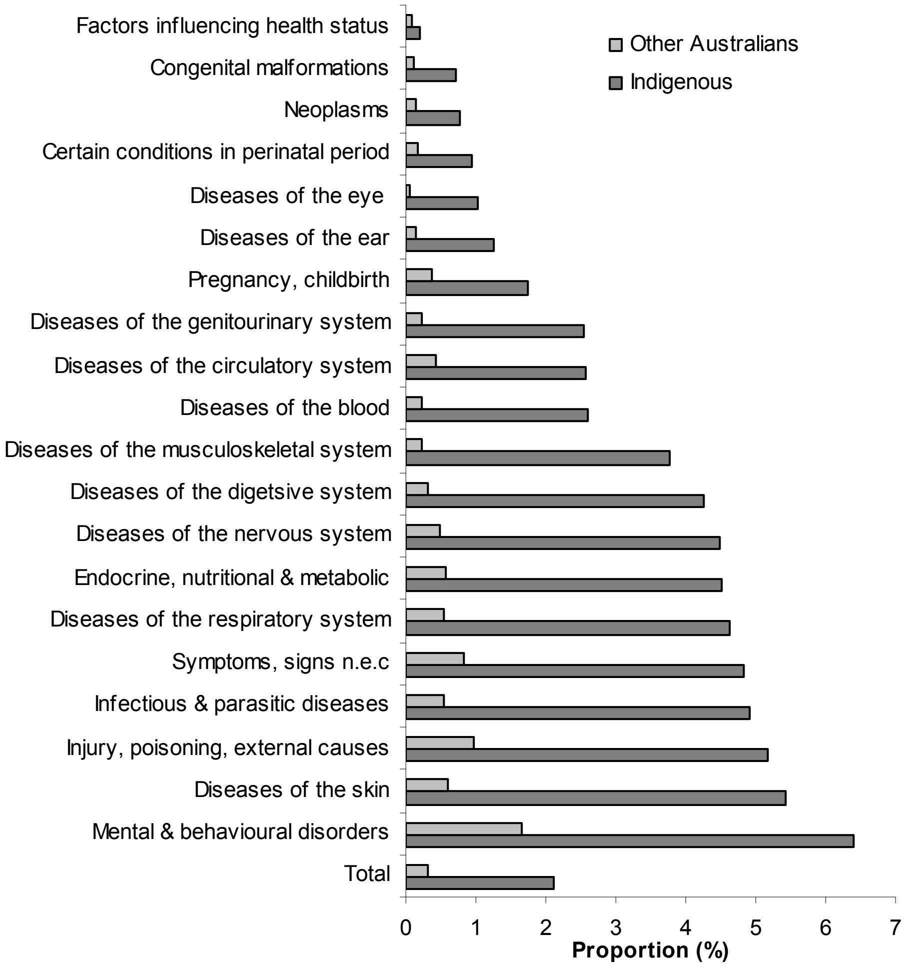


Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.4: Disparity between Indigenous Australians and other Australians in the likelihood of discharge against medical advice, by state/territory, 2004–05 to 2005–06

The univariate analyses also found that across all diagnostic categories, a higher proportion of Indigenous patients were discharged against medical advice. Apart from mental and behavioural disorders, the principal diagnoses which had the highest numbers of separations for Indigenous people ending in self-discharge were injury, poisoning, external causes (2588), diseases of the respiratory system (1680), and diseases of the digestive system (1299). Figure 3.08.5 shows that the diagnosis categories with the highest proportions of self-discharge were diseases of the skin (5.4%), injury, poisoning and external causes (5.2%), and infectious and parasitic diseases (4.9%).

The disease categories with the greatest levels of inequality in self-discharge between Indigenous and other Australians were diseases of the musculoskeletal system (ratio of 16.6), diseases of the eye (ratio of 14.9), and diseases of the digestive system (ratio of 13.6).



Note: Age-standardised proportions.

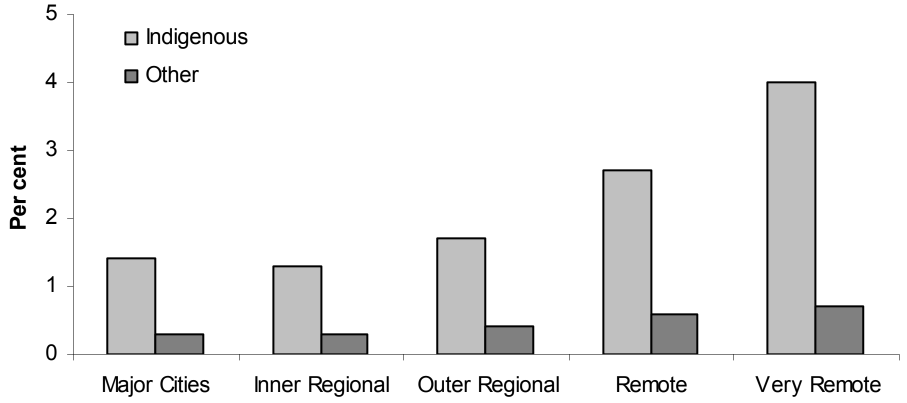
Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.5: Proportion of separations for which patients were discharged against medical advice (excluding mental and behavioural disorders), by principal diagnosis chapter and Indigenous status, Australia, 2004–05 to 2005–06

Further analyses by state/territory found that the Northern Territory had the highest proportion of separations of Indigenous patients discharged against medical advice for most diagnostic chapters. For example, for diseases of the skin, diseases of the musculoskeletal system, symptoms, signs and abnormal findings, diseases of the digestive system, and injury and poisoning, over 10% of separations of Indigenous patients involved discharge against medical advice.

In Queensland, disparities were greatest for diseases of the digestive system (ratio of 11) and diseases of the nervous system (ratio of 8). In Western Australia, disparities were greatest for musculoskeletal diseases (ratio of 24) and diseases of the digestive system (ratio of 16). In South Australia, disparities were greatest for musculoskeletal diseases (ratio of 43) and diseases of the skin (ratio of 28). In the Northern Territory, disparities were greatest for diseases of the genitourinary system (ratio of 33) and pregnancy and childbirth (ratio of 27). In New South Wales, disparities were greatest for musculoskeletal diseases (ratio of 8) and diseases of the digestive system (ratio of 7). In Victoria, disparities were greatest for diseases of the digestive system (ratio of 18) and diseases of the nervous system (ratio of 11).

A second series of univariate analyses focused on differences by state/territory, diagnosis chapter, and remoteness category. Figure 3.08.6 illustrates that the proportion of separations for which patients were discharged against medical advice among Indigenous Australians was much higher than among other Australians across all remoteness categories (excluding mental and behavioural disorders). For both Indigenous and other Australians, the proportions increased with increasing remoteness.



Note: Age-standardised proportions.

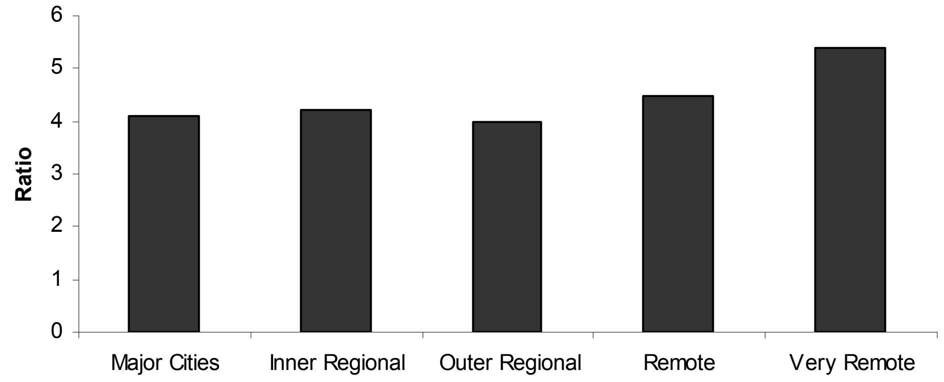
Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.6. Proportion of hospitalisations ending in discharge against medical advice, by Indigenous status and remoteness, 2004–05 to 2005–06

An examination of the variation in remoteness *within* each state/territory showed that these patterns of increasing proportions with increasing remoteness were generally persistent. In Queensland, proportions for Indigenous patients were highest in Remote areas (2.9%), followed by Very Remote areas (1.4%). In Western Australia, proportions were highest in Very Remote areas (4.6%), followed by Outer Regional areas (2.5%). In South Australia, proportions were highest in Remote and Very Remote areas (5.5%). In the Northern Territory, proportions were highest in Remote areas (4.8%), followed by Very Remote areas (4.1%).

In New South Wales, the proportions were much higher in Very Remote areas (2.5%) than other remoteness categories. In Victoria, proportions were slightly higher in Major Cities (1.6%) than in inner and Outer Regional areas (1.2% and 1.1%, respectively). In Tasmania, proportions were similar for inner and Outer Regional areas (0.6% and 0.7%, respectively).

As shown in Figure 3.08.7, the greatest disparities between Indigenous Australians and other Australians were found in the Very Remote and Remote areas, with Indigenous Australians 4.5 to 5.4 times as likely to discharge themselves.



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.7. Disparity between Indigenous and other Australians in the likelihood of discharge against medical advice, by remoteness, 2004–05 to 2005–06

These patterns generally hold within the state/territory. The data were further broken down by remoteness category and principal diagnosis. The proportions of separations for which Indigenous patients were discharged against medical advice were highest in Remote and Very Remote areas for most principal diagnoses.

The diagnostic chapters with the highest proportions of Indigenous separations ending in discharge against medical advice varied by region (Table 3.08.8). Although some diagnostic chapters appear frequently (such as diseases of the skin and diseases of the digestive system), endocrine, nutritional and metabolic, and infectious and parasitic diseases have high rates only in Very Remote regions.

Table 3.08.8: Diagnosis chapters with the highest proportions of Indigenous separations ending in discharge against medical advice

Remoteness category	Highest proportion	Second highest proportion	Third highest proportion
Major City	Symptoms, signs, n.e.c. (3.5%)	diseases of the nervous system (3.4%)	Diseases of the skin (3.0%) and diseases of the digestive system (3.0%)
Inner Regional	Symptoms, signs, n.e.c. (3.5%)	Injury, poisoning, external causes (3.2%)	Diseases of the nervous system (3.2%)
Outer Regional	Injury, poisoning, external causes (5.0%)	Diseases of the skin (4.4%)	Diseases of the nervous system (4.3%) and diseases of the digestive system (4.3%)
Remote	Diseases of the skin (6.8%)	Injury, poisoning, external causes (6.7%)	Diseases of the nervous system (6.3%)
Very Remote	Endocrine, nutritional, and metabolic (9.0%)	Diseases of the skin (8.6%)	Infectious and parasitic diseases (8.4%)

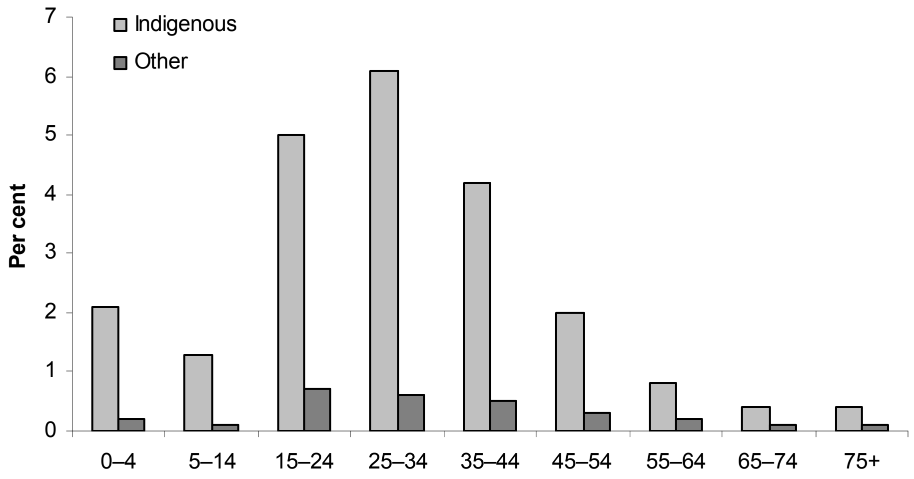
Source: AIHW analysis of National Hospital Morbidity Database

A third series of more detailed univariate analysis looked at the association between discharge against medical advice and other variables such as age, sex, average length of stay and diagnosis subcategories.

This analyses showed that Indigenous males were more likely to be discharged from hospital against medical advice than Indigenous females (3% compared with 2% of hospitalisations).

The disparity between Indigenous and other Australians in the proportion of hospitalisations for which patients were discharged against medical advice was greater for females (ratio of 7) than males (ratio of 6).

The majority of hospitalisations for which Indigenous and other patients were discharged against medical advice were among those aged 25–44 years (53% of Indigenous hospitalisations and 37% of other Australian hospitalisations). Within each age group, the highest proportion of hospitalisations for which Indigenous and other patients were discharged from hospital against medical advice were among those aged 15–24 and 25–34 years (4%–6% for Indigenous patients and around 1% for other patients). The greatest disparities between Indigenous and other Australians in the proportion of hospitalisations for which patients were discharged against medical advice were among those aged 25–34 years and 35–44 years (ratios of 9 and 7, respectively) (Figure 3.08.8).



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.8: Proportion of separations for which patients were discharged from hospital against medical advice (excluding separations with a principal diagnosis of mental and behavioural disorders), by Indigenous status and age group, Australia, 2004–05 to 2005–06

Indigenous patients who were discharged from hospital against medical advice stayed in hospital longer on average than Indigenous patients who were not discharged from hospital against medical advice (3.1 days compared with 2.7 days) (Table 3.08.9). Indigenous patients who were discharged from hospital against medical advice had a similar average length of stay to other patients (3.1 days). In comparison, Indigenous patients who were not discharged from hospital against medical advice had a lower average length of stay in hospital than other patients (2.7 days compared with 3.1 days).

Table 3.08.9: Average length of stay in hospital for patients who were discharged against medical advice (excluding diagnoses for mental and behavioural disorders) and not discharged against medical advice, by Indigenous status and sex, Australia, 2004–05 to 2005–06

	Discharged against medical advice					Not discharged against medical advice				
	Number of bed days		Average length of stay			Number of bed days		Average length of stay		
	Indig	Other	Indig	Other	Ratio	Indig	Other	Indig	Other	Ratio
Males	19,476	79,824	3.3	3.1	1.1	531,841	19,031,331	2.8	3.1	0.9
Females	17,801	59,644	2.9	3.0	1.0	653,570	22,348,178	2.6	3.2	0.8
Persons	37,277	139,468	3.1	3.1	1.0	1,185,412	41,379,555	2.7	3.1	0.9

Source: AIHW analysis of National Hospital Morbidity Database.

The most common diagnosis subcategories for which Indigenous patients were discharged from hospital against medical advice were injuries to the head, representing 7% of total hospitalisations for which Indigenous patients were discharged against medical advice, followed by influenza and pneumonia (6%) and infections of the skin (6%). These three diagnosis subcategories were the most common diagnosis subcategories for which both Indigenous males and Indigenous females were discharged from hospital against medical advice.

Indigenous patients were more likely to be discharged from hospital against medical advice than other patients for all of the top 15 most common diagnosis subcategories for which patients were discharged against medical advice. The greatest disparities were for diseases of the oesophagus, stomach and duodenum (ratio of 15), influenza and pneumonia (ratio of 10) and diseases of the gallbladder, biliary tract and pancreas (ratio of 10).

Given the importance of all these factors, a further series of univariate and multivariate analyses were performed to examine the relative importance of selected variables in affecting the outcome of whether a person discharges against medical advice, and to see whether controlling for these factors eliminated the impact of Indigenous status. Thus, the analyses sought to answer the question of whether compositional differences between the two populations accounted for differences in the likelihood of discharge against medical advice. Categories of included variables were state and territory, remoteness, and principal diagnoses. All analyses controlled for age and sex. Univariate analyses showed that females hospitalised for each principal diagnosis chapter were less likely to discharge against medical advice than males (odds ratios ranged from 0.54 for factors influencing health status to 0.60 for injury and poisoning).

Results from both the univariate and multivariate analyses showed that Indigenous status was the most significant variable contributing to whether a patient would discharge themselves from hospital against medical advice, even after controlling for the other factors.

The principal diagnosis chapters of 'factors influencing health status' (which includes care involving dialysis) and 'pregnancy and childbirth' were the second and third most significant variables after Indigenous status that affected the outcome of discharge from hospital against medical advice. Patients within these categories were less likely to discharge against medical advice than patients not hospitalised for those diagnoses.

Sex was the fourth most significant variable, with the odds for males approximately twice as high as those for females. Aside from other principal diagnosis chapters, which reduced the likelihood of discharge against medical advice (neoplasms, diseases of the digestive system, diseases of the genitourinary system and diseases of the musculoskeletal system), age group was the next most significant variable.

Hospitalisation for mental and behavioural disorders was the most significant variable of all principal diagnosis chapters that increased the likelihood of being discharged against medical advice, followed by hospitalisations for symptoms, signs and abnormal findings, and injury and poisoning.

State/territory of usual residence of a patient paired with state/territory of hospital location was more significant in contributing to the outcome of whether a patient would discharge themselves from hospital than remoteness of usual residence paired with remoteness of hospital location. When the usual residence and hospital location variables were considered separately, results show that where a patient is hospitalised is more important than where a patient resides.

Given that the control variables did have a significant impact on the outcome variable, separate multivariate regressions were run for Indigenous and other Australians to test whether the impact of these variables was similar for both groups; for example, whether living in a remote area has the same effect for other Australians that it does for Indigenous Australians.

The findings demonstrate that there were general similarities in the impacts of sex, age, and remoteness for Indigenous and other Australians. Results for Indigenous Australians showed that females were less likely to discharge against medical advice than males (odds ratio of 0.83). Similarly, for other Australians, females were also less likely to discharge against medical advice (odds ratio of 0.62). For Indigenous Australians, the odds of discharge against medical advice for patients in the 20–24, 25–29 and 30–34, 35–39 and 40–44 year age groups were between 11 and 13 times the odds for patients aged 75 years and over. These age groups were also associated with higher rates of discharge against medical advice for other Australians, but the odds ratios were much lower than for Indigenous Australians (between 4 and 5).

In general, for both Indigenous and other Australians, compared with patients with a usual residence in Major Cities and who were hospitalised in Major Cities, patients who were resident in Inner or Outer Regional, Remote or Very Remote areas and were hospitalised in Remote or Very Remote areas were most likely to discharge against medical advice.

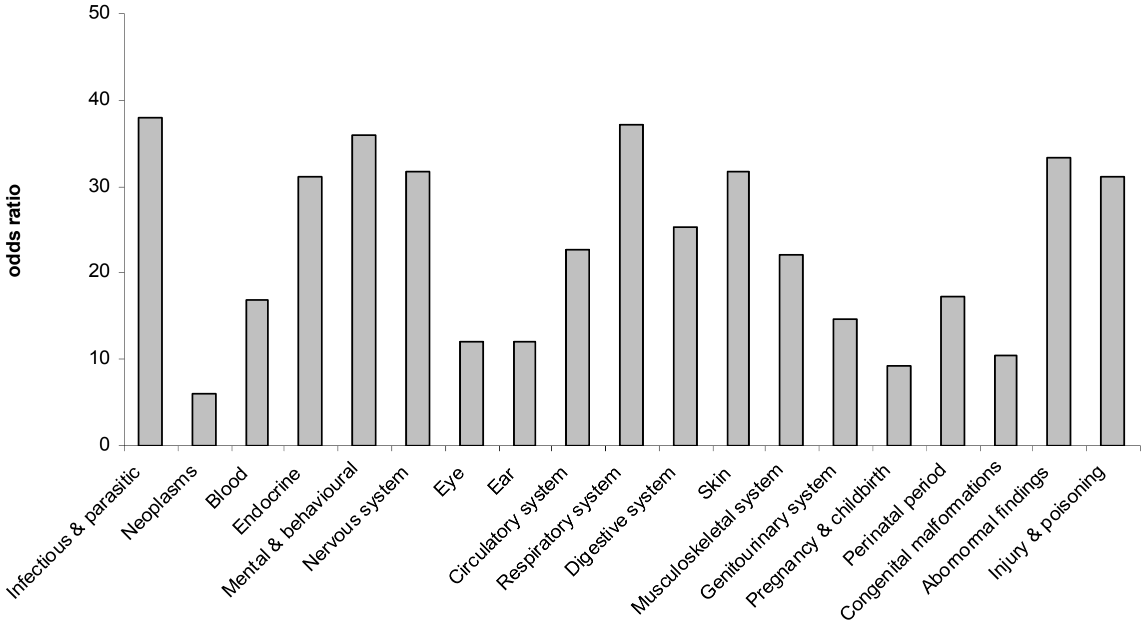
For Indigenous Australians, patients who were resident in Very Remote areas and were hospitalised in Remote areas were most likely to discharge against medical advice (odds ratio of 4.06), followed by patients with residence in inner or Outer Regional areas who were hospitalised in Very Remote areas (ratios of around 3.3)

For other Australians, patients who were resident in Outer Regional areas and were hospitalised in Remote areas were most likely to discharge against medical advice (odds ratio of 2.99), followed by patients with residence in Outer Regional areas who were hospitalised in Very Remote areas (ratio of 2.63) and patients with residence in Very Remote areas who were hospitalised in Remote areas (ratio of 2.33)

Results for Indigenous Australians showed that principal diagnosis was the most significant variable contributing to whether patients would discharge from hospital against medical advice. Infectious and parasitic diseases, diseases of the respiratory system and mental and behavioural disorders had the greatest odds ratios. Age group was the second most significant variable contributing to whether Indigenous patients would discharge against medical advice—odds ratios were highest amongst those aged 25–44 years. Remoteness of usual residence/remoteness of hospital was the next most significant variable affecting the outcome of discharge against medical advice for Indigenous Australians—odds ratios were highest among those residing in Inner or Outer Regional, Remote or Very Remote areas and hospitalised in Remote or Very Remote areas. Sex was the least significant of the four variables.

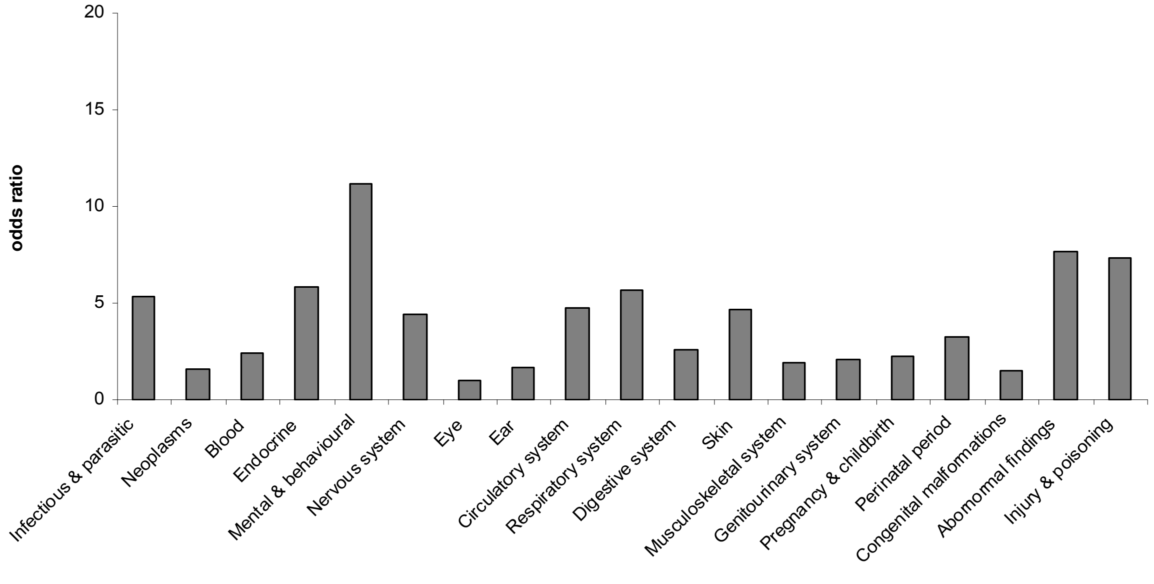
In contrast, results for other Australians showed that sex was the most significant variable affecting the outcome of whether a patient would discharge from hospital against medical advice—odds ratios were highest for females. Principal diagnosis was the second most significant variable affecting the outcome of discharge from hospital against medical advice—mental and behavioural disorders had the highest odds ratio. Age group was the next most significant variable contributing to whether a patient would discharge form hospital against medical advice for other Australians followed by remoteness of usual residence/remoteness of hospital.

Figures 3.08.9a and 3.08.9b present the odds ratios of the principal diagnosis chapters for Indigenous Australians and other Australians. The results are relative to "factors affecting health status." For Indigenous Australians, the highest odds ratios are for infectious and parasitic diseases, diseases of the respiratory system, and mental and behavioural disorders. The lowest odds ratios are for neoplasms, pregnancy and childbirth, and congenital malformations. For other Australians, the highest odds ratios are for mental and behavioural disorders, symptoms, signs and abnormal findings, and injury and poisoning. The lowest odds ratios are for diseases of the eye, congenital malformations, and neoplasms.



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.9a: The impact of principal diagnosis chapter on the likelihood of discharge against medical advice (relative to factors affecting health status): Indigenous Australians, 2004–05 to 2005–06



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.9b: The impact of principal diagnosis chapter on the likelihood of discharge against medical advice (relative to factors affecting health status): other Australians, 2004–05 to 2005–06

Although these exploratory analyses have been critical in identifying some of the factors underlying the disparity between Indigenous and other Australians in the likelihood of discharging against medical advice, they were not able to fully account for the differences. Thus, they point to the need for further research in other domains such as individual factors (such as psychosocial, personal circumstances, health and wellbeing, and cultural issues) and community level factors (such as trust/mistrust in system) and hospital level factors (such as staff, hospital policies and the environment).

Data quality issues

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. For several years, Queensland, South Australia, Western Australia and the northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data for Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data for South Australia and Victoria).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from the Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

References

ABS (Australian Bureau of Statistics) 2004. Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009. ABS cat. no. 3238.0. Canberra: ABS.

ABS & AIHW (Australian Institute of Health and Welfare) 2005. The health and welfare of Australia’s Aboriginal and Torres Strait Islander Peoples 2005. ABS cat. no. 4704.0, AIHW cat. no. IHW 14. Canberra: ABS & AIHW.

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3.09 Access to mental health services

Access to mental-health-care services such as hospitals, community mental health care, doctors and Aboriginal and Torres Strait Islander Primary heath-care services by Aboriginal and Torres Strait Islander peoples

Data sources

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 NHS. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues, including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 NHS.

Bettering the Evaluation and Care of Health (BEACH) survey

Information about encounters in general practice is available from the BEACH survey, which is conducted by the AIHW Australian GP Statistics and Classification Centre, University of Sydney. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be an underestimate. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Due to a late inclusion of a 'not stated' category of Indigenous status in 2001–02, (before which 'not stated' responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2000–01 to 2004–05, during which there were 7,296 GP encounters with Indigenous patients recorded in the survey, representing 1.6% of total GP encounters in the survey.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

The AIHW National Public Hospitals Establishment Database holds establishment-level data for public hospitals within the jurisdiction of the state and territory health authorities.

Private hospitals and public hospitals not administered by the state and territory health authorities are not included.

Data are presented for the six jurisdictions that have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (AIHW unpublished). These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions as public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period from July 2004 to June 2006. An aggregate of 2 years of data has been used because the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

Mental health services can be provided in ambulatory or non-ambulatory settings. Ambulatory mental health care ranges from care provided in the primary care setting to care in hospital-based outpatient services, community-based mental health care and same day admitted patient mental health care in specialised psychiatric and general hospitals. Non-ambulatory mental-health-care settings include admitted patient mental health care in specialised psychiatric and general hospitals and residential mental health care. Mental health services are provided by a range of health professionals such as psychiatrists, GPs, psychologists, counsellors and Aboriginal mental health workers.

Community mental health care

Information on the use of community mental health services by Indigenous people is available from the AIHW National Community Mental Health Care Database (NCMHCD). The information collected in the database is a nationally agreed set of common data elements collected by service providers based on the National Minimum Data Set for Community Mental Health Care.

The quality of Indigenous identification in this database varies by jurisdiction. In 2005–06, Queensland, Western Australia, Tasmania, the Northern Territory and the Australian Capital Territory reported that the quality of their data was suitable for analysis.

As with hospitalisation data, service contacts for which the Indigenous status of the client was not reported have been included with hospitalisations for non-Indigenous people under the 'other' category.

Residential mental health care

Information on the use of residential mental health services by Indigenous people is available from the AIHW National Residential Mental Health Care Database (NRMHCD). The information collected in the database is a nationally agreed set of common data elements collected by service providers and based on the National Minimum Data Set for Residential Mental Health Care.

The quality of Indigenous identification in this database varies by jurisdiction. In 2005–06 there were no residential mental-health-care services in Queensland and the Northern Territory and only Western Australia, Tasmania and the Australian Capital Territory reported that the quality of their data was suitable for analysis.

As with hospitalisation data, service contacts for which the Indigenous status of the client was not reported have been included with hospitalisations for non-Indigenous people under the 'other' category.

AIHW Medical Labour Force Survey

The AIHW Medical Labour Force Survey is conducted by the state and territory departments of health with the cooperation of the medical and nursing registration boards in each jurisdiction, and in consultation with the AIHW. The AIHW is the data custodian for this collection. The Medical Labour Force Survey is a census of all registered medical practitioners in each state and territory in Australia. The Medical Labour Force Survey has been conducted annually since 1993. Information on demographic details, main areas and specialty of work, qualifications and hours worked are collected from registered professionals. The data collected generally relate to the 4 weeks prior to the survey.

Service Activity Reporting (SAR) database

The SAR database collects data from approximately 150 Australian Government-funded Indigenous primary heath-care services and is held at the DoHA. It is estimated that these services provide GP services to around 40% of the Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a 12-month period.

Response rates to the SAR by Indigenous primary heath-care services in 2005–06 were around 99%.

Note that the SAR only includes Indigenous health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Analyses

Age-standardised rates and ratios have been used for this indicator as a measure of the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported data

Self-reported data from the 2004–05 NATSIHS on visiting a health professional for mental-health-related reasons are presented in Tables 3.09.1, 3.09.2a and 3.09.2b below.

- In 2004–05, approximately 12% of Indigenous Australians reported visiting a health professional about their feelings in the 4 weeks prior to survey (Table 3.09.1).
- The Northern Territory had the highest proportion of Indigenous Australians reporting they visited a health professional about their feelings (17%) followed by Victoria (16%); New South Wales and Queensland had the lowest (both 10%).
- The highest proportion of Indigenous Australians who reported visiting a professional about their feelings were in Very Remote areas (14%) followed by Inner Regional areas (13%) (Table 3.09.2a).
- A higher proportion of Indigenous Australians (20%) reported visiting an 'other health professional' than non-Indigenous Australians (13%) (Table 3.09.2b).

Table 3.09.1: Whether saw a doctor or health professional about feelings in last 4 weeks, Indigenous Australians, by state/territory, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
					Per cent				
Yes	10	16	10	11	13	13	13	17	12
No	89	83	90	88	86	87	87	82	88
Don't know/not stated/refusal	1(a)	1(a)	—	1(a)	—(a)	—(a)	—	1(a)	1(b)
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number(c)	63,317	13,405	58,068	28,676	11,793	8,345	1,966	23,073	208,643

(a) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(b) Persons who were asked whether they saw a doctor or other health professional about feelings.

(c) Estimate has a relative standard error of between 25% and 50% and should be interpreted with caution.

Source: AIHW analysis of 2004–05 NATSIHS.

Table 3.09.2a: Whether saw a doctor or health professional about feelings in last 4 weeks, Indigenous Australians,(a) by remoteness, 2004–05

	Major Cities	Inner Regional	Outer Regional	Remote	Very Remote	Australia
			Per cent			
Yes	11	13	10	12	14	12
No	88	86	90	87	86	88
Don't know/not stated/refused	—(b)	—(b)	n.p.	n.p.	n.p.	—(c)
Total(d)	**100**	**100**	**100**	**100**	**100**	**100**
Total number(d)	65,915	43,047	46,086	17,160	35,177	207,384

(a) Persons aged 18 years and over who scored greater than 1 on at least one of the K5 (Kesslor Psychological Distress Scale) items.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Estimate has a relative standard error of between 25% and 50% and should be interpreted with caution.

(d) Includes refusal.

Source: AIHW analysis of 2004–05 NATSIHS

Table 3.09.2b: Type of other health professional consulted (selected), by Indigenous status and remoteness, 2004–05

	Non-remote		Remote(a)		Australia	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous(b)	Indigenous	Non-Indigenous
			Per cent			
Accredited counsellor(c)	1	—	—(d)	n.a.	1	—
Psychologist	1	—	—(d)	n.a.	1	—
Other health professional(e)	15	13	30(d)	n.a.	18	13
Total who saw other health professional(f)(g)	**16**	**13**	**32(d)**	**n.a.**	**20**	**13**
Total number	348,315	19,061,481	125,995	n.a.	474,310	19,292,387

(a) Respondents in non-remote areas were provided with a prompt card, which contained 'other health professional' categories whereas the question in remote areas was open-ended. Subsequently there may have been some under-reporting by remote respondents.

(b) Non-Indigenous data were not collected in Very Remote areas of Australia in the 2004–05 NHS.

(c) Persons in remote areas who saw a mental health worker were coded as having seen an accredited counsellor.

(d) Estimate has a relative standard error of between 25% and 50% and should be interpreted with caution.

(e) Persons who saw an 'other health professional' other than an accredited counsellor and/or psychologist.

(f) Includes 'not stated' and 'not known if consulted other health professional'.

(g) Sum of components may add up to more than total as persons may have reported seeing more than one type of other health professional.

Note: Data are age-standardised.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Psychologists and psychiatrists employed in Australia

The AIHW Medical labour Force Survey collected information on the number of psychiatrists in Australia.

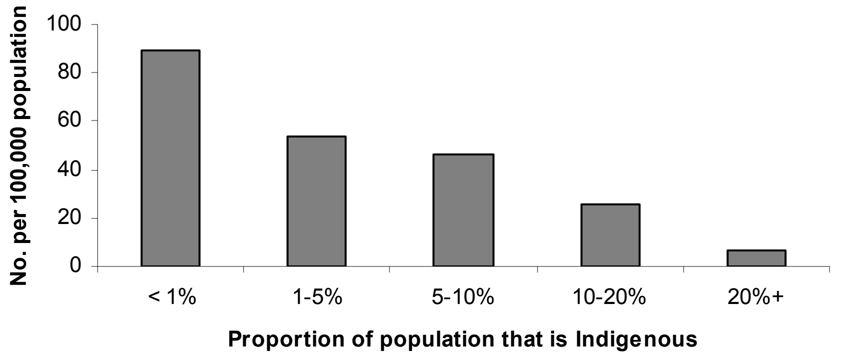
- In 2004, there were 2,535 full-time equivalent (FTE) employed psychiatrists and 856 FTE employed psychiatrists in training in Australia. Psychiatrists (including psychiatrists-in-training) made up 5.4% of all employed medical practitioners in Australia (AIHW 2007b).
- There were 17 FTE psychiatrists per 100,000 population in Australia. The rate ranged from 10 FTE per 100,000 in the Northern Territory to 22 per 100,000 in Victoria and South Australia. Queensland and Western Australia had relatively low rates of 12 FTE psychiatrists per 100,000 population.
- The rate of FTE psychiatrists per 100,000 population was much higher in Major Cities (22 per 100,000) than in Remote and Very Remote areas (3 per 100,000). In 2004, 90.1% of FTE psychiatrists (for whom region was reported) worked mainly in the Major Cities, although less than half of a per cent worked mainly in Remote and Very Remote regions (AIHW 2007b).

Information on psychologists in Australia is available from the AIHW Psychologist Labour Force Survey, the latest of which was conducted in 2002.

The 2002 survey was conducted in five jurisdictions (New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory). The number of registered psychologists in these jurisdictions comprised around 86% of psychologists registered nationally. Coverage excludes those psychologists whose initial registration occurred during the 12 months preceding the survey. The overall response rate for the five jurisdictions was 56%.

In 2002 there were 14,073 employed psychologists in the five jurisdictions included in the AIHW survey. The full-time equivalent (FTE) rates of psychologists per 100,000 population for each jurisdiction were estimated to be: New South Wales, 88; Victoria, 95; Queensland, 64; South Australia, 54; and the Australian Capital Territory, 170 (AIHW 2006b).

- The FTE rate of employed psychologists was highest in areas where less than 1% of the population was Indigenous (89 per 100,000) and lowest in areas where 20% or more of the population was Indigenous (7 per 100,000) (Figure 3.09.1).



Notes

1. In 2002, 492 employed psychologists did not report the postcode they worked in. Hence the number of employed psychologists stated by region is an underestimate.
2. Data for New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory only.
3. FTE is based on 35 hours per week.

Source: AIHW analysis of Psychologist Labour Force Survey, 2002.

Figure 3.09.1: FTE employed psychologists per 100,000 population, by proportion of Indigenous population living in an area, 2002

Public psychiatric hospitals

Information on the number of public psychiatric hospitals in Australia is available from the National Public Hospital Establishment Database.

- In 2004–05, there were 20 public psychiatric hospitals in Australia with 2,487 available beds. The majority of these were located in Major Cities (55% or 11 hospitals) and Inner Regional areas (35% or 7 hospitals). There were no public psychiatric hospitals located in Remote or Very Remote areas (Table 3.09.3).
- Among jurisdictions, New South Wales reported the highest number of available beds in public psychiatric hospitals (1,161), although South Australia had the highest number of available beds per 100,000 population (30.1). The rate of available beds was highest in Inner Regional areas (15 per 100,000 population).
- In 2004–05, there were 122 public acute hospitals with a specialised psychiatric unit or ward. New South Wales and Victoria had the largest number of public acute hospitals with specialised psychiatric units or wards (42 and 31, respectively) (Table 3.09.4). The majority of public acute hospitals with specialised psychiatric units or wards were located in Major Cities (68.0% or 83 hospitals).
- In these hospitals, there were on average 3,450 available beds in the specialised psychiatric units and wards (17.2 available beds per 100,000 population).

Table 3.09.3: Public psychiatric hospitals[(a)] and available beds, by remoteness area and state[(b)], 2004–05

	NSW	Vic[(c)]	Qld	WA	SA	Tas	Total
Public psychiatric hospitals							
Major Cities	7	1	1	1	1	. .	11
Inner Regional	3	0	1	0	0	3	7
Outer Regional	0	0	2	0	0	0	2
Remote and Very Remote	0	0	0	0	0	0	0
Total all regions	**10**	**1**	**4**	**1**	**1**	**3**	**20**
Available beds							
Major Cities	807	115	192	205	461	. .	1,780
Inner Regional	354	0	204	0	0	69	627
Outer Regional	0	0	80	0	0	0	80
Remote and Very Remote	0	0	0	0	0	0	0
Total all regions	**1,161**	**115**	**476**	**205**	**461**	**69**	**2,487**
Available beds per 100,000 population							
Major Cities	16.8	3.2	9.4	14.7	41.9	. .	13.4
Inner Regional	25.6	0	20.1	0	0	22.4	14.9
Outer Regional	0	0	11.8	0	0	0	3.9
Remote and Very Remote	0	0	0	0	0	0	0
Total all regions	**17.3**	**2.3**	**12.2**	**10.4**	**30.1**	**14.3**	**12.4**

(a) The number of hospitals reported can be affected by administrative and/or reporting arrangements and is not necessarily a measure of the number of physical hospital buildings or campuses.

(b) There were no public psychiatric hospitals in the Australian Capital Territory or the Northern Territory.

(c) The count of hospitals in Victoria is a count of the campuses, which report data separately to the National Hospital Morbidity Database.

. . Not applicable.

Source: AIHW 2007a..

Table 3.09.4: Public acute hospitals with psychiatric units or wards[(a)] and available beds, by Remoteness Area, states and territories, 2004–05

	NSW	Vic[(b)]	Qld	WA	SA	Tas	ACT	NT	Total
Public acute hospitals with psychiatric units or wards									
Major Cities	29	22	9	13	8	. .	2	. .	83
Inner Regional	12	8	6	1	0	2	0	. .	29
Outer Regional	1	1	3	2	0	1	. .	1	9
Remote and Very remote	0	0	0	0	0	0	. .	1	1
Total all regions	**42**	**31**	**18**	**16**	**8**	**3**	**2**	**2**	**122**
Available psychiatric beds									
Major Cities	714	763	567	383	172	. .	44	. .	2,643
Inner Regional	179	124	230	15	0	62	0	. .	610
Outer Regional	2	12	111	16	0	24	. .	26	191
Remote and Very Remote	0	0	0	0	0	0	. .	6	6
Total all regions	**895**	**899**	**908**	**414**	**172**	**86**	**44**	**32**	**3,450**
Available psychiatric beds per 100,000 population									
Major Cities	14.9	21.0	27.6	27.4	15.6	. .	13.6	. .	19.8
Inner Regional	12.9	11.7	22.7	5.8	0	20.1	0	. .	14.4
Outer Regional	0.4	4.7	16.4	8.6	0	14.7	. .	23.8	9.3
Remote and Very Remote	0	0	0	0	0	0	. .	6.6	1.2
Total all regions	**13.3**	**18.1**	**23.4**	**20.9**	**11.2**	**17.8**	**13.6**	**16.0**	**17.2**

(a) The number of hospitals reported can be affected by administrative and/or reporting arrangements and is not necessarily a measure of the number of physical hospital buildings or campuses.

(b) The count of hospitals in Victoria is a count of the campuses, which report data separately to the National Hospital Morbidity Database.

. . Not applicable.

Source: AIHW 2007b (National Public Hospital Establishments Database).

Hospitalisations

- For the 2-year period from July 2004 to June 2006, there were 587,180 hospitalisations from mental-health-related conditions in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, of which 20,463 (3.5%) were hospitalisations of Aboriginal and Torres Strait Islander peoples.
- Mental-health-related conditions were responsible for 4.4% of all hospitalisations of Indigenous Australians.

Hospitalisations by state/territory

Table 3.09.5 presents hospitalisations for a principal diagnosis of mental-health-related conditions in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, for the 2-year period from July 2004 to June 2006. As well as rates and ratios for the six jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, Table 3.09.5 presents unadjusted and adjusted national level data. The Australia data is adjusted by applying a completeness factor of

89.4%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period from July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males were hospitalised for mental-health-related conditions at twice the rate of other males and Indigenous females were hospitalised for mental-health-related conditions at 1.4 times the rate of other females.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised for mental-health-related conditions at 1.9 times the rate of other Australians.
- In South Australia, Indigenous Australians were hospitalised for mental-health-related conditions at around 4 times the rate of other Australians, and in New South Wales, Western Australia and the Northern Territory Indigenous Australians were hospitalised at around twice the rate of other Australians. In Queensland and Victoria the rate ratios were 1.3.
- In the Northern Territory, both Indigenous and other Australians were hospitalised for mental-health-related conditions at low rates in comparison to hospitalisation rates in New South Wales, Victoria, Queensland, Western Australia and South Australia.

Table 3.09.5: Hospitalisations for principal diagnosis of mental-health-related conditions, by Indigenous status, sex and state/territory, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)]

	Indigenous				Other[(d)]				
	Number	No. per 1,000[(e)]	LCL 95%[(f)]	UCL 95%[(g)]	Number	No. per 1,000[(e)]	LCL 95%[(f)]	UCL 95%[(g)]	Ratio[(h)]
NSW									
Males	4,392	38.2	36.8	39.6	92,746	14.1	14.0	14.2	2.7*
Females	3,357	26.8	25.7	27.8	91,694	13.5	13.5	13.6	2.0*
Persons	7,749	32.2	31.3	33.0	184,442	13.8	13.7	13.8	2.3*
Vic									
Males	521	18.9	17.2	20.6	68,791	13.8	13.7	13.9	1.4*
Females	686	27.3	25.1	29.6	113,619	21.9	21.7	22.0	1.3*
Persons	1,207	23.0	21.6	24.4	182,410	17.9	17.8	18.0	1.3*
Qld									
Males	2,253	21.1	20.1	22.2	47,753	12.2	12.1	12.4	1.7*
Females	1,976	17.0	16.1	17.9	62,074	15.8	15.7	16.0	1.1*
Persons	4,229	19.0	18.3	19.6	109,827	14.1	14.0	14.1	1.3*
WA									
Males	1,847	32.0	30.3	33.7	22,217	11.4	11.2	11.5	2.8*
Females	1,934	29.0	27.6	30.5	31,200	16.0	15.8	16.2	1.8*
Persons	3,781	30.3	29.2	31.4	53,417	13.6	13.5	13.8	2.2*
SA									
Males	926	40.5	37.5	43.5	16,512	10.9	10.7	11.1	3.7*
Females	1,145	45.0	42.1	47.9	18,425	11.5	11.3	11.7	3.9*
Persons	2,071	42.7	40.6	44.8	34,937	11.2	11.1	11.3	3.8*
NT									
Males	821	14.4	13.3	15.6	1,041	7.1	6.6	7.6	2.0*
Females	605	10.4	9.5	11.4	643	4.8	4.3	5.2	2.2*
Persons	1,426	12.4	11.7	13.1	1,684	6.0	5.7	6.3	2.1*
NSW, Vic, Qld, WA, SA, NT[(i)]									
Males	**10,760**	**28.0**	**27.4**	**28.7**	**249,060**	**13.1**	**13.0**	**13.1**	**2.1***
Females	**9,703**	**23.2**	**22.6**	**23.7**	**317,655**	**16.2**	**16.2**	**16.3**	**1.4***
Persons	**20,463**	**25.5**	**25.1**	**25.9**	**566,717**	**14.6**	**14.6**	**14.7**	**1.7***
Australia unadjusted[(j)]									
Males	11,310	28.1	27.5	28.7	264,076	13.3	13.3	13.4	2.1*
Females	10,106	23.1	22.6	23.6	333,997	16.4	16.3	16.4	1.4*
Persons	21,416	25.5	25.1	25.9	598,095	14.8	14.8	14.9	1.7*
Australia adjusted[(j)(k)]									
Males	12,639	31.4	30.8	32.1	262,747	13.2	13.2	13.3	2.4*
Females	11,293	25.8	25.3	26.3	332,810	16.3	16.3	16.4	1.6*
Persons	23,932	28.5	28.0	28.9	595,579	14.8	14.7	14.8	1.9*

(continued)

Table 3.09.5 (continued): Hospitalisations for principal diagnosis of mental-health-related conditions, by Indigenous status, sex and state/territory, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p < 0.05 level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes F00–F99, G30, G47.0, G47.1, G47.2, G47.8, G47,9, 099.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0.

(c) Financial year reporting.

(d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Directly age-standardised using the Australian 2001 standard population.

(f) LCL = lower confidence limit.

(g) UCL = upper confidence limit.

(h) Rate ratio—Indigenous: other.

(i) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Note: Person numbers and rates include hospitalisations for which sex was not stated.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by ambulatory and non-ambulatory-equivalent

Mental health services can be provided in ambulatory or non-ambulatory settings. Ambulatory mental-health-care settings range from care provided in the primary care setting through to ambulatory care in hospital-based outpatient services, community-based mental health care and same day admitted patient mental health care in specialised psychiatric and general hospitals. Non-ambulatory mental-health-care settings include admitted patient mental health care in specialised psychiatric and general hospitals and residential mental health care.

Table 3.09.6 and Figure 3.09.2 present ambulatory-equivalent and non-ambulatory-equivalent mental-health-related hospitalisations for Indigenous and non-Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory over the 2-year period from July 2004 to June 2006.

- Between July 2004 and June 2006, there were 2,721 ambulatory-equivalent mental-health-related hospitalisations among Indigenous Australians (993 with specialised psychiatric care and 1,728 without specialised psychiatric care).
- Over the same period there were 17,742 non-ambulatory-equivalent mental health-related separations among Indigenous Australians (8,084 with specialised psychiatric care and 9,658 without specialised psychiatric care).
- Rates of ambulatory-equivalent mental-health-related hospitalisations were lower for Indigenous Australians than other Australians (rate ratio of 0.6). This was particularly the case for ambulatory-equivalent separations with specialised psychiatric care. The rate of these hospitalisations per 1,000 Aboriginal and Torres Strait Islander peoples was almost one-third the rate for other Australians (rate ratio of 0.3). In contrast, the rate of ambulatory-equivalent separations without specialised psychiatric care per 1,000 Indigenous peoples was almost double that for other Australians (rate ratio of 1.9).
- Rates of non-ambulatory-equivalent mental-health-related hospitalisations per 1,000 Aboriginal and Torres Strait Islander peoples were more than double that for other Australians (rate ratio of 2.4). The rate of such hospitalisations with specialised psychiatric care among Indigenous Australians was around 1.8 times that of other Australians. The rate of non-ambulatory-equivalent separations among Indigenous Australians without specialised psychiatric care was over 3 times that of other Australians.

Table 3.09.6: Ambulatory-equivalent and non-ambulatory-equivalent mental-health-related hospitalisations, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Males					Females					Persons				
	No.	**No. per 1,000**[(e)]	**LCL 95%**[(f)]	**UCL 95%**[(g)]	**Ratio**[(h)]	**No.**	**No. per 1,000**[(e)]	**LCL 95%**[(f)]	**UCL 95%**[(g)]	**Ratio**[(h)]	**No.**	**No. per 1,000**[(e)]	**LCL 95%**[(f)]	**UCL 95%**[(g)]	**Ratio**[(h)]
Ambulatory-equivalent															
With specialised psychiatric care															
Indigenous	529	1.2	1.1	1.3	0.4*	464	1.0	0.9	1.1	0.2*	993	1.1	1.0	1.2	0.3*
Other[(i)]	63,216	3.3	3.2	3.3		107,788	5.5	5.5	5.6		171,004	4.4	4.4	4.4	
Without specialised psychiatric care															
Indigenous	889	2.3	2.1	2.5	2.2*	839	1.9	1.8	2.1	1.6*	1,728	2.1	2.0	2.2	1.9*
Other[(i)]	19,800	1.0	1.0	1.0		22,920	1.2	1.2	1.2		42,720	1.1	1.1	1.1	
Total Indigenous	**1,418**	**3.5**	**3.3**	**3.7**	**0.8***	**1,303**	**3.0**	**2.8**	**3.1**	**0.4***	**2,721**	**3.2**	**3.1**	**3.4**	**0.6***
Total Other[(i)]	**83,016**	**4.3**	**4.3**	**4.3**		**130,708**	**6.7**	**6.7**	**6.8**		**213,724**	**5.5**	**5.5**	**5.5**	
Non-ambulatory-equivalent															
With specialised psychiatric care															
Indigenous	4,311	10.1	9.8	10.5	2.0*	3,773	8.8	8.4	9.1	1.6*	8,084	9.4	9.2	9.7	1.8*
Other[(i)]	95,735	5.0	5.0	5.1		106,493	5.5	5.4	5.5		202,228	5.2	5.2	5.3	
Without specialised psychiatric care															
Indigenous	5,031	14.4	13.9	14.9	3.8*	4,627	11.4	11.1	11.8	2.8*	9,658	12.8	12.5	13.1	3.3*
Other[(i)]	70,305	3.8	3.7	3.8		80,408	4.0	4.0	4.1		150,715	3.9	3.9	3.9	
Total Indigenous	**9,342**	**24.5**	**23.9**	**25.1**	**2.8***	**8,400**	**20.2**	**19.7**	**20.7**	**2.1***	**17,742**	**22.2**	**21.9**	**22.6**	**2.4***
Total Other[(i)]	**166,040**	**8.8**	**8.7**	**8.8**		**186,901**	**9.5**	**9.5**	**9.5**		**352,943**	**9.1**	**9.1**	**9.2**	

(continued)

Table 3.09.6 (continued): Ambulatory-equivalent and non-ambulatory-equivalent mental-health-related hospitalisations, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes: Chapter IX Diseases of Mental, Behavioural Disorders (F00–F99) and other mental-health-related conditions: ICD-10-AM codes: G30, G47.0, G47.1, G47.2, G47.8, G47.9, O99.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Directly age-standardised using the Australian 2001 standard population.

(f) LCL = lower confidence limit.

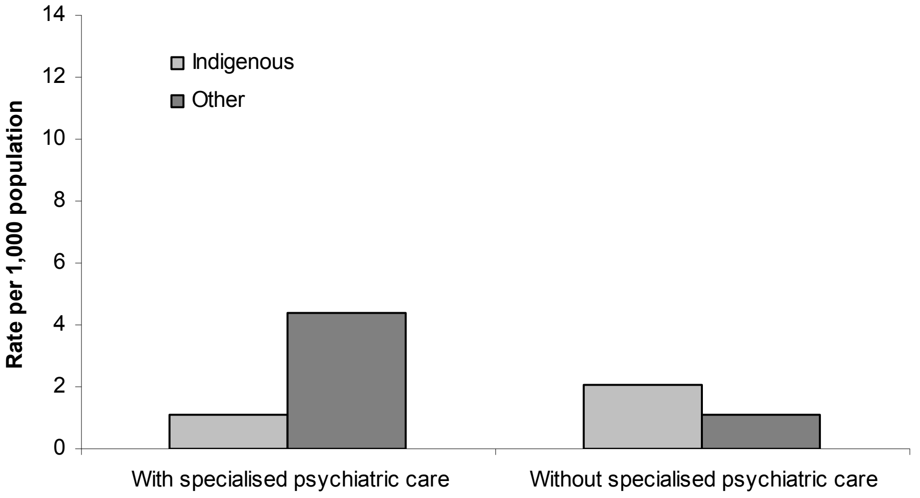
(g) UCL = upper confidence limit.

(h) Rate ratio—Indigenous: other.

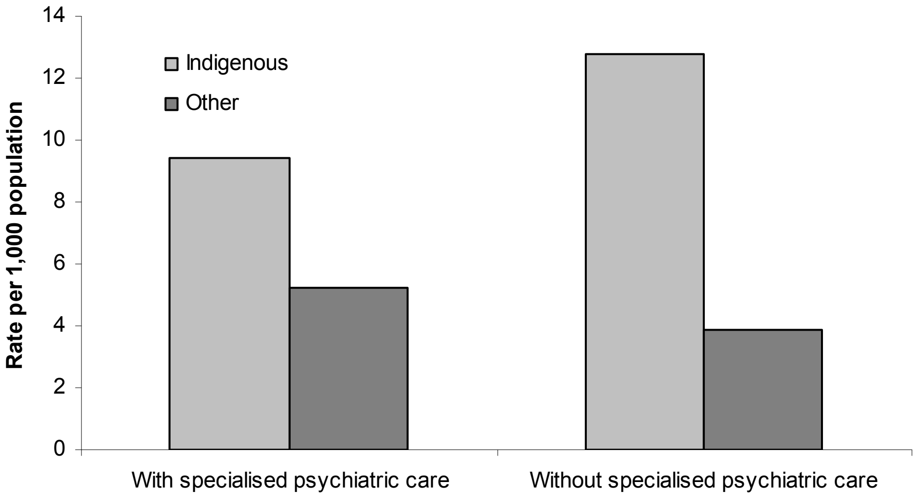
(i) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

Source: AIHW analysis of National Hospital Morbidity Database.

Ambulatory-equivalent



Non-ambulatory-equivalent



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.09.2: Ambulatory-equivalent and non-ambulatory-equivalent mental-health-related hospitalisation rates, by Indigenous status, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006

Average length of stay

Table 3.09.7 presents the average length of stay and total number of bed days for non-ambulatory-equivalent mental-health-related hospitalisations for Indigenous and other Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.

- In the period from July 2004 to June 2006, the average length of stay in hospital for non-ambulatory-equivalent mental health-related hospitalisations was lower for Indigenous Australians and other Australians (8.6 days compared with 11.1 days).
- The average length of stay for non-ambulatory-equivalent mental health-related hospitalisations with specialised psychiatric care was similar for Indigenous and other Australians (15.8 days compared with 16.1 days). The average length of stay for non-ambulatory-equivalent mental health-related hospitalisations without specialised psychiatric care psychiatric care was 2.6 days for Indigenous Australians and 4.4 days for other Australians.
- For both Indigenous and other Australians, the total number of bed days was higher for non-ambulatory-equivalent separations with specialised psychiatric care than without specialised psychiatric care.

Table 3.09.7: Average length of stay for non-ambulatory-equivalent mental health-related hospitalisations, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous			Other[(e)]			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
					Patient days				
With specialised psychiatric care	76,229	51,441	127,670	1,620,268	1,633,079	3,253,347	1,696,497	1,684,520	3,381,017
Without specialised psychiatric care	12,262	12,817	25,079	289,928	366,031	655,966	302,190	378,848	681,045
Total	**88,491**	**64,258**	**152,749**	**1,910,196**	**1,999,110**	**3,909,313**	**1,998,687**	**2,063,368**	**4,062,062**
					Average length of stay (overnight)				
With specialised psychiatric care	17.7	13.6	15.8	16.9	15.3	16.1	17.0	15.3	16.1
Without specialised psychiatric care	2.4	2.8	2.6	4.1	4.6	4.4	4.0	4.5	4.2
Total	**9.5**	**7.6**	**8.6**	**11.5**	**10.7**	**11.1**	**11.4**	**10.6**	**11.0**

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); ICD-10-AM codes: Chapter IX Diseases of Mental, Behavioural Disorders (F00–F99) and other mental health-related conditions; ICD-10-AM codes: G30, G47.0, G47.1, G47.2, G47.8, G47.9, O99.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

Source: AIHW analysis of National Hospital Morbidity Database.

Time series analyses

Time series data is presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, and so they were included as part of the current period analysis (2004–05 to 2005–06), but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for mental health-related conditions over the 7-year period 1998–99 to 2005–06 are presented in Table 3.09.8 and Figure 3.09.3.

- In Queensland, Western Australia, South Australia and the Northern Territory, there were significant increases in hospitalisation rates for mental health-related conditions among Indigenous females during the period 1998–99 to 2005–06. The fitted trend implies an average yearly increase in the rate of around 0.4 per 1,000 which is equivalent to a 16% increase in the rate over the period.
- There were significant declines in hospitalisation rates for mental health-related conditions among other Australians over the same period, with an average yearly decline in the rate of around 0.1 per 1,000. This is equivalent to a 7% decline in the rate over the period. The declines in hospitalisation rates were significant for males but not for females.
- There were significant increases in both the hospitalisation rate ratios and rate differences between Indigenous and other Australians over the period 1998–99 to 2005–06 (14% increase in the rate ratio and 30% increase in the rate difference for persons over the period). This reflects both a relative and absolute increase in the gap between hospitalisation rates of Indigenous and other Australians for mental health-related conditions over the period 1998–99 to 2005–06.

Note that changes in the level of accuracy of Indigenous identification in hospital records over this period will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all have an impact on the level of hospitalisation over time. Caution should be used in interpreting changes over time because it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may reflect better hospital access rather than a worsening of health.

Table 3.09.8: Age-standardised hospitalisation rates, rate ratios and rate differences for mental health-related conditions, Qld, WA, SA and NT combined, 1998–99 to 2005–06(a)

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change(b)	% change over period(c)
Indigenous number per 1,000										
Males	24.4	24.4	26.0	24.9	24.5	24.1	23.7	24.7	–0.1	–2.8
Females	19.2	17.0	20.5	20.4	21.3	21.2	21.4	20.8	0.4*	15.9
Persons	21.7	20.5	23.1	22.5	22.8	22.6	22.4	22.6	0.2	5.7
Other Australian(d) number per 1,000										
Males	13.6	12.9	13.2	13.0	12.4	12.3	11.8	11.5	–0.3*	−14.7
Females	14.9	14.8	15.0	14.6	15.1	15.1	15.1	14.5	–0.01	0.0
Persons	14.2	13.9	14.1	13.9	13.7	13.7	13.5	13.0	–0.1*	–7.1
Rate ratio(e)										
Males	1.8	1.9	2.0	1.9	2.0	2.0	2.0	2.2	0.04*	14.6
Females	1.3	1.1	1.4	1.4	1.4	1.4	1.4	1.4	0.03*	16.3
Persons	1.5	1.5	1.6	1.6	1.7	1.6	1.7	1.7	0.03*	13.8
Rate difference(f)										
Males	10.8	11.5	12.8	11.9	12.1	11.8	11.9	13.2	0.2	12.4
Females	4.3	2.1	5.5	5.8	6.3	6.1	6.2	6.3	0.4*	72.4
Persons	7.5	6.6	9.0	8.7	9.1	8.8	9.0	9.6	0.3*	30.0

* Represents results with statistically significant increases or decreases at the $p < 0.05$ level over the period 1998–99 to 2005–06.

(g) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(h) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(i) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

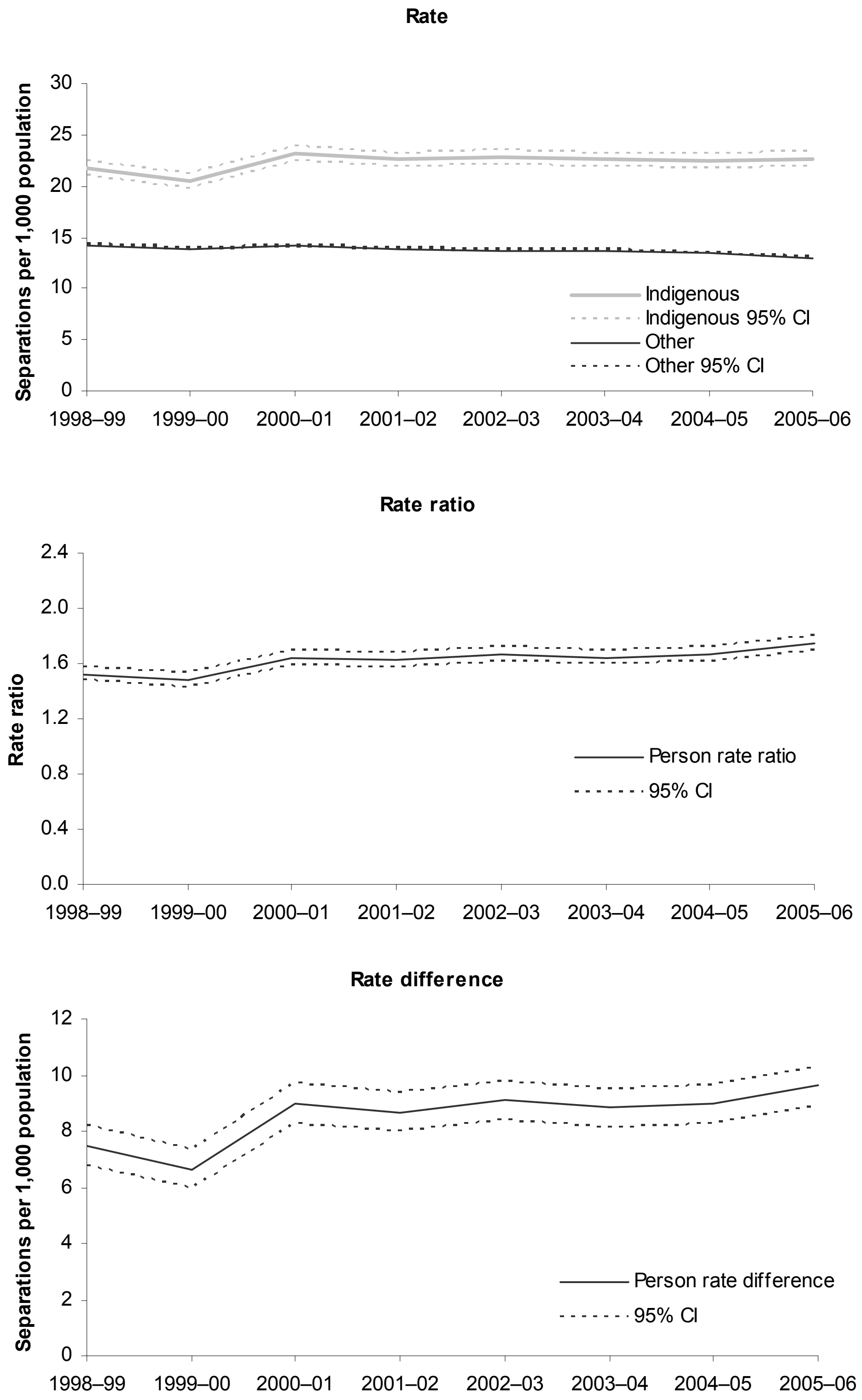
(j) Includes hospitalisations for non-Indigenous Australians and those for whom Indigenous status was not stated.

(k) Hospitalisation rates for Indigenous Australians divided by hospitalisation rates for other Australians.

(l) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.09.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from mental-health-related conditions, Qld, WA, SA and NT combined, 1998–99 to 2005–06

Community mental-health-care services

Community mental-health-care is defined as care that is provided by specialised public mental health services dedicated to the assessment, treatment, rehabilitation and care of non-admitted clients. This excludes specialised mental-health-care services for admitted patients, support services that are not provided by specialised mental-health-care organisations, services provided by non-government organisations, and residential care services.

- In 2005–06, there were 5,665,408 clients of community mental-health-care services, of which 247,263 service contacts (4.4%) were for Aboriginal and/or Torres Strait Islander peoples.

Contacts by age and sex

- In 2005–06, Indigenous people had higher proportions of mental health service contacts for the younger age groups than did other Australians, but lower proportions in the older age groups, reflecting the differences in age distribution in these populations (the mean age of Indigenous Australians is around 21 years compared with 36 years for non-Indigenous Australians). For example, 26% and 23% of service contacts for Indigenous Australian males and females were for clients aged between 15 and 24 years compared with 16% and 18% of service contacts for other Australian males and females of the same age (Table 3.09.9).
- In the older age groups, there were lower proportions of service contacts for Indigenous Australian males and females aged 65 years or more (1% and 2%, respectively) than for other Australian males (8%) and females (15%). This may reflect in part the younger age structure of the Indigenous population—life expectancy of Indigenous males and females is estimated at only 59 years and 65 years, respectively, compared with 77 and 82 years for non-Indigenous males and females (ABS and AIHW 2005).
- In 2005–06, Indigenous males and females had higher rates of community mental-health-care service contacts across the majority of age groups, with the exception of those aged 65 years and over. Differences were most marked in the 25–34 and 35–44 year age groups where Indigenous males and females were between 2 and 3 times as likely to be clients of community mental-health-care services as other Australians in these age groups.

Table 3.09.9: Community mental-health-care service contacts, by Indigenous status, sex and age group, 2005–06[(a)]

	Indigenous			Other[(b)]			
Sex and age group	No.	%	No. per 1,000[(c)]	No.	%	No. per 1,000[(c)]	Ratio[(d)]
Males							
Less than 15 yrs	13,303	8.8	72.7	217,374	8.3	56.6	1.3
15–24	38,946	25.7	396.8	423,932	16.1	155.6	2.5
25–34	53,138	35.0	725.4	686,059	26.1	242.6	3.0
35–44	31,953	21.1	517.0	556,455	21.2	187.2	2.8
45–54	9,568	6.3	231.7	354,312	13.5	128.0	1.8
55–64	4,032	2.7	185.9	184,608	7.0	85.4	2.2
65 and over	843	0.6	62.0	205,752	7.8	78.6	0.8
Total[(e)]	**151,783**	**100.0**	**312.8**	**2,628,492**	**100.0**	**132.9**	**2.4**
Females							
Less than 15 yrs	6,934	7.3	37.9	151,148	6.4	39.3	1.0
15–24	22,046	23.1	224.6	416,801	17.7	153.0	1.5
25–34	27,126	28.4	370.3	429,793	18.3	152.0	2.4
35–44	22,728	23.8	367.7	428,274	18.2	144.1	2.6
45–54	11,106	11.6	269.0	358,572	15.3	129.5	2.1
55–64	3,640	3.8	167.8	212,309	9.0	98.2	1.7
65 and over	1,802	1.9	132.5	351,787	15.0	134.3	1.0
Total[(e)]	**95,382**	**100.0**	**218.9**	**2,348,684**	**100.0**	**117.4**	**1.9**
Total[(e)]	**247,263**	**100.0**	**531.7**	**5,418,145**	**100.0**	**270.3**	**2.0**

(a) These data should be interpreted with caution because of likely under-identification of Indigenous Australians.

(b) 'Other' includes service contacts for non-Indigenous clients and those for whom Indigenous status was not stated.

(c) Number per 1,000 population based on estimated resident population as at 30 June 2005.

(d) Rate ratio—Indigenous: other.

(e) Includes service contacts for clients for whom age or sex was not stated.

(f) Total rates have been directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of National Community Mental Health Care Database.

Contacts by state/territory

- In 2005–06, the proportion of service contacts for clients of community mental health services who identified themselves as being of Aboriginal and/or Torres Strait Islander origin ranged from 1.4% for Victoria to 30.4% for the Northern Territory. As at 30 June 2006, the NT had a higher proportion of Indigenous residents (32%) than other jurisdictions (such as 0.6% in Victoria).
- There were more service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples than for other Australians (531.7 per 1,000 and 270.3 per 1,000, respectively) (Table 3.09.10). This was true in all jurisdictions. These rates should be

interpreted with caution because there is likely to be an under estimate of the actual number of service contacts for Indigenous clients.

The number and rate of service contacts per 1,000 population for Indigenous people vary among the states and territories. This may reflect variations in completeness of Indigenous identification among patients, varying coverage of service contacts for Indigenous people or for the total population, or different patterns of service use by Indigenous and non-Indigenous persons.

Table 3.09.10: Community mental-health-care service contacts per 1,000 population, by Indigenous status and state and territory, 2005–06

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Indigenous	108,645	26,302	57,243	25,130	12,175	979	5,726	11,063	247,263
Non-Indigenous	1,040,517	1,800,406	832,841	440,820	271,101	47,412	135,872	24,807	4,593,776
Not stated	683,015	6497	2,309	26,518	19,124	17,185	69,235	486	824,369
Total	**1,832,177**	**1,833,205**	**892,393**	**492,468**	**302,400**	**65,576**	**210,833**	**36,356**	**5,665,408**
					Number per 1,000 population[a]				
Indigenous	822.1	936.6	435.5	375.9	446.3	153.5	1138.6	187.2	531.7
Other Australians[b]	254.2	356.4	216.6	239.5	191.4	133	612.6	168.4	270.3
Ratio[c]	3.2	2.6	2.0	1.6	2.3	1.2	1.9	1.1	2.0
Total	**266.5**	**359.7**	**223.7**	**244.7**	**196.2**	**131.2**	**620.9**	**172.9**	**276.8**

(a) Rates were directly age-standardised using the Australian 2001 standard population.

(b) 'Other Australians' includes service contacts for non-Indigenous clients and those for whom Indigenous status was not stated.

(c) Rate ratio—Indigenous: other.

Note: Shading indicates that the Indigenous identification in the National Community Mental Health Care Database (NCMHCD) in these jurisdictions is in need of improvement. This is based on information provided by state and territory health authorities on the quality of their data in the NCMHCD. Data from these states and territories should be interpreted with caution because of likely under identification of Indigenous Australians.

Source: AIHW analysis of National Community Mental Health Care Database.

Residential mental-health-care services

Residential mental health care refers to care provided by a specialised mental health service that:

- employs mental-health-care-trained staff on–site
- provides rehabilitation, treatment or extended care to residents for whom the care is intended to be on an overnight basis and in a domestic–like environment
- encourages the resident to take responsibility for their daily living activities.

This excludes non–government-operated services and services that are staffed less than 24 hours a day. There are no residential mental-health-care services in Queensland or the Northern Territory.

- In 2005–06, there were 2,345 clients of residential mental-health-care services, of which 64 service contacts (2.7%) were for Indigenous people.
- The proportion of service contacts for clients of community mental health services who identified themselves as being of Aboriginal and/or Torres Strait Islander origin ranged from 1.4% for Victoria to 5.7% for South Australia.
- There were more service contacts per 10,000 population for Indigenous people than for other Australians (1.9 per 10,000 and 1.1 per 10,000, respectively) (Table 3.09.11). This

was true in all jurisdictions except Western Australia. These rates should be interpreted with caution as there is likely to be an under estimate of the actual number of service contacts for Indigenous clients.

Table 3.09.11: Residential mental-health-care service contacts per 10,000 population, by Indigenous status and state and territory, 2005–06

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Indigenous	23	11	. .	5	8	16	1	. .	64
Non-Indigenous	403	778	. .	172	130	565	48	. .	2,096
Not stated	10	2	. .	0	2	160	11	. .	185
Total	**436**	**791**	**. .**	**177**	**140**	**741**	**60**	**. .**	**2,345**
					Number per 10,000 population[(a)]				
Indigenous	2.0	3.7	. .	0.7	3.6	18.5	2.1	. .	1.9
Other Australians[(b)]	0.6	1.6	. .	0.9	0.9	15.4	1.8	. .	1.1
Ratio[(c)]	3.3	2.3	. .	0.8	4.0	1.2	1.2	. .	1.7
Total	**0.6**	**1.6**	**. .**	**0.9**	**0.9**	**15.3**	**1.8**	**. .**	**1.2**

(a) Rates were directly age-standardised using the Australian 2001 standard population.

(b) ‘Other Australians’ includes service contacts for non-Indigenous clients and those for whom Indigenous status was not stated.

(c) Rate ratio Indigenous: other.

Notes

1. Queensland and the Northern Territory do not have any residential mental-health-care services.
2. Shading indicates that the Indigenous identification in the National Community Mental Health Care Database (NCMHCD) in these jurisdictions is in need of improvement. This is based on information provided by state and territory health authorities on the quality of their data in the NCMHCD. Data from these states and territories should be interpreted with caution because of likely under identification of Indigenous Australians.

Source: AIHW analysis of National Residential Mental Health Care Database.

General practitioner encounters

Information about general practitioner encounters is available from the BEACH survey. Data for the 5-year period 2002–03 to 2006–07 are presented in Table 3.09.12. Mental health-related problems (psychological problems) were the sixth most common type of problems managed at GP encounters with Indigenous patients during this period. The other five most common types of problems managed at GP encounters with Indigenous patients were respiratory conditions, circulatory conditions, endocrine and metabolic problems, musculoskeletal conditions and skin problems.

- In the period 2002–03 to 2006–07 there were 7,542 GP encounters with Indigenous patients recorded in the survey, at which 11,219 problems were managed. Of these, 9.7% (1,088) were mental health-related problems (Table 3.09.12).
- After adjusting for differences in age distribution, mental health-related problems were managed at GP encounters with Indigenous patients at a similar rate to encounters among other patients.

Table 3.09.12: Mental health-related problems managed by general practitioners, by Indigenous status of the patient, 2002–03 to 2006–07(a)(b)(c)

	Number		% of total problems		Crude rate (no per 100 encounters)						Age-standardised rate (no. per 100 encounters)(d)		
Problem managed	Indigenous	Other(e)	Indigenous	Other(e)	Indigenous	95% LCL(f)	95% UCL(g)	Other(e)	95% LCL(f)	95% UCL(g)	Indigenous	Other(e)	Ratio(h)
Mental health-related conditions(i)	1,088	56,480	9.7	7.8	14.4	11.9	16.9	11.7	11.4	12.0	13.5	11.6	1.2

(k) These survey results are likely to undercount the number of Indigenous Australians visiting doctors.

(l) Combined financial year data for 5 years.

(m) Data for Indigenous and other Australians have not been weighted.

(n) Directly age-standardised rate per 100 encounters.

(o) Includes non-Indigenous patients and patients for whom Indigenous status was ‘not stated’.

(p) LCL = lower confidence interval.

(q) UCL = upper confidence interval.

(r) Rate ratio—Indigenous: other.

(s) ICPC–2 codes: P01–P13, P15–P20, P22–P25, P27–P29, P70–P82, P85–P86, P98–P99.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.

Aboriginal and Torres Strait Islander Primary Heath-Care Services

Information on client contacts with emotional and social well-being staff or psychiatrists in Aboriginal and Torres Strait Islander Primary heath-care services is available from the Service Activity Reporting database.

- In 2005–06 there were 124,211 client contacts with emotional and social wellbeing staff or psychiatrists; this was 5.5% of the estimated total contacts made to Indigenous Primary heath-care services.

The SAR also collects information on mental health programs run by Indigenous Primary heath-care services.

- In 2005–06, 89 (59%) of the 150 services that reported data in the SAR provided mental health programs to clients.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner or Outer Regional and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 NHS.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

General practitioner data (BEACH)

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery. In terms of mental health service delivery, there are a number of different service delivery models, ranging from ambulatory care in community mental health services and hospitals and non-ambulatory care in hospitals and residential services.

(continued)

Data quality issues (continued)

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The not stated category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. For several years, Queensland, South Australia, Western Australia and the northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007a). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data for Western Australia and the Northern Territory and relatively marked Indigenous under-identification in data for South Australia and Victoria data).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from the Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

National Community Mental Health Care Database

The quality of the Indigenous identification in this database varies by jurisdiction.

The number and rate of service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples varies among the states and territories. This may reflect variations in completeness of Indigenous identification among patients or different patterns of service use by Indigenous and non-Indigenous persons.

All states and territories use the standard ABS question of Indigenous status. For a number of jurisdictions, the NCMHCD data reported for the 'both Aboriginal and Torres Strait Islander' category are suspected to be affected by misinterpretation of the category to include non-Aboriginal

(continued)

Data quality issues (continued)

and Torres Strait Islander peoples (for example, Maori and South Sea Islanders) and use of the category as an 'Indigenous, not further specified'.

All state and territory health authorities provided information on the quality of the data for the NCMHCD 2005–06. New South Wales stated that the quality of Indigenous data has not been evaluated; Victoria considered the quality of Indigenous data was not acceptable due to lack of consistency in data entry across its services; Queensland reported that the quality of Indigenous data is acceptable at the broad level – that is, in distinguishing Indigenous Australians and other Australians. However, they believe that there are quality issues regarding the coding of more specific details (that is, 'Aboriginal', 'Torres Strait Islander', 'Both Aboriginal and Torres Strait Islander'). Queensland reported that several strategies have been implemented to improve the quality of Indigenous data and noted that a replacement for the existing collection system with in-built validation checks would further improve the quality of this data. Western Australia reported that the quality of Indigenous status data for 2005–06 was acceptable. However, the data could be improved with the appropriate resources, training and reporting standards. South Australia indicated that there has been limited analysis of the quality of Indigenous status data. Therefore, the quality of the data is uncertain at this stage. Tasmania reported the quality of its data to be acceptable; the Australian Capital Territory considered the quality of its Indigenous status data to be acceptable, noting that there is some room for improvement regarding the reporting of the 'not stated' category; and the Northern Territory indicated its Indigenous status data to be of acceptable quality.

National Residential Mental Health Care Database

The quality of the Indigenous identification in this database varies by jurisdiction.

The number and rate of service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples varies among the states and territories. This may reflect variations in completeness of Indigenous identification among patients or different patterns of service use by Indigenous and non-Indigenous persons.

Data from the NRMHCD on Indigenous status should be interpreted with caution because of the varying quality and completeness of Indigenous identification across all jurisdictions. Only Western Australia, Tasmania and the Australian Capital Territory considered their Indigenous status data of acceptable quality. New South Wales has not evaluated the quality of their Indigenous data. Likewise, limited analysis was done on indigenous data in South Australia. Victoria considered the quality of Indigenous data not acceptable due to the lack of consistency in data entry across their services.

AIHW Medical Labour Force Survey

The AIHW Medical Labour Force Survey is conducted on an annual basis. Survey responses are weighted by state, age and sex to produce state and territory and national estimates of the total medical labour force. Benchmarks for weighting come from registration information provided by state and territory registration boards.

The response rates to this survey can vary from year to year and across jurisdictions, but have stayed fairly stable over the 5 years to 2004. Note that the questionnaires have varied over time and across jurisdictions. Mapping of data items has been undertaken to provide time series data. However, because of this, and the variation in response rates, some caution should be used in interpreting change over time and differences across jurisdictions.

More detailed information about how these surveys were conducted is available from the Medical labour force 2004 *(AIHW 2006).*

(continued)

Service Activity Reporting data

Response rates to the SAR by Aboriginal and Torres Strait Islander primary heath-care services in 2005–06 were around 99%. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.*
- *The SAR questionnaire collects a broad set of indicators for the services and did not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *These data provide a rough guide to service activity in this area but do not attempt to measure quantity or quality.*
- *These data also do not differentiate between services provided by the service and those facilitated by the service.*

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3.10 Aboriginal and Torres Strait Islander people in the health workforce

Number and proportion of Aboriginal and Torres Strait Islander Australians in the health workforce

Data sources

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at 5-yearly intervals, with 2006 being the most recent, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

The 1996 and 2001 Census used the Australian Standard Classification of Occupations, but this was replaced by the Australian and New Zealand Standard Classification of Occupations for the 2006 Census.

Analyses

Aboriginal and Torres Strait Islander health workforce

Data on the number and proportion of Indigenous Australians employed in health-related occupations in 2006 are presented in the Table 3.10.1 below.

- In 2006, there were approximately 4,891 Indigenous Australians employed in health-related occupations, which represented 1% of the total health workforce.

Health workforce by occupation

- Indigenous people comprised 2.4% of all health and welfare support workers, 1.3% of all health diagnostic and promotion professionals, 0.6% of all midwifery and nursing professions, 0.5% of all health therapy professionals (including dentists), 0.2% of all medical practitioners (Table 3.10.1). Indigenous people comprised 96% of all Aboriginal and Torres Strait Islander health workers.
- In 2006, there were 100 Indigenous people working as medical practitioners and 1,223 Indigenous people working as nurses or midwives. After nursing, Indigenous people were most commonly employed as Aboriginal and Torres Strait Islander health workers (965 people). Aboriginal and Torres Strait Islander health workers may be employed as specialists in areas such as alcohol, mental health, diabetes, eye and ear health, sexual health, or they may work as generalist members of primary care teams, or as hospital liaison officers.

Table 3.10.1: Employment in health-related occupations (health workforce), 2006[(a)]

Health-related occupation	Indig.	All persons	Proportion who were Indig.	Proportion of Indig. health workforce	Proportion of total health workforce
	No.	No.	%	%	%
Aboriginal and Torres Strait Islander health worker	965	1,010	95.5	19.7	0.2
Health and welfare services managers (b)	141	10,807	1.3	2.9	2.2
Psychologists (c)	39	13,437	0.3	0.8	2.7
Health diagnostic and promotion professionals					
Medical imaging professionals (d)	18	10,147	0.2	0.4	2.1
Environmental health officer	98	3,907	2.5	2.0	0.8
Occupational health and safety adviser	50	6,840	0.7	1.0	1.4
Health promotion officer	437	3,898	11.2	8.9	0.8
Other health diagnostic and promotion professionals (e)	45	23,287	0.2	0.9	4.7
Total	***648***	***48,079***	***1.3***	***13.2***	***9.8***
Health therapy professionals					
Dental practitioners (f)	16	9,065	0.2	0.3	1.8
Dental hygienists, technicians and therapists (g)	22	5,169	0.4	0.4	1.0
Dental assistant	171	15,378	1.1	3.5	3.1
Physiotherapist	54	12,286	0.4	1.1	2.5
Other health therapy professionals (h)	58	22,699	0.3	1.2	4.6
Total	***321***	***64,597***	***0.5***	***6.6***	***13.1***
Medical practitioners					
General medical practitioner	60	29,920	0.2	1.2	6.1
Other medical practitioners, internal medicine (i) specialists, psychiatrists and surgeons	40	25,155	0.2	0.8	5.1
Total	***100***	***55,075***	***0.2***	***2.0***	***11.2***
Midwifery and nursing professionals					
Midwives (j)	53	13,164	0.4	1.1	2.7
Nurse educators and researchers (k)	17	3,762	0.5	0.3	0.8
Nurse manager	46	10,899	0.4	0.9	2.2
Registered nurse (aged care)	239	25,070	1.0	4.9	5.1
Registered nurse (community health)	51	8,771	0.6	1.0	1.8
Registered nurse (critical care and emergency)	44	9,917	0.4	0.9	2.0
Registered nurse (mental health)	48	7,712	0.6	1.0	1.6
Registered nurse (perioperative)	46	10,009	0.5	0.9	2.0
Other registered nurses (l)	679	111,096	0.6	13.9	22.6
Total	***1,223***	***200,400***	***0.6***	***25.0***	***40.7***

(continued)

Table 3.10.1 (continued): Employment in health-related occupations (health workforce), 2006[(a)]

Health-related occupation	Indig.	All persons	Proportion who were Indig.	Proportion of Indig. health workforce	Proportion of total health workforce
	No.	No.	%	%	%
Health and welfare support workers					
Ambulance officers and paramedics	153	9,098	1.7	3.1	1.8
Diversional therapist	41	4,078	1.0	0.8	0.8
Enrolled and mothercraft nurses	215	19,397	1.1	4.4	3.9
Massage therapist	54	8,200	0.7	1.1	1.7
Hospital orderly	165	9,939	1.7	3.4	2.0
Nursing support worker	442	22,380	2.0	9.0	4.5
Personal care assistant	339	21,956	1.5	6.9	4.5
Other nursing support and personal care workers (m)	39	3,899	1.0	0.8	0.8
Total	***2,413***	***99,957***	***2.4***	***49.3***	***20.3***
Total(n)	**4,891**	**492,342**	**1.0**	**100.0**	**100.0**

(a) Aged 15 years and over.

(b) Comprises health and welfare services managers n.f.d., medical administrator, nursing clinical director, primary health organisation manager, health and welfare services managers n.e.c..

(c) Comprises psychologists n.f.d., clinical psychologist, educational psychologist, organisational psychologist, psychotherapist and psychologists n.e.c..

(d) Comprises medical imaging Professionals n.f.d., medical diagnostic radiographer, medical radiation therapist, nuclear medicine technologist and sonographer.

(e) Comprises health professionals n.f.d., health diagnostic and promotion professionals n.f.d., dietician, occupational and environmental health professionals n.f.d., optometrists and orthoptists n.f.d., optometrist, orthoptist, pharmacists n.f.d., hospital pharmacist, industrial pharmacist, retail pharmacist, other health diagnostic and promotion professionals n.f.d., orthotist or orosthetist, health diagnostic and promotion professionals n.e.c..

(f) Comprises dental practitioners n.f.d., dental specialist and dentist.

(g) Comprises dental hygienists, technicians and therapists n.f.d., dental hygienist, dental prosthetist, dental technician and dental therapist.

(h) Comprises health therapy professionals n.f.d., chiropractors and osteopaths n.f.d., chiropractor, osteopath, complementary health therapists n.f.d., acupuncturist, homeopath, naturopath, traditional Chinese medicine practitioner, complementary health therapists n.e.c., occupational therapist, podiatrist, speech professionals and audiologists n.f.d., audiologist and speech pathologist.

(i) Comprises medical practitioners n.f.d., generalist medical practitioners n.f.d., resident medical officer, anaesthetist, internal medicine specialists n.f.d., specialist physician (general medicine), cardiologist, clinical haematologist, clinical oncologist, endocrinologist, gastroenterologist, intensive care specialist, neurologist, paediatrician, renal medicine specialist, rheumatologist, thoracic medicine specialist, internal medicine specialists n.e.c., psychiatrist, surgeons n.f.d., surgeon (general), cardiothoracic surgeon, neurosurgeon, orthopaedic surgeon, otorhinolaryngologist, paediatric surgeon, plastic and reconstructive surgeon, urologist, vascular surgeon, other medical practitioners n.f.d., dermatologist, emergency medicine specialist, obstetrician and gynaecologist, ophthalmologist, pathologist, radiologist, medical practitioners n.e.c..

(j) Comprises midwifery and nursing professionals n.f.d. and midwife.

(k) Comprises nurse educators and researchers n.f.d., nurse educator and nurse researcher.

(l) Comprises registered nurses n.f.d., nurse practitioner, registered nurse (child and family health), registered nurse (developmental disability), registered nurse (disability and rehabilitation), registered nurse (medical), registered nurse (medical practice), registered nurse (surgical), registered nurses n.e.c..

(m) Comprises nursing support and personal care workers n.f.d., therapy aide.

(n) Components may not add to total because of perturbation of component data.

Source: ABS and AIHW analysis of 2006 Census data.

Health workforce by age and sex

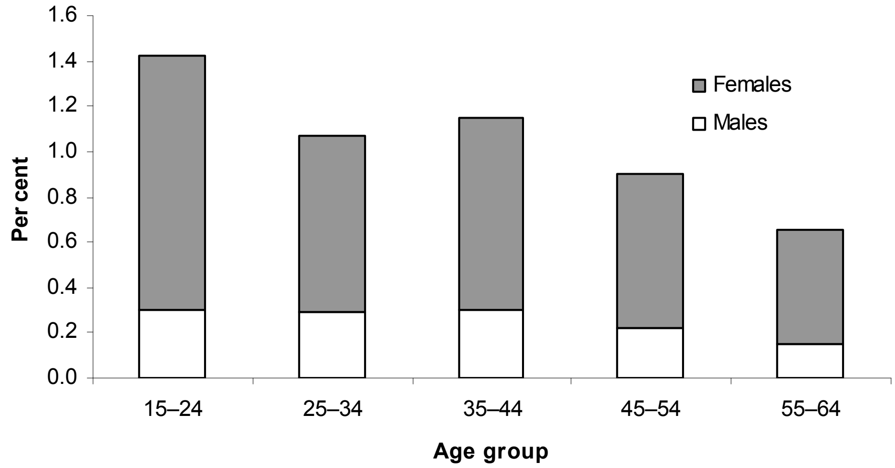
- In 2006, the majority of Indigenous people employed in the health workforce were aged 35–44 years (1,486 people). The proportion of health workers who were Indigenous was highest among those aged 15–24 years (1.4%) and lowest among those aged 55–64 years (0.7%) (Table 3.10.2; Figure 3.10.1).
- Indigenous females represented a higher proportion of the health workforce than Indigenous males across all age groups.
- The highest number of people employed in the total health workforce were aged 45–54 years. Females represented over three-quarters (76%) of the total health workforce (Table 3.10.2).

Table 3.10.2: Aboriginal and Torres Strait Islander health workforce[(a)], by age and sex, 2006

	Age group					
	15–24	**25–34**	**35–44**	**45–54**	**55–64**	**Total**
Indigenous health workforce						
			Number			
Male	108	301	388	314	104	1,223
Female	406	803	1,100	984	347	3,666
Total	**518**	**1,098**	**1,486**	**1,290**	**453**	**4,891**
			Proportion of Indigenous health workforce (%)			
Male	20.8	27.4	26.1	24.3	23.0	25.0
Female	78.4	73.1	74.0	76.3	76.6	75.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			Proportion of total health workforce (%)			
Male	0.3	0.3	0.3	0.2	0.2	0.2
Female	1.1	0.8	0.9	0.7	0.5	0.7
Total	**1.4**	**1.1**	**1.2**	**0.9**	**0.7**	**1.0**
Total health workforce						
			Number			
Male	5,604	24,496	31,374	32,748	19,048	119,386
Female	30,549	78,498	97,751	110,928	49,611	372,961
Total	**36,150**	**102,996**	**129,125**	**143,676**	**68,658**	**492,342**
			Proportion of total health workforce (%)			
Male	15.5	23.8	24.3	22.8	27.7	24.2
Female	84.5	76.2	75.7	77.2	72.3	75.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Occupation as defined by the Australian and New Zealand Classification of Occupations (ANZSCO).

Source: ABS and AIHW analysis of 2006 Census data.



Source: ABS and AIHW analysis of 2006 Census data.

Figure 3.10.1: Indigenous health workforce as a proportion of the total health workforce, by age group and sex, 2006

Indigenous health workforce by state/territory

- In 2006, the Northern Territory had the highest proportion of Indigenous persons in the health workforce (9%), and Victoria had the lowest (0.3%) (Table 3.10.3; Figure 3.10.2). This was well below the proportion of the state/territory population that was Indigenous in 2006.
- The proportion of Indigenous Australians who were employed in health-related occupations in 2006 ranged from 0.9% in the Northern Territory to 1.8% in New South Wales and Victoria (Figure 3.10.3).

Table 3.10.3: Indigenous health workforce[(a)], by state/territory, 2006

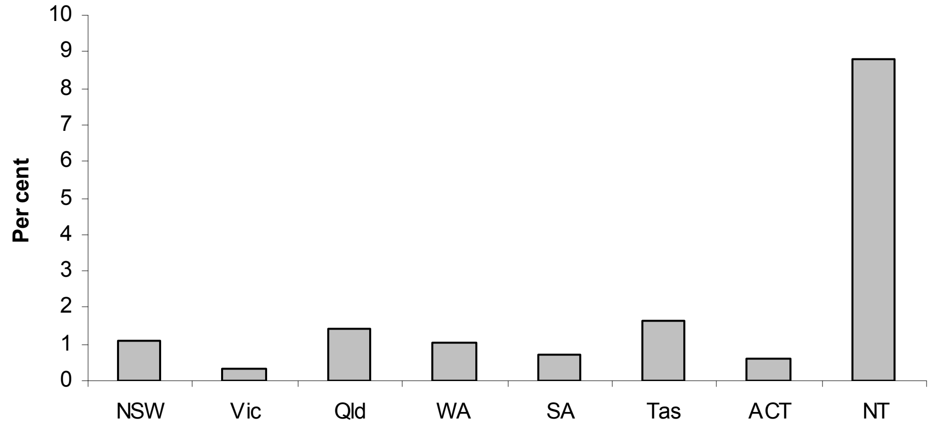
	NSW[(b)]	Vic	Qld	WA[(c)]	SA	Tas	ACT	NT	Australia
Number of Indigenous Australians in health workforce	1,743	381	1,343	486	302	196	47	390	4,891
Indigenous health workforce as a proportion of total health workforce	1.1	0.3	1.4	1.0	0.7	1.7	0.6	8.8	1.0
Indigenous health workforce as a proportion of the Indigenous population	1.8	1.8	1.5	1.1	1.7	1.7	1.7	0.9	1.5
Proportion of state/territory population that is Indigenous	2.2	0.7	3.5	3.4	1.8	3.8	1.3	30.4	2.5

(a) Occupation as defined by the Australian Standard Classification of Occupation.

(b) Includes Territory of Jervis Bay.

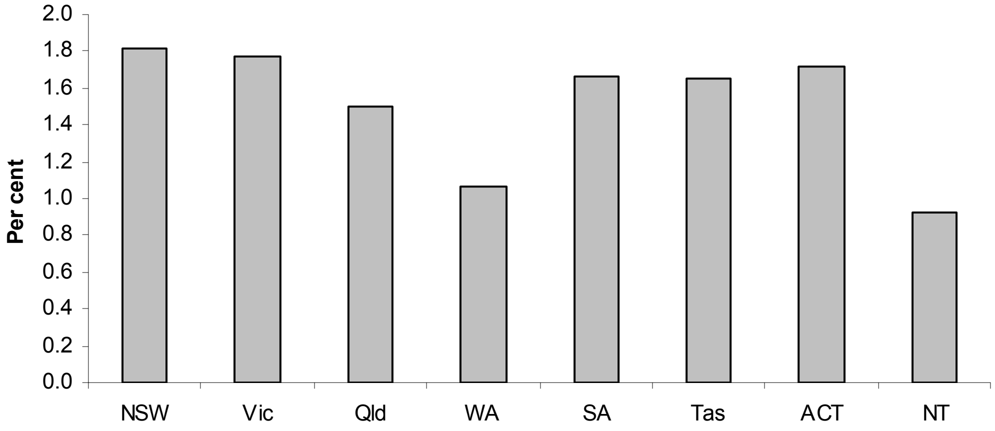
(c) Includes Territories of Christmas Island and Cocos Islands.

Source: ABS and AIHW analysis of 2006 Census data.



Source: ABS and AIHW analysis of 2006 Census data.

Figure 3.10.2: Indigenous health workforce as a proportion of total health workforce, by state/territory, 2006



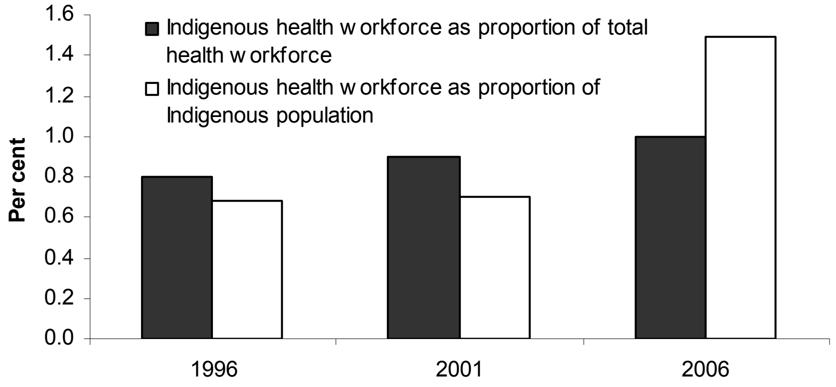
Source: ABS and AIHW analysis of 2006 Census data.

Figure 3.10.3: Indigenous health workforce as a proportion of the Indigenous population, by state/territory, 2006

Time series analyses

Figure 3.10.4 shows the proportion of the Australian health workforce that are Indigenous persons and the proportion of the Indigenous Australian population employed in the health workforce in 1996, 2001 and 2006.

- In 2006 there were approximately 4,891 Indigenous Australians employed in health-related occupations, representing 1.0% of the total health workforce. The proportion of Indigenous Australians in the health workforce has increased slightly since 2001 (0.9%) and 1996 (0.8%) (Figure 3.10.4; Table 3.10.4).
- The proportion of the Indigenous population who were employed in the health workforce increased from around 0.7% in 1996 to 1.5% in 2006.



Source: ABS and AIHW analysis of 1996, 2001 and 2006 Census data.

Figure 3.10.4: Indigenous health workforce as a proportion of the total health workforce and as a proportion of the Indigenous population, 1996, 2001 and 2006

- In 1996, 2001 and 2006, the highest number of Indigenous people employed in the health workforce were aged 35–44 years. In all three years the proportion of health workers who were Indigenous was highest among those aged 15–24 years and lowest among those aged 55–64 years (Table 3.10.5).
- In 1996, 2001 and 2006, Indigenous females represented a higher proportion of the health workforce than Indigenous males across all age groups (Table 3.10.5).
- Females represented over three-quarters (76%) of the total health workforce in 1996, 2001 and 2006 (Table 3.10.6).

Table 3.10.4: Employment in selected health-related occupations (health workforce)[(a)], 1996, 2001 and 2006

	1996			2001			2006		
	Indig.	**All persons**	**Indig.**	**Indig.**	**All persons**	**Indig.**	**Indig.**	**All persons**	**Indig.**
	No.	**No.**	**%**	**No.**	**No.**	**%**	**No.**	**No.**	**%**
Aboriginal and Torres Strait Islander health worker	667	704	94.7	844	906	93.2	965	1,010	95.5
Psychologists	14	6,784	0.2	23	9,105	0.3	39	13,437	0.3
Medical imaging professionals	8	6,718	0.1	17	8,279	0.2	18	10,147	0.2
Dental	146	22,714	0.6	155	25,339	0.6	209	29,612	0.7
Medical practitioners	60	41,169	0.1	87	45,079	0.2	100	55,075	0.2
Nurse manager	13	6,148	0.2	29	7,328	0.4	46	10,899	0.4
Registered nurse	608	133,199	0.5	782	140,781	0.6	1,107	172,575	0.6
Ambulance officers and paramedics	48	5,952	0.8	82	6,689	1.2	153	9,098	1.7
Total	**2,831**	**346,856**	**0.8**	**3,260**	**376,743**	**0.9**	**4,891**	**492,342**	**1.0**

(a) For 1996 and 2001 data, occupation as defined by the Australian Standard Classification of Occupation (ASCO).For 2006 data, occupation as defined by the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Source: ABS and AIHW analysis of 1996, 2001 and 2006 Census data.

Table 3.10.5: Aboriginal and Torres Strait Islander health workforce[(a)], by age and sex, 1996, 2001 and 2006

	Age group					
	15–24	**25–34**	**35–44**	**45–54**	**55–64**	**Total**
			1996			
			Number			
Male	119	227	230	90	30	696
Female	283	585	736	422	109	2,135
Total	**402**	**812**	**966**	**512**	**139**	**2,831**
			Proportion of total health workforce (per cent)			
Male	0.4	0.2	0.2	0.1	0.1	0.2
Female	0.8	0.6	0.6	0.5	0.4	0.6
Total	**1.2**	**0.9**	**0.8**	**0.7**	**0.5**	**0.8**
			2001			
			Number			
Male	83	255	250	160	49	797
Female	268	628	797	611	148	2,452
Total	**351**	**883**	**1,047**	**771**	**197**	**3,249**
			Proportion of total health workforce (per cent)			
Male	0.3	0.3	0.2	0.2	0.1	0.2
Female	1.0	0.7	0.7	0.6	0.4	0.7
Total	**1.3**	**1.0**	**0.9**	**0.7**	**0.5**	**0.9**
			2006			
			Number			
Male	108	301	388	314	104	1,223
Female	406	803	1,100	984	347	3,666
Total	**518**	**1,098**	**1,486**	**1,290**	**453**	**4,891**
			Proportion of total health workforce (per cent)			
Male	0.3	0.3	0.3	0.2	0.2	0.2
Female	1.1	0.8	0.9	0.7	0.5	0.7
Total	**1.4**	**1.1**	**1.2**	**0.9**	**0.7**	**1.0**

(a) For 1996 and 2001 data, occupation as defined by the Australian Standard Classification of Occupation (ASCO).For 2006 data, occupation as defined by the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Source: ABS and AIHW analysis of 1996, 2001 and 2006 Census data.

Table 3.10.6: Total health workforce[(a)], by age and sex, 1996, 2001 and 2006

	Age group					
	15–24	25–34	35–44	45–54	55–64	Total
			1996			
			Number			
Male	5,436	21,874	27,102	18,964	9,771	83,147
Female	28,074	71,171	88,298	58,649	17,517	263,709
Total	**33,510**	**93,045**	**115,400**	**77,613**	**27,288**	**346,856**
			Proportion of total health workforce (per cent)			
Male	16.2	23.5	23.5	24.4	35.8	24.0
Female	83.8	76.5	76.5	75.6	64.2	76.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			2001			
			Number			
Male	4,573	21,342	27,233	23,814	12,318	89,280
Female	22,767	67,127	90,468	79,857	27,244	287,463
Total	**27,340**	**88,469**	**117,701**	**103,671**	**39,562**	**376,743**
			Proportion of total health workforce (per cent)			
Male	16.7	24.1	23.1	23.0	31.1	23.7
Female	83.3	75.9	76.9	77.0	68.9	76.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			2006			
			Number			
Male	5,604	24,496	31,374	32,748	19,048	119,386
Female	30,549	78,498	97,751	110,928	49,611	372,961
Total	**36,150**	**102,996**	**129,125**	**143,676**	**68,658**	**492,342**
			Proportion of total health workforce (per cent)			
Male	15.5	23.8	24.3	22.8	27.7	24.2
Female	84.5	76.2	75.7	77.2	72.3	75.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) For 1996 and 2001 data, occupation as defined by the Australian Standard Classification of Occupation (ASCO).For 2006 data, occupation as defined by the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Source: ABS and AIHW analysis of 1996, 2001 and 2006 Census data.

Additional information

Indigenous Doctors and Nurses

- According to the Australian Indigenous Doctors' Association, there are currently an estimated 120 Indigenous doctors in Australia (AIDA 2008). This represents only about 0.2% of the medical profession—well below the proportion (2.4%) of the Australia population that is Indigenous. To increase the rate of Indigenous doctors working in Australia to be equivalent to the rate of non-Indigenous doctors, the Australian Medical Association estimate that around 928 more doctors need to be trained (AMA 2004). In 2007 there were approximately 113 Indigenous medical graduates and 124 Indigenous medical students in Australian medical schools (Lawson et al. 2007).
- In 2005 there were an estimated 60,252 medical practitioners working in medicine in Australia (AIHW 2008a). There were also an estimated 244,360 employed nurses, 1,063 (0.4%) of whom were Aboriginal or Torres Strait Islander Australians (AIHW 2008b).

Health workforce in rural and regional Australia

A recent report on an audit of the health workforce in rural and regional Australia in 2008 found that:

- Supply of the medical workforce—when considered as the number of doctors in comparison to the population of the area in which those doctors practise—is low to very poor in many rural and regional areas of Australia.
- The nursing workforce—when considered as a ratio of nurses to population—is relatively evenly distributed throughout rural and regional Australia.
- The supply of other health professions—particularly dental practitioners—as a ratio of professional to population, is low to poor.
- The Aboriginal health workforce is relatively small—predominantly working in Outer Regional and Remote locations.
- The supply of medical and nursing professionals varies considerably across jurisdictions. The Northern Territory, Western Australia, and the Australian Capital Territory, have lower proportions of GPs in the population and Queensland and New South Wales have the lowest proportion of nurses.
- The supply and the distribution of health professionals—in particular throughout rural and regional areas—largely correspond with the distribution of state and territory-funded health services across Australia (DoHA 2008).

Aboriginal and Torres Strait Islander primary health-care services

- In 2004–05, a total of 215 full-time equivalent (FTE) doctors were employed by Indigenous primary health-care services. The majority of doctors, nurses, allied health professionals and dentists employed by Indigenous primary health-care services were non-Indigenous. Most traditional healers, environmental health workers, Indigenous health workers, substance use workers and drivers/field officers were Indigenous Australians (OATSIH & NACCHO 2008).
- In 2004–05, there were a small number of FTE health staff positions in Indigenous primary health-care services that were not funded by the service. These positions may be funded by state/territory health departments or through programs such as More Allied Health Services (MAHS) Program and Community Development Employment Projects

(CDEP). A very small proportion of the FTE Indigenous health worker positions were held by non-Indigenous staff, and a very small proportion of FTE medical specialist/allied health professional, doctor and nurse positions were held by Indigenous staff (OATSIH & NACCHO 2008).

Data quality issues

Census of population and housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and the limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example, whether people are counted more than once, or are undercounted (ABS 1996).*

For the 2002 NATSISS, it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

Occupation data

Census data for the health labour force are the counts of people as recorded in the Census (raw counts), without adjustment for non-response or under-enumeration.

The ABS routinely rounds up small numbers in its Census data in order to protect the confidentiality of individuals. This leads to small discrepancies in total values between tables. Unfortunately, this process may have altered the accuracy of data regarding Indigenous participation in health and community services occupations—where participation is low, the small estimates reported for many occupations might actually seem to increase participation.

The Census is a point-in-time measure. The health workforce is subject to reductions through retention problems and increases in numbers through training. These changes will need to be considered in any interpretation of changes over time.

Recording errors (for example, difficult to read) or inaccurate coding (misinterpretation of role) of occupation may also affect results.

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3.11 Competent Governance

Measures of competent governance in mainstream and Indigenous-specific health services, including management of service delivery, compliance and accountability of services, and cultural responsiveness of service delivery for Indigenous clients

Data sources

Data related to competent governance come from the Office of the Registrar of Indigenous Corporations (ORIC), the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), the Healthy For Life (HFL) data collection, the Service Activity Reporting (SAR) data collection and the Drug and Alcohol Service Reporting (DASR) data collection.

Office of the Registrar of Indigenous Corporations

The Office of the Registrar of Indigenous Corporations (ORIC) is set up to help administer the *Corporations (Aboriginal and Torres Strait Islander) Act 2006* (CATSI Act) and to support and regulate corporations for Indigenous people throughout Australia. The ORIC collects data from Indigenous corporations registered under the CATSI Act, including the number of corporations, compliance status and deregistration of corporations.

The CATSI Act replaced previous legislation, the *Aboriginal Councils and Associations Act 1976* (ACA), on 1 July 2007 (ORIC 2005).

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Healthy for Life Program

The HFL program is an ongoing program funded by the Office for Aboriginal and Torres Strait Islander Health (OATSIH) of the Australian Government Department of Health and Ageing (DoHA). The program aims to improve the capacity and performance of primary health-care services to deliver high-quality maternal and children's health services and chronic disease care to Indigenous people through population health approaches using best practice and quality improvement principles.

Services participating in the HFL program are required to submit de-identified, aggregate service data for 11 essential indicators covering maternal health, child health and chronic disease care on a regular basis (6 and 12 months) as well as information about the characteristics of their service and organisational infrastructure. For the January to June 2007 reporting period, 59 HFL services submitted data to the AIHW.

Service Activity Reporting (SAR) data collection

The SAR collects data from about 150 Australian Government-funded Indigenous primary health-care services and is held at the DoHA. It is estimated that these services provide GP services to around 40% of the Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a 12-month period. Response rates to the SAR by Indigenous primary health-care services are usually between 97% and 99%.

Note that the SAR includes only Indigenous health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Drug and Alcohol Service Reporting (DASR)

The DASR collected data from approximately 40 Australian Government-funded Indigenous substance-use services and is held at the DoHA. Service-level data on substance use and related activities are collected by survey questionnaire over a 12 month period. Response rates to the DASR by Aboriginal and Torres Strait Islander substance-use services are usually between 93% and 100%.

Note that the DASR includes only Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to substance-use services.

Analyses

Office of the Registrar of Indigenous Corporations data

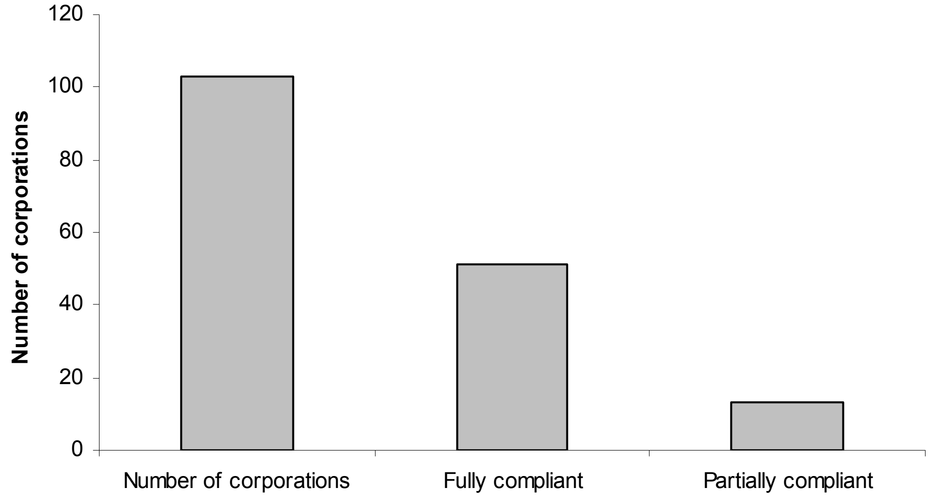
All corporations incorporated under the ACA Act are required to submit certain documents to ORIC, including a list of members and financial reports.

- In 2005–06, there were 103 Indigenous health corporations incorporated under the ACA Act registered with ORIC. Half of these organisations provided all, and 13% provided some, of the key documents required for 2005–06 (Table 3.11.1; Figure 3.11.1).
- Over the period 2000–01 to 2004–05, the proportion of Indigenous health corporations I incorporated under the ACA Act registered with ORIC that were fully or partially compliant with providing the key documents required remained between 96% and 99% (Table 3.11.2).

Table 3.11.1: Number and proportion of health corporations incorporated under the ACA Act 1976 by compliance[(a)], 2005–06

	Number	Proportion
Fully compliant	51	49.5
Partially compliant	13	12.6
Sub-total fully or partially compliant	64	62.1
Not fully or partially compliant	39	37.9
Total	**103**	**100.0**

Source: AIHW analysis of The Office of the Registrar of Indigenous Corporations unpublished data.



Source: AIHW analysis of The Office of the Registrar of Indigenous Corporations unpublished data.

Figure 3.11.1: Total number of health corporations incorporated under the Aboriginal Councils and Associations Act 1976 by compliance, 2005–06

Table 3.11.2: Number and proportion of health corporations incorporated under the ACA Act 1976 by compliance[(a)], 2000–01 to 2004–05

	Number of corporations	Fully compliant		Partially compliant		*Fully or partially compliant*		Not fully or partially compliant	
	No.	No	%	No.	%	*No*	*%*	No.	%
2000–01	77	n/a	n/a	n/a	n/a	*74*	*96.1*	3	3.9
2001–02	79	n/a	n/a	n/a	n/a	*76*	*96.2*	5	6.3
2002–03	80	n/a	n/a	n/a	n/a	*75*	*93.8*	1	1.3
2003–04	81	n/a	n/a	n/a	n/a	*80*	*98.8*	5	6.2
2004–05	82	n/a	n/a	n/a	n/a	*77*	*93.9*	5	6.1

Source: AIHW analysis of The Office of the Registrar of Indigenous Corporations unpublished data.

Service Activity Reporting data

- In 2005–06, there were approximately 3,650 full-time equivalent (FTE) staff in Indigenous primary health-care services, 2,286 (63%) health staff and 1,364 (37%) administration staff. The majority of both health and administration staff were Indigenous (59% and 64%,, respectively) (Table 3.11.3).
- In 2003–04, the majority of Indigenous primary health-care services had governing committees/Boards that; met regularly (96%), consisted only of Indigenous members (94%), had detailed income and expenditure statements presented to them on at least two occasions (94%), or received training (56%) (Table 3.11.4).
- In 2005–06, 57% of Indigenous primary health-care services had representatives on external Boards (for example, hospitals); 64% participated in Regional Planning Forums and 84% were involved in committees on health (for example, steering groups) (Table 3.11.5).

Table 3.11.3: Number and proportion of staff in Indigenous primary health-care services, by type of staff and Indigenous status, 2005–06

	Health staff		Admin. staff		Health and admin. staff	
	FTEs	Per cent	FTEs	Per cent	FTEs	Per cent
Paid staff						
Indigenous	1,283.9	61.2	811.6	62.6	2,095.5	61.7
Non-Indigenous	813.3	38.8	481.0	37.1	1,294.3	38.1
Unknown Indigenous status	—	—	4.0	0.3	4.0	0.1
Total	**2,097.2**	**100.0**	**1,296.5**	**100.0**	**3,393.8**	**100.0**
Visiting staff						
Indigenous	72.2	38.2	54.6	80.7	126.9	49.4
Non-Indigenous	106.6	56.4	13.1	19.3	119.7	46.6
Unknown Indigenous status	10.1	5.3	—	—	10.1	3.9
Total	**188.9**	**100.0**	**67.7**	**100.0**	**256.6**	**100.0**
Paid and visiting staff						
Indigenous	1,356.2	59.3	866.2	63.5	2,222.4	60.9
Non-Indigenous	919.9	40.2	494.1	36.2	1,414.0	38.7
Unknown Indigenous status	10.1	0.4	4.0	0.3	14.1	0.4
Total	**2,286.1**	**100.0**	**1,364.3**	**100.0**	**3,650.4**	**100.0**

Source: Service Activity Reporting 2005–06.

Table 3.11.4: Number and proportion of governing committee/board use, Aboriginal and Torres Strait Islander primary health-care services, 2003–04[(a)]

	No.	Per cent
Governing committee or board met regularly	132	95.7
Income and expenditure statements were presented to committee or board on at least two occasions	130	94.2
All of the governing committee or board members were Aboriginal and/or Torres Strait Islander	129	93.5
Governing committee or board received training	77	55.8
Total number of services	**138**	**100.0**

(a) 2003–04 is the latest year of data available, This material was not included in the SAR questionnaire for 2004–05 and 2005–06, but was re-instated for 2006–07.

Source: Service Activity Reporting 2003–04.

Table 3.11.5: Number and proportion of Aboriginal and Torres Strait Islander primary health-care services participating[(a)] in mainstream processes, 2005–06

	No.	Per cent
Representation on external boards (e.g. hospitals)	85	56.7
Participation in regional planning forums (e.g. under the framework agreements)	96	64.0
Involvement in committees on health (e.g. steering groups)	126	84.0
Total number of services	**150**	**100.0**

(a) A service is recorded as having conducted an activity if that activity was conducted by either the service itself or by one of its auspiced entities.

Source: Service Activity Reporting 2005–06.

Drug and Alcohol Service Reporting data

- In 2005–06, the majority of Aboriginal and Torres Strait Islander substance-use-specific services had governing committees/boards that; met regularly (92%), consisted only of Indigenous members (76%), or received training (65%) (Table 3.11.6).

Table 3.11.6: Number and proportion of governing committee/board use, Aboriginal and Torres Strait Islander substance-use services, 2005–06

	No.	Per cent
Governing committee or board met regularly	34	91.9
All of the governing committee or board members were Aboriginal and/or Torres Strait Islander	28	75.7
Governing committee or board received training	24	64.9
Total number of services	**37**	**100.0**

Source: Drug and Alcohol Service Activity Reporting 2005–06.

Self-reported data

Indigenous persons who did not access health services when needed

The 2004–05 NATSIHS collected data on the reasons why Indigenous Australians did not visit a doctor or other health professional in the last 12 months when they needed to.

- In 2004–05, 15% of Indigenous Australians reported that they needed to, but didn't, visit a doctor in the last 12 months. Over the same period, 8% of Indigenous Australians reported that they didn't visit an other health professional when they needed to and 7% reported that they didn't visit a hospital when they needed to (Table 3.11.7).

- Of those Indigenous Australians who needed to visit a doctor but didn't, approximately 10% reported that they did not go because of dislikes of the service/professional, or they felt embarrassed or afraid; and 5% reported that they did not go because they felt the service would be inadequate (Table 3.11.7).
- Of those Indigenous Australians who needed to visit an other health professional but didn't, approximately 12% reported that they did not go because of dislikes of the service/professional, or they felt embarrassed or afraid; and 5% reported that they did not go because they felt the service would be inadequate (Table 3.11.7).
- Of those Indigenous Australians who needed to visit a hospital but didn't, approximately 16% reported that they did not go because of dislikes of the service/professional, or they felt embarrassed or afraid; and 6% reported that they did not go because they felt the service would be inadequate (Table 3.11.7).

Indigenous persons who did not access health services when needed, by state/territory

- Tasmania/the Australian Capital Territory and Victoria had the highest proportion of Indigenous Australians reporting that they needed to but didn't visit a doctor in the last 12 months (18%) and the Northern Territory had the lowest proportion (8%) (Table 3.11.7).
- Victoria had the highest proportion of Indigenous Australians reporting that they needed to, but didn't, visit an other health professional in the last 12 months (13%) and the Northern Territory had the lowest proportion (4%) (Table 3.11.7).
- Victoria and Western Australia had the highest proportion of Indigenous Australians reporting that they needed to visit a hospital in the last 12 months (8%) and the Northern Territory had the lowest (4%) (Table 3.11.7).
- The proportion of Indigenous persons who reported that they did not visit a doctor when needed because they disliked the service/professional, or they felt embarrassed or afraid, ranged from 14% in Victoria to 7% in Queensland and South Australia.
- The proportion of Indigenous persons who reported that they did not visit a doctor when needed because they felt the service would be inadequate ranged from 2% in the Northern Territory to 10% in Victoria.
- The proportion of Indigenous persons who reported that they did not visit an other health professional when needed because they disliked the service/professional, or they felt embarrassed or afraid, was lowest in Western Australia (8%) and highest in Victoria (21%).
- The proportion of Indigenous persons who reported that they did not visit an other health professional when needed because they felt the service would be inadequate ranged from 1% in South Australia to 8% in New South Wales.
- The proportion of Indigenous persons who reported that they did not visit a hospital when needed because they disliked the service/professional, or they felt embarrassed or afraid, was lowest in South Australia and the Northern Territory (7%) and highest in Victoria (24%).
- The proportion of Indigenous persons who reported that they did not visit a hospital when needed because they felt the service would be inadequate ranged from 2% in the Northern Territory to 8% in New South Wales (Table 3.11.7).

Table 3.11.7: Indigenous persons who did not access health services when needed, by state/territory, 2004–05

	NSW	Vic	Qld	WA	SA	Tas/ACT	NT	Total
					Per cent			
Whether needed to visit doctor in last 12 months, but didn't								
Yes	16	18	15	14	14	18	8	15
No	83	82	85	86	86	82	92	85
Total persons[(a)]	**139,006**	**29,356**	**130,002**	**68,827**	**26,614**	**22,232**	**58,272**	**474,310**
Reasons why didn't visit the doctor when needed to								
Dislikes(service/professional/afraid/embarrassed)	10	14	7	12	7	12	9	10
Felt it would be inadequate	5	10	7	3	3	3	2	5
Other[(b)]	88	80	90	93	92	89	91	89
Total who needed to visit doctor but didn't[(a)]	**22,647**	**5,317**	**19,783**	**9,697**	**3,817**	**3,970**	**4,433**	**69,665**
Whether needed to go to other health professional (OHP) in the last 12 months, but didn't								
Yes	7	13	9	5	8	9	4	8
No	93	86	91	95	92	90	96	92
Total persons[(a)]	**139,006**	**29,356**	**130,002**	**68,827**	**26,614**	**22,232**	**58,272**	**474,310**
Reasons why didn't visit OHP when needed to								
Dislikes(service/professional/afraid/embarrassed)	12	21	10	8	14	13	11	12
Felt it would be inadequate	8	4	5	3	1	5	3	5
Other[(b)]	88	81	91	96	92	88	91	89
Total who needed to visit OHP, but didn't[(a)]	**9,532**	**3,890**	**12,206**	**3,361**	**2,146**	**2,094**	**2,441**	**35,670**
Whether needed to go to hospital in the last 12 months but didn't								
Yes	6	8	7	8	6	6	4	7
No	93	92	93	92	94	94	96	93
Total persons[(a)]	**139,006**	**29,356**	**130,002**	**68,827**	**26,614**	**22,232**	**58,272**	**474,310**
Reasons why didn't visit hospital when needed to								
Dislikes(service/professional/afraid/embarrassed)	21	24	13	13	7	19	7	16
Felt it would be inadequate	8	3	7	6	5	6	2	6
Other[(b)]	82	87	90	84	91	84	94	86
Total who needed to visit hospital, but didn't[(a)]	**8,855**	**2,245**	**9,618**	**5,452**	**1,727**	**1,382**	**2,544**	**31,821**

(a) Total includes 'not stated'.

(b) 'Other' includes 'cost, transport/distance', 'waiting time too long or not available when required', 'not available in area', 'too busy', 'decided not to seek care', 'discrimination', 'service not culturally appropriate and language problems', 'other'.

Note: Components may add to more than 100% because persons may have reported more than one type of action.

Source: AIHW analysis of 2004–05 NATSIHS.

Indigenous persons who did not access health services when needed, by remoteness

- In 2004–05, Indigenous Australians in non-remote areas were more likely than those in remote areas to report not visiting a doctor (17% and 10%, respectively) or other health professional (9% and 5%, respectively) when they needed to in the last 12 months (Table 3.11.8). Proportions were similar in remote and non-remote areas for those not visiting a hospital when needed (7%).
- Similar proportions of Indigenous Australians in remote and non-remote areas reported that they did not visit a doctor when needed or did not visit a other health professional when needed because they disliked the service/professional, or they felt embarrassed or afraid (between 10% and 12%). However, Indigenous Australians in non-remote areas were twice as likely as those in remote areas to report that they did not visit a hospital when needed because they disliked the service/professional, or they felt embarrassed or afraid.
- Approximately 7% of Indigenous Australians in remote areas and 5% of Indigenous Australians in non-remote areas reported that they did not visit a doctor when needed because they felt that it would be inadequate. A similar proportion of Indigenous persons in remote and non-remote areas (6% and 7%, respectively) reported that they did not visit a hospital when needed because they felt that it would be inadequate (Table 3.11.8).

Table 3.11.8: Indigenous persons who did not access health services when needed, by remoteness, 2004–05

	Non-remote	Remote	Total
		Per cent	
Whether needed to visit doctor in last 12 months but didn't			
Yes	17	10	15
No	83	90	85
Total Persons[a]	**348,315**	**125,995**	**474,310**
Reasons why didn't visit the doctor when needed to			
Anticipation of inadequate service			
Dislikes (service/professional/afraid/embarrassed)	10	11	10
Felt it would be inadequate	5	7[b]	5
Discrimination, service not culturally appropriate, language problems	1	1[c]	1[b]
Other[d]	90	85	89
Total who needed to visit doctor but didn't[a]	**57,653**	**12,012**	**69,665**
Whether needed to go to other health professional (OHP) in the last 12 months but didn't			
Yes	9	5	8
No	91	95	92
Total Persons[a]	**348,315**	**125,995**	**474,310**
Reasons why didn't visit OHP when needed to			
Anticipation of inadequate service			
Dislikes (service/professional/afraid/embarrassed)	12	11[b]	12
Felt it would be inadequate	5[b]	5[c]	5
Discrimination, service not culturally appropriate, language problems	2[c]	2[c]	2[c]
Other[d]	89	91	89
Total who needed to visit OHP but didn't[a]	**29,699**	**5,971**	**35,670**
Whether needed to go to the hospital in the last 12 months but didn't			
Yes	7	7	7
No	93	93	93
Total Persons[a]	**348,315**	**125,995**	**474,310**
Reasons why didn't visit hospital when needed to			
Anticipation of inadequate service			
Dislikes (service/professional/afraid/embarrassed)	18	9[b]	16
Felt it would be inadequate	6	7[b]	6
Discrimination, service not culturally appropriate, language problems	2[b]	2[c]	2[b]
Other[d]	85	90	86
Total who needed to visit hospital, but didn't[a]	**22,982**	**8,840**	**31,822**

(a) Total includes ‘not stated’.

(b) Estimate has a relative standard error of 25–50% and is subject to sampling variability too high for practical use.

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(d) ‘Other’ includes ‘cost, transport/distance’, ‘waiting time too long or not available when required’, ‘not available in area’,’ too busy’, ‘decided not to seek care’, ‘other’.

Note: Components may add to more than 100% because persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Indigenous persons who did not access health services when needed, by sex

- In 2004–05, Indigenous females were more likely than Indigenous males to report not visiting a doctor (17% and 13%, respectively) or other health professional (8% and 7%, respectively) when they needed to in the last 12 months (Table 3.11.9). A similar proportion of males and females reported that they did not visit a hospital when needed (7%).
- A higher proportion of males than females reported that they did not visit a doctor, other health professional or hospital when needed because they disliked the service/professional, or they felt embarrassed or afraid.
- A similar proportion of males and females reported that they did not visit a doctor or other health professional when needed because they felt the service would be inadequate (all around 5%).

Table 3.11.9: Experiences of not attending GP service/other health professional, by sex, Indigenous Australians, 2004–05

	Male	Female	Total
		Per cent	
Whether needed to visit doctor in last 12 months, but didn't			
Yes	13	17	15
No	87	83	85
Total persons[(a)]	**232,362**	**241,948**	**474,310**
Reasons why didn't visit the doctor when needed to			
Anticipation of inadequate service			
Dislikes (service/professional/afraid/embarrassed)	15	6	10
Felt it would be inadequate	5	5	5
Discrimination, service not culturally appropriate, language problems	—[(b)]	1[(c)]	1[(c)]
Other[(d)]	86	91	89
Total who needed to visit doctor, but didn't[(a)]	**29,428**	**40,237**	**69,665**
Whether needed to go to other health professional (OHP) in the last 12 months but didn't			
Yes	7	8	8
No	93	92	92
Total persons[(a)]	**232,362**	**241,948**	**474,310**
Reasons why didn't visit OHP when needed to			
Anticipation of inadequate service			
Dislikes (service/professional/afraid/embarrassed)	14	11	12
Felt it would be inadequate	5[(c)]	5[(c)]	5
Discrimination, service not culturally appropriate, language problems	2[(b)]	1[(b)]	2[(c)]
Other[(d)]	88	90	89
Total who needed to visit OHP, but didn't[(a)]	**15,968**	**19,702**	**35,670**
Whether needed to go to the hospital in the last 12 months but didn't			
Yes	7	7	7
No	93	93	93
Total Persons[(a)]	**232,362**	**241,948**	**474,310**
Reasons why didn't visit hospital when needed to			
Anticipation of inadequate service			
Dislikes (service/professional/afraid/embarrassed)	20	11	16
Felt it would be inadequate	6[(c)]	7[(c)]	6
Discrimination, service not culturally appropriate, language problems	1[(b)]	2[(c)]	2[(c)]
Other[(f)]	82	91	86
Total who needed to visit hospital, but didn't[(a)]	**15,430**	**16,392**	**31,822**

(a) Total includes ‘not stated’.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Estimate has a relative standard error of 25–50% and is subject to sampling variability too high for practical use.

(d) ‘Other’ includes ‘cost’, ‘transport/distance’, ‘waiting time too long or not available when required’, ‘not available in area’, ‘too busy’, ‘decided not to seek care’, ‘other’.

Note: Components may add to more than 100% because persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Healthy For Life data

Information on involvement in service planning and quality improvement by services funded through the HFL program is available from the AIHW Healthy For Life data collection.

- In 2006–07, the most common formal mechanism for input into planning was via meetings of reference groups or other advisory committees (86%) (Table 3.11.10).
- The most common formal mechanism for dissemination of health service performance information was via verbal and/or written reports presented at meetings other than the Annual General Meeting (83%).
- A number of services had a complaints mechanism for assessing client satisfaction (85%).

In 2006–07, services funded through the HFL program undertook the following quality improvement activities:

- participated in formal quality improvement processes that involved repeated cycles of 'plan–do–study–act' in chronic disease (75%), child health (59%) and maternal health (56%)
- used health service data to review quality in chronic disease (70%), child health (63%) and maternal health (61%)
- participated in the interpretation of health service data and service planning/goal setting in relation to chronic disease (85%), child health (80%) and maternal health (78%) (Table 3.11.11).

Table 3.11:10: Healthy for Life service population involvement in service planning and feedback, 2006–07

Service planning/ feedback activity	Yes	No	No response
		Per cent	
Formal mechanisms for input into planning			
Meeting(s) of reference group(s) or other advisory committee(s)	86	5	9
Input received at an Annual General Meeting	61	31	9
Other(a)	36	14	51
Formal mechanisms for dissemination of health service performance information			
A current formal communication strategy	58	27	15
Verbal and/or written report(s) presented at an Annual General Meeting	70	14	17
Verbal and/or written reports(s) presented at other meeting(s)	83	3	14
Health service newsletter(s)	49	42	9
‘Column’ in the newsletter(s) of other agencies	32	56	12
Ad hoc information on our health service website	32	53	15
Other(b)	22	25	53
Formal mechanisms for assessing client satisfaction			
Client satisfaction survey	56	32	12
Client focus group(s)	42	41	17
Suggestions box	44	44	12
Complaints mechanism	85	2	14

(a) ‘ Other’ includes: strategic planning days; special general meetings; a leadership forum; meetings of the community branch , community council, Koori elders, board, doctors and staff, steering committee; client feedback; community consultation; reports on service activities provided to members and elders; an Operational Management Review Committee is being established; HFL/AHPACC Committee; and member of Cross Borders Health Committee; interagency meeting; community working party.

(b) ‘Other’ includes: the Indigenous Coordination Centre, Department of Aboriginal Affairs, Coastal Custodians (National Parks and Wildlife Service Newsletter), Indigenous networks/ reference groups including the Aboriginal health worker forum; an information letter with an application package that also includes posters, business cards and pamphlets is distributed to Correctional Service Centres, AMSs, CDEPs, court houses, Aboriginal Legal Services; clients are encouraged to complete a client satisfaction survey at all service delivery points; advertising in media—local newspaper and radio; pamphlets and posters; community/open days, expos; and annual reports.

Note: Data were provided by 59 services.

Source: AIHW, Healthy for Life data collection.

Table 3.11.11: Healthy for Life service quality improvement activities in relation to maternal and child health and chronic disease prevention and care, 2006–07

Quality improvement activity	Yes	No	No response
		Per cent	
Participation in formal quality improvement processes that involve repeated cycles of Plan-Do-Study-Act (PDSA)			
Maternal health	56	32	12
Child health	59	29	12
Chronic disease	75	17	9
Other[(a)]	31	32	37
If none of the above:			
Quality improvement strategies included in current business plan	61	2	37
Health service data used to review quality			
Maternal health	61	9	31
Child health	63	7	31
Chronic disease	70	2	29
Other[(b)]	22	22	56
Staff participation in interpretation of health service data and service planning/goal setting			
Maternal health	78	10	12
Child health	80	10	10
Chronic disease	85	5	10
Other[(c)]	31	27	42

(a) 'Other' includes: accreditation with AGPAL; preventative services for well people; oral health; complaints; systems analysis; participant in NPCC and Primary Care Partnership Chronic Disease Management Project; programs such as social emotional wellbeing, kinship, Menzies ABCD, OATSIH CQII, Alternative Care and Family Preservation, Administration Team and Health Team and Unique Learning Centre*;* audits—well person's/prevention/data (immunisation and health promotion); reviews of HFL SDRF and process for conducting health checks/guidelines/service delivery procedures; evaluation for NIAODW training program and partnership strategies.

(b) 'Other' includes: STI and self-management programs identified inaccurate documentation in the maternal and child health areas—retrieving lost data manually and training staff in this area to ensure information is consistent and accurately recorded; oral health; quality RIS, complaints process; health data to review and develop annual plans; ABCD conducted and used to develop service action plan; immunisation data to review current mode of service delivery; external quarterly audits; services perform service performance appraisals to meet target indicators and improve data collaboration; systems development—recall and reminders, disease registers; healthy living and risk behaviour management; and health checks.

(c) 'Other' includes: staff undergo process of recording data, generating reports and filtering searches to find target groups; systems analysis and assessment; STI, policy reviews, self-management programs; prevention of chronic disease; preventive services (well people); well person's audit/prevention audit; action planning for SDRF and HFL; GP and nurses only engaged in these activities, the GP is targeted to be more involved in QII planning and goal setting; and all staff are involved in the accreditation process with AGPAL.

*Note: D*ata were provided by 59 services.

Source: AIHW, Healthy for Life data collection.

Aboriginal and Torres Strait Islander representation on health/hospital boards

Information on Aboriginal and Torres Strait Islander representation on health/hospital boards is available from the states and territories. Data presented below comes from the *National summary of the 2003 and 2004 jurisdictional reports against the Aboriginal and Torres Strait Islander Health Performance Indicators* (SCATSIH & SIMC 2006).

New South Wales

In New South Wales, health service boards have the overall responsibility for the strategic direction and operational efficiency of the organisation, the protection of its assets and the quality of its services. The boards guide and direct, establish policies, chart the course of their respective organisations and act as advocates for their organisations in the local communities.

The boards are subject to the direction and control of the Minister except in relation to the context of a report or recommendation.

In 2002–03, 17 out of the 80 health service boards in New South Wales had at least one Indigenous member. In 2003–04, this fell to 6 out of 62. There were fewer boards/committees in 2003–04 because of the dissolution of 18 area health service boards in August 2004.

The *Health Services Act 1997* and the *Ambulance Service Act 1990* do not make provision for the make-up of membership on Health Service Boards, so Aboriginal and Torres Strait Islander membership is not mandated. However, it should be noted that the constitution of the soon to be appointed area health service councils, which will replace the 18 dissolved area health service boards, states that 'at least one member must be a person who has expertise, knowledge or experience in relation to Aboriginal health'.

Victoria

The functions of the board of a public hospital, denominational hospital or multi-purpose service are to oversee and manage the hospital and to ensure that the services provided by the hospital comply with the requirements of the *Health Services Act 1988* and the objectives of the hospital. Public hospitals must have a board of management of between 6 and 12 persons, whose names are submitted by the board and appointed by the Minister.

Metropolitan health services must have a Board of Management of between six and nine persons appointed by the Governor in Council on the recommendation of the Minister. The Minister must ensure that the Board includes at least one person who is able to reflect the perspectives of users of health services and that women and men are adequately represented. Members of the Boards of denominational public hospitals are not appointed by the Minister.

Information on the structure of health/hospital boards is not routinely collected by the Department of Human Services in Victoria, and there is no requirement for the hospital and community health centres to record the Indigenous status of board members. Available data show that 6 of the 84 health boards in Victoria reported Aboriginal and Torres Strait Islander representation in 2002–02 and 2003–04.

Individual boards no longer exist in the Melbourne metropolitan regions. In no case is Indigenous membership mandatory, although some hospitals seek a representative from the local Aboriginal cooperative/community organisation and encourage members of minority groups when advertising opportunities for board appointments.

Opportunities also exist for community members to participate in hospital advisory committees. Information on the membership of these committees is not collected by the Department of Human Services.

Queensland

Queensland Health is divided into three zones containing 38 health service districts. Each district has a district health service council. The role of the District Health Service Council is to work in cooperation with the relevant health service district to ensure that the needs of the community are represented and reflected in the health services provided, and to monitor the performance of the district against a service agreement. The council should act as a direct link between the public and Queensland Health.

District health service councils facilitate community input into the planning, delivery, monitoring, and evaluation of hospital and community-based health services. The councils are established in legislation, with a direct reporting relationship to the Minister, and consists of up to 10 members with equitable community representation. Members are not elected, but are appointed by the Governor-in-Council. A term as member is for a period of 3 to 4 years. All district health service councillors are ministerial appointments. There is no requirement mandated by the terms of reference for Indigenous representation, nor is there a requirement for appointees to record Indigenous status. However, currently there are 26 Indigenous members serving on 11 of the district health service councils.

Western Australia

Health service boards are established under the *Hospital and Health Services Act 1927* and derive their functions and responsibilities from the Act. The boards are responsible for the control, management and maintenance of the hospital and for providing health services as approved by the Minister under an Australian Government—state agreement.

In 2002–03 all existing hospital boards were disbanded. In 2003–04, 17 new district health advisory councils (DHACs) were established, 15 of which had Aboriginal and Torres Strait Islander people as members. The 17 DHACs have been established to achieve diverse representation from the community and have input into service planning, plus propose creative and community-based ideas for improving service access and quality.

South Australia

There were 73 incorporated hospitals and health centres under the South Australian Health Commission, at 30 June 2003. Information is available on 38 boards that have provision within the hospital's constitution for a ministerial nomination. In the 2002–03 and 2003–04 financial years, 13 health/hospital boards in the Hills Mallee Southern, Eyre, Northern and Far Western, Riverland and Mid-North regions of South Australia reported Aboriginal and Torres Strait Islander membership.

Tasmania

Tasmania does not have regional health or hospital boards. Services are administered by the Department of Health and Human Services.

Australian Capital Territory

All board/committee members are asked if they wish to identify their Aboriginal or Torres Strait Islander status at the time of initial appointment. However, some members may choose not to do so. The representation may, therefore, be higher than recorded. In 2002–03, four members of the 10 health boards and committees identified as Aboriginals and/or Torres Strait Islanders. In 2003–04, five members of the 14 boards and committees identified as Indigenous Australians.

In February 2002, the ACT Government announced a review of the structural and governance arrangements for the health and community care system. As a result of the review, the ACT Health and Community Care Board was abolished, and legislation to formally repeal the purchaser/provider arrangements in health was passed by the ACT Legislative Assembly in December 2002. The health portfolio has been restructured into a simplified model, and the ACT Health Council established to provide a consultative mechanism involving health consumers and professionals in ACT health policy and planning processes. There was Aboriginal and Torres Strait Islander representation on the Council in both 2002–03 and 2003–04.

Northern Territory

Under the *Hospital Management Boards Act*, each public hospital in the Northern Territory is to have a board of eight members, five of whom are to be appointed by the Minister. Although the Act does not require hospitals to have Indigenous people on the boards, all Northern Territory hospitals make every effort to include Aboriginal members.

The Northern Territory has a wide array of representative health groups, many of which include Aboriginal representation and some of which require a majority of Aboriginal members. Examples of this latter group are the Northern Territory Aboriginal Ear Health Committee and the Northern Territory Aboriginal Eye Health Committee.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the NHS. The NHS was conducted in Major Cities, regional and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 NHS.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities, and to help respondents to understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2005–05 NATSIHS publication (ABS 2006).

Healthy For Life data

For the January to June 2007 reporting period 59 services submitted data as part of the Healthy For Life program. Not all of these services were able to provide data for all of the essential indicators and service profile questions.

Service Activity Reporting (SAR) and Drug and Alcohol Service Reporting (DASR)

Response rates to the SAR and DASR are usually above 90%.The SAR and DASR collect service level data on health care and health related activities by survey questionnaire over a 12 month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR and DASR only include Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding.*
- *The SAR and DASR questionnaires collect a broad set of indicators for the services and do not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *Data provided are often estimates and, although these are thought to be reasonable, there has been no audit to check the accuracy of these figures.*

In relation to the statistics for this performance measure – these data provide a rough guide to service activity in this area, but do not attempt to measure quantity or quality. They also do not differentiate between service provided by the service and those facilitated by the service.

References

ABS (Australian Bureau of Statistics) 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

ORAC (Office of the Registrar of Aboriginal Corporations) 2007. Yearbook 2005–06. Canberra: ORAC.

SCATSIH (Standing Committee on Aboriginal and Torres Strait Islander Health) & SIMC (Statistical Information Management Committee) 2006. National summary of the 2003 and 2004 jurisdictional reports against the Aboriginal and Torres Strait Islander health performance indicators. Cat. no. AIHW 16. Canberra: Australian Institute of Health and Welfare.

3.12 Access to services by types of service compared with need

Access to services by types of service compared with need (for example, primary care, hospital, dental and allied health and post-acute care and palliative care)

Data sources

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues, including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The 2002 NATSISS collected information from 9,400 Indigenous Australians across all states and territories of Australia. The sample covered persons aged 15 years or over who were usual residents of private dwellings. The survey collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, as well as law and justice. The 2002 NATSISS is the second national social survey of Indigenous Australians conducted by the ABS. Selected non-Indigenous comparisons are available through the 2002 General Social Survey (GSS). The ABS plans to conduct the NATSISS every 6 years. The next survey is planned for 2008.

Community Housing and Infrastructure Needs Survey (CHINS)

The CHINS collects data from all Aboriginal and Torres Strait Islander housing organisations and discrete Indigenous communities in Australia. The ABS conducted the CHINS on behalf of the Aboriginal and Torres Strait Islander Commission (ATSIC) and the Office for Aboriginal and Torres Strait Islander Health (OATSIH) in 1999 and 2001. The most recent CHINS was conducted by the ABS in 2006 on behalf of the Australian Government Department of Families, Community Services and Indigenous Affairs (FaCSIA) through funding from FaCSIA. Results from this survey were published in April 2007. Data from the CHINS is held by FaCSIA and the ABS.

The 2006 information was collected on 496 Indigenous housing organisations, which managed a total of 21,854 permanent dwellings. Information was also collected on 1,187 discrete Indigenous communities, with a combined population of 92,960. Most of these communities were in Very Remote regions of Australia, with 73% (865) having a population of fewer than 50 people.

In the 2006 CHINS, a community questionnaire collected detailed infrastructure information from all discrete Indigenous communities with a reported usual population of 50 persons or more, as well as for communities, which had a reported usual population of less than 50 persons but which were not administered by a larger discrete Indigenous community or Resource Agency (375 communities). The 812 other communities had reported usual populations of less than 50 persons and were asked a subset of questions from the community questionnaire form, the short community questionnaire (ABS 2007).

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at 5-yearly intervals with 2006 the most recent and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question and it is asked for each household member.

the Census data are adjusted for undercounts at the person level to arrive at the estimated resident opulation, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

Hospitalisations

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions that have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (AIHW unpublished). These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the ‘other’ category. This is to enable consistency across jurisdictions because public hospitals in some states and territories do not have a category for the reporting of ‘not stated’ or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used because the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient’s episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term ‘hospitalisation’ has been used to refer to a separation which is the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending a change in a type of care (for example, from acute to rehabilitation). ‘Separation’ also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

General practitioner data

The DoHA holds data on the number of GPs in Australia by remoteness area and Statistical Local Area (SLA).

Care must be taken in using and interpreting the data provided. There are two issues to note that have an effect on the quality of the data. First, the data include only those services claimed through the Medicare system. Consequently the full-time equivalent for doctors in remote areas, which are more likely to have high proportions of Indigenous populations, will be understated because some services are provided in rural hospitals and through the Royal Flying Doctor Service. There is also anecdotal information that services provided in Aboriginal Medical Services are often not claimed through the Medicare system, which further understates the full-time equivalent for doctors in areas with high Indigenous populations.

Second, the data at the grouped SLA level can hide variability in data at the individual SLA level. For example, although one group of SLAs may have fewer people per doctor overall than a second group of SLAs, there will be a number of SLAs in the first group with far more people per doctor than several SLAs in the second group.

Medicare database

Medicare enrolment application forms are lodged by the Medicare offices in each state/territory or by mail. Information from these forms is entered directly into the Medicare database which is held by the DoHA.

In November 2002, the ABS standard question on Indigenous identification was included on the Medicare Enrolment Application form. Because the voluntary Indigenous identifier was only introduced recently, the coverage of Indigenous Australians in this data set is not complete. Aboriginal and Torres Strait Islanders who had identified as Indigenous in this database as at 1 June 2008 numbered 206,408, up from 80,658 as at 1 July 2005.

AIHW Labour Force surveys

The AIHW runs a number of surveys of the health labour force, including the Medical Labour Force Survey, Nursing and Midwifery Labour Force Survey, Physiotherapy Labour Force Survey, Podiatry Labour Force Survey, Psychology Labour Force Survey and Occupational Therapy Labour Force Survey. These surveys are generally conducted by the state and territory departments of health in consultation with the AIHW. The AIHW is the data custodian for each of these collections. The labour force surveys are a census of all registered health professionals in the relevant health profession in each state and territory in Australia.

Service Activity Reporting (SAR) database

The SAR database collects data from approximately 151 Australian Government-funded Indigenous primary health-care services and is held at DoHA.

Response rates to the SAR by Indigenous primary health-care services are usually between 97% and 99%.

Note that the SAR includes only Indigenous health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Drug and Alcohol Service Reporting (DASR)

The DASR collects data from approximately 40 Australian Government-funded Indigenous substance-use services and is held at the DoHA. Service-level data on substance use and related activities are collected by survey questionnaire over a 12 month period. Response rates to the DASR by Indigenous substance-use services are usually between 93% and 100%.

Note that the DASR only includes Indigenous health organisations that receive at least some Australian Government funding to facilitate access to substance-use services.

Health expenditure data

The report on expenditures on health services for Aboriginal and Torres Strait Islander peoples is produced every 3 years. The latest report covers expenditure for the 2004–05 financial year and was published in the AIHW report *Expenditures on health for Aboriginal and Torres Strait Islander people 2004–05* (AIHW 2008a).

There are a number of difficulties in reporting on this measure, including the issue of under-identification of Indigenous Australians in health databases (such as for hospital separations). Although adjustments are made to the data to allow for under-identification, the adjusted estimates may be an overestimate or underestimate of actual health service use and expenditure by Indigenous people.

In some areas of expenditure, surveys have been used to estimate service use by Indigenous people, which, in turn, have been used in the estimates of expenditure. Consequently, the reliability of the expenditure estimates is affected by sampling error.

There may also be some limitations associated with the scope and definition of health expenditures and there may be inconsistencies in reporting and categorisation of expenditure on health goods and services across data providers.

The attribution of expenditure to Indigenous people, either on an overall population or per capita basis, should be treated with caution as it is an estimate (AIHW 2008).

Expenditure is a measure of met need. Indigenous Australians have a significantly poorer health status (measured in terms of life expectancy, mortality rates and morbidity) than non-Indigenous Australians. It could therefore be expected that per capita investment of health resources to achieve equality for Aboriginal and Torres Strait Islanders should be higher than for other Australians.

Palliative care data

Data on palliative care are sourced from the Admitted Patient Palliative Care National Minimum Data Set which is a component of the National Hospital Morbidity Data Collection (see hospitalisations section above).

There is currently no national data source on palliative care that occurs in the community (that is non-admitted care). However, a national minimum data set for community based palliative care is currently being explored by the AIHW.

Analyses

Indigenous Australians have a significantly poorer health status (measured in terms of life expectancy, mortality rates and morbidity) than non-Indigenous Australians. Indigenous Australians therefore have a greater need for health care and require a higher level of health-care access on average than non-Indigenous Australians.

Age-standardised rates and ratios have been used for this indicator as a measure of the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates among Indigenous people and those of other Australians, taking into account differences in age distributions.

Self-reported data—access to health care

The 2004–05 NATSIHS collected information on Indigenous Australians' access to health services. These data are presented in the Tables 3.12.1–3.12.13 below.

- In 2004–05, approximately 42% of Indigenous Australians had accessed health care in the last 12 months.
- After adjusting for differences in age structure, approximately 47% of Indigenous Australians reported they had accessed health care in the last 2 weeks or were admitted to hospital in the last 12 months, compared with 42% of non-Indigenous Australians.
- Approximately 20% of Indigenous Australians reported they had visited a doctor or specialist in the last 2 weeks, 16% had been admitted to hospital in the last 12 months and 17% had consulted with other health professionals in the last 2 weeks.
- Indigenous Australians were twice as likely to have visited casualty or consulted with another health professional than non-Indigenous Australians.
- Indigenous and non-Indigenous Australians aged 55 years and over were most likely to have accessed health care in the last 2 weeks (66% and 57%, respectively) (Table 3.12.1).
- In 2004–05, a higher proportion of Indigenous females had accessed health care in the last 2 weeks (45%) than Indigenous males (38%) (Table 3.12.3).
- In 2004–05, approximately 42% of Indigenous Australians reported they had accessed some type of health care in the last 2 weeks. The proportion who had accessed health care ranged from 35% in the Australian Capital Territory to 52% in the Northern Territory (Table 3.12.4).
- Indigenous Australians living in Very Remote areas of Australia were more likely to have accessed health services than Indigenous Australians in Major Cities (55% compared with 44%) (Table 3.12.5).
- In non-remote areas of Australia, Indigenous Australians accessed health care at similar rates to non-Indigenous Australians (46% compared with 43%) (Table 3.12.6).
- Between 2001 and 2004–05, there was little change in the proportion of Indigenous and non-Indigenous Australians accessing health care (Table 3.12.7).

Access to health care by selected health characteristics

- A higher proportion of Indigenous Australians aged 15 years and over with reported fair/poor health status accessed health care in the last 12 months than Indigenous Australians with excellent/very good or good health status (64% compared with 44%) (Table 3.12.2a).

- Indigenous Australians aged 15 years and over with fair/poor health status were twice as likely to have visited casualty in the last 12 months than non-Indigenous Australians.
- Approximately 47% of Indigenous Australians and 42% of non-Indigenous Australians with three or more long-term health conditions reported they accessed health care in the last 12 months (Table 3.12.2b).

Access to health care by selected population characteristics

- In 2004–05, approximately 62% of Indigenous Australians who spoke a language other than English at home accessed health services compared with 51% of Indigenous Australians who spoke English at home (Table 3.12.8).
- Indigenous Australians in the lowest quintile of equivalent household income were more likely to have accessed health care than those in the highest quintile (48% compared with 41%). These proportions were similar for non-Indigenous Australians.
- A higher proportion of Indigenous Australians with private health insurance accessed health services than Indigenous Australians without private health cover (54% compared with 48%). This was particularly the case with consulting a dentist (9% compared with 3%), and consulting other health professionals (24% compared with 17%).
- A higher proportion of Indigenous Australians who accessed health care felt they were treated worse than non-Indigenous people (67%) than those who felt they were treated the same or better than non-Indigenous people (50%).

Table 3.12.1: Accessing health care, by Indigenous status and age group, 2004–05

	0–14		15–24		25–34		35–44		45–54		55 and over		Total		Total (age-standardised)[(e)]	
Accessing health care[(a)]	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
									Per cent							
Admitted to hospital	12*	9*	16*	12*	19	18	18*	13*	19*	14*	31*	21*	16	15	20*	15*
Visited casualty/outpatients	3*	2*	5*	2*	6*	2*	4*	2*	7*	2*	9*	4*	5	3	6*	3*
Doctor consultation (GP and/or specialist)	16	15	15	17	19	20	24*	20*	28*	23*	43*	37*	20	23	25*	23*
Dental consultation[(b)]	5*	7*	3*	6*	3	4	3*	5*	4[(c)]	6	4[(c)]	6	4	6	4*	6*
Consultation with other health professionals	13*	9*	13	11	23*	15*	22*	14*	23*	14*	25*	17*	17	13	20*	13*
Total accessing health care[(d)]	**35**	**33**	**36**	**36**	**47***	**42***	**45***	**39***	**50***	**43***	**66***	**57***	**42**	**42**	**47***	**42***
Total not accessing health care	**65**	**67**	**64**	**64**	**53***	**58***	**55***	**61***	**50***	**57***	**34***	**43***	**58**	**58**	**53***	**58***
Total number of persons ('000)	180.7	3,760.0	92.1	2,636.2	69.8	2,761.4	59.1	2,899.6	39.6	2,705.6	33.2	4,529.7	474.3	19,292.4	474.3	19,292.4

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Total who took at least one health-related action—those who were admitted to hospital in last 12 months, dental consultation in last 2 weeks, doctor consultation in last 2 weeks, visited casualty/outpatient in last 2 weeks or consulted with other health professional in last 2 weeks.

(b) Persons aged 2 years and over.

(c) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(d) Components may not add to total because persons may have reported more than one type of action.

(e) Totals are directly age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 3.12.2a: Persons aged 15 years and over accessing health care, by self-assessed health status and Indigenous status, 2004–05

	Excellent/very good/good			Fair/poor			Total		
Accessing health care[(a)]	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
				Per cent					
Admitted to hospital	17	14	1.2*	30	27	1.1	22	16	1.3*
Visited casualty/outpatients	4	2	2.1*	11	6	2.0*	6	3	2.5*
Doctor consultation (GP and/or specialist)	22	21	1.0	40	42	0.9	27	24	1.1*
Dental consultation	3	6	0.6*	4[(b)]	6	0.7	3	6	0.6*
Consultation with other health professional	20	13	1.5*	28	22	1.3*	22	15	1.5*
Total accessing health care[(c)]	**44**	**41**	**1.1**	**64**	**62**	**1.0**	**51**	**45**	**1.1***
Total not accessing health care	**56**	**59**	**0.9**	**36**	**38**	**1.0**	**49**	**55**	**0.9***
Total number	229,335	1,3079,626	. .	64,236	2,452,751	. .	293,641	1,5532,377	. .

* Differences between Indigenous and non-Indigenous data are statistically significant.

(a) Total who took at least one health-related action—those who were admitted to hospital in last 12 months, dental consultation in last 2 weeks, doctor consultation in last 2 weeks, visited casualty/outpatient in last 2 weeks or consulted with other health professional in last 2 weeks.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Components may not add to total because persons may have reported more than one type of action.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 3.12.2b: Accessing health care, by number of long-term conditions and Indigenous status, 2004–05

	Number of long-term health conditions															
	0			1			2			3 or more			Total (age-standardised)			Total	
Accessing health care(a)	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.
	Per cent																
Admitted to hospital	10(b)	9	1.2	17	10	1.7*	17	14	1.2	26	20	1.3*	20	15	1.3*	16*	15*
Visited casualty/ outpatients	2(b)	1(b)	2.3	5(b)	2	2.7*	5	2	2.1*	8	4	2.0*	6	3	2.3*	5*	3*
Doctor consultation (GP and/or specialist)	11(b)	10	1.0	16	15	1.1	25	21	1.2	34	31	1.1	25	23	1.1*	20*	23*
Dental consultation(c)	3(b)	6	0.5	3(b)	6	0.4*	3	5	0.5*	4	7	0.6*	4	6	0.6*	4*	6*
Consultation with other health professional	13(b)	5	2.5*	18	9	1.9*	19	13	1.4*	28	23	1.2*	20	13	1.5*	17*	13*
Total accessing health care(d)	**29**	**26**	**1.1**	**40**	**33**	**1.2***	**46**	**41**	**1.1**	**60**	**56**	**1.1***	**47**	**42**	**1.1***	**42**	**42**
Total not accessing health care	**71**	**74**	**1.0**	**60**	**67**	**0.9***	**54**	**59**	**0.9**	**40**	**44**	**0.9***	**53**	**58**	**0.9***	**58**	**58**
Total number ('000)	167.7	4,441.8	. .	100.6	3,951.0	. .	68.2	3,101.6	. .	137.8	7,797.9	. .	474.3	19,292.4	. .	474.3	19,292.4

* Differences between Indigenous and non-Indigenous data are statistically significant.

(a) Total who took at least one health-related action—those who were admitted to hospital in last 12 months, dental consultation in last 2 weeks, doctor consultation in last 2 weeks, visited casualty/outpatient in last 2 weeks or consulted with other health professional in last 2 weeks.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Persons aged 2 years and over.

(d) Components may not add to total because persons may have reported more than one type of action.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 3.12.3: Indigenous Australians accessing health care, by sex, 2004–05

Accessing health care[a]	Males	Females	Persons
		Per cent	
Admitted to hospital	14	18	16
Visited casualty/outpatients	4	5	5
Doctor consultation (GP and/or specialist)	18	22	20
Dental consultation[b]	4	4	4
Consultation with other health professional	15	20	17
Total accessing health care[c]	**38**	**45**	**42**
Total not accessing health care	**62**	**55**	**58**
Total number	232,362	241,948	474,310

(a) Total who took at least one health-related action—those who were admitted to hospital in last 12 months, dental consultation in last 2 weeks, doctor consultation in last 2 weeks, visited casualty/outpatient in last 2 weeks or consulted with other health professional in last 2 weeks.

(b) Persons aged 2 years and over.

(c) Components may not add to total because persons may have reported more than one type of action.

Source: ABS and AIHW Analysis of 2004–05 NATSIHS.

Table 3.12.4: Indigenous Australians accessing health care, by state/territory, 2004–05

Accessing health care[(a)]	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				Per cent					
Admitted to hospital	15.2	14.1	14.6	18.6	17.6	14.1	13.5	22.4	16.4
Visited casualty/ outpatients	4.0	3.4	5.6	7.0	4.6	2.8	2.3[(b)]	4.0	4.8
Doctor consultation (GP and/or specialist)	19.7	28.0	19.2	19.0	18.4	22.3	13.1	20.6	20.1
Dental consultation[(c)]	2.9	3.4	5.0	3.0	3.7	3.6[(d)]	4.6	4.1	3.8
Consultation with other health professional	13.7	14.7	16.0	16.0	17.4	11.2	16.0	33.5	17.3
Total accessing health care[(e)]	**38.6**	**45.1**	**40.7**	**43.4**	**40.0**	**38.3**	**34.7**	**51.6**	**41.9**
Total not accessing health care	**61.4**	**54.9**	**59.3**	**56.6**	**60.0**	**61.7**	**65.3**	**48.4**	**58.1**
Total number	139,570	29,334	130,856	67,548	26,534	18,072	4,162	58,234	474,310

(a) Total who took at least one health-related action—those who were admitted to hospital in last 12 months, dental consultation in last 2 weeks, doctor consultation in last 2 weeks, visited casualty/outpatient in last 2 weeks or consulted with other health professional in last 2 weeks.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Persons aged 2 years and over.

(d) Estimate has a relative standard error between 25% and 50% and should be used with caution.

(e) Components may not add to total because persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS

Table 3.12.5: Accessing health care, by Indigenous status and remoteness, 2004–05

	Major Cities			Inner Regional			Outer Regional			Remote			Very Remote(d)			Australia		
Accessing health care(a)	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
										Per cent								
Admitted to hospital	17.1	14.3	1.2	21.3	15.7	1.4*	17.9	15.4	1.2	20.4	13.1	1.6*	23.6	n.a.	n.a.	19.6	14.7	1.3*
Visited casualty/outpatients	3.1	2.4	1.3	4.9	2.3	2.1*	7.6	3.5	2.2*	9.6	3.4	2.8*	6.7	n.a.	n.a.	5.7	2.5	2.3*
Doctor consultation (GP and/or specialist)	25.6	23.7	1.1	25.1	19.8	1.3*	26.1	20.8	1.3*	20.5	17.3	1.2	24.8	n.a.	n.a.	25.0	22.5	1.1*
Dental consultation(c)	4.0	6.2	0.7*	3.8	6.1	0.6*	3.6	5.0	0.7	3.2(d)	6.3(d)	0.5	3.3	n.a.	n.a.	3.7	6.0	0.6*
Consultation with other health professional	14.1	12.9	1.1	19.5	14.1	1.4*	16.1	14.8	1.1	19.0	13.0	1.5	35.0	n.a.	n.a.	19.9	13.4	1.5*
Total accessing health care(e)	**43.8**	**42.7**	**1.0**	**48.2**	**41.0**	**1.2***	**45.2**	**40.6**	**1.1**	**48.3**	**39.2**	**1.2***	**55.1**	**n.a.**	**n.a.**	**47.5**	**42.1**	**1.1***
Not accessing/not stated	**56.2**	**57.3**	**1.0**	**51.8**	**59.0**	**0.9***	**54.8**	**59.4**	**0.9**	**51.7**	**60.8**	**0.9**	**44.9**	**n.a.**	**n.a.**	**52.5**	**57.9**	**0.9***
Total number ('000)	144.2	13,095.4	. .	95.6	3,904.4	. .	108.5	2,061.8	. .	41.3	n.a.	. .	84.7	n.a.	. .	474.3	19,292.4	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) The 2004–05 NHS did not collect data in Very Remote areas.

(b) Health-related actions in last 2 weeks except hospital admissions (in last 12 months).

(c) Persons aged 2 years and over.

(d) Estimate has a relative standard error between 25% and 50% and should be used with caution.

(e) Components may not add to total because persons may have reported more than one type of action.

Note: Data have been age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 3.12.6: Accessing health care, by Indigenous status (non-remote only), 2004–05

Accessing health care[a]	**Indigenous**	**Non-Indigenous**	**Ratio**
	%	%	
Admitted to hospital	18.5	14.7	1.3*
Visited casualty	1.7	0.9	1.9*
Visited outpatients	4.0	1.8	2.2*
Visited day clinic	2.4	2.5	1.0
Doctor consultation (GP)	23.5	19.6	1.2*
Specialist consultation	5.2	5.3	1.0
Dental consultation[b]	3.9	6.0	0.6*
Consultation with other health professional	16.2	13.4	1.2*
Total accessing health care[c]	**45.6**	**42.5**	**1.1***
Not accessing/not stated	**54.4**	**57.5**	**0.9***
Total number	348,315	19,061,481	—

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Health-related actions in last 2 weeks except hospital admissions (in last 12 months).

(b) Persons aged 2 years and over.

(c) Components may not add to total because persons may have reported more than one type of action.

Note: Data have been age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 3.12.7: Accessing health care, by Indigenous status, 2001 and 2004–05

Accessing health care[a]	**2001**			**2004–05**		
	Indigenous	**Non-Indigenous**	**Rate ratio**	**Indigenous**	**Non-Indigenous**	**Rate ratio**
	%	%		%	%	
Admitted to hospital	19	12	1.6*	20	15	1.3*
Visited casualty/ outpatients	6	3	2.2*	6	3	2.3*
Doctor consultation (GP and/or specialist)	26	25	1.1	25	23	1.1*
Dental consultation[b]	5	6	0.7*	4	6	0.6*
Consultation with other health professional	15	13	1.2	20	13	1.5*
Total accessing health care[c]	**46**	**42**	**1.1***	**47**	**42**	**1.1***
Did not access health care	**54**	**58**	**0.9***	**53**	**58**	**0.9***
Total number	374,354	1,8545,583	. .	474,310	1,9292,387	. .

* Differences between Indigenous and non-Indigenous data are statistically significant.

(a) Total who took at least one health-related action—those who were admitted to hospital in last 12 months, dental consultation in last 2 weeks, doctor consultation in last 2 weeks, visited casualty/outpatient in last 2 weeks or consulted with other health professional in last 2 weeks.

(b) Persons aged 2 years and over.

(c) Components may not add to total because persons may have reported more than one type of action.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2001 NHS (Indigenous supplement), 2004–05 NATSIHS and 2004–05 NHS.

Table 3.12.8: Accessing health care, by selected population characteristics and Indigenous status, 2004–05

	Language spoken at home [(a)]		**Equivalent income of household**		**Index of disparity**		**Location**		**Private health insurance[(b)]**		**Treatment when seeking health care[(c)]**			
Accessing health care[(d)]	**English**	**Other than English**	**1st quintile**	**5th quintile**	**1st quintile**	**5th quintile**	**Remote**	**Non-remote**	**With private cover**	**Without private cover**	**Worse**	**The same or better**	**Other[(e)]**	**Total**
							Per cent							
							Indigenous							
Admitted to hospital	22*	28*	24*	14	22*	18[(f)]	23*	19*	19	21*	40	21	14	20*
Casualty, outpatients	7*	6*[(f)]	8*	3	6*	4[(g)]	8*	5*	3[(f)]	6*	13[(f)]	6	3[(f)]	6*
Consulted GP/specialist	29*	30*	22*	21	25	25[(f)]	23*	26*	28	28	31	26	18	25
Consulted dentist[(h)]	4*	3*	2*[(f)]	4*	3	10[(g)]	3	4*	9[(f)]	3	3[(g)]	3	3[(f)]	4*
Consulted OHP[(i)]	19*	42*	19*	17	22*	21[(f)]	30*	16*	24	17*	40	22	17	20*
Total accessing services[(j)]	51*	62*	48	41	50*	51	53*	45*	54	48*	67	50	37	47*
Did not access services	49*	38*	52	59	50*	49	47*	55*	46*	52*	33	50	63	53*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
							Non-Indigenous							
Admitted to hospital	17*	14*	17*	15	15*	15	13*	n.a.	16	17*	n.a.	n.a.	n.a.	15*
Casualty, outpatients	3*	3*	4*	2	3*	2	3[(f)]*	n.a.	2	3*	n.a.	n.a.	n.a.	3*
Consulted GP/specialist	25*	29*	28*	19	26	21	17*	n.a.	23	26	n.a.	n.a.	n.a.	23*
Consulted dentist[(h)]	6*	6*	5*	8*	5	8	6[(f)]	n.a.	7	4	n.a.	n.a.	n.a.	6*
Consulted OHP[(i)]	15*	9*	13*	14	12*	15	13*	n.a.	16	13*	n.a.	n.a.	n.a.	13*
Total accessing services[(j)]	45*	45*	46	41	43*	43	39*	n.a.	46	43*	n.a.	n.a.	n.a.	42*
Did not access services	55*	55*	54	59	57*	57	61*	n.a.	54*	57*	n.a.	n.a.	n.a.	58*
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**n.a.**	**100**	**100**	**n.a.**	**n.a.**	**n.a.**	**100**

(continued)

Table 3.12.8 (continued): Accessing health care, by selected population characteristics and Indigenous status, 2004–05

* Differences between Indigenous and non-Indigenous are statistically significant.

(a) Persons aged 18 years and over.
(b) Persons aged 15 years and over in non-remote areas.
(c) Includes 'not stated' responses.
(d) Health-related actions in last 2 weeks except hospital admissions (in last 12 months).
(e) ‘Other’ includes 'only encountered Indigenous people', 'Did not seek health care in the last 12 months', refusal, not stated, don't know/not sure.
(f) Estimate has a relative standard error of between 25% and 50% and should be used with caution.
(g) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.
(h) Persons aged 2 years and over.
(i) OHP: other health professional.
(j) Components may not add to total because persons may have reported more than one type of action.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Time since last consulted a doctor or dentist

- In 2004–05, after adjusting for differences in age structure, approximately 36% of Indigenous people reported that it had been 2 years or more since their last dental consultation. This compared with 29% of non-Indigenous people (Table 3.12.9).
- Approximately 25% of Indigenous people reported it had been 2 weeks or less since their last visit to a doctor compared with 23% of non-Indigenous people, and for 26% of Indigenous people it had been 2 weeks to 3 months since their last doctor consultation compared with 28% of non-Indigenous people.
- There was little change in the time since last doctor consultation for Indigenous and non-Indigenous Australians between 2001 and 2004–05. For dental visits, there was a reduction in the 2 years or more category over this time period.

Table 3.12.9: Time since last consulted a dentist or doctor, by Indigenous status, 2001 and 2004–05

	2001			2004–05		
	Indigenous	Non-Indigenous	Rate ratio	Indigenous	Non-Indigenous	Rate ratio
	Per cent					
Dentist/dental professional						
Less than 6 months	22	30	0.7	20	29	0.7
6 months to less than 2 years	26	34	0.8	29	37	0.8
2 years or more	43	31	1.4	36	29	1.2
Never	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total[(a)]	**100**	**100**	. .	**100**	**100**	. .
GP/specialist						
2 weeks or less	27	25	1.1	25	23	1.1
2 weeks to 3 months	26	29	0.9	26	28	0.9
3 months to 6 months	13	16	0.8	14	17	0.8
6 months to 12 months	12	14	0.8	14	16	0.9
12 months to 2 years	19	16	1.2	19	16	1.2
Never	2	—	6.5	1	—	—
Total[(a)]	**100**	**100**	. .	**100**	**100**	. .

n.p. Not available for publication.

(a) Includes 'time since last consultation' not known.

Note: Data are age-standardised.

Source: ABS 2006.

Indigenous persons who did not access health care when needed and why

Table 3.12.10 presents data on whether Indigenous Australians needed to access a dentist, doctor, other health professional or hospital in the last 12 months, but didn't, and the reasons why they didn't access these health services.

- In 2004–05, approximately 21% of Indigenous Australians reported they needed to go to a dentist in the last 12 months, but didn't, 15% needed to go to a doctor, 8% needed to go to another health professional and 7% needed to go to hospital, but didn't.
- Indigenous people in non-remote areas were more likely to report that they needed to access a dentist, doctor or other health professional, but didn't, than people in remote areas of Australia.
- Indigenous females were more likely to report they needed to go to a dentist or doctor (23% and 17%, respectively) compared with Indigenous males (19% and 13%, respectively).
- Indigenous people aged 15–44 and 45 years and over were more likely to report they needed access to these services, but didn't go, than Indigenous people aged 0–14 years.
- The most common reasons why Indigenous people did not go to a dentist when needed were cost (29%), waiting time was too long or not available at the time required (22%) and feeling afraid, embarrassed or a dislike of the service (21%).
- The most common reasons why Indigenous people did not go to a doctor when needed were that they decided not to seek care (26%), too busy (24%), transport/distance difficulties (14%) and waiting time too long or not available at time required (14%).
- The most common reasons why Indigenous people did not go to another health professional when needed was cost (28%) and too busy (26%).
- The most common reasons why Indigenous people did not visit a hospital when needed was that they decided not to seek care for their health problem (25%) and transport/distance issues (19%).
- A higher proportion of Indigenous people living in remote areas reported transport/ distance as a reason for not accessing health services than Indigenous people in non-remote areas.

Table 3.12.10: Indigenous persons who did not access health services when needed and why, by remoteness, sex and age, 2004–05

	Remoteness		Sex		Age group			
	Non-remote	Remote	Male	Female	0–14	15–44	45+	Total
				Per cent				
Whether needed to go to dentist in last 12 months, but didn't(a)								
Yes	23	16	19	23	7	29	26	21
No	77	84	81	77	93	71	74	79
Total persons(b)	331,272	121,086	222,020	230,338	158,717	220,896	72,745	452,358
Reasons didn't go to a dentist								
Cost	32	15	27	30	22	30	30	29
Too busy (including work, personal or family responsibilities)	15	11	15	13	6(c)	16	13	14
Dislikes (service/professional/ afraid /embarrassed)	21	20	19	22	13(c)	23	19	21
Waiting time too long or not available at time required	21	23	18	24	28	20	22	22
Decided not to seek care	14	8	16	10	10(c)	13	15	13
Transport/distance	7	28	11	11	18	10	11	11
Not available in area	3	28	9	8	10(c)	8	9	8
Felt it would be inadequate	2(c)	2(d)	3(c)	2(c)	3(d)	1(c)	4(c)	2(c)
Discrimination/ not culturally appropriate/ language problems	—(d)	1(d)	1(d)	—(d)	—	—d)	1(c)	—(c)
Other	9	7(c)	9	7	23	7	5	8
Total who needed to visit dentist, but didn't(b)	**74,062**	**18,871**	**40,501**	**52,432**	**10,495**	**63,729**	**18,709**	**92,933**
Whether needed to visit doctor in last 12 months, but didn't								
Yes	17	10	13	17	4	22	22	15
No	83	90	87	83	96	78	78	85
Total persons(b)	348,315	125,995	232,362	241,948	180,669	220,896	72,745	474,310
Reasons why didn't visit the doctor when needed to								
Cost	14	4(c)	11	13	12(c)	13	10(c)	12
Too busy (including work, personal or family responsibilities)	26	17	21	26	11(c)	26	24	24
Dislikes (service/professional/ afraid/embarrassed)	10	11	15	6	8(c)	10	9	10
Waiting time too long or not available at time required	14	15	14	14	18(c)	13	14(c)	14
Decided not to seek care	27	22	30	24	24	27	26	26
Transport/distance	11	28(c)	12	15	20	12	17	14
Not available in area	2(d)	13(c)	3(c)	4(c)	8(d)	3	5(d)	4(c)
Felt it would be inadequate	5	7(c)	5	5	3(d)	5	7(c)	5
Discrimination/ not culturally appropriate/ language problems	1	1(d)	—(d)	1(c)	n.p.	1(c)	1	1(c)
Other	12	5	10	11	15(c)	10	11	11
Total who needed to visit doctor, but didn't(b)	**57,653**	**12,012**	**29,428**	**40,237**	**7,010**	**47,054**	**15,601**	**69,665**

(continued)

Table 3.12.10 (continued): Indigenous persons who did not access health services when needed and why, by remoteness, sex and age, 2004–05(a)

	Remoteness		Sex		Age group			
	Non-remote	Remote	Male	Female	0–14	15–44	45+	Total
				Per cent				
Whether needed to go to other health professional in last 12 months, but didn't								
Yes	9	5	7	8	2	11	10	8
No	91	95	93	92	97	89	90	92
Total persons(b)	348,315	125,995	232,362	241,948	180,669	220,896	72,745	474,310
Why didn't go to other health professional (OHP)								
Cost	33	5(d)	26	30	22(c)	31	24	28
Too busy (including work, personal or family responsibilities)	27	20	24	26	14(c)	29	21(c)	26
Dislikes (service/professional/ afraid/embarrassed)	12	11(c)	14	11	11(c)	14	7(c)	12
Waiting time too long or not available at time required	7(c)	19	9(c)	9	24(c)	6	9	9
Decided not to seek care	18	16	19	16	13(c)	16	23	17
Transport/distance	7(c)	15(c)	7(c)	9	7(c)	8(c)	8(c)	8
Not available in area	2(c)	30	7	7	9(c)	6	10(c)	7
Felt it would be inadequate	5(c)	5(d)	5(c)	5(c)	10(d)	4(c)	7(c)	5
Discrimination/ not culturally appropriate/ language problems	2(d)	2(d)	2(d)	1(d)	0(d)	2(c)	n.p.	*2
Other	11	10(c)	11	10	14(c)	10	11(c)	11
Total who needed to visit OHP but didn't(b)	**29,699**	**5,971**	**15,968**	**19,702**	**4,200**	**24,085**	**7,385**	**35,670**
Whether needed to go to hospital in the last 12 months, but didn't								
Yes	7	7	7	7	2	9	12	7
No	93	93	93	93	98	91	88	93
Total persons(b)	348,315	125,995	232,362	241,948	180,669	220,896	72,745	474,310
Why didn't visit hospital								
Cost	5(c)	3(c)	4(c)	5(c)	4(d)	4(c)	5(c)	4
Too busy (including work, personal or family responsibilities)	17	16	12(c)	20	8(d)	20	12	16
Dislikes (service/professional/ afraid/embarrassed)	18	9(c)	20	11	6(d)	17	17	16
Waiting time too long or not available at time required	18	10(c)	17	15	16(c)	16	15(c)	16
Decided not to seek care	25	26	28	23	22(c)	22	34	25
Transport/distance	13	34	14	23	27	17	20	19
Not available in area	2(c)	8(c)	3(c)	4(c)	4(d)	3(c)	6(c)	4(c)
Felt it would be inadequate	6	7(c)	6(c)	7(c)	14(c)	4(c)	8(c)	6
Discrimination/ not culturally appropriate/ language problems	2(c)	2(d)	1(d)	2(c)	1(d)	2(c)	1(d)	2(c)
Other	15	9	15(c)	12	17(c)	15	8(c)	14
Total who needed to visit hospital, but didn't(b)	**22,982**	**8,840**	**15,430**	**16,392**	**3,873**	**19,382**	**8,567**	**31,822**

(continued)

Table 3.12.10 (continued): Indigenous persons who did not access health services when needed and why, by remoteness, sex and age, 2004–05[(a)]

(a) Persons aged 2 years and over.

(b) Total includes 'not stated'.

(c) Estimate has a relative standard error between 25% and 50% and should be used with caution.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Note: Components may not add to total because persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Co-payment and private health insurance

Information on co-payment and private health insurance was collected in non-remote areas of Australia only, and is presented in Tables 3.12.11 and 3.12.12.

- In 2004–05, approximately 15% of Indigenous persons in non-remote areas required co-payment for their last visit to the doctor, 37% required co-payment for their last visit to a specialist and 17% required co-payment for their last visit to other health professionals (Table 3.12.11).
- In 2004–05, a much higher proportion of Indigenous Australians in non-remote areas reported they were not currently covered by private health insurance than non-Indigenous Australians (83% compared with 49%) (Table 3.12.12).
- The most common reasons for why Indigenous Australians had private health insurance were security, protection or peace of mind (43%), a shorter wait for treatment or concern over public hospital waiting lists (20%), and provision of benefits for ancillary services or extras (18%). Similar proportions of non-Indigenous Australians reported these reasons for also having private health insurance.
- The most common reasons for Indigenous Australians not having private health insurance were that they could not afford it (65%), and that they felt that Medicare cover was sufficient (19%).

Table 3.12.11: Indigenous persons in non-remote areas requiring co-payment for last visit to GP/specialist or other health professional, 2004–05

Co-payment required[a)]	Proportion (%)
GP[(b)]	
Yes	15
No	82
Not stated/not known	3[(c)]
Total	100
Total number	**72,801**
Specialist[(b)]	
Yes	37
No	62
Not stated/not known	1[(c)]
Total	100
Total number	**13,724**
Other health professional[(d)]	
Yes	17
No	80
Not stated/not known	2[(c)]
Total[(e)]	100
Total number	**54,327**

(a) Last consultation in the 2 weeks before interview.

(b) Consultations information is essentially as reported by respondents. In some cases respondents may have reported consultations with health practitioners other than doctors because they consider them to be doctors. Conversely, some consultations reported as being with other health professionals should have been reported as being a GP/specialist consultation (regardless of the type of treatment provided at the consultation).

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(d) Excludes dentists. For the full list of other health professionals, refer to *National Aboriginal and Torres Strait Islander Health Survey: Users Guide* (ABS cat. no. 4715.0.55.004).

(e) Total may not add up to 100% because of rounding effects.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 3.12.12: Private health insurance (non-remote areas only), by Indigenous status, 2004–05

	Indigenous	Non-Indigenous	Ratio
		Per cent	
Whether currently covered by private health insurance			
With private health insurance	15	51	0.3*
Without private health insurance	83	49	1.7*
Not stated/not known	2[(a)]	—	—
Total[(b)]	**100**	**100**	. .
Total number	**213,422**	**15,344,756**	. .
Reasons for private health insurance			
Security or protection or peace of mind	43	42	1.0
Shorter wait for treatment or concerned over public hospital waiting lists	20	22	0.9
Provides benefits for ancillary services or extras	18	22	0.8
Allows treatment as private patient in hospital	16	21	0.8
Always had it or parents pay it or condition of job	16	23	0.7*
Choice of doctor	14	20	0.7*
Has condition that requires treatment	11	8	1.4
Elderly or getting older or likely to need treatment	8[(a)]	6	1.3*
To gain government benefits or avoid extra Medicare levy	7	10	0.7
Lifetime cover or avoid age surcharge	6[(a)]	5	1.2
Other financial reasons	4[(a)]	4	1.0
Other reason	7[(a)]	6	1.2
Total[(b)]	**100**	**100**	. .
Total number	**28,843**	**7,847,957**	. .
Reasons not covered by private health insurance			
Cannot afford it/too expensive	65	64	1.0
Medicare cover sufficient	19	14	1.4*
Pensioner/Veteran's Affairs/health concession card	8	6	1.3
Not high priority/previously included in parents' cover	6	7	0.9
Lack of value for money/not worth it	6	11	0.5*
Do not need medical care/in good health/have no dependants	5	12	0.4
Disillusionment about having to pay out-of-pocket costs/gap fees	2	4	0.5*
Prepared to pay cost of private treatment from own resources	—[(a)]	1	—
Will not pay Medicare levy and private health insurance premium	1[(a)]	3	0.3*
High risk category	—[(a)]	—	—
Other	7	7	1.0
Total[(b)]	**100**	**100**	. .
Total numbers	**180,376**	**7,432,057**	. .

* Represents statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(b) The sum of the components may add to more than 100% because persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Treatment when seeking health care

- In 2004–05, about 4% of Indigenous people reported that when they sought health care in the last 12 months they were treated worse than non-Indigenous people, 77% reported they were treated the same as non-Indigenous people, and 5% reported they were treated better than non-Indigenous people (Table 3.12.13).
- A higher proportion of Indigenous people in remote areas reported they were treated better than non-Indigenous people (11% compared with 3%).
- Approximately 16% of Indigenous people felt that they were treated badly when they sought health care because they were Indigenous.
- The most common feeling felt when Indigenous people thought they had been treated badly when seeking health care was anger (67%). Approximately 31% of Indigenous people reported they felt sorry for the persons who had treated them badly and 28% of Indigenous people felt sad as a result of being treated badly.
- Approximately 38% of Indigenous people who had been treated badly when seeking health care reported that they talked to friends or family about the situation, 33% reported they try to avoid the situation or person involved and 30% try to do something about the people involved.

Table 3.12.13: Treatment of Indigenous Australians when seeking health care in the last 12 months, by remoteness, 2004–05

	Remote	Non-remote	Total
		Per cent	
Treatment when seeking health care			
Worse than non-Indigenous people	5	3	4
The same as non-Indigenous people	71	79	77
Better than non-Indigenous people	11	3	5
Only encountered Indigenous people	2	1[(b)]	2
Did not seek health care in last 12 months	4	6	5
Don't know/not sure	7	7	7
Total persons[(a)]	**185,515**	**72,782**	**258,297**
Whether felt treated badly because Aboriginal or Torres Strait Islander			
Yes	16	15	16
No	83	84	84
Total persons[(a)]	**185,515**	**72,782**	**258,297**
How usually feel when treated badly			
Feel angry	71	66	67
Feel sorry for the person who did it	28	32	31
Feel sad	35	25	28
Feel ashamed or worried about it	32	10	17
Feel sick	15	10	12
Other feeling	15	11	12
No feeling	6[(b)]	6[(b)]	6
Total persons[(a)]	**28,723**	**11,650**	**40,373**
What usually do when treated badly			
Talk to family or friends about it	49	33	38
Try to avoid the person/situation	34	32	33
Try to do something about the people who did it	36	27	30
Just forget about it	27	28	28
Keep it to yourself	15	19	18
Try to change the way you are or things that you do	12	8	9
Do anything else	5[(b)]	6	5
No action	3[(b)]	5[(b)]	4
Total persons[(a)]	**28,723**	**11,650**	**40,373**

(a) Total includes ‘not stated’ and refusal to answer.

(b) Estimate has a relative standard error between 25% and 50% and is subject to sampling variability too high for most practical purposes.

Note: Components may not add to total because persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Community housing

The 2006 CHINS collected information on health services from 1,187 discrete Indigenous communities. Information on distance to the nearest health facility, health professionals working within communities and access to medical emergency air services is presented below.

Distance to nearest health facility

- Of the 1,078 discrete Indigenous communities in 2006 that reported distance to the nearest health facility, 755 (71%) were located 100 kilometres or more from the nearest hospital (Table 3.12.14), compared with 841 (69%) in 2001. In 2006 these communities represented 67% of the reported population living in these discrete Indigenous communities compared with 53% in 2001.
- Aboriginal primary health-care centres and other (state-funded) community health centres were more likely to be located near or within Indigenous communities than were hospitals. In addition to the 9% of communities located with a hospital either in or within 10 kilometres of the community, 211 (20%) had an Aboriginal primary health-care centre located either in or within 10 kilometres of the community, and 217 (21%) had an other (state-funded) community health centre.
- Over half (56%) of the reported population living in discrete Indigenous communities that reported distance to the nearest health facility had an Aboriginal primary health-care centre in or within 10 kilometres of their community.

Table 3.12.14: Discrete Indigenous communities access to medical facilities, by reported usual population, 2006

	Hospital				Aboriginal Primary health-care centre				Other (state-funded) community health centre			
	Communities		Reported usual population		Communities		Reported usual population		Communities		Reported usual population	
Distance to nearest health facility	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Located within community	10	0.9	14,090	15.3	107	10.2	41,450	47.0	104	9.9	35,737	42.9
Less than 10 km	89	8.3	7,743	8.4	104	9.9	7,743	8.8	113	10.7	8,101	9.7
10–24 km	69	6.4	5,634	6.1	110	10.4	3,402	3.9	125	11.9	6,358	7.6
25–49 km	72	6.7	4,766	5.2	156	14.8	3,572	4.1	173	16.4	4,442	5.3
50–99 km	83	7.7	7,968	8.6	160	15.2	6,464	7.3	165	15.7	5,441	6.5
100–249 km	308	28.6	21,080	22.9	268	25.4	12,552	14.2	171	16.3	8,505	10.2
250 km or more	447	41.5	30,912	33.5	149	14.1	12,934	14.7	201	19.1	14,803	17.8
Total no. of communities(a)	***1,078***	***100.0***	***92,193***	***100.0***	***1,054***	***100.0***	***88,117***	***100.0***	***1,052***	***100.0***	***83,387***	***100.0***
Total no. of communities(b)	**1,187**	. .	**92,960**	. .	**1,187**	. .	**92,960**	. .	**1,187**	. .	**92,960**	. .

(a) Excludes 'distance to nearest health facility' not stated.

(b) Includes 'distance to nearest health facility' not stated

Source: ABS 2007 (2006 Community Housing and Infrastructure Needs Survey).

Health professionals within communities

- In 2006, over half (56%) of people living in discrete Indigenous communities located 10 kilometres or more from a hospital who completed the long community questionnaire, had a male Indigenous health worker visit or work in their community on a daily basis, and almost three quarters (74%) had a female Indigenous health worker visit or work in their community on a daily basis (Table 3.12.15).
- Approximately 55,723 (91%) of these people had a registered nurse visiting or working in their community and 53,201 (87%) had a doctor visiting or working in their community (Table 3.12.15).
- Almost three quarters (73%) of these people had a registered nurse visit or work in the community on a daily basis and only 19% had a doctor visit or work in the community on a daily basis (Table 3.12.15).
- Of the people living in discrete Indigenous communities with a population of less than 50 that are not self administered, 32% had a male Indigenous health worker, 30% had a female Indigenous health worker, 32% had a registered nurse and 23% had a doctor visiting or working in their community.

Table 3.12.15: Selected medical professionals working in the community, discrete Indigenous communities who completed the long community questionnaire[(a)], located 10 kilometres or more from a hospital, 2006

	Communities		Reported usual population	
Type of health professional and frequency of visit or work	**Number**	**Per cent**	**Number**	**Per cent**
Male Indigenous health worker				
Daily	75	26.0	34,300	56.0
Weekly or fortnightly	47	16.3	4,991	8.1
Monthly	10	3.5	1,331	2.2
Three monthly	5	1.7	448	0.7
Less than three monthly	11	3.8	1,906	3.1
Total with male Indigenous health worker visiting or working in community	*148*	*51.4*	*42,976*	*70.2*
Female Indigenous health worker				
Daily	121	42.0	45,587	74.4
Weekly or fortnightly	38	13.2	3,256	5.3
Monthly	14	4.9	1,355	2.2
Three monthly	4	1.4	119	0.2
Less than three monthly	3	1.0	820	1.3
Total with female Indigenous health worker visiting or working in community	*180*	*62.5*	*51,137*	*83.5*
Total with no Indigenous health worker visiting or working in community	*95*	*33.0*	*8,463*	*13.8*
Registered nurse				
Daily	120	41.7	44,923	73.3
Weekly or fortnightly	64	22.2	8,054	13.1
Monthly	17	5.9	1,663	2.7
Three monthly	2	0.7	150	0.2
Less than three monthly	8	2.8	933	1.5
Total with registered nurse visiting or working in community	211	73.3	55,723	91.0
No registered nurse visiting or working in community	*77*	*26.7*	*5,525*	*9.0*
Doctor				
Daily	14	4.9	11,344	18.5
Weekly or fortnightly	104	36.1	25,969	42.4
Monthly	58	20.1	11,478	18.7
Three monthly	6	2.1	2,550	4.2
Less than three monthly	10	3.5	1,860	3.0
Total with health prof. working in community	*192*	*66.7*	*53,201*	86.9
No doctor visiting or working in community	*96*	33.3	*8,047*	13.1
Total communities[(a)]	**288**	**100.0**	**61,248**	**100.0**

(a) All discrete Indigenous communities with a reported usual population of 50 persons or more, or which have a reported usual population of less than 50 persons, but which are not administered by a larger discrete Indigenous community or resource agency, and are located 10 kilometres or more from a hospital.

Source: AIHW analysis of 2006 CHINS.

Access to medical emergency air service

- In 2006, 316 (27%) discrete Indigenous communities had access to a medical emergency air service accounting for 57% (52,936) of people living in discrete Indigenous communities (Table 3.12.16).
- Approximately half (49%) of communities with access to a medical emergency air service were located 250 kilometres or more from the nearest hospital.

Table 3.12.16: Discrete Indigenous communities: access to medical emergency air services, by number of communities and reported usual population, 2006

	Access to medical emergency air service				No access to medical emergency air service				Total			
	Communities		Reported usual population		Communities		Reported usual population		Communities		Reported usual population	
Distance to nearest hospital	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
10–24 km	10	3.2	1,789	3.4	59	8.9	3,845	22.1	69	7.0	5,634	8.0
25–49 km	9	2.8	1,857	3.5	63	9.5	2,909	16.7	72	7.4	4,766	6.8
50–99 km	29	9.2	6,635	12.5	54	8.1	1,333	7.7	83	8.5	7,968	11.3
100–249 km	114	36.1	15,932	30.1	194	29.3	5,148	29.5	308	31.5	21,080	30.0
250 km or more	154	48.7	26,723	50.5	293	44.2	4,189	24.0	447	45.7	30,912	43.9
All communities 10 km or more from nearest hospital[(a)]	***316***	***100.0***	***52,936***	***100.0***	***663***	***100.0***	***17,424***	***100.0***	***979***	***100.0***	***70,360***	***100.0***
All communities[(b)]	**316**	. .	**52,936**	. .	**871**	. .	**40,024**	. .	**1,187**	. .	**92,960**	. .

(a) Excludes 'Distance to nearest hospital not stated'.

(b) Includes communities located less than 10 kilometres from nearest hospital. Includes 'Distance to nearest hospital not stated'

Source: ABS 2007 (ABS 2006 CHINS).

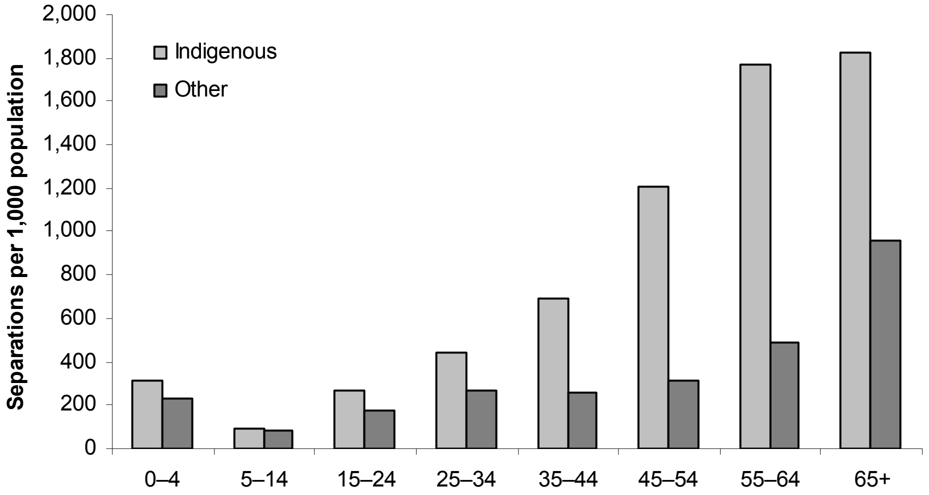
Hospitalisations

- In the 2-year period July 2004 to June 2006 there were a total of 13,783,538 hospitalisations in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. Of these, 467,822 or 3% were hospitalisations of Indigenous Australians.

An analysis of hospitalisations excluding those for routine dialysis are presented in Measure 1.02.

Hospitalisations by age group

- For the period 2004–05 to 2005–06, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined had higher hospitalisation rates than other Australians across all age groups (Figure 3.12.1).
- The greatest difference in rates occurred in the 45–54 and 55–64 year age groups where Indigenous Australians were hospitalised at around four times the rate of other Australians in these age groups.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.12.1: Age-specific hospitalisation rates, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006

Hospitalisations by state/territory

Table 3.12.17 presents hospitalisations for all diagnoses for the 2-year period July 2004 to June 2006 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are included in Table 3.12.17. The Australia data is adjusted by applying a completeness factor of 89.5%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised at more than twice the rate of other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised at 2.6 times the rate of other Australians.
- In the period July 2004 to June 2006, Indigenous Australians in Victoria were hospitalised at about the same rate as other Australians. Indigenous Australians in New South Wales and Queensland were hospitalised at between 1.5 times and twice the rate of other Australians. In Western Australia and South Australia, Indigenous Australians were hospitalised at around three times the rate of other Australians, although in the Northern Territory, Indigenous Australians were hospitalised at six times the rate of other Australians (Table 3.12.17).

Table 3.12.17: Hospitalisations, by Indigenous status, sex and state/territory, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[a][b][c][d]

	Indigenous				Other[e]				
	Number	No. per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Number	No. per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Ratio[i]
NSW									
Males	44,115	502.0	495.4	508.5	2,011,189	306.5	306.1	306.9	1.6*
Females	51,340	508.9	503.4	514.5	2,245,455	317.1	316.7	317.6	1.6*
Persons	95,460	503.5	499.3	507.7	4,256,725	309.9	309.6	310.2	1.6*
Vic									
Males	7,126	356.2	344.9	367.5	1,802,921	366.9	366.4	367.5	1.0
Females	10,620	502.0	490.6	513.4	2,064,687	385.6	385.1	386.1	1.3*
Persons	17,746	430.5	422.5	438.4	3,867,627	373.5	373.1	373.8	1.2*
Qld									
Males	52,567	747.9	739.3	756.4	1,268,624	336.4	335.8	337.0	2.2*
Females	68,494	800.1	792.7	807.6	1,430,335	360.5	359.9	361.1	2.2*
Persons	121,061	773.8	768.2	779.4	2,698,959	346.5	346.1	347.0	2.2*
WA									
Males	40,025	932.3	921.1	943.5	623,630	331.5	330.6	332.3	2.8*
Females	59,270	1208.0	1196.9	1219.2	683,559	345.9	345.1	346.7	3.5*
Persons	99,295	1075.0	1067.1	1082.9	1,307,190	336.2	335.6	336.8	3.2*
SA									
Males	15,298	956.2	938.1	974.3	535,386	339.7	338.8	340.6	2.8*
Females	18,130	948.5	932.6	964.5	596,281	354.8	353.9	355.8	2.7*
Persons	33,429	949.8	937.8	961.7	1,131,673	344.7	344.1	345.4	2.8*
NT									
Males	43,956	1189.7	1176.6	1202.9	26,348	221.6	218.4	224.9	5.4*
Females	56,875	1529.3	1514.8	1543.8	27,194	245.8	242.4	249.2	6.2*
Persons	100,831	1378.0	1368.0	1388.0	53,542	233.1	230.8	235.5	5.9*
NSW, Vic, Qld, WA, SA and NT[d]									
Males	**203,087**	**737.3**	**733.2**	**741.4**	**6,268,098**	**332.7**	**332.5**	**333.0**	**2.2***
Females	**264,729**	**851.8**	**847.9**	**855.6**	**7,047,511**	**349.1**	**348.9**	**349.4**	**2.4***
Persons	**467,822**	**796.1**	**793.3**	**798.9**	**13,315,716**	**338.7**	**338.5**	**338.9**	**2.4***
Australia unadjusted[j]									
Males	207,223	720.7	716.7	724.8	6,523,761	332.6	332.4	332.9	2.2*
Females	269,294	827.1	823.4	830.9	7,330,383	348.8	348.5	349.0	2.4*
Persons	476,523	774.9	772.2	777.6	13,854,310	338.5	338.3	338.6	2.3*
Australia adjusted[j][k]									
Males	231,572	805.4	801.2	809.7	6,499,412	331.4	331.2	331.7	2.4*
Females	300,936	924.3	920.3	928.3	7,298,741	347.2	347.0	347.5	2.7*
Persons	532,515	866.0	863.1	868.8	13,798,318	337.1	336.9	337.2	2.6*

(continued)

Table 3.12.17 (continued): Hospitalisations, by Indigenous status, sex and state/territory, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

(l) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(m) Categories are based on the (ICD-10-AM) fifth edition (National Centre for Classification in Health 2006).

(n) Financial year reporting.

(o) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(p) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(q) Directly age-standardised using the Australian 2001 standard population.

(r) LCL = lower confidence limit.

(s) UCL = upper confidence limit.

(t) Rate ratio—Indigenous: other.

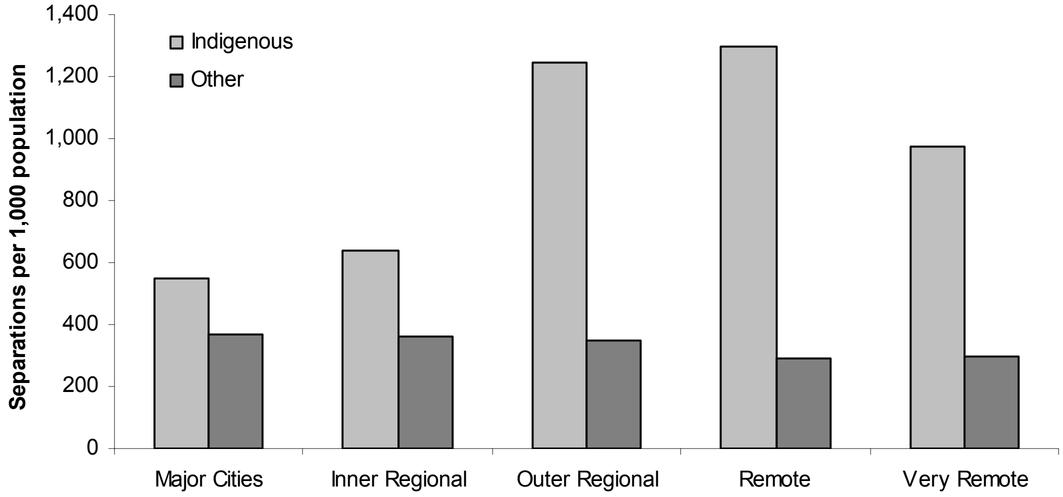
(u) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(v) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by remoteness

- In the period July 2004 to June 2006, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, hospitalisation rates among Indigenous Australians were highest among those living in Outer Regional and Remote areas. For other Australians, hospitalisation rates were highest among those living in cities and Inner Regional areas.
- Indigenous Australians living in Major Cities and Inner Regional areas were hospitalised at twice the rate of other Australians and Indigenous Australians living in Outer Regional and Remote areas were hospitalised at around four times the rate of other Australians (Figure 3.12.2).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.12.2: Age-standardised hospitalisation rates, by Indigenous status and remoteness, NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006

Time series analyses

Time series data is presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 1998–99 to 2005–06—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, therefore they were included as part of the current period analysis (2004–05 to 2005–06), but not as part of the time series analyses.

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians over the period 1998–99 to 2005–06 are presented in Table 3.12.18 and Figure 3.12.3.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates among Indigenous Australians during the 7-year period 1998–99 to 2005–06. The fitted trend implies an average yearly increase in the rate of around 48 per 1,000 which is equivalent to a 46% increase in the rate over this period.
- There were also significant increases in hospitalisation rates among other Australians during the same period, with an average yearly increase in the rate of 4 per 1,000 for other Australian persons. This is equivalent to a 9% increase in the rate over this period.
- There were significant increases in the hospitalisation rate ratios and rate differences between Indigenous and other Australians. The fitted trend implies an average yearly increase of 0.1 in the rate ratio (34% increase over the period) and 44 per 1,000 in the hospitalisation rate differences between Indigenous and other Australians over this period (76% increase). This indicates a relative and absolute increase in the gap between hospitalisation rates for Indigenous and other Australians.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians. Also, changes in access, hospital policies and practices all have an impact on the level of hospitalisation over time. Caution should be used in interpreting changes over time because it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rate at which Indigenous Australians are hospitalised. An increase in hospitalisation rates may also reflect better access to hospitals, rather than a worsening of health.

Table 3.12.18: Age-standardised hospitalisation rates, rate ratios and rate differences, Qld, WA, SA and NT combined, 1998–99 to 2005–06(a)

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	Annual change(b)	% change over period(c)
Indigenous number per 1,000										
Persons	726.0	777.9	790.3	854.8	896.5	957.3	995.8	1,064.1	47.6*	45.9
Other Australian(d) number per 1,000										
Persons	326.5	333.7	343.4	349.4	350.1	352.5	352.8	357.1	4.0*	8.6
Rate ratio(e)										
Persons	2.2	2.3	2.2	2.4	2.6	2.7	2.8	3.0	0.1*	34.1
Rate difference(f)										
Persons	399.5	444.2	446.9	505.4	546.5	604.8	643.0	707.0	43.6*	76.4

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–99 to 2003–04.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 1998–99 and 2005–06 based on the average annual change over the period.

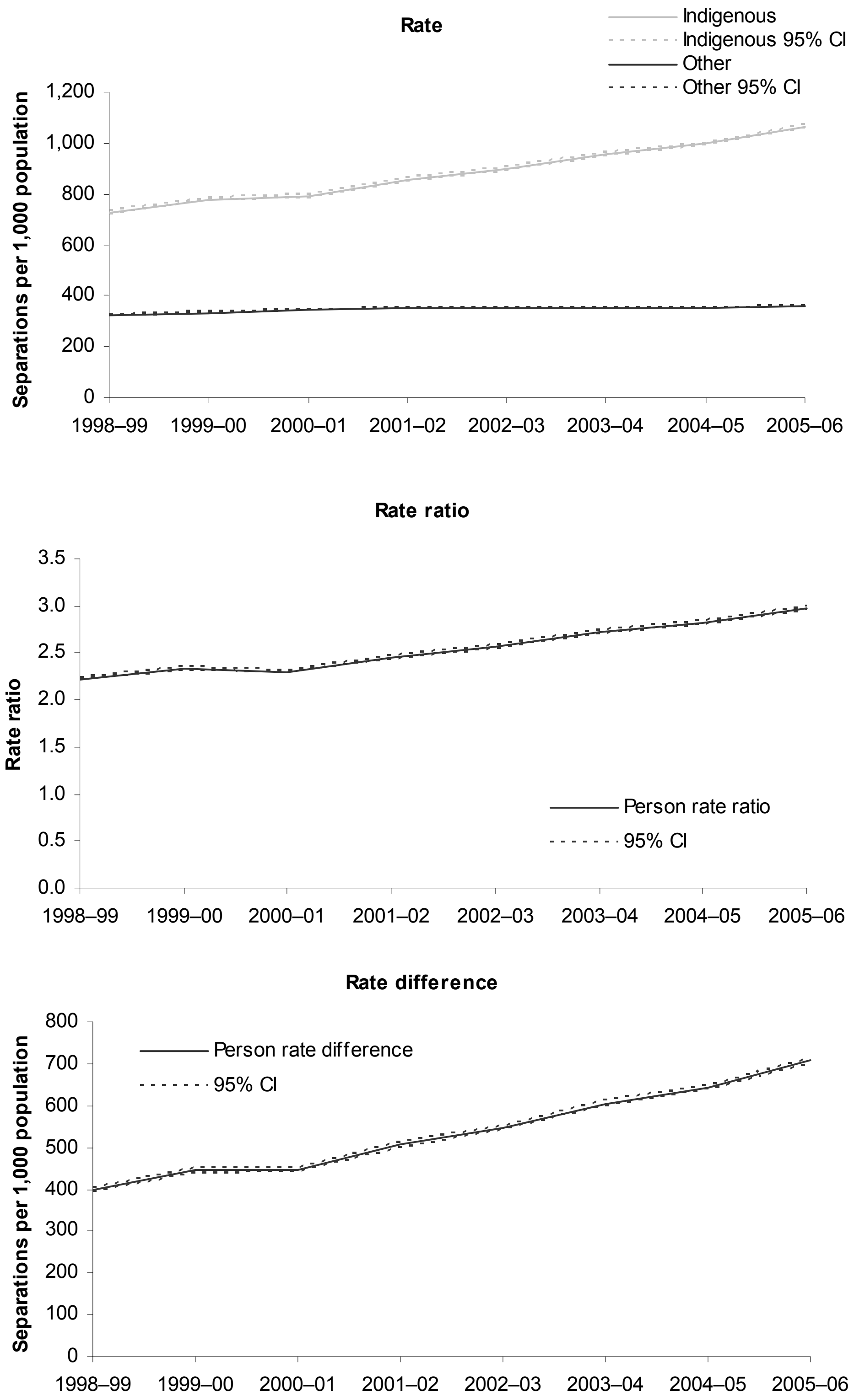
(d) 'Other Australian' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Note: Rates have been directly age-standardised using the Australian 2001 standard population.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.12.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians, Qld, WA, SA and NT combined, 1998–99 to 2005–06

Hospitalisations for palliative care data

Data on palliative care are sourced from the Admitted Patient Palliative Care National Minimum Data Set, which is a component of the National Hospital Morbidity Data Collection.

Information on hospitalisations for palliative care is presented in Table 3.12.19 below.

Hospitalisations for the 2-year period July 2004 to June 2006 are presented for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. As well as rates and ratios for the six jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2004–05, unadjusted and adjusted national level data are included in the hospitalisations by state and territory table. The Australia data is adjusted by applying a completeness factor of 89.5%, which is an estimate of the level of Indigenous under-identification in hospital separations data.

- Over the period July 2004 to June 2006, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised for palliative care at around 1.5 times the rate of other Australians.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous persons were hospitalised for palliative care at 1.7 times the rate of other Australians.
- Over the period July 2004 to June 2006, Indigenous Australians in Queensland and Western Australia were hospitalised for palliative care at around twice the rate of other Australians. In New South Wales and South Australia, Indigenous females were hospitalised for palliative care at higher rates than other females although Indigenous males were hospitalised at slightly lower rates than other males. In Victoria and the Northern Territory, Indigenous Australians were hospitalised for palliative care at lower rates than other Australians, but the number of hospitalisations for palliative care for Indigenous persons in these jurisdictions were very small and thus the rates should be interpreted with caution (Table 3.12.17).

Table 3.12.19: Hospitalisations for palliative care, by Indigenous status, sex and state/territory, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	No. per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
NSW									
Males	72	1.3	0.9	1.7	10,154	1.6	1.5	1.6	0.8
Females	99	1.8	1.3	2.2	8,346	1.1	1.0	1.1	1.7*
Persons	172	1.6	1.3	1.9	18,500	1.3	1.3	1.3	1.2*
Vic									
Males	n.p.	1.2	0.3	2.2	5,581	1.2	1.1	1.2	1.1
Females	n.p.	n.p.	n.p.	n.p.	4,782	0.8	0.8	0.8	0.4
Persons	15	0.7	0.3	1.1	10,363	1.0	0.9	1.0	0.7
Qld									
Males	103	3.3	2.5	4.1	5,979	1.6	1.6	1.7	2.0*
Females	100	1.6	1.3	2.0	4,615	1.1	1.1	1.1	1.5*
Persons	203	2.3	1.9	2.7	10,594	1.4	1.3	1.4	1.7*
WA									
Males	72	3.2	2.4	4.1	3,100	1.8	1.7	1.9	1.8*
Females	84	2.9	2.2	3.5	2,428	1.2	1.1	1.2	2.4*
Persons	156	3.0	2.5	3.5	5,528	1.5	1.4	1.5	2.1*
SA									
Males	12	0.8	0.3	1.3	1,817	1.1	1.1	1.2	0.7
Females	23	1.4	0.7	2.1	1,230	0.6	0.6	0.6	2.3*
Persons	35	1.1	0.7	1.6	3,047	0.8	0.8	0.9	1.4
NT									
Males	17	0.7	0.3	1.1	78	0.9	0.7	1.2	0.7
Females	11	0.4	0.1	0.6	71	1.0	0.7	1.3	0.3*
Persons	28	0.5	0.3	0.7	149	1.0	0.8	1.2	0.5
NSW, Vic, Qld, WA, SA and NT[(d)]									
Males	**287**	**2.1**	**1.8**	**2.4**	**26,709**	**1.5**	**1.4**	**1.5**	**1.4***
Females	**321**	**1.6**	**1.4**	**1.8**	**21,472**	**1.0**	**1.0**	**1.0**	**1.6***
Persons	**609**	**1.8**	**1.6**	**1.9**	**48,181**	**1.2**	**1.2**	**1.2**	**1.5***
Australia unadjusted[(j)]									
Males	301	2.1	1.8	2.4	27,701	1.5	1.4	1.5	1.4*
Females	335	1.6	1.4	1.8	22,479	1.0	1.0	1.0	1.6*
Persons	637	1.8	1.6	1.9	50,180	1.2	1.2	1.2	1.5*
Australia adjusted[(j)(k)]									
Males	336	2.3	2.0	2.6	27,666	1.5	1.4	1.5	1.6*
Females	374	1.8	1.6	2.0	22,440	1.0	1.0	1.0	1.8*
Persons	712	2.0	1.8	2.2	50,105	1.2	1.2	1.2	1.7*

(continued)

Table 3.12.19 (continued): Hospitalisations for palliative care, by Indigenous status, sex and state/territory, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p < 0.05 level.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Categories are based on the (ICD-10-AM) fifth edition (National Centre for Classification in Health 2006).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio—Indigenous: other.

(j) Includes all eight states and territories, including the Australian Capital Territory and Tasmania; Other Territories and Residence State not applicable (e.g. overseas, at sea, no fixed address).

(k) Australian hospitalisation numbers and rates have been adjusted for Indigenous under-identification using a national adjustment factor of 0.89. This factor was derived from a study undertaken by the AIHW in 2007 which assessed the level of Indigenous under-identification in hospital data in all states and territories by comparing information gathered from face-to face interviews in public hospitals with results from hospital records. By applying this factor, the number of Indigenous hospitalisations was increased by 11% and these additional hospitalisations then subtracted from the number of hospitalisations for Other Australians.

Source: AIHW analysis of National Hospital Morbidity Database.

General practitioners

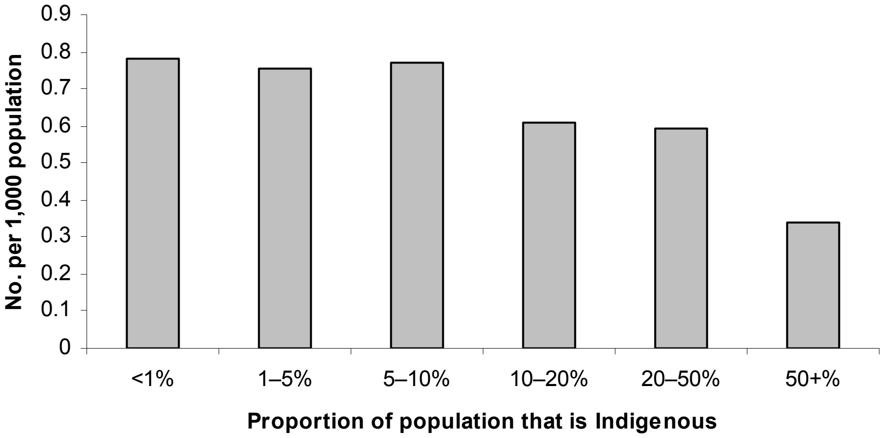
Information on the number of GPs working in Australia is available from the DoHA. Data in Figure 3.12.4 present the number of full-time equivalent GPs per 1,000 population by areas of low through to high proportions of Indigenous populations. Using population data from the 2001 Census, Statistical Local Areas (SLAs) were grouped according to the proportion of the population living in these areas that was Indigenous.

- In 2005–06, there were approximately 15,133 full-time equivalent GPs working in Australia. Approximately 47% of GPs were working in areas where less than 1% of the population was Indigenous, at a rate of 0.8 per 1,000 population and only 0.2% of GPs were working in areas where more than 50% of the population was Indigenous, at a rate of 0.3 per 1,000 population.

Care must be taken in using and interpreting the data provided. There are a few issues to note which have an effect on the quality of the data:

- The data include only those services claimed through the Medicare system. Consequently the full-time equivalent (FTE) for doctors in remote areas, which are more likely to have high proportions of Indigenous population, will be understated as some services are provided in rural hospitals and through the Royal Flying Doctor Service. There is also anecdotal information that services provided in Aboriginal Medical Services are often not claimed through the Medicare system, further understating the FTE for doctors in areas with high Indigenous populations.
- The data at the grouped SLA level can hide variability in data at the individual SLA level. For example, although one group of SLAs may have fewer people per doctor overall than a second group of SLAs, there will be a number of SLAs in the first group with far more people per doctor than several SLAs in the second group.
- The after-hours care MBS items cannot be claimed before 8pm during the week, nor the emergency after-hours items before 11pm. Therefore the items don't cover the entire after-hours period.
- Attendances at hospital emergency departments are not recorded in the MBS. Therefore these figures will underestimate the true amount of primary care received after hours.

- The population in an area isn't the same as the number of patients in the area because not everyone visits a doctor during the year and those that visit don't necessarily use a doctor in their resident area.



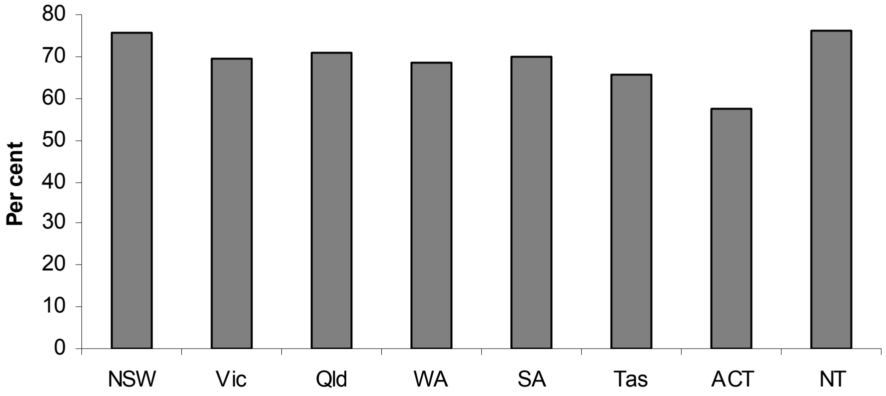
Source: Department of Health and Ageing.

Figure 3.12.4: Number of full-time equivalent GPs per 1,000 population, by areas of low through to high proportions of Indigenous populations, 2005–06

GPs who bulk bill

No data are currently available on the number of GPs who bulk bill by areas of low through to high proportions of Indigenous populations, or by remoteness category. Data on the proportion of medical services that bulk bill are available by electoral role and state and territory. State and territory data are presented below.

- In 2005–06, approximately 72% of medical services bulk billed. This ranged from 58% in the Australian Capital Territory to 76% in New South Wales and the Northern Territory (Figure 3.12.5).



Source: AIHW analysis of Medicare data.

Figure 3.12.5: Proportion of medical services that bulk bill, by state/territory, 2005–06

Health labour force

Information on the health labour force is available from the AIHW labour force surveys, which collect data on health-related occupations including medical practitioners, nurses and midwives, psychologists, physiotherapists, podiatrists, pharmacists, dentists and occupational therapists. In the absence of centralised national mailing lists for each profession, most of these surveys rely on the various state and territory registration boards to administer survey questionnaires as part of the registration renewal process.

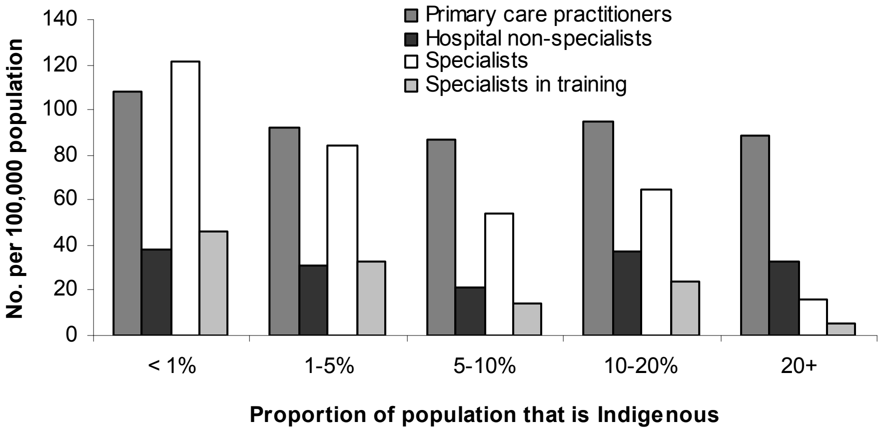
The AIHW uses the data collected in each of these surveys to derive estimates of the total health labour force for each occupation. Survey responses are weighted to match available registration data provided by state/territory registration boards to account for non-response. Weighted data were not available from the Occupational Therapy Labour Force Survey and thus are not presented here. Data from the Pharmacists Labour Force Survey are presented in measure 3.13—Access to prescription medicines.

Data presented below show the number of FTE employed health professionals per 100,000 population by areas of low through to high proportions of Indigenous populations. Using population data from the 2001 Census, SLAs were grouped according to the proportion of the population living in these areas that self-identified as Indigenous.

Clinical medical practitioners

Information on medical practitioners in Australia is collected through the AIHW Medical Labour Force Survey of which the most recently published data are for 2005. The survey includes all practitioners registered with the medical board in each state and territory but excludes those practitioners who registered for the first time in the survey year. Response to the Medical Labour Force Survey in 2005 represented an estimated 71% of the medical registrations in all jurisdictions. As the response rate to the 2005 survey in the Northern Territory was very low (7.5%), the survey data could not be used to obtain estimates for 2005 for that jurisdiction. In order to provide some estimates for 2005, survey responses to the 2004 Northern Territory Medical labour force survey were weighted to 2005 registration benchmarking figures.

- In 2005 there were 56,084 employed clinical medical practitioners in Australia. The rate of FTE employed clinical medical practitioners in Australia was 268 per 100,000. Clinical medical practitioners are comprised of primary care practitioners (FTE rate of 98 per 100,000), hospital non-specialists (33 per 100,000), specialists (99 per 100,000) and specialists-in-training (37 per 100,000) (AIHW 2008b).
- The FTE rate of employed primary care practitioners was highest in areas where less than 1% of the population was Indigenous (108 per 100,000) and lowest in areas where more 5—10% of the population was Indigenous (87 per 100,000) (Figure 3.12.6).
- The FTE rate of employed hospital non-specialists was similar for areas with low and high proportions of Indigenous people in the population.
- The FTE rate of employed specialists was highest in areas where less than 1% of the population was Indigenous (121 per 100,000) and lowest in areas where 20% or more of the population was Indigenous (16 per 100,000).
- The FTE rate of employed specialists-in-training was highest in areas where less than 1% of the population was Indigenous (46 per 100,000) and lowest in areas where over 20% of the population was Indigenous (5 per 100,000).



Notes:

1. In 2005 1955 clinical medical practitioners did not report the postcode they worked in. Hence the number of employed clinicians by region is an underestimate.
2. FTE based on working 45 hours per week

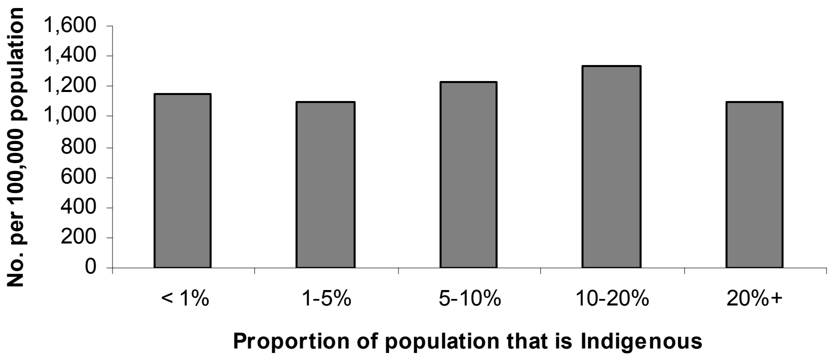
Source: AIHW analysis of 2005 Medical Labour Force Survey data.

Figure 3.12.6: FTE employed clinical medical practitioners per 100,000 population, by areas of low through to high proportions of Indigenous population, 2005

Nurses and midwives

Information on nurses and midwives in Australia is available from the AIHW Nursing and Midwifery Labour Force Survey. The latest Nursing and Midwifery Labour Force Survey was conducted in 2007, but the most recent results are for 2005. The scope of the survey is all nurses who were registered or enrolled with the nursing/midwifery board in each state or territory at the time of the survey. Coverage excludes nurses who registered or enrolled for the first time in the 12 months before the survey. Response to the Nursing and Midwifery Labour Force Survey in 2005 represented an estimated 55% of the nursing registrations and enrolments in all jurisdictions. The response rate was lower for enrolled nurses (51%) than for registered nurses (56%).

- In 2005 there were 244,360 employed nurses and midwives in Australia. The FTE rate of employed nurses and midwives was around 1,133 per 100,000 (AIHW 2008c).
- The rates of FTE employed nurses and midwives were similar in areas with low and high proportions of the population that was Indigenous. Rates ranged from 1,094 per 100,000 in areas where 20% or more of the population was Indigenous to 1,342 per 100,000 in areas where between 10% and 20% of the population was Indigenous (Figure 3.12.7).



Notes:

1. In 2005, 11,218 employed nurses and midwives did not report the postcode they worked in. Hence the number of employed nurses and midwives stated by region is an underestimate.
2. FTE is based on 35 hours per week.
3. Estimates for the Western Australia and Northern Territory should be treated with caution because of the low response rate WA (26.9% and 13.7%, respectively).
4. Data from Victoria are based on 2004 survey data weighted to 2005 registration/enrolment data.

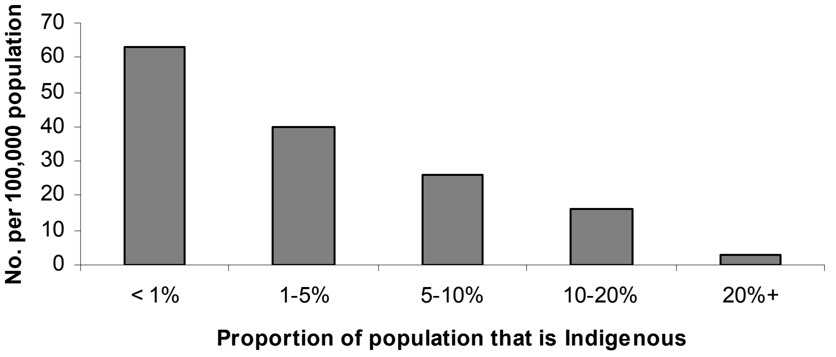
Source: AIHW analysis of 2005 Nursing and Midwifery Labour Force Survey data.

Figure 3.12.7: FTE employed nurses and midwives per 100,000 population, by areas of low through to high proportions of Indigenous population, 2005

Physiotherapists

Information on physiotherapists in Australia is available from the AIHW Physiotherapy Labour Force Survey, the latest of which was conducted in 2002. The 2002 survey was conducted in five jurisdictions (New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory). The number of registrations in those jurisdictions comprised around 87% of physiotherapy registrations nationally in 2002 (excluding the Northern Territory for which no registration figures were available). Coverage excludes physiotherapists whose initial registration occurred during the 12 months preceding the survey. The overall response rate in the five jurisdictions was 72%.

- In 2002, there were 10,728 employed physiotherapists in the five jurisdictions included in the AIHW survey (AIHW 2006a).
- The FTE rate of employed physiotherapists was highest in areas where only a small proportion of the population was Indigenous and lowest in areas with a relatively high Indigenous representation. For example, in areas where less than 1% of the population was Indigenous, the FTE rate was 63 per 100,000 compared with 3 per 100,000 in areas where over 20% of the population was Indigenous (Figure 3.12.8).



Notes:

1. In 2002, 728 employed physiotherapists did not report the postcode they worked in. Hence the number of employed physiotherapists stated by region is an underestimate.
2. Data for New South Wales, Victoria, Queensland, South Australia and Australian Capital Territory only.
3. Victoria, South Australia and the Australian Capital Territory collected 'total' hours, whereas New South Wales and Queensland collected 'paid hours' only. These hours were used for the calculation of FTE. FTE is based on 35 hours per week.

Source: AIHW analysis of 2002 Physiotherapy Labour Force Survey data.

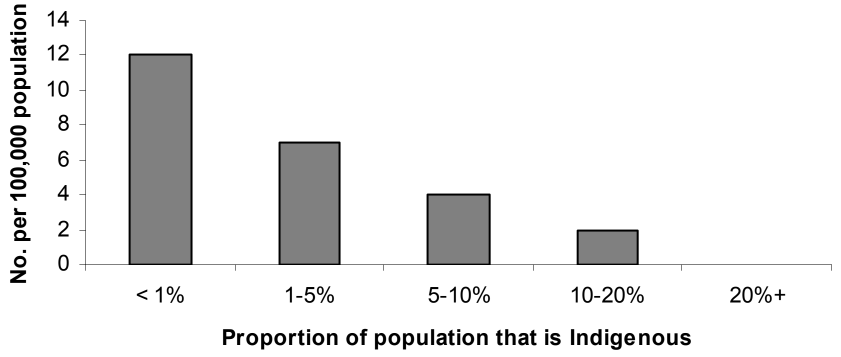
Figure 3.12.8: FTE employed physiotherapists per 100,000 population, by areas of low through to high proportions of Indigenous population, 2002

Podiatrists

Information on podiatrists in Australia is available from the AIHW Podiatry Labour Force Survey, the latest of which was conducted in 2003. The 2003 survey was conducted in five jurisdictions (New South Wales, Victoria, Queensland, South Australia and Tasmania). The number of registrations in those jurisdictions comprised around 87% of podiatry registrations nationally in 2003 (excluding the Northern Territory for which no registration figures were available). Coverage excludes podiatrists whose initial registration occurred during the 12 months preceding the survey. The overall response rate for the five jurisdictions was 72%.

In 2003, there were 1,820 employed podiatrists in Australia. The FTE rates of employed podiatrists per 100,000 population for each of the five states were estimated to be: New South Wales, 9.3; Victoria, 14.5; Queensland, 7.7; South Australia, 19.7; and Tasmania, 13.2 (AIHW 2006b).

- The FTE rate of employed podiatrists was highest in areas where less than 1% of the population was Indigenous (12 per 100,000) and lowest in areas where 20% or more of the population was Indigenous (less than 2 per 100,000) (Figure 3.12.9).



Notes:

1. In 2003, 98 employed Podiatrists did not report the postcode they worked in. Hence the number of employed podiatrists stated by region is an underestimate.
2. Data for New South Wales, Victoria, Queensland, South Australia and Tasmania only.
3. Victoria, South Australia and Tasmania collected 'paid' hours, whereas New South Wales and Queensland collected 'total hours worked'. These hours were used for the calculation of FTE. FTE is based on 35 hours per week.

Source: AIHW analysis of 2003 Podiatry Labour Force Survey data.

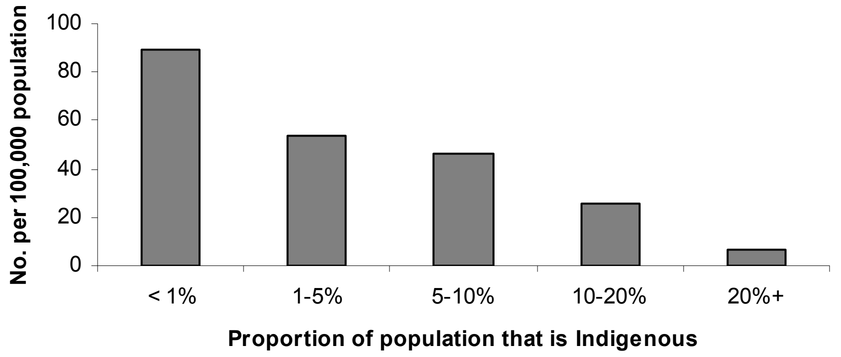
Figure 3.12.9: FTE employed podiatrists per 100,000 population, by areas of low through to high proportions of Indigenous population, 2003

Psychologists

Information on psychologists in Australia is available from the AIHW Psychologist Labour Force Survey, the latest of which was conducted in 2002. The 2002 survey was conducted in five jurisdictions (New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory). The number of registered psychologists in these jurisdictions comprised around 86% of psychologists registered nationally. Coverage excludes those psychologists whose initial registration occurred during the 12 months preceding the survey. The overall response rate for the five jurisdictions was 56%.

In 2002, there were 14,073 employed psychologists in the five jurisdictions included in the AIHW survey. The full-time equivalent (FTE) rates of psychologists per 100,000 population for each jurisdiction were estimated to be: New South Wales, 88; Victoria, 95; Queensland, 64; South Australia, 54; and the Australian Capital Territory, 170 (AIHW 2006c).

- The FTE rate of employed psychologists was highest in areas where less than 1% of the population was Indigenous (89 per 100,000) and lowest in areas where 20% or more of the population was Indigenous (7 per 100,000) (Figure 3.12.10).



Notes:

1. In 2002 492 employed psychologists did not report the postcode they worked in. Hence the number of employed psychologists stated by region is an underestimate.
2. Data for New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory only.
3. FTE is based on 35 hours per week.

Source: AIHW analysis of 2002 Psychologist Labour Force Survey data.

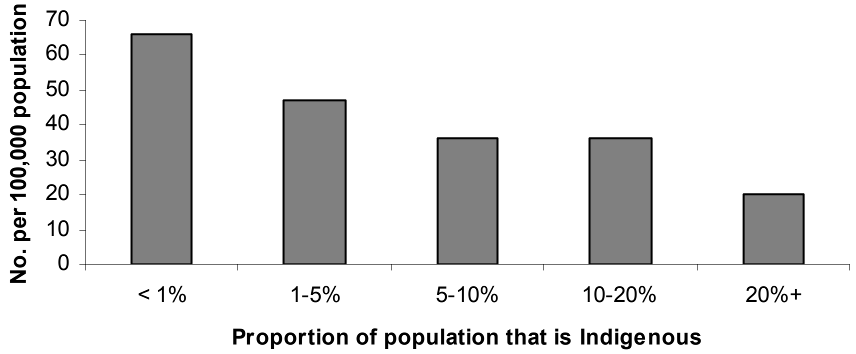
Figure 3.12.10: FTE employed psychologists per 100,000 population, by areas of low through to high proportions of Indigenous populations, 2002

Dentists

Information on dentists in Australia is available from the AIHW Dental Labour Force Survey. The most recent data available from this survey are for 2005.

In 2005 there were 10,074 employed dentists included in the AIHW survey. The full-time equivalent (FTE) rate of dentists per 100,000 population was around 57 per 100,000.

- The FTE rate of employed dentists was highest in areas where less than 1% of the population was Indigenous (66 per 100,000) and lowest in areas where 20% or more of the population was Indigenous (20 per 100,000) (Figure 3.12.11).



Note: FTE is based on 35 hours per week.

Source: AIHW analysis of 2005 Dental Labour Force Survey data.

Figure 3.12.11: FTE employed dentists per 100,000 population, by areas of low through to high proportions of Indigenous populations, 2005

Aboriginal and Torres Strait Islander health services

Data on Indigenous primary health-care services are available from the SAR and the DASR data collections which are joint projects of the National Aboriginal Community Controlled Health Organisation and the OATSIH.

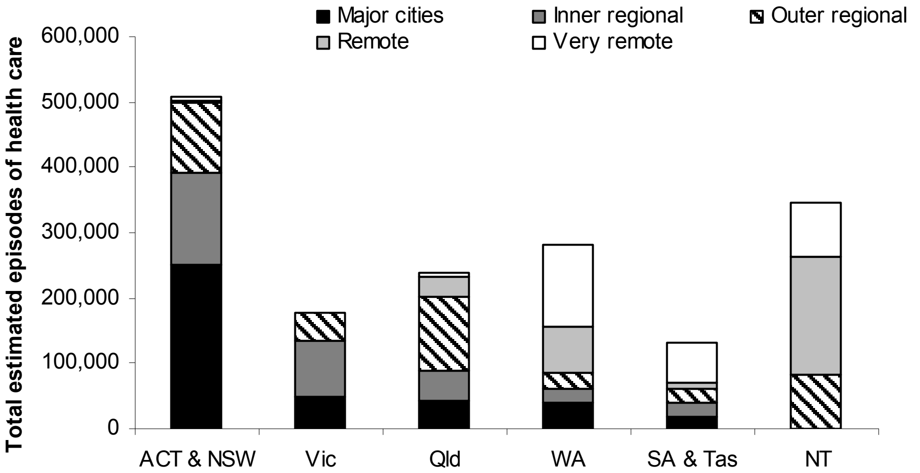
Primary health-care services

Episodes of health care

Episodes of health care are defined in the SAR data collection as 'contact between an individual client and a service by one or more staff to provide health care, such as for sickness, injury, counselling, health education, or screening'.

Figure 3.12.12 shows the total estimated number of episodes of health care provided by respondent Indigenous primary health-care services by remoteness area in each state and territory.

- In 2005–06, the number of episodes of health care provided across each state and territory varied considerably by remoteness area. The majority of the estimated episodes of health care reported for Western Australia, South Australia and Tasmania, and the Northern Territory were provided in Remote and Very Remote areas, in Queensland majority were provided in Outer and Inner Regional areas, and for the other jurisdictions the majority of episodes of health care were provided in Major Cities and Inner Regional areas. This reflects the geographic nature of these jurisdictions.



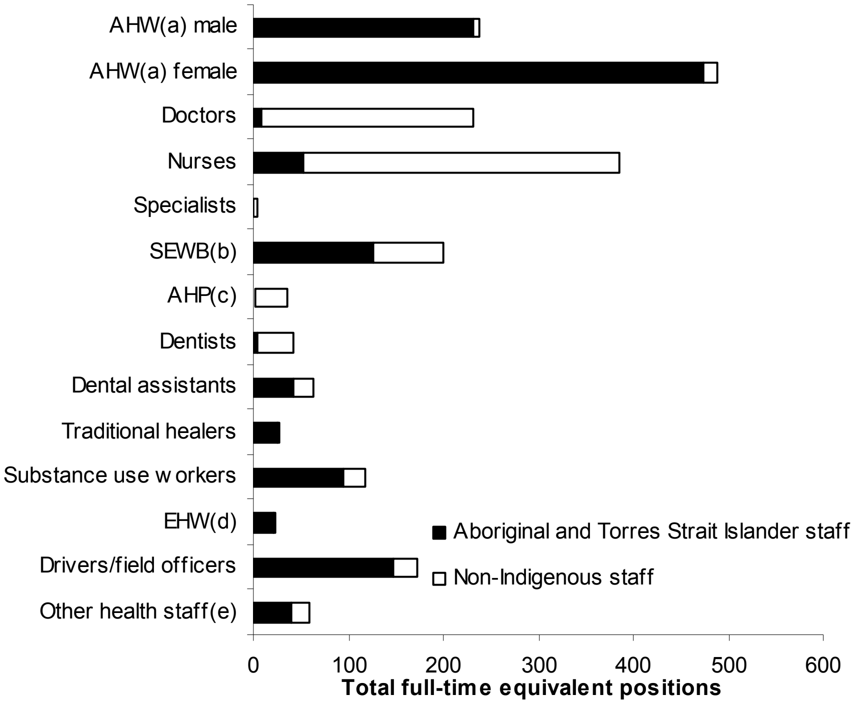
Note: South Australia and Tasmania data have been combined because of small numbers.

Source: Service Activity Reporting 2005–06.

Figure 3.12.12: Total episodes of health care provided by respondent Aboriginal and Torres Strait Islander primary health-care services, by state/territory and remoteness, 2005–06

Health staff

- In 2005–06, a total of 234 FTE doctors and 386 FTE nurses were employed by Indigenous primary health-care services. The majority of doctors, nurses, allied health professionals and dentists were non-Indigenous (94%, 86%, 97% and 90%, respectively). The majority of Indigenous health workers, traditional healers, environmental health workers, substance-use workers and drivers/field officers were Aboriginal and Torres Strait Islander Australians (Figure 3.12.13).



(a) AHW — Aboriginal health worker
(b) SEWB — Social and emotional wellbeing staff, includes counsellors, social workers, psychologists.
(c) AHP — allied health professionals.
(d) EHW — environmental health workers.
(e) Other health staff — includes eye health coordinators, hearing program coordinators, nutrition workers, antenatal support and family health workers.

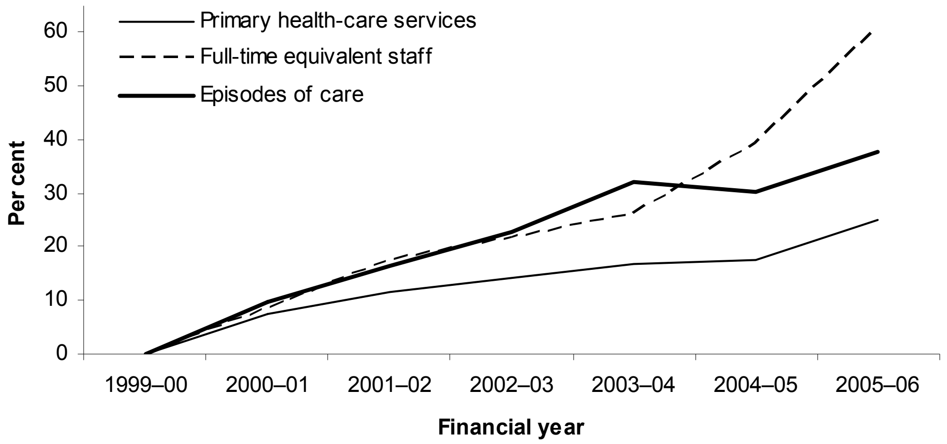
Source: Service Activity Reporting 2005–06.

Figure 3.12.13: Number of full-time equivalent health staff employed by respondent Aboriginal and Torres Strait Islander primary health-care services, by Indigenous status, as at June 2006

Episodes of health care and health staff—time series analyses

Data presented below include those services that have been included in the SAR in any year in the period 1999–00 to 2005–06.

- Over the period 1999–00 to 2005–06, there has been a rise of 25% in the number of Aboriginal and Torres Strait Islander primary health-care services (from 120 services in 1999–00 to 150 services in 2005–06) (Figure 3.12.14).
- Over the same period, there was a steady increase of 38% in the total estimated episodes of health care provided to Indigenous and non-Indigenous clients (from 1,220,000 to 1,680,000).
- There was a 61% rise in full-time equivalent staff employed by Indigenous primary health-care services between 1999–00 to 2005–06 (from 2,300 to 3,700).



Source: Service Activity Reporting 2005–06.

Figure 3.12.14: Cumulative per cent changes to Aboriginal and Torres Strait Islander primary health-care services, 1999–00 to 2005–06

Programs/activities provided

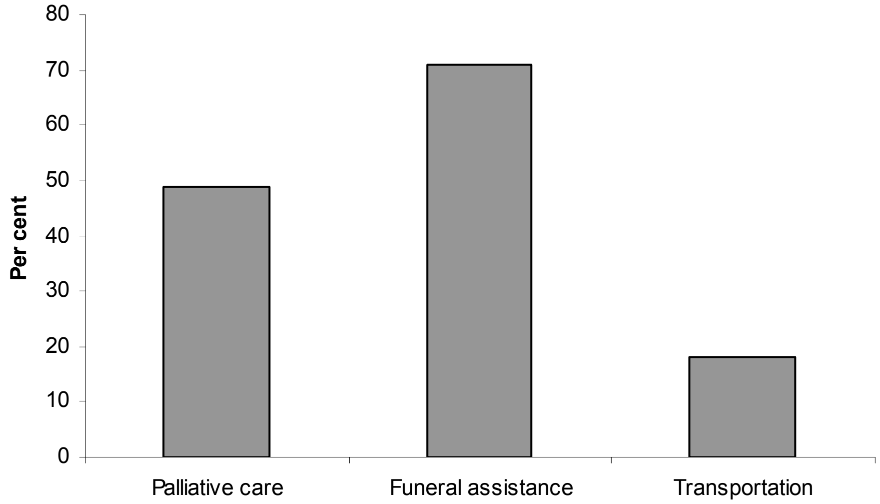
Aboriginal and Torres Strait Islander primary health-care services offer a range of programs and activities to support their communities.

Drug and alcohol programs

- In 2005–06, 92 services (61%) out of the 150 services that reported in the SAR provided alcohol and other drug programs.

Palliative care, funeral assistance and deceased transportation

- In 2005–06, the majority (71%) of Indigenous primary health-care services reported in the SAR provided funeral assistance, although just under half (49%) provided palliative care and 18% provided transportation for the deceased(Figure 3.12.15).



Source: Service Activity Reporting 2005–06.

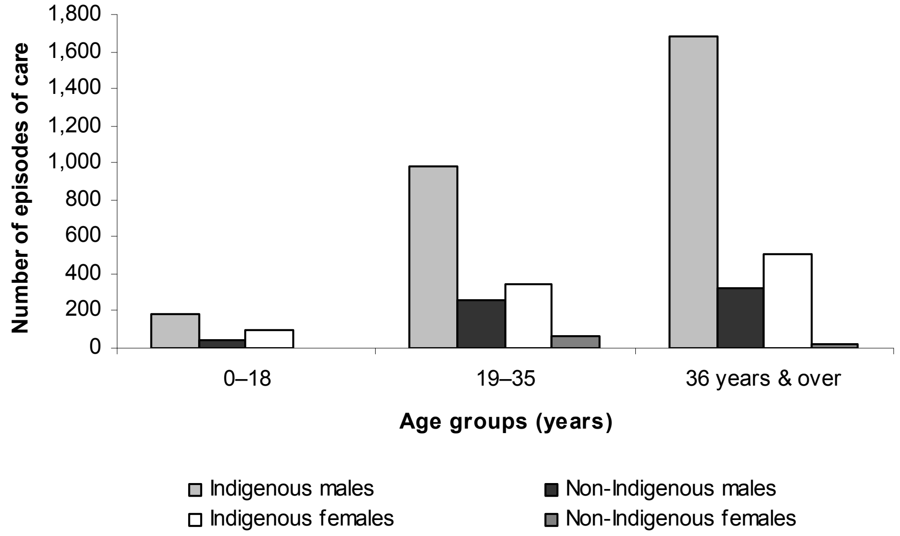
Figure 3.12.15: Proportion of Aboriginal and Torres Strait Islander primary health-care services providing palliative care, funeral assistance and transportation for the deceased, 2005–06

Drug and alcohol services

Episodes of care

Data on the type of episodes of health care provided by services reported in the DASR data collection is presented below.

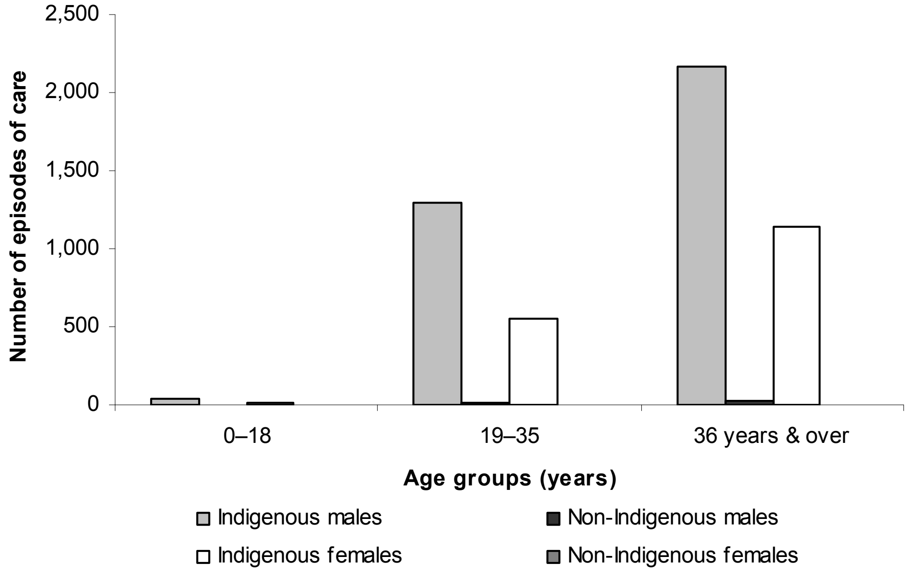
- In 2005–06, approximately 4,500 residential treatment/rehabilitation episodes of care were provided to Indigenous and non-Indigenous clients by Aboriginal and Torres Strait Islander substance-use-specific services. Approximately 82% (3,800) of these episodes were provided to Indigenous clients.
- Over three quarters (76%) of the residential treatment/rehabilitation episodes of care in 2005–06 were provided to males. Indigenous males aged 36 years and over represented the largest group (62%, 1,700) of recipients of residential treatment/rehabilitation episodes of care (Figure 3.12.16).



Source: Drug and Alcohol Service Reporting 2005–06

Figure 3.12.16: Residential treatment/rehabilitation episodes of care at DASR services by Indigenous status, age and gender 2005–06

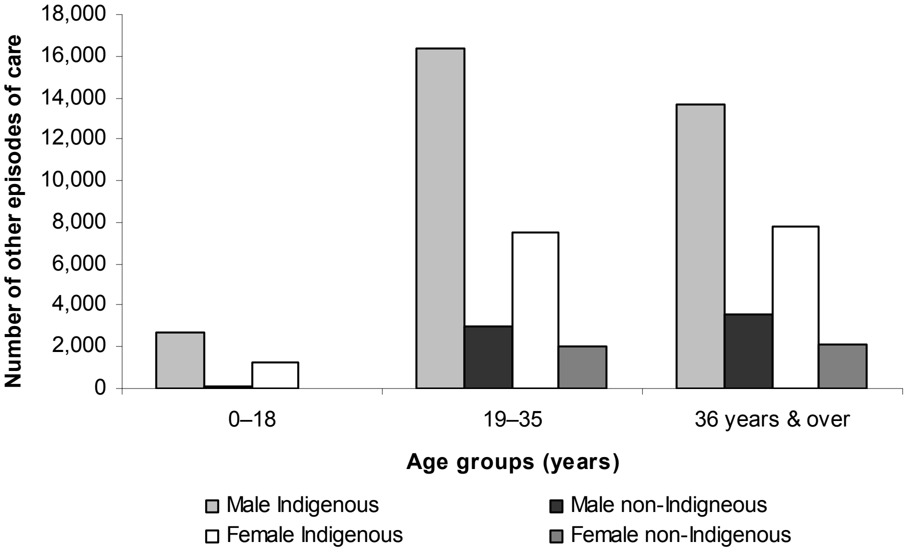
- In 2005–06 there were approximately 5,300 sobering-up/residential respite/short-term care episodes of care provided to Indigenous and non-Indigenous clients by Aboriginal and Torres Strait Islander substance-use-specific services. Almost all (99%, 5,200) of these episodes were provided to Indigenous clients.
- Across all age groups the majority of sobering-up/residential respite/short-term care episodes of care were provided to males. Indigenous males aged 36 years and over represented the largest group (41%, 2,200) of recipients of sobering-up/residential respite/short-term care episodes of care (Figure 3.12.17).



Source: Drug and Alcohol Service Reporting 2005–06.

Figure 3.12.17: Sobering-up/residential respite episodes of care at DASR services by Indigenous status, age and gender 2005–06

- In 2005–06 60,100 other episodes of care, such as non-residential care, were provided to Indigenous and non-Indigenous clients by Aboriginal and Torres Strait Islander substance-use-specific services. Over three-quarters (81%, 49,200) of these episodes were provided to Indigenous clients.
- Across all age groups the majority of other episodes of care were provided to males. Indigenous males aged 19–35 years represented the largest group (24%, 16,400) of recipients of other care episodes of care (Figure 3.12.18).



Source: Drug and Alcohol Service Reporting 2005–06.

Figure 3.12.18: Other episodes of care at DASR services by Indigenous status, age and gender 2005–06

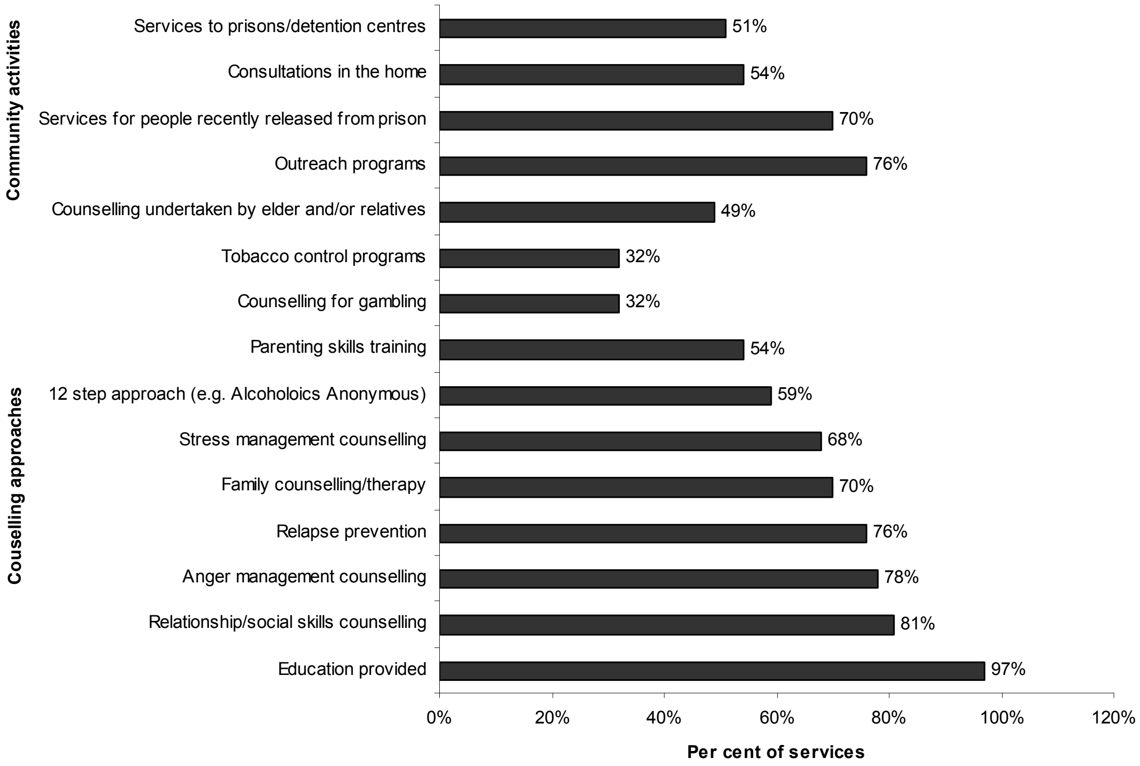
Programs/activities provided

Aboriginal and Torres Strait Islander drug and alcohol services offer a range of programs and activities to support their communities. Information from the DASR on selected programs and activities provided is presented below.

Counselling and community activities

Figure 3.12.19 presents the proportion of services reported in the DASR data collection that provided selected counselling approaches and community activities in 2005–06.

- In 2005–06, education was the most common type of counselling care provided by services (97%), followed by relationship/social skills counselling (81%) and anger management counselling (78%). The least common type of counselling care provided was counselling for gambling and tobacco control, which were offered by 32% of services.
- Of the cultural and healthy lifestyle training activities provided by DASR services, community-based education was the most common (84%) followed by outreach programs (76%), and services for people recently released from prison (70%).



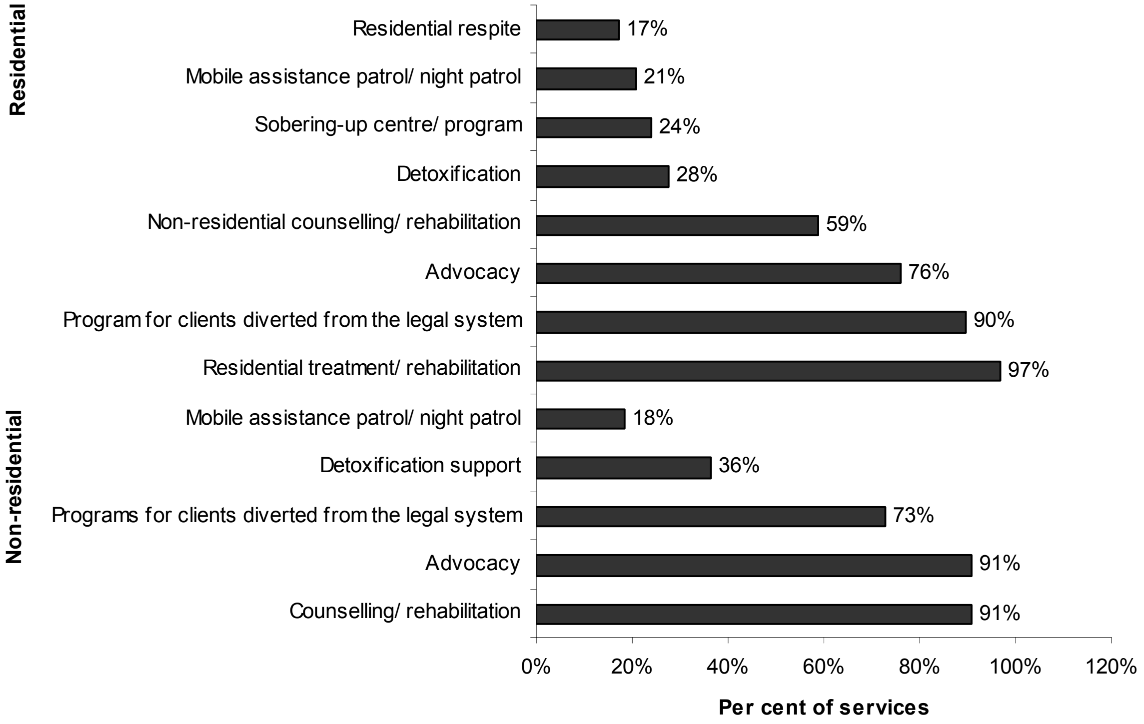
Source: Drug and Alcohol Service Reporting 2005–06.

Figure 3.12.19: Proportion of Aboriginal and Torres Strait Islander substance-use-specific services providing specific programs/activities, 2005–06

Program information

The DASR also collected information on programs run by residential and non-residential Aboriginal and Torres Strait Islander substance-use-specific services.

- In 2006–07, the most common types of programs provided by non-residential Indigenous substance-use-specific services were counselling/rehabilitation (91%), advocacy (91%), and programs for clients diverted from the legal system (73%) (Figure 3.12.20).
- The most common types of programs provided by residential Indigenous substance-use-specific services were residential treatment/rehabilitation (97%), programs for clients diverted from the legal system (90%) and advocacy (76%).



Source: Drug and Alcohol Service Reporting 2006–07.

Figure 3.12.20: Proportion of Aboriginal and Torres Strait Islander substance-use services providing specific program information , 2006–07

Expenditure on health services

- Expenditure on health goods and services for Aboriginal and Torres Strait Islander peoples during 2004–05 was estimated at $2304.0 million (Table 3.12.20). About 56% of this was directed to two areas of expenditure—services provided to admitted patients in acute care hospitals ($799.4 million) and community health services ($497.8 million).
- On a per person basis, estimated expenditure on health for Aboriginal and Torres Strait Islander peoples averaged $4,718, compared with $4,019 for non-Indigenous people—a ratio of 1.17:1.
- Spending on community health services for Indigenous Australians was over 6.5 times that for non-Indigenous Australians and expenditure for both patient transport and public health were well above the national average. Conversely, expenditure on high-level residential care (aged care) was 27% of the non-Indigenous average, and 29% for aids and appliances. Expenditure on medical services, dental and other health practitioners and medications was less than half those for non-Indigenous people.

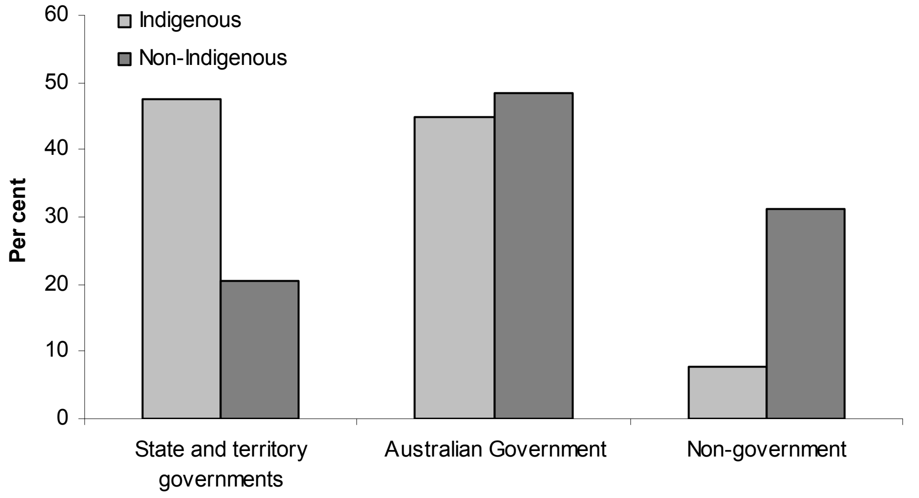
Table 3.12.20: Total expenditure on health for Indigenous and non-Indigenous people, by type of health good or service, current prices, 2004–05

	Total expenditure ($ million)			Expenditure per person ($)		
Health good or service type	**Indigenous**	**Non-Indigenous**	**Indigenous share (%)**	**Indigenous**	**Non-Indigenous**	**Ratio**
Hospitals	1,080.7	27,337.6	3.8	2,213	1,386	1.60
Public hospital services[(a)]	1,048.6	21,042.7	4.7	2,147	1,067	2.01
Admitted patient services	799.4	16,226.8	4.7	1,637	823	1.99
Non-admitted patient services	249.2	4,815.8	4.9	510	244	2.09
Private hospitals	32.1	6,295.0	0.5	66	319	0.21
High-level residential care	41.7	6,283.4	0.7	85	319	0.27
Patient transport	103.5	1,369.9	7.0	212	69	3.05
Medical services	164.6	14,483.5	1.1	337	734	0.46
Community health services	497.8	3,052.7	14.0	1,019	155	6.59
Dental and other health practitioners	78.0	7,811.8	1.0	160	396	0.40
Medications	109.4	11,056.4	1.0	224	561	0.40
Aids and appliances	18.6	2,591.4	0.7	38	131	0.29
Public health	88.9	1,350.3	6.2	182	68	2.66
Research	46.0	1,669.0	2.7	94	85	1.11
Health administration n.e.c.	74.6	2,254.5	3.2	153	114	1.34
Total	**2,304.0**	**79,260.4**	**2.8**	**4,718**	**4,019**	**1.17**

(a) Public hospital services exclude any dental services, community health services, patient transport services, public health and health research undertaken by the hospital.

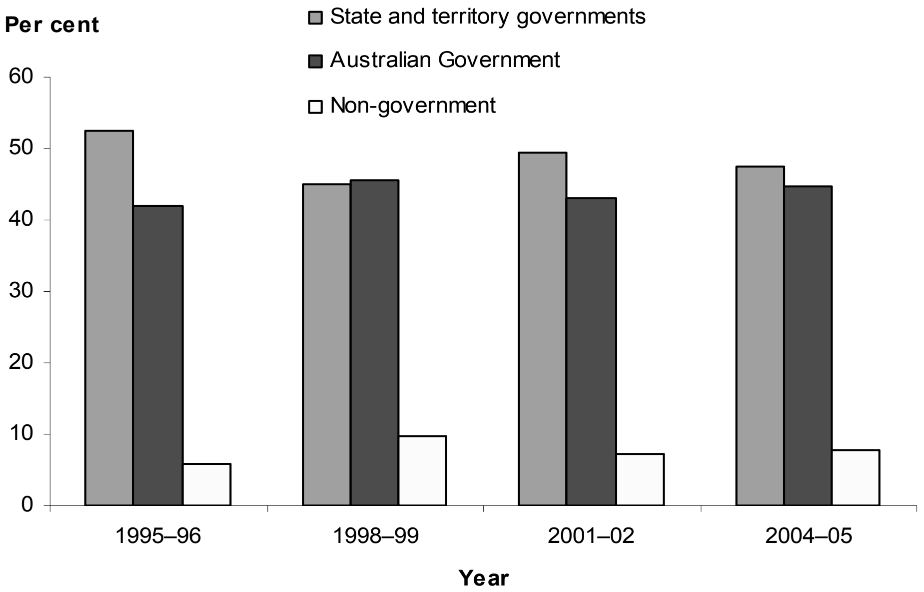
Source: AIHW 2008a (Health expenditure database).

- Governments provided an estimated 92% of the funding used to pay for health goods and services for Aboriginal and Torres Strait Islander peoples during 2004–05 (Figure 3.12.21).
- The share of funding provided by both the state and territory governments and the non-government sector for Indigenous Australians was quite different from their respective shares for non-Indigenous people. The states and territories provided nearly half (48%) of the funding for Indigenous people, compared with 21% for non-Indigenous Australians. Non-government sources, on the other hand, provided a much lower share (8%) of the funding for services for Indigenous people than for non-Indigenous people (31%). The Australian Government's funding was similar for both groups—45% for Indigenous Australians and 48% for non-Indigenous people.
- The share of the three main funding sources of Indigenous health services expenditure has varied little from 1995–96 to 2004–05 (Figure 3.12.22).



Source: AIHW 2008a.

Figure 3.12.21: Funding of expenditure on health for Indigenous and non-Indigenous people, by broad sources of funding, 2004–05



Source: AIHW 2008a.

Figure 3.12.22: Funding of Indigenous health services 1995–96 to 2004–05, (current prices)

Additional information

Aboriginal and Torres Strait Islander peoples face a number of barriers to accessing services including lack of transport (particularly in remote areas), financial difficulties and proximity of culturally appropriate services. The proportion of Indigenous persons involved in health-related professions can also affect use of health services by Indigenous people.

Transport

Although distance to various health services provides one measure of access, lack of transport can often mean that comparatively short distances are an impediment to service use. Data are available from the 2006 Census and the 2002 NATSISS on access to motor vehicles and difficulties with transport.

- In 2006, households with Indigenous persons were less likely than non-Indigenous households to have at least one motor vehicle. Approximately 72% of Indigenous and 87% of non-Indigenous households had at least one motor vehicle.
- In 2006, Indigenous Australians in every state and territory were less likely to report having access to a motor vehicle(s) than other Australians. The Northern Territory had the lowest proportion of Indigenous households with access to at least one motor vehicle (50%) and Tasmania had the highest proportion (86%).
- In 2002, around 12% of Indigenous Australians reported that they could not or often had difficulty getting to places needed, compared with only 4% of other Australians (Table 3.12.21).

Table 3.12.21: Transport access for persons aged 18 years and over, by Indigenous status, 2002

	Indigenous			Other
	Remote	Non-remote	Total	Total
		Per cent		
Difficulty with transport[(a)]				
Can easily get to places needed	65.2	73.5	71.2	84.4
Cannot get, or often has difficulty getting, to places needed	16.4	9.8	11.6	3.6
Total number	**69,300**	**182,100**	**251,400**	**14,353,800**

(a) Not all categories shown for this data item.

Note: The content of this table is restricted to those items that are comparable between the NATSISS and the General Social Survey.

Source: ABS 2004a.

The data on vehicles per household and per person suggest that other Australians have better access to personal transport than Indigenous Australians and would therefore be more readily able to reach a health facility or service. Public transportation may compensate for the lack of personal transport, and some clinics may provide a transport service for their patients, but this service are not available everywhere.

For more information on transport see Measure 2.16—Transport.

Affordability

Many privately provided health services involve direct out-of-pocket payments by patients. These have a greater impact on people with limited economic means and, given the generally poorer economic position of Aboriginal and Torres Strait Islander peoples, the effect is likely to be greater on Indigenous peoples than on other Australians. Examples of this are services provided by dentists, physiotherapists and other health professionals that are not covered by Medicare, and pharmaceuticals that are not covered by the Pharmaceutical Benefits Scheme (PBS). These do not attract subsidies from governments and, therefore, patients meet out-of-pocket fees when these services are accessed. Other services, such as medical services covered by Medicare and pharmaceuticals covered by the PBS, although subsidised, can also involve out-of-pocket expenditure, which restrict the access of people in lower socioeconomic groups.

Medical services subsidised under Medicare can attract co-payments if they are not bulk-billed. In the December quarter 2006, 72% of medical services were bulk-billed (DoHA 2007). Patients who are not bulk billed are usually required to pay the full fee at the time of service and can then seek a refund from Medicare. This, however, means that they must first be able to pay for the service. This difficulty is further exacerbated by the fact that some practitioners charge fees above the Medicare Benefits Schedule fee, requiring larger gap payments, which are generally borne by the patients. Aboriginal Community Controlled Health Services are covered by Medicare and patients of these services are bulk billed.

People who are prescribed drugs under the PBS are also required to make out-of-pocket co-payments. The amount that a patient needs to find is adjusted to some extent in accordance with the patient's ability to pay. Different co-payments apply to concession card holders, pensioners and general patients. The PBS also has safety net provisions that protect individuals and families from large overall expenses for PBS medicines.

Data on the financial stress of Indigenous Australians were collected in the 2004–05 NATSIHS.

- In 2004–05, about half (49%) of all Indigenous persons aged 15 years and over reported they were living in households in which they could not raise $2,000 within a week in a time of crisis.
- Indigenous Australians living in remote areas of Australia were more likely to have financial difficulties, with 67% unable to raise $2,000 compared with 41% in non-remote areas.

This information suggests that many Indigenous people suffer financial difficulties of some kind, especially those living in remote areas of Australia. Financial difficulties are an important barrier to accessing services where costs are involved.

Cultural barriers

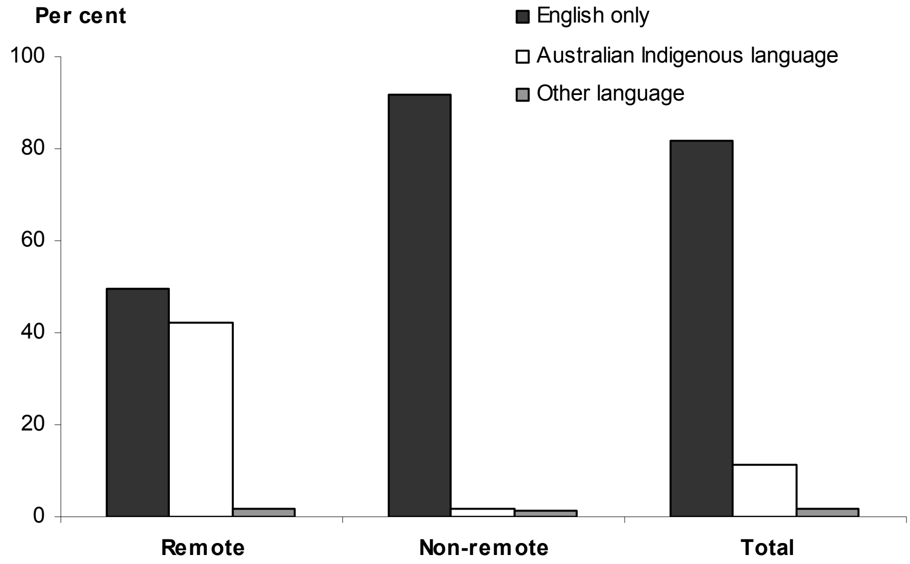
Measurement of the accessibility of health services involves factors other than the distance people must travel and the financial costs incurred (Ivers et al. 1997). Many Indigenous persons or communities do not have adequate access to either culturally appropriate services or to other suitable arrangements, and where culturally appropriate services exist they are often under-resourced or unable to meet community needs (Bell et al. 2000). The perception of cultural barriers may cause Indigenous people to travel substantial distances in order to access health services delivered in a more appropriate manner than those available locally (Ivers et al. 1997). The willingness of Indigenous peoples to access health services may be affected by such factors as community control of the service, the gender of health service staff, and the availability of Aboriginal and Torres Strait Islander staff, particularly where the patient's proficiency in spoken and written English is limited (Ivers et al. 1997). Some Indigenous people do not feel comfortable attending services such as a private general practice because of educational, cultural, linguistic and lifestyle factors, and will do so only when there is no alternative or their health problem has worsened (Bell et al. 2000).

Information on language and other cultural barriers comes from the 2006 Census and 2002 NATSISS.

Language

- In 2006, about 13% of Indigenous peoples reported that they spoke a language other than English at home. This figure includes 11% who said they spoke an Indigenous language at home and 2% who said they spoke another language. Indigenous persons living in remote areas of Australia were much more likely to report speaking an Australian Indigenous language at home (42%) than those living in non-remote areas (2%) (Figure 3.12.23).

Not being able to speak, read and write English proficiently can mean that some Indigenous Australians find it difficult to approach services such as health and welfare services. They may therefore miss out on important information and entitlements and may have difficulty reading and completing forms (House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs 1993).



Source: ABS and AIHW analysis of 2006 Census data.

Figure 3.12.23: Main language spoken at home, Indigenous Australians, 2006

Communicating with service providers

The 2002 NATSISS collected information on whether Indigenous Australians had difficulty communicating with service providers.

- Approximately 11% of males and females aged 18 years and over reported that they had difficulty understanding service providers, being understood by service providers or both (Table 3.12.22).
- Indigenous persons living in remote areas were more likely to report experiencing difficulty (19%) than those in non-remote areas of Australia (8%) (Table 3.12.22).

- Indigenous Australians aged 55 years and over had the most difficulty understanding or being understood by service providers (14%).
- The proportion of Indigenous Australians who reported difficulty communicating with service providers varied by state and territory. Indigenous Australians in Western Australia, South Australia and the Northern Territory were approximately twice as likely to experience difficulty communicating with service providers (18%, 17% and 15%, respectively) than Indigenous Australians in New South Wales, Victoria and Queensland (8%, 9% and 9%, respectively).

Table 3.12.22: Communication with service providers by Indigenous persons aged 18 years and over, by sex and remoteness, 2002

	Non-remote		Remote		Total	
	Males	**Females**	**Males**	**Females**	**Males**	**Females**
			Per cent			
Has difficulty understanding service providers	2.6	3.7	3.9	4.2	3.0	3.8
Has difficulty being understood by service providers	3.0	1.8	4.6	3.8	3.5	2.4
Has difficulty understanding and being understood by service providers	2.2	2.3	9.7	11.3	4.3	4.8
Total experiencing difficulty	*7.8*	*7.8*	*18.2*	*19.3*	*10.7*	*10.9*
No difficulties	*92.2*	*92.2*	*81.5*	*80.1*	*89.2*	*88.9*
Total[(a)]	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number[(a)]	**85,800**	**96,200**	**33,400**	**35,900**	**119,200**	**132,200**

(a) Includes not stated responses.

Source: ABS and AIHW analysis of 2002 NATSISS.

Telephone

A working telephone in the home is often considered a necessity in cases of emergency so that health services, such as hospitals, ambulances and doctors, can be contacted quickly. People without a working telephone in the home are less equipped to seek medical help when required.

The 2002 NATSISS also collected information on whether Indigenous Australians had access to a working telephone.

- In 2002, of those surveyed, 71% of Indigenous Australians aged 18 years and over reported having a working telephone in the home. Those living in non-remote areas were more likely to have a working telephone (82%) compared with those living in remote areas (43%).
- The proportion who had a working telephone varied by state and territory. The Northern Territory had the lowest proportion of Indigenous Australians with a working telephone (37%) which probably reflects the high proportion of Indigenous people in the Northern Territory who live in remote areas. Approximately 61% of persons in Western Australia and 71% in South Australia were without a working telephone.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS)

The NATSIHS and NATSISS both use the standard Indigenous status question. The survey samples were specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS and NATSISS are subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in these surveys are essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents — particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the NHS and the 2002 General Social Survey. The NHS was conducted in Major Cities, regional and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys and the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS and NATSISS content in order to accommodate language and cultural appropriateness in traditional communities, and to help respondents to understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS and NATSISS data quality issues can be found in the 2004–05 NATSIHS and 2002 NATSISS publications (ABS 2006 and ABS 2004a).

Community Housing and Infrastructure Needs Survey (CHINS)

The 2006 CHINS collected information on a variety of topics from discrete Aboriginal and Torres Strait Islander communities throughout Australia and on Indigenous organisations that provide rental housing to Aboriginal and Torres Strait Islander peoples. In 2006 CHINS information was collected on 496 Indigenous organisations, which managed a total of 21,854 permanent dwellings. The majority of those dwellings were located in the Northern Territory (6,448), Queensland (6,230), New South Wales (4,176) and Western Australia (3,462) (ABS 2007).

The CHINS survey only covers discrete Indigenous communities, including approximately 92,900 Aboriginal and Torres Strait Islanders or 19% of the total Indigenous population. CHINS data is collected every 5 years. The data are collected from key personnel in Indigenous communities and housing organisations knowledgeable about housing and infrastructure issues.

The estimates are not subject to sampling error as the CHINS was designed as a complete enumeration of discrete Indigenous communities. However, data could not be obtained from a small number of communities. In addition, the community population was often estimated by community representatives without reference to records.

(continued)

Data quality issues (continued)

Further information on the CHINS can be found in the 2006 CHINS publication (ABS 2007).

Census of Population and Housing

The Census uses the National health data dictionary *standard Indigenous status question and it is asked for each household member. Measures that are drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself; for example, whether people are counted more than once, or are undercounted (ABS 1996).*

For the 2002 NATSISS, it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. Although the Census data are adjusted for undercounts at the person level to arrive at the estimated resident population, no such adjustment is done at the household level. This affects the accuracy of the person counts at the household level to provide adjusted household estimates.

Hospital separation data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery. In terms of mental health service delivery, there are a number of different service delivery models, ranging from ambulatory care in community mental health services and hospitals and non-ambulatory care in hospitals and residential services.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. For several years, Queensland, South Australia, Western Australia and the northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007a). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in Western Australia and the Northern Territory and relatively marked Indigenous under-identification in South Australia and Victoria data).*

(continued)

Data quality issues (continued)

- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included..*

From the AIHW study, it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from the ABS Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004b).*

GP data

Care must be taken in using and interpreting the data provided. There are two issues to note which have an effect on the quality of the data. First, the data include only those services claimed through the Medicare system. Consequently the full-time equivalent for doctors in remote areas, which are more likely to have high proportions of Indigenous population, will be understated as some services are provided in rural hospitals and through the Royal Flying Doctor Service. There is also anecdotal information that services provided in Aboriginal Medical Services are often not claimed through the Medicare system, further understating the full-time equivalent for doctors in areas with high Indigenous populations.

Second, the data at the grouped SLA level can hide variability in data at the individual SLA level. For example, although one group of SLAs may have fewer people per doctor overall than a second group of SLAs, there will be a number of individual SLAs in the first group with far more people per doctor than in some individual SLAs in the second group.

AIHW health workforce labour force surveys

These surveys collect a large amount of detail, such as employment status, type of work and location, specialty fields and qualifications of health professionals. They collect information on all registered practitioners, regardless of whether they are employed; and the data is able to be compared across time.

Some of the limitations of these surveys include:

- *The surveys collect information from health professionals at the time that they apply for registration renewal, and therefore exclude people who are registering for the first time (including interns and short-term temporary residents).*
- *Response rates by state vary from year to year.*
- *Non-response is increasing and for these respondents only age and sex are known.*
- *There can be inconsistencies between states in collection, formatting, processing and registration periods across states and territories.*
- *The process relies on the cooperation of registration boards.*
- *Participation is voluntary.*
- *Survey results are not publicly available until at least 18 months after the reference period.*

(continued)

Data quality issues (continued)

Service Activity Reporting (SAR) and Drug and Alcohol Service Reporting (DASR)

Response rates to the SAR and DASR are usually above 90%. The SAR and DASR collect service level data on health care and health-related activities by survey questionnaire over a 12 month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR and DASR only include Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding.*
- *The SAR and DASR questionnaires collect a broad set of indicators for the services and do not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *Data provided are often estimates and, although these are thought to be reasonable, there has been no audit to check the accuracy of these figures.*

In relation to the statistics for this performance measure – these data provide a rough guide to service activity in this area, but do not attempt to measure quantity or quality. They also do not differentiate between service provided by the service and those facilitated by the service.

Expenditure data

Quality of data on Indigenous service use

For many publicly funded health services, there are few details available about service users and, in particular, about their Indigenous status. For privately funded services, this information is frequently unavailable. For those services that do collect this information, recording Indigenous status accurately for all people does not always occur. The result is that there is some margin of error in the estimations of health expenditure for Indigenous people and their corresponding service use.

Expenditure estimates

There may be some limitations associated with the scope and definition of health expenditure included in this measure. Other (non-health) agency contributions to health expenditure, such as 'health' expenditure incurred within education departments and prisons, are not included.

Furthermore, although every effort has been made to ensure consistent reporting and categorisation of expenditure on health goods and services, in some cases there may be inconsistencies across data providers. These may result from limitations of financial reporting systems and/or different reporting mechanisms. Reporting of health administration (n.e.c.) is one such example; in some cases, all the associated administration costs have been included in the estimates of expenditure on a particular health service category (for example, acute care services), whereas in other cases they have been separately reported.

Palliative care data

Data on palliative care are sourced from the Admitted Patient Palliative Care National Minimum Data Set (NMDS) which includes Aboriginal and or Torres Strait Islander status and allows all the items within the data set to be analysed against this status. The NMDS is a component of the hospitals morbidity collection. Hospital data on palliative care is likely to include similar data quality problems to those outlined in the hospital separations data section above.

(continued)

Data quality issues (continued)

Sourcing data from an admitted patient NMDS means that there is a lack of national data on palliative care that occurs in the community (that is, non-admitted care). This is an obvious gap given the emphasis within palliative care on providing patients and their families with choices about their settings of care (AIHW 2007b). Also, and similar to other health sectors and services provided through hospitals, palliative care has a number of data quality issues, including a lack of consistency around definitions. For example the term 'palliative' – what it is and who provides it. In response to this the Australian Government funds:

- *The AIHW to manage palliative care data development issues. This work has had a number of outcomes including the development and piloting of a palliative care community data set specification that contained Aboriginal and Torres Strait Islander status. The recommendations from this work are being considered by the Palliative Care Intergovernmental Forum but definitions agreed from the work will be provided to the Health Data Standards Committee for inclusion in the National Health Data Dictionary.*
- *The University of Wollongong to head a collaboration of four universities to develop and manage a voluntary, service level, quality improvement initiative called the Palliative Care Outcomes Collaboration (PCOC). This initiative has developed a data set including clinical assessment items, and a methodology that allows routine collection and reporting of the data set to support the quality initiative. At this stage it is estimated that around 50% of services submit data to the PCOC database. There is an Indigenous data item included in the data set that allows analysis across all the data set variables but, to date, the numbers of Indigenous clients in the limited sample are negligible.*

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3.13 Access to prescription medicines

This measure has two components:

- **Pharmaceutical Benefits Scheme expenditure per capita for Indigenous Australians**
- **not filling prescriptions because of cost**

Data sources

Data for this measure come from AIHW health expenditure data and the AIHW Pharmacists Labour Force Survey

Health expenditure data

Data for this measure come from Indigenous Pharmaceutical Benefits Scheme (PBS) expenditure estimates published in the report *Expenditures on health for Aboriginal and Torres Strait islander people 2004–05* (AIHW 2008). The PBS usage and expenditure estimates in this report are derived from combining the national survey of general practitioner activity entitled Bettering the Evaluation and Care of Health (BEACH) data with data from those Aboriginal and Torres Strait Islanders who voluntarily identify themselves to Medicare as Indigenous (the voluntary Indigenous identifier (VII) enrolees).The VII sample covered about 300 times the number of Indigenous GP services in BEACH surveys (AIHW 2008).

There were limits to using the VII data. This sample is not fully representative. The geographic spread was not entirely even, and the VII group was significantly younger than the average—possibly because of the way in which they were enrolled. Relative to the Indigenous population, very few older people were included. Health service use increases markedly with age and, although it was possible to standardise for the age differential alone, there may have been other factors at work, besides the geographic ones. By September 2007, 177,116 people had enrolled and that larger sample—which will be available for subsequent editions of this series—is likely to be much more representative (AIHW 2008).

AIHW Pharmacists Labour Force Survey

The AIHW runs a number of surveys of the health labour force including the Pharmacy Labour Force Survey. The AIHW is the data custodian of this collection. The survey is of registered pharmacists and is drawn from the registration files maintained by each state and territory pharmacy registration board. Each pharmacy board conducts an annual renewal of registration and, in some years, questionnaires are sent to pharmacists on renewal of their registration. In 2003 the survey was conducted in all jurisdictions except the Northern Territory.

There is currently no data source for statistics on not filling prescriptions because of cost for Indigenous Australians. This will be recommended for inclusion in the next NATSIHS.

Analyses

Pharmaceuticals expenditure

- Expenditure provided by the Australian Government for Aboriginal and Torres Strait Islander peoples in 2004–05 was estimated at $72.2 million, which represented 1.2% of total expenditure on pharmaceuticals in Australia by the Australian Government (Table 3.13.1). Non-government expenditure on pharmaceuticals for Indigenous people was estimated at $37.2 million, which represented 0.7% of total expenditure on pharmaceuticals by non-government organisations.
- The majority of expenditure on these pharmaceuticals was for benefit-paid pharmaceuticals ($70.3 million of Australian Government expenditure and $11.4 million of non-government expenditure).
- Per capita expenditure on pharmaceuticals by the Australian Government for 2004–05 was estimated at $148 for Indigenous people and $302 for non-Indigenous people—a ratio of 0.49:1. Per capita non-government expenditure on pharmaceuticals was estimated at $76 for Indigenous people and $259 for non-Indigenous people—a ratio of 0.29:1.

Table 3.13.1: Total and per person expenditure (current prices) on pharmaceuticals by the Australian Government and non-government organisations, by Indigenous status, 2004–05

	Total expenditure ($ million)			Expenditure per person ($)		
PBS	**Indigenous**	**Non-Indigenous**	**Indigenous share (%)**	**Indigenous**	**Non-Indigenous**	**Ratio**
Australian Government						
Benefit-paid pharmaceuticals	70.3	5859.8	1.2	144	297	0.48
Other pharmaceuticals	1.9	95.2	2.0	4	5	0.82
Total pharmaceuticals	**72.2**	**5955.1**	**1.2**	**148**	**302**	**0.49**
Non-Government						
Benefit-paid pharmaceuticals	11.4	1139.1	1.0	23	58	0.40
Other pharmaceuticals	25.8	3962.3	0.6	53	201	0.26
Total pharmaceuticals	**37.2**	**5101.4**	**0.7**	**76**	**259**	**0.29**
Total						
Benefit-paid pharmaceuticals	81.7	6,998.9	1.2	167	355	0.47
Other pharmaceuticals	27.7	4,057.5	0.7	57	206	0.28
Total pharmaceuticals	**109.4**	**11,056.5**	**1.0**	**224**	**561**	**0.40**

Source: AIHW 2008.

PBS expenditure

- In 2004–05, benefits to Indigenous Australians through the Pharmaceutical Benefits Scheme were estimated at $68.2 million. Pharmaceutical benefits expenditures per person for Indigenous Australians were 51% of the non-Indigenous average (Table 3.13.2). The average share of expenditure on mainstream pharmaceutical benefits was also lower, at 37%.

- In 1999 special provisions were introduced under section 100 of the *National Health Act 1953* for Indigenous Australians in remote areas where access to private pharmacies was poor. Clients of approved remote area Aboriginal Health Services (AHS) were able to receive PBS medicines directly from the AHS at the time of medical consultation, without the need for a normal prescription form, and without charge. Estimated expenditure on Indigenous Australians in 2004–05 on drugs dispensed under this Act was $19.4 million. The estimated ratio of Indigenous to non-Indigenous expenditure per person under the scheme was 300:1.

Table 3.13.2: Total and per person expenditures through the Pharmaceutical Benefits Scheme, by Indigenous status, 2004–05

	Total expenditure ($ million)			Expenditure per person ($)		
Pharmaceutical benefits	**Indigenous**	**Non-Indigenous**	**Indigenous share (%)**	**Indigenous**	**Non-Indigenous**	**Ratio**
Mainstream PBS[(a)]	47.6	5,257.7	0.9	97	267	0.37
Section 100[(b)]	19.4	2.6	88.1	40	—	300.19
Other PBS special supply	1.3	125.9	1.0	3	6	0.41
Total PBS benefits	**68.2**	**5,386.2**	**1.3**	**140**	**273**	**0.51**

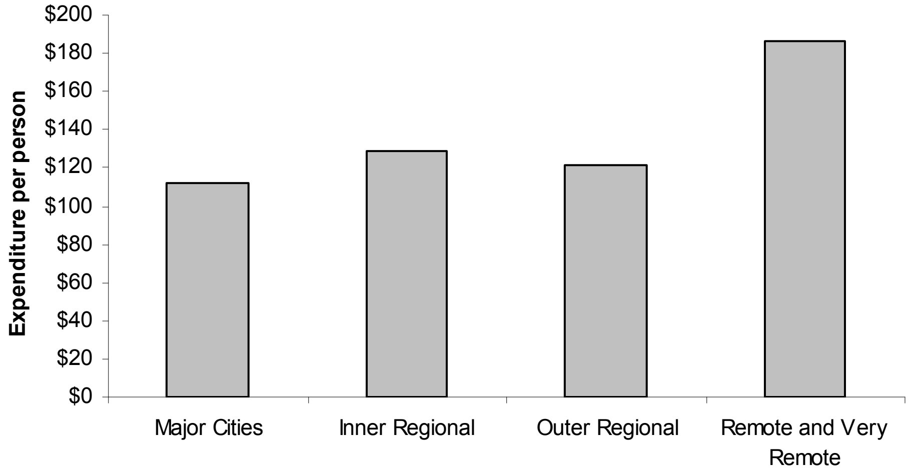
(a) Excludes RPBS.

(b) Excludes highly specialised drugs dispensed from public and private hospitals.

Source: AIHW 2008.

PBS expenditure by remoteness

- In 2004–05, PBS pharmaceutical expenditures on Indigenous people were greater in more remote areas, where the section 100 arrangements apply, ($186 per person) than in Major Cities ($112 per person) (Figure 3.13.1).



Note: PBS drugs include $19.4 million of Section 100 remote area health services expenditure. Almost all of this expenditure occurs in Remote and Very Remote areas.

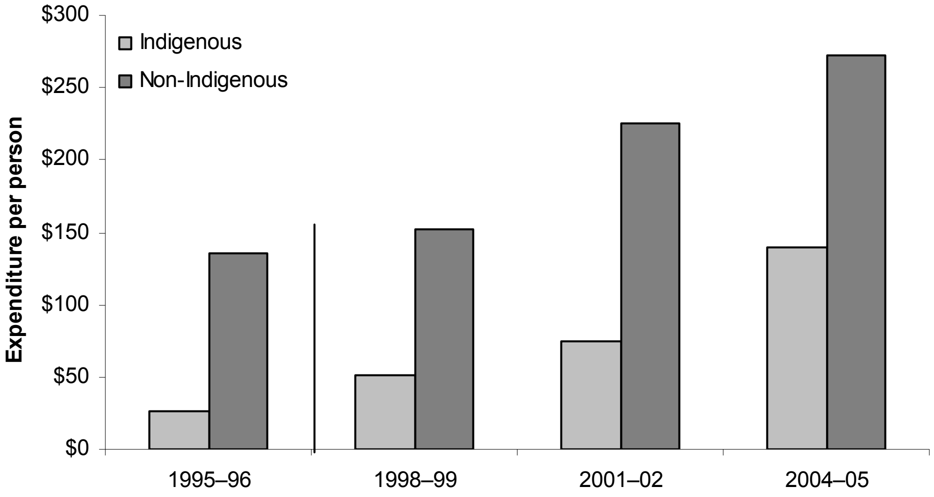
Source: AIHW 2008.

Figure 3.13.1: Estimated average health expenditures per person on pharmaceutical benefits, for Aboriginal and Torres Strait Islander peoples, by remoteness, 2004–05

PBS expenditure over time

Changes in expenditure over time should be interpreted with caution because of differences in methodology used to calculate some Indigenous expenditure estimates for the different time periods.

- The estimates of average expenditure per person for the Indigenous population by the Australian Government on the PBS between 1995–96 and 1998–99 almost doubled from an estimated $26 in 1995–96 to $51 in 1998–99.
- Expenditure increased by another 32% between 1998–99 and 2001–02 (from $51 to $75) and by another 46% between 2001–02 and 2004–05 (from $75 to $140).
- The Indigenous to non-Indigenous expenditure ratios were higher in 2004–05 than in 1995–96 (0.51 compared with 0.19) (Figure 3.13.2).



Notes

1. Does not include RPBS benefits for veterans.
2. The 1995–96 estimate for Indigenous Australians is based on the revised price estimate of $9.3 million for PBS benefits for Indigenous Australians in 1995–96 (AIHW 2001: 42), down from $9.8 million (Deeble et al. 1998:21). That revision reduced the current price per person estimate from $26.64 to $25.28.

Source: AIHW 2008.

Figure 3.13.2: Average PBS health expenditure (constant prices) per person by the Australian Government, 1995–96, 1998–99, 2001–02 and 2004–05

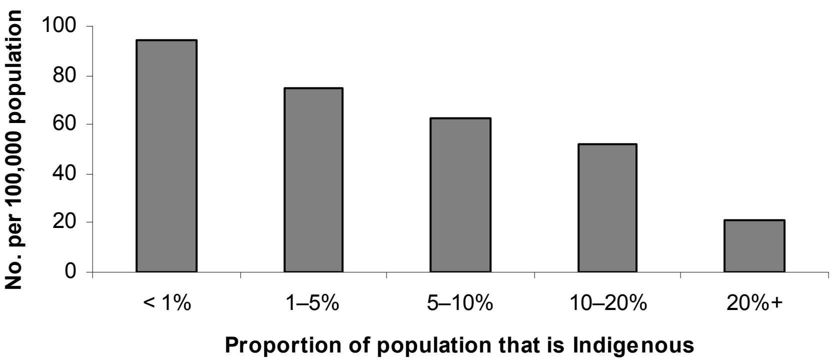
Pharmacy labour force

Information on pharmacists in Australia is available from the AIHW Pharmacy Labour Force Survey. The population for the survey is registered pharmacists and is drawn from the registration files maintained by each state and territory pharmacy registration board. Each pharmacy board conducts an annual renewal of registration and, in some years, questionnaires are sent to pharmacists on renewal of their registration. In 2003, the survey was conducted in all jurisdictions except the Northern Territory. It covered all pharmacists registered with the pharmacy board in each state and territory, but may exclude pharmacists who registered for the first time in the survey year.

Response to the Pharmacy Labour Force Survey in 2003 represented 71.5% of pharmacist registrations in all participating jurisdictions. The overall response rate is an approximation because some pharmacists were registered in more than one state or territory. The AIHW uses data collected in the Pharmacy Labour Force Survey to derive estimates of the total pharmacy labour force. Survey responses are weighted to account for non-response.

Data presented below shows the FTE rate of employed pharmacists per 100,000 population by areas of low through to high proportions of Indigenous populations. Using population data from the 2001 Census, SLAs were grouped according to the proportion of the population living in these areas that was Indigenous.

- In 2003, there were 15,673 employed pharmacists in Australia. The FTE rate of employed pharmacists was around 86 per 100,000.
- The FTE rate of employed pharmacists was highest in areas where 1% or less of the population was Indigenous (94 per 100,000) and lowest in areas where 20% or more of the population was Indigenous (21 per 100,000) (Figure 3.13.3).



Notes

1. In 2003, 808 employed pharmacists did not report the postcode they worked in. Hence the number of employed pharmacists stated by region is an underestimate.
2. Data do not include Northern Territory.
3. FTE is based on 35 hours per week.
4. Data from Victoria are based on 2004 survey data weighted to 2005 registration data.

Source: AIHW analysis of 2003 Pharmacy Labour Force Survey data.

Figure 3.13.3: FTE employed pharmacists per 100,000 population, by areas of low through to high proportions of Indigenous population, 2003

Data quality issues

Expenditure data

Indigenous PBS expenditure estimates are calculated for the expenditure report by combining the BEACH data with data from those Aboriginal and Torres Strait Islanders who voluntarily identify themselves to Medicare as Indigenous (the voluntary Indigenous identifier (VII) enrolees).

Per capita estimates indicate average PBS expenditure per head for the whole of the reference population. They do not indicate average expenditure for those who have accessed PBS.

BEACH estimates

Given the small sample of Indigenous Australians in BEACH and the problems with accurately identifying Indigenous status in this collection, these estimates need to be used with caution.

VII estimates

There are limits to using the VII data. This sample is not fully representative. The geographic spread was not entirely even, and the VII group was significantly younger than the average – possibly because of the way in which they were enrolled. Relative to the Indigenous population, very few older people were included. Health service use increases markedly with age and, although it was possible to standardise for the age differential alone, there may have been other factors at work, as well as the geographic ones.

AIHW health workforce labour force surveys

These surveys collect a large amount of detail, such as employment status, type of work and location, specialty fields and qualifications of health professionals. They collect information on all registered practitioners, regardless of whether they are employed; and the data is able to be compared across time.

Some of the limitations of these surveys include:

- *The surveys collect information from health professionals at the time that they apply for registration renewal, and therefore exclude people who are registering for the first time (including interns and short-term temporary residents).*
- *Response rates by state vary from year to year.*
- *Non-response is increasing and for these respondents only age and sex are known.*
- *There can be inconsistencies between states in collection, formatting, processing and registration periods across states and territories.*
- *The process relies on the cooperation of registration boards.*
- *Participation is voluntary.*
- *Survey results are not publicly available until at least 18 months after the reference period.*

Medicare data

A voluntary Indigenous identifier was introduced into the Medicare database from November 2002. By September 2007, 177,116 people had identified as Aboriginal or Torres Strait Islander or both in the Medicare database. As these data improve, it will be possible to use this identifier to undertake PBS expenditure calculations using the PBS database.

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3.14 Access to After-Hours Primary Health Care

Access to after-hours primary health care by Aboriginal and Torres Strait Islander people

Data sources

Data for this measure come from the Bettering the Evaluation and Care of Health (BEACH) survey, Service Activity Reporting (SAR) data, Medicare data, the Non-admitted Patient Emergency Department Care National Minimum Data Set, and expenditure data.

Bettering the Evaluation and Care of Health (BEACH) survey

Information about encounters in general practice is available from the BEACH survey, which is conducted by the AIHW Australian GP Statistics and Classification Centre, University of Sydney. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

The number of Indigenous patients identified in the BEACH survey is likely to be underestimated. This is because some GPs might not ask about Indigenous status, or the patient may choose not to identify (AIHW 2002). The estimates presented here are also derived from a relatively small sample of GP encounters involving Indigenous Australians.

Due to a late inclusion of a 'not stated' category of Indigenous status in 2001–02 (before which 'not stated' responses were included with non-Indigenous encounters), GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2002–03 to 2006–07, during which there were 7,542 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey—representing 1.5% of total GP encounters in the survey.

Service Activity Reporting (SAR) data collection

The SAR collects data from approximately 150 Australian Government-funded Indigenous primary health-care services and is held at the DoHA. It is estimated that these services provide GP services to around 40% of the Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a 12-month period. Response rates to the SAR by Indigenous primary health-care services are usually between 97% and 99%.

Note that the SAR only includes Indigenous health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Medicare data

In November 2002, the ABS standard question on Indigenous identification was included on the Medicare enrolment application form. Because the voluntary Indigenous identifier was only introduced recently, the coverage of Indigenous Australians in this data set is not complete. Aboriginal and Torres Strait Islanders who had identified as Indigenous in this database as at 1 June 2008 numbered 206,408.

Data included in this analysis provides a substitute measure of access, but not the actual access of Indigenous Australians to the MBS after-hours items.

Note there are a number of items on the Medicare Benefits Schedule relevant to this performance measure that will be considered for inclusion once the data improves. These items include: 1, 2, 97–98, 5000–5067, 5200–5267, 601–602, 697, and 698.As the quality of the voluntary Indigenous identifier improves, Medicare data will provide an additional source of data for this performance measure.

National non-admitted Patient Emergency Department Care Database

The National Non-admitted Patient Emergency Department Care Database (NAPEDCD) is a national collection of de-identified data on emergency department episodes, which is held at the AIHW. The database includes episode-level data on non-admitted patients treated in the emergency departments of public hospitals that were classified in the public hospital peer groups of P*rincipal referral and specialist women's and children's hospitals and Large hospitals*.

The NAPEDCD includes data on the type and length of emergency department visit, triage category, waiting times, patient demographics, arrival mode and departure status.

This data set includes the standard Indigenous status question.

Analyses

General practitioner data (BEACH)

The BEACH Survey collected information on the after-hours arrangements of GPs surveyed. GPs can have more that one type of after-hours arrangement.

- Over the period 2002–03 to 2006–07, around 99% of GPs surveyed had after-hours arrangements in place. For 38% of GPs, the practice had its own after-hours arrangements; 17% of GPs had cooperative arrangements with other practices regarding after-hours care; 47% employed a deputising service for after-hours patient care, 17% referred to another service for after-hours patient care and 4% had other after-hours arrangements.

The BEACH survey also collected information on GP encounters with Indigenous patients and other patients. Table 3.14.1 and Figure 3.14.1 present the rate of GP encounters with Indigenous and other patients by whether the GP visited had after-hours arrangements in place.

- Over the period 2002–03 to 2006–07, Indigenous patients visited GPs with after-hours arrangements in place at a rate of 97 per 100 encounters and other patients visited GPs with after-hours arrangements in place at a rate of 98 per 100 encounters (Table 3.14.1).
- Of GP encounters with Indigenous patients, for approximately 46 per 100 encounters the GP visited had their own after-hours arrangements for patient care; for 17 per 100 encounters the GP had cooperative arrangements with other practices, for 20 per 100 encounters the GP employed a deputising service for after-hours patient care, for 32 per 100 encounters the GP referred to another service for after-hours care and for 5 per 100 encounters the GP had other after-hours arrangements in place. For 3 per 100 GP encounters with Indigenous patients, the GP visited had no after-hours arrangements in place (Table 3.14.1).

- The rate for which GPs visited had their own after-hours arrangements or had referred to another service for after-hours patient care was higher for encounters with Indigenous patients than for encounters with other patients (46 and 32 per 100 compared with 38 and 17 per 100, respectively).The rate at which GPs employed a deputising service for after-hours patient care was lower for encounters with Indigenous patients than for encounters with other patients (20 compared with 47 per 100) (Table 3.14.1; Figure 3.14.1).

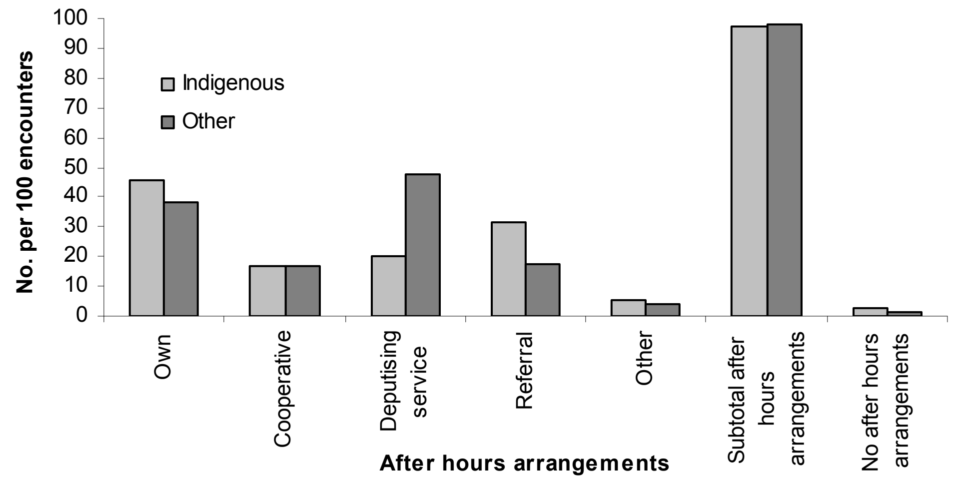
Table 3.14.1: GP encounters by whether the GP has after-hours arrangements, by Indigenous status, 2002–03 to 2006–07

	Number		No. per 100 encounters			No. per 100 encounters			
After-hours arrangements	**Indigenous**	**Other**	**Indigenous**	**LCI**	**UCI**	**Other**	**LCI**	**UCI**	**Ratio**
Practice does its own	3,433	183,667	45.5	41.4	48.6	38.0	36.7	39.3	*1.2**
Cooperative with other practices	1,267	80,733	16.8	11.1	21.0	16.7	15.3	18.1	*1.0*
Deputising service	1,525	228,675	20.2	16.6	23.6	47.3	45.2	49.4	0.4*
Referral to other services	2,392	83,208	31.7	20.8	39.8	17.2	15.6	18.8	1.8*
Other arrangement	397	18,003	5.3	0.5	9.4	3.7	2.8	4.6	1.4
Total after-hours arrangements[(a)]	*7,321*	*474,179*	*97.1*	*79.0*	*110.4*	*98.1*	*93.6*	*102.6*	*1.0*
No after-hours arrangements	206	5094	2.7	0.0	5.0	1.1	0.7	1.4	2.6
Total encounters	**7,542**	**483,258**	**100.0**	**100.0**	. .	**100.0**	**100.0**	. .	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Subtotal is more than the sum of the components as GPs can have more than one type of after-hours arrangement.

Source: AIHW analysis of BEACH survey of general practice, AGPSCC.



Source: AIHW analysis of BEACH survey of general practice survey, AGPSCC.

Figure 3.14.1: Rate of GP encounters, by whether the GP has after-hours arrangements in place, by Indigenous status of the patient, 2002–03 to 2006–07

After-hours services provided by GPs (Medicare data)

Information on the number of after-hours services provided by GPs working in Australia is available from DoHA using the MBS items for after-hours services (1, 2, 97–98, 500–5067, 5200–5267, 601–602, 697 and 698).

A service refers to a claim for a single MBS item. There may be more than one service provided for each patient episode of care.

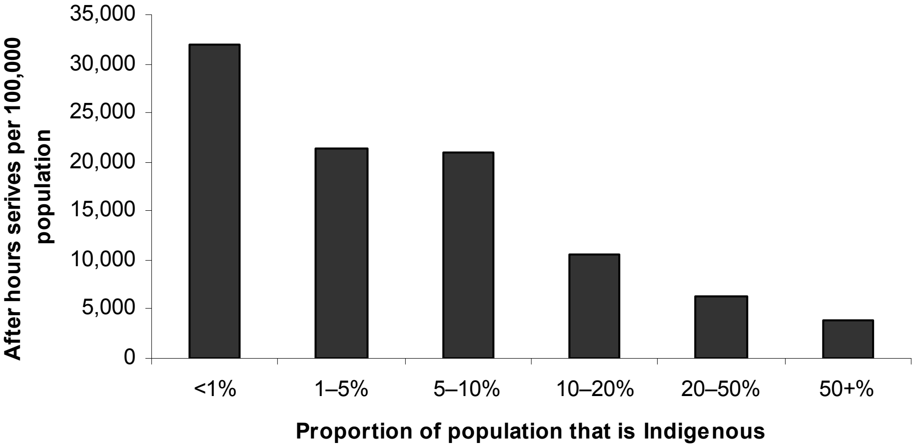
Data in Figure 3.14.3 present the number of after-hours services provided by full-time equivalent GPs per 100,000 population by areas of low through to high proportions of Indigenous people in the population. Using population data from the 2001 Census, SLAs were grouped according to the proportion of the population living in these areas that was Indigenous. Note that the use of proportions of Indigenous populations does not show the number of Indigenous persons actually claiming after-hours services.

- In 2006–07, there were approximately 14,789 full-time equivalent GPs working in Australia who provided 5,007,122 after-hours services to patients.
- The rate of after-hours services provided by GPs was around 25,792 per 100,000 population. The rate of after-hours services provided by GPs was highest in areas where less than 1% of the population was Indigenous and lowest in areas where 50% or more of the population was Indigenous (32,028 compared with 3,926 per 100,000 population) (Figure 314.2).

Care must be taken in using and interpreting the data provided. There are two issues to note that have an effect on the quality of the data. First, the data include only those services claimed through the Medicare system. Consequently, the full-time equivalent (FTE) for doctors in remote areas, which are more likely to have high proportions of Indigenous population, will be understated because some services are provided in rural hospitals and through the Royal Flying Doctor Service. There is also anecdotal information that services provided in Aboriginal Medical Services are often not claimed through the Medicare system—further understating the FTE for doctors in areas with high Indigenous populations.

Secondly, the data at the grouped SLA level can hide variability in data at the individual SLA level. For example, although one group of SLAs may have fewer people per doctor overall than a second group of SLAs, there will be a number of individual SLAs in the first group with far more people per doctor than some of the individual SLAs in the second group.

Thirdly, this data does not measure Indigenous Australians use of after-hours MBS items. It is a substitute measure based on after-hours MBS claims for the whole population in relation to the size of the Indigenous population in each SLA.



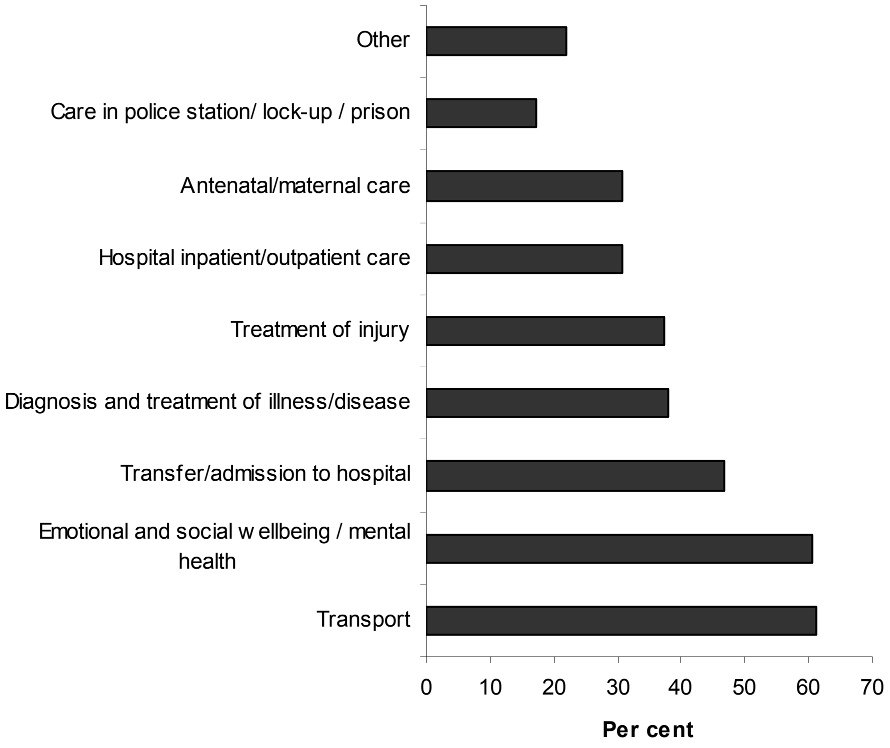
Source: AIHW analysis of Medicare Database.

Figure 3.14.2: Rate of after-hours services provided by FTE GPs in areas of low through to high proportions of Indigenous people in the population, 2006–07

Aboriginal and Torres Strait Islander primary health-care services

Information on Aboriginal and Torres Strait Islander primary health-care services that provided care outside of normal operating hours is available from the 2005–06 SAR database.

- In 2005–06, approximately 115 (77%) of the 150 Indigenous primary health-care services that reported data in the SAR provided care outside of normal operating hours.
- The most common types of service provided outside of normal operating hours by Indigenous primary health-care services were transport (61%) and emotional and social wellbeing/mental health (61%). Approximately 47% of services provided transfer/admission to hospital; 38% provided diagnosis and treatment of illness/disease; 37% provided treatment of injury; 31% provided hospital inpatient/outpatient care, 31% provided antenatal/maternal care; and 17% provided care in a police station/lock-up/prison (Figure 3.14.3).



Source: Service Activity Reporting Database 2005–06.

Figure 3.14.3: Proportion of services that provided care outside of normal operating hours, by type of service, 2005–06

Emergency department episodes

Information on non-admitted patients treated in the emergency departments of public hospitals that were classified in the public hospitals is available from the AIHW National Non-admitted Patient Emergency Department Care Database. Note that this data set only includes hospitals that were classified in the public hospital peer groups of *Principal referral and specialist women's and children's hospitals* and *Large hospitals*. These hospitals are predominantly in Major Cities. Therefore, the episodes of care reported underestimate the level of use of emergency department services by Indigenous Australians nationally.

- In 2004–05 to 2005–06, there were 9,437,824 episodes of care provided by emergency departments, 405,721 (4%) of which were for patients identified as Aboriginal or Torres Strait Islander (Table 3.14.2).
- In 2004–05 to 2005–06, there were 4,725,692 episodes of care provided after hours in emergency departments, of which 205,584 (4%) were for patients identified as Indigenous. Around half of all presentations to emergency departments by Indigenous and non-Indigenous patients were for after-hours care (51% and 50%, respectively) (Table 3.14.4).
- Around one-quarter of all presentations to emergency departments by Indigenous patients were after hours on weekends, 14% were on Sundays and 11% were before 8am or after 1pm on Saturdays (Table 3.14.4).
- In 2004–05 to 2005–06, there were 5,689,677 episodes of care provided by emergency departments for triage categories 4 (semi-urgent) and 5 (non-urgent), of which 271,137 (5%) were for patients identified as Indigenous. Around 45% of episodes of care were provided after hours for Indigenous Australians compared with 46% for non-Indigenous Australians (Table 3.14.3).
- Around 59% of Indigenous presentations to emergency departments after hours were for semi-urgent or non-urgent triage categories.
- The proportion of presentations to emergency departments after hours by Indigenous patients varied by jurisdiction, South Australia had the highest proportion (50%) and Queensland the lowest (45%) (Figure 3.14.4). South Australia also had the highest proportion (48%) of Indigenous presentations to emergency departments after hours for semi-urgent and non-urgent triage categories and Queensland the lowest (42%) (Figure 3.14.5).

Table 3.14.2: Non-admitted patient emergency care episodes by time of day and Indigenous status, Australia, 2004–05 to 2005–06

	Number			Per cent		
Time	Indigenous	Non-Indigenous	Not stated	Indigenous	Non-Indigenous	Not stated
00:00	11,191	218,753	5,705	2.8	2.5	3.0
01:00	8,907	178,954	4,875	2.2	2.0	2.6
02:00	7,274	151,717	4,189	1.8	1.7	2.2
03:00	5,887	132,938	3,591	1.5	1.5	1.9
04:00	4,776	116,967	3,015	1.2	1.3	1.6
05:00	4,008	111,274	2,690	1.0	1.3	1.4
06:00	4,645	136,513	3,105	1.1	1.5	1.7
07:00	8,010	228,742	4,713	2.0	2.6	2.5
08:00	15,777	397,881	7,568	3.9	4.5	4.0
09:00	22,783	536,211	10,423	5.6	6.1	5.5
10:00	25,788	575,858	11,536	6.4	6.5	6.1
11:00	25,337	568,003	11,457	6.2	6.4	6.1
12:00	23,563	531,638	11,261	5.8	6.0	6.0
13:00	23,194	518,923	10,896	5.7	5.9	5.8
14:00	22,771	508,720	10,662	5.6	5.8	5.7
15:00	22,659	493,626	10,187	5.6	5.6	5.4
16:00	23,872	498,248	10,537	5.9	5.6	5.6
17:00	23,969	490,575	10,163	5.9	5.5	5.4
18:00	24,278	491,007	10,211	6.0	5.6	5.4
19:00	24,109	490,511	10,074	5.9	5.5	5.4
20:00	22,573	456,106	9,064	5.6	5.2	4.8
21:00	19,524	396,838	8,208	4.8	4.5	4.4
22:00	17,065	339,420	7,379	4.2	3.8	3.9
23:00	13,761	274,611	6,560	3.4	3.1	3.5
Total	**405,721**	**8,844,034**	**188,069**	**100.0**	**100.0**	**100.0**

Notes

1. The non-admitted patient emergency department care data are required to be reported for hospitals categorised as peer group A or B in the previous year's Australian hospital statistics. In addition, data are provided for some smaller hospitals by some states and territories.
2. The coverage of the National Non-admitted Patient Emergency Department Care Database is estimated at about 76% of records for 2004–05 and 78% for 2005–06. Therefore this data will only cover a subset of after-hours emergency episodes of care.
3. The identification of Indigenous patients is not considered complete and varies among jurisdictions. It is considered acceptable only for Western Australia and the Northern Territory.

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database.

Table 3.14.3: Non-admitted patient emergency care episodes for triage categories 4 (semi-urgent) and 5 (non-urgent) by time of day and Indigenous status, Australia, 2004–05 to 2005–06

	Number			Per cent		
Time	Indigenous	Non-Indigenous	Not stated	Indigenous	Non-Indigenous	Not stated
00:00	6,473	116,444	2,832	2.4	2.2	2.7
01:00	5,141	93,713	2,355	1.9	1.8	2.3
02:00	4,069	78,726	2,057	1.5	1.5	2.0
03:00	3,263	67,963	1,732	1.2	1.3	1.7
04:00	2,638	58,788	1,396	1.0	1.1	1.4
05:00	2,209	56,203	1,246	0.8	1.1	1.2
06:00	2,855	74,676	1,558	1.1	1.4	1.5
07:00	5,687	148,983	2,903	2.1	2.8	2.8
08:00	12,276	284,799	5,072	4.5	5.4	4.9
09:00	17,767	372,032	6,612	6.6	7.0	6.4
10:00	19,111	376,277	7,009	7.0	7.1	6.8
11:00	18,225	354,228	6,686	6.7	6.7	6.5
12:00	16,188	320,474	6,223	6.0	6.0	6.0
13:00	15,902	312,994	5,942	5.9	5.9	5.8
14:00	15,486	309,826	5,995	5.7	5.8	5.8
15:00	15,383	301,093	5,666	5.7	5.7	5.5
16:00	15,909	299,072	5,782	5.9	5.6	5.6
17:00	15,813	289,257	5,472	5.8	5.4	5.3
18:00	15,966	286,980	5,396	5.9	5.4	5.2
19:00	15,648	286,929	5,394	5.8	5.4	5.2
20:00	14,280	263,040	4,769	5.3	4.9	4.6
21:00	12,219	224,154	4,144	4.5	4.2	4.0
22:00	10,402	188,405	3,592	3.8	3.5	3.5
23:00	8,227	150,440	3,211	3.0	2.8	3.1
Total	**271,137**	**5,315,496**	**103,044**	**100.0**	**100.0**	**100.0**

Notes

1. The non-admitted patient emergency department care data are required to be reported for hospitals categorised as peer group A or B in the previous year's Australian hospital statistics. In addition, data are provided for some smaller hospitals by some states and territories.
2. The coverage of the National Non-admitted Patient Emergency Department Care Database is estimated at about 76% of records for 2004–05 and 78% for 2005–06. Therefore this data will only cover a subset of after-hours emergency episodes of care.
3. The identification of Indigenous patients is not considered complete and varies among jurisdictions. It is considered acceptable only for Western Australia and the Northern Territory.

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database.

Table 3.14.4: Non-admitted patient emergency care episodes after hours[(a)], by Indigenous status, 2004–05 to 2005–06

	Number				Percent			
Time of presentation	**Indigenous**	**Non-Indigenous**	**Not stated**	**Total**	**Indigenous**	**Non-Indigenous**	**Not stated**	**Total**
On Sundays	58,458	1,374,101	30,202	1,462,761	14.4	15.5	16.0	15.5
Before 8am or after 1pm on Saturday	45,427	971,104	22,336	1,038,867	11.2	11.0	11.9	11.0
After hours[(a)] weekday	101,699	2,076,399	45,966	2,224,064	25.1	23.5	24.4	23.5
Total after hours	*205,584*	*4,421,604*	*98,504*	*4,725,692*	*50.7*	*50.0*	*52.3*	*50.0*
Between 8am and 1pm on Saturday	12,783	305,558	6,259	324,600	3.1	3.5	3.3	3.4
Between 8am and 8pm on a weekdays	187,489	4,122,847	83,680	4,394,016	46.2	46.6	44.4	46.5
Not after hours	*200,272*	*4,428,405*	*89,939*	*4,718,616*	*49.3*	*50.0*	*47.7*	50.0
Total	**405,856**	**8,850,009**	**188,443**	**9,444,308**	**100.0**	**100.0**	**100.0**	**100.0**

(a) After hours is defined by the MBS definition (excluding consideration of public holidays): on Sunday, before 8am or after 1pm on a Saturday, or at any time other than 8am to 8pm on a weekday.

Notes

1. The non-admitted patient emergency department care data are required to be reported for hospitals categorised as peer group A or B in the previous year's Australian hospital statistics. In addition, data are provided for some smaller hospitals by some states and territories.
2. The coverage of the National Non-admitted Patient Emergency Department Care Database is estimated at about 76% of records for 2004–05 and 78% for 2005–06. Therefore this data will only cover a subset of after-hours emergency episodes of care.
3. The identification of Indigenous patients is not considered complete and varies among jurisdictions. It is considered acceptable only for Western Australia and the Northern Territory.
4. Excludes patients who were admitted or arrived at the hospital by ambulance.

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database.

Table 3.14.5: Non-admitted patient emergency care episodes after hours[(a)] for triage categories 4 (semi-urgent) and 5 (non-urgent), by Indigenous status, 2004–05 to 2005–06

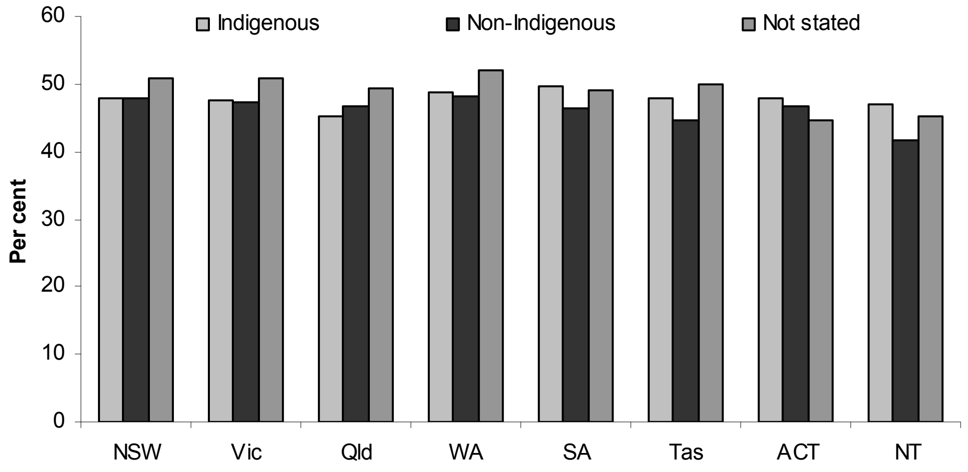
	Number				Percent			
Time of presentation	**Indigenous**	**Non-Indigenous**	**Not stated**	**Total**	**Indigenous**	**Non-Indigenous**	**Not stated**	**Total**
On Sundays	39,266	847,814	17,233	904,313	14.5	15.9	16.7	15.9
Before 8am or after 1pm on Saturday	27,734	541,059	11,259	580,052	10.2	10.2	10.9	10.2
After hours(a) weekday	54,898	1,042,966	21,105	1,118,969	20.2	19.6	20.5	19.7
Total after hours	*121,898*	*2,431,839*	*49,597*	*2,603,334*	*45.0*	*45.7*	*48.1*	*45.8*
Between 8am and 1pm on Saturday	10,919	229,896	4,443	245,258	4.0	4.3	4.3	4.3
Between 8am and 8pm on a weekdays	138,320	2,653,761	49,004	2,841,085	51.0	49.9	47.6	49.9
Not after hours	*149,239*	*2,883,657*	*53,447*	*3,086,343*	*55.0*	*54.3*	*51.9*	*54.2*
Total	**271,137**	**5,315,496**	**103,044**	**5,689,677**	**100.0**	**100.0**	**100.0**	**100.0**

(a) After hours is defined by the MBS definition (excluding consideration of public holidays): on Sunday, before 8am or after 1pm on a Saturday, or at any time other than 8am to 8pm on a weekday.

Notes

1. The non-admitted patient emergency department care data are required to be reported for hospitals categorised as peer group A or B in the previous year's Australian hospital statistics. In addition, data are provided for some smaller hospitals by some states and territories.
2. The coverage of the National Non-admitted Patient Emergency Department Care Database is estimated at about 76% of records for 2004–05 and 78% for 2005–06. Therefore this data will only cover a subset of after hours emergency episodes of care.
3. The identification of Indigenous patients is not considered complete and varies among jurisdictions. It is considered acceptable only for Western Australia and the Northern Territory.
4. Excludes patients who were admitted or arrived at the hospital by ambulance.

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database.

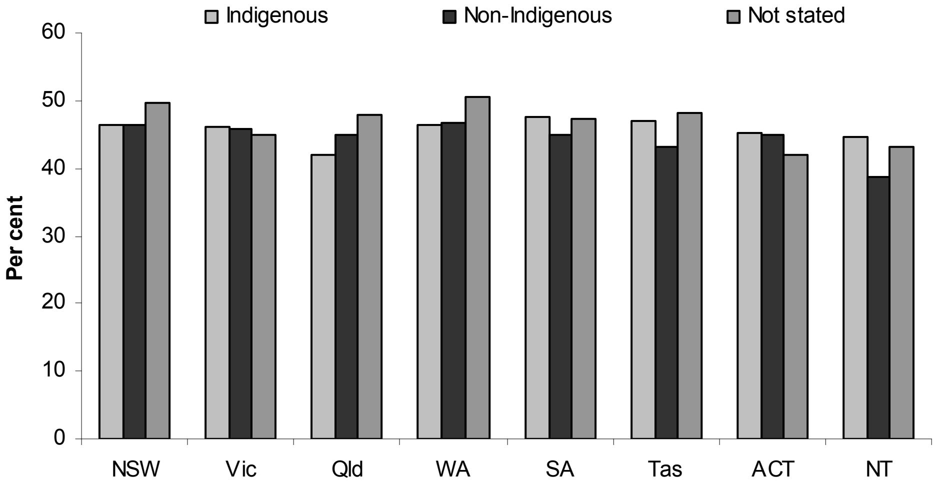


Notes

1. After hours is defined by the MBS definition (excluding consideration of public holidays): on Sunday, before 8am or after 1pm on a Saturday, or at any time other than 8am to 8pm on a weekday.
2. Caution should be used in the interpretation of these data because the identification of Indigenous patients is not considered to be complete and completeness varies among the jurisdictions.
3. The quality of Indigenous identification is considered acceptable for the purpose of analysis only for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (public hospitals only).
4. The non-admitted patient emergency department care data is required to be reported for hospitals categorised as peer group A or B in the previous year's Australian hospital statistics. In addition, data are provided for some smaller hospitals by some states and territories.
5. The coverage of the National Non-admitted Patient Emergency Department Care Database is estimated at about 76% of records for 2004–05 and 78% for 2005–06. Therefore this data will only cover a subset of after-hours emergency episodes of care.

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database.

Figure 3.14.4: Proportion of presentations to emergency departments which were after hours, by Indigenous status of the patient and state/territory, 2004–05 to 2005–06



Notes

1. After hours is defined by the MBS definition (excluding consideration of public holidays): on Sunday, before 8am or after 1pm on a Saturday, or at any time other than 8am to 8pm on a weekday.
2. Caution should be used in the interpretation of these data because the identification of Indigenous patients is not considered to be complete and completeness varies among the jurisdictions.
3. The quality of Indigenous identification is considered acceptable for the purpose of analysis only for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (public hospitals only).
4. The Non-admitted Patient Emergency Department Care data is required to be reported for hospitals categorised as peer group A or B in the previous year's Australian hospital statistics. In addition, data are provided for some smaller hospitals by some states and territories.
5. The coverage of the National Non-admitted Patient Emergency Department Care Database is estimated at about 76% of records for 2004–05 and 78% for 2005–06. Therefore this data will only cover a subset of after-hours emergency episodes of care.

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database.

Figure 3.14.5: Proportion of presentations to emergency departments which were after hours for triage categories 4 (semi-urgent) and 5 (non-urgent), by Indigenous status and state/territory, 2004–05 to 2005–06

Data quality issues

General Practitioner data (BEACH)

Information about general practitioner encounters is available from the 'Bettering the Evaluation and Care of Health' (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey, 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous Australians visiting general practitioners, but the extent of this undercount is not measurable.

Service Activity Reporting data

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health-care services were around 99% for the period 2005–06. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.*
- *The SAR questionnaire collects a broad set of indicators for the services and did not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *These data provide a rough guide to service activity in this area, but do not attempt to measure quantity or quality.*
- *These data also do not differentiate between services provided by the service and those facilitated by the service.*
- *These services have a different distribution by remoteness than mainstream GPs.*

In relation to the statistics for this performance measure – these data provide a rough guide to service activity in this area but do not attempt to measure quantity or quality.

The SAR questionnaire does not ask for details of the actual hours that a service is available in this period, what 'after hours' or 'usual opening hours' actually constitutes, nor does it require respondents to report on actual numbers of patients seen in this period. The inclusion of the MBS definition within the after-hours question in the SAR is currently under consideration for the 2007–08 SAR questionnaire.

Furthermore, SAR data is not representative of the total Indigenous population, as only around 30% of Indigenous people use such services as their regular GP or health service (AHMAC 2006).

Medicare data

The data on MBS items for after-hours care by high through to low proportions of Indigenous population is a substitute measure of access by Indigenous Australians that does not actually capture Indigenous Australians access to these items. Note there are a number of items on the Medicare Benefits Schedule relevant to this performance measure that will be considered for inclusion once the data improves. These items include 1, 2, 97–98, 5000–5067, 520–-5267, 601–602, 697, and 698.As the quality of the voluntary Indigenous identifier improves, Medicare data will provide an additional source of data for this performance measure.

(continued)

Data quality issues (continued)

Note: Medicare Indigenous identification is collected once rather than at the point of service.

National Minimum Data Set—non-admitted patient emergency department care

The National Non-admitted Patient Emergency Department Care Database is a national collection of de-identified data on emergency department episodes based on the Non-admitted Emergency Department Care National Minimum Data Set.

As the coverage of this data collection is largely public hospitals, which were classified in peer groups A and B, most of the data relates to large hospitals within Major Cities. The proportion of accident and emergency occasions of service for which detailed episode-level data were available was 78% in 2005–06 and 2006–07. This coverage estimate is likely to overestimate the level of coverage for Indigenous occasions of service because proportionally more Indigenous Australians live in rural and remote areas. Therefore these data may not be indicative of the level of use of emergency department services by Indigenous people nationally (AIHW 2008a).

It is recommended that this data only be reported as numbers, and not rates, because the denominator would include Indigenous Australians not covered in this collection.

Indigenous status question

This data set includes the standard Indigenous status question.

Under-identification

The quality of the data provided for Indigenous status in 2006–07 for emergency department presentations varied by jurisdiction. Most states and territories advised that the Indigenous status data collected in an emergency department setting could be less accurate than the data collected for admitted patients; the data should therefore be used with caution (AIHW 2008a). In 2006–07 only New South Wales, Western Australia and the Northern Territory reported that the quality of Indigenous status data was acceptable.

Expenditure data

Quality of data on Indigenous service use

For many publicly funded health services, there are few details available about service users and, in particular, about their Indigenous status. For privately funded services, this information is frequently unavailable. For those services that do collect this information, recording Indigenous status accurately for all people does not always occur. The result is that there is some margin of error in the estimations of health expenditure for Indigenous people and their corresponding service use.

Expenditure estimates

There may be some limitations associated with the scope and definition of health expenditures included in this measure. Other (non-health) agency contributions to health expenditure, such as 'health' expenditures incurred within education departments and prisons, are not included.

Furthermore, although every effort has been made to ensure consistent reporting and categorisation of expenditure on health goods and services, in some cases there may be inconsistencies across data providers. These may result from limitations of financial reporting systems and/or different reporting mechanisms. Reporting of health administration (n.e.c.) is one such example; in some cases, all the associated administration costs have been included in the estimates of expenditure on a particular health-service category (for example, acute care services), whereas in other cases they have been separately reported.

References

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AIHW (Australian Institute of Health and Welfare) 2002. Australia's children 2002. Cat. no. PHE 36. Canberra: AIHW.

AIHW 2008a. Australian hospital statistics 2006–07, Health services series no. 30. Cat. no. HSE 50. Canberra: AIHW.

AIHW 2008b. Expenditures on health for Aboriginal and Torres Strait Islander people 2004–05. Health and welfare expenditure series no. 32. Cat. no. HWE 40. Canberra: AIHW.

3.15 Regular GP or health service

Number and proportion of individuals who have a regular general practitioner (GP) or health service

Data sources

Data for this measure come from the ABS 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Analyses

Self-reported data

Whether visited same doctor/health service

- In 2004–05, approximately 89% of Indigenous persons aged 15 years and over and 91% of all Aboriginal and Torres Strait Islander peoples surveyed reported that they usually went to the same GP or medical service.
- If they had a problem with their health, the majority (60%) of Indigenous Australians went to a doctor/GP outside of Aboriginal medical services (AMS's) and hospitals. The next highest proportion attended an Aboriginal medical service (30%). Approximately 7% of Indigenous people reported that they went to hospital for their regular health care.

Whether visited same doctor/health service by age and sex

- A slightly higher proportion of Indigenous Australians aged 0–14 years and 55 years and over reported they usually went to the same GP or medical service than those of other ages (93% and 94%, respectively) (Table 3.15.1; Figure 3.15.1).
- Similar proportions of Indigenous males and females reported they usually went to the same GP or medical service (90% and 91%, respectively).
- Approximately 3% of Indigenous males reported they did not seek health care if they had a problem with their health compared with 1% of Indigenous females (Table 3.15.2).

Table 3.15.1: Types of regular health care used by Indigenous Australians, by age, 2004–05

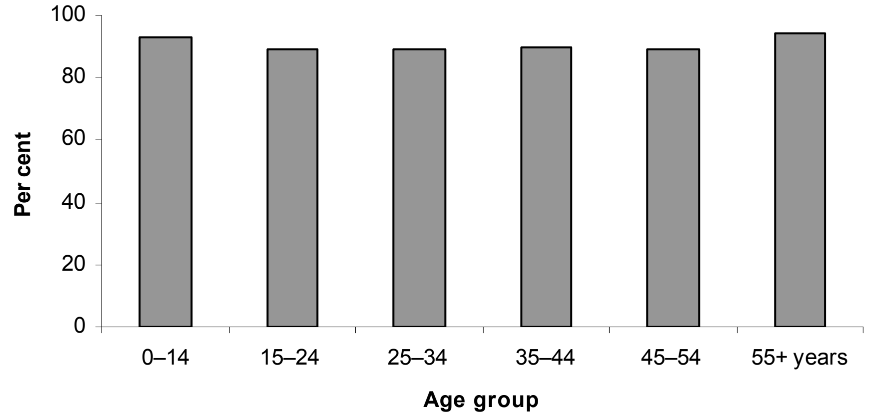
	0–14 years	15–24 years	25–34 years	35–44 years	44–54 years	55 years and over	Total
				Per cent			
Where usually go if problem with health							
Doctor/GP (outside AMS/ hospital)	62	62	54	56	61	62	60
Aboriginal medical service	30	28	33	31	30	30	30
Hospital	7	6	8	6	7	7	7
Don’t seek health care	1(a)	2	3	3(a)	2(a)	—(b)	2
Total(c)	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Whether usually go to same GP/medical service							
Yes	93	89	89	90	89	94	91
No	7	11	11	10	11	6	9
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	180,669	82,067	69,772	59,057	39,578	33,167	474,310

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Total includes ‘traditional healer’, ‘other health care’ and ‘not stated’.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.



Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Figure 3.15.1: Whether Indigenous Australians usually go to the same GP/medical service, by age group, 2004–05

Table 3.15.2: Types of regular health care used by Indigenous Australians, by sex, 2004–05

	Indigenous		
	Male	**Female**	**Persons**
		Per cent	
Where usually go if problem with health			
Doctor/GP (outside AMS/ hospital)	60	59	60
Aboriginal medical service	29	31	30
Hospital	6	7	7
Don't seek health care	3	1	2
Total[(a)]	**100**	**100**	**100**
Whether usually go to same GP/medical service			
Yes	90	91	91
No	10	8	9
Total[(a)]	**100**	**100**	**100**
Total number	232,362	241,948	474,310

(a) Total includes 'traditional healer', 'other health care' and 'not stated'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Whether visited same doctor/health service by state/territory and remoteness

- The overall pattern of a higher proportion of Indigenous people using a doctor (outside of AMS's and hospitals) for their regular health care was true across all jurisdictions, with the exception of the Northern Territory where 82% reported using an Aboriginal medical service and only 14% reported using a doctor. Nevertheless, significant differences existed between jurisdictions with regard to the type of service Indigenous people used for regular health care. The majority of Indigenous people (about two-thirds and over) in the Australian Capital Territory, South Australia, Victoria, New South Wales and Tasmania used a doctor (outside of AMS's and hospitals) for their regular health care. A higher proportion of Indigenous persons used hospitals for regular health care in Queensland and Western Australia (12% and 14%, respectively) compared with other jurisdictions (Table 3.15.3).

- The proportion of Indigenous Australians using Aboriginal medical services for their regular health care increased with remoteness from 15% in Major Cities to 76% in Very Remote areas. The proportion of Indigenous Australians using a doctor (outside of AMS's and hospitals) for their regular health care decreased with remoteness from 80% in Major Cities and Inner Regional areas to 6% in Very Remote areas. Hospital use, however, was higher in Remote and Very Remote areas (Table 3.15.4; Figure 3.15.2).

Table 3.15.3: Types of regular health care used by Indigenous Australians, by state /territory, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Per cent				
Where usually go if problem with health									
Doctor/GP (outside AMS/ hospital)	80	75	56	48	68	89	64	14	60
Aboriginal medical service	13	19	30	34	26	6	32	82	30
Hospital	3(a)	3(a)	12	14	3(a)	3(a)	1(b)	2(a)	7
Don't seek health care	3	2(a)	2(a)	1(a)	2(a)	—(a)	2(a)	2(a)	2
Total(c)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	139,570	29,334	130,856	67,548	26,534	18,072	4,162	58,234	474,310
Whether usually go to same GP/medical service									
Yes	88	92	90	90	96	96	95	94	91
No	11	8(a)	10	10	4	4	5(a)	6(a)	9
Total(c)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	139,570	29,334	130,856	67,548	26,534	18,072	4,162	58,234	474,310

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(c) Total includes 'traditional healer', 'other health care' and 'not stated'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

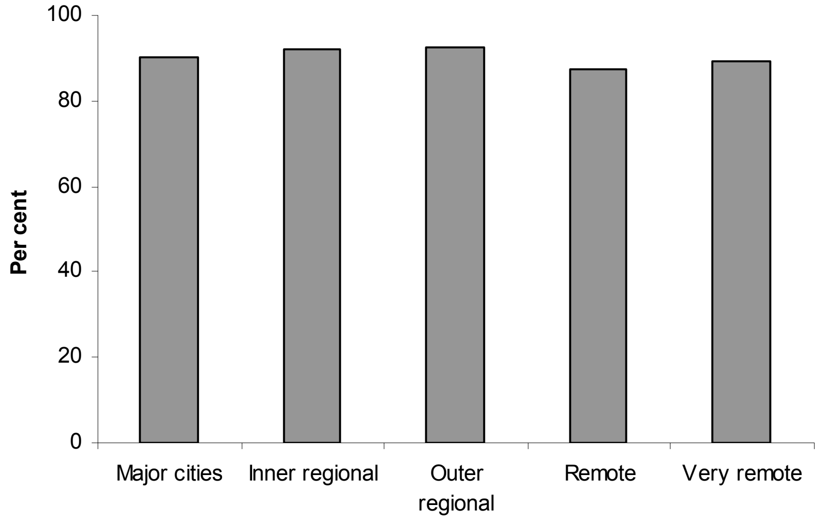
Table 3.15.4: Types of regular health care used by Indigenous Australians, by remoteness, 2004–05

	Major Cities	Inner Regional	Outer Regional	Remote	Very Remote	Australia
			Per cent			
Where usually go if problem with health						
Doctor/GP (outside AMS/ hospital)	80	80	67	34	6(a)	60
Aboriginal medical service	15	11	26	45	76	30
Hospital	1	6	5(a)	15(a)	16	7
Don't seek health care	3	2(a)	1(a)	1(a)	34(a)	2
Total(b)	**100**	**100**	**100**	**100**	**100**	**100**
Total Number	144,157	95,609	108,549	41,306	84,689	474,310
Whether usually go to same GP/medical service						
Yes	90	92	93	87	89	91
No	9	8	7	12	10	9
Total(b)	**100**	**100**	**100**	**100**	**100**	**100**
Total Number	144,157	95,609	108,549	41,306	84,689	474,310

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Total includes 'traditional healer', 'regular health care' and 'not stated'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.



Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Figure 3.15.2: Whether Indigenous Australians usually go to the same GP/medical service, by remoteness, 2004–05

Whether visited same doctor/health service by selected population and health characteristics

- The proportion of Indigenous Australians who reported they usually went to the same GP or medical service was similar irrespective of language spoken at home or household income but was slightly higher among those in the 5th quintile (95%) of the Socioeconomic Indexes of Areas (SEIFA) index of disadvantage (95%), those in non-remote areas (92%) and those with private health cover (93%) (Table 3.15.5).
- The proportion of Indigenous Australians who reported they usually went to the same GP or medical service was similar (around 90%) for those with reported excellent/very good/good health and those with fair/poor health, and for those with any number of long-term conditions (Table 3.15.6).

Table 3.15.5: Whether Indigenous Australians usually go to the same GP/medical service, by selected population characteristics, 2004–05

	Yes	No	Total
		Per cent	
Main Language spoken at home[(a)]			
English	89	11	100
Language other than English	90	9	100
Total[(b)]	89	10	100
Household income			
1st quintile	91	9	100
5th quintile	90	10	100
Total[(c)]	91	9	100
SIEFA Index of disadvantage			
1st quintile	91	9	100
5th quintile	95	5[(d)]	100
Total[(c)]	91	9	100
Location			
Remote	89	11	100
Non-remote	92	8	100
Total	91	9	100
Private health insurance[(e)]			
With private cover	93	7[(d)]	100
Without private cover	90	10	100
Total[(c)]	90	10	100

(a) Persons aged 18 years and over.

(b) Total includes ‘not stated’, ‘inadequately described’ and ‘non-verbal languages’.

(c) Total includes ‘not stated’ and ‘not known’ where applicable.

(d) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(e) Persons aged 15 years and over, non-remote areas only.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 3.15.6: Type of regular health care used by Indigenous Australians, by summary health characteristics, 2004–05

	Self-assessed health status(a)			Number of long-term conditions(b)				
Regular health care	Excellent/very good/good	Fair/poor	Total(c)	0	1	2	3+	Total
				Per cent				
Where usually go if problem with health								
Doctor/GP (outside AMS/ hospital)	59	58	59	58	58	59	65	60
Aboriginal medical service	30	31	30	31	31	33	27	30
Hospital	7	7	7	7	7	6(d)	6	7
Don't seek health care	2	2(d)	2	2	3(d)	1(e)	1(d)	2
Total(f)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Whether usually go to same GP/ medical service								
Yes	89	90	89	90	91	91	92	91
No	10	9	10	9	9	8	8	9
Total(c)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	229,335	64,236	293,641	321,338	24,767	27,714	100,386	474,310

(a) Persons aged 15 years and over.

(b) All persons. Includes conditions identified as a national health priority area.

(c) Total includes 'not stated'.

(d) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(e) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(f) Total includes 'traditional healer', 'other health care' and 'not stated'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Discrimination/treatment when visited doctor/health service

- Indigenous people who usually went to the same GP or medical service were more likely to report that they were treated the same as non-Indigenous people when seeking health care over the last 12 months (78%) than those without a usual GP or medical service (70%). A similar proportion reported that they were treated worse (4%) or better (5%) than non-Indigenous people (Table 3.15.7).
- Sixteen per cent of Indigenous Australians reported that they were treated badly because they were Indigenous.
- Of the people who reported that they were treated badly because they were Indigenous, the majority felt angry (67%). Others reported feeling sad (28%), sorry for the person who treated them badly (31%), ashamed or worried about it (17%) or sick (12%).
- Of the people who reported that they were treated badly because they were Aboriginal or Torres Strait Islander, 33% reported that they tried to avoid the person/situation, 28% just forgot about it, and 38% talked to family or friends about it.

Table 3.15.7: Whether Indigenous Australians usually go to the same GP/medical service, by treatment when seeking health care, 2004–05

	Whether usually go to same GP/medical service		
	Yes	No	Total[(f)]
	Per cent		
Treatment when seeking health care in last 12 months compared with non-Indigenous people			
Worse than non-Indigenous people	4	5[(a)]	4
The same as non-Indigenous people	78	70	77
Better than non-Indigenous people	5	4[(a)]	5
Only encountered Indigenous people	2	—[(b)]	2
Did not seek health care in last 12 months	4	13	5
Don't know/not sure	7	7	7
Total[(c)]	**100**	**100**	**100**
Total number[(c)(f)]	**230,491**	**26,946**	**258,297**
Whether felt treated badly because Aboriginal or Torres Strait Islander in last 12 months			
Yes	16	15	16
No	84	84	84
Total[(c)(f)]	**100**	**100**	**100**
Total number[(c)(f)]	**230,491**	**26,946**	**258,297**
How usually feel when treated badly because Aboriginal/Torres Strait Islander			
Feel angry	68	64	67
Feel sad	26	39	28
Feel sorry for the person who did it	32	25[(a)]	31
Feel ashamed or worried about it	16	18[(a)]	17
Feel sick	12	10[(a)]	12
Other feeling	12	11[(a)]	12
No feeling	5[(a)]	14[(a)]	6
Total[(d)(e)(f)]	**100**	**100**	**100**
Total number[(e)(f)]	**36,239**	**4,088**	**40,373**
What usually do when treated badly because Aboriginal/Torres Strait Islander			
Try to avoid the person/situation	34	24[(a)]	33
Try to change the way you are or things that you do	9	9[(a)]	9
Try to do something about the people who did it	30	23[(a)]	30
Talk to family or friends about it	38	38	38
Keep it to yourself	17	26[(a)]	18
Just forget about it	27	33[(a)]	28
Do anything else	5	7[(a)]	5
No action	4[(a)]	6[(a)]	4
Total[(d)(e)(f)]	**100**	**100**	**100**
Total number[(e)(f)]	**36,239**	**4,088**	**40,373**

(continued)

Table 3.15.7 (continued): Whether usually goes to the same GP/medical service, by discrimination, Indigenous Australians, 2004–05

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.
(b) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.
(c) Total persons aged 18 years and over.
(d) Components may not add to total because persons may have reported more than one type of action.
(e) Persons who answered yes to ‘whether treated badly in the last 12 months because Aboriginal/Torres Strait Islander’.
(f) Includes refusal to answer and ‘not stated’.

Source: ABS and AIHW analysis of 2004–05 NATSIHS

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problems inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions (ABS 2006).

Non-Indigenous comparisons are available through the General Social Survey. Time series comparisons are available through the 1994 National Aboriginal and Torres Strait Islander Survey.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities, and to help respondents to understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments.

Further information on NATSIHS data quality issues can be found in the 2005–05 NATSIHS publication (ABS 2006).

Doctor/health service

The NATSIHS does not separately identify whether persons would go to this doctor/health service if they are sick or need advice about their health; if they had new health problems; if they needed preventative health care; or if they needed referrals. In the United States, persons are determined to have a usual primary care provider if they reported that they would usually go the same health professional for all four of these situations.

References

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS

3.16 Care planning for clients with chronic diseases

The use of care planning for the management of chronic disease among the Aboriginal and Torres Strait Islander population

Data sources

Data on care planning come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), the Service Activity Reporting (SAR) data collection and the Healthy For Life (HFL) data collection.

Note that these data sources only provide part of the picture of the use of care planning for the management of chronic disease among the Indigenous population. Data on care-planning Medicare items will provide a more complete picture of care planning once the voluntary Indigenous identifier is more complete.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues, including health-related actions, health risk factors, health status, socioeconomic circumstances and women’s health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Healthy for Life Program

The HFL program is an ongoing program funded by the Office for Aboriginal and Torres Strait Islander Health (OATSIH) of the Australian Government Department of Health and Ageing (DoHA). The program aims to improve the capacity and performance of primary health-care services to deliver high-quality maternal and children’s health services and chronic disease care to Indigenous people through population health approaches using best practice and quality improvement principles.

Services participating in the HFL program are required to submit de-identified, aggregate service data for 11 essential indicators covering maternal health, child health and chronic disease care on a regular basis (6 and 12 months) as well as information about the characteristics of their service and organisational infrastructure. For the January to June 2007 reporting period, 59 HFL services submitted data to the AIHW.

Service Activity Reporting (SAR) data collection

The SAR collects data from approximately 150 Australian Government-funded Indigenous primary health-care services and is held at the Australian Government Department of health and Ageing (DoHA). It is estimated that they provide GP services to around 40% of the

Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a 12-month period.

Response rates to the SAR by Indigenous primary health-care services are usually between 97% and 99%.

Note that the SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Analyses

Service Activity Reporting data

The 2003–04 SAR collected all data items relevant to care planning. The 2004–05 and 2005–06 SAR reports did not collect information on four relevant data items (services where the hospital regularly provides or facilitates information on the condition of the patient who has been admitted; services where the hospital regularly provides or facilitates information to a patient's family on the condition of the patient who has been admitted; discharge planning for Indigenous patients is well coordinated between the hospital and the service; and services that provide or facilitate antenatal shared care arrangements). These data items have been re-instated in the 2006–07 SAR.

Data presented below is from the 2003–04 SAR and the 2005–06 SAR. Data is not yet available for the 2006–07 SAR.

- In 2003–04, approximately 93% of Indigenous primary health-care services provided care planning, 63% reported keeping track of clients needing follow-up (for example, through monitoring sheets/follow-up files), 60% reported that the hospital provided information on the condition of the patient who had been admitted, 57% used clinical practice guidelines and 56% reported that discharge planning was well coordinated between the hospital and the service (for example, provision of medicines, arrangements for transport, liaison with GP and family). About 54% of Indigenous primary health-care services reported they used Patient Information and Recall Systems (PIRS), which automatically provide reminders for follow-up and routine health checks (Table 3.16.1a; Figure 3.16.1).
- In 2005–06, approximately 61% of Indigenous primary health-care services provided shared care arrangements for the management of people with chronic conditions, 57% of services kept track of clients needing follow-up, 54% of services used clinical practice guidelines, 53% of services used Patient Information Recall Systems and 51% of services maintained a health register (Table 3.16.1b).

Table 3.16.1a: Number and proportion of respondent Aboriginal and Torres Strait Islander primary health-care services that provide care planning, 2003–04

	No.	Per cent
Services that provide or facilitate shared care arrangements for the management of people with chronic conditions	69	50.0
Services where the hospital regularly provides or facilitates information on the condition of the patient who has been admitted	83	60.1
Services where the hospital regularly provides or facilitates information to a patient's family on the condition of the patient who has been admitted	52	37.7
Discharge planning for Aboriginal and Torres Strait Islander patients is well coordinated between the hospital and the service (e.g. provision of medicines, arrangements for transport, liaison with GP and family)	77	55.8
Services that provide or facilitate antenatal shared-care arrangements	82	59.4
Services that keep track of clients needing follow-up (e.g. through monitoring sheets/follow-up files)	87	63.0
Services that maintain a health register (not specific to chronic diseases)	71	51.4
Services that use clinical practice guidelines (not specific to chronic diseases)	79	57.2
Services that use Patient Information Recall Systems (PIRS), which automatically provide reminders for follow-up and routine health checks	75	54.3
Total services that provide care planning[(a)]	***128***	***92.8***
Total services	**138**	**100.0**

(a) Total services that provide at least one of the activities listed.

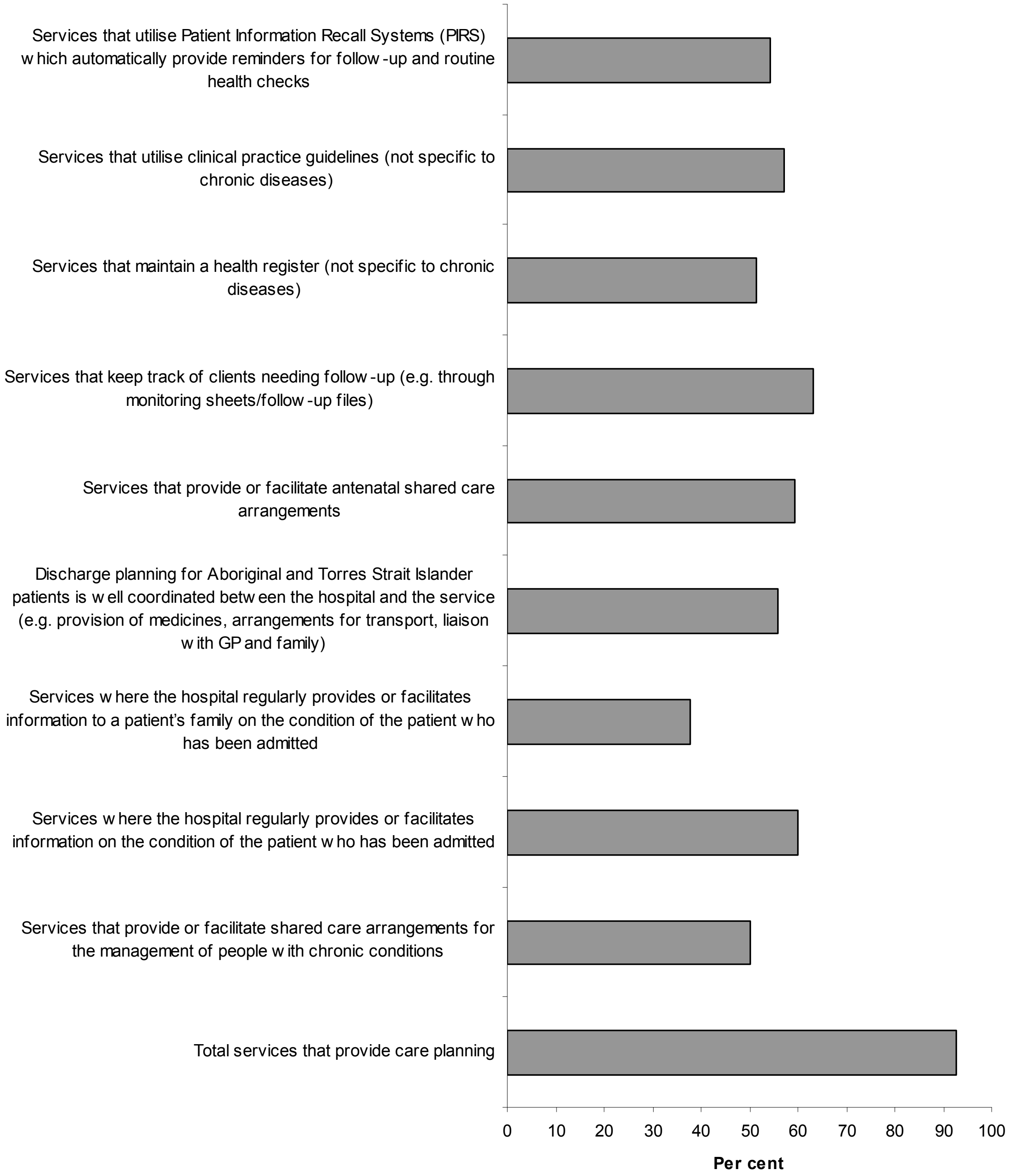
Source: DoHA Service Activity Report 2003–04.

Table 3.16.1b: Number and proportion of respondent Aboriginal and Torres Strait Islander primary health-care services that provide care planning, 2005–06

	No.	Per cent
Services that provide or facilitate shared care arrangements for the management of people with chronic conditions	92	61.3
Services that keep track of clients needing follow-up (e.g. through monitoring sheets/follow-up files)	86	57.3
Services that maintain a health register (not specific to chronic diseases)	76	50.7
Services that use clinical practice guidelines (not specific to chronic diseases)	82	54.7
Services that use Patient Information Recall Systems (PIRS), which automatically provide reminders for follow-up and routine health checks	80	53.3
Total services that provide care planning[(a)]	***n.a.***	***n.a.***
Total services	**150**	**100.0**

(a) Total services that provide at least one of the activities listed.

Source: DoHA Service Activity Report 2005–06.



Source: DoHA Service Activity Report 2003–04.

Figure 3.16.1: Proportion of respondent Aboriginal and Torres Strait Islander primary health-care services that provide care planning, 2003–04

Asthma action plans

The 2004–05 NATSIHS collected self-reported data on the number of Indigenous and non-Indigenous Australians in non-remote areas with long-term health conditions, such as asthma, and whether the person has a written action plan. Data on asthma action plans by Indigenous status, age and state/territory are presented below.

- In 2004–05, approximately 17% of Indigenous Australians living in non-remote areas reported asthma as a long-term condition. Indigenous Australians were almost twice as likely as non-Indigenous Australians to report asthma as a long-term condition.
- In 2004–05, similar proportions of Indigenous and non-Indigenous Australians with asthma living in non-remote areas reported having written asthma action plans (25% and 22%, respectively) (Table 3.16.2).
- Indigenous Australians aged 0–4 and those aged 55 years and over were the most likely to have a written asthma action plan (44% and 35%, respectively).
- New South Wales had the highest (31%), and Western Australia the lowest (17%), proportion of Indigenous Australians reporting having a written asthma action plan (Table 3.16.3).
- In 2004–05, the majority of Indigenous and non-Indigenous Australians with written asthma action plans reported the source of their plan to be a doctor (91% and 95%, respectively) (Table 3.16.4).

Table 3.16.2: Whether persons in non-remote areas have a written asthma action plan, by Indigenous status and age group, 2004–05

Age group (years)	Does have a written asthma action plan	Does not have a written asthma action plan	Never heard of a written asthma action plan	Total[(a)]	Total with asthma	Total persons with asthma
			Per cent			No.
0–4						
Indigenous	44.1	51.6	2.8	100.0	12.3	5,621
Non-Indigenous	33.4	61.4	3.6	100.0	7.2	85,612
5–14						
Indigenous	33.7	63.0	2.9	100.0	17.7	15,801
Non-Indigenous	37.1	57.9	3.3	100.0	13.4	339,310
Total aged 0–14						
Indigenous	*36.5*	*60.0*	*2.9*	*100.0*	*15.9*	*21,422*
Non-Indigenous	*36.4*	*58.6*	*3.4*	*100.0*	*11.4*	*424,922*
15–24						
Indigenous	12.8	75.9	8.6	100.0	17.6	12,396
Non-Indigenous	21.4	73.1	5.3	100.0	12.6	327,611
25–34						
Indigenous	17.8	75.8	5.8	100.0	19.5	9,705
Non-Indigenous	18.1	77.2	4.7	100.0	10.6	288,858
35–44						
Indigenous	20.3	71.0	5.5	100.0	13.6	5,519
Non-Indigenous	18.9	77.0	4.1	100.0	8.7	249,056
45–54						
Indigenous	14.4	74.9	8.1	100.0	21.8	6,294
Non-Indigenous	18.7	76.2	5.1	100.0	9.0	241,475
55 years and over						
Indigenous	34.7	54.7	10.4	100.0	18.7	4,441
Non-Indigenous	18.1	73.4	7.8	100.0	9.1	407,322
Total non-age-standardised						
Indigenous	**24.6**	**68.0**	**5.9**	**100.0**	**17.2**	**59,777**
Non-Indigenous	**22.8**	**71.5**	**5.1**	**100.0**	**10.2**	**1,939,245**
Total age-standardised[(b)]						
Indigenous	**24.7**	**66.9**	**6.9**	**100.0**	**17.7**	. .
Non-Indigenous	**22.4**	**71.9**	**5.2**	**100.0**	**10.2**	. .
Rate ratio	**1.1**	**0.9**	**1.3**	. .	**1.7**	. .

(a) Total includes 'not known if has a written asthma action plan', which represents 1.5% of Indigenous Australians and 0.5% of non-Indigenous Australians with asthma in non-remote areas.

(b) Totals are directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 3.16.3: Whether persons in non-remote areas have a written asthma action plan by Indigenous status and state/territory, 2004–05

Jurisdiction	Does have a written asthma action plan	Does not have a written asthma action plan	Never heard of a written asthma action plan	Total[(a)]	Total with asthma	Total persons with asthma
			Per cent			No.
New South Wales						
Indigenous	31.0	61.6	7.0	100.0	18.0	22,331
Non-Indigenous	23.5	73.3	2.5	100.0	9.2	595,171
Rate ratio	1.3	0.8	2.8	. .	2.0	. .
Victoria						
Indigenous	22.9	70.1	6.3	100.0	4.7	5,904
Non-Indigenous	26.5	65.8	7.5	100.0	7.7	496,570
Rate ratio	0.9	1.1	0.8	. .	0.6	. .
Queensland						
Indigenous	22.3	69.6	5.1	100.0	11.5	16,150
Non-Indigenous	20.4	73.6	5.6	100.0	6.1	390,422
Rate ratio	1.1	0.9	0.9	. .	1.9	. .
Western Australia						
Indigenous	16.6	72.8	10.3	100.0	5.6	6,808
Non-Indigenous	15.1	80.2	4.1	100.0	3.1	198,044
Rate ratio	1.1	0.9	2.5	. .	1.8	. .
South Australia						
Indigenous	22.1	70.4	3.0	100.0	2.9	3,517
Non-Indigenous	22.2	73.1	4.6	100.0	2.5	164,221
Rate ratio	1.0	1.0	0.7	. .	1.1	. .
Tasmania and ACT						
Indigenous	28.5	64.1	7.0	100.0	3.0	4,084
Non-Indigenous	20.3	67.7	11.8	100.0	1.3	85,930
Rate ratio	1.4	0.9	0.6	. .	2.3	. .
Northern Territory[(b)]						
Indigenous	24.8	72.1	3.1	100.0	0.7	983
Non-Indigenous	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Rate ratio	. .	. .	. .	. .	. .	. .
Australia						
Indigenous	**24.7**	**66.9**	**6.9**	**100.0**	**17.7**	**59,777**
Non-Indigenous	**22.4**	**71.9**	**5.2**	**100.0**	**10.2**	**1,939,245**
Rate ratio	**1.1**	**0.9**	**1.3**	**. .**	**1.7**	**. .**

(continued)

Table 3.16.3 (continued): Whether person(s) in non-remote areas have a written asthma action plan by Indigenous Status and state/territory, 2004–05

(a) Includes 'not known if has a written asthma action plan', which represents 1.5% of Indigenous Australians and 0.5% of non-Indigenous Australians with asthma in non-remote areas.

(b) Non-Indigenous data for Northern Territory not presented because of the small sample size.

Note: Data have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 3.16.4: Source of written asthma action plan by Indigenous status and age group, 2004–05

	Doctor	Other	Total with written asthma action plan	Total persons with written asthma action plans
		Per cent		No.
Non-age-standardised				
Indigenous	91.8	8.2	100.0	14,682
Non-Indigenous	94.2	5.8	100.0	442,896
Age-standardised[(a)]				
Indigenous	90.8	9.2	100.0	. .
Non-Indigenous	94.9	5.1	100.0	. .
Rate ratio	1.0	1.8	. .	. .

(a) Totals are directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Healthy For Life data

Chronic disease management plans (MBS item 721) General Practitioner Management Plan (GPMP)

From 1 July 2005, the Australian Government introduced chronic disease management Medicare items, including MBS 721 and 723.

MBS item 721 is for patients with a chronic or terminal medical condition who will benefit from a structured approach to management of their care needs. A rebate can be claimed once the patient's GP has prepared a General Practitioner Management Plan (GPMP). The recommended frequency of GPMPs is once every 2 years. The GP may be assisted by their practice nurse, Aboriginal health worker or other health professional in the GP's medical practice or health service. The service must include a personal attendance by the GP with the patient.

As at 30 June 2007, 19 services funded through the HFL program reported information on MBS item 721 GPMP. The number and proportion of Indigenous regular clients of these services with a chronic disease who have a current MBS item 721 GPMP, by type of chronic disease and remoteness is shown in Table 3.16.5.

- Of the 3,415 Indigenous adults with Type II diabetes who are regular clients of the HFL services, 419 (12%) had a chronic disease management plan (MBS item 721).
- Of the 1,546 Indigenous adults with coronary heart disease who are regular clients of the HFL service, 165 (11%) had a chronic disease management plan (MBS item 721).
- Of Indigenous regular clients with Type II diabetes or coronary heart disease, those living in regional areas were most likely to have a current GPMP (20% and 22%,

respectively), followed by those living in remote areas (17% and 14%, respectively), with those in urban areas the least likely (both 3%).

Table 3.16.5: Number and proportion of Indigenous regular clients of services funded through the Healthy For Life program[(a)] with a chronic disease[(b)] who have a current MBS item 721 General Practitioner Management Plan, by type of chronic disease and remoteness, at 30 June 2007

	Urban	Regional	Remote	Total
	Number of Indigenous regular clients with a current GPMP			
Type II diabetes	47	243	129	419
Coronary heart disease	21	100	44	165
	Total number of Indigenous regular clients with a chronic disease			
Type II diabetes	1,454	1,221	740	3,415
Coronary heart disease	763	465	318	1,546
	Proportion of Indigenous regular clients with a chronic disease who have a current GPMP (%)			
Type II diabetes	3	20	17	12
Coronary heart disease	3	22	14	11

(a) Indigenous adults aged 15 years and over who are regular clients of the HFL service.

(b) Chronic diseases include Type II diabetes and coronary heart disease.

Notes

1. Data were provided by 19 services.
2. Remoteness was determined using the HFL Services Remoteness Accessibility Remoteness Index of Australia 13 November 2007.

Source: AIHW, Healthy for Life data collection.

Chronic disease management plans (MBS item 723) Team Care Arrangement

Chronic disease management plans (MBS item 723) Team Care Arrangement (TCA) provide a rebate for a GP to coordinate the preparation of TCAs for a patient with a chronic or terminal medical condition who also requires ongoing care from a multidisciplinary team of at least three health or care providers. The recommended frequency is once every 2 years, supported by regular review services.

As at 30 June 2007, 12 services funded through the HFL program reported information on MBS 723 TCAs. The number and proportion of Indigenous regular clients of these services with a chronic disease who have a current MBS item 723 TCA, by type of chronic disease, is shown in Table 3.16.6.

- Of the 2,252 Indigenous adults with Type II diabetes who are regular clients of the HFL services, 85 (4%) had a current MBS item 723 TCA.
- Of the 956 Indigenous adults with coronary heart disease who are regular clients of the HFL services, 28 (3%) had such an arrangement.

Table 3.16.6: Number and proportion of Indigenous regular clients of services funded through the Healthy For Life program[(a)] with a chronic disease[(b)] who have a current MBS item 723 Team Care Arrangement, by type of chronic disease, at 30 June 2007

	Type II diabetes	Coronary heart disease
Number of Indigenous regular clients with a current TCA	85	28
Total number of Indigenous regular clients with a chronic disease	2,252	956
Proportion of Indigenous regular clients with a chronic disease who have a current TCA (%)	4%	3%

(a) Indigenous adults who are regular clients of the HFL service aged 15 years and over.

(b) Chronic diseases include Type II diabetes and coronary heart disease.

Note: Data were provided by 12 services.

Source: AIHW, HFL data collection.

Care planning and health service linkages

- In 2006–07, of the 59 services funded through the HFL program that provided data on care planning and health service linkages, 64% reported they had care planning for their clients with chronic disease (Table 3.16.7).
- Around two-thirds of services reported they had hospital admission communication and 68% of services reported they had hospital discharge communication for their clients with chronic disease. Just over half (54%) of services reported they provided care in residential aged care services.

Table 3.16.7: Proportion of services funded through the Healthy For Life Program that had care planning and health service linkages for their clients with chronic disease, 2006–07

Criteria assessed	Yes	No	No response
		Per cent	
Care planning	64	17	19
Health service linkages			
Hospital admission communication	66	15	19
Hospital discharge communication	68	14	19
Care provided in residential aged care services	54	27	19

Note: Data were provided by 59 services.

Source: AIHW, HFL data collection.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the NHS. The NHS was conducted in Major Cities, regional and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 NHS.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities, and to help respondents to understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

Healthy For Life data

For the January to June 2007 reporting period, 59 services submitted data as part of the Healthy For Life Program. Not all of these services were able to provide data for all of the essential indicators and service profile questions.

Service Activity Reporting (SAR) data collection

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health-care services were around 99% in 2005–06. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.*
- *The SAR questionnaire collects a broad set of indicators for the services and did not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *Data provided are often estimates and although these are thought to be reasonable, there has been no audit to check the accuracy of these figures.*

In relation to the statistics for this performance measure, these data provide a rough guide to service activity in this area but do not attempt to measure quantity or quality.

References

ABS (Australian Bureau of Statistics) 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

3.17 Accreditation

The proportion of:

- **accredited public hospital Aboriginal and Torres Strait Islander separations and patient days as a percentage of all Aboriginal and Torres Strait Islander separations and patient days in public hospitals**
- **accredited general medical practice service establishments by proportion of Indigenous populations in Divisions of General Practice**

Data sources

Data for this measure come from the AIHW National Public Hospitals Establishment Database and general practice data from the Annual Survey of Divisions of General Practice, the Australian General Practice Accreditation Limited (AGPAL) and the General Practice Accreditation Plus (GPA+).

Hospitalisations

The AIHW National Public Hospitals Establishment Database holds establishment-level data for public hospitals within the jurisdiction of the state and territory health authorities. Private hospitals and public hospitals not administered by the state and territory health authorities are not included. Information is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions that have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2004–05—New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (AIHW unpublished). These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions because public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period July 2004 to June 2006. An aggregate of 2 years of data has been used, because the number of hospitalisations for some conditions is likely to be small for a single year.

General practice data (Annual Survey of Divisions of General Practice, AGPAL, GPA+)

No data are currently available on the Indigenous status of clients/episodes for general practice data by accreditation status. Therefore a proxy looking at areas of Indigenous populations and accreditation status of practices in these areas has been used. Note that this proxy has some limitations, in that people do not necessarily visit GPs in the area in which they live.

A question on numbers of accredited general practices in Divisions of General Practice is included in the Annual Survey of Divisions of General Practice. This survey is managed by the Primary Health Care Research and Information Service, Department of General Practice, Flinders University. This survey collects data on the number of practices in Australia and the number of practices accredited in Australia. It does not collect data on practices that are registered for accreditation but are not yet fully accredited.

AGPAL and GPA+ are the two registered providers of general practice accreditation in Australia. Most general practices are accredited by AGPAL. AGPAL and GPA+ provide information on the total numbers of accredited practices and practices registered for accreditation. They do not collect data on the total number of practices in Australia.

There are no accurate data on the number of practices in Australia. The Annual Survey of Divisions of General Practice reported that in 2005–06 there were 7,525 general practices. This number has been used as the denominator for calculating the proportion of accredited practices.

Service Activity Reporting (SAR) data collection

The SAR collects data from approximately 150 Australian Government-funded Indigenous primary health-care services and is held at the Australian Government Department of health and Ageing (DoHA). It is estimated that these services provide GP services to around 40% of the Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a 12-month period.

Response rates to the SAR by Indigenous primary health-care services in 2005–06 were around 99%.

Note that the SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Healthy for Life Program

Healthy for Life (HFL) program is an ongoing program funded by the Office for Aboriginal and Torres Strait Islander Health (OATSIH) of the DoHA. The program aims to improve the capacity and performance of primary health-care services to deliver high-quality maternal and children's health services and chronic disease care to Indigenous people through population health approaches using best practice and quality improvement principles.

Services participating in the HFL program are required to submit de-identified, aggregate service data for 11 essential indicators covering maternal health, child health and chronic disease care on a regular basis (6 and 12 months) as well as information about the characteristics of their service and organisational infrastructure. For the January to June 2007 reporting period, 59 HFL services submitted data to the AIHW.

Analyses

Accreditation is generally a voluntary process by which a recognised body—usually a non-governmental organisation—assesses and recognises that a health-care organisation meets applicable quality standards. The two pre-conditions for accreditation are an explicit definition of quality (that is, standards) and an independent review process aimed at identifying whether practices meet the quality standards (Australian Council on Health Care Standards 2005). Accreditation provides public recognition that a health-care organisation has undertaken a process to ensure it meets the requirements of national health-care standards. All health-care organisations—whether they are in the public or private sector, local community-based care facilities or tertiary level providers— can undergo accreditation.

Hospital accreditation

Data on the proportion of hospitalisations in accredited hospitals for Indigenous and other Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined over the 2-year period July 2004 to June 2006 are presented in the tables 3.17.1–3.17.3.

- Over this period, there were approximately 415,945 hospitalisations of Indigenous Australians in the six jurisdictions in accredited public hospitals. This was 95% of all public hospitalisations of Indigenous Australians in these jurisdictions. Over the same period, 98% of hospitalisations of other Australians in these jurisdictions were in accredited public hospitals (Table 3.17.1).

Hospital accreditation by state/territory and remoteness

- In the six jurisdictions, the proportion of hospitalisations of Indigenous Australians that were in accredited hospitals ranged from 91% in New South Wales to 100% in Victoria and the Northern Territory.
- Over the 2-year period July 2004 to June 2006 in the six jurisdictions, about 95% of days spent by Indigenous patients and 98% of days spent by other Australians in hospital were in accredited hospitals (Table 3.17.2).
- The proportion of hospitalisations of Indigenous Australians that were in accredited hospitals was highest among those residing in Major Cities (almost 100%) and lowest among those living in Very Remote areas (80%). A similar pattern was evident for hospitalisations of other Australians (Table 3.17.3).

Table 3.17.1: Hospital separations, by Indigenous status and accreditation status, NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006[(a)(b)]

	Indigenous			Other[(c)]		
	Number separations in accredited hospitals	Number separations in non-accredited hospitals	Per cent separations in accredited hospitals	Number separations in accredited hospitals	Number separations in non-accredited hospitals	Per cent separations in accredited hospitals
NSW	81,069	8,149	90.9	2,581,132	94,359	96.5
Vic	20,201	7	100.0	2,474,215	1,850	99.9
Qld	106,848	7,739	93.2	1,340,419	29,072	97.9
WA	72,092	6,988	91.2	680,054	19,086	97.3
SA	29,837	247	99.2	708,776	4,403	99.4
NT	105,898	0	100.0	53,378	0	100.0
NSW, Vic, Qld, WA, SA, NT	**415,945**	**23,130**	**94.7**	**7,837,974**	**148,770**	**98.1**

(a) Data are from public hospitals only.

(b) Data are reported for NSW, Vic, Qld, WA, SA and NT only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(c) 'Other' includes hospitalisations for non-Indigenous people and those for whom Indigenous status was not stated.

Note: the proportion is the number of separations in accredited hospitals by Indigenous status and state/territory divided by the total number of separations by Indigenous status and state/territory.

Source: AIHW analysis of National Public Hospitals Establishment Database.

Table 3.17.2: Hospital patient days, by Indigenous status and accreditation status, NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006[(a)(b)]

	Indigenous			Other[(c)]		
	Number patient days in accredited hospitals	Number patient days in non-accredited hospitals	Per cent patient days in accredited hospitals	Number patient days in accredited hospitals	Number patient days in non-accredited hospitals	Per cent patient days in accredited hospitals
NSW	275,198	21,420	92.8	11,031,088	472,693	95.9
Vic	56,814	17	100.0	8,592,837	4,866	99.9
Qld	324,326	13,602	96.0	5,070,046	84,177	98.4
WA	228,907	28,032	89.1	2,589,271	64,367	97.6
SA	105,957	1,009	99.1	2,918,186	49,936	98.3
NT	286,359	0	100.0	182,010	0	100.0
Total	**1,277,561**	**64,080**	**95.2**	**30,383,438**	**676,039**	**97.8**

(a) Data are from public hospitals only.

(b) Data are reported for NSW, Vic, Qld, WA, SA and NT only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(c) 'Other' includes hospitalisations for non-Indigenous people and those for whom Indigenous status was not stated.

Source: AIHW analysis of National Public Hospitals Establishment Database.

Table 3.17.3: Hospital separations, by Indigenous status, accreditation status and remoteness, July 2004 to June 2006[(a)(b)]

	Indigenous			Other[(c)]		
Remoteness category[(d)]	Number separations in accredited hospitals	Number separations in non-accredited hospitals	Per cent separations in accredited hospitals	Number separations in accredited hospitals	Number separations in non-accredited hospitals	Per cent separations in accredited hospitals
Major Cities	108,864	165	99.8	5,703,276	6,320	99.9
Inner Regional	61,285	2,259	96.4	1,415,791	61,361	95.8
Outer Regional	141,802	6,390	95.7	632,885	57,002	91.7
Remote	76,043	7,348	91.2	65,153	18,387	78.0
Very Remote	27,951	6,968	80.0	20,869	5,700	78.5
Total[(b)]	**415,945**	**23,130**	**94.7**	**7,837,974**	**148,770**	**98.1**

(a) Data are from public hospitals only.

(b) Data are reported for NSW, Vic, Qld, WA, SA and NT only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(c) 'Other' includes hospitalisations for non-Indigenous people and those for whom Indigenous status was not stated.

(d) Remoteness category based on residence of patient.

Source: AIHW analysis of National Public Hospitals Establishment Database.

Hospital accreditation by hospital category

- In New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, all hospitalisations of Indigenous and other Australians in principal referral hospitals, specialist women and children's hospitals; large hospitals in large major cities, hospice and rehabilitation hospitals were in accredited hospitals (Table 3.17.4).
- Between 69% and 85% of hospitalisations of Indigenous Australians and 77% and 89% of hospitalisations of other Australians in small hospitals were in accredited hospitals.
- Only 63% of Indigenous and 71% of other Australian hospitalisations in multi-purpose service hospitals were in accredited hospitals.

Table 3.17.4: Hospital separations, by Indigenous status, accreditation status and hospital category (peer group), NSW, Vic, Qld, WA, SA and NT combined, July 2004 to June 2006[(a)(b)]

	Indigenous			Other[(c)]		
	Number separations in accredited hospitals	Number separations in non-accredited hospitals	Per cent separations in accredited hospitals	Number separations in accredited hospitals	Number separations in non-accredited hospitals	Per cent separations in accredited hospitals
Principal referral						
Principal referral	236,477	0	100.0	4,765,625	0	100.0
Specialist women's and children's	14,653	0	100.0	421,237	0	100.0
Large hospitals						
Large major cities	9,685	0	100.0	762,019	0	100.0
Large regional and remote	30,073	1,196	96.2	402,030	25,662	94.0
Medium hospitals						
Medium major cities and regional group 1	26,902	1,192	95.8	461,200	20,991	95.6
Medium major cities and regional group 2	16,481	1,605	91.1	471,820	26,274	94.7
Small hospitals						
Small regional acute	9,408	2,699	77.7	178,131	25,706	87.4
Small non-acute	5,651	2,550	68.9	126,200	15,197	89.3
Remote acute	49,155	8,386	85.4	43,465	12,769	77.3
Sub- and non-acute hospitals						
Multi-purpose service	6,161	3,649	62.8	35,197	14,141	71.3
Hospice	11	0	100.0	5,226	0	100.0
Rehabilitation	5,967	0	100.0	34,489	0	100.0
Mothercraft	217	7	96.9	26,429	1,850	93.5
Other non-acute	173	n.p.	98.9	20,761	1,095	95.0
Other hospitals						
Psychiatric	2,111	n.p.	99.8	28,555	248	99.1
Un-peered and other acute	2,820	1,840	60.5	55,590	4,837	92.0
Total	**415,945**	**23,130**	**94.7**	**7,837,974**	**148,770**	**98.1**

(a) Data are from public hospitals only.

(b) Data are reported for NSW, Vic, Qld, WA, SA and NT only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(c) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

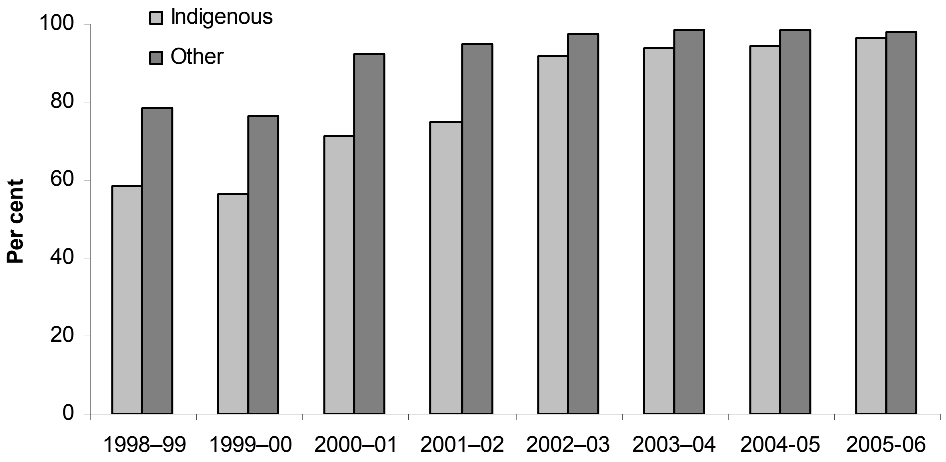
Source: AIHW analysis of National Public Hospitals Establishment Database.

Time series analyses

Time series data is presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations from 1998–99 onwards—Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population.

- Between 1998–99 and 2005–06 in these four jurisdictions combined, there were increases in the proportion of hospitalisations of Indigenous and other Australians in accredited hospitals (from 59% to 96% for Indigenous separations and from 78% to 98% for other separations) (Figure 3.17.1).

Although the difference between the proportion of Indigenous and non-Indigenous separations in accredited hospitals appear to decline between 1998–99 and 2005–06, this is likely to be the result of more hospitals in rural and remote areas obtaining accreditation in recent years. A higher proportion of Indigenous Australians than non-Indigenous Australians are hospitalised in hospitals in these areas.



Source: AIHW analysis of National Public Hospitals Establishment Database.

Figure 3.17.1: Proportion of hospitalisations in accredited public hospitals, by Indigenous status, Qld, WA, SA and NT combined, 1998–99 to 2005–06

General practice accreditation

Information on the accreditation of general practices is available from the Annual Survey of Divisions of General Practice and from the two registered providers of general practice accreditation in Australia—AGPAL and GPA+. Although the Annual Survey of Divisions of General Practice collects information on the accreditation of all general practices in Australia, AGPAL and GPA+ collect a subset of this information—accreditation of general practices registered with these two providers.

Table 3.17.5 and Figure 3.17.2 present data on the number and proportion of general practices accredited in Australia based on the Annual Survey of Divisions of General Practice.

- In 2005–06, the Annual Survey of Divisions of General Practice estimated that there were 7,525 general practices in Australia, 4,897 (65%) of which were accredited.
- Approximately 61% of general practices in areas where less than 1% of the population was Indigenous were accredited. Between 66% and 80% of general practices in areas where between 1–10% of the population were Indigenous were accredited. In areas where more than 10% of the population were Indigenous, only 49% of general practices were accredited (Figure 3.17.2).

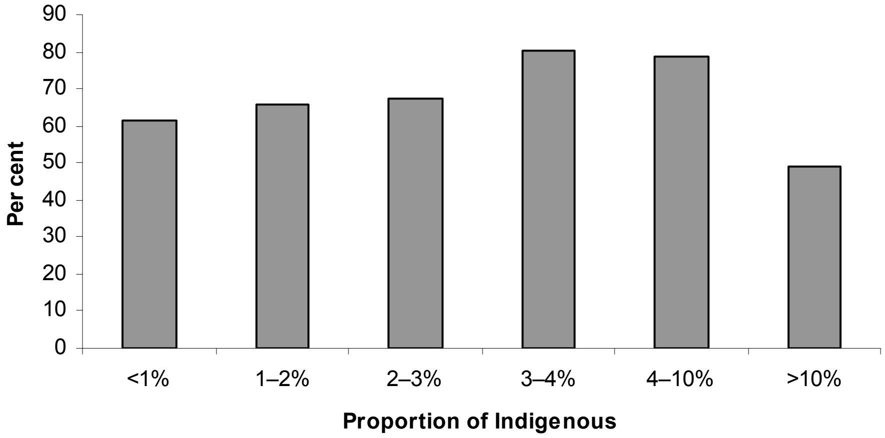
Table 3.17.5: Number and proportion of general practices accredited by Divisions of General Practice, by proportion of the population that are Indigenous, 2005–06

Proportion of Indigenous[(a)]	Total number of practices	Number accredited	Per cent accredited
<1%	2,980	1,824	61.2
1–2%	2,286	1,500	65.6
2–3%	960	645	67.2
3–4%	389	312	80.2
4–10%	568	448	78.9
>10%	342	168	49.1
Total	**7,525**	**4,897**	**65.1**

(a) Indigenous proportions are based on ABS population estimates used in the Annual Survey of Divisions of General Practice.

Note: There is double counting of some services where general practices reside on the border of two divisions. In that case two divisions may service the same practice.

Source: AIHW analysis of the Annual Survey of Divisions of General Practice.



Note: Indigenous proportions are based on ABS population estimates used in the Annual Survey of Divisions of General Practice.

Source: Annual Survey of Divisions of General Practice.

Figure 3.17.2: Proportion of general practices accredited by Divisions of General Practice, by proportion of the population that is Indigenous, 2005–06

Table 3.17.6 presents data on the number of general practices accredited, and the number of general practices registered for accreditation but not yet accredited, based on data from AGPAL and GPA+.

- In 2007–08, there were 4,462 general practices accredited through AGPAL and GPA+, which represents 59% of total general practices. Over the same period there were 624 general practices registered for accreditation through AGPAL and GPA+ but not yet accredited, which represents 8% of total general practices.
- The majority of general practices accredited through AGPAL and GPA+ were in areas where less than 1% or between 1% and 2% of the population were Indigenous (1,585 and 1,341 practices, respectively).
- Areas where between 4% and 10% of the population were Indigenous had the highest proportion of general practices accredited through AGPAL and GPA+ (86%), although areas where less than 1% of the population were Indigenous and where more than 10% of the population were Indigenous had the lowest proportion of general practices accredited through AGPAL and GPA+ (53% and 54%, respectively).

Table 3.17.6: Number of general practices accredited through AGPAL and GPA+, by proportion of the population that is Indigenous, 2007–08

Proportion of Indigenous[(a)]	Accreditation status	Number
<1%	Accredited	1,585
	Registered but not yet accredited	186
1–2%	Accredited	1,341
	Registered but not yet accredited	191
2–3%	Accredited	585
	Registered but not yet accredited	97
3–4%	Accredited	279
	Registered but not yet accredited	39
4–10%	Accredited	487
	Registered but not yet accredited	68
>10%	Accredited	184
	Registered but not yet accredited	43
Total[(b)]	**Accredited**	**4,462**
	Registered but not yet accredited	**624**

(a) Indigenous proportions are based on ABS population estimates used in the Annual Survey of Divisions of General Practice.

(b) Includes one Division for which the proportion of the Indigenous population was not available.

(c) Proportions calculated using the total number of Divisions in each category of Indigenous populations from the Annual Survey of Divisions of General Practice.

Note: There is double counting of some services where general practices reside on the border of two divisions. In that case, two divisions may service the same practice.

Source: AIHW analysis of AGPAL and GPA+ data.

Accreditation of Aboriginal and Torres Strait Islander primary health-care services

OATSIH recognises that there are several accreditation frameworks for clinical or other service delivery relevant to the Indigenous health sector. Work is currently underway to explore options for a streamlined/integrated approach to accreditation under multiple frameworks. Until the outcomes of this work are available, organisations will be supported to tackle clinical or other service delivery accreditation. For example, organisations with a GP will be supported to tackle accreditation against the Royal Australian College of General Practitioners (RACGP) standards for general practice. Other services may recognise an alternative accreditation framework that reflects their service delivery; for example, Quality Improvement Council (QIC) modules deal with services such as home-based care services, alcohol, tobacco and other drugs services, and mental health services. Organisations that obtain service delivery accreditation through a discrete framework will also be supported to work towards organisational accreditation through the accreditation frameworks of organisations such as the QIC or International Standards Organisation (ISO).

Reform in this area is likely to be led by the Australian Commission on Safety and Quality in Health Care, which is currently considering reforms to standards and accreditation in Australian health care. Part of this work includes the development of mandatory Australian health-care safety standards.

Information on the accreditation of Indigenous primary health-care services is available from the registered providers of general practice accreditation (AGPAL and GPA+); the Quality Improvement Council; the SAR and from the AIHW HFL Data Collection. Note that there is great overlap in the services that are captured in each of these data sources.

Service Activity Reporting

Client counts were available for 131 of the 151 Indigenous primary health-care services eligible for SAR for 2005–06, and an estimated 289,000 individual clients were seen by these services.

- In 2005–06, 59 (42%) of the 140 Indigenous primary health-care services with a GP that reported in the 2005–06 SAR were accredited.
- Of the accredited services with a general practitioner, 52 (88%) of services were accredited against the RACGP standards for accreditation only (which includes accreditation through AGPAL and GPA+), 1 (2%) were accredited through QIC, 4 (7%) were accredited against the RACGP standards and through QIC, and 2 (3%) were accredited against the RACGP standards and through another provider.
- Three (10%) of the 29 Indigenous primary health-care services without a GP were accredited— two (67%) through QIC only and one (33%) against the RACGP standards and through another provider.

Table 3.17.7: Number and proportion of Aboriginal and Torres Strait Islander primary health-care services, by accreditation status, 2005–06

Accreditation status	Services with a GP	Services without a GP
	Number of services	
Accredited	59	3
Not accredited	81	26
Total	**140**	**29**
	Proportion of services (%)	
Accredited	42.1	10.3
Not accredited	57.9	89.7
Total	**100.0**	**100.0**

Source: Service Activity Reporting 2005–06.

Healthy for Life Program

Information on the accreditation status of services funded through the HFL program is available from the AIHW Healthy for Life data collection.

- Of the 58 services that were included in the Healthy For Life program and reported information on accreditation, two-thirds (38) of services were accredited and around one-third (20) of services were undergoing accreditation. AGPAL was the most commonly used provider, with 40 (69%) of services accredited or undergoing accreditation by AGPAL. Four (7%) services were accredited by QIC, and 13 (22%) services used other providers (Table 3.17.8).

Table 3.17.8: Number and proportion of services funded through the Healthy for Life program, by accreditation status and recognised provider, at 30 June 2007

	Recognised provider				
Accreditation status	**AGPAL**	**QIC**	**Other**	**Provider not stated**	**Total**
			Number of services		
Accredited	25	2	11	0	38
Undergoing accreditation	15	2	2	1	20
Total	**40**	**4**	**13**	**1**	**58**
			Proportion of services (%)		
Accredited	63	50	85	0	66
Undergoing accreditation	37	50	15	100	34
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Note: Data were provided by 58 services.

Source: AIHW, Healthy for Life data collection.

Data quality issues

Hospital separations data

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The not stated category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. For several years, Queensland, South Australia, Western Australia and the northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data (AIHW unpublished). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these six jurisdictions is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (ABS & AIHW 2005):

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in Western Australia and the Northern Territory and relatively marked Indigenous under-identification in South Australia and Victoria data).*
- *Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.*

From the AIHW study it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

General practice data

Numerator

There is good evidence on the number of practices accredited in Australia. However, no data are available on the Indigenous status of clients/episodes for general practice by accreditation status. Therefore, a substitute looking at areas of Indigenous populations and accreditation status of practices in these areas is suggested. This substitute is limited in that people do not necessarily visit GPs in the area they live.

(continued)

Data quality issues (continued)

Annual Survey of Divisions of General Practice

A question on numbers of accredited general practices in Divisions of General Practice is included in the Annual Survey of Divisions of General Practice. This survey does not collect data on practices that are registered for accreditation but are not yet fully accredited.

These data are self-reported, collated at the division level and the survey includes some non-response. The main caveat with these data is that there is double counting of some services where general practices reside on the border of two divisions. In that case, two divisions may service the same practice. Therefore these data would be less accurate than data obtained from the accreditation bodies; that is, AGPAL and GPA+. The Annual Survey does not seek information on general practices by Statistical Local Area (SLA). Therefore the analysis of these data in relation to Aboriginal and Torres Strait Islander Australians is limited to division-level population statistics on Indigenous proportions of the population. Divisions are large (for example, two Divisions for the Northern Territory) and therefore only loosely measure areas of high and low Indigenous populations.

AGPAL

AGPAL provides information on the total numbers of accredited practices and practices registered for accreditation. These data are published by Division of General Practice, but not SLA.

GPA+

Data on practices accredited by GPA+ have not been routinely reported, but may in the future become available.

Service Activity Reporting (SAR) data collection

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health-care services were around 99% in 2005–06. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.*
- *The SAR questionnaire collects a broad set of indicators for the services and did not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *Data provided are often estimates and although these are thought to be reasonable, there has been no audit to check the accuracy of these figures.*

In relation to the statistics for this performance measure, these data provide a rough guide to service activity in this area but do not attempt to measure quantity or quality.

Healthy For Life data

For the January to June 2007 reporting period 59 services submitted data as part of the Healthy For Life Program. Not all of these services were able to provide data for all of the essential indicators and service profile questions.

References

ABS (Australian Bureau of Statistics) & AIHW (Australian Institute of Health and Welfare) 2005. The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples 2005. ABS cat. no. 4704.0, AIHW cat. no. IHW 14. Canberra: ABS & AIHW.

AIHW 2005. Improving the quality of Indigenous identification in hospitals separations data. Cat. no. HSE 101. Canberra: AIHW.

AIHW 2007. Australian Hospital Statistics 2005–06. Health services series no. 30. Cat. no. HSE 50. Canberra: AIHW.

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3.18 Aboriginal and Torres Strait Islander peoples training for health-related disciplines

The proportion of Aboriginal and Torres Strait Islander Australians in tertiary education for health-related disciplines

Data sources

Data for this measure come from the Australian Government Department of Education, Science and Training's Higher Education Student Statistics Collection and the National Centre for Vocational Education Research collection.

Higher Education Student Statistics Collection

The Higher Education Student Statistics Collection is an annual collection of enrolments and completions. These data are held by the Department of Education, Employment and Workplace Relations (formally Department of Education, Science and Training (DEST)). This collection includes data sources from all Australian universities.

National Centre for Vocational Education Research (NCVER) collection

The National Centre for Vocational Education Research (NCVER) collection is an annual collection of enrolments and completions by field of education in the vocational education and training sector. These data are held by the NCVER.

Analyses

Higher education sector

Data on Indigenous students enrolled and who have completed health-related courses in the higher education sector are available from DEEWR (formally DEST). Data for 2006 are presented below.

- In 2006, there were approximately 1,016 Indigenous undergraduate students enrolled in health-related courses and 152 Indigenous undergraduate students who completed a health-related course (Table 3.18.1). This represented 15% of all Indigenous undergraduate students enrolled in study and 14% of all Indigenous undergraduate students who completed study in 2006.
- The most common type of health-related course in which Indigenous undergraduate students were enrolled or had completed in 2006 was nursing (460 enrolled and 48 completed) followed by public health (350 enrolled and 78 completed).
- About 1.6% of all undergraduate students enrolled in health-related courses in 2006 were Indigenous. Only 1.2% of undergraduate students who completed a health-related course in 2006 were of Indigenous origin.
- Public health had the highest Indigenous representation of all health-related courses. Approximately 9% of students enrolled in this course were Indigenous and 10% of

students who completed this course in 2006 were Indigenous. The majority of Indigenous students studying public health courses were studying Indigenous health. Approximately 89% of students enrolled in Indigenous health in 2006 were Indigenous and 96% of students who completed Indigenous health in 2006 were Indigenous.

- The proportion of university students enrolled in health-related courses who were of Indigenous origin was similar in most states and territories (between 1% and 2%) except in the Northern Territory where around 17% of students enrolled in health-related courses were Indigenous (Figure 3.18.1).
- There was a decline in the proportion of university students who completed health-related courses who were Indigenous between 2001 and 2002 (from around 5% to 3%). Indigenous representation in health-related course completions remained at around 3% between 2002 and 2004 after which it increased to around 5% in 2005 and 2006 (Figure 3.18.2). A similar pattern was evident for enrolments in health-related courses.

Table 3.18.1: Undergraduate students[(a)] enrolled in and completed health-related courses[(b)], Indigenous and total students, 2006

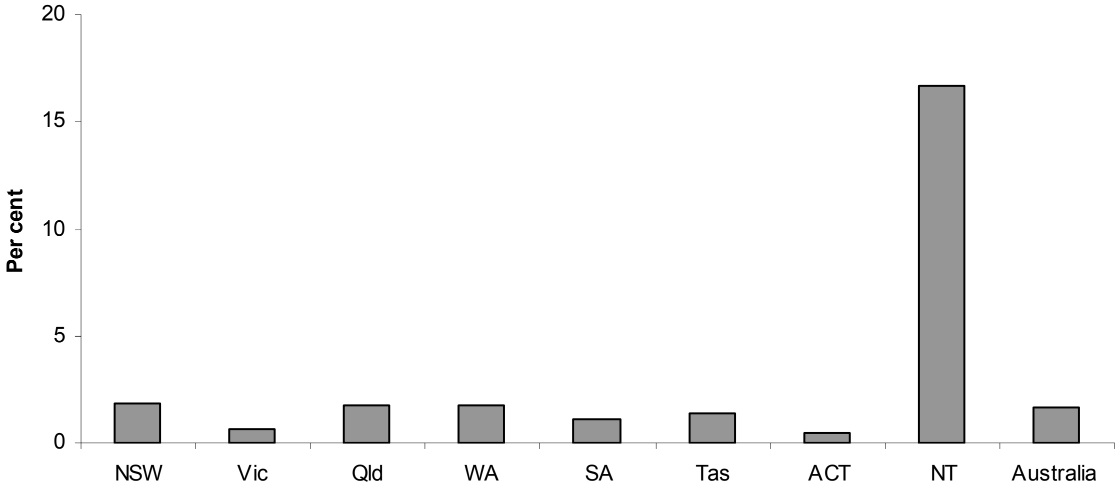
	Enrolled			Completed		
	Indigenous	Total	Indigenous as a proportion of total	Indigenous	Total	Indigenous as a proportion of total
	No.	No.	%	No.	No.	%
Nursing	460	29,293	1.6	48	5,965	0.8
Public health	350	3,751	9.3	78	768	10.2
Indigenous health	222	250	88.8	50	52	96.2
Other public health	128	3,501	3.7	28	716	3.9
Medical studies	116	9,736	1.2	12	1,390	0.9
Rehabilitation therapies	61	11,163	0.5	6	2,308	0.3
Dental studies	10	1,845	0.5	2	308	0.6
Pharmacy	9	4,088	0.2	2	858	0.2
Radiography	7	1,671	0.4	3	630	0.5
Optical science	3	494	0.6	1	87	1.1
Total[(c)]	**1,016**	**61,815**	**1.6**	**152**	**12,268**	**1.2**

(a) Domestic students

(b) Based on ABS narrow fields of education.

(c) The data take into account the coding of combined courses to two fields of education. As a consequence, counting both fields of education for Combined Courses means that the totals may be less than the sum of all fields of education.

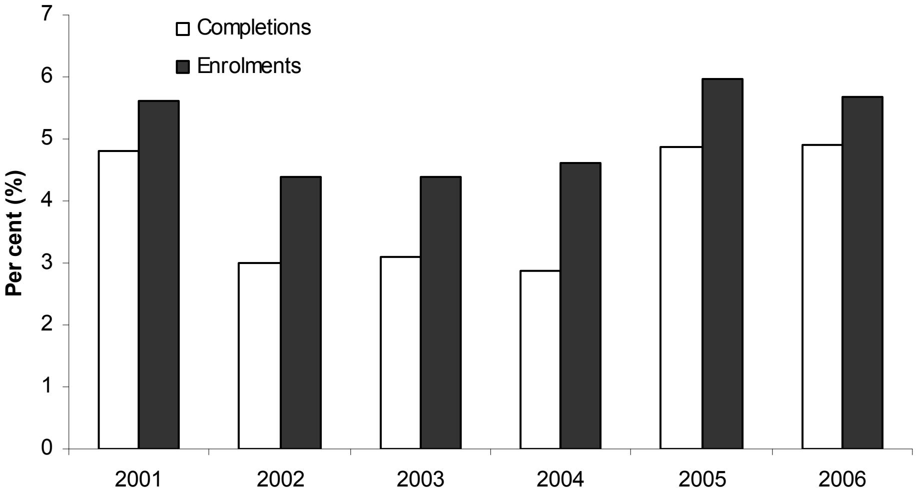
Source: AIHW analysis of Higher Education Student Statistics Collection.



Note: The calculated proportion for Australia includes other territories.

Source: AIHW analysis of Higher Education Student Statistics Collection.

Figure 3.18.1: Proportion of university students enrolled in health-related courses who were Indigenous, by state/territory, 2006



Note: Domestic students.

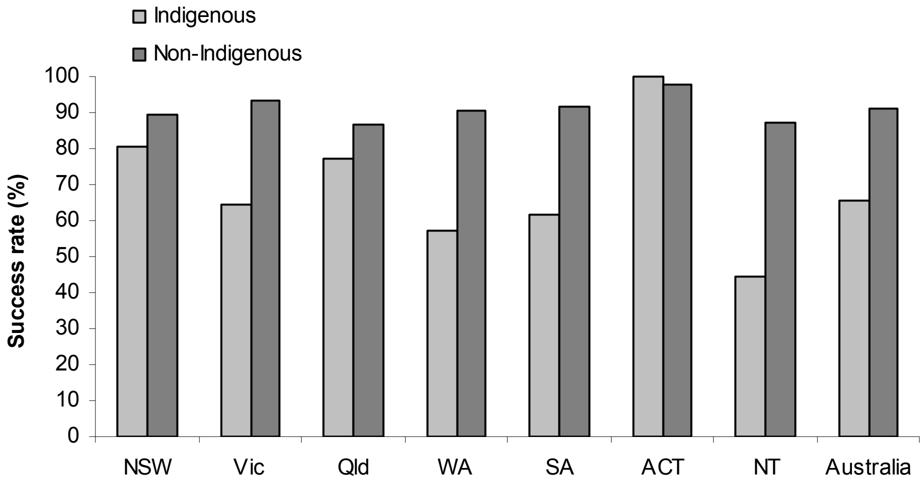
Source: AIHW analysis of Higher Education Student Statistics Collection.

Figure 3.18.2: Proportion of university students completing health-related courses who were Indigenous, 2001– 2006

Success rates

The success rate for higher educational institutions is based on the proportion of units passed within a year compared with the total units enrolled.

- In 2006, the success rate for Indigenous university students studying health-related courses was 65%. This compared with 91% for non-Indigenous university students studying health-related courses. The success rate for Indigenous students varied by state and territory, ranging from 44% in the Northern Territory to 100% in the Australian Capital Territory (Figure 3.18.3).



Notes

1. Domestic students.
2. Success rates not available for Tasmania.

Source: AIHW analysis of Higher Education Student Statistics Collection.

Figure 3.18.3: Higher education success rates for university students studying health-related courses, by state/territory and Indigenous status, 2006

Vocational education and training (VET) sector

Data on Indigenous students enrolled and who have completed health-related courses in the VET sector are available from NCVER. Data for 2006 are presented below.

- In 2006, there were approximately 3,165 Indigenous students representing 5,149 enrolments in health-related courses in the VET sector, and 431 completions of health-related courses by Indigenous students in the VET sector (Table 3.18.2). This represented 5% of all Indigenous students enrolled in VET courses and 3% of all Indigenous students who completed VET courses in 2006.
- The most common type of health-related course in which Indigenous VET students were enrolled or had completed in 2006 was public health (2,856 enrolments and 201 completions) followed by nursing (357 enrolments and 43 completions).
- About 5% of all VET sector enrolments or completions in health-related courses in 2006 were for students of Indigenous origin.

- Indigenous health and medical studies had the highest Indigenous representation of all health-related courses. Approximately 95% of VET sector enrolments in a course in Indigenous health and 100% of VET sector completions of a course in Indigenous health in 2006 were for Indigenous students. Approximately 22% of VET sector enrolments in a course in medical studies and 95% of VET sector completions in a course in medical studies in 2006 were for Indigenous students. The high proportion of Indigenous students completing a course in medical studies is due to the fact that only two courses under this category had qualifications completed in 2006—Certificate III in Aboriginal Primary Health Care and Diploma of Anaesthetic Technology. All of the students who completed the Certificate III in Aboriginal Primary Health Care were Indigenous (104) although all of the students who completed the Diploma of Anaesthetic Technology were non-Indigenous (5).
- The proportion of VET sector enrolments in health-related courses who were for students of Aboriginal and Torres Strait Islander origin ranged from 0.5% in the Australian Capital Territory to 57% in the Northern Territory (Figure 3.18.4).
- The proportion of VET sector completions in health-related courses who were for students of Aboriginal and Torres Strait Islander origin increased between 1996 and 2002 (from around 2% to 7%) after which there was a decline until 2005 (to around 2%) and then a sharp increase again in 2006 to around 5% (Figure 3.18.5).

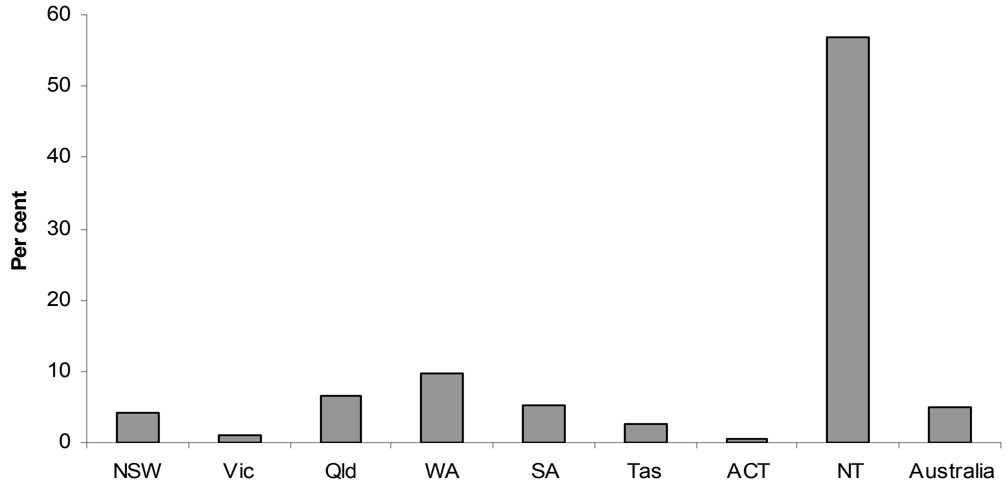
Table 3.18.2: Vocational education and training sector students enrolled and completed health-related courses[(a)], 2006

	Enrolled			Completed[(b)]		
	Indigenous	Total	Indigenous as a proportion of total	Indigenous	Total	Indigenous as a proportion of total
	No.	No.	%	No.	No.	%
Public health	2,856	39,957	7.1	201	1,917	10.5
Indigenous health	145	153	94.8	38	38	100.0
Other public health	2,711	39,804	6.9	163	1879	8.7
Nursing	357	17,631	2.0	43	2,916	1.5
Medical studies	130	586	22.2	104	109	95.4
Dental studies	46	3,662	1.3	9	1,203	0.7
Complementary therapies	26	3,204	0.8	5	948	0.5
Rehabilitation therapies	56	829	6.8	1	102	1.0
Optical science	5	1,068	0.5	—	118	—
Pharmacy	—	30	—	—	4	—
Other health	1,673	35,426	4.7	68	849	8.0
Total	**5,149**	**102,393**	**5.0**	**431**	**8,166**	**5.3**

(a) Qualification field of education classification.

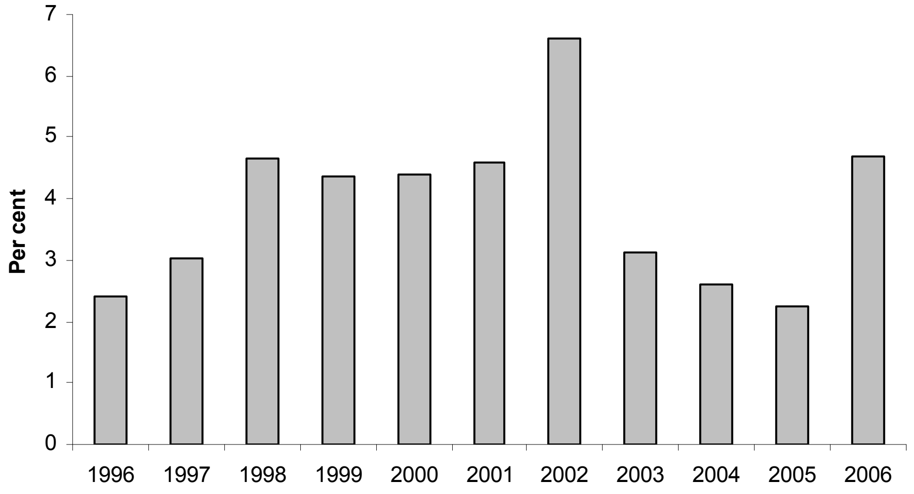
(b) Excludes course completions for statement of attainment, bridging and enabling courses for which there were 2,121 course completions for Indigenous students in 2006.

Source: AIHW analysis of NCVER, National VET Provider Collection 2006, data.



Source: AIHW analysis of NCVER, National VET Provider Collection 2006 data.

Figure 3.18.4: Proportion of vocational education and training sector students enrolled in health-related course who were Indigenous, by state/territory, 2006



Note: 2006 data on qualifications completed are preliminary estimates.

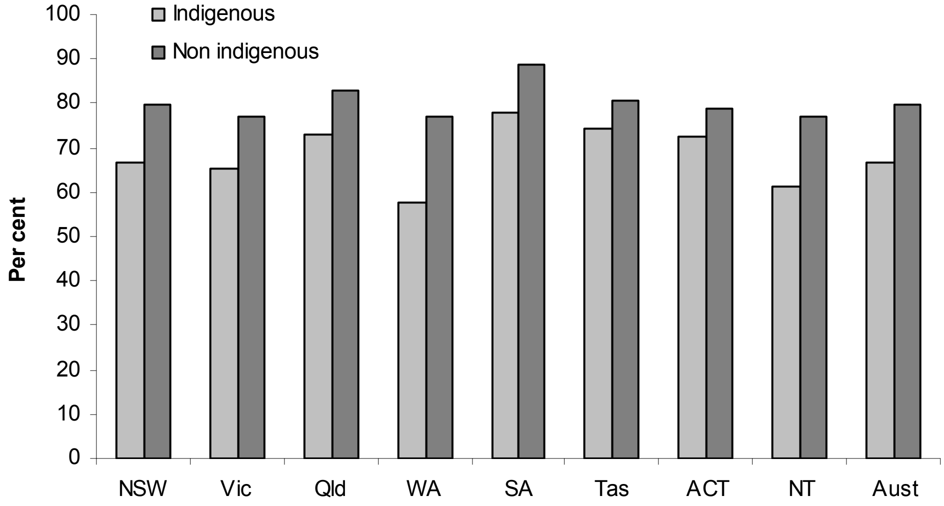
Source: AIHW analysis of NCVER, National VET Provider Collection 2006 data.

Figure 3.18.5: Proportion of vocational education and training sector students completing health-related courses who were Indigenous, 1996–2006

Load pass rates

The VET load pass rate indicates the extent to which students pass assessment in an assessable module or unit of competency. Load pass rates are calculated as the number of nominal hours supervised in assessable modules or units of competency completed with a pass assessment divided by the total nominal hours supervised in assessable modules or units of competency.

- In 2006, the VET load pass rate for Indigenous students studying health related courses was 67%, compared with 80% for non-Indigenous students. The load pass rate for Indigenous students studying health related courses ranged from 58% in Western Australia to 78% in South Australia (Figure 3.18.6).



Note: Load pass rate is calculate as the number of nominal hours supervised in assessable modules or units of competency completed with a pass assessment or recognition of prior learning divided by the total nominal hours supervised in assessable modules or units of competency (pass+fail+withdrawn+RPL).

Source: AIHW analysis of NCVER, National VET Provider Collection 2006 data.

Figure 3.18.6: Load pass rate for VET sector students studying health-related courses, by Indigenous status and state/territory, 2006

Aboriginal and Torres Strait Islander health worker occupations

Tables 3.18.3 and 3.18.4 present the number and rate of VET sector students completing a course aimed at Indigenous health workers in 2006.

- In 2006, approximately 202 VET sector students had completed a course aimed at Indigenous health worker occupations in Australia. The majority of these course completions were at the certificate III or IV level (166, or 82%) (Table 3.18.3).
- Queensland had the highest number of students completing a course aimed at Indigenous health worker occupations (77), followed by Western Australia (61).
- Of all VET sector students who had completed a course aimed at Indigenous health worker occupations in 2006, 80% were female (162 course completions) and 20% were males (40 course completions) (Table 3.18.4).

Table 3.18.3: Number of vocational education and training sector students completing a program aimed at Aboriginal and Torres Strait Islander health worker occupations[(a)(b)], by qualification type and state/territory, 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Certificate I	—	—	—	—	—	—	—	—	—
Certificate II	—	—	—	—	—	—	—	—	—
Certificate III	—	—	61	31	—	—	—	6	98
Certificate IV	—	—	12	23	31	—	—	2	68
Diploma or higher	7	—	4	7	18	—	—	—	36
Total	**7**	**—**	**77**	**61**	**49**	**—**	**—**	**8**	**202**

(a) Australian Standard Classification of Occupations code 3493—Aboriginal and Torres Strait Islander health workers.

(b) An Australian Standard Classification of Occupations code assigned to the courses indicates the most likely occupation associated with this course. It should also be remembered that students may enrol in more than one course.

Note: Rates (no. per 1,000 population) have not been presented as the numbers are too small to produce rates.

Source: NCVER, National VET Provider Collection 2006 data.

Table 3.18.4: Number of vocational education and training sector students completing a program aimed at Aboriginal and Torres Strait Islander health worker occupations[(a)(b)], by qualification type and sex, 2006

	Males	Females	Persons
		Number	
Certificate I	—	—	—
Certificate II	—	—	—
Certificate III	17	81	98
Certificate IV	13	55	68
Diploma or higher	10	26	36
Total	**40**	**162**	**202**

(a) Australian Standard Classification of Occupations code 3493—Aboriginal and Torres Strait Islander health workers.

(b) An Australian Standard Classification of Occupations code assigned to the courses indicates the most likely occupation associated with this course. It should also be remembered that students may enrol in more than one course.

Note: Rates (no. per 1,000 population) have not been presented as the numbers are too small to produce rates.

Source: NCVER, National VET Provider Collection 2006 data.

Data quality issues

Higher Education Student Statistics Collection

The Higher Education Student Statistics Collection only includes information from higher education institutions in Australia as determined under the Higher Education Funding Act 1988. *This includes:*

- *institutions that receive block operating grant funding for teaching and research activities*
- *other public higher education institutions that receive some level of operating grant funding*
- *the Australian Film, Television and Radio School, the National Institute of Dramatic Art and the Australian Defence Force Academy*

Private institutions are not required to report statistical data to the Department of Education, Science and Training and are therefore outside the scope of the collection (ABS 2003). The collection of data from private higher education institutions is being trialled (ABS 2004).

The Department of Education, Science and Training (DEST) has provided institutions with suggested wording for questions relating to Indigenous status (ABS 2003).

Approximately 3% of students in this data collection have a 'not stated' Indigenous status. At the moment, these are recorded as non-Indigenous although plans are under way to separately record the 'Not stated' responses.

National Centre for Vocational Education Research

This collection gathers information from providers (in receipt of public VET funding) about activity of the VET system in Australia. The collection encompasses all delivery funded either wholly or in part from public funds. In-scope activity includes all VET delivered by:

- *technical and further education organisations*
- *higher education institutions*
- *other government providers (for example, agricultural colleges)*
- *community education providers*
- *government-funded private registered training organisations*
- *schools funded through government allocations for VET*
- *all other Australian Government and state recurrent and specific-purpose funded VET, regardless of the location of the training organisation.*

Out-of-scope activity includes:

- *all delivery at overseas campuses other than overseas Australia territories*
- *all fee-for-service delivery by private training organisations*
- *all delivery by private training organisations to full fee-paying overseas clients*
- *all non-VET activity (ABS 2003).*

The completeness of the Indigenous status of students needs to be considered when interpreting these data. In 2006, 4% of government-funded VET students in Australia identified themselves as Indigenous, although 15% of students did not report their Indigenous status (NCVER unpublished data).

References

ABS (Australian Bureau of Statistics) 2003. Directory of Education and Training AVETMISS Vocational Education and Training (VET) Provider Collection. ABS cat. no. 1136.0. Canberra: ABS.

ABS 2004. Measuring learning in Australia: plan to improve the quality, coverage and use of education and training statistics. ABS cat. no. 4231. Canberra: ABS.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2005. Report on government services 2005. Vol. 2. Canberra: Productivity Commission.

3.19 Expenditure on Aboriginal and Torres Strait Islander health compared with need

Expenditure on health for Aboriginal and Torres Strait Islander people
This measure is presented on both a total population basis and per capita basis and disaggregated to reflect expenditure on acute health care, primary health care and population health

Data sources

Data for this measure come from the latest available health expenditure 2008 report—*Expenditures on health for Aboriginal and Torres Strait Islander people 2004–05,* published by the AIHW (AIHW 2008).

There are a number of difficulties in reporting on this measure, including the issue of under-identification of Indigenous Australians in health databases (such as for hospital separations). Although adjustments are made to the data to allow for under-identification, the adjusted estimates may be an overestimate or underestimate of actual health service use and expenditure by Aboriginal and Torres Strait Islander people.

In some areas of expenditure, surveys have been used to estimate service use by Aboriginal and Torres Strait Islander people which, in turn, have been used in the estimates of expenditure. Consequently, the reliability of the expenditure estimates is affected by sampling error.

There may also be some limitations associated with the scope and definition of health expenditures and there may be inconsistencies in reporting and categorisation of expenditure on health goods and services across data providers.

The attribution of expenditure to Indigenous people either on an overall population or per capita basis should be treated with caution as it is an estimate (AIHW 2008).
Expenditure is a measure of met need. Indigenous Australians have a significantly poorer health status (measured in terms of life expectancy, mortality rates and morbidity) than non-Indigenous Australians. It could therefore be expected that per capita investment of health resources to achieve equality for Aboriginal and Torres Strait Islanders should be higher than for other Australians.

Analyses

Total government expenditure

Expenditure on health goods and services

Total government expenditure on health goods and services for Indigenous Australians is presented in Tables 3.19.1 and 3.19.2.

- Expenditure on health goods and services for Aboriginal and Torres Strait Islander peoples during 2004–05 was estimated at $2,304 million (Table 3.19.1) or 3% of total health expenditure. Almost three-quarters of this expenditure (69%) was related to two major program areas—goods or services provided in hospitals ($1,081 million) and community health services ($498 million).

- On a per person basis, average expenditure on health goods and services for Indigenous people was $4,718, which was 17% higher than the expenditure for non-Indigenous Australians ($4,019) (Table 3.19.2).
- In three major program areas, average per person expenditure on services for Indigenous people was greater than for non-Indigenous Australians (Figure 3.19.1). These were community health services, which had an Indigenous to non-Indigenous expenditure ratio per person of 6.6; public health (which includes services such as alcohol and drug services, cancer screening and environmental health) with a ratio of 2.7; and admitted and hospitals with a ratio of 2.0. In contrast, average expenditure on goods and services provided outside public hospitals was often lower for Indigenous people than for non-Indigenous people. For example, average expenditure on medical services and medications were both less than half that for non-Indigenous Australians.

Table 3.19.1: Expenditure on health (current prices) for Indigenous and non-Indigenous people, by type of health good or service, 2004–05

	Total expenditure ($ million)			
Health good or service type	**Indigenous**	**Non-Indigenous**	**Total**	**Indigenous share (%)**
Hospitals	1,080.7	27,337.6	28,418.3	3.8
Public hospital services[(a)]	1,048.6	21,042.7	22,091.3	4.7
Admitted patient services	799.4	16,226.8	17,026.2	4.7
Non-admitted patient services	249.2	4,815.8	5,065.1	4.9
Private hospitals	32.1	6,295.0	6,327.0	0.5
High-level residential care	41.7	6,283.4	6,325.1	0.7
Patient transport	103.5	1,369.9	1,473.4	7.0
Medical services	164.6	14,483.5	14,648.1	1.1
Community health services	497.8	3,052.7	3,550.5	14.0
Dental and other health practitioners	78.0	7,811.8	7,889.8	1.0
Medications	109.4	11,056.4	11,165.8	1.0
Aids and appliances	18.6	2,591.4	2,610.1	0.7
Public health	88.9	1,350.3	1,439.2	6.2
Research	46.0	1,669.0	1,715.0	2.7
Health administration n.e.c.	74.6	2,254.5	2,329.1	3.2
Total	**2,304.0**	**79,260.4**	**81,564.4**	**2.8**

(a) Public hospital services excludes any dental services, community health services, patient transport services, public health and health research undertaken by the hospital.

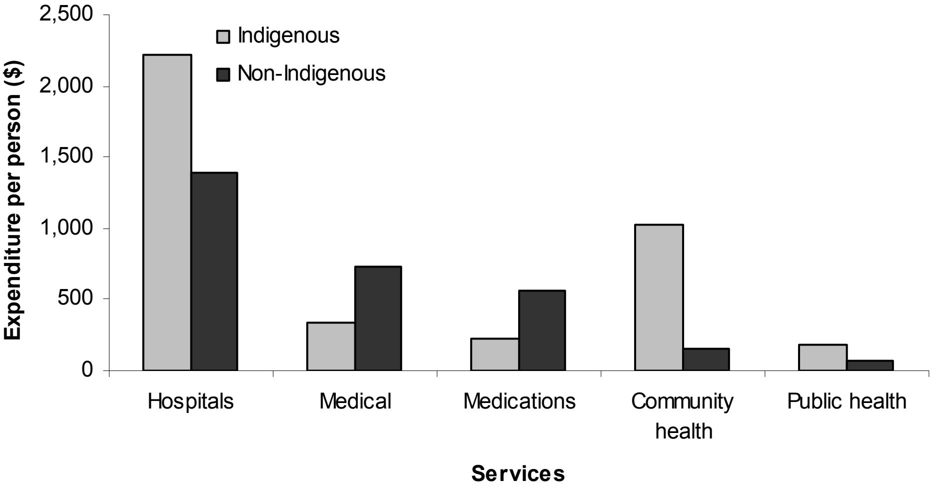
Source: AIHW 2008.

Table 3.19.2: Expenditures per person (current prices) on health services for Indigenous and non-Indigenous people, by type of health good or service, 2004–05

	Indigenous		Non-Indigenous		
Health good or service type	**Amount ($)**	**Proportion (%)**	**Amount ($)**	**Proportion (%)**	**Ratio**
Hospitals	2,213	46.9	1,386	34.5	1.6
Public hospital services[(a)]	2,147	45.5	1,067	26.5	2.0
Admitted patient services	1,637	34.7	823	20.5	2.0
Non-admitted patient services	510	10.8	244	6.1	2.1
Private hospitals	66	1.4	319	7.9	0.2
High-level residential care	85	1.8	319	7.9	0.3
Patient transport	212	4.5	69	1.7	3.1
Medical services	337	7.1	734	18.3	0.5
Community health services	1,019	21.6	155	3.9	6.6
Dental and other health practitioners	160	3.4	396	9.9	0.4
Medications	224	4.7	561	13.9	0.4
Aids and appliances	38	0.8	131	3.3	0.3
Public health	182	3.9	68	1.7	2.7
Research	94	2.0	85	2.1	1.1
Health administration n.e.c.	153	3.2	114	2.8	1.3
Total	**4,718**	**100.0**	**4,019**	**100.0**	**1.2**

(a) Public hospital services excludes any dental services, community health services, patient transport services, public health and health research undertaken by the hospital.

Source: AIHW 2008.



Source: AIHW 2008.

Figure 3.19.1: Expenditure per person on selected health services for Indigenous and non-Indigenous people, by service type, 2004–05

Expenditure on primary and secondary/tertiary services

Primary health services are those provided to whole populations (community health services and public health activities or health promotion) and those provided in, or flowing from, a patient-initiated contact with a health service. Secondary/tertiary services are those generated within the system by referral, hospital admission, and so on. Because distinctions are not always easy to make, there is some approximation in these estimates.

- In 2004–05, average expenditures per person on both primary and secondary/tertiary care services were higher for Indigenous Australians than for non-Indigenous people, although the ratio was somewhat higher for primary care—1.3:1 compared with 1.1:1 (Table 3.19.4). Higher spending on primary care services for Indigenous Australians came largely from a much higher use of the community health services sector, including those provided through the Aboriginal Community Controlled Health Services (ACCHS).
- The higher level of spending on secondary/tertiary services for Indigenous people was largely in hospitals. Expenditure on secondary/tertiary hospital services for Indigenous people was $1,958 per person compared with $1,264 per person for non-Indigenous people. Expenditure on primary medical services and medications was lower for Indigenous people ($285 and $203 per person, respectively) than for non-Indigenous people ($488 and $465 per person, respectively).

Table 3.19.3: Estimated expenditure on primary and secondary/tertiary health services, by area of expenditure and Indigenous status, 2004–05

	Primary			Secondary/tertiary		
	Expenditure ($ million)			Expenditure ($ million)		
Service	**Indigenous**	**Non-Indigenous**	**Indigenous share (%)**	**Indigenous**	**Non-Indigenous**	**Indigenous share (%)**
Hospitals	124.6	2,407.9	4.9	956.1	24,929.7	3.7
Admitted patients	n.a.	n.a.	n.a.	831.5	22,521.8	3.6
Non-admitted patients	124.6	2,407.9	4.9	124.6	2,407.9	4.9
High-level residential care	n.a.	n.a.	n.a.	41.7	6,283.4	0.7
Patient transport	51.8	274.0	15.9	51.8	1,095.9	4.5
Medical services	139.3	9,627.8	1.4	25.3	4,855.7	0.5
Community health services	497.8	3,052.7	14.0	n.a.	n.a.	n.a.
Dental services	56.4	5,041.1	1.1	n.a.	n.a.	n.a.
Other health practitioners	10.8	1,385.4	0.8	10.8	1,385.4	0.8
Medications	99.2	9,171.2	1.1	10.2	1,885.2	0.5
Aids and appliances	16.9	2,149.6	0.8	1.7	441.9	0.4
Public health	88.9	1,350.3	6.2	n.a.	n.a.	n.a.
Total[(a)]	**1,085.7**	**34,459.9**	**3.1**	**1,097.7**	**40,877.0**	**2.6**

(a) Excludes expenditure on health administration n.e.c. and research.

Source: AIHW 2008.

Table 3.19.4: Estimated expenditure per person on primary and secondary/tertiary health services, by area of expenditure and Indigenous status, 2004–05

	Primary			Secondary/tertiary		
	Expenditure per person ($)			Expenditure per person ($)		
Service	**Indigenous**	**Non-Indigenous**	**Ratio**	**Indigenous**	**Non-Indigenous**	**Ratio**
Hospitals	255	122	2.1	1,958	1,264	1.6
Admitted patients	n.a.	n.a.	n.a.	1,703	1,142	1.5
Non-admitted patients	255	122	2.1	255	122	2.1
High-level residential care	n.a.	n.a.	n.a.	85	319	0.3
Patient transport	106	14	7.6	106	56	1.9
Medical services	285	488	0.6	52	246	0.2
Community health services	1,019	155	6.6	n.a.	n.a.	n.a.
Dental services	116	256	0.5	n.a.	n.a.	n.a.
Other health practitioners	22	70	0.3	22	70	0.3
Medications	203	465	0.4	21	96	0.2
Aids and appliances	35	109	0.3	4	22	0.2
Public health	182	68	2.7	n.a.	n.a.	n.a.
Total[(a)]	**2,223**	**1,747**	**1.3**	**2,248**	**2,073**	**1.1**

(a) Excludes expenditure on health administration n.e.c. and research.

Source: AIHW 2008.

Funding of health services

Funding for health goods and services for Indigenous people is presented in Table 3.19.5.

- Governments provided an estimated 92% of the funding used to pay for health goods and services for Aboriginal and Torres Strait Islander peoples during 2004–05 although non-government sources such as out-of-pocket payments by users of services provided the remainder of the funding (Table 3.19.5).
- The Australian Government's funding was similar for Indigenous and non-Indigenous Australians (45% and 48%, respectively), although the shares of funding provided by both the state and territory governments and the non-government sector were different for Indigenous and non-Indigenous Australians. The states and territories provided nearly half (48%) of the funding for Aboriginal and Torres Strait Islander peoples, compared with 21% for non-Indigenous Australians. Non-government sources, on the other hand, provided a much lower share of the funding for services for Indigenous people (8%) than for non-Indigenous people (31%). Non-government payments include injury compensation insurers, private health insurers and out-of-pocket payments by users of services.

The main reason for the differences between Indigenous and non-Indigenous funding shares of the states and territories and non-government sources was the greater reliance by Indigenous people on publicly provided services, particularly public hospitals that are funded by the states and territories. Indigenous Australians also have a lower use of privately provided services than non-Indigenous Australians.

- The top three areas of funding for Indigenous Australians in 2004–05 were services to admitted patients in public hospitals ($799 million), community health services ($498 million) and non-admitted patient services in public hospitals ($249 million).
- For non-Indigenous people, the top three areas of funding were admitted patient services in public hospitals ($16,227 million), medical services ($14,484 million) and medications ($11,056 million). Of the hospital funding, almost one-quarter (23%) was by private hospitals, compared with only 3% in the case of Indigenous people.

Table 3.19.5: Health funding (current prices) for Indigenous and non-Indigenous people, by service type and broad sources of funding, 2004–05 ($ million)

	Australian Government funding		State/territory government funding		Non-government funding		Total	
Health good or service type	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Hospitals	431.7	11,628.1	618.6	10,496.6	30.4	5,212.9	1,080.7	27,337.6
Public hospital services[(a)]	424.4	9,310.9	608.6	10,281.3	15.6	1,450.5	1,048.6	21,042.7
Admitted patient services	322.3	7,138.0	463.8	7,838.5	13.3	1,250.4	799.4	16,226.8
Non-admitted patient services	102.1	2,172.9	144.8	2,442.8	2.3	200.1	249.2	4,815.8
Private hospitals	7.3	2,317.2	10.0	215.4	14.8	3,762.4	32.1	6,295.0
High-level residential care	30.0	4,362.3	—	—	11.7	1,921.1	41.7	6,283.4
Patient transport	14.4	148.6	87.5	1,148.2	1.6	73.1	103.5	1,369.9
Medical services	140.5	11,448.1	—	—	24.1	3,035.4	164.6	14,483.5
Community health services	219.9	166.2	277.5	2,867.0	0.5	19.5	497.8	3,052.7
Dental and other health practitioners	7.6	1,056.9	27.8	505.7	42.7	6,249.1	78.0	7,811.8
Medications	72.3	5,978.8	—	—	37.1	5,077.6	109.4	11,056.4
Public health	40.7	825.8	48.2	524.4	—	—	88.9	1,350.3
Research	27.8	1,105.1	6.0	201.7	12.2	362.2	46.0	1,669.0
Health administration n.e.c. and Aids and appliances	47.1	1,541.2	29.5	479.4	16.6	2,825.4	93.3	4,845.9
Total	**1,032.0**	**38,261.2**	**1,095.1**	**16,223.0**	**176.9**	**24,776.3**	**2,304.0**	**79,260.4**
Share of total funding	*44.8*	*48.3*	*47.5*	*20.5*	*7.7*	*31.3*	*100.0*	*100.0*
Expenditure per person ($)	2,113	1,940	2,243	823	362	1,256	4,718	4,019
Ratio Indigenous: non-Indigenous	1.09:1		2.73:1		0.29:1		1.17:1	

(a) Public hospital services excludes any dental services, community health services, patient transport services, public health and health research undertaken by the hospital.

Source: AIHW 2008.

Australian Government expenditure

On a per person basis, the Australian Government spent an estimated $1,199 per Indigenous person in 2004–05, compared with $1,288 for non-Indigenous people. In 2004–05, the total expenditure funded through Aboriginal Community Controlled Health Organisations (ACCHOs) services for Indigenous Australians was $208 million. Most of this expenditure was administered by the Office of Aboriginal and Torres Strait Islander Health (OATSIH). Per person expenditure through ACCHOs services was $426 for Indigenous Australians compared with $1 for non-Indigenous Australians (AIHW 2008).

State/territory government expenditure

State/territory government expenditure on health goods and services for Indigenous Australians is presented in Table 3.19.6 and Figure 3.19.2.

- In 2004–05, state and territory governments were estimated to have spent, on average, $3,148 per Indigenous Australian compared with $1,361 per non-Indigenous Australian. This represents an Indigenous/non-Indigenous expenditure ratio of 2:1.
- In all the major types of health goods and services, states and territories spent more per person for Indigenous people than for non-Indigenous people (Table 3.19.6). Expenditure on community health for Indigenous people was four times that for non-Indigenous people, expenditure on public health was three times that for non-Indigenous people and expenditure on admitted patient services in acute-care hospitals was twice that for non-Indigenous people.
- The Northern Territory ($5,461) and South Australia ($4,011) had the highest average expenditure per person for Indigenous people. Tasmania, which had the lowest average expenditure per person ($891), was the only jurisdiction where the estimated expenditure per person for Indigenous Australians was lower than that for non-Indigenous people ($1,285), but there is great uncertainty as to what is actually spent on health for Indigenous Australians in Tasmania and these numbers should be treated with great caution (Table 3.19.6; Figure 3.19.2).

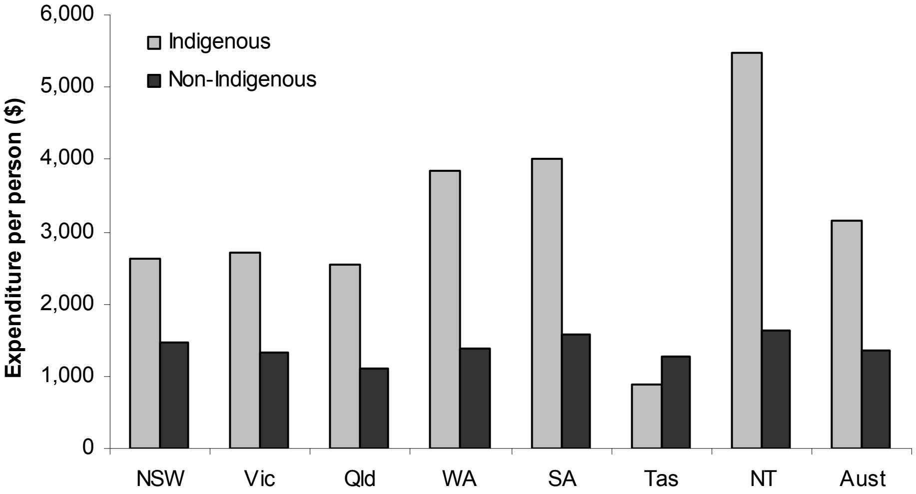
Table 3.19.6: Estimated state/territory[(a)] health expenditure per person for Indigenous and non-Indigenous people, by type of service, 2004–05

	Expenditure per person ($)							
Health good or service type	**NSW**	**Vic**	**Qld**	**WA**	**SA**	**Tas**	**NT**	**Total**
Hospitals								
Admitted patient services[(b)]								
Indigenous	1,223	1,315	1,384	2,124	2,168	423	2,696	1,611
Non-Indigenous	879	870	640	728	768	708	754	802
Non-admitted patients								
Indigenous	571	397	427	744	634	98	404	510
Non-Indigenous	321	205	156	214	308	154	264	244
Public hospital services								
Indigenous	1,794	1,712	1,811	2,868	2,802	521	3,101	2,121
Non-Indigenous	1,200	1,075	796	941	1,076	863	1,018	1,046
Patient transport								
Indigenous	88	61	213	274	165	39	354	183
Non-Indigenous	58	61	80	51	55	61	97	62
Community health								
Indigenous	556	621	386	553	698	191	1,108	575
Non-Indigenous	127	110	141	228	213	168	225	147
Public health								
Indigenous	73	233	69	53	97	55	558	139
Non-Indigenous	41	44	41	52	53	54	151	46
Dental								
Indigenous	98	32	37	27	77	6	61	57
Non-Indigenous	20	21	32	27	33	58	40	26
Research								
Indigenous	9	43	6	9	21	2	21	12
Non-Indigenous	10	15	7	9	8	3	7	10
Health administration n.e.c.								
Indigenous	—	—	23	61	152	76	259	60
Non-Indigenous	—	—	10	61	130	78	91	24
Total								
Indigenous	**2,618**	**2,701**	**2,546**	**3,844**	**4,011**	**891**	**5,461**	**3,148**
Non-Indigenous	**1,456**	**1,327**	**1,108**	**1,369**	**1,567**	**1,285**	**1,629**	**1,361**

(a) ACT per person figures are not calculated, as the expenditure numbers for the ACT include substantial expenditures for NSW residents. Thus the ACT population is not the appropriate denominator.

(b) Admitted patient expenditure adjusted for Aboriginal and Torres Strait Islander peoples under-identification, except for Tasmania.

Source: AIHW 2008.



(a) ACT per person figures are not calculated, as the expenditure numbers for the ACT include substantial expenditures for NSW residents. Thus the ACT population is not the appropriate denominator.

Source: AIHW 2008.

Figure 3.19.2: Expenditure per person by state and territory on health services for Indigenous and non-Indigenous people, 2004–05

Regional health expenditure

Estimated average health expenditures per person by remoteness area for Indigenous and non-Indigenous people are presented in Table 3.19.7 and Figure 3.19.3. This analysis is restricted to the 54% of health services expenditure data that can be apportioned according to the Australian Standard Geographic Classification Remoteness Areas. Note that some of the expenditure categories within this section are not directly comparable with estimates in other sections of this measure (see AIHW 2008).

- In 2004–05, average expenditures on health for Indigenous Australians were lowest in Major Cities and Inner Regional areas.
- Expenditure per capita on hospital care for Indigenous people was greatest in the more remote areas, as was expenditure by OATSIH through Aboriginal Community Controlled Health Services.
- Pharmaceutical Benefits Scheme (PBS) expenditures, were greater in more remote areas where the section 100 arrangements apply. Under section 100 of the *National Health Act 1953*, clients of approved remote area Aboriginal Health Services (AHSs) are able to receive PBS medicines directly from the AHS at the time of medical consultation, without the need for a normal prescription form, and without charge.
- Average per person expenditure on high-level residential care services was highest for Indigenous Australians in Remote and Very Remote areas.

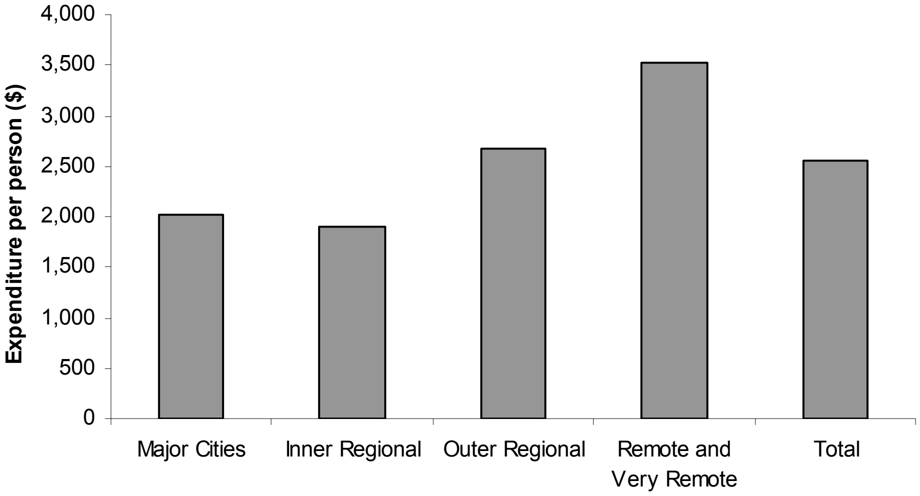
Table 3.19.7: Expenditures per person on selected health services for Indigenous people, by remoteness, 2004–05 ($)

Service	Major Cities	Inner Regional	Outer Regional	Remote and Very Remote	Total
Hospitals(a)	1,390	1,215	1,743	2,394	1,703
OATSIH grants to ACCHOs	252	301	464	683	425
Medical services	227	227	268	168	221
PBS pharmaceuticals(b)	112	129	121	186	137
High-level residential care	48	31	79	84	61
Total	**2,029**	**1,903**	**2,674**	**3,516**	**2,547**

(a) By ASGC remoteness area of patient residence.

(b) PBS drugs include $19.4 million of Section 100 Remote Area Health Services expenditure. Almost all of this expenditure occurs in Remote and Very Remote areas.

Source: AIHW 2008.



Source: AIHW 2008

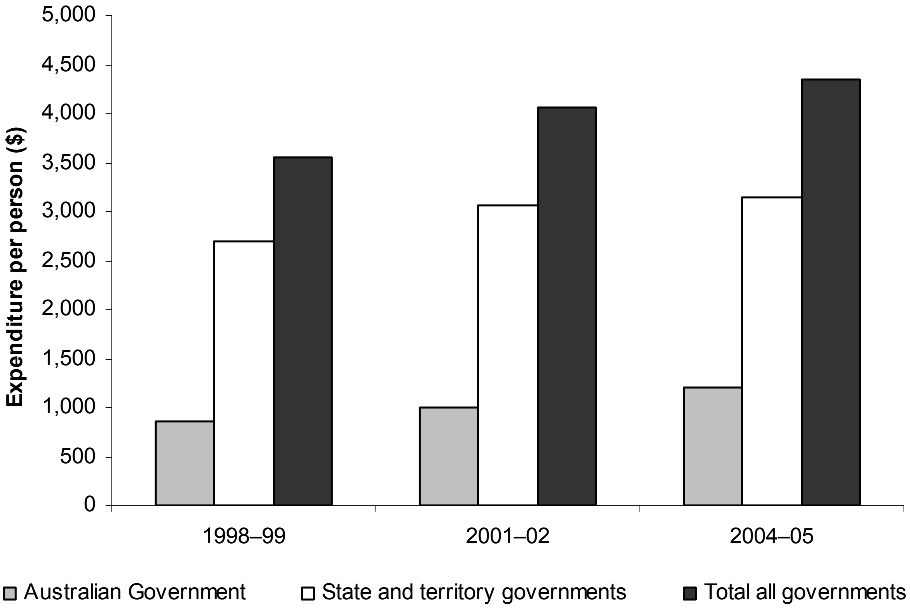
Figure 3.19.3: Expenditures per person on selected health services for Indigenous people, by remoteness, 2004–05 ($)

Changes in health expenditure and funding over time

Health expenditure estimates for Aboriginal and Torres Strait Islander peoples have been produced for 1995–96, 1998–99, 2001–02 and 2004–05. Changes in expenditure and funding over time should be interpreted with caution as changes may, in part, reflect changes in the propensity of people to identify themselves as Indigenous or improvements in the ability of health-care providers to identify Indigenous people. It should also be noted that the methods used to develop the estimates of expenditure in respect to Indigenous Australians have changed significantly between years, particularly between 1995–96 and 1998–99. Although estimates for each of the four periods (1995–96, 1998–99, 2001–02 and 2004–05) have been included in some of the tables and figures below, discussion focuses on changes between 1998–99 and 2004–05.

Total government health expenditure

- Estimated expenditures on health for Indigenous people increased between 1998–99, 2001–02 and 2004–05 (Figure 3.19.4). Estimated expenditure on health care for Aboriginal and Torres Strait Islander peoples rose by about 23% in constant prices between 1998–99 and 2004–05.



Source: AIHW 2008.

Figure 3.19.4: Time series health expenditure per Indigenous person (constant (2004–05) prices) by level of government, 1998–99, 2001–02 and 2004–05

Australian Government expenditure

- Estimates of average expenditure per person by the Australian Government on its two largest mainstream programs—Medicare and PBS—increased by 46% from an estimated $249 in 1998–99 (in 2004–05 prices) to $364 in 2004–05 (Figure 3.19.8 and Figure 3.19.5).
- The Australian Government has substantially increased the coverage and capacity of Indigenous-specific health services across Australia in urban, rural and remote areas since 1995–96. In 2007–08 total Commonwealth funding for Indigenous specific programs was $491.8 million, a real growth of 245% since 1995–96 (Figure 3.19.6).

Table 3.19.8: Average expenditure per person (constant prices[(a)] by the Australian Government on selected services, 1995–96, 1998–99, 2001–02 and 2004–05 ($)

	1995–96[(b)]				1998–99			2001–02			2004–05		
Service	Indigenous	Non-Indigenous	Ratio		Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio
MBS[(c)]	131	486	0.3	*Not comparable with later reports*	198	483	0.4	191	489	0.4	224	494	0.5
PBS[(d)(e)]	26	135	0.2		51	152	0.3	75	226	0.3	140	273	0.5
MBS and PBS[(c)(d)]	*156*	*621*	*0.3*		*249*	*634*	*0.4*	*266*	*715*	*0.4*	*364*	*767*	*0.5*
OATSIH-funded ACCHOs	325	2	172.4		320	1	566.4	412	1	340.2	426	1	307.1

(a) Expenditure expressed in constant prices (2004–05)

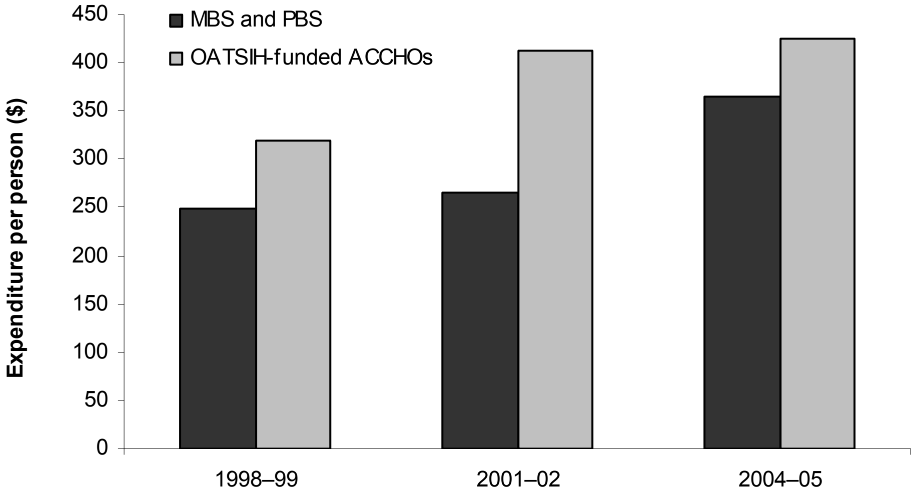
(b) Not comparable with later years. It is thought that the 1995–96 estimates are an under-estimate of these categories.

(c) Includes MBS benefits paid for specified dental services, optometry services and allied heath.

(d) Does not include RPBS benefits for veterans.

(e) 1995–95 PBS data based on the revised current price estimate of $9.3 million for PBS benefits for Aboriginal and Torres Strait Islander peoples in 1995–96 (AIHW 2001); down from the published $9.8 million (Deeble et al. 1998).

Source: AIHW 2008.



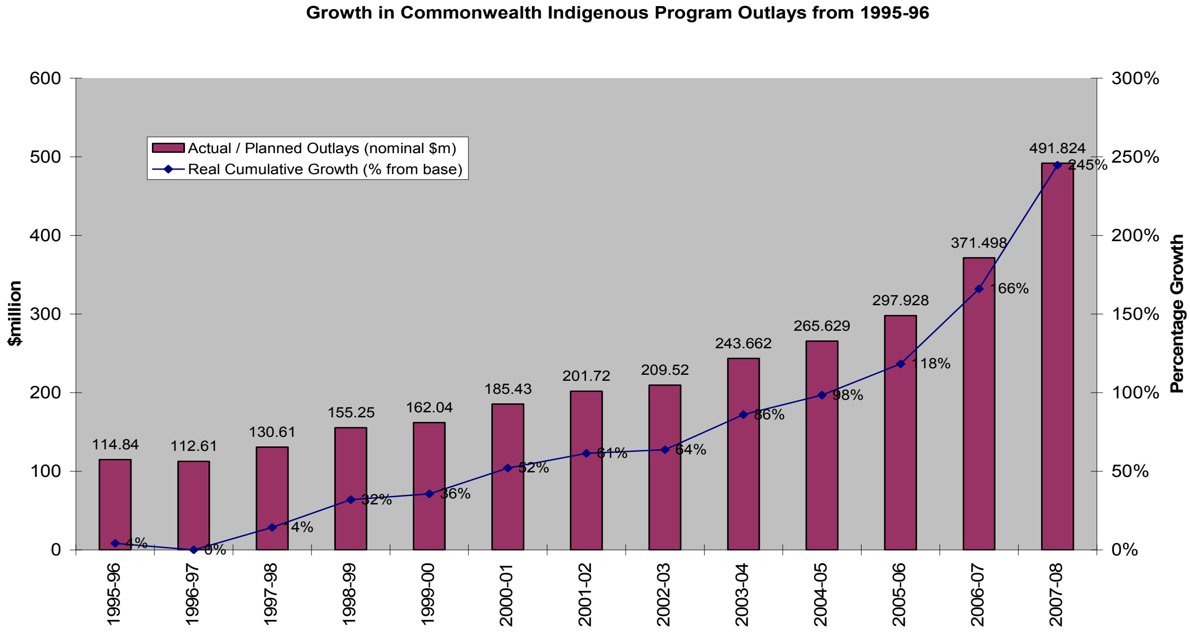
Notes

1. Expenditure expressed in constant prices (see AIHW 2008 for details).

2. MBS and PBS category includes MBS benefits paid for specified dental services, optometry services and allied heath, and does not include RPBS benefits for veterans.

Source: AIHW 2008.

Figure 3.19.5: Average expenditure per person (constant prices), incurred by the Australian Government on health for Aboriginal and Torres Strait Islander peoples in selected major programs, 1998–99, 2001–02 and 2004–05 ($)



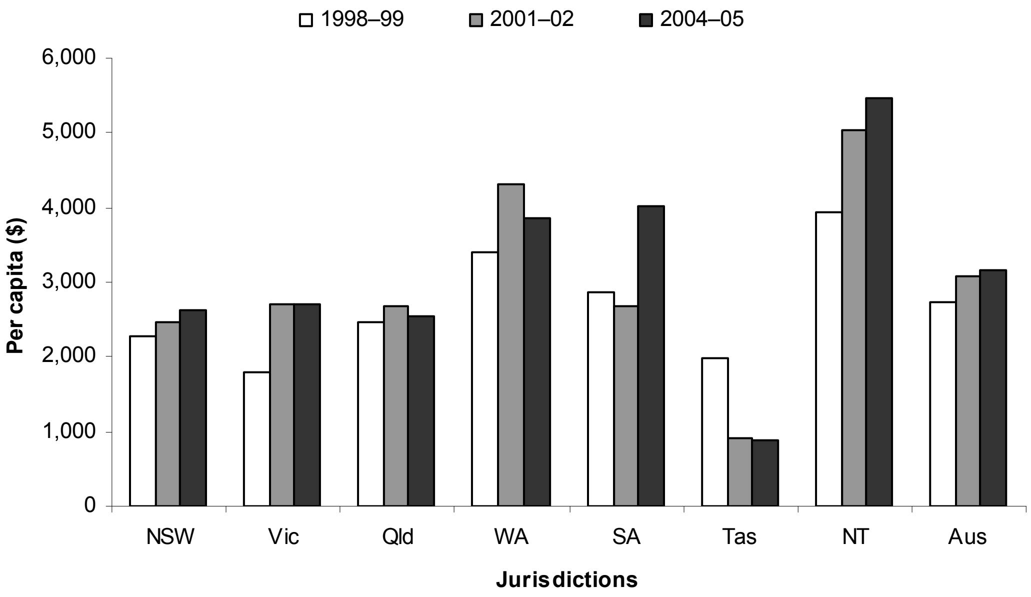
Source: Annual Reports/Portfolio Budget Statements

Figure 3.19.6: Actual and estimated growth in expenditure by the Australian Government on Indigenous specific programs, 1995-96 to 2007–08

State/territory government expenditure

Average per person expenditures incurred by state and territory governments on health for Indigenous people over the period 1998–98 to 2004–05 are presented in Figure 3.19.6.

- Average per person expenditures incurred by state and territory governments on health for Indigenous people increased between 1998–99 and 2004–05 from $2,725 to $3,148.
- Between 1998–99 and 2004–05 there were increases in the average per person expenditures on health for Indigenous people by all state and territory governments, with the exception of Tasmania for which there was a decrease in expenditure over this period.
- The Northern Territory government incurred the largest average per person expenditure on health for Indigenous people in 2004–05 ($5,461).



(a) ACT per person figures are not calculated, as the expenditure numbers for the ACT include substantial expenditures for NSW residents. Thus the ACT population is not the appropriate denominator.

(b) Admitted patient expenditure adjusted for Indigenous under-identification see Table A3.3 AIHW 2008.

(c) Constant price estimates for 1998–99 and 2001–02 have been expressed in terms of 2004–05 prices.

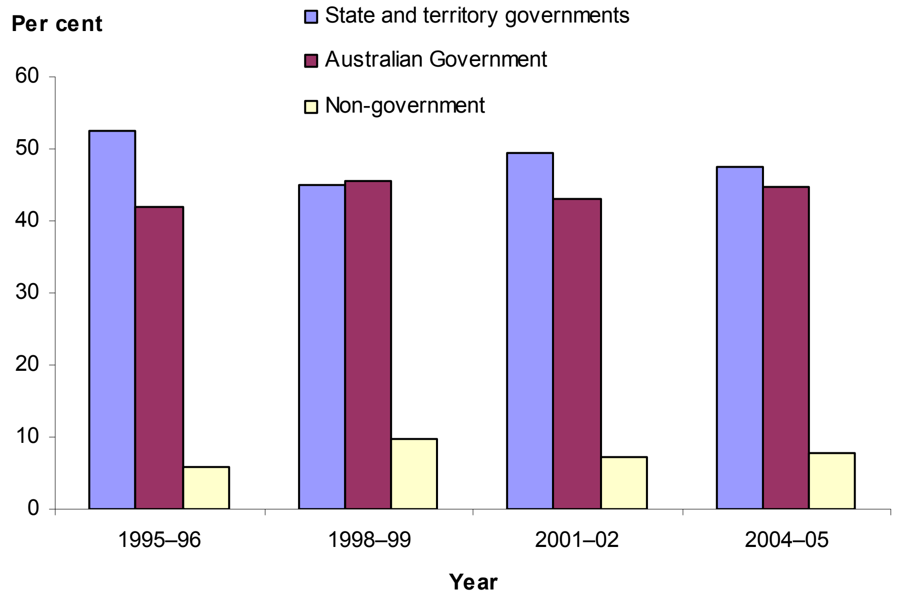
Source: AIHW 2008; AIHW 2005.

Figure 3.19.7: Average expenditure per person, incurred by state/territory governments(a)(b) on health for Aboriginal and Torres Strait Islander peoples, constant prices(c), 1998–99, 2001–02 and 2004–05 ($)

Funding

- The share of the three main funding sources for health services expenditure for Indigenous people has varied little in the 9 years between 1995–96 and 2004–05 (Figure 3.19.8).

These comparisons should be treated with caution, however, due to changes in the willingness of people to identify as Indigenous in censuses over time, which affects the denominators of per person expenditure estimates.



Sources: AIHW 2008.

Figure 3.19.8: Funding (current prices) of Indigenous health services expenditure, by level of government 1995–96 to 2004–05.

Data quality issues

Expenditure data

Quality of data on Indigenous service use

For many publicly funded health services there are few details available about service users and, in particular, about their Indigenous status. For privately funded services, this information is frequently unavailable. For those services that do collect this information, recording Indigenous status accurately for all people does not always occur. The result is that there is some margin of error in the estimations of health expenditure for Aboriginal and Torres Strait Islander peoples and their corresponding service use.

Expenditure estimates

There may be some limitations associated with the scope and definition of health expenditures included in this measure. Other (non-health) agency contributions to health expenditure, such as 'health' expenditures incurred within education departments and prisons, are not included.

Furthermore, although every effort has been made to ensure consistent reporting and categorisation of expenditure on health goods and services, in some cases there may be inconsistencies across data providers. These may result from limitations of financial reporting systems, and/or different reporting mechanisms. Reporting of health administration (n.e.c.) is one such example; in some cases, all the associated administration costs have been included in the estimates of expenditure on a particular health service category (for example, acute care services), whereas in other cases they have been separately reported.

Estimation of Australian Government expenditure on Aboriginal and Torres Strait Islander peoples

For many areas of expenditure by the Australian Government, there were limited administrative data on the utilisation of the associated services by Aboriginal and Torres Strait Islander people. Accordingly, in many areas, estimates were made on the basis of survey data, or an approximation of Indigenous use was made, based on likely Indigenous access to the service.

Estimation of MBS and PBS expenditure

Australian Government expenditures on Aboriginal and Torres Strait Islander people through the Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) are not easily quantified. Until very recently the administrative data collected through these programs have not included information on the Indigenous status of patients. Since November 2002,Indigenous people have been able to voluntarily identify through the Medicare system.

At the time of preparing this report, however, there were limited numbers of Indigenous Australians identified within Medicare data. Accordingly, in this report, the estimates of expenditure on Indigenous people through these programs are largely based on survey data. Future reports may be able to use the voluntarily identified Medicare data.

The national survey of general practitioner activity entitled Bettering the Evaluation and Care of Health (BEACH) is the principal source of data used in estimating the Indigenous share of MBS and PBS benefits.

(continued)

Data quality issues (continued)

Expenditure on public hospitals

Separations

The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

Under-identification

The incompleteness of Indigenous identification means the adjustments must be made to the number of hospital separations recorded as Indigenous so as to more accurately estimate admitted patient expenditure for Aboriginal and Torres Strait Islander people.

References

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3.20 Recruitment and retention of clinical management staff (including GPs)

The recruitment and retention of qualified clinical and management staff to provide effective health care to meet Aboriginal and Torres Strait Islander health-care needs

Data sources

National data for broad measures of recruitment and retention are not available from existing national administrative health or workforce databases. There are, however, a small number of limited collections that are relevant to this measure. Data for this measure come from the Service Activity Reporting (SAR) data collection, the Rural Workforce Agency National Minimum Data Set, and general practitioner data held by the Department of Health and Ageing (DoHA).

Service Activity Reporting (SAR) data collection

The SAR collects data from approximately 150 Australian Government-funded Indigenous primary health-care services which are held at DoHA. It is estimated that these services provide GP services to around 40% of the Indigenous population. Service-level data on health care and health-related activities are collected by survey questionnaire over a 12-month period.

Response rates to the SAR by Indigenous primary health-care services were around 99% for the period 2005–06.

Note that the SAR only includes Indigenous health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

Rural Workforce Agency National Minimum Data Set

The Rural Workforce Agency National Minimum Data Set is a national data set based on annual surveys conducted by each state and territory Rural Workforce Agency and compiled through the Australian Rural and Remote Workforce Agencies Group. The data are collected in accord with an agreed national minimum data set and data dictionary, so should be consistent and provide a valuable and regular source of data. These data are available by remoteness area and duration of practice. They do not directly answer the broader retention and recruitment questions but will provide useful information for this measure.

GP data

The DoHA holds data on the number of GPs in Australia by remoteness area and Statistical Local Area (SLA). The number of GPs in areas of high, medium and low Indigenous populations (based on SLAs) are used as a proxy measure of GP retention.

There are a number of difficulties in using these data as a proxy for retention of GPs in an area. Some GPs may work only part of the year or may provide services at more than one region. GPs may also stop billing Medicare for a period of time and resume at a later time. This causes problems in counting GPs based on their duration of practice. Care must be taken in using and interpreting the data provided.

AIHW labour force surveys

The AIHW runs a number of surveys of the health labour force including the Medical Labour Force Survey, Nursing and Midwifery Labour Force Survey, Physiotherapy Labour Force Survey, Podiatry Labour Force Survey, Psychology Labour Force Survey, Pharmacy Labour Force Survey and the Occupational Therapy Labour Force Survey. These surveys are generally conducted by the state and territory departments of health in consultation with the AIHW. The AIHW is the data custodian for each of these collections. The labour force surveys are a census of all registered health professionals in the relevant health profession in each state and territory in Australia.

Analyses

Recruitment

Information on the recruitment of clinical and management staff in Aboriginal and Torres Strait Islander primary health-care services is available from the SAR data collection, collected by DoHA, and is presented below.

Recruitment by staff category

- As at the 30 June 2006, there were approximately 2,097 full-time equivalent (FTE) health (clinical) staff and 1,296 full-time equivalent administrative and support (management) staff positions within Aboriginal and Torres Strait Islander primary health-care organisations funded by the Australian Government. The number of FTE vacancies at this time was 227 health staff and 54 administrative and support staff, which was 11% and 4% of total funded FTE positions.
- The highest number of health staff vacancies in 2006 were for Aboriginal health workers (99), followed by emotional and social wellbeing workers (46), and doctors and specialists (29) (Table 3.20.1).
- Occupations with the highest proportion of health staff vacancies out of funded FTE positions for that occupation were emotional and social wellbeing staff (18%), Aboriginal health workers (12%), doctors and specialists (11%), other health staff (10%) and substance-use workers (8%).

Table 3.20.1: Number and proportion of health (clinical) staff and administrative and support (management) staff vacancies in Aboriginal and Torres Strait Islander primary health-care organisations, at 30 June 2006

Staff category	Number	Per cent[(a)]
Health staff		
Aboriginal health worker	99	12.0
Doctors and specialists	29	11.0
Nurses	25	6.1
Emotional and social wellbeing workers	46	18.1
Allied health professionals	3	6.5
Dentists	3	7.2
Dental support	1	0.9
Traditional healers	0	0.0
Substance-use workers	10	7.8
Environmental health workers	1	3.4
Drivers/field officers	2	1.4
Other health staff	5	9.7
Total health/clinical	*227*	*10.7*
Administrative and support staff		
CEO/admin/managers	15	4.3
Secretaries	7	1.6
Accountants	4	2.5
Information/data	1	1.6
Trainers/educators	5	9.9
Other support staff	22	8.2
Total administrative and support staff	*54*	*4.2*
Total	**279**	**7.6**

(a) Number of funded FTE vacancies divided by the total FTE positions multiplied by 100.

Source: Service Activity Reporting 2005–06.

Recruitment by state/territory and remoteness

- As at 30 June 2006, the Northern Territory had the highest proportion (10%) of total health staff vacancies (health staff and administrative and support staff) of total full-time equivalent positions in Indigenous primary health-care organisations and Queensland, Western Australia and South Australia had the lowest (each 6%) (Table 3.20.2; Figure 3.20.1). The Northern Territory had the highest number of health (clinical) staff vacancies (14%) followed by Victoria and Tasmania (13%). The Northern Territory, Queensland and New South Wales and the Australian Capital Territory had the highest proportion of administrative and support staff vacancies (each 5%).
- As at 30 June 2006, Remote and Very Remote areas of Australia had the highest proportion of total health staff vacancies of total positions funded in Indigenous primary health-care organisations (9% and 8%, respectively). This compared with around 6–7% in Major Cities and inner and Outer Regional areas (Table 3.20.3; Figure 3.20.2). The proportion of health (clinical) staff vacancies was around 10% in regional and remote areas and 8% in Major Cities. The highest proportion was in Remote and Very Remote areas of Australia (7% and 5%, respectively).

Table 3.20.2: Number and proportion[(a)] of health (clinical) staff and administrative and support (management) staff vacancies of total positions (FTE) in Aboriginal and Torres Strait Islander primary health-care organisations, by state/territory, at 30 June 2006

	NSW and ACT[(b)]		Vic and Tas[(b)]		Qld		WA		SA		NT	
Staff category	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Health staff	52	9.6	33	12.9	24	6.4	31	7.1	18	7.9	67	13.7
Administrative and support staff	12	4.7	1	0.4	11	4.8	9	3.5	5	3.7	16	5.2
Total	64	8.0	34	8.1	35	5.8	40	5.8	23	6.3	83	10.4

(a) Number of funded FTE vacancies divided by the total FTE positions multiplied by 100.

(b) Jurisdictions have been combined because of the small number of services in the Australian Capital Territory and Tasmania.

Source: Service Activity Reporting 2005–06.

Source: Service Activity Reporting 2005–06.

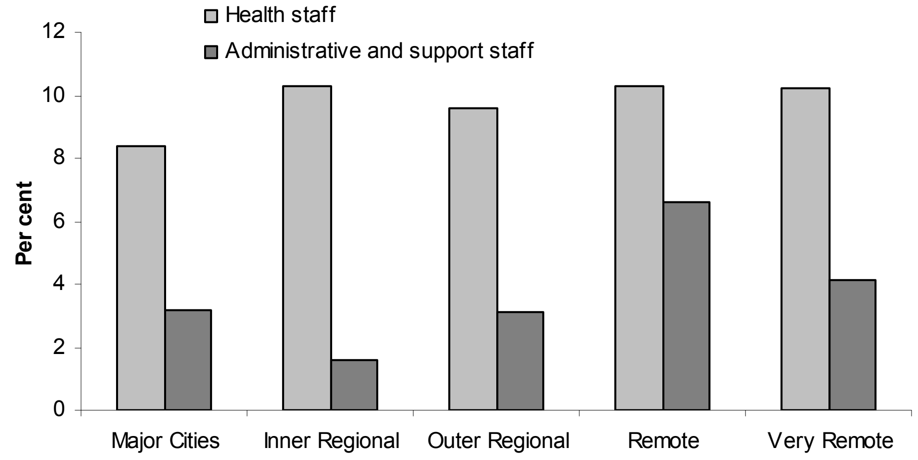
Figure 3.20.1: Proportion of health and administrative and support staff vacancies of total positions in Aboriginal and Torres Strait Islander primary health-care organisations, by state/territory, at 30 June 2006

Table 3.20.3: Number and proportion[(a)] of health (clinical) staff and administrative and support (management) staff vacancies of total positions (FTE) in Aboriginal and Torres Strait Islander primary health-care organisations, by remoteness, at 30 June 2006

	Major Cities		Inner Regional		Outer Regional		Remote		Very Remote		Total	
Staff category	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Health staff	33	8.0	38	10.3	61	9.7	59	10.4	34	9.8	227	10.7
Administrative and support staff	8	3.6	4	1.6	12	3.0	23	6.6	8	4.7	54	4.2
Total	**41**	**6.4**	**41**	**7.0**	**73**	**7.1**	**82**	**9.0**	**42**	**8.2**	**279**	**7.6**

(a) Number of funded FTE vacancies divided by the total FTE positions multiplied by 100.

Source: Service Activity Reporting 2005–06.



Source: Service Activity Reporting 2005–06.

Figure 3.20.2: Proportion of health and administrative and support staff vacancies in Aboriginal and Torres Strait Islander primary health-care organisations, by remoteness, at 30 June 2006

Recruitment by length of time vacant

- As at 30 June 2006, the majority of health staff vacancies in Aboriginal and Torres Strait Islander health-care organisations were vacant for 26 weeks or more (122) and the majority of administrative and support staff vacancies were vacant for between 4 and 25 weeks (30) (Table 3.20.4).

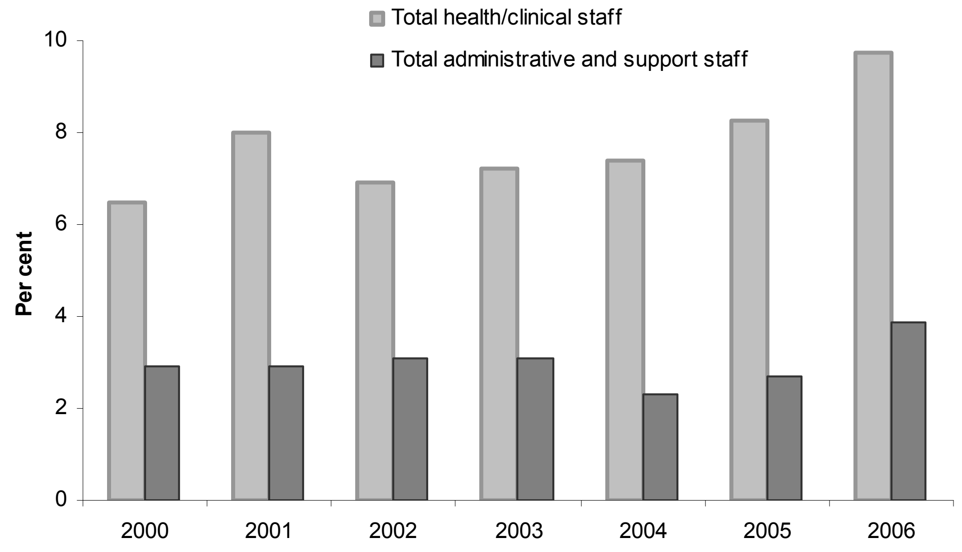
Table 3.20.4: Full-time equivalent health (clinical) staff and administrative and support (management) staff vacancies in Aboriginal and Torres Strait Islander primary health-care organisations, by length of time vacant, at 30 June 2006

Staff category	1 week	2–3 weeks	4–25 weeks	26+ weeks
Health staff	5	5	92	122
Admin. and support staff	2	4	30	18
Total	7	9	122	140

Source: Service Activity Reporting 2005–06.

Time series analyses

- There has been an increase in the proportion of health/clinical staff vacancies in Aboriginal and Torres Strait Islander health-care organisations over the period June 2000 to June 2006 (from 6.5% to 10%). There has also been an increase in the number of administrative and support staff (from 3% to 4%) (Figure 3.20.3).



Note: Data are as at 30 June.

Source: AIHW analysis of Service Activity Reporting data.

Figure 3.20.3: Full-time equivalent health (clinical) staff and administrative and support (management) staff vacancies in Aboriginal and Torres Strait Islander primary health-care organisations, 2000–2006

Retention

Information on the number of GPs working in Australia is available from DoHA and additional data on GPs working in rural areas of Australia are available from the Rural Workforce Agency.

GPs by Statistical Local Area

Table 3.20.5 and Figure 3.20.4 present data on the number of full-time equivalent GPs per 1,000 population by areas of low through to high proportions of Indigenous populations. Using population data from the 2001 Census, SLAs were grouped according to the proportion of the population living in these areas that was Indigenous.

- In 2005–06, there were approximately 14,789 full-time equivalent GPs working in Australia. Approximately 47% of GPs were working in areas where less than 1% of the population was Indigenous, at a rate of 0.8 per 1,000 population and only 0.2% of GPs were working in areas where more than 50% of the population was Indigenous, at a rate of 0.3 per 1,000 population (Table 3.20.5).

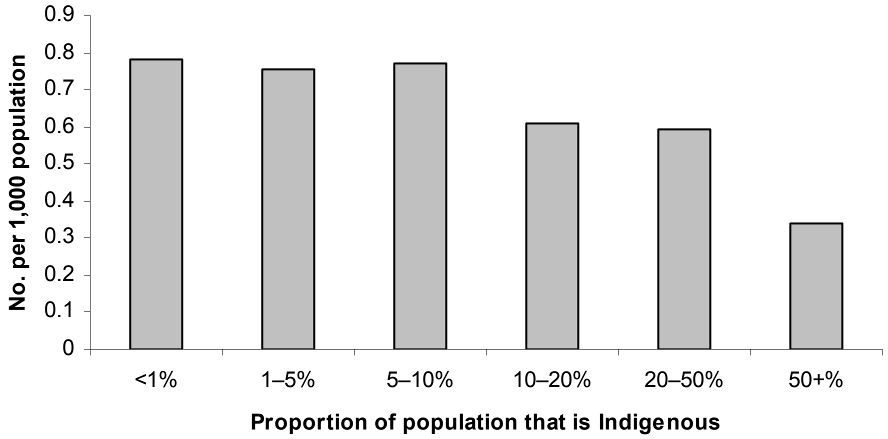
Care must be used in the interpretation of the data provided. There are two issues that have an effect on the quality of these data. First, the data include only those GPs claiming through the Medicare system. Consequently the FTE for doctors in remote areas, which are more likely to have high proportions of Indigenous population, will be understated because some services are provided in rural hospitals and through the Royal Flying Doctor Service. There is also anecdotal information that services provided in Aboriginal Medical Services are often not claimed through the Medicare system—further understating the FTE for doctors in areas with high Indigenous populations.

Second, the data at the grouped SLA level can hide variability in data at the individual SLA level. For example, although one group of SLAs may have fewer people per doctor overall than a second group of SLAs, there will be a number of SLAs in the first group with far more people per doctor than several SLAs in the second group.

Table 3.20.5: Number of full-time equivalent GPs per 1,000 population, by areas of low through to high proportions of Indigenous populations, 2005–06

Proportion of SLA population which is Indigenous	Number of FTE GPs	No. per 1,000 population
<1%	6,939	0.8
1–5%	6,803	0.8
5–10%	708	0.8
10–20%	234	0.6
20–50%	79	0.6
50+%	27	0.3
Total	**14,789**	**0.8**

Source: AIHW analysis of DoHA data.



Source: AIHW analysis of DoHA data.

Figure 3.20.4: Number of full-time equivalent GPs per 1,000 population, by areas of low through to high proportions of Indigenous populations, 2005–06

GPs by remoteness

Table 3.20.6 presents the number and proportion of full-time equivalent GPs by remoteness area.

- In 2005–06, approximately 73% of GPs were working in capital cities or other metropolitan areas, 25% of GPs were working in rural areas and only 2% of GPs were working in remote areas of Australia.

Table 3.20.6: Number and proportion of full-time equivalent GPs, by remoteness, 2005–06

Remoteness category	Number of FTE GPs	Per cent
Capital city	9,493	65.4
Other metropolitan area	1,125	7.8
Large rural	906	6.2
Small rural	1,001	6.9
Other rural	1,700	11.7
Remote centre	124	0.9
Other remote centre	159	1.1
Total	**14,509**	100.0

Source: Australian Government Department of Health and Ageing data.

GPs in rural areas

Table 3.20.7 presents the number and proportion of GPs working in rural areas of Australia, by length of stay in current practice and remoteness area as at 30 November 2007.

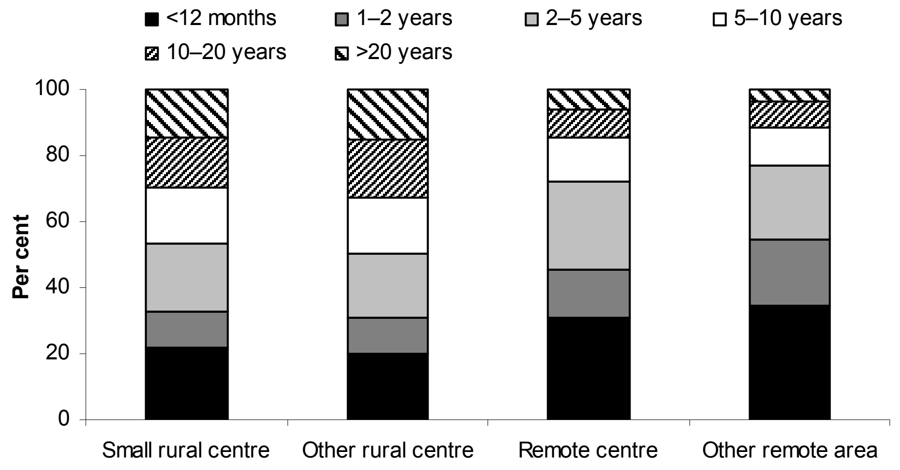
- As at 30 November 2007, the Rural Workforce Agency Annual Survey recorded a total of 4,428 general practitioners working in rural and remote areas of Australia. Approximately 22% of general practitioners reported they had stayed in current practice for less than 12 months and only 14% had stayed in practice for more than 20 years (Table 3.20.7).
- General practitioners in rural areas were more likely to stay in current practice for a longer time than general practitioners in more remote areas. For example, between 12% and 15% of general practitioners working in remote centres and other remote areas had stayed in practice for 10 years or more compared with 30% to 33% of general practitioners working in small rural centres and other rural centres (Figure 3.20.5).

Table 3.20.7: Number and proportion of GPs in rural and remote areas, by length of stay in current practice and remoteness, at 30 November 2007

	Duration						
RRMA[(a)] category	**<12 months**	**1–2 years**	**2–5 years**	**5–10 years**	**10–20 years**	**>20 years**	**Total**
				Number			
Small rural centre	342	178	321	271	242	228	1,582
Other rural centre	457	254	441	382	405	343	2,282
Remote centre	88	42	75	38	24	18	285
Other remote area	97	55	62	33	22	10	279
Total	**984**	**529**	**899**	**724**	**693**	**599**	**4,428**
				Proportion			
Small rural centre	21.6	11.3	20.3	17.1	15.3	14.4	100.0
Other rural centre	20.0	11.1	19.3	16.7	17.7	15.0	100.0
Remote centre	30.9	14.7	26.3	13.3	8.4	6.3	100.0
Other remote area	34.8	19.7	22.2	11.8	7.9	3.6	100.0
Total	**22.2**	**11.9**	**20.3**	**16.4**	**15.7**	**13.5**	**100.0**

(a) RRMA: rural, remote and metropolitan areas.

Source: Rural workforce Agency Annual Survey data.



Source: AIHW analysis of Rural Workforce Agency Annual Survey data.

Figure 3.20.5: Proportion of GPs in rural and remote areas, by duration of practice and remoteness, at 31 November 2007

Additional information

Supply of health professionals

Data on the supply of health professionals are available from AIHW Labour Force Surveys. Data from the 2005 Medical Labour Force Survey, 2005 Nursing and Midwifery Labour Force Survey, 2002 Physiotherapy Labour Force Survey, 2002 Podiatry Labour Force Survey, 2003 Psychology Labour Force Survey and 2002–03 Occupational Therapy Labour Force Survey are summarised below. Information is also presented on the dental labour force from the AIHW Dental Statistics and Research unit.

Medical practitioners

- There were 67,890 registered medical practitioners in Australia of whom 60,252 (88.7%) were employed in medicine in Australia in 2005—a rise of 13% from 2001. The number of clinicians grew by 14% from 49,392 in 2001 to 56,084 in 2005. This is equivalent to an increase of 22 clinicians per 100,000 population (from 254 in 2001 to 275 in 2005). There was a 17% increase in specialist numbers between 2001 and 2005 (from 17,124 to 19,943), which equates to an increase of 10 specialists per 100,000 population (from 88 to 98). The number of specialists-in-training grew by 28% between 2001 and 2005 (from 5,429 to 6,920) and this equates to an increase of 6 per 100,000 population (AIHW 2008a).
- Despite a decrease in average hours worked from 2001 to 2005, the supply of employed medical practitioners increased from 277 to 287 full-time equivalent (FTE) medical practitioners per 100,000 population over that period. Increases in the FTE rate of supply ranged from 18 practitioners per 100,000 population in Major Cities to 2 practitioners per 100,000 population in Inner Regional areas.
- The proportion of registered medical practitioners who were employed in medicine ranged from 93% in the Northern Territory to 85% in Tasmania and Western Australia (Table 3.20.8).
- Of the registered medical practitioners who were not employed in medicine in Australia in 2005, the majority were employed in medicine overseas (2,947) or retired (2,669).

Table 3.20.8: Labour force status of registered medical practitioners, by state/territory, 2005

Labour force status	NSW	Vic	Qld[(a)]	WA[(a)]	SA	Tas[(a)]	ACT	NT[(b)]	Australia
Employed in medicine in this state	21,730	15,831	9,352	4,881	4,938	1,438	1,363	719	60,252
On extended leave	196	225	86	93	43	37	12	13	705
Employed in medicine overseas	1,459	539	421	215	160	52	69	33	2,947
Employed elsewhere, not in medicine	208	81	56	51	32	6	15	3	454
Not employed in medicine	308	167	119	158	59	26	27	0	863
Retired	665	470	478	368	433	142	107	5	2,669
Total registered	**24,566**	**17,315**	**10,514**	**5,766**	**5,664**	**1,700**	**1,592**	**773**	**67,890**
Percentage of registered practitioners employed in medicine	88.5	91.4	89.0	84.7	87.2	84.5	85.6	93.1	88.7

(a) The number of medical practitioners in Queensland, Western Australia and Tasmania are underestimates as the benchmark figures did not include all registered medical practitioners.

(b) Northern Territory estimates for 2005 are based on responses to the 2004 Medical labour force survey weighted to 2005 benchmark figures, giving an estimated response rate of 31.8% (compared with the actual response rate for the 2005 survey of 7.5%). Care should be taken when interpreting these figures.

Source: Medical Labour Force Survey 2005 (AIHW 2008a).

Registered and enrolled nurses

- The total number of nurses identified in 2005 by the Nursing and Midwifery Labour Force Census was 285,619, comprising 230,578 registered nurses and 55,042 enrolled nurses. This represents a 10% increase in the number of nurses between 2001 and 2005. Overall, supply of nurses increased from 1,031 FTE nurses per 100,000 population in 2001 to 1,133 FTE nurses per 100,000 population in 2005 (AIHW 2008b).
- Nursing supply appears to be evenly distributed across regions, ranging from 1,177 FTE nurses per 100,000 in Very Remote areas to 1,074 in Major Cities.
- The proportion of registered nurses employed in nursing in Australia in 2005 was 86.0% (198,315), and ranged from 78% in New South Wales to 94% in Tasmania. Of the registered nurses who were not employed in nursing, the majority were not looking for work in nursing (21,779) or on extended leave (6,472) (Table 3.20.9).
- The proportion of enrolled nurses employed in nursing in Australia in 2005 was 84% (46,044), ranging from 74% in New South Wales to 93% in South Australia. Many of the enrolled nurses who were not employed in nursing were not actively looking for work in nursing (6,803), looking for work in nursing (1,023) or on extended leave (1,016).

Table 3.20.9: Labour force status of registered and enrolled nurses, by state/territory, 2005

	NSW	Vic[a]	Qld	WA[b]	SA	Tas	ACT	NT[c]	Australia[d]
					Registered nurses in 2005				
Employed	61,299	52,830	35,060	19,105	17,841	5,692	3,425	n.p.	198,315
On extended leave	2,236	1,987	993	630	341	126	96	n.p.	6,472
Looking for work in nursing	951	390	388	155	140	23	39	n.p.	2,086
Overseas	1,157	245	232	54	199	11	27	n.p.	1,925
Not looking for work in nursing	12,847	3,004	2,621	1,983	722	232	349	n.p.	21,779
Total employed nurses	*78,491*	*58,455*	*39,294*	*21,927*	*19,243*	*6,084*	*3,936*	*n.p.*	*230,578*
Percentage of registered nurses employed in nursing	78.1	90.4	89.2	87.1	92.7	93.6	87.0	n.p.	86.0
					Enrolled nurses in 2005				
Employed	11,876	16,206	6,313	3,800	5,810	953	683	n.p.	46,044
On extended leave	345	357	120	84	73	16	21	n.p.	1,016
Looking for work in nursing	367	384	99	66	75	13	19	n.p.	1,023
Overseas	76	39	24	13	3	—	—	n.p.	156
Not looking for work in nursing	3,469	1,622	614	658	317	69	54	n.p.	6,803
Total enrolled nurses	*16,134*	*18,607*	*7,170*	*4,620*	*6,278*	*1,051*	*777*	*n.p.*	*55,042*
Percentage of enrolled nurses employed in nursing	73.6	87.1	88.0	82.3	92.5	90.7	87.9	n.p.	83.7
					All nurses in 2005				
Employed	73,174	69,036	41,373	22,904	23,651	6,645	4,108	n.p.	244,360
On extended leave	2,582	2,344	1,114	714	414	142	117	n.p.	7,488
Looking for work in nursing	1,318	773	487	221	214	36	59	n.p.	3,108
Overseas	1,234	284	256	67	203	11	27	n.p.	2,081
Not looking for work in nursing	16,316	4,625	3,235	2,641	1,040	301	403	n.p.	28,582
Total nurses 2005	**94,624**	**77,062**	**46,464**	**26,547**	**25,521**	**7,135**	**4,714**	**n.p.**	**285,619**
Percentage of all nurses employed in nursing	77.3	89.6	89.0	86.3	92.7	93.1	87.1	n.p.	85.6

(a) Estimates for Victoria for 2005 are derived from responses to the 2006 AIHW Nursing and Midwifery Labour Force Census, weighted to 2005 registration and enrolment benchmark figures.

(b) Estimates for WA for 2005 should be treated with caution because of the low response rate (26.9%) in the 2005 census.

(c) Estimates for the NT for 2005 are not separately published because of the very low response rate to the census in that jurisdiction (13.7%).

(d) The total for Australia includes estimates for the NT and WA. Due to the relative size of the nursing and midwifery workforces in these jurisdictions, any biases in their estimates are unlikely to have a significant effect on the accuracy of the national figure.

Source: Nursing and Midwifery Labour Force Census 2005 (AIHW 2008b).

Physiotherapists

- In 2002, there were 15,967 physiotherapists registered with state/territory physiotherapist registration boards throughout Australia (excluding the Northern Territory). This represents a 11% increase in the number of physiotherapists between 1998 and 2002.
- The AIHW 2002 Physiotherapy Labour Force Survey showed that there were 13,446 registered physiotherapists throughout New South Wales, Victoria, Queensland, South Australia, and the Australian Capital Territory in 2002, of whom 10,728 (80%) were

working in physiotherapy. The proportion of registered physiotherapists who were working in physiotherapy in 2002 ranged from 74% in New South Wales to 87% in Victoria (Table 3.20.10).

- From the 2002 AIHW survey, the FTE rates could only be calculated for three jurisdictions (Victoria, 70 per 100,000; South Australia, 72; and the Australian Capital Territory, 81).
- Of the registered physiotherapists who were not working in physiotherapy in 2002, the majority were not actively looking for work in physiotherapy (1,382).

Table 3.20.10: Registered physiotherapists: labour force status and field of physiotherapy by state/territory, NSW, Vic, Qld, SA and ACT, 2002

Labour force status/field	NSW	Vic[(a)]	Qld	SA	ACT	Total[(b)]
Physiotherapy labour force	4,370	3,405	1,935	1,204	286	11,201
Total working in physiotherapy	*4,191*	*3,257*	*1,849*	*1,156*	*274*	*10,728*
Clinical physiotherapist	3,955	2,931	1,717	1,051	258	9,913
Non-clinical physiotherapist	236	326	133	104	16	815
Total not working in physiotherapy	*179*	*148*	*86*	*48*	*12*	*473*
On extended leave	108	114	44	43	n.p.	311
Looking for work in physiotherapy	71	34	42	6	10	162
Total not in physiotherapy labour force	*1,313*	*322*	*426*	*149*	*34*	*2,245*
Overseas	499	144	148	64	8	863
Not looking for work in physiotherapy	814	178	278	85	26	1,382
Total registered physiotherapists	**5,683**	**3,728**	**2,362**	**1,353**	**320**	**13,446**
Percentage of physiotherapists employed in physiotherapy	73.7	87.4	78.3	85.4	85.6	79.8

(a) The numbers for Victoria should be treated with caution. The increase from 1998 to 2002 in the number employed (21.7%), and the associated declines in the numbers 'looking for work in physiotherapy' and 'not in the labour force', are higher than would be expected from the increase in registrations over the same period (7.7%).

(b) Excludes Western Australia, Tasmania and the Northern Territory of which were not surveyed in 2002.

Source: Physiotherapy Labour Force Survey, 2002 (AIHW 2006a).

Podiatrists

- In 2003, there were 2,361 podiatrists registered with state/territory boards throughout Australia (excluding the Northern Territory). This represents a 15% increase in the number of podiatrists between 1999 and 2003.
- The AIHW 2003 Podiatry Labour Force Survey showed there were 1,988 registered podiatrists n New South Wales, Victoria, Queensland, South Australia and Tasmania in 2003, of whom 1,820 (92%) were working in podiatry. The proportion of podiatrists working in podiatry ranged from 89% in Victoria to 97% in South Australia (Table 3.20.11).
- The supply of podiatrists varied between states, ranging from 7.7 per 100,000 population in Queensland to 19.7 per 100,000 population in South Australia.
- Of the registered podiatrists who were not working in podiatry in 2002, the majority were not actively looking for work in podiatry (112).

Table 3.20.11: Labour force status of registered podiatrists by state/territory, NSW, Vic, Qld, SA and Tas, 2003

Labour force status	NSW	Vic	Qld	SA	Tas	Total
Podiatry labour force	583	655	279	284	53	1,854
Working in podiatry	*580*	*636*	*273*	*278*	*53*	*1,820*
Clinical podiatrist	563	610	264	268	50	1,755
Non-clinical podiatrist	17	26	9	10	n.p.	65
Not working in podiatry	*n.p.*	*19*	*n.p.*	*6*	*n.p.*	*33*
On extended leave	—	17	n.p.	6	—	27
Looking for work in podiatry	n.p.	n.p.	n.p.	—	—	6
Not in podiatry labour force	46	61	22	n.p.	n.p.	134
Overseas	n.p.	10	7	n.p.	n.p.	22
Not looking for work in podiatry	44	50	15	n.p.	n.p.	112
Total registered podiatrists[(a)]	**629**	**716**	**301**	**286**	**56**	**1,988**
Percentage of podiatrists employed in podiatry	92.2	88.8	90.7	97.2	94.6	91.5

(a) Excludes Western Australia, the Australian Capital Territory and the Northern Territory

Source: Podiatry Labour Force Survey, 2003 (AIHW 2006b).

Psychologists

- In 2004–05 there were 22,175 psychologists registered with Psychologist Registration Boards in Australia (excluding the Australian Capital Territory and the Northern Territory). This represents an increase in the number of psychologists between 1999–00 and 2004–05 in all jurisdictions, ranging from 20% in Western Australia to 59% in New South Wales.
- The AIHW 2003 Labour Force Survey showed there were 16,094 registered psychologists in New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory in 2003. Of these 14,073 (87%) were working in psychology, ranging from 85% in South Australia to 90% in Victoria (Table 3.20.12).
- The FTE rate of psychologists per 100,000 population for each of the above jurisdictions ranged from 54 in South Australia to 170 in the Australian Capital Territory.
- Of the registered psychologists who were not working in psychology, the majority were not actively looking for work in psychology (817).

Table 3.20.12: Labour force status of registered psychologists, by state/territory, NSW, Vic, Qld, SA and ACT, 2003

Labour force status	NSW	Vic	Qld[a]	SA	ACT	Total[b]
Psychology labour force[a]	5,842	4,840	2,568	814	519	14,584
Total working in psychology	*5,589*	*4,671*	*2,535*	*769*	*509*	*14,073*
Clinical psychologist	3,996	3,067	1,793	516	323	9,694
Non-clinical psychologist	1,593	1,605	742	253	186	4,379
Total not working in psychology	*253*	*168*	*n.a.*	*46*	*10*	*511*
On extended leave	102	46	34	37	n.p.	222
Looking for work in psychology	151	122	n.a.	8	8	289
Not in psychology labour force[a][c]	620	303	43	78	48	1,092
Overseas	185	38	43	4	5	275
Not looking for work in psychology	434	265	n.a.	74	43	817
Looking for work status not known	21	69	317	9	n.p.	419
Total registered psychologists	**6,483**	**5,212**	**2,928**	**901**	**569**	**16,094**
Percentage of psychologists employed in psychology	86.2	89.6	86.6	85.3	89.5	87.4

(a) Excludes 'looking for work' not known.

(b) Excludes Western Australia, Tasmania and the Northern Territory.

(c) Excludes 'whether looking for work' because this was not collected in the Queensland survey.

Source: Psychology Labour Force Survey, 2003 (AIHW 2006c).

Dental therapists

- Data from the National Dental Labour Force Collection show there were an estimated 1,560 registered dental therapists in Australia in 2003. Of these, 1,279 (82%) were working in dentistry, and 1,236 (79%) were practising therapists. This represents a 1.3% decrease in the number of practising therapists between 2000 and 2003.
- The number of dental therapists per 100,000 population also decreased, from 6.6 in 2000 to 6.3 in 2003.
- The proportion of dental therapists working in dentistry ranged from 71% in the Australian Capital Territory to 97% in Tasmania (Table 3.20.13).
- The majority of registered dental therapists not working in dentistry were not working (102) or working, but not in dentistry (73).

Table 3.20.13: Practice status of dental therapists, by state/territory, 2003

Labour force status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All
Working in dentistry	*195*	*179*	*354*	*318*	*134*	*61*	*22*	*16*	*1,279*
Practising therapy	195	152	354	309	128	61	22	16	1,236
Practising hygiene and therapy	—	1	—	5	—	—	—	—	7
Practising hygiene	—	26	—	4	6	—	—	—	36
Practising therapy only in other states	—	1	—	—	—	—	—	—	1
On 3+ months leave	10	11	11	16	9	1	—	—	58
Overseas	—	—	—	1	—	—	—	2	3
Not working	12	17	18	48	2	1	4	—	102
Working in dentistry, but not as dental auxiliary	7	7	18	9	—	—	2	—	45
Working, but not in dentistry	7	14	21	24	2	—	2	2	73
Total registered dental therapists	**232**	**229**	**422**	**417**	**147**	**63**	**31**	**19**	**1,560**
Percentage of dental therapists employed in dentistry	84.1	78.2	83.9	76.3	91.2	96.8	71.0	84.2	82.0

Notes

1. Not all columns/rows sum to total as weighted data have been rounded to whole numbers.
2. There was no NT collection in 2003; results are based on data from the 2002 collection.
3. Registration of dental therapists/hygienists in NSW and Qld commenced in 2005.

Source: AIHW Dental Statistics and Research Unit 2006.

Occupational therapists

- The size of the occupational therapist labour force in Australia is difficult to estimate as occupational therapists are only required to be registered in four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory), and registration numbers were readily available from only three of these (Queensland, Western Australia and South Australia). In the 2001 ABS Census of Population and Housing, however, 5,331 persons identified as being employed as occupational therapists.
- Of the three jurisdictions where registration numbers were available, there has been an increase of 32% in the total number of occupational therapist registrations between 1998 and 2003.
- The AIHW 2002–2003 Occupational Therapy Labour Force Survey received responses from 3,622 occupational therapists throughout Australia. Of these, 3,107 (86%) were employed in occupational therapy (Table 3.20.14).
- Of the occupational therapist respondents who were not employed in occupational therapy, the majority were not actively looking for work in occupational therapy (278) or were on extended leave (117).

Table 3.20.14: Occupational therapist respondents: labour force status and role, Australia, 2002–2003

Labour force status	Australia
Occupational therapy labour force	3,277
Employed in occupational therapy	*3,107*
Clinical occupational therapy	2,684
Non-clinical occupational therapy	423
Not working in occupational therapy	*170*
On extended leave	117
Looking for work in occupational therapy	53
Not in occupational therapy labour force	345
Overseas	67
Not looking for work in occupational therapy	278
Total respondents	**3,622**
Percentage of occupational therapists employed in occupational therapy	85.8

Note: The table excludes respondents who did not answer the labour force questions.

Source: Occupational Therapy Labour Force Survey, 2002–2003 (AIHW 2006d).

Factors that influence length of practice in rural and remote Australia

In 2001, a national survey of GPs practising in rural and remote communities was conducted by the Monash University School of Rural Health. The survey found that professional considerations—particularly on-call arrangements, professional support and variety of rural practice—were the most important factors determining general practice retention in rural and remote areas. Other important factors were local availability of services and geographic attractiveness. The least important factor was proximity to a city or large regional centre (Humphreys et al. 2002).

A 2004 study reported on the viability of rural general practice found that the key factors contributing to the viability of these practices were:

- Practice characteristics (59%), such as the characteristics of practice staff (14%), having a sufficient number of patients (11%), good practice management and efficiencies (9%) and good working relationships between partners (7%).
- Income (including Medicare rebates, hospital income, bulk-billing and private billing practices and incentive payments). This was nominated as a key factor of practice viability by 31% of respondents. The most frequent items here referred to private billings or realistic fees (11%), with 10% referring to adequate remuneration.
- Personal circumstances, workforce issues and community characteristics, which were each nominated by about 23% of respondents.

In terms of the factors that would put the practice at risk:

- Workforce was clearly the most important factor considered to threaten practice viability; it was nominated by 57% of practitioners. Workforce supply items of doctor retention (21%) and recruitment difficulties (9%) were the most frequently mentioned. Workload issues included unpaid paperwork (8%) and loss of hospital work due to downgrades or closure (5%).
- Many respondents (44%) identified financial issues that threaten practice viability, with both income and expenses or costs mentioned. Inadequate Medicare rebate was cited by

16% of respondents, inadequate remuneration by 11%, and increases in practice costs by 14%.
- Medico-legal issues were raised by one-third of respondents. These issues concerned the cost of indemnity cover (18%) and concerns over the uncertainty of cover and collapse of insurers (13%).
- Fewer respondents nominated administration-political issues, community characteristics, GP/practice characteristics and personal and family circumstances (Jones & Humphries 2004).

A 2007 study reported on retention issues for rural doctors found that doctors who were satisfied with their current medical practice intended to remain in rural practice for 40% longer than those who were not satisfied (11.5 years compared with 8.2 years) (Alexander & Fraser 2007). Those content with their life as a rural doctor intended to remain in rural practice for 51% longer than those who were discontented (11.8 years compared with 7.8 years). Continuing professional development, training opportunities, professional support and networking as well as financial support were the doctor's top priorities. Training in Indigenous health was identified as a key information deficit by most doctors.

Data quality issues

Service Activity Reporting data

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health-care services were around 99% for the period 2005–06. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. Although this data collection provides valuable information, it needs to be recognised that there are limitations that have to be considered when using these data. Particular issues include:

- *The SAR only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.*
- *The SAR questionnaire collects a broad set of indicators for the services and did not aim to provide a comprehensive set of statistics on the activities of the services or their needs.*
- *These data provide a rough guide to service activity in this area, but do not attempt to measure quantity or quality.*
- *These data also do not differentiate between services provided by the service and those facilitated by the service.*

Staff vacancies in Indigenous primary health-care organisations

The Service Activity Reporting (SAR) data collection reports on the number of vacancies in Indigenous primary health-care organisations (138 in 2003–04) funded by the Australian Government for both clinical and management positions at 30 June each year. While the numbers of FTE positions — about 1,400 health practitioner and 800 admin./ management positions — are of reasonable size, the number of FTE vacancies, 118 (8.45%) and 11 (1.38%), respectively, are very small. The small numbers could limit the scope for breaking the data down into finer categories and could over-emphasise variability over time. The SAR collection is a snapshot taken at 30 June and therefore does not include vacancies arising, but filled, during the course of a year.

Rural Workforce Agency National Minimum Data Set

The Rural Workforce Agency National Minimum Data Set is a national data set based on annual surveys conducted by each state and territory Rural Workforce Agency and compiled through the Australian Rural and Remote Workforce Agencies Group (Health Workforce Queensland and New South Wales Rural Doctors Network 2005). The data are collected in accord with an agreed national minimum data set and data dictionary, so should be consistent and provide a valuable and regular source of data. This measure does not directly answer the broader retention and recruitment questions, but will provide a useful interim surrogate measure.

GP data

Care must be taken in using and interpreting the data provided. There are two issues to note which have an effect on the quality of the data. First, the data include only those services claimed through the Medicare system. Consequently, the full-time equivalent for doctors in remote areas — which are more likely to have high proportions of Indigenous population — will be understated because some services are provided in rural hospitals and through the Royal Flying Doctor Service. There is also anecdotal information that services provided in Aboriginal Medical Services are often not claimed through the Medicare system — further understating the full-time equivalent for doctors in areas with high Indigenous populations.

Second, the data at the grouped SLA level can hide variability in data at the individual SLA level. For example, although one group of SLAs may have fewer people per doctor overall than a second group of SLAs, there will be a number of SLAs in the first group with far more people per doctor than several SLAs in the second group.

(continued)

Data quality issues (continued)

A voluntary Indigenous identifier was introduced into the Medicare database from November 2002. As at 1 July 2005, 84,867 people had identified as Aboriginal or Torres Strait Islander or both in the Medicare database. As these data improve, it will be possible to use this identifier to undertake calculations of GP retention in areas by Indigenous status of clients.

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Appendix 1: List of measures and data sources

Measure	Data sources
1.01 Low birthweight infants	National Perinatal Data Collection
1.02 Top reasons for hospitalisation	AIHW National Hospital Morbidity Database
1.03 Hospitalisation for injury and poisoning	AIHW National Hospital Morbidity Database
1.04 Hospitalisation for pneumonia	AIHW National Hospital Morbidity Database
1.05 Circulatory disease	AIHW National Hospital Morbidity Database, BEACH, NATSIHS
1.06 Acute rheumatic fever & rheumatic heart disease	Registers of acute rheumatic fever and rheumatic heart disease in the Top End of the Northern Territory and Central Australia
1.07 High blood pressure	AIHW National Hospital Morbidity Database, BEACH, NATSIHS
1.08 Diabetes	AIHW National Hospital Morbidity Database, BEACH, NATSIHS
1.09 End stage renal disease	Australia and New Zealand Dialysis and Transplant Registry (ANZDATA), AIHW's National Hospital Morbidity Database, AIHW National Mortality Database
1.10 Decayed, missing, filled teeth	AIHW Dental Statistics Research Unit (Child Dental Health Survey; Indigenous child oral health in remote communities Study; and National Survey of Adult Oral health), NATSIHS, WAACHS, AIHW National Hospital Morbidity Database
1.11 HIV/AIDS, hepatitis C and sexually transmissible infections	National Notifiable Diseases Surveillance System (NNDSS), National AIDS Registry and National HIV database (NCHECR)
1.12 Children's hearing loss	NATSIHS, WAACHS, BEACH survey, AIHW National Hospital Morbidity Database. Limited data on child hearing screening from the state and territory health departments
1.13 Disability	NATSISS, Census of Population and Housing, WAACHS
1.14 Community functioning	NATSISS, CHINS
1.15 Life expectancy at birth	ABS population estimates based on the 2001 Census of Population and Housing; AIHW National Mortality Database
1.16 Perceived health status	NATSIHS, NATSISS
1.17 Median age at death	AIHW National Mortality Database
1.18 Social and emotional wellbeing	NATSIHS, NATSISS, AIHW National Hospital Morbidity Database, AIHW National Mortality Database, AIHW Community Mental Health Care Database, AIHW Residential Community Mental Health Care Database, WAACHS, BEACH survey
1.19 Infant mortality rate	AIHW National Mortality Database
1.20 Perinatal mortality	ABS Deaths Registration Database
1.21 Sudden infant death syndrome	AIHW National Mortality Database
1.22 All causes age standardised deaths rates	AIHW National Mortality Database
1.23 Leading causes of mortality	AIHW National Mortality Database
1.24 Maternal mortality	National Perinatal Data Collection
1.25 Avoidable and preventable deaths	AIHW National Mortality Database
2.01 Access to functional housing with Utilities	CHINS, NATSISS
2.02 Overcrowding in housing	NATSIHS, NATSISS, Census of Population and Housing
2.03 Environmental tobacco smoke	NATSIHS

(continued)

Appendix 1 (continued): List of measures and data sources

Measure	Data sources
2.04 Years 3, 5 and 7 literacy and numeracy	National Report on Schooling in Australia (Ministerial Council on Education, Employment, Training and Youth Affairs)
2.05 Years 10 and 12 retention and attainment	ABS National Schools Statistics Collection
2.06 Educational participation and attainment of Aboriginal and Torres Strait Islander adults	NATSIHS, NATSISS, National Centre for Vocational Education Research (NCVER), Department of Education, Science and Training (DEST) Higher Education Statistics Collection, Census of Population and Housing
2.07 Employment status including CDEP participation	NATSIHS, Census of Population and Housing, ABS Labour Force Survey
2.08 Income	NATSIHS, NATSISS, Census of Population and Housing
2.09 Housing tenure type	NATSIHS, NATSISS, Census of Population and Housing
2.10 Index of disadvantage	Census of Population and Housing
2.11 Dependency ratio	ABS population estimates based on Census of Population and Housing
2.12 Single-parent families by age group	Census of Population and Housing, NATSIHS
2.13 Community safety	NATSISS, AIHW National Hospital Morbidity Database, AIHW National Mortality Database, Australian Institute of Criminology National Homicide Monitoring Program
2.14 Contact with the criminal justice system	ABS National Prison Census, National Policy Custody Survey, AIC National Deaths in Custody Program Annual Report, AIHW Juvenile Justice National Minimum Data Set, NATSISS, AIC Drug Use Monitoring in Australia (DUMA)
2.15 Child protection	AIHW National Child Protection Data collections
2.16 Transport	NATSIHS, NATSISS, Census of Population and Housing
2.17 Indigenous people with access to their traditional lands	NATSISS
2.18 Tobacco use	NATSIHS, 2004 National Drug Strategy Household Survey (NDSHS)
2.19 Tobacco smoking during pregnancy	AIHW National Perinatal Data Collection
2.20 Risky and high risk alcohol consumption	NATSIHS, AIHW National Hospital Morbidity Database, AIHW National Mortality Database, BEACH survey
2.21 Drug and other substance use including inhalants	NATSIHS, NATSISS, NDSHS, the AIHW Hospital Morbidity Database, AIC DUMA survey
2.22 Level of physical activity	NATSIHS
2.23 Dietary behaviours	NATSIHS
2.24 Breastfeeding practices	NATSIHS
2.25 Unsafe sexual practices	NNDSS, National Perinatal Data Collection
2.25 Prevalence of overweight and obesity	NATSIHS
3.01 Antenatal care	State/territory Perinatal Collections
3.02 Immunisation (child and adult)	NATSIHS, Australian Childhood Immunisation Register (ACIR)
3.03 Early detection and early treatment (including cancer screening)	Medicare database, AIHW BreastScreen Australia database, National Bowel Cancer Screening Register, NATSIHS, AIHW National Mortality Database, Service Activity Reporting (SAR) database

(continued)

Appendix 1 (continued): List of measures and data sources

Measure	Data sources
3.04 Chronic disease management	SAR database, Healthy For Life (HFL) Data Collection
3.05 Differential access to key hospital procedures	AIHW National Hospital Morbidity Database
3.06 Ambulatory care sensitive hospital admissions	AIHW National Hospital Morbidity Database
3.07 Health promotion	CHINS, SAR database, Drug and Alcohol Service Reporting (DASR) database, BEACH survey, AIHW health expenditure data, Annual Survey of Divisions of General Practice
3.08 Discharge against medical advice	AIHW National Hospital Morbidity Database
3.09 Access to mental health services	NATSIHS, BEACH survey, AIHW National Hospital Morbidity Database, AIHW National Community Mental Health Care Database, AIHW, National Residential Mental Health Care Database, SAR database, AIHW Medical Labour Force Survey, AIHW National Public Hospital Establishment Database
3.10 Aboriginal and Torres Strait Islander Australians in the health workforce	Census of Population and Housing
3.11 Competent governance	Office of the Registrar of Indigenous Corporations (ORIC), NATSIHS, HFL data collection, SAR database and DASR database
3.12 Access to services by types of service compared to need	NATSIHS, NATSISS, CHINS, Census of Population and Housing, AIHW National Hospital Morbidity Database, DoHA general practitioner and Medicare data, AIHW Health Labour Force Surveys, SAR database, DASR database, AIHW health expenditure data
3.13 Access to prescription medicines	Indigenous Pharmaceutical Benefits Scheme (PBS) expenditure estimates based on the BEACH survey. AIHW Pharmacists Labour Force Survey
3.14 Access to after hours primary health care	BEACH survey, SAR database, Medicare database, AIHW Non-admitted Patient Emergency Department Care National Minimum Data Set, AIHW health expenditure data
3.15 Regular GP or health service	NATSIHS
3.16 Care planning for clients with chronic diseases	NATSIHS, HFL data collection, SAR database
3.17 Accreditation	AIHW National Public Hospitals Establishment Database, general practice data from the Annual Survey of Divisions of General Practice, Australian General Practice Accreditation Limited (AGPAL), General Practice Accreditation Plus (GPA+)
3.18 Aboriginal and Torres Strait Islander people in Tertiary Education for health related disciplines	NCVER, Higher Education Statistics Collection
3.19 Expenditure on Aboriginal and Torres Strait Islander health compared to need	AIHW Expenditure Database
3.20 Recruitment and retention of clinical and management staff (including GPs)	SAR data collection, Rural Workforce Agency National Minimum Dataset, general practitioner data held by the Department of Health and Ageing (DoHA), AIHW Labour Force Surveys

List of abbreviations

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Services
ACIR:	Australian Childhood Immunisation Register
ACT	Australian Capital Territory
AGPAL	Australian General Practice Accreditation Limited
AGPSCC	Australian General Practice Statistics and Classification Centre
AHS	Aboriginal Health Service
AIC	Australian Institute of Criminology
AIHW	Australian Institute of Health and Welfare
ANZDATA	Australian and New Zealand Dialysis and Transplant Registry
AQF	Australian Qualifications Framework
ARF	acute rheumatic fever
ASGC	Australian Standard Geographical Classification
ATSIC	Aboriginal and Torres Strait Islander Commission
BEACH	Bettering the Evaluation and Care of Health (survey)
BMI	body mass index
BPG	benzathine penicillin G
CABG	coronary artery bypass grafts
CDEP	Community Development Employment Projects scheme
CHINS	Community Housing and Infrastructure Needs Survey
CI	confidence interval
COPD	chronic obstructive pulmonary disease
DEST	(Australian Government) Department of Education, Science and Training
dmft	decayed, missing and filled deciduous infant teeth
DMFT	decayed, missing and filled permanent adult teeth
DoHA	(Australian Government) Department of Health and Ageing
DUMA	Drug Use Monitoring in Australia
ESRD	end stage renal disease
FaCSIA	(Australian Government) Department of Families, Community Services and Indigenous Affairs
FTE	full-time equivalent
GP	general practitioner
GPA+	General Practice Accreditation Plus
GSS	General Social Survey
HIB	haemophilus influenza type B
ICD-10	International classification of diseases, 10th revision
ICD-10-AM	International statistical classification of disease and related health problems, 10th revision, Australian modification, 4th edition
ICPC-2	International Classification of Primary Care, 2nd edition
ICPC-2 PLUS	International Classification of Primary Care, extended 2nd edition
MBS	Medicare Benefits Schedule

MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
METeOR	Metadata Online Registry
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
NCHECR	National Centre in HIV Epidemiology and Clinical Research
NCMHCD	National Community Mental Health Care Database
NCVER	National Centre for Vocational Education Research
NDSHS	National Drug Strategy Household survey
n.e.c.	not elsewhere classified
n.f.d.	not further defined
NHMP	National Homicide Monitoring Program
NHMRC	National Health and Medical Research Council
NMDS	National Minimum Data Set
NNDSS	National Notifiable Diseases Surveillance System
NPSU	National Perinatal Statistics Unit
NSSC	National Schools Statistics Collection
NSW	New South Wales
NT	Northern Territory
OATSIH	Office of Aboriginal and Torres Strait Islander Health
OECD	Organisation for Economic Cooperation and Development
PBS	Pharmaceutical Benefits Scheme
PCI	percutaneous coronary intervention
PIRS	Patient Information and Recall System
PYLL	potential years of life lost
Qld	Queensland
RHD	rheumatic heart disease
RPBS	Repatriation Pharmaceutical Benefits Scheme
SA	South Australia
SAAP	Supported Accommodation Assistance Program
SAR	Service Activity Reporting
SDQ	Strengths and Difficulties Questionnaire
SEIFA	Socio-Economic Indexes For Areas
SF-36	Medical Outcome Short Form (mental health survey)
SIDS	sudden infant death syndrome
SLA	Statistical Local Area
SOMIH	State Owned and Managed Indigenous Housing
TAFE	Technical and Further Education colleges
Tas	Tasmania
VET	vocational education and training
Vic	Victoria
WA	Western Australia
WAACHS	Western Australian Aboriginal Child Health Survey
WHO	World Health Organisation

List of symbols used in tables

–	Nil or rounded to zero (including null cells)
n.p.	Not available for publication but included in totals where applicable, unless otherwise indicated
n.a.	Not available
. .	Not applicable