Aboriginal and Torres Strait Islander Health Performance Framework 2006 report

Detailed analyses

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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 2006 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 2003, in the three jurisdictions for which there is 12 years of adequate coverage of Indigenous deaths, all cause mortality rates have declined by 16% for Indigenous males and 6% for Indigenous females.
- **Deaths from circulatory disease.** Over the period 1997–2003, there were significant declines in mortality rates from circulatory diseases among Indigenous Australians resulting in a significant closing of the gap between Indigenous and non-Indigenous mortality from circulatory disease (from a rate ratio of 1.9 to 1.6)
- **Infant mortality** has declined by 44% and perinatal mortality by about 55% between 1991 and 2003.
- **Hospitalisations from pneumonia** for Indigenous children aged 0–4 years declined at an average annual rate of around 2 per 1,000 between 1998–99 to 2003–04 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 120% between 1991 and 2004
- **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 2004 and the incidence of HIV infection has increased slightly in recent years for Aboriginal and Torres Strait Islander peoples.

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:

- **School retention.** Indigenous school retention rates to Year 10 and Year 12 have steadily increased over the last 5 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 2004–05 (from 18% to 21%)
- **Unemployment** rates are more than twice as high among Indigenous Australians as amongst other Australians, unemployment has however declined somewhat between 1994 and 2002 (from 30% to 20%)
- **Home ownership.** The proportion of Aboriginal and Torres Strait Islander people who own their own home has increased from 22% in 1994 to 27% in 2002.

Areas of concern

- **Overcrowding.** In 2004–05, Indigenous adults were five times more likely to live in overcrowded homes than other adults
- **Income.** In 2004–05, approximately 42% of Aboriginal and Torres Strait Islanders were in the bottom 20% of incomes and there has been little increase in the mean equivalised household income of Indigenous Australians between 1994 and 2002
- **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 2005, the proportion of Aboriginal and Torres Strait Islander adults who were in prison increased significantly from 1,265 per 100,000 to 1,561 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 between 3 and 4 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.

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.

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 (between 84% and 98% of Indigenous mothers attended at least one antenatal care session in 2003 in the five 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, while Aboriginal and Torres Strait Islander peoples reported accessing health care at similar rates to other Australians (around 46%), there

were differences in the types of health care accessed. For example, Indigenous Australians were twice as likely 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 be explained by diagnosis, age, sex or place of residence and this situation has not improved in recent years. Between July 2002 and June 2004, excluding care involving dialysis, 53% of hospital separations for Aboriginal and Torres Strait Islander peoples in public hospitals had a procedure recorded compared to 70% 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 2002–03 to 2003–04, Aboriginal and Torres Strait Islander peoples were discharged from hospital against medical advice at 19 times the rate of other Australians
- **Avoidable hospitalisations through health care.** Between 2000–01 to 2003–04, hospitalisation rates for ambulatory care sensitive conditions have increased for Indigenous Australians and the relative gap between Indigenous and non-Indigenous Australians for these conditions has widened (from a rate ratio of 4.3 to 5.9)
- **Mental health services.** In 2003–04, 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 2001, Aboriginal and Torres Strait Islander peoples accounted for only 0.9% of the total health workforce and in 2004, only 1.3% of all undergraduate students enrolled in tertiary health-related courses, and 3.9% of all people in the vocational, education and training sector, were Aboriginal or Torres Strait Islander
- **Health expenditure.** In 2001–02, on a per person basis, average health expenditures for Aboriginal and Torres Strait Islander peoples was 18% 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, 2006 report.* The report was the first 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 (eg circulatory disease, diabetes), human function (eg 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 (eg income and education), environmental factors (eg overcrowding), community capacity (eg child protection), health behaviours (eg risky alcohol consumption and dietary behaviours) and person-related factors (eg 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 64 measures which have been developed and for which data is available. Measures that are shaded have not yet been developed but are planned for inclusion in the next report against the HPF (2008).

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

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
Community functioning

Life Expectancy & Wellbeing
1.14 Life expectancy at birth
1.15 Perceived health status
1.16 Median age at death
1.17 Social and emotional wellbeing

Deaths
1.18 Infant mortality rate
1.19 Perinatal mortality
1.20 Sudden infant death syndrome
1.21 All causes age standardised deaths rates
1.22 Leading causes of mortality
1.23 Maternal mortality
1.24 Avoidable and preventable deaths

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

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
Index of disparity

Community Capacity
Demography
2.10 Dependency ratio
2.11 Single-parent families by age group
Safety and Crime
2.12 Community safety
2.13 Contact with the criminal justice system
2.14 Child protection
Other
2.15 Transport
2.16 Indigenous people with access to their traditional lands

Health Behaviours
Tobacco, alcohol and other drug use
2.17 Tobacco use
2.18 Tobacco smoking during pregnancy
2.19 Risky and high risk alcohol consumption
2.20 Drug and other substance use including inhalants
Physical activity
2.21 Level of physical activity
Nutrition
2.22 Dietary behaviours
2.23 Breastfeeding practices
Other health behaviours
Self reported unsafe sexual practices

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
Health promotion

Responsive
3.07 Discharge against medical advice
3.08 Access to mental health services
3.09 Aboriginal and Torres Strait Islander Australians in the health workforce
Competent governance

Accessible
3.10 Access to services by types of service compared to need
3.11 Access to prescription medicines
Access to after hours primary health care

Continuous
3.12 Regular GP or health service
Care planning for client with preventable chronic diseases
Use of Enhanced Primary Care Items on MBS

Capable
3.13 Accreditation
3.14 Aboriginal and Torres Strait Islander people in Tertiary Education for health related disciplines

Sustainable
3.15 Expenditure on Aboriginal and Torres Strait Islander health compared to need
3.16 Recruitment and retention of clinical and management staff (including GPs)

Notes

1. Shading indicates the measures that have not been developed yet.
2. The **Safe** domain is measured within the National Health Performance Committee framework.

Demographic information

The Aboriginal and Torres Strait Islander population of Australia is projected to have grown to about 510,000 by mid-2007. Aboriginal and Torres Strait Islander peoples represent 2.4% 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 39% 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 2.8% 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 (27%), Western Australia (14%) and the Northern Territory (12%). Indigenous people comprise about 30% 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 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 hospital separations 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

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 is 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.

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

Data on mothers for whom Indigenous status was 'not stated' have been excluded from analysis. In 2003, there were 77 births with a 'not stated' Indigenous status in all states and territories excluding Tasmania (0.03%).

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

Analyses

Births

Between 2001 and 2003 there were 722,450 births recorded in the National Perinatal Minimum Data Set (excluding Tasmania) of which 26,678 (3.7%) 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 periods 1998–2000 and 2001–2003.

- 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 to 6%).

- Over the period 2001–2003, there were 3,403 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 to 6% of babies born to non-Indigenous mothers. When multiple births are excluded, approximately 11.8% of babies born to Indigenous mothers were of low birthweight compared to 4.5% 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 2001–2003 (11% and 12% respectively). The Australian Capital Territory had the highest proportion of low birthweight babies (19%), however these data should be interpreted with caution due to the small number of Indigenous babies born in the Australian Capital Territory each year and the likelihood that some women from surrounding 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 and 2001–2003[a][b][c][d][e]

	1998–2000		2001–2003	
	No.	%	No.	%
NSW				
Indigenous	681	11.0	784	12.2
Non-Indigenous	14,429	5.7	14,451	5.8
Vic				
Indigenous	171	13.4	152	12.7
Non-Indigenous	11,542	6.2	11,814	6.3
Qld				
Indigenous	907	10.8	956	11.5
Non-Indigenous	8,319	6.1	8,671	6.2
WA				
Indigenous	606	13.3	675	14.5
Non-Indigenous	4,160	5.8	4,042	5.8
SA				
Indigenous	203	15.7	229	17.6
Non-Indigenous	3,349	6.3	3,193	6.2
ACT[f]				
Indigenous	29	16.7	39	19.1
Non-Indigenous	950	6.8	901	6.5
NT				
Indigenous	490	12.7	568	13.3
Non-Indigenous	490	7.2	402	6.0
Total[g]				
Indigenous	**3,087**	**12.0**	**3,403**	**12.9**
Non-Indigenous	**43,239**	**6.0**	**43,474**	**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 three-year groupings due to 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 NSW.

(f) Because of the small numbers in the ACT, fluctuations over time need to be interpreted with caution.

(g) Excludes Tasmania as the 'not stated' category for Indigenous status was unable to be distinguished form the 'non-Indigenous' category.

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

Time series analysis

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 1997–2003 are presented in Table 1.01.2 and Figure 1.01.1.

- Over the period 1997–2003, there was a significant increase in the proportion of low birthweight babies born to Indigenous and non-Indigenous mothers. The fitted trend implies an average yearly increase in low birthweight babies born to Indigenous mothers of around 0.25 per 100 live births and around 0.03 per 100 live births for low birthweight babies born to non-Indigenous mothers.
- Over the same period 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 0.03 and an average yearly increase in the rate difference of around 0.22 per 100 live births.

Table 1.01.2: Rate (proportion), rate ratio and rate difference between low birthweight babies of Indigenous and non-Indigenous mothers, 1997–2003

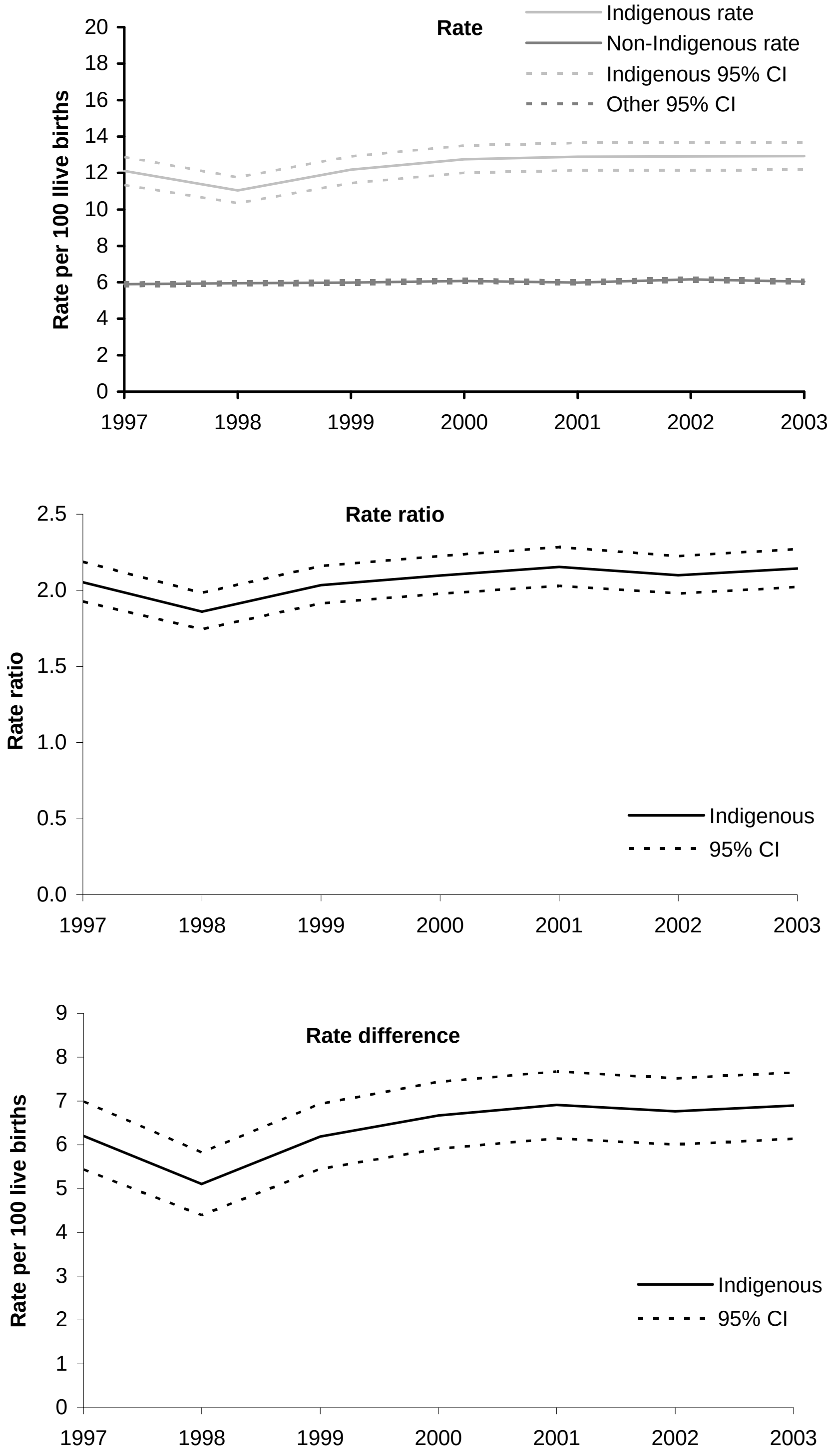
	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Rate per 100 live births (%)								
Indigenous	12.1	11.0	12.2	12.7	12.9	12.9	12.9	0.25*
Non-Indigenous	5.9	5.9	6.0	6.1	6.0	6.2	6.0	0.03*
Rate ratio	2.1	1.9	2.0	2.1	2.2	2.1	2.1	0.03*
Rate difference	6.2	5.1	6.2	6.7	6.9	6.8	6.9	0.22*

* Represents results with statistically significant increases or decreases at the p<.05 level over the period 1997–2003.

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

Note: Excludes Tasmania as the ‘not stated’ category for Indigenous status was unable to be distinguished form the ‘non-Indigenous’ category.

Source: AIHW analysis of AIHW NPSU National Perinatal Data Collection.



Note: Excludes Tasmania as the 'not stated' category for Indigenous status was unable to be distinguished form the 'non-Indigenous' category.

Source: AIHW analysis of AIHW NPSU National Perinatal Data Collection.

Figure 1.01.1: Rates, rate ratios and rate differences between low birthweight babies of Indigenous and non-Indigenous mothers, 1997–2003

Mean birthweight

- In 2003, the average birthweight of live-born babies of Indigenous mothers was 3,160 grams. This was 220 grams lighter than the average of 3,380 grams for live-born babies of non-Indigenous mothers in 2003.

Time series analysis

- Over the period 1997–2003, while there was a significant decline in the mean birthweight of babies of Indigenous mothers (the fitted trend implies an average yearly decline of around 2.7 grams), this decline is not necessarily clinically significant. The change could be accounted for by measurement error, for example, 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. There was no significant change in the mean birthweight of babies of non-Indigenous mothers over the same period (Table 1.01.3). It should also be noted that there is a significant difference between the mean birthweight of male and female babies born of low birthweight (male babies were born an average of 125 grams more than female babies in 2003).
- There was a significant decline in the ratio and difference between the mean birthweight of babies of Indigenous and non-Indigenous mothers over the period 1997–2003.

Table 1.01.3: Mean birthweight, ratio and difference between mean birthweight of live-born babies of Indigenous and non-Indigenous mothers, 1997–2003

	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Mean birthweight (grams)								
Indigenous	3,170	3,186	3,170	3,175	3,166	3,165	3,160	–2.7
Non-Indigenous	3,375	3,382	3,380	3,384	3,382	3,378	3,380	0.3
Rate ratio	0.9	0.9	0.9	0.9	0.9	0.9	0.9	–0.0*
Rate difference (grams)	–205	–196	–210	–209	–216	–213	–220	–1.3*

* Represents results with statistically significant increases or decreases at the p<.05 level over the period 1997–2003.

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

Note: Excludes Tasmania as the category 'not stated' Indigenous status was unable to be distinguished from the category 'non-Indigenous.

Source: AIHW analysis of AIHW NPSU National Perinatal Data Collection.

Preterm births

Preterm birth before 37 weeks gestation is associated with neonatal problems that cause significant morbidity and mortality in newborn babies.

- Over the period 2001–2003, approximately 13% of live-born babies of Indigenous mothers were preterm compared to 7% of live-born babies born to non-Indigenous mothers (NPSU unpublished data).
- Of live-born low birthweight babies born to Indigenous mothers in 2001–03, approximately 67% were preterm. This compared to 69% of babies born to non-Indigenous mothers (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, 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 Australian mothers (13% compared to 6%—Laws & Sullivan 2005). The latest available data from the United States, Canada and New Zealand are outlined below.

- For the period 2001–2003, 7.3% of babies born to American Indian or Alaskan native mothers on reserves were of low birthweight. This compared to 7.8% of babies born to all mothers in the United States (National Center for Health Statistics, 2005).
- In 2000, 4.7% of Canadian First Nation babies were of low birthweight. This compared with the 2001 Canadian rate of 5.5% (Health Canada 2005).
- For the period 2001–2002, 7.9% of babies born to Maori mothers were of low birthweight. This compared to 6.3% of babies born to all mothers in New Zealand (Statistics New Zealand 2005).

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 preterm birth, fetal growth restriction, or a combination of the two, or other factors such as socioeconomic disadvantage, 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 four times the rate of non-Indigenous mothers (see 2.25 for more information on smoking during pregnancy).
- Indigenous females are more likely to have babies at younger ages than non-Indigenous mothers. In 2003, more than one in five (22.7%) Aboriginal and Torres Strait Islander mothers were teenagers, compared with 3.9% of non-Indigenous mothers (Laws & Sullivan 2005). 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 preterm birth (gestational age of less than 37 weeks) as non-Indigenous mothers. In 2003, 14% of births to Indigenous mothers were preterm compared with 8% of births to non-Indigenous mothers (Laws & Sullivan 2005).
- Indigenous mothers are more likely to have had a higher number of previous pregnancies. In 2003, 28% of Aboriginal and Torres Strait Islander mothers had given birth three or more times previously. This compared to 9% of all mothers (Laws & Sullivan 2005).

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 in each state/territory. 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 & Sullivan 2004b).

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 impacts on 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 statistic does not necessarily indicate the Indigenous status of the baby.

Studies linking perinatal data with birth registration data and hospital admissions show that Indigenous data are under-reported (Human Resources Development Canada &Health Canada, 2003). 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. Data on Indigenous status are not reported for Tasmania as the not stated category for Indigenous status is included with the non-Indigenous category. The not stated category for Indigenous status is high for Tasmania (around 75%) and low for the other jurisdictions, not more than 0.5% (Laws & Sullivan 2004a).

The not stated category for birthweight was found to be small nationally in the evaluation of the Perinatal National Minimum Data Set. Therefore, the exclusion of not stated for birthweight will not have a significant impact on these data.

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 due to 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 Most common reasons for hospitalisation

Hospital admissions for the leading ICD-10-AM 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'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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two-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 change in a type of care (for example, from acute to rehabilitation).

Analyses

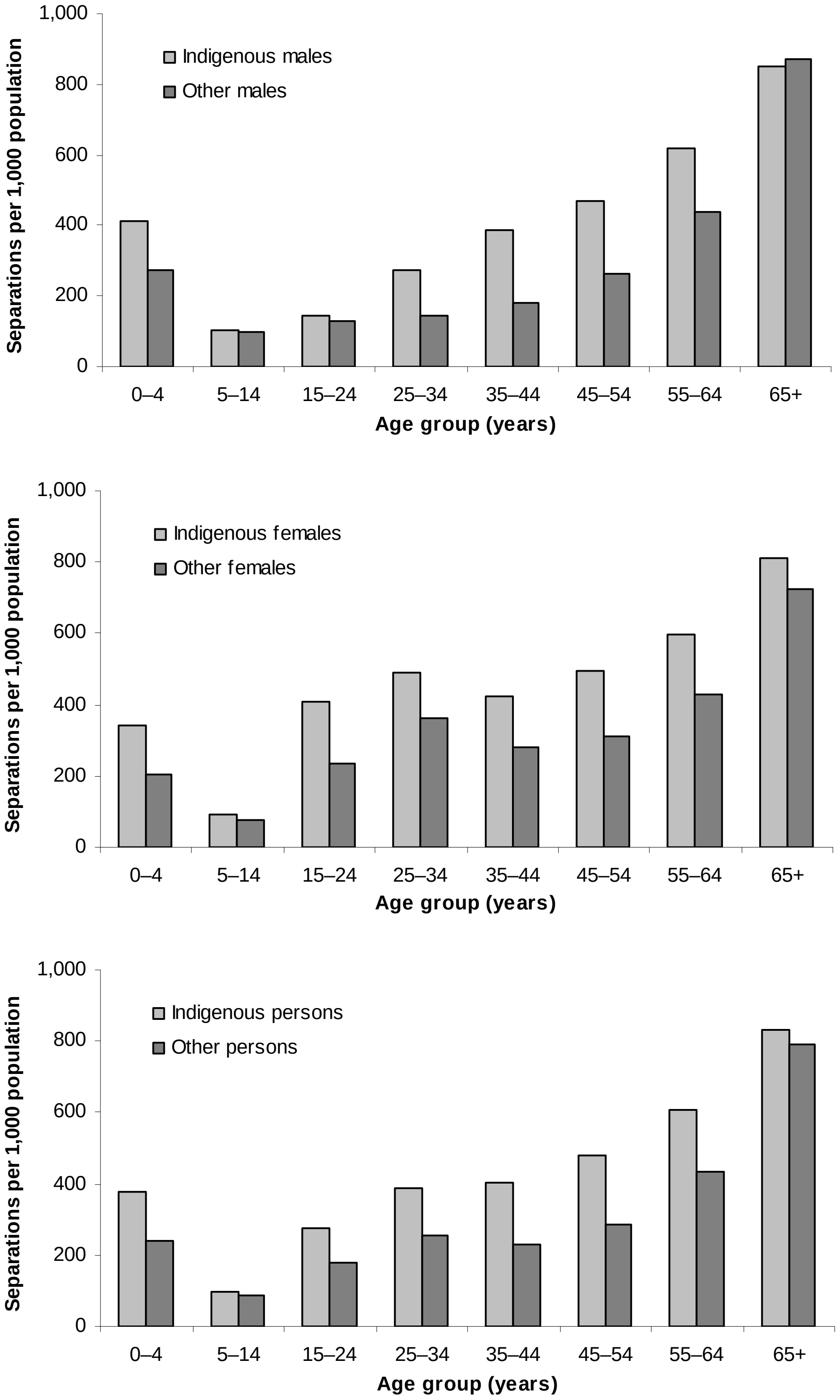
Age-standardised rates and ratios have been used for this indicator as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians,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

Hospitalisations

- In the two-year period July 2002 to June 2004 there were a total of 5,193,610 hospitalisations in Queensland, Western Australia, South Australia and the Northern Territory. Of these, 312,292 or 6% were hospitalisations of Indigenous Australians. For 6.7% of hospitalisations, Indigenous status was not stated.
- Excluding hospitalisations for dialysis, there were 4,604,585 hospitalisations in Queensland, Western Australia, South Australia and the Northern Territory combined, 183,535 (4.0%) of which were hospitalisations of Indigenous Australians (Table 1.02.1).

Hospitalisations by age and sex

- For the two-year period July 2002 to June 2004, in 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 0–4, 15–24 and 45–54 year age groups for females. Indigenous males and females were hospitalised at up to twice the rate of other males and females in these age groups.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.02.1: Age-specific hospitalisation rates (excluding dialysis), by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004

Hospitalisations by state/territory

Table 1.02.1 presents hospitalisations excluding dialysis for the two-year period July 2002 to June 2004 for Queensland, Western Australia, South Australia and the Northern Territory.

- Indigenous Australians in Queensland and South Australia were hospitalised at twice the rate of other Australians while in Western Australia and the Northern Territory, Indigenous Australians were hospitalised at three times the rate of other Australians in these jurisdictions.
- When care involving dialysis is excluded from analysis, Indigenous Australians in Queensland were hospitalised at 1.3 times the rate of other Australians and in Western Australia, South Australia and the Northern Territory, Indigenous Australians were hospitalised at up to twice the rate of other Australians. In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians were hospitalised at 1.4 times the rate of other Australians.

Table 1.02.1: Hospitalisations (excluding dialysis), by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004[a][b][c][d]

	Indigenous				Other[e]				
	Number	Rate per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Number	Rate per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Ratio[i]
Qld									
Males	30,704	376.7	370.6	382.8	1,073,612	293.5	293.0	294.1	1.3*
Females	41,583	417.1	411.9	422.3	1,281,869	331.2	330.6	331.8	1.3*
Persons	72,287	396.9	393.0	400.8	2,355,481	311.0	310.6	311.4	1.3*
WA									
Males	22,556	445.7	438.1	453.4	512,571	274.0	273.2	274.8	1.6*
Females	30,290	538.9	531.5	546.3	621,964	310.5	309.7	311.3	1.7*
Persons	52,846	493.5	488.2	498.8	1,134,535	290.7	290.2	291.2	1.7*
SA									
Males	7,625	419.2	406.3	432.2	464,420	299.1	298.2	300.0	1.4*
Females	10,699	504.0	492.1	515.9	564,452	340.7	339.7	341.6	1.5*
Persons	18,324	462.2	453.4	470.9	1,028,873	317.7	317.0	318.3	1.5*
NT									
Males	17,241	371.3	363.8	378.8	39,887	187.0	184.1	189.9	2.0*
Females	22,834	436.4	429.5	443.3	45,782	197.9	195.0	200.9	2.2*
Persons	40,078	403.3	398.3	408.4	85,696	192.9	190.8	195.0	2.1*
Qld, WA, SA and NT[d]									
Males	**78,126**	**395.3**	**391.5**	**399.2**	**2,090,490**	**287.7**	**287.3**	**288.1**	**1.4***
Females	**105,406**	**457.2**	**453.8**	**460.7**	**2,514,067**	**325.4**	**325.0**	**325.4**	**1.4***
Persons	**183,535**	**426.6**	**424.1**	**429.2**	**4,604,585**	**304.9**	**304.6**	**305.2**	**1.4***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

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

(b) Categories are based on the ICD-10-AM (National Centre for Classification in Health 2004).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 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 AIHW 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 two-year period July 2002 to

June 2004 in 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 (7%), 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 four jurisdictions, responsible for 12% of hospitalisations.
- Overall, in Queensland, Western Australia, South Australia and the Northern Territory, Indigenous Australians were hospitalised at almost three times the rate of other Australians. Excluding dialysis, Indigenous Australians were hospitalised at 1.4 times the rate of other Australians.
- The greatest differences in rates between Indigenous and other Australians were for care involving dialysis and endocrine, nutritional and metabolic diseases, caused mainly by diabetes. Indigenous Australians were hospitalised at 15 and four times the rates of other Australians for these conditions respectively.

Table 1.02.2: Hospitalisations, by principal diagnosis and Indigenous status, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Number		Per cent		Indigenous			Other[(e)]			
Principal diagnosis	Indigenous	Other[(e)]	Indigenous	Other[(e)]	Rate per 1,000[(f)]	95% UCL[(g)]	95% UCL[(h)]	Rate per 1,000[(f)]	95% UCL[(g)]	95% UCL[(h)]	Ratio[(i)]
Injury & poisoning & certain other consequences of external causes	25,255	314,996	8.1	6.5	49.1	48.4	49.9	21.9	21.8	22.0	2.2*
Pregnancy, childbirth and the puerperium[(j)]	23,782	317,281	7.6	6.5	34.9	34.5	35.4	22.6	22.6	22.7	1.5*
Diseases of the respiratory system	22,549	232,850	7.2	4.8	52.0	51.1	53.0	16.3	16.3	16.4	3.2*
Diseases of the digestive system	14,954	588,702	4.8	12.1	37.0	36.3	37.8	40.4	40.3	40.5	0.9*
Symptoms, signs and abnormal clinical and laboratory findings	11,459	191,037	3.7	3.9	30.6	29.9	31.3	18.9	18.8	19.0	1.6*
Mental and behavioural disorders	10,881	274,970	3.5	5.6	22.0	21.5	22.4	13.2	13.1	13.2	1.7*
Diseases of the circulatory system	9,815	310,286	3.1	6.4	37.6	36.7	38.4	21.2	21.1	21.2	1.8*
Diseases of the genitourinary system	8,014	258,229	2.6	5.3	21.2	20.6	21.8	17.7	17.7	17.8	1.2*
Diseases of the skin & subcutaneous tissue	7,970	91,441	2.6	1.9	16.8	16.3	17.3	6.3	6.3	6.3	2.7*
Certain infectious and parasitic diseases	7,700	61,520	2.5	1.3	12.4	12.1	12.8	4.4	4.3	4.4	2.9*

(continued)

Table 1.02.2 (continued): Hospitalisations, by principal diagnosis and Indigenous status, Qld, WA, SA and NT, July 2002–June 2004(a)(b)(c)(d)

	Number		Per cent		Indigenous			Other(e)			
Principal diagnosis	**Indigenous**	**Other(e)**	**Indigenous**	**Other(e)**	**Rate per 1,000(f)**	**95% UCL(g)**	**95% UCL(h)**	**Rate per 1,000(f)**	**95% UCL(g)**	**95% UCL(h)**	**Ratio(i)**
Endocrine, nutritional and metabolic diseases	6,325	78,133	2.0	1.6	21.4	20.8	22.1	5.4	5.3	5.4	4.0*
Other(k)	34,831	1,701,605	11.2	34.9	91.6	90.3	92.8	116.7	116.5	116.9	0.8*
Subtotal	*183,535*	*4,421,050*	*58.8*	*90.6*	*426.6*	*424.1*	*429.2*	*304.9*	*304.6*	*305.2*	*1.4**
Care involving dialysis	128,684	460,181	41.2	9.4	455.4	452.6	458.1	31.4	31.4	31.5	14.5*
Total(l)	**312,292**	**4,881,318**	**100.0**	**100.0**	**882.2**	**878.5**	**886.0**	**336.4**	**336.1**	**336.7**	**2.6***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 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.

(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, and 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 AIHW National Hospital Morbidity Database.

Hospitalisations by associated diagnosis

Table 1.02.3 presents hospitalisations for selected principal diagnoses by associated diagnoses, for Aboriginal and Torres Strait Islander people in Queensland, Western Australia, South Australia and the Northern Territory combined.

- For the two-year period July 2002 to June 2004, the majority of hospitalisations with a principal diagnosis of care involving dialysis were reported with an associated diagnosis of diseases of the genitourinary system (77%) followed by endocrine, metabolic and nutritional disorders (10%).
- Approximately 22% of hospitalisations with a principal diagnosis of injury and poisoning were reported with an associated diagnosis of mental and behavioural disorders and to a lesser extent with endocrine, metabolic and nutritional disorders (10%).
- Hospitalisations with a principal diagnosis of circulatory diseases were most commonly reported with an associated diagnosis of endocrine, metabolic and nutritional diseases (47%).
- Hospitalisations with a principal diagnosis of infectious and parasitic diseases, diseases of the digestive system, respiratory diseases, and skin diseases were all commonly reported with an associated diagnosis of endocrine, metabolic and nutritional disorders (42%, 20%, 20% and 19% respectively).
- Hospitalisations with a principal diagnosis of endocrine, nutritional and metabolic diseases were commonly reported with an associated diagnosis of diseases of the circulatory system (37%).

Table 1.02.3: Hospitalisations of Indigenous persons: principal diagnosis by associated causes of hospitalisation, Qld, WA, SA, and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Principal diagnosis														
Associated cause of hospitalisation	**Dialysis (Z49)**	**Injury & poisoning (S00-Y98)**	**Pregnancy (O00-O99)**	**Respiratory (J00-J99)**	**Digestive (K00-K93)**	**Mental disorders (F00-F99)**	**Abnormal findings (R00-R99)**	**Circulatory (I00-I99)**	**Genito -urinary (N00-N99)**	**Skin (L00-L99)**	**Infectious (A00-B99)**	**Endocrine (E00-E90)**	**Other[(e)]**	***Subtotal (excluding dialysis)***	**Total[(f)]**
	Percent														
Genitourinary diseases (N00–N99)	76.5	4.6	4.9	6.4	6.7	2.5	8.0	15.0	24.1	5.4	15.0	29.6	6.4	*8.2*	36.3
Endocrine, nutritional & metabolic (E00–E90)	9.8	10.3	2.6	19.8	19.9	9.8	23.2	47.4	22.2	18.9	41.7	46.5	12.7	*17.9*	14.6
Mental and behavioural disorders (F00–F99)	0.0	21.7	3.7	11.2	19.5	49.0	16.5	12.4	6.5	7.9	6.9	11.4	8.6	*14.0*	8.2
Diseases of the circulatory system (I00–I99)	1.9	5.8	1.9	13.0	10.8	3.8	17.6	58.1	12.1	9.0	8.5	36.5	8.6	*12.1*	7.9
Infectious and parasitic diseases (A00–B99)	0.0	8.8	7.3	14.1	8.8	3.5	6.4	6.5	22.3	37.1	21.9	17.9	7.2	*11.1*	6.5
Injury & poisoning (S00–Y98)	0.0	41.6	0.9	1.9	3.0	6.7	3.0	3.6	3.3	15.9	3.3	6.7	6.2	*9.5*	5.6
Symptoms, signs and abnormal findings (R00–R99)	0.1	5.7	4.9	10.2	8.0	12.9	15.1	11.1	8.2	5.4	16.6	13.8	7.9	*8.9*	5.2

(continued)

Table 1.02.3 (continued): Hospitalisations of Indigenous persons: principal diagnosis by associated causes of hospitalisation, Qld, WA, SA, and NT, July 2002–June 2004(a)(b)(c)(d)

	Principal diagnosis														
Associated cause of hospitalisation	**Dialysis (Z49)**	**Injury & poisoning (S00-Y98)**	**Pregnancy (O00-O99)**	**Respiratory (J00-J99)**	**Digestive (K00-K93)**	**Mental disorders (F00-F99)**	**Abnormal findings (R00-R99)**	**Circulatory (I00-I99)**	**Genito-urinary (N00-N99)**	**Skin (L00-L99)**	**Infectious (A00-B99)**	**Endocrine (E00-E90)**	**Other(e)**	***Subtotal (excluding dialysis)***	**Total(f)**
	Percent														
Respiratory diseases (J00–J99)	0.0	3.2	2.4	20.5	5.3	3.7	6.3	13.7	5.7	3.2	14.9	9.9	5.3	*7.4*	4.4
Pregnancy, childbirth (O00-O99)	0.0	0.2	54.4	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.4	*7.2*	4.2
Digestive diseases (K00-K93)	0.0	3.0	2.1	4.2	25.8	4.0	7.7	6.7	5.5	2.7	6.2	8.3	4.7	*6.2*	3.6
Skin diseases (L00-L99)	0.0	3.9	0.5	2.8	1.9	1.3	2.0	2.3	2.1	16.3	9.6	16.0	2.8	*3.7*	2.2
Care involving dialysis (Z49)	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.5	0.0	*0.1*	0.1
Other(e)	1.4	34.0	71.3	40.3	38.8	55.5	44.5	62.7	43.6	35.3	42.6	63.5	55.4	*49.4*	29.6
Total number(g)	**128,684**	**25,255**	**23,782**	**22,549**	**14,954**	**10,881**	**11,459**	**9,815**	**8,014**	**7,970**	**7,700**	**6,325**	**34,831**	**183,535**	**312,292**

(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 (National Centre for Classification in Health 2004).

(c) Financial year reporting.

(d) Indigenous data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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, and 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 associated diagnosis can be reported for each hospitalisation.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Time series analysis

All hospitalisations

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians over the period 1998–99 to 2003–04 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, females and persons during the five-year period 1998–99 to 2003–04. The fitted trend implies an average yearly increase in the rate of around 45 per 1,000 for Indigenous persons.
- There were also significant increases in hospitalisation rates among other Australian males, females and persons during the same period, with an average yearly increase in the rate of 5 per 1,000 population.
- 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 and 40 per 1,000 in the hospitalisation rate differences between Indigenous and other Australians in the five-year period 1998–99 to 2003–04. This indicates a relative and absolute increase in the gap between hospitalisation rates for Indigenous and other Australians.

It should be noted 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 impact on 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 better access to hospitals 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 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	648.9	661.8	689.5	734.7	764.2	840.1	37.4*
Females	797.7	882.9	881.7	961.2	1,013.5	1.063.9	51.5*
Persons	726.0	778.1	790.3	854.9	896.5	957.3	45.0*
Other Australian[(b)] rate per 1,000							
Males	318.3	325.1	333.9	338.9	340.3	343.4	5.0*
Females	339.7	347.2	357.1	364.6	364.9	367.4	5.7*
Persons	326.7	333.9	343.4	349.8	350.5	353.2	5.4*
Rate ratio[(c)]							
Males	2.0	2.0	2.1	2.2	2.2	2.4	0.1*
Females	2.4	2.6	2.6	2.7	2.9	3.0	0.1*
Persons	2.2	2.3	2.3	2.4	2.6	2.7	0.1*
Rate difference[(d)]							
Males	330.6	336.8	355.6	395.8	423.9	496.8	32.4*
Females	471.0	549.0	538.3	611.4	663.0	710.7	46.1*
Persons	399.3	444.2	446.9	505.2	546.1	604.1	39.7*

* Represents results with statistically significant increases or declines at the $p<.05$ level over the period 1998–99 to 2003–04.

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

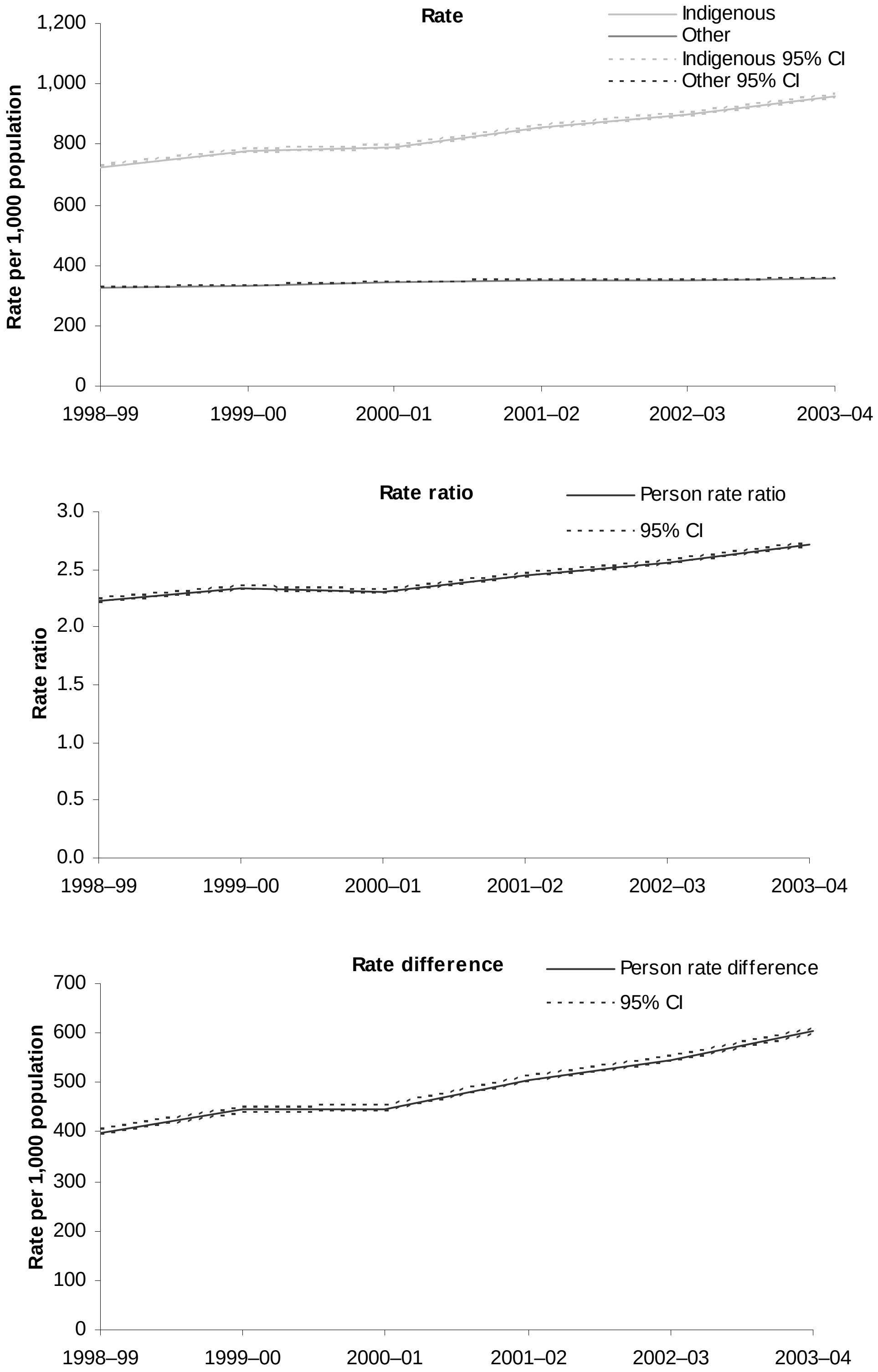
(b) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW 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 2003–04

All hospitalisations excluding dialysis

Hospitalisation rates, rate ratios and rate differences (excluding dialysis) between Indigenous and other Australians over the period 1998–99 to 2003–04 are presented in Table 1.02.5 and Figure 1.02.3.

- In Queensland, Western Australia, South Australia and the Northern Territory, there were significant declines in hospitalisations rates among Indigenous females over the five-year period 1998–99 to 2003–04. The fitted trend implies an average yearly increase in the rate of around 12 per 1,000. There was no significant change in the hospitalisation rate for Indigenous males over the same period.
- Over the period 1998–99 to 2003–04, there were no significant changes in the hospitalisation rates among other Australians.
- There were significant declines in both the hospitalisation rate ratios and rate differences between Indigenous females and other females over the period 1998–99 to 2003–04. This indicates a relative and absolute decline in the gap between hospitalisation rates for Indigenous females and other females. There was no significant change in the hospitalisation rate ratios or rate differences for males.

Table 1.02.5: Age-standardised hospitalisation rates, rate ratios and rate differences (excluding dialysis), Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	392.8	398.9	377.2	384.1	384.6	406.0	0.9
Females	507.2	515.1	446.3	452.5	452.7	461.6	−11.7*
Persons	451.7	458.9	412.5	419.3	419.5	433.6	−5.8
Other Australian[(b)] rate per 1,000							
Males	290.9	295.3	288.9	292.0	287.8	287.7	−1.0
Females	322.4	328.3	320.5	326.5	325.2	325.5	0.3
Persons	304.7	310.0	303.0	307.7	304.9	305.0	−0.3
Rate ratio[(c)]							
Males	1.3	1.4	1.3	1.3	1.3	1.4	0.0
Females	1.6	1.6	1.4	1.4	1.4	1.4	−0.04*
Persons	1.5	1.5	1.4	1.4	1.4	1.4	0.0
Rate difference[(d)]							
Males	101.8	103.6	88.3	92.1	96.8	118.3	1.9
Females	184.8	186.8	125.8	126.0	127.5	136.1	−12.0*
Persons	147.0	149.0	109.5	111.7	114.6	128.7	−5.5

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

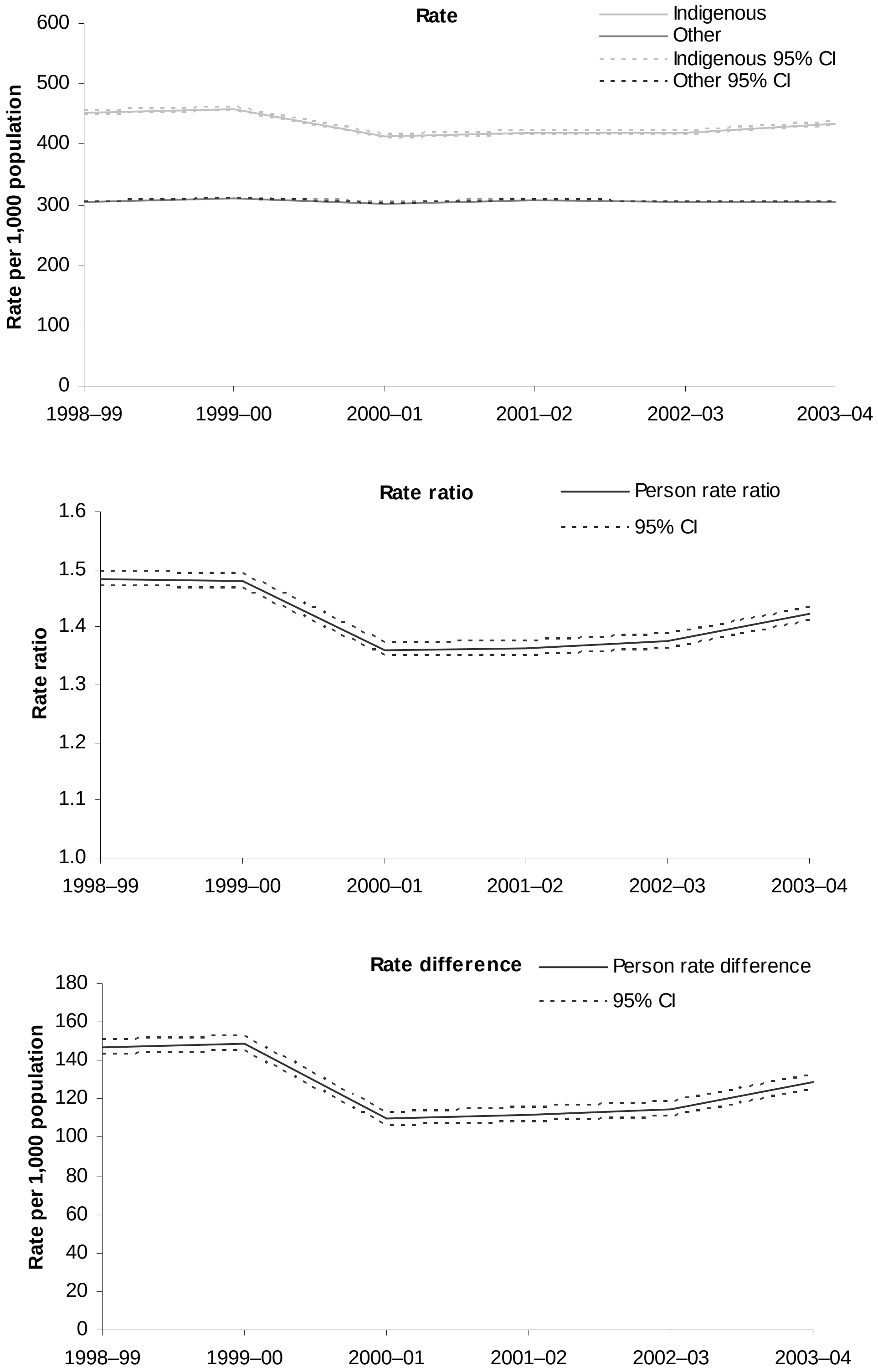
(b) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW 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 2003–04

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:
    - Qld 80%
    - WA 94%
    - SA 90%
    - NT 98%
  - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study—from 70% in 1998–99 to 80% in 2003–04 for Queensland, from 90% to 94% for Western Australia, from 85% to 90% for South Australia, and from 96% to 98% for the Northern Territory.
  - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 90% in 1998–99 to 80% in 2003–04 for Queensland, from 98% to 94% for Western Australia, from 95% to 90% for South Australia, and from 100% to 98% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were more extreme than has been posted under these scenarios, then the observed trends in hospitalisations might not persist.
- For all hospitalisations, the increases in hospitalisation rates, rate ratios and rate differences during the period 1998–99 to 2003–04 remained significant under all three identification scenarios.
- For all hospitalisations excluding dialysis, the observed decline in hospitalisation rates for Indigenous females and the decline in the rate ratio and rate difference for females during the period 1998–99 to 2003–04 remained statistically significant under the constant and increasing identification scenarios. None of the aforementioned trends remained statistically significant under the decreasing identification scenario.

Time series by principal diagnosis

- Hospitalisation rates among Indigenous Australians for most principal diagnoses were similar for the period June 1998 to July 2000 as for the period June 2002 to July 2004. Hospitalisations of Indigenous Australians for care involving dialysis and symptoms, signs and abnormal clinical findings increased between the two periods and hospitalisations for mental and behavioural disorders declined (Table 1.02.6).

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

	Number		Percent		Indigenous			Other(e)			
Principal diagnosis	**Indigenous**	**Other(e)**	**Indigenous**	**Other(e)**	**Rate per 1,000(f)**	**95% UCL(g)**	**95% UCL(h)**	**Rate per 1,000(f)**	**95% UCL(g)**	**95% UCL(h)**	**Ratio(i)**
Injury & poisoning & certain other consequences of external causes	24,965	312,813	9.0	7.1	51.4	50.6	52.2	22.7	22.6	22.8	2.3*
Pregnancy, childbirth and the puerperium(j)	21,751	302,408	7.9	6.9	34.0	33.6	34.5	21.4	21.3	21.4	1.6*
Diseases of the respiratory system	23,177	233,612	8.4	5.3	54.1	53.1	55.0	17.0	16.9	17.1	3.2*
Diseases of the digestive system	13,195	520,846	4.8	11.8	34.2	33.4	34.9	37.5	37.4	37.6	0.9*
Symptoms, signs and abnormal clinical and laboratory findings	9,075	178,946	3.3	4.1	20.3	19.8	20.8	12.7	12.6	12.7	1.6*
Mental and behavioural disorders	10,310	223,808	3.7	5.1	27.1	26.5	27.8	16.3	16.2	16.4	1.7*
Diseases of the circulatory system	9,024	304,050	3.3	6.9	36.7	35.8	37.6	22.7	22.6	22.8	1.6*
Diseases of the genitourinary system	8,973	256,627	3.2	5.8	25.0	24.4	25.7	18.2	18.1	18.3	1.4*
Diseases of the skin & subcutaneous tissue	8,504	81,265	3.1	1.8	19.1	18.6	19.6	5.9	5.9	6.0	3.2*
Certain infectious and parasitic diseases	7,762	64,002	2.8	1.5	12.7	12.3	13.1	4.6	4.6	4.7	2.8*

(continued)

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

	Number		Percent		Indigenous			Other[(e)]			
Principal diagnosis	**Indigenous**	**Other[(e)]**	**Indigenous**	**Other[(e)]**	**Rate per 1,000[(f)]**	**95% UCL[(g)]**	**95% UCL[(h)]**	**Rate per 1,000[(f)]**	**95% UCL[(g)]**	**95% UCL[(h)]**	**Ratio[(i)]**
Endocrine, nutritional and metabolic diseases	4,652	45,980	1.7	1.0	15.8	15.3	16.3	3.4	3.3	3.4	4.7*
Other[(k)]	57,602	1,582,048	20.8	35.9	124.8	123.5	126.2	114.8	114.6	115.0	1.1*
Subtotal	*198,990*	*4,106,405*	*72.0*	*93.1*	*455.4*	*452.8*	*458.0*	*297.2*	*296.9*	*297.4*	*1.5**
Care involving dialysis	77,539	302,477	28.0	6.9	296.9	294.6	299.2	22.4	22.3	22.4	13.3*
Total[(l)]	**276,529**	**4,408,882**	**100.0**	**100.0**	**752.3**	**748.8**	**755.8**	**319.5**	**319.2**	**319.8**	**2.4***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(c) Financial year reporting.

(d) Data are reported by state of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Other includes hospitalisations of non-Indigenous persons 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, and 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 AIHW National Hospital Morbidity Database.

Data quality issues

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.

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. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate Indigenous identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 ABS's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 (ABS 2004).

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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 people expressed as a rate by age group, age-standardised rate and rate 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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

Analyses

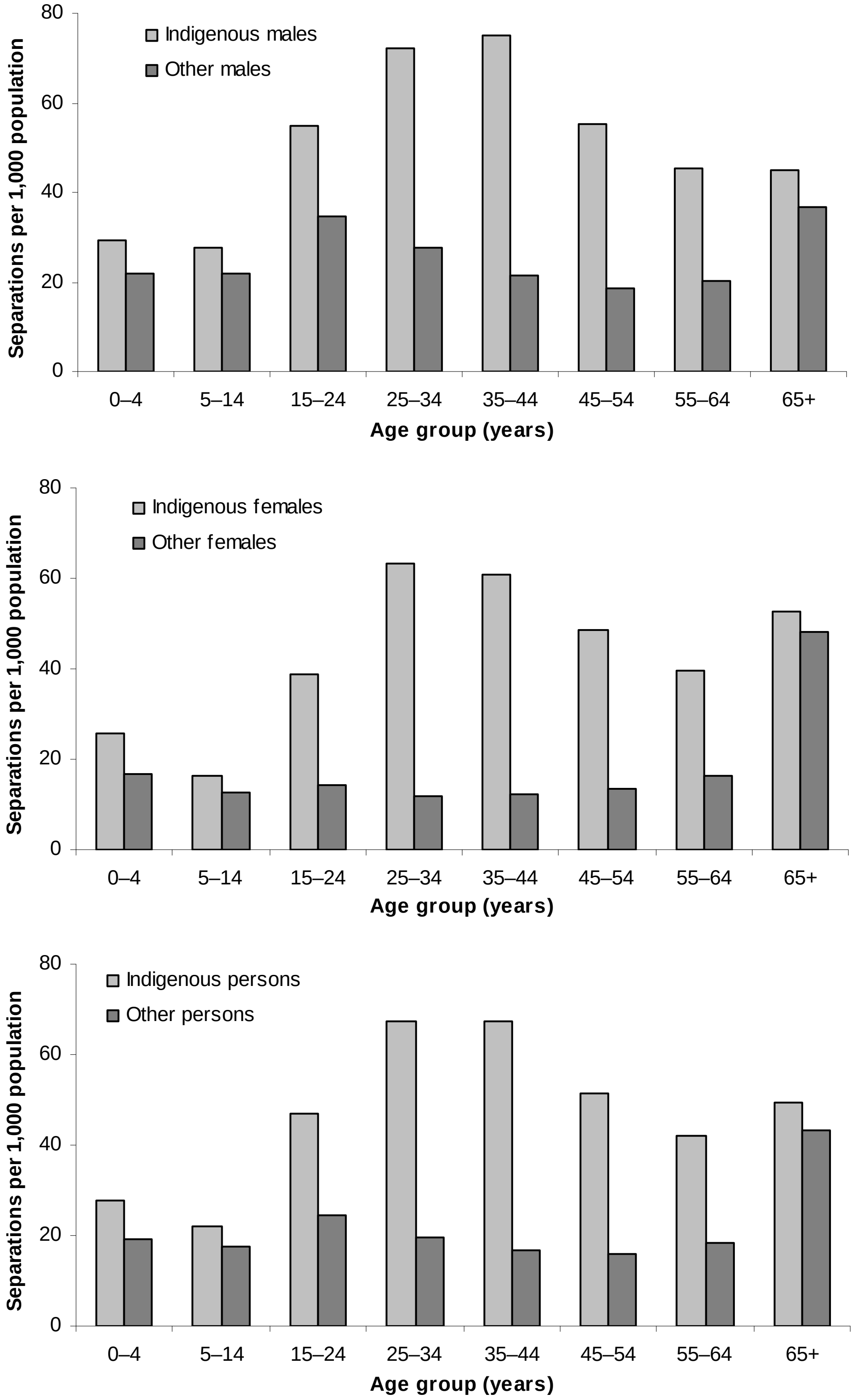
Age-standardised rates and ratios have been used for this indicator as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians,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

Hospitalisations

- In the two-year period July 2002 to June 2004, there were 340,251 hospitalisations for injury and poisoning in Queensland, Western Australia, South Australia and the Northern Territory combined, 25,255 (7.4%) 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 diagnosis among Aboriginal and Torres Strait Islander Australians, representing 8% of all hospital separations.

Hospitalisations by age and sex

- For the two-year period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory, Indigenous males and females had higher hospitalisation rates for injury and poisoning than other males and females across all age groups (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 15–24 and 25–34 year age groups for females. Indigenous males were hospitalised at between three and four times the rate of other males in these age groups and Indigenous females were hospitalised at around five 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 35–44 years, while for other males and females, rates were highest among those aged 65 years and over.
- Approximately 55% of Indigenous Australians hospitalised for injury and poisoning were males (13,776) and 45% were females (11,479).



Source: AIHW analysis of AIHW 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, Qld, WA, SA and NT, July 2002–June 2004

Hospitalisations by state/territory

Table 1.03.1 presents hospitalisations for a principal diagnosis of injury and poisoning for the two-year period July 2002 to June 2004 in Queensland, Western Australia, South Australia and the Northern Territory.

- 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.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians were hospitalised for injury at more than twice the rate of other Australians in these jurisdictions.

Table 1.03.1: Hospitalisations for principal diagnosis of injury and poisoning, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004[a][b][c][d]

	Indigenous				Other[e]				
	Number	Rate per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Number	Rate per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Ratio[i]
Qld									
Males	5,307	44.8	43.2	46.4	98,488	27.2	27.0	27.4	1.6*
Females	3,815	33.4	32.0	34.8	67,665	18.0	17.9	18.1	1.9*
Persons	9,122	38.9	37.9	40.0	166,153	22.7	22.6	22.9	1.7*
WA									
Males	4,286	67.7	65.3	70.1	43,859	23.8	23.6	24.0	2.8*
Females	3,928	63.7	61.4	66.0	32,421	16.9	16.7	17.1	3.8*
Persons	8,214	65.8	64.1	67.5	76,280	20.5	20.4	20.7	3.2*
SA									
Males	1,187	48.5	45.2	51.9	36,991	25.0	24.7	25.2	1.9*
Females	1,086	45.5	42.3	48.7	30,363	18.1	17.9	18.3	2.5*
Persons	2,273	47.1	44.8	49.5	67,354	21.7	21.6	21.9	2.2*
NT									
Males	2,996	55.8	53.3	58.3	3,625	25.7	24.7	26.6	2.2*
Females	2,650	49.9	47.7	52.2	1,579	15.3	14.4	16.2	3.3*
Persons[j]	5,646	52.9	51.2	54.6	5,209	21.0	20.3	21.6	2.5*
Qld, WA, SA and NT[d]									
Males	13,776	53.0	51.9	54.1	182,963	25.8	25.7	25.9	2.1*
Females	11,479	45.2	44.2	46.2	132,028	17.7	17.6	17.8	2.6*
Persons[j]	25,255	49.1	48.4	49.9	314,996	21.9	21.8	22.0	2.2*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 ICD10-AM (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Other includes non-Indigenous hospitalisations 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’.

Source: AIHW analysis of AIHW 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 by type of injury for the two-year period July 2002 to June 2004 for the four jurisdictions.

- For the period 2002–03 to 2003–04 in Queensland, Western Australia, South Australia and the Northern Territory, 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 (10%).
- Indigenous males and females were hospitalised at three and four times the rate of other males and females respectively for 'other effects of external causes (such as radiation, hypothermia, maltreatment syndromes) and early complications of trauma'.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males were hospitalised for injury and poisoning at twice the rate of other males, and Indigenous females were hospitalised at three times the rate of other females.

Table 1.03.2: Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning, by type of injury and sex, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Males						Females						Persons[(k)]					
Principal diagnosis	No.	%[(f)]	Rate per 1,000[(g)]	LCL 95%[(h)]	UCL 95%[(i)]	Ratio[(j)]	No.	%[(f)]	Rate per 1,000[(g)]	LCL 95%[(h)]	UCL 95%[(i)]	Ratio[(j)]	No.	%[(f)]	Rate per 1,000[(g)]	LCL 95%[(h)]	UCL 95%[(i)]	Ratio[(j)]
Injuries (S00–T19)	10,954	79.5	40.5	39.5	41.4	2.1*	8,391	73.1	31.5	30.7	32.4	2.8*	19,345	76.6	36.0	35.4	36.6	2.3*
Complications of surgical & medical care (T80–T89)	1,180	8.6	6.8	6.3	7.2	1.7*	1,396	12.2	7.7	7.2	8.1	2.2*	2,576	10.2	7.2	6.9	7.6	2.0*
Poisoning (T36–T50)	458	3.3	1.7	1.5	1.9	1.4*	788	6.9	2.9	2.6	3.1	1.6*	1,246	4.9	2.3	2.2	2.4	1.5*
Other effects of external causes/ complications of trauma (T66–T79)	459	3.3	1.7	1.5	1.9	3.2*	408	3.6	1.5	1.3	1.7	3.7*	867	3.4	1.6	1.4	1.7	3.4*
Burns and frostbite (T20–T35)	430	3.1	1.4	1.2	1.6	2.6*	280	2.4	1.0	0.8	1.1	3.7*	710	2.8	1.2	1.1	1.3	2.9*
Toxic effects (T51–T65)	295	2.1	1.0	0.9	1.2	2.0*	216	1.9	0.7	0.5	0.8	2.1*	511	2.0	0.8	0.7	0.9	2.0*
Total[(k)]	**13,776**	**100.0**	**53.0**	**51.9**	**54.1**	**2.1***	**11,479**	**100.0**	**45.2**	**44.2**	**46.2**	**2.6***	**25,255**	**100.0**	**49.1**	**48.4**	**49.9**	**2.2***

(continued)

* Represents results with statistically significant differences in the Indigenous/Other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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.

Table 1.03.2 (continued): Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning, by type of injury and sex, Qld, WA, SA and NT, July 2002–June 2004(a)(b)(c)(d)

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have the highest level of accuracy of Indigenous identification, 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 four 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) Percentage of male, female and total hospitalisations of Indigenous persons in the period 2002–03 to 2003–04.

(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 AIHW National Hospital Morbidity database.

External cause of injury and poisoning

Table 1.03.3 presents hospitalisations for external causes of injury and poisoning for Aboriginal and Torres Strait Islander peoples in Queensland, Western Australia, South Australia and the Northern Territory.

- In the two-year period July 2002 to June 2004, assault was the most common cause for hospitalisation for Indigenous males and females hospitalised with a principal diagnosis of injury and poisoning (26% and 37% respectively) in Queensland, Western Australia, South Australia and the Northern Territory combined.
- Aboriginal and Torres Strait Islander males and females were 10 and 47 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 twice and three times as likely to be hospitalised for exposure to electrical currents, smoke, fire, animals or nature as other males and females respectively.

Table 1.03.3: Hospitalisations of Indigenous persons for external causes of injury and poisoning, by sex, Qld, WA, SA and NT, July 2002–June 2004[a][b][c][d]

	Males						Females						Persons[e]					
External cause	**No.**	**%[f]**	**Rate per 1,000[g]**	**LCL 95%[h]**	**UCL 95%[i]**	**Ratio[j]**	**No.**	**%[f]**	**Rate per 1,000[g]**	**LCL 95%[h]**	**UCL 95%[i]**	**Ratio[j]**	**No.**	**%[f]**	**Rate per 1,000[g]**	**LCL 95%[h]**	**UCL 95%[i]**	**Ratio[j]**
Assault (X85–Y09)	3,597	26.1	14.1	13.6	14.6	10.3*	4,259	37.1	14.8	14.3	15.2	47.2*	7,856	31.1	14.4	14.1	14.7	17.0*
Accidental falls (W00–W19)	2,191	15.9	8.7	8.2	9.2	1.5*	1,648	14.4	8.3	7.7	8.8	1.3*	3,839	15.2	8.6	8.2	9.0	1.4*
Exposure to inanimate mechanical forces (W20–W49)	1,992	14.5	6.3	6.0	6.7	1.4*	972	8.5	2.9	2.7	3.1	2.2*	2,964	11.7	4.6	4.4	4.8	1.6*
Complications of medical and surgical care (Y40–Y48)	1,158	8.4	6.8	6.3	7.3	1.7*	1,383	12.0	7.8	7.3	8.3	2.1*	2,541	10.1	7.3	7.0	7.7	1.9*
Transport accidents (V01–V99)	1,486	10.8	5.0	4.7	5.3	1.3*	705	6.1	2.3	2.1	2.5	1.4*	2,191	8.7	3.6	3.4	3.7	1.3*
Other accidental exposures[k]	1,046	7.6	4.3	4.0	4.6	1.5*	663	5.8	2.7	2.5	3.0	1.8*	1,709	6.8	3.5	3.3	3.7	1.6*
Intentional self-harm (X60–X84)	642	4.7	2.3	2.1	2.5	2.4*	778	6.8	2.7	2.5	2.9	1.9*	1,420	5.6	2.5	2.4	2.7	2.1*
Exposure to electric current/smoke/ fire/animals/nature (W85–W99, X00–X39)[l]	582	4.2	1.9	1.7	2.1	2.1*	387	3.4	1.3	1.1	1.5	2.9*	969	3.8	1.6	1.5	1.7	2.4*
Exposure to animate mechanical forces (W50–W64)	614	4.5	2.1	1.9	2.4	2.3*	260	2.3	0.9	0.8	1.0	2.2*	874	3.5	1.5	1.4	1.6	2.2*
Accidental poisoning by and exposure to noxious substances (X40–X49)	308	2.2	1.0	0.8	1.1	1.6*	290	2.5	1.0	0.8	1.1	1.6*	598	2.4	1.0	0.9	1.1	1.6*

(continued)

Table 1.03.3 (continued): Hospitalisations of Indigenous persons for external causes of injury and poisoning, by sex, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Males						Females						Persons[(e)]					
External cause	**No.**	**%[(f)]**	**Rate per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**	**No.**	**%[(f)]**	**Rate per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**	**No.**	**%[(f)]**	**Rate per 1,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**
Other external causes[(m)]	145	1.1	0.6	0.5	0.6	4.7*	125	1.1	0.5	0.4	0.6	4.0*	270	1.1	0.5	0.4	0.6	4.3*
Total[(n)]	**13,776**	**100.0**	**53.0**	**51.9**	**54.1**	**2.1***	**11,479**	**100.0**	**45.2**	**44.2**	**46.2**	**2.6***	**25,255**	**100.0**	**49.1**	**48.4**	**49.9**	**2.2***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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) Percentage of male, female and total hospitalisations of Indigenous persons in the period 2002–03 to 2003–04.

(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 (Y9–Y98).

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

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Time series analysis

Injury and poisoning

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning over the five-year period 1998–99 to 2003–04 are presented in Table 1.03.4 and Figure 1.03.2.

- 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, females and persons during the period 1998–99 to 2003–04, however, these declines were not significant.
- There were significant declines in hospitalisation rates for injury and poisoning among other Australian males, females and persons during the same period, with an average yearly decline in the rate of around 0.3 per 1,000 population.
- There were no significant changes in the hospitalisation rate ratios or rate differences between Indigenous and other Australians for the period 1998–99 to 2003–04.

It should be noted 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 impact on 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 better access rather than a worsening of health.

Table 1.03.4: Age-standardised hospitalisation rates, rate ratios and rate differences from injury and poisoning, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	58.8	54.0	55.1	57.0	52.4	53.6	−0.8
Females	46.8	46.4	45.0	46.1	44.4	45.9	−0.3
Persons	52.6	50.2	49.9	51.5	48.4	49.8	−0.5
Other Australian[(b)] rate per 1,000							
Males	27.7	27.8	27.0	26.5	25.7	26.1	−0.4*
Females	18.6	18.3	18.2	17.8	17.6	17.9	−0.2*
Persons	23.3	23.2	22.7	22.3	21.8	22.2	−0.3*
Rate ratio[(c)]							
Males	2.1	1.9	2.0	2.1	2.0	2.1	0.0
Females	2.0	2.0	2.0	2.1	2.0	2.1	0.0
Persons	2.3	2.2	2.2	2.3	2.2	2.2	0.0
Rate difference[(d)]							
Males	31.1	26.3	28.1	30.5	26.7	27.5	−0.4
Females	23.5	23.2	22.3	23.8	22.7	23.8	0.0
Persons	29.3	27.0	27.2	29.2	26.7	27.6	−0.2

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

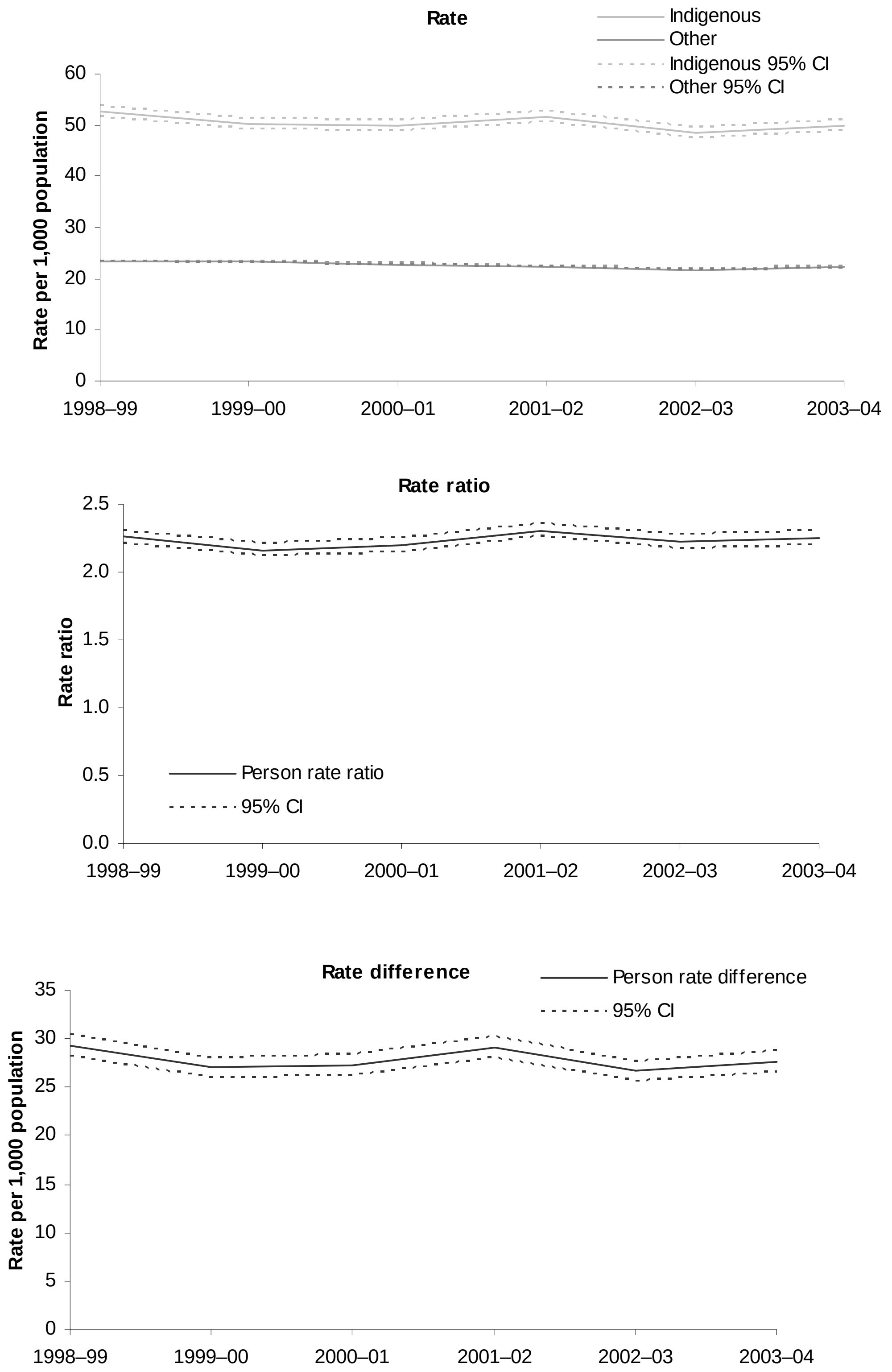
(b) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.03.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from injury and poisoning, Qld, WA, SA and NT, 1998–99 to 2003–04

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:
    - Qld 80%
    - WA 94%
    - SA 90%
    - NT 98%
  - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study—from 70% in 1998–99 to 80% in 2003–04 for Queensland, from 90% to 94% for Western Australia, from 85% to 90% for South Australia, and from 96% to 98% for the Northern Territory.
  - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 90% in 1998–99 to 80% in 2003–04 for Queensland, from 98% to 94% for Western Australia, from 95% to 90% for South Australia, and from 100% to 98% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were more extreme than has been posted under these scenarios, then the observed trends in hospitalisations might not persist.
- The decline in the hospitalisation rates from injury and poisoning for other Australian males, females and persons during the period 1998–99 to 2003–04 remained significant under all three scenarios.

Assault

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault over the five-year period 1998–99 to 2003–04 are presented in Table 1.03.5 and Figure 1.03.3 below.

- Over the period 1998–99 to 2003–04, 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.
- Over the same period there was no significant change in the hospitalisation rate for assault for other Australians.
- There were significant declines in both hospitalisation rate ratios and rate differences between Indigenous and other Australians for assault over the period 1998–99 to 2003–04, which reflect both a relative and absolute decline in the gaps between them.

Table 1.03.5: Age-standardised hospitalisation rates, rate ratios and rate differences for assault, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	16.2	15.3	15.2	15.8	14.6	13.6	−0.4*
Females	16.6	16.1	15.1	15.5	15.0	14.5	−0.4*
Persons	16.4	15.7	15.1	15.6	14.8	14.1	−0.4*
Other Australian[(b)] rate per 1,000							
Males	1.4	1.4	1.5	1.5	1.4	1.3	0.0
Females	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Persons	0.9	0.9	0.9	0.9	0.9	0.8	0.0
Rate ratio[(c)]							
Males	11.5	11.1	10.2	10.8	10.4	10.1	−0.2*
Females	19.0	18.8	16.3	17.1	17.4	17.4	−0.3
Persons	18.7	18.3	16.4	17.3	17.2	16.8	−0.3*
Rate difference[(d)]							
Males	14.8	13.9	13.7	14.4	13.2	12.3	−0.4*
Females	15.7	15.2	14.1	14.6	14.1	13.7	−0.4*
Persons	15.5	14.8	14.2	14.7	13.9	13.2	−0.4*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

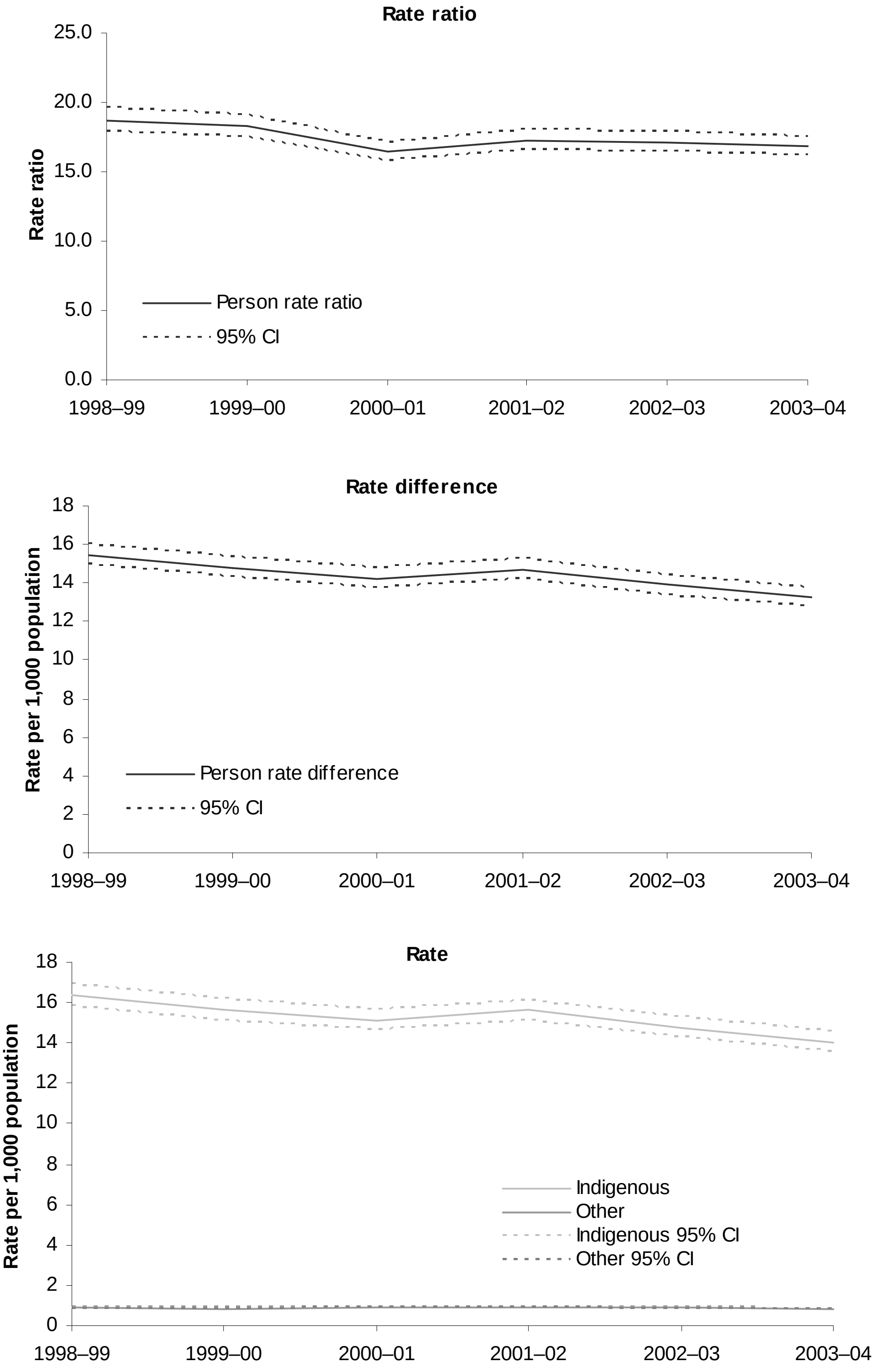
(b) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.03.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault, Qld, WA, SA and NT, 1998–99 to 2003–04

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. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate Indigenous identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 ABS's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

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 Dataset. This dataset includes the standard Indigenous status question but does not include injury coding (for example, ICD-10). The Injury Surveillance National Minimum Dataset includes injury coding (components of ICD-10) but does not include demographic details such as Indigenous status. Therefore, there is currently no national minimum dataset containing both Indigenous status and injury coding.

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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 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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

Analyses

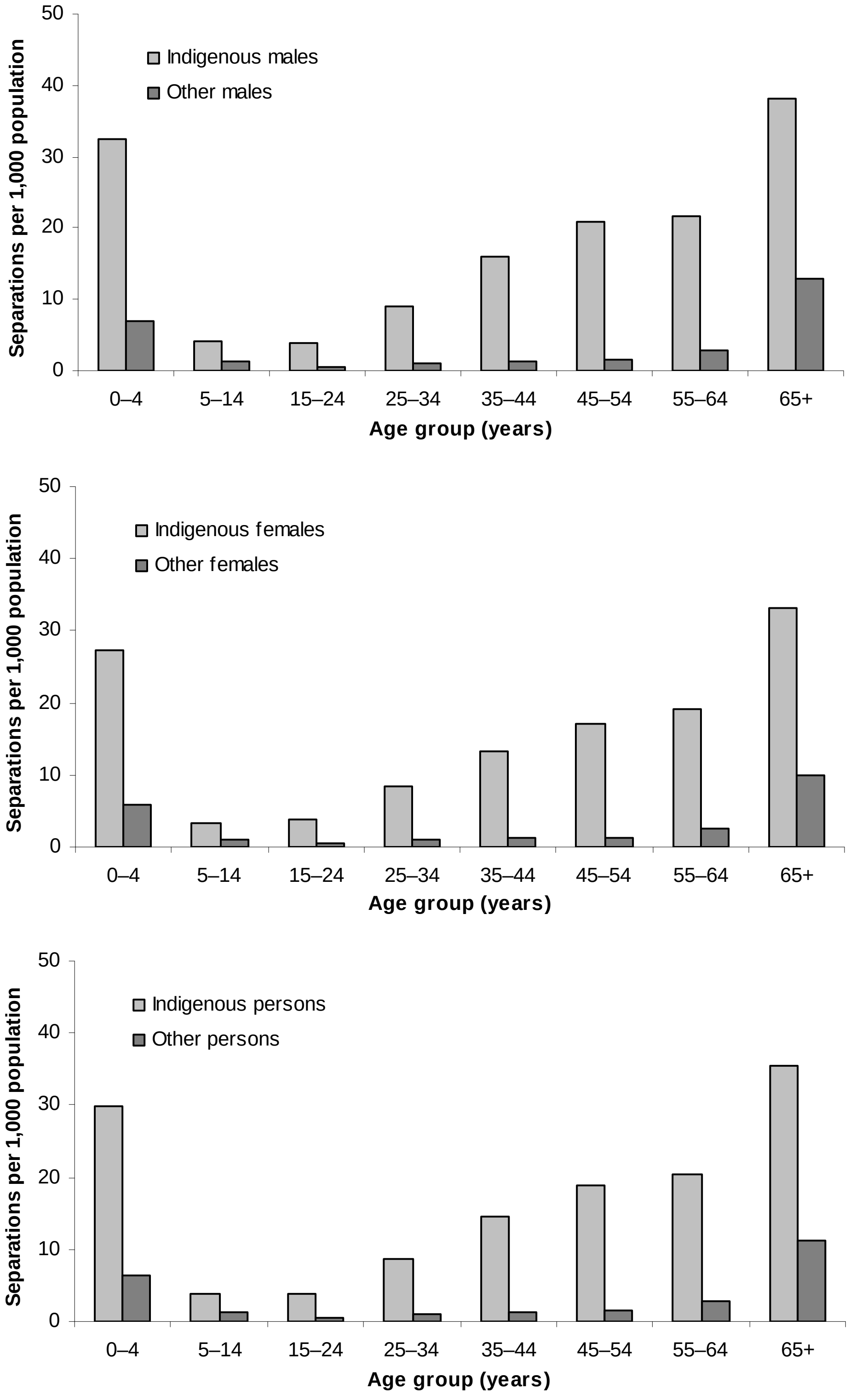
Age-standardised rates and ratios have been used for this indicator as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians,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

Hospitalisations

- In the two-year period July 2002 to June 2004, there were 47,870 hospitalisations for pneumonia in Queensland, Western Australia, South Australia and the Northern Territory combined, 6,802 (14%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples (Table 1.04.1).
- Hospitalisations for pneumonia represented 2.2% of all hospital separations for Aboriginal and Torres Strait Islander Australians.

Hospitalisations by age and sex

- In the two-year period July 2002 to June 2004, in 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 12–14 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 and 65 years and over.
- Approximately 52% of Indigenous Australians hospitalised for pneumonia were males (3,269) and 48% were females (3,233).



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.04.1: Age-specific hospitalisation rates for a principal diagnosis of pneumonia, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004

Hospitalisations by state/territory

Table 1.04.1 presents hospitalisations for a principal diagnosis of pneumonia for the two-year period July 2002 to June 2004 for Queensland, Western Australia, South Australia and the Northern Territory.

- 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 eight times more likely to be hospitalised for pneumonia than other Australians. In South Australia and Queensland, Indigenous Australians were hospitalised for pneumonia at five and three times the rate of other Australians respectively.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians were hospitalised for pneumonia at six times the rate of other Australians.

Table 1.04.1: Hospitalisations for principal diagnosis of pneumonia, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004[a][b][c][d]

	Indigenous				Other[e]				
	Number	Rate per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Number	Rate per 1,000[f]	LCL 95%[g]	UCL 95%[h]	Ratio[i]
Qld									
Males	954	11.1	10.1	12.2	11,106	3.3	3.2	3.3	3.4*
Females	837	8.9	8.1	9.7	10,256	2.7	2.6	2.7	3.3*
Persons	1,791	9.9	9.2	10.5	21,362	2.9	2.9	3.0	3.3*
WA									
Males	1,040	20.7	19.0	22.5	4,675	2.8	2.7	2.9	7.4*
Females	963	18.0	16.6	19.5	4,242	2.2	2.1	2.3	8.2*
Persons	2,003	19.3	18.2	20.4	8,917	2.5	2.4	2.5	7.8*
SA									
Males	273	14.0	11.6	16.4	5,463	3.6	3.5	3.7	3.9*
Females	282	14.4	12.2	16.5	4,748	2.7	2.6	2.8	5.4*
Persons	555	14.2	12.6	15.8	10,211	3.1	3.0	3.1	4.6*
NT									
Males	1,302	27.0	24.9	29.2	332	3.1	2.7	3.5	8.8*
Females	1,151	23.1	21.4	24.8	246	2.7	2.3	3.1	8.5*
Persons	2,453	24.9	23.6	26.2	578	2.9	2.6	3.2	8.6*
Qld, WA, SA and NT[d]									
Males	3,569	17.0	16.2	17.8	21,576	3.2	3.2	3.3	5.3*
Females	3,233	14.5	13.9	15.2	19,492	2.6	2.5	2.6	5.7*
Persons	6,802	15.7	15.2	16.2	41,068	2.9	2.8	2.9	5.5*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

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

(b) Categories are based on the ICD10-AM (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 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 AIHW National Hospital Morbidity Database.

Time series analysis

All ages

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for pneumonia over the five-year period 1998–99 to 2003–04 are presented in Table 1.04.2 and Figure 1.04.2.

- In Queensland, Western Australia, South Australia and the Northern Territory, there were apparent declines in hospitalisation rates for pneumonia among Indigenous males, females and persons during the period 1998–99 to 2003–04, however, the declines were only significant for Indigenous males.
- There were no significant changes in hospitalisation rates among other Australian males, females and persons over the same period.
- There were also significant declines in the hospitalisation rate ratios and rate differences between Indigenous and other Australians for pneumonia. The fitted trend implies an average yearly decline of 0.1 in the rate ratio and 0.4 per 1,000 in the rate difference for the period 1998–99 to 2003–04. This reflects a relative and absolute decrease in the gap between the hospitalisation rates for Indigenous and other Australians 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 five-year period 1998–99 to 2003–04 are presented in Table 1.04.3 and Figure 1.04.3.

- In Queensland, Western Australia, South Australia and the Northern Territory, there were significant declines in hospitalisation rates for pneumonia among Indigenous children aged 0–4 years during the period 1998–99 to 2003–04. The fitted trend implies an average yearly decline in the rate of around 2 per 1,000.
- Over the same period, there were significant increases 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 0.5 in the rate ratio and 2.3 per 1,000 in the rate difference for the period 1998–99 to 2003–04. 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.

It should be noted 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 impact on 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 from pneumonia, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	20.0	18.6	17.0	17.2	17.0	17.0	−0.6*
Females	15.6	14.7	14.3	12.5	14.6	14.5	−0.2
Persons	17.6	16.5	15.6	14.7	15.7	15.7	−0.4
Other Australian[(b)] rate per 1,000							
Males	3.5	3.3	3.1	3.3	3.3	3.2	—
Females	2.5	2.4	2.3	2.6	2.5	2.6	—
Persons	2.9	2.8	2.7	2.9	2.9	2.9	—
Rate ratio[(c)]							
Males	5.7	5.7	5.5	5.2	5.2	5.3	−0.1*
Females	5.3	5.3	5.3	4.3	5.1	5.0	−0.1
Persons	6.0	6.0	5.8	5.1	5.5	5.5	−0.1*
Rate difference[(d)]							
Males	16.5	15.4	13.9	13.9	13.7	13.8	−0.5*
Females	12.7	11.9	11.6	9.7	11.7	11.6	−0.2
Persons	14.7	13.7	12.9	11.8	12.8	12.8	−0.4*

* Represents results with statistically significant increases or declines at the $p<.05$ level over the period 1998–99 to 2003–04.

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

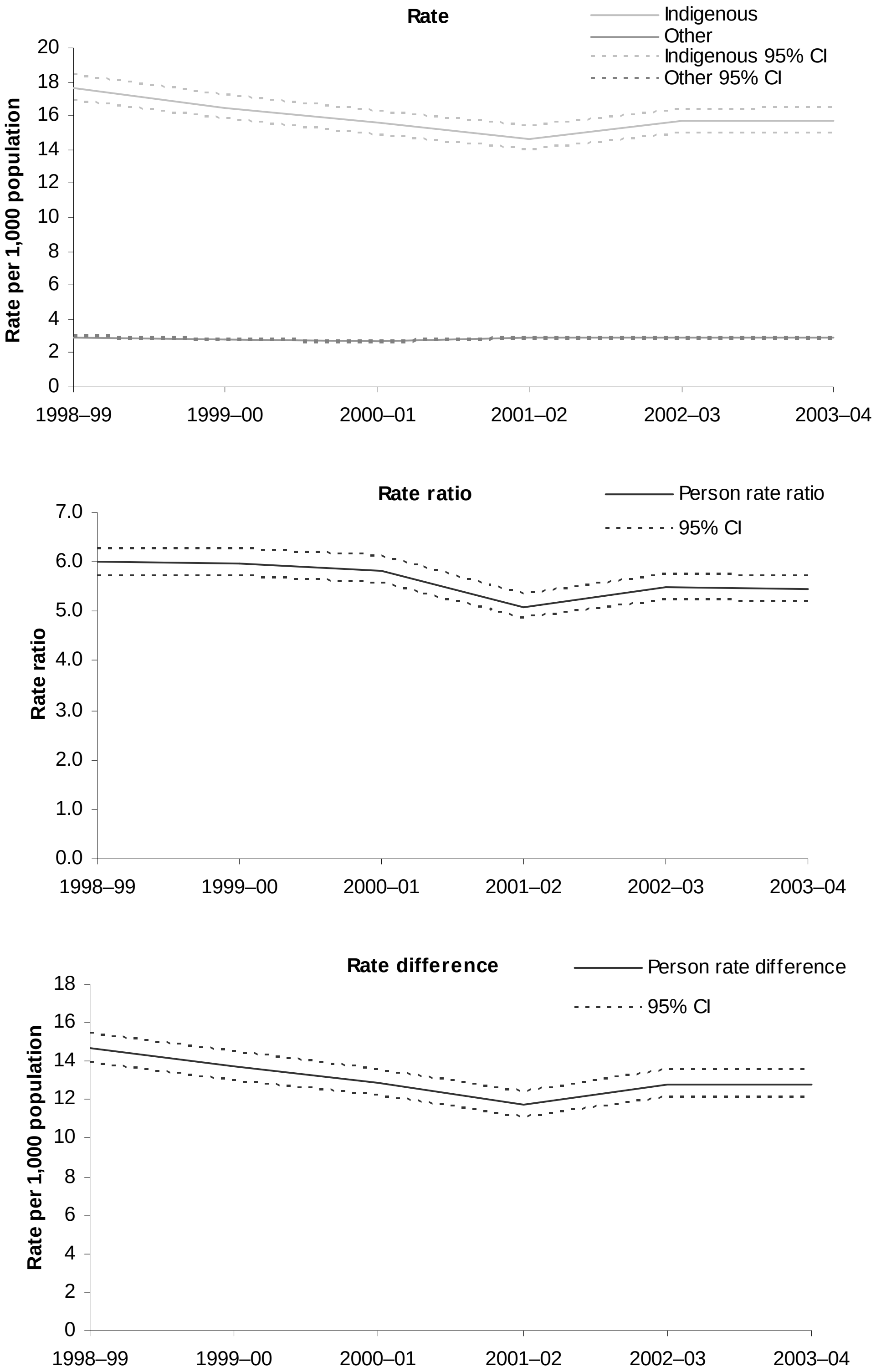
(b) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.04.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from pneumonia, Qld, WA, SA and NT, 1998–99 to 2003–04

Table 1.04.3: Children aged 0–4 years, hospitalisation rates, rate ratios and rate differences from pneumonia, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Persons	40.1	36.5	34.8	31.8	30.3	29.6	−2.1*
Other Australian[(b)] rate per 1,000							
Persons	5.5	5.8	6.2	6.3	6.3	6.4	0.2*
Rate ratio[(c)]							
Persons	7.2	6.3	5.6	5.1	4.8	4.6	−0.5*
Rate difference[(d)]							
Persons	34.5	30.8	28.6	25.5	24.0	23.2	−2.3*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

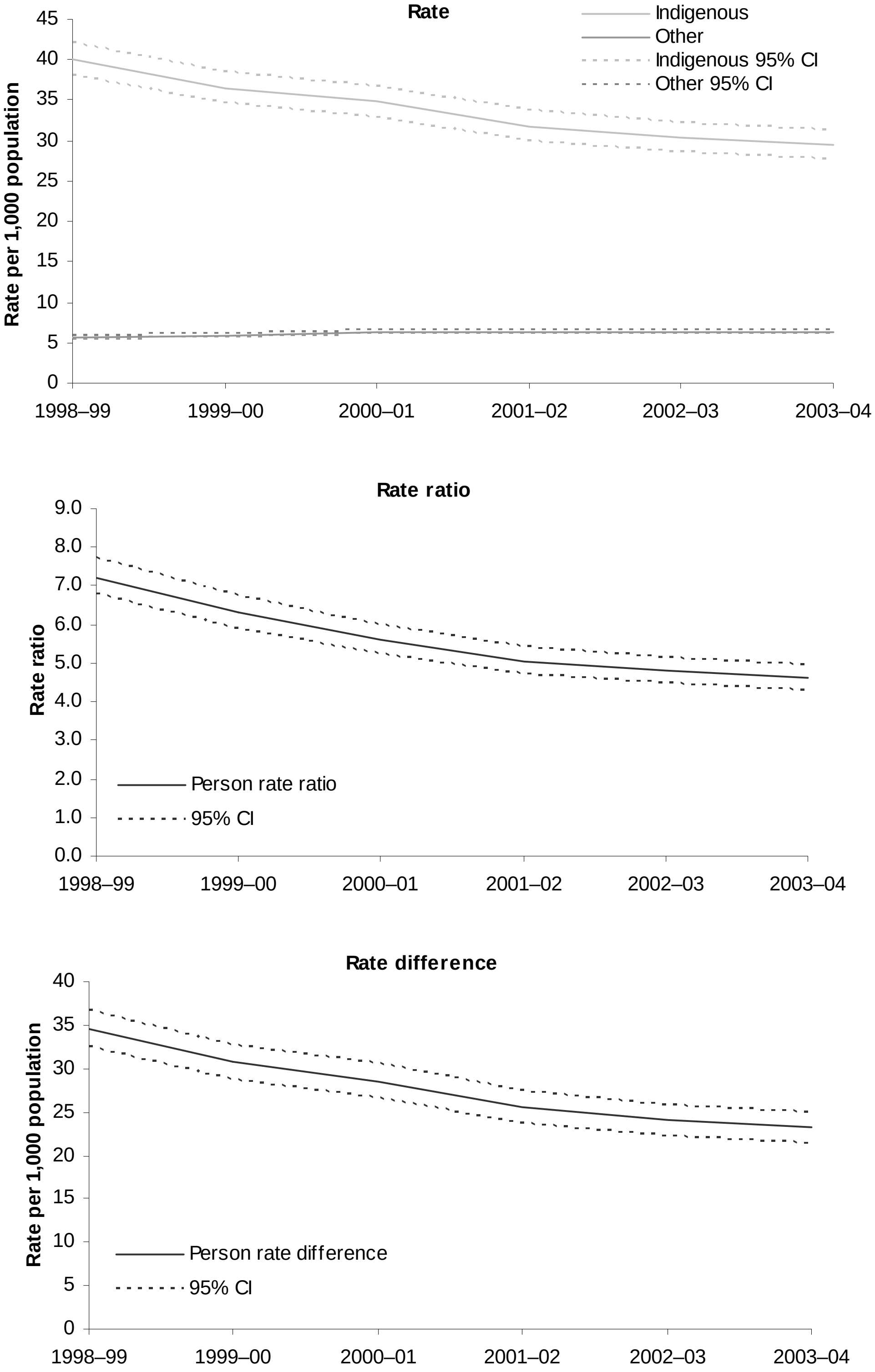
(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

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

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

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

Source: AIHW analysis of AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW 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 from pneumonia, Qld, WA, SA and NT, 1998–99 to 2003–04

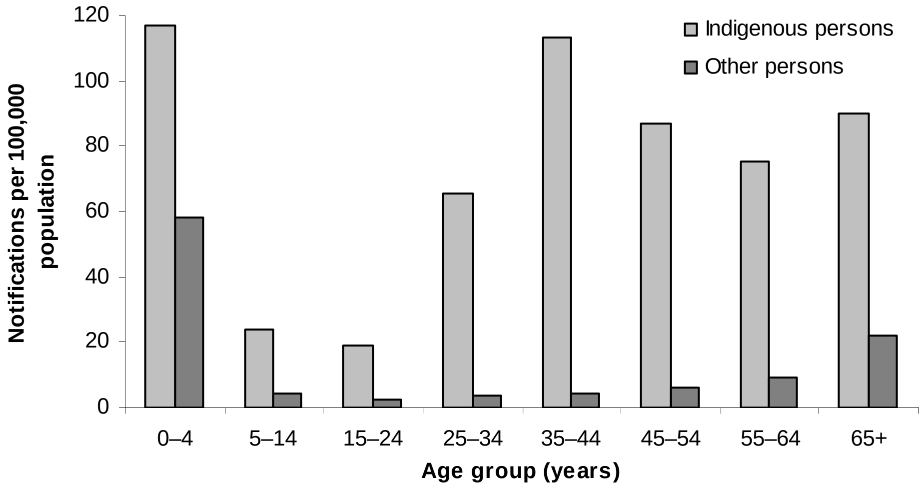
Additional information

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 2002–2004, there were 283 invasive pneumococcal disease notifications among Indigenous persons in Western Australia, South Australia and the Northern Territory. The notification rate for Indigenous persons was 56.2 per 100,000 which was almost six times the rate for other persons (10.2 per 100,000). Notification rates were highest among those aged 0–4 years and 35–44 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 25–34 and 35–44 year age groups, where Indigenous Australians suffered from invasive pneumococcal disease at between 19 and 28 times the rate of other Australians. Importantly, the notification rate among Aboriginal and Torres Strait Islander people 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, 2002–2004

Hospitalisations

Over the period June 2002 to July 2004, there were 72 hospitalisations of Indigenous people in Queensland, Western Australia, South Australia and the Northern Territory combined for invasive pneumococcal disease. Over one-third of these hospitalisations were among those aged 0–4 years (35%).

- Hospitalisation rates, rate ratios and rate differences between Indigenous and other children aged 0–4 years for invasive pneumococcal disease over the five-year period 1998–99 to 2003–04 are shown in Table 1.04.4 and Figure 1.04.5 below.
- 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 2003–04. The fitted trend implies an average yearly decline in the rate of around 0.1 per 1,000.
- Over the same period, there was no significant change in the hospitalisation rate for invasive pneumococcal disease among other children aged 0–4 years.
- There were significant declines in both the hospitalisation rate ratios and rate differences between Indigenous and other children for invasive pneumococcal disease. The fitted trend implies an average yearly decline of around 0.7 in the rate ratio and 0.1 per 1,000 in the rate difference for the period 1998–99 to 2003–04. This reflects a relative and absolute decline in the gap between hospitalisation rates for invasive pneumococcal disease among Indigenous and other Australians aged 0–4 years over the period.

Table 1.04.4: Children aged 0–4 years, hospitalisation rates, rate ratios and rate differences from invasive pneumococcal disease, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Persons	0.6	0.6	0.4	0.2	0.4	0.3	−0.1*
Other Australian[(b)] rate per 1,000							
Persons	0.1	0.2	0.2	0.3	0.2	0.2	0.01
Rate ratio[(c)]							
Persons	5.9	2.9	1.6	0.7	1.8	1.6	−0.7*
Rate difference[(d)]							
Persons	0.5	0.4	0.1	-0.1	0.2	0.1	−0.1*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

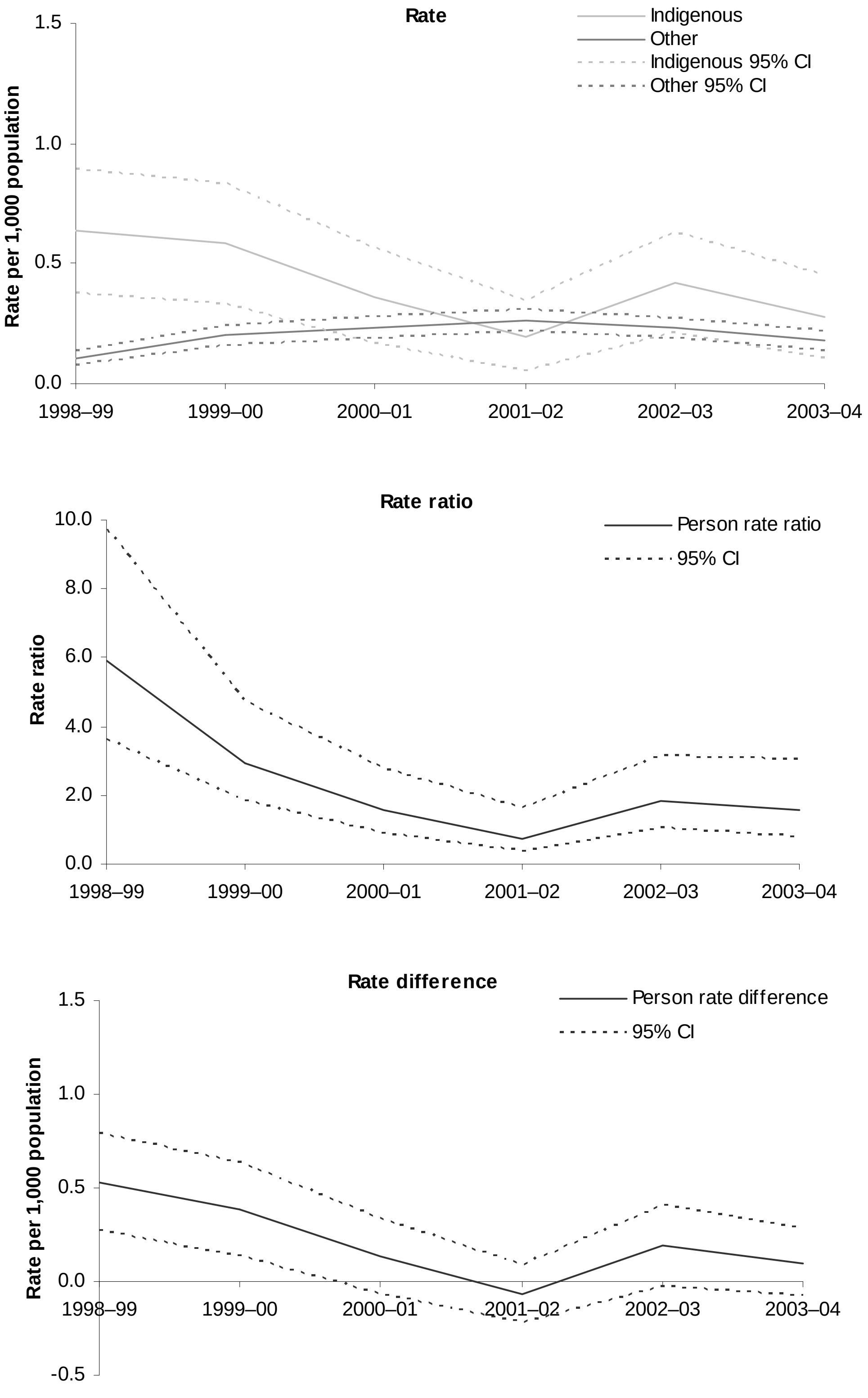
(b) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 proxy for invasive pneumococcal disease.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.



Source: **AIHW analysis of AIHW National Hospital Morbidity database.**

Figure 1.04.5: Children aged 0–4 years, hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from invasive pneumococcal disease, Qld, WA, SA and NT, 1998–99 to 2003–04

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 for pneumococcal vaccine was higher for Indigenous Australians than for other Australians (20% compared with 3% respectively) (Menzies et al. 2004). Indigenous adults in remote area had higher vaccination coverage rates for this disease than in non-remote areas. Pneumococcal vaccinations are likely to be higher for Indigenous adults than other adults as these have been funded for Indigenous people 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. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate Indigenous identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 ABS's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 (ABS 2004).

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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 people expressed as a rate by age group, age-standardised rate and rate ratio

Data sources

Data for this indicator come from the National Aboriginal and Torres Strait Islander Health Survey, the Bettering the Evaluation and Care of Health (BEACH) survey and the AIHW's 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 six-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 and the 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 five-year period 2000–01 to 2004–05, during which there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.6% of total GP encounters.

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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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-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 Tables 1.05.1 and 1.05.2 below.

- In 2004–05 approximately 23% of Indigenous Australians reported having a heart or circulatory condition compared to 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), 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).
- 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 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 1.05.1: 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.
	%	%	%	%	%	%	%	%	%	%
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.

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
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.

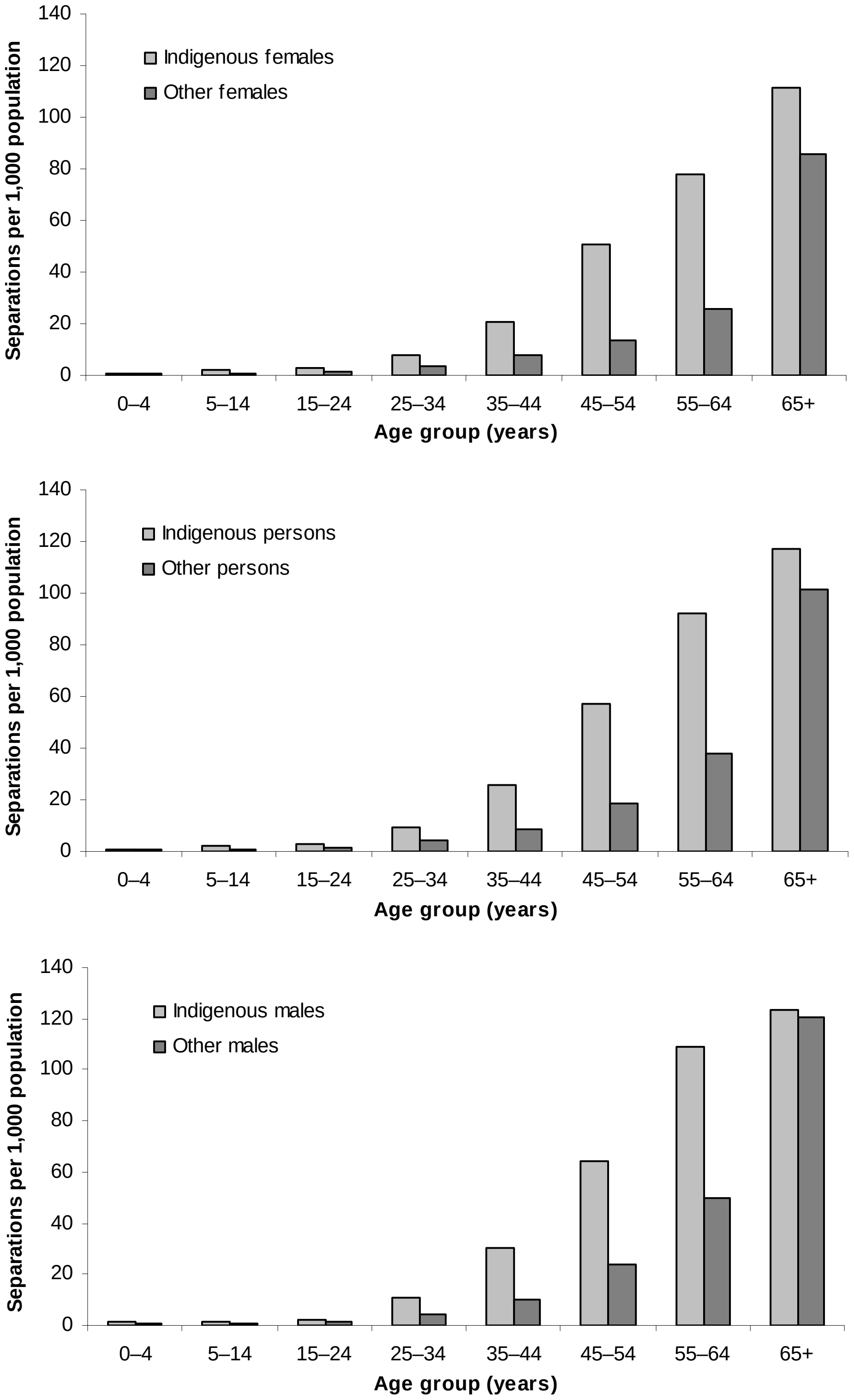
Sources: ABS 1995 National Health Survey (Indigenous supplement); 2001 National Health Survey (Indigenous supplement); 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Hospitalisations

- For the two-year period July 2002 to June 2004, there were 320,101 hospitalisations for circulatory diseases in Queensland, Western Australia, South Australia and the Northern Territory combined, 9,815 (3%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples.
- Circulatory disease is the eighth most common diagnosis 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 two-year period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory, Indigenous males and females had higher hospitalisation rates for circulatory diseases than other males and females across all age groups (Figure 1.05.1).
- The greatest difference in hospitalisation rates occurred in the 25–34, 35–44 and 45–54 year age groups where Indigenous males and females were hospitalised at around three to four times the rate of other Australians.
- 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 (5,185) and 47% were females (4,630).



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.05.1: Age-specific hospitalisation rates for a principal diagnosis of circulatory disease, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004

Hospitalisations by state/territory

Table 1.05.3 presents hospitalisations for a principal diagnosis of diseases of the circulatory system for the two-year period July 2002 to June 2004.

- In all four jurisdictions, Indigenous males and females were hospitalised for circulatory diseases at around twice the rate of other males and females.

Table 1.05.3: Hospitalisations for principal diagnosis of diseases of the circulatory system, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	Rate per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	Rate per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
Qld									
Males	2,176	43.5	41.3	45.8	93,490	27.0	26.8	27.1	1.6*
Females	2,050	36.3	34.5	38.2	68,642	17.6	17.5	17.7	2.1*
Persons	4,226	39.6	38.2	41.0	162,132	22.1	22.0	22.2	1.8*
WA									
Males	1,381	44.5	41.8	47.3	40,978	23.9	23.7	24.1	1.9*
Females	1,207	34.5	32.3	36.7	29,956	15.3	15.1	15.4	2.3*
Persons[(j)]	2,588	39.1	37.4	40.8	70,947	19.4	19.2	19.5	2.0*
SA									
Males	537	44.5	39.8	49.1	41,735	26.5	26.3	26.8	1.7*
Females	464	36.4	32.6	40.3	32,656	17.0	16.9	17.2	2.1*
Persons	1,001	40.3	37.3	43.2	74,391	21.5	21.3	21.6	1.9*
NT									
Males	1,091	35.6	32.9	38.2	1,917	19.4	18.3	20.4	1.8*
Females	909	26.7	24.6	28.7	899	12.3	11.4	13.2	2.2*
Persons	2,000	30.8	29.2	32.4	2,816	16.2	15.5	16.9	1.9*
Qld, WA, SA & NT[(d)]									
Males	5,185	42.1	40.7	43.5	178,120	26.0	25.8	26.1	1.6*
Females	4,630	33.7	32.6	34.8	132,153	16.8	16.7	16.9	2.0*
Persons[(j)]	9,815	37.6	36.7	38.4	310,286	21.2	21.1	21.2	1.8*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 ICD10-AM (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate Indigenous identification, 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 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.

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

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Hospitalisations by principal diagnosis

Table 1.05.4 presents hospitalisations with a principal diagnosis of diseases of the circulatory system by type of circulatory disease for the two-year period July 2002 to June 2004 for the four jurisdictions.

- For the two-year period July 2002 to June 2004 in 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 (47%), followed by other heart disease (30%).
- In Queensland, Western Australia, South Australia and the Northern Territory, Indigenous males and females were hospitalised for rheumatic heart disease at much higher rates than other males and females (seven and 11 times higher 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 hypertensive diseases.

Table 1.05.4: Hospitalisations of Indigenous persons for principal diagnosis of diseases of the circulatory system, by type of circulatory disease and sex, Qld, WA, SA and NT, July 2002–June 2004[a][b][c][d]

	Males						Females						Persons					
Principal diagnosis	**No.**	**%**[e]	**Rate per 1,000**[f]	**LCL 95%**[g]	**UCL 95%**[h]	**Ratio**[i]	**No.**	**%**[e]	**Rate per 1,000**[f]	**LCL 95%**[g]	**UCL 95%**[h]	**Ratio**[i]	**No.**	**%**[e]	**Rate per 1,000**[f]	**LCL 95%**[g]	**UCL 95%**[h]	**Ratio**[i]
Ischaemic heart disease (I20–I25)	2,415	46.6	19.5	18.6	20.4	1.8*	1,847	39.9	13.9	13.2	14.6	2.8*	4,262	43.4	16.5	15.9	17.1	2.2*
Acute myocardial infarction (I21)	*831*	*16.0*	*6.3*	*5.8*	*6.8*	*2.2**	*458*	*9.9*	*3.5*	*3.2*	*3.9*	*2.8**	*1,289*	*13.1*	*4.8*	*4.5*	*5.1*	*2.3**
Other heart disease (126–152)	1,544	29.8	12.9	12.1	13.7	1.8*	1.320	28.5	10.5	9.8	11.1	2.1*	2,864	29.2	11.6	11.1	12.1	1.9*
Cerebrovascular disease (160–169)	383	7.4	4.1	3.6	4.6	2.0*	385	8.3	3.4	3.0	3.7	2.1*	768	7.8	3.7	3.4	4.0	2.0*
Stroke (I60–I64)	*338*	*6.5*	*3.7*	*3.2*	*4.1*	*2.3**	*363*	*7.8*	*3.2*	*2.8*	*3.6*	*2.5**	*701*	*7.1*	*3.4*	*3.1*	*3.7*	*2.4**
Rheumatic heart disease (I00–I09)	204	3.9	0.7	0.5	0.8	6.6*	363	7.8	1.3	1.1	1.4	10.9*	567	5.8	1.0	0.9	1.1	9.0*
Hypertension disease (I10–115)	166	3.2	1.2	1.0	1.4	4.0*	252	5.4	1.7	1.4	1.9	3.8*	418	4.3	1.4	1.3	1.6	3.8*
Other diseases of the circulatory system (I70–I99)[j]	473	9.1	3.7	3.3	4.2	0.7*	463	10.0	3.0	2.7	3.4	0.6*	936	9.5	3.3	3.1	3.6	0.6*
Total	**5,185**	**100.0**	**42.1**	**40.7**	**43.5**	**1.6***	**4,630**	**100.0**	**33.7**	**32.6**	**34.8**	**2.0***	**9,815**	**100.0**	**37.6**	**36.7**	**38.4**	**1.8***

(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, Qld, WA, SA and NT, July 2002–June 2004(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 ICD10-AM (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Percentage of male, female and total hospitalisations of Indigenous persons in the period 2002–03 to 2003–04.

(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 AIHW National Hospital Morbidity Database.

Hospitalisations by associated diagnosis

Table 1.05.5 presents hospitalisations for associated causes of diseases of the circulatory system for Aboriginal and Torres Strait Islander peoples in Queensland, Western Australia, South Australia and the Northern Territory combined.

- For the two-year period July 2002 to June 2004, hospitalisations of Indigenous Australians with a principal diagnosis of circulatory diseases were commonly reported with other diseases of the circulatory system (58%), the disease category 'contact with health services and factors influencing health status' which includes dialysis, and endocrine, metabolic and nutritional disorders (47%).
- In particular, hospitalisations with a principal diagnosis of ischaemic heart disease, cerebrovascular disease and other heart disease were commonly reported with an associated diagnosis of endocrine, metabolic and nutritional disorders (58%, 49% and 48% 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 associated diagnosis of hospitalisation (54%).

Table 1.05.5: Hospitalisations of Indigenous persons for principal diagnosis of circulatory disease, by associated causes of hospitalisation, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Reported with a principal diagnosis of circulatory disease								
Associated cause 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 circulatory system (I00–I99)	70.3	*75.4*	60.7	55.6	*56.2*	40.9	18.4	24.4	58.1
Contact with health services & factors influencing health status (includes dialysis)	62.6	*69.0*	51.4	53.1	*52.9*	38.6	43.8	40.5	54.3
Endocrine, nutritional & metabolic diseases (E00–E90)	57.8	*60.4*	47.5	48.6	*47.9*	13.1	39.0	23.5	47.4
Diseases of the genitourinary system (N00–N99)	13.3	*17.7*	19.5	16.7	*17.5*	7.1	17.2	11.1	15.0
Diseases of the respiratory system (J00–J99)	10.1	*12.6*	23.1	14.2	*14.3*	12.3	7.4	4.7	13.7
Mental & behavioural disorders (F00–F99)	9.8	*9.7*	16.7	18.4	*18.7*	4.4	15.1	9.7	12.4
Symptoms, signs & abnormal clinical & laboratory findings (R00–R99)	6.2	*8.5*	13.2	35.0	*36.1*	8.1	15.8	7.6	11.1
Diseases of the nervous system (G00–G99)	4.4	*5.4*	5.5	54.4	*57.5*	1.6	4.1	3.2	8.4
Diseases of the digestive system (K00–K93)	4.8	*5.8*	7.7	7.0	*7.6*	7.6	4.5	12.8	6.7
Diseases of the blood and disorders involving immune mechanism (D50–D89)	5.2	*7.1*	6.7	4.8	*4.9*	15.0	4.5	9.1	6.5

(continued)

Table 1.05.5 (continued): Hospitalisations of Indigenous persons for principal diagnosis of circulatory disease, by associated causes of hospitalisation, Qld, WA, SA and NT, July 2002–June 2004(a)(b)(c)(d)

	Reported with a principal diagnosis of circulatory disease								
Associated cause 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								
Certain infectious and parasitic diseases (A00–B99)	4.1	*7.2*	7.6	12.1	*12.7*	11.1	4.3	7.2	6.5
Diseases of the eye and adnexa (H00–H59)	3.8	*4.3*	3.8	8.5	*8.6*	0.4	5.7	1.8	3.9
Injury & poisoning (S00–T98)	3.3	*4.3*	3.3	3.9	*3.7*	3.7	3.1	6.1	3.6
Other(f)	4.7	*6.1*	9.8	9.1	*9.6*	11.3	9.8	13.6	8.0
Total number	**4,262**	***1,289***	**2,864**	**768**	***701***	**567**	**418**	**936**	**9,815**

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

(b) Categories are based on the ICD10-AM (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate Indigenous identification, 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 four 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 associated diagnosis can be reported for each hospitalisation.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Time series analysis

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for diseases of the circulatory system over the five-year period 1998–99 to 2003–04 are presented in Table 1.05.6 and Figure 1.05.2.

- In Queensland, Western Australia, South Australia and the Northern Territory, there were significant increases in hospitalisation rates for circulatory diseases among Indigenous males during the period 1998–99 to 2003–04. There was no significant change in the hospitalisation rates for Indigenous females.
- There were significant declines in hospitalisation rates among other Australian males, females and persons during the same period, with an average yearly decrease in the rate of around 0.5 per 1,000 population.
- 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 2003–04. The fitted trend implies an average yearly increase of 0.1 in the rate ratio and 0.8 per 1,000 in the rate difference between Indigenous and other Australians for the period 1998–99 to 2003–04. This reflects a relative and absolute increase in the gap between hospitalisation rates for Indigenous and other Australians for circulatory diseases.

It should be noted 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 impact on 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 to hospitals rather than a worsening of health.

Table 1.05.6: Age-standardised hospitalisation rates, rate ratios and rate differences from circulatory diseases, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	37.3	39.8	37.3	38.6	40.8	43.5	1.0*
Females	34.5	35.5	32.3	34.4	34.3	33.0	−0.2
Persons	35.9	37.6	34.7	36.4	37.4	37.8	0.3
Other Australian[(b)] rate per 1,000							
Males	28.9	28.7	27.6	27.0	26.4	25.8	−0.6*
Females	18.6	18.4	18.0	17.7	17.1	16.7	−0.4*
Persons	23.5	23.2	22.5	22.1	21.5	21.0	−0.5*
Rate ratio[(c)]							
Males	1.3	1.4	1.4	1.4	1.5	1.7	0.1*
Females	1.5	1.5	1.4	1.6	1.6	1.6	0.0*
Persons	1.5	1.6	1.5	1.6	1.7	1.8	0.1*
Rate difference[(d)]							
Males	8.4	11.2	9.7	11.6	14.4	17.6	1.7*
Females	11.0	12.2	9.7	12.3	12.7	12.0	0.3
Persons	12.4	14.3	12.1	14.3	15.8	16.7	0.8*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

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

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

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

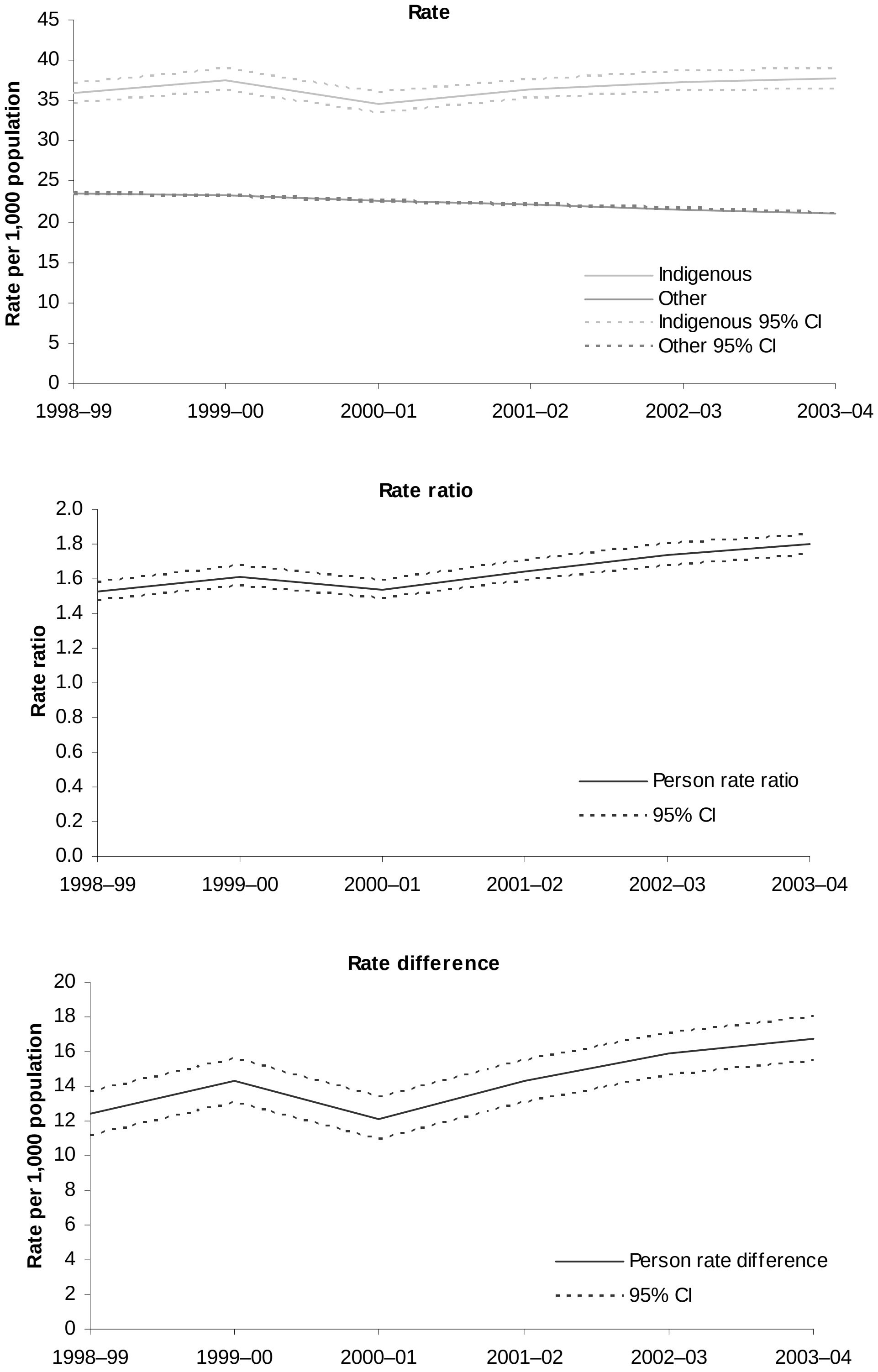
Note: Rates have been directly age standardised using the 2001 Australian standard population.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

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:
    - Qld 80%
    - WA 94%
    - SA 90%
    - NT 98%
  - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study—from 70% in 1998–99 to 80% in 2003–04 for Queensland; from 90% to 94% for Western Australia,

  from 85% to 90% for South Australia, and from 96% to 98% for the Northern Territory.
  - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 90% in 1998–99 to 80% in 2003–04 for Queensland, from 98% to 94% for Western Australia, from 95% to 90% for South Australia, and from 100% to 98% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were more extreme than has been posted under these scenarios, then the observed trends in hospitalisations might not persist.
- The increases in hospitalisation rates for Indigenous males over the period 1998–99 to 2003–04 remained significant under the constant and decreasing identification scenarios.
- The decreases in hospitalisation rates for other Australian males, females and persons remained significant under all three scenarios.
- The increases in hospitalisation rate ratios for males remained significant under all three scenarios, for females remained significant only under the decreasing identification scenario, and for persons remained significant under the constant and decreasing identification scenarios.
- The increases in the hospitalisation rate differences between Indigenous and other males remained significant under all three scenarios, while for persons the increase in rate differences remained significant under the constant and decreasing identification scenarios.



Source: AIHW analysis of AIHW National Hospital Morbidity database.

Figure 1.05.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from circulatory diseases, Qld, WA, SA and NT, 1998–99 to 2003–04

General practitioner encounters

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. Data for the five-year period 2000–01 to 2004–05 are presented below. Circulatory problems are among the five most common types of problems managed at GP encounters with Indigenous patients.

- In the period 2000–01 to 2004–05 there were a total of 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 10,955 problems were managed. Of these, 9.1% (997) were circulatory problems (Table 1.05.7).
- Circulatory problems were managed at a rate of around 14 per 100 encounters among Indigenous patients.
- After adjusting for differences in age distribution, circulatory problems were managed at GP encounters with Indigenous patients at 1.2 times the rate at encounters with other patients.
- There were around twice as many GP encounters for heart failure and ischaemic heart disease with Indigenous patients than with other patients.

Table 1.05.7: Circulatory problems managed by general practitioners, by Indigenous status of the patient, 2000–01 to 2004–05(a)(b)(c)

	Number		Per cent		Crude rate per 100 encounters						Age-standardised rate per 100 encounters(d)		
Problem managed	**Indigenous**	**Other(e)**	**Indigenous**	**Other(e)**	**Indigenous**	**95% LCL(f)**	**95% UCL(g)**	**Other**	**95% LCL(f)**	**95% UCL(g)**	**Indigenous**	**Other(e)**	**Ratio(h)**
Hypertension(i) (K86, K87)	486	44,345	4.4	6.1	6.7	5.4	8.0	9.5	9.3	17.8	9.8	9.4	1.0
Ischaemic heart disease(i) (K74, K76)	100	6,114	0.9	0.8	1.4	1.0	1.8	1.3	1.3	138.2	2.1	1.3	1.6*
Heart failure (K77)	62	3,628	0.6	0.5	0.8	0.6	1.1	0.8	0.7	2.7	1.7	0.8	2.2*
Cardiac check-up(i) (K30, K31)	53	5,704	0.5	0.8	0.7	0.5	1.0	1.2	1.2	2.5	1.2	1.2	1.0
Atrial fibrillation/ flutter (K78)	31	3,546	0.3	0.5	0.4	0.2	0.6	0.8	0.7	0.3	0.9	0.8	1.2
Total circulatory problems	***997***	***81,462***	***9.1***	***11.3***	***13.7***	***11.3***	***16.1***	***17.5***	***17.2***	***17.8***	***20.9***	***17.3***	***1.2****
Other problems managed	9,997	641,025	90.9	88.7	137.0	116.3	157.7	137.5	136.7	138.2	139.7	137.4	1.0
Total problems	**10,994**	**722,487**	**100.0**	**100.0**	**150.7**	**127.6**	**173.7**	**154.9**	**153.9**	**156.0**	**160.5**	**154.8**	**1.0**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

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

(b) Combined financial year data for five years.

(c) Data for Indigenous and Other Australians have not been weighted.

(d) Directly age-standardised rate per 100 encounters. Figures do not add to 100 as more than one problem can be managed at each encounter.

(e) ‘Other’ includes non-Indigenous patients and patients for whom Indigenous status was ‘not stated’.

(f) LCL = lower confidence interval.

(g) UCL = upper confidence interval.

(h) Rate ratio Indigenous:other.

(i) Includes multiple ICPC–2 or ICPC–2 PLUS codes.

Source: AIHW analysis of BEACH 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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having better identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%.

(continued)

Data quality issues (continued)

The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 ABS's 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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1.06 Acute rheumatic fever and rheumatic heart disease

Incidence and prevalence of acute rheumatic fever and rheumatic heart disease among Aboriginal and Torres Strait Islander people 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 due to difficulties in determining denominator populations for the calculation of rates.

Due to 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 2002–2005. Prevalence data for rheumatic heart disease are at 31 December 2005.

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 only available from the ABS for Census years. 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: Prevalence of circulatory disease.

Analyses

Incidence of acute rheumatic fever

- Between 2002 and 2005 there were 291 new cases of acute rheumatic fever in the Top End of the Northern Territory and Central Australia, 286 (98.3%) of which were of Aboriginal and Torres Strait Islander peoples.

Incidence by sex and age group

- For the four-year period 2002–2005, 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 (57%) of new and recurrent cases of acute rheumatic fever in these regions (Table 1.06.1). 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 2.4 per 1,000 among males and 3.7 per 1,000 among females.
- Approximately 44% of new cases of acute rheumatic fever in the Indigenous population were of males and 56% were of females.

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, 2002–2005[(a)]

	Males					Females					Persons				
	No.	**%**	**Rate per 1,000[(b)]**	**95% LCL[(c)]**	**95% UCL[(d)]**	**No.**	**%**	**Rate per 1,000[(b)]**	**95% LCL[(c)]**	**95% UCL[(d)]**	**No.**	**%**	**Rate per 1,000[(b)]**	**95% LCL[(c)]**	**95% UCL[(d)]**
0–4	n.p.	2.4	n.p.	—	—	n.p.	1.3	n.p.	—	—	5	1.7	0.2	0.0	0.3
5–14	68	54.0	2.4	1.8	3.0	94	58.8	3.7	2.9	4.4	162	56.6	3.0	2.5	3.5
15–24	38	30.2	1.6	1.1	2.2	32	20.0	1.4	0.9	1.9	70	24.5	1.5	1.2	1.9
25–34	10	7.9	0.5	0.2	0.8	18	11.3	0.9	0.5	1.3	28	9.8	0.7	0.4	1.0
35–44	6	4.8	0.4	0.1	0.8	10	6.3	0.7	0.3	1.1	16	5.6	0.6	0.3	0.8
45+	n.p.	0.8	n.p.	—	—	n.p.	2.5	n.p.	—	—	5	1.7	0.2	0.0	0.3
Total	**126**	**100.0**	**1.1**	**0.9**	**1.3**	**160**	**100.0**	**1.4**	**1.2**	**1.6**	**286**	**100.0**	**1.3**	**1.1**	**1.4**

(a) Calender year reporting. Data are presented in four-year groupings due to small numbers each year.

(b) Age-specific rates calculated using the average number of registrations for 2002–2005 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 four-year period 2002–2005, there were 183 new or recurrent cases of acute rheumatic fever in the Top End of the Northern Territory, 97% (178) of these were Indigenous Australians. For the same period in Central Australia, there were 108 cases of acute rheumatic fever registered, all of whom were Indigenous Australians (Table 1.06.2).
- In 2002–2005, incidence of acute rheumatic fever among Indigenous Australians in the Top End of the Northern Territory was around 1.1 per 1,000 and in Central Australia the incidence rate was around 1.5 per 1,000 (Table 1.06.2).

Table 1.06.2: New or recurrent cases of acute rheumatic fever in the Top End of the Northern Territory and Central Australia, by sex, 2002–2005[(a)]

	Number		Per cent[(b)]		Indigenous		
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Rate per 1,000[(c)]	95% LCL[(d)]	95% UCL[(e)]
NT Top End							
Males	81	n.p.	98.8	1.2	1.0	0.8	1.3
Females	97	n.p.	96.0	4.0	1.3	1.0	1.5
Persons	178	5	97.3	2.7	1.1	1.0	1.3
Central Australia[(f)]							
Males	45	—	100.0	—	1.2	0.9	1.6
Females	63	—	100.0	—	1.7	1.3	2.2
Persons	108	—	100.0	—	1.5	1.2	1.8

(a) Calender year reporting. Data are presented in four-year groupings due to small numbers each year.

(b) Percentage of total male, female and person cases in the period 2002–2005.

(c) Crude rate per 1,000 using the average number of registrations over the period 2002–05 divided by the 2001 estimated resident Indigenous population for the Top End and Central Australia.

(d) LCL = lower confidence limit.

(e) UCL = upper confidence limit.

(f) Excludes cases in WA and SA due to 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 five-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 five 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 two–three year groupings for the period 1995–1997 to 2004–2005 in Table 1.06.3. Rates for non-Indigenous Australians are not presented due to the small number of cases each year.

It should be noted that as population data for the Top End and Central Australia are only available for Census years, 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 2004–2005.

- Over the periods 1995–1997 to 1998–2000 and 2001–2003 to 2004–2005, there were no significant changes in the number of cases or rates of acute rheumatic fever among Indigenous Australians in the Top End of the Northern Territory or Central Australia (Table 1.06.3; Figure 1.06.1).

It should also be noted 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 2004–2005

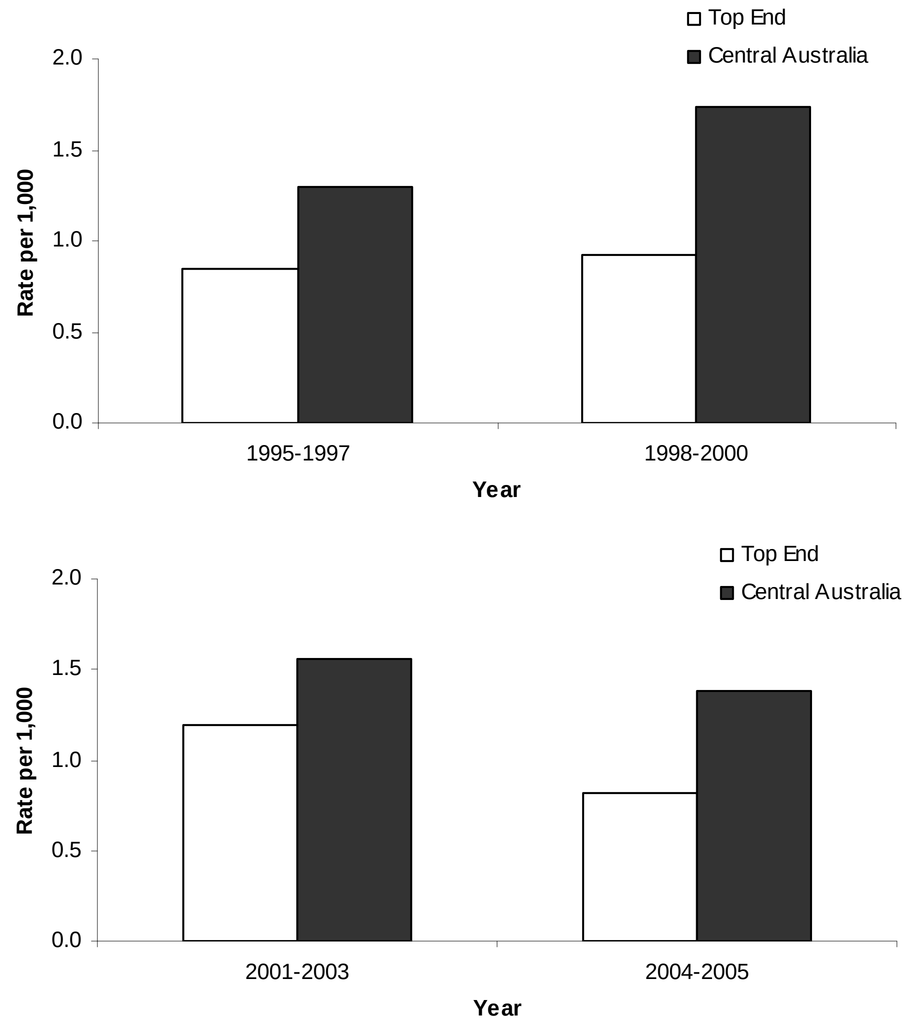
	1995–97	1998–2000	Difference in rates[(b)]	2001–03	2004–05	Difference in rates[(b)]
Top End NT						
Number	88	96	. .	139	63	. .
Rate	0.8	0.9	0.1	1.2	0.8	−0.4
Central Australia						
Number	67	90	. .	85	50	. .
Rate	1.3	1.7	0.4	1.6	1.4	−0.2

* Represents significant increases or decreases over the period 1995–1997 to 1998–2000 and 2001–03 to 2004–2005 at the p<.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 2004–2005.

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

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



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 2004–2005

Prevalence of rheumatic heart disease

- As at 31 December 2005, there were 1,209 cases of rheumatic heart disease in the Top End of the Northern Territory and Central Australia, 1,110 (91.8%) of whom were of Indigenous people.

Prevalence by sex and age group

- As at 31 December 2005, rates of rheumatic heart disease in the Top End of the Northern Territory and Central Australia were between 28 per 1,000 and 33 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 15–24, 25–34 and 35–44 year age groups, where rate ratios were between 77 and 98.
- Approximately 35% of cases of rheumatic heart disease in the Indigenous population were among Indigenous males and 65% among Indigenous females.
- The overall prevalence rate for Indigenous males in the Top End of the Northern Territory and Central Australia was around 14 per 1,000. For Indigenous females, the prevalence rate was much higher at around 25 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 2005

	Males						Females						Persons					
	No.	**%**	**Rate per 1,000(a)**	**95% LCL(b)**	**95% UCL(c)**	**Rate ratio(d)**	**No.**	**%**	**Rate per 1,000(a)**	**95% LCL(b)**	**95% UCL(c)**	**Rate ratio(d)**	**No.**	**%**	**Rate per 1,000(a)**	**95% LCL(b)**	**95% UCL(c)**	**Rate ratio(d)**
0–14	45	11.5	4.2	3.0	5.5	33.7*	54	7.5	5.5	4.1	7.0	82.8*	99	8.9	4.9	3.9	5.8	25.0*
15–24	107	27.2	18.6	15.0	22.1	—	163	22.7	29.0	24.5	33.4	44.2*	270	24.3	23.7	20.9	26.5	77.0*
25–34	97	24.7	19.6	15.7	23.5	68.3*	192	26.8	38.5	33.1	44.0	126.0*	289	26.0	29.1	25.8	32.5	98.3*
35–44	85	21.6	25.0	19.7	30.4	56.7*	150	20.9	41.2	34.6	47.8	98.7*	235	21.2	33.4	29.1	37.7	77.6*
45–54	27	6.9	13.1	8.1	18.0	19.0*	93	13.0	41.7	33.2	50.2	19.5*	120	10.8	27.9	22.9	32.9	20.7*
55–64	24	6.1	22.7	13.6	31.8	24.3*	43	6.0	36.0	25.2	46.8	13.0*	67	6.0	29.8	22.6	36.9	17.8*
65+	8	2.0	12.0	3.7	20.3	5.5*	22	3.1	23.2	13.5	32.9	3.5*	30	2.7	18.6	11.9	25.2	4.5*
Total	**393**	**100**	**13.8**	**12.4**	**15.2**	**31.3***	**717**	**100.0**	**25.3**	**23.4**	**27.1**	**25.2***	**1,110**	**100.0**	**19.5**	**18.4**	**20.7**	**27.8***

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

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 2005.

- As at 31 December 2005, there were 962 cases of rheumatic heart disease in the Top End of the Northern Territory, 91% (876) of whom were Indigenous Australians.
- For the same reference period, there were 247 cases of rheumatic heart disease in Central Australia, 94.7% (234) of whom were Indigenous Australians.
- 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 28 and 17 times the rates for non-Indigenous males and females respectively.
- In 2005, the prevalence rate of rheumatic heart disease among Indigenous Australians in Central Australia was around 29 times the rate for non-Indigenous Australians.

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 2005

	Number		Per cent[a]		Indigenous			Non-Indigenous			
	Indigenous	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Rate per 1,000[b]**	**95% LCL[c]**	**95% UCL[d]**	**Rate per 1,000[b]**	**95% LCL[c]**	**95% UCL[d]**	**Ratio[e]**
NT Top End											
Males	308	29	91.4	8.6	18.2	15.8	20.6	0.6	0.3	0.9	28.4*
Females	568	57	90.9	9.1	34.0	30.7	37.2	1.8	1.3	2.4	18.6*
Persons	876	86	91.1	8.9	26.4	24.3	28.4	1.2	0.7	1.7	22.3*
Central Australia[f]											
Males	85	n.p.	95.5	4.5	9.8	7.3	12.3	n.p.	n.p.	n.p.	n.p.
Females	149	9	94.3	5.7	19.4	15.8	22.9	0.6	0.2	1.1	30.4*
Persons	234	13	94.7	5.3	14.9	12.7	17.1	0.6	0.5	0.8	24.4*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

(a) Percentage of total registrations for males, females and 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 WA and SA due to 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 better awareness of the condition and its symptoms rather than an actual rise in the number of cases.

Data quality issues

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

References

Hanna JN & Heazlewood RJ 2005. The epidemiology of acute rheumatic fever in Indigenous people in north Queensland. Australian and New Zealand Journal of Public Health 29(4):313–17.

1.07 High blood pressure

The prevalence of 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 indicator come from the National Aboriginal and Torres Strait Islander Health Survey, the Bettering the Evaluation and Care of Health (BEACH) survey and the AIHW's 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 six–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 Bettering the Evaluation and Care of Health (BEACH) survey which is conducted by the AIHW and the 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 five-year period 2000–01 to 2004–05, during which there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.6% of total GP encounters.

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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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-reported prevalence

Self-reported data from the National Aboriginal and Torres Strait Islander Health Survey on the prevalence of high blood pressure or 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 or hypertension compared to 10% of non-Indigenous males and females.
- High blood pressure or 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 to 32% and 36% of non-Indigenous males and females respectively.
- In 2004–05, the prevalence of high blood pressure or 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 or hypertension among Indigenous Australians between 2001 and 2004–05.

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

	Males		Females	
Age group	**Indigenous (%)**	**Non-Indigenous (%)**	**Indigenous (%)**	**Non-Indigenous (%)**
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 or hypertension,[(a)] by sex and remoteness, 1995, 2001 and 2004–05

	1995(a)		2001		2004–05	
	Males (%)	**Females (%)**	**Males (%)**	**Females (%)**	**Males (%)**	**Females (%)**
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) Non-remote data are not available for the 1995 National Health Survey.

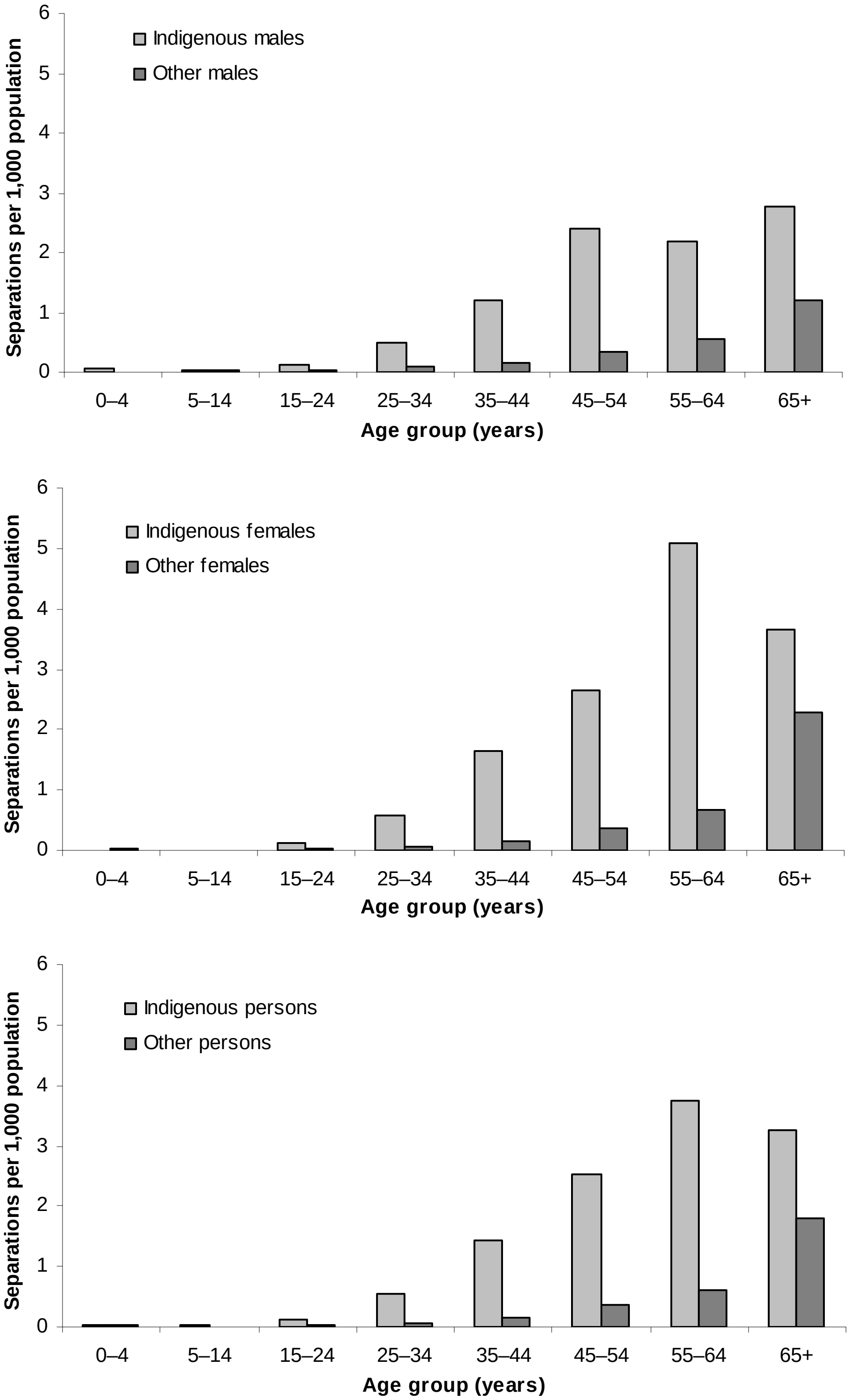
Sources: ABS and AIHW analysis of ABS 1995 National Health Survey (Indigenous supplement); 2001 National Health Survey (Indigenous supplement); 2004–05 National Aboriginal and Torres Strait Islander Health Survey.

Hospitalisations

- In the two-year period July 2002 to June 2004 there were 5,694 hospitalisations for hypertensive disease in Queensland, Western Australia, South Australia and the Northern Territory combined, 418 (7.3%) of which were hospitalisations of Aboriginal and Torres Strait Islander people.
- Hospitalisations from hypertensive disease (hypertension) accounted for 0.1% of total hospitalisations of Aboriginal and Torres Strait Islander people.

Hospitalisations by age and sex

- For the two-year period July 2002 to June 2004, in 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 six and seven times the rate of other males in these age groups and Indigenous females were hospitalised at between seven and 10 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 males, hospitalisation rates for hypertensive disease were highest in the 65 years and over age group, whereas for females, hospitalisation rates were highest in the 55–64 year age group for Indigenous females and the 65 years and over age group for other females.
- Approximately 40% of Indigenous Australians hospitalised for hypertensive disease among Indigenous Australians were males (166) and 60% were females (252) (Table 1.07.3).
- There were around 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.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.07.1: Age-specific hospitalisation rates for a principal diagnosis of hypertensive disease, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004

Table 1.07.3: Hospitalisations of Indigenous persons for principal diagnosis of hypertensive disease, by sex, Qld, WA, SA and NT, July 2002–June 2004(a)(b)(c)d)

	Indigenous				Other(i)				
	No.	Rate per 1,000(f)	LCL 95%(g)	UCL 95%(h)	No.	Rate per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Ratio(i)
Males	166	1.2	1.0	1.4	1,981	0.3	0.3	0.3	4.0*
Females	252	1.7	1.4	1.9	3,295	0.4	0.4	0.5	3.8*
Persons	418	1.4	1.3	1.6	5,276	0.4	0.4	0.4	3.8*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate Indigenous identification, 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 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 AIHW National Hospital Morbidity Database.

General practitioner encounters

Information about general practitioner encounters is available from the BEACH survey. Data for the five-year period 2000–01 to 2004–05 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 2000–01 to 2004–05 there were a total of 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 10,955 problems were managed. Of these, 486 (6.6%) were for hypertension.
- Hypertension was managed at GP encounters at a rate of 6.7 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, 2000–01 to 2004–05[b][c][d]

	Number		Crude rate per 100 encounters						Age-standardised rate 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	208	18,093	7.0	5.5	8.4	9.6	9.3	9.8	9.5	9.4	1.0
Females	272	25,846	6.4	5.0	7.9	9.5	9.3	9.7	10.1	9.5	1.1
Persons	486	44,345	6.7	5.4	8.0	9.5	9.3	17.8	9.8	9.4	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 five years.

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

(e) Directly age-standardised rate 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.

Source: AIHW analysis of BEACH 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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publication (ABS 2006).

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.

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 people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%.

(continued)

Data quality issues (continued)

The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 ABS's 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 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 further be 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 hypertension are significantly lower than the prevalence in the population as there is very little hospitalisation for hypertension.*

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.

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1.08 Diabetes

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

Data sources

Data for this indicator come from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), the Bettering the Evaluation and Care of Health (BEACH) survey and the AIHW's 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 six-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 and the 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 five-year period 2000–01 to 2004–05, during which there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.6% of total GP encounters.

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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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-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.

- In 2004–05, after adjusting for differences in age structure, approximately 12% of Indigenous Australians reported diabetes or high sugar levels compared to 4% of non-Indigenous Australians.
- The greatest difference in prevalence rates between Indigenous and non-Indigenous Australians was among those aged 45–54 years and over. Indigenous Australians were more than five times as likely to report diabetes as non-Indigenous Australians in this age group (Table 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%).
- 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).
- 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
	%	%
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.

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
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
Remote	n.a.	7	9
Non-remote	4	4	5
Total	**n.a.**	**5**	**6**
Total number	265,416	442,995	474,310

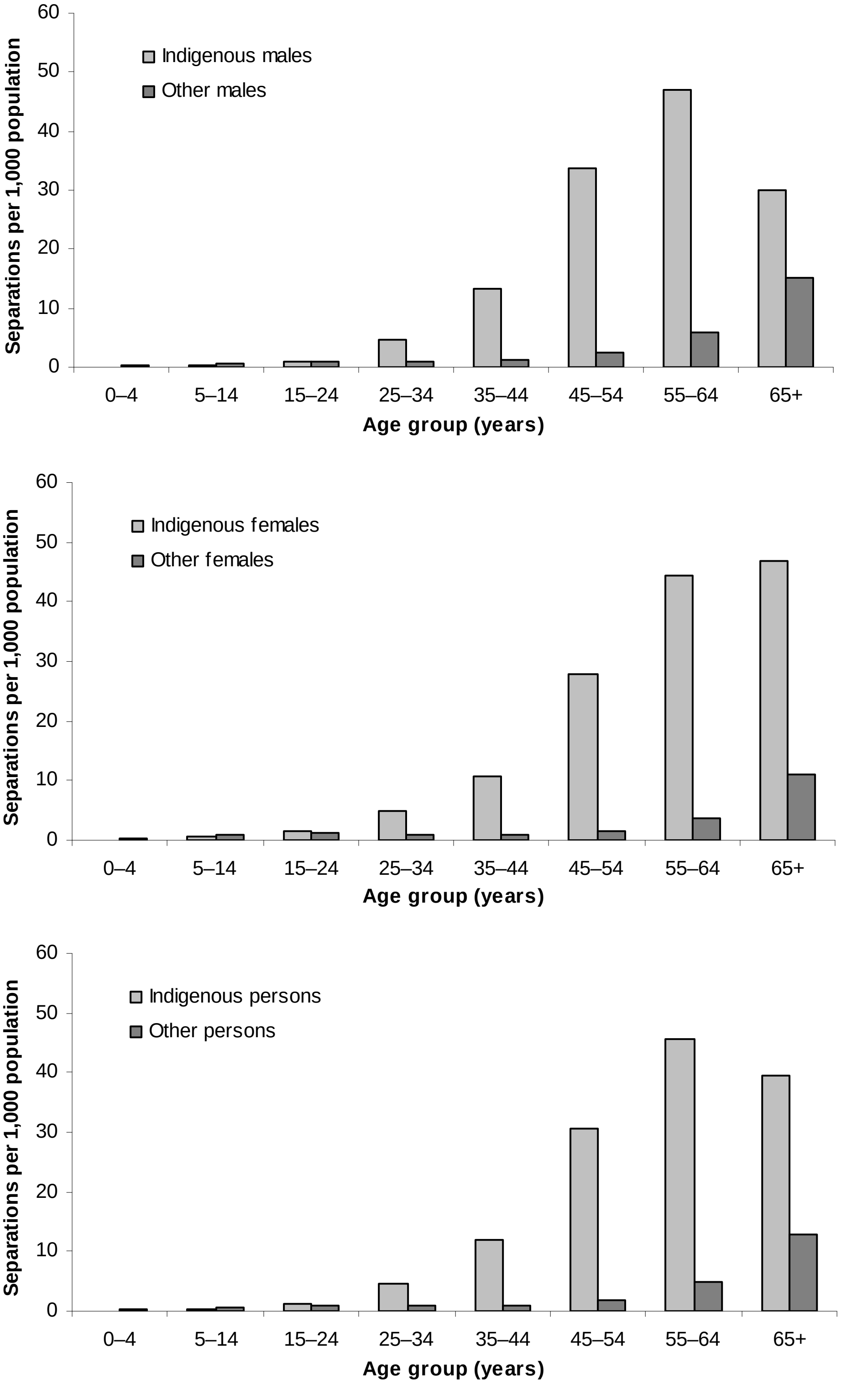
Sources: ABS 2006; 1995 National Health survey (Indigenous supplement); 2001 National Health Survey (Indigenous supplement).

Hospitalisations

- In the two-year period July 2002 to June 2004, there were 46,636 hospitalisations for diabetes in Queensland, Western Australia, South Australia and the Northern Territory combined, 4,508 hospitalisations (9.7%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples (Table 1.08.4).
- 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 two-year period July 2002 to June 2004, in 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 1.08.1).
- The greatest difference in rates for both males and females occurred in the 54–64 year age group, where Indigenous males were hospitalised at around 15 times the rate of other males and Indigenous females were hospitalised at 19 times the rate of other females.
- For Indigenous males, hospitalisation rates from 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 48% of Indigenous Australians hospitalised for diabetes were males (2,145) and 52% were females (2,363).



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.08.1: Age-specific hospitalisation rates for a principal diagnosis of diabetes, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004

Hospitalisations by state/territory

Table 1.08.4 presents hospitalisations for a principal diagnosis of diabetes for the two-year period July 2002 to June 2004 for Queensland, Western Australia, South Australia and the Northern Territory.

- In Queensland and Western Australia, Indigenous Australians were hospitalised for diabetes at six times the rate of other Australians. In South Australia, Indigenous Australians were hospitalised for diabetes at five times the rate of other Australians; and in the Northern Territory, Indigenous Australians were hospitalised at three times the rate of other Australians.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males and females were hospitalised for diabetes at five and seven times the rate of other Australians respectively.

Table 1.08.4: Hospitalisations of Indigenous persons for principal diagnosis of diabetes mellitus, by sex, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	Rate per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	Rate per 1,000[(g)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
Qld									
Males	808	14.3	13.1	15.5	9,790	2.8	2.8	2.9	5.1*
Females	887	14.6	13.5	15.7	7,879	2.1	2.0	2.1	7.1*
Persons	1,695	14.5	13.7	15.3	17,669	2.4	2.4	2.4	6.0*
WA									
Males	514	13.5	12.1	14.8	5,642	3.4	3.3	3.4	4.0*
Females	688	18.7	17.1	20.3	5,065	2.6	2.5	2.7	7.1*
Persons	1,202	16.4	15.3	17.4	10,707	3.0	2.9	3.0	5.5*
SA									
Males	247	19.5	16.7	22.3	6,739	4.3	4.2	4.4	4.5*
Females	268	19.7	17.1	22.4	5,956	3.3	3.2	3.4	6.0*
Persons	515	19.8	17.8	21.7	12,695	3.8	3.7	3.8	5.3*
NT									
Males	576	20.2	18.3	22.1	859	8.4	7.7	9.0	2.4*
Females	520	15.9	14.4	17.5	198	2.2	1.9	2.5	7.2*
Persons	1,096	18.0	16.8	19.2	1,057	5.7	5.3	6.1	3.1*
Qld, WA, SA, NT[(d)]									
Males	2,145	15.7	14.9	16.5	23,030	3.4	3.3	3.4	4.7*
Females	2,363	16.3	15.6	17.1	19,098	2.5	2.5	2.5	6.6*
Persons	**4,508**	**16.1**	**15.6**	**16.7**	**42,128**	**2.9**	**2.9**	**2.9**	**5.6***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate coverage of Indigenous identification, 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 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 AIHW National Hospital Morbidity database.

Hospitalisations by principal diagnosis

Table 1.08.5 presents hospitalisations for a principal diagnosis of diabetes by type of diabetic condition for the two-year period July 2002 to June 2004 for Queensland, Western Australia, South Australia and the Northern Territory combined.

- For the period 2002–03 to 2003–04 in Queensland, Western Australia, South Australia and the Northern Territory combined, of all hospitalisation with a principal diagnosis of diabetes, type 2 diabetes was the most common, responsible for 88% of hospitalisations of Indigenous Australians for diabetes (excluding gestational diabetes).
- In the four jurisdictions, Indigenous males and females were hospitalised for type 2 non-insulin-dependent diabetes at much higher rates than other males and females (six and nine times higher respectively).
- Indigenous males and females were hospitalised for other specified diabetes at nine and four times the rate of other males and females respectively.
- Indigenous females were hospitalised for gestational diabetes at four times the rate of other females.

Table 1.08.5: Hospitalisations of Indigenous persons for principal diagnosis of diabetes mellitus, by sex, Qld, WA, SA and NT, July 2002–June 2004(a)(b)(c)(d)

	Males						Females						Persons					
Principal diagnosis	**No.**	**%(e)**	**Rate per 1,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**	**No.**	**%(e)**	**Rate per 1,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**	**No.**	**%(e)**	**Rate per 1,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**
Type 2—non-insulin-dependent diabetes (E11)	1,867	87.0	14.3	13.5	15.0	5.6*	2,093	88.6	15.0	14.3	15.8	8.8*	3,960	87.8	14.8	14.2	15.3	7.0*
Type 1—insulin-dependent diabetes (E10)	245	11.4	1.3	1.1	1.5	1.6*	243	10.3	1.2	1.0	1.3	1.6*	488	10.8	1.2	1.1	1.4	1.6*
Other specified diabetes (E13)	24	1.1	0.1	0.1	0.1	8.5*	9	0.4	0.0	0.0	0.1	4.1*	33	0.7	0.1	0.0	0.1	6.5*
Unspecified diabetes (E14)	9	0.4	0.0	0.0	0.1	2.3	18	0.8	0.1	0.0	0.1	6.7*	27	0.6	0.1	0.0	0.1	4.2*
Total(j)	**2,145**	**100.0**	**15.7**	**14.9**	**16.5**	**4.7***	**2,363**	**100.0**	**16.3**	**15.6**	**17.1**	**6.6***	**4,508**	**100.0**	**16.1**	**15.6**	**16.7**	**5.6***
Gestational diabetes (O24.4)	—	—	—	—	—	—	610	20.5(k)	1.9	1.8	2.1	3.7*	—	—	—	—	—	—

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Percentage of male, female and total hospitalisations of Indigenous people for diabetes (excluding gestational diabetes) in the period 2002–03 to 2003–04. Note: Percentages 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 AIHW National Hospital Morbidity Database.

Hospitalisations by associated diagnosis

Table 1.08.6 presents hospitalisations with a principal diagnosis of diabetes by associated causes of hospitalisation for Aboriginal and Torres Strait Islander peoples in Queensland, Western Australia, South Australia and the Northern Territory.

- For the two-year period July 2002 to June 2004, aside from factors influencing health status and contact with health services, hospitalisations of Indigenous Australians with a principal diagnosis of diabetes were commonly reported with an associated diagnosis of diseases of the circulatory system (39%), diseases of the genitourinary system (29%) and other endocrine, metabolic and nutritional disorders (22%).
- Aside from the diseases mentioned above, insulin-dependent diabetes was commonly reported with an associated diagnosis of mental and behavioural disorders (21%), and non-insulin-dependent diabetes was commonly reported with an associated diagnosis of diseases of the skin (21%) and eyes (20%).

Table 1.08.6: Hospitalisations of Indigenous persons for principal diagnosis of diabetes mellitus, by associated causes of hospitalisation, Qld, WA, SA and NT, July 2002–July 2004[(a)(b)(c)(d)]

	Reported with a principal diagnosis of diabetes				
	Insulin-dependent diabetes (E10)	Non-Insulin-dependent diabetes (E11)	Other specified diabetes (E13)	Unspecified diabetes (E14)	Total
Associated cause of hospitalisation	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**
Factors influencing health status and contact with health services (includes dialysis) (Z00–Z99)	55.1	46.4	66.7	18.5	47.3
Diseases of the circulatory system (I00–I99)	23.0	41.2	57.6	22.2	39.2
Diseases of the genitourinary system (N00–N99)	13.7	30.7	12.1	14.8	28.6
Endocrine, nutritional & metabolic diseases (E00–E90) excluding (E10–E14)	17.8	23.1	24.2	11.1	22.4
Diseases of the skin & subcutaneous tissue (L00–L99)	12.3	21.2	27.3	7.4	20.2
Diseases of the eye & adnexa (H00–H59)	10.2	19.6	15.2	0.0	18.5
Certain infectious and parasitic diseases (A00–B99)	12.9	18.4	39.4	11.1	17.9
Diseases of the nervous system (G00-G99)	7.8	15.6	36.4	0.0	14.8
Mental & behavioural disorders (F00–F99)	20.7	11.0	51.5	3.7	12.3
Symptoms, signs & abnormal clinical & laboratory findings (R00–R99)	11.1	10.2	18.2	11.1	10.3
Neoplasms (cancer) (C00–D48)	6.6	10.8	15.2	0.0	10.3
Diseases of the digestive system (K00–K93)	15.6	7.3	30.3	0.0	8.4
Diseases of the respiratory system	11.9	7.6	3.0	0.0	8.0
Injury & poisoning (S00–T98)	2.5	8.1	15.2	3.7	7.5
Other(e)	8.4	8.1	12.1	0.0	8.1
Total number	**488**	**3,960**	**33**	**27**	**4,508**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 (National Centre for Classification in Health).

(c) Financial year reporting.

(d) Indigenous data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate Indigenous identification, 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 four 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 associated diagnosis can be reported for each hospitalisation.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Time series analysis

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for diabetes over the period 2000–01 to 2003–04 are presented in Table 1.08.7 and Figure 1.08.2. This period has been used for analysis as coding changes were made to diabetes complications in July 1999 and July 2000. Coding for diabetes is only consistent from 2000–01 onwards and data for prior 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, females and persons during the period 2000–01 to 2003–04. The fitted trend implies an average yearly increase in the rate of around 1.0 per 1,000 population.
- There were also significant increases in hospitalisation rates among other Australian males, females and persons during the same period, with an average yearly increase in the rate of around 0.2 per 1,000 population.
- 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 2003–04. This increase was significant for females but not for males.

It should be noted 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 impact on 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 1.08.7: Age-standardised hospitalisation rates, rate ratios and rate differences from diabetes, Qld, WA, SA and NT, 2000–01 to 2003–04

	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000					
Males	13.9	14.4	14.3	17.0	0.9*
Females	14.1	15.7	15.4	17.3	0.9*
Persons	14.0	15.1	15.0	17.3	1.0*
Other rate per 1,000[(b)]					
Males	2.8	3.2	3.3	3.5	0.2*
Females	2.0	2.3	2.4	2.6	0.2*
Persons	2.4	2.7	2.8	3.0	0.2*
Rate ratio[(c)]					
Males	5.0	4.5	4.4	4.9	0.0
Females	5.9	5.7	5.4	5.8	−0.1
Persons	5.9	5.5	5.3	5.8	0.0
Rate difference[(d)]					
Males	11.1	11.2	11.1	13.6	0.7
Females	11.7	12.9	12.5	14.3	0.7*
Persons	11.6	12.4	12.1	14.3	0.8*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 2000–01 to 2003–04.

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

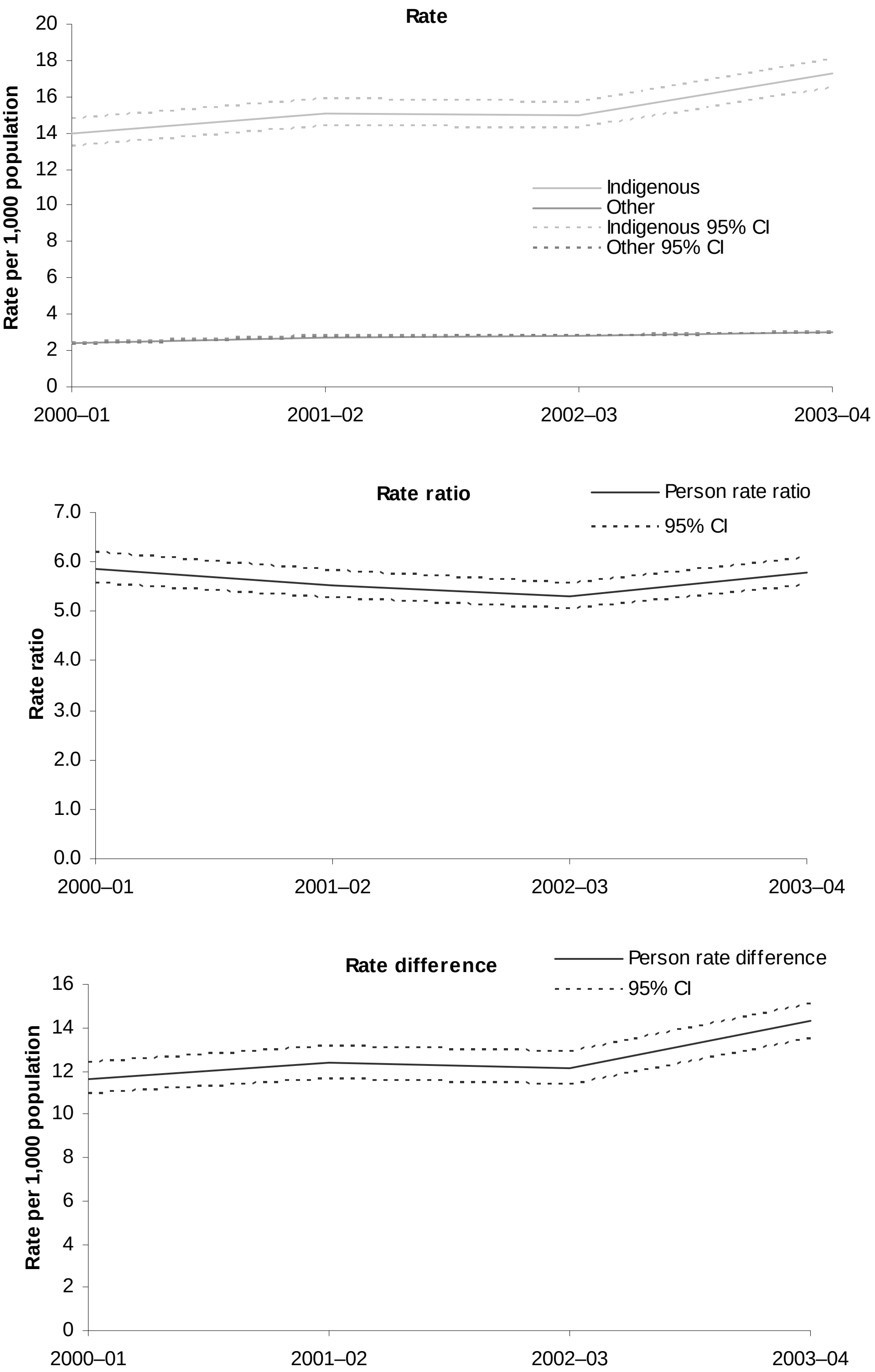
(b) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.08.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from diabetes, Qld, WA, SA and NT, 2000–01 to 2003–04

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:
    - Qld 80%
    - WA 94%
    - SA 90%
    - NT 98%
  - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study—from 74% in 2000–01 to 80% in 2003–04 for Queensland, from 92% to 94% for Western Australia, from 87% to 90% for South Australia, and from 96% to 98% for the Northern Territory.
  - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 85% in 2000–01 to 80% in 2003–04 for Queensland, from 96% to 94% for Western Australia, from 93% to 90% for South Australia, and from 99% to 98% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were 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 2003–04 remained statistically significant under all three identification scenarios except for the increase in rates for Indigenous males which was no longer significant under the increasing identification scenario. The observed increases in the rate difference between Indigenous and other Australian hospitalisation rates for diabetes remained significant under the constant and decreasing identification scenarios.

General practitioner encounters

Information about general practitioner encounters is available from the BEACH survey. Data for the five-year period 2000–01 to 2004–05 are presented in Table 1.08.8. Diabetes is the most common individual problem managed at GP encounters with Indigenous patients.

- In the period 2000–01 to 2004–05 there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 10,955 problems were managed. Of these, 5.1% (561) of problems were due to diabetes.
- Diabetes was managed at a rate of 7.7 per 100 GP encounters with Indigenous patients.
- After adjusting for differences in age distribution, diabetes was managed at encounters with Indigenous patients at three times the rate of encounters with other patients.
- Non-insulin-dependent diabetes (type 2) was the most common type of diabetes managed at encounters with Indigenous patients—at three times the rate of encounters with other patients.
- Insulin-dependent diabetes (type 1) was also managed at encounters with Indigenous patients at around three times the rate of encounters with other patients.
- Gestational diabetes was managed at GP encounters with Indigenous females at four times the rate of encounters with other females.

Table 1.08.8: Diabetes problems managed by general practitioners, by Indigenous status of patient, 2000–01 to 2004–05(a)(b)(c)

	Number		Per cent of total problems		Crude rate per 100 encounters						Age-standardised rate 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)**
Diabetes: non-insulin-dependent (T90)	513	13,059	4.7	1.8	7.0	5.4	8.6	2.8	2.7	2.9	9.5	2.8	3.4*
Diabetes: insulin-dependent (T89)	41	1,311	0.4	0.2	0.6	0.4	0.7	0.3	0.3	0.3	0.7	0.3	2.5*
Total diabetes: non-gestational(i)	*554*	*14,370*	*5.0*	*2.0*	*7.6*	*5.9*	*9.3*	*3.1*	*3.0*	*3.2*	*10.2*	*3.1*	*3.3**
Gestational diabetes (W85)(j)	7	84	0.1	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.1	0.0	3.9*
All diabetes (i)	*561*	*14,454*	*5.1*	*2.0*	*7.7*	*6.0*	*9.4*	*3.1*	*3.0*	*3.2*	*10.3*	*3.1*	*3.3**
Total problems	**10,994**	**722,487**	**100.0**	**100.0**	**150.7**	**127.9**	**173.4**	**154.9**	**154.0**	**155.8**	**160.5**	**154.8**	**1.0**

* Represents results with statistically significant differences in the Indigenous/other comparison at the p<.05 level.

(a) These survey results are likely to undercount the number of Indigenous Australians visiting doctors.
(b) Combined financial year data for five years.
(c) Data for Indigenous and other Australians have not been weighted.
(d) Directly age-standardised rate per 100 encounters.
(e) Includes non-Indigenous patients and patients for whom Indigenous status was ‘not stated’.
(f) LCL = lower confidence interval.
(g) UCL = upper confidence interval.
(h) Rate ratio Indigenous:other.
(i) Includes multiple ICPC–2 or ICPC–2 PLUS codes.
(j) Proportions, rates and ratios are for females only.

Source: AIHW analysis of BEACH 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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publication (ABS 2006).

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.

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. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%.

(continued)

Data quality issues (continued)

The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 ABS's 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 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 (ANZDATA); 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 (ANZDATA), the AIHW's National Hospital Morbidity Database and the AIHW National Mortality Database.

Australian and New Zealand Dialysis and Transplant Registry (ANZDATA)

Information is available on Indigenous persons with end stage renal disease (ESRD) from the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA). 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 ANZDATA 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 ANZDATA 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 ANZDATA 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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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.

While 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 five-year period 2000–2004 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death is a more accurate reflection of mortality during a particular year than year of registration data, however year of occurrence data for 2004 is still incomplete owing to late registrations.

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.

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).

End stage renal disease is a complete or near complete failure of the kidneys in their function to excrete wastes, concentrate urine, and regulate electrolytes. End stage renal disease 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 2002 and 2004, there were 5,797 new patients registered with ANZDATA, of these 532 (9%) identified as Aboriginal or Torres Strait Islander. This is higher than the proportion of Indigenous people in the total population (2.4%).
- Indigenous people commencing ESRD treatment were substantially younger than other Australians commencing ESRD treatment. About two-thirds (63%) of new Indigenous patients registered with ANZDATA were aged less than 55 years, whereas only a third (33%) of other Australians registered were below that age (Table 1.09.1).
- Incidence rates of treated end stage kidney disease for Indigenous Australians were higher than for other Australians across all age groups with the exception of those aged 0–14 years where incidence rates were similar. The difference was marked at ages 45–54 years and 55–64 years where incidence rates for Indigenous Australians were between 14 and 18 times those for other 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 other Australians.
- Between 2002 and 2004, Indigenous males and females were six and 11 times as likely to register for treatment of ESRD as other males and females (Table 1.09.2).
- Incidence rates of treated end stage kidney disease for Indigenous Australians were higher than for other Australians in all states and territories. Rate ratios ranged from 3 in New South Wales and Victoria to 17 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 26 times as likely to register for treatment of ESRD as other Australians in remote areas, 18 times as likely in outer regional areas and 12 times as likely in very remote areas. In major cities and inner regional areas, incidence rates for Indigenous Australians were four–five times those for other Australians living in these areas (Table 1.09.4).

The reasons for the high incidence of treated end stage kidney disease 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 2005).

Table 1.09.1: Incidence of end stage renal disease, by Indigenous status and age group, 2002–2004[(a)]

	Number		Per cent[(b)]		Indigenous	Other	
	Indigenous	**Other[(c)]**	**Indigenous**	**Other[(c)]**	**Rate per 1,000[(d)]**	**Rate per 1,000[(d)]**	**Rate ratio[(e)]**
0–24	13	216	2.4	4.1	—	—	1.4
25–44	123	768	23.1	14.6	0.3	—	7.0*
45–54	201	736	37.8	14.0	1.7	0.1	17.8*
55–64	132	1,012	24.8	19.2	2.2	0.2	14.1*
65+	63	2,533	11.8	48.1	1.6	0.3	4.7*
Total[(f)]	532	5,265	100.0	100.0	0.7	0.1	**8.3***

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

(a) Calendar year reporting. Data are presented in three-year groupings due to small numbers each year.

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

(c) Includes non-Indigenous cases and cases for which Indigenous status was ‘not stated’.

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

(e) Rate ratio Indigenous:other.

(f) 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, 2002–2004[a]

	Male						Female						Total					
Age group	**No.**	**%[b]**	**Rate per 1,000[c]**	**LCL 95%[d]**	**UCL 95%[e]**	**Rate ratio[f]**	**No.**	**%[b]**	**Rate per 1,000[c]**	**LCL 95%[d]**	**UCL 95%[e]**	**Rate ratio[f]**	**No.**	**%[b]**	**Rate per 1,000[c]**	**LCL 95%[d]**	**UCL 95%[e]**	**Rate ratio[f]**
0–4 years	0	0.0	0.0	0.0	0.0	. .	0	0.0	0.0	0.0	0.0	. .	0	0.0	0.0	0.0	0.0	. .
5–9 years	2	0.8	0.0	0.0	0.1	2.8	0	0.0	0.0	0.0	0.0	. .	2	0.4	0.0	0.0	0.0	1.5
10–14 years	0	0.0	0.0	0.0	0.0	. .	0	0.0	0.0	0.0	0.0	. .	0	0.0	0.0	0.0	0.0	. .
15–19 years	0	0.0	0.0	0.0	0.0	. .	8	2.8	0.1	0.0	0.2	8.2*	8	1.5	0.1	0.0	0.1	3.4*
20–24 years	2	0.8	0.0	0.0	0.1	1.2	1	0.4	0.0	0.0	0.0	1.2	3	0.6	0.0	0.0	0.1	1.2
25–44 years	63	25.3	0.3	0.3	0.4	6.2*	60	21.2	0.3	0.2	0.4	8.3*	123	23.1	0.3	0.3	0.4	7.0*
45–64 years	153	61.4	1.8	1.5	2.1	11.6*	180	63.6	2.0	1.7	2.3	21.0*	333	62.6	1.9	1.7	2.1	15.2*
65 +years	29	11.6	1.7	1.1	2.3	3.7*	34	12.0	1.5	1.0	2.0	6.3*	63	11.8	1.6	1.2	2.0	4.7*
Total[g]	**249**	**100.0**	**0.7**	**0.6**	**0.8**	**6.4***	**283**	**100.0**	**0.7**	**0.6**	**0.8**	**11.3***	**532**	**100.0**	**0.7**	**0.7**	**0.8**	**8.3***

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

(a) Calender year reporting. Data are presented in three-year groupings due to small numbers each year.

(b) Percentage of male, female and total registration rates for Indigenous persons in the period 2002–2004.

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

(d) LCL = lower confidence limit.

(e) UCL = upper confidence limit.

(f) Rate ratio Indigenous:other.

(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, 2002–2004[(a)]

	Males			Females			Persons		
	No.	**Rate per 1,000[(b)]**	**Ratio[(c)]**	**No.**	**Rate per 1,000[(b)]**	**Ratio[(c)]**	**No.**	**Rate per 1,000[(b)]**	**Ratio[(c)]**
NSW									
Indigenous	30	0.3	3.3*	17	0.2	2.6*	47	0.2	3.0*
Other[(d)]	993	0.1		703	0.1		1,696	0.1	
Vic									
Indigenous	8	0.3	2.5*	6	0.3	4.3*	14	0.3	3.3*
Other[(d)]	866	0.1		496	0.1		1,362	0.1	
Qld									
Indigenous	76	0.9	7.2*	78	0.8	10.9*	154	0.8	8.7*
Other[(d)]	624	0.1		420	0.1		1,044	0.1	
WA									
Indigenous	47	0.8	6.9*	72	1.2	19.4*	119	1.1	11.5*
Other[(d)]	318	0.1		183	0.1		501	0.1	
SA									
Indigenous	14	0.8	7.5*	13	0.5	9.2*	27	0.6	7.9*
Other[(d)]	258	0.1		144	0.1		402	0.1	
Tas									
Indigenous	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Other[(d)]	59	0.1		45	0.1		104	0.1	
ACT									
Indigenous	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Other[(d)]	79	0.2		49	0.1		128	0.2	
NT									
Indigenous	71	1.7	14.3*	94	2.0	21.5*	165	1.8	17.4*
Other[(d)]	18	0.1		10	0.1		28	0.1	
Australia									
Indigenous	**249**	**0.7**	**6.4***	**283**	**0.7**	**11.3***	**532**	**0.7**	**8.3***
Other[(d)]	**3,215**	**0.1**		**2,050**	**0.1**		**5,265**	**0.1**	

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

(a) Calendar year reporting. Data are presented in three-year groupings due to small numbers each year.

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

(c) Rate ratio Indigenous:other.

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

Source: AIHW analysis of ANZDATA data.

Table 1.09.4: Incidence of end stage renal disease, by Indigenous status and remoteness, 2002–2004[(a)]

	Number		Per cent[(b)]		Indigenous	Other[(c)]	
	Indigenous	Other[(c)]	Indigenous	Other[(c)]	Rate per 1,000[(d)]	Rate per 1,000[(d)]	Rate ratio[(e)]
Major cities	77	3,663	14.6	71.1	0.4	0.1	4.3*
Inner regional	42	1,047	8.0	20.3	0.4	0.1	4.5*
Outer regional	173	380	32.8	7.4	1.1	0.1	17.5*
Remote	112	43	21.2	0.8	1.5	0.1	26.1*
Very remote	124	19	23.5	0.4	1.0	0.1	11.9*
Australia	532	5,265	100.0	100.0	0.7	0.1	**8.3***

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

(a) Calendar year reporting. Data are presented in three-year groupings due to small numbers each year.

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

(c) Other includes registrations for non-Indigenous people and those for whom Indigenous status was ‘not stated’.

(d) Directly age standardised using the Australian 2001 Standard population.

(e) Rate ratio Indigenous:other.

Source: AIHW analysis of ANZDATA data.

Time series analysis

Data on the incidence of ESRD among Indigenous and other Australians for the period 1991–2004 are presented below.

- The number of Indigenous patients starting ESRD treatment has more than tripled over the last decade (from 54 in 1991 to 188 in 2004).
- Over the period 1991–2004, 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). 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 other males and females, however, these increases were not as rapid as in the Indigenous population.
- There were significant increases in both the incidence rate ratios and rate differences between Indigenous and other Australians for ESRD over the period 1991–2004, 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 in the incidence of ESRD among Indigenous people 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, 1991–2004

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Annual change(a)
Indigenous rate per 1,000(b)															
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	0.03*
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	0.03*
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	0.03*
Other(c) rate per 1,000(b)															
Males	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.00*
Females	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.00*
Persons	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.00*
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	6.2	6.4	0.17*
Females	3.6	3.4	5.3	5.3	6.2	4.4	5.0	6.4	4.9	6.1	5.1	6.3	6.2	6.4	0.21*
Persons	4.8	5.2	6.4	7.6	8.2	6.1	8.8	8.0	8.2	7.6	8.5	8.4	7.8	8.6	0.23*
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	0.03*
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	0.03*
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	0.6	0.03*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–2004.

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

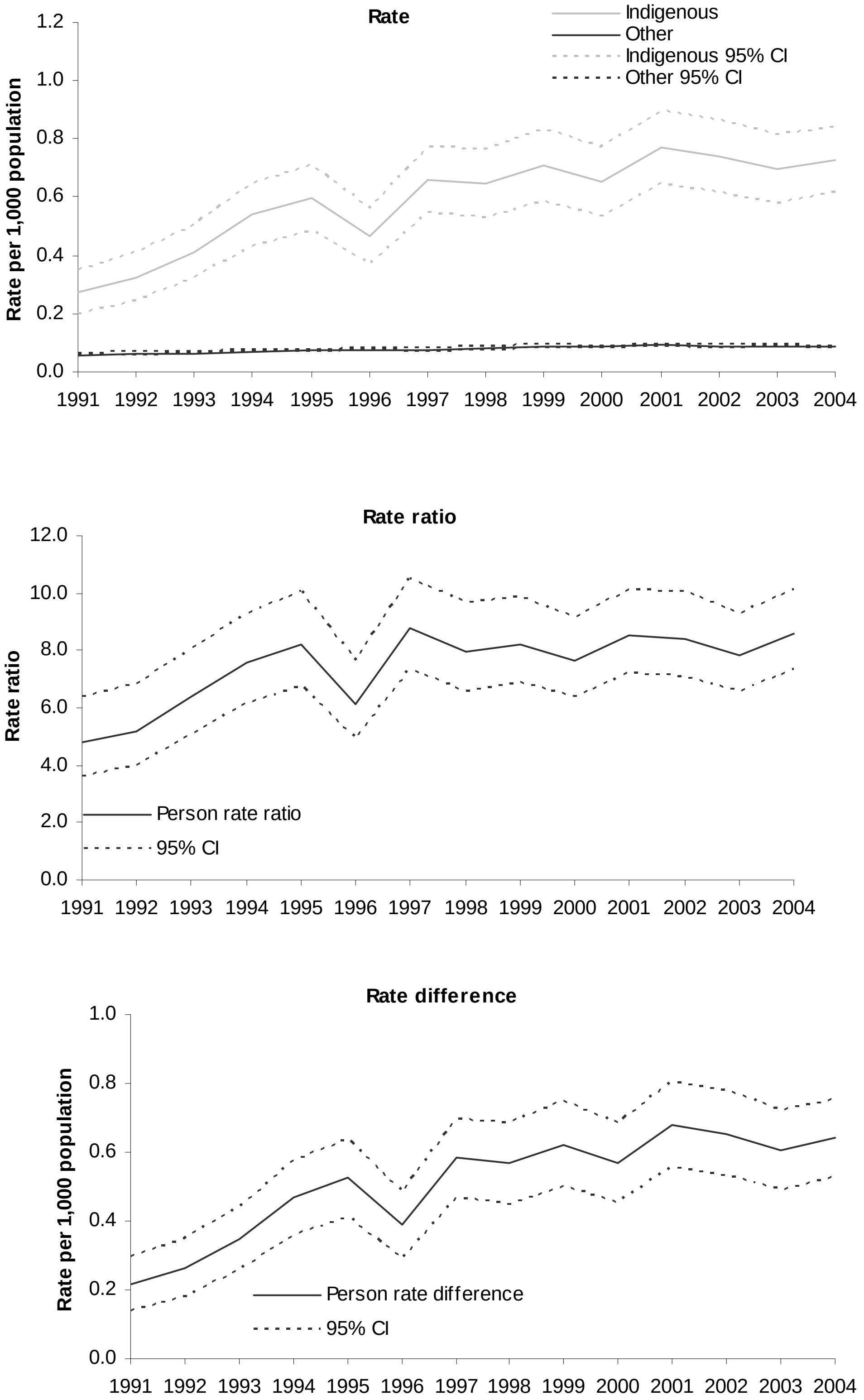
(b) Rates have been directly age standardised using the 2001 Australian standard population.

(c) Other includes registrations for non-Indigenous people and those for whom Indigenous status was not stated.

(d) Incidence rate for non-Indigenous people divided by the rate for other Australians.

(e) Incidence rate for non-Indigenous people minus the rate for other 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, 1991–2004

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 2004, of all Indigenous ESRD patients registered, 87% were reliant on dialysis and only 13% had received a kidney transplant. In comparison, 54% of non-Indigenous Australians living with ESRD were reliant on dialysis and 46% had received a kidney transplant (Table 1.09.6).
- Indigenous Australians were 10 times as likely as other Australians to have ESRD and be reliant on dialysis.

Once dialysis treatment has commenced, Indigenous people are less likely 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 2004[(a)]

	Number		Per cent[(b)]		Rate per 1,000[(c)]		
Treatment	**Indigenous**	**Other[(d)]**	**Indigenous**	**Other[(d)]**	**Indigenous**	**Other[(d)]**	**Ratio[(e)]**
Dialysis	828	7,124	86.7	53.6	3.4	0.3	9.7*
Transplant	127	6,159	13.3	46.4	0.4	0.3	1.4*
Total	**955**	**13,283**	**100.0**	**100.0**	**3.8**	**0.7**	**5.8***

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

(a) Calendar year reporting. Data are presented in three-year groupings due to small numbers each year.

(b) Per cent of Indigenous and other patients receiving dialysis and transplants.

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

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

(e) Rate ratio Indigenous:other.

Source: AIHW analysis of ANZDATA data.

Hospitalisations

- Over the period June 2002 to July 2004, there were 606,320 hospitalisations for chronic kidney disease and its sequelae in Queensland, Western Australia, South Australia and the Northern Territory combined, 130,843 (21.6%) of which were hospitalisations of Indigenous Australians.
- Approximately 42% of total hospitalisations of Indigenous Australians were from 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 Queensland, Western Australia, South Australia and the Northern Territory combined over the period June 2002 to July 2004 are presented in Tables 1.09.7 and 1.09.8 below.

- 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 14 times the rate of other Australians (Table 1.09.7).
- Indigenous Australians were hospitalised for care involving dialysis at 15 times the rate of other Australians, diabetic nephropathy at 18 times the rate of other Australians and chronic renal failure at almost seven times the rate of other Australians.
- Approximately 41% of Indigenous Australians hospitalised for chronic kidney disease and its sequalae were males (54,179) and 59% were Indigenous females (76,570).
- Indigenous males were hospitalised for chronic kidney disease with dialysis at 10 times the rate of other males, and Indigenous females were hospitalised for chronic kidney disease at 21 times the rate of other females (Table 1.09.8).
- Over the period June 2002 to July 2004, there were 141,778 bed days associated with Indigenous chronic kidney disease hospitalisations in 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 (128,337 hospitalisations), the average length of stay in hospital for Indigenous people with chronic kidney disease was 5.1 days compared with 4.1 days for other Australians.

Table 1.09.7: Hospitalisations for chronic kidney disease and its sequalae, by Indigenous status and type of kidney disease, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Number		Per cent[(e)]		Indigenous			Other[(f)]			
	Indigenous	Other[(f)]	Indigenous	Other[(f)]	Rate per 1,000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate per 1000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate Ratio[(j)]
Care involving dialysis (ESRD)	128,684	460,181	98.3	96.8	455.4	452.6	458.1	31.4	31.4	31.5	14.5*
Diabetic nephropathy	757	2,207	0.6	0.5	2.8	2.5	3.0	0.2	0.1	0.2	18.4*
Renal-tubulo interstitial diseases	537	4,679	0.4	1.0	1.2	1.0	1.3	0.3	0.3	0.3	3.6*
Chronic renal failure	442	3,745	0.3	0.8	1.7	1.5	1.9	0.3	0.2	0.3	6.6*
Glomerular diseases	214	1,820	0.2	0.4	0.3	0.3	0.4	0.1	0.1	0.1	2.7*
Hypertensive renal disease	33	459	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	3.5*
Other chronic diseases	176	2,386	0.1	0.5	0.4	0.3	0.5	0.2	0.2	0.2	2.6*
Total	**130,843**	**475,477**	**100.0**	**100.0**	**461.9**	**459.1**	**464.6**	**32.5**	**32.4**	**32.6**	**14.2***

* 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 (National Centre for Classification of Health 2004); ICD-10-AM codes Z49; N18–N19; E102, E112, E132 and E142; N11–N12 and N14–N16; 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Per cent of hospitalisations of Indigenous and non-Indigenous people in the period 2002–03 to 2003–04.

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

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Table 1.09.8: Hospitalisations of Indigenous Australians for chronic kidney disease and its sequalae, by sex and type of kidney disease, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Males						Females					
	No.	%[(e)]	Rate per 1,000[(f)]	95% LCL[(g)]	95% UCL[(h)]	Rate ratio[(i)]	No.	%[(e)]	Rate per 1,000[(f)]	95% LCL[(g)]	95% UCL[(h)]	Rate ratio[(i)]
Care involving dialysis (ESRD)	53,433	98.6	389.6	385.7	393.4	9.7*	75,157	98.2	510.7	506.7	514.6	21.4*
Chronic renal failure	186	0.3	1.4	1.2	1.7	4.5*	256	0.3	1.9	1.6	2.2	9.1*
Diabetic nephropathy	278	0.5	2.0	1.8	2.3	10.9*	479	0.6	3.4	3.0	3.7	28.1*
Renal-tubulo interstitial diseases	72	0.1	0.3	0.2	0.4	2.9*	465	0.6	1.9	1.7	2.1	3.5*
Glomerular diseases	99	0.2	0.3	0.2	0.4	2.1*	115	0.2	0.4	0.3	0.4	3.5*
Hypertensive renal disease	21	0.0	0.1	0.1	0.2	3.8*	12	0.0	0.1	0.0	0.1	3.2*
Other chronic diseases	90	0.2	0.4	0.3	0.5	2.3*	86	0.1	0.4	0.3	0.5	2.8*
Total	**54,179**	**100.0**	**394.2**	**390.4**	**398.1**	**9.6***	**76,570**	**100.0**	**518.7**	**514.7**	**522.7**	**20.7***

* 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 (National Centre for Classification in Health 2004); ICD-10-AM codes Z49; N18–N19; E102, E112, E132 and E142; N11–N12 and N14–N16; 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Per cent of hospitalisations of Indigenous and non-Indigenous persons in the period 2002–03 to 2003–04.

(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 AIHW National Hospital Morbidity Database.

Mortality

- Over the period 2000–2004, in Queensland, Western Australia, South Australia and the Northern Territory, there were 4,109 deaths for which chronic kidney disease was recorded as the underlying cause of death, 269 deaths (6.5%) of which were deaths of Indigenous Australians.
- Approximately 4% of all deaths of Indigenous Australians over this period were from chronic kidney disease.
- Deaths from chronic kidney disease occurred at younger ages among Indigenous Australians than among non-Indigenous Australians.
- 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 almost five times as likely as non-Indigenous Australians to have died from chronic kidney disease between 2001 and 2004.
- Indigenous males died from chronic kidney disease at four times the rate of non-Indigenous males and Indigenous females died from chronic kidney disease at six times the rate of non-Indigenous females.

Data quality issues

ANZDATA

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 due to 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 upon 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 six months for all patients on maintenance dialysis or with functioning renal transplants. In this survey, question five 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 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 people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*

(continued)

Data quality issues (continued)

- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 ABS's 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. 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). While 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/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.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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.

(continued)

Data quality issues (continued)

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 than changes in the identification of Indigenous people in other administrative collections and population Censuses. Denominators used here are sourced from ABS's 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 people

Data sources

Data for this indicator come from the AIHW Dental Statistics Research Unit (Child Dental Health Survey and National Dental Telephone Interview Survey), the ABS 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), 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 2000–03, 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 indicator.

National Dental Telephone Interview Survey

Data on adult dental health come from the 1994–96 National Dental Telephone Interview Survey, and from a survey of adults seeking public dental care in Australia in 2001–02. While the National Dental Telephone Interview Survey is conducted every two and a half years, the 1994–96 survey specifically focused on Indigenous Australians, migrants and rural and remote dwellers.

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 six-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 has been 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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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.

Dental health survey data

Data on the oral health of Indigenous children and adults are presented below.

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, while the DMFT score measures decay experience in permanent teeth. Another measure of good oral health is the proportion of children with no tooth decay.

Children's oral health

Data on both 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 is for 2000, South Australia 2003 and the Northern Territory 2002.

Deciduous teeth

- 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.
- 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 1.10.2).
- 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 in New South Wales, Western Australia and the Northern Territory aged 4–10 years had a higher ratio of untreated deciduous decayed teeth to the total count of decayed, missing and filled teeth (d/dmft) than non-Indigenous children, particularly in rural areas (Figure 1.10.3).

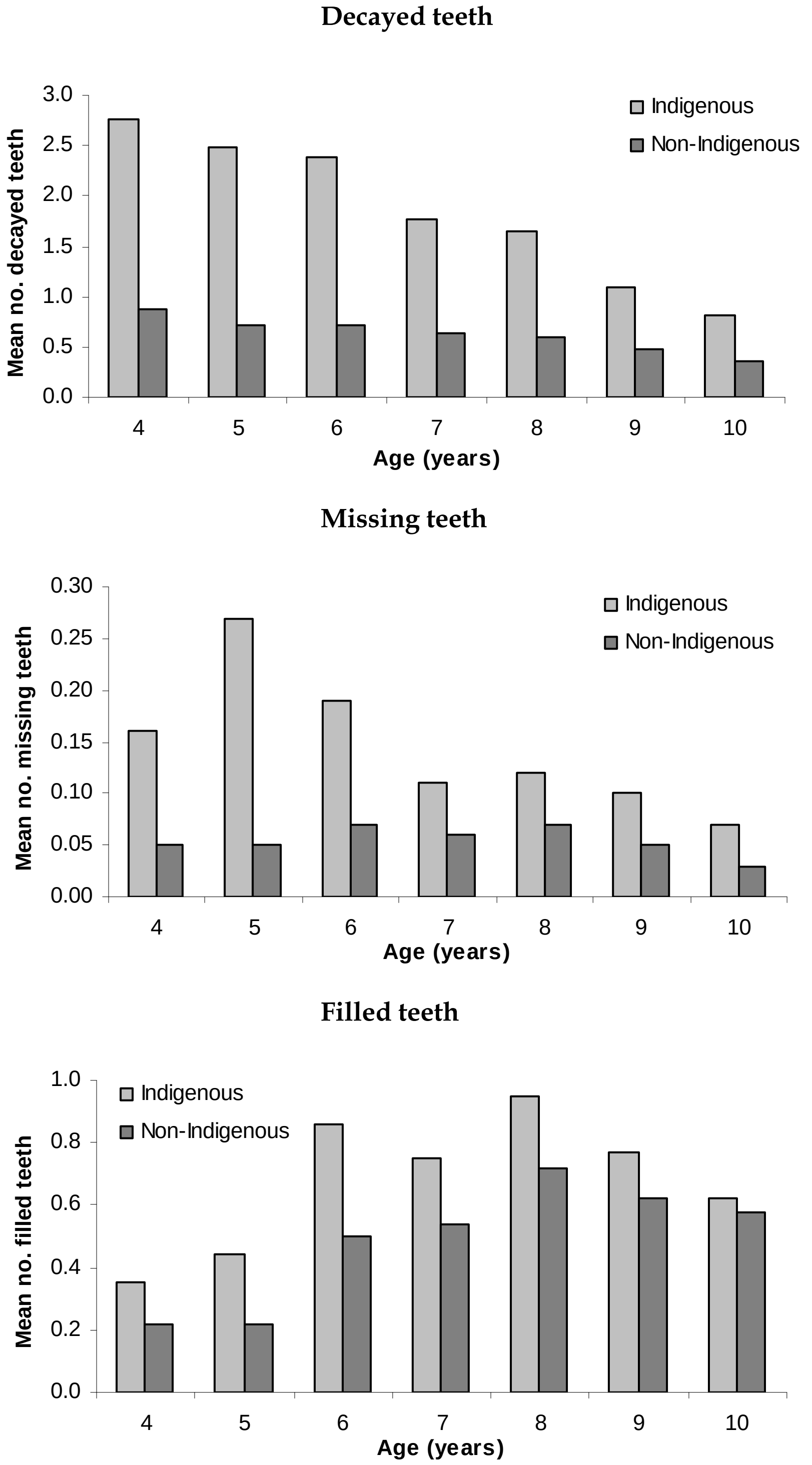
Table 1.10.1: Mean number of decayed, missing or filled deciduous teeth, children aged 4–10 years, by Indigenous status, NSW (2000), SA (2003) and NT (2002)

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)				
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	0.06	[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	0.04	[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	0.49	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

(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.

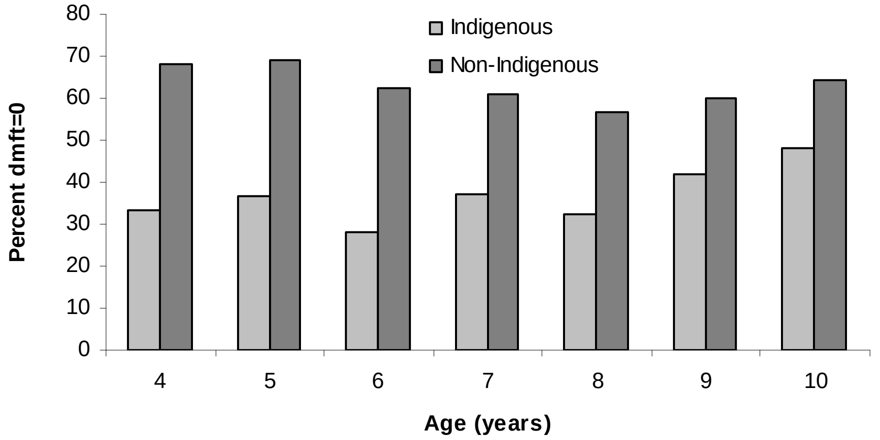

Decayed teeth

Missing teeth

Filled teeth

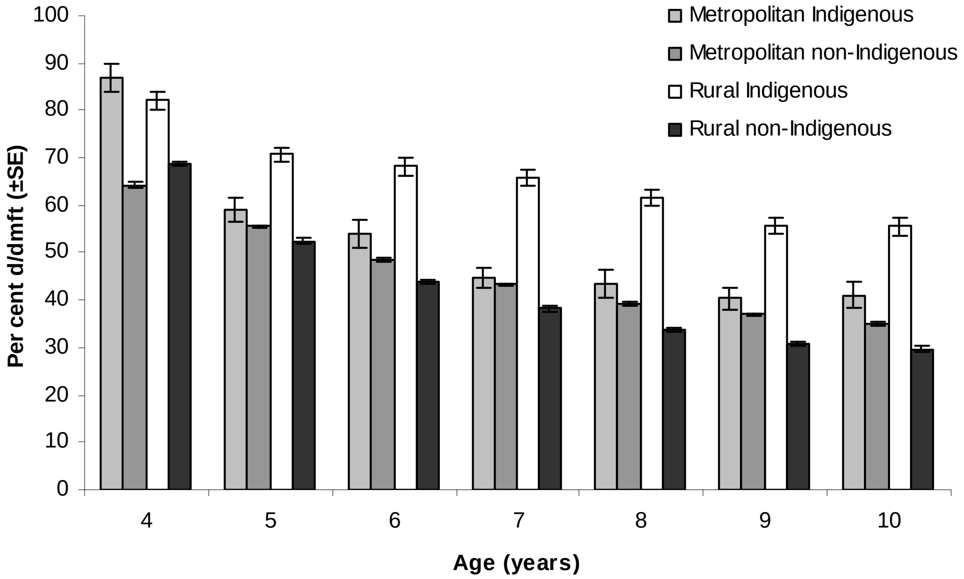
Source: AIHW Dental Statistics Research Unit.

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)



Source: AIHW Dental Statistics Research Unit

Figure 1.10.2: Per cent of children 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 Dental Statistics Research Unit.

Figure 1.10.3: Children 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

- 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 1.10.4). Data are not presented separately for missing permanent teeth due to 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.
- 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, however, the differences between Indigenous and non-Indigenous children in the proportion with no clinical caries experience was less marked than in their deciduous teeth (Figure 1.10.5).
- 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 1.10.6). This was also the case in metropolitan areas for most ages, however, the differences between Indigenous and non-Indigenous children with untreated permanent decayed teeth were not as marked as in rural areas.

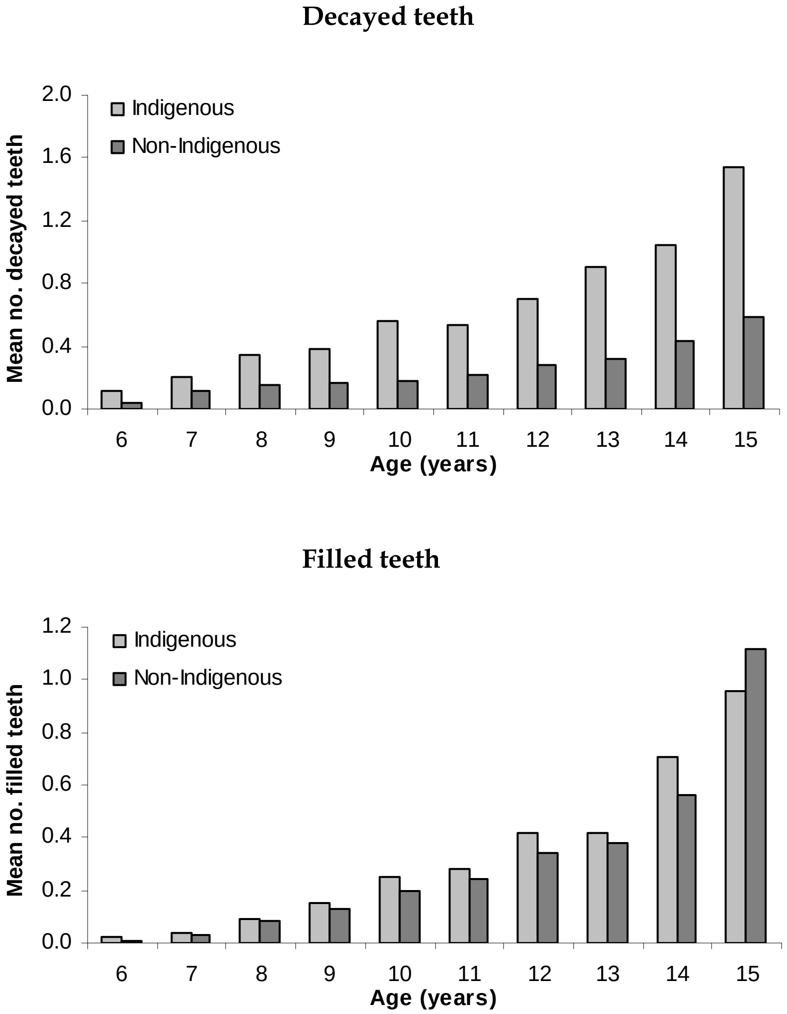
Table 1.10.2: Mean number of decayed, missing and filled permanent teeth for 6–15 year olds, by age and Indigenous status, NSW (2000), SA (2003) and NT (2002)

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	0.25	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

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

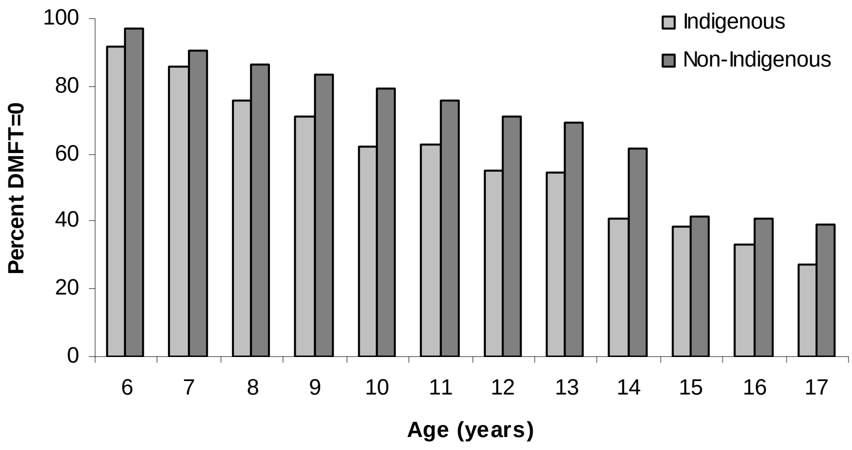
(b) Estimate has a relative standard error of greater than 50% and is considered too unreliable for general use.

Source: AIHW Dental Statistics Research Unit.



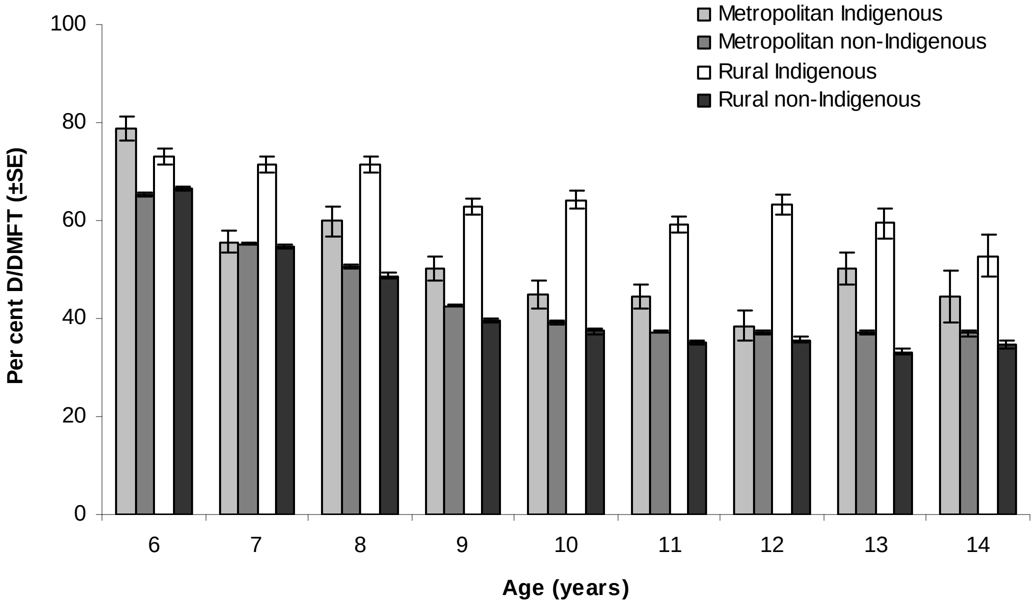
Source: AIHW Dental Statistics Research Unit.

Figure 1.10.4: 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)



Source: AIHW Dental Statistics Research Unit,

Figure 1.10.5: Per cent of children with no decayed, missing or filled permanent teeth (DMFT = 0), by age and Indigenous status, NSW (2000), SA (2003) and NT (2002)



SE= Standard Error

Source: AIHW Dental Statistics Research Unit.

Figure 1.10.6: Children 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)

Time series analysis

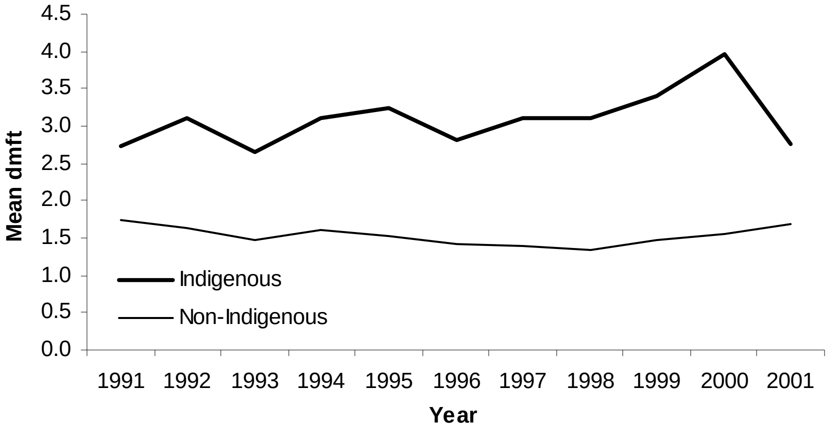
Time series data for caries experience among Indigenous children are available for the Northern Territory and are presented in Table 1.10.3 and Figures 1.10.7 and 1.10.8 below.

- 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 to 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 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 1.10.3: Mean dmft and DMFT scores for Indigenous children in NT, 1991–2001

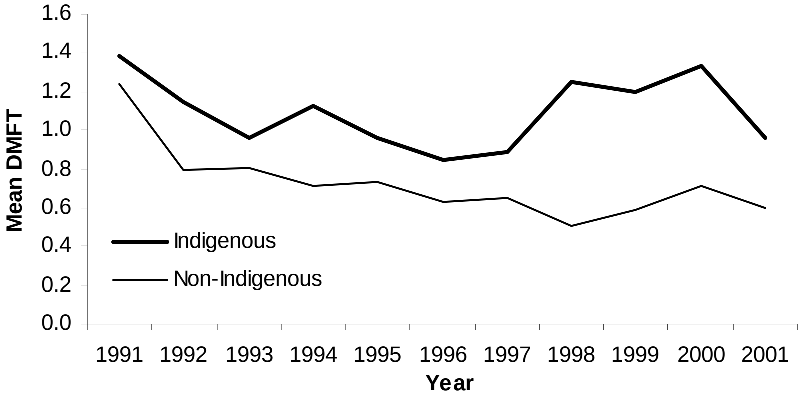
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Mean dmft scores, children aged 6 yrs											
Indigenous	2.74	3.11	2.66	3.11	3.23	2.80	3.12	3.11	3.4	3.96	2.77
Non-Indigenous	1.73	1.64	1.48	1.62	1.53	1.41	1.40	1.35	1.47	1.56	1.68
Mean DMFT scores, children aged 12 yrs											
Indigenous	1.38	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 1.10.7: Mean dmft scores for children at 6 years of age in NT, by Indigenous status, 1991–2001



Source: AIHW Dental Statistics Research Unit.

Figure 1.10.8: 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 for Indigenous adults come from adults seeking public dental care in Australia in 2001–02. Data on complete loss of all natural teeth come from the 1994–96 National Dental Telephone Interview Survey.

- In 2001–02, the mean number of decayed teeth was higher for Indigenous adults across all age groups, while the mean number of filled teeth was higher for non-Indigenous adults across all age groups (Table 1.10.4, Figure 1.10.9). Indigenous adults aged 25 years and over had higher mean numbers of missing teeth than non-Indigenous adults.
- Overall, a higher percentage of Indigenous adults had no natural teeth (16.3%) compared to non-Indigenous adults (10.9%) (Figure 1.10.10). This difference is observed in all age groups over 24 years of age and is particularly marked in the 45–65 and 65 years and over age groups where Indigenous adults were around twice as likely to have no natural teeth as non-Indigenous adults.

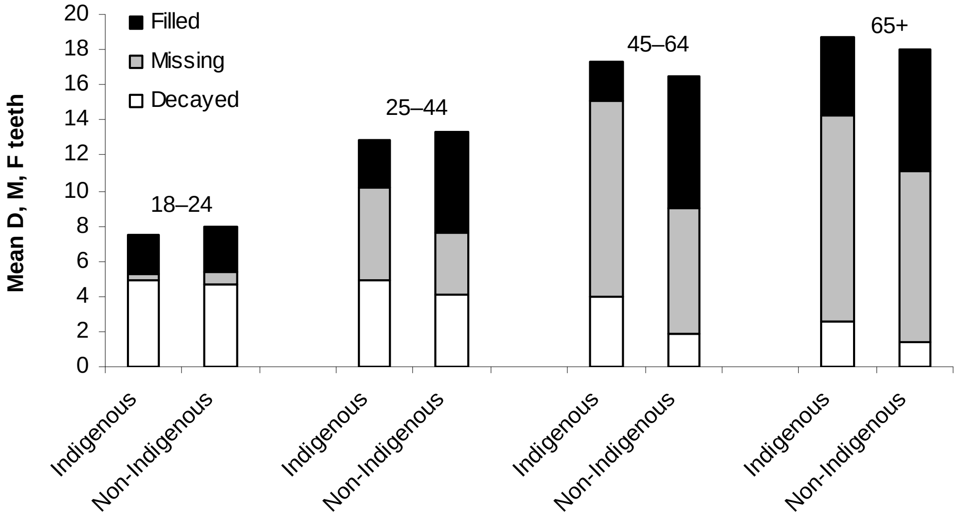
Table 1.10.4: Mean number of decayed, missing or filled teeth for adults seeking public dental care, by age group and Indigenous status, 2001–02

	18–24 years		25–44 years		45–64 years		65 years & over	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
Decayed	(a)4.93	4.66	4.87	4.14	3.97	1.83	2.56	1.36
Missing	(b)0.33	0.72	5.33	3.52	11.11	7.23	11.67	9.8
Filled	2.18	2.56	2.71	5.62	2.25	7.48	(a)4.44	6.86
Decayed, missing & filled	7.44	7.94	12.91	13.28	17.33	16.54	18.67	18.02

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

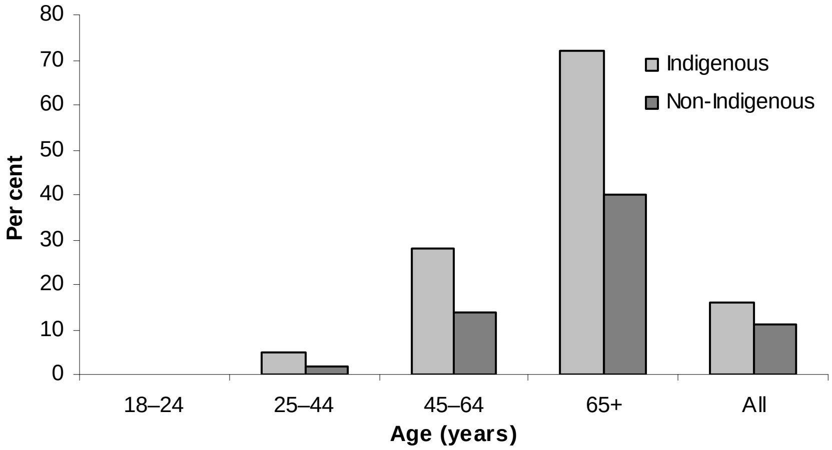
(b) Estimate has a relative standard error of greater than 50% and is considered too unreliable for general use.

Source: AIHW Dental Statistics Research Unit.



Source: AIHW Dental Statistics Research Unit.

Figure 1.10.9: Mean number of decayed, missing or filled teeth for adults seeking public dental care, by age group and Indigenous status, 2001–02

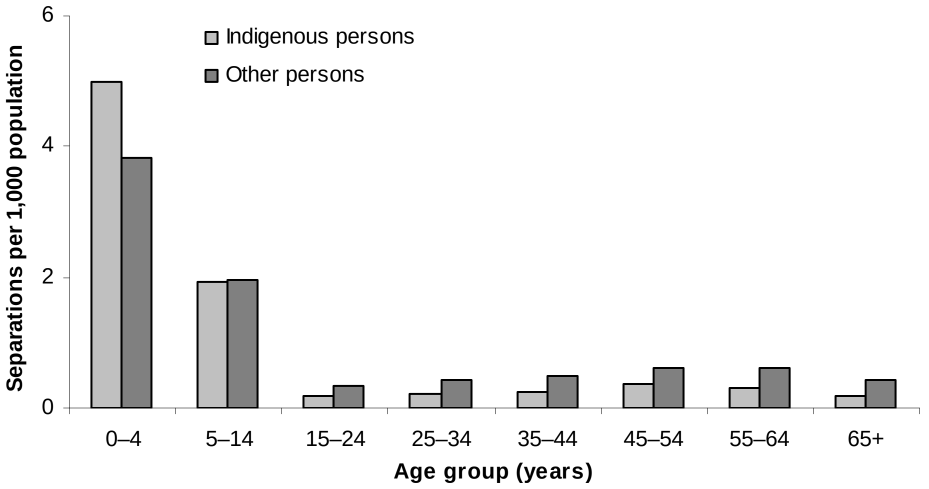


Source: AIHW Dental Statistics Research Unit.

Figure 1.10.10: Adults with no natural teeth, by Indigenous status, 1994–96

Hospitalisations

- For the two-year period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory combined, there were 13,464 hospitalisations for dental problems, 718 (5.3%) of which were hospitalisations 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 1.10.11). 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 AIHW National Hospital Morbidity Database.

Figure 1.10.11: Age-specific hospitalisation rates for dental problems, by Indigenous status, Qld, WA, SA and NT, July 2002–June 2004

- After adjusting for differences in age structure between the two population groups, Indigenous and other Australians in Queensland, Western Australia, South Australia and the Northern Territory were hospitalised at similar rates for dental problems.

Self-reported data

Oral health 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 of age 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 to 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%).

Dentist consultations and oral health actions

Information on the dentist consultations and oral health actions of Indigenous Australians was collected in the 2004–05 NATSIHS and is presented in Tables 1.10.5 and 1.10.6.

- 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 two weeks (Table 1.10.5).
- In 2004–05, 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 to 76%) (Table 1.10.6).
- Approximately 45% of Indigenous Australians aged 15 years and over reported not having lost any natural teeth, 33% reported having lost one–four teeth, 9% had lost five–nine teeth, 3% had lost 10–14 teeth and 8% had lost 15 or more teeth. Numbers of natural teeth lost were similar for Indigenous Australians living in remote and non-remote areas.

Of those aged 55 years and over, almost half reported having lost 10 or more natural teeth.

- 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 to 5%), whereas a higher proportion of Indigenous people in remote areas reported they required dentures (8%) than those living in non-remote areas (6%). Approximately 45% of Indigenous Australians aged 55 years and over reported wearing dentures and 13% reported they required dentures.

Table 1.10.5: Dental consultation in the last 2 weeks, by Indigenous status and age group, persons aged 2 years and over, 2004–05

	2–14		15–24		25–34		35–44		45–54		55+		Total[(a)]	
	Indig. (%)	Non-Indig. (%)	Indig. (%)	Non-Indig. (%)	Indig. (%)	Non-Indig. (%)	Indig. (%)	Non-Indig. (%)	Indig. (%)	Non-Indig. (%)	Indig. (%)	Non-Indig. (%)	Indig. (%)	Non-Indig. (%)
Dental consultation in last 2 weeks	5*	7*	3*	6*	3	4	3*	5*	4[(b)]	6	4[(b)]	6	4*	6*
Total number of persons	**180,669**	**3,760,010**	**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**	**474,310**	**1,9292,387**

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

(a) Totals are age standardised.

(b) Estimate has a relative standard error of between 25% and 50% and should be interpreted with caution.

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

Table 1.10.6: Oral health actions, Indigenous Australians, by remoteness and age group, 2004–05

	15–24			25–34			35–44			45–54			55+			Total		
	Remote (%)	Non-remote (%)	Total (%)	Remote (%)	Non-remote (%)	Total (%)	Remote (%)	Non-remote (%)	Total (%)	Remote (%)	Non-remote (%)	Total (%)	Remote (%)	Non-remote (%)	Total (%)	Remote (%)	Non-remote (%)	Total (%)
Whether ever visited health professional about teeth																		
Yes	75	95	90	74	95	89	75	92	87	81	96	92	78	93	89	76	94	89
No	24	5	9	26	5	11	24	8(b)	13	19	4(b)	8	22	7	11	24	6	11
Total(a)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Number of natural teeth lost																		
No teeth lost	78	80	80	55	48	50	31	26	27	24	14	17	16	5*	8	47	45	45
1–4	21	18	18	40	41	40	49	48	48	43	35	37	27	19	22	36	31	33
5–9	n.p.	1(b)	1(b)	4(b)	7	6	14(b)	17	16	19	21	21	16	13	14	9	10	9
10–14	—	—	—	1(c)	1(c)	1(b)	3(c)	2(b)	2(b)	6(b)	8	7	11	9	10	3	3	3
15 or more	n.p.	1(c)	1(c)	n.p.	2(b)	1	2(b)	5	4	7	18	15	23	43	37	4	9	8
Total(a)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Dentures																		
Wears dentures	—(c)	1(b)	1(b)	2(b)	2	2	2(b)	10	8	14	26	23	19	55	45	5	12	10
Requires dentures	1(c)	—(c)	1(b)	5	4	4	11	9	10	14	12	12	19	10	13	8	6	6
Doesn't require dentures	20	18	19	38	45	43	54	55	55	48	49	48	45	30	34	39	37	38
No teeth lost	78	80	80	55	48	50	31	26	27	24	14	17	16	5*	8	47	45	45
Total(a)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

n.p. Not available for publication but included in totals where applicable

(a) Includes not known responses.

(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.

Source: ABS 2006.

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, for example, dental examinations, preventative 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).

National Dental Telephone Interview Survey

The computer assisted telephone interview method is restricted to people with access to telephones and there will be some loss of representativeness in the sample to the extent that people without phones or with language difficulties may have been excluded. This may be exacerbated among Indigenous persons, particularly for those living in remote areas (Brennan & Carter 1998).

Any survey of Indigenous persons may suffer from misclassification or under-reporting of Indigenous status. For example, there was a larger than expected increase in the estimated Indigenous population, based on Census data between 1991 and 1996, suggesting that the accuracy of identifying persons of Aboriginal or Torres Strait Islander origin needs to be improved. The percentage of Indigenous persons in the Australian population remains small. Therefore, any survey which does not purposively sample Indigenous persons is likely to achieve only small numbers of responses from Indigenous persons, with resulting differences in levels of precision of estimates between Indigenous and non-Indigenous persons. Differences may also occur in age distributions by Indigenous status which may confound the comparison of estimates of Indigenous and non-Indigenous persons (Brennan & Carter 1998).

The numbers of Indigenous persons surveyed is low among older age groups. Therefore these data should be interpreted cautiously.

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.

(continued)

Data quality issues (continued)

Non-Indigenous comparisons are available through the National Health Survey (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 National Health Survey.

In remote communities there were some modifications to the NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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 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.

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 people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated data from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

(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 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 ABS's 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 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 (NNDSS) 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.

While 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.

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 three-year period 2002–2004 as notifications of some diseases are too small to present for a single year.

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.

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 due to small numbers but are described in the text below.

- For the three-year period 2002–2004 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 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 6–9 times higher than rates for other males and females; syphilis notification rates were 71–176 times higher; gonorrhoea notification rates were 36–104 times higher and hepatitis C notification rates were 3–7 times higher than for other males and females of the same age.
- Age-specific rate ratios for the four diseases were generally 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, 35–44 and 45–54 years, 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 2002–2004, 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 2002 and 2004, notification rates for AIDS were higher among Indigenous males than other males in the 25–34, 35–44 and 45–54 year age groups (rate ratios of around 2) and seven times higher in the 15-24 year age group. Indigenous females had higher notification rates than other females for AIDS in the 15–24 and 35–44 year age groups (ratios of 30 and 14 respectively) (Table 1.11.2).
- For both HIV and AIDS, notification rates were highest among those aged 25–34 and 35–44 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, 2002–2004[(a)(b)(c)]

	Males			Females			Persons		
	Indigenous	Other[(d)]	Rate ratio[(e)]	Indigenous	Other[(d)]	Rate ratio[(e)]	Indigenous	Other[(d)]	Rate ratio[(e)]
				Chlamydia					
0–14	47.3	1.4	33.4*	320.9	10.8	29.6*	180.0	8.5	21.2*
15–24	2,756.8	442.6	6.2*	5,764.0	957.4	6.0*	4,243.5	693.2	6.1*
25–34	1,742.1	297.0	5.9*	2,261.9	262.1	8.6*	2,005.1	279.8	7.2*
35–44	765.8	80.4	9.5*	850.9	51.6	16.5*	810.1	66.1	12.3*
45–54	364.6	36.6	10.0*	261.1	12.4	21.1*	310.6	24.6	12.6*
55–64	57.0	15.6	3.7*	40.5	5.4	7.6*	48.3	10.6	4.6*
65+	17.7	3.8	4.7*	65.1	1.3	49.1*	45.0	2.4	18.8*
				Syphilis					
0–14	6.9	0.0	—	39.2	0.0	197.3*	22.6	0.2	113.0*
15–24	563.5	6.7	83.7*	714.4	0.2	175.7*	638.1	5.4	118.2*
25–34	453.2	6.4	70.5*	381.4	4.1	93.7*	416.8	5.3	78.6*
35–44	318.5	8.6	37.1*	267.2	4.1	118.7*	291.8	5.4	54.0*
45–54	307.7	5.7	54.2*	182.8	2.2	158.5*	242.5	3.4	71.3*
55–64	342.2	4.1	82.6*	192.2	1.2	222.5*	262.7	2.5	105.1*
65+	335.7	2.6	127.5*	338.3	0.9	425.6*	337.2	1.6	210.8*
				Gonorrhoea					
0–14	84.2	0.8	111.4*	204.5	3.6	57.2*	142.6	3.8	37.5*
15–24	3,947.0	70.1	56.3*	4,121.6	66.2	62.2*	4,065.2	68.3	59.5*
25–34	2,558.9	72.0	35.5*	2,351.9	22.6	104.2*	2,493.0	47.6	52.4*
35–44	1,352.7	44.3	30.5*	1,048.8	10.0	104.9*	1,225.5	27.2	45.1*
45–54	478.6	29.9	16.0*	360.3	2.2	166.7*	425.0	16.2	26.2*
55–64	251.0	13.3	18.9*	182.1	1.0	175.7*	230.6	7.3	31.6*
65+	123.7	4.0	31.3*	65.1	0.1	491.1*	89.9	1.8	49.9*
				Hepatitis C					
0–14	1.2	0.1	12.2*	0.0	0.0	—	0.6	0.0	—
15–24	69.6	16.2	4.3*	42.3	13.2	3.2*	56.1	14.8	3.8*
25–34	124.8	17.7	7.0*	45.0	9.3	4.8*	84.4	13.6	6.2*
35–44	17.9	5.5	3.3*	16.5	3.5	4.7*	17.2	4.5	3.8*
45–54	17.1	1.7	10.0*	10.4	1.4	7.2*	13.6	1.6	8.5*
55–64	0.0	0.2	—	0.0	0.2	—	0.0	0.2	—
65+	0.0	—	—	0.0	0.1	—	0.0	0.1	—

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the p<.05 level.

(a) Calender year reporting. Data are presented in three-year groupings due to 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 this 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.

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, 2002–2004[a][b]

	Males			Females			Persons		
	Indigenous	Other[c]	Rate ratio[d]	Indigenous	Other[c]	Rate ratio[d]	Indigenous	Other[c]	Rate ratio[d]
HIV									
0–14	—	0.9	—	—	0.1	—	0.0	0.1	—
15–24	4.4	4.8	0.9	3.7	1.4	2.7*	4.0	3.1	1.3
25–34	17.1	18.1	0.9	6.2	2.5	2.4*	11.4	10.4	1.1
35–44	16.6	17.7	0.9	9.7	1.3	7.7*	13.0	9.5	1.4
45–54	10.7	9.1	1.2	5.1	0.6	7.9*	7.8	4.9	1.6
55–64	3.5	4.3	0.8	—	0.5	—	1.7	2.5	0.7
65+	—	1.3	—	—	0.1	—	—	0.7	—
AIDS									
0–14	—	—	—	—	—	—	—	—	—
15–24	0.7	0.1	7.3	0.7	—	28.9*	0.7	0.1	11.6*
25–34	6.7	2.7	2.4*	—	0.4	—	3.2	1.6	2.0
35–44	11.9	5.1	2.3*	4.3	0.3	14.4*	7.9	2.7	2.9*
45–54	9.0	3.6	2.5*	1.7	0.2	7.0	5.2	2.0	2.7*
55–64	3.5	2.0	1.8	—	0.1	—	1.7	1.1	1.6
65+	—	0.7	—	—	—	—	—	0.3	—

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the p<.05 level.

(a) Calender year reporting. Data are presented in three-year groupings due to small numbers each year.

(b) Age-specific rates are calculated using the average Indigenous June population for the relevant years.

(c) Includes notifications for non-Indigenous Australians and those for whom Indigenous status was 'not stated'.

(d) 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 2002–2004 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 are presented in Table 1.11.4.

Chlamydia

- For the period 2002–2004, there were 22,151 notifications for chlamydia in Western Australia, South Australia and the Northern Territory, 28% of which were notifications of Aboriginal and Torres Strait Islander peoples. In the Northern Territory, 64% of notifications for chlamydia were among Indigenous people. In Western Australia and South Australia, 24% and 9% 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 seven and eight times those of other males and females respectively.

- Notification rates for chlamydia among Indigenous males and females were particularly high in Western Australia where rates were around seven times those of other males and females.

Syphilis

- For the period 2002–2004, there were 1,635 notifications for syphilis in Western Australia, South Australia and the Northern Territory, 79% of which were notifications of Aboriginal and Torres Strait Islander peoples. In the Northern Territory, 87% of notifications for syphilis were among Indigenous people. In Western Australia and South Australia, 66% and 57% 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 67 and 157 times the rates for other males and females.
- Rates of syphilis among Indigenous Australians were markedly higher than among other Australians in Western Australia and South Australia (72 and 62 times higher respectively).

Gonorrhoea

- For the period 2002–2004, there were 9,288 notifications for gonorrhoea in Western Australia, South Australia and the Northern Territory combined, 72% of which were notifications of Aboriginal and Torres Strait Islander people. In the Northern Territory, 81% of notifications for gonorrhoea were among Indigenous people. In Western Australia and South Australia, 70% and 46% 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 38 and 81 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 (77 and 198 times as high respectively).

Hepatitis C (incident)

- For the period 2002–2004, there were 646 notifications for hepatitis C (incident) in Western Australia, South Australia and the Northern Territory, 20% 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 four 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 eight and five times those of other males and females respectively. In South Australia, the rates among Indigenous males and females were 12 and nine times those of other males and females respectively.

Donovanosis

- For the period 2002–2004, there were 42 notifications for donovanosis in Australia, 98% (41) 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 due to the small numbers of notifications.

HIV

- Over the period 2002–2004, there were 2,615 HIV notifications in Australia, 2.6% 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 2002–04. HIV notification rates for Indigenous females were around four 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 were around four times as likely to contract HIV as other males, and Indigenous females in Western Australia were approximately 30 times as likely to contract HIV as other females.

AIDS

- Over the period 2002–2004, there were 649 cases of AIDS in Australia, 4.6% of which were notifications of Indigenous Australians.
- After adjusting for differences in age structure, notification rates for AIDS were higher among Indigenous males and females than among other males and females. Indigenous males were twice as likely to contract AIDS as other males, and Indigenous females were almost six times as likely to contract AIDS as other females.
- 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 two and three 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, Qld, WA, SA and NT, 2002–2004(a)

				Males			**Females**			**Persons**		
		Proportion (%)		**Rate per 100,000(b)**			**Rate per 100,000(b)**			**Rate per 100,000(b)**		
	No.	**Indig.**	**Other(c)**	**Indig.**	**Other(c)**	**Ratio(d)**	**Indig.**	**Other(c)**	**Ratio(d)**	**Indig.**	**Other(c)**	**Ratio(d)**
						Chlamydia						
WA	11,221	23.9	76.1	801.4	123.4	6.5*	1,271.8	175.6	7.2*	1,035.2	149.7	6.9*
SA	6,219	9.2	90.8	438.1	105.1	4.2*	742.9	162.7	4.6*	587.8	133.0	4.4*
NT	4,711	63.9	36.1	995.7	287.1	3.5*	1,726.8	459.7	3.8*	1,354.3	366.4	3.7*
WA, SA & NT(e)	**22,151**	**28.3**	**71.7**	**816.2**	**123.3**	**6.6***	**1,357.3**	**181.9**	**7.5***	**1,083.7**	**152.2**	**7.1***
						Syphilis						
WA	554	65.5	34.5	272.1	4.8	56.3*	216.9	1.8	123.4*	242.6	3.4	72.4*
SA	76	56.6	43.4	41.2	1.1	37.7*	52.6	0.4	125.5*	46.9	0.8	62.4*
NT	1,005	87.4	12.6	471.3	35.2	13.4*	488.6	19.0	25.7*	480.0	27.7	17.3*
WA, SA & NT(e)	**1,635**	**78.5**	**21.5**	**313.8**	**4.7**	**67.0***	**294.2**	**1.9**	**157.0***	**303.2**	**3.3**	**91.5***
						Gonorrhoea						
WA	4,278	69.7	30.3	1,262.2	29.6	42.7*	1,140.6	14.8	77.2*	1,197.3	22.8	52.4*
SA	882	46.1	53.9	437.4	19.5	22.4*	452.9	2.3	198.4*	441.5	11.0	40.2*
NT	4,128	80.8	19.2	1,566.7	193.0	8.1*	1,639.5	146.9	11.2*	1,601.8	173.3	9.2*
WA, SA & NT(e)	**9,288**	**72.4**	**27.6**	**1,241.1**	**32.9**	**37.7***	**1,219.8**	**15.1**	**81.0***	**1,228.0**	**24.4**	**50.3***
						Hepatitis C						
WA	460	21.3	78.7	59.3	7.8	7.6*	26.6	4.9	5.4*	42.8	6.4	6.7*
SA	184	17.4	82.6	47.6	4.1	11.7*	28.2	3.0	9.3*	37.8	3.6	10.6*
NT	n.p.	0.0	100.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
WA, SA & NT(e)	**646**	**20.1**	**79.9**	**33.4**	**5.9**	**5.6***	**16.4**	**3.9**	**4.2***	**24.8**	**4.9**	**5.0***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

(a) Calender year reporting. Data are presented in three-year groupings due to 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) 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 this 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, 2002–2004(a)

				Males			Females			Persons		
		Proportion (%)		Rate per 100,000(b)			Rate per 100,000(b)			Rate 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	1,241	1.2	98.8	6.6	11.3	0.6*	n.p.	1.2	n.p.	4.0	6.3	0.6*
Vic	638	1.4	98.6	17.5	7.8	2.2*	n.p.	0.8	n.p.	10.4	4.3	2.4*
Qld	414	3.9	96.1	8.7	6.4	1.4*	n.p.	0.9	n.p.	5.2	3.6	1.4*
WA	149	12.8	87.2	21.3	4.8	4.4*	28.5	0.9	30.1*	25.2	2.9	8.7*
SA	125	4.8	95.2	n.p.	3.8	n.p.	n.p.	0.4	n.p.	3.3	2.1	1.6*
Tas	10	0.0	100.0	n.p.	1.1	n.p.	n.p.	n.p.	n.p.	n.p.	0.8	n.p.
ACT	17	0.0	100.0	n.p.	5.9	n.p.	n.p.	n.p.	n.p.	n.p.	3.7	n.p.
NT	21	19.0	81.0	n.p.	2.4	n.p.	n.p.	1.2	n.p.	n.p.	1.8	n.p.
Aust.	**2,615**	**2.6**	**97.4**	**7.4**	**7.8**	**0.9***	**3.5**	**0.9**	**3.8***	**5.4**	**4.4**	**1.2***
						AIDS						
NSW	337	3.6	96.4	7.4	3.1	2.4*	n.p.	0.2	n.p.	3.6	1.7	2.1*
Vic	131	0.8	99.2	n.p.	1.7	n.p.	n.p.	0.2	n.p.	n.p.	0.9	n.p.
Qld	103	8.7	91.3	5.0	1.5	3.3*	n.p.	0.2	n.p.	3.0	0.9	3.5*
WA	33	12.1	87.9	n.p.	1.2	n.p.	n.p.	n.p.	n.p.	n.p.	0.6	n.p.
SA	28	7.1	82.9	n.p.	0.7	n.p.	n.p.	n.p.	n.p.	n.p.	0.4	n.p.
Tas	n.p.	0.0	100.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
ACT	7	0.0	100.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
NT	6	33.3	65.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	0.5	n.p.
Aust.	**649**	**4.6**	**95.4**	**4.4**	**2.0**	**2.2***	**1.0**	**0.2**	**6.1***	**2.6**	**1.1**	**2.5***

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the p<.05 level.

(a) Calender year reporting. Data are presented in three-year groupings due to 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.

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 2002–2004.

- For the period 2002–2004, the most common method of contracting HIV among Indigenous Australians was heterosexual contact (44%), followed by male homosexual/bisexual contact (32%) and heterosexual contact and injecting drug use (16%). For other Australians, the most common method of HIV contraction was male homosexual/bisexual contact (66%), followed by heterosexual contact (12%) and male homosexual/bisexual contact and injecting drug use (4%).
- Over the same period, the most common method of contracting AIDS among Indigenous Australians was male homosexual/bisexual contact (57%), followed by heterosexual contact (26.7%). These were also the most common ways of contracting AIDS among other Australians (64% and 13% respectively).
- Indigenous Australians were five times as likely to contract HIV through heterosexual contact and 11 times as likely to contract HIV through heterosexual contact and 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 twice as likely to contract AIDS through male homosexual/bisexual contact and five times as likely to contract AIDS through heterosexual contact as other Australians.

Table 1.11.5: Exposure categories for HIV/AIDS, by Indigenous status, 2002–2004[(a)]

	Number		Per cent		Rate per 100,000[(b)]		
Exposure category	**Indigenous**	**Other[(c)]**	**Indigenous**	**Other[(c)]**	**Indigenous**	**Other[(c)]**	**Ratio[(d)]**
				HIV			
Male homosexual/bisexual contact	22	1,677	31.9	65.9	1.7	2.9	0.6*
Male homosexual/bisexual contact and injecting drug use	n.p.	95	5.8	3.7	n.p.	0.2	n.p.
Heterosexual contact	30	293	43.5	11.5	2.5	0.5	5.0*
Heterosexual contact and injecting drug use	11	40	15.9	1.6	0.7	0.1	10.5*
Injecting drug use	0	31	0.0	1.2	—	0.1	—
Mother with/at risk of HIV infection	0	5	0.0	0.2	—	—	—
Other[(e)]	n.p.	194	0.0	7.6	n.p.	0.3	n.p.
Total[(f)]	**69**	**2,546**	**100.0**	**100.0**	**5.4**	**4.4**	**1.2***
				AIDS			
Male homosexual/bisexual contact	17	393	56.7	63.5	1.5	0.7	2.2*
Male homosexual/bisexual contact and injecting drug use	n.p.	41	6.7	6.6	n.p.	0.1	n.p.
Heterosexual contact	8	78	26.7	12.6	0.7	0.1	5.1*
Heterosexual contact and injecting drug use	n.p.	15	6.7	2.4	n.p.	—	n.p.
Injecting drug use	n.p.	15	3.3	2.4	n.p.	—	n.p.
Other[(e)]	0	62	0.0	10.0	—	0.1	—
Total[(f)]	**30**	**619**	**100.0**	**100.0**	2.6	**1.1**	**2.5***

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the p<.05 level.

(a) Calender year reporting. Data are presented in three-year groupings due to small numbers each year.
(b) Directly age standardised using the 2001 Australian 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) Includes: person from high HIV prevalence country, no sexual contact, sexual exposure not known, haemophiia/coagulation disorder and blood transfusion, blood products or tissue.
(f) Includes exposure category not stated.

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 2003–2004, and hepatitis C for the period 1995–1996 to 2003–2004, are presented in the tables and figures below. HIV and AIDS notifications for the period 1994–1996 to 2003–2004 are also presented here. Data are presented in two- to three-year groupings due to 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 2003–2004. The fitted trend line shows an average yearly increase in the rate of around 78 per 100,000 (Table 1.11.6, Figure 1.11.1). Significant increases in rates for chlamydia were evident for both Indigenous males and females.
- There were also significant increases in notification rates for syphilis among other Australian males and females during the same period.
- Notification rate ratios between Indigenous and other Australians for syphilis showed significant declines over the 10-year period. The fitted trend line showed an average yearly decline in the ratio of around 0.3.
- Although rate ratios showed declines over the period, the difference in notification rates between Indigenous and other Australians increased for both males and females, obtaining statistical significance.

Table 1.11.6: Age-standardised notification rates, rate ratios and rate differences for chlamydia, WA, SA and NT, 1994–1996 to 2003–2004.

	1994–1996	1997–1999	2000–2002	2003–2004	Annual change[(a)]
Indigenous rate per 100,000					
Males	347.9	488.8	656.7	903.5	63.9*
Females	648.0	818.5	1,126.4	1,430.4	92.7*
Persons	497.6	651.9	890.1	1,162.0	77.8*
Other Australian rate per 100,000[(b)]					
Males	35.9	58.3	91.1	131.8	11.2*
Females	63.0	84.4	129.1	188.8	14.9*
Persons	50.2	72.2	111.0	161.6	13.0*
Rate ratio[(c)]					
Males	9.7	8.4	7.2	6.9	–0.3*
Females	12.9	11.3	10.1	8.9	–0.5*
Persons	9.9	9.0	8.0	7.2	–0.3*
Rate difference[(d)]					
Males	311.9	430.5	565.6	771.7	52.7*
Females	597.8	746.3	1,014.4	1,268.8	79.7*
Persons	447.4	579.7	779.1	1,000.3	64.8*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1994–1996 to 2003–2004.

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

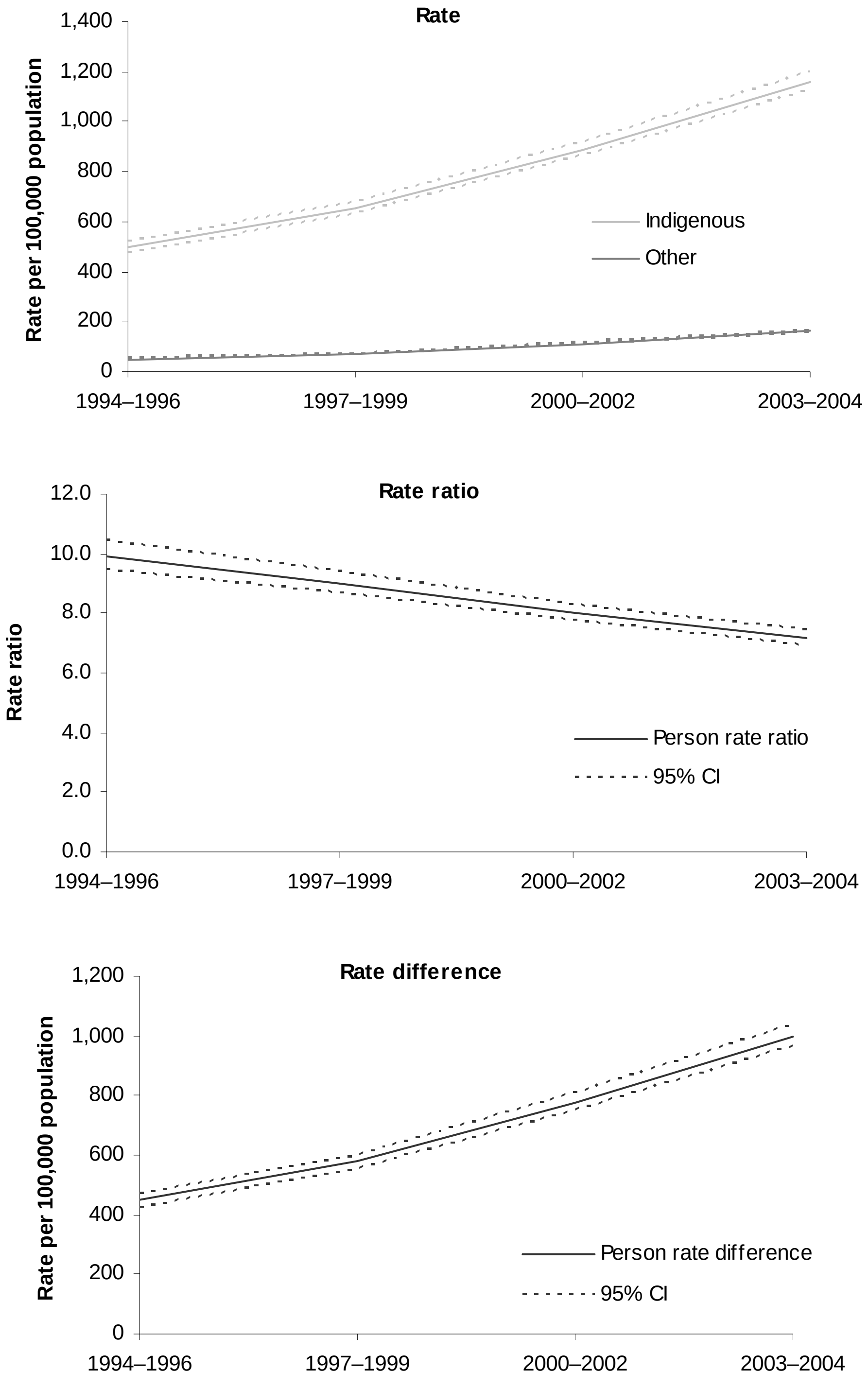
(b) ‘Other’ includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(c) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(d) 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 2003–2004

Syphilis

- In Western Australia, South Australia and the Northern Territory combined, there were apparent increases in notification rates for syphilis among Indigenous males and females during the period 1994–1996 to 2003–2004, however these increases were not statistically significant (Table 1.11.7, Figure 1.11.2).
- 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.
- Notification rate ratios between Indigenous and other Australians for syphilis showed declines over the 10-year period, however, statistical significance was only obtained for males.
- There was little change in the notification rate differences between Indigenous and other Australians for syphilis over the period 1994–1996 to 2003–2004.

Table 1.11.7: Age-standardised notification rates, rate ratios and rate differences for syphilis, WA, SA and NT, 1994–1996 to 2003–2004

	1994–1996	1997–1999	2000–2002	2003–2004	Annual change[(a)]
Indigenous rate per 100,000					
Males	326.4	285.1	336.4	309.7	0.1
Females	294.4	230.2	288.8	275.7	0.1
Persons	308.6	255.6	311.5	290.9	0.1
Other Australian rate per 100,000[(b)]					
Males	2.7	3.8	4.8	4.3	0.2*
Females	2.0	1.5	2.2	1.7	0.0
Persons	2.3	2.7	3.5	3.0	0.1
Rate ratio[(c)]					
Males	121.9	75.7	69.5	71.3	−5.7*
Females	126.5	86.5	80.3	91.7	−4.0
Persons	132.7	96.0	87.8	96.7	−4.2
Rate difference[(d)]					
Males	323.7	281.3	331.6	305.3	−0.1
Females	292.0	227.6	285.2	272.7	−0.1
Persons	306.3	252.9	308.0	287.9	0.0

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1994–1996 to 2003–2004.

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

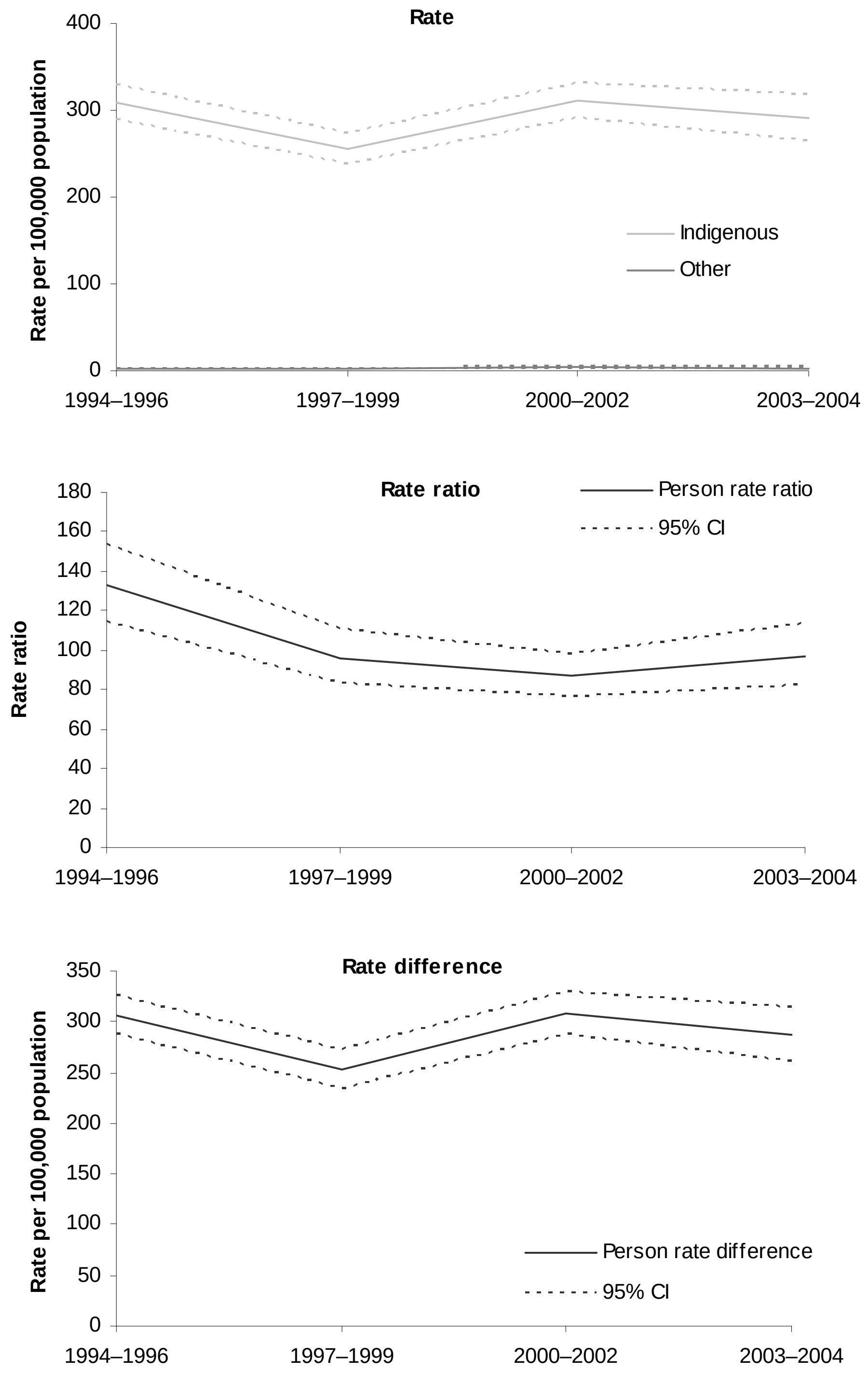
(b) ‘Other’ includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(c) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(d) Notification rate for Indigenous Australians divided by 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 2003–2004

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 2003–2004. The fitted trend line shows an average yearly increase in the rate of around 42 per 100,000 (Table 1.11.8, Figure 1.11.3). There were significant increases in notification rates for both Indigenous males and females.
- There were also significant increases in notification rates for gonorrhoea among other Australians during the same period. Rates showed a significant increase for males but not for females.
- Notification rate ratios between Indigenous and other Australians for gonorrhoea showed significant declines for males over the 10-year period, with an average yearly decline in the ratio of around 2.6.
- 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 41 per 100,000. These increases were statistically significant for females but not for males.

Table 1.11.8: Age-standardised notification rates, rate ratios and rate differences for gonorrhoea, WA, SA and NT, 1994–1996 to 2003–2004

	1994–1996	1997–1999	2000–2002	2003–2004	Annual change[(a)]
Indigenous rate per 100,000					
Males	1,168.0	1,114.9	1,243.8	1,292.8	17.5*
Females	761.6	1,113.7	1,252.9	1,338.1	66.2*
Persons	960.5	1,109.7	1,242.9	1,309.0	41.6*
Other Australian rate per 100,000[(b)]					
Males	18.5	25.9	31.0	32.5	1.7*
Females	7.7	16.1	16.0	12.3	0.5
Persons	13.2	21.0	23.0	22.5	1.1*
Rate ratio[(c)]					
Males	63.2	43.1	40.6	39.8	−2.6*
Females	57.8	52.9	53.7	59.5	0.2
Persons	72.9	52.8	53.3	58.2	−1.6
Rate difference[(d)]					
Males	1,149.6	1,089.0	1,213.2	1,260.3	15.8
Females	748.4	1,092.6	1,229.6	1,315.6	65.1*
Persons	947.3	1,088.7	1,219.6	1,286.5	40.5*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1994–1996 to 2003–2004.

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

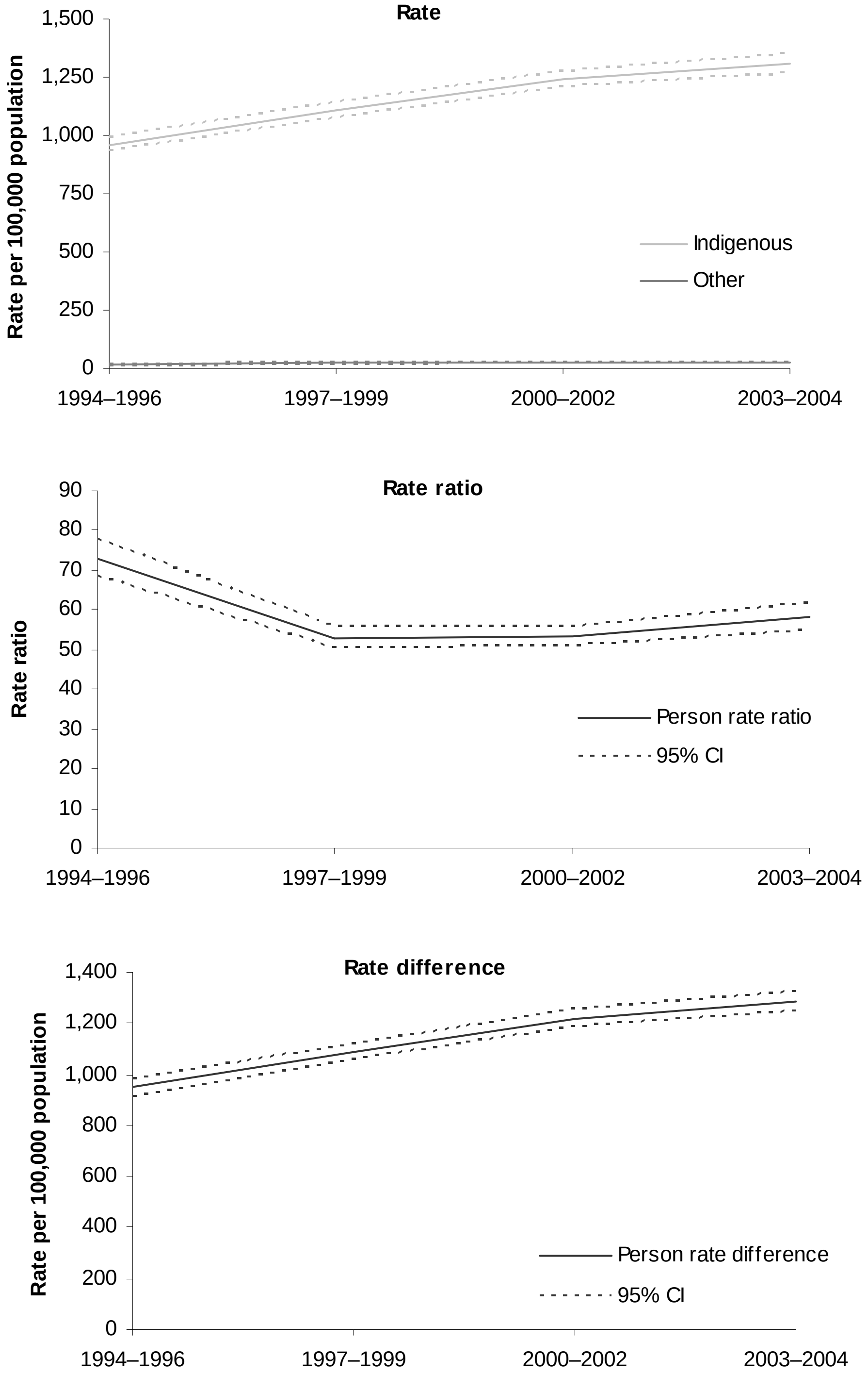
(b) ‘Other’ includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(c) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(d) 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 2003–2004

Hepatitis C (incident)

Time trends data for hepatitis C notifications are presented for the period 1995–1996 to 2003–2004 as data were not available in South Australia for 1994.

- In Western Australia, South Australia and the Northern Territory combined, there were significant increases in notification rates for hepatitis C among Indigenous Australians during the period 1995–1996 to 2003–2004. The fitted trend line shows an average yearly increase in the rate of around 8.6 per 100,000 (Table 1.11.9, Figure 1.11.4). The increases in notification rates were significant for both Indigenous males and females.
- There were significant declines in the rate of hepatitis C notifications for other Australians over the same period, with an average yearly decline in the rate of 1.7 per 100,000. These declines were significant for males but not for females.
- Notification rate ratios and rate differences between Indigenous and other Australians for hepatitis C showed significant increases for both males and females over the period 1995–1996 to 2003–2004. This reflects a relative and absolute increase in the gap between notification rates for Indigenous and other Australians for hepatitis C.

Table 1.11.9: Age-standardised notification rates, rate ratios and rate differences for hepatitis C (incident), WA, SA and NT, 1995–1996 to 2003–2004

	1995–1996	1997–1999	2000–2002	2003–2004	Annual change[(a)]
Indigenous rate per 100,000					
Males	115.8	117.7	160.0	180.3	8.8*
Females	56.1	81.1	116.6	120.8	8.5*
Persons	85.9	99.0	137.8	149.7	8.6*
Other Australian rate per 100,000[(b)]					
Males	93.5	81.4	82.2	66.3	−2.9*
Females	46.0	44.9	47.7	41.0	−0.4
Persons	69.8	63.2	65.0	53.7	−1.7*
Rate ratio[(c)]					
Males	1.2	1.4	1.9	2.7	0.2*
Females	0.8	1.3	1.8	2.2	0.2*
Persons	1.2	1.6	2.1	2.8	0.2*
Rate difference[(d)]					
Males	22.4	36.2	77.8	114.0	11.7*
Females	−13.7	17.8	51.5	67.1	10.2*
Persons	16.1	35.8	72.8	96.0	10.3*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1995–1996 to 2003–2004.

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

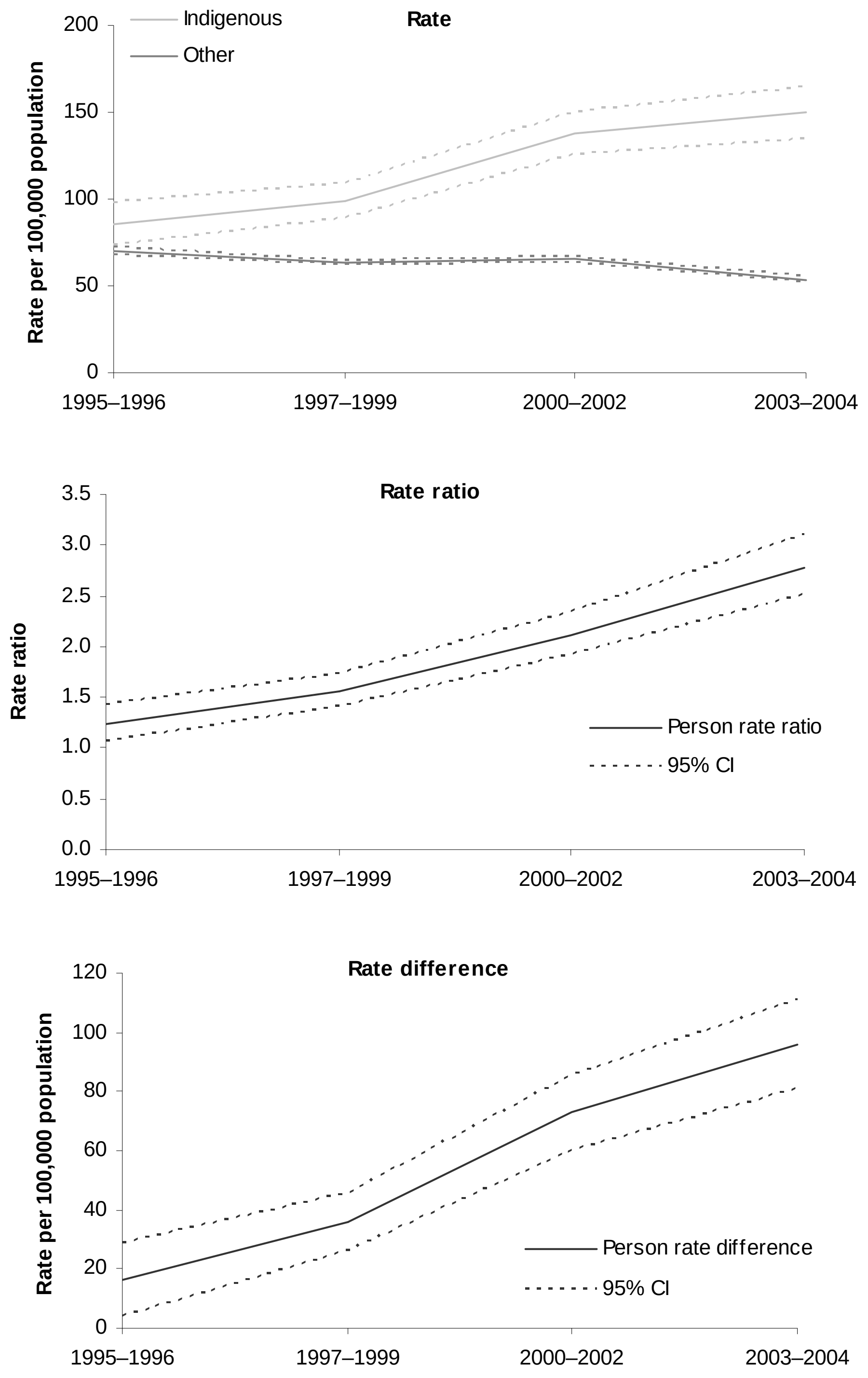
(b) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(c) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(d) 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 1.11.4: Age-standardised notification rates, rate ratios and rate differences for hepatitis C, WA, SA and NT, 1995–1996 to 2003–2004

HIV

- There were no significant changes in the rate of HIV notifications among Indigenous Australians or other Australians over the period 1994–1996 to 2003–2004 (Table 1.11.10, Figure1.11.5).
- There were significant declines in the notification rate ratios and non-significant declines in the rate difference between Indigenous and other Australians for HIV between 1994–1996 and 2003–2004.

Table 1.11.10: Age-standardised notification rates, rate ratios and rate differences for HIV[(a)], 1994–1996 to 2003–2004

	1994–1996	1997–1999	2000–2002	2003–2004	Annual change[(b)]
Indigenous rate per 100,000	5.2	4.4	4.5	5.0	0.0
Other Australian rate per 100,000[(c)]	3.8	3.5	3.8	4.1	0.0
Rate ratio[(d)]	1.4	1.3	1.2	1.2	−0.02*
Rate difference[(e)]	1.4	0.9	0.7	0.9	−0.1

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1994–1996 to 2003–2004.

(a) Data exclude cases diagnosed in the Australian Capital Territory and Victoria prior to 1 June 1998.

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

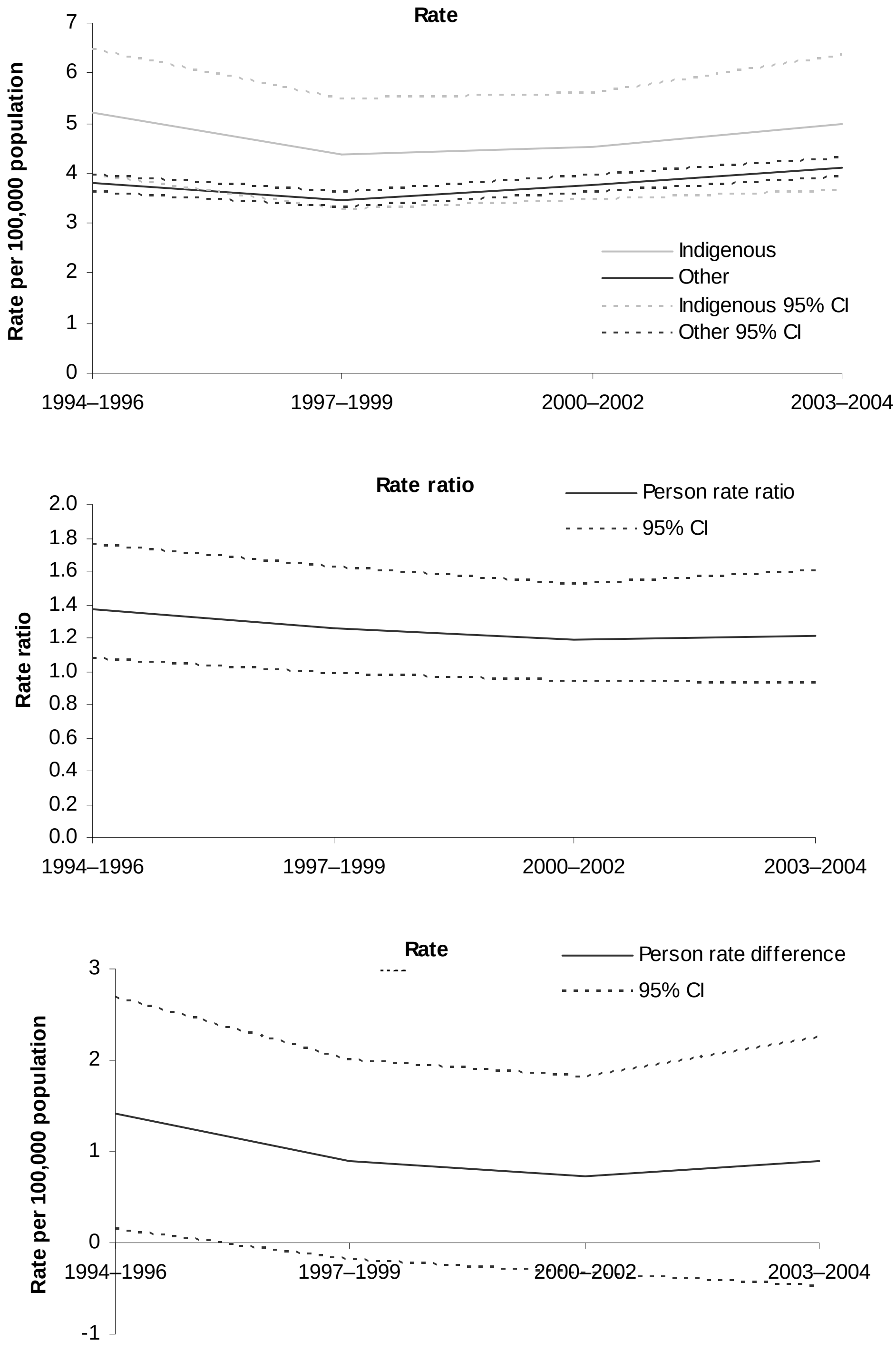
(c) 'Other' includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(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: 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, 1994–1996 to 2003–2004

AIDS

- There were no significant changes in the rate of AIDS notifications among Indigenous Australians over the period 1994–1996 to 2003–2004 (Table 1.11.11, Figure 1.11.6).
- Over the same period, 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 0.3 per 100,000.
- There were significant increases in both notification rate ratios and rate differences between Indigenous and other Australians for AIDS between 1994–1996 and 2003–2004. This reflects both a relative and absolute increase in the gap between notification rates for Indigenous and other Australians for AIDS over the period 1994–1996 to 2003–2004.

Table 1.11.11: Age-standardised notification rates, rate ratios and rate differences for AIDS[(a)], 1994–1996 to 2003–2004

	1994–1996	1997–1999	2000–2002	2003–2004	Annual change(b)
Indigenous rate per 100,000	2.6	1.6	1.7	2.9	0.0
Other Australian rate per 100,000(c)	3.5	1.5	1.2	1.0	−0.3*
Rate ratio(d)	0.7	1.1	1.4	3.0	0.3*
Rate difference(e)	−1.0	0.1	0.5	1.9	0.3*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1994–1996 to 2003–2004.

(a) Excludes cases diagnosed in the Australian Capital Territory and Victoria prior to 1 June 1998.

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

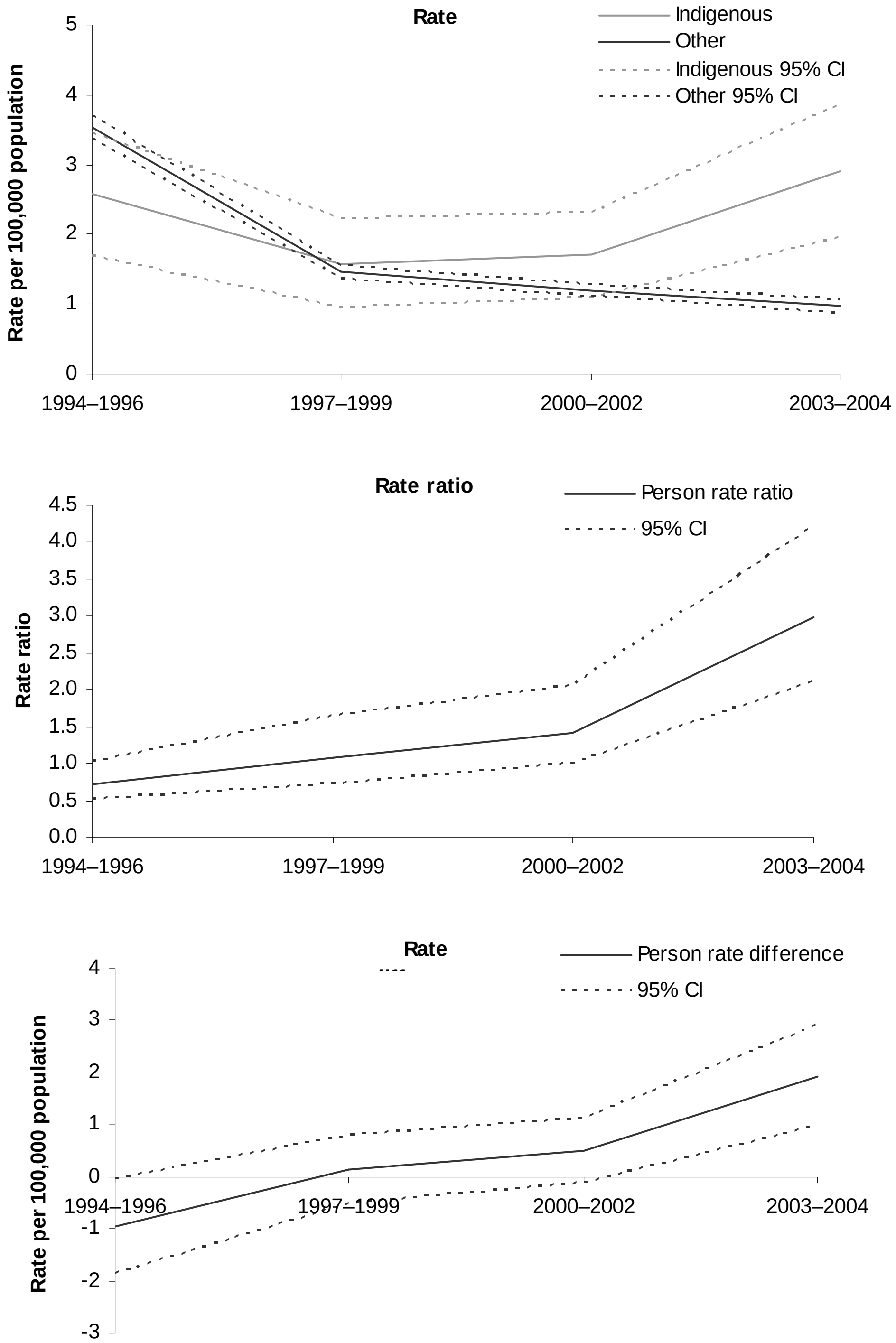
(c) ‘Other’ includes notifications for non-Indigenous people and those for whom Indigenous status was not stated.

(d) Notification rate for Indigenous Australians divided by the notification rate for other Australians.

(e) Notification rate for Indigenous Australians 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, 1994–1996 to 2003–2004

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:
    - WA 64%
    - SA 89%
    - NT 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 64% in 2004 for Western Australia, from 82% to 89% for South Australia, and from 87% to 92% for the Northern Territory. HIV/AIDS notifications were adjusted by linearly increasing the identification from 75% in 1994 to 85% in 2004.
  - Under the decreasing identification scenario, chlamydia, syphilis, gonorrhoea and hepatitis C notifications were adjusted by linearly decreasing the identification from 74% in 1994 to 64% in 2004 for Western Australia, from 96% to 89% for South Australia, and from 97% to 92% for the Northern Territory. HIV/AIDS notifications were adjusted by linearly decreasing the identification from 95% in 1994 to 85% in 2004.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were 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, none remained statistically significant under any identification scenario.
- Of the aforementioned trends observed for gonorrhoea notifications, the increase in rates for Indigenous females and persons and the increase in the rate difference for females and persons remained significant under all three identification scenarios. The increase in rates for Indigenous males remained significant under the decreasing identification scenario. The increase in rates for other Australian males remained significant under the constant and increasing identification scenarios and the increase in rates for other Australian persons remained significant under the increasing identification scenario. The decline in rate ratios for males did not remain statistically significant under any identification scenario.
- The observed trends in hepatitis C notifications all remained significant under all three identification scenarios.

- The decline in the rate ratio between Indigenous and other Australian HIV notification rates remained statistically significant under the constant and increasing 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*
- *they 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 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).

While the identification of Indigenous notifications is incomplete in all states and territories, 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 than changes in the identification of Indigenous people in the population estimates. Denominators used here are sourced from the ABS's 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.

AIHW & ABS (Australian Institute of Health and Welfare and Australian Bureau of Statistics) 2006. Recent developments in the collection of Aboriginal and Torres Strait Islander health and welfare statistics 2005. AIHW cat. no. IHW 15, ABS cat. no. 4704.0.55.001. Canberra: AIHW & ABS.

DoHA (Department of Health and Ageing) 2005. Communicable disease intelligence, quarterly report vol. 29, no. 1. Canberra: DoHA.

SIMC (Statistical Information Management Committee) 2004. National summary of the 2001 and 2002 jurisdictional reports against the Aboriginal and Torres Strait Islander health performance indicators. AIHW cat. no. IHW 12. Canberra: AIHW.

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 (NATSIHS), the Western Australian Aboriginal Child Health Survey, the Bettering the Evaluation and Care of Health (BEACH) survey and the AIHW’s 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 six-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 has been the first to gather comprehensive health, educational and developmental information on a population-based sample of Aboriginal and Torres Strait Islander children in their families and communities.

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 and the 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 five-year period 2000–01 to 2004–05, during which there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.6% of total GP encounters.

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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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, however, 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.

- 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 or 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 to 1% of non-Indigenous children. Approximately 4% of Indigenous children of the same age reported otitis media compared to 2% of non-Indigenous children. Otitis media is infection and inflammation of the middle ear space and ear drum. Symptoms include earache, fever and, in some cases, diminished hearing.
- 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 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, however, 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 1.12.1: Persons reporting diseases of the ear and mastoid, by Indigenous status and age group, 2004–05[(a)]

	Per cent						Rate per 1,000[(b)]					
	0–4		5–14		Total 0–14		0–4		5–14		Total 0–14	
Age (years)	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Complete/ partial deafness or hearing loss	2[(c)]	1[(c)]	6*	2*	5*	1*	18	5	59	16	45	12
Otitis media	4*	2*[(c)]	5*	1*	4*	2*	36	18	47	14	44	15
Other diseases of the ear and mastoid	—[(c)]	—[(d)]	2[(c)]	1	1[(c)]	—	4	1	16	5	12	4
Total[(e)(f)]	**6***	**2***	**12***	**3***	**10***	**3***	**55**	**23**	**115**	**34**	**95**	**30**
Total number	60,183	1,198,038	120,486	2,561,973	180,669	3,760,010	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) Rate per 1,000 population.

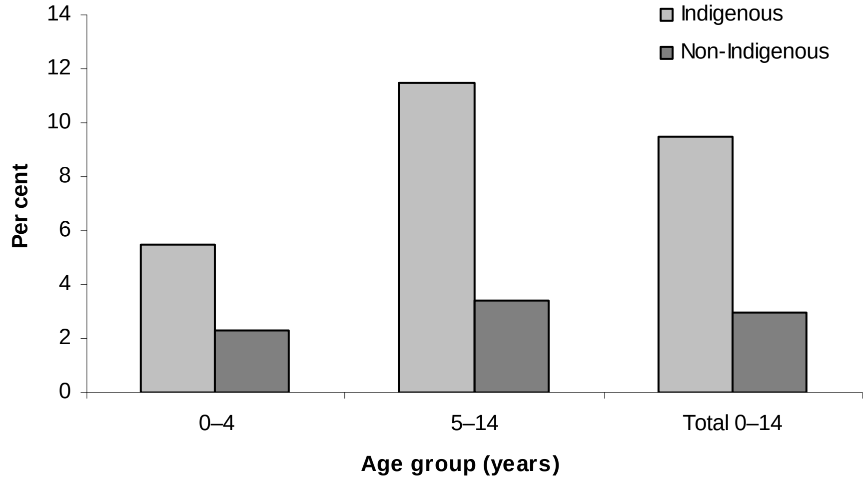
(c) Estimates having a relative standard error of 25% to 50% should be used with caution.

(d) Estimate having a relative standard error greater than 50% are considered too unreliable for general use.

(e) Includes ‘Type of ear/hearing problem’ not known.

(f) 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 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

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 (%)**
Remote	n.a.	n.a.	18	18	12	13
Non-remote	7	4	6	11	9	8
Total	**n.a.**	**n.a.**	**10**	**13**	**10**	**9**
Total number	54,392	52,401	90,615	85,878	92,767	87,902

(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.

Hospitalisations

- For the two-year period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory, there were 27,149 hospitalisations from diseases of the ear and mastoid process among children aged 0–14 years, 6.8% of which were hospitalisations of Aboriginal and Torres Strait Islander children.
- Diseases of the ear and mastoid process accounted for 4.5% of total hospitalisations among Indigenous children aged 0–14 years.

Hospitalisations by age and principal diagnosis

- For the two-year period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory, there were 809 hospitalisations among Indigenous children aged 0–4 years; and 1,037 hospitalisations among Indigenous children aged 5–14 years for diseases of the ear and mastoid process. This represented 3% and 7% of total hospitalisations among Indigenous children respectively (Table 1.12.3).
- While Indigenous children aged 0–4 years were less likely to be hospitalised from diseases of the ear and mastoid process as other children, Indigenous children aged 5–14 years were 1.3 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, while Indigenous children aged 5–14 years were 1.4 times more likely to be hospitalised than other children.
- Indigenous children aged 0–14 years were hospitalised for tympanoplasy procedures due to middle ear infection at almost five times the rate of other children. Differences observed in hospitalisations from middle ear infections may be due to the chronic nature of the disease among Indigenous children resulting in greater damage to the ear drum.

Table 1.12.3: Hospitalisations for diseases of the ear and mastoid process, by Indigenous status, Qld, WA, SA and NT, July 2002–June 2004[a][b][c][d][e]

	Number		Per cent[e]		Indigenous			Other[f]			
	Indigenous	Other[f]	Indigenous	Other[f]	Rate per 1,000[g]	LCL 95%[h]	UCL 95%[i]	Rate per 1,000[g]	LCL 95%[h]	UCL 95%[i]	Rate ratio[j]
Aged 0–4 years											
Diseases of middle ear and mastoid (H65–H75)	744	13,913	2.7	6.5	10.4	9.6	11.1	15.6	15.4	15.9	0.7*
Other disorders of ear (H90–H95)	36	561	0.1	0.3	0.5	0.3	0.7	0.6	0.6	0.7	0.8
Diseases of the external ear (H60–H62)	29	250	0.1	0.1	0.4	0.3	0.6	0.3	0.2	0.3	1.4*
Diseases of inner ear (H80–H83)	0	17	0.0	—	0.0	0.0	0.0	—	—	—	—
Total	**809**	**14,741**	**3.0**	**6.9**	**11.3**	**10.5**	**12.0**	**16.6**	**16.3**	**16.8**	**0.7***
Aged 5–14 years											
Diseases of middle ear and mastoid (H65–H75)	976	9,687	6.9	5.8	6.8	6.4	7.2	5.0	4.9	5.1	1.4*
Other disorders of ear (H90–H95)	30	352	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.2	1.2
Diseases of the external ear (H60–H62)	28	501	0.2	0.3	0.2	0.1	0.3	0.3	0.2	0.3	0.8
Diseases of inner ear (H80–H83)	3	32	—	—	—	—	—	—	—	—	1.3
Total	**1,037**	**10,572**	**7.3**	**6.3**	**7.2**	**6.8**	**7.7**	**5.4**	**5.3**	**5.5**	**1.3***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 (National Centre for Classification in Health 2004); ICD-10-AM codes H60-H95.

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) Per cent total hospitalisations for Indigenous and non-Indigenous people in that age group for the period 2002–03 to 2003–04.

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

(g) Age-specific hospitalisation rate using the average Indigenous December populations for the relevant years.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:other.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Time series analysis

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for diseases of the ear and mastoid process over the five-year period 1998–99 to 2003–04 are presented in Table 1.12.4 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 2003–04, with an average yearly decline in the rate of around 0.2 per 1,000 population. The declines in hospitalisation rates were significant for both males and females. Most of these declines were attributable to declines in rates between 2001–02 and 2002–03.
- 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.
- There was no significant change in the hospitalisation rate ratios or rate difference between Indigenous and other children during the period 1998–99 to 2003–04.

It should be noted 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 impact on 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 but is likely to be a combination of both.

Table 1.12.4: 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 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	10.1	10.4	10.4	9.4	8.5	9.5	−0.3*
Females	9.2	9.0	8.6	9.2	7.8	8.2	−0.2*
Persons	9.7	9.7	9.5	9.3	8.1	8.9	−0.2*
Other Australian[(b)] rate per 1,000							
Males	11.4	11.1	11.2	10.8	10.8	10.5	−0.2*
Females	8.2	8.0	8.1	7.8	7.5	7.3	−0.2*
Persons	9.9	9.6	9.7	9.4	9.2	9.0	−0.2*
Rate ratio[(c)]							
Males	0.9	0.9	0.9	0.9	0.8	0.9	0.0
Females	1.1	1.1	1.1	1.2	1.0	1.1	0.0
Persons	1.0	1.0	1.0	1.0	0.9	1.0	0.0
Rate difference[(d)]							
Males	−1.3	−0.7	−0.8	−1.4	−2.4	−0.9	−0.2
Females	0.9	0.9	0.4	1.4	0.3	0.9	0.0
Persons	−0.2	0.1	−0.2	0.0	−1.1	−0.1	−0.2

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

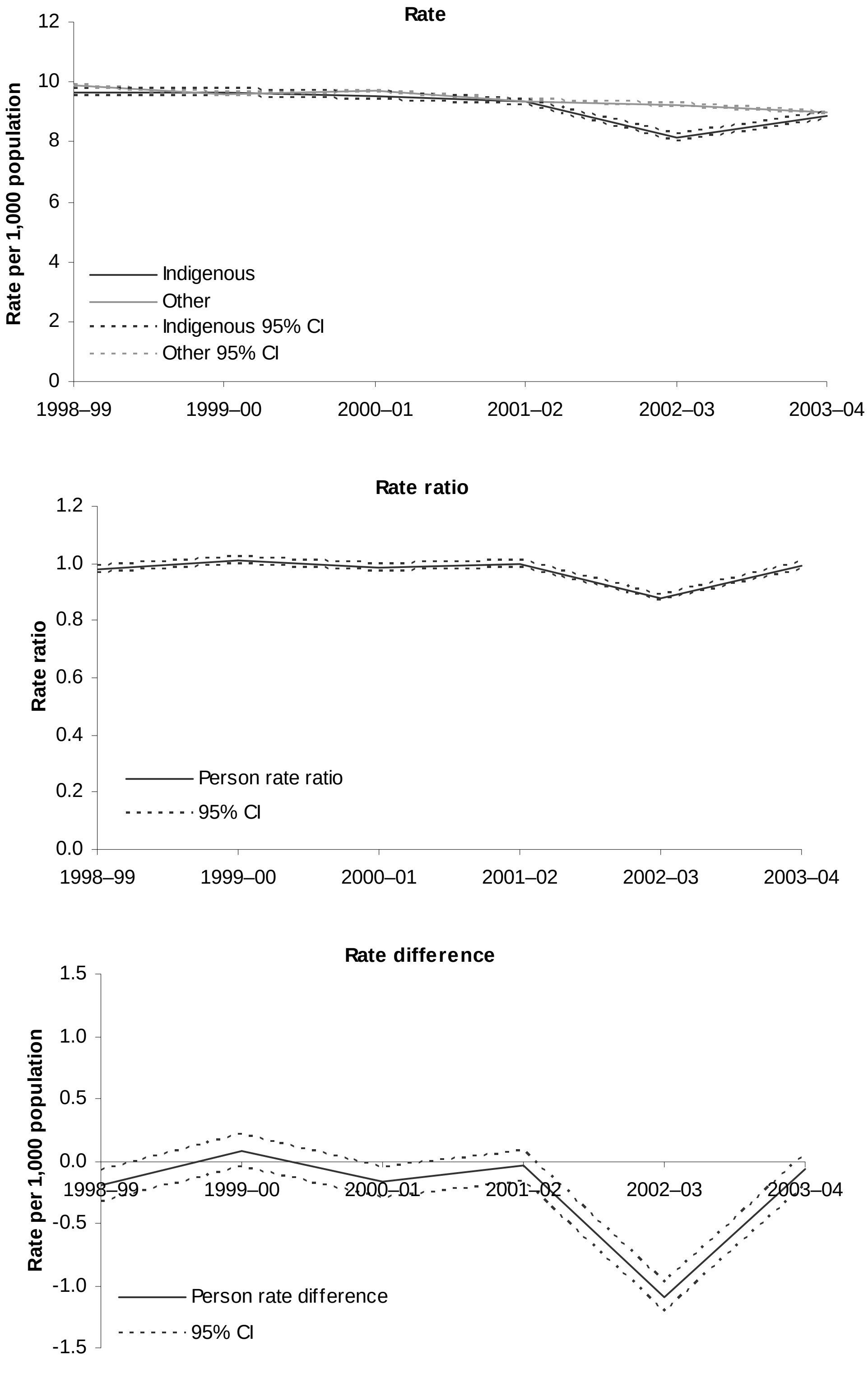
(b) ‘Other’ includes hospitalisations for non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW 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 2003–04

General practitioner encounters

Information about general practitioner encounters is available from the BEACH survey. 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. Data for the five-year period 2000–01 to 2004–05 are presented in Table 1.12.5 below.

- In the period 2000–01 to 2004–05 there were a total of 58,466 GP encounters with patients aged 0–14 years, 1,657 (2.8%) of which were with Aboriginal and Torres Strait Islander patients recorded in the survey.
- Ear and hearing problems were responsible for 11% of total problems managed among Indigenous patients aged 0–14 years and 10% 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 13.5 and 11.7 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 6.7% of total problems managed among Indigenous patients aged 0–14 years and made up a greater proportion of problems managed in the 0–4 year age group (7.9%) than at encounters with children of 5–14 years (5.2%).
- 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 (8.3 per 100 encounters compared with 7.6 per 100 encounters respectively).

Table 1.12.5: Ear and hearing problems[(a)] managed by general practitioners, by Indigenous status of patient, 2000–01 to 2004–05[(b)(c)(d)]

	Number		Per cent total problems[(e)]		Indigenous			Other[(f)]			
Age	**Indigenous**	**Other[(f)]**	**Indigenous**	**Other[(f)]**	**Rate per 100 encounters[(g)]**	**95% LCL[(h)]**	**95% UCL[(i)]**	**Rate per 100 encounters[(g)]**	**95% LCL[(h)]**	**95% UCL[(i)]**	**Ratio[(j)]**
					0–4 years						
Acute otitis media/ myringitis	90	2,753	7.9	7.6	9.7	7.1	12.3	9.2	8.8	9.7	1.1
Other infections of ear	25	523	2.2	1.4	2.7	0.7	4.7	1.7	1.4	2.1	1.5
Subtotal infections of ear	*115*	*3,276*	*10.1*	*9.0*	*12.4*	*7.1*	*12.3*	*11.0*	*8.8*	*9.7*	*1.1*
Hearing loss	0	16	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	—
Other diseases of the ear	13	446	1.1	1.2	1.4	0.5	2.3	1.5	1.1	1.9	0.9
Total diseases of the ear	**128**	**3,738**	**11.2**	**10.3**	**13.8**	**8.3**	**19.3**	**12.5**	**11.3**	**13.7**	**1.1**
					5–14 years						
Acute otitis media/ myringitis	47	1,545	5.2	4.7	6.4	4.2	8.6	5.7	4.9	5.5	1.1
Other infections of ear	32	858	2.8	2.4	3.5	1.4	7.6	3.2	2.5	3.3	1.1
Subtotal infections of ear	*79*	*2,403*	*8.8*	*7.3*	*10.8*	*4.2*	*8.6*	*8.9*	*4.9*	*5.5*	*1.2*
Hearing loss	0	25	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	—
Other diseases of the ear	17	482	1.9	1.5	2.3	1.1	4.1	1.8	1.2	1.7	1.3
Total diseases of the ear	**96**	**2910**	**10.7**	**8.9**	**13.2**	**6.8**	**20.4**	**10.8**	**8.6**	**10.5**	**1.2**

(continued)

Table 1.12.5 (continued): Ear and hearing problems[a] managed by general practitioners, by Indigenous status of patient, 2000–01 to 2004–05[b][c][d]

	Number		Per cent total problems[e]		Indigenous			Other[f]			
Age	**Indigenous**	**Other[f]**	**Indigenous**	**Other[f]**	**Rate per 100 encounters[g]**	**95% LCL[h]**	**95% UCL[i]**	**Rate per 100 encounters[g]**	**95% LCL[h]**	**95% UCL[i]**	**Ratio[j]**
					0–14 years						
Acute otitis media/ myringitis	137	4,298	6.7	6.2	8.3	6.3	10.3	7.6	7.3	7.9	1.1
Other infections of ear	57	1,381	5.0	3.8	3.4	1.6	5.4	2.4	2.1	2.7	1.4
Subtotal infections of ear	*194*	*5,679*	*9.5*	*8.2*	*11.7*	*6.3*	*10.3*	*10.0*	*7.3*	*7.9*	*1.2*
Hearing loss	0	41	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	—
Other diseases of the ear	30	928	1.5	1.3	1.8	1.0	2.9	1.6	1.3	1.8	1.1
Total diseases of the ear	**224**	**6,648**	**11.0**	**9.6**	**13.5**	**8.8**	**18.5**	**11.7**	**10.7**	**12.5**	**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 five 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 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 data.

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 ear drum 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 to 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 to 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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 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 (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 separation 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 people. While the identification of Indigenous people in hospitalisations is incomplete in all States and Territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification (AIHW 2005). It has been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in WA and relatively marked Indigenous under- identification in Qld data);*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations;*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 (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. 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 (Statistical Information Management Committee, 2004).

In 2004–05, NSW Health has commenced a state-wide otits media screening initiative for 0-6 year old Aboriginal children over a 4 year term. Data is 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 25dB 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.

References

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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 (NATSISS) 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 or 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, 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.

The 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 with 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.

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 for Indigenous people.

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 has been the first to gather comprehensive health, educational and developmental information on a population-based sample of Aboriginal and Torres Strait Islander children in their families and communities across the state. Current work is underway 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

Self-reported prevalence

Disability status

Common criteria

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 or 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 or 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 or 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 older, 2002

Disability status	15–24 years (%)	25–34 years (%)	35–44 years (%)	45–54 years (%)	55 years and over (%)	Total (%)
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 older, 2002

Disability status	Male (%)	Female (%)	Persons (%)
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
	%	%
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

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 older, non-remote areas, 2002[(a)]

	18–24		25–34		35–44		45–54		55 and over		Total		Total—age standardised[(b)]		
Disability status	**Indig. (%)**	**Non-Indig. (%)**	**Indig. (%)**	**Non-Indig. (%)**	**Indig. (%)**	**Non-Indig. (%)**	**Indig. (%)**	**Non-Indig. (%)**	**Indig. (%)**	**Non-Indig. (%)**	**Indig. (%)**	**Non-Indig. (%)**	**Indig. (%)**	**Non-Indig. (%)**	**Rate ratio**
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)]

	Disability status		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 25–50% 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: SCRGSP 2005 - (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 older, 2002

Disability type	**15–24 (%)**	**25–34 (%)**	**35–44 (%)**	**45–54 (%)**	**55 or over (%)**	**Total (%)**
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 three 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 older, non-remote areas, 2002

	Has disability or long-term health condition (%)	Has no disability or long-term health condition (%)
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 older, non-remote areas, 2002

	Has disability or long-term health condition (%)	Has no disability or long-term health condition (%)
Family and culture		
Involved in social activities in last three 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.

Additional information

Prevalence of disability among Indigenous children

There is no national survey of disability amongst children that includes Indigenous respondents. Therefore the only national data currently available on children with special needs are the self-reported data from the NATSISS for Indigenous peoples aged 15–18 years. Data on disability among Indigenous persons aged 15–18 years in non-remote areas are presented in Table 1.13.8. It should be noted that the sample size for this small population group is small and thus results should be interpreted with caution.

- In 2002, in non-remote areas of Australia, approximately 29% of Indigenous males and 35% of Indigenous females aged 15–18 years reported a disability or long-term condition.
- Approximately 3% of Indigenous persons aged 15–18 years reported a profound or severe core activity limitation, 3% reported a moderate or mild core activity limitation, 9% reported a schooling/employment restriction only and 16% reported no specific limitation.

Table 1.13.8: Disability status, Indigenous persons aged 15–18 years, non-remote areas, 2002

Disability status	Males (%)	Females (%)	Persons (%)
Has profound/severe core activity restriction	3.8	3.0	3.4
Has moderate/mild core activity restriction	3.4	2.9	3.1
Has a schooling/employment restriction only	10.7	8.1	9.3
Has no specific limitation	11.5	20.9	16.1
Total with disability or long-term health condition	**29.4**	**34.9**	**31.8**
Total number	14,700	14,800	29,500

Source: AIHW analysis of the ABS National Aboriginal and Torres Strait Islander Social Survey 2002.

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).

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 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 NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (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 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. Data on potential years of life lost before age 65 years 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 upon 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. While 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). Due to 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.

While 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 five-year period 2000–04 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death more accurately reflect mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

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 1999–2001 (77 years for males and 82 years for females) (Table 1.14.1 and Figure 1.14.1).
- 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 1.14.1: Life expectancy at birth, Indigenous 1996–2001, total population 1999–2001(a)(b)

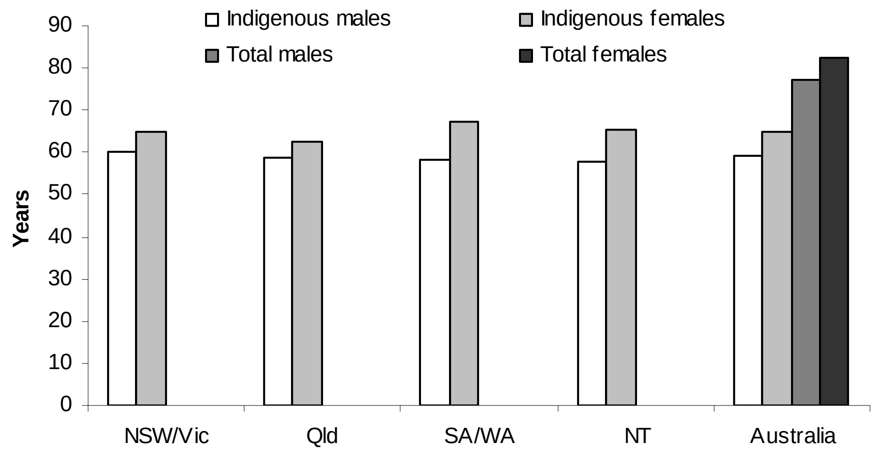
	Males	Females
	Indigenous	
New South Wales/Victoria	60.0	65.1
Queensland	58.9	62.6
South Australia/Western Australia	58.5	67.2
Northern Territory	57.6	65.2
Australia(c)	**59.4**	**64.8**
	Total population	
New South Wales	76.9	82.4
Victoria	77.5	82.7
Queensland	76.9	82.3
Western Australia	77.3	82.8
South Australia	77.0	82.5
Tasmania	76.0	81.2
Australian Capital Territory	78.5	82.9
Northern territory	70.8	76.5
Australia	**77.0**	**82.4**

(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 2005; SCATSIH & SIMC 2006.



Source: ABS 2005.

Figure 1.14.1: Life expectancy at birth, Indigenous 1996–2001 and total population 1999–2001, 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.

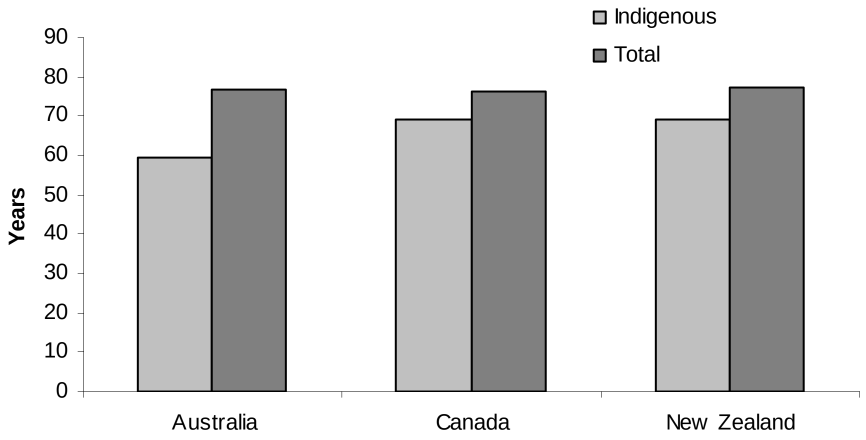
An important issue in relation to the quality of Indigenous mortality data is the undercounting of deaths (the numerator for mortality data). In each of the four countries, the undercounting of Indigenous deaths is likely to lead to an underestimation of the relative size of disparities that exist between Indigenous and non-Indigenous populations. This will affect life expectancy estimates.

The life expectancy estimates presented below are not strictly comparable due to differences in the methods used to estimate life expectancy. Moreover, the populations covered by these estimates are variable across the three countries.

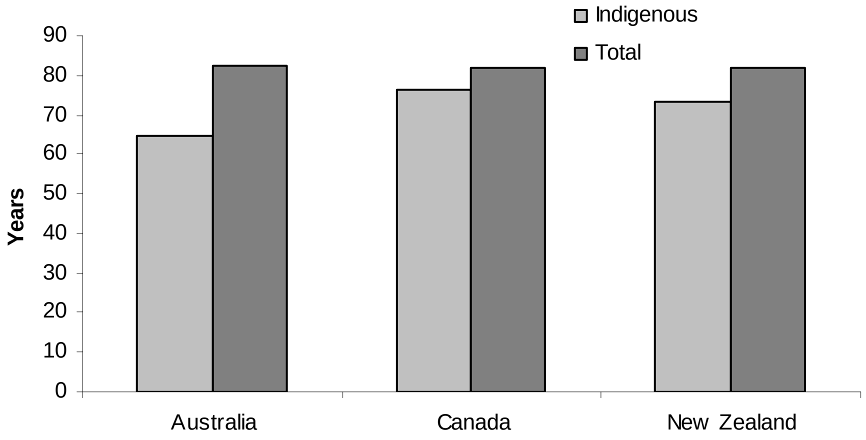
- The estimated life expectancy of Aboriginal and Torres Strait Islander males and females was much lower than that reported for Maori people in New Zealand and First Nation Indigenous people in Canada (Figure 1.14.2).
- The life expectancy for Maoris for 2000–02 was 69.0 years for males and 73.2 years for females (Statistics New Zealand 2005), while 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). 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 to 2100. In 1999, the projected life expectancy for American Indian males was 72.8 compared to 74.0 for total males, and 82.0 for American Indian females compared to 79.7 for total females (based on low series population estimates) (National Projections Program, Population Division, US Census Bureau, 2000).

Males



Females



Notes

1. Life expectancy estimates for Aboriginal and Torres Strait Islander peoples are for 1996–2001 and the total Australian population are for 1999–2001.
2. Life expectancy estimates for First Nations and the total Canadian population are for 2000.
3. Life expectancy estimates for Maoris and the total New Zealand population are for 2000–2002.

Sources: ABS unpublished data; Health Canada 2005; Statistics New Zealand 2005.

Figure 1.14.2: 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 an indicator of premature mortality. It represents the total number of years not lived before a given age (for example, 65 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 65 years. Deaths occurring in individuals aged 65 years or older 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 1.14.2 presents the number and rate of potential years of life lost for Indigenous and non-Indigenous Australians over the period 2000–2004.

- Between 2000 and 2004, approximately 74% of Indigenous males and 64% of Indigenous females died before the age of 65 years. This compared to 26% of non-Indigenous males and 16% of non-Indigenous females.
- For the period 2000–2004, there were 83,269 and 51,803 years of potential life lost before the age of 65 years for Indigenous males and females respectively.
- The rate of potential years of life lost per 1,000 population was 108.8 for Indigenous males and 67.0 for Indigenous females. This compared to 33.8 per 1,000 population for non-Indigenous males and 18.7 per 1,000 population for non-Indigenous females.
- An average of 25–26 years of life were lost before the age of 65 years for every death of Indigenous males and females over the period 2000–2004, compared to 18 years for non-Indigenous males and females.

Table 1.14.2: Potential years of life lost before age 65 years (PYLL), 2000–2004[a][b][c]

	Deaths aged under 65 years		PYLL (65)		
	No.	% of deaths	No.	Rate per 1,000[d]	No. per death
			Indigenous		
Males	3,154	74.0	83,269	108.8	26.4
Females	2,060	64.1	51,803	67.0	25.1
			Non-Indigenous		
Males	30,991	26.2	569,819	33.8	18.4
Females	16,962	15.9	305,834	18.7	18.0

(a) While 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 occurrence of death for 2000–2003 and year of registration of death for 2004.

(d) Rate per 1,000 population.

Source: AIHW National Mortality Database.

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 upon 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. While 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). While 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.

While the identification of Indigenous deaths is incomplete in all states 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. Prior to this time, the not stated responses were probably included in 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 2000–2004 using experimental population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

(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 while 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 than 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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1.15 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 (NATSIHS) and the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS).

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 six-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. It 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.

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 or over reported their health as being very good or excellent, 35% reported their health as being good and 22% reported their health as being 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)

	Age group (years)														
	15–24		25–34		35–44		45–54		55 and over		Total non-age standardised		Total age-standardised		
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 (%)**	**Rate ratio**
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	. .

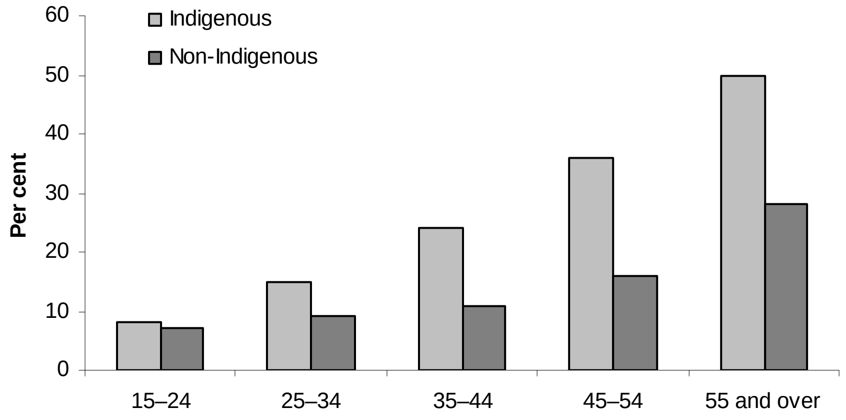
* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(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% reported their health as fair or poor respectively (Table 1.15.3a). Indigenous Australians were 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 non-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 (%)**
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)**
	(%)	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**
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	. .
Subtotal 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	. .
Subtotal 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 (%)	*Subtotal non-remote (%)*	Remote (%)	Very remote (%)	*Subtotal remote (%)*	Total (%)
Excellent	12	14	15	*14*	14	13	*13*	14
Very good	31	29	30	*30*	24	30	*28*	30
Subtotal 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
Subtotal 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, Australia 2004–05(a)(b)

	Major cities			**Inner regional**			**Outer regional**			***Subtotal non-remote***			**Remote**			**Very remote(c)**	***Subtotal 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*
Subtotal 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*
Subtotal 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.

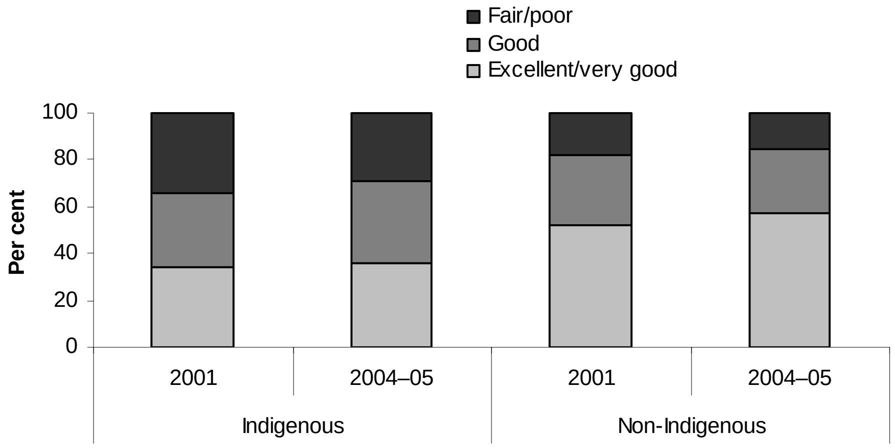
(f) Includes self-assessed health status ‘not stated’.

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 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 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, Australia, 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. These data 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 2.13).
- 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 to 24% of Indigenous Australians who reported they recognised and lived on their homeland (Measure 2.16).
- In 2004–05, a higher proportion of Indigenous Australians with reported fair/poor health accessed health care in the last 12 months than Indigenous Australians with 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 2.19).
- Approximately 58% of Indigenous Australians in non-remote areas with fair/poor health status reported exercising at sedentary levels compared to 48% of Indigenous Australians with excellent/very good/good health status (Measure 2.21).
- 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 to 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 2.15).

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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004; ABS 2006).

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 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.

While 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 occurrence of death for the period 1999–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death are a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

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.

Analyses

Median age at death by state/territory

- In 2004, in Queensland, Western Australia, South Australia and the Northern Territory combined, the median age at death was 49 years for Indigenous males and 58 years for Indigenous females. This compared to 76 years for non-Indigenous males and 82 years for non-Indigenous females in these jurisdictions.

- In 2004, in the four jurisdictions, the median age at death for Indigenous males ranged from 43 years in the Northern Territory to 53 years in Queensland. For Indigenous females, the median age at death ranged from 53.5 years in South Australia to 63 years in Western Australia (Table 1.16.1).

Table 1.16.1: Median age at death, by Indigenous status and sex, Qld, WA, SA and NT, 1999–2004[(a)(b)(c)(d)]

	Qld	WA	SA	NT	Qld, WA, SA & NT
			Indigenous males		
1999	50.5	49	45	44	48
2000	53	48	50	47.5	51
2001	52	50	47	44	49
2002	50	50	48.5	47	49
2003	51	51	49.5	47	50
2004	53	49.5	49	43	49
1999–2004	52	50	49	46	49
			Non-Indigenous males		
1999	74	74	76	60	74
2000	75	75	76	60	75
2001	75	75	76	63	75
2002	75	75	77	62	76
2003	75	76	77	64	76
2004	76	76	77	62.5	76
1999–2004	75	75	77	62	76
			Indigenous females		
1999	60.5	50	50	53.5	57
2000	58	55.5	55.5	52	56
2001	53	53	53	52	53
2002	58.5	54.5	54.5	52	54.5
2003	61	49	49	50	56
2004	57	63	53	53.5	58
1999–2004	58	57	53	52	56
			Non-Indigenous females		
1999	81	81	82	71	81
2000	81	81	82	61	81
2001	81	81	82	73	81
2002	82	82	82	70	82
2003	82	82	83	74	82
2004	82	82	83	71	82
1999–2004	82	82	82	70	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 occurrence of death except for 2004, which is by year of registration of death.

Sources: AIHW analysis of AIHW 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 is 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 1991–2003 have been used for the analysis of Indigenous mortality trends. Data for 2004 have not been used because they are still incomplete, owing to late registration of some deaths.

Due to 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 deaths for which Indigenous status was not stated).

Table 1.16.2 and Figure 1.16.1 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 1991-2003. Table 1.16.3 and Figure 1.16.2 present quartiles of age at death for Indigenous Australians by jurisdiction over the same period.

- Over the period 1991–2003, there were non-significant declines in the median age at death for Indigenous males, and significant declines in the median age at death for Indigenous females in Western Australia, South Australia and the Northern Territory combined. The fitted trend implies an average yearly decline of 0.4 years in the median age at death for Indigenous females.
- Over the same period, there were significant increases in the median age at death for both other males and other females in Western Australia, South Australia and the Northern Territory. The fitted trend implies an average yearly increase in the median age at death of 0.3 years for both males and females.
- Over the period 1991–2003, there were significant increases in the age at death in the first quartile among Indigenous males in all three jurisdictions—Western Australia, South Australia and the Northern Territory. There were also significant increases in the median age at death for Indigenous males in South Australia. For Indigenous females, there were significant increases in the age at death in the first quartile in South Australia and significant declines in the median age at death in Western Australia. There has been no significant change in the age at death in the third quartile in any jurisdiction.

Table 1.16.2: Median age at death, by Indigenous status and sex, WA, SA and NT, 1991–2003

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous														
Males	49	48	47	50	47	48	48	45	46	48	47	48	49	−0.1
Females	56	56	57	59	55.5	56	53.5	51	54	55	53	52	51	−0.4*
Other														
Males	73	73	73	73	73	74	74	74	75	75	75	76	76	0.3*
Females	79	79	79	80	80	81	81	81	81	81	82	82	82	0.3*

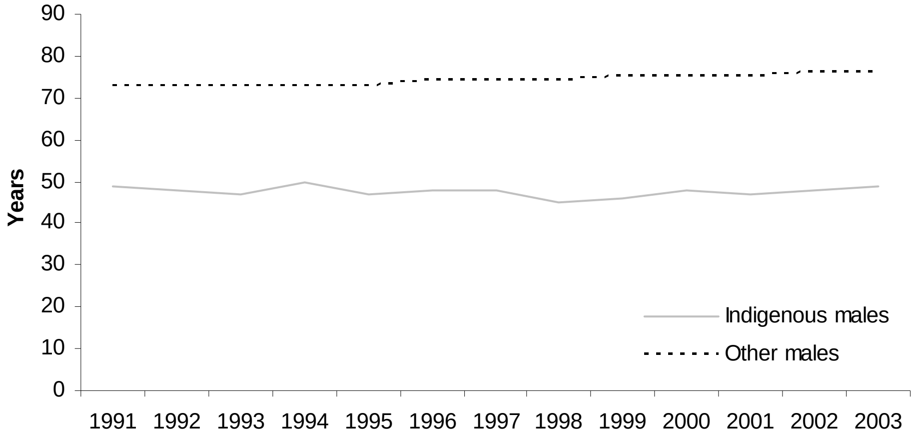
* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–2003.

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

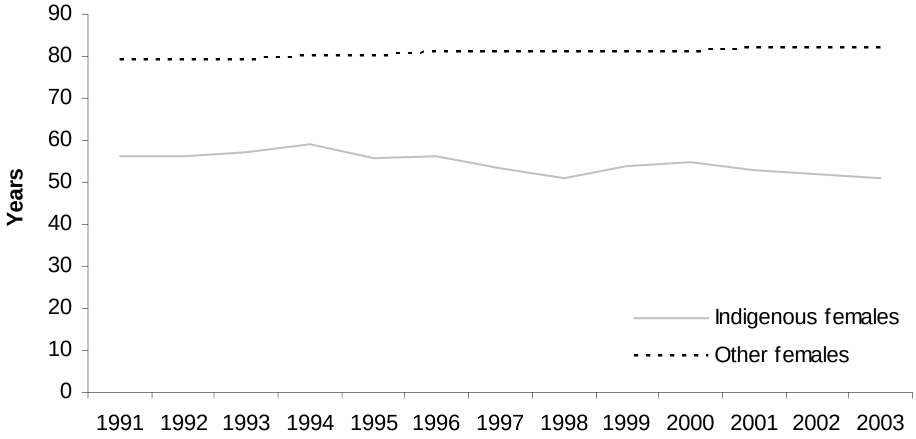
Note: Data based on year of occurrence of death.

Source: AIHW analysis of AIHW National Mortality Database.

Males



Females



Source: AIHW analysis of AIHW National Mortality Database.

Figure 1.16.1: Median age at death, by Indigenous status, WA, SA and NT combined, 1991–2003

Table 1.16.3: Quartiles of age at death, Indigenous Australians in WA, SA and NT, 1991–2003

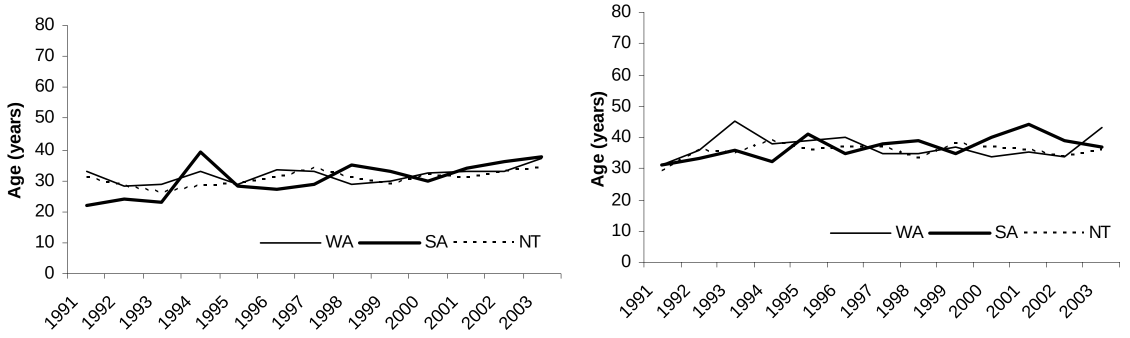
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
First quartile of age at death														
Males														
WA	33	28	29	33	29	33.5	33	29	30	32.5	33	33	37	0.3*
SA	22	24	23	39	28	27	29	35	33	30	34	36	37.5	1.0*
NT	31	28	26	28	29	31	34	31	29	32	31	33	34	0.4*
Females														
WA	31	36	45	38	39	40	35	35	37	34	35.5	34	43	0.0
SA	31	33	36	32	41	35	38	39	35	40	44	39	37	0.6*
NT	29	36	35	39	36	37	37	33	38	37	36	34	36	0.2
Median age at death														
Males														
WA	51	49	50	53	47	49	49	44	49	48	50	50	51	−0.1
SA	39	41	38	52	44	47	46	47	45	50	47	48.5	49.5	0.7*
NT	49	46	46	46	48	46.5	48	45	44	47.5	44	47	47	−0.1
Females														
WA	59	58	62	61	57	59	55.5	54	55.5	56	55	52	57.5	−0.5*
SA	55	53.5	55	48.5	51	48	54	51.5	50	55.5	53	54.5	49	−0.1
NT	52	55	51	58	56	53	52	49	53.5	52	52	52	50	−0.3
Third quartile of age at death														
Males														
WA	67	63	66	65	68	67	63	64.5	63	66	66	66	66	0.0
SA	57	58.5	56	68	61	62	66	70	55	64	63	63	58.5	0.2
NT	64	65	61	62	62	60	64	62	62	61	61	62	64	−0.1
Females														
WA	71	70	75	74	71	70	67	69	71	69	69.5	70	71	−0.2
SA	66	62	69	67.5	64	67	70	69	75	69.5	71.5	68	65	0.4
NT	66	67	65	70	67	68	68	68	72	66	69	68	67	0.1

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–2003.

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

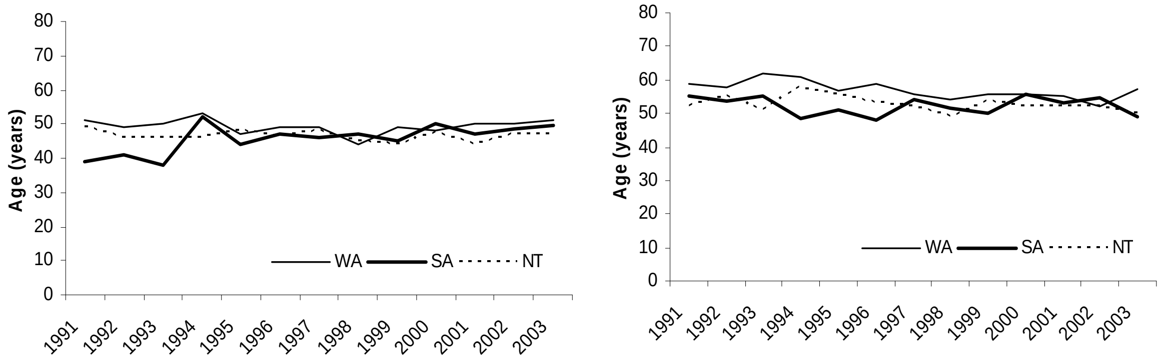
Note: Data based on year of occurrence of death.

Source: AIHW analysis of AIHW National Mortality Database.



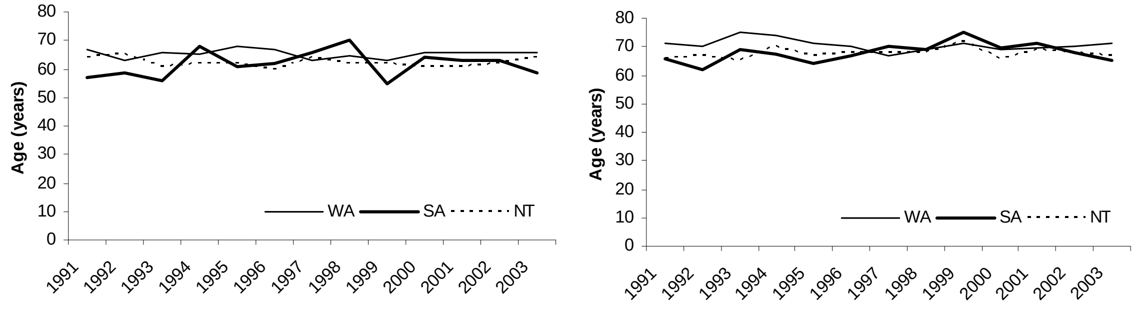
First quartile, Males

First quartile, females



Median age at death, males

Median age at death, females



Third quartile, males

Third quartile, females

Source: AIHW analysis of AIHW National Mortality Database.

Figure 1.16.2: Quartiles of age at death for Indigenous males and females in WA, SA and NT, 1991–2003

International comparisons

International Indigenous data are available for New Zealand, the United States and Canada.

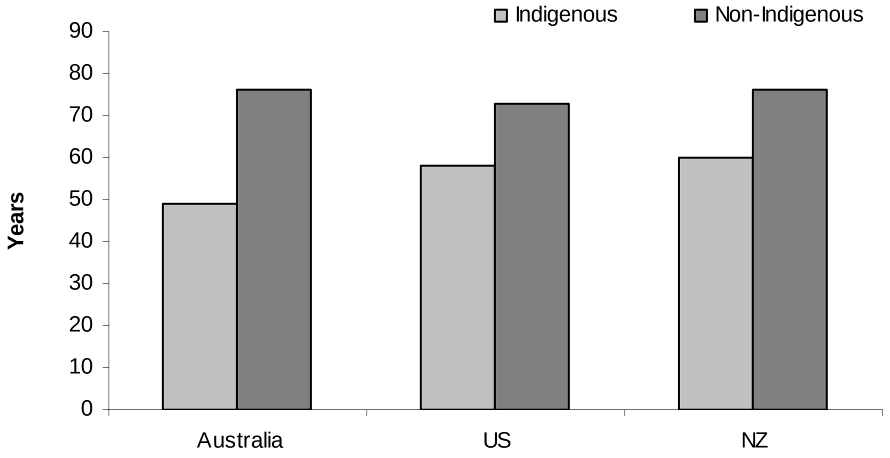
There are several common issues that adversely affect the quality of Indigenous mortality data in these three countries and Australia. These include the lack of an accurate denominator value for the Indigenous population and the lack of agreement over which population denominator values to use if they 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.

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.

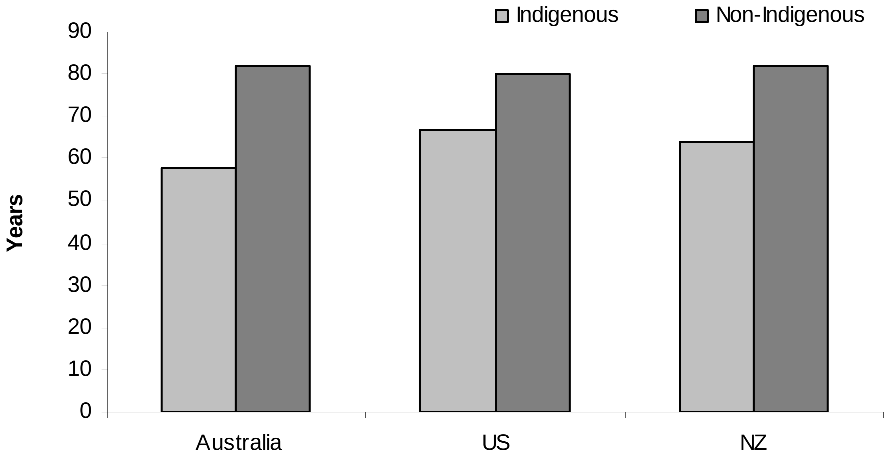
The median age at death is available for United States Indians and Alaskan Natives in the United States and is presented below. Median age at death is not available for Canadian First Nations because, for this population group, data are not accurately available by single year age groups.

- In 2003, the median age at death for United States Indians and Alaskan Natives was 58 years for males and 67 years for females. This compared to 73 years for non-Indigenous males and 80 years for non-Indigenous females in the United States (United States Department of Health and Human Services unpublished data).
- In 2003, the median age at death for New Zealand Maoris was 60 years for males and 65 years for females. This compared to 76 years for all males in New Zealand and 82 years for all females (Statistics New Zealand 2005).
- The median age at death for Aboriginal and Torres Strait Islander peoples is well below that for United States Indians/Alaskan Natives and New Zealand Maoris (Figure 1.16.3).

Males



Females



Notes

1. Australia data are for Qld, WA, SA and NT, Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians.
2. US data are for US Indians/Alaskan Natives and non-Indigenous Americans.
3. New Zealand data are for Maoris and the total New Zealand population.

Sources: AIHW analysis of AIHW National Mortality Database; unpublished data from United States Department of Health and Human Services; Statistics New Zealand 2005.

Figure 1.16.3: Median age at death, by Indigenous status, Australia, United States and New Zealand, 2003

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. 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). While 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 under-estimates of the true differences.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

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 than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from ABS's 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.

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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. The New Zealand Medical Journal 117(1207). <www.nzma.org.nz/journal/117-1207/1215>.

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1.17 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:

- National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)
- National Aboriginal and Torres Strait Islander Social Survey (NATSISS)
- Australian Institute of Health and Welfare (AIHW) National Hospital Morbidity Database
- AIHW National Mortality Database
- AIHW Community Mental Health Care Database
- Western Australian Aboriginal Child Health Survey
- Bettering the Evaluation and Care of Health (BEACH) 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 six-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. 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 has been 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 and the 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 five-year period 2000–01 to 2004–05, during which there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.6% of total GP encounters.

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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005a). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 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 change in a type of care (for example, from acute to rehabilitation).

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.

While 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 five-year period 2000–2004 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death are a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

Community mental health care

Information on the use of community mental health services by Aboriginal and Torres Strait Islander people 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 2003–04, Western Australia, Tasmania and the Northern 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.

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 people 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 related to feelings of anger, the impact of psychological distress, cultural identification and stressors.

Feelings of positive wellbeing

- In 2004–05, approximately 60% of Indigenous males and 53% of Indigenous females reported they felt calm and peaceful and around 73% of Indigenous males and 70% of Indigenous females reported they had been a happy person all or most of the time in the last four weeks. The proportion of Indigenous Australians who reported these positive feelings was similar across all age groups (Table 1.17.1).
- Around 58% of Indigenous males and 51% of Indigenous females reported they were full of life; and 54% of Indigenous males and 41% of Indigenous females reported they often had a lot of energy all or most of the time in the last four weeks. A higher proportion of Indigenous Australians aged 18–24 years reported these feelings of positive wellbeing than Indigenous Australians aged 55 years and over.

Feelings of anger

- In 2004–05, approximately 13% of Indigenous males and 18% of Indigenous females reported they felt annoyed and irritated a lot in the last four weeks.
- Approximately 5% of Indigenous males and 4% of Indigenous females reported they had violent thoughts and 3% of Indigenous males and 4% of Indigenous females reported they wanted to break and smash things a lot in the last four weeks (Table 1.17.2).
- Around 4% of Indigenous males and 7% of Indigenous females reported they got into a lot of arguments and 3% of Indigenous males and 5% of Indigenous females reported they shouted or threw things a lot in the last four weeks.
- Indigenous Australians aged 18–24 years were generally more likely to report these feelings or anger than those in the older age groups.

Table 1.17.1: Aboriginal and Torres Strait Islander persons aged 18 years or over: selected indicators of positive wellbeing, [(a)] by sex and age group, 2004–05

Type of feeling felt[(b)]	18–24 years			25–34 years			35–44 years			45–54 years			55+ years			Total		
	Males	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
									(Per cent)									
How often felt calm and peaceful (in last 4 weeks)																		
All/most	62	54	58	55	50	53	64	52	58	60	52	56	63	59	61	60	53	56
Some	25	28	27	31	30	30	19	25	22	21	25	23	21	23	22	24	27	26
A little	9[(c)]	12	10	8	14	11	10	17	14	13	13	13	10[(c)]	11	10	10	13	12
None	2[(c)]	5[(c)]	4	4[(c)]	5	5	5[(c)]	5	5	5[(c)]	8	7	4[(c)]	4[(c)]	4	4	5	5
Total[(d)]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
How often been a happy person (in last 4 weeks)																		
All/most	73	70	71	75	70	72	72	70	71	71	70	70	70	74	72	73	70	71
Some	18	23	21	19	20	20	18	19	18	20	19	19	13	16	15	18	19	19
A little	6[(c)]	6	6	4	8	6	5	9	7	7	7	7	11[(c)]	5[(c)]	8	6	7	7
None	1[(c)]	2[(c)]	1[(c)]	—[(c)]	2[(c)]	1[(c)]	2[(c)]	2[(c)]	2	2[(c)]	3[(c)]	3[(c)]	4[(c)]	2[(e)]	2[(c)]	2	2	2
Total[(d)]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
How often felt full of life (in last 4 weeks)																		
All/most	62	49	55	62	54	58	59	53	56	55	50	52	47	47	47	58	51	55
Some	27	31	29	25	27	26	26	24	25	25	28	27	26	27	26	26	27	27
A little	7	13	11	8	14	11	7	14	11	11	11	11	11	14	13	9	13	11
None	3[(c)]	5	4	3[(c)]	4	4	6[(c)]	8	7	8	9	8	14	8	11	6	7	6
Total[(d)]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

(continued)

Table 1.17.1 (continued): Aboriginal and Torres Strait Islander persons aged 18 years or over: selected indicators of positive wellbeing, (a) by sex and age group, 2004–05

Type of feeling felt(b)	18–24 years			25–34 years			35–44 years			45–54 years			55+ years			Total		
	Males	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
	(Per cent)																	
How often had a lot of energy (in last 4 weeks)																		
All/most	61	40	50	62	45	53	52	40	45	46	41	43	38	38	38	54	41	47
Some	24	38	32	24	31	27	27	35	32	31	29	30	31	33	32	27	33	30
A little	12	16	14	9	18	14	12	17	15	15	17	16	14	13	14	12	17	14
None	2(c)	5(c)	3	4(c)	5	5	7	7	7	8	11	9	15	12	13	6	7	7
Total(d)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

(a) Questions from SF-36 scale.

(b) Type of feeling over previous 4 weeks.

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

(d) Includes don't know, not stated and refusal.

(e) 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 National Aboriginal and Torres Strait Islander Health Survey.

Table 1.17.2: Social and emotional wellbeing items related to anger, (a) by sex and age group, 2004–05

Type of feeling felt(b)	18–24 years			25–34 years			35–44 years			45–54 years			55+ years			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
	(Per cent)																	
Felt annoyed and irritated																		
A lot	12	18	15	12	21	17	15	21	18	15	16	16	12	*12	12	13	18	16
Some	48	58	53	55	57	56	57	57	57	55	58	56	49	46	47	53	56	55
Not at all	39	24	31	32	21	26	26	22	24	29	25	27	37	38	38	32	25	28
Total(c)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Had violent thoughts																		
A lot	7	4	5	5(d)	5	5	5	4	4	3(d)	4(d)	3(d)	1(e)	2(d)	2(d)	5	4	4
Some	23	21	22	18	22	20	19	18	18	21	20	20	11	9	10	19	19	19
Not at all	69	75	72	76	72	74	74	77	76	75	75	75	86	85	85	75	76	76
Total(c)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Wanted to break and smash things																		
A lot	4(d)	6(d)	5	4(d)	5	4	3(d)	4	3	1(e)	2(d)	2(d)	—(e)	2(d)	1(d)	3	4	3
Some	23	18	20	15	22	19	14	15	15	15	14	15	6	10	8	15	17	16
Not at all	72	75	74	80	72	75	80	81	80	83	82	82	92	85	88	80	78	79
Total(c)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Got into lots of arguments																		
A lot	7	8	7	4(d)	9	6	5	6	6	3(d)	6(d)	5	1(d)	2(d)	2(d)	4	7	6
Some	32	37	35	31	31	31	31	32	31	26	29	28	14	16	15	28	30	29
Not at all	59	54	57	64	60	62	61	61	61	70	64	67	84	78	80	66	62	64
Total(c)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

(continued)

Table 1.17.2 (continued): Social and emotional wellbeing items related to anger, [(a)] by sex and age group, 2004–05

Type of feeling felt[(b)]	18–24 years			25–34 years			35–44 years			45–54 years			55+ years			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
	(Per cent)																	
Shouted or threw things																		
A lot	4[(d)]	5	4	4[(d)]	6	5	3[(d)]	6	5	2[(d)]	6[(d)]	4	1[(e)]	2[(d)]	1[(d)]	3	5	4
Some	21	27	24	17	33	25	21	29	25	17	22	19	9	10	10	18	26	22
Not at all	73	67	70	78	60	68	73	65	69	81	71	76	88	84	86	77	68	72
Total[(c)]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

(a) Questions were adapted using a set developed for American Indian communities in the United States. The objective of these questions was not to provide a measure of anger, but to report on the manifestations of anger against other dimensions of the Social and Emotional Wellbeing module.

(b) Type of feeling over previous 4 weeks.

(c) Includes don't know, not stated and refusal.

(d) Estimate has a relative standard error of between 25% and 50% and should be interpreted with caution.

(e) 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 National Aboriginal and Torres Strait Islander Health Survey.

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, financial stress and law and justice.

Cultural attachment

- Approximately 38% of Indigenous people aged 15 years and over reported that they or a relative had been removed from their natural family, 54% 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.

Family and community attachments

- Approximately 90% of Indigenous people aged 15 years and over reported that they had been involved in social activities in the last three months (such as religious activities, sporting activities, going out to a café, restaurant or bar, etc.) 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.
- Overall, approximately 82% of Indigenous people 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 (46%), serious illness or disability (31%) and inability to get a job (27%).
- Alcohol- and drug-related problems were reported as a stressor by one–quarter (25%) of all Indigenous people, and by 37% of Indigenous people living in remote areas of Australia.

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 people. 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 prior to 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 prior to 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 prior to 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 people was higher than for other Australians. For example, 27% of Aboriginal and Torres Strait Islander people 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 2.19 and 2.20.

Financial stress

- In 2002, over half (54%) 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 five 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. Mental illness and/or emotional distress may not only cause Indigenous and other Australians to come into contact with the criminal justice system, but 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 to 129 per 100,000 for non-Indigenous people.

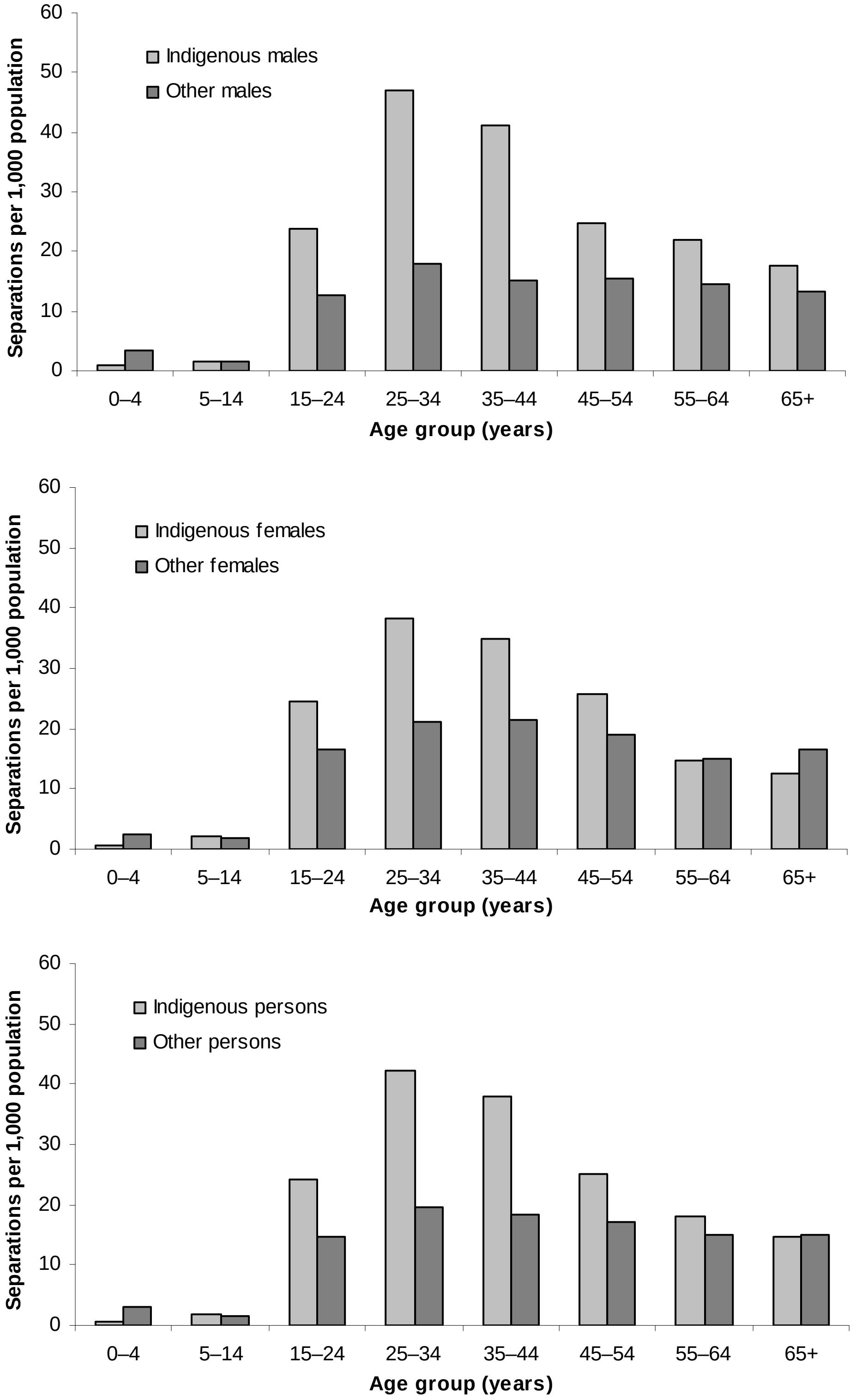
Hospitalisations

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 two-year period July 2002 to June 2004, there were 210,420 hospitalisations from mental health related conditions in Queensland, Western Australia, South Australia and the Northern Territory combined, 11,264 (5.4%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples.
- Mental health related conditions were responsible for 3.6% 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 two-year period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males and females had higher hospitalisation rates for mental health related conditions than other males and females across all age groups from 15–24 years and over (Figure 1.17.1).
- 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 both Indigenous males and females and other Australian males and females, hospitalisation rates for mental health related conditions were highest among those aged 25–34 years.
- Approximately 51% of Indigenous Australians hospitalised for mental health related conditions were males (5,767) and 49% were females (5,496).



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.17.1: Age-specific hospitalisation rates for a principal diagnosis of mental health related conditions, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004

Hospitalisations by state/territory

Table 1.17.3 presents hospitalisations for a principal diagnosis of mental health related conditions for the two-year period July 2002 to June 2004 in Queensland, Western Australia, South Australia and the Northern Territory.

- In Western Australia and South Australia, Indigenous Australians were hospitalised for mental health related conditions at around three times the rate of other Australians in these states and territories, and in the Northern Territory, Indigenous Australians were hospitalised at around twice the rate of other Australians.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males were hospitalised from mental health related conditions at around twice the rate of other Australians in these states and territories. Indigenous females were hospitalised at a slightly higher rate than that of other females.

Table 1.17.3: Hospitalisations for principal diagnosis of mental health related conditions, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004[a][b][c]

	Indigenous				Other[d]				
	Number	**Rate per 1,000[e]**	**LCL 95%[f]**	**UCL 95%[g]**	**Number**	**Rate per 1,000[e]**	**LCL 95%[f]**	**UCL 95%[g]**	**Ratio[h]**
Qld									
Males	2,422	23.0	22.0	24.1	48,912	13.3	13.2	13.4	1.7*
Females	1,941	17.3	16.4	18.2	59,752	16.1	16.0	16.2	1.1*
Persons	4,363	20.0	19.3	20.7	108,664	14.7	14.6	14.8	1.4*
WA									
Males	1,942	34.0	32.3	35.8	21,130	11.3	11.1	11.4	3.0*
Females	1,964	31.6	30.1	33.2	28,824	15.2	15.0	15.4	2.1*
Persons	3,906	32.7	31.6	33.9	49,954	13.2	13.1	13.3	2.5*
SA									
Males	834	36.9	33.9	39.9	17,799	12.0	11.8	12.2	3.1*
Females	1,135	45.2	42.3	48.1	21,361	13.6	13.5	13.8	3.3*
Persons	1,969	41.0	39.0	43.1	39,160	12.8	12.7	13.0	3.2*
NT									
Males	569	10.3	9.3	11.3	889	5.9	5.5	6.3	1.7*
Females	456	7.8	7.0	8.7	487	3.8	3.4	4.2	2.1*
Persons	1,026	9.0	8.4	9.7	1,378	5.0	4.7	5.3	1.8*
Qld, WA, SA & NT[i]									
Males	5,767	24.3	23.5	25.0	88,730	12.4	12.3	12.4	2.0*
Females	5,496	21.3	20.6	21.9	110,424	15.1	15.1	15.2	1.4*
Persons	11,264	22.7	22.2	23.2	199,156	13.8	13.7	13.8	1.6*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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 for 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

Note: Person numbers and rates include hospitalisations for which sex was not stated.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Hospitalisations by principal diagnosis

Mental health related conditions

Table 1.17.4 presents hospitalisations for a principal diagnosis of mental health related conditions for the two-year period July 2002 to June 2004 for 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 (34%), followed by schizophrenia, schizotypal and delusional disorders (18%).
- Based on the hospitalisation rates of other males and females, in the four jurisdictions, there were four–five times as many hospitalisations from mental and behavioural disorders due to psychoactive substance use among Indigenous males and females as would be expected.
- Indigenous males and females were hospitalised from schizophrenia, schizotypal and delusional disorders at around three times the rate of other males and females.

Self-harm and assault

- While self-harm and assault are not included amongst the mental health related conditions presented in this indicator, hospitalisations for these conditions may be mental health related. In 2002–03 to 2003–04 in the four jurisdictions, Indigenous males and females were hospitalised for assault at nine and 37 times the rate, and for self-harm at three times and twice the rate of other males and females respectively for these causes of hospitalisation (Table 1.17.5).

For more information on assault and self-harm see Measures 1.03 (Hospitalisations for injury and poisoning) and 2.12 (Community safety).

Table 1.17.4: Hospitalisations of Indigenous persons for principal diagnosis of mental health related conditions, by type of condition and sex, Qld, WA, SA and NT, July 2002–June 2004[(a)(b)(c)(d)]

	Males						Females						Persons[(e)]					
Principal diagnosis	No.	%[(f)]	Rate per 1,000[(g)]	LCL 95%[(h)]	UCL 95%[(i)]	Ratio[(j)]	No.	%[(f)]	Rate per 1,000[(g)]	LCL 95%[(h)]	UCL 95%[(i)]	Ratio[(j)]	No.	%[(f)]	Rate per 1,000[(g)]	LCL 95%[(h)]	UCL 95%[(i)]	Ratio[(j)]
Mental & behavioural disorders due to psychoactive substance use (F10–F19)	2,434	42.2	10.9	10.4	11.4	4.6*	1,365	24.8	5.3	5.0	5.6	3.6*	3,799	33.7	7.9	7.6	8.2	4.1*
Schizophrenia, schizotypal and delusional disorders (F20–F29)	1,804	31.3	6.7	6.3	7.0	2.4*	1,193	21.7	4.4	4.2	4.7	2.4*	2,998	26.6	5.5	5.3	5.7	2.4*
Mood disorders (F30–F39)	600	10.4	2.6	2.3	2.8	0.8*	1,297	23.6	5.0	4.7	5.3	0.8*	1,897	16.8	3.8	3.7	4.0	0.8*
Neurotic, stress-related disorders (F40–F49)	511	8.9	2.1	1.8	2.3	0.9*	986	17.9	3.7	3.5	4.0	1.1*	1,497	13.3	2.9	2.8	3.1	1.0
Disorders of adult personality and behaviour (F60–F69)	125	2.2	0.5	0.4	0.6	2.0*	166	3.0	0.6	0.5	0.7	1.0	291	2.6	0.5	0.5	0.6	1.3*
Organic, including symptomatic, mental disorders (F00–F09)	94	1.6	1.0	0.7	1.2	1.7*	83	1.5	0.9	0.7	1.1	2.0*	177	1.6	0.9	0.8	1.1	1.9*
Behavioural and emotional disorders (F90–F98)	62	1.1	0.2	0.1	0.2	1.4*	28	0.5	0.1	0.0	0.1	1.4*	90	0.8	0.1	0.1	0.2	1.4*

(continued)

Table 1.17.4 (continued): Hospitalisations of Indigenous persons for principal diagnosis of mental health related conditions, by type of condition and sex, Qld, WA, SA and NT, July 2002–June 2004(a)(b)(c)(d)

	Males						Females						Persons(e)					
Principal diagnosis	**No.**	**%(f)**	**Rate per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**	**No.**	**%(f)**	**Rate per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**	**No.**	**%(f)**	**Rate per 1,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**
Behavioural syndromes assoc. with physiological disturbances (F50–F59)	6	0.1	0.0	0.0	0.1	1.0	41	0.7	0.1	0.1	0.2	0.3*	47	0.4	0.1	0.1	0.1	0.4
Disorders of psych. development (F80–F89)	14	0.2	0.0	0.0	0.0	0.5*	27	0.5	0.1	0.0	0.1	2.8*	41	0.4	0.0	0.0	0.1	1.2*
Unspecified mental disorder (F99)	18	0.3	0.1	0.0	0.1	5.9*	7	0.1	0.0	0.0	0.0	4.0*	25	0.2	0.0	0.0	0.1	5.2
Mental retardation (F70–F79)	14	0.2	0.1	0.0	0.2	3.0*	5	0.1	0.0	−0.1	0.2	0.8	19	0.2	0.0	−0.1	0.1	1.8*
Other(k)	85	1.5	0.3	0.2	0.4	0.7*	298	5.4	1.1	0.9	1.2	1.6*	383	3.4	0.7	0.6	0.8	1.3
Total	**5,767**	**100.0**	**24.3**	**23.5**	**25.0**	**2.0***	**5,496**	**100.0**	**21.3**	**20.6**	**21.9**	**1.4***	**11,264**	**100.0**	**22.7**	**22.2**	**23.2**	**1.6**

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital.

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

(f) Percentage of male, female and total hospitalisations of Indigenous people in the period 2002–03 to 2003–04.

(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 AIHW National Hospital Morbidity Database.

Table 1.17.5: Hospitalisations of Indigenous people for assault and self-harm, by sex, Qld, WA, SA and NT, July 2002–June 2004[a][b][c][d]

	Males						Females						Persons[e]					
External cause	**No.**	**%[f]**	**Rate per 1,000[g]**	**LCL 95%[h]**	**UCL 95%[i]**	**Ratio[j]**	**No.**	**%[f]**	**Rate per 1,000[g]**	**LCL 95%[h]**	**UCL 95%[i]**	**Ratio[j]**	**No.**	**%[f]**	**Rate per 1,000[g]**	**LCL 95%[h]**	**UCL 95%[i]**	**Ratio[j]**
Assault (X85–Y09)	3,597	26.1	14.1	13.6	14.6	10.3*	4,259	37.1	14.8	14.3	15.2	47.2*	7,856	31.1	14.4	14.1	14.7	17.0*
Intentional self-harm (X60–X84)	642	4.7	2.3	2.1	2.5	2.4*	778	6.8	2.7	2.5	2.9	1.9*	1,420	5.6	2.5	2.4	2.7	2.1*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 (National Centre for Classification in Health 2004). 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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) Percentage of male, female and total hospitalisations of Indigenous people in the period 2002–03 to 2003–04.

(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 AIHW National Hospital Morbidity Database.

Average length of stay in hospital (days)

- For the two-year period July 2002 to June 2004, the average length of stay in hospital due to mental health related conditions was eight days for Indigenous patients and six days for other patients (Table 1.17.6).
- 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 (162 days for Indigenous patients and 142 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 four bed days for Indigenous patients and an average of seven bed days for other patients.

Table 1.17.6: Average length of stay in hospital (days), mental health related conditions, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004(a)(b)(c)(d)

	Indigenous			Other(e)		
Mental health related condition	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
Mental retardation	217.9	5.0	161.8	183.6	94.6	141.7
Organic mental disorders	64.5	19.5	43.4	20.1	13.8	16.9
Schizophrenia, schizotypal and delusional disorders	17.8	15.1	16.7	15.3	14.9	15.1
Behavioural & emotional disorders with onset usually occurring in childhood & adolescence	10.8	12.4	11.3	5.8	3.7	5.1
Behavioural syndromes associated with psychological disturbances and physical factors	2.0	7.0	6.4	7.9	9.3	9.2
Mood disorders	7.4	5.6	6.2	4.1	3.4	3.7
Disorders of psychological development	8.5	1.9	4.1	8.2	4.7	7.2
Disorders of adult personality & behaviour	3.1	3.3	3.2	14.5	4.0	7.3
Mental disorders due to psychoactive substance use	3.0	2.4	2.8	2.6	2.2	2.5
Neurotic, stress-related and somatoform disorders	2.8	1.9	2.2	1.7	1.9	1.8
Unspecified mental disorder	1.1	0.4	0.9	2.0	5.5	3.3
Total mental & behavioural disorders	*9.8*	*6.4*	*8.2*	*7.2*	*5.1*	*6.0*
Other mental health conditions	2.6	4.0	3.7	8.5	6.3	7.2
Total	**9.7**	**6.3**	**8.0**	**7.2**	**5.1**	**6.1**

(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 (National Centre in Health Classification 2004); 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) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four 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 AIHW National Hospital Morbidity Database.

Time series analysis

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for mental health related conditions over the five-year period 1998–99 to 2003–04 are presented in Table 1.17.7 and Figure 1.17.2.

- 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 2003–04. The fitted trend implies an average yearly increase in the rate of around 0.7 per 1,000.
- 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. 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 2003–04. 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 2003–04.

It should be noted 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 impact on 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 1.17.7: Age-standardised hospitalisation rates, rate ratios and rate differences from mental health related conditions, Qld, WA, SA and NT, 1998–99–2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	24.4	24.4	26.1	24.9	24.5	24.1	−0.1
Females	19.2	17.0	20.5	20.4	21.3	21.2	0.7*
Persons	21.7	20.5	23.1	22.5	22.8	22.6	0.3
Other Australian[(b)] rate per 1,000							
Males	13.6	12.9	13.2	13.1	12.4	12.3	−0.2*
Females	14.9	14.8	15.0	14.7	15.1	15.2	0.1
Persons	14.2	13.9	14.1	13.9	13.8	13.8	−0.1*
Rate ratio[(c)]							
Males	1.8	1.9	2.0	1.9	2.0	1.9	0.03*
Females	1.3	1.1	1.4	1.4	1.4	1.4	0.04*
Persons	1.5	1.5	1.6	1.6	1.7	1.6	0.03*
Rate difference[(d)]							
Males	10.8	11.5	12.8	11.8	12.1	11.7	0.2
Females	4.3	2.1	5.5	5.7	6.2	6.0	0.6*
Persons	7.5	6.6	9.0	8.7	9.1	8.8	0.4*

* Represents results with statistically significant increases or decreases at the p<.05 level over the period 1998–99 to 2003–04.

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

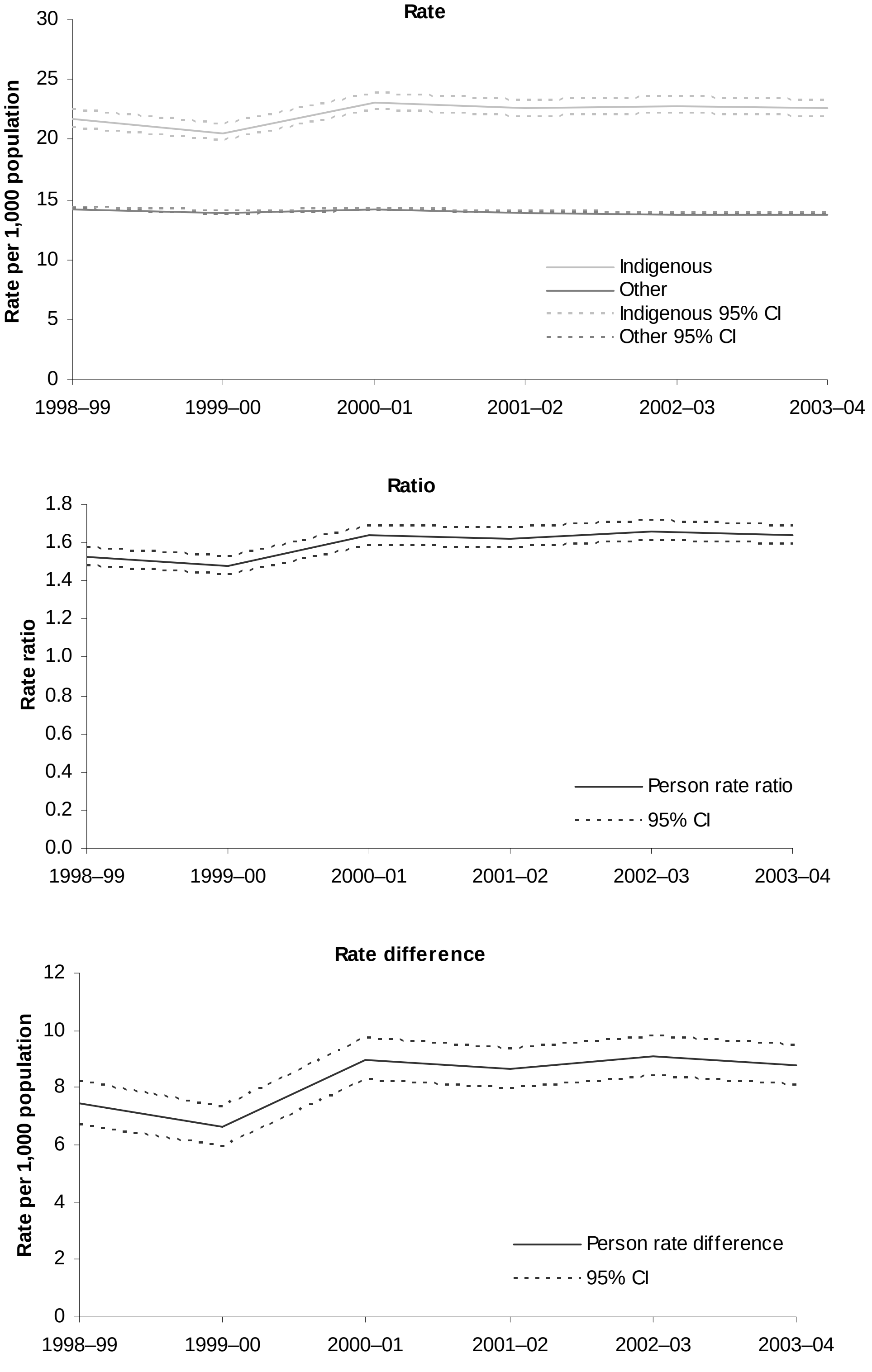
(b) Includes hospitalisations for non-Indigenous Australians and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 1.17.2: 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 2003–04

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 2003–04, there were 181,706 service contacts (3.7%) for clients of community mental health services who identified themselves as being of Aboriginal and/or Torres Strait Islander origin. This ranged from 1.3% for Victoria to 26.4% for the Northern Territory (AIHW 2005b).
- There were more service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples than for other Australians (413.9 per 1,000 and 243.6 per 1,000 respectively). This was true in all jurisdictions with the exception of the Northern Territory. 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.
- In 2003–04, Aboriginal and Torres Strait Islander 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 to 36 years for non-Indigenous Australians). For example, 24% and 22% of service contacts for Indigenous Australian males and females were for clients aged between 15 and 24 years compared with 16% and 17% of service contacts for other Australian males and females (AIHW 2005b).
- 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 3% respectively) than for other Australian males (7%) and females (15%).
- In 2003–04, 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 year and 35–44 year age groups where Indigenous males and females were twice as likely to be clients of community mental health care services than other Australians in these age groups.

For more information on community mental health services see Measure 3.08 (Access to mental health services).

Mortality

- During the period 2000–2004, there were 8,143 deaths from mental health related conditions in Queensland, Western Australia, South Australia and the Northern Territory combined, 184 deaths (2.3%) of which were deaths of Aboriginal and Torres Strait Islander peoples; for 1.9% 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 people.
- Mental and behavioural disorders are the twelfth most common cause of death among Aboriginal and Torres Strait Islander people, behind diseases of the circulatory system, external causes, cancer, endocrine, metabolic and nutritional disorders, diseases of the respiratory system, diseases of the digestive system, diseases of the genitourinary system, symptoms, signs and ill-defined conditions, certain conditions originating in the perinatal period, diseases of the nervous system and infectious and parasitic diseases.

Mortality by age and sex

Table 1.17.8 presents age-specific mortality rates for mental health related conditions for the period 2000–2004 for Queensland, Western Australia, South Australia and the Northern Territory combined.

- Between 2000 and 2004, 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 35–44 and 45–54 year age groups where Indigenous males died at between 10 and 14 times the rates of non-Indigenous males and Indigenous females died at between six and 11 times the rates of non-Indigenous females in these age groups. These differences in mortality rates are mainly the result of the high number of deaths due to mental and behavioural disorders due to psychoactive substance use among the Indigenous population in these age groups.
- Approximately 63% of Indigenous Australians who died from mental health related conditions were males (115 deaths) and 37% (69 deaths) were females.

Table 1.17.8: Mental health related mortality rates per 100,000, by Indigenous status, age group and sex, Qld, WA, SA and NT, 2000–2004(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	—	3.1	—	—	3.3	—
1–4	4.1	0.8	5.4*	1.4	0.7	2.1*
5–14	0.5	—	—	1.2	—	—
15–24	6.0	1.2	5.2*	1.5	0.7	2.2*
25–34	15.8	2.0	7.9*	5.1	0.9	5.7*
35–44	23.1	2.4	9.6*	8.9	0.8	10.6*
45–54	46.3	3.3	14.1*	10.6	1.3	7.3*
55–64	51.2	6.8	7.5*	20.3	4.5	5.0*
65–74	102.5	31.5	3.3*	75.6	21.4	3.5*
75 and over	376.3	249.1	1.5	363.3	384.6	0.9
Total(i)	46.6	18.4	2.5*	32.2	24.5	1.3

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 four jurisdictions should not be assumed to represent the experience in the other jurisdictions.

(c) Data are presented in five-year groupings due to small numbers each year.

(d) There data exclude 155 registered deaths where the Indigenous status is not stated.

(e) While 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 due to these data quality issues.

(f) Deaths are by year of occurrence except the latest year which is based on year of registration.

(g) Age-specific death rates per 100,000 using the average December populations for the relevant years.

(h) Rate ratio—rate for Indigenous divided by rate for non-Indigenous.

(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 AIHW National Mortality Database.

Mortality by cause of death

Mental health related conditions

Deaths for the period 2000–2004 among Aboriginal and Torres Strait Islander people in Queensland, Western Australia, South Australia and the Northern Territory combined are presented in Table 1.17.9 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 (89 deaths or 48%). For Indigenous females it was organic mental disorders, which include dementia, delirium and other mental disorders due to brain damage and dysfunction (32 deaths or 17%).
- In the four jurisdictions combined, Indigenous males died from mental health related conditions at around three times the rate of other males. Indigenous females died from mental health related conditions at a slightly higher rate than other females.
- Indigenous males and females died from mental and behavioural disorders due to psychoactive substance use at 10 and seven times the rate of other males and females respectively.
- Indigenous Australians died from organic mental disorders, which include dementia, delirium and other mental disorders due to brain damage and dysfunction, at twice the rate of non-Indigenous Australians.

Assault and self-harm

- In addition to the mental health related conditions presented here, there were 355 deaths of Aboriginal and Torres Strait Islander peoples due to self-harm (suicide) (4.7%) and 147 deaths of Aboriginal and Torres Strait Islander peoples due to assault (2.0%) in Queensland, Western Australia, South Australia and the Northern Territory between 2000 and 2004.
- Indigenous Australians died from self-harm and assault at two 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 9.2% of all deaths of Indigenous Australians.

Table 1.17.9: Deaths from mental health related conditions for Indigenous Australians, by sex, Qld, WA, SA and NT, 2000–2004[(a)(b)(c)(d)(e)]

	Males					Females					Persons				
Cause of death	**No.**	**Rate per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**	**No.**	**Rate per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**	**No.**	**Rate per 100,000(f)**	**LCL 95%(g)**	**UCL 95%(h)**	**Ratio(i)**
Mental and behavioural disorders due to psychoactive substances use (F10–F19)	89	27.7	20.4	35.0	9.7*	27	5.9	3.2	8.6	7.3*	116	15.8	12.2	19.3	8.8*
Organic, including symptomatic mental disorders (F00–F09)	17	15.2	7.6	22.8	1.7	32	20.4	13.1	27.7	1.6*	49	18.2	12.9	23.5	1.6*
Other(j)	9	3.7	0.3	7.0	0.6	10	5.9	2.0	9.8	0.6	19	5.0	2.3	7.7	0.6
Total	**115**	**46.6**	**35.5**	**57.7**	**2.5***	**69**	**32.2**	**23.5**	**40.9**	**1.3**	**184**	**39.0**	**32.1**	**45.9**	**1.8***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 four jurisdictions should not be assumed to represent the experience in the other jurisdictions.

(b) Data are presented in five-year groupings due to small numbers each year.

(c) These data exclude 314 registered deaths where the Indigenous status is not stated.

(d) While 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 due to these data quality issues.

(e) Deaths are by year of occurrence except the latest year which is based on 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: It should be noted that 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 AIHW National Mortality Database

General practitioner encounters

Information about general practitioner encounters is available from the BEACH survey. Data for the five-year period 2000–01 to 2004–05 are presented below. Mental health related problems are among the top five most common types of problems managed at GP encounters with Aboriginal and Torres Strait Islander patients. The other four most common types of problems managed at GP encounters with Indigenous patients are respiratory conditions, skin problems, musculoskeletal conditions and circulatory conditions.

- In the period 2000–01 to 2004–05 there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 10,955 problems were managed. Of these, 8.8% (971) were mental health related problems (Table 1.17.10).
- Depression was the most common mental health–related problem managed at GP encounters with Indigenous patients, followed by drug misuse (licit or illicit), anxiety and sleep disturbance.
- Mental health related problems were managed at a rate of 13.3 per 100 GP encounters with Indigenous 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 among other patients.
- Alcohol misuse was managed at GP encounters with Indigenous patients at around three times the rate of encounters with other patients. Drug misuse and tobacco misuse were managed at twice the rate of 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 1.17.10: Most frequently reported mental health related problems managed by general practitioners, by Indigenous status of patient, 2000–01 to 2004–05(a)(b)(c)

	Number		% of total problems		Crude rate per 100 encounters						Age-standardised rate 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)**
Depression(i) (P03, P07)	241	19,166	2.2	2.7	3.3	2.7	3.9	4.1	4.0	4.2	3.2	4.1	0.8*
Drug abuse (P19)	112	2,527	1.0	0.3	1.5	1.0	2.1	0.5	0.5	0.6	1.2	0.5	2.2*
Anxiety(i) (P01, P74)	109	8,487	1.0	1.2	1.5	1.0	2.0	1.8	1.8	1.9	1.5	1.8	0.8*
Sleep disturbance (P06)	108	7,910	1.0	1.1	1.5	1.1	1.9	1.7	1.6	1.8	1.5	1.7	0.9
Alcohol misuse(i) (P15, P16)	84	1,750	0.8	0.2	1.2	0.8	1.5	0.4	0.3	0.4	1.0	0.4	2.6*
Schizophrenia (P72)	62	2,223	0.6	0.3	0.8	0.6	1.1	0.5	0.4	0.5	0.8	0.5	1.6*
Tobacco misuse (P17)	56	1,755	0.5	0.2	0.8	0.4	1.1	0.4	0.4	0.4	0.7	0.4	1.9*
Acute stress reaction (P02)	49	2,891	0.4	0.4	0.7	0.4	0.9	0.6	0.6	0.7	0.7	0.6	1.0
Affective psychosis (P73)	13	779	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.9
Dementia (P70)	10	2,234	0.1	0.3	0.1	0.1	0.2	0.5	0.4	0.5	0.4	0.5	0.9
Other(j)	127	6,777	1.2	0.9	1.7	1.3	2.2	1.5	1.4	1.5	1.5	1.5	1.0
Total mental health	**971**	**56,499**	**8.8**	**7.8**	**13.3**	**11.0**	**15.6**	**12.1**	**11.8**	**12.4**	**12.6**	**12.1**	**1.0**

* Represents results with statistically significant differences in the Indigenous/other Australian comparisons at the p<.05 level.

(a) These survey results are likely to undercount the number of Indigenous Australians visiting doctors.
(b) Combined financial year data for five years.
(c) Data for Indigenous and Other Australians have not been weighted.
(d) Directly age-standardised rate per 100 encounters. Figures do not add to 100 as more than one problem can be managed at each encounter.
(e) Includes non-Indigenous patients and patients for whom Indigenous status was ‘not stated’.
(f) LCL = lower confidence interval.
(g) UCL = upper confidence interval.
(h) Rate ratio Indigenous:other.
(i) Includes multiple ICPC–2 or ICPC–2 PLUS codes.
(j) ICPC–2 codes: P02, P04–P05, P08–P13, P18–P20, P22–P25, P27–P29, P71, P75–P82, P85–P86, P98–P99.

Source: AIHW analysis of BEACH data.

Additional information

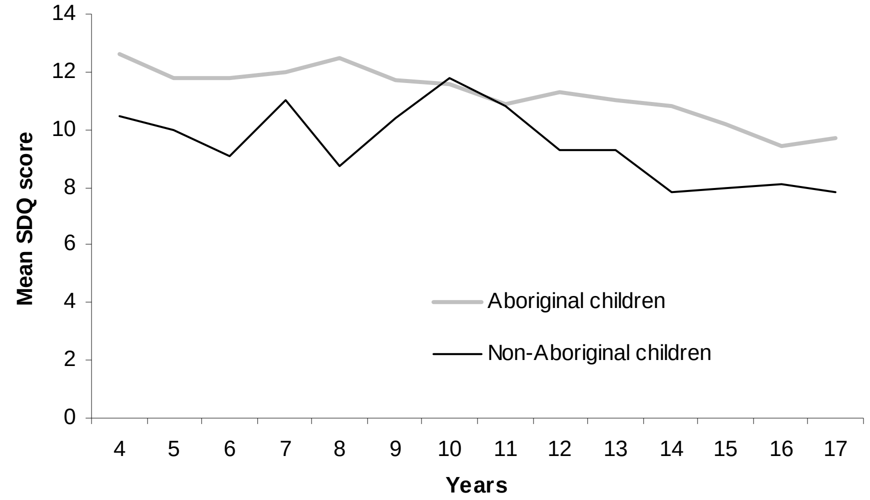
Social and emotional wellbeing of Aboriginal children

The Western Australian Aboriginal Child Health Survey collected information on the social and emotional wellbeing of Aboriginal 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. It should be noted 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 comprises questions looking into emotional symptoms, conduct problems, hyperactivity, peer problems and pro-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 at all ages between 4 and 17 years except for ages 10 and 11 where mean scores were similar (Figure 1.17.3).
- 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.



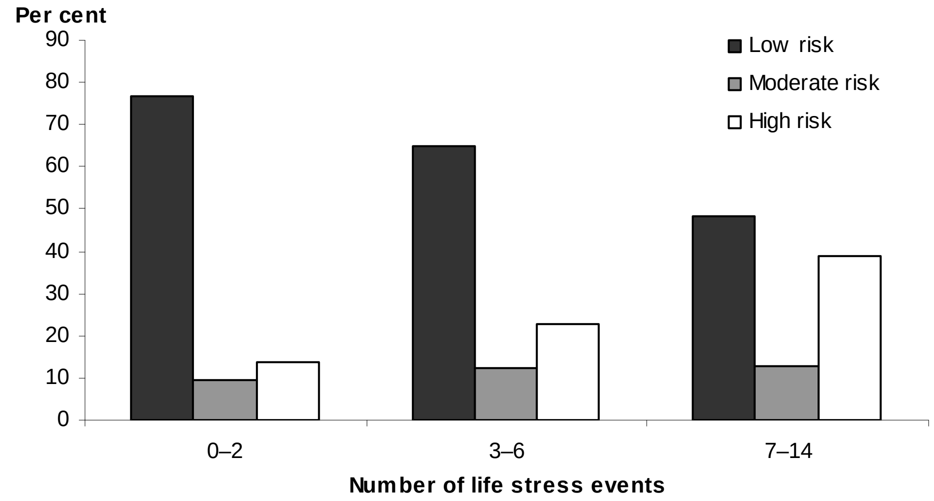
Sources: Zubrick et al. 2005; Computer-assisted telephone interview survey conducted for the WAACHS by the Survey Research Centre at the University of Western Australia.

Figure 1.17.3: 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 impact on 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 to 14% of children in families where two or fewer life stress events had occurred (Figure 1.17.4).



Source: Zubrick et al. 2005.

Figure 1.17.4: 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

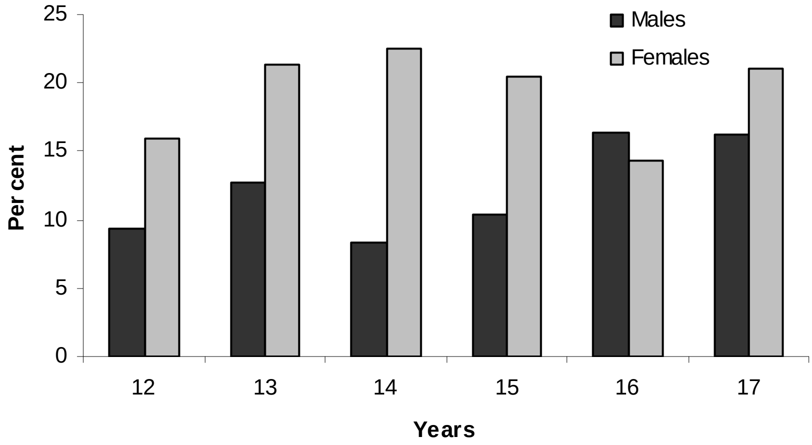
A number of health risk factors were also found to be associated with a high risk of clinically significant emotional and behavioural difficulties.

- 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. While Indigenous males were more likely to use marijuana than Indigenous females, particularly at aged 17 years (45% compared to 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 past six 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 prior to the survey.
- Overall, a higher proportion of Aboriginal females reported they had seriously thought about ending their own life than Aboriginal males (20% compared to 12%). This was true for all ages from 12–17 years except for those aged 16 years where Indigenous males were more likely than females to report having thought about ending their own life (Figure 1.17.5).
- Of those who had suicidal thoughts in the 12 months prior to 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 children who reported suicidal thoughts was significantly higher among those who smoked regularly, used marijuana, drank to excess in the six months prior to survey, were exposed to some form of family violence and who had a friend who had attempted suicide.



Source: Zubrick et al. 2005.

Figure 1.17.5: 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 one and a half times as likely to be at high risk of clinically significant conduct problems and two and a half 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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004a, 2006a).

Western Australian Aboriginal Child Health Survey (WAACHS)

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.

General practitioner data (BEACH)

Information about general practitioner encounters is available from the 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 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 of Aboriginal and Torres Strait Islander people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005a). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia, and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 ABS's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 (ABS 2004b).

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 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.

(continued)

Data Quality issues (continued)

All states and territories use the standard ABS question of Indigenous status. For a number of jurisdictions, the National Community Mental Health Care Database (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 2003–04. Only Western Australia, Tasmania and the Northern Territory reported that the quality of their data was acceptable.

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). While 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 under-estimates of the true differences.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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.

(continued)

Data Quality issues (continued)

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 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 than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from the ABS's 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 ICD-10. Mortality coding using ICD-10 was introduced into Australia from 1 January 1997.

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1.18 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's 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.

While 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 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for all years prior to 2004 and year of registration of death for 2004. This is because mortality data by year of occurrence of death are a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

Analyses

Mortality

- Over the period 2000–2004 there were 2,384 deaths of infants in Queensland, Western Australia, South Australia and the Northern Territory, 440 (18.5 %) of which were deaths of Aboriginal and Torres Strait Islander infants.
- The infant mortality rate for Indigenous infants was 12.2 per 1,000 live births compared to 4.4 per 1,000 live births for non-Indigenous infants.

Mortality by state/territory

Table 1.18.1 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, and 2002–2004.

- For the period 1996–1998, there were 188 deaths of Aboriginal and Torres Strait Islander infants in Western Australia, South Australia and the Northern Territory combined. Indigenous infant mortality rates were 8.8 per 1,000 live births in South Australia, 18.3 per 1,000 in Western Australia and 23.2 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 298 deaths of Indigenous infants in Queensland, Western Australia, South Australia and the Northern Territory combined. Infant mortality rates ranged from 8.5 per 1,000 live births in South Australia to 20.1 per 1,000 live births in the Northern Territory. In Western Australia and the Northern Territory, Indigenous infants died at around four 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 Australians.
- For the period 2002–2004, there were 250 deaths of Aboriginal and Torres Strait Islander infants in the four jurisdictions. Infant mortality rates ranged from 8.4 per 1,000 live births in South Australia to 14.5 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.

Table 1.18.1: Infant mortality rates per 1,000 live births, by Indigenous status, Qld, WA, SA and NT, 1996–1998, 1999–2001 and 2002–2004(a)(b)(c)(d)(e)(f)(g)

	Indigenous				Non-Indigenous				
	Deaths	Rate per 1,000(h)	LCL 95%(i)	UCL 95%(j)	Deaths	Rate per 1,000(h)	LCL 95%(i)	UCL 95%(j)	Rate ratio(k)
					1996–98(b)				
WA	82	18.3	14.3	22.3	325	4.7	4.1	5.2	3.9*
SA	16	8.8	4.5	13.2	243	4.5	3.9	5.1	2.0*
NT	90	23.2	18.4	27.9	39	5.6	3.9	7.4	4.1*
					1999–2001				
Qld	112	11.8	9.6	14.0	720	5.5	5.1	5.9	2.2*
WA	77	15.8	12.3	19.3	252	3.6	3.2	4.1	4.3*
SA	16	8.5	4.3	12.7	212	4.1	3.6	4.7	2.1*
NT	93	20.1	16.0	24.1	37	5.7	3.9	7.6	3.5*
Qld, WA, SA & NT(a)	**298**	**14.3**	**12.7**	**15.9**	**1,221**	**4.7**	**4.5**	**5.0**	**3.0***
					2002–04				
Qld	104	10.2	8.3	12.2	636	4.7	4.3	5.0	2.2*
WA	62	12.7	9.5	15.8	212	3.1	2.7	3.5	4.1*
SA	16	8.4	4.3	12.5	176	3.5	3.0	4.0	2.4*
NT	68	14.5	11.1	18.0	41	6.4	4.5	8.4	2.3*
Qld, WA, SA & NT(a)	**250**	**11.5**	**10.1**	**13.0**	**1,065**	**4.1**	**3.8**	**4.3**	**2.8***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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) 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 only reliable from 1998 onwards.

(c) Data are presented in three-year groupings due to small numbers each year.

(d) Data exclude 434 registered infant deaths where Indigenous status was not stated over the period 1996–2004 in Australia.

(e) While 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 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 infant mortality may differ from the estimates for 'all causes'.

(f) Due to 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 due to these data quality issues.

(g) Deaths are by year of occurrence except the latest year which is based on year of registration.

(h) Rate 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 AIHW National Mortality Database.

Mortality by cause of death

- In the period 2000–2004, 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 twice the rate of non-Indigenous infants for these conditions (Table 1.18.2).

- 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 almost five times the rates of non-Indigenous infants respectively for these conditions.
- Indigenous infants also died at much higher rates from respiratory diseases and infectious and parasitic diseases than non-Indigenous infants (11 and seven times the rate respectively).

Table 1.18.2: Causes of infant death by Indigenous status, Qld, WA, SA and NT, 2000–2004[(a)(b)(c)(d)(e)]

	Number of deaths		Rate 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)	185	935	5.1	2.2	2.4*
Congenital malformations (Q00–Q99)	69	467	1.9	1.1	1.8*
SIDS (R95)	48	121	1.3	0.3	4.8*
Other signs, symptoms & ill-defined conditions (R00–R94, R96–R99)	45	94	1.3	0.2	5.8*
Diseases of the respiratory system (J00–J99)	32	34	0.9	0.1	11.3*
Injury & poisoning (S00–T98)	22	68	0.6	0.2	3.9*
Infectious and parasitic diseases (A00–B99)	18	32	0.5	0.1	6.8*
Diseases of the circulatory system (I00–I99)	7	23	0.2	0.1	3.7*
Other conditions[((h)]	14	113	0.4	0.3	1.5
Total	**440**	**1,887**	**12.2**	**4.4**	**2.8***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) These data exclude 57 infant deaths where the Indigenous status is not stated.

(d) While 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. It should be noted that 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.

(e) Deaths are by year of occurrence except the latest year which is based on year of registration.

(f) Rate per 1,000 live births.

(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 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 AIHW National Mortality Database.

Mortality by associated causes of death

Table 1.18.3 presents underlying causes of deaths for Indigenous infants by associated causes of death for the period 2000–2004 in Queensland, Western Australia, South Australia and the Northern Territory combined.

- In the period 2000–2004, just under half (46%) of infant deaths were reported alone.
- Deaths of Indigenous infants in Queensland, Western Australia, South Australia and the Northern Territory were commonly reported with conditions originating in the perinatal period (36%) and congenital malformations, deformations and chromosomal abnormalities (10%) as associated causes of death.
- Indigenous infants who died from infectious and parasitic diseases as an underlying cause of death were commonly reported with respiratory diseases as an associated cause of death (28%).
- Deaths of Indigenous infants from injury and poisoning as the underlying cause of death were commonly reported with other types of injury as associated causes of death (86%).
- Indigenous infants who died from congenital malformations, deformations and chromosomal abnormalities as an underlying cause of death were commonly reported with conditions originating in the perinatal period as an associated cause of death (55%).

Table 1.18.3: Underlying and associated causes of death for Indigenous infants, Qld, WA, SA and NT, 2000–2004[a][b][c][d][e]

	Underlying cause of death									
Associated cause of death	**Conditions originating in perinatal period**	**Congenital malformations**	**SIDS**	**Signs, symptoms & ill-defined conditions (excluding SIDS)**	**Disease of respiratory system**	**Injury & poisoning**	**Infectious & parasitic diseases**	**Disease of circulatory system**	**Other conditions[f]**	**Total**
					Per cent					
Reported alone	35.7	21.7	91.7	100.0	65.6	0.0	44.4	57.1	0.0	46.1
Conditions originating in perinatal period (P00–P96)	58.4	55.1	0.0	0.0	12.5	4.5	11.1	0.0	35.7	35.9
Congenital malformations (Q00–Q99)	5.9	33.3	2.1	0.0	0.0	0.0	11.1	28.6	21.4	9.5
Disease of respiratory system (J00–J99)	2.2	7.2	2.1	0.0	12.5	13.6	27.8	28.6	35.7	6.6
Injury & poisoning (V01–Y98)	0.5	4.3	0.0	0.0	0.0	86.4	0.0	0.0	7.1	5.5
Circulatory diseases (I00–I99)	2.7	11.6	0.0	0.0	3.1	0.0	5.6	42.9	21.4	4.8
Infectious & parasitic diseases (A00–B99)	3.2	1.4	2.1	0.0	9.4	0.0	5.6	28.6	7.1	3.4
Signs, symptoms & ill-define conditions, excluding SIDS (R00–R94, R96–R99)	1.1	2.9	2.1	0.0	0.0	9.1	5.6	0.0	21.4	2.5
SIDS (R95)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other conditions[f]	8.1	10.1	0.0	0.0	3.1	13.6	16.7	0.0	35.7	7.7
Total deaths	**185**	**69**	**48**	**45**	**32**	**22**	**18**	**7**	**14**	**440**

(continued)

Table 1.18.3 (continued): Underlying and associated causes of death for Indigenous infants, Qld, WA, SA and NT, 2000–2004(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 five-year groupings due to small numbers each year.

(c) These data exclude 57 infant deaths where the Indigenous status is not stated.

(d) While 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. It should be noted that 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.

(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 AIHW 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 1991–2003 have been used for the analysis of Indigenous mortality in this indicator. Data for 2004 have not been used because they are still incomplete, owing to late registration of some deaths.

Due to 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).

Infant mortality rates, rate ratios and rate differences between Indigenous and other Australian infants over the period 1991–2003 are presented in Table 1.18.4 and Figure 1.18.1.

- Over the period 1991–2003, there were significant declines in recorded mortality rates for Indigenous infants 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 0.8 per 1,000 births for Indigenous infants and 0.2 per 1,000 births for other infants.
- There were no significant changes in the mortality rate ratios for Indigenous and other Australians over the period 1991–2003. There were, however, significant declines in the mortality rate differences of around 0.7 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 volatility in the measures of Indigenous mortality, caution should be exercised in assessing trends in Indigenous mortality over time and comparisons between jurisdictions and comparisons with the non-Indigenous population.

Table 1.18.4: Infant mortality rates, rate ratios and rate differences, WA, SA and NT, 1991–2003

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous rate per 1,000 live births														
Persons	21.9	25.2	19.6	18.9	19.1	20.4	19.0	16.1	19.4	14.7	15.1	13.8	11.6	−0.8*
Other[(b)] rate per 1,000 live births														
Persons	5.6	5.8	5.1	4.9	5.1	4.9	4.7	4.3	4.0	3.8	4.6	4.0	3.4	−0.2*
Rate ratio[(c)]														
Persons	3.9	4.3	3.8	3.9	3.7	4.1	4.0	3.7	4.8	3.9	3.3	3.5	3.4	0.0
Rate difference[(d)]														
Persons	16.3	19.4	14.5	14.0	14.0	15.4	14.3	11.8	15.3	10.9	10.6	9.8	8.1	−0.7*

* Represents results with statistically significant increases or decreases at the $p<.05$ level over the period 1991–2003.

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

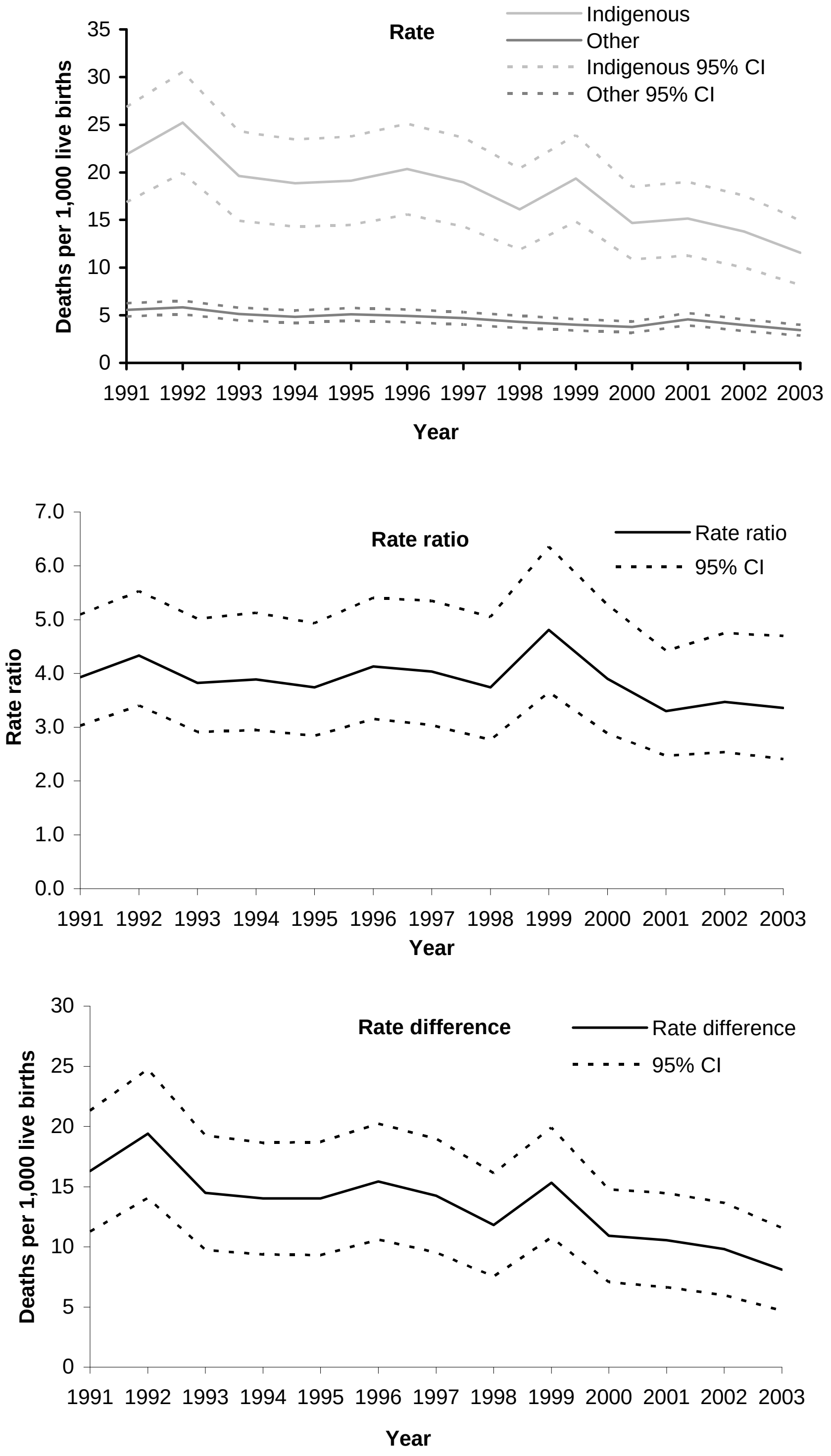
(b) Other includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(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.

Note: The average of births over 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 AIHW National Mortality Database.



Source: AIHW analysis of AIHW National Mortality Database.

Figure 1.18.1: Infant mortality rates, rate ratios and rate differences between Indigenous and other Australians, WA, SA and NT, 1991–2003

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 identification estimates derived from the most recent ABS analyses (relating to the period 1999–2003) (WA—72%, SA—66%, NT—95%).
    - 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 2003 for Western Australia, from 60% to 66% for South Australia, and from 90% to 95% for the Northern Territory.
    - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 72% in 2003 for Western Australia, from 72% to 66% for South Australia, and from 100% to 95% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were 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 1991–2003 remained statistically significant under all three identification scenarios.

Time series analysis by cause of death

Table 1.18.5 presents infant mortality rates by cause of death for the period 1991–1996 and 1997–2003.

- Over the periods 1991–1996, and 1997–2003, 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 1997–2003, there were declines in infant mortality rates for congenital malformations, SIDS and certain conditions originating in the perinatal period and increases in infant mortality rates for diseases of the respiratory system for Indigenous infants.

Table 1.18.5: Causes of infant death, by Indigenous status, Qld, WA, SA and NT, 1991–1996 and 1997–2003[a][b][c][d][e]

	Number of deaths		Rate per 1,000[f]		Rate ratio[h]
	Indigenous	Other[g]	Indigenous	Other[g]	
			1991–1996		
Certain conditions originating in the perinatal period (760–779)	151	624	7.4	2.3	3.2*
Congenital malformations (740–759)	69	387	3.4	1.4	2.3*
SIDS (798)	105	231	5.1	0.9	6.0*
Other signs, symptoms & ill-defined conditions (780–798, 799)	42	24	2.0	0.1	22.9*
Diseases of the respiratory system (460–519)	4	4	0.2	0.0	13.1*
Injury & poisoning (800–999)	14	39	0.7	0.1	4.7*
Infectious and parasitic diseases (001–139)	18	15	0.9	0.1	15.7*
Diseases of the circulatory system (390–459)	10	14	0.5	0.1	9.4*
Other conditions[i]	14	70	0.7	0.3	2.6*
Total	**428**	**1,408**	**20.8**	**5.2**	**4.0***
			1997–2003		
Certain conditions originating in the perinatal period (P00–P96)	167	545	6.5	1.8	3.5*
Congenital malformations (Q00–Q99)	64	328	2.5	1.1	2.2*
SIDS (R95)	60	111	2.3	0.4	6.2*
Other signs, symptoms & ill-defined conditions (R00–R94, R96–R99)	27	53	1.0	0.2	5.9*
Diseases of the respiratory system (J00–J99)	28	20	1.1	0.1	16.1*
Injury & poisoning (S00–T98)	16	50	0.6	0.2	3.7*
Infectious and parasitic diseases (A00–B99)	15	15	0.6	0.1	11.5*
Diseases of the circulatory system (I00–I99)	6	11	0.2	0.0	6.3*
Other conditions[i]	17	86	0.7	0.3	2.38
Total	**400**	**1,219**	**15.5**	**4.1**	**3.8***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 six-year groupings due to small numbers each year.

(c) While 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. It should be noted that 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.

(d) Due to 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 due to these data quality issues.

(e) Deaths are by year of occurrence except the latest year which is based on year of registration.

(f) Rate 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) '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 AIHW 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.

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 to 5 per 1,000 live births). The latest available data from the United States, Canada and New Zealand are outlined below.

- For the period 2000–2002, the infant mortality rate of babies born to American Indian or Alaskan native mothers was 8.9 per 1,000 live births. This compared to 6.9 per 1,000 live births for babies born to all mothers in the United States (National Center for Health Statistics 2005).
- In 2000, the mortality rate of Canadian First Nation infants was 6.4 per 1,000 live births. This compares with the 2001 Canadian rate of 5.2 per 1,000 live births (Health Canada 2005).
- In 2004, the mortality rate of Maori infants was 7.1 per 1,000 live births. This compared to 5.6 per 1,000 live births for the total New Zealand population (Statistics New Zealand 2006).

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. 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). While 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.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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

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 Indigenous births in 2000-04 was 94%. Identification for the states and territories ranged from 69% for the Australian Capital Territory to 108% for the Northern Territory (ABS 2005b). 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 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.

Cause of death coding

Causes of death are 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.

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1.19 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 gender, state/territory of birth and the Indigenous status of the mother, however, it does not collect information on cause of death for all jurisdictions. Work is underway 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 the Registration Database.

Data are presented by state/territory of usual residence rather than state/territory of death. While 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.

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

Several years of data have been combined due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for all years prior to 2004 and year of registration of death for 2004. This is because mortality data by year of occurrence of death is a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

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

- Over the period 2000–2004, there were 476 deaths of Indigenous perinatal infants and 3,381 deaths of non-Indigenous perinatal infants in Queensland, Western Australia, South Australia and the Northern Territory combined.

Mortality by state/territory

Perinatal mortality rates per 1,000 births among Indigenous and non-Indigenous babies are presented in Table 1.19.1 for Queensland, Western Australia, South Australia and the Northern Territory for the years 1996–1998, 1999–2001, and 2002–2004.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were 295 perinatal deaths of Indigenous babies in 1996–1998, 344 perinatal deaths of Indigenous babies in 1999–2001 and 250 perinatal deaths of Indigenous babies in 2002–2004.
- Over the period 2002–04, the perinatal mortality rate for Indigenous babies in Queensland, Western Australia, South Australia and the Northern Territory combined was 13.4 per 1,000 live births compared to 8.2 for non-Indigenous babies.
- Indigenous perinatal mortality rates ranged from 9.8 per 1,000 live births in Western Australia, to 18.3 per 1,000 live births in the Northern Territory.
- Indigenous babies in the Northern Territory, South Australia and Queensland died in the perinatal period at twice the rate of non-Indigenous babies in these jurisdictions. In Western Australia, Indigenous and non-Indigenous perinatal babies died in the perinatal period at similar rates.
- The majority of perinatal deaths were fetal deaths. Between 2002 and 2004, the fetal death rate was 7.6 per 1,000 live births among Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory compared to 5.5 among non-Indigenous Australians. The neonatal death rate among Indigenous babies for the same period was 5.8 per 1,000 live births compared to 2.7 among non-Indigenous babies.

Table 1.19.1: Fetal, neonatal and perinatal mortality rates per 1,000 births, by Indigenous status, Qld, WA, SA and NT, 1996–1998 to 2002–2004[a][b][c][d][e][f]

	1996–1998[g]					1999–2001					2002–2004				
	No.	Rate per 1,000	LCL 95%[h]	UCL 95%[i]	Rate ratio[j]	No.	Rate per 1,000	LCL 95%[h]	UCL 95%[i]	Rate ratio[j]	No.	Rate per 1,000	LCL 95%[h]	UCL 95%[i]	Rate ratio[j]
							Fetal deaths								
Qld															
Indigenous	59	6.3	4.7	7.9	1.2	79	8.2	6.4	10.0	1.5*	56	6.6	4.9	8.3	1.2
Non-Indigenous	695	5.2	4.8	5.6		695	5.3	4.9	5.7		662	5.3	4.9	5.7	
WA															
Indigenous	49	10.6	7.6	13.6	2.2*	44	9.2	6.5	11.9	1.7*	25	6.3	3.8	8.8	1.1
Non-Indigenous	347	4.9	4.4	5.4		361	5.3	4.8	5.8		350	5.6	5.0	6.2	
SA															
Indigenous	12	6.8	3.0	10.6	1.3	23	12.6	7.5	17.7	2.5*	13	7.9	3.6	12.2	1.3
Non-Indigenous	291	5.4	4.8	6.0		256	5.1	4.5	5.7		279	5.9	5.2	6.6	
NT															
Indigenous	44	11.2	7.9	14.5	2.4*	46	9.8	7.0	12.6	1.7*	48	10.6	7.6	13.6	2.3*
Non-Indigenous	32	4.7	3.1	6.3		38	5.9	4.0	7.8		29	4.7	3.0	6.4	
Qld, WA, SA & NT[c]															
Indigenous	**164**	**8.3**	**7.0**	**9.6**	**1.7***	**192**	**9.2**	**7.9**	**10.5**	**1.9***	**142**	**7.6**	**6.3**	**8.9**	**1.5***
Non-Indigenous	**1,365**	**5.2**	**4.9**	**5.5**		**1,350**	**5.3**	**5.0**	**5.6**		**1,320**	**5.5**	**5.2**	**5.8**	

(continued)

Table 1.19.1 (continued): Fetal, neonatal and perinatal mortality rates per 1,000 births, by Indigenous status, Qld, WA, SA and NT, 1996–1998 to 2002–2004(a)(b)(c)(d)(e)(f)

	1996–1998(g)					1999–2001					2002–2004				
	No.	Rate per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)	No.	Rate per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)	No.	Rate per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)
							Neonatal deaths								
Qld															
Indigenous	57	6.1	4.5	7.7	1.8*	61	6.4	4.8	8.0	1.9*	50	5.9	4.3	7.5	1.9*
Non-Indigenous	457	3.5	3.2	3.8		432	3.3	3.0	3.6		395	3.2	2.9	3.5	
WA															
Indigenous	28	6.1	3.8	8.4	2.5*	35	7.4	4.9	9.9	3.3*	14	3.5	1.7	5.3	1.6*
Non-Indigenous	175	2.5	2.1	2.9		151	2.2	1.8	2.6		136	2.2	1.8	2.6	
SA															
Indigenous	3	1.7	−0.2	3.6	0.7	8	4.4	1.4	7.4	1.8*	9	5.5	1.9	9.1	2.5*
Non-Indigenous	130	2.4	2.0	2.8		120	2.4	2.0	2.8		103	2.2	1.8	2.6	
NT															
Indigenous	43	11.1	7.8	14.4	3.4*	48	10.4	7.5	13.3	2.4*	35	7.8	5.2	10.4	2.7*
Non-Indigenous	22	3.2	1.9	4.5		27	4.2	2.6	5.8		18	2.9	1.6	4.2	
Qld, WA, SA & NT(c)															
Indigenous	**131**	**6.7**	**5.6**	**7.8**	**2.4***	**152**	**7.3**	**6.1**	**8.5**	**2.7***	**108**	**5.8**	**4.7**	**6.9**	**2.4***
Non-Indigenous	**784**	**3.0**	**2.8**	**3.2**		**730**	**2.8**	**2.6**	**3.0**		**652**	**2.7**	**2.5**	**2.9**	

(continued)

Table 1.19.1 (continued): Fetal, neonatal and perinatal mortality rates per 1,000 births, by Indigenous status, Qld, WA, SA and NT, 1996–1998 to 2002–2004(a)(b)(c)(d)(e)(f)

	1996–1998(g)					1999–2001					2002–2004				
	No.	Rate per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)	No.	Rate per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)	No.	Rate per 1,000	LCL 95%(h)	UCL 95%(i)	Rate ratio(j)
							Perinatal deaths								
Qld															
Indigenous	116	12.3	10.1	14.5	1.4*	140	14.5	12.1	16.9	1.7*	106	12.5	10.1	14.9	1.5*
Non-Indigenous	1,152	8.7	8.2	9.2		1,127	8.6	8.1	9.1		1,057	8.4	7.9	8.9	
WA															
Indigenous	77	16.7	13.0	20.4	2.3*	79	16.6	12.9	20.3	2.2*	39	9.8	6.7	12.9	1.2
Non-Indigenous	522	7.4	6.8	8.0		512	7.6	6.9	8.3		486	7.8	7.1	8.5	
SA															
Indigenous	15	8.5	4.2	12.8	1.1	31	16.9	11.0	22.8	2.3*	22	13.4	7.8	19.0	1.7*
Non-Indigenous	421	8.5	7.7	9.3		376	7.5	6.7	8.3		382	8.0	7.2	8.8	
NT															
Indigenous	87	22.2	17.5	26.9	2.8*	94	20.1	16.0	24.2	2.0*	83	18.3	14.4	22.2	2.4*
Non-Indigenous	54	7.9	5.8	10.0		65	10.2	7.7	12.7		47	7.6	5.4	9.8	
Qld, WA, SA & NT(c)															
Indigenous	**295**	**15.0**	**13.3**	**16.7**	**2.0***	**344**	**16.4**	**14.7**	**18.1**	**2.1***	**250**	**13.4**	**11.7**	**15.1**	**1.8***
Non-Indigenous	**2,149**	**8.1**	**7.8**	**8.4**		**2,080**	**8.2**	**7.8**	**8.6**		**1,972**	**8.2**	**7.8**	**8.6**	

(continued)

Table 1.19.1 (continued): Fetal, neonatal and perinatal mortality rates per 1,000 births, by Indigenous status, Qld, WA, SA and NT, 1996–1998 to 2002–2004(a)(b)(c)(d)(e)(f)

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

(a) Shading indicates that the Indigenous identification is likely to be less than 50% complete.

(b) Data are presented in three-year groupings due to 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) While 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) Due to 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 due to these data quality issues.

(f) Deaths are by year of occurrence of death.

(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 1.19.2 presents perinatal deaths of Indigenous and non-Indigenous babies by cause of death. It should be noted 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 2000–2004, there were 476 perinatal deaths of Indigenous babies 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 related to length of gestation and fetal growth was reported as a 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 (28%). For approximately 19% of Indigenous babies, the fetus and newborn affected by maternal complications of pregnancy was reported as an underlying or associated cause of death.

Table 1.19.2: Underlying or associated causes of death for perinatal babies, by Indigenous status, Qld, WA, SA and NT, 2000–2004[(a)(b)(c)(d)(e)(f)(g)(h)]

	Total number		Per cent	
Cause of death	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Condition in the fetus/infant				
Disorders related to length of gestation and fetal growth (P05–P08)	109	473	22.9	14.0
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	58	525	12.2	15.5
Infections specific to the perinatal period (P35–P39)	23	127	4.8	3.8
Other conditions originating in the perinatal period (P10–P15 and P50–P96)	197	1,489	41.4	44.0
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	67	692	14.1	20.5
Other conditions[(h)]	409	2,689	85.9	79.5
Condition in the mother				
Fetus and newborn affected by complications of placenta, cord and membranes	135	922	28.4	27.3
Fetus and newborn affected by maternal complications of pregnancy	88	630	18.5	18.6
Fetus and newborn affected by maternal conditions that may be unrelated to present pregnancy	77	448	16.2	13.3
Fetus and newborn affected by other complications of labour and delivery and noxious influences transmitted via placenta or breast milk	15	191	3.2	5.6
Total deaths[(i)]	**476**	**3,381**	**100.0**	**100.0**

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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) 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 five-year groupings due to small numbers each year.

(d) Cause of death data should be used with caution as the level of identification by cause is unknown.

(e) These data exclude 27 perinatal deaths for the main condition in fetus/neonatal infant and 20 perinatal deaths for the main condition in Mother where the Indigenous status was not stated.

(f) While 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 Indigenous perinatal deaths and, depending on the level of under-identification in births, may either underestimate or overestimate the rates. It should be noted that 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.

(g) Deaths are by year of occurrence of death.

(h) 'Other conditions' include: infectious and parasitic diseases, neoplasms, diseases of blood and blood-forming organs, endocrine, nutritional and metabolic diseases, mental and behavioural disorders, diseases of the nervous system, circulatory system, respiratory system, diseases of the digestive system, diseases of the musculoskeletal system and connective tissues, diseases of the genitourinary system, other symptoms, signs and abnormal findings, injury and poisoning, and external causes.

(i) The sum of the components will total more than the total number of deaths and 100% as more than one condition may be reported for each death.

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 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 1991–2003 have been used for the analysis of Indigenous mortality in this indicator. Data for 2004 have not been used because they are still incomplete, owing to late registration of some deaths.

Due to 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 deaths for which 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 comparisons with the non-Indigenous population.

Perinatal mortality rates, rate ratios and rate differences between Indigenous and other babies over the period 1991–2003 are presented in Table 1.19.3 and Figure 1.19.1.

- Over the period 1991–2003, 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 0.9 deaths per 1,000 live births.
- 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 live births.
- There were no significant changes in the mortality rate ratios between Indigenous and other babies between 1991 and 2003, however, there were significant declines in the mortality rate differences.

Table 1.19.3: Perinatal mortality rates, rate ratios and rate differences, WA, SA and NT, 1991–2003

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous rate per 1,000 births														
Number	66	93	86	86	63	66.5	71	65	85	63	56	44	55	
Rate	19.5	27.0	25.2	24.9	18.5	19.3	21.4	19.0	23.5	16.2	14.4	11.9	14.1	−0.9*
Other[(b)] rate per 1,000 births														
Number	413	420	425	382	416	409	317	313	314	323	325	310	329	
Rate	9.1	9.4	9.4	8.5	9.3	9.3	7.3	7.3	7.3	7.6	7.9	7.5	7.9	−0.2*
Rate ratio[(c)]														
Persons	2.1	2.9	2.7	2.9	2.0	2.1	2.9	2.6	3.2	2.1	1.8	1.6	1.8	−0.1
Rate difference[(d)]														
Persons	10.4	17.6	15.8	16.4	9.3	10.0	14.1	11.8	16.2	8.7	6.5	4.4	6.2	−0.7*

* Represents statistically significant increases or decrease over the period 1991–2003 at the p<.05 level/

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

(b) Other includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

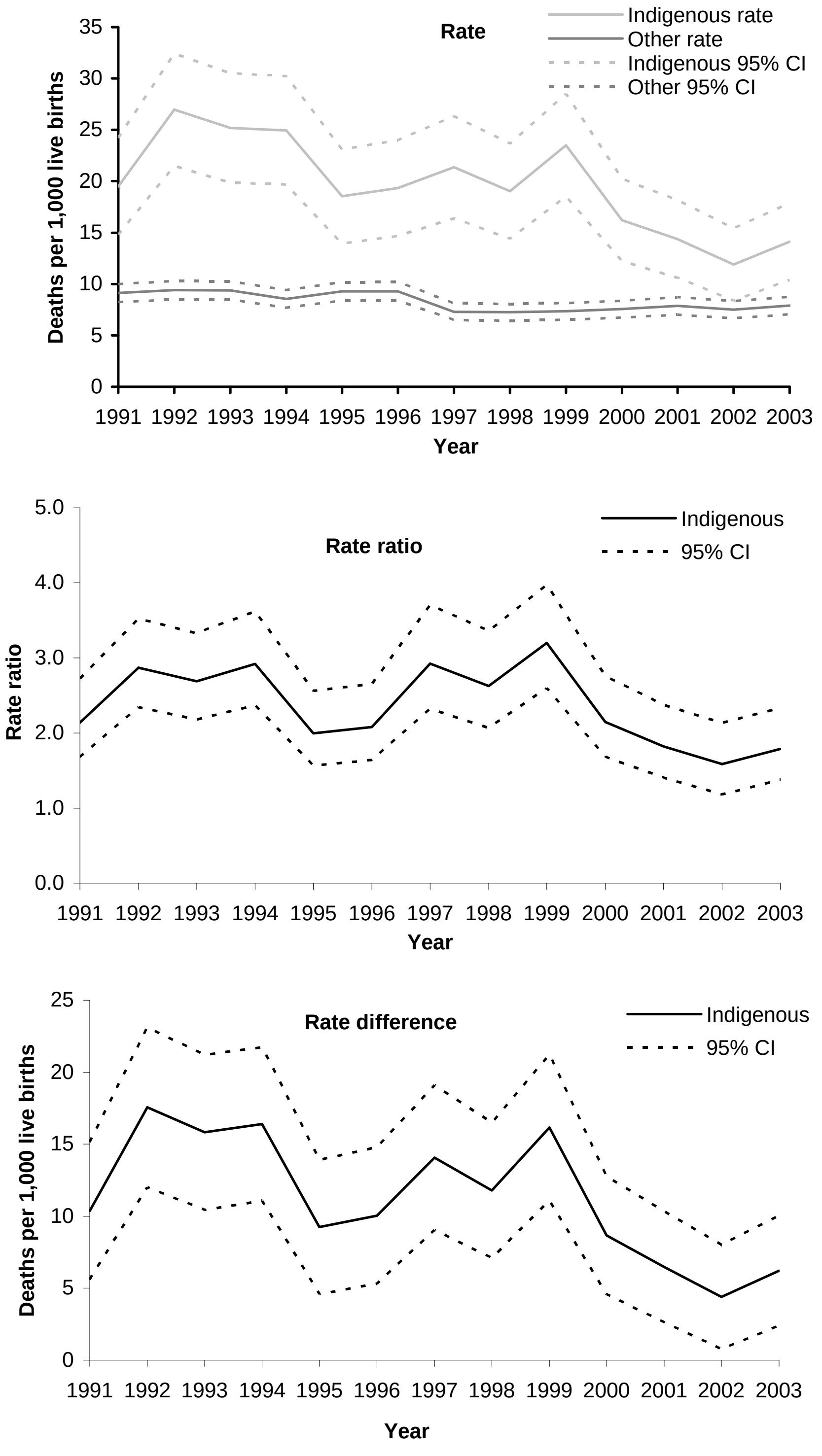
(c) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(d) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Notes

1. Perinatal deaths were not available in South Australia in 1996 and thus the average of deaths for 1995 and 1997 were used for this year.
2. The average of births over 1993–1995 in Western Australia was used for births in 1991 and 1992 as there were errors in the number of births recorded.

Source: ABS Deaths Registration Database.



Source: ABS Deaths Registration Database.

Figure 1.19.1: Perinatal mortality rates, rate ratios and rate differences between Indigenous and other Australians, WA, SA and NT, 1991–2003

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 identification estimates derived from the most recent ABS analyses (relating to the period 1999–2003).
  - Under the increasing identification scenario, deaths were adjusted by linearly increasing the identification through the period under study—from 64% in 1991 to 71% in 2002 for Western Australia, from 60% to 66% for South Australia, and from 90% to 95% for the Northern Territory.
  - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 73% in 2002 for Western Australia, from 72% to 67% for South Australia, and from 100% to 95% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were 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.

International comparisons

International data are available for New Zealand, the United States and Canada using the WHO definition of perinatal mortality. However, the WHO definition differs significantly from the Australian definition of the perinatal period. Therefore Australian data include babies of at least 400 grams (or at least 20 weeks if birthweight is unavailable) while the WHO definition commences at 500 grams (22 weeks if birthweight is unavailable). In addition, the WHO defines perinatal deaths as less than seven days while 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. International comparisons have therefore not been presented here.

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. 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). While 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/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.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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

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 2000–04 was 94%. Identification for the states and territories ranged from 69% for the Australian Capital Territory to 108% for the Northern Territory (ABS 2005b). Given 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 while 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 tenth revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia from 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) while the WHO definition commences at 500 grams (22 weeks if birthweight is unavailable). In addition, the WHO defines perinatal deaths as less than seven days while 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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Laws PJ & Sullivan EA 2004. Australia’s mothers and babies 2002. Perinatal Statistics Series no. 15. AIHW cat. no. PER 28. Sydney: AIHW National Perinatal Statistics Unit.

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1.20 Sudden infant death syndrome

The number of Aboriginal and Torres Strait Islander infants 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's 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.

While 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 five-year period 2000–2004 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death are a more accurate reflection of mortality during a particular year than year of registration data, however year of occurrence data for 2004 are still incomplete owing to late registrations.

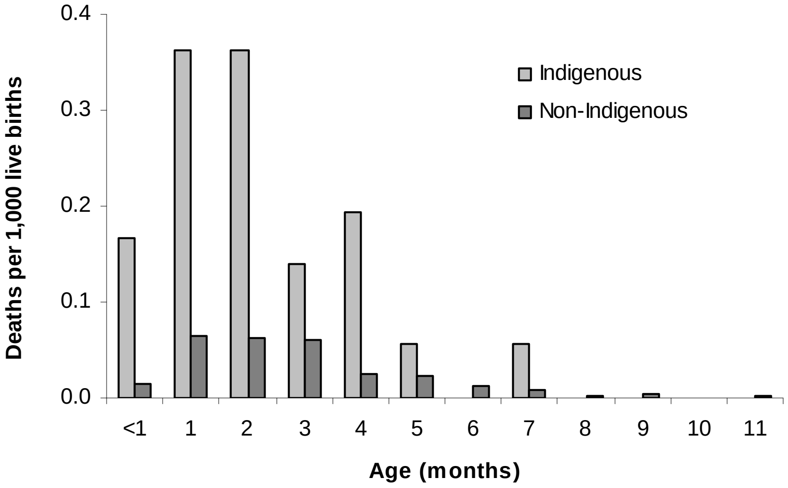
Analyses

Mortality

- For the period 2000–2004, there were 176 deaths from SIDS in Queensland, Western Australia, South Australia and the Northern Territory, 48 (27.3%) of which were deaths of Aboriginal and Torres Strait Islander infants; for 4% of deaths, Indigenous status was not stated.
- SIDS represented approximately 10.9% of all deaths of Aboriginal and Torres Strait Islander infants.

Mortality by age (months)

- For the period 2000–2004, two-thirds (67%) 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 from SIDS occurred at around the age of 1–2 months for Indigenous and non-Indigenous infants (0.36 and 0.06 per 1,000 live births respectively) (Figure 1.20.1). Indigenous infants of this age died at almost six times the rate of non-Indigenous infants.
- Mortality rate ratios between Indigenous and non-Indigenous infants were highest among those aged less than 1 month, where Indigenous infants died from SIDS at 12 times the rate of non-Indigenous infants.



Source: AIHW analysis of AIHW National Mortality Database.

Figure 1.20.1: SIDS mortality rates per 1,000 live births, by age in months and Indigenous status, Qld, WA, SA and NT, 2000–2004

Mortality by state/territory

Table 1.20.1 presents SID deaths, mortality rates and ratios for Queensland, Western Australia, South Australia and the Northern Territory for the period 2000–2004.

- In the four jurisdictions where recording of Indigenous deaths is most complete, mortality rates from SIDS ranged from 0.6 per 1,000 live births in South Australia to 2.0 per 1,000 live births in the Northern Territory, however, 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 almost five times the rate of non-Indigenous infants. In the Northern Territory alone, Indigenous infants died from SIDS at 11 times the rate of non-Indigenous infants.

Table 1.20.1: SIDS mortality rates per 1,000 live births, by Indigenous status, Qld, WA, SA and NT, 2000–2004(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	24	1.4	0.9	2.0	85	0.4	0.3	0.5	3.8*
WA	6	0.7	0.1	1.3	18	0.2	0.1	0.2	4.6*
SA	n.p.	0.6	−0.2	1.5	16	0.2	0.1	0.3	3.3*
NT	16	2.0	1.0	3.0	n.p.	0.2	−0.1	0.4	10.8*
Qld, WA, SA & NT	**48**	**1.3**	**1.0**	**1.7**	**121**	**0.3**	**0.2**	**0.3**	**4.8***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 54% for Queensland, 72% for Western Australia, 66% for South Australia and 95% for the Northern Territory. The completeness of Indigenous identification for SIDS may differ from the estimates for ‘all causes’.

(c) Data are presented in five-year groupings due to small numbers each year.

(d) Data exclude 21 deaths where Indigenous status was not stated in Queensland, Western Australia, South Australia and the Northern Territory.

(e) While 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 occurrence except the latest year which is based on year of registration.

(g) Rate 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 AIHW 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. Due to 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 1997–2003. Data for 2004 were not used because of late registration of some deaths. Data are presented in three–four year groupings due to low numbers of deaths from SIDS each year.

Due to 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).

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 2000–2003 are presented in Table 1.20.2 and Figure 1.20.2.

- Over the period 1991–1993 to 1994–1996, there were non-significant declines in mortality rates from SIDS for Indigenous infants in Western Australia, South Australia and the Northern Territory. Over the same period there were significant declines in mortality rates from SIDS for other infants (a decline of around 0.3 deaths per 1,000).
- Over the period 1997–1999 to 2000–2003, there were significant declines in mortality rates from SIDS for both Indigenous and other infants in Western Australia, South Australia and the Northern Territory. There was a decline of around 2.2 deaths per 1,000 for Indigenous infants and 0.3 deaths per 1,000 for other infants over this period.

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 comparisons 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 analysis of trends in SIDS over time (Freemantle et al. 2005).

Table 1.20.2: SIDS mortality rates, rate ratios and rate differences per 1,000 live births, WA, SA and NT, 1991–1993 to 1994–1996 and 1997–1999 to 2000–2003

	1991–1993	1994–1996	Difference in rates[(a)]	1997–1999	2000–2003	Difference in rates[(a)]
Indigenous deaths from SIDS	59	47		38	22	
Other deaths from SIDS	141	93		72	39	
Indigenous rate per 1,000[(b)]	5.8	4.6	−1.2	3.7	1.4	−2.2*
Other[(c)] rate per 1,000[(b)]	1.0	0.7	−0.3*	0.6	0.2	−0.3*
Rate ratio[(d)]	5.5	6.6		6.6	6.1	
Rate difference[(e)]	4.7	3.9		3.1	1.2	

* Represents statistically significant differences at the p<.05 level over the period 1991–1993 to 1994–1996 and 1997–1999 to 2000–2003.

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

(b) Rates are per 1,000 live births.

(c) Other includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

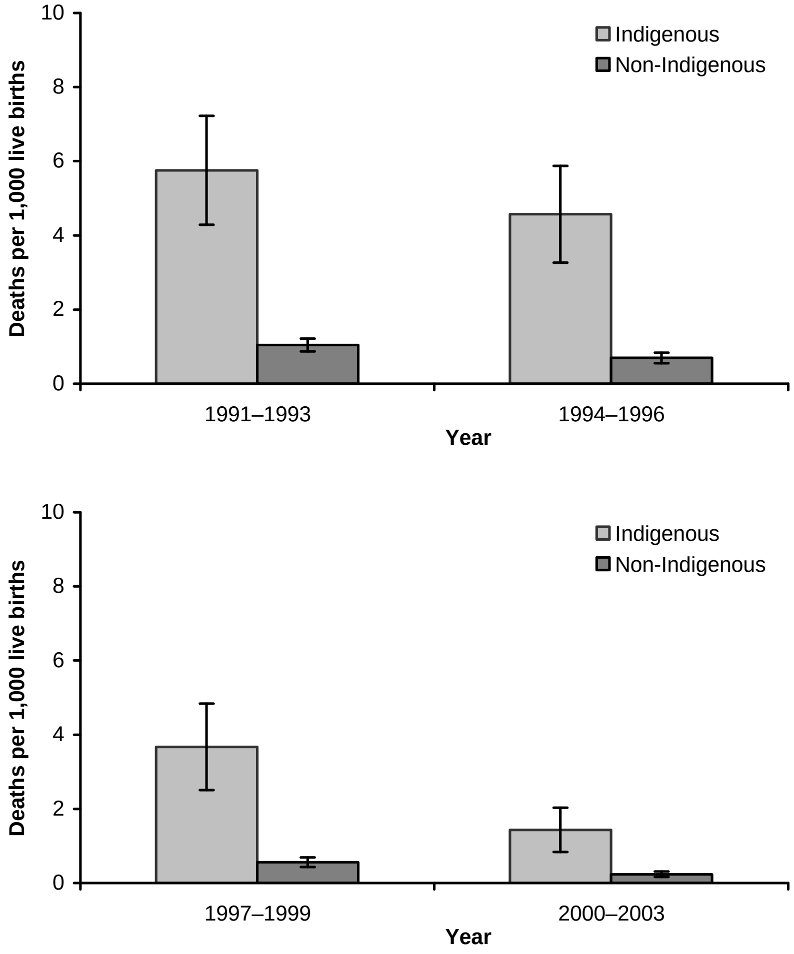
(d) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Notes

1. Data are presented in three-year groupings due to 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 AIHW National Mortality Database.



Source: AIHW analysis of AIHW National Mortality Database.

Figure 1.20.2: SIDS mortality rates per 1,000 live births, by Indigenous status, WA, SA and NT, 1991–1993 to 1994–1996 and 1997–1999 to 2000–2003

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 due to 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 inter-census population denominator counts.

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 from SIDS than other infants, and in New Zealand, Indigenous infants have higher mortality rates from 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 seven times that for non-Indigenous infants (1.4 per 1,000 live births compared to 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.

- During the period 2000–2003, the death rate from SIDS was 0.6 per 1,000 live births among American Indians and Alaskan Natives compared to 1.2 per 1,000 live births for non-Indigenous people in the United States (United States department of Health and Human Services unpublished data). It should be noted that these figures are based on births according to the race of the mother not the parents as are the data for Australia and New Zealand.
- In 2001, the mortality rate for SIDS was 2.0 per 1,000 live births among New Zealand Maoris, compared to 0.4 per 1,000 live births among non-Indigenous people in New Zealand (Statistics New Zealand, unpublished data).

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. 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). While 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/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.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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

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 2000-04 was 94%. Identification for the states and territories ranged from 69% for the Australian Capital Territory to 108% for the Northern Territory (ABS 2005b). 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 while 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 this adequate rigour there is 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 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.

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.

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1.21 All causes mortality

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's 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.

While 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 five-year period 2000–2004 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death is a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

Analyses

Age-standardised rates and ratios have been used for this indicator 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 2000–2004, there were 236,355 deaths in Queensland, Western Australia, South Australia and the Northern Territory, 7,479 (3.2%) of which were deaths of people who identified as Aboriginal or Torres Strait Islander origin and 3,613 (1.5%) of which were deaths for whom Indigenous status was not recorded.

Mortality by age and sex

Table 1.21.1 presents age-specific mortality rates for the period 2000–2004 for Queensland, Western Australia, South Australia and the Northern Territory combined.

- For the period 2000–2004, in Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males had higher mortality rates than non-Indigenous males across all age groups except those aged 75 years and over. Indigenous females had higher mortality rates than non-Indigenous females across all age groups.
- The greatest difference in rates occurred in the 25–34, 35–44, 45–54 and 55–64 year age groups where Indigenous males and females died at between four and six times the rate of non-Indigenous males and females.

Table 1.21.1: All causes age-specific mortality rates per 100,000, by Indigenous status and sex, Qld, WA, SA and NT, 2000–2004[a] [b] [c] [d] [e]

	Males			Females		
	Indigenous rate[f]	Non-Indigenous rate[f]	Rate ratio[g]	Indigenous rate[f]	Non-Indigenous rate[f]	Rate ratio[g]
Less than 1	1,378.3	478.2	2.9*	1,052.6	390.0	2.7*
1–4	63.3	30.4	2.1*	60.9	20.1	3.0*
5–14	34.0	14.2	2.4*	22.8	9.9	2.3*
15–24	207.4	81.1	2.6*	101.7	30.5	3.3*
25–34	430.2	111.2	3.9*	198.7	41.6	4.8*
35–44	797.1	143.5	5.6*	443.5	79.6	5.6*
45–54	1,381.4	289.0	4.8*	883.9	176.4	5.0*
55–64	2,677.9	732.5	3.7*	1,787.6	423.6	4.2*
65–74	5,348.1	2,118.0	2.5*	3,943.9	1,193.6	3.3*
75 and over	8,692.4	7,751.2	1.1	7,344.0	6,259.8	1.2*
Total[h]	**1,556.0**	**759.2**	**2.0***	**1,120.5**	**535.2**	**2.1***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) These data exclude 3,020 registered deaths where the Indigenous status is not stated.

(d) While 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 occurrence except the latest year which is based on 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 AIHW National Mortality Database.

Mortality by state/territory

Table 1.21.2 presents the number of deaths and mortality rates for the five-year period 2000–2004 for Indigenous and non-Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory.

- In Queensland, Western Australia and South Australia, Indigenous Australians died at twice the rate of non-Indigenous Australians. In the Northern Territory, Indigenous Australians died at three times the rate of non-Indigenous Australians.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians died at twice the rate of non-Indigenous Australians.

Table 1.21.2: All causes mortality, by Indigenous status, Qld, WA, SA and NT, 2000–2004[a][b][c][d]

		Number of deaths			Indigenous			Non-Indigenous			
State/territory	**Implied coverage[e] (%)**	**Indigenous**	**Non-Indigenous**	**Not stated**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Ratio[i]**
Qld	54	2,825	112,861	1,544	1,194.9	1,140.5	1,249.3	647.0	647.0	647.0	1.8*
WA	72	1,823	52,587	768	1,288.0	1,216.3	1,359.8	610.7	610.7	610.7	2.1*
SA	66	643	57,625	1,255	1,165.5	1,053.1	1,278.0	647.2	647.2	647.2	1.8*
NT	95	2,188	2,190	46	1,693.8	1,605.3	1,782.3	669.8	669.8	669.8	2.5*
Qld, WA, SA & NT		**7,479**	**225,263**	**3,613**	**1,319.4**	**1,282.5**	**1,356.4**	**638.3**	**638.3**	**638.3**	**2.1***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) While 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 occurrence except the latest year which is based on 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 58% nationally. Note: Tasmania and Australian Capital Territory implied coverage rates were not calculated due to 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.

Source: AIHW analysis of AIHW 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 1991–2003 have been used for the analysis of Indigenous mortality in this indicator. Data for 2004 have not been used because they are still incomplete, owing to late registration of some deaths.

Due to 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 over the period 1991–2003 are presented in Table 1.21.3 and Figure 1.21.1.

- In the period 1991–2003, 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 22 per 100,000. There fitted trend showed significant declines in recorded deaths for Indigenous females but not for Indigenous males. Most of the observed declines are attributable to significant declines in Indigenous mortality in Western Australia.
- There were also significant declines in recorded mortality rates for other males, females and persons between 1991 and 2003. The fitted trend implies an average yearly decline in the rate of around 14 per 100,000 for other Australians.
- There were significant increases in the mortality rate ratios between Indigenous and other Australians for males over the period 1991–2003, and significant declines in the mortality rate differences for females 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 comparisons with the non-Indigenous population.

Table 1.21.3: Age-standardised mortality rates, rate ratios and rate differences, WA, SA and NT, 1991–2003

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous rate per 100,000[(b)]														
Males	1,803.6	1,688.9	1,725.7	1,870.9	1,761.3	1,756.9	1,866.0	1,860.1	1,633.0	1,804.7	1,671.5	1,608.1	1,673.0	−9.7
Females	1,531.9	1,330.0	1,424.3	1,495.2	1,269.5	1,251.2	1,298.5	1,230.0	1,290.5	1,278.0	1,147.1	1,239.7	984.9	−30.1*
Persons	1,668.0	1,502.5	1,572.0	1,677.1	1,498.5	1,490.2	1,556.1	1,518.7	1,457.2	1,516.3	1,388.0	1,407.4	1,297.2	−21.8*
Other rate per 100,000[(c)]														
Males	968.1	970.4	966.0	971.7	922.2	928.4	887.0	862.6	830.5	807.0	785.7	767.4	754.0	−20.7*
Females	622.4	638.6	633.8	621.5	608.8	614.0	599.8	578.1	559.4	546.2	553.5	546.5	540.6	−9.0*
Persons	774.0	784.6	780.6	775.3	748.4	754.1	728.1	706.7	681.4	663.7	659.4	647.1	638.1	−13.8*
Rate ratio[(d)]														
Males	1.9	1.7	1.8	1.9	1.9	1.9	2.1	2.2	2.0	2.2	2.1	2.1	2.2	0.04*
Females	2.0	1.7	1.8	1.9	1.7	1.7	1.8	1.7	1.9	1.9	1.7	1.9	1.5	−0.01
Persons	2.2	1.9	2.0	2.2	2.0	2.0	2.1	2.1	2.1	2.3	2.1	2.2	2.0	0.01
Rate difference[(e)]														
Males	835.5	718.6	759.7	899.2	839.1	828.5	979.0	997.5	802.5	997.8	885.8	840.6	919.0	11.0
Females	757.9	545.4	643.8	719.9	521.1	497.1	570.4	523.3	609.1	614.3	487.7	592.7	346.7	−16.3*
Persons	894.0	717.9	791.4	901.8	750.1	736.1	828.0	812.0	775.8	852.6	728.7	760.3	659.1	−8.1

* Represents results with statistically significant increases or declines at the $p<.05$ level over the period 1991–2003.

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

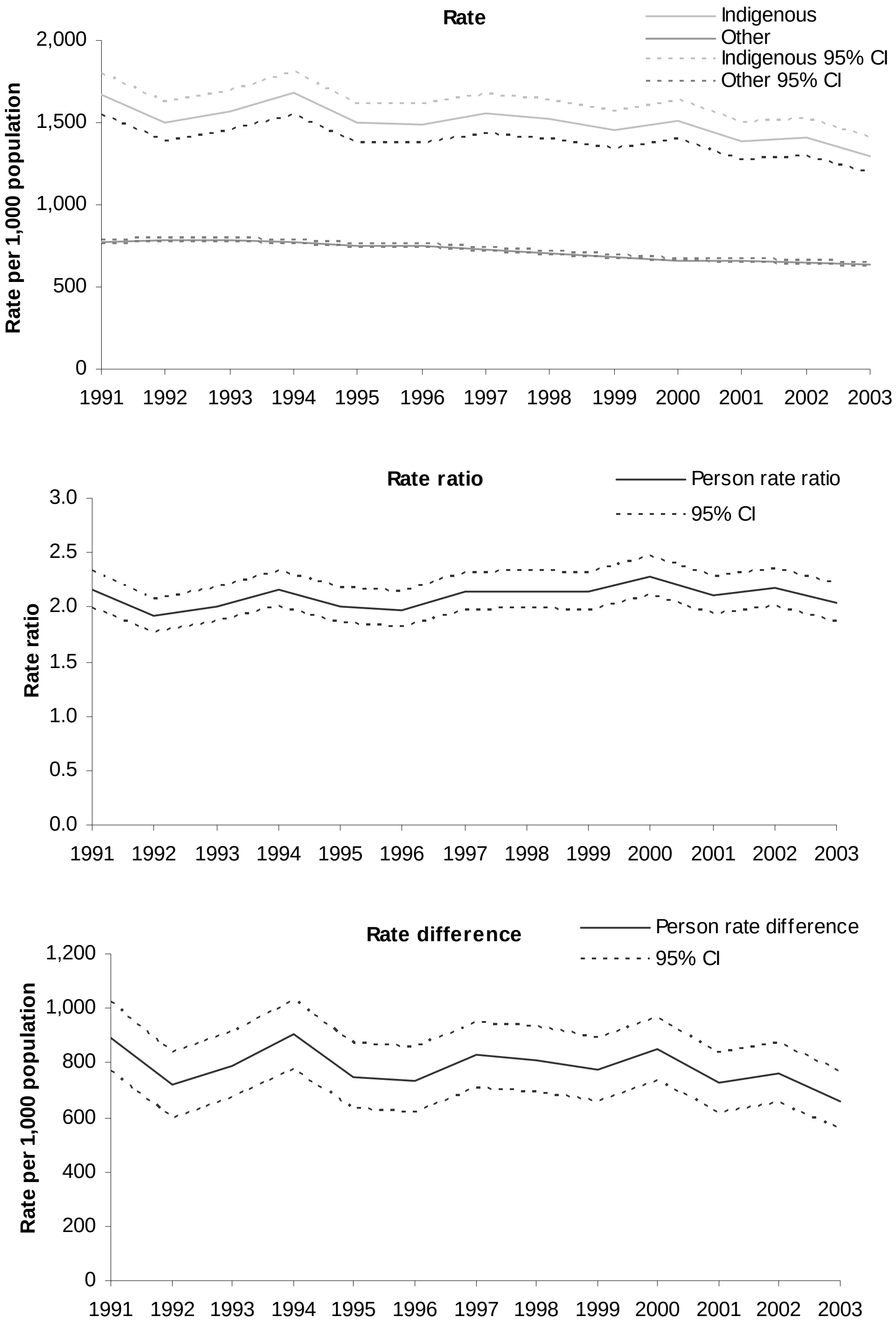
(b) Rates have been directly age standardised using the 2001 Australian standard population.

(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 AIHW National Mortality Database.



Source: AIHW analysis of AIHW National Mortality Database.

Figure 1.21.1: Mortality rates, rate ratios and rate differences between Indigenous and other Australians, WA, SA and NT, 1991–2003

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 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 under-identification estimates derived from the most recent ABS analyses (relating to the period 1999–2003).
  - 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 2003 for Western Australia, from 60% to 66% for South Australia, and from 90% to 95% for the Northern Territory.
  - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 72% in 2003 for Western Australia, from 72% to 66% for South Australia, and from 100% to 95% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were 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 1991–2003, for Indigenous females, other males, other females and other persons, remained statistically significant under all three identification scenarios. The declines in mortality rates for Indigenous persons remained statistically significant under the constant and increasing identification scenarios. The increase in mortality rate ratios for males and the decline in mortality rate differences for females remained statistically significant under all three 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. 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). While 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/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.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

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 than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from the ABS's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 (ABS 2004).

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ABS & AIHW (Australian Bureau of Statistics and 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.

1.22 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's 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.

While 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 five-year period 2000–2004 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death is a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

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

Analyses

Age-standardised rates and ratios have been used for this indicator 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 1.22.1 and 1.22.2 present data on the major causes of death of Indigenous Australians over the period 2000–2004 in Queensland, Western Australia, South Australia and the Northern Territory combined.

- Over the period 2000–2004, the most common cause of death among Indigenous Australians was circulatory diseases (27%), followed by external causes (injury and poisoning) (16%). Indigenous Australians died from these causes of death at around twice the rate of non-Indigenous Australians (Table 1.22.1).
- 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 causing death for which Indigenous Australians died at almost twice the rate of non-Indigenous Australians.
- Over the period 2000–2004, Indigenous Australians died from endocrine, metabolic and nutritional disorders (predominantly diabetes) at seven times the rate of non-Indigenous Australians and 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 2000–2004 (28% of Indigenous male and 26% of Indigenous female deaths). Other major causes of excess deaths were external causes, diseases of the respiratory system and endocrine, nutritional and metabolic diseases. Deaths due to these causes were responsible for around two-thirds of excess deaths among Indigenous males and females (Table 1.22.2).

Table 1.22.1: Causes of mortality, by Indigenous status, Qld, WA, SA and NT, 2000–2004[(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**	**Rate per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Rate per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**
Circulatory diseases (I00–I99)	2,006	84,164	1,370	26.8	37.4	37.9	424.8	403.0	446.7	239.2	239.2	239.2	1.8*
External causes (V00–Y98)	1,202	14,454	435	16.1	6.4	12.0	103.2	95.7	110.6	40.8	40.8	40.8	2.5*
Cancer (C00– D48)	1,134	66,376	46	15.2	29.5	1.3	240.1	224.2	256.0	187.2	187.2	187.2	1.3*
Lung cancer (C30–C39)	290	13,209	149	3.9	5.9	4.1	61.6	53.8	69.3	37.3	37.3	37.3	1.7*
Cervical cancer (C53)[(j)]	35	441	1	0.5	0.2	0.0	11.5	7.0	15.9	2.3	2.3	2.3	4.9*
Endocrine, metabolic & nutritional disorders (E00–E99)	700	7,580	104	9.4	3.4	2.9	151.6	138.9	164.2	21.5	21.5	21.5	7.0*
Respiratory diseases (J00–J99)	656	19,655	347	8.8	8.7	9.6	144.3	131.3	157.3	55.9	55.9	55.9	2.6*
Digestive diseases (K00–K93)	401	7,479	136	5.4	3.3	3.8	63.4	55.8	70.9	21.1	21.1	21.1	3.0*
Conditions originating in perinatal period (P00–P96)	188	957	18	2.5	0.4	0.5	6.8	5.8	7.8	2.8	2.8	2.8	2.4*
Nervous system diseases (G00–G99)	179	7,198	130	2.4	3.2	3.6	26.3	21.3	31.3	20.4	20.4	20.4	1.3*

(continued)

Table 1.22.1 (continued): Causes of mortality, by Indigenous status, Qld, WA, SA and NT, 2000–2004[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**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Ratio[i]**
Infectious & parasitic diseases (A00–B99)	176	2,610	39	2.4	1.2	1.1	25.7	20.7	30.6	7.4	7.4	7.4	3.5*
Kidney diseases (N00–N29)	163	3,365	58	2.2	1.5	1.6	36.3	29.9	42.7	9.6	9.6	9.6	3.8*
Other causes[k]	674	11,425	263	9.0	5.1	7.3	96.9	86.8	107.0	32.5	32.5	32.5	3.0*
All causes	**7,479**	**225,263**	**3,613**	**100.0**	**100.0**	**100.0**	**1,319.4**	**1,282.5**	**1,356.4**	**638.5**	**638.5**	**638.5**	**2.1***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) Rates exclude 3,613 registered deaths where the Indigenous status is not stated.

(d) While 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 due to these data quality issues.

(e) Deaths are by year of occurrence except the latest year which is based on 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) Rates for cervical cancer are for females only.

(k) 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: It should be noted that 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 AIHW National Mortality Database.

Table 1.22.2: Main causes of excess Indigenous deaths, by sex, Qld, WA, SA and NT, 2000–2004[a][b][c]

	Males				Females			
Underlying cause of death	**Observed**	**Expected**	**Excess**	**% excess**	**Observed**	**Expected**	**Excess**	**% excess**
	No.	**No.**	**No.**	**%**	**No.**	**No.**	**No.**	**%**
Circulatory diseases (I00–I99)	1,143	371	772	27.5	863	332	531	25.5
External causes (V00–Y98)	838	299	539	19.2	364	108	256	12.3
Endocrine, metabolic & nutritional disorders (E00–E99)	316	42	274	9.8	384	36	348	16.7
Respiratory diseases (J00–J99)	366	91	275	9.8	290	78	212	10.2
Cancer (C00–D48)	601	406	195	6.9	533	348	185	8.9
Lung cancer (C30–C39)	184	90	94	3.3	106	50	56	2.7
Cervical cancer (C53)	0	0	0	0.0	35	8	27	1.3
Digestive diseases (K00–K93)	230	42	188	6.7	171	36	135	6.5
Conditions originating in perinatal period (P00–P96)	108	42	66	2.4	80	34	46	2.2
Nervous system diseases (G00–G99)	113	42	71	2.5	66	42	24	1.1
Infectious & parasitic diseases (A00–B99)	101	20	81	2.9	75	14	61	2.9
Kidney diseases (N00–N29)	65	12	53	1.9	98	13	85	4.1
Other causes[d]	383	89	294	10.5	291	88	203	9.7
All causes	**42,64**	**1,456**	**2,808**	**100.0**	**3,215**	**1,129**	**2,086**	**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 five-year groupings due to small numbers each year.

(c) Deaths are by year of occurrence except the latest year which is based on year of registration.

(d) 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: It should be noted that 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 AIHW National Mortality Database.

Circulatory diseases

- Over the period 2000–2004, there were 2,006 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 1.22.3).
- 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 2000–2004, Indigenous Australians died from hypertensive disease at four times the rate of non-Indigenous Australians. Indigenous males and females died from rheumatic heart disease (which predominantly affects children) at 6 and 10 times the rate of non-Indigenous males and females respectively.

Table 1.22.3: Deaths of Indigenous Australians from circulatory diseases, by sex, Qld, WA, SA and NT, 2000–2004(a)(b)(c)(d)(e)

	Males						Females						Total					
	No.	%	Rate per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)	No.	%	Rate per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)	No.	%	Rate per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)
Ischaemic heart disease (I20–I25)	717	62.7	301.2	274.5	327.9	1.9*	437	50.6	181.2	162.1	200.3	1.7*	1,154	57.5	235.9	220.0	251.7	1.8*
Acute myocardial infarction (I21)	397	34.7	171.2	150.8	191.7	2.0*	201	23.3	89.7	75.9	103.5	1.5*	598	29.8	126.7	114.9	138.6	1.7*
Cerebrovascular disease (I60–I69)	161	14.1	91.0	74.7	107.2	1.6*	167	19.4	79.7	66.1	93.2	1.3*	328	16.4	85.0	74.6	95.5	1.4*
Stroke (I60–I64)	129	11.3	71.8	57.4	86.1	1.7*	144	16.7	66.5	54.3	78.7	1.5*	273	13.6	69.1	59.7	78.4	1.6*
Other heart disease (I26–I52)	167	14.6	78.2	63.2	93.2	2.6*	118	13.7	47.4	37.4	57.3	1.7*	285	14.2	60.8	52.3	69.3	2.1*
Hypertension disease (I10–I15)	39	3.4	17.9	11.3	24.5	3.6*	49	5.7	21.2	14.4	27.9	3.7*	88	4.4	19.9	15.1	24.8	3.7*
Rheumatic heart disease (I00–I09)	29	2.5	6.1	3.1	9.0	5.7*	62	7.2	14.5	10.3	18.7	10.2*	91	4.5	10.6	7.9	13.2	8.4*
Other diseases of the circulatory system (I70–I99)	30	2.6	14.5	8.6	20.5	0.8	30	3.5	11.1	6.4	15.8	1.0	60	3.0	12.7	8.9	16.4	0.9
Total circulatory diseases	**1,143**	**100.0**	**508.8**	**472.9**	**544.8**	**1.9**	**863**	**100.0**	**355.0**	**328.0**	**382.0**	**1.7***	**2,006**	**100.0**	**424.8**	**403.0**	**446.7**	**1.8***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) These data exclude 1,370 deaths where the Indigenous status was not stated.

(d) While 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 occurrence except the latest year which is based on 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.

Note: It should be noted that 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 AIHW National Mortality Database.

External causes (injury and poisoning)

- Over the period 2000–2004, there were 1,202 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 2.5 times the rate of non-Indigenous Australians (Table 1.22.4).
- The most common type of external cause of mortality 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 two and three times the rate of non-Indigenous Australians respectively and died from assault at 10 times the rate of non-Indigenous Australians.
- Over the period 2000–2004, Indigenous Australians died from exposure to electric current/smoke/fire/animals/nature at around eight times the rate of non-Indigenous Australians.

Table 1.22.4: Deaths of Indigenous Australians from external causes of injury and poisoning, by sex, Qld, WA, SA and NT, 2000–2004(a)(b)(c)(d)(e)

	Males						Females						Total					
	No.	%	Rate per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)	No.	%	Rate per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)	No.	%	Rate per 100,000(f)	LCL 95%(g)	UCL 95%(h)	Rate ratio(i)
Intentional self-harm (X60–X84)	286	34.1	41.8	36.5	47.2	2.1*	69	19.0	8.4	6.3	10.4	1.7*	355	29.5	24.5	21.7	27.2	2.0*
Transport accidents (V01–V99)	221	26.4	36.9	30.8	43.0	2.4*	104	28.6	16.1	12.6	19.6	3.3*	325	27.0	26.0	22.7	29.3	2.6*
Assault (X85–Y09)	83	9.9	13.5	10.4	16.6	9.5*	64	17.6	9.2	6.5	11.9	10.9*	147	12.2	11.3	9.3	13.4	10.0*
Accidental drowning or accidental threats to breathing (W65–W84)	84	10.0	12.3	9.4	15.2	3.3*	30	8.2	4.4	2.3	6.4	3.1*	114	9.5	8.2	6.4	10.0	3.2*
Accidental poisoning by and exposure to noxious substances (X40–X49)	42	5.0	6.2	4.2	8.1	1.5*	25	6.9	3.8	2.2	5.3	1.9*	67	5.6	4.9	3.7	6.2	1.6*
Exposure to electric current/smoke/fire/ animals/nature (W85–W99, X00–X39)	29	3.5	7.3	3.5	11.2	6.6*	14	3.8	3.9	1.4	6.5	7.4*	43	3.6	5.5	3.3	7.7	6.6*
Accidental falls (W00–W19)	16	1.9	4.4	1.7	7.0	1.1	9	2.5	3.5	0.9	6.1	1.2	25	2.1	4.0	2.1	5.9	1.2
Exposure to inanimate mechanical forces (W20–W49)	17	2.0	1.9	0.9	2.9	1.4	6	1.6	0.8	0.1	1.4	4.6*	23	1.9	1.3	0.8	1.9	1.7*

(continued)

Table 1.22.4 (continued): Deaths of Indigenous Australians from external causes of injury and poisoning, by sex, Qld, WA, SA and NT, 2000–2004[a][b][c][d][e]

	Males						Females						Total					
	No.	%	Rate per 100,000[f]	LCL 95%[g]	UCL 95%[h]	Rate ratio[i]	No.	%	Rate per 100,000[f]	LCL 95%[g]	UCL 95%[h]	Rate ratio[i]	No.	%	Rate per 100,000[f]	LCL 95%[g]	UCL 95%[h]	Rate ratio[i]
Other external causes of accidental injury (X50–X59)	27	3.2	11.5	5.8	17.3	2.5*	23	6.3	9.3	4.8	13.9	1.9*	50	4.2	10.3	6.7	13.9	2.1*
Other external causes[j]	33	3.9	7.6	4.2	11.0	3.3*	20	5.5	6.4	3.0	9.8	4.5*	53	4.4	7.1	4.6	9.5	3.9*
Total external causes	**838**	**100.0**	**143.5**	**131.0**	**155.9**	**2.5***	**364**	**100.0**	**65.8**	**57.1**	**74.6**	**2.8***	**1,202**	**100.0**	**103.2**	**95.7**	**110.6**	**2.5***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) These data exclude 435 deaths where the Indigenous status was not stated.

(d) While 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 occurrence except the latest year which is based on 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 event of undetermined intent; legal intervention and operations of war; complications of medical and surgical care; sequale of external cause of mortality; supplementary factors related to causes of mortality not classified elsewhere.

Note: It should be noted that 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 AIHW National Mortality Databases.

Neoplasms (cancer)

- Over the period 2000–2004, there were 1,134 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 1.22.5).
- The 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 around twice the rate of non-Indigenous Australians.
- Over the period 2000–2004, there were 35 deaths of Indigenous females in the four jurisdictions from cervical cancer. Indigenous females died from cervical cancer at five times the rate of non-Indigenous Australians.

Table 1.22.5: Deaths of Indigenous Australians from neoplasms (cancer), by sex, Qld, WA, SA and NT, 2000–2004[a][b][c][d][e]

	Males						Females						Total					
Site of neoplasm	**No.**	**%**	**Rate per 100,000**[f]	**LCL 95%**[g]	**UCL 95%**[h]	**Rate ratio**[i]	**No.**	**%**	**Rate per 100,000**[f]	**LCL 95%**[g]	**UCL 95%**[h]	**Rate ratio**[i]	**No.**	**%**	**Rate per 100,000**[f]	**LCL 95%**[g]	**UCL 95%**[h]	**Rate ratio**[i]
Respiratory and inthrathoracic organs (C30–C39)	184	30.6	91.2	73.0	109.4	1.4*	106	19.9	38.4	28.8	48.1	1.7*	290	25.6	61.6	52.0	71.1	1.7*
Bronchus & lung (C34)	168	28.0	83.9	69.7	98.1	1.6*	99	18.6	35.7	28.2	43.3	1.6*	267	23.5	56.8	49.3	64.3	1.6*
Digestive organs (C15–C26)	173	28.8	81.9	67.6	96.2	1.3*	108	20.3	42.3	33.5	51.1	1.1	281	24.8	59.8	51.9	67.8	1.2*
Ill-defined, secondary & unspecified site (C76–C80)	40	6.7	22.3	14.3	30.2	1.8*	53	9.9	24.4	17.1	31.6	2.4*	93	8.2	23.5	18.1	28.9	2.1*
Lymphoid, haematopoietic and related tissue (C81–C96)	51	8.5	24.5	16.3	32.7	1.0	38	7.1	11.5	7.1	15.9	0.8	89	7.8	17.0	12.8	21.3	0.9
Female genital organs (C51–C58)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	83	15.6	31.0	21.0	42.0	2.4*	83	7.3	17.0	11.0	23.0	2.5*
Cervix (C53)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	35	6.6	11.5	7.0	15.9	4.9*	35	3.1	6.3	3.8	8.8	5.1*
Breast (C50)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	70	13.1	26.6	19.5	33.7	1.1	70	6.2	14.8	10.8	18.9	1.2
Lip, oral cavity and pharynx (C00–C14)	50	8.3	18.8	12.9	24.7	3.7*	19	3.6	5.8	3.0	8.7	3.4*	69	6.1	11.7	8.7	14.8	3.5*

(continued)

Table 1.22.5 (continued): Deaths of Indigenous Australians from neoplasms (cancer), by sex, Qld, WA, SA and NT, 2000–2004[a][b][c][d][e]

	Males						Females						Total					
Site of neoplasm	**No.**	**%**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Rate ratio[i]**	**No.**	**%**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Rate ratio[i]**	**No.**	**%**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Rate ratio[i]**
Male genital organs (C60–C63)	29	4.8	19.1	11.2	26.9	0.6	0	n.a.	—	—	—	—	29	2.6	8.1	4.8	11.4	0.6*
Other malignant neoplasms[j]	57	9.5	25.4	17.5	33.3	0.6	41	7.7	14.7	9.5	20.0	0.8	98	8.6	19.4	14.9	24.0	0.7*
Non-malignant neoplasms (D00–D48)	17	2.8	8.6	3.5	13.8	1.9*	15	2.8	5.3	2.3	8.3	1.7	32	2.8	6.6	3.9	9.4	1.8*
Total neoplasms	**601**	**100.0**	**291.8**	**264.6**	**319.0**	**1.2***	**533**	**100.0**	**200.3**	**181.2**	**219.4**	**1.4***	**1,134**	**100.0**	**240.1**	**224.2**	**256.0**	**1.3***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) These data exclude 713 deaths where the Indigenous status was not stated.

(d) While 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 occurrence except the latest year which is based on 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 neoplasms of bone and articular cartilage, melanoma & other neoplasms of skin, neoplasms of mesothelial and soft tissue, neoplasms of urinary tract, neoplasms of eye, brain and other parts of central nervous system, neoplasms of thyroid and other endocrine glands.

Note: It should be noted that 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 AIHW National Mortality Database.

Respiratory diseases

- Over the period 2000–2004, there were 656 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 around three times the rate of non-Indigenous Australians (Table 1.22.6).
- 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 the rate of non-Indigenous Australians for these diseases.

Table 1.22.6: Deaths of Indigenous Australians from respiratory diseases, by sex, Qld, WA, SA and NT, 2000–2004[a][b][c][d][e]

	Males						Females						Total					
	No.	**%**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Rate ratio[i]**	**No.**	**%**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Rate ratio[i]**	**No.**	**%**	**Rate per 100,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Rate ratio[i]**
Chronic lower respiratory diseases (J40–J47)	197	53.8	106.9	89.6	124.1	2.8*	160	55.2	69.6	57.7	81.6	3.4*	357	54.4	85.8	75.7	95.8	3.1*
Pneumonia and influenza (J10–J18)	120	32.8	51.3	39.5	63.1	2.8*	94	32.4	33.1	24.8	41.4	2.0*	214	32.6	41.2	34.2	48.1	2.5*
Other respiratory disease (J00–06, J20–39, J60–99)	49	13.4	22.1	14.3	29.9	1.6*	36	12.4	13.7	8.5	19.0	1.7*	85	13.0	17.4	12.9	21.8	1.7*
Total respiratory diseases	**366**	**100.0**	**180.2**	**158.0**	**202.5**	**2.6***	**290**	**100.0**	**116.5**	**101.0**	**131.9**	**2.6***	**656**	**100.0**	**144.3**	**131.3**	**157.3**	**2.6***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) These data exclude 108 deaths where the Indigenous status was not stated.

(d) While 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 occurrence except the latest year which is based on 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.

Note: It should be noted that 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 AIHW National Mortality Database.

Diseases of the genitourinary system

- Over the period 2000–2004, there were 209 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 1.22.7).
- The most common type of genitourinary disease causing mortality among Indigenous Australians was renal failure. Indigenous Australians died from renal failure at around four times the rate of non-Indigenous Australians.
- Over the period 2000–2004, Indigenous Australians died from glomerular disease (a disease of the kidneys) at around seven times the rate of non-Indigenous Australians.

Table 1.22.7: Deaths of Indigenous Australians from diseases of the genitourinary system, by sex, Qld, WA, SA and NT, 2000–2004[(a)(b)(c)(d)(e)]

	Males						Females						Total					
	No.	**%**	**Rate per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Rate ratio[(i)]**	**No.**	**%**	**Rate per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Rate ratio[(i)]**	**No.**	**%**	**Rate per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Rate ratio[(i)]**
Renal failure (N17–N19)	49	63.6	27.2	18.4	36.1	2.9*	71	53.8	30.1	22.3	37.9	4.3*	120	57.4	28.8	22.9	34.6	3.6*
Other diseases of the urinary system (N30–N39)	8	10.4	5.6	1.5	9.8	2.0*	21	15.9	10.8	5.7	15.8	2.9*	29	13.9	8.6	5.2	12.1	2.6*
Glomerular disease (N00–N08)	11	14.3	3.4	1.0	5.8	6.1*	10	7.6	2.6	0.9	4.4	7.3*	21	10.0	3.0	1.5	4.4	6.6*
Renal tubulo-intestinal diseases (N10–N16)	4	5.2	1.4	−0.2	3.0	2.2*	9	6.8	3.7	1.0	6.4	3.7*	13	6.2	2.7	1.0	4.4	3.3*
Other diseases of the genitourinary system[(j)]	5	6.5	2.9	0.1	5.7	2.8*	21	15.9	8.3	4.2	12.5	17.7*	26	12.4	6.0	3.3	8.6	8.6*
Total genitourinary diseases	**77**	**100.0**	**40.6**	**30.0**	**51.1**	**2.8***	**132**	**100.0**	**55.5**	**44.9**	**66.2**	**4.4***	**209**	**100.0**	**49.0**	**41.4**	**56.7**	**3.7***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) These data exclude 88 deaths where the Indigenous status was not stated.

(d) While 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 occurrence except the latest year which is based on 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: 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: It should be noted that 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 AIHW 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. Due to 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 affects the comparability of the data, the analysis reported for this indicator has been done for two time periods—1991–1996 and 1997–2003. Data for 2004 were not used because of late registration of some deaths.

Due to 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 circulatory diseases, external causes (injury and poisoning), respiratory diseases, diabetes, cancer and kidney-related diseases over the period 1991–1996 and 1997–2003 are presented in Tables 1.22.8–1.22.13 and Figure 1.22.1 below.

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 from circulatory diseases among Indigenous Australians and significant declines in mortality rates from circulatory diseases among other Australians.
- Over the period 1997–2003 there were significant declines in mortality rates from circulatory diseases among Indigenous and other Australians. The fitted trend implies an average yearly decline in the rate of around 34 per 100,000 for Indigenous Australians and 12 per 100,000 for other Australians. Over the same period, there were significant declines in the mortality rate ratios and rate differences between Indigenous and other Australians from circulatory diseases. This reflects both a relative and absolute decline in the gap between mortality rates for Indigenous and other Australians from circulatory diseases.

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 from injury and poisoning among Indigenous Australians. Over the same period there were no significant changes in the mortality rates for other Australians. There were significant declines in both the mortality rate ratios and rate differences between Indigenous and other Australians from injury and poisoning over the period 1991–1996.
- Over the period 1997–2003 there were apparent declines in the mortality rates from injury and poisoning for both Indigenous and other Australians, however, these declines did not obtain statistical significance.

Cancer

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory, there were apparent increases in the mortality rates from cancer for both Indigenous and other Australians, however, these increases did not obtain statistical significance.
- Over the period 1997–2003, there were non-significant increases in mortality rates from cancer among Indigenous Australians and significant declines in mortality rates from cancer among other Australians. There were significant increases in the mortality rate ratios and rate differences between Indigenous and other Australians from cancer over the period 1997–2003 reflecting both a relative and absolute increase in the gap between mortality rates for Indigenous and other Australians from cancer.

Respiratory diseases

- For the periods 1991–1996 and 1997–2003 in Western Australia, South Australia and the Northern Territory, there were apparent declines in mortality rates from respiratory diseases among Indigenous Australians, however, these declines did not obtain statistical significance. There were no significant changes in the mortality rates from respiratory diseases for other Australians for either period.

Diabetes

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory, there were non-significant increases in mortality rates from diabetes among Indigenous Australians and significant increases in mortality rates from diabetes among other Australians.
- There were no significant changes in the mortality rates from diabetes for Indigenous or other Australians over the period 1997–2003.

Kidney diseases

- Over the period 1991–1996 in Western Australia, South Australia and the Northern Territory, there were no significant changes in mortality rates from kidney diseases among Indigenous Australians, but significant increases in mortality rates from kidney diseases among other Australians.
- There were no significant changes in the mortality rates from kidney diseases for Indigenous or other Australians over the period 1997–2003.

It should be noted 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 comparisons with the non-Indigenous population.

Table 1.22.8: Age-standardised mortality rates, rate ratios and rate differences, circulatory diseases, WA, SA and NT, 1991–1996 and 1997–2003

	1991	1992	1993	1994	1995	1996	Annual change[(a)]	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous rate per 100,000[(b)]	572.4	497.9	512.6	636.2	489.5	484.3	−9.8	552.9	565.1	489.0	490.3	418.7	429.2	354.4	−33.5*
Other[(c)] rate per 100,000[(b)]	360.9	356.9	354.5	341.7	326.3	314.0	−9.7*	297.6	285.7	268.4	250.4	247.7	234.4	227.8	−11.9*
Rate ratio[(d)]	1.6	1.4	1.4	1.9	1.5	1.5	0.02	1.9	2.0	1.8	2.0	1.7	1.8	1.6	−0.05*
Rate difference[(e)]	211.5	141.0	158.1	294.5	163.3	170.3	−0.1	255.3	279.4	220.6	239.9	170.9	194.8	126.6	−21.6*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–1996 and1997–2003.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Rates have been directly age standardised using the 2001 Australian standard population.
(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 AIHW National Mortality Database.

Table 1.22.9: Age-standardised mortality rates, rate ratios and rate differences, external causes, WA, SA and NT, 1991–1996 and 1997–2003

	1991	1992	1993	1994	1995	1996	Annual change[(a)]	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous rate per 100,000[(b)]	139.7	140.8	139.2	128.8	120.3	134.1	−2.9	114.4	147.8	106.3	124.8	123.1	129.1	116.1	−0.6
Other[(c)] rate per 100,000[(b)]	43.1	40.7	44.3	42.0	41.0	45.0	0.2	41.3	47.8	41.9	43.6	41.5	39.1	39.6	−0.8
Rate ratio[(d)]	3.2	3.5	3.1	3.1	2.9	3.0	−0.1*	2.8	3.1	2.5	2.9	3.0	3.3	2.9	0.0
Rate difference[(e)]	96.6	100.1	94.9	86.8	79.3	89.1	−3.1*	73.2	100.0	64.4	81.2	81.6	90.1	76.5	0.3

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–1996 & 1997–2003.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Rates have been directly age standardised using the 2001 Australian standard population.
(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 AIHW National Mortality Database.

Table 1.22.10: Age-standardised mortality rates, rate ratios and rate differences, cancer, WA, SA and NT, 1991–1996 and 1997–2003

	1991	1992	1993	1994	1995	1996	Annual change[(a)]	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous rate per 100,000[(b)]	222.3	230.2	218.3	229.8	228.7	223.2	0.3	222.6	220.7	224.3	240.3	202.1	254.2	248.0	4.3
Other[(c)] rate per 100,000[(b)]	204.0	205.9	208.3	211.4	205.1	205.7	0.3	202.1	196.1	196.8	191.9	191.4	190.1	185.9	−2.4*
Rate ratio[(d)]	1.1	1.1	1.0	1.1	1.1	1.1	0.0	1.1	1.1	1.1	1.3	1.1	1.3	1.3	0.04*
Rate difference[(e)]	18.3	24.3	9.9	18.4	23.6	17.5	0.1	20.4	24.7	27.5	48.4	10.7	64.2	62.1	6.7*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–1996 and 1997–2003.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Rates have been directly age standardised using the 2001 Australian standard population.
(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 AIHW National Mortality Database.

Table 1.22.11: Age-standardised mortality rates, rate ratios and rate differences, respiratory diseases, WA, SA and NT, 1991–1996 and 1997–2003

	1991	1992	1993	1994	1995	1996	Annual change[(a)]	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous rate per 100,000[(b)]	264.5	249.7	217.8	227.1	211.2	234.6	−7.3	162.3	174.3	146.7	176.0	163.9	152.0	154.6	−1.8
Other[(c)] rate per 100,000[(b)]	59.8	67.1	59.6	59.0	53.8	60.0	−1.1	63.6	57.5	54.6	60.1	58.4	62.2	61.6	0.3
Rate ratio[(d)]	4.4	3.7	3.7	3.9	3.9	3.9	−0.1	2.6	3.0	2.7	2.9	2.8	2.4	2.5	0.0
Rate difference[(e)]	204.8	182.5	158.1	168.2	157.4	174.6	−6.2	98.7	116.8	92.0	115.9	105.5	89.8	93.0	−2.1

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–1996 and 1997–2003.

(a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
(b) Rates have been directly age standardised using the 2001 Australian standard population.
(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 AIHW National Mortality Database.

Table 1.22.12: Age-standardised mortality rates, rate ratios and rate differences, diabetes, WA, SA and NT, 1991–1996 and 1997–2003

	1991	1992	1993	1994	1995	1996	Annual change(a)	1997	1998	1999	2000	2001	2002	2003	Annual change(a)
Indigenous rate per 100,000(b)	117.3	110.9	142.3	122.2	130.6	129.0	2.8	146.5	90.6	118.2	159.6	159.8	123.8	118.4	0.8
Other(c) rate per 100,000(b)	19.7	21.9	23.9	26.6	25.4	28.0	1.6*	17.5	15.2	14.9	15.2	15.6	15.5	15.5	−0.2
Rate ratio(d)	5.9	5.1	6.0	4.6	5.1	4.6	−0.2	8.4	6.0	8.0	10.5	10.3	8.0	7.6	0.1
Rate difference(e)	97.5	89.1	118.4	95.6	105.3	101.0	1.2	129.0	75.4	103.4	144.4	144.2	108.3	102.9	1.0

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–1996 and 1997–2003.

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

(b) Rates have been directly age standardised using the 2001 Australian standard population.

(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 AIHW National Mortality Database.

Table 1.22.13: Age-standardised mortality rates, rate ratios and rate differences, kidney diseases, WA, SA and NT, 1991–1996 and 1997–2003

	1991	1992	1993	1994	1995	1996	Annual change(a)	1997	1998	1999	2000	2001	2002	2003	Annual change(a)
Indigenous rate per 100,000(b)	49.4	19.7	48.7	23.1	55.6	38.3	0.8	58.1	74.4	93.3	63.5	34.5	49.9	58.6	−3.8
Other(c) rate per 100,000(b)	6.9	6.7	8.3	7.0	8.3	9.5	0.5*	11.3	10.5	10.0	10.0	11.2	10.6	10.4	0.0
Rate ratio(d)	7.2	2.9	5.9	3.3	6.7	4.0	−0.2	5.1	7.1	9.4	6.4	3.1	4.7	5.6	−0.3
Rate difference(e)	42.6	13.0	40.4	16.1	47.3	28.8	0.3	46.8	64.0	83.3	53.6	23.3	39.3	48.1	−3.8

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–1996 and 1997–2003.

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

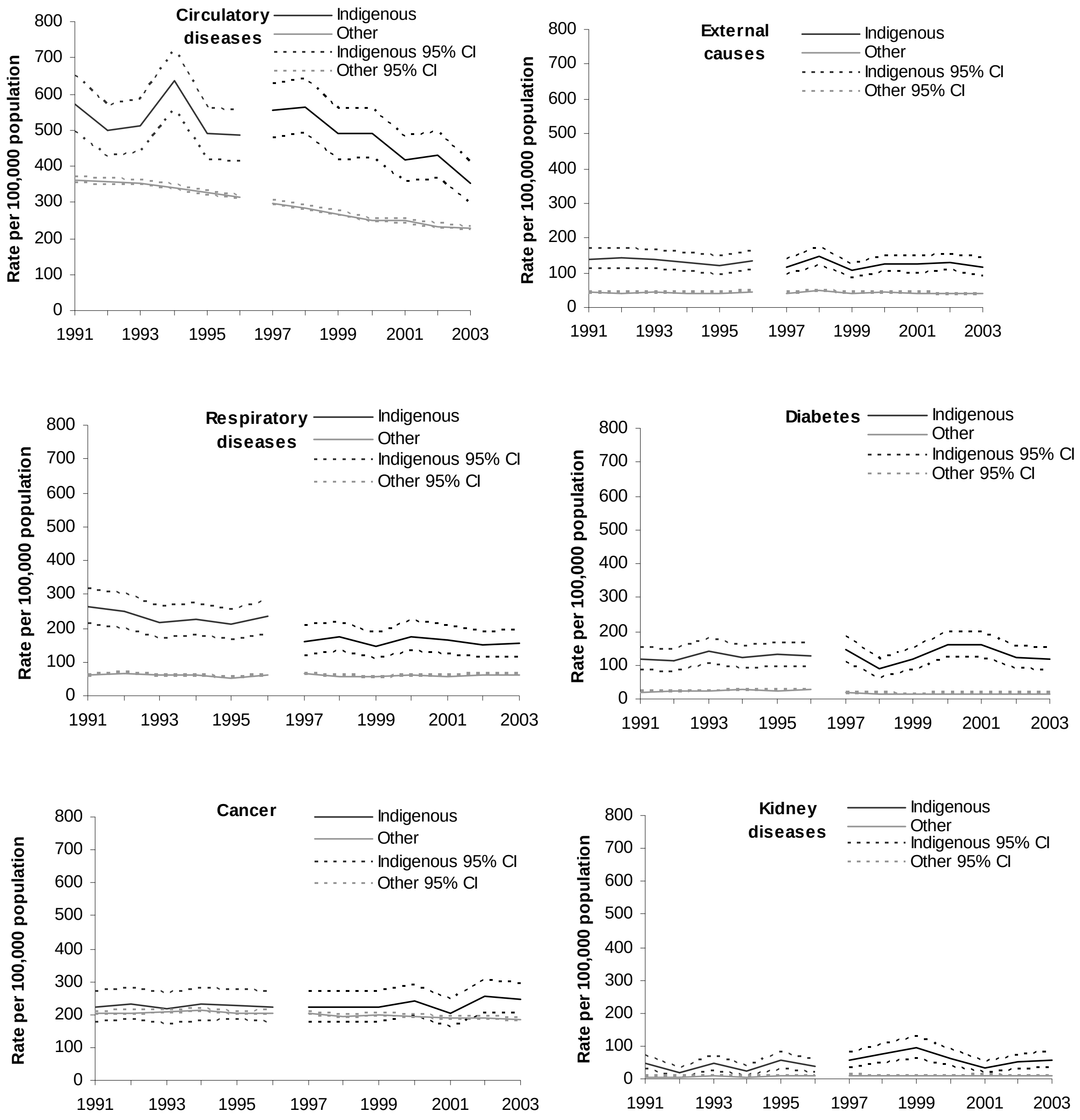
(b) Rates have been directly age standardised using the 2001 Australian standard population.

(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 AIHW National Mortality Database.



Source: AIHW National Mortality Database.

Figure 1.22.1: Mortality rates for Indigenous and other Australians, selected causes of death, WA, SA and NT, 1991–1996 and 1997–2003

Sensitivity of mortality trends to changes in identification

- The fitted trends described above 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 under-identification estimates derived from the most recent ABS analyses (relating to the period 1999–2003):
    - WA—72%
    - SA—66%
    - NT—95%.
  - 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 2003 for Western Australia, from 60% to 66% for South Australia, and from 90% to 95% for the Northern Territory.
  - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 72% in 2003 for Western Australia, from 72% to 66% for South Australia, and from 100% to 95% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were 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 from 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 from circulatory diseases among Indigenous and other Australians over the period 1997-2003 also remained statistically significant under all three identification scenarios. The declines in the mortality rate ratios over this later period did not remain statistically significant under any identification scenario and the declines in the mortality rate differences remained significant under all three scenarios.
- The observed declines over the period 1991–9196 in the mortality rate ratios between Indigenous and other Australians from injury and poisoning remained statistically significant under all three identification scenarios. The decline in the mortality rate differences over this period remained significant under the increasing and constant identification scenario.

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. 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). While 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/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.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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 than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from ABS's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 (ABS 2004).

(continued)

Data quality issues (continued)

Cause of death coding

Causes of death are 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.

References

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ABS & AIHW (Australian Bureau of Statistics and 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.

1.23 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 publications *Maternal deaths in Australia 1997–1999* (Slaytor et al. 2004) and *Maternal deaths in Australia 2000–2002* (Sullivan & King 2006), published by the AIHW National Perinatal Statistics Unit.

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.

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 prior to the 1997–1999 triennium. All calculations of maternal mortality by Indigenous status from the 1997–1999 triennium 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.

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' (Sullivan & King 2006). This definition includes deaths of women from terminations of pregnancy, spontaneous abortion, miscarriage and ectopic pregnancy, but 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, 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 one year after termination of pregnancy) have not been included in the analysis as they have not been routinely collected in Australia until recently. In line with current international trends, late maternal deaths will be routinely collected and reported from 2000–2002.

Analyses

Maternal mortality

- For the period 2000–2002, there were 13 maternal deaths of Aboriginal and Torres Strait Islander women, four direct maternal deaths, eight indirect maternal deaths and one incidental death. These deaths accounted for 16.9% of the 77 maternal deaths where Indigenous status was known.
- The maternal mortality rate for Aboriginal and Torres Strait Islander women was 23.2 per 100,000 confinements in 1991–1993, 17.4 per 100,000 confinements in 1994–1996, 23.5 per 100,000 confinements in 1997–99 and 45.9 per 100,000 in 2000–2002 (Table 1.23.1).
- The maternal mortality rates for Indigenous women were between two and five times the maternal mortality rates for non-Indigenous women over the past four triennia 1991–1993, 1994–1996, 1997–1999 and 2000–2002. The maternal mortality rate for Indigenous women has increased from 23.5 per 100,000 Indigenous women who gave birth in the 1997–1999 triennium to 45.9 per 100,000 Indigenous women who gave birth in the 2000–02 triennium (Figure 1.23.1).
- These rates must be interpreted with caution due to the incomplete recording of Indigenous status and the small numbers. As a result of incomplete ascertainment of Indigenous status, the Indigenous maternal mortality rates are likely to be underestimations of the true rates.

Table 1.23.1: Indigenous maternal mortality rates, 1991–1993 to 2000–2002

Triennium	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

(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 and 2000–2002, 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.

Sources: Slaytor et al. 2004; Sullivan & King 2006.

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, deaths where Indigenous status is unknown have been excluded.

Sources: Slaytor et al. 2004; Sullivan & King 2006.

Figure 1.23.1: Maternal mortality ratios, by Indigenous status, 1991–1993 to 2000–2002.

Data quality concerns

Maternal mortality

Maternal deaths

It should be noted 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 (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

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Sullivan EA & King JF 2006. Maternal deaths in Australia 2000–2002. Maternal Deaths Series no. 2. AIHW Cat. No. PER 32. Sydney: AIHW National Perinatal Statistics Unit.

1.24 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's 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.

While 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 five-year period 2000–2004 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death is a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

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

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., in press).

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 means of preventing the condition from occurring, for example, where the aetiology is to a considerable extent related to lifestyle factors (such as smoking).

Analyses

Age-standardised rates and ratios have been used for this indicator 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 2000–2004, there were 65,981 deaths of people aged 0–74 years from avoidable causes in Queensland, Western Australia, South Australia and the Northern Territory combined, 4,845 (7.3%) of which were deaths of Aboriginal and Torres Strait Islander peoples.
- Avoidable causes represented over three-quarters (76%) 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 (70%).

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 2000–2004.

- Indigenous males and females had higher mortality rates from 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–six times the rate of non-Indigenous males and females respectively (Table 1.24.1).
- Indigenous males and females died from avoidable causes at around four and five times the rate of non-Indigenous males and females respectively.
- 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 four times the rate of non-Indigenous Australians (Table 1.24.2).
- The proportion of deaths at ages 0–74 years from avoidable causes which are considered to be amenable to health care was higher for Indigenous Australians (22%) than non-Indigenous Australians (11%) (Table 1.24.3).

Table 1.24.1: Avoidable mortality, by Indigenous status, age group and sex, persons aged 0–74 years, Qld, WA, SA and NT, 2000–2004[(a)(b)(c)(d)(e)]

	Males			Females		
	Rate per 100,000[(f)]			Rate per 100,000[(f)]		
Age group (years)	**Indigenous**	**Non-Indigenous**	**Rate ratio[(g)]**	**Indigenous**	**Non-Indigenous**	**Rate ratio[(g)]**
Less than 1	683.7	257.3	2.7*	532.0	216.3	2.5*
1–4	34.4	18.7	1.8*	43.9	10.3	4.3*
5–14	20.3	7.9	2.6*	13.4	4.9	2.8*
15–24	165.9	64.6	2.6*	76.8	22.8	3.4*
25–34	345.8	85.8	4.0*	143.9	29.8	4.8*
35–44	620.0	108.2	5.7*	337.9	57.7	5.9*
45–54	1,107.4	207.3	5.3*	686.9	124.5	5.5*
55–64	2,130.5	516.1	4.1*	1,347.5	283.8	4.7*
65–74	4,152.1	1,485.8	2.8*	3,057.6	802.7	3.8*
Total[(h)]	**876.9**	**236.8**	**3.7***	**563.7**	**126.4**	**4.5***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to the small numbers each year.

(c) While 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 occurrence except the latest year which is based on year of registration.

(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 excludes those aged 75 years and over and those for whom age was not stated.

Note: The completeness of identification of Indigenous deaths can vary by age.

Source: AIHW analysis of AIHW National Mortality Database.

Table 1.24.2: Avoidable mortality, by Indigenous status and state/territory, persons aged 0–74 years, 2000–2004[(a)(b)(c)(d)]

	Number[(e)]			Indigenous			Non-Indigenous			
State/territory	**Indigenous**	**Non-Indigenous**	**Not stated**	**Rate per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Rate per 100,000[(f)]**	**LCL 95%[(g)]**	**UCL 95%[(h)]**	**Ratio[(i)]**
Qld	2,130	77,854	672	623.9	577.6	670.1	187.6	187.6	187.6	3.3*
WA	1,291	34,543	548	664.9	605.2	724.5	165.1	165.1	165.1	4.0*
SA	496	39,165	863	679.4	585.6	773.2	183.1	183.1	183.1	3.7*
NT	1,619	1,563	32	965.0	890.9	1039.0	228.8	228.8	228.8	4.2*
Qld, WA, SA & NT[(i)]	**4,845**	**60,816**	**950**	**710.1**	**688.5**	**731.6**	**181.4**	**181.4**	**181.4**	**3.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five year groupings due to small numbers each year.

(c) While 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 occurrence except the latest year which is based on year of registration.

(e) 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 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.

Source: AIHW analysis of AIHW National Mortality Database

Table 1.24.3: Avoidable mortality, by Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2000–2004[(a)(b)(c)]

	Number			**Per cent**			**Rate per 100,000[(e)]**		
Mortality category	**Indigenous**	**Non-Indigenous**	**Not stated**	**Indigenous**	**Non-Indigenous**	**Not stated**	**Indigenous**	**Non-Indigenous**	**Ratio[(f)]**
Avoidable mortality	4,845	60,816	950	75.5	69.9	61.7	710.1	181.4	3.9*
Amenable mortality	*1,198*	*17,337*	*418*	*21.6*	*11.3*	*44.0*	*152.3*	*48.7*	*3.1**
Unavoidable mortality	1,569	26,210	589	24.5	30.1	38.3	208.9	78.2	2.7*
Total mortality	**6,414**	**87,026**	**1,539**	**100.0**	**100.0**	**100.0**	**918.9**	**259.6**	**3.5***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five-year groupings due to small numbers each year.

(c) While 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 occurrence except the latest year which is based on year of registration.

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

(f) Rate ratio Indigenous:non-Indigenous.

Source: AIHW analysis of AIHW National Mortality Database.

Avoidable mortality by cause of death

Table 1.24.4 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 2000–2004.

- The most common types of avoidable conditions causing death among Aboriginal and Torres Strait Islander people were ischaemic heart disease (20%), followed by cancer (13%), in particular lung cancer, diabetes (11%) and suicide (8%). Indigenous Australians died from these conditions at four, two, 18 and two times the rate of non-Indigenous Australians respectively (Table 1.24.4).
- Indigenous Australians died from selected invasive bacterial and protozoal infections at around eight times the rate of non-Indigenous Australians, from alcohol-related disease at nine times the rate of non-Indigenous Australians, from violence at 10 times the rate of non-Indigenous Australians, from nephritis and nephrosis at 18 times the rate of non-Indigenous Australians and from rheumatic heart disease and other valvular heart disease at 19 times the rate of non-Indigenous Australians.

Table 1.24.4: Avoidable mortality, by cause of death and Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2000–2004[(a)(b)(c)(d)(e)]

	Number(f)			Per cent			Indigenous			Non-Indigenous			
Cause of death	**Indig.**	**Non-Indig.**	**Not stated**	**Indig.**	**Non-Indig.**	**Not stated**	**Rate per 100,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Rate per 100,000(g)**	**LCL 95%(h)**	**UCL 95%(i)**	**Ratio(j)**
Ischaemic heart disease	962	12,824	219	19.9	21.1	19.3	163.2	158.9	167.6	38.3	38.3	38.3	4.3*
Cancer	643	21,821	264	13.3	35.9	23.2	120.3	116.8	123.9	64.6	64.6	64.6	1.9*
Lung cancer	243	7,410	98	5.0	12.2	10.3	46.7	40.5	52.9	20.8	20.8	20.8	2.2*
Diabetes	539	1,935	26	11.1	3.2	2.3	104.7	101.4	108.0	5.8	5.8	5.8	18.1*
Suicide	371	4,218	137	7.7	6.9	12.1	27.2	24.5	29.9	12.6	12.6	12.6	2.2*
Road traffic injuries	315	2,974	107	6.5	4.9	9.4	25.9	23.4	28.4	8.9	8.9	8.9	2.9*
Cerebrovascular disease	220	3,630	55	4.5	6.0	4.8	40.6	38.5	42.7	10.9	10.9	10.9	3.7*
Alcohol-related disease	297	1,456	27	6.1	2.4	2.4	37.6	35.2	40.0	4.3	4.3	4.3	8.8*
Chronic obstructive pulmonary disease	205	3,027	58	4.2	5.0	5.1	45.0	42.9	47.0	9.1	9.1	9.1	5.0*
Selected invasive bacterial and protozoal infections	234	1,245	36	4.8	2.0	3.2	30.7	28.5	32.8	3.7	3.7	3.7	8.2*
Nephritis and nephrosis	154	509	6	3.2	0.8	0.5	28.0	26.3	29.7	1.5	1.5	1.5	18.2*
Violence	146	391	18	3.0	0.6	1.6	11.6	10.0	13.3	1.2	1.2	1.2	10.0*

(continued)

Table 1.24.4 (continued): Avoidable mortality, by cause of death and Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2000–2004[(a)(b)(c)(d)]

	Number[(f)]			Per cent			Indigenous			Non-Indigenous			
Cause of death	**Indig.**	**Non-Indig.**	**Not stated**	**Indig.**	**Non-Indig.**	**Not stated**	**Rate per 100,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Rate per 100,000[(g)]**	**LCL 95%[(h)]**	**UCL 95%[(i)]**	**Ratio[(j)]**
Birth defects	125	943	24	2.6	1.6	2.1	6.5	4.9	8.1	2.9	2.9	2.9	2.2*
Rheumatic and other valvular heart disease	88	178	2	1.8	0.3	0.2	10.2	8.9	11.5	0.5	0.5	0.5	19.1*
Other[(k)]	546	5,665	157	11.3	9.3	13.8	58.6	55.3	61.9	17.0	17.0	17.0	3.5*
Total	**4,845**	**60,816**	**1,136**	**100.0**	**100.0**	**100.0**	**710.1**	**700.3**	**719.8**	**181.4**	**181.4**	**181.4**	**3.9***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 five year groupings due to small numbers each year.

(c) Rates exclude 950 deaths where the Indigenous status was not stated.

(d) While 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 due to these data quality issues.

(e) Deaths are by year of occurrence except the latest year which is based on year of registration.

(f) It should be noted that 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.

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

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:non-Indigenous.

(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, complications of perinatal period, falls, fires/burns, accidental poisonings, drownings.

Source: AIHW analysis of AIHW 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. Due to 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 affects the comparability of the data, the analysis reported for this indicator has been done for two time periods—1991–1996 and 1997–2003. Data for 2004 were not used because of late registration of some deaths.

Due to 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 avoidable causes over the period 1991 to 1996 and 1997 to 2003 are presented in Tables 1.24.5a and 1.24.5b and Figure 1.25.1 below.

- Over the period 1991–1996, in Western Australia, South Australia and the Northern Territory there were significant declines in mortality rates from 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. These declines were significant for Indigenous females but not for Indigenous males.
- Over the same period, there were significant declines in mortality rates for avoidable causes for other Australians.
- Over the period 1991–1996, there were significant declines in the mortality rate ratios and rate differences between Indigenous and other Australians from avoidable causes for females only.
- Over the period 1997–2003, in Western Australia, South Australia and the Northern Territory there were also significant declines in the mortality rates from avoidable causes among Indigenous Australians aged 0–74 years. The fitted trend implies an average yearly decline in the rate of around 29 per 100,000. 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.
- Over the period 1997–2003, there were significant increases in the mortality rate ratios between Indigenous and other males from avoidable mortality. There were significant declines in the mortality rate differences between Indigenous and other Australians.

Table 1.24.5a: 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)]
Indigenous rate per 100,000[(b)]							
Males	1,077.8	1,030.3	1,131.7	1,182.5	1,104.9	1,020.9	0.3
Females	873.1	843.1	808.9	771.7	697.4	743.9	–32.0*
Persons	976.5	936.0	965.7	968.5	888.2	876.9	–18.2*
Other[(c)] rate per 100,000[(b)]							
Males	341.5	337.5	333.5	328.6	315.8	310.7	–6.4*
Females	176.2	178.1	168.2	165.5	161.2	160.1	–3.8*
Persons	256.7	255.5	248.7	245.2	237.0	234.3	–4.9*
Rate ratio[(d)]							
Males	3.2	3.1	3.4	3.6	3.5	3.3	0.1
Females	3.4	3.3	3.3	3.1	2.9	3.2	–0.1*
Persons	3.8	3.7	3.9	4.0	3.7	3.7	0.0
Rate difference[(e)]							
Males	736.3	692.9	798.2	853.9	789.0	710.1	6.1
Females	696.9	664.9	640.7	606.2	536.2	583.8	–28.2*
Persons	719.8	680.4	717.0	723.3	651.2	642.6	–13.4

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991–1996.

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

(b) Rates have been directly age standardised using the 2001 Australian standard population.

(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 AIHW National Mortality Database

Table 1.24.5b: Age-standardised mortality rates, rate ratios and rate differences, avoidable causes, persons aged 0-74 years, WA, SA & NT, 1997–2003

	1997	1998	1999	2000	2001	2002	2003	Annual change[(a)]
Indigenous rate per 100,000[(b)]								
Males	1,130.8	1,044.8	986.2	1,025.0	1,016.8	876.0	1,002.4	–24.7*
Females	760.2	728.5	597.1	740.4	597.7	656.9	505.9	–32.3*
Persons	932.4	879.2	781.2	875.3	791.4	761.3	736.3	–29.1*
Other[(c)] rate per 100,000[(b)]								
Males	294.3	289.0	266.6	261.8	247.0	233.1	223.5	–12.3*
Females	153.1	142.6	137.7	135.8	130.5	127.5	122.6	–4.6*
Persons	222.6	215.0	201.4	198.1	188.3	179.9	172.7	–8.3*
Rate ratio[(d)]								
Males	3.8	3.6	3.7	3.9	4.1	3.8	4.5	0.1*
Females	3.4	3.4	3.0	3.7	3.2	3.7	2.9	0.0
Persons	4.2	4.1	3.9	4.4	4.2	4.2	4.3	0.0
Rate difference[(e)]								
Males	836.4	755.8	719.6	763.2	769.8	642.9	778.9	–12.4
Females	537.5	513.5	395.7	542.3	409.4	477.0	333.2	–24.0
Persons	709.7	664.3	579.8	677.2	603.1	581.4	563.7	–20.7*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1997–2003.

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

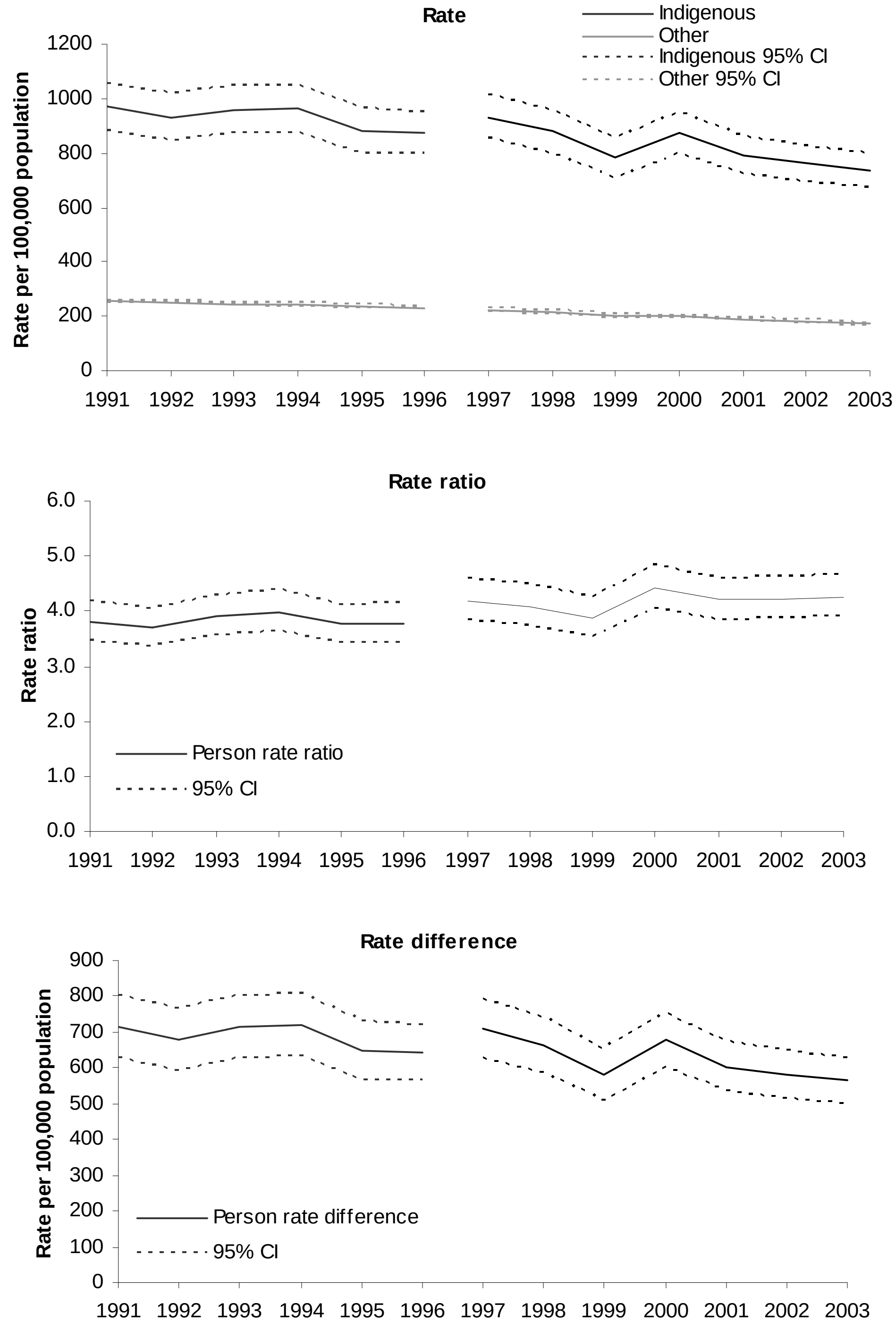
(b) Rates have been directly age standardised using the 2001 Australian standard population.

(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 AIHW National Mortality Database



Source: AIHW National Mortality Database

Figure 1.23.1: 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 1997–2003

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 occurred at older ages.

The PYLL due to death is calculated for each person who died before age 75. Deaths occurring in individuals aged 75 years or older 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 aged below 45 years than for the non-Indigenous population, for whom the impact is more noticeable at older ages. The proportion of potential years of life lost (YPLL) from amenable causes for Indigenous infants under one year of age and Indigenous children aged 1–14 years was almost twice that of non-Indigenous infants and children.

- For the 25–44 year age group, the proportion of PYLL from amendable mortality in the Indigenous population was 1.5 times that of the non-Indigenous population (27% compared with 18%) (Table 1.24.6).
- 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 1.24.6: Potential years of life lost to amenable mortality by Indigenous status and age group, persons aged 0–74 years, Qld, WA, SA & NT, 2000–2004[a][b][c][d][e]

Age group (years)	Number		Per cent		
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Ratio[g]
Less than 1	15,750	74,250	40.2	24.3	1.7*
1–14	2,590	12,677	6.6	4.1	1.6*
15–24	1,538	11,221	3.9	3.7	1.1*
25–44	10,672	5,431	27.3	18.1	1.5*
45–64	7,509	121,367	19.2	39.6	0.5*
65–74	1,072	31,225	2.7	10.2	0.3*
Total[f]	**39,131**	**306,171**	**100.0**	**100.0**	. .

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p>.05.

(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) While 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 due to these data quality issues.

(d) Deaths are by year of occurrence except the latest year which is based on year of registration.

(e) Data are presented in five year groupings due to the small numbers each year.

(f) Ratio – Indigenous percent divided by non-Indigenous percent.

(g) Excludes those aged 75 years and over and those for whom age was not stated.

Source: AIHW analysis of AIHW 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. 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). While 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/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.

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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 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 1991–2009 (ABS 2004).

(continued)

Data quality issues (continued)

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.

References

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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 2001 Community Housing Infrastructure Needs Survey (CHINS) 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, Community Services and Indigenous Affairs (FaCSIA) through funding from FaCSIA and OATSIH. Results from this survey were published in April 2007. Data from the CHINS is held by FaCSIA and the ABS.

The 2001 information was collected on 616 Indigenous organisations which managed a total of 21,287 permanent dwellings. Information was also collected on 1,216 discrete Indigenous communities with a combined population of 108,000. Most communities were in very remote regions of Australia, with 73% having a population of less than 50 people.

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. It 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.

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 (FaCSIA 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

CHINS collects data on water, sewerage and electricity in discrete Indigenous communities. Data from the 2001 Survey are presented below.

Water supply

- Of the 1,216 discrete Indigenous communities surveyed in the 2001 CHINS, approximately 2% reported they had no organised water supply. These communities without an organised water supply had a total population of 90 people (0.1%).
- Approximately 65% of Indigenous communities (784 communities), with a reported population of 66,531 people, reported bore water as their main source of water supply (Table 2.01.3).
- Approximately 5% of discrete Indigenous communities in Western Australia and 1% of communities in the Northern Territory were not connected to an organised water supply (Table 2.01.1).
- Approximately 10% of discrete Indigenous communities experienced five or more interruptions to water supply in the 12 months prior to survey and 40% of communities experienced interruptions to water supply greater than 24 hours (Table 2.01.1).

Drinking water failed testing

- Of all communities with a population of 50 or more, 17% of communities failed testing of drinking water. Nationally, 8% of people (6,245 people) in discrete Indigenous communities with a usual population of 50 or more and not connected to a nearby town water supply, lived in communities where drinking water was not sent away for testing in the 12 months before the 2001 CHINS (Table 2.01.4).
- Of those communities that were connected to a town water supply and reported sending their drinking water away for testing in the 12 months prior to survey (166 communities), 34% had provided samples that failed testing on at least one occasion.
- The proportion of communities for which drinking water failed testing in the 12 months prior to survey ranged from 10% in New South Wales and the Northern Territory to 32% in Western Australia.

- Of those communities that were connected to a town water supply and reported sending their drinking water away for testing in the 12 months prior to survey (166 communities), 34% had provided samples that failed testing on at least one occasion.
- The proportion of communities for which drinking water failed testing in the 12 months prior to survey ranged from 10% in New South Wales and the Northern Territory to 32% in Western Australia.
- Most people in discrete communities with a usual population of 50 or more not connected to nearby town supplies whose drinking water failed testing in the 2001 CHINS, lived in very remote areas (13,058 people) (Table 2.01.2).
- In 1991 and 2001, a similar proportion of discrete Indigenous communities with a population of 50 or more reported their drinking water failed testing in the previous 12 months (17%) (Figure 2.01.1). In New South Wales, Western Australia and South Australia, a higher proportion of Indigenous communities reported their drinking water failed testing in 2001 compared to 1999 and for Queensland and the Northern Territory, the reverse was true.

Table 2.01.1: Water supply in discrete Indigenous communities, by state/territory, 2001

	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	0.7	13	4.6	—	0	7	1.1	21	1.7	90	0.1
Dwellings not connected to organised water supply[(b)(c)]	—	—	18	0.4	20	0.7	7	0.7	102	1.4	147	0.9	n.a.	n.a.
Communities experiencing 5 or more interruptions over 12-month period[(d)]	—	—	6	13.6	8	9.9	4	15.4	13	10.5	31	9.5	9,188	9.7
Communities experiencing interruptions to supply greater than 24 hours[(d)]	9	31.0	20	46.0	28	34.0	9	41.0	46	39.0	118	40.0	38,242	40.3
Communities with drinking water not tested in the 12 months prior to survey[(d)(e)]	1	2.0	13	29.5	3	3.7	1	3.8	25	20.2	43	13.1	6,245	8.0
Communities with drinking water failed testing in the 12 months prior to survey[(d)(e)(f)]	5	10.2	7	15.9	26	32.1	4	15.4	13	10.5	56	17.1	17,028	23.6
Total[(b)]	**60**	. .	**142**	. .	**283**	. .	**96**	. .	**632**	. .	**1 216**	. .	**108,085**	. .

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

(b) Calculation based on all discrete Indigenous communities.

(c) Percentage calculated as a proportion out of all permanent dwellings on discrete Indigenous communities in the relevant jurisdiction.

(d) Discrete Indigenous communities with a usual population of 50 or more.

(e) Proportion calculated in relation to total communities not connected to a town supply.

(f) 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 2003; AIHW cat. no. HOU 129; ABS 2002.

Table 2.01.2: Water supply in discrete Indigenous communities, by remoteness, 2001

	Major cities		Inner regional		Outer regional		Remote		Very remote		Australia	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Number of communities with no organised water supply[(a)]	—	—	—	—	—	—	—	—	21	2.0	21	1.7
Number of dwellings not connected to organised water supply	—	—	—	—	3	n.a.	43	n.a.	101	n.a.	147	0.9
Aggregate population of communities experiencing 5 or more interruptions over 12-month period[(b)]	—	—	—	—	—	—	2,165	20.2	7,023	10.1	9,188	9.7
Number of communities experiencing interruptions to water supply greater than 2 days in the previous 12 months[(b)(c)]	—	—	3	16.7	8	20.5	6	15.0	61	27.1	78	23.9
Aggregate population of communities with drinking water not tested in the 12 months prior to survey[(b)(d)]	—	. .	—	—	481	6.2	385	5.3	5,379	8.5	6,245	8.0
Aggregate population of communities with drinking water failed testing in the 12 months prior to survey[(b)(d)(e)]	—	. .	370	100.0	1,700	23.4	1,900	27.7	13,058	22.6	17,028	23.6
Total number of communities with population 50 or more	**5**	**. .**	**18**	**. .**	**39**	**. .**	**40**	**. .**	**225**	**. .**	**327**	**. .**
Total number of communities[(a)]	**5**	**. .**	**19**	**. .**	**53**	**. .**	**109**	**. .**	**1,030**	**. .**	**1,216**	**. .**

(a) All Indigenous communities.

(b) Discrete Indigenous communities with a usual population of 50 or more.

(c) Refers to restrictions on the amount of water used and/or purpose for which water can be used. Also includes periods where water may only be supplied or used at specified times during the day. Reason for restrictions include drought, normal dry season shortages, bills not paid, equipment breakdown, lack of storage containment, poor water quality, no fuel.

(d) Proportion calculated in relation to total communities not connected to a town supply.

(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.

Sources: SCRGSP 2003; AIHW cat. no. HOU 129; ABS 2002; Aboriginal and Torres Strait Islander Commission (ATSIC), Community Housing and Infrastructure Needs Survey 2001, unpublished data.

Table 2.01.3: Main source of drinking water, discrete Indigenous communities, by state/territory, 2001

	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[(b)]	47	78.3	9	6.3	37	13.1	10	10.4	81	12.8	186	15.3	18,134	16.8
Bore water	6	10.0	39	27.5	206	72.8	65	67.7	468	74.1	784	64.5	66,531	61.6
Rainwater tanks	1	1.7	20	14.1	2	0.7	20	20.8	9	1.4	53	4.4	4,017	3.7
River or reservoir	5	8.3	43	30.3	10	3.5	1	1.0	40	6.3	99	8.1	17,580	16.3
Well or spring	1	1.7	26	18.3	6	2.1	—	—	18	2.8	51	4.2	1,535	1.4
Other organised water supply	—	—	4	2.8	9	3.2	—	—	9	1.4	22	1.8	198	0.2
No organised water supply	—	—	1	0.7	13	4.6	—	—	7	1.1	21	1.7	90	0.1
Total	**60**	**100.0**	**142**	**100.0**	**283**	**100**	**96**	**100.0**	**632**	**100.0**	**1,216**	**100.0**	**108,085**	**100.0**

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

(b) Town supply means that a discrete Indigenous community is not responsible for the water supply, which is often maintained by a water authority or local shire council.

Sources: SCRGSP 2003; ABS 2002.

Table 2.01.4: Testing of drinking water in discrete Indigenous communities with a usual population of 50 or more, by state/territory, 2001[(a)]

		Not connected to town supply							
		Did not fail testing[(b)]	Failed testing[(c)]	Not tested[(d)]	Connected to town supply[(e)]	Not stated (excl. communities with town supply)	Communities not connected to town supply where water is tested	Total communities not connected to town supply	Total communities
Aggregate population of communities									
NSW	No.	280	870	75	6,111	180	1,330	1,405	7,516
Qld	No.	18,266	5,739	2,832	1,693	1,300	25,305	28,137	29,830
WA	No.	5,663	4,350	335	3,075	—	10,013	10,348	13,423
SA	No.	2,165	670	150	1,229	159	2,994	3,144	4,373
NT	No.	25,770	5,342	2,853	4,183	1,370	32,482	35,335	39,518
Aust[(f)]	**No.**	**52,144**	**17,028**	**6,245**	**16,570**	**3,009**	**72,181**	**78,426**	**94,996**
Proportion of aggregate population of communities									
NSW	%	21.1	65.4	5.3	81.3	2.4	65.4	18.7	100.0
Qld	%	72.2	22.7	10.1	5.7	4.4	22.7	94.3	100.0
WA	%	56.6	43.4	3.2	22.9	—	43.4	77.1	100.0
SA	%	72.3	22.4	4.8	28.1	3.6	22.4	71.9	100.0
NT	%	79.3	16.4	8.1	10.6	3.5	16.4	89.4	100.0
Aust[(f)]	**%**	**72.2**	**23.6**	**8.0**	**17.4**	**3.2**	**23.6**	**82.6**	**100.0**
Number of communities									
NSW	No.	3	5	1	39	1	10	. .	49
Qld	No.	16	7	13	7	1	37	. .	44
WA	No.	28	26	3	24	—	57	. .	81
SA	No.	12	4	1	7	2	19	. .	26
NT	No.	51	13	25	32	3	92	. .	124
Aust[(f)]	**No.**	**110**	**56**	**43**	**111**	**7**	**216**	**. .**	**327**

(continued)

Table 2.01.4 (continued): Testing of drinking water in discrete Indigenous communities with a usual population of 50 or more, by state/territory, 2001[(a)]

		Not connected to town supply							
		Did not fail testing[(b)]	Failed testing[(c)]	Not tested[(d)]	Connected to town supply[(e)]	Not stated (excl. communities with town supply)	Communities not connected to town supply where water is tested	Total communities not connected to town supply	Total communities
Proportion of communities									
NSW	%	6.1	10.2	2.0	79.6	2.0	20.4	. .	100.0
Qld	%	36.4	15.9	29.5	15.9	2.3	84.1	. .	100.0
WA	%	34.6	32.1	3.7	29.6	—	70.4	. .	100.0
SA	%	46.2	15.4	3.8	26.9	7.7	73.1	. .	100.0
NT	%	41.1	10.5	20.2	25.8	2.4	74.2	. .	100.0
Aust[(f)]	**%**	**33.6**	**17.1**	**13.1**	**33.9**	**2.1**	**66.1**	**. .**	**100.0**

(a) In the 12 months prior to the survey.

(b) 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.

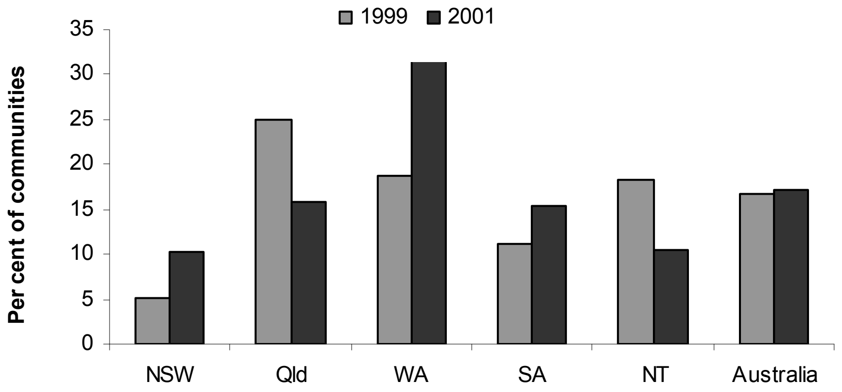
(c) Testing means water was sent away for testing. Proportion calculated in relation to total communities not connected to a town supply where water was sent away for testing.

(d) Testing means water was sent away for testing. Proportion calculated in relation to total communities not connected to a town supply.

(e) Town supply means that a discrete Indigenous community is not responsible for the water supply, which is often maintained by a water authority or local shire council. This category does not refer to communities with a reticulated water supply from a dam, river or other source, which the community is responsible for maintaining.

(f) Victoria and Tasmania included in Australia for confidentiality reasons.

Source: SCRGSP 2003.



Note: Victoria and Tasmania included in Australia for confidentiality reasons.

Source: AIHW analysis of ATSIC, Community Housing and Infrastructure Needs Survey 1999 and 2001.

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 and 2001

Water restrictions

- In 2001, more than one-third (35%) of communities with a usual population of 50 or more experienced water restrictions in the 12 months prior to survey (Table 2.01.5). Of the 114 communities that reported water restrictions, 31 (27%) reported restrictions on five or more occasions in the 12 months prior to survey.
- The proportion of communities reporting restrictions in 2001 was the same as in 1999 (35%), the proportion of people affected by these restrictions was higher in 2001 (42%) than in 1999 (35%) (Table 2.01.5).
- Approximately 16% of discrete Indigenous communities with a usual population of 50 or more reported water restrictions lasting one day, while 5% of communities reported water restrictions for more than 112 days (Table 2.01.6).

Table 2.01.5: Water restrictions,[a] by size of community, 2001 and 1999

	2001					1999	
	Communities with a population of						
	50–99	100–199	200 or more	Total	Reported usual population	Total	Reported usual population
Experienced water restriction							
Once	8	9	18	35	9,672	37	9,189
Twice	6	4	15	25	7,721	22	6,001
Three times	5	3	7	15	5,020	14	3,584
Four times	1	—	7	8	7,869	5	1,480
Five times or more	8	6	17	31	9,188	43	13,596
Total with water restriction	28	22	64	114	39,470	121	33,850
Did not experience water restriction	74	58	81	213	55,526	227	61,573
All communities	**102**	**80**	**145**	**327**	**94,996**	**348**	**95,423**

(a) In the 12 months prior to the survey.

Source: ABS 2002 (Community Housing and Infrastructure Needs Survey 1991 and 2001)

Table 2.01.6: Duration of water restrictions in discrete Indigenous communities with a usual population of 50 or more, by state/territory, 2001(a)

		1 day	2 days	3–7 days	8–14 days	15–28 days	29–56 days	57–112 days	>112 days	No restrictions	Not avail./not stated	Total
Aggregate population of communities												
NSW	No.	610	332	720	200	300	—	500	300	4,554	—	7,516
Qld	No.	6,481	3,700	3,503	3,700	350	—	172	2,410	9,514	—	29,830
SA	No.	1,030	749	720	—	130	—	—	200	1,544	—	4,373
WA	No.	470	563	1,315	200	560	—	70	1,864	8,321	60	13,423
NT	No.	5,987	2,729	6,998	4,485	786	—	260	290	17,333	650	39,518
Aust(b)	**No.**	**14,778**	**8,130**	**13,256**	**8,664**	**2,126**	—	**1,002**	**5,064**	**41,266**	**710**	**94,996**
Proportion of aggregate population of communities												
NSW	%	8.9	4.4	—	2.2	4.4	—	4.4	4.4	71.1	—	100.0
Qld	%	15.9	4.5	13.6	6.8	2.3	—	4.5	13.6	38.6	—	100.0
SA	%	15.4	11.5	15.4	—	3.8	—	—	3.8	50.0	—	100.0
WA	%	4.9	6.2	9.9	2.5	4.9	—	1.2	9.9	59.3	1.2	100.0
NT	%	12.1	8.9	10.5	8.1	4.0	—	2.4	3.2	49.2	1.6	100.0
Aust(b)	**%**	**10.7**	**7.3**	**10.7**	**5.2**	**4.0**	—	**2.4**	**6.4**	**52.3**	**0.9**	**100.0**
Number of communities												
NSW	No.	4	2	—	1	2	—	2	2	32	—	45
Qld	No.	7	2	6	3	1	—	2	6	17	—	44
SA	No.	4	3	4	—	1	—	—	1	13	—	26
WA	No.	4	5	8	2	4	—	1	8	48	1	81
NT	No.	15	11	13	10	5	—	3	4	61	2	124
Aust(b)	**No.**	**35**	**24**	**35**	**17**	**13**	—	**8**	**21**	**171**	**3**	**327**

(continued)

Table 2.01.6 (continued): Duration of water restrictions in discrete Indigenous communities with a usual population of 50 or more, by state/territory, 2001(a)

		1 day	2 days	3–7 days	8–14 days	15–28 days	29–56 days	57–112 days	>112 days	No restrictions	Not avail./not stated	Total
Proportion of communities												
NSW	%	8.1	4.4	9.6	2.7	4.0	—	6.7	4.0	60.6	—	100.0
Qld	%	21.7	12.4	11.7	12.4	1.2	—	0.6	8.1	31.9	—	100.0
SA	%	23.6	17.1	16.5	0.0	3.0	—	0.0	4.6	35.3	—	100.0
WA	%	3.5	4.2	9.8	1.5	4.2	—	0.5	13.9	62.0	0.4	100.0
NT	%	15.2	6.9	17.7	11.3	2.0	—	0.7	0.7	43.9	1.6	100.0
Aust (b)	**%**	**15.6**	**8.6**	**14.0**	**9.1**	**2.2**	**0.0**	**1.1**	**5.3**	**43.4**	**0.7**	**100.0**

(a) In the 12 months prior to the survey.

(b) Victoria and Tasmania included in Australia for confidentiality reasons.

Source: SCRGSP 2003 (Community Housing and Infrastructure Needs Survey 2001).

Water quality

Data from a survey of small water utilities by the enHealth Council enables some comparison to be made between water quality in Indigenous communities and water quality in other small towns in Australia. There is a significant amount of missing data in the survey, so the results should be interpreted with caution. However, the data do allow some comparisons of water quality.

- The survey found that in 2003, approximately 18% of people (17,475) in Indigenous communities had drinking water that failed to meet microbiological testing guidelines, 17% of people (133,544) in non-Indigenous communities supplied by utilities with fewer than 3,000 customers drank water that failed microbiological guidelines and 41% of people (728,831) in non-Indigenous communities supplied by utilities with 3,000 to 10,000 customers had drinking water that failed microbiological guidelines (Table 2.01.7).

Table 2.01.7: Compliance with drinking water quality guidelines, Indigenous communities and other small towns, by state/territory, 2003

	Health-related chemicals[(a)]			Aesthetic chemicals[(b)]			Physical[(c)]			Microbiological			Total towns
	Fail	No data	Pass	Fail	No data	Pass	Fail	No data	Pass	Fail	No data	Pass	
Indigenous communities (no. of communities,towns)													
NSW	2	48	1	—	48	3	3	48	—	3	47	1	51
Vic	—	2	—	—	2	—	—	2	—	—	2	—	2
Qld	1	43	—	1	43	—	1	43	—	2	42	—	44
WA	—	97	1	—	97	1	1	97	—	—	97	1	98
SA	8	14	4	11	14	1	12	14	—	—	26	—	26
Tas	—	1	—	—	1	—	—	1	—	—	1	—	1
NT	1	8	120	7	8	114	13	8	108	29	100	—	129
Aust	**12**	**213**	**126**	**19**	**213**	**119**	**30**	**213**	**108**	**34**	**315**	**2**	**351**
Indigenous communities (aggregate population)													
NSW	288	7,586	120	—	—	7,994	408	—	7,586	343	7,591	60	7,994
Vic	—	250	—	—	—	250	—	—	250	—	250	—	250
Qld	400	29,267	—	400	—	29,267	400	—	29,267	1,960	27,707	—	29,667
WA	—	14,380	32	—	—	14,412	32	—	14,380	—	14,380	32	14,412
SA	1,360	1,490	768	2,128	—	1,490	2,128	—	1,490	—	3,618	—	3,618
Tas	—	70	—	—	—	70	—	—	70	—	70	—	70
NT	875	6,166	32,345	5,039	—	34,347	9,656	—	29,730	15,172	24,214	—	39,386
Aust	**2,923**	**59,209**	**33,265**	**7,567**	—	**87,830**	**12,624**	—	**82,773**	**17,475**	**77,830**	**92**	**95,397**

(continued)

Table 2.01.7 (continued): Compliance with drinking water quality guidelines, Indigenous communities and other small towns, by state/territory, 2003

	Health-related chemicals[(a)]			Aesthetic chemicals[(b)]			Physical[(c)]			Microbiological			Total towns
	Fail	**No data**	**Pass**	**Fail**	**No data**	**Pass**	**Fail**	**No data**	**Pass**	**Fail**	**No data**	**Pass**	
Non-Indigenous utilities with <3,000 people (no. of utilities)													
NSW	2	76	20	5	78	15	20	78	—	21	70	7	98
Vic	52	102	176	196	49	85	269	61	—	133	161	36	330
Qld	2	334	100	17	334	85	101	334	1	61	375	—	436
WA	4	30	147	42	31	108	137	31	13	4	42	135	181
SA	—	142	—	40	7	95	127	7	8	—	142	—	142
Tas	—	46	—	3	41	2	—	46	—	—	45	1	46
NT	1	—	13	10	—	4	13	—	1	4	10	—	14
Aust	**61**	**730**	**456**	**313**	**540**	**394**	**667**	**557**	**23**	**223**	**845**	**179**	**1,247**
Non-Indigenous utilities with <3,000 people (aggregate population)													
NSW	2,580	46,698	17,309	3,060	—	63,527	16,589	—	49,998	17,113	44,834	4,640	66,587
Vic	37,553	70,309	112,965	125,446	—	95,381	176,322	—	44,505	77,647	122,823	20,357	220,827
Qld	2,760	196,596	73,313	8,520	—	264,149	75,943	—	196,726	36,884	235,785	—	272,669
WA	427	9,529	103,277	23,873	—	89,360	95,234	—	17,999	209	23,843	89,181	113,233
SA	—	76,867	—	22,818	—	54,049	74,257	—	2,610	—	76,867	—	76,867
Tas	—	31,264	—	1,070	—	30,194	—	—	31,264	—	31,014	250	31,264
NT	1,350	—	5,654	4,832	—	2,172	6,504	—	500	1,691	5,313	—	7,004
Aust	**44,670**	**431,263**	**312,518**	**189,619**	—	**598,832**	**444,849**	—	**343,602**	**133,544**	**540,479**	**114,428**	**788,451**

(continued)

Table 2.01.7 (continued): Compliance with drinking water quality guidelines, Indigenous communities and other small towns, by state/territory, 2003

	Health-related chemicals[(a)]			**Aesthetic chemicals**[(b)]			**Physical**[(c)]			**Microbiological**			**Total towns**
	Fail	**No data**	**Pass**	**Fail**	**No data**	**Pass**	**Fail**	**No data**	**Pass**	**Fail**	**No data**	**Pass**	
Non-Indigenous utilities with 3,000–10,000 people (no. of utilities)													
NSW	7	29	24	3	33	24	27	33	—	19	34	7	60
Vic	9	10	26	26	4	15	37	8	—	16	22	7	45
Qld	—	31	20	3	31	17	20	31	—	17	34	—	51
WA	1	2	20	3	2	18	19	2	2	—	5	18	23
SA	—	6	—	2	—	4	6	—	—	—	6	—	6
Tas	—	2	—	—	2	—	—	2	—	—	2	—	2
NT	1	1	1	1	1	1	2	1	—	1	2	—	3
Aust	**18**	**81**	**91**	**38**	**73**	**79**	**111**	**77**	**2**	**53**	**105**	**32**	**190**
Non-Indigenous utilities with 3,000–10,000 people (aggregate population)													
NSW	94,728	346,380	507,973	203,733	—	745,348	530,543	—	418,538	556,812	318,819	73,450	949,081
Vic	52,162	99,501	168,586	146,161	—	174,088	236,010	—	84,239	76,009	166,146	78,094	320,249
Qld	—	148,136	120,210	24,400	—	243,946	120,210	—	148,136	92,510	175,836	—	268,346
WA	5,551	51,000	105,986	11,637	—	150,900	96,744	—	65,793	—	68,165	94,372	162,537
SA	—	24,568	—	9,391	—	15,177	24,568	—	—	—	24,568	—	24,568
Tas	—	6,010	—	—	—	6,010	—	—	6,010	—	6,010	—	6,010
NT	3,500	20,000	10,000	3,500	—	30,000	13,500	—	20,000	3,500	30,000	—	33,500
Aust	**155,941**	**695,595**	**912,755**	**398,822**	—	**1,365,469**	**1,021,575**	—	**742,716**	**728,831**	**789,544**	**245,916**	**1,764,291**

(a) Arsenic, boron, barium, cadmium, chromium, fluorine, mercury, iodine, nickel, nitrates, nitrites, lead, selenium and uranium.

(b) Aluminium, chlorine, copper, iron, electrical conductivity, manganese, sodium, sulphates, total dissolved solids and zinc.

(c) pH and turbidity.

Source: SCRGSP 2003 - E-health Council Survey data.

Electricity source and supply

- Community generators were the main source of electricity reported for 480 Indigenous communities (39%) followed by state grid or transmitted supply reported for 260 communities (21%). 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 (Table 2.01.8).
- No organised electricity supply was reported for 80 discrete Indigenous communities in 2001 (7% of all communities surveyed) (Table 2.01.8).
- The proportion of communities with no organised electricity supply ranged from 0% in New South Wales to 45% in the Northern Territory (Table 2.01.9).
- All dwellings not connected to an organised electricity supply were located in outer regional, remote and very remote areas, with the highest numbers in very remote areas (Table 2.01.10).
- In 2001, interruptions to electricity supply in the 12 months prior to survey occurred in 82% (267) of the 327 discrete Indigenous communities with a reported population of 50 or more (Table 2.01.11). This was similar to that in 1999 when interruptions were reported for 81% (281) of communities.

Table 2.01.8: Main source of electricity, all communities, bys state/territory, 2001

	State grid/transmitted supply	Community generators	Domestic generators	Solar	Solar hybrid	Other organised electricity supply	No organised electricity supply	Total
				Communities with a population of less than 50				
State/territory								
NSW	11	—	—	—	—	—	—	11
Qld	6	67	11	2	—	—	12	98
WA	21	94	51	3	10	2	21	202
SA	16	12	4	7	21	8	2	70
NT	56	146	97	73	90	2	44	508
Australia[(a)]	**110**	**319**	**163**	**85**	**121**	**12**	**79**	**889**
				Communities with a population of 50 or more				
State/territory								
NSW	49	—	—	—	—	—	—	49
Qld	11	30	2	—	1	—	—	44
WA	27	53	1	—	—	—	—	81
SA	12	12	—	—	1	1	—	26
NT	49	66	1	5	2	—	1	124
Australia[(a)]	**150**	**161**	**4**	**5**	**4**	**2**	**1**	**327**
				All communities				
State/territory								
NSW	60	—	—	—	—	—	—	60
Qld	17	97	13	2	1	—	12	142
WA	48	147	52	3	10	2	21	283
SA	28	24	4	7	22	9	2	96
NT	105	212	98	78	92	2	45	632
Australia[(a)]	**260**	**480**	**167**	**90**	**125**	**14**	**80**	**1, 216**

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

Source: ABS 2002: Community Housing and Infrastructure Needs Survey 2001.

Table 2.01.9: Electricity supply in discrete Indigenous communities, by state/territory, 2001

	NSW		Qld		WA		SA		NT		Australia[(a)]			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**Reported usual population**	**%**
Communities with no organised electricity supply[(b)]	—	—	12	8.5	21	7.4	2	2.1	45	7.1	80	6.6	681	0.6
Dwellings not connected to organised electricity supply[(b)(c)]	—	—	10	0.2	30	1	22	2.1	195	2.7	257	1.5	n.a.	n.a.
Communities experiencing 20 or more interruptions over 12 month period[(d)]	4	8.2	11	25.0	21	25.9	2	7.7	15	12.1	54	16.5	17,113	18.0
Communities experiencing interruptions to supply greater than 24 hours[(d)]	6	12.2	4	9.1	20	24.7	4	15.4	7	5.6	42	12.8	9,313	9.8
Communities with population 50 or more	*49*	*. .*	*44*	*. .*	*81*	*. .*	*26*	*. .*	*124*	*. .*	*327*	*. .*	*94,996*	*. .*
Total no. of communities[(b)]	**60**	**. .**	**142**	**. .**	**283**	**. .**	**96**	**. .**	**632**	**. .**	**1 216**	**. .**	**108,085**	**. .**

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

(b) All Indigenous communities.

(c) Percentage calculated as a proportion out of all permanent dwellings on discrete Indigenous communities in the relevant jurisdiction.

(d) Discrete Indigenous communities with a usual population of 50 or more.

Sources: SCRGSP 2003; AIHW cat. no. HOU 129; ABS 2002: ATSIC, Community Housing and Infrastructure Needs Survey 2001, unpublished data.

Table 2.01.10: Electricity supply in discrete Indigenous communities, by remoteness area, 2001

	Major cities		**Inner regional**		**Outer regional**		**Remote**		**Very remote**		**Australia**			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**Reported usual population**	**%**
No organised electricity supply[(a)]	—	—	—	—	1	1.9	3	2.8	76	7.4	80	6.6	681	0.6
Number of dwellings not connected to organised electricity supply[(a)]	—	—	—	—	9	17.0	43	39.4	205	19.9	257	1.5	n.a.	n.a.
Communities experiencing 20 or more interruptions over 12-month period[(b)]	—	—	1	5.6	4	10.3	2	5.0	47	20.9	54	16.5	17,113	18.0
Communities experiencing interruptions to supply greater than 24 hours[(b)]	1	20.0	1	5.6	7	17.9	5	12.5	28	12.4	42	12.8	9,313	9.8
Total number of communities with population 50 or more	**5**	**. .**	**18**	**. .**	**39**	**. .**	**40**	**. .**	**225**	**. .**	**327**	**. .**	**94,996**	**. .**
Total number of communities[(a)]	**5**	**. .**	**19**	**. .**	**53**	**. .**	**109**	**. .**	**1,030**	**. .**	**1,216**	**. .**	**108,085**	**. .**

(a) All Indigenous communities.

(b) Discrete Indigenous communities with a usual population of 50 or more.

Sources: SCRGSP 2003; AIHW cat. no. HOU 129; ABS 2002; ATSIC, Community Housing and Infrastructure Needs Survey 2001, unpublished data.

Electricity interruptions

- Over one-third (37%) of affected communities experienced less than five electricity interruptions, while 20% experienced 20 or more interruptions in the 12 months prior to survey.
- In 2001, approximately 13% of communities experienced interruptions to electricity supply lasting longer than 24 hours (Table 2.01.10). This was similar to that reported in 1999 (14%) (Figure 2.01.2).

Table 2.01.11: Electricity interruptions,[(a)] communities with a population of 50 or more and reported usual population, 2001 and 1999

	2001							1999			
	Communities with a population of										
Electricity interruptions	**50–99**	**100–199**	**200 or more**	**Total**	**%**	**Reported usual population**	**%**	**Total**	**%**	**Reported usual population**	**%**
1–4 times	35	32	33	100	30.6	25,403	26.7	120	34.5	25,159	26.4
5–9 times	19	11	39	69	21.1	23,508	24.7	55	15.8	25,812	27.1
10–14 times	6	7	21	34	10.4	13,246	13.9	33	9.5	10,345	10.8
15–19 times	2	1	5	8	2.4	2,750	2.9	16	4.6	5,221	5.5
20 times or more	13	13	28	54	16.5	17,113	18.0	57	16.4	18,490	19.4
***Total with electricity interruption*[(b)]**	***75***	***64***	***128***	***267***	***81.7***	***82,670***	***87.0***	***281***	***80.7***	***84,027***	***88.1***
Did not experience electricity interruption	26	16	17	59	18.0	12,276	12.9	62	17.8	10,897	11.4
All communities[(c)(d)]	**102**	**80**	**145**	**327**	**100.0**	**94,996**	**100.0**	**348**	**100.0**	**95,423**	**100.0**

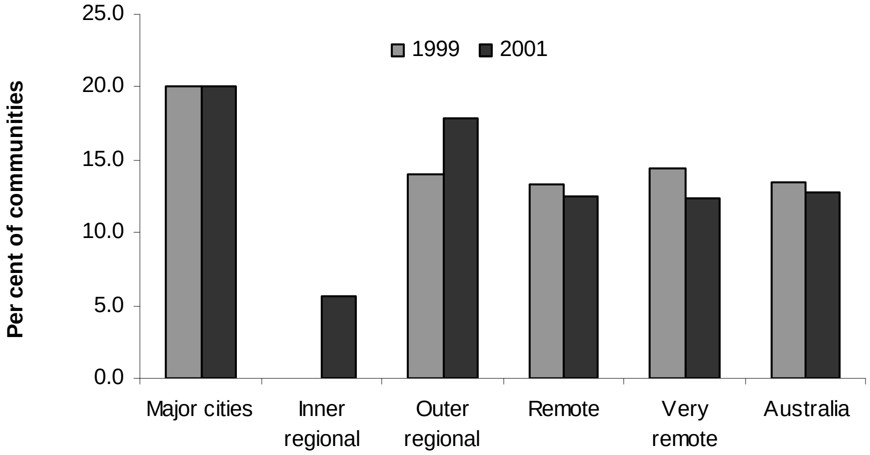
(a) In the 12 months prior to the survey.

(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: AIHW analysis of Community Housing and Infrastructure Needs Survey 2001.



Source: AIHW analysis of ATSIC, Community Housing and Infrastructure Needs Survey 1999 and 2001.

Figure 2.01.2: Proportion of discrete Indigenous communities, with reported usual population 50 or more, experiencing interruptions to electricity supply greater than 24 hours in the previous 12 months, by remoteness, 1999 and 2001

Sewerage systems

- In 2001, the majority of people living in discrete Indigenous communities had a community water-borne sewerage system or septic tanks.
- Approximately 1,110 people living in discrete Indigenous communities did not have an organised sewerage system. All of these people lived in communities with a population of less than 50 (Table 2.01.12b). A further 3,573 people relied on pit toilets or pan toilets for their sewerage.
- The proportion of people living in communities that did not have an organised sewerage system ranged from 0% in South Australia to 1.9% in the Northern Territory and from 0% in major cities and inner regional areas to 1.2% in very remote areas (Table 2.01.12a).
- The most common form of sewerage system in discrete Indigenous communities with 50 or more people reporting 20 or more sewerage system leaks in the previous 12 months was septic tanks with leach drains.
- Approximately 8% of all discrete Indigenous communities in 2001 had no organised sewerage system. This ranged from 2% in New South Wales to 9% in the Northern Territory (Table 2.01.14). A further 18% of communities relied on pit toilets. Approximately 2% of dwellings were not connected to an organised sewerage system.
- Approximately 0.3% of communities in outer regional areas had no organised sewerage system, 0.7% in remote areas and 1.2% in very remote areas (Table 2.01.15).

Sewerage system overflows and leakages

- Sewerage system overflows or leakages in the 12 months prior to survey occurred in 47% of the 327 Indigenous communities with a usual population of 50 or more.

- Sewerage leakages and overflows were most common in discrete Indigenous communities with septic tanks with leach drains as the main sewerage system (60% experienced leaks or overflows) and least common in communities connected to nearby town sewerage systems (34%) (Table 2.01.13). In 2001, 12% of Indigenous communities with a reported population of 50 or more experienced 10 or more sewerage overflows or leakages in the last 12 months. This was slightly lower than that reported in 1999 (15%). The proportion of communities which experienced 10 or more sewerage overflows or leakages in the last 12 months was higher in 1999 than in 2001 across all remoteness areas (Figure 2.01.3).

Table 2.01.12a: Number of people in discrete Indigenous communities with different types of sewerage systems, by state/territory, 2001

	Town system	Community water borne	Septic tanks: common eff. disp.	Septic tanks: leach drains	Pit toilets	Pan toilets	Other organised system	No organised system	Total
Communities with a population of less than 50									
NSW	152	—	95	—	—	—	—	8	255
Queensland	25	—	77	326	484	30	99	90	1,131
WA	40	10	206	2,652	130	—	—	97	3,135
SA	—	—	106	463	236	18	30	—	853
NT	237	72	372	4,081	1,993	—	45	915	7,715
Australia[(a)]	**454**	**82**	**856**	**7,522**	**2,843**	**48**	**174**	**1,110**	**13,089**
Communities with a population of 50 or more									
NSW	4,944	170	1,772	630	—	—	—	—	7,516
Queensland	5,729	15,619	2,840	5,642	—	—	—	—	29,830
WA	1,085	6,703	2,939	2,626	—	—	70	—	13,423
SA	350	540	2,319	1,064	100	—	—	—	4,373
NT	3,662	27,225	3,650	4,399	582	—	—	—	39,518
Australia[(a)]	**15,827**	**50,536**	**13,520**	**14,361**	**682**	**—**	**70**	**—**	**94,996**
All communities									
NSW	5,096	170	1,867	630	—	—	—	8	7,771
Queensland	5,754	15,619	2,917	5,968	484	30	99	90	30,961
WA	1,125	6,713	3,145	5,278	130	—	70	97	16,558
SA	350	540	2,425	1,527	336	18	30	—	5,226
NT	3,899	27,297	4,022	8,480	2,575	—	45	915	47,233
Australia[(a)]	16,281	50,618	14,376	21,883	3,525	48	244	1,110	108,085

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

Source: SCRGSP 2003: Community Housing and Infrastructure Needs Survey, 2001.

Table 2.01.12b: Number of people in discrete Indigenous communities with different types of sewerage systems, by remoteness area, 2001

	Town system	Community water borne	Septic tanks: common eff. disp.	Septic tanks: leach drains	Pit toilets	Pan toilets	Other organised system	No organised system	Total
Communities with a population of less than 50									
Major cities	—	—	—	—	—	—	—	—	—
Inner regional	20	—	—	—	—	—	—	—	20
Outer regional	44	—	60	151	—	—	—	38	293
Remote	205	—	113	829	153	48	—	85	1,433
Very remote	185	82	683	6,542	2,690	—	174	987	11,343
Australia	**454**	**82**	**856**	**7,522**	**2,843**	**48**	**174**	**1,110**	**13,089**
Communities with a population of 50 ormore									
Major cities	645	—	—	—	—	—	—	—	645
Inner regional	2,195	259	152	150	—	—	—	—	2,756
Outer regional	5,560	3,580	1,545	860	—	—	—	—	11,545
Remote	2,134	5,564	2,570	445	—	—	—	—	10,713
Very remote	5,293	41,133	9,253	12,906	682	—	70	—	69,337
Australia	**15,827**	**50,536**	**13,520**	**14,361**	**682**	**—**	**70**	**—**	**94,996**
All communities									
Major cities	645	—	—	—	—	—	—	—	645
Inner regional	2,215	259	152	150	—	—	—	—	2,776
Outer regional	5,604	3,580	1,605	1,011	—	—	—	38	11,838
Remote	2,339	5,564	2,683	1,274	153	48	—	85	12,146
Very remote	5,478	41,215	9,936	19,448	3,372	—	244	987	80,680
Australia	**16,281**	**50,618**	**14,376**	**21,883**	**3,525**	**48**	**244**	**1,110**	**108,085**

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

Source: SCRGSP 2003: Community Housing and Infrastructure Needs Survey 2001.

Table 2.01.13: Discrete Indigenous communities with a usual population of 50 or more reporting sewerage system leakages and overflows, by type of sewerage system, 2001[(a)]

		Frequency of sewerage system leakages or overflows						
		1–4 times	**5–9 times**	**10–14 times**	**20 times or more**	**Total with overflows**	**No overflows**	**Total communities**
Number of communities								
Town system	No.	15	7	1	2	25	48	73
Water borne	No.	26	8	4	3	41	50	92
Septic tank common effluent	No.	20	3	1	6	30	32	62
Septic tank leach drain	No.	24	8	6	17	55	36	91
Pit toilets	No.	4	—	—	—	4	4	8
No system	No.	—	—	—	—	—	1	1
Total	No.	89	26	12	28	155	171	327
Proportion of communities								
Town system	%	20.5	9.6	1.4	2.7	34.2	65.8	100.0
Water borne	%	28.3	8.7	4.3	3.3	44.6	54.3	100.0
Septic tank common effluent	%	32.3	4.8	1.6	9.7	48.4	51.6	100.0
Septic tank leach drain	%	26.4	8.8	6.6	18.7	60.4	39.6	100.0
Pit toilets	%	50.0	—	—	—	50.0	50.0	100.0
No system	%	—	—	—	—	—	100.0	100.0
Total	%	27.2	8.0	3.7	8.6	47.4	52.3	100.0

(a) In the 12 months prior to survey.

Source: SCRGSP 2003: Community Housing and Infrastructure Needs Survey, 2001.

Table 2.01.14: Sewerage in discrete Indigenous communities, by state/territory, 2001

	NSW		**Qld**		**WA**		**SA**		**NT**		**Australia** [(a)]			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**Reported usual population**	**%**
No organised sewerage system[(b)]	1	1.7	10	7.0	23	8.1	—	—	57	9.0	91	7.5	1,110	1.0
Pit toilets	—	—	42	29.6	11	3.9	28	29.2	143	22.6	224	18.4	3,525	3.3
Dwellings not connected to organised sewerage system[(b)(c)]	—	—	9	0.2	31	1	—	—	261	3.6	301	1.8	n.a.	n.a.
Communities experiencing 10 or more overflows or leakages over 12-month period[(d)]	2	4.1	13	29.5	8	9.9	—	—	17	13.7	40	12.2	10,281	10.8
Communities experiencing overflows or leakages for longer than 48 hours[(d)]	11	22.4	18	40.9	23	28.4	6	23.1	35	28.2	94	28.7	n.a.	n.a.
Total number of communities with population 50 or more	**49**	. .	**44**	. .	**81**	. .	**26**	. .	**124**	. .	**327**	. .	**94,996**	. .
Total number of communities[(b)]	**60**	. .	**142**	. .	**283**	. .	**96**	. .	**632**	. .	**1,216**	. .	**108,085**	. .

(a) Victoria and Tasmania included in Australia for confidentiality reasons.

(b) All Indigenous communities.

(c) Percentage calculated as a proportion out of all communities with permanent dwellings on discrete Indigenous communities in relevant jurisdiction.

(d) Discrete Indigenous communities with a usual population of 50 or more.

Source: SCRGSP 2003; AIHW cat. no. HOU 129; ABS 2002.

Table 2.01.15: Sewerage in discrete Indigenous communities, by remoteness, 2001

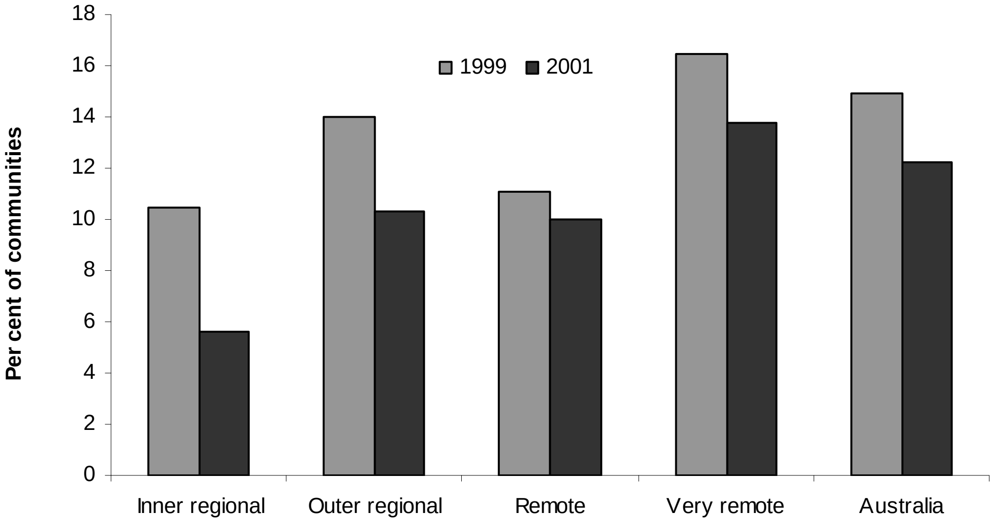
	Major cities		Inner regional		Outer regional		Remote		Very remote		Australia			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**Reported usual population**	**%**
Communities with no organised sewerage system(a)	n.a.	n.a	n.a.	n.a	n.a.	n.a	n.a.	n.a	n.a.	n.a	91	7.5	1,110	1.0
Dwellings not connected to organised sewerage system(a)(b)	—	—	—	—	31	n.a.	4	n.a.	266	n.a.	301	1.8	n.a.	n.a
Communities experiencing 10 or more overflows or leakages over 12-month period(c)	—	—	1	5.6	4	10.3	4	10.0	31	13.8	40	12.2	10,281	10.8
Communities experiencing overflows or leakages for longer than 48 hours(c)	1	20.0	2	11.1	12	30.8	6	15.0	73	32.4	94	28.7	n.a.	n.a
Total number of communities with population of 50 or more	**5**	. .	**18**	. .	**39**	. .	**40**	. .	**225**	. .	**327**	. .	94,996	. .
Total number of communities(a)	**5**	. .	**19**	. .	**53**	. .	**109**	. .	**1,030**	. .	**1,216**	. .	**108,085**	. .

(a) All Indigenous communities.

(b) Number and percentage of dwellings in discrete Indigenous communities not connected to sewerage system.

(c) Discrete Indigenous communities with a usual population of 50 or more.

Source: SCRGSP 2003; AIHW cat. no. HOU 129: ABS 2002; ATSIC, Community Housing and Infrastructure Needs Survey 2001, unpublished data.



Source: AIHW analysis of ATSIC, Community Housing and Infrastructure Needs Survey 1999 and 2001.

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 and 2001

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 that are 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 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).

Fixing Houses for Better Health data

The Department of Families, Community Services and Indigenous Affairs (FaCSIA) funds the Fixing Houses for Better Health program to improve the houses and household living conditions on rural and remote Indigenous communities across Australia. The program uses a housing for health approach where houses are surveyed to determine how well health hardware and other features of the house are functioning, and then arranges for the non-functioning elements to be fixed. The health hardware includes items such as electrical fittings, taps, showers and drainage. The housing for health philosophy is that there is no data collection without services.

The Fixing Houses for Better Health database includes a large amount of detailed information on the existence and functionality of over 200 different household components. Functionality is rated at two different points in time – before and after maintenance work has been completed. Data on nearly 4,000 dwellings in rural and remote Indigenous communities that have been assessed and repaired under the program are included in the database. This is not a representative sample of dwellings as communities either choose or are selected to participate in the program.

There are a large number of variables in the database and for reporting purposes these have been grouped into 36 factors that assist in better assessing an individual's ability to complete healthy living practices in their house. These factors are described as critical or non-critical Healthy Living Practices.

The critical Healthy Living Practices are:

- *Power, water, waste connected*
- *Safety: electrical system is safe*
- *Safety: gas supply is safe*
- *Safety: structure of and access to the house is safe*
- *Safety: fire egress is available and safe*
- *Shower working*
- *Washing children: basin/bath/tub working*
- *Laundry services OK*
- *Flush toilet working*
- *Waste removal from all other areas working*
- *Ability to store, prepare and cook food*
- *the proportion of households with shower working increased from 33% to 82%*
- *the proportion of households with facilities for washing children working increased from 45% to 70%*
- *the proportion of households with laundry facilities working increased from 28% to 73%*
- *the proportion of households with flush toilet working increased from 57% to 88%*
- *the proportion of households with all drains working from 16% to 49%*
- *the proportion of households with facilities to store, prepare and cook food increased from 4% to 8%.*

Source: FaCSIA 2006.

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
					Estimate					
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 of 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 NATSISS 2002.

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
		Estimate							
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 of 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 NATSISS 2002.

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

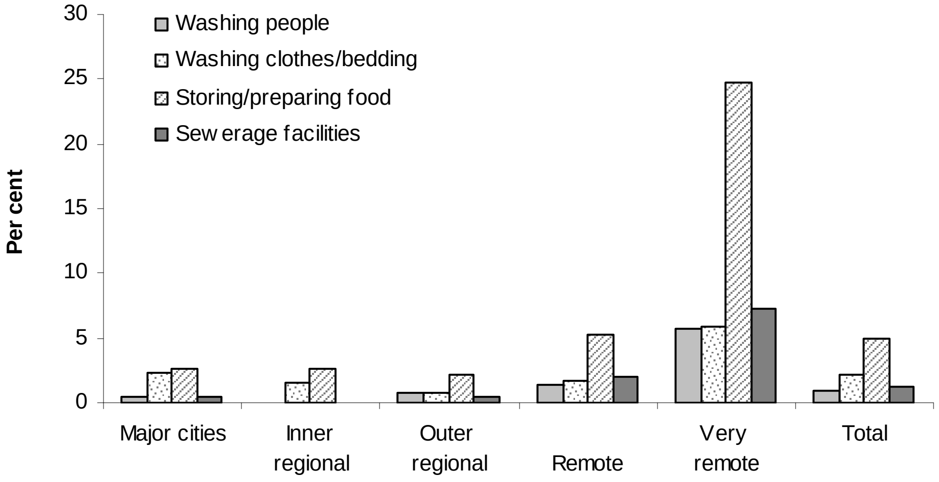
(a) Comprises households with a working bath or shower.

(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: Percentage 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 2001 CHINS collected data on dwelling conditions for permanent dwellings in discrete Indigenous communities that were managed by Indigenous housing organisations. In 2001 CHINS information was collected on 616 Indigenous organisations which managed a total of 21,287 permanent dwellings. The majority of those dwellings were located in the Northern Territory (6,715), Queensland (5,673), New South Wales (4,079) and Western Australia (3,273) (ABS 2002).

The CHINS survey only covers discrete Indigenous communities, including approximately 108,000 Aboriginal and Torres Strait Islanders or 24% of the total Indigenous population. CHINS data is collected every five 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 national publication (ABS 2002).

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 NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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 Building a Better Future: Indigenous Housing to 2010. The NRF comprises a set of 38 performance indicators for national reporting on Indigenous housing. The NRF 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 potential source of data for future reporting of the Health Performance Framework. 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 households

The proportion of Aboriginal and Torres Strait Islander people living in overcrowded households

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) 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 six-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. It 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.

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at five-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.

While 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.

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 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 only allows for children to share bedrooms in some cases, which may lead to an overestimation of overcrowding. In the *National housing assistance data dictionary version 3* 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

Overcrowding

- The 2004–05 National Aboriginal and Torres Strait Islander Health Survey estimated that there were 127,546 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 27% of all Indigenous persons aged 18 years and over. There were around 1 million other Australians living in overcrowded households in 2004–05, representing 5% of all other persons aged 18 years and over (Table 2.02.1). Approximately 14% of Indigenous people were living in households that required two or more additional bedrooms compared to 1% of other people.
- The 2002 National Aboriginal and Torres Strait Islander Social Survey 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 persons aged 15 years and over (Table 2.02.2).
- The 2001 Census estimated that there were 21,274 Indigenous households that were overcrowded according to the Canadian National Occupancy Standard. This represented 15% of all Indigenous households in 2001 (Table 2.02.5). According to the Proxy Occupancy Standard, there were approximately 13,380 Indigenous households that were overcrowded in 2001, which represented 10% of all Indigenous households. Only 2% of other households were classified as overcrowded according to this standard (Table 2.02.7).

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 (65%) and New South Wales, Victoria, Tasmania and the Australian Capital Territory had the lowest (between 10% and 12%) (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).
- In 2001, the proportion of Indigenous households that were overcrowded in 2001 ranged from 6% in Tasmania to 36% in the Northern Territory (Table 2.02.5).

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	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.

(b) Indigenous households only.

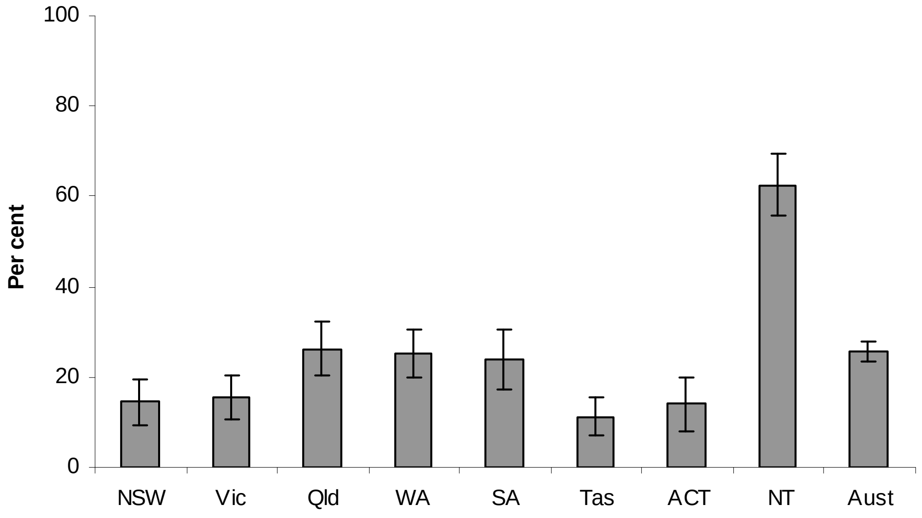
Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 the Canadian National Occupancy Standard for housing appropriateness.

Source: SCRGSP 2005: ABS NATSISS 2002.



Note: Overcrowding based on the Canadian National Occupancy Standard for housing appropriateness.

Source: SCRGSP 2005: ABS NATSISS 2002.

Figure 2.02.1: Proportion of Indigenous people 15 years and over living in overcrowded housing, by state/territory, 2002

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	Australia
One or more bedroom 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 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.

Overcrowding by remoteness

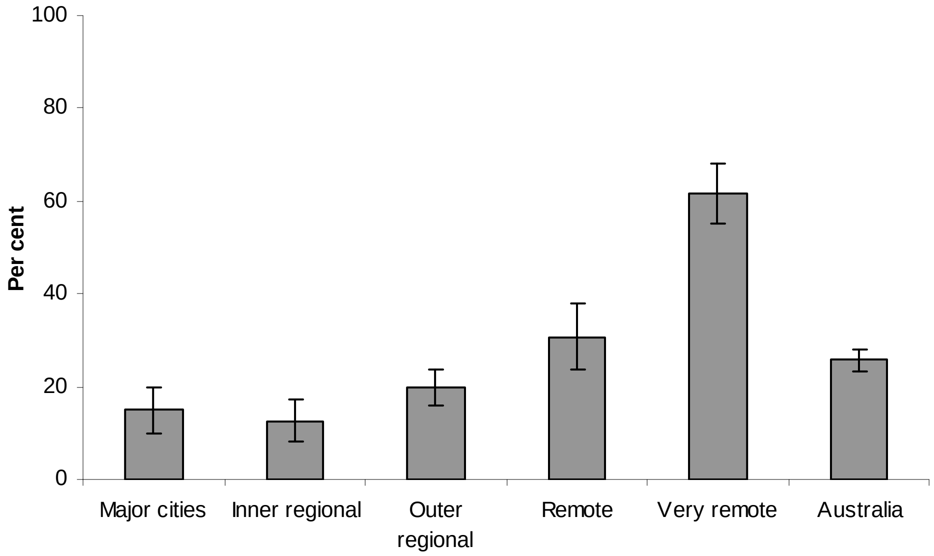
- In 2004–05, the proportion of Indigenous people aged 18 years and over living in overcrowded households was much higher in remote and very remote areas (52%) than Indigenous people in major cities (14%) (Table 2.02.3).
- In 2002, overcrowding also increased with remoteness with 62% of Indigenous persons aged 15 years and over living in very remote areas, 31% in remote areas and only 16% in non-remote areas (Table 2.02.4; Figure 2.02.2).

Table 2.02.4: Number and proportion of Indigenous Australians aged 15 years or 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 the Canadian National Occupancy Standard for housing appropriateness.

Source: SCRGSP 2005: ABS NATSISS 2002.



Note: Overcrowding based on the Canadian National Occupancy Standard for housing appropriateness.

Source: SCRGSP 2005: ABS NATSISS 2002.

Figure 2.02.2: Proportion of Indigenous people 15 years and over living in overcrowded housing, by remoteness, 2002

Overcrowding by tenure type

- In 2002, of Indigenous households that were overcrowded, 83% were renters and 13% were home owners (Table 2.02.5).
- In 2001, overcrowding varied by tenure type with 42% of Indigenous households in Indigenous or mainstream community housing overcrowded in 2001, according to the

Canadian National Occupancy Standard. This compares with around 15% of Indigenous households in mainstream public housing or State Owned and Managed Indigenous Housing (SOMIH), 13% of private renters and 8% of home owners or purchasers (Table 2.02.6).

- In 2001, approximately 34% of Indigenous households that were renters of Indigenous or mainstream community housing were overcrowded according to the Proxy Occupancy Standard compared to 2% of other households (Table 2.02.7).

Table 2.02.5: Overcrowded Indigenous households using the Canadian National Occupancy Standard, by state/territory and tenure type, 2002

	NSW	Vic	Qld	WA	SA	Tas and ACT	NT[(a)]	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	0.0	7.5	2.2	6.6	3.1	2.2	2.0	2.8
Total[(b)]	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Indigenous households only

(b) Includes not stated.

Note: Non-Indigenous comparisons are not available as information on number of additional bedrooms required was not collected in 2002 General Social Survey.

Source: AIHW analysis of 2002 NATSISS.

Table 2.02.6: Number and proportion of overcrowded Indigenous households, using the Canadian National Occupancy Standard, by tenure type and state/territory, 2001

Tenure type	NSW & ACT	Vic	Qld	WA	SA	Tas	NT	Aust(a)
				No. of overcrowded Indigenous households				
Home owner/purchaser	1,290	339	901	390	204	175	192	3,491
Renter mainstream public housing/SOMIH	1,335	275	1,108	989	372	118	317	4,514
Renter Indigenous/mainstream community housing	563	47	1,624	1,041	297	7	2,835	6,414
Private renter	1,836	386	1,922	386	157	131	187	5,005
Other	424	89	565	284	111	32	345	1,850
Total	**5,448**	**1,136**	**6,120**	**3,090**	**1,141**	**463**	**3,876**	**21,274**
				Total number of Indigenous households(b)				
Home owner/purchaser	17,407	4,665	11,259	4,812	2,627	3,835	1,619	46,224
Renter mainstream public housing/SOMIH	10,795	2,232	6,084	4,829	2,629	1,218	1,605	29,395
Renter Indigenous/mainstream community housing	3,075	351	4,506	2,118	779	53	4,499	15,381
Private renter	14,495	3,253	13,546	3,446	1,758	1,678	1,065	39,244
Other	4,189	1,035	4,080	2,088	800	455	1,864	14,511
Total	**49,961**	**11,536**	**39,475**	**17,293**	**8,593**	**7,239**	**10,652**	**144,755**

(continued)

Table 2.02.6 (continued): Number and proportion of overcrowded Indigenous households, using the Canadian National Occupancy Standard, by tenure type and state/territory, 2001

Tenure type	NSW & ACT	Vic	Qld	WA	SA	Tas	NT	Aust[(a)]
			Proportion of overcrowded households (%)					
Home owner/purchaser	7.4	7.3	8.0	8.1	7.8	4.6	11.9	7.6
Renter mainstream public housing/SOMIH	12.4	12.3	18.2	20.5	14.1	9.7	19.8	15.4
Renter Indigenous/mainstream community housing	18.3	13.4	36.0	49.2	38.1	13.2	63.0	41.7
Private renter	12.7	11.9	14.2	11.2	8.9	7.8	17.6	12.8
Other	10.1	8.6	13.8	13.6	13.9	7.0	18.5	12.7
Total	**10.9**	**9.8**	**15.5**	**17.9**	**13.3**	**6.4**	**36.4**	**14.7**

(a) Includes not stated state/territory.

(b) Refers to the total number of households for which household groups and dwelling details were unknown.

Notes

1. 'Renter mainstream public housing/SOMIH' includes households in public housing and State Owned and Managed Indigenous Housing.
2. 'Renter Indigenous /mainstream community housing' includes households in mainstream and Indigenous Community Housing.
3. 'Private renter' includes those renting privately with landlord not in same household and those renting from a real estate agent.
4. 'Other' includes households renting from relatives, employers, caravan park owners/managers and other landlords not elsewhere classified as well as those living rent-free and those in rent-buy schemes.
5. Households are considered overcrowded if one or more additional bedroom is required to satisfy the Canadian National Occupancy Standard.

Source: ABS Census 2001, customised tables.

Table 2.02.7: Number and proportion of overcrowded households, using the Proxy Occupancy Standard, by Indigenous status, state/territory and tenure type, 2001

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust[(a)]
					No. of overcrowded households				
Indigenous									
Home owner/purchaser	810	190	580	250	110	100	20	110	2,160
Renter mainstream public housing/SOMIH	660	160	690	630	210	50	30	240	2,660
Renter Indigenous/mainstream community housing	380	30	1,260	870	240	. .	. .	2,530	5,320
Private and other renter	890	180	1,110	270	110	60	20	190	2,840
Total	2,810	580	3,740	2,110	690	220	60	3,160	13,380
Other[(b)]									
Home owner/purchaser	26,690	20,130	8,200	3,620	4,160	1,050	560	470	64,900
Renter mainstream public housing/SOMIH	2,860	1,640	730	280	470	130	170	70	6,360
Renter Indigenous/mainstream community housing	240	100	80	20	40	10	. .	10	480
Private and other renter	15,810	6,790	5,070	1,420	1,060	330	170	260	30,900
Total	46,910	29,630	14,450	5,520	5,880	1,540	910	840	105,700

(continued)

Table 2.02.7 (continued): Number and proportion of overcrowded households, using the Proxy Occupancy Standard, by Indigenous status, state/territory and tenure type, 2001

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust[(a)]
					Proportion of overcrowded households (per cent)				
Indigenous									
Home owner/purchaser	4.8	4.0	5.2	5.2	4.1	2.5	2.6	7.0	4.7
Renter mainstream public housing/SOMIH	6.4	7.0	11.3	13.1	7.9	4.4	6.2	14.5	9.1
Renter Indigenous/mainstream community housing	12.5	8.5	27.7	39.4	31.2	. .	. .	55.2	34.0
Private and other renter	5.5	4.9	7.1	6.1	4.8	3.3	4.0	11.6	6.1
Total	5.9	5.1	9.8	12.6	8.2	3.1	4.1	32.4	9.5
Other[(b)]									
Home owner/purchaser	1.8	1.7	1.0	0.8	1.1	0.9	0.7	2.1	1.4
Renter mainstream public housing /SOMIH	2.8	3.2	1.8	1.2	1.1	1.3	1.8	2.0	2.2
Renter Indigenous/mainstream community housing	2.6	1.6	1.5	0.7	0.9	0.7	. .	1.6	1.7
Private and other renter	3.1	2.1	1.5	1.0	1.1	1.1	0.8	1.6	2.1
Total	**2.2**	**1.8**	**1.2**	**0.9**	**1.1**	**0.9**	**0.8**	**1.9**	**1.6**

(a) Includes not stated state/territory.

(b) Refers to the total number of households for which household groups and dwelling details were unknown.

Notes

1. 'Renter mainstream public housing/SOMIH' includes households in public housing and State Owned and Managed Indigenous Housing.
2. 'Renter Indigenous/mainstream community housing' includes households in mainstream and Indigenous Community Housing.
3. 'Private and other renter' 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 otherlandlords not elsewhere classified.
4. 'Total' includes households living rent-free, those in rent-buy schemes and those with tenure type not stated.
5. Based on the Proxy Occupancy Standard.

Source: ABS Census 2001, customised tables.

Overcrowding by self-assessed health status

- In 2004–05, there was little difference in the proportion of Indigenous Australians living in overcrowded and non-overcrowded households who reported their health as excellent/very good (42% and 44% respectively).
- After adjusting for differences in age structure, Indigenous Australians in both overcrowded and non-overcrowded households were twice as likely to report their health as fair/poor as non-Indigenous Australians. (Table 2.02.8)

Table 2.02.8: Persons living in overcrowded households, using Canadian National Occupancy Standard, by Indigenous status and self-reported health status, persons aged 15 years and over, 2004–05

	Overcrowded				Not overcrowded			
Self-assessed health status	**Indig.**	**Indigenous age standardised**	**Non-Indig. age standardised**	**Ratio**	**Indig.**	**Indig. age standardised**	**Non-Indig. age standardised**	**Ratio**
	%	**%**	**%**		**%**	**%**	**%**	
Excellent/very good	41.8	32.4	49.8	0.7	43.7	37.2	57.0	0.7
Good	39.0	37.6	30.0	1.3	33.5	33.8	27.6	1.2
Fair/poor	19.2	30.0	20.2	1.5	22.8	29.0	15.3	1.9
Total	**100.0**	**100.0**	**100.0**	**. .**	**100.0**	**100.0**	**100.0**	**. .**

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004a, 2006).

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).*

For the 2002 NATSISS it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. While 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.

(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: children 0–14 years who live in a household with a smoker

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 who have 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 six-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, only 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 to 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
	%	%	%
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**	. .

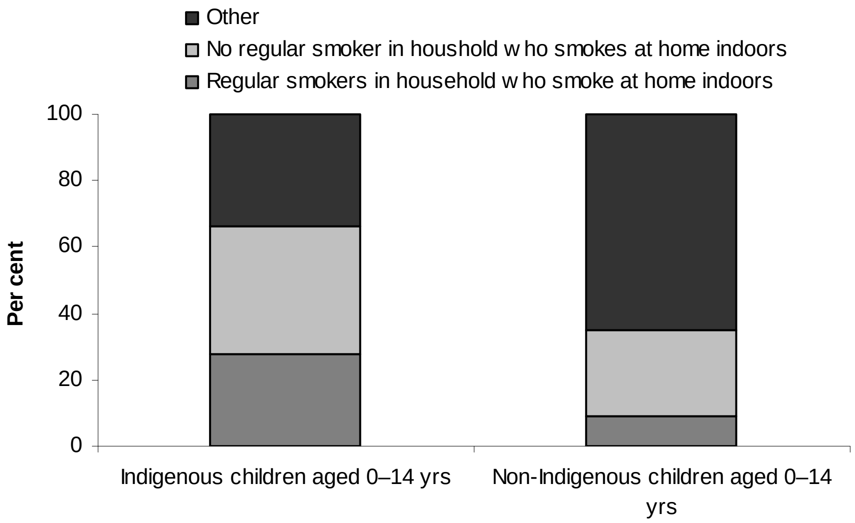
* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(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 National Health Survey.



Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 who had 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 National Health Survey.

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
	%	%	%	%	%	%	%	%
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 to live in households with a regular smoker who smoked at home indoors than non-Indigenous children in major cities and regional areas respectively.

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 & AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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
	%	%	%	%	%	%
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.

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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publication (ABS 2006).

References

ABS (Australian Bureau of Statistics) 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. Canberra: ABS.

2.04 Year 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 indicator come from the 2004 National Report on Schooling in Australia, published by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA 2004).

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 (Corporation 2006).

It should be noted that the question and method used to identify Indigenous students varied between jurisdictions. For example, in New South Wales and Western Australia, Indigenous students were those who answered 'yes' to the question: 'Are you an Aboriginal or Torres Strait Islander person?'. In Queensland, Indigenous students are 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 are identified by schools at the time of enrolment or by self-identification. In Victoria, students are identified as Indigenous on enrolment forms at the commencement of school and also those that answer 'yes' to the question: 'Is this student Aboriginal or Torres Strait Islander on the front page of the student's test booklet.

When comparing results across states and territories, it is also 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 prior to testing.

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://online.curriculum.edu.au/litbench/intro.asp>

<http://online.curriculum.edu.au/numbench/index.htm>.

Data analyses

Reading, writing and numeracy benchmarks

Reading

- Nationally in 2004, approximately 82.9% of Indigenous students achieved the Year 3 reading benchmark compared to 93.0% of all students; 69.4% of Indigenous students achieved the Year 5 reading benchmark compared to 88.7% of all students; and 71.0% of Indigenous students achieved the Year 7 reading benchmark compared to 91.0% of all students.

Writing

- Approximately 76.8% of Indigenous students achieved the Year 3 writing benchmark compared to 92.9% of all students; 81.7% of Indigenous students achieved the Year 5 writing benchmark compared to 94.2% of all students; and 78.8% of Indigenous students achieved the Year 7 writing benchmark compared to 93.6% of all students.

Numeracy

- Nationally in 2004, approximately 79.2% of Indigenous students achieved the Year 3 numeracy benchmark compared to 93.7% of all students; 69.4% of Indigenous students achieved the Year 5 numeracy benchmark compared to 91.2% of all students; and 51.9% of Indigenous students achieved the Year 7 numeracy benchmark compared to 82.1% 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 2004 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 45% in the Northern Territory to 95% in the Australian Capital Territory and Queensland (Table 2.04.1).
- The proportion of Indigenous students who achieved the Year 5 benchmark ranged from 47% in the Northern Territory to 88% in Tasmania.
- The proportion of Indigenous students who achieved the Year 7 benchmark was lowest in the Northern Territory (39%) and highest in Queensland (86%).

Table 2.04.1: Proportion of Year 3, 5 and 7 Indigenous and total students achieving the reading benchmark, by state/territory, 2004

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	%	%	%	%	%	%	%	%	%
					Indigenous				
Year 3	80.4 (± 4.4)*	76.6 (±5.2)*	94.6 (±1.3)*	84.1 (± 5.0)*	73.3 (±6.4)*	93.7 (±3.0)	94.6 (±5.3)	44.7 (±4.9)	82.9 (±3.6)
Year 5	75.7 (±2.8)*	71.4 (±5.6)*	65.0 (±4.2)*	74.2 (±3.9)*	60.3 (±5.2)*	88.1 (±3.9)*	86.7 (±7.0)*	47.1 (±4.5)	69.4 (±3.8)
Year 7	68.5 (±2.1)*	77.0 (±4.1)*	85.5 (±2.1)*	57.6 (±3.9)*	69.2 (±4.2)*	75.7 (±5.7)*	81.6 (±7.8)*	38.8 (±4.3)	71.0 (±2.8)
					All students				
Year 3	92.2 (±1.8)*	90.5 (±1.9)*	97.0 (±1.7)*	95.6 (±1.4)*	90.9 (± 1.7)*	96.5 (±0.7)	95.2 (±0.9)	76.0 (±3.0)	93.0 (±1.5)
Year 5	90.9 (±1.0)*	87.6 (±2.1)*	83.4 (±2.3)*	93.7 (+1.0)*	90.0 (±1.2)*	94.0 (±1.0)*	96.5 (±0.6)*	77.2 (±2.5)	88.7 (±1.6)
Year 7	88.1 (±0.8)*	93.1 (±0.5)*	94.5 (±0.7)*	88.9 (±1.1)*	92.5 (±0.6)*	88.9 (±1.0)*	95.0 (±0.7)*	73.9 (±1.9)	91.0 (±0.7)

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

( ) Confidence interval.

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.

Source: MCEETYA 2004.

Writing

- The proportion of Indigenous students who achieved the Year 3 benchmark ranged from 57% in Western Australia and the Northern Territory to 96% in the Australian Capital Territory (Table 2.04.2).
- The proportion of Indigenous students who achieved the Year 5 benchmark was lowest in the Northern Territory (50%) and highest in Queensland (93%).
- The proportion of Indigenous students who achieved the Year 7 benchmark ranged from 42% in the Northern Territory to 92% in Queensland.

Table 2.04.2: Proportion of Year 3, 5 and 7 Indigenous and total students achieving the writing benchmark, by state/territory, 2004

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	%	%	%	%	%	%	%	%	%
					Indigenous				
Year 3	86.9 (±2.7)*	93.5 (±1.2)*	75.0 (±5.7)*	56.9 (±5.4)*	62.1 (±6.0)*	86.2 (±3.9)	95.9 (±4.6)	56.7 (±5.3)*	76.8 (±4.3)*
Year 5	87.4 (±4.2)*	82.2 (±4.2)*	92.6 (±1.4)*	59.2 (±4.6)*	69.7 (±5.8)*	83.0 (±4.7)*	78.7 (±9.4)*	49.5 (±4.2)*	81.7 (±3.5)*
Year 7	81.8 (±4.9)*	87.1 (±3.4)*	92.3 (±1.7)*	58.2 (±3.9)*	59.4 (±6.3)*	75.2 (±6.2)*	79.7 (±9.4)*	42.4 (±4.2)*	78.8 (±3.8)*
					All students				
Year 3	95.8 (±0.8)*	97.1 (±0.1)*	88.4 (±3.2)*	85.5 (±2.9)*	90.0 (±2.3)*	91.4 (±1.5)	95.5 (±0.9)	83.8 (±2.5)*	92.9 (±1.5)*
Year 5	95.9 (±1.4)*	93.4 (±0.7)*	97.1 (±1.4)*	87.4 (±1.9)*	92.7 (±1.4)*	91.6 (±1.6)*	92.8 (±2.4)*	81.8 (±1.9)*	94.2 (±1.1)*
Year 7	93.7 (±2.0)*	96.0 (+0.7)*	97.3 (+0.4)*	86.6 (±1.4)*	88.0 (+2.1)*	86.5 (±1.9)*	93.1 (±2.1)*	79.4 (±1.9)*	93.6 (±1.3)*

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

( ) Confidence interval.

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.

Source: MCEETYA 2004.

Numeracy

- The proportion of Indigenous students who achieved the Year 3 benchmark ranged from 68% in Western Australia and South Australia to 92% in the Australian Capital Territory (Table 2.04.3).
- The proportion of Indigenous students who achieved the Year 5 benchmark was lowest in the Northern Territory (39%) and highest in Victoria (86%).
- The proportion of Indigenous students who achieved the Year 7 benchmark ranged from 27% in the Northern Territory to 68% in Tasmania.

Table 2.04.3: Proportion of Year 3, 5 and 7 Indigenous and total students achieving the numeracy benchmark, by state/territory, 2004

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	%	%	%	%	%	%	%	%	%
					Indigenous				
Year 3	89.5 (±2.4)*	88.2 (±2.5)*	74.3 (±4.2)*	68.1 (±6.8)*	68.0 (±6.4)*	89.1(±4.4)	91.8 (±7.7)	69.0 (±5.7)*	79.2 (±4.1)*
Year 5	77.0 (±3.6)*	85.8 (±3.4)*	71.7 (±3.6)*	56.6 (±4.2)*	62.4 (±5.4)*	81.9 (±5.0)*	72.0 (±10.6)*	38.8 (±3.8)*	69.4 (±3.9)*
Year 7	46.6 (±1.1)*	62.9 (±4.5)*	60.6 (±2.1)*	47.8 (±2.8)*	59.1 (±5.6)*	67.9 (+5.0)*	65.0 (±10.8)*	26.8 (±3.7)*	51.9 (±2.8)*
					All students				
Year 3	95.8(±0.8)*	96.0 (±0.5)*	90.5 (±1.8)*	89.9 (±2.6)*	91.5 (±1.8)*	93.7 (±1.4)	95.3 (±1.2)	88.0 (±2.5)*	93.7 (±1.2)*
Year 5	92.2 (±1.2)*	94.7 (±0.7)*	89.3 (±1.6)*	87.1 (±1.6)*	90.0 (±1.3)*	89.2 (±1.5)*	92.1 (±1.2)*	71.5 (±2.5)*	91.2 (±1.2)*
Year 7	76.1 (±0.9)*	85.8 (±0.7)*	84.6 (±0.6)*	84.6 (±0.8)*	87.3 (±1.0)*	80.9 (±1.3)*	87.7 (±1.1)*	66.1 (±2.1)*	82.1 (±0.8)*

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

( ) Confidence interval.

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.

Source: MCEETYA 2004.

Reading, writing and numeracy benchmarks by remoteness

Reading, writing and numeracy benchmarks by remoteness area are not available for the Indigenous population but are available for the total Australian population and are presented in Table 2.04.4.

- In 2004, the proportion of students who achieved the Year 3, Year 5 and Year 7 reading, writing and numeracy benchmarks were highest in metropolitan areas and lowest in very remote areas of Australia.
- For example, the Year 3 reading, writing and numeracy benchmarks were each 94% in metropolitan areas and 78%, 67% and 72% respectively in very remote areas.
- The Year 5 reading, writing and numeracy benchmarks were 90%, 95% and 92% respectively in metropolitan areas compared to 64%, 70% and 59% in very remote areas.
- The Year 7 reading, writing and numeracy benchmarks were 92%, 94% and 83% respectively in metropolitan areas compared to 63%, 66% and 51% in very remote areas.

A much higher proportion of the population living in very remote areas of Australia are Indigenous Australians (45%) than the proportion of people living in major cities, where only 1% of the population is Indigenous.

Table 2.04.4: Proportion of Year 3, 5 and 7 students achieving the numeracy benchmark, by remoteness area, 2004

	Metropolitan	Provincial	Remote	Very remote
Reading				
Year 3	93.6 (±1.4)	92.2 (±1.8)	90.3 (±3.2)	78.7 (±4.6)
Year 5	89.7 (±1.5)	87.7 (±1.8)	82.9 (±3.6)	64.2 (±5.4)
Year 7	91.9 (±0.7)	90.1 (±0.9)	83.0 (±3.0)	63.0 (±4.9)
Writing				
Year 3	93.6 (±1.4)	92.5 (±1.8)	83.4 (±4.2)	66.9 (±5.9)
Year 5	95.0 (±1.1)	93.9 (±1.3)	87.8 (±3.1)	70.2 (±4.6)
Year 7	94.4 (±1.2)	92.8 (±1.5)	84.4 (±3.5)	65.8 (±5.0)
Numeracy				
Year 3	94.2 (±1.1)	93.7 (±1.4)	87.4 (±3.7)	71.6 (±6.2)
Year 5	92.1 (±1.1)	90.6 (±1.5)	82.0 (±3.7)	59.1 (±4.9)
Year 7	83.4 (±0.8)	80.2 (± 1.1)	73.3 (±3.4)	50.8 (±4.9)

( ) Confidence interval.

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.

Source: MCEETYA 2004.

Time series analysis

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 2004 there was a significant increase in the proportion of Indigenous students achieving the Year 3 and Year 5 reading benchmarks. The fitted trend implies an average yearly increase of around 1.7% for Year 3 and 2.0% for Year 5 reading benchmarks.
- Between 2001 and 2004 there was a significant increase in the proportion of Indigenous students achieving the Year 7 reading benchmark. The fitted trend implies an average yearly increase of around 3.4%.
- Between 1999 and 2004 there was a significant increase in the proportion of total students achieving the Year 3 reading benchmark and between 2001 and 2004, there was a significant increase in the proportion of total students achieving the Year 7 reading benchmark.

Writing

- Between 1999 and 2004 there was a significant increase in the proportion of Indigenous students achieving the Year 3 and Year 5 writing benchmarks. The fitted trend implies an average yearly increase of around 2.6% for Year 3 and 1.4% for Year 5 writing benchmarks.
- Over the same period there was a significant increase in the proportion of total students achieving the Year 5 writing benchmark, with an average yearly increase of around 0.3%.

Numeracy

- Between 2000 and 2004 there was a significant increase in the proportion of Indigenous students achieving the Year 5 numeracy benchmark, with an average yearly increase of around 1.8%.
- 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 0.4%.

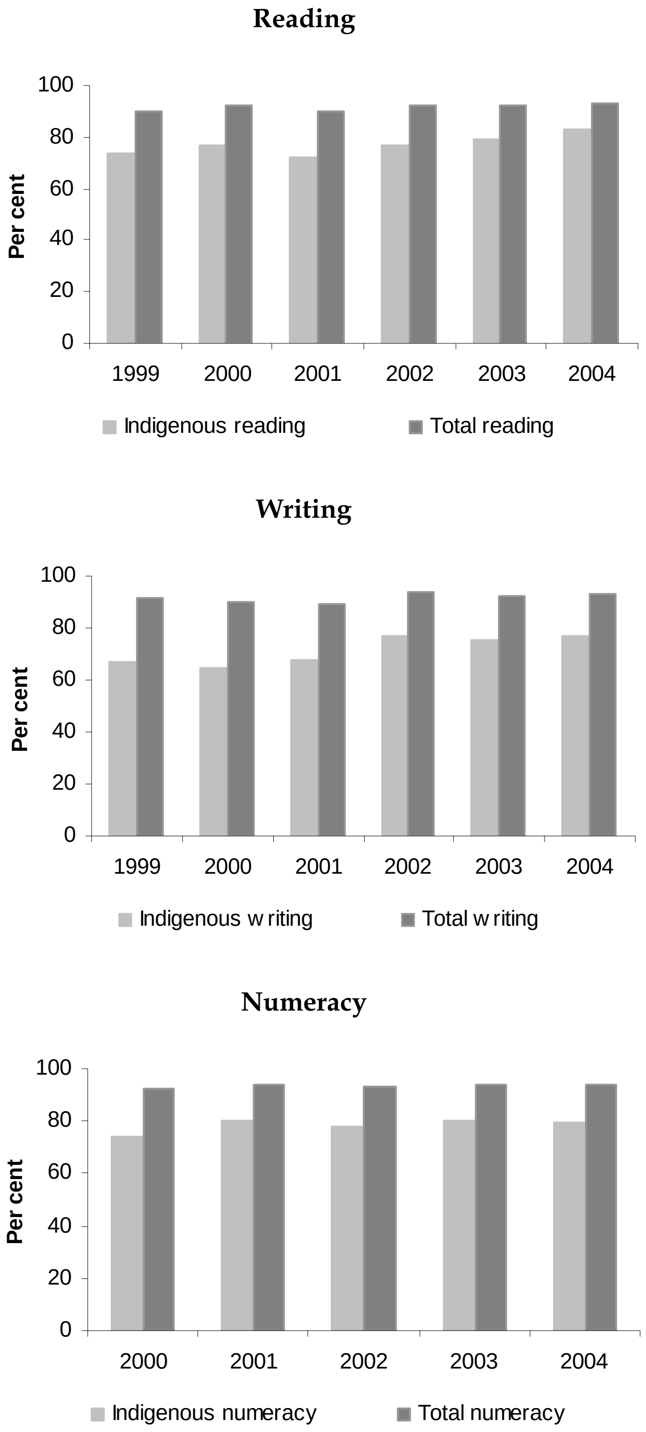
Table 2.04.5: Proportion of students achieving reading, writing and numeracy benchmarks, by Indigenous status, 1999–2004

	1999	2000	2001	2002	2003	2004	Annual change[(a)]
				Reading			
Indigenous							
Year 3	73.4	76.9	72.0	76.7	78.8	82.9	1.7*
Year 5	58.7	62.0	66.9	68.0	67.7	69.4	2.0*
Year 7	n.a.	n.a.	60.1	65.3	66.5	71.0	3.4*
All students							
Year 3	89.7	92.5	90.3	92.3	92.4	93.0	0.5*
Year 5	85.6	87.4	89.8	89.3	89.0	88.7	0.6
Year 7	n.a.	n.a.	88.4	89.1	89.4	91.0	0.8*
				Writing			
Indigenous							
Year 3	66.9	65.0	67.8	77.1	75.2	76.8	2.6*
Year 5	74.6	74.3	79.9	76.4	79.6	81.7	1.4*
Year 7	n.a.	n.a.	74.3	71.6	74.4	78.8	1.6
All students							
Year 3	91.9	90.0	89.5	93.6	92.2	92.9	0.5
Year 5	93.0	92.5	94.0	93.6	94.1	94.2	0.3*
Year 7	n.a.	n.a.	92.6	90.7	92.1	93.6	0.4
				Numeracy			
Indigenous							
Year 3	n.a.	73.7	80.2	77.6	80.5	79.2	1.1
Year 5	n.a.	62.8	63.2	65.6	67.6	69.4	1.8*
Year 7	n.a.	n.a.	48.6	51.9	49.3	51.9	0.7
All students							
Year 3	n.a.	92.7	93.9	92.8	94.2	93.7	0.2
Year 5	n.a.	89.6	89.6	90.0	90.8	91.2	0.4*
Year 7	n.a.	n.a.	82.0	83.5	81.3	82.1	−0.2

* Represents results with statistically significant increases or declines at the p<.05 level over the periods for which data are available.

(a) Average annual change in proportions determined using linear regression analysis.

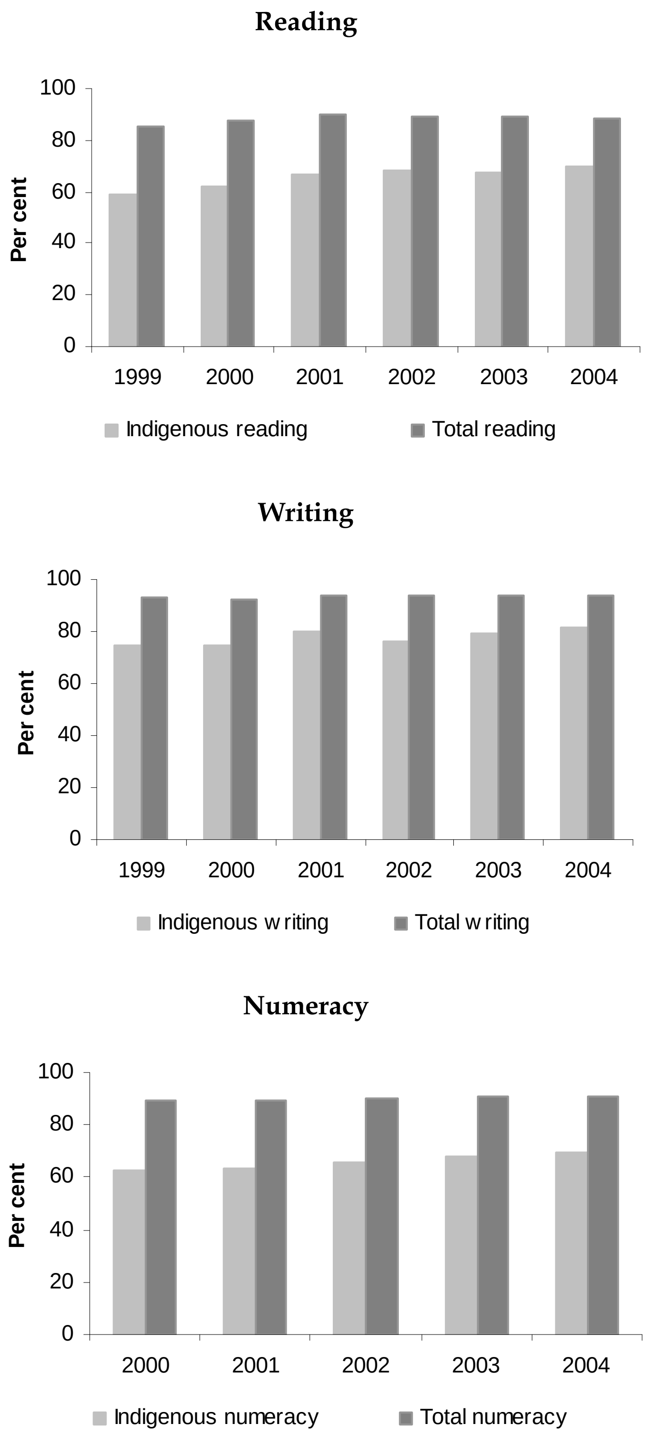
Source: AIHW analysis of National Report on Schooling in Australia 2004 available through MCEETYA.



Note: Year 3 numeracy benchmark not available for 1999.

Source: AIHW analysis of National Report on Schooling in Australia 2004, available through MCEETYA.

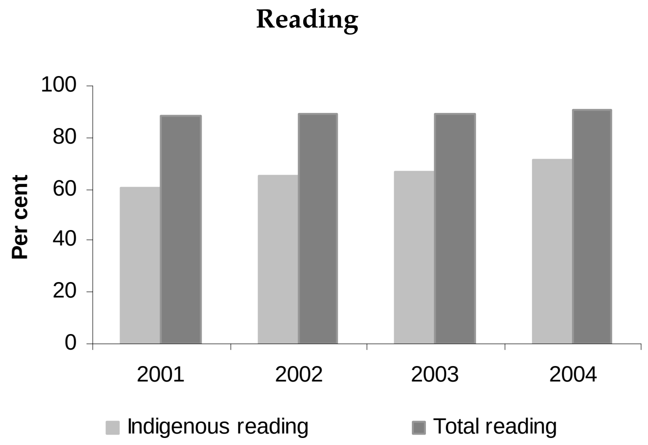
Figure 2.04.1: Proportion of Year 3 students achieving the reading, writing and numeracy benchmark, by Indigenous status, 1999–2004

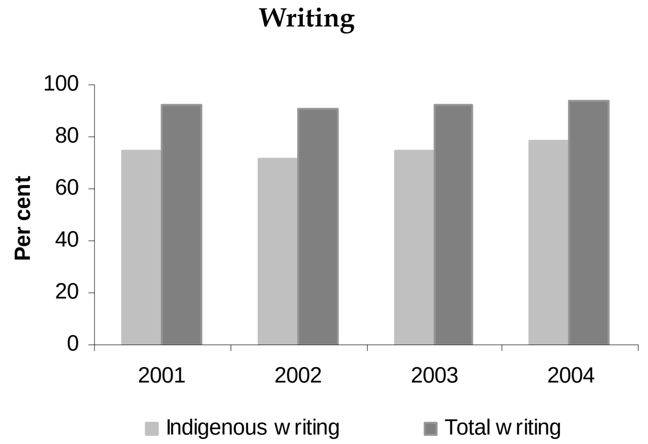


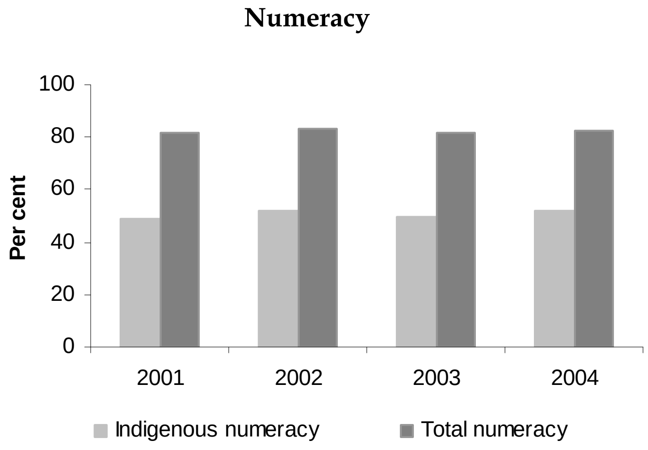
Note: Year 5 numeracy benchmark not available for 1999.

Source: AIHW analysis of National Report on Schooling in Australia 2004, available through MCEETYA.

Figure 2.04.2: Proportion of Year 5 students achieving the reading, writing and numeracy benchmark, by Indigenous status, 1999–2004







Note: Year 7 reading, writing and numeracy benchmarks only available from 2001.

Source: AIHW analysis of National Report on Schooling in Australia 2004, available through MCEETYA.

Figure 2.04.3: Proportion of Year 7 students achieving the reading, writing and numeracy benchmark, by Indigenous status, 2001–2004

Data quality issues

Reading, writing and numeracy data

Points to be considered when interpreting the National Report on Schooling in Australia data (MCEETYA 2004) 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 prior to 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.

It should be noted 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 on the relevant tables.

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

Corporation, C. Literacy benchmarks; numeracy benchmarks. Viewed 30 May 2006, <www.online.curruculum.edu.au/>.

MCEETYA (Ministerial Council on Education, Employment, Training and Youth Affairs) 2004. National Report on Schooling in Australia 2004: 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 people

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 comprises 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 due to 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 commencement of secondary schooling to a specifed year level. The term apparent is used as 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 in Schools' students are included in retention calulations.

Year 10 and 12 apparent retention rate

- Year 10 and 12 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7/8).

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 and Year 12.

- In 2005, there were approximately 8,881 Indigenous students in Year 10 (approximately 3.4% of all Year 10 students) and 3,427 Indigenous students in Year 12 (approximately 1.8% of all students in Year 12).

- In 2005, the apparent retention rate of full-time Indigenous students from Year 7/8 to Year 10 was 88.3% compared to 98.6% for non-Indigenous students.
- In the same year, the apparent retention rate of full-time Indigenous students from Year 7/8 to Year 12 was much lower—39.5% compared to 76.6% for non-Indigenous students.

Apparent retention rates by sex

- The apparent retention rates for Indigenous females were slightly higher than for Indigenous males from Year 7/8 to Year 10 (91% compared to 86%) and Year 7/8 to Year 12 (44% compared to 35%).

Apparent retention rates by state/territory

- Tasmania and the Australian Capital Territory had the highest retention rates of Indigenous students from Year 7/8 to Year 10 (103% and 101% respectively), while New South Wales and Victoria had the lowest (80% and 81% respectively).
- Retention rates of Indigenous students from Year 7/8 to Year 12 were highest in the Australian Capital Territory (60%) and Queensland (54%) and lowest in Western Australia (29%) and New South Wales (31%).
- Rates for Tasmania and the Australian Capital Territory should be interpreted with caution, as due to the small size of these jurisdictions, 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,[(a)] by Indigenous status, sex and state/territory, 2005[(b)(c)(d)(e)]

	NSW		Vic		Qld		WA[(f)]		SA		Tas		ACT[(g)]		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 10																		
Number	1,133	41,632	195	30,635	1,410	26,333	826	13,980	233	9,695	225	3,174	37	2,413	328	874	4,387	128,736
Per cent	**77.3**	**96.4**	**75.0**	**96.6**	**87.7**	**99.5**	**90.5**	**101.3**	**84.4**	**99.2**	**103.2**	**99.4**	**100.0**	**98.0**	**95.9**	**99.0**	**85.7**	**97.9**
Year 12																		
Number	331	27,861	67	23,274	363	19,068	199	9,380	79	6,315	66	1,824	27	2,040	122	559	1,527	90,321
Percent	**26.6**	**67.2**	**30.5**	**74.2**	**48.6**	**76.7**	**24.7**	**69.8**	**31.5**	**65.1**	**37.3**	**59.6**	**77.1**	**87.3**	**40.0**	**62.5**	**35.1**	**71.1**
									Females									
Year 10																		
Number	1,197	40,252	228	30,011	1,428	25,337	788	13,398	269	9,260	192	3,006	46	2,336	346	809	4,494	124,409
Per cent	**83.1**	**97.2**	**87.4**	**99.7**	**96.2**	**101.2**	**95.4**	**101.8**	**88.8**	**99.9**	**103.2**	**100.5**	**102.2**	**100.3**	**87.2**	**92.0**	**90.9**	**99.4**
Year 12																		
Number	462	31,167	119	26,392	746	20,553	250	10,286	95	7,159	99	2,193	14	2,069	115	598	1,900	100,417
Per cent	**35.5**	**77.6**	**52.0**	**87.9**	**59.9**	**86.0**	**33.2**	**80.6**	**35.1**	**78.8**	**58.9**	**77.5**	**42.4**	**88.5**	**35.9**	**71.2**	**44.0**	**82.3**

(continued)

Table 2.05.1 (continued): Apparent retention rates,[(a)] by Indigenous status, sex and state/territory, 2005[(b)(c)(d)(e)]

	NSW		**Vic**		**Qld**		**WA[(f)]**		**SA**		**Tas**		**ACT[(g)]**		**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.**
									Persons									
Year 10																		
Number	2,330	81,884	423	60,646	2,838	51,670	1,614	27,378	502	18,955	417	6,180	83	4,749	674	1,683	8,881	253,145
Per cent	**80.2**	**96.8**	**81.2**	**98.1**	**91.8**	**100.0**	**92.8**	**101.6**	**86.7**	**99.5**	**103.2**	**100**	**101.2**	**99.1**	**91.2**	**95.5**	**88.3**	**98.6**
Year 12																		
Number	793	59,028	186	49,666	1,382	39,621	449	19,666	174	13,474	165	4,017	41	4,109	237	1,157	3,427	190,738
Per cent	**31.1**	**72.3**	**41.4**	**80.9**	**54.1**	**81.3**	**28.8**	**75.1**	**33.3**	**71.8**	**47.8**	**68.2**	**60.3**	**87.9**	**37.9**	**66.7**	**39.5**	**76.6**

(a) Retention rate = Year 10 and 12 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7/8).

(b) While 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.

(c) 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.

(d) In small jurisdictions, relatively small changes in student numbers can create apparently large movements in retention rates.

(e) The inclusion or exclusion of part-time students can also have a significant effect on apparent retention rates, especially in SA, Tas and the NT which have relatively large proportions of part-time students.

(f) Data for WA have been affected by changes in scope and coverage over time.

(g) 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.

Source: ABS and AIHW analysis of ABS National Schools Statistics Collection.

Apparent retention rates over time

- Apparent retention rates for Indigenous full-time students, from Year 7/8 to both Year 10 and Year 12, have continued to increase over the last five years. The rate to Year 10 increased from 79.2% in 2000 to 85.7% in 2005 for Indigenous males and from 87.0% in 2000 to 90.9% in 2005 for Indigenous females. The rate to Year 12 increased from 33.5% in 2000 to 35.1% in 2005 for Indigenous males and from 39.3% in 2000 to 44.0% in 2005 for Indigenous females (Table 2.05.2).
- The apparent retention rate for non-Indigenous students from Year 7/8 to Year 10 was 98.6% in 2005 compared to 98.0% in 2000; and from Year 7/8 to Year 12 was 76.6% in 2005 compared to 73.3% in 2000.

Table 2.05.2: Apparent retention rates,(a) by Indigenous status and sex, 2000 and 2005(b)(c)(d)(e)

	2000			2005			Change		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Year 10									
Indigenous	79.2	87.0	83.0	85.7	90.9	88.3	6.5	3.9	5.3
Non-Indigenous	96.9	99.1	98.0	97.9	99.4	98.6	1.0	0.3	0.6
Year 12									
Indigenous	33.5	39.3	36.4	35.1	44.0	39.5	1.6	4.7	3.1
Non-Indigenous	67.0	79.8	73.3	71.1	82.3	76.6	4.1	2.5	3.3

(a) Retention rate = Year 10 and 12 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7/8).

(b) While 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.

(c) 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.

(d) In small jurisdictions, relatively small changes in student numbers can create apparently large movements in retention rates.

(e) The inclusion or exclusion of part-time students can also have a significant effect on apparent retention rates, especially in SA, Tas and the NT which have relatively large proportions of part-time students.

Source: ABS and AIHW analysis of ABS National Schools Statistics Collection.

Table 2.05.3 and Figure 2.05.1 present apparent retention rates over the period 1998–2005.

- Between 1998 and 2005 there was a significant increase in apparent retention rates for Indigenous students from Year 7/8 to both Year 10 and Year 12. The fitted trend implies an average yearly increase in the rate of around 0.8% for Year 10 and 1.0% for Year 12.
- Over the same period, there was also a significant increase in apparent retention rates for non-Indigenous students from Year 7/8 to Year 10 and Year 12. The fitted trend implies an average yearly increase in the rate of around 0.2% for Year 10 and 0.7% for Year 12.

Table 2.05.3: Apparent Year 10 and Year 12 retention rates, by Indigenous status, 1998–2005

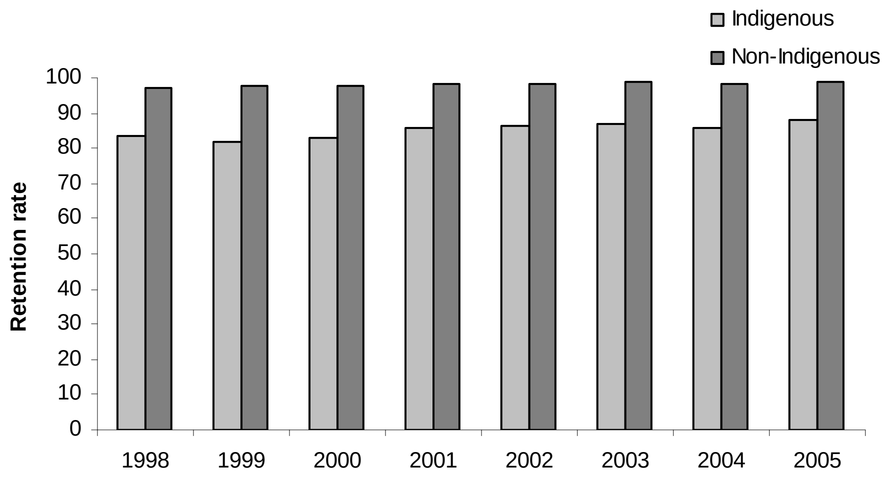
	1998	1999	2000	2001	2002	2003	2004	2005	Annual change[(a)]
Year 10									
Indigenous	83.3	82.0	83.0	85.7	86.4	87.2	85.8	88.3	0.8*
Non-Indigenous	97.4	97.9	98.0	98.4	98.5	98.9	98.5	98.6	0.2*
Year 12									
Indigenous	32.1	34.7	36.4	35.7	38.0	39.1	39.8	39.5	1.0*
Non-Indigenous	72.7	73.2	73.3	74.5	76.3	76.5	76.9	76.6	0.7*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–2005

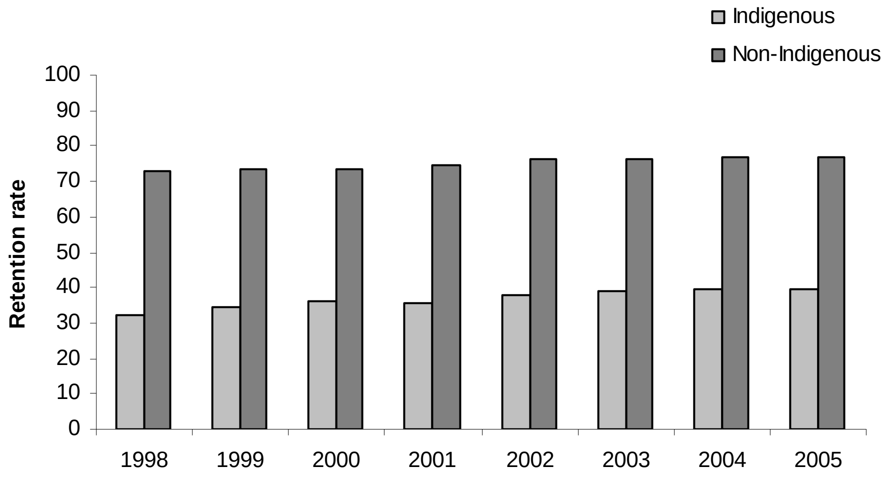
(a) Average annual change in rates determined using linear regression analysis.

Source: ABS and AIHW analysis of ABS National Schools Statistics Collection.

Year 10 apparent retention rates



Year 12 apparent retention rates



Source: ABS 2006.

Figure 2.05.1: Apparent Year 10 and Year 12 retention rates, full-time students, by Indigenous status, 1998–2005

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 2005, approximately 65% of Indigenous Year 11 students went on to achieve a Year 12 certificate compared to 86% 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 69% of Indigenous females in Year 11 went on to achieve a Year 12 certificate compared to 61% of Indigenous males, and approximately 89% of non-Indigenous females who began Year 11 went on to complete Year 12 compared to 83% of non-Indigenous males.

Attainment rates by state/territory

- Attainment rates of Indigenous students were highest in the Australian Capital Territory (89%) and Queensland (78%), and were lowest in the Northern Territory (42%) and Western Australia (53%).

Table 2.05.4: Attainment rates,(a) by Indigenous status, sex and state/territory, 2005(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	331	27,861	67	23,274	636	19,068	199	9,380	79	6,315	66	1,824	27	2,040	122	559	1,527	90,321
Per cent	**60.2**	**86.2**	**56.8**	**83.0**	**76.2**	**85.7**	**46.6**	**78.5**	**54.9**	**72.7**	**61.1**	**81.7**	**93.1**	**86.6**	**42.2**	**70.9**	**61.1**	**83.2**
										Females								
Year 12																		
Number	462	31,167	119	26,392	746	20,553	250	10,286	95	7,159	99	2,193	14	2,069	115	598	1,900	100,417
Per cent	**71.1**	**89.7**	**65.7**	**89.9**	**78.7**	**89.9**	**58.3**	**86.3**	**55.6**	**83.0**	**79.8**	**92.8**	**82.4**	**87.7**	**41.5**	**79.0**	**67.9**	**88.9**
										Persons								
Year 12																		
Number	793	59,028	186	49,666	1,382	39,621	449	19,666	174	13,474	165	4,017	41	4,109	237	1,157	3,427	190,738
Per cent	**66.1**	**88.0**	**62.2**	**86.5**	**77.5**	**87.8**	**52.5**	**82.4**	**55.2**	**77.8**	**71.4**	**87.4**	**89.1**	**87.1**	**41.9**	**74.9**	**64.7**	**86.1**

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

(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. This will have an effect on the results as around 11% of Indigenous high school students study part time.

(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 ABS National Schools Statistics Collection.

Attainment rates over time

- Attainment rates for Indigenous male students were slightly lower in 2005 (61%) than in 2000 (62.9%), while attainment rates for Indigenous female students were slightly higher in 2005 (67.9%) than in 2000 (67.0%) (Table 2.05.5).
- The attainment rates for non-Indigenous male and female students were 83.2% and 88.9% in 2005 compared to 81.7% and 87.8% in 2000.

Table 2.05.5: Attainment rates,[a] by Indigenous status and sex, 2000 and 2005[b][c]

	2000			2005			Per cent change		
	Males	**Females**	**Total**	**Males**	**Females**	**Total**	**Males**	**Females**	**Total**
Year 12									
Indigenous	62.9	67.0	65.0	61.1	67.9	64.7	−1.8	0.9	−0.3
Non-Indigenous	81.7	87.8	84.8	83.2	88.9	86.1	1.5	1.1	1.3

(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. This will have an effect on the results as around 11% of Indigenous high school students study part time.

(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 ABS National Schools Statistics Collection.

Table 2.05.6 and Figure 2.05.2 present Year 12 attainment rates over the period 1998–2005.

- Between 1998 and 2005 there was no significant change in attainment rates for Indigenous or non-Indigenous students.

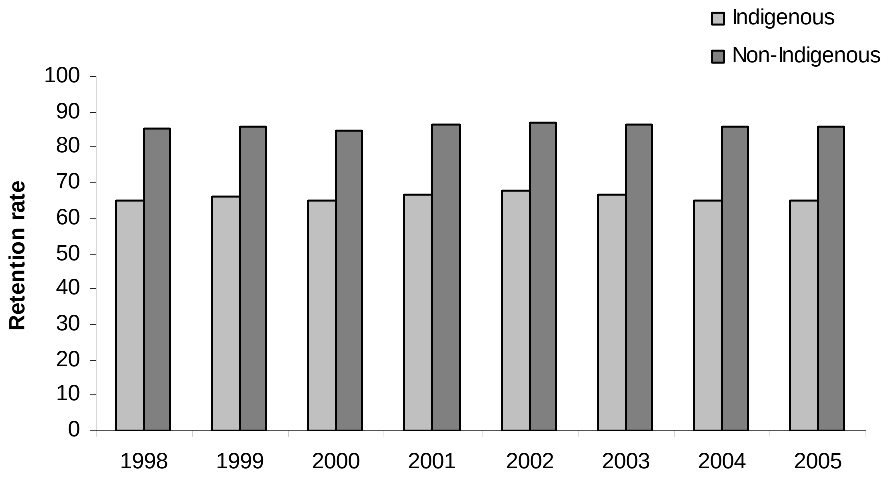
Table 2.05.6: Attainment rates, by Indigenous status, 1998–2005

	1998	1999	2000	2001	2002	2003	2004	2005	Annual change[a]
Year 12									
Indigenous	64.7	66.2	65.0	66.6	67.8	66.4	64.7	64.7	0.0
Non-Indigenous	85.2	85.7	84.8	86.5	87.1	86.3	86	86.1	0.2

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–2005

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

Source: ABS and AIHW analysis of ABS National Schools Statistics Collection.



Source: AIHW analysis of ABS National Schools Statistics Collection.

Figure 2.05.2: Year 12 attainment rates, full-time students, by Indigenous status, 1998–2005

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 as 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 addressed, where possible, in the ABS's review of apparent retention rates. A progress report on the review is included in this publication.

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 2006).

Attainment data

The following points should be considered when interpreting attainment statistics:

- *Indigenous Education Strategic Initiatives Program data are not subject to external review or validation, except where specific performance indicators draw on the National Schools Statistics Collection.*
- *only full-time students were included in this analysis; part-time students were not included. This will have an effect on the results as around 11% of Indigenous high school students study part time.*
- *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.

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 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 as 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 six-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. It 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.

National Centre for Vocational Education Research

The National Centre for Vocational Education Research is Australia’s principal provider of vocational education and training (VET) sector research and statistics. VET is a national system designed to skill workers to work in particular occupations and industries. The VET sector includes providers in receipt of 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).

While universities design and produce their own enrolment forms, DEST has provded 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 proxy, 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.

Data analyses

Self-reported survey data

The 2004–05 Aboriginal and Torres Strait Islander Health Survey collected information on the educational institution currently attended, the highest level of non-school qualification and the highest level of school completed by Indigenous people aged 15 years and over. These data are presented in the tables below.

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 to 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%) and TAFE (9% and 11% respectively). Only 4% of Indigenous Australians aged 15–24 years were currently attending university or higher education compared to 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 to 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

	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	26	26	1.0	—(a)	—	—	n.p.	—(a)	—	—(a)	—(a)	—	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) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(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 National Health Survey.

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**	**Indigenous**	**Non-Indigenous**	**Rate ratio**
	%	**%**		**%**	**%**	
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 [(a)]	***17***	***15***	***1.1***	***21***	***14***	***1.4****
Not studying	83	85	1.0*	79	85	0.9*
Not stated	—	—	—	—[(a)]	—	—
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.

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

(a) Includes other educational institution and not asked (currently still at school).

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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%) while 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 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		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		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		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		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		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		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		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		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		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.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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
	%	%	%	%	%	%	%	%
				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(c)	8	82	79	*79*	82	89	*87*	81
Total(b)	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(c)	84	86	88	*85*	93	n.a.	*n.a.*	85
Total(b)	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**
				Rate ratio				
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(c)	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.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 to 19%). Year 10 or 11 was the highest level of schooling completed by 42% 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 to 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%) compared with 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 both the Indigenous and non-Indigenous populations reported similar levels of school completed (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**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Indig.**	**Non-Indig.**	**Rate ratio**
	%	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**	
Completed Year 12(a)	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*
Totall(c)(d)	**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) 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.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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	Indig.	Non-Indig.	Rate ratio	Indig.	Non-Indig.	Rate ratio
	%	%		%	%		%	%	
Completed Year 12[(a)]	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[(b)]	36	18	2.0*	33	19	1.7*	35	19	1.9*
Total[(c)(d)]	**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) 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.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 to 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 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		1.2*	1.8*	1.2*	. .	. .
Vic	Indigenous	%	28	42	30	100	16,444
	Non-Indigenous	%	49	31	20	100	3,737,882
	Rate ratio		1.4*	1.4*	1.4*	. .	. .
Qld	Indigenous	%	29	42	29	100	70,590
	Non-Indigenous	%	45	38	17	100	2,787,025
	Rate ratio		1.1	1.7*	1.1	. .	. .
WA	Indigenous	%	12	52	35	100	36,503
	Non-Indigenous	%	46	40	14	100	1,417,909
	Rate ratio		1.3*	2.5*	1.3*	. .	. .
SA	Indigenous	%	18	44	38	100	14,324
	Non-Indigenous	%	40	42	18	100	1,135,705
	Rate ratio		1.1	2.1*	1.1	. .	. .
Tas	Indigenous	%	23	52	25	100	9,430
	Non-Indigenous	%	33	43	24	100	345,136
	Rate ratio		1.2	1.1	1.2	. .	. .
ACT	Indigenous	%	46	34	20	100	2,300
	Non-Indigenous	%	71	20	9	100	238,831
	Rate ratio		1.7*	2.3*	1.7*	. .	. .
NT	Indigenous	%	15	36	48	100	33,141
	Non-Indigenous	%	41	42	16[(e)]	100	89,837
	Rate ratio		0.9	3.0*	0.9	. .	. .
Aust.	**Indigenous**	**%**	**23**	**43**	**35**	**100**	**257,424**
	Non-Indigenous	**%**	**47**	**35**	**19**	**100**	**14,699,415**
	Rate ratio		**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) 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 National Health Survey.

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 National Health Survey.

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.

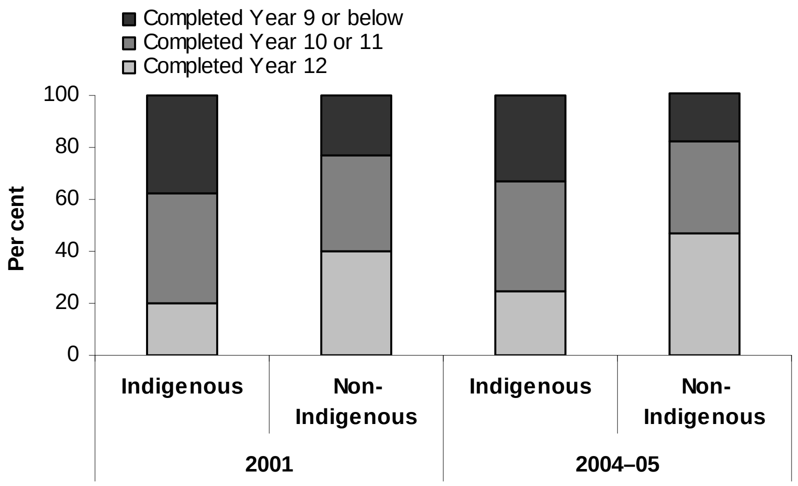
(b) Total may include persons for whom specific information could not be determined.

(c) Excludes those who are still attending secondary school and includes not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Time series analysis

- 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 National Health Survey (Indigenous supplement), 2004–05 NATSIHS and 2004–05 National Health Survey.

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 to 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 to a third of Indigenous Australians who spoke English as their main language (Table 2.06.11).
- Indigenous Australians in the highest 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) Ratio: 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 National Health Survey.

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.**
	%	%	%	%	%	%	%	%
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*(i)	5*	100	100
Index of disparity								
1st quintile	16*	36*	44*	36*	40*	28*	100	100
5th quintile	60(f)	65	29(fi)	26	11(if	9	100	100
Employment								
Employed CDEP	19	. .	46	. .	35	. .	100	. .
Employed non-CDEP	35*	56*	47*	35*	18*	9*	100	100
Sub-total 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*(i)	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(h)	**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) Remote regions for non-Indigenous data is for remote areas only and does 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 comprises of renter (excluding boarders) and boarder.

(h) Other comprises of 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 to 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 to Indigenous Australians (6% and 6% respectively).

Non-school qualifications by age and sex

- Indigenous Australians aged 35–44 years and non-Indigenous Australians aged 25–34 years were most likely to have a non-school qualification (41% and 67% respectively) than Indigenous and non-Indigenous Australians in other age groups (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%) as 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 or not.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 or not.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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, while 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 or not.

(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 National Health Survey.

Table 2.06.15: Whether has a non-school qualification, by Indigenous status, and remoteness area, persons aged 25–64 years, 2004–05

	Major cities			**Inner regional**			**Outer regional**			***Subtotal non-remote***			**Remote**			**Very remote(a)**			***Sub total remote(a)***
Highest level of non-school qualification(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-Indig.**	**Rate ratio(c)**	***Indig.***
	%	**%**		**%**	**%**		**%**	**%**		***%***	***%***		**%**	**%**		**%**	**%**	**%**	***%***
Non-school qualification																			
Bachelor degree or above(d)	8	26	0.3*	7(b)	14	0.5*	5(b)	13	0.4*	*7*	*22*	*0.3**	4(b)	10(b)	0.3*	2(b)	. .	. .	*2*
Advanced diploma/ diploma	9	11	0.9	5(b)	9	0.6*	5	8	0.6*	*7*	*10*	*0.7**	3(b	6(b)	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(e)	***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(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 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 sub-total for remote areas and a rate ratio is unable to calculated.

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

(c) As classified to the ABS Classification of Qualifications.

(d) Includes bachelor degree, doctorate, masters, graduate diploma, graduate certificate.

(e) Includes persons with a non-school qualification inadequately described.

(f) Includes those who did not state whether they had a non-school qualification or not.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 to 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
	%	%	%	%
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[(c)]	**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% to 50% and should be used with caution.

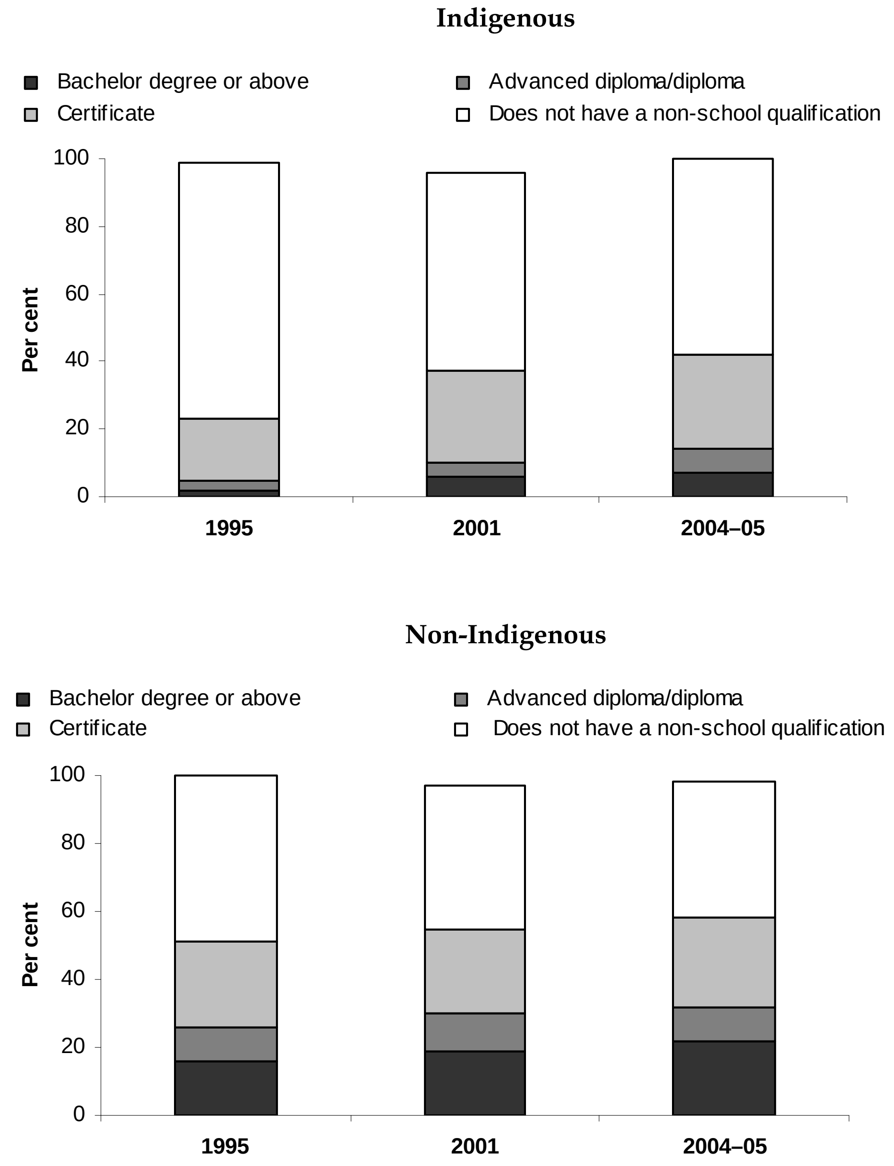
(d) Total may include persons for whom specific information could not be determined.

(e) Includes women who did not answer the form.

Source: ABS and AIHW analysis of 2004–05 NATSIHS

Time series analysis

- 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 to 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 National Health Surveys (Indigenous supplements), 2004–05 NATSIHS and 2004–05 National Health Survey.

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 to 26%) (Table 2.06.17).

- A higher proportion of Indigenous Australians in the highest quintile of household income reported having a non-school qualification (63%) than Indigenous Australians in the lowest 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(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)**	**Indig.**	**Non-Indig.**	**Ratio(d)**
	%	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**	
Bachelor degree or above(a)	73	92	0.8*	27(e)	8	3.3*	7(e)	12	0.6*	18(e)	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(e)	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(b)	***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(c)	**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) Includes other educational institution and persons for whom specific information could not be determined.

(c) Includes not stated.

(d) Ratio: Indigenous proportion divided by non-Indigenous proportion.

(e) 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 NATSIHS and 2004–05 National Health Survey.

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.
	%	%	%	%	%	%	%	%	%	%	%	%
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) Total may include 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) Remote regions for non-indigenous data is for remote areas only and does 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 comprises of renter (excluding boarders) and boarder.

(h) Other comprises of life tenure scheme, participant in rent/buy scheme, rent free and other.

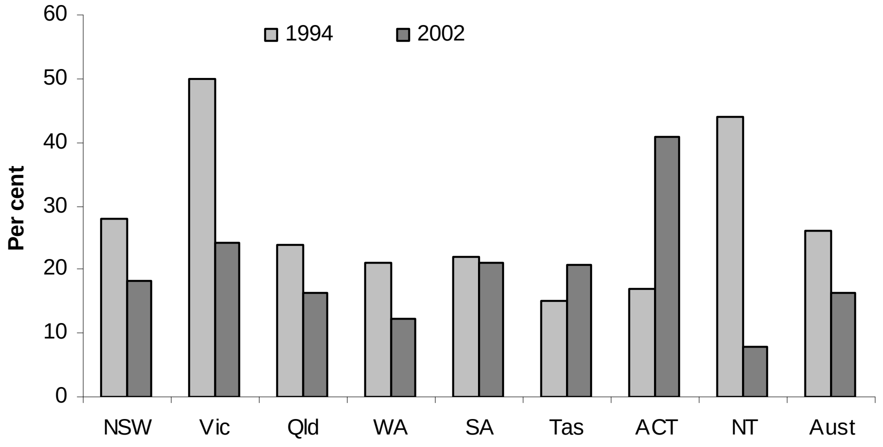
(i) Includes not known, not stated and not applicable.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 increased from 8.3% in 1994 to 16.3% in 2002.
- The proportion of Indigenous people with a certificate III qualification or higher increased between 1994 and 2002 in all states and territories.



Notes

1. Excludes persons still at school.
2. The 1994 estimates for the ACT and NT have relative standard errors greater than 25% and should be used with caution.

Source: SCRGSP 2005a: 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

Vocational education and training 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 2004 are presented below.

- During the year 2004, there were approximately 12,413 course completions in the VET sector by Indigenous Australians aged 15 years and over. This constitutes 4.1% of the Indigenous population aged 15 years and over. In comparison, approximately 2.7% of the non-Indigenous population aged 15 years and over completed a course in the VET sector in 2004.
- A similar proportion of Indigenous and other Australians aged 15 years and over had completed a certificate III course (0.6%) or certificate IV, diploma or higher (0.5%) in 2004. A higher proportion of Indigenous Australians aged 15 years and over had completed a certificate I/II (1.4%) or other certificate course (1.7%) than other Australians (0.7% and 0.9% 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 except the 15–24 years age group where 6.4% of Indigenous Australians had a VET qualification compared to 7.1% of other Australians (Table 2.06.19).
- Overall, a higher proportion of Indigenous males had completed a course in the VET sector in 2004 than Indigenous females (4.3% compared to 4.0%). However, Indigenous females were more likely to have completed a certificate III course or higher than Indigenous males.

Table 2.06.19: Educational attainment in the VET sector, by Indigenous status, sex and age group, 2004

		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)]**
							Males						
Certificate IV, diploma or higher	No.	97	13,025	148	7,815	164	6,588	86	4,537	36	1,568	532	33,923
	%	0.2	1.0	0.4	0.6	0.6	0.4	0.4	0.3	0.2	0.1	0.4	0.4
Certificate III	No.	396	20,746	194	8,940	98	6,059	74	4,042	17	1,604	779	41,630
	%	0.8	1.5	0.5	0.6	0.3	0.4	0.4	0.3	0.1	0.1	0.5	0.5
Certificate I/Certificate II	No.	1,311	35,053	367	5,747	206	4,173	104	2,892	29	1,466	2,101	49,787
	%	2.7	2.6	1.0	0.4	0.7	0.3	0.5	0.2	0.2	0.1	1.4	0.6
Other certificates [(b)]	No.	1,327	23,591	672	16,574	454	16,598	237	13,457	70	8,672	2,837	80,599
	%	2.8	1.7	1.9	1.2	1.6	1.1	1.2	1.0	0.4	0.4	1.9	1.0
Total completions	**No.**	**3,131**	**92,415**	**1,381**	**39,076**	**922**	**33,418**	**501**	**24,928**	**152**	**13,310**	**6,249**	**205,939**
	%	**6.5**	**6.8**	**3.9**	**2.8**	**3.2**	**2.3**	**2.6**	**1.8**	**1.0**	**0.6**	**4.3**	**2.6**
							Females						
Certificate IV, diploma or higher	No.	137	16,537	242	10,090	255	9,027	163	6,333	57	1,458	855	43,836
	%	0.3	1.3	0.6	0.4	0.8	0.6	0.8	0.5	0.3	0.1	0.6	0.5
Certificate III	No.	537	22,780	261	9,657	208	10,095	104	6,850	21	1,715	1,134	51,360
	%	1.2	1.8	0.7	0.3	0.7	0.7	0.5	0.5	0.1	0.1	0.7	0.6
Certificate I/Certificate II	No.	1,324	37,718	256	6,181	204	6,733	129	4,467	50	1,599	2,012	57,055
	%	2.8	2.9	0.7	0.2	0.6	0.5	0.6	0.3	0.3	0.1	1.3	0.7
Other certificates [(b)]	No.	885	19,453	459	12,239	427	15,143	254	12,447	88	6,408	2,155	66,606
	%	1.9	1.5	1.2	0.4	1.3	1.0	1.2	0.9	0.5	0.3	1.4	0.8
Total completions	No.	**2,883**	**96,488**	**1,218**	**38,167**	**1,094**	**40,998**	**650**	**30,097**	**216**	**11,180**	**6,156**	**218,857**
	%	**6.2**	**7.4**	**3.2**	**1.4**	**3.4**	**2.8**	**3.2**	**2.2**	**1.2**	**0.5**	**4.0**	**2.7**

(continued)

Table 2.06.19 (continued): Educational attainment in the VET sector, by Indigenous status, sex and age group, 2004

		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.	234	29,565	390	17,917	419	15,628	249	10,872	93	3,028	1,387	77,881
	%	0.2	1.1	0.5	0.6	0.7	0.5	0.6	0.4	0.3	0.1	0.5	0.5
Certificate III	No.	934	43,575	455	18,619	306	16,177	178	10,915	38	3,329	1,914	93,156
	%	1.0	1.6	0.6	0.7	0.5	0.5	0.4	0.4	0.1	0.1	0.6	0.6
Certificate I/Certificate II	No.	2,638	72,808	624	11,933	410	10,913	233	7,359	79	3,066	4,117	106,895
	%	2.8	2.7	0.9	0.4	0.7	0.4	0.6	0.3	0.2	0.1	1.4	0.7
Other certificates [(b)]	No.	2,215	43,063	1,131	28,833	881	31,755	491	25,926	158	15,086	4,995	147,477
	%	2.3	1.6	1.5	1.0	1.5	1.1	1.2	1.0	0.5	0.3	1.7	0.9
Total completions	**No.**	**6,021**	**189,011**	**2,600**	**77,302**	**2,016**	**74,473**	**1,151**	**55,072**	**368**	**24,509**	**12,413**	**425,409**
	%	**6.4**	**7.1**	**3.6**	**2.8**	**3.3**	**2.5**	**2.9**	**2.0**	**1.1**	**0.5**	**4.1**	**2.7**

(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 December 2004.

Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2004, unpublished data.

Educational attainment by state/territory and remoteness

- In 2004, the proportion of Indigenous Australians aged 15 years and over who completed a VET course ranged from 1.6% in the Northern Territory to 7.5% in New South Wales (Table 2.06.20). The Australian Capital Territory had the highest proportion of Indigenous Australians who completed a certificate IV, diploma or higher in 2004 (2%).
- The proportion of Indigenous and other students who completed a VET course in 2004 was similar in Western Australia, Tasmania and the Australian Capital Territory, while in New South Wales, Victoria, Queensland, South Australia and the Northern 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 2004 was highest in outer regional areas (6.5%) and lowest in very remote areas of Australia (2.7%). Higher proportions of Indigenous Australians living in major cities, 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 2.06.21).

Table 2.06.20: Educational attainment in the VET sector, by Indigenous status, sex and state/territory, persons aged 15 years and over, 2004

	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	245	0.6	321	0.8	647	1.5	2,069	4.8	3,282	7.7	13,706	0.5	19,104	0.7	21,072	0.8	54,673	2.1	108,555	4.1
Vic	42	0.5	38	0.4	72	0.8	16	0.2	168	1.8	8,978	0.5	10,220	0.5	8,900	0.5	4,067	0.2	32,165	1.7
Qld	107	0.3	205	0.5	546	1.4	671	1.7	1,529	3.9	3,753	0.3	4,569	0.3	9,086	0.6	20,928	1.4	38,336	2.6
WA	47	0.2	107	0.5	433	2.0	0	0.0	587	2.7	4,185	0.7	3,700	0.6	5,087	0.9	0	0.0	12,972	2.2
SA	23	0.3	39	0.5	109	1.3	1	0.0	172	2.1	1,067	0.1	1,637	0.2	2,043	0.3	150	0.0	4,897	0.6
Tas	9	0.2	35	0.6	80	1.4	8	0.1	132	2.4	834	0.5	1,587	0.9	1,506	0.8	140	0.1	4,067	2.2
ACT	16	1.2	9	0.7	33	2.5	2	0.2	60	4.6	1,059	1.4	568	0.7	1,612	2.1	633	0.8	3,872	5.0
NT	43	0.2	25	0.1	181	0.9	70	0.4	319	1.7	341	0.3	245	0.2	481	0.4	8	0.0	1,075	1.0
Australia	**532**	**0.4**	**779**	**0.5**	**2,101**	**1.4**	**2,837**	**1.9**	**6,249**	**4.3**	**33,923**	**0.4**	**41,630**	**0.5**	**49,787**	**0.6**	**80,599**	**1.0**	**205,939**	**2.6**
Females																				
NSW	359	0.8	449	1.0	686	1.5	1,729	3.9	3,223	7.2	16,989	0.6	21,063	0.8	27,949	1.0	53,069	2.0	119,070	4.4
Vic	93	1.0	70	0.7	71	0.7	12	0.1	246	2.6	12,147	0.6	13,031	0.6	8,784	0.4	3,228	0.2	37,190	1.8
Qld	180	0.4	302	0.7	500	1.2	326	0.8	1,308	3.1	5,496	0.4	6,580	0.4	9,679	0.6	9,544	0.6	31,299	2.1
WA	85	0.4	152	0.7	317	1.4	0	0.0	554	2.5	4,922	0.8	5,977	1.0	4,960	0.8	0	0.0	15,859	0.8
SA	44	0.5	43	0.5	150	1.7	18	0.2	255	2.9	1,356	0.2	1,650	0.2	1,642	0.2	3	0.0	4,651	0.6
Tas	17	0.3	59	1.0	83	1.5	1	0.0	160	2.8	1,153	0.6	1,963	1.0	1,678	0.9	62	0.0	4,856	2.5
ACT	36	2.7	11	0.8	39	2.9	3	0.2	89	6.7	1,298	1.9	745	1.1	1,847	2.7	662	1.0	4,552	6.6
NT	41	0.2	48	0.2	166	0.8	66	0.3	321	1.6	475	0.4	351	0.3	516	0.5	38	0.0	1,380	1.2
Australia	**855**	**0.6**	**1,134**	**0.7**	**2,012**	**1.3**	**2,155**	**1.4**	**6,156**	**4.0**	**43,836**	**0.5**	**51,360**	**0.6**	**57,055**	**0.7**	**66,606**	**0.8**	**218,857**	**2.7**

(continued)

Table 2.06.20 (continued): Educational attainment in the VET sector, by Indigenous status, sex and state/territory, persons aged 15 years and over, 2004

	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	604	0.7	770	0.9	1,333	1.5	3,798	4.4	6,505	7.5	30,700	0.6	40,175	0.8	49,022	0.9	107,742	2.0	227,639	4.3
Vic	135	0.7	108	0.6	143	0.8	28	0.1	414	2.2	21,146	0.5	23,349	0.6	17,703	0.4	7,501	0.2	69,699	1.7
Qld	287	0.4	507	0.6	1,046	1.3	1,000	1.2	2,840	3.5	9,303	0.3	11,150	0.4	18,767	0.6	30,536	1.0	69,756	2.3
WA	132	0.3	259	0.6	751	1.7	0	0.0	1,142	2.6	9,110	0.8	9,679	0.8	10,049	0.8	0	0.0	28,838	2.4
SA	67	0.4	82	0.5	259	1.5	19	0.1	427	2.5	2,423	0.2	3,287	0.2	3,685	0.2	153	0.0	9,548	0.6
Tas	26	0.2	95	0.8	165	1.5	9	0.1	295	2.6	2,019	0.5	3,597	1.0	3,209	0.9	202	0.1	9,027	2.4
ACT	52	2.0	20	0.8	73	2.8	5	0.2	150	5.7	2,364	1.6	1,323	0.9	3,462	2.4	1,297	0.9	8,446	5.8
NT	84	0.2	73	0.2	347	0.9	136	0.4	640	1.6	816	0.4	596	0.3	998	0.4	46	0.0	2,456	1.1
Australia	**1,387**	**0.5**	**1,914**	**0.6**	**4,117**	**1.4**	**4,995**	**1.7**	**12,413**	**4.1**	**77,881**	**0.5**	**93,156**	**0.6**	**106,895**	**0.7**	**147,477**	**0.9**	**425,409**	**2.7**

(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 December 2004.

Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2004, unpublished data.

Table 2.06.21: Educational attainment in the VET sector, by Indigenous status, sex and remoteness area, persons aged 15 years and over, 2004

		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.	188	20,748	87	6,017	166	3,140	34	439	52	266
	%	0.5	0.4	0.3	0.4	0.5	0.4	0.3	0.4	0.2	0.6
Certificate III	No.	230	24,095	174	9,537	206	5,359	73	770	82	314
	%	0.6	0.5	0.7	0.6	0.7	0.7	0.5	0.7	0.3	0.7
Certificate I/Certificate II	No.	524	27,293	334	11,811	669	7,667	173	1,141	348	538
	%	1.3	0.5	1.3	0.8	2.2	1.0	1.3	1.0	1.4	1.2
Other certificates(a)	No.	511	36,061	555	19,601	1,159	20,419	352	2,323	216	686
	%	1.3	0.7	2.1	1.3	3.8	2.7	2.6	2.0	0.9	1.5
Total completions	**No.**	**1,453**	**108,197**	**1,150**	**46,966**	**2,200**	**36,585**	**632**	**4,673**	**698**	**1,804**
	%	**3.6**	**2.2**	**4.4**	**3.1**	**7.2**	**4.8**	**4.7**	**4.0**	**2.8**	**4.0**
						Females					
Certificate IV, diploma or higher	No.	299	27,058	158	8,419	237	4,163	55	604	90	289
	%	0.7	0.5	0.6	0.5	0.7	0.6	0.4	0.6	0.4	0.9
Certificate III	No.	382	29,542	227	12,028	315	6,856	84	839	113	385
	%	0.9	0.6	0.8	0.8	0.9	0.9	0.6	0.8	0.4	1.1
Certificate I/Certificate II	No.	557	31,926	335	13,597	623	8,337	183	1,453	294	579
	%	1.3	0.6	1.2	0.9	1.9	1.1	1.4	1.4	1.2	1.7
Other certificates(a)	No.	479	33,755	448	15,802	789	13,744	252	1,761	160	474
	%	1.1	0.6	1.6	1.0	2.4	1.9	1.9	1.7	0.6	1.4
Total completions	**No.**	**1,717**	**122,281**	**1,168**	**49,846**	**1,964**	**33,100**	**574**	**4,657**	**657**	**1,727**
	%	**3.9**	**2.3**	**4.2**	**3.2**	**5.9**	**4.5**	**4.2**	**4.6**	**2.6**	**5.1**

(continued)

Table 2.06.21 (continued): Educational attainment in the VET sector, by Indigenous status, sex and remoteness, persons aged 15 years and over, 2004

		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.	487	47,824	245	14,463	403	7,321	89	1,043	142	555
	%	0.6	0.5	0.5	0.5	0.6	0.5	0.3	0.5	0.3	0.7
Certificate III	No.	612	53,715	401	21,621	522	12,237	157	1,610	195	699
	%	0.7	0.5	0.7	0.7	0.8	0.8	0.6	0.7	0.4	0.9
Certificate I/Certificate II	No.	1,082	59,235	669	25,423	1,294	16,024	356	2,596	643	1,117
	%	1.3	0.6	1.2	0.8	2.0	1.1	1.3	1.2	1.3	1.4
Other certificates[(a)]	No.	990	69,958	1,006	35,484	1,948	34,187	604	4,087	376	1,160
	%	1.2	0.7	1.9	1.1	3.1	2.3	2.2	1.9	0.7	1.5
Total completions	**No.**	**3,171**	**230,732**	**2,321**	**96,991**	**4,167**	**69,769**	**1,206**	**9,336**	**1,356**	**3,531**
	%	**3.7**	**2.2**	**4.3**	**3.1**	**6.5**	**4.7**	**4.5**	**4.3**	**2.7**	**4.5**

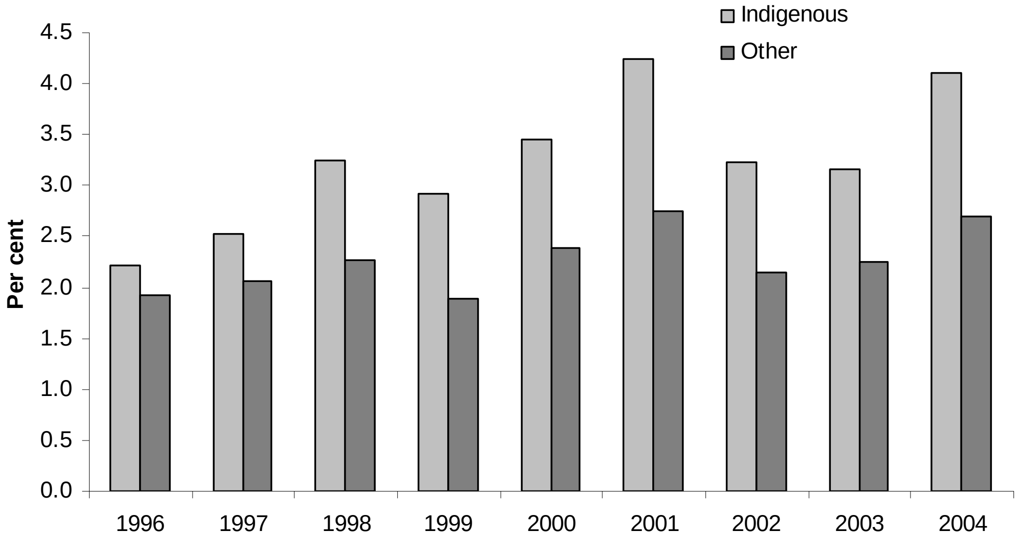
(a) Includes statements of attainment.

Note: Percentages are calculated using the 2001 Indigenous and non-Indigenous estimated resident populations. This is because population estimates for Indigenous Australians are not available for 2004. Percentages presented here should therefore be used with caution.

Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2004, unpublished data.

Time series analysis

- Between 1996 and 2004, there was a statistically significant increase in the proportion of Indigenous students and other students who had completed a course in the VET sector, however, the magnitude of the increase among Indigenous students was considerably higher (Figure 2.06.4). The fitted trend implies an average yearly increase in the proportion of 0.2% for Indigenous students and 0.1% for other students.



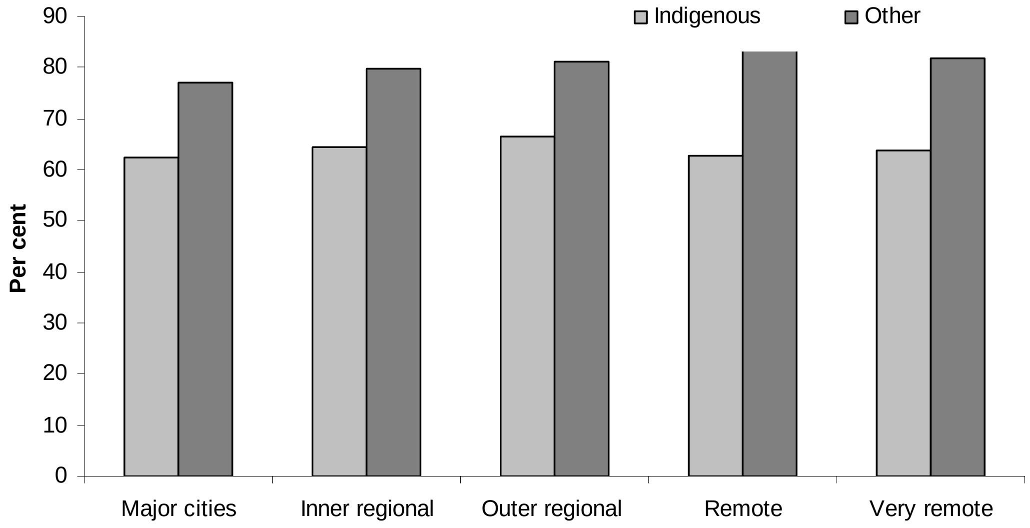
Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2004, unpublished data.

Figure 2.06.4: Total completions in the VETsector, by Indigenous status, 1996–2004

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 2004, the VET load pass rate for Indigenous students was 64% compared to 79% for other students. The load pass rate was lower for Indigenous students compared with other students across all geographical regions (Figure 2.06.5).



Source: AIHW analysis of National Centre for Vocational Education Research, National VET Provider Collection 2004, unpublished data.

Figure 2.06.5: VET load pass rate, by remoteness, 2004

Higher education data

Educational attainment

Data on the educational attainment of Indigenous Australians in the higher education sector are available from DEST. Data collected for the year 2004 are presented in the tables below.

- During the year 2004, approximately 2.9% of Indigenous Australians aged 15 years and over completed a course in the higher education sector compared to 4.5% of other Australians. Approximately 2.1% of Indigenous Australians completed an undergraduate degree and 0.4% of Indigenous Australians completed a postgraduate degree. This compared with 3.3% and 1.2% for other Australians.

Educational attainment by age and sex

- Indigenous and other Australians aged 15–24 years were most likely to have completed a higher education course in 2004 (3.6% and 15.6% respectively) than those in other age groups (Table 2.06.22).
- Indigenous Australians aged 35–44 and 45–54 years were most likely to have completed a postgraduate degree (0.7%) and Indigenous Australians aged 15–24 years were most likely to have completed an undergraduate degree (3.0%).
- In 2004, a higher proportion of Indigenous females aged 15 years and over had completed a postgraduate degree (0.6%) or an undergraduate degree (2.7%) than Indigenous males (0.2% and 1.5% respectively).

Table 2.06.22: Education attainment in the higher education sector, by Indigenous status, sex and age group, 2004

	15–24				25–34				35–44				45–54				55+				Total			
	Indigenous		Other[(a)]		Indigenous		Other[(a)]		Indigenous		Other[(a)]		Indigenous		Other[(a)]		Indigenous		Other[(a)]		Indigenous		Other[(a)]	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Males																								
Doctorate or higher	6	0.0	2,287	0.2	24	0.1	5,808	0.4	27	0.1	3,591	0.2	20	0.1	2,719	0.2	8	0.1	1,201	0.1	85	0.1	15,606	0.2
Master's degree	11	0.0	5,267	0.3	92	0.3	17,871	1.3	87	0.3	10,704	0.8	52	0.3	4,910	0.3	9	0.0	1,140	0.0	251	0.1	39,892	0.6
Postgrad' diploma or certificate[(b)]	15	0.0	2,991	0.2	46	0.2	9,974	0.7	63	0.2	7,301	0.5	22	0.1	3,478	0.2	7	0.0	776	0.0	153	0.0	24,520	0.3
Subtotal postgraduate	*32*	*0.0*	*10,545*	*0.7*	*162*	*0.6*	*33,653*	*2.4*	*177*	*0.6*	*21,596*	*1.5*	*94*	*0.5*	*11,107*	*0.7*	*24*	*0.1*	*3,117*	*0.1*	*489*	*0.2*	*80,018*	*1.1*
Bachelor's degree	941	1.9	163,107	11.9	532	1.4	33,307	2.4	323	1.1	11,913	0.8	129	0.6	4,414	0.3	24	0.1	1,229	0.0	1,949	1.3	213,975	2.8
Other undergraduate[(c)]	70	0.2	1,996	0.1	120	0.3	2,271	0.1	94	0.3	1,256	0.0	46	0.3	503	0.0	17	0.1	199	0.0	347	0.2	6,226	0.0
Subtotal undergraduate	*1,011*	*2.1*	*165,103*	*12.0*	*652*	*1.7*	*35,578*	*2.5*	*417*	*1.5*	*13,169*	*0.8*	*175*	*0.9*	*4,917*	*0.3*	*41*	*0.2*	*1,428*	*0.0*	*2,296*	*1.5*	*220,201*	*2.8*
All graduates[(d)]	**1,205**	**2.5**	**178,892**	**13.1**	**932**	**2.6**	**71,392**	**5.1**	**682**	**2.4**	**35,936**	**2.5**	**300**	**1.6**	**16,559**	**1.2**	**72**	**0.5**	**4719**	**0.2**	**3,191**	**2.2**	**307,509**	**3.9**
Females																								
Doctorate or higher	8	0.0	2,395	0.2	22	0.1	5,860	0.4	34	0.1	3,904	0.3	46	0.2	3,034	0.2	14	0.1	1,193	0.0	124	0.1	16,386	0.2
Master's degree	24	0.0	6,435	0.5	101	0.3	17,425	1.2	105	0.3	9,606	0.7	70	0.3	6,202	0.5	32	0.2	1,329	0.0	332	0.3	40,997	0.6
Postgrad' diploma or certificate[(b)]	25	0.0	6,434	0.5	93	0.2	13,346	0.9	84	0.3	8,608	0.5	63	0.3	5,184	0.4	14	0.0	964	0.0	279	0.2	34,536	0.4
Subtotal postgraduate	*57*	*0.0*	*15,264*	*1.2*	*216*	*0.6*	*36,631*	*2.5*	*223*	*0.7*	*22,118*	*1.5*	*179*	*0.8*	*14,420*	*1.1*	*60*	*0.3*	*3,486*	*0.0*	*735*	*0.6*	*91,919*	*1.2*
Bachelor's degree	1,715	3.6	215,111	16.5	905	2.4	43,994	3.1	662	2.1	23,322	1.5	297	1.4	9,886	0.7	42	0.2	2,155	0.1	3,621	2.2	294,469	3.7
Other undergraduate[(c)]	160	0.3	1,479	0.0	206	0.5	1,258	0.0	225	0.7	785	0.0	112	0.5	484	0.0	27	0.1	195	0.0	730	0.5	4,201	0.0
Subtotal undergraduate	*1,875*	*3.9*	*216,590*	*16.5*	*1,111*	*2.9*	*45,252*	*3.1*	*887*	*2.8*	*24,107*	*1.5*	*409*	*1.9*	*10,370*	*0.7*	*69*	*0.3*	*2,350*	*0.1*	*4,351*	*2.7*	*298,670*	*3.7*
All graduates[(d)]	**2,204**	**4.7**	**236,148**	**18.2**	**1,491**	**3.9**	**84,445**	**6.0**	**1,223**	**3.8**	**47,836**	**3.2**	**651**	**3.2**	**25,585**	**1.9**	**135**	**0.7**	**6,015**	**0.2**	**5,704**	**3.7**	**400,034**	**5.0**

(continued)

Table 2.06.22 (continued): Educational attainment in the higher education sector, by Indigenous status, sex and age group, 2004

	15-24				25–34				35–44				45–54				55+				Total			
	Indigenous		**Other[(a)]**		**Indigenous**		**Other[(a)]**		**Indigenous**		**Other[(a)]**		**Indigenous**		**Other[(a)]**		**Indigenous**		**Other[(a)]**		**Indigenous**		**Other[(a)]**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
												Persons												
Doctorate or higher	14	0.0	4,682	0.2	46	0.1	11,668	0.4	61	0.1	7,495	0.2	66	0.2	5,753	0.2	22	0.1	2,394	0.0	209	0.1	31,992	0.2
Master's degree	35	0.0	11,702	0.4	193	0.3	35,296	1.3	192	0.3	20,310	0.7	122	0.3	11,112	0.5	41	0.2	2,469	0.0	583	0.1	80,889	0.6
Postgrad' diploma or certificate[(b)]	40	0.0	9,425	0.4	139	0.2	23,320	0.9	147	0.2	15,909	0.5	85	0.2	8,662	0.3	21	0.0	1,740	0.0	432	0.2	59,056	0.4
Subtotal postgraduate	*89*	*0.0*	*25,809*	*1.0*	*378*	*0.6*	*70,284*	*2.6*	*400*	*0.7*	*43,714*	*1.4*	*273*	*0.7*	*25,527*	*1.0*	*84*	*0.3*	*6,603*	*0.0*	*1,224*	*0.4*	*171,937*	*1.2*
Bachelor's degree	2,656	2.8	378,218	14.2	1,437	1.9	77,301	2.8	985	1.6	35,235	1.2	426	1.1	14,300	0.5	66	0.2	3,384	0.1	5,570	1.8	508,444	3.3
Other undergraduate[(c)]	230	0.2	3,475	0.1	326	0.5	3,529	0.0	319	0.5	2,041	0.0	158	0.3	987	0.0	44	0.1	394	0.0	1,077	0.3	10,427	0.0
Subtotal undergraduate	*2,886*	*3.0*	*381,693*	*14.3*	*1,763*	*2.4*	*80,830*	*2.8*	*1,304*	*2.2*	*37,276*	*1.2*	*584*	*1.4*	*15,287*	*0.5*	*110*	*0.3*	*3,778*	*0.1*	*6,647*	*2.1*	*518,871*	*3.3*
All graduates[(d)]	**3,409**	**3.6**	**415,040**	**15.6**	**2,423**	**3.3**	**155,837**	**5.6**	**1,905**	**3.2**	**83,772**	**2.8**	**951**	**2.4**	**42,144**	**1.6**	**207**	**0.6**	**10,734**	**0.2**	**8,895**	**2.9**	**707,543**	**4.5**

(a) Not stated for Indigenous status included with 'Other'.

(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.

Note: Percentages are calculated using the Indigenous and non-Indigenous Estimated resident populations for December 2004.

Source: AIHW analysis of DEST Higher Education Statistics Collection data.

Educational attainment by state/territory

- The proportion of Indigenous persons aged 15 years and over who had completed a course in the higher education sector ranged from 2.1% in Tasmania, to 8.1% in the Australian Capital Territory (Table 2.06.23). The Australian Capital Territory had the highest proportion of Indigenous persons who had completed a postgraduate degree in 2004.
- A lower proportion of Indigenous persons aged 15 years and over had completed a higher education course than other Australians in all states and territories except Victoria, South Australia and the Northern Territory, where proportions were slightly higher for Indigenous Australians.

Table 2.06.23: Education attainment in the Higher Education sector by Indigenous status, sex and state/territory, 2004

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Australia[(a)]	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
									Indigenous									
Males																		
Doctorate or higher	26	0.1	21	0.2	21	0.1	7	0.0	3	0.0	0	0.0	5	0.4	2	0.0	85	0.1
Master’s degree	97	0.2	46	0.5	49	0.1	18	0.1	13	0.1	0	0.0	17	1.3	7	0.0	251	0.1
Postgrad’ dip. or certificate[(b)]	52	0.1	33	0.3	25	0.0	13	0.0	9	0.0	0	0.0	9	0.7	10	0.1	153	0.0
Subtotal postgraduate	*175*	*0.4*	*100*	*1.1*	*95*	*0.2*	*38*	*0.2*	*25*	*0.3*	*0*	*0.0*	*31*	*2.4*	*19*	*0.1*	*489*	*0.3*
Bachelor's degree	590	1.3	252	2.7	563	1.4	219	1.0	113	1.3	56	1.0	57	4.4	68	0.3	1,949	1.3
Other undergraduate[(c)]	81	0.2	4	0.0	20	0.0	64	0.3	17	0.2	18	0.4	0	0.0	111	0.6	347	0.2
Subtotal undergraduate	*671*	*1.6*	*256*	*2.8*	*583*	*1.5*	*283*	*1.3*	*130*	*1.6*	*74*	*1.3*	*57*	*4.4*	*179*	*0.9*	*2,296*	*1.6*
All graduates[(d)]	**884**	**2.1**	**358**	**3.9**	**752**	**1.9**	**436**	**2.0**	**178**	**2.1**	**82**	**1.5**	**102**	**7.8**	**330**	**1.7**	**3,191**	**2.2**
Females																		
Doctorate or higher	41	0.1	29	0.3	17	0.0	12	0.1	12	0.1	3	0.1	4	0.3	5	0.0	124	0.1
Master’s degree	130	0.3	55	0.6	61	0.1	36	0.2	18	0.2	6	0.1	13	1.0	5	0.0	332	0.3
Postgrad’ dip. or certificate[(b)]	70	0.1	66	0.7	53	0.1	37	0.2	12	0.1	7	0.1	7	0.5	21	0.1	279	0.2
Subtotal postgraduate	*241*	*0.5*	*150*	*1.6*	*131*	*0.3*	*85*	*0.4*	*42*	*0.5*	*16*	*0.3*	*24*	*1.8*	*31*	*0.2*	*735*	*0.5*
Bachelor's degree	1121	2.4	392	4.1	1,000	2.3	437	1.9	250	2.9	107	1.9	78	5.8	137	0.7	3,621	2.2
Other undergraduate[(c)]	144	0.3	7	0.1	41	0.1	121	0.5	64	0.7	3	0.0	0	0.0	245	1.2	730	0.5
Subtotal undergraduate	*1,265*	*2.8*	*399*	*4.2*	*1,041*	*2.4*	*558*	*2.5*	*314*	*3.6*	*110*	*1.9*	*78*	*5.9*	*382*	*1.9*	*4,351*	*2.8*
All graduates[(d)]	**1,582**	**3.6**	**551**	**5.8**	**1,305**	**3.0**	**812**	**3.6**	**377**	**4.3**	**151**	**2.6**	**111**	**8.3**	**595**	**3.0**	**5,704**	**3.7**

(continued)

Table 2.06.23 (continued): Education attainment in the higher education sector, by Indigenous status, sex and state/territory, 2004

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Aust[(a)]	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Persons																		
Doctorate or higher	67	0.1	50	0.3	38	0.0	19	0.0	15	0.1	3	0.0	9	0.3	7	0.0	209	0.1
Master's degree	227	0.3	101	0.5	110	0.1	54	0.1	31	0.2	6	0.0	30	1.1	12	0.0	583	0.1
Postgrad' dip. or certificate[(b)]	122	0.2	99	0.5	78	0.1	50	0.1	21	0.1	7	0.1	16	0.5	31	0.1	432	0.2
Sub-total postgraduate	*416*	*0.5*	*250*	*1.3*	*226*	*0.3*	*123*	*0.3*	*67*	*0.4*	*16*	*0.1*	*55*	*2.1*	*50*	*0.1*	*1,224*	*0.4*
Bachelor's degree	1,711	1.9	644	3.5	1,563	1.8	656	1.5	363	2.1	163	1.5	135	5.2	205	0.5	5,570	1.8
Other undergraduate[(c)]	225	0.2	11	0.0	61	0.0	185	0.4	81	0.5	21	0.2	0	0.0	356	0.9	1,077	0.3
Subtotal undergraduate	*1,936*	*2.2*	*655*	*3.5*	*1,624*	*2.0*	*841*	*1.9*	*444*	*2.6*	*184*	*1.6*	*135*	*5.1*	*561*	*1.4*	*6,647*	*2.2*
All graduates	**2,466**	**2.8**	**909**	**4.8**	**2,057**	**2.5**	**1,248**	**2.8**	**555**	**3.2**	**233**	**2.1**	**213**	**8.1**	**925**	**2.4**	**8,895**	**2.9**
									Other[(e)]									
Males																		
Doctorate or higher	4,585	0.2	3,851	0.2	2,721	0.2	1,644	0.3	1,283	0.2	399	0.2	907	1.1	81	0.1	15,606	0.2
Master's degree	15,575	0.5	12,326	0.7	5,646	0.3	2,609	0.5	1,477	0.2	233	0.2	1,384	1.7	108	0.1	39,892	0.6
Postgrad' dip. or certificate[(b)]	8,524	0.3	6,513	0.4	3,844	0.2	2,313	0.5	1,454	0.2	243	0.1	1,129	1.4	179	0.1	24,520	0.3
Subtotal postgraduate	*28,684*	*1.1*	*22,690*	*1.2*	*12,211*	*0.8*	*6,566*	*1.1*	*4,214*	*0.5*	*875*	*0.5*	*3,420*	*4.4*	*368*	*0.3*	*80,018*	*1.0*
Bachelor's degree	66,163	2.5	52,488	2.7	43,135	2.9	21,782	3.7	15,278	2.0	4,920	2.7	7061	9.1	995	0.9	213,975	2.8
Other undergraduate[(c)]	2,350	0.1	1084	0.0	1,179	0.0	115	0.0	231	0.0	1185	0.6	28	0.0	42	0.0	6,226	0.0
Subtotal undergraduate	*68,513*	*2.6*	*53,572*	*2.7*	*44,314*	*3.0*	*21,897*	*3.7*	*15,509*	*2.0*	*6,105*	*3.3*	*7,089*	*9.1*	*1037*	*1.0*	*220,201*	*2.8*
All graduates[(d)]	**100,414**	**3.8**	**77,122**	**4.0**	**58,423**	**3.9**	**28,942**	**4.9**	**19,957**	**2.6**	**7,108**	**3.9**	**10,724**	**13.8**	**1,591**	**1.5**	**307,509**	**3.9**

(continued)

Table 2.06.23 (continued): Education attainment in the higher education sector, by Indigenous status, sex and state/territory, 2004

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Aust(e)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Females																		
Doctorate or higher	4,612	0.2	4,551	0.2	2,769	0.2	1,633	0.3	1,388	0.2	407	0.2	786	1.1	96	0.1	16,386	0.2
Master's degree	15,538	0.5	11,702	0.6	6,562	0.4	2,929	0.5	1,821	0.2	275	0.2	1,095	1.6	185	0.1	40,997	0.6
Postgrad' dip. or certificate(b)	9,882	0.4	10,675	0.5	4,852	0.4	3,474	0.6	2,632	0.3	352	0.2	1,375	2.0	387	0.4	34,536	0.4
Subtotal postgraduate	*30,032*	*1.1*	*26,928*	*1.3*	*14,183*	*0.9*	*8,036*	*1.3*	*5,841*	*0.7*	*1,034*	*0.5*	*3,256*	*4.7*	*668*	*0.6*	*91,919*	*1.1*
Bachelor's degree	90,497	3.4	68,326	3.4	60,965	4.0	30,293	5.0	22,237	2.8	6,219	3.2	8,275	12.0	2,242	2.0	294,469	3.7
Other undergraduate(c)	1,760	0.0	747	0.0	990	0.0	172	0.0	242	0.0	88	0.0	47	0.1	79	0.0	4,201	0.0
Subtotal undergraduate	*92,257*	*3.4*	*69,073*	*3.4*	*61,955*	*4.1*	*30,465*	*5.0*	*22,479*	*2.9*	*6,307*	*3.3*	*8,322*	*12.1*	*2,321*	*2.1*	*298,670*	*3.7*
All graduates(d)	**126,836**	**4.7**	**96,895**	**4.8**	**78,601**	**5.2**	**39,001**	**6.4**	**28,621**	**3.7**	**7,573**	**4.0**	**11,678**	**16.9**	**3245**	**2.9**	**400,034**	**5.0**
Persons																		
Doctorate or higher	9,197	0.2	8,402	0.2	5,490	0.2	3,277	0.3	2,671	0.2	806	0.2	1,693	1.1	177	0.1	31,992	0.2
Master's degree	31,113	0.5	24,028	0.6	12,208	0.4	5,538	0.5	3,298	0.2	508	0.2	2,479	1.7	293	0.1	80,889	0.6
Postgrad' dip. or certificate(b)	18,406	0.3	17,188	0.4	8,696	0.3	5,787	0.5	4,086	0.3	595	0.1	2,504	1.7	566	0.3	59,056	0.4
Subtotal Postgraduate	*58,716*	*1.1*	*49,618*	*1.2*	*26,394*	*0.9*	*14,602*	*1.2*	*10,055*	*0.6*	*1,909*	*0.5*	*6,676*	*4.5*	*1,036*	*0.5*	*171,937*	*1.1*
Bachelor's degree	156,660	3.0	120,814	3.1	104,100	3.5	52,075	4.4	37,515	2.4	11,139	3.0	15,336	10.5	3,237	1.5	508,444	3.3
Other undergraduate(c)	4,110	0.0	1,831	0.0	2,169	0.0	287	0.0	473	0.0	1,273	0.4	75	0.1	121	0.0	10,427	0.0
Sub-total undergraduate	*160,770*	*3.0*	*122,645*	*3.1*	*106,269*	*3.5*	*52,362*	*4.4*	*37,988*	*2.4*	*12,412*	*3.3*	*15,411*	*10.5*	*3,358*	*1.5*	*518,871*	*3.3*
All graduates(d)	**227,250**	**4.3**	**174,017**	**4.4**	**137,024**	**4.6**	**67,943**	**5.6**	**48,578**	**3.1**	**14,681**	**3.9**	**22,402**	**4,836**	**2.2**	**2.2**	**707,543**	**4.5**

(a) Includes other territories.

(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.

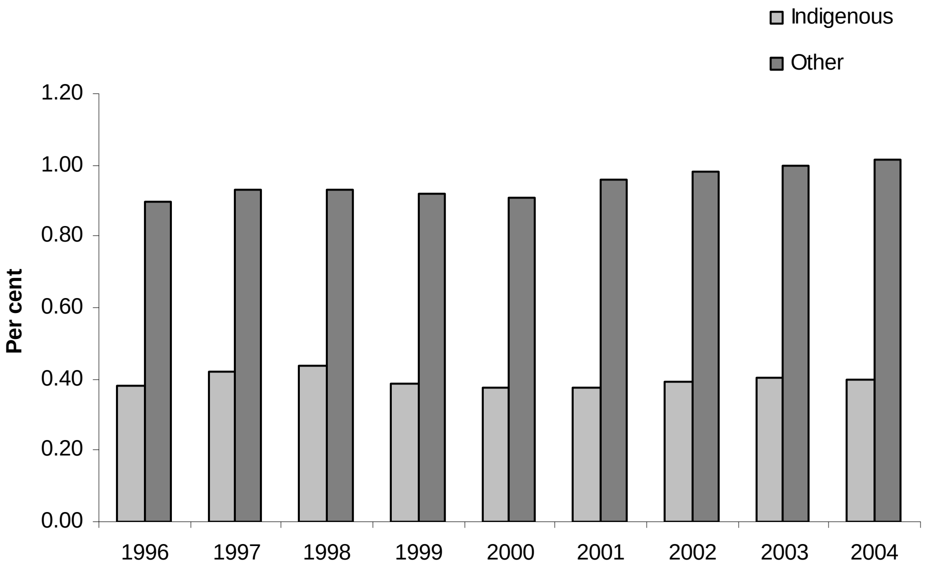
(e) Not stated for Indigenous status included with 'Other'.

Note: Percentages are calculated using the Indigenous and non-Indigenous estimated resident populations for December 2004.

Source: AIHW analysis of DEST Higher Education Statistics Collection.

Time series analysis

- Between 1996 and 2004, there was little change in the proportion of domestic Indigenous or other students who have completed a higher education award course (Figure 2.06.6).



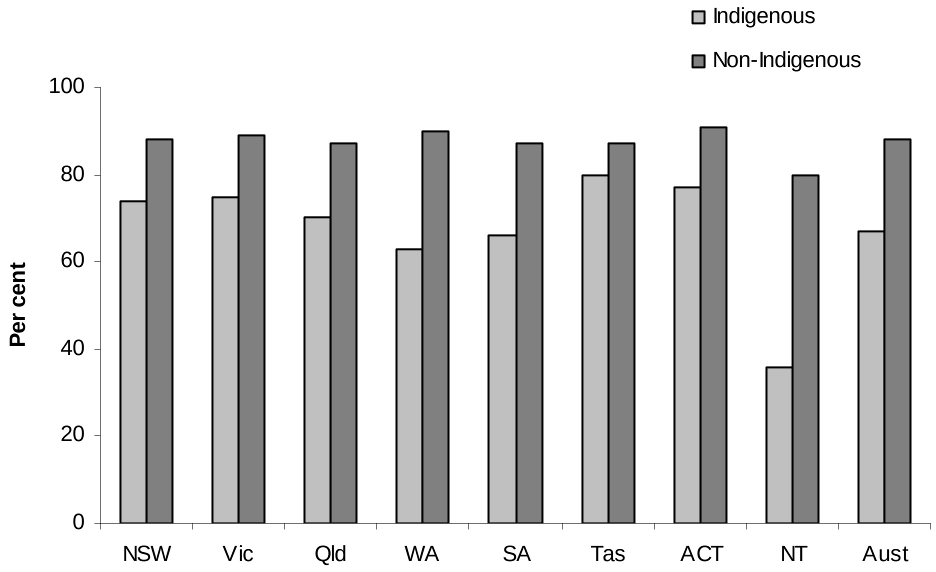
Source: AIHW analysis of DEST Higher Education Statistics Collection.

Figure 2.06.6: Higher education award course completions for domestic students, by Indigenous status, 1996–2004

Success rate

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 2004, the success rate for Indigenous students varied by state and territory, ranging from 36% in the Northern Territory to 80% in Tasmania. The success rate for non-Indigenous students was similar in most states and territories (between 87% and 91%) (Figure 2.06.7).



Source: AIHW analysis of DEST Higher Education Statistics Collection.

Figure 2.06.7: Higher education success rates, by Indigenous status and state/territory, 2004

Additional information

Reasons for leaving school early

The 2002 National Aboriginal and Torres Strait Islander Social Survey collected information on main reasons why Indigenous persons left school before completing Year 12 or equivalent. Data are presented by remoteness area in Table 2.06.24 below.

- 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 for Indigenous persons to leave school before completing Year 12 was that they got a job or apprenticeship or wanted a job or apprenticeship (16%). Other personal/family reasons accounted for 12.9% 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 2.06.24).
- A higher proportion of Indigenous persons aged 15–24 years in remote and very remote areas reported that Year 12 or equivalent was not available as the main reason for leaving school before completing Year 12 (8.3%) or they felt they had done enough at school (10%) than Indigenous persons in non-remote areas (1% and 6% respectively).
- 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 to 5%).

Table 2.06.24: 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
	%	%	%	%	%	%
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 ABS NATSISS 2002.

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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004a; 2006).

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 in comparing data across jurisdictions for load pass rates as average module durations vary across jurisdictions (SCRGSP 2005b).

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.*

(continued)

Data quality issues (continued)

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 underway to separately record the 'Not stated' responses.

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ABS (Australian Bureau of Statistics) 2003. Directory of Education and Training Statistics Higher Education Student Statistics Collection. ABS cat. No. 1136.0. Canberra: ABS.

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ABS 2004b. Measuring learning in Australia: plan to improve the quality, coverage and use of education and training statistics. ABS cat. No. 4231. Canberra: ABS.

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey: user's guide 2004–05. ABS cat. No. 4715.0.55.004. Canberra: ABS.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2005a. Overcoming Indigenous disadvantage: key indicators 2005. Canberra: Productivity Commission.

SCRGSP 2005b. Report on government services 2005. Canberra: Productivity Commission.

2.07 Employment status

The employment status of Aboriginal and Torres Strait Islander peoples aged 15–64 years

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 six-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 following labour force categories and terminologies have been used in this measure:

- **Employed**—persons who had a job or business, or who undertook work without pay in a family business for a minimum of one hour per week. Includes persons who were absent from a job or business and Community Development Employment Projects participants.
- **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.
- **Unemployed**—persons who were not employed and actively looking for work in the four weeks prior to the survey, and were available to start work in the week prior to the survey.
- **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.

Data analyses

Employment status

- 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 2.07.3).

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 above 50% and is considered too unreliable for general use.

Sources: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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: AIHW and ABS 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 National Health Survey.

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, 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 to be employed in CDEP (29%) and less likely to be employed in non-CDEP (23%) than Indigenous Australians in non-remote areas (4% and 46% respectively) (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

	NSW	**Vic**	**Qld**	**WA**	**SA**	**Tas**	**ACT**	**NT**	**Australia**
Labour force status	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
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 between 25% and 50% and should be used with caution.

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

Source: AIHW and ABS 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 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 National Health Survey 2004–05.

Table 2.07.6: Labour force status of Indigenous persons aged 15–64 years, by remoteness, 2004–05

	Remote	Non-remote	Australia
Labour force status	**%**	**%**	**%**
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: AIHW and ABS analysis of 2004–05 NATSIHSational Aboriginal and Torres Strait Islander Health Survey.

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[b]	Indig.	Non-Indig.	Ratio[b]	Indig.	Non-Indig.	Ratio[b]
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**	**. .**

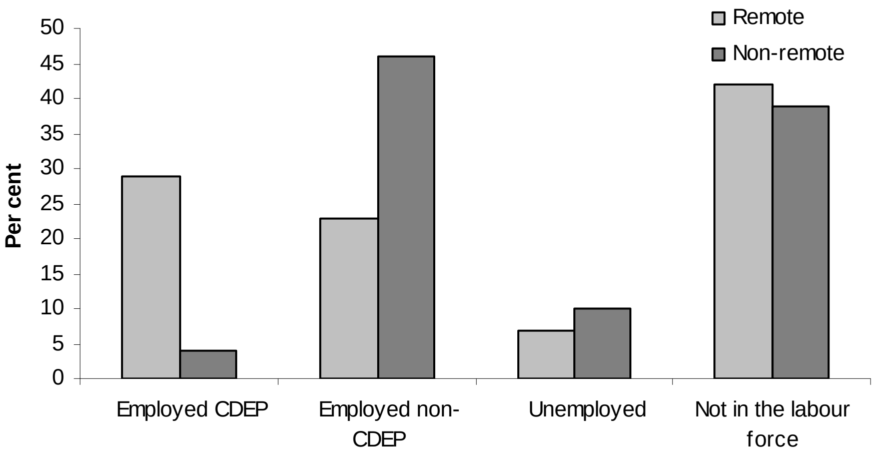
(a) Ratio = Indigenous proportion divided by the non-Indigenous proportion.

(b) Estimate has a relative standard error between 25% and 50% and should be used with caution.

(c) Includes labour force status not stated.

Note: Data are age standardised.

Source: AIHW and ABS analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

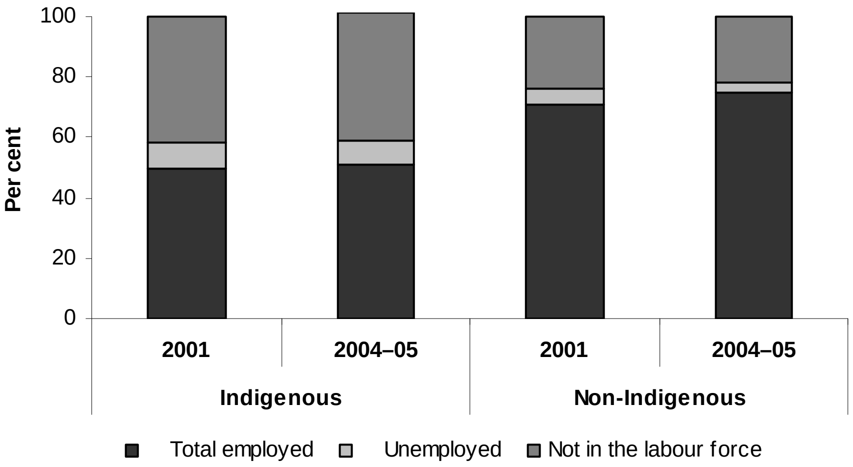


Source: AIHW and ABS analysis of 2004–05 NATSIHS.

Figure 2.07.1: Labour force status, by remoteness, Indigenous persons aged 15–64 years, 2004–05

Time series analysis

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 18 to 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: AIHW and ABS analysis of 2001 National Health Survey (Indigenous supplement), 2004–05 NATSIHS and 2004–05 National Health Survey.

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

- 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 to 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 to 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

	Self-assessed health status		Number of long-term health conditions				
	Excellent/very good/good	**Fair/poor**	**0**	**1**	**2**	**3+**	**Total**
		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[(a)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	222,665	58,668	66,107	53741	49,337	112,219	281,404

(a) 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.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey

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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publication (ABS 2006).

References

ABS (Australian Bureau of Statistics) 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. Canberra: ABS.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2005. Overcoming Indigenous disadvantage: key indicators 2005. Canberra: Productivity Commission.

2.08 Income (household, individual, sources and income poverty)

Equivalised gross household and individual income of 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 (NATSIHS) 2002 and the National Aboriginal and Torres Strait Islander Social Survey (NATSISS).

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 six-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. It 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.

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 under the age of 15 years.

Data analyses

Household income

Mean equivalised household income

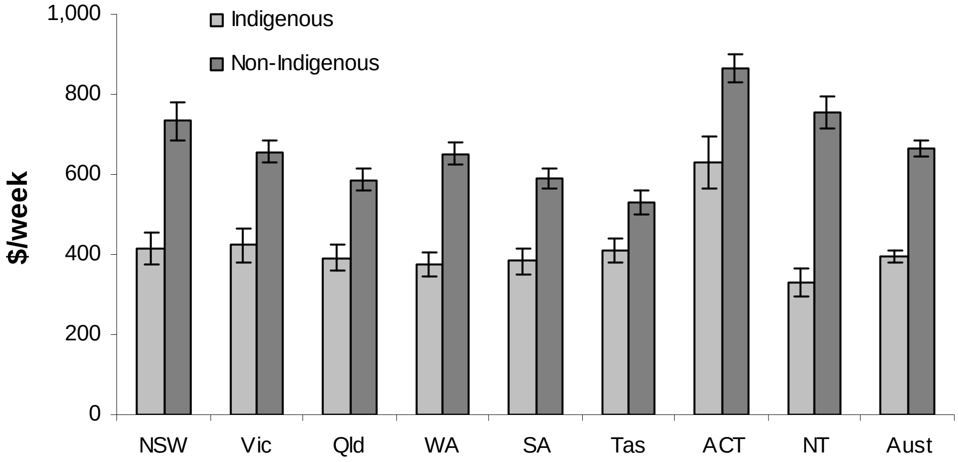
Data on the mean equivalised household income of Indigenous and non-Indigenous persons are available from the 2002 NATSISS and 2002 General Social Survey.

- The 2002 NATSISS estimated that the mean equivalised gross household income was $394 per week for Indigenous persons aged 18 years and over compared to $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, however, this difference was not statistically significant (Figure 2.08.2).
- There was little difference in the mean quivalised 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

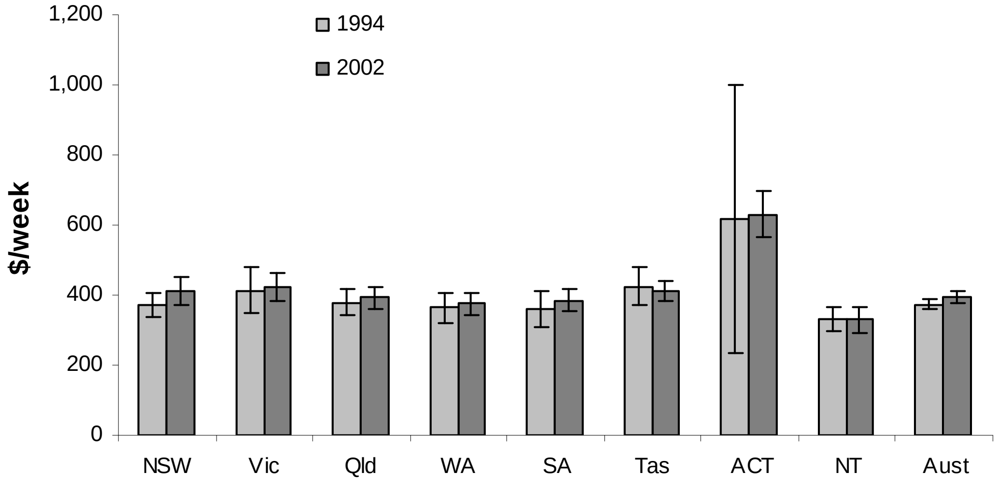
State/territory	Indigenous	Non-Indigenous
	$	$
New South Wales	414	733
Victoria	423	657
Queensland	392	587
Western Australia	376	652
South Australia	384	590
Tasmania	411	531
Australian Capital Territory	631	865
Northern Territory	329	755
Australia	**394**	**665**

Source: SCRGSP 2005: 2002 NATSISS and 2002 General Social Survey data.



Source: SCRGSP 2005: 2002 NATSISS and 2002 GSS data.

Figure 2.08.1: Mean gross weekly equivalised household income, by Indigenous status and state/territory, persons aged 18 years and over, 2002

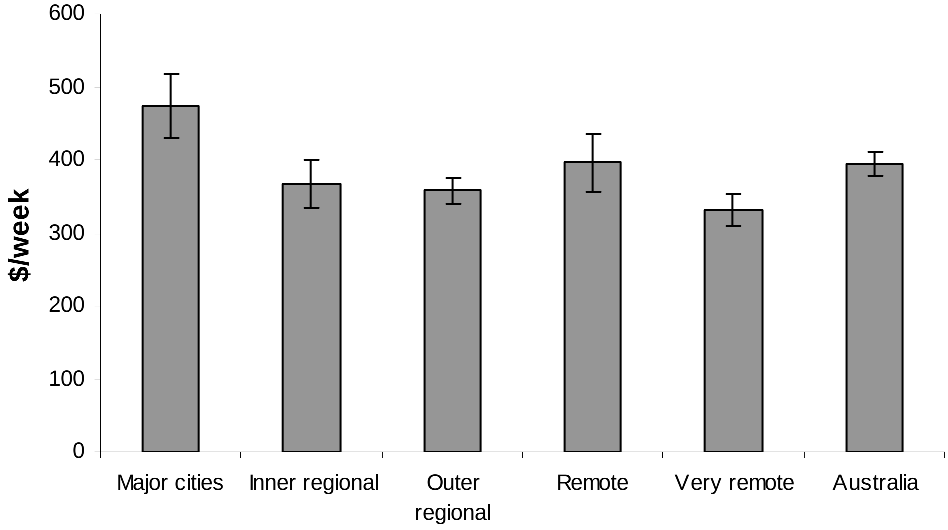


Notes

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: 2002 NATSISS and 1994 NATSIS data.

Figure 2.08.2: Mean gross weekly equivalised household income, Indigenous Australians aged 18 years and over, by state/territory, 1994 and 2002



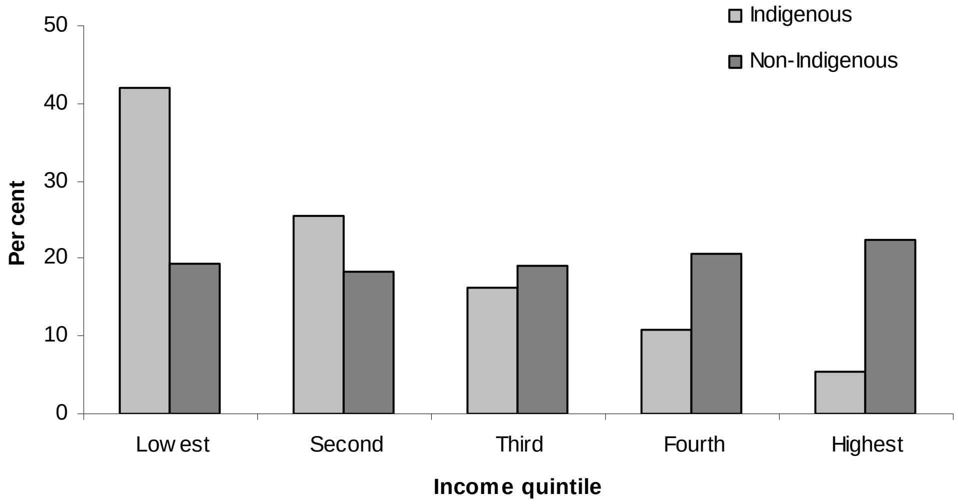
Source: SCRGSP 2005: 2002 NATSISS data.

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 quintile of equivalised gross weekly household income compared to 21% of non-Indigenous Australians. Only 6% of Indigenous Australians were in the highest quintile of equivalised gross weekly household income compared to 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 quintile of equivalised gross weekly household income (42% compared to 19%) and much less likely to be in the highest quintile (6% compared to 22%) (Figure 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 National Health Survey 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 population.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 to 49% of Indigenous Australians in remote or very remote areas. Around 13% and 7% of Indigenous Australians in major cities were in the fourth or highest quintile of income compared to 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 National Health Survey 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 population.

(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 National Health Survey.

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 National Health Surveys (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, 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 National Health Survey 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 population.

(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 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 National Health Survey.

Equivalised household income by summary health and 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 completed 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, 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
Total	**35**	**22**	**14**	**9**	**5**	***14***	**100**
Housing							
Owner	14	18	22	18	11	*29*	100
Renter	44	23	11	6	2	*8*	100
Stressors in last 12 months[(a)]							
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
Total	**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

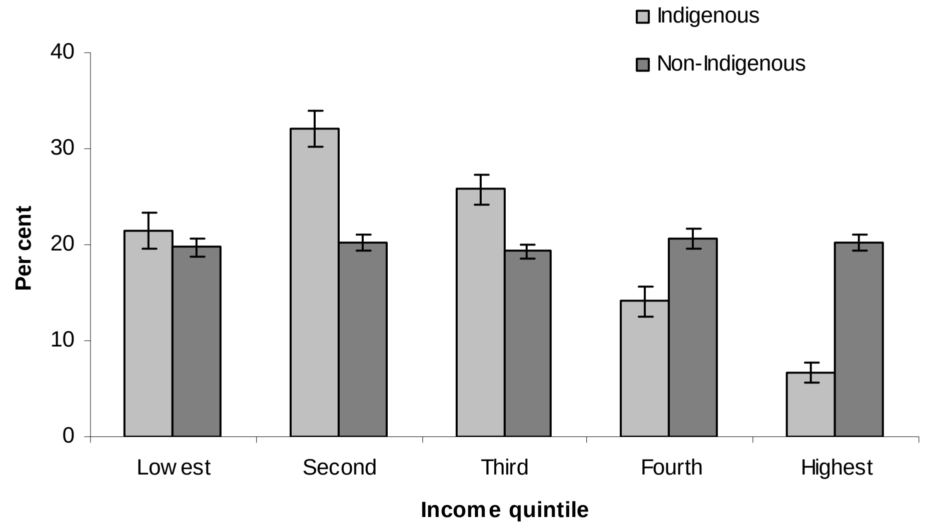
(a) Persons aged 18 years and over.

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 General Social Survey 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 compare to 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: 2002 NATSISS and 2002 GSS data.

Figure 2.08.5: Gross weekly individual income quintiles, by Indigenous status, 2002

Additional information

Financial stress

The 2002 NATSISS also collected information on financial stress within Indigenous households.

- In 2002, approximately 54% 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. Just over one-third (37%) of these households contained Indigenous children under five years of age and 64% contained Indigenous children under 15 years of age.

- 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 (73% compared with 47% respectively).
- Indigenous people aged 18 years and over were about four times as likely as non-Indigenous people to report that they were unable to raise $2,000 within a week in a time of crisis.

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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004; 2006).

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.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2005. Overcoming Indigenous disadvantage: key indicators 2005 report. Canberra: 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 the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS). 2001 Census data are presented for comparisons between Indigenous and non-Indigenous households and by remoteness. The 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) is used for the analysis of housing tenure type by selected health characteristics.

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 six-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 collects housing tenure information at both the person and household level but results are published on a person basis.

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 this 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 or 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, 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.

The NATSISS collects housing tenure information at both the person and household level but results are published on a person basis. The NATSISS can provide non-Indigenous comparisons with the General Social Survey (GSS). However, the GSS was not conducted in remote areas and therefore non-Indigenous data are not available by remoteness area. In addition, the rental categories were different in the GSS so it is not possible to compare types of rental arrangements between Indigenous and non-Indigenous Australians from these surveys.

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at five-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.

While 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 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:

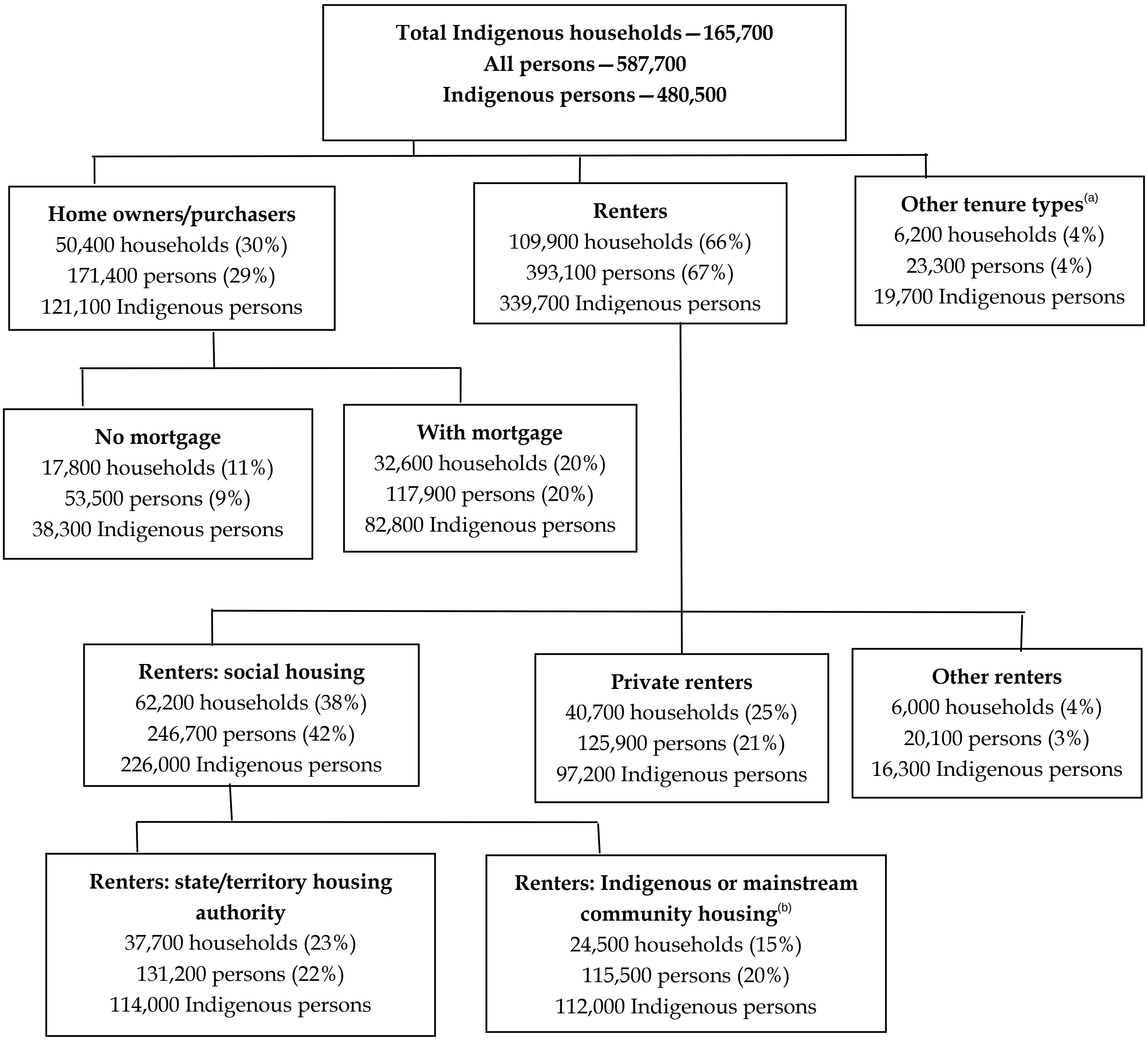
- a household where the reference person or the spouse is Indigenous
- a household containing one or more Indigenous people.

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).

Data analyses

Tenure type

- Among the estimated 165,700 Indigenous households in 2002, 30% 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 70% 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 that many Indigenous households live in remote areas on Indigenous land where individual home ownership is generally not possible. In 2002 there were 11% of Indigenous households who owned their homes outright and 20% who 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) (23%) and those renting from Indigenous or 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 cooperative housing (24%). 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.

n.p. Not published, as the categories for renters are different in the GSS and the NATSISS.

(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%), while 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 most 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.
Sub Total 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.

n.p. Not published, as the categories for renters are different in the NATSISS and the GSS.

(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 include those living rent free.

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.

n.p. Not published, the categories for renters are different in the NATSISS and GSS.

(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 of 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 as well as their lower socioeconomic status (Table 2.09.4).
- Among Indigenous households living in remote areas of Australia, one-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**
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.

Information on the tenure type of Indigenous and other households by remoteness is available from the 2001 Census and is presented in Table 2.09.5 below.

- Among the estimated 144,731 Indigenous households enumerated in the 2001 Census, approximately 32% were home owners or purchasers, 31% were renters of some form of social housing and 31% were private or other renters. This can be compared to other households where 67% were home owners or purchasers, 4% were renters of some form of social housing and 21% were private or other renters.
- In 2001, the proportion of Indigenous households in the different tenure types varied by remoteness. Of the estimated 23,700 Indigenous households in remote areas, 43% were renters in Indigenous community or cooperative housing, 17% were renters of state/territory housing, 8% were renters through private landlords and 15% were home owners (Table 2.09.5).
- In comparison, among the estimated 121,000 Indigenous households in non-remote areas, 5% were renters in Indigenous community or cooperative housing, 21% were renters of state/territory housing, 31% were renters through private landlords and one-third (35%) were homeowners.
- In 2001, the proportion of other households in the different tenure types also varied by remoteness but not as much as among Indigenous households. Among other households in remote areas, approximately 55% were home owners and 36% were renters. This compared with 68% and 26% of other households in non-remote areas respectively.

Table 2.09.5: Households, by tenure type, Indigenous status and remoteness, 2001

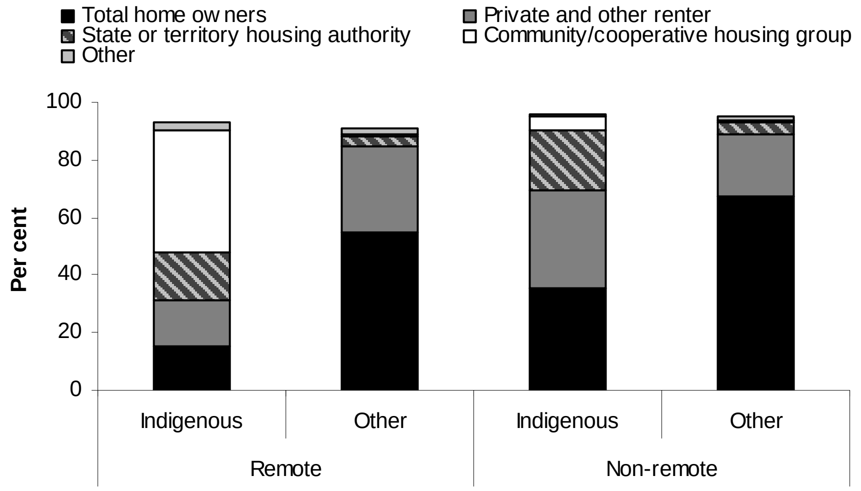
	Remote				Non-remote				Total			
	Indigenous		Other		Indigenous		Other		Indigenous		Other	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Home owners												
Fully owned	1,873	7.9	49,166	36.9	16,311	13.5	2,691,954	40.5	18,184	12.6	2,741,120	40.4
Being purchased	1,694	7.1	23,970	18.0	26,342	21.8	1,810,606	27.2	28,035	19.4	1,834,576	27.0
Total home owners	*3,567*	*15.0*	*73,136*	*54.9*	*42,653*	*35.2*	*4,502,560*	*67.7*	*46,219*	*31.9*	*4,575,696*	*67.5*
Renters												
Private landlord	1,986	8.4	18,073	13.6	37,615	31.1	1,291,409	19.4	39,601	27.4	1,309,482	19.3
State or territory housing authority	3,974	16.8	4,657	3.5	25,543	21.1	281,824	4.2	29,517	20.4	286,481	4.2
Community/ cooperative housing group	10,073	42.5	1,167	0.9	5,660	4.7	27,424	0.4	15,733	10.9	28,591	0.4
Other renter	1,845	7.8	21,622	16.2	3,360	2.8	118,932	1.8	5,206	3.6	140,554	2.1
Total renters[(a)]	*18,290*	*77.1*	*47,799*	*35.9*	*73,587*	*60.8*	*1,757,191*	*26.4*	*91,878*	*63.5*	*1,804,990*	*26.6*
Other[(b)]	566	2.4	2,345	1.8	1,325	1.1	85,828	1.3	1,891	3.5	88,173	3.1
Total[(c)]	**23,713**	**100.0**	**133,273**	**100.0**	**121,018**	**100.0**	**6,650,229**	**100.0**	**144,731**	**100.0**	**6,783,502**	**100.0**

(a) Includes rent-free accommodation and landlord type not stated.

(b) Includes life tenure, other.

(c) Includes tenure type not stated.

Source: ABS 2003.



Source: ABS 2003.

Figure 2.09.1: Percentage of households, by tenure type, Indigenous status and remoteness, 2001

Time series

- Between 1994 and 2002, there has been an increase in the proportion of Indigenous households and persons aged 18 years and over who were home owners. Over the same period, there has been 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 2.09.6).

Table 2.09.6: 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 to 67%). A much higher 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 2.09.7).
- 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 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 2.09.8).

Table 2.09.7: Summary health characteristics and housing tenure, by Indigenous status: 2004–05(a)

	Self-assessed health status						Number of long-term 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
	%	%		%	%		%	%		%	%		%	%		%	%		%	%	
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 not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Table 2.09.8: Tenure type by selected population characteristics, persons aged 18 years and over, by Indigenous status: 2002

	Home owner/purchaser		Renter		Total(a)	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
			Percent			
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	*29	*15	*53	*29	*46	*19
5th quintile	*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.

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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004; ABS 2006).

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). However, the GSS was not conducted in remote areas and therefore non-Indigenous data are not available by remoteness area. In addition, the rental categories were different in the GSS so it is not possible to compare types of rental arrangements between Indigenous and non-Indigenous Australians from these surveys.

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. While 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 understates 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).

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2.10 Dependency ratio—including identification of age distributions within 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 proxy 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

Data for this indicator come from ABS Australian population and Indigenous-specific 'low series' population estimates and projections based on the 2001 Census of Population and Housing. Data from the Census are adjusted for a number of factors, including undercount and not-stated Indigenous status, to produce population estimates by Indigenous status, age and geographic regions.

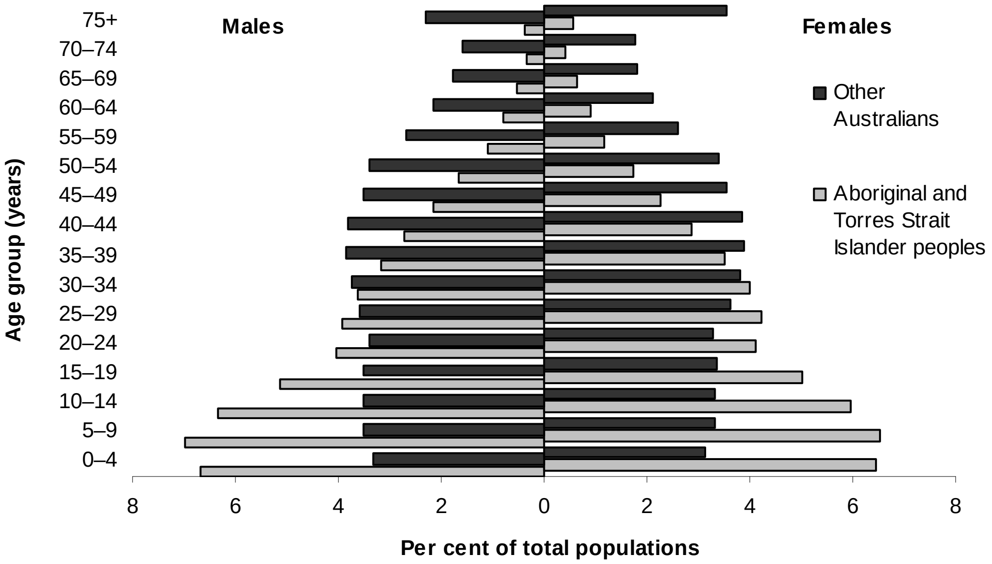
The Census year estimate of the Indigenous population is used as the basis for revising Indigenous population figures for previous years. This adjustment removes the effects of unexplained intercensal growth from Indigenous time series, and presents growth in terms of demographic factors alone (following the development of the 2001 Indigenous population estimates, the size and structure of the Indigenous population for 1991 to 2000 was rebased on the 2001 estimates).

As Indigenous population estimates by remoteness region are only available for the Census year 2001, data by remoteness are presented for this year only.

Data analyses

Age distribution of population

- The Indigenous population has a younger age structure than the non-Indigenous population which is shown in the population pyramid in Figure 2.10.1. In 2001, 39% of Indigenous people were aged under 15 years compared with 20% of non-Indigenous people. People aged 65 years or over comprised 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 structure of the Indigenous and non-Indigenous populations are similar across most states and territories (Table 2.10.1). The main variations from the national average are that the Australian Capital Territory has a lower proportion of Indigenous people aged 65 years and over (1%), and the Northern Territory has a lower proportion of non-Indigenous people aged 65 years and over (4%) compared to other states and territories.



Source: AIHW analysis of ABS population estimates based on 2001 Census of Population and Housing.

Figure 2.10.1: Population profile, by Indigenous status, age and sex, 2001.

Table 2.10.1: Age distribution of population, (percentage) by age group, state/territory and Indigenous status, 2001

	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	13.5	6.5	12.9	6.4	13.6	6.6	12.9	6.4	12.6	6.0	12.6	6.4	13.0	6.4	12.1	7.6	13.1	6.4
5–9	13.8	6.8	13.5	6.8	14.0	7.0	13.2	6.9	13.4	6.5	13.2	6.9	13.8	6.8	12.3	7.4	13.5	6.8
10–14	12.5	6.8	12.2	6.8	12.3	7.0	12.7	7.2	12.2	6.6	13.6	7.1	11.3	7.0	11.4	6.8	12.3	6.8
15–19	10.0	6.7	10.1	6.8	10.0	7.1	10.1	7.2	10.5	6.8	11.5	7.0	10.5	7.7	10.5	6.3	10.2	6.9
20–24	7.6	6.6	8.0	6.8	8.2	6.8	8.2	6.8	8.0	6.3	7.8	5.9	8.9	8.3	9.5	7.5	8.2	6.7
25–29	7.7	7.3	8.1	7.3	8.3	7.2	8.3	7.2	8.2	6.6	6.7	6.1	9.1	8.1	9.3	9.4	8.2	7.2
30–34	7.3	7.5	7.7	7.8	7.6	7.4	7.8	7.6	7.8	7.2	6.8	6.7	8.8	8.0	8.1	9.8	7.6	7.6
35–39	6.7	7.7	6.5	7.7	6.6	7.6	6.8	7.8	6.9	7.5	6.4	7.3	6.9	7.9	6.9	9.4	6.7	7.7
40–44	5.7	7.6	5.6	7.6	5.4	7.6	5.4	7.9	5.8	7.7	6.2	7.8	6.6	7.8	5.5	8.8	5.6	7.7
45–49	4.5	6.9	4.6	7.0	4.3	7.1	4.5	7.4	4.4	7.2	4.8	7.3	4.8	7.5	4.3	8.0	4.4	7.1
50–54	3.6	6.7	3.8	6.6	3.3	6.9	3.3	7.0	3.4	7.0	3.5	7.1	2.5	7.4	3.2	7.3	3.4	6.8
55–59	2.5	5.3	2.4	5.1	2.1	5.4	2.2	5.1	2.3	5.5	2.3	5.6	1.7	5.0	2.2	4.7	2.3	5.3
60–64	1.8	4.3	1.7	4.3	1.6	4.3	1.6	4.1	1.7	4.5	1.8	4.8	0.9	3.5	1.8	2.9	1.7	4.3
65–69	1.3	3.7	1.1	3.6	1.1	3.4	1.2	3.3	1.1	3.9	1.1	4.0	0.5	2.6	1.1	1.6	1.2	3.6
70–74	0.8	3.5	0.8	3.4	0.7	3.1	0.8	3.0	0.8	3.9	0.7	3.7	0.2	2.3	0.7	1.2	0.8	3.3
75+	0.8	6.1	1.1	6.0	0.9	5.4	1.1	5.0	0.9	7.1	0.8	6.5	0.4	3.8	1.0	1.3	0.9	5.9
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**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Includes other territories.

Source: AIHW analysis of ABS population estimates based on 2001 Census of Population and Housing.

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 mainly influenced 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 age dependency ratios (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 to 0.50 for non-Indigenous Australians and in 2001, the dependency ratio for Indigenous Australians was 0.72 compared to 0.49 for non-Indigenous Australians (Table 2.10.2).
- In 2001, the youth dependency ratio was higher for Indigenous Australians than non-Indigenous Australians (0.67 compared to 0.30), whereas the aged dependency ratio was lower for Indigenous Australians than non-Indigenous Australians (0.05 compared to 0.18).
- In 2001, the youth dependency ratio for Indigenous people ranged from 0.58 in the Northern Territory to 0.69 in New South Wales and Queensland, and the aged dependency ratio for Indigenous people was 0.02 in the Australian Capital Territory and 0.05 in all other states and territories (Table 2.10.2).
- In 2001, the youth dependency ratio for Indigenous people was lowest in remote and very remote areas (around 0.6) and highest in inner and outer regional areas (between 0.7 and 0.8). In contrast, the aged dependency ratio was lowest in major cities (0.04) and highest in remote and very remote areas (0.06) (Table 2.10.3).
- For non-Indigenous Australians, the youth dependency ratio was similar across all remoteness categories (around 0.3). The aged dependency ratio for non-Indigenous Australians was lowest in remote and very remote areas (around 0.1), and highest in major cities, inner and outer regional areas (around 0.2).

Table 2.10.2: Total and youth and aged dependency ratios, by state/territory and Indigenous status, 1996 and 2001

	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

(a) Includes other territories.

Source: AIHW analysis of ABS population estimates based on 1996 and 2001 Census of Population and Housing.

Table 2.10.3: Total and youth and aged dependency ratios, by remoteness and Indigenous status, 2001

	Major cities	Inner regional	Outer regional	Remote	Very remote
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

Source: AIHW analysis of ABS population estimates based on the 2001 Census of Population and Housing.

Time series analysis

Table 2.10.4 and Figure 2.10.2 present the youth and aged dependency ratios for Indigenous and non-Indigenous Australians over the period 1996–2005.

- Over the period 1996–2005, 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 and 0.003 for non-Indigenous Australians.
- 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 0.002.

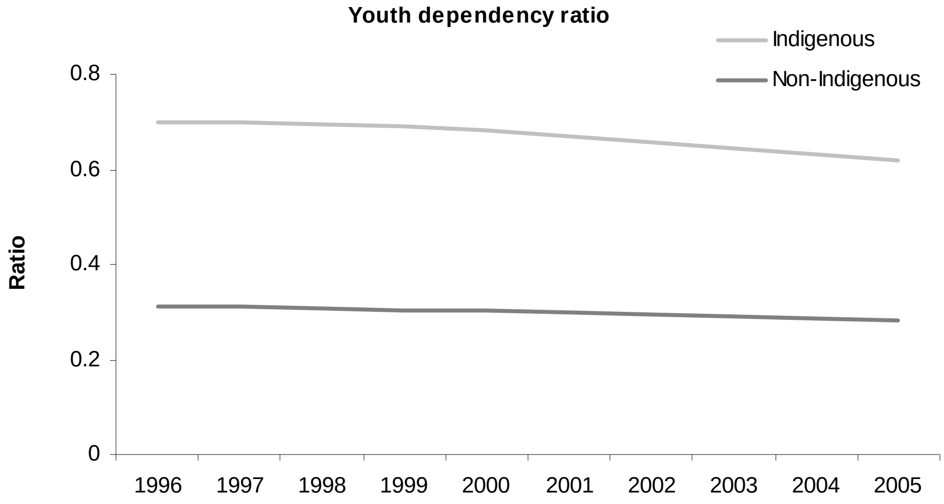
Table 2.10.4: Youth dependency ratio and aged dependency ratio, by Indigenous status, 1996–2005

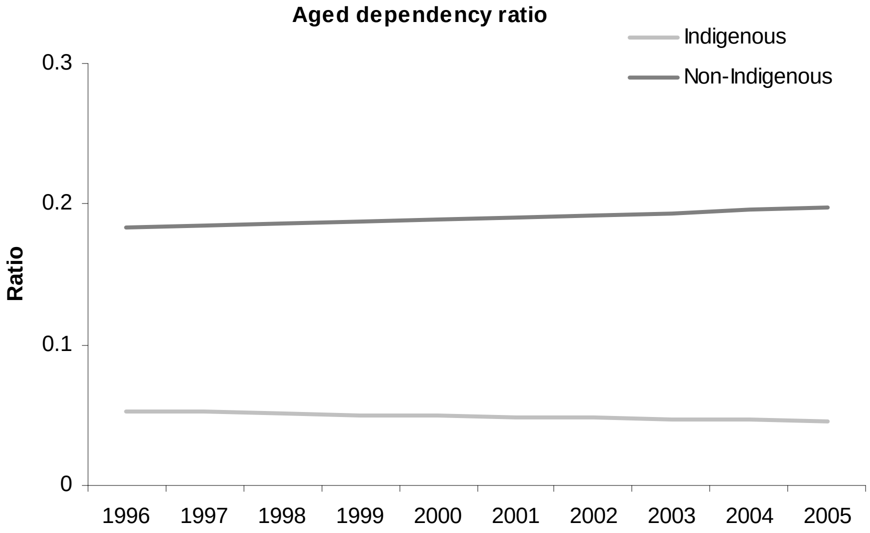
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Annual change(a)
enous											
dependency ratio	0.70	0.70	0.70	0.69	0.68	0.67	0.66	0.64	0.63	0.62	-0.1*
dependency ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-0.001*
ndigenous											
dependency ratio	0.31	0.31	0.31	0.30	0.30	0.30	0.30	0.29	0.29	0.28	-0.003*
dependency ratio	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.002*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

(a) Average annual change in ratios determined using linear regression analysis.

Source: AIHW analysis of ABS population estimates and projections based on the 2001 Census of Population and Housing.





Source: AIHW analysis of ABS population estimates and projections based on the 2001 Census of Population and Housing

Figure 2.10.2: Youth dependency rate and aged dependency rate, by Indigenous status, 1996–2005

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. While 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.

ABS population estimates

The ABS refers to Indigenous population estimates and projections as experimental due to 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.

References

ABS 2004. Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians 1991–2009. ABS cat. no. 3238.0. Canberra: ABS.

2.11 Single-parent families by age group

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 2001 Census of Population and Housing and the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (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 six-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 ABS Census of Population and Housing is conducted by the ABS at five-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.

While 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.

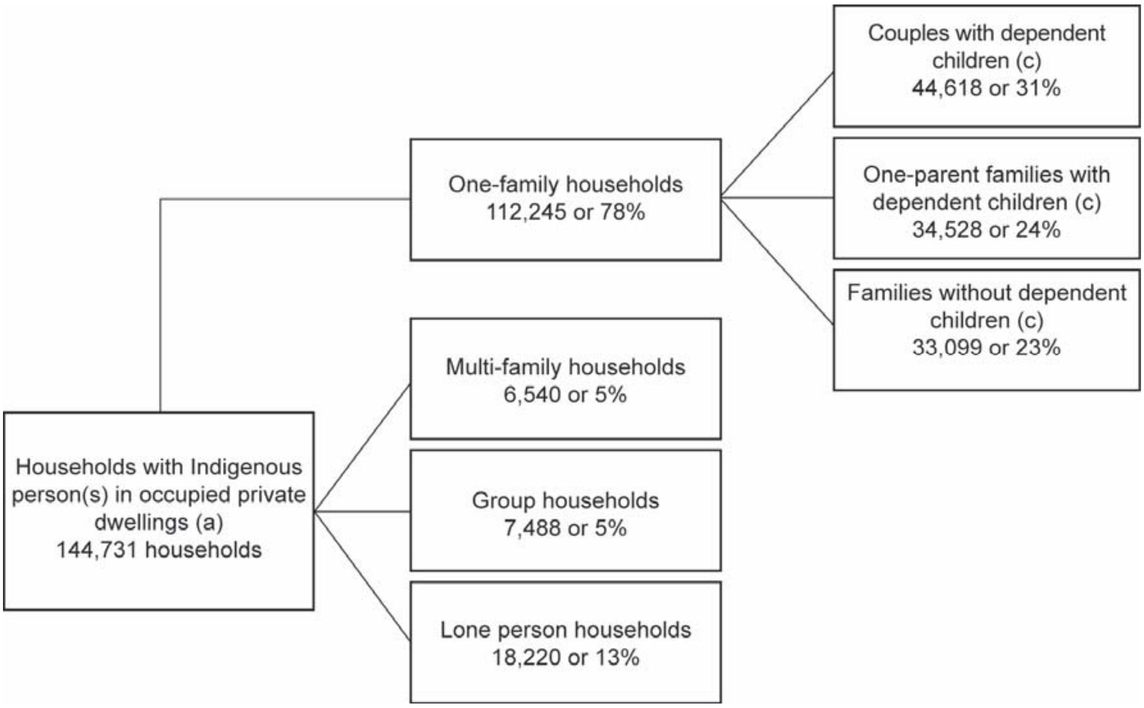
The Census collects data on family type, household type, household composition and relationships in the household. Indigenous households are defined as households with at least one Indigenous person, of any age resident on Census night. One-parent (single-parent) families are defined as families comprising a person who has no spouse or partner usually present 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 as 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

- In 2001, of the 144,731 Indigenous households, 112,245 (78%) were one-family households, 18,220 (13%) were lone-person households, 7,488 (5%) were group households and 6,540 (5%) were multi-family households (Figure 2.11.1).
- Of the 112,245 one-family households, 44,618 (31%) were couples with dependent children, 34,528 (24%) were one-parent families with dependent children and 33,099 (23%) were families without dependent children (Table 2.11.1).
- In 2001, approximately 34,528 households with Indigenous person(s) were one-parent families with dependent children. This was 41% of all Indigenous households with dependent children. Approximately 20% of other households with dependent children were one-parent families (Table 2.11.1).
- Approximately 15% of Indigenous households with dependent children had four or more children compared to 6% of other households. Indigenous one-parent families with dependent children were twice as likely to have four children and seven times as likely to have seven or more children as other one-parent families.
- In 2001, one-family Indigenous households were three times as likely as other one-family households to be one-parent families with dependents (31% compared with 10%), less likely to be families without dependants (30% compared with 50%) and equally likely to be couples with dependent children (around 40%) (Figure 2.11.2).
- In 2001, among Indigenous persons in occupied private dwellings, approximately 39% were children under the age of 15 years. This compared to 20% among non-Indigenous persons. Indigenous persons were also twice as likely to be classified as a lone parent (8% compared with 4%) and half as likely to be classified as a husband, wife or partner in a couple relationship as non-Indigenous persons (23% compared with 46%) (Table 2.11.2).
- 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 to 2% of non-Indigenous persons (Table 2.11.2).



(a) Households occupied by usual residents, where household could be classified.

(b) Households with two or more families.

(c) Dependent children are defined as children under 15 years of age, or those aged 15–24 years who were full-time students.

Source: ABS 2003.

Figure 2.11.1: Indigenous household composition, 2001

Table 2.11.1: Number and percentage of dependent children[a][b] in occupied private dwellings, by household composition and Indigenous status, 2001

	Number of dependent children					
	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	13,403	13,770	27,173	617	16	27,806
2	15,232	10,648	25,880	1,119	69	27,068
3	9,231	5,880	15,111	919	107	16,137
4	4,444	2,724	7,168	556	152	7,876
5	1,375	994	2,369	288	132	2,789
6	549	318	867	169	116	1,152
7 or more	385	191	576	218	249	1,043
Total	**44,618**	**34,528**	**79,146**	**3,882**	**844**	**83,872**
Percentage	**53.2**	**41.2**	**94.4**	**4.6**	**1.0**	**100.0**
Rate ratio[c]	**0.7**	**2.1**	**1.0**	**3.0**	**37.3**	**1.0**
			Other households			
1	610,226	234,824	845,050	13,044	139	858,233
2	781,481	156,617	938,098	14,837	179	953,114
3	326,035	54,797	380,832	5,452	139	386,423
4	85,940	14,268	100,208	1,683	93	101,984
5	15,419	3,291	18,710	531	34	19,275
6	4,381	660	5,041	181	20	5,242
7 or more	1,876	226	2,102	104	20	2,226
Total	**1,825,358**	**464,681**	**2,290,039**	**35,834**	**628**	**2,326,501**
Percentage	**78.5**	**20.0**	**98.4**	**1.5**	**0.0**	**100.0**
			All households			
1	623,629	248,594	872,223	13,661	155	886,039
2	796,713	167,265	963,978	15,956	248	980,182
3	335,266	60,677	395,943	6,371	246	402,560
4	90,384	16,992	107,376	2,239	245	109,860
5	16,794	4,285	21,079	819	166	22,064
6	4,930	978	5,908	350	136	6,394
7 or more	2,261	417	2,678	322	269	3,269
Total	**1,869,976**	**499,209**	**2,369,185**	**39,716**	**1,472**	**2,410,373**
Percentage	**77.6**	**20.7**	**98.3**	**1.6**	**0.1**	**100.0**

(continued)

Table 2.11.1 (continued): Number and percentage of dependent children[(a)(b)] in occupied private dwellings, by household composition and Indigenous status, 2001

	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	30.0	39.9	34.3	15.9	1.9	33.2
2	34.1	30.8	32.7	28.8	8.2	32.3
3	20.7	17.0	19.1	23.7	12.7	19.2
4	10.0	7.9	9.1	14.3	18.0	9.4
5	3.1	2.9	3.0	7.4	15.6	3.3
6	1.2	0.9	1.1	4.4	13.7	1.4
7 or more	0.9	0.6	0.7	5.6	29.5	1.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			Other households			
1	33.4	50.5	36.9	36.4	22.1	36.9
2	42.8	33.7	41.0	41.4	28.5	41.0
3	17.9	11.8	16.6	15.2	22.1	16.6
4	4.7	3.1	4.4	4.7	14.8	4.4
5	0.8	0.7	0.8	1.5	5.4	0.8
6	0.2	0.1	0.2	0.5	3.2	0.2
7 or more	0.1	0.0	0.1	0.3	3.2	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	0.5	0.2	0.9
2	0.8	0.9	0.8	0.7	0.5	0.8
3	1.2	1.4	1.1	1.5	0.8	1.2
4	2.1	2.3	2.0	2.5	1.1	2.1
5	3.4	3.4	3.4	3.6	1.4	3.6
6	4.7	4.7	4.4	4.9	1.5	5.2
7 or more	7.1	6.6	6.4	6.9	1.6	9.2
Total	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

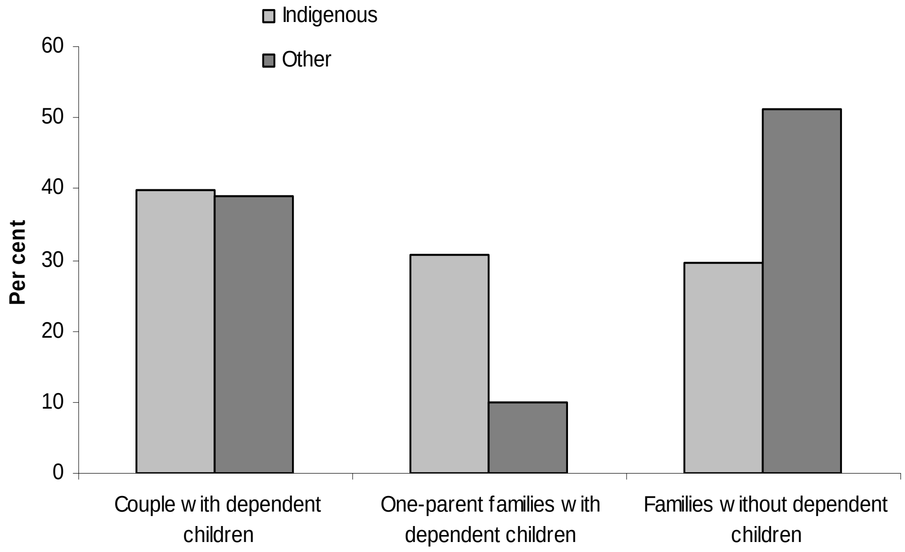
(a) Under 15 years of age. Includes up to three temporarily absent children.

(b) Persons enumerated at home.

(c) Ratio—Indigenous:other.

Note: One-parent families in multiple households have not been separately identified.

Source: ABS 2003.



Source: ABS 2003.

Figure 2.11.2: Selected family types as a proportion of all one-family households, 2001

Table 2.11.2: Relationship in household, persons in occupied private dwellings, 2001

	Indigenous persons		Non-Indigenous persons		All persons	
	No.	%	No.	%	No.	%
Husband, wife or partner[(a)]	90,937	23.1	7,826,912	45.7	8,001,824	43.9
Lone parent	31,166	7.9	721,911	4.2	762,632	4.2
Child under 15 years	151,453	38.5	3,489,370	20.4	3,709,854	20.4
Dependent student (15–24 years)	14,294	3.6	855,268	5.0	876,048	4.8
Non-dependent child	28,028	7.1	1,067,043	6.2	1,111,863	6.1
Other related individual						
Brother/sister	7,276	1.9	172,704	1.0	183,528	1.0
Father/mother	2,348	0.6	85,201	0.5	88,801	0.5
Grandchild	2,473	0.6	18,891	0.1	21,909	0.1
Grandfather/grandmother	548	0.1	9,907	0.1	10,722	0.1
Cousin	2,243	0.6	12,182	0.1	14,688	0.1
Uncle/aunt	1,321	0.3	7,390	—	8,891	0.1
Nephew/niece	3,980	1.0	16,935	0.1	21,289	0.1
Other	2,473	0.6	27,915	0.2	33,732	0.2
Total	22,662	5.8	351,125	2.1	383,560	2.1
Unrelated individual	5,938	1.5	140,590	0.8	151,165	0.8
Group household member	8,870	2.3	574,260	3.4	596,040	3.3
Lone person	18,220	4.6	1,544,001	9.0	1,616,214	8.9
Total[(b)]	**393,682**	**100.0**	**17,139,209**	**100.0**	**18,229,855**	**100.0**

(a) Includes people in tribal marriages and same-sex couples.

(b) Includes persons not at home on Census night, and those in other not classifiable households.

Source: ABS 2003.

Additional information

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 2.11.3).
- 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.
- Around 18% of Indigenous persons with reported fair/poor health were lone parents compared to 15% of Indigenous persons with excellent/very good/good health status (Table 2.11.4).
- A higher proportion of Indigenous persons whose highest year of school completed was Year 11 or below were lone parents that Indigenous persons who completed Year 12 (19% compared to 12%).
- Approximately 10% of Indigenous persons who were employed were lone parents compared to 23% of Indigenous persons who were not in the labour force.
- A higher proportion of renters were lone parents (19%) than home owners (8%).
- Approximately 19% of Indigenous persons who experienced stressors in the last 12 months were lone parents.

Table 2.11.3: 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 National Health Survey.

Table 2.11.4: Lone parents, by selected population characteristics: Indigenous persons aged 15 years and older, 2004–05

	Lone parent	Other	Total
	%	%	%
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[(a)]			
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 persons aged 15 years and over	46,635	247,006	293,641

(a) Data are based on Indigenous persons aged 18 years and older.

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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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).*

For the 2002 NATSISS it was estimated that there were 165,700 Indigenous households compared with 144,700 enumerated in the 2001 Census. While 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.

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 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.

2.12 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 indicator come from the National Aboriginal and Torres Strait Islander Social Survey (NATSISS), 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 or 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, 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.

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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 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 change in a type of care (for example, from acute to rehabilitation).

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.

While 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 five-year period 2000–04 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–03 and year of registration of death for 2004. This is because mortality data by year of occurrence of death are a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

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 fianancial 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 last 12 months and neighbourhood community problems, and are presented in the tables and figures below.

Victim of physical or threatened violence and personal stressors

- In 2002, approximately 24% of Indigenous Australians aged 15 years and over and 22% of Indigenous Australians aged 18 years and over reported they were a victim of physical or threatened violence in the last 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 last 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 last 12 months. This compared to 57% of non-Indigenous Australians (Table 2.12.1). The most common stressors experienced by Indigenous Australians aged 18 years and over 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 2.12.1). Indigenous Australians aged 18–54 years were twice as likely and Indigenous Australians aged 55 years and over were four times as likely to be victims of physical or threatened violence than non-Indigenous Australians of the same age.
- 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 last 12 months than non-Indigenous Australians across all age groups (Table 2.12.1).

Table 2.12.1: Issues of community safety, by Indigenous status and age group, persons aged 18 years and older, 2002

	18–24			**25–34**			**35–44**			**45–54**			**55+**			**Total**[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**
	%	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**	
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*	20	9	2.2*
Personal stressors experienced in last 12 months																		
Mental illness[b]	14	9	1.6*	17	9	1.9*	17	9	1.9*	19	9	2.1*	12	6	2.0*	16	8	2.0*
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	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	7	3.6*
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	3	3.7*
Witness to violence	17	4	4.3*	16	4	4.0*	16	3	5.3*	13	3	4.3*	12	—[c]	31.7*	15	3	5.0*
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	3	6.0*
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	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	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	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*	*57*	*1.5**
No stressors reported	16	41	0.4*	15	40	0.4*	18	39	0.5*	18	39	0.5*	23	50	0.5*	17	43	0.4*
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**	. .

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

(a) Totals for victim of physical or threatened violence are age standardised as this measure was found to be associated by 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 General Social Survey (GSS).

Victim of physical or threatened violence and personal stressors by sex

- A slightly higher proportion of Indigenous males aged 15 years and over than Indigenous females aged 15 years and over reported being a victim of physical or threatened violence (26% compared to 23%). 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 2.12.2).
- A higher proportion of Indigenous females aged 18 years and over reported experiencing at least one stressor in the last 12 months than Indigenous males (85% compared to 80%) (Table 2.12.2).

Table 2.12.2: Issues of community safety, persons aged 18 years and over, by Indigenous status and sex, 2002

	Males		**Females**	
	Indigenous	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Victim of physical or threatened violence in last 12 months[(a)]	21*	11*	19*	7*
Personal stressors experienced in last 12 months				
Mental illness[(b)]	12*	7*	20*	9*
Death of family member or close friend	45*	19*	48*	21*
Alcohol- or drug-related problems	22*	7*	27*	8*
Abuse or violent crime	9*	2*	13*	4*
Witness to violence	14*	2*	17*	3*
Trouble with the police	17*	3*	19*	3*
Member of family sent to jail/currently in jail	19	. .	20	. .
Overcrowding at home	18	. .	23	. .
Discrimination/racism	17	. .	19	. .
Total experienced stressors [(c)(d)]	*80**	*56**	*85**	*59**
No stressors reported	20*	44*	15*	41*
Total	**100**	**100**	**100**	**100**

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

(a) Proportions for victim of physical or threatened violence are age standardised as this measure was found to be associated by 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 a victim 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 2.12.3).
- 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 2.12.3).
- The proportion of Indigenous Australians aged 18 years and over who experienced stressors in the last 12 months ranged from 75% in Tasmania to 88% in the Northern Territory and the Australian Capital Territory (Table 2.12.3).

Table 2.12.3: 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 for victim of physical or threatened violence are age standardised as this measure was found to be associated by 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 proportion of Indigenous Australians aged 15 years and over who were a victim of physical or threatened violence was similar in remote and non-remote areas (23% and 25% respectively) (Table 2.12.4; Figure 2.12.1).
- 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 to 81%) (Table 2.12.4). Indigenous Australians were more likely to have experienced stressors than non-Indigenous Australians across all remoteness areas (Table 2.12.5).

Table 2.12.4: Issues of community safety, Indigenous persons aged 15 years and over, by sex, 2002

	Remote	**Non-remote**	**Total**
	%	**%**	**%**
Victim of physical or threatened violence in last 12 months	22.7	25.0	24.3
Personal stressors experienced in last 12 months[(a)]			
Mental illness[(b)]	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[(a)(c)]	*85.5*	*81.0*	*82.3*
No stressors reported	14.5	19.0	17.7
Total	**100.0**	**100.0**	**100.0**

(a) Sum of components may be more than total as persons may have reported more than one type of stressor.

(b) Data collected for non-remote areas only.

(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 2.12.5: Issues of community safety, persons aged 18 years and over, by Indigenous status and remoteness, 2002

	Major cities		**Inner regional**		**Outer regional**		**_Subtotal non-remote_**		**Remote**		**Very remote(a)**		**_Subtotal remote_**	
	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(b)	19*	9*	21*	10*	20*	8*	_20*_	_9*_	20*	8*	20	n.p.	_20_	_n.p._
Personal stressors experienced in last 12 months														
Mental illness(c)	19*	8*	18*	8*	11*	7*	_16*_	_8*_	n.a.	6(d)	n.a.	n.p.	_. ._	_n.p._
Death of family member or close friend	42*	20*	43*	20*	44*	21*	_43*_	_20*_	51*	15*(d)	58	n.p.	_56_	_n.p._
Alcohol or drug related problems	22*	8*	20*	7*	19*	6*	_21*_	_7*_	26*	8*(d)	41	n.p.	_37_	_n.p._
Abuse or violent crime	11*	3*	7*	3*	8*	3*	_9*_	_3*_	13*	6*(d)	19	n.p.	_17_	_n.p._
Witness to violence	11*	3*	7*	3*	10*	2*	_10*_	_3*_	19*	3*(d)	34	n.p.	_30_	_n.p._
Trouble with the police	18*	3*	15*	3*	16*	4*	_16*_	_3*_	18*	4*(d)	23	n.p.	_22_	_n.p._
Member of family sent to jail/currently in jail	20	n.a.	14	n.a.	17	n.a.	_17_	n.a.	19	n.a.	28	n.p.	_25_	_n.p._
Overcrowding at home	16	n.a.	9	n.a.	11	n.a.	_13_	n.a.	25	n.a.	50	n.p.	_42_	_n.p._
Discrimination/racism	22	n.a.	15	n.a.	17	n.a.	_19_	n.a.	17	n.a.	17	n.p.	_17_	_n.p._
Total experienced stressors(e)(f)	_83*_	_58*_	_81*_	_58*_	_79*_	_56*_	_81*_	_57*_	_80*_	_51*_	_88_	_n.p._	_86_	_n.p._
No stressors reported	17*	42*	19*	42*	21*	44*	_19*_	_43*_	20*	49*	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 by age.

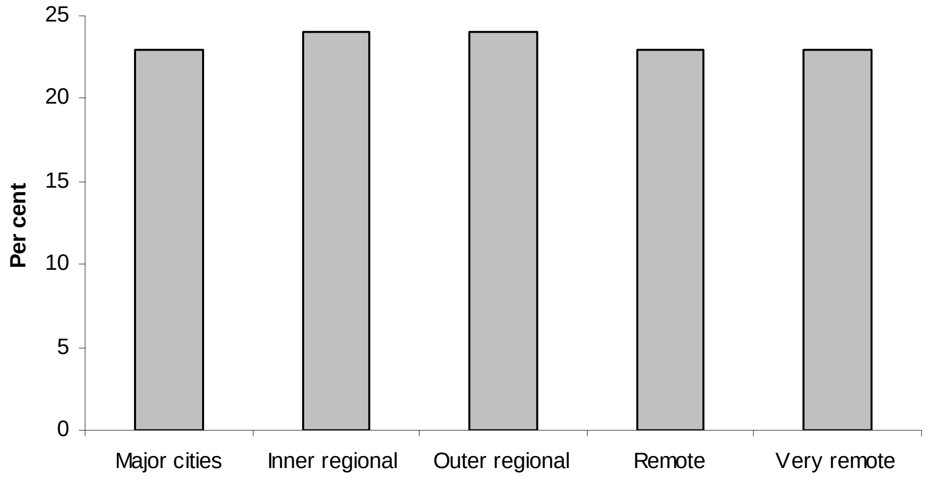
(c) Data collected for non-remote areas only in the NATSISS.

(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.

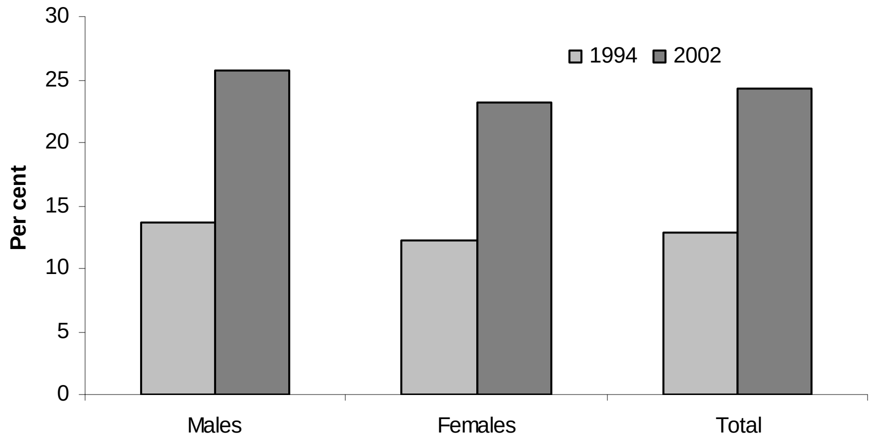


Source: ABS and AIHW analysis of 2002 NATSISS.

Figure 2.12.1: Percentage of Indigenous persons aged 18 years and over reporting they were a victim of physical or threatened violence in last 12 months, by remoteness, 2002

Time series analysis

- A higher proportion of Indigenous persons aged 15 years and over reported being a victim of physical or threatened violence in the last 12 months in 2002 than in 1994 (13% compared to 24%) (Figure 2.12.2).



Source: ABS and AIHW analysis of 1994 National Aboriginal and Torres Strait Islander Survey and 2002 NATSISS.

Figure 2.12.2: Percentage of Indigenous persons aged 15 years and over reporting they were a victim of physical or threatened violence in last 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 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 quintile of household income (Table 2.12.6).
- Approximately 15% of Indigenous Australians aged 18 years and over had been a witness to violence in the last 12 months. Indigenous Australians were five times as likely to have been a witness to violence as non-Indigenous Australians. 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 2.12.6: 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 of those who were victim of physical or threatened violence				Proportion of those 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[(e)]	14[(e)]	9	1.6	9[(e)]	14[(e)]	2	7.0*
Index of disparity								
1st quintile	24	21	10	2.1*	18	17	4	4.3*
5th quintile	26[(e)]	18[(e)]	7	2.6*	8[(e)]	11[(e)]	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 2.12.6 (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.**

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

(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 2.12.7).
- 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 2.12.7) and similar for males and females (73% and 74% respectively) (Table 2.12.8).

Table 2.12.7: Neighbourhood/community problems, by age group: Indigenous persons aged 15 years and older, 2002

	15–24 years	25–34 years	35–44 years	45–54 years	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 2.12.8: Neighbourhood/community problems, by sex: Indigenous persons aged 15 years and older, 2002

	Male	Female
	%	%
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 2.12.9).

Table 2.12.9: Neighbourhood/community problems, Indigenous persons aged 15 years and older, NSW, Vic, Qld and WA, 2002

	NSW	Vic	Qld	WA
	%	%	%	%
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 SA, NT, Tas and ACT not available for publication due to 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 reported most types of neighbourhood/community problems in remote areas than in non-remote areas (Table 2.12.10).

Table 2.12.10: Neighbourhood/community problems, by remoteness: Indigenous persons aged 15 years and older, 2002

	Remote	Non-remote
	%	%
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)]		
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 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 2.12.11).

Table 2.12.11: Neighbourhood/community problems, by selected health and population characteristics: Indigenous persons aged 15 years and over, 2002

	Neighbourhood/community problem reported			
	Family violence	**Assault**	**Sexual assault**	**Personal safety day or night**[(a)]
	%	%	%	%
Self-assessed health status				
Excellent/good	40.1	44.8	43.9	40.6
Good	33.8	30.3	32.7	30.0
Fair/poor	25.7	24.4	23.3	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	19.0	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	7.1	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	81.5	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 or calculated 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.

Hospitalisations

- For the period July 2002 to June 2004, there were 7,856 hospitalisations of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined in which assault was recorded as the principal diagnosis. This represented approximately 2.5% of total hospitalisations of Indigenous Australians in these states and territories.
- Overall, in the four states and territories combined, Indigenous Australians were hospitalised for assault at around 17 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 55–64 and 65 years and over were hospitalised for assault at around 20 times the rate of other males, and Indigenous females aged 25–34, 35–44 and 45–54 years were hospitalised for assault at around 60 times the rate of other females (Table 2.12.12).

Table 2.12.12: Hospitalisations for principal diagnosis of assault, by Indigenous status, sex and age, Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

	Indigenous				Other(e)				
	Number	Rate per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Number	Rate per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Ratio(i)
					Males				
0–4	80	2.2	1.7	2.7	100	0.2	0.2	0.3	10.0*
5–14	89	1.2	1.0	1.4	227	0.2	0.2	0.3	5.3*
15–24	895	16.3	15.2	20.5	3,590	3.5	3.4	3.6	4.6*
25–34	1,162	26.7	25.1	36.2	2,728	2.7	2.6	2.8	10.1*
35–44	930	27.5	25.8	30.1	1,841	1.7	1.6	1.8	16.3*
45–54	319	14.9	13.3	14.8	914	0.9	0.8	1.0	16.5*
55–64	97	9.2	7.3	5.5	341	0.4	0.4	0.5	20.6*
65+	24	3.5	2.1	2.4	145	0.2	0.1	0.2	19.6*
					Females				
0–4	68	1.9	1.5	2.4	91	0.2	0.2	0.3	9.2*
5–14	82	1.2	0.9	1.4	88	0.1	0.1	0.1	12.7*
15–24	1,054	19.3	18.1	20.5	529	0.5	0.5	0.6	35.1*
25–34	1,621	34.5	32.8	36.2	584	0.6	0.5	0.6	59.8*
35–44	1,054	28.4	26.7	30.1	517	0.5	0.4	0.5	60.2*
45–54	313	13.4	11.9	14.8	225	0.2	0.2	0.3	60.2*
55–64	53	4.4	3.2	5.5	88	0.1	0.1	0.1	36.5*
65+	14	1.5	0.7	2.4	97	0.1	0.1	0.1	15.8*
					Persons				
0–4	148	2.1	1.7	2.4	191	0.2	0.2	0.2	9.6*
5–14	171	1.2	1.0	1.4	315	0.2	0.1	0.2	7.4*
15–24	1,949	17.8	17.0	18.6	4,120	2.1	2.0	2.1	8.5*
25–34	2,783	30.7	29.6	31.9	3,312	1.6	1.6	1.7	18.9*
35–44	1,984	28.0	26.8	29.2	2,358	1.1	1.0	1.1	25.9*
45–54	632	14.1	13.0	15.2	1,139	0.6	0.5	0.6	25.1*
55–64	150	6.6	5.5	7.6	429	0.3	0.3	0.3	23.1*
65+	38	2.4	1.6	3.1	242	0.1	0.1	0.2	17.8*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p<.05$ 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 (National Centre for Classification in Health 2004). 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 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) Age-specific rate per 1,000 population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio: Indigenous rate divided by rate for other Australians.

Source: AIHW analysis of AIHW National Hospital Morbidity Database

Hospitalisations by state/territory

- In Queensland, Indigenous Australians were hospitalised for assault at nine times the rate of other Australians. In the Northern Territory and South Australia, Indigenous Australians were hospitalised for assault at 13 and 17 times the rate of other Australians, and in Western Australia, Indigenous Australians were hospitalised for assault at 30 times the rate of other Australians (Table 2.12.13).

Table 2.12.13: Hospitalisations for principal diagnosis of assault, by Indigenous status, Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

	Indigenous				Other(e)				
	Number	Rate per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Number	Rate per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Ratio(i)
Qld	2,075	8.4	8.0	8.8	6,518	0.9	0.9	0.9	9.4*
WA	3,004	23.0	22.1	23.9	2,857	0.8	0.7	0.8	30.4*
SA	693	13.5	12.4	14.5	2,308	0.8	0.8	0.8	16.7*
NT	2,084	17.8	17.0	18.7	423	1.4	1.3	1.5	12.8*
Qld, WA, SA, NT	**7,856**	**14.4**	**14.1**	**14.7**	**12,106**	**0.8**	**0.8**	**0.9**	**17.0***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

(k) Data are from public and most private hospitals. Excludes private hospitals in the Northern Territory.

(l) Categories are based on the ICD-10-AM (National Centre for Classification in Health 2004). 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).

(m) Financial year reporting.

(n) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(o) Other includes hospitalisations of non-Indigenous patients and those for whom Indigenous status was not stated.

(p) Directly age standardised using the Australian 2001 Standard population.

(q) LCL = lower confidence limit.

(r) UCL = upper confidence limit.

(s) Rate ratio Indigenous:Other.

Note: it should be noted that a person can have more than one hospital episode associated with a single assault.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Time series analysis

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australian hospitalisation for assault over the five-year period 1998–99 to 2003–04 are presented in Table 2.12.14 and Figure 2.12.3 below.

- Over the period 1998–99 to 2003–04, 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.
- 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 2003–04, which reflects both a relative and absolute decline in the gap between hospitalisation rates for Indigenous and other Australian hospitalisations from assault.

It should be noted 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 impact on 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 2.12.14: Age-standardised hospitalisation rates, rate ratios and rate differences from assault, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–2000	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	16.2	15.3	15.2	15.8	14.6	13.6	−0.4*
Females	16.6	16.1	15.1	15.5	15.0	14.5	−0.4*
Persons	16.4	15.7	15.1	15.6	14.8	14.1	−0.4*
Other Australian[(b)] rate per 1,000							
Males	1.4	1.4	1.5	1.5	1.4	1.3	0.0
Females	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Persons	0.9	0.9	0.9	0.9	0.9	0.8	0.0
Rate ratio[(c)]							
Males	11.5	11.1	10.2	10.8	10.4	10.1	−0.2*
Females	19.0	18.8	16.3	17.1	17.4	17.4	−0.3
Persons	18.7	18.3	16.4	17.3	17.2	16.8	−0.3*
Rate difference[(d)]							
Males	14.8	13.9	13.7	14.4	13.2	12.3	−0.4*
Females	15.7	15.2	14.1	14.6	14.1	13.7	−0.4*
Persons	15.5	14.8	14.2	14.7	13.9	13.2	−0.4*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

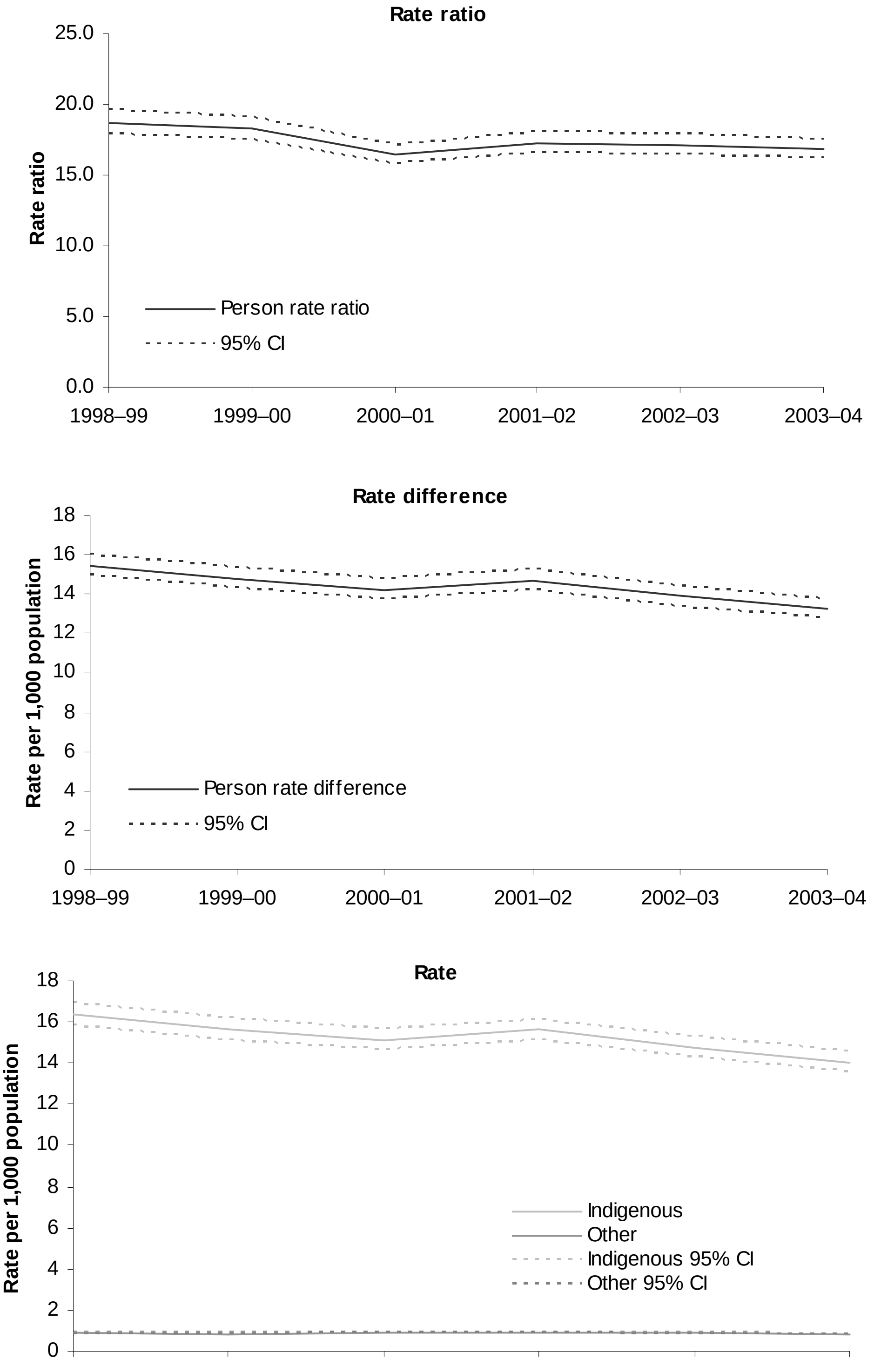
(b) Includes hospitalisations of non-Indigenous Australians and those for whom Indigenous status was not stated.

(c) Hospitalisation rate of Indigenous Australians divided by the hospitalisation rate for other Australians.

(d) Hospitalisation rate for Indigenous Australians minus the hospitalisation rate for other Australians.

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

Source: AIHW analysis of AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 2.12.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from assault, Qld, WA, SA and NT, 1998–99 to 2003–04

Mortality

Tables 2.12.15 and 2.12.16 present deaths from assault in Queensland, Western Australia, South Australia and the Northern Territory over the five-year period 2000–2004.

- Over the period 2000–2004, there were 147 deaths of Indigenous people from assault (homicide) in Queensland, Western Australia, South Australia and the Northern Territory combined. This represented approximately 2% of total deaths of Aboriginal and Torres Strait Islander people in these states and territories.
- Indigenous Australians in the four states and territories combined died from assault at 10 times the rate of non-Indigenous Australians.

Mortality by age and sex

- Mortality rates for assault were highest among those aged 25–34 and 35–44 years in both the Indigenous population and non-Indigenous population (Figure 2.12.4). Indigenous males in these age groups died from assault at between 12 and 17 times the rate of non-Indigenous Australians of the same age, and Indigenous females in these age groups died from assault at between 13 and 19 times the rate of non-Indigenous females of the same age (Table 2.12.15).

Table 2.12.15: Deaths from assault (homicide), by Indigenous status, sex and age, Qld, WA, SA and NT, 2000–2004[a][b][c][d][e]

	Indigenous				Non-Indigenous				
	Number	Rate per 100,000[f]	LCL 95%[g]	UCL 95%[h]	Number	Rate per 100,000[f]	LCL 95%[g]	UCL 95%[h]	Ratio[i]
Males									
0–4	n.p.	n.p.	n.p.	n.p.	14	1.2	0.6	1.9	n.p.
5–14	n.p.	n.p.	n.p.	n.p.	11	0.4	0.2	0.7	n.p.
15–24	13	9.8	4.5	15.1	38	1.5	1.0	2.0	6.4*
25–34	27	25.0	15.6	34.5	53	2.1	1.5	2.6	12.1*
35–44	27	32.8	20.4	45.1	52	1.9	1.4	2.4	17.0*
45–54	10	19.3	7.3	31.3	36	1.4	1.0	1.9	13.4*
55-64	n.p.	n.p.	n.p.	n.p.	35	1.9	1.3	2.6	n.p.
65+	0	0.0	—	—	15	0.8	0.4	1.1	—
Females									
0–4	n.p.	n.p.	n.p.	n.p.	13	1.2	0.5	1.8	n.p.
5–14	n.p.	n.p.	n.p.	n.p.	11	0.5	0.2	0.7	n.p.
15–24	21	15.8	9.1	22.6	30	1.3	0.8	1.7	12.5*
25–34	23	19.7	11.6	27.7	27	1.1	0.7	1.5	18.5*
35–44	11.0	12.2	5.0	19.5	33	1.2	0.8	1.6	10.1*
45–54	n.p.	n.p.	n.p.	n.p.	17	0.7	0.4	1.0	n.p.
55-64	n.p.	n.p.	n.p.	n.p.	6	0.3	0.1	0.6	n.p.
65+	n.p.	n.p.	n.p.	n.p.	12	0.5	0.2	0.8	n.p.
Persons									
0–4	n.p.	n.p.	n.p.	n.p.	27	1.2	0.8	1.7	n.p.
5–14	n.p.	n.p.	n.p.	n.p.	22	0.5	0.3	0.6	n.p.
15–24	34	12.8	8.5	17.1	68	1.4	1.1	1.7	9.2*
25–34	50	22.3	16.1	28.4	80	1.6	1.2	1.9	14.2*
35–44	38	22.0	15.0	29.1	85	1.6	1.2	1.9	14.1*
45–54	13	12.0	5.5	18.6	53	1.1	0.8	1.3	11.3*
55-64	n.p.	n.p.	n.p.	n.p.	41	1.1	0.8	1.5	n.p.
65+	n.p.	n.p.	n.p.	n.p.	27	0.6	0.4	0.8	n.p.

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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 jurisdcitions 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 five-year groupings due to small numbers each year.

(c) These data excludes a total of 18 deaths where Indigenous status was not stated.

(d) While 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 occurrence except the latest year which is based on year of registration.

(f) Age-specific rate per 100,000 population.

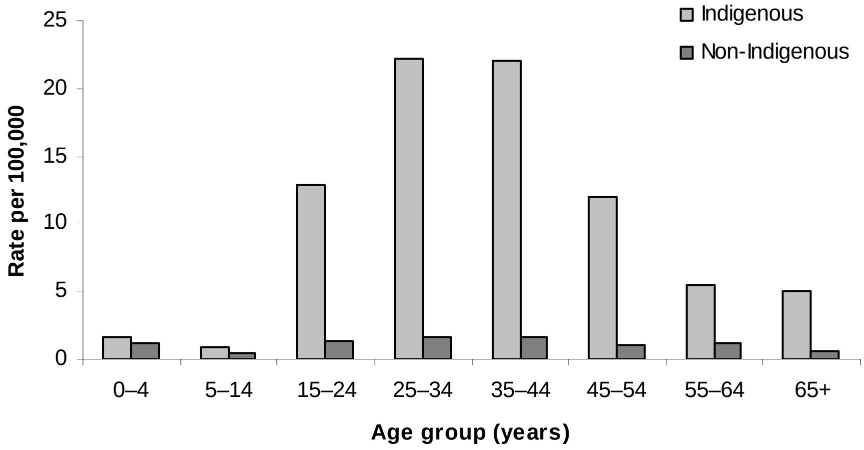
(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio Indigenous:non-Indigenous.

Note: The completeness of identification of Indigenous deaths can vary by age.

Source: AIHW analysis of AIHW National Mortality Database.



Source: AIHW analysis of AIHW National Mortality Database.

Figure 2.12.4: Age-specific mortality rates for assault (homicide), by Indigenous status, Qld, WA, SA and NT, 2000–2004

Mortality by state/territory

- In Queensland and South Australia, Indigenous Australians died from assault at five and seven times the rate of non-Indigenous Australians. In the Northern Territory and Western Australia, Indigenous Australians died from assault at 11 and 12 times the rate of non-Indigenous Australians in these states and territories respectively (Table 2.12.16).

Table 2.12.16: Deaths from assault (homicide), by Indigenous status, Qld, WA, SA and NT, 2000–2004[a][b][c][d]

	Indigenous				Non-Indigenous				
	Number	Rate per 100,000[e]	LCL 95%[f]	UCL 95%[g]	Number	Rate per 100,000[e]	LCL 95%[f]	UCL 95%[g]	Ratio[h]
Qld	40	6.4	4.3	8.5	229	1.3	1.3	1.3	5.1*
WA	28	10.5	5.8	15.2	87	0.9	0.9	0.9	12.2*
SA	9	7.4	2.4	12.3	85	1.0	1.0	1.0	7.3*
NT	70	23.9	17.7	30.1	20	2.2	2.2	2.2	11.0*
Qld, WA, SA, NT [i]	**147**	**11.3**	**9.3**	**13.4**	**421**	**1.1**	**1.1**	**1.1**	**10.0***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

(l) Data are presented in five-year groupings due to small numbers each year.

(m) These data exclude a total of 18 deaths where Indigenous status was not stated.

(n) While 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.

(o) Deaths are by year of occurrence except the latest year which is based on year of registration.

(p) Directly age standardised using the Australian 2001 Standard population.

(q) LCL = lower confidence limit.

(r) UCL = upper confidence limit.

(s) Rate ratio Indigenous:Non-Indigenous.

(t) 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 54% for Queensland, 72% for Western Australia, 66% for South Australia and 95% for the Northern Territory. The completeness of Indigenous identification for avoidable deaths may differ from the estimates for 'all causes'.

Source: AIHW analysis of AIHW 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 reasonable coverage of Indigenous deaths in their recording systems.

There is a consistent time series of population estimates from 1991. Due to 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 affects the comparability of the data, the analysis reported for this indicator has been done for two time periods—1991–1996 and 1997–2003. Data for 2004 was not used because of late registration of some deaths. Data are presented in three–four year groupings due to low numbers of deaths from assault each year.

Due to 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 2000–2003 are presented in Table 2.12.17 and Figure 2.12.5.

- 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 2000–2003, there were 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 comparisons with the non-Indigenous population.

Table 2.12.17: 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 2000–2003

	1991-1993	1994-1996	Difference in rates	1997-1999	2000-2003	Difference in rates
Indigenous deaths	76	64	. .	43	97	. .
Other deaths(b)	146	169	. .	152	166	. .
Indigenous rate per 100,000	23.3	17.3	−6.0	10.9	17.4	6.5*
Other rate(b) per 100,000	1.5	1.7	0.2	1.5	1.2	−0.3*
Rate ratio(c)	15.1	10.2	. .	7.3	14.6	. .
Rate difference(d)	21.7	15.6	. .	9.4	16.2	. .

* Represents statistically significant differences at the p<.05 level over the period 1991–1993 to 1994–1996 and 1997–1999 to 2000–2003.

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

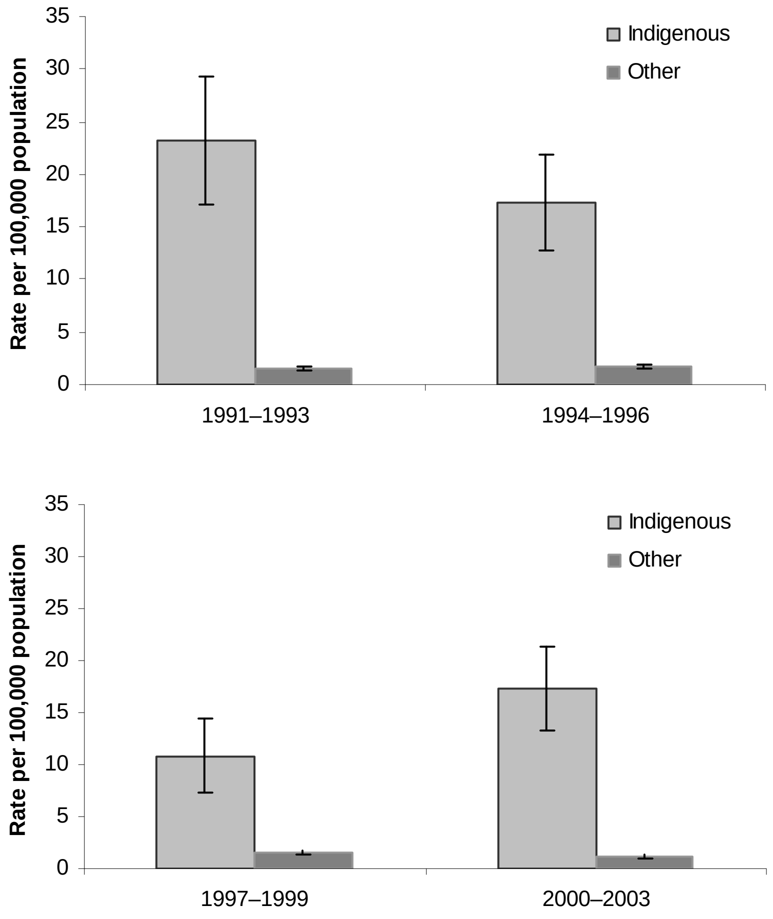
(g) Includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

(h) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(i) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

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

Source: AIHW analysis of AIHW National Mortality Database.



Note: Due to coding changes form 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 AIHW National Mortality Database.

Figure 2.12.5: Age-standardised mortality rates from assault (homicide), by Indigenous status, 1991–1993 to 1994–1996 and 1997–1999 to 2000–2003

Victims of homicide

The National Homicide Monitoring Program collects data on all homicides recorded in Australia. Data for the five-year periods 1994–95 to 1998–99 and 1999–2000 to 2003–04 are presented in Table 2.12.18 below.

- Over the five year period 1999–2000 to 2003–04, there were 225 Indigenous victims of homicide recorded in the National Homicide Monitoring Program 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 1999–2000 to 2003–04.
- For approximately 41% of homicides in the period 1999–2000 to 2003–04 in which the victim was Indigenous, the homicide involved a male offender and a male victim and for 36%, the homicide involved a male offender and a female victim.
- For approximately 82% of homicides in the period 1999–2000 to 2003–04 where the victim was Indigenous, both the offender and the victim were not working. This compared to 41% of homicides where the victim was non-Indigenous.
- Domestic altercation was the most common circumstance surrounding homicides in the period 1999–2000 to 2003–04 in which the victim was Indigenous (41%), followed by alcohol-related arguments (24%). The most common circumstance surrounding homicides in which the victim was non-Indigenous was other arguments (other than domestic or alcohol related) (45%).
- For approximately 62% of homicides in the period 1999–2000 to 2003–04 in which the victim was Indigenous, the homicide involved intimate partners or other family members and for 31% the homicide involved friends and acquaintances. The corresponding proportions for homicides involving non-Indigenous victims were 43% and 36% respectively.

Table 2.12.18: 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)]						1999–2000 to 2003–04[(a)]					
	Indigenous victims		Non-Indigenous victims		Total victims[(b)]		Indigenous victims		Non-Indigenous victims		Total victims[(b)]	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Gender[(c)]												
Male offender/male victim	79	41	733	55	812	53	88	41	681	53	769	52
Male offender/female victim	73	38	408	31	481	32	77	36	415	32	492	33
Female offender/male victim	34	18	139	10	173	11	39	18	124	10	163	11
Female offender/female victim	6	3	48	4	54	4	10	5	57	4	67	4
Total	**192**	**100**	**1,328**	**100**	**1,520**	**100**	**214**	**100**	**1,277**	**100**	**1,491**	**100**
Employment status[(c)]												
Offender & victim both working	3	2	133	13	136	12	5	3	192	18	197	16
Neither working	135	85	516	51	651	55	147	82	435	41	582	47
Offender working only	11	7	139	14	150	13	12	7	188	18	200	16
victim working only	9	6	228	22	237	20	15	8	238	23	253	21
Total	**158**	**100**	**1,016**	**100**	**1,174**	**100**	**179**	**100**	**1,053**	**100**	**1,232**	**100**
Circumstance												
Domestic altercation	76	39	354	24	430	26	92	41	388	27	480	29
Alcohol-related argument	53	27	111	8	164	10	55	24	121	8	176	11
Other argument	40	20	709	48	749	45	45	20	651	45	696	42
No apparent motive/unknown	27	14	296	20	323	19	33	15	278	19	311	19
Total	**196**	**100**	**1,470**	**100**	**1,666**	**100**	**225**	**100**	**1,438**	**100**	**1,663**	**100**

(continued)

Table 2.12.18 (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)]						1999–2000 to 2003–04[(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	62	527	43	655	46
Friends & acquaintances	60	32	427	34	487	33	63	31	437	36	500	35
Strangers	6	3	249	20	255	17	13	6	193	16	206	14
Other relationship	10	5	79	6	89	6	1	0	56	5	57	4
Unknown	1	1	7	1	8	1	1	0	14	1	15	1
Total	**188**	**100**	**1,271**	**100**	**1,459**	**100**	**206**	**100**	**1,227**	**100**	**1,433**	**100**
Total[(b)]	**196**		**1,470**		**1,666**		**225**		**1,438**		**1,663**	

(a) Where an offender has been identified.

(b) Excludes victims where racial appearance, gender, 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 genders 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, 1994–2004.

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 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 NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (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 which the respondent may feel frightened or ashamed of 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 as 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 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).

(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 of Aboriginal and Torres Strait Islander people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005).

It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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's 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. 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). While 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/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.

(continued)

Data quality issues (continued)

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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 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 (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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2.13 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 (NATSISS) and the AIC Drug Use Monitoring in Australia (DUMA).

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. It 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.

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 jursidictions 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 includes 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)

The DUMA is an annual survey which has been conducted by the Australian Institute of Criminolgy since 1999 at some locations across Australia. Further sites in Victoria and the Northern Territory (Darwin) are being reported from 2006 onwards. The survey reports on drug use among police detainees at seven 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 the 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 2005. These data are published in the ABS publication, *Prisoners in Australia 2005*.

- As at 30th June 2005, there were 5,656 Indigenous prisoners aged 18 years and over recorded in the National Prison Census. Indigenous prisoners represented approximately 22% of the total prisoner population.
- After adjusting for differences in age structure, the age-standardised rate of imprisonment for Indigenous prisoners was 1,561 per 100,000 adult population compared to 129 per 100,000 adult population for non-Indigenous prisoners, making Indigenous prisoners 12 times more likely than non-Indigenous persons to be in prison at 30 June 2005 (Table 2.13.1).
- Indigenous Australians were imprisoned at a rate of 2,021 per 100,000.

People in prison custody by age and sex

- The median age of Indigenous prisoners was 30 years compared to 33 years for non-Indigenous prisoners (Table 2.13.1).
- Imprisonment rates were highest among those aged 20–34 years in both 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 (3,820 per 100,000 compared to 338 per 100,000).

Table 2.13.1: People in prison custody, by Indigenous status, sex and age group, as at 30 June 2005

Age group (years)	Males			Females			Persons		
	No.	%	Rate[(a)]	No.	%	Rate[(a)]	No.	%	Rate[(a)]
				Indigenous					
Under 18	19	0.4	1,041.7	—	—	—	19	0.3	531.0
18	90	1.7	1,667.0	4	0.8	78.9	94	1.7	897.9
19	166	3.2	3,254.9	17	3.5	338.8	183	3.2	1,808.8
20–24	1,159	22.4	5,229.4	117	24.0	534.8	1,276	22.6	2,897.4
25–29	1,134	21.9	6,411.9	90	18.4	490.2	1,224	21.6	3,395.6
30–34	1,051	20.3	5,899.9	114	23.4	587.9	1,165	20.6	3,131.4
35–39	738	14.3	4,799.4	68	13.9	392.1	806	14.3	2,463.2
40–44	452	8.7	3,286.6	45	9.2	293.5	497	8.8	1,708.9
45–49	212	4.1	1,906.3	23	4.7	191.4	235	4.2	1,015.7
50–54	82	1.6	938.5	10	2.0	106.2	92	1.6	506.9
55–59	39	0.8	622.2	—	—	—	39	0.7	300.3
60–64	13	0.3	315.2	—	—	—	13	0.2	149.4
65 and over	13	0.3	219.0	—	—	—	13	0.2	95.6
Total	**5,168**	**100.0**	**3,819.6**	**488**	**100.0**	**337.6**	**5,656**	**100.0**	**2,021.2**
Mean age	30.7	. .	. .	30.7	. .	. .	30.7	. .	. .
Median age	30.0	. .	. .	30.0	. .	. .	30.0	. .	. .
				Non-Indigenous					
Under 18	18	0.1	30.0	—	—	—	18	0.1	15.3
18	111	0.6	81.2	5	0.4	3.9	116	0.6	43.5
19	287	1.6	205.5	13	1.1	9.8	300	1.6	110.0
20–24	2,854	15.9	402.4	155	12.8	23.0	3,009	15.7	217.5
25–29	3,406	18.9	507.7	240	19.8	36.6	3,646	19.0	274.9
30–34	3,369	18.7	458.7	226	18.6	30.5	3,595	18.7	243.7
35–39	2,676	14.9	374.3	192	15.8	26.6	2,868	14.9	199.6
40–44	1,899	10.6	252.4	153	12.6	20.2	2,052	10.7	136.0
45–49	1,316	7.3	185.2	96	7.9	13.4	1,412	7.4	98.8
50–54	811	4.5	124.2	67	5.5	10.1	878	4.6	66.8
55–59	599	3.3	97.5	39	3.2	6.4	638	3.3	52.2
60–64	353	2.0	75.5	16	1.3	3.5	369	1.9	39.8
65 and over	279	1.6	23.5	11	0.9	0.8	290	1.5	11.0
Total	**17,978**	**100.0**	**238.2**	**1,213**	**100.0**	**15.6**	**19,191**	**100.0**	**125.3**
Mean age	34.9	. .	. .	35.4	. .	. .	35.0	. .	. .
Median age	33.0	. .	. .	34.0	. .	. .	33.0	. .	. .

(continued)

Table 2.13.1 (continued): People in prison custody, by Indigenous status, sex and age group, as at 30 June 2005

Age group (years)	Males			Females			Persons		
	No.	%	Rate[(a)]	No.	%	Rate[(a)]	No.	%	Rate[(a)]
					Total[(b)]				
Under 18	37	0.2	59.9	—	—	—	37	0.1	30.6
18	218	0.9	153.4	9	0.5	6.7	227	0.9	81.9
19	469	2.0	324.0	31	1.8	22.5	500	2.0	176.8
20–24	4,083	17.3	558.2	276	15.9	39.6	4,359	17.2	305.3
25–29	4,607	19.5	669.1	338	19.5	50.2	4,945	19.5	363.0
30–34	4,488	19.0	596.5	345	19.9	45.4	4,833	19.1	319.6
35–39	3,475	14.7	475.8	265	15.3	35.9	3,740	14.8	254.6
40–44	2,418	10.2	315.6	202	11.6	26.2	2,620	10.3	170.4
45–49	1,571	6.7	217.6	119	6.9	16.3	1,690	6.7	116.3
50–54	914	3.9	138.2	81	4.7	12.1	995	3.9	74.7
55–59	665	2.8	107.2	41	2.4	6.7	706	2.8	57.2
60–64	373	1.6	79.0	16	0.9	3.5	389	1.5	41.6
65 and over	301	1.3	25.3	11	0.6	0.8	312	1.2	11.8
Total	**23,619**	**100.0**	**307.4**	**1,734**	**100.0**	**21.9**	**25,353**	**100.0**	**162.5**
Mean age	34.0	. .	. .	34.1	. .	. .	34.0	. .	. .
Median age	32.0	. .	. .	32.0	. .	. .	32.0	. .	. .

(a) Rate per 100,000 adult population.

(b) Includes prisoners whose Indigenous status is unknown.

Source: ABS 2005.

People in prison custody by state/territory

- The proportion of prisoners who were Indigenous was highest in the Northern Territory (81%) and lowest in Victoria (6%) (Table 2.13.2).
- Western Australia and South Australia recorded the highest age-standardised ratios of Indigenous to non-Indigenous rates of imprisonment, with Indigenous persons being 19 and 13 times as likely to be in prison as non-Indigenous Australians in these jurisdictions respectively.

Table 2.13.1: People in prison custody, by Indigenous status, sex and state/territory, 30 June 2005

	Indigenous					Non-Indigenous					
	Number					Number					
	Males	**Females**	**Persons**	**Crude rate[b]**	**Age-standardised rate[c]**	**Males**	**Females**	**Persons**	**Crude rate[b]**	**Age standardised rate[c]**	**Age standardised rate ratio[d]**
NSW[a]	1,504	178	1,682	2,106.3	1,652.0	7,347	506	7,853	152.1	157.9	10.5
Vic	199	21	220	1,223.7	983.2	3,236	236	3,472	89.0	91.2	10.8
Qld	1,235	96	1,331	1,706.1	1,303.8	3,718	251	3,969	134.4	137.7	9.5
WA	1,267	141	1,408	3,502.6	2,697.0	1,947	127	2,074	140.3	143.9	18.7
SA	240	25	265	1,680.6	1,296.5	996	58	1,054	89.4	98.6	13.2
Tas	66	4	70	691.8	559.2	452	24	476	133.2	149.2	3.7
ACT[e]	14	3	17	1,059.9	821.1	129	7	136	97.3	93.2	8.8
NT	641	22	663	1,855.9	1,440.9	153	4	157	147.1	134.7	10.7
Aust	**5,168**	**488**	**5,656**	**2,021.2**	**1,560.9**	**17,978**	**1,213**	**19,191**	**125.3**	**128.8**	**12.1**

(a) Rates for NSW exclude ACT prisoners held in NSW.

(b) Crude rate per 100,000 adult population.

(c) Age-standardised rate per 100,000 adult 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) Rates for ACT include prisoners held in NSW as well as prisoners held in ACT.

Source: ABS 2005.

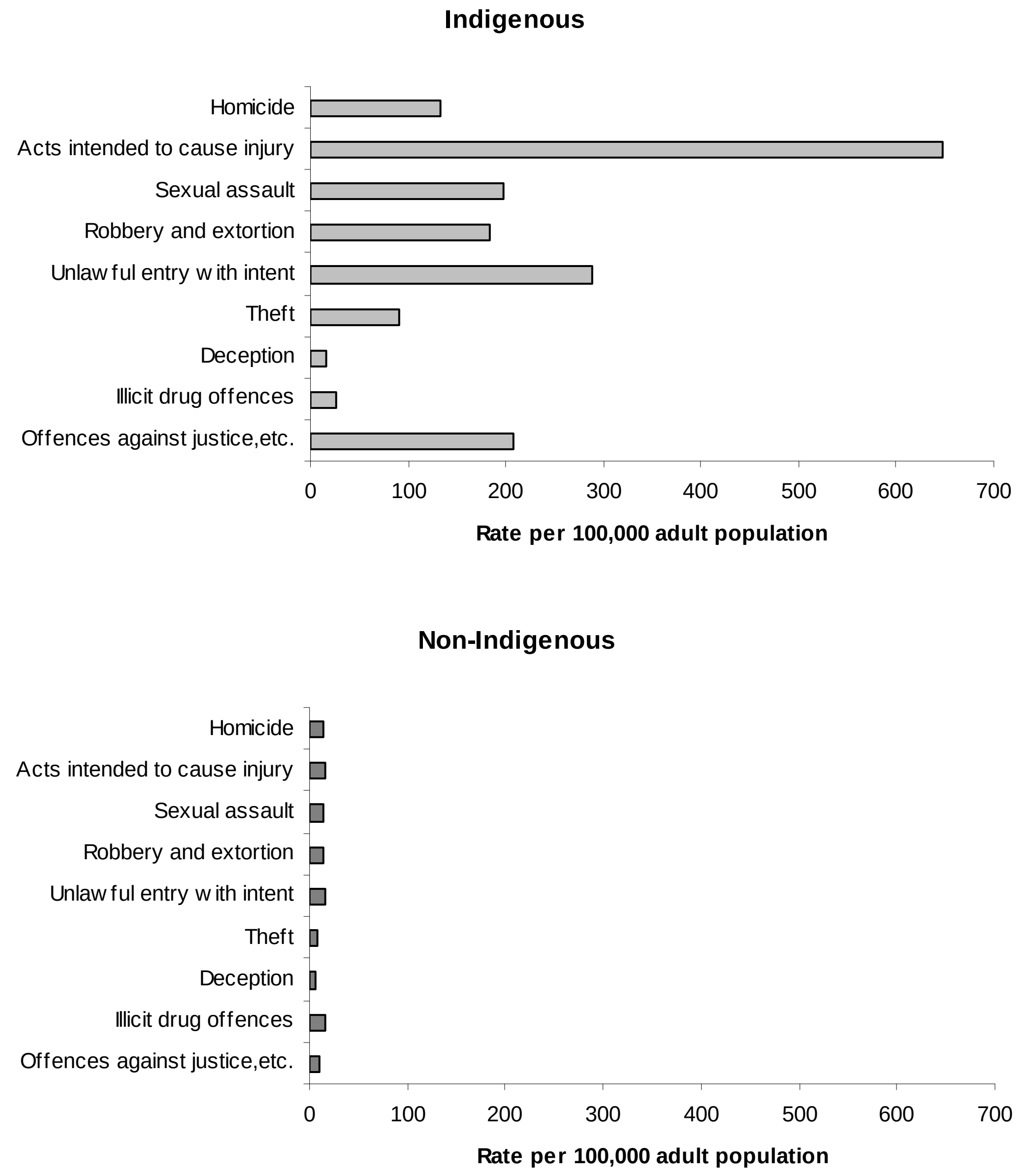
People in prison custody by legal status and most serious offence/charge

- As at 30th June 2005, approximately 80% of Indigenous and non-Indigenous people in prison custody were sentenced to prison (Table 2.13.3).
- 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 only 13% of non-Indigenous people in prison custody (Table 2.13.3).
- Unlawful entry was recorded as the most serious offence for 14% of Indigenous people in prison custody and 13% of non-Indigenous people in prison custody. Offences against justice procedures, government security and operations were the most serious offence for 10% 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 (12%) compared to Indigenous people in prison custody (1%).
- Indigenous people were taken into prison custody at higher rates than non-Indigenous people for all types of offences (Figure 2.13.1). Differences were most marked for acts intended to cause injury and unlawful entry with intent.

Table 2.13.3: People in prison custody, by Indigenous status, legal status and most serious offence/charge, 30 June 2005

	Indigenous		Non-Indigenous	
	No.	%	No.	%
Legal status				
Sentenced	4,515	79.8	15,437	80.4
Unsentenced	1,141	20.2	3,754	19.6
Most serious offence/charge				
Acts intended to cause injury	1,809	32.0	2,449	12.8
Unlawful entry with intent	810	14.3	2,429	12.7
Offences against justice procedures, government security and operations	580	10.3	1,446	7.5
Sexual assault and related offences	551	9.7	2,111	11.0
Robbery, extortion and related offences	518	9.2	2,122	11.1
Homicide and related offences	371	6.6	2,108	11.0
Road traffic and motor vehicle regulatory offences	289	5.1	978	5.1
Theft and related offences	256	4.5	1,282	6.7
Dangerous or negligent acts endangering persons	151	2.7	210	1.1
Illicit drug offences	72	1.3	2,325	12.1
Property damage and environmental pollution	65	1.1	180	0.9
Public order offences	56	1.0	197	1.0
Deception and related offences	45	0.8	812	4.2
Abduction and related offences	25	0.4	167	0.9
Weapons and explosives offences	21	0.4	165	0.9
Miscellaneous offences	37	0.7	210	1.1
Total	**5,656**	**100.0**	**19,191**	**100.0**

Source: ABS 2005.



Note: Rates per 1,000 adult population have not been age standardised.

Source: ABS 2005.

Figure 2.13.1: Most serious offence/charge, crude rates, Indigenous and non-Indigenous adults, 30 June 2005

People in prison custody by sentence length

- As at 30 June 2005, the median sentence length for Indigenous sentenced prisoners was 24 months. The longest median sentence lengths were for homicide and related offences (120 months or 10 years), sexual assault and related offences (84 months or 7 years) and robbery, extortion and related offences (65 months or 5 years) (Table 2.13.4).

Table 2.13.4: Number of Indigenous sentenced prisoners, by sentence length[(a)] and most serious offence, 30 June 2005

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 (months)	Median (months)
Homicide and related offences	0	0	0	0	3	11	75	36	32	27	99	12	295	6.5	144.2	120.1
Sexual assault and related offences	0	0	3	10	31	93	169	99	28	13	6	15	467	10.3	94.1	84.0
Robbery, extortion and related offences	0	0	3	10	22	140	165	41	20	7	0	0	411	9.1	77.7	64.9
Abduction and related offences	0	0	0	0	0	7	12	0	0	0	0	0	19	0.4	59.6	48.0
Illicit drug offences	0	0	0	0	14	25	10	0	0	0	0	0	52	1.2	42.3	33.0
Unlawful entry with intent	8	8	23	64	184	255	105	10	5	0	0	0	662	14.7	37.1	27.0
Weapons and explosives offences	0	0	3	3	6	4	0	0	0	0	0	0	19	0.4	30.6	20.4
Property damage and environmental pollution	3	6	3	8	14	15	3	0	0	0	0	0	52	1.2	23.0	19.8
Acts intended to cause injury	20	34	101	233	418	327	120	20	10	3	0	0	1,302	28.8	27.9	16.0
Theft and related offences	6	6	18	37	61	49	18	4	3	0	0	0	202	4.5	30.0	15.0
Deception and related offences	6	0	0	6	16	9	0	0	0	0	0	0	37	0.8	25.0	15.0
Dangerous or negligent acts endangering persons	3	15	11	26	58	31	3	0	0	0	0	0	147	3.3	18.5	14.0
Public order offences	3	6	4	8	15	3	3	3	0	0	0	0	45	1.0	24.8	12.0
Offences against justice procedures, government security and operations	4	50	63	150	143	79	7	3	0	0	0	0	499	11.1	15.1	10.9
Road traffic and motor vehicle regulatory offences	12	28	40	103	79	17	0	0	0	0	0	0	279	6.2	10.5	9.0
Miscellaneous offences	0	0	0	7	5	12	3	0	0	0	0	0	27	0.6	28.8	24.0
Total	**65**	**153**	**272**	**668**	**1,069**	**1,077**	**693**	**219**	**98**	**50**	**105**	**46**	**4,515**	**100.0**	**43.3**	**23.7**

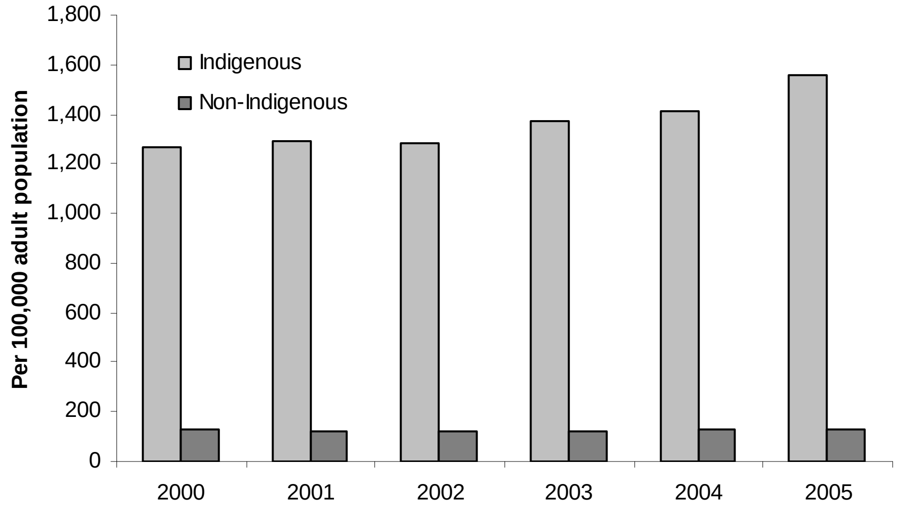
(a) Aggregate sentence length.

Source: ABS 2005.

Time series analysis

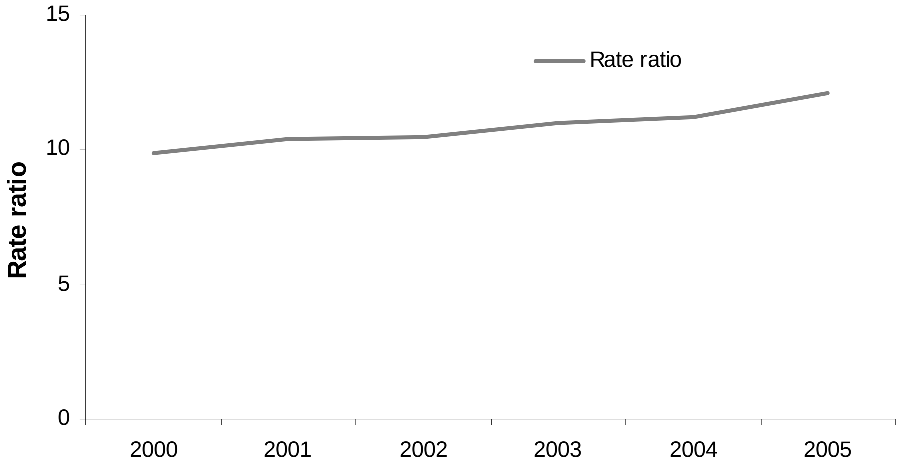
Data on the imprisonment rates of Indigenous and non-Indigenous people aged 18 years and over are presented below for the period 2000–2005.

- For the period 2000–2005, there was a significant increase in the imprisonment rate of Indigenous Australians, with an average yearly increase in the rate of around 56 per 100,000. There was no significant change in the imprisonment rate of non-Indigenous Australians over the same period (Figure 2.13.2).
- There was a significant increase in the rate ratio between Indigenous and non-Indigenous imprisonment rates between 2000 and 2005. The fitted trend implies an average yearly increase in the ratio of around 0.4 (Figure 2.13.3).



Source: AIHW analysis of ABS 2005 data.

Figure 2.13.2: Age-standardised imprisonment rates, by Indigenous status, 2000–2005.



Source: AIHW analysis of ABS 2005 data.

Figure 2.13.3: Age-standardised rate ratio Indigenous to non-Indigenous persons in prison custody, 2000–2005.

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.

Please note that rates presented below will differ slightly from those published by the AIC as ABS low series Indigenous population estimates have been used in the calculation of rates, as opposed to high series Indigenous population estimates which 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 2.13.5).
- Indigenous people were taken into police custody at a rate of 2,061 per 100,000, which was 17 times the rate of non-Indigenous people.
- The majority of Indigenous people taken into police custody were aged between 20–34 years of age at rates of over 3,000 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 to 4.2 hours for non-Indigenous people.

Table 2.13.5: People in police custody, by Indigenous status and selected characteristics, 2002

	Indigenous		Other		
	No.	Rate per 100,000[(a)]	No.	Rate 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 2.13.5 (continued): People in police custody, by Indigenous status and selected characteristics, 2002

	Indigenous		Other		
	No.	**Rate per 100,000[(a)]**	**No.**	**Rate 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 by which high series population estimates are used.

(b) The rate ratio is calculated by dividing Indigenous rate by non-Indigenous rate.

(c) Public order offences include 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) Offences against justice include 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.

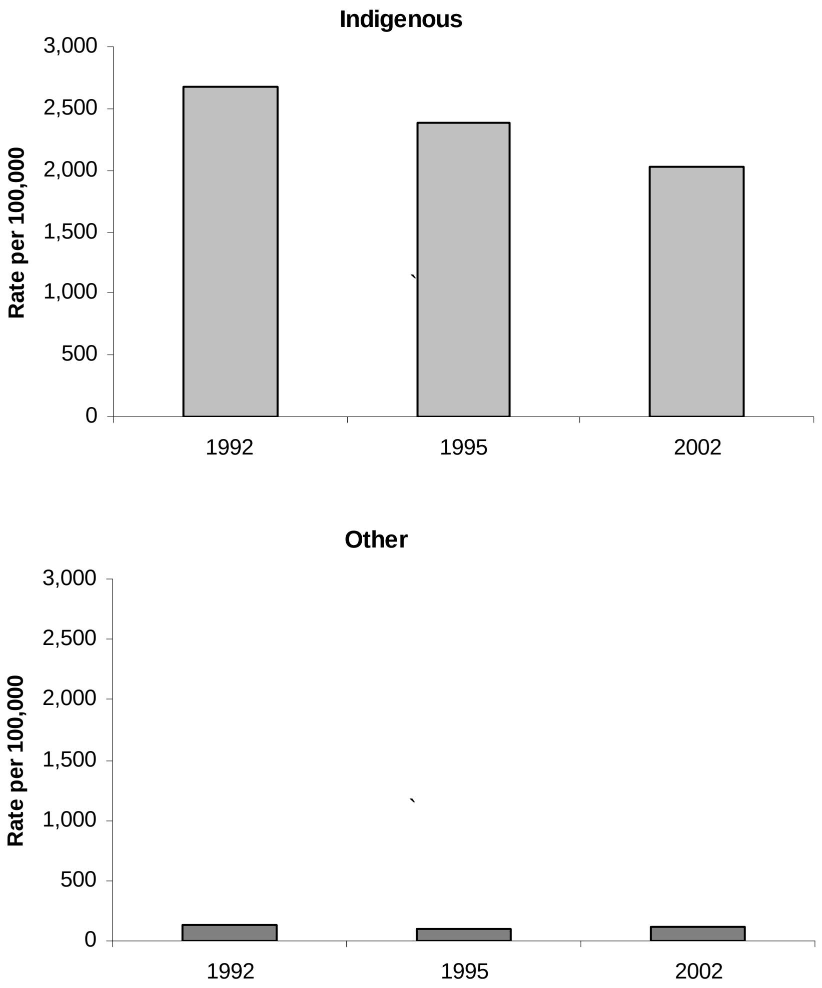
(f) Includes incidents of protective custody for those states where public drunkenness is not an offence, as well as where the word ‘arrest’ or ‘warrant’ was written but nothing else. These incidents were not included in the calculation of percentages.

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 (computer file, weighted data).

Time series analysis

- Rates of 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). Rates of non-Indigenous people in police custody were 126 per 100,000 in 1992, 100 per 100,000 in 1995 and 120 per 100,000 in 2002 (Figure 2.13.4).



Notes

1. Number of incidents per 100,000 population aged 10 years and over.
2. Rates calculated using ABS *Experimental estimates and projections of the Aboriginal and Torres Strait Islander population, 1991 to 2009* (cat no. 3238.0) and ABS Population by age and sex (cat. no. 3201.0).
3. Rates have not been age standardised.
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 2.13.4: Rates of people in police custody, by Indigenous status, 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 2002–2004, there were 49 deaths in police and prison custody of Indigenous persons. Of these deaths, 24 were in police custody and 25 were in prison custody. Deaths of Indigenous persons in custody represented approximately 22% of total deaths in custody for this period (Table 2.13.6).

- The majority of Indigenous deaths in custody occurred among those aged 25–39 years (22 deaths). Of those who died in custody aged less than 25 years, approximately 31% were Indigenous.
- All the deaths in custody that occurred in the Northern Territory between 2002 and 2004 were of Indigenous people (11 deaths in total).
- The majority of deaths in custody of Indigenous people were due to natural causes (22 deaths) or accident (16 deaths). Indigenous persons represented 31% and 36% of total deaths in custody for these causes of death.
- The most common offence of Indigenous and non-Indigenous people who died in custody between 2002 and 2004 was violence. Indigenous people represented 22% of total deaths in custody of people charged with violence-related offences.

Table 2.13.6: Deaths in custody (police and prison), by Indigenous status and selected characteristics, 2002–2004

	Indigenous		Non-Indigenous	
	No.	**%**	**No.**	**%**
Custodial authority				
Police	24	24.2	75	75.8
Prison	25	19.5	103	80.5
Juvenile justice/welfare	0	0.0	0	0.0
Total	**49**	**21.6**	**178**	**78.4**
Age				
Less than 25	13	31.0	29	69.0
25–39	22	24.2	69	75.8
40–54	12	18.8	52	81.3
55+	2	6.7	28	93.3
Total	**49**	**21.6**	**178**	**78.4**
State/territory				
NSW	12	14.0	74	86.0
Vic	0	0.0	30	100.0
Qld	12	26.7	33	73.3
WA	13	37.1	22	62.9
SA	1	7.1	13	92.9
Tas	0	0.0	4	100.0
ACT	0	0.0	2	100.0
NT	11	100.0	0	0.0
Australia	**49**	**21.6**	**178**	**78.4**
Manner of death				
Self-inflicted	10	11.6	76	88.4
Natural causes	22	30.6	50	69.4
Justifiable homicide	0	0.0	14	100.0
Unlawful homicide	0	0.0	6	100.0
Accident	16	35.6	29	64.4
Total	**48***	**21.5**	**175**[(a)]	**78.5**
Most serious offence				
Violent	26	22.2	91	77.8
Theft related	4	12.1	29	87.9
Good order	7	41.2	10	58.8
Drug related	0	0.0	8	100.0
Traffic	8	27.6	21	72.4
Other	4	19.0	17	81.0
Total	**49**	**21.8**	**176**[(b)]	**78.2**

(a) Three cases have been excluded due to missing data.

(b) Two cases have been excluded due to missing data.

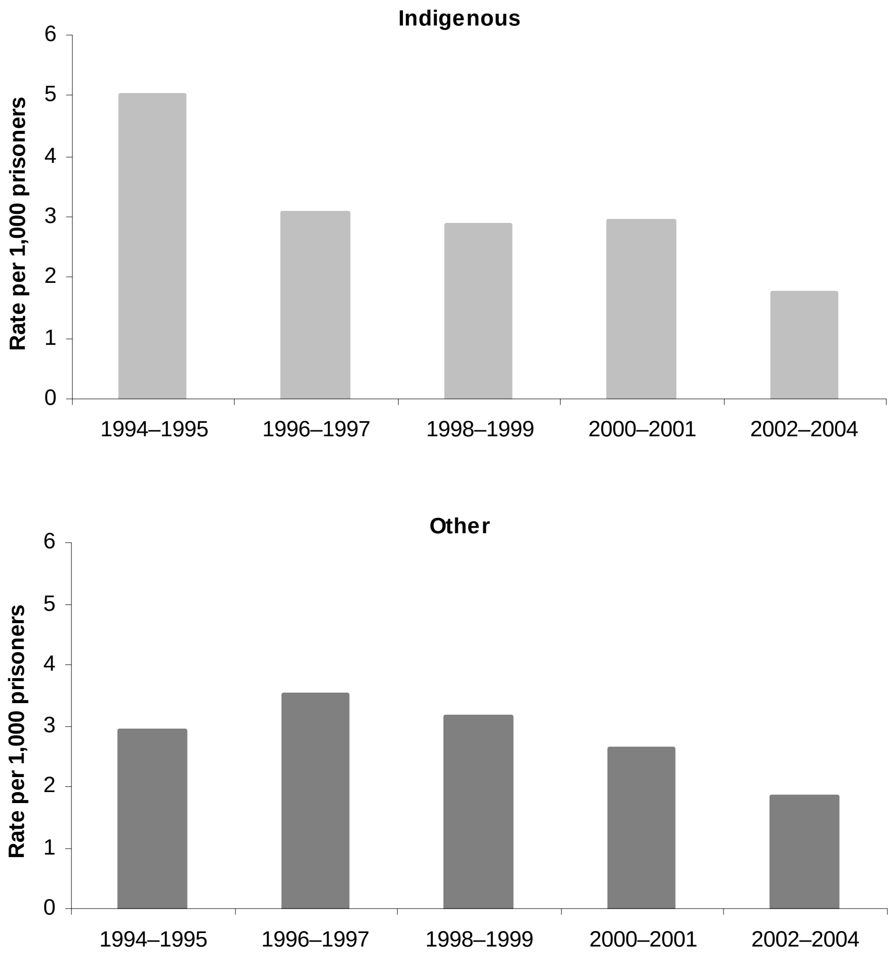
Note: Numbers may change pending coronial outcomes.

Source: AIHW analysis of AIC Deaths in Custody in Australia: National Deaths in Custody Program 2002–2004.

Time series analysis

Figure 2.13.5 presents the crude death rates for Indigenous and other Australians in prison custody over the period 1994–1995 to 2002–2004.

- Over the period 1994–1995 to 2002–2004 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.
- 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 0.1 per 1,000 prison population.



Note: Rates are per 1,000 prison population and have not been age standardised.

Source: AIHW analysis of AIC Deaths in Custody in Australia data.

Figure 2.13.5: Crude rates of deaths in prison custody, by Indigenous status, 1994-1995 to 2002–2004

Contact with police

Information on police contact by Indigenous persons is available from the 2002 National Aboriginal and Torres Strait Islander Social Survey.

- 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 last 5 years and 7% had been incarcerated in the last 5 years (Table 2.13.7).

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 last 5 years.
- A higher proportion of Indigenous males had been formally charged (50%), arrested by police in the last 5 years (24%) and incarcerated in the last 5 years (11%), than Indigenous females (21%, 9% and 3% respectively).
- 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 last 12 months and had used substances in the last 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 quintile of household income had been formally charged, arrested by the police or incarcerated in the last 5 years than Indigenous Australians in the highest quintile of household income.
- The majority of Indigenous Australians who had been formally charged, arrested by the police in the last 5 years or incarcerated in the last 5 years reported that the age at which they were first formally charged by the police was between 15 and 24 years of age (63%, 61% and 58% respectively).

Table 2.13.7: Contact with the police, by selected population characteristics: Indigenous persons aged 15 years and older, 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 or 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 2.13.7 (continued): Contact with the police, by selected population characteristics: Indigenous persons aged 15 years and older, 2002

	Formally charged	Arrested by police in last 5 years	Incarcerated in last 5 years[(a)]
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
Subtotal 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
Victim of physical or threatened violence in last 12 months			
Yes	52.0	31.8	12.9
No	29.5	11.5	5.2

(continued)

Table 2.13.7 (continued): Contact with the police, by selected population characteristics: Indigenous persons aged 15 years and older, 2002

	Formally charged	Arrested by police in last 5 years	Incarcerated in last 5 years[(a)]
		(per cent)	
Presence of stressors 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 last 5 years and incarcerated in last 5 years, not of total persons.

(e) Includes those who ‘don’t know’ age at which first formally charged and ‘not stated’.

Source: AIHW analysis of 2002 NATSISS.

Detainees and drug use

The AIC Drug Use Monitoring in Australia (DUMA) survey reports on drug use among police detainees at seven 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 2005 survey are presented in Table 2.13.8 below.

- In 2005, a higher proportion of Indigenous detainees tested positive to drugs than non-Indigenous detainees in all seven police stations surveyed.
- Between 62% and 85% of Indigenous detainees at selected police stations in South Australia, New South Wales, Queensland and Western Australia tested positive to drugs compared to between 47% and 73% of non-Indigenous detainees.
- Cannabis was the most common drug for which both Indigenous and non-Indigenous detainees tested positive. Methylamphetamine was also a common drug to which Indigenous and non-Indigenous detainees tested positive. Multiple drugs were tested positive in between 21% to 43% of Indigenous detainees and 23% to 38% of non-Indigenous detainees.

Table 2.13.8: Detainees at selected police stations, by drug use and Indigenous status, 2005

	Adelaide + Elizabeth (SA)		Bankstown + Parramatta (NSW)		Brisbane + Southport (Qld)		East Perth (WA)	
	Indigenous	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
				(per cent)				
Benzodiazepines	30.3	20.6	33.3	15.8	21.3	19.3	14.2	22.6
Cannabis	80.0	60.5	50.0	34.4	59.8	51.0	73.1	57.2
Cocaine	0.0	0.7	4.2	3.7	0.0	0.6	0.0	0.0
Heroin	9.7	9.3	4.2	15.2	5.5	14.3	6.0	11.1
Methylamphetamine	26.9	35.6	25.0	12.3	28.4	23.1	29.1	33.0
Multiple drugs	42.8	37.5	20.8	22.9	35.4	29.2	32.1	37.6
Subtotal tested positive to a drug	*84.8*	*72.9*	*66.7*	*47.4*	*66.9*	*62.2*	*79.9*	*69.0*
Did not test positive to a drug	15.2	27.1	33.3	52.6	33.1	37.8	20.2	31.1
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number	145	734	24	462	127	1,010	134	306

Source: AIC, Drug Use Monitoring in Australia (DUMA) Program 2005.

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 2003–04.

It should be noted that rates presented below will differ slightly from those published by the AIHW in *Juvenile justice in Australia, 2000–01 to 2003–04.* This is because rates presented here are calculated using the ABS low series Indigenous estimated resident population projections, while rates presented in the AIHW report were calculated using the high series Indigenous estimated resident population projections.

- In 2003–04, there were 3,427 Indigenous persons aged 10–17 years under juvenile justice supervision. This represented approximately 37% of all people aged 10–17 years under juvenile justice supervision (Table 2.13.9).
- Overall, Aboriginal and Torres Strait Islander young people aged 10–17 years were represented under juvenile justice supervision at a rate of 37.2 per 1,000 population, compared to 2.8 per 1,000 for non-Indigenous young people.

Young people under juvenile justice by selected characteristics

- Approximately 80% of Indigenous persons and 85% 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 (Figure 2.13.6). Around half (49%) of all Indigenous young people under juvenile justice supervision were aged 16–17 years.
- Western Australia and South Australia had the highest rates of Aboriginal and Torres Strait Islander young people under juvenile justice supervision (61 per 1,000 and 56 per 1,000 young people respectively).

Table 2.13.9: Young people aged 10–17 yearsunder juvenile justice supervision, by Indigenous status and selected characteristics, 2003–04

	Indigenous		Non-Indigenous		Not stated		
	No.	Rate per 1,000[(a)]	No.	Rate per 1,000[(a)]	No.	Rate per 1,000[(a)]	Rate ratio[(b)]
Sex							
Males	2,726	57.3	4,986	4.6	621	n.a.	12.5
Females	698	15.6	905	0.9	161	n.a.	17.8
Persons[(c)]	3,427	37.2	5,893	2.8	784	n.a.	13.3
Age							
10	14	1.1	9	0.0	2	n.a.	33.0
11	63	5.1	36	0.1	10	n.a.	37.5
12	123	10.1	84	0.3	21	n.a.	31.9
13	311	26.2	264	1.0	37	n.a.	26.6
14	502	44.1	633	2.4	94	n.a.	18.5
15	720	65.1	1,183	4.5	163	n.a.	14.5
16	854	79.9	1,780	6.8	204	n.a.	11.8
17	840	81.3	1,904	7.2	253	n.a.	11.3
Total	**3,427**	**37.2**	**5,893**	**2.8**	**784**	**n.a.**	**13.3**
State/territory							
NSW	892	32.6	1,575	2.2	197	n.a.	14.5
Vic	149	26.2	1,244	2.4	0	n.a.	11.1
Qld	993	38.7	1,417	3.4	2	n.a.	11.4
WA	803	60.6	499	2.3	188	n.a.	26.0
SA	288	55.6	629	4.0	68	n.a.	13.8
Tas	40	54.5	209	6.0	1	n.a.	9.1
ACT	208	19.7	45	3.1	0	n.a.	6.4
NT	54	14.4	275	5.4	328	n.a.	2.7
Aust	**3,427**	**37.2**	**5,893**	**2.8**	**784**	**n.a.**	**13.3**

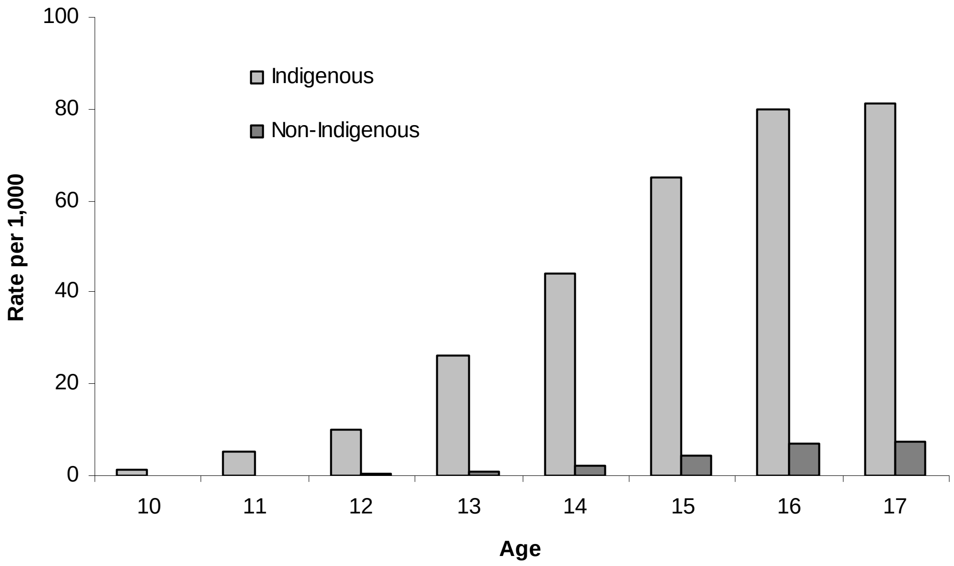
(a) Rate per 1,000 population aged 10–17 years.

(b) Rate ratio is calculated by dividing the Indigenous rate by the rate for other Australians.

(c) Includes those for whom sex was unknown.

Note: Rates presented here will differ from those published in the AIHW report, Juvenile justice in Australia, 2000–01 to 2003–04. This is because rates presented here are calculated using the average of 2003 and 2004 low series Indigenous estimated resident population projections and Australian June quarter 2004 Estimated Resident Population. Rates presented in the AIHW report were calculated using the 2004 high series Indigenous population projections.

Source: AHW analysis of AIHW Juvenile Justice National Minimum Data Set.



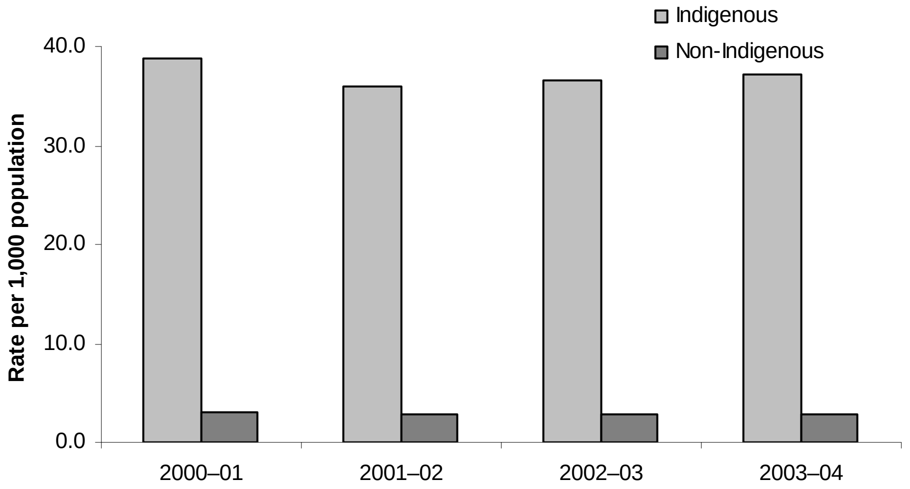
Note: Excludes those for whom Indigenous status was unknown.

Source: AIHW analysis of AIHW Juvenile Justice National Minimum Data Set.

Figure 2.13.6: Rate of young people aged 10–17 years under juvenile justice supervision, by Indigenous status and age, 2003–04

Time series analysis

- Over the period 2000–01 to 2003–04 there was a non-significant decline in the rate of juvenile justice supervision for Indigenous young people age 10–17 years, and a significant decline in the rate of juvenile justice supervision for non-Indigenous young people (Figure 2.13.7).



Notes

1. Excludes those for whom Indigenous status was unknown.
2. Rates for 2000–01 to 2002–03 do not include Australian Capital Territory data. Australian Capital Territory data only available for 2003–04. ABS *Experimental estimates and projections of the Aboriginal and Torres Strait Islander population 1991 to 2009* (cat. no. 3238.0) used in the calculation of rates.

Source: AIHW analysis of AIHW Juvenile Justice National Minimum Data Set.

Figure 2.13.7: Rates of young people aged 10–17 years under juvenile justice supervision, by Indigenous status, 2000–01 to 2003–04

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 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 NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004).

Criminal justice data

While 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 prisoner 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 primarily 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 jurisdiction (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)

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.

Future reporting of these data will include the Victorian and Northern Territory police station data from 2006 calendar year onwards.

Juvenile Justice National Minimum Data Set

'Responsibility for juvenile justice rests at state and territory level, and there is marked diversity in terms of 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 2006). Therefore caution is required in comparing data across the jurisdictions.

The coverage of data in this new national minimum dataset is high 'with missing data confined to supervised bail and reason for exit data in Queensland, pre-sentence data in Tasmania and some reason-for-exit data from Victoria and Northern Territory. Much of these data will be available and reported on in the next edition. Data for 2000–01, 2001–02 and 2002–03 from the Australian Capital Territory were unavailable. In all other instances, it is believed that 100% of young people within scope of the collection, being supervised by juvenile justice departments as a result of having committed or allegedly committed an offence, 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 (20%) is approximately 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 2006). 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. For example, over the 4 year period, there has been a general decline in Indigenous status unknown data in most jurisdictions' (AIHW 2006).

References

AIHW (Australian Institute of Health and Welfare) 2006. Juvenile justice in Australia 2000–01 to 2003–04. AIHW cat. no. JUV 1. Canberra: AIHW.

ABS (Australian Bureau of Statistics) 2004. National Aboriginal and Torres Strait Islander Social Survey 2002. ABS cat. no. 4714.0. Canberra: ABS.

ABS 2005. Prisoners in Australia. ABS cat. no. 4517.0. Canberra: ABS.

2.14 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 2004–05 financial year and have been published in the AIHW report—*Child protection in Australia 2004–05*. 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.

It should also be noted 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 cannot be compared directly with those from previous years in earlier AIHW *Child protection in Australia* publications. Prior years were calculated using ABS Indigenous population data from the 1996 Census; these projections are different from those in that they are based on the data from the 2001 Census. For time series analysis 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 substantiations

The data presented below on child protection substantiations 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 2006).

It should be noted that as 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 2004–05, Aboriginal and Torres Strait Islander children are more likely to be the subject of a substantiation than other children.

Children in substantiations by age

- In 2004–05, the majority of Indigenous and other children who were in substantiations were aged between 1 and 14 years of age (Table 2.14.1).

Table 2.14.1: Number of children in substantiations, by age, Indigenous status and state/territory, 2004–05

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
				Number				
Indigenous children								
<1	268	119	163	65	72	3	10	58
1–4	436	203	288	95	159	18	34	101
5–9	448	231	353	88	142	7	22	75
10–14	412	178	331	97	90	9	27	71
15–17	71	39	58	13	16	—	8	19
Unknown	11	—	—	—	4	—	—	—
Total	**1,646**	**770**	**1,193**	**358**	**483**	**37**	**101**	**324**
Other children								
<1	927	768	1,207	80	173	51	63	12
1–4	1,803	1,545	3,068	154	375	115	193	35
5–9	2,101	1,758	3,540	215	394	149	234	37
10–14	2,197	1,757	3,273	197	307	159	212	37
15–17	528	416	704	41	71	28	62	8
Unknown	35	1	—	—	6	98	—	—
Total	**7,591**	**6,245**	**11,792**	**687**	**1,326**	**600**	**764**	**129**

Notes

1. If a child was the subject of more than one type of abuse or neglect as part of the same notification, then the abuse and/or neglect 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, then the type of abuse reported in this table is the type of abuse and/or neglect associated with the first substantiation decision during the year.
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.
4. Totals differ slightly from those provided in Table 2.14.2 because 17 year olds are included.

Source: AIHW 2006.

Substantiations by state/territory

- In 2004–05 in all jurisdictions, except Tasmania, the substantiation rate for Indigenous children was higher than the rate for other children (Table 2.14.2).

The reasons for the over-representation of Aboriginal and Torres Strait Islander children in child protection substantiations are complex. The report *Bringing Them Home* (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 and
- cultural differences in child-rearing practices.

Table 2.14.2: Children aged 0–16 years who were the subjects of substantiations: number and rates per 1,000 children, by Indigenous status and state/territory, 2004–05

	Number of children			Rate per 1,000 children		
State/territory	**Indigenous**	**Other**	**Total**	**Indigenous**	**Other**	**Total**
New South Wales	1,642	7,556	9,198	27.1	5.2	6.1
Victoria	770	6,244	7,014	63.0	5.8	6.4
Queensland	1,186	11,700	12,886	20.4	13.7	14.1
Western Australia	353	682	1,035	12.2	1.6	2.3
South Australia	481	1,317	1,798	43.2	4.2	5.5
Tasmania	37	599	636	4.8	5.8	5.8
Australian Capital Territory	99	758	857	56.0	10.9	12.0
Northern Territory	319	128	447	13.7	3.9	7.9

Notes

1. Children aged 17 years were not included in this table. The substantiation rate for 17 year olds is, compared to 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.
2. Data from Tasmania should be interpreted carefully due to a lower rate of recording Indigenous status at the time of the substantiation.
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 2006.

Substantiations by types of abuse and neglect

Substantiations 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 pattern of substantiated abuse and neglect for Aboriginal and Torres Strait Islander children differs from the pattern for other children. Indigenous children were more likely than other children to be the subject of a substantiation of neglect. For example, in Queensland, 41% of Indigenous children in substantiations were the subject of a substantiation of neglect, compared with 31% of other children. In the Northern Territory, the corresponding percentages were 44% and 26% respectively (Table 2.14.3).
- The proportion of Indigenous and other children who were the subject of a substantiation for the various types of abuse and neglect varied over the period 1998–99 to 2004–05. For example, the proportion of Indigenous and other children in Queensland in substantiations of emotional abuse was lower in 1997–98 (9% and 9% respectively) than in 2004–05 (31% and 39% respectively) (Table 2.14.4).

Table 2.14.3: Children aged 0–17 years who were the subject of a substantiation: type of abuse or neglect, by Indigenous status and state/territory, 2004–05 (per cent)

Type of abuse or neglect	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
					Indigenous children			
Physical abuse	18	22	24	28	18	27	13	34
Sexual abuse	11	4	4	20	2	30	3	6
Emotional abuse	37	49	31	13	39	22	44	16
Neglect	34	25	41	39	41	22	41	44
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
					Other children			
Physical abuse	24	25	23	29	24	31	14	48
Sexual abuse	19	10	6	23	7	13	6	6
Emotional abuse	36	43	39	14	35	21	54	20
Neglect	21	22	31	34	33	35	26	26
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes

1. The number of Indigenous children who were the subject of a substantiation should be interpreted with caution due to small numbers in Tasmania and the Australian Capital Territory.
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.
4. Children aged 17 years were included in this table. Inclusion of this age group does not skew results, because no average substantiation rate for all children (in relation to all children in the state) is calculated.

Source: AIHW 2006.

Table 2.14.4: Children who were the subject of a substantiation, by type of abuse, Indigenous status and state/territory, 2004–05 (per cent)

Type of abuse or neglect	NSW		Vic		Qld		WA		SA		Tas		ACT		NT	
	Indig.	**Other**	**Indig.**	**Other**	**Indig.**	**Other**	**Indig.**	**Other**	**Indig.**	**Other**	**Indig.**	**Other**	**Indig.**	**Other**	**Indig.**	**Other**
									(Per cent)							
Physical abuse	18	24	22	25	24	23	28	29	18	24	27	31	13	14	34	48
Sexual abuse	11	19	4	10	4	6	20	23	2	7	30	13	3	6	6	6
Emotional abuse	37	36	49	43	31	39	13	14	39	35	22	21	44	54	16	20
Neglect	34	21	25	22	41	31	39	34	41	33	22	35	41	26	44	26
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes

1. 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.
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.
3. Children aged 17 years were included in this table. Inclusion of this age group does not skew results, because no average substantiation rate for all children (in relation to all children in the state) is calculated.

Source: AIHW 2006.

Time series analysis

- Since 1998–99 the rate of Aboriginal and Torres Strait Islander children in substantiations has fluctuated across the jurisdictions; however, it has increased substantially in all jurisdictions except Western Australia (Table 2.14.5).

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.

Table 2.14.5: Number and rates of Aboriginal and Torres Strait Islander children aged 0–16 years who were the subject of a substantiation, per 1,000 children, by state/territory, 1998–99 to 2004–05

Year	NSW	Vic	Qld	WA	SA	Tas[(a)]	ACT[(a)]	NT
				Number				
1998–99	864	n.a.[(b)]	492	598	269	8	23	n.a.[(c)]
1999–00	761	568	502	329	337	4	6	172
2000–01	875	602	680	355	317	2	20	153
2001–02	913	579	795	386	346	2	11	222
2002–03	1910	667	881	275	351	19	33	198
2003–04	n.a.	700	1,192	322	441	12	44	375
2004–05	1,642	770	1,186	353	481	37	99	319
				Rate per 1,000				
1998–99	15.2	n.a.[(b)]	9.3	10.9	25.6	1.1	14.3	n.a.[(c)]
1999–00	13.2	48.5	9.3	11.9	31.6	0.5	3.7	7.7
2000–01	14.9	50.9	12.4	12.6	29.4	0.3	12.1	6.8
2001–02	15.4	48.4	14.3	13.6	31.8	0.3	6.6	9.7
2002–03	31.9[(d)]	55.3	15.6	9.6[(e)]	32.0	2.5	19.4	8.6
2003–04	n.a.[(f)]	57.7	20.8	11.2	39.9	1.6	25.3	16.2
2004–05	27.1	63.0	20.4	12.2	43.2	4.8	56.0	13.7

(a) Rates from Tasmania and the Australian Capital Territory should be interpreted with care due to the small numbers. Any fluctuation in the numbers of children has a large impact on the rates.

(b) Indigenous data were not available from Victoria in 1998–99.

(c) Data for the 1998–99 financial year were not available from the Northern Territory.

(d) The data for 2002–03 and previous years should not be compared. 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.

(e) The decline in the number of substantiations is due to the decreased number of notifications.

(f) New South Wales was able to provide limited data for 2003–04 due to the introduction of a new client information system.

Notes

1. Rates calculated using ABS Indigenous population estimates and projections (low series) based on the 2001 Census.
2. 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.
3. Children aged 17 years were not included in this table. The substantiation rate for 17 year olds is, compared to 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.

Source: AIHW 2006.

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 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 2006).

Care and protection orders by state/territory

- As at June 2005, the rates of Aboriginal and Torres Strait Islander children on care and protection orders varied considerably across jurisdictions (Table 2.14.6). The rate was highest in Victoria (52.8 per 1,000) and lowest in the Northern Territory (11.4 per 1,000). In all jurisdictions, the rate of Indigenous children on orders was higher than the rate for other children.

It should be noted that care should be taken in interpreting this data as an individual child may be subject to more than one protection order at the same time.

Table 2.14.6: Children on care and protection orders: number and rate per 1,000 children aged 0–17 years, by Indigenous status and state/territory, at 30 June 2005

	Number of children			Rate per 1,000 children		
State/territory	**Indigenous**	**Other**	**Total**	**Indigenous**	**Other**	**Total**
New South Wales[(a)]	2,113	6,507	8,620	33.0	4.3	5.4
Victoria	682	4,976	5,658	52.8	4.3	4.9
Queensland	1,342	4,515	5,857	21.9	5.0	6.0
Western Australia	660	1,123	1,783	21.6	2.5	3.7
South Australia	322	1,231	1,553	27.3	3.7	4.5
Tasmania	94	622	716	11.5	5.7	6.1
Australian Capital Territory	70	394	464	37.4	5.3	6.1
Northern Territory	281	133	414	11.4	3.8	7.0

Notes

1. New South Wales data do not include supervisory orders.
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 2006.

Types of care and protection orders

There were more orders issued during 2004–05 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 number of orders issued in 2004–05 for Indigenous and other children is presented in Table 2.14.17.

- As at 30 June 2005, most Indigenous children were on guardianship and custody orders or arrangements (89%). Approximately 10% of Indigenous children were on interim and temporary orders. The proportion of other children on these orders was very similar to those for Indigenous children.

Table 2.14.7: Children on care and protection orders, by type of order, by state/territory and Indigenous status, 30 June 2005

Type of order	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Indigenous children					**Number**				
Guardianship or custody orders/arrangements	1,914	525	1,188	556	296	82	49	187	4,797
Supervisory orders	n.a.	137	65	..	..	0	2	2	206
Interim and temporary orders	199	20	89	104	26	12	19	92	561
Total	**2,113**	**682**	**1,342**	**660**	**322**	**94**	**70**	**281**	**5,564**
					Per cent				
Guardianship or custody orders/arrangements	91	77	89	84	92	87	70	67	86
Supervisory orders	..	20	5	..	..	0	3	1	4
Interim and temporary orders	9	3	7	16	8	13	27	33	10
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Other children					**Number**				
Guardianship or custody orders/arrangements	5,836	3,572	3,909	961	1,150	509	284	86	16,307
Supervisory orders	n.a.	..	220	..	..	30	49	3	302
Interim and temporary orders	671	181	386	162	81	83	61	44	1,669
Total	**6,507**	**3,753**	**4,515**	**1,123**	**1,231**	**622**	**394**	**133**	**185,278**
					Per cent				
Guardianship or custody orders/arrangements	90	72	87	86	93	82	72	65	89
Supervisory orders	..	..	5	..	..	5	12	2	2
Interim and temporary orders	10	4	9	14	7	13	15	33	9
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes

1. New South Wales could not provide data on children on supervisory orders.
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 2006.

Time series analysis

- At 30 June 2005 there were more Indigenous and other children on care and protection orders than in previous years for all jurisdictions (Table 2.14.8).

Since 1997 the number of both Indigenous and other children on care and protection orders across Australia has increased significantly. The increase in the number of children on care and protection orders is 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.

Table 2.14.8: Number of children on care and protection orders: children aged 0–17 years, by Indigenous status and state/territory, at 30June 1998 to 30 June 2005

State/territory	1997–98	1998–99	1999–2000	2000–01	2001–02	2002–03	2003–04	2004–05
				Indigenous				
NSW	1,195	1,562	1,826	2,070	1,992	2,265	n.a.	2,113
Vic	294	n.a.	448	512	510	534	574	682
Qld	852	880	856	803	880	953	1,146	1,342
WA	215	298	327	355	468	509	583	660
SA	160	158	215	221	233	261	275	322
Tas	34	34	31	27	23	59	83	94
ACT	46	36	40	32	32	48	53	70
NT	72	93	118	126	126	174	230	281
Australia	**2,868**	**n.a.**	**3,861**	**4,146**	**4,264**	**4,803**	**n.a.**	**5,564**
				Other				
NSW	4,792	6,948	5,835	6,035	6,237	6,710	n.a.	6,507
Vic	3,921	4,358	4,304	4,270	4,465	4,504	4,677	4,976
Qld	2,581	3,609	2,756	2,770	2,885	3,154	3,804	4,515
WA	584	1,019	778	831	916	961	1,056	1,123
SA	942	1,024	995	1,039	1,053	1,117	1,180	1,231
Tas	486	440	439	426	440	541	551	622
ACT	209	236	192	187	229	240	300	394
NT	66	177	102	79	68	100	115	133
Australia	**13,581**	**17,811**	**15,401**	**15,637**	**16,293**	**17,327**	**n.a.**	**19,501**

Notes

1. The data for New South Wales exclude children on finalised supervisory orders. New South Wales was unable to provide data for 2003–04 due to the ongoing implementation of the data system.
2. Victoria was unable to provide Indigenous data for 1998–99.
3. During 2001–02, practices were introduced to improve the identification of Indigenous status that resulted in an increase in the number of Indigenous clients.
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.

Source: AIHW 1999; 2000; 2001; 2002; 2003; 2004; 2005; 2006.

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 2006).

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. This will hopefully 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 their time in out-of-home care.

Out-of-home care by state/territory

- At 30 June 2005 there were 5,678 Aboriginal and Torres Strait Islander children in out-of-home care. The rate of Aboriginal and Torres Strait Islander children in out-of-home care was 26.4 per 1,000 aged 0–17 years, ranging from 8.9 per 1,000 in the Northern Territory to 40.7 per 1,000 in Victoria (Table 2.14.9).
- In all jurisdictions there were higher rates of Aboriginal and Torres Strait Islander children in out-of-home care than other children. The national rate of Indigenous children in out-of-home care was over 6 times the rate for other children.

Table 2.14.9: Children in out-of-home care: number and rate per 1,000 children aged 0–17 years, by Indigenous status and state/territory, at 30 June 2005

	Number of children			Rate per 1,000 children		
State/territory	**Indigenous**	**Other**	**Total**	**Indigenous**	**Other**	**Total**
New South Wales	2,543	6,687	9,230	39.7	4.4	5.8
Victoria	526	3,882	4,408	40.7	3.4	3.8
Queensland	1,275	4,382	5,657	20.8	4.8	5.8
Western Australia	692	1,137	1,829	22.6	2.5	3.8
South Australia	286	1,043	1,329	24.3	3.1	3.9
Tasmania	78	498	576	9.5	4.6	4.9
Australian Capital Territory	60	282	342	32.0	3.8	4.5
Northern Territory	218	106	324	8.9	3.1	5.5
Australia	**5,678**	**18,017**	**23,695**	**26.4**	**3.9**	**4.9**

Notes:

1. 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.
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 2006.

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.

- As at 30 June 2005, the proportion of Aboriginal and Torres Strait Islander children who were placed with either an Indigenous carer or a relative, for example, was 87% in New South Wales and 83% in Western Australia (Table 2.14.10).

Table 2.14.10: Aboriginal and Torres Strait Islander children in out-of-home care: Indigenous status and relationship of carer, by state/territory, at 30 June 2005

Relationship	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
				Number				
Indigenous relative/kin	1,485	133	343	345	70	8	19	79
Other Indigenous caregiver	443	77	366	143	136	1	14	71
Other relative/kin	266	71	115	55	12	11	3	n.a.
Indigenous residential care	7	11	2	25	. .	. .	2	. .
Total in accordance with the Aboriginal Child Placement Principle	***2,201***	***292***	***826***	***568***	***218***	***20***	***38***	***150***
Other caregiver	291	181	444	77	64	54	14	68
Other residential care	42	24	5	38	4	0	6	. .
Total not placed in accordance with the Aboriginal Child Placement Principle	333	205	449	115	68	54	20	68
Total	**2,534**	**497**	**1,275**	**683**	**286**	**74**	**58**	**218**
				Per cent				
Indigenous relative/kin	59	27	27	51	24	11	33	36
Other Indigenous caregiver	17	15	29	21	48	1	24	33
Other relative/kin	10	14	9	8	4	15	5	n.a.
Indigenous residential care	. .	2	. .	4	. .	. .	3	
Total in accordance with the Aboriginal Child Placement Principle	***87***	***59***	***65***	***83***	***76***	***27***	***66***	***69***
Other caregiver	11	36	35	11	22	73	24	31
Other residential care	2	5	. .	6	1	. .	10	..
Total not placed in accordance with the Aboriginal Child Placement Principle	13	41	35	17	24	73	34	31
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Notes

1. This table does not include Indigenous children who were living independently or whose living arrangements were unknown.
2. 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 2006.

Data quality issues

Child Protection data

Reported rates for Aboriginal and Torres Strait Islander children in the child protection system for 2004–05 cannot be compared directly with those from previous years in earlier AIHW Child protection in Australia *publications. Prior years were calculated using ABS Indigenous population data from the 1996 Censu;, these projections are different from those in that they are based on the data from the 2001 Census. For time series analysis 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), as 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 as 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'. 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.

Data quality issues (continued)

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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2.15 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 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) and the 2001 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 six-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indgenous 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. It 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.

Census of Population and Housing

The ABS Census of Population and Housing is conducted by the ABS at five-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.

While 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 2001, households with Indigenous persons were more likely than non-Indigenous households to be without a vehicle. Approximately 30% of Indigenous households and 16% of non-Indigenous households did not have access to a motor vehicle.
- Excluding motorbikes, the ratio of persons aged 17 years and over to vehicles in 2001 was 1.3 in Indigenous households and 1.1 in non-Indigenous households (Table 2.15.1).

Motor vehicle access by state/territory and remoteness

- The ratio of persons to vehicles for Indigenous households was highest in the Northern Territory (1.9) and lowest in Tasmania and the Australian Capital Territory (1.1).
- The ratio of persons of driving age to vehicles in Indigenous households was higher in very remote areas (2.1) than in major cities (1.2).
- In 2001, approximately 70% of Indigenous households had at least one motor vehicle compared to 84% of non-Indigenous households. The Northern Territory had the lowest proportion of Indigenous households with at least one vehicle (48%) and Tasmania had the highest (85%).
- Approximately 73% of Indigenous households in non-remote areas reported having at least one vehicle compared to 51% of Indigenous households in remote areas in 2001. In contrast, in non-Indigenous households, access to motor vehicles was similar in both the non-remote and remote areas (84% and 85% respectively).

Table 2.15.1: Households, by number of motor vehicles, Indigenous status and state/territory, 2001

	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]	1.24	1.09	1.09	70.3	81.1	80.9
Vic	1.16	1.07	1.07	76.2	84.9	84.8
Qld	1.28	1.06	1.07	70.3	85.7	85.2
WA	1.33	1.05	1.06	67.9	87.1	86.6
SA	1.22	1.07	1.07	72.4	85.5	85.3
Tas	1.10	1.07	1.07	84.6	85.1	85.1
ACT	1.11	1.05	1.05	81.6	87.6	87.5
NT	1.91	1.05	1.19	47.7	82.2	75.9
Australia[f]	1.29	1.07	1.08	69.8	84.1	83.8
Remoteness Area						
Major cities	1.18	1.08	1.08	74.1	82.8	82.7
Inner regional	1.18	1.06	1.06	75.4	86.7	86.5
Outer regional	1.24	1.05	1.06	70.3	86.9	86.2
Subtotal non-remote	*1.20*	*1.07*	*1.08*	*73.4*	*84.1*	*83.9*
Remote	1.41	1.04	1.07	62.6	86.5	84.3
Very remote	2.11	1.06	1.34	42.7	79.8	68.9
Subtotal remote	*1.81*	*1.05*	*1.15*	*51.2*	*84.8*	*79.8*
Australia[f]	1.29	1.07	1.08	69.8	84.1	83.8
Total number of households	**144,731**	**6,783,502**	**6,928,233**	**144,731**	**6,783,502**	**6,928,233**

(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'.

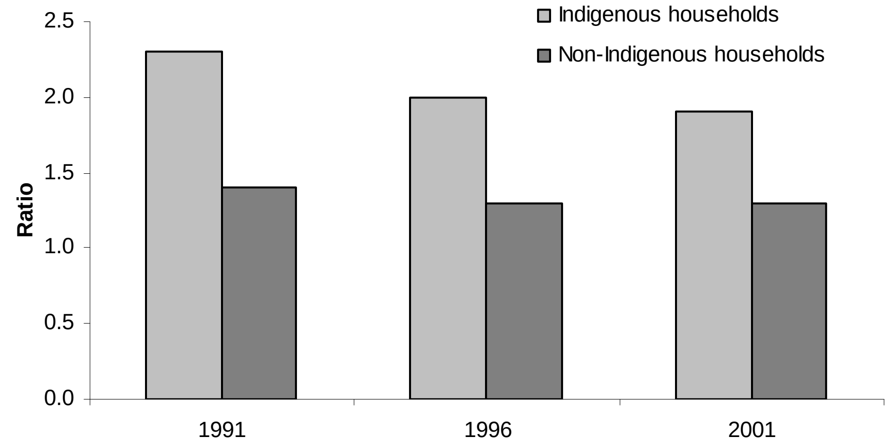
(e) Includes Territory of Jervis Bay.

(f) Includes Territories of Christmas Island and Cocos Islands.

Source: ABS 2001 Census of Population and Housing, customised data.

Motor vehicle access over time

- Access to vehicles has improved over time, with the ratio of persons to vehicles in both Indigenous and non-Indigenous households being higher in 1991 and 1996 compared to 2001 (Figure 2.15.1). The difference between the Indigenous and non-Indigenous rates has also reduced over the same period.



Source: AIHW 2005 (1991, 1996 and 2001 Census data).

Figure 2.15.1: Ratio of persons aged 17 years and over in ocupied private dwellings to vehicles, by Indigenous status, 1991, 1996 and 2001

Transport access, difficulty and use

The NATSISS collected data on access to motor vehicles, perceived level of difficulty with transport, use of transport, including public transport in the last 2 weeks, modes of transport and reasons why did not use public transport. These data are presented below.

- In 2002, around 60% of Indigenous people aged 18 years or over had access to a motor vehicle to drive compared to 85% of non-Indigenous people.
- Around 12% of Indigenous Australians aged 18 years and over reported that they could not or often had difficulty getting to the places they needed to, compared with only 4% of non-Indigenous Australians.
- Approximately 26% of Indigenous Australians aged 18 years and over used public transport in the last 2 weeks and a further 69% used other forms of transport in the last 2 weeks (Table 2.15.2).
- Of those who used transport in the last 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 last 2 weeks were 'prefer to use own transport or walk' (42%) and 'no service available at all' (40%).
- Approximately 43% of Indigenous Australians who reported they often had difficulty getting to places needed reported they used public transport in the last 2 weeks compared to 22% of Indigenous Australians who reported they could easily get to places needed (Table 2.15.7).

Transport access, difficulty and use by age

- Indigenous people aged 18–24 years were less likely to have access to a motor vehicle (48%) than Indigenous people in older age groups (Table 2.15.2).

- Indigenous Australians aged 18–24 years were more likely to have used public transport in the last 2 weeks (32%) than those in older age groups (Table 2.15.2).

Table 2.15.2: Transport, by Indigenous status and age group, persons aged 18 years and older, 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 2.15.2 (continued): Transport, by Indigenous status and age group, persons aged 18 years and older, 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) (d)]																		
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.
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.**
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 2.15.2 (continued): Transport, by Indigenous status and age group, persons aged 18 years and older, 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 last 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: AIHW and ABS analysis of the 2002 NATSISS and 2002 General Social Survey (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 to 55%) (Table 2.15.3).
- A higher proportion of Indigenous females reported using public transport in the last 2 weeks than Indigenous males (29% compared with 22%) (Table 2.15.3).

Table 2.15.3: 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.
Grand 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) (d)]									
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.
Grand total	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**	**100.0**	**n.a.**	**n.a.**

(continued)

Table 2.15.3 (continued): 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
	%	%		%	%		%	%	
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 last 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: AIHW and ABS analysis of the 2002 NATSISS and 2002 GSS.

Transport access, difficulty and use by state/territory

- Indigenous Australians in every state and territory were much more likely to report not having access to a motor vehicle(s), and to report having difficulty getting to the places they needed to, than non-Indigenous Australians. 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 2.15.4).
- Indigenous Australians in the Northern Territory were less likely to have used transport in the last 2 weeks as 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 that reported in the other states and territories (Table 2.15.4).

Table 2.15.4: Transport, by Indigenous status and state/territory, persons aged 18 years and older, 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.
Grand 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 2.15.4 (continued): Transport, by Indigenous status and state/territory, persons aged 18 years and older, 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.
Grand 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 2.15.4 (continued): Transport, by Indigenous status and state/territory, persons aged 18 years and older, 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) The ‘Use of transport’, ‘Use of public transport’, ‘Mode of transport’ and ‘Reasons did not use public transport’ parts for these columns are calculated with Tas and ACT data combined, due to 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 last 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: AIHW and ABS analysis of the 2002 NATSISS and 2002GSS.

Transport access, difficulty and use by remoteness

- A higher proportion of Indigenous Australians in non-remote areas reported having access to a motor vehicle to drive than Indigenous Australians in non-remote areas (64% compared with 48%) (Table 2.15.5).
- Indigenous Australians in remote areas were more likely to report that they could not or often had difficulty getting to the places they needed to (16%) than Indigenous Australians in non-remote areas (10%) (Figure 2.15.2).
- Indigenous Australians in remote areas were much more likely to report not having used transport in the last 2 weeks (14%) and to report no service available (74%) as the main reason why they did not use public transport than Indigenous Australians in non-remote areas (2% and 25% respectively) (Table 2.15.5).

Table 2.15.5: Transport, by Indigenous status and remoteness, persons aged 18 years and older, 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.	na	100.0	n.a.	n.a.
Use of public transport in last 2 weeks[(c)(d)]									
Used public transport in last 2 wks	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 wks	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 wks	2.0	n.a.	n.a.	13.6	n.a.	n.a.	5.2	n.a.	n.a.
Grand Total	100	n.a.	n.a.	100	n.a.	n.a.	100	n.a.	n.a.

(continued)

Table 2.15.5 (continued): Transport, by Indigenous status and remoteness, persons aged 18 years and older, 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.

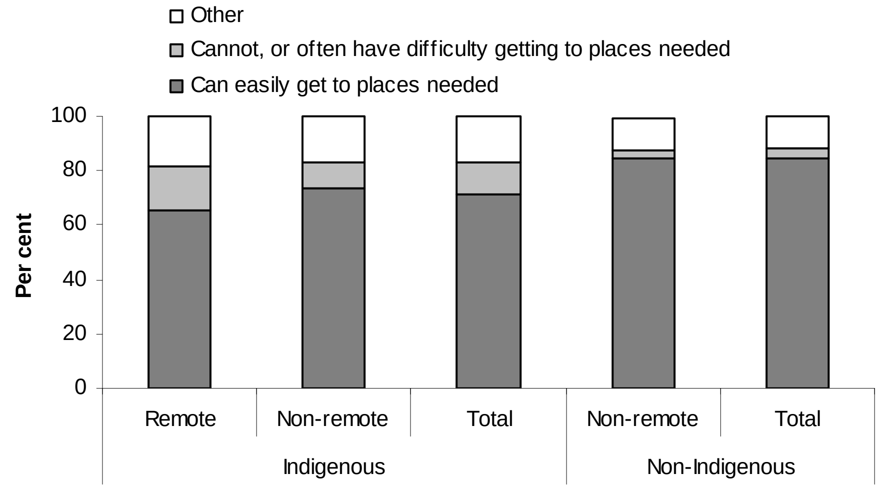
(d) Proportion out of people who used transport in last 2 weeks.

(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: AIHW and ABS analysis of the 2002 NATSISS and 2002GSS.



Note: Other includes sometimes has difficulty getting to places needed and never go out/housebound.

Source: ABS and AIHW analysis of 2002 NATSISS & 2002 GSS.

Figure 2.15.2: 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 who could not get to places when needed reported fair/poor health status and having a disability or long-term health condition than Indigenous and non-Indigenous Australians who could easily get to places when needed (Table 2.15.6).
- A higher proportion of Indigenous Australians who could not get to places when needed were in the lowest 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 2.15.6: Perceived level of difficulty with transport, by selected health and population characteristics and Indigenous status, persons aged 18 years and older, 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/good	40*	62*	24*	44*	21*	36*	27	25[(b)]
Good	31*	24*	34	29	30	23	31	41[(b)]
Fair/poor	28*	13*	41*	27*	49	40	41	35
Disability or long-term health condition[(a)]								
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) Persons in non-remote areas only.

(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: Data for self assessed health status and disability or long term health condition are age standardised.

Source: AIHW and ABS analysis of the 2002 NATSISS and 2002GSS.

Table 2.15.7: Perceived level of difficulty with transport, by selected transport characteristics and Indigenous status, persons aged 18 years and older, 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(e)
No access	28*	9*	65*	41*	79	61	74	64(e)
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number(a)	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(b)								
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(b) (c)								
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(d)	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) Includes 'not stated'.

(b) Data collected for Indigenous Australians only.

(c) Proportion calculation excludes 'used public transport in last 2 weeks' or 'not applicable'.

(d) Number includes people who chose 'not applicable' for 'Main reason did not use public transport'.

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

Source: AIHW and ABS analysis of the 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 transportation 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 last two weeks was that no service was available at all (Table 2.15.7).

Transport/distance as a barrier to accessing health services

The 2004–05 NATSIHS collected information on reasons why 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, transport/distance was reported as the main reason why Indigenous Australians didn't visit a dentist, doctor, other health professional or hospital in the last 12 months when needed for 11%, 14%, 8% and 19% of Indigenous Australians respectively.
- 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.
- Indigenous Australians aged 0–14 years were most likely to report transport as the main reason why they didn't access health services when needed than those in the older age groups.
- Indigenous females were more likely to report transport/distance as the main reason why they didn't access a doctor or hospital in the last 12 months when needed than Indigenous males.

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 identify 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2006; ABS 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. While 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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ABS 2004. National Aboriginal and Torres Strait Islander Social Survey, 2002. ABS cat. no. 4714.0. Canberra: ABS.

AIHW (Australian Institute of Health and Welfare) 2005. Rural, regional and remote health: indicators of health. Rural Health Series no. 5. AIHW cat. no. PHE 59. Canberra: AIHW.

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.

2.16 Proportion of 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 or 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, 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.

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 and lowest among those aged 55 years and over (23%) (Table 2.16.1).
- 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 2.16.1: 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 25% to 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 2.16.2).
- 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 but did not live there was highest in Queensland (58%) and lowest in Tasmania/Australian Capital Territory (31%).

Table 2.16.2: 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 25% to 50% and should be used with caution.

Source: AIHW analysis of 2002 NATSISS.

Access to traditional lands by remoteness

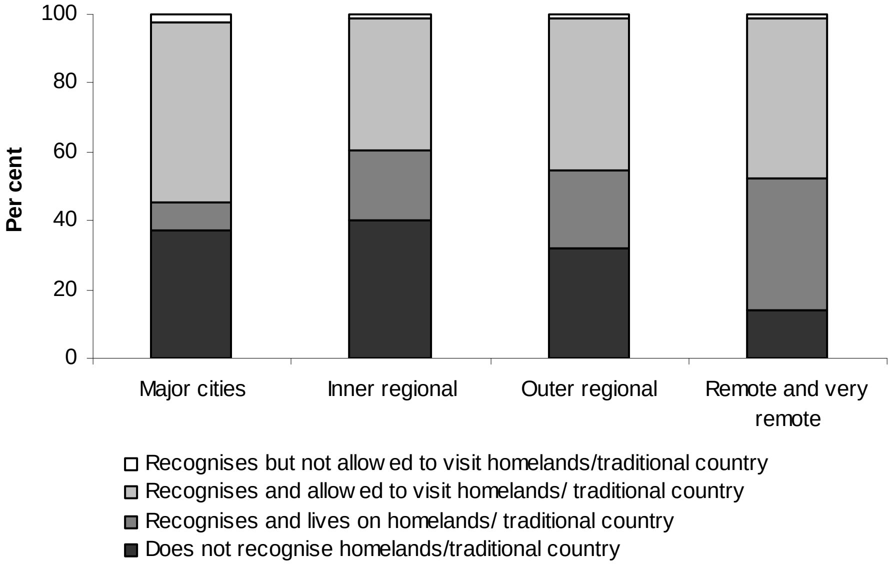
- In 2002, the proportion of Indigenous Australians aged 15 years and over who reported they did not recognise their homelands was highest in inner regional areas (40%) and major cities (38%) and lowest in outer regional (32%) and remote and very remote areas (14%) (Table 2.16.3; Figure 2.16.1).
- Approximately 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 inner regional, outer regional, remote and very remote areas were not allowed to visit their traditional country.

Table 2.16.3: 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 25% to 50% and should be used with caution.

Source: AIHW analysis of 2002 NATSISS.



Source: AIHW analysis of 2002 NATSISS.

Figure 2.16.1: Proportion of Indigenous people who recognise or do not recognise homelands/traditional country, by remoteness, 2002

Access to traditional lands by selected health characheristics

- 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 2.16.4). 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 past 12 months 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 47% of Indigenous Australians who did not recognise their homelands.

Table 2.16.4: 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				Tobacco		
	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 25% to 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 2.16.5).
- A higher proportion of Indigenous Australians who recognised their homelands but were not allowed to live there reported neighbourhood problems (85%), compared with 71% of Indigenous Australians who did not recognise their homelands.

Table 2.16.5: 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 25% to 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 2.16.6).
- 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 2.16.6: Access to traditional lands, by type of personal stressors in last 12 months, Indigenous Australians aged 15 years and over, 2002

Type of stressor	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)			
Serious illness or disability	25.2	33.0	33.5	30.9	30.8
Serious accident	8.4	15.0	12.0	11.4[(a)]	11.6
Death of family member or close friend	37.1	51.5	49.0	37.1	45.7
Member of family sent to jail/currently in jail	11.4	25.4	22.2	16.0[(a)]	19.5
Overcrowding at home	10.8	29.8	22.8	11.2[(a)]	20.5
Divorce or separation	11.7	12.3	17.0	27.4	14.5
Not able to get a job	25.3	28.8	26.8	41.1	27.0
Involuntary loss of job	7.3	7.2	9.1	26.9	8.4
Alcohol/drug problems	16.2	30.3	28.1	23.2[(a)]	24.9
Witness to violence	8.5	21.7	17.4	20.4[(a)]	15.7
Abuse or violent crime	7.2	14.6	12.2	14.0[(a)]	11.2
Trouble with police	13.9	20.7	20.1	21.8[(a)]	18.4
Gambling problem	7.4	19.8	16.9	16.2[(a)]	14.6
Number	85,879	61,700	130,287	4,338	282,205

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

Note: Proportions do not add 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 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 NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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 which has been alienated from use/access by Indigenous Australians but to which they nevertheless feel a traditional connection.

A further problem exists in regard to obtaining objectively derived data due to 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.

2.17 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 (NATSIHS) 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 six-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

The National Drug Strategy Household Survey (NDSHS) is conducted by the AIHW every three years and collects information relating to drug use in Australia. The sample size for the 2004 survey was 29,445 persons aged 12 years or older.

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 would also limit the reliability of time series analysis.

NDSHS data are reportable by 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 to 21% of non-Indigenous Australians. Around 24% of Indigenous adults were ex-smokers compared to 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 2.17.1).
- 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 2.17.1: 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														
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(a)	**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														
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														
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 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: 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 2.17.2).
- 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 2.17.2: 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[(b)]	2[(b)]	1[(b)]	4[(b)]	3[(b)]	1[(b)]	3[(c)]	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[(a)]	**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) Includes smoking status ‘unknown’.

(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.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Smoking status by remoteness

Table 2.17.3 presents the smoking status of Indigenous and non-Indigenous adults by remoteness area for 2004–05.

- In 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 while 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 2.17.3: 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**
									(per cent)									
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 smoking status ‘unknown’.
(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 age standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 2.17.4).
- The rate ratio of Indigenous to non-Indigenous smokers, ex-smokers and non-smokers was also similar in 2001 and 2004–05.
- Data on the smoking status of Indigenous Australians were collected in the 1995 National Health Survey, however 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 2.17.4: 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 age standardised.

Source: ABS & AIHW analysis of 2001 National Health Survey (Indigenous supplement), 2004–05 NATSIHS and 2004–05 National 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 last 12 months. This contrasted with other Australians, 45% of whom had smoked at least 100 cigarettes in their lifetime, and 20% of whom had smoked in the last 12 months (AIHW 2005).

These data should be interpreted with caution 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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publication (ABS 2006).

Smoking data

The survey addresses smoking status, commencement 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. As most Australians commence smoking before the age of 18 years, this limits our understanding of teenage smoking patterns. Teenagers are one of the primary target groups for smoking prevention programs.

National Drug Strategy Household Survey

The National Drug Strategy Household Survey (NDSHS) collects information relating to drug use in Australia. The sample size for the 2004 survey was 29,445 persons aged 12 years or older.

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 would also limit the reliability of time series analysis.

NDSHS data are reportable by the national level only. Data are not available for remoteness areas, regional areas and state and territory levels.

Smoking data

The survey addresses smoking status, age of commencement of tobacco use, sex, and age. The survey collects data from persons aged 12 years and older (with parent/guardian consent). This age group is one of the primary areas for targeting reductions in 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 Bureau of Statistics and 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. IHW14. Canberra: ABS and AIHW.

AIHW (Australian Institute of Health and Welfare) 2005. Statistics on drug use in Australia 2004. Drug Statistics Series no. 15. AIHW cat. no. PHE 62. Canberra: AIHW.

2.18 Tobacco smoking during pregnancy

The proportion of Indigenous mothers who smoked during pregnancy

Data sources

Data for this measure come from the AIHW National Perinatal Data Collection.

There is currently no data element in the Perinatal National Minimum Data Set (NMDS) for smoking during pregnancy. Five jurisdictions currently collect data on smoking during pregnancy in their perinatal collections, however, the definitions used differ among them. The Australian Capital Territory and New South Wales have two questions—did the mother smoke during pregnancy, and average number of cigarettes smoked per day during the second half of the pregnancy. Western Australia asks a question on whether the mother smoked during pregnancy. South Australia has a question on smoking status at the first antenatal visit and a second question on average number of tobacco cigarettes smoked per day in the second half of pregnancy. The Northern Territory has a question on smoking consumption at the first antenatal visit, and at 36 weeks gestation. Given the different questions currently asked in the five jurisdictions, comparisons between states and territories should be interpreted with caution.

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 4.2% of mothers in New South Wales, Western Australia, South Australia, the Australian Capital Territory and the Northern Territory identified as Aboriginal or Torres Strait Islander in 2003. Approximately 2,937 Indigenous mothers in these jurisdictions reported they smoked during pregnancy, 2,437 reported they did not smoke during pregnancy and for 257 Indigenous mothers, smoking status was not known.
- When the effect of age was controlled for, Aboriginal and Torres Strait Islander mothers in the five jurisdictions smoked during pregnancy at around three times the rate of non-Indigenous mothers in these jurisdictions (52% compared to 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 2003 in Table 2.18.1 and Figure 2.18.1.

- In New South Wales, Aboriginal and Torres Strait Islander mothers smoked during pregnancy at around four times the rate of non-Indigenous mothers. In Western Australia, South Australia and the Australian Capital Territory, Indigenous mothers smoked at three times the rate of non-Indigenous mothers and in the Northern Territory, Indigenous mothers smoked during pregnancy at twice the rate of non-Indigenous mothers.

Table 2.18.1: Mother's tobacco smoking status during pregnancy, by Indigenous status, NSW, WA, SA, ACT and NT, 2003(a)(b)

Smoking status	NSW	WA	SA(c)	ACT(d)	NT(e)	Total
			Number			
Indigenous						
Smoked	1,228	794	227	36	602	2,937
Did not smoke	933	732	163	44	565	2,437
Not stated	0	0	28	0	229	257
Total	**2,161**	**1,526**	**468**	**80**	**1,396**	**5,631**
Non-Indigenous						
Smoked	11,645	3,791	4,028	549	449	20,462
Did not smoke	71,175	18,962	12,777	4,130	1,643	108,687
Not stated	12	0	244	4	124	384
Total	**82,832**	**22,753**	**17,049**	**4,683**	**2,216**	**129,533**
			Proportion(f)			
Indigenous						
Smoked	56.2	51.8	58.8	44.4	44.3	52.3
Did not smoke	43.8	48.2	35.9	55.6	40.4	43.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Non-Indigenous						
Smoked	14.5	16.9	23.6	13.1	19.7	16.1
Did not smoke	85.5	83.1	75.0	86.8	74.7	83.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
			Rate ratio(g)			
Smoked	3.9	3.1	2.5	3.4	2.3	3.2
Did not smoke	0.5	0.6	0.5	0.6	0.5	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 NSW.

(c) For SA, 'smoked' includes women who quit before the first antenatal visit.

(d) Of the women who gave birth in the ACT in 2003, 15.3% were non-ACT residents. Care must be taken when interpreting percentages.

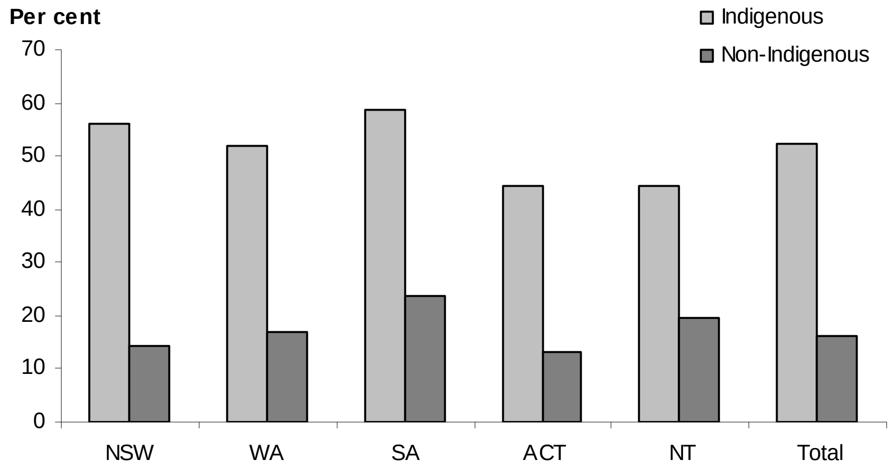
(e) For NT, smoking status was recorded at the first antenatal visit.

(f) Proportions are directly age standardised using the Australian female population aged 15–44 years who gave birth in 2003.

(g) Rate ratio is equal to the rate for Indigenous mothers divided by the rate for non-Indigenous mothers.

Note: Data not available for Victoria, Queensland and Tasmania.

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



Source: AIHW analysis of NPSU National Perinatal Data Collection.

Figure 2.18.1: Proportion of mothers who smoked during pregnancy, by Indigenous status and selected states/territories, 2003

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 impacts on 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). Jurisdictions have taken different approaches to the collection of this information. Data on smoking during pregnancy are currently only available from five states and territories as there is no national data element for this information. Tasmania and Queensland began collecting data in 2005. Victoria collects information on smoking during pregnancy using mechanisms other than their perinatal data collection.

Work is under way to develop a national definition for inclusion in the national 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 and comparisons with the non-Indigenous population. Given the different questions currently asked in the five 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. AIHW cat. no. PER 27. Sydney: AIHW National Perinatal Statistics Unit.

2.19 Risky and high-risk alcohol consumption

The proportion of Aboriginal and Torres Strait Islander people who consume alcohol at risky or high-risk levels

Data sources

Data for this indicator come from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), the AIHW's National Hospital Morbidity Database, the AIHW National Mortality Database and the Bettering the Evaluation and Care of Health (BEACH) 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 six-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 six 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 four but less than six 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 six 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 four but less than seven standard drinks on any one day.
- Short-term high-risk drinking is consumption in excess of seven or more standard drinks on any one day.
- Long-term risky drinking is average consumption in excess of two but less than five 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 four 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 and the 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 five-year period 2000–01 to 2004–05, during which there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.6% of total GP encounters.

Hospitalisations

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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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.

While 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 five-year period 2000–2004 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death are a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

Data 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.

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 people.

- In 2004–05, approximately 50% of Indigenous Australians aged 18 years and over reported having consumed alcohol in the week prior to 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.
- Around one-quarter (24%) of Indigenous adults reported they had not consumed alcohol in the last 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 last 12 months, but equally as likely to drink at long-term risky/high-risk levels in the week prior to 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.

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 last week (20%) (Table 2.19.1).
- Indigenous Australians were more likely than non-Indigenous Australians to report drinking at short-term risky/high-risk levels at least once in the last 12 months across all age groups, although the levels are close for the 18-24 year age group.
- A significantly higher proportion of Indigenous Australians aged 25–34 and 35–44 years drank at long-term risky/high-risk levels in the last week than non-Indigenous Australians of the same age.

Table 2.19.1: 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 mnths(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 wk(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
Subtotal(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 last 12 months.

(c) Based on responses to questions in 2004–05 National Health Survey/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 last 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the last 12 months.

(f) Risk level based on consumption in week prior to interview.

(g) Includes persons whose risk level was reported as 'not known'.

(h) Includes persons who consumed alcohol >1 week, but <12 months ago.

(i) Includes persons who reported time since last consumed alcohol 'not known'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Alcohol risk levels by sex

- A higher proportion of Indigenous males than Indigenous females reported having consumed alcohol in the week prior to survey (58% compared with 41%) (Table 2.19.2).
- 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 last 12 months (30% compared to 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 last 12 months.
- Indigenous males were more likely to report drinking at long-term risky/high-risk levels in the last week than non-Indigenous males (18% compared with 15%). The proportion of Indigenous and non-Indigenous females reporting drinking at long-term risky/high-risk levels was similar.

Table 2.19.2: Alcohol risk levels,[(a)] by Indigenous status and sex, persons aged 18 years and over, 2004–05

	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
					(per cent)					
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
Subtotal[(g)]	*58**	*71**	*41**	*55**	*55*	*71*	*0.8**	*38*	*55*	*0.7**
Total[(h)(i)]	**100**	**100**	**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 last 12 months.

(c) Based on responses to questions in 2004–05 National Health Survey/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 last 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the last 12 months.

(f) Risk level based on consumption in week prior to interview.

(g) Includes persons whose risk level was reported as 'not known'.

(h) Includes persons who consumed alcohol >1 week, but <12 months ago.

(i) Includes persons who reported time since last consumed alcohol 'not known'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 2.19.3a).
- 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 with the exception of Tasmania. The proportion of Indigenous and non-Indigenous Australians reporting drinking at long-term risky/high-risk levels in the last week was similar across all states and territories (Table 2.19.3b).

Table 2.19.3a: 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 last 12 months.

(c) Based on responses to questions in 2004–05 National Health Survey/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 last 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the last 12 months.

(f) Risk level based on consumption in week prior to interview.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.19.3b: Alcohol risk levels,(a) by Indigenous status and state/territory, persons aged 18 years and over, 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*(h)	6*	15	n.a.
Long-term risk(g)																
Drank at risky/high risk levels in last week	17	13	17(h)	12	18	14	16	15	16	16	13	12	9(h)	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.

(c) No alcohol consumed in last 12 months.

(d) Based on responses to questions in 2004–05 National Health Survey/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 last 12 months.

(f) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the last 12 months.

(g) Risk level based on consumption in week prior to interview.

(h) 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 National Health Survey.

Alcohol risk levels by remoteness

- Indigenous adults in remote areas were more likely to report drinking at short-term risky/high risk-levels in the week prior to interview as Indigenous adults in non-remote areas. Similar proportions of Indigenous Australians in remote and non-remote areas reported drinking at long-term risky/high-risk levels in the week prior to interview (15% and 17%) (Table 2.19.4). Indigenous adults in remote areas were much more likely to have abstained from alcohol consumption in the last 12 months than Indigenous adults in non-remote areas (38% compared to 19%).

Table 2.19.4: 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 last 12 months.

(c) Based on responses to questions in 2004–05 National Health Survey/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 last 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the last 12 months.

(f) Risk level based on consumption in week prior to 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 who drank at short-term or long-term risky/high-risk levels and reported their health as excellent/very good was slightly lower and fair/poor was similar to the proportion of Indigenous Australians in the total population who reported their health as fair/poor (Table 2.19.5).
- Indigenous Australians who spoke English as their main language at home and were in the 4th and 5th quintile 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 and were in the 1st quintile of household income. 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 (Table 2.19.6).

Table 2.19.5: 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
	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**
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 National Health Survye/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 week prior to interview.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the last 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the last 12 months.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.19.6: 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)]**	**Total population**
		(per cent)		
Main language spoken at home				
English	18	57	20	85
Language other than English	9	39	16	15
Location				
Remote	15	49	23	28
Non-remote	17	57	18	72
Household income				
1st quintile	15	49	20	34
4th and 5th quintile	20	63	15	14
Employment				
Employed CDEP	21	60	32	11
Employed non-CDEP	19	62	18	41
Subtotal employed	*19*	*61*	*21*	*53*
Unemployed	20	67	23	8
Not in the labour force	12	43	16	40
Housing tenure type				
Owner[(e)]	19	55	14	25
Renter	15	54	21	72
Other[(f)]	25[(g)]	65	22	2
Treatment when seeking health care in last 12 months compared to non-Indigenous people				
Worse	16	56	19	4
The same or better	16	53	19	82
Total	**16**	**55**	**19**	**100**

(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 last 12 months. 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 last 12 months.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the last 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.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Hospitalisations

Table 2.19.7 presents hospitalisations of Indigenous and other Australians for principal diagnoses related to alcohol use in Queensland, Western Australia, South Australia and the Northern Territory combined, over the period July 2002 to June 2004.

- Over the period July 2002 to June 2004, there were 3,684 hospitalisations of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined that had a principal diagnosis related to alcohol use. This represented approximately 1.2% 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 four times the rate of other females.
- Just over three-quarters 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 (2,839 hospitalisations). The most common type of mental and behavioural disorder due to alcohol use was acute intoxication, for which Indigenous Australians were hospitalised at nine times the rate of other Australians. Indigenous Australians were hospitalised at 14 times the rate of other Australians for mental and behavioural disorders due to withdrawal state and 26 times the rate of other Australians for psychotic disorder.
- Indigenous Australians were hospitalised for alcoholic liver disease at seven times the rate of other Australians and were hospitalised for accidental poisoning by alcohol at five times the rate of other Australians.

Table 2.19.7: Hospitalisations for principal diagnoses related to alcohol use, Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

	Males					**Females**					**Persons**				
	Number		**Rate per 1,000[(e)]**			**Number**		**Rate per 1,000[(e)]**			**Number**		**Rate 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)	793	3,089	3.7	0.4	8.8*	599	1,789	2.5	0.3	9.9*	1,392	4,878	3.1	0.3	9.1*
drawal state (F10.3, F10.4)	451	1,137	2.3	0.2	15.0*	118	353	0.5	0.0	10.8*	569	1,490	1.4	0.1	13.6*
endence syndrome (F10.2)	313	6,692	1.6	0.9	1.8*	123	4,614	0.5	0.6	0.9	436	11,306	1.1	0.8	1.4*
Psychotic disorder (F10.5)	143	170	0.6	0.0	25.1*	59	52	0.2	0.0	30.6*	202	222	0.4	0.0	25.7*
Harmful use (F10.1)	101	847	0.5	0.1	4.1*	74	561	0.3	0.1	4.0*	175	1,408	0.4	0.1	4.0*
Other[(h)] (F10.6– F10.9)	43	314	0.3	0.0	6.4*	22	86	0.1	0.0	9.3*	65	400	0.2	0.0	6.8*
Subtotal	***1,844***	***12,249***	***9.0***	***1.7***	***5.4****	***995***	***7,455***	***4.2***	***1.0***	***4.1****	***2,839***	***19,704***	***6.5***	***1.3***	***4.8****
Alcoholic liver disease (K70)	290	2,195	1.6	0.3	5.4*	228	727	1.0	0.1	10.7*	518	2,922	1.3	0.2	6.7*
Intentional self poisoning by alcohol (X65)	55	1,252	0.2	0.2	1.3	95	1,707	0.4	0.2	1.5*	150	2,959	0.3	0.2	1.4*
Accidental poisoning by alcohol (X45)	98	472	0.5	0.1	7.3*	43	473	0.2	0.1	3.0*	141	945	0.3	0.1	5.0*
Poisoning by alcohol undetermined intent (Y15)	17	94	0.1	0.0	5.9*	19	132	0.1	0.0	4.0*	36	226	0.1	0.0	4.8*
Total	**2,304**	**16,262**	**11.4**	**2.2**	**5.2***	**1,380**	**10,494**	**5.8**	**1.4**	**4.0***	**3,684**	**26,756**	**8.5**	**1.8**	**4.6***

(continued)

Table 2.19.7 (continued): Hospitalisations for principal diagnoses related to alcohol use, Qld, WA, SA and NT, July 2002 to June 2004(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. Excludes private hospitals from the Northern Territory.

(m) Categories are based on ICD-10-AM (National Centre for Classification in Health 2004).

(n) Financial year reporting.

(o) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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) Other 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 AIHW National Hospital Morbidity Database.

Mortality

Table 2.19.8 presents deaths of Indigenous Australians related to alcohol use in Queensland, Western Australia, South Australia and the Northern Territory over the period 2000–2004.

- Over the period 2000–2004 in Queensland, Western Australia, South Australia and the Northern Territory, there were 323 deaths of Indigenous Australians related to alcohol use. This represented approximately 2.5% of total deaths of Indigenous Australians in these states and territories (Table 2.19.8).
- Of all deaths related to alcohol use among Aboriginal and Torres Strait Islander people, the majority were for alcoholic liver disease (210 deaths).
- Overall, Indigenous males died from alcohol-related causes at seven times the rate of non-Indigenous males and Indigenous females died from causes related to alcohol use at 10 times the rate of non-Indigenous females.
- Indigenous Australians died from mental and behavioural disorders due to alcohol use at 11 times the rate of non-Indigenous Australians, alcoholic liver disease at six times the rate of non-Indigenous Australians and poisoning by alcohol at 10 times the rate of non-Indigenous Australians.

Table 2.19.8: Deaths related to alcohol use, Qld, WA, SA and NT, 2000-2004(a)(b)(c)(d)(e)

	Males					Females					Persons				
	Number		Rate per 100,000(f)			Number		Rate per 100,000(f)			Number		Rate 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)	111	893	26.9	5.1	5.3*	99	272	14.2	1.5	9.5*	210	1,165	20.1	3.2	6.2*
Mental & behavioural disorders due to alcohol use (F10)	69	314	20.9	1.8	11.3*	29	64	3.7	0.3	10.6*	98	378	11.5	1.1	10.8*
Poisoning by alcohol (X45, X65, Y15)	5	27	0.7	0.2	4.5*	10	10	1.3	0.1	23.2*	15	37	1.0	0.1	9.6*
Total	**185**	**1,234**	**48.5**	**7.1**	**6.9***	**138**	**346**	**19.1**	**1.9**	**10.1***	**323**	**1,580**	**32.6**	**4.4**	**7.4***

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

(a) Data are presented in five-year groupings due to 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) While 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 occurrence except the latest year which is based on year of registration.

(e) Excludes a total of 42 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: It should be noted that 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 AIHW 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 2000–01 to 2004–05 there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 10,955 problems were managed. Of these, 0.8% (84) were problems related to alcohol misuse.
- After adjusting for differences in age structure, alcohol misuse was managed at GP encounters with Indigenous patients at around three times the rate of 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 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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).

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 of Aboriginal and Torres Strait Islander peoples. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern territory) have been assessed as having better identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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's 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. 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). While 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/ 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.

(continued)

Data quality issues (continued)

While 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. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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 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 than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from the ABS's 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 from 1 January 1997.

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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2.20 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 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), the National Aboriginal and Torres Strait Islander Social Survey (NATSISS), the National Drug Strategy Household Survey (NDSHS), the AIHW Hospital Morbidity Database and the AIC 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 six-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. It 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.

National Drug Strategy Household Survey (NDSHS)

The National Drug Strategy Household Survey (NDSHS) is conducted by the AIHW every three years and collects information relating to drug use in Australia. The sample size for the 2004 survey was 29,445 persons aged 12 years or older.

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 would also limit the reliability of time series analysis.

NDSHS data are reportable by the national level only. Data are not available for remoteness areas, regional areas and state and territory levels.

Drug Use Monitoring in Australia (DUMA)

The DUMA is an annual survey that has been conducted by the Australian Institute of Criminolgy (AIC) since 1999 at some locations across Australia. Further sites in Victoria and the Northern Territory (Darwin) are being reported from 2006 onwards. The survey reports on drug use among police detainees at seven 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.

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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005a). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

Data 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.

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 and 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% of Indigenous Australians 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% of Indigenous Australians aged 15 years and over reported illicit substance use in the last 12 months.

Substance use by age and sex

- In 2004–05, the majority of Indigenous persons who used substances in the last 12 months were aged 15–34 years (61%) (Table 2.20.1).
- In 2004–05, a higher proportion of Indigenous males reported having ever used illicit substances (54%) and substance use in the last 12 months (32%) than Indigenous females (45% and 25% respectively) (Table 2.20.2a).
- Approximately 44% of Indigenous males and 34% of Indigenous females aged 18–24 years reported they had used substances in the last 12 months.

Type of substance use

- Marijuana was the most commonly reported illicit drug used by Aboriginal and Torres Strait Islander people 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 last 12 months. Amphetamines/speed was the next most frequently reported substance either experimented with (15%) or recently used (7%) by Indigenous Australians followed by ecstasy or designer drugs (Table 2.20.2a).
- Marijuana was also the most commonly reported illicit drug used by Indigenous people aged 15 years and over in non-remote areas in 2002 (34% reported having ever used the drug and 19% had used the drug in the last 12 months) (Table 2.20.2b; Figure 2.20.1).

Table 2.20.1: Substance use, by age and sex, Indigenous persons aged 15 years and over, 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(a)	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(b)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
				Proportion of age group (%)					
15–17(a)	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(b)	**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) Excludes data obtained through child proxy.

(b) People who accepted the substance use form.

(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: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.20.2a: 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
Painkillers 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
Has 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
Grand 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
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*
Use in last 12 months 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
Grand total	**142,490**	**100.0**	**143,226**	**100.0**	**285,715**	**100.0**

Source: AIHW analysis of 2004–05 NATSIHS.

Table 2.20.2b: Substance use, by type of substance and sex, Indigenous persons aged 15 years or over, non-remote areas, 2002

	Males		Females		Persons	
	Number	**Per cent**	**Number**	**Per cent**	**Number**	**Per cent**
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
Painkillers/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[(c)]	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 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[(b)]	**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
Painkillers/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[(c)]	3,000	1.5
Cocaine	500	0.5[(c)]	900	0.8[(c)]	1,300	0.6[(c)]
LSD or synthetic hallucinogens	700	0.7[(c)]	700	0.6[(c)]	1,300	0.7[(c)]
Heroin	500	0.5[(c)]	600	0.6[(c)]	1,100	0.5[(c)]
Kava	500	0.5[(c)]	600	0.6[(c)]	1,100	0.6[(c)]
Other inhalants	500	0.5[(c)]	400	0.4[(c)]	900	0.5[(c)]
Naturally occurring hallucinogens	400	0.5[(c)]	200	0.2[(d)]	600	0.3[(c)]
Petrol	400	0.4[(d)]	100	0.1[(d)]	500	0.3[(c)]
Total used substances in last 12 months	***26,000***	***26.6***	***22,300***	***20.7***	***48,300***	***23.5***

(continued)

Table 2.20.2b (continued): Substance use, by type of substance and sex, Indigenous persons aged 15 years or over, non-remote areas, 2002

	Males		Females		Persons	
	Number	Per cent	Number	Per cent	Number	Per cent
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[(b)]	**97,600**	**100.0**	**107,500**	**100.0**	**205,100**	**100.0**

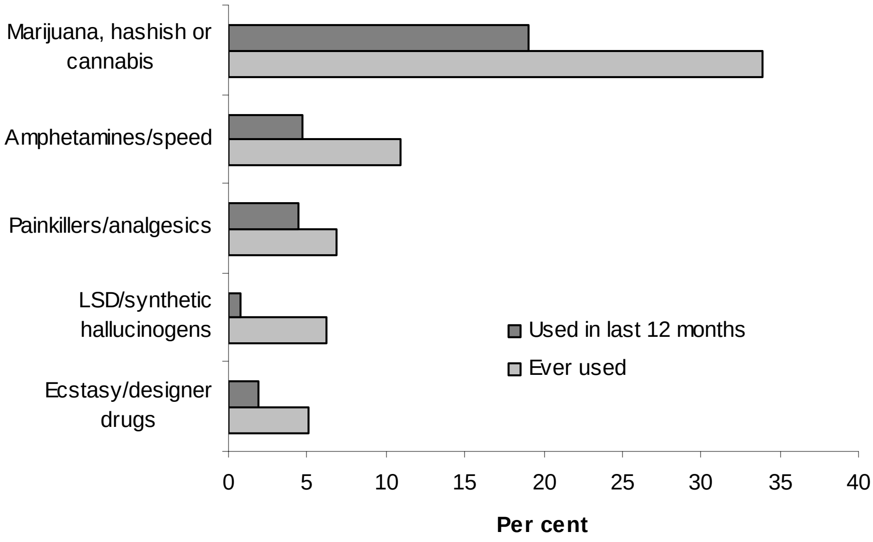
(a) For non-medicinal use.

(b) Includes not stated responses.

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

(d) Estimates with a relative standard error greater than 50% are considered too unreliable for general use.

Source: AIHW analysis of ABS NATSISS 2002.



Notes:

1. Painkillers/analgesics are for non-medicinal use.
2. Estimate for LSD or synthetic hallucinogens in last 12 months has a relative standard error of 25% to 50% and should be used with caution.

Source: AIHW analysis of ABS NATSISS 2002.

Figure 2.20.1: Illicit substance use, Indigenous persons aged 15 years and over, non-remote areas, 2002

Substance use by Indigenous status

- The 2004 National Drug Strategy Household Survey found that illicit drug use among Aboriginal and Torres Strait Islander people was higher than for other Australians. For example, 27% of Indigenous persons aged 14 years and over had used drugs or other substances in the last 12 months compared to 15% of other Australians and 12% of Indigenous persons aged 14 years and over had used substances other than marijuana/cannabis in the last 12 months compared to 8% of other Australians (Table 2.20.3).

Table 2.20.3: Drugs or other substances including inhalant use status, persons aged 14 years and over, 2004

	Never used	Ex-users	Recent users
	%	%	%
Drugs or other substances, including marijuana/cannabis			
Indigenous	50.1	22.9	26.9
Non-Indigenous	62.1	22.9	15.0
Drugs or other substances, excluding marijuana/cannabis			
Indigenous	74.2	14.2	11.6
Non-Indigenous	81.5	10.3	8.1

Source: AIHW 2005b.

Time series analysis

- 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 prior to survey were slightly higher in 2004–05 than in 2002 (28% compared to 25%) (Table 2.20.4).
- A higher proportion of Indigenous adults reported having ever used substances in 2004–05 than in 2002 (50% compared to 44%).
- The proportion of Indigenous Australians who reported marijuana use in the last 12 months was higher in 2004–05 than in 2002 (23% compared to 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 to 5%).

Table 2.20.4: Indigenous persons aged 18 years and over in non-remote areas, substance use, by sex, 2002 and 2004−05

	2002[(a)]			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[(b)]	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[(i)]	1[(i)]	1[(i)]	29[(i)]	—[(j)]	19[(i)]
Total used substances in last 12 months[(c)(d)]	**29**	**22**	**25**	**32**	**24**	**28**
Used substances but not in last 12 months	19	18	19	22	21	22
Total used substances[(e)]	**48**	**40**	**44**	**56**	**46**	**50**
Never used substances	51	59	55	42	53	48
Not stated[(f)]	1[(j)]	—[(i)]	—[(i)]	2[(i)]	2[(i)]	2
Total[(g)]	**100**	**100**	**100**	**100**	**100**	**100**
Substance use form status						
Form accepted	93	92	93	78	83	80
Form non-response[(h)]	7	8	7	9	7	8
Form status not unknown	. .	. .	. .	13	10	12
Total	**100**	**100**	**100**	**100**	**100**	**100**

(a) Data from 2002 NATSISS.

(b) Includes painkillers, tranquilisers and sleeping pills.

(c) Includes heroin, cocaine, petrol, LSD/synthetic hallucinogens, naturally occurring hallucinogens, ecstasy/designer drugs, and other inhalants. Includes methadone in 2004–05.

(d) Sum of components may be more than the total as persons may have reported more than one type of substance used in last 12 months.

(e) Includes 'whether used substances in last 12 months' not known.

(f) Includes 'whether ever used substances' not known.

(g) People who accepted the substance use form.

(h) Includes refusals.

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

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

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 (used in the last 12 months) reported they were currently daily smokers and drank at risky/high-risk levels than Indigenous persons who had never used illicit substances (Table 2.20.5).
- 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 2.20.5: 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	34	31	35
4th and 5th quintile	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 2.20.5 (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 last 12 months and 12% of Indigenous males and 7% of Indigenous females had used three or more substances in the last 12 months (Table 2.20.6).

Table 2.20.6: Multiple drug use, by sex: Aboriginal and Torres Strait Islander persons aged 15 years and over, 2004–05[a][b]

	Did not use substances in last 12 months[c]	Used one substance[d]	Used 2 or more substances[d]
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 last 12 months.

(d) Number of substances used in the last 12 months.

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

Detainees and drug use

The AIC Drug Use Monitoring in Australia (DUMA) survey reports on drug use among police detainees at seven police stations in metropolitan areas in South Australia, New South Wales, Queensland and Western Australia. The survey is by a voluntary questionnaire and drug use are confirmed by a urine sample provided by the detainee. Data from the 2005 survey is presented in Table 2.20.7 below.

- In 2005, a higher proportion of Indigenous detainees tested positive to drugs than non-Indigenous detainees in all seven police stations surveyed.
- The proportion of Indigenous detainees testing positive to drugs ranged from 62% and 85% for Indigenous detainees compared to between 47% and 73% for non-Indigenous detainees.
- Cannabis was the most common drug for which both Indigenous and non-Indigenous detainees tested positive. Methylamphetamine was also a common drug to which Indigenous and non-Indigenous detainees tested positive. Multiple drugs were tested positive in between 21% to 43% of Indigenous detainees and 23% to 38% of non-Indigenous detainees.

Table 2.20.7: Detainees at selected police stations, by drug use and Indigenous status, 2005

	Adelaide + Elizabeth (SA)		Bankstown + Parramatta (NSW)		Brisbane + Southport (Qld)		East Perth (WA)	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
				(per cent)				
Tested positive to a drug								
Benzodiazepines	30.3	20.6	33.3	15.8	21.3	19.3	14.2	22.6
Cannabis	80.0	60.5	50.0	34.4	59.8	51.0	73.1	57.2
Cocaine	0.0	0.7	4.2	3.7	0.0	0.6	0.0	0.0
Heroin	9.7	9.3	4.2	15.2	5.5	14.3	6.0	11.1
Methylamphetamine	26.9	35.6	25.0	12.3	28.4	23.1	29.1	33.0
Multiple drugs	42.8	37.5	20.8	22.9	35.4	29.2	32.1	37.6
***Subtotal tested positive to a drug*[(a)]**	***84.8***	***72.9***	***66.7***	***47.4***	***66.9***	***62.2***	***79.9***	***69.0***
Did not test positive to a drug	15.2	27.1	33.3	52.6	33.1	37.8	20.2	31.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	145	734	24	462	127	1,010	134	306

(a) Proportion who tested positive to a least one drug. Sum of components with add to more than the subtotal as detainees can test positive to more than one type of drug.

Source: AIHW analysis of AIC, Drug Use Monitoring in Australia Program (DUMA) 2005.

Hospitalisations

Table 2.20.8 presents hospitalisations related to drug use for the period July 2002 to June 2004 in Queensland, Western Australia, South Australia and the Northern Territory.

- For the period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory, there were 2,525 hospitalisations of Indigenous Australians related to substance use (Table 2.20.8). This represented 0.8% of total hospitalisations of Indigenous Australians in these jurisdictions.
- Indigenous Australians were hospitalised for conditions related 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 antibiotics and hormones, and poisoning due to psychotropic drugs were responsible for 14%, 12% and 10% respectively of all hospitalisations of Indigenous Australians related to substance use over the period June 2003 to July 2004. Indigenous Australians were hospitalised for the first two 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 both responsible for 11% of all hospitalisations of Indigenous Australians related to substance use. Indigenous Australians were hospitalised for these disorders at five and three times the rate of other Australians respectively.
- Indigenous Australians were hospitalised for mental and behavioural disorders from use of volatile solvents at around 22 times the rate of other Australians.

Table 2.20.8: Main types of hospitalisations related to drug use in Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

	Indig.	Other(e)	Indig.	Other(e)	Indigenous			Other(e)			
	Number	Per cent	Number	Per cent	Rate per 1,000(f)	95% LCL(g)	95% UCL(h)	Rate per 1,000(f)	95% LCL(g)	95% UCL(h)	Rate Ratio(i)
Poisoning											
Antiepileptic, sedative-hypnotic and anti-Parkinson's drugs (T42)	361	6,608	14.3	19.3	0.7	0.6	0.8	0.5	0.4	0.5	1.5*
Antibiotics and hormones (T36–T39)	293	4,845	11.6	14.1	0.5	0.4	0.6	0.3	0.3	0.3	1.5*
Psychotropic drugs, includes antidepressants (T43)	258	5,722	10.2	16.7	0.4	0.4	0.5	0.4	0.4	0.4	1.1
Narcotics, including opium, heroin, methadone and cocaine (T40)	78	1,424	3.1	4.2	0.1	0.1	0.2	0.1	0.1	0.1	1.3
Toxic effect of organic solvents (T52)	60	220	2.4	0.6	0.1	0.1	0.1	—	—	—	4.5*
Accidental poisoning											
Antidepressants and barbiturates (X41)	220	3,669	8.7	10.7	0.4	0.3	0.4	0.3	0.2	0.3	1.5*
Unspecified (includes glues and paints) (X49)	106	1,846	4.2	5.4	0.2	0.1	0.2	0.1	0.1	0.1	1.4*
Narcotics (includes cannabis, cocaine, heroin, opium and methadone) and hallucinogens (X42)	80	1,267	3.2	3.7	0.1	0.1	0.2	0.1	0.1	0.1	1.5*
Organic solvents, including petroleum derivatives (X46)	63	215	2.5	0.6	0.1	0.1	0.1	—	—	—	4.5*
Mental/behavioural disorders											
from use of cannabinoids (F12)	284	1,246	11.2	3.6	0.4	0.4	0.5	0.1	0.1	0.1	4.8*
from use of multiple drug and psychoactive substances (F19)	269	1,924	10.7	5.6	0.4	0.4	0.5	0.1	0.1	0.1	3.0*
from use of other stimulants (F15)	226	2,575	9.0	7.5	0.4	0.3	0.4	0.2	0.2	0.2	2.0*
from use of volatile solvents (F18)	99	84	3.9	0.2	0.1	0.1	0.2	—	—	—	21.5*
from use of opioids (F11)	60	1,746	2.4	5.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
from use of sedatives (F13)	15	759	0.6	2.2	—	—	—	0.1	—	0.1	0.5*
from use of cocaine (F14)	n.p.	33	0.1	0.1	n.p.	n.p.	n.p.	—	—	—	n.p.

(continued)

Table 2.20.8 (continued): Main types of hospitalisations related to drug use in Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

	Indig.	Other(e)	Indig.	Other(e)	Indigenous			Other(e)			
	Number		Per cent		Rate per 1000(f)	95% LCL(g)	95% UCL(h)	Rate per 1000(f)	95% LCL(g)	95% UCL(h)	Rate Ratio(i)
Other											
Acute hepatitis C (B17.1)	6	93	0.2	0.3	—	—	—	—	—	—	2.0
Maternal care for suspected damage to foetus by drugs (035.5)	n.p.	11	0.1	—	n.p.	n.p.	n.p.	—	—	—	n.p.
Neonatal withdrawal symptoms from maternal use of drugs of addiction (P96.1)	43	332	1.7	1.0	—	—	—	—	—	—	1.6*
Total	**2,525**	**34,287**	**100.0**	**100.0**	**4.1**	**3.9**	**4.3**	**2.4**	**2.4**	**2.4**	**1.7***

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

(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) (National Centre for Classification in Health 2004).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 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 AIHW 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 identify 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004a; 2006).

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 datacollector, 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 for substance use reported in community areas was assumed to be the result of the use of direct questioning in community 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 only collected 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 being 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 painkillers, tranquillisers and methadone.

Data may be compared with the 2002 NATSISS (excluding information regarding methadone which was only collected 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 to 10% for NATSISS.

National Drug Strategy Household Survey (NDSHS)

The National Drug Strategy Household Survey (NDSHS) collects information relating to drug use in Australia. The sample size for the 2004 survey was 29,445 persons aged 12 years or older.

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 would also limit the reliability of time series analysis.

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.

Future reporting of these data will include the Victorian and Northern Territory police station data when these become available from the 2006 calendar year onwards.

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 of Aboriginal and Torres Strait Islander peoples. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern territory) have been assessed as having better identification in 2003–04 (AIHW 2005a). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory.

The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data.*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005a).*

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's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004b).*

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2.21 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).

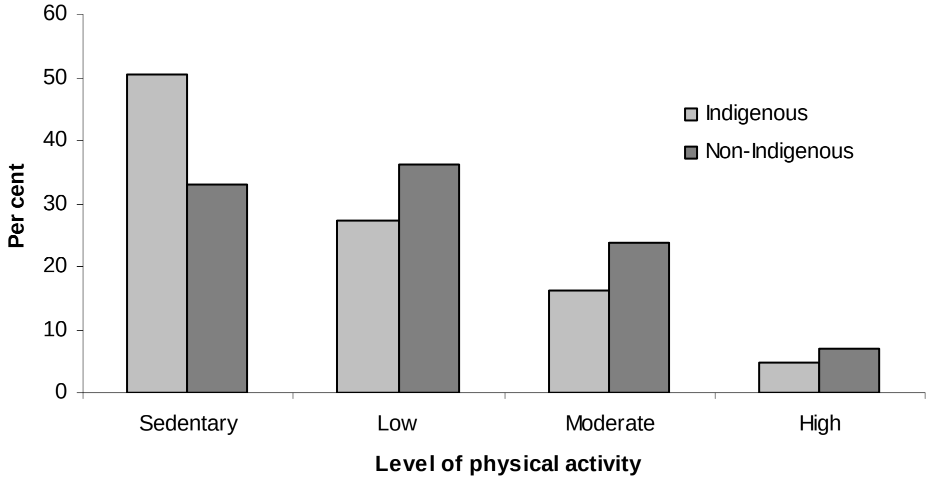
The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range 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 six-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 two weeks prior to survey was collected in non-remote areas only and is presented below.

- In 2004–05, approximately 47% of Indigenous persons aged 15 years and over in non-remote areas of Australia reported their exercise level as sedentary in the two weeks prior to survey, 28% as low, 18% as moderate and 7% as high.
- In 2004–05 in non-remote areas, after adjusting for differences in age structure, approximately 51% of Indigenous persons aged 15 years and over reported their exercise level as sedentary (very low or no exercise), 27% as low and 21% as moderate or high. This compared to 33%, 36% and 31% of non-Indigenous Australians respectively (Figure 2.23.1).



Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Figure 2.21.1: 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), while moderate or high levels of physical activity were highest among those aged 15–24 and 25–34 years (32% and 27% respectively) (Table 2.21.1).
- A higher proportion of Indigenous females than Indigenous males reported that their level of exercise was sedentary (51% compared to 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 2.21.1: 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(c)	24	14*	27*	22	25	20*	25*
High	19	20	9*	13*	6(c)	8	3(c)	5	n.p.	3	10	9	7*	9*
Total number(b)	**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*(c)	6*	2(d)	4	n.p.	3	n.p.	2	3*	4*	2*	4*
Total number(b)	**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*(c)	6*	3(c)	4	1(d)	3	7	7	5*	7*
Total number(b)	**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) Includes physical activity level 'not stated'.

(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: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 2.21.2a).
- A higher proportion of Indigenous Australians than non-Indigenous Australians reported their exercise level as sedentary in all states and territories except Tasmania. Data were not available for non-Indigenous Australians in the Northern Territory (Table 2.21.2b).

Table 2.21.2a: 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(c)	9	5	6(c)	8	10	7(c)	7
Total(a)	**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) Includes physical activity level ‘not stated’.

(b) The National Health Survey sample does not support a non-Indigenous Northern Territory estimate.

(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 NATSIHS.

Table 2.21.2b: 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(c)	7	6	7	3*	8*	4(c)	6	6	7	7	9	5(c)	n.a.	5*	7*
Total(b)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total number(b)	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) Includes physical activity level 'not stated'.

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

Note: Data are age standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 to 48% of Indigenous Australians with excellent/very good/good health status (Table 2.21.3). 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.

Table 2.21.3: 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(c)	23	0.7	14	23	0.6*	9(c)	23	0.4*	16	24	0.7*	15	24	0.6*
High	5	7	0.7*	2(c)	3	0.6	5(d)	6(c)	0.8	2(d)	5	0.4*	—(d)	4(c)	0.1*	4	7	0.7*	6	7	0.9
Total(b)	**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) Includes physical activity level 'not stated'.

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

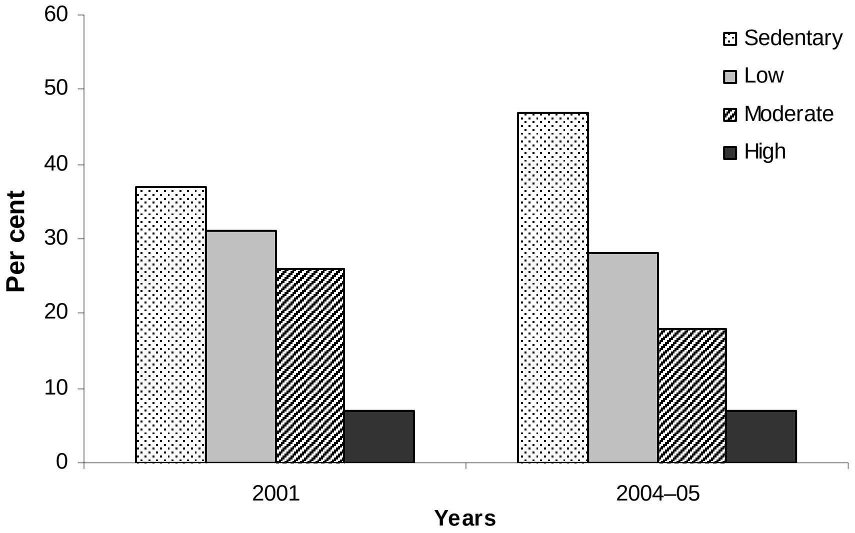
(d) Estimate has a relative standard error of greater than 50% and is considered too unreliable for general use.

Note: Data are age standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Time series analysis

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), while the level of high physical activity remained the same (7%) (Table 2.21.4; Figure 2.21.2).



Source: ABS and AIHW analysis of 2001 National Health Survey (Indigenous supplement) and 2004–05 NATSIHS.

Figure 2.21.2: Level of physical activity, Indigenous persons aged 15 years and over, non-remote areas, 2001 and 2004–05

Table 2.21.4: Level of physical activity, by Indigenous status, non-remote areas, 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**

(a) Persons aged 15 years and over.

Note: Data are age standardised.

Source: ABS and AIHW analysis of 2001 National Health Survey (Indigenous supplement), 2004–05 NATSIHS and 2004–05 National Health Survey.

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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publication (ABS 2006).

Physical activity data

The information is 'as reported' by respondents and reflects the respondent's 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 two-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 primarily 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 employs 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.

2.22 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 six-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are availavle through the 2004–05 National Health Survey (NHS).

The questions on dietary behaviour in the NATSIHS 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. Data for all those aged 12–14 years, and 68% of those were 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.

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.
- 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, 42% 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 2.22.1b).

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 2.22.1a).
- 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 2.22.1a, 2.22.1b).
- Indigenous and non-Indigenous people aged 12–14 years were most likely to report drinking whole milk (88% and 69% respectively) than those in the older age groups (Table 2.22.1a).
- The proportion of Indigenous people who reported usually adding salt after cooking increased with age (Table 2.22.1b).
- In non-remote areas, Indigenous people were much more likely to drink full-cream milk than non-Indigenous people across all age groups (Tables 2.22.1a; 2.22.1b).

Table 2.22.1a: 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	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
							(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)	—
1 serve or less	20	23	24	27	27	24	21	20	21	18	16	13
2–4 serves	66	67	65	63	63	65	65	66	66	65	71	67
5 serves or more	12	9	8	9	9	11	13	13	11	16	11	19
Total	**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
1 serve or less	41	39	46	44	48	45	53	42	43	38	37	32
2–4 serves	51	51	37	43	37	43	32	46	41	52	53	58
5 serves or more	2(a)	5	3*	4	2(a)	3	2(a)	4	4(a)	4	4(a)	6
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

(continued)

Table 2.22.1a: 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**	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**
Usual type of milk												
Whole	88	69	81	55	76	49	73	48	68	37	58	35
Low/reduced fat	8	22	11	25	12	28	17	29	16	38	24	35
Skim	1(b)	4	4	11	6	13	7	13	6	13	11	17
Soy	np	np	—(b)	3	2(a)	4	n.p.	4	2(b)	5	2(a)	5
None of the above(c)	np	np	—(b)	1(a)	—(a)	1	n.p.	1	3(b)	1	1(b)	1
Total drinks milk	*98*	*98*	*97*	*95*	*96*	*96*	*98*	*95*	*96*	*94*	*95*	*94*
Does not drink milk	2*	2*	3	5	3	4	2(a)	5	4	6	5(a)	6
Total(d)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

(a) Estimate has a relative standard error of 25% to 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 National Health Survey.

Table 2.22.1b: 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
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
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 2.22.1b (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 National Health Survey.

Dietary habits by sex

- A higher proportion of Indigenous males aged 12 years and over reported not eating vegetables daily than Indigenous females (16% compared to 12%) (Table 2.22.2).
- Indigenous females were twice as likely as Indigenous males to report drinking skim milk as the usual type of milk consumed (6% compared to 3%).
- There was little difference in the proportion of Indigenous males and females reporting eating vegetables daily or adding salt after cooking.

Table 2.22.2: Selected dietary habits, by sex, Indigenous persons aged 12 years and over, 2004–05

Dietary behaviours	Males	Females	Persons
	%	%	%
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 2.22.3: 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 or 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 2.22.3 (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 National Health Survey.

Dietary habits by state/territory

Dietary habits of Indigenous and non-Indigenous Australians are presented in Tables 2.22.4a and 2.22.4b 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 due to 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 Queensalnd, 12% in Victoria and 14% in Western Australia (Table 2.22.4a).
- 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/Australian Capital Territory (37%).
- Non-Indigenous Australians were more likely to report eating five serves of vegetables or more than Indigenous Australians in New South Wales, Queensland and Western Australia. Rates were similar for Indigenous and non-Indigenous Australians in Victoria (Table 2.22.4b).
- Non-Indigenous Australians were more likely to report eating five serves of fruit or more than Indigenous Australians in four jurisdicitions for which data are presented (New South Wales, Victoria, Queensland and Western Australia) (Table 2.22.4b).
- 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 2.22.4a: 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 due to 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 2.22.4b: 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 vegs	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 SA, Tas, ACT and NT are not presented due to output resRtictions for non-remote data items for these states and territories.

Source: AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

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 2.22.5).
- 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 2.22.5).

Table 2.22.5: Selected dietary habits, by remoteness, Indigenous persons aged 12 years and over, 2004–05

Dietary behaviours	Remote	Non-remote	Total
	%	%	%
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	—[(e)]	1	1
None of the above[(b)]	1[(e)]	1[(e)]	1[(e)]
Total drinks milk	*95*	*97*	*96*
Does not drink milk	5	3	4
Total[(c)]	**100**	**100**	**100**
Salt added after cooking			
Never/rarely	16	35	30
Sometimes	30	23	25
Usually	53	43	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.

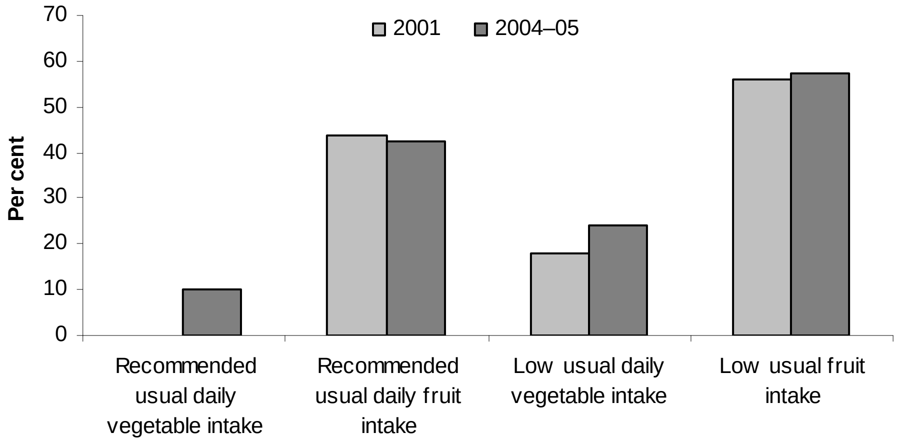
(d) Includes 'frequency salt is added after cooking' not known.

(e) Estimate is subject to sampling variability too high for most practical purposes.

Source: ABS 2006a.

Time series analysis

- 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 18% 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 (56% and 58% respectively) (Figure 2.22.1).



Notes

1. Recommended usual daily vegetable intake = 5 or more serves per day.
2. Recommended usual daily fruit intake =2 or more serves of fruit 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 National Health Survey (Indigenous supplement) and 2004–05 NATSIHS.

Figure 2.22.1: Percentage 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 reported fair/poor health reported no usual daily vegetable intake and/or no usual daily fruit intake than Indigenous persons with excellent/very good health status (Table 2.22.6).
- Indigenous Australians aged 15 years and over in the lowest quintile of income were much more likely than Indigenous Australians in the highest quintile of household income to report no usual daily fruit and/or vegetable intake.
- Indigenous Australians who completed Year 9 or below as their highest year of school and did not have a non-school qualification were also much more likely to report no usual daily fruit and/or vegetable intake than Indigenous Australians 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 Indigenous people who were home owners (1% and 11% respectively).

Table 2.22.6: Dietary risk behaviours, by selected health and population characteristics, Indigenous persons aged 15 years and over, 2004–05

	No usual vegetable intake	No usual daily fruit intake
	%	%
Self-assessed health status		
Excellent/very good	4.7	12.9
Good	6.3	16.6
Fair/poor	6.5	16.2
Total	**5.7**	**14.9**
Household income		
1st quintile	7.8	16.8
5th quintile	0.2	5.8
Total	**5.7**	**14.9**
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
Total	**5.7**	**14.9**
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
Total	**5.7**	**14.9**
Employment		
Employed	5.0	14.3
Unemployed	4.0	14.4
Not in the labour force	6.8	15.6
Total	**5.7**	**14.9**
Housing		
Owner	0.5	11.1
Renter	7.4	16.4
Total	**5.7**	**14.9**
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
Total	**5.6**	**14.8**
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.

Whether ran out of food in the last 12 months

- In 2004–05, approximately 24% of Indigenous Australians aged 15 years and over reported they ran out of food in the last 12 months compared to 5% of non-Indigenous Australians (Table 2.22.7).
- Approximately 8% of Indigenous people reported they went without food when they couldn't afford to buy more compared to 2% of non-Indigenous people.
- Indigenous Australians in the younger age groups 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 last 12 months was much higher in the Northern Territory (45%) than the other states and territories (between 19% 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 Indigenous Australians in non-remote areas (20%).

Table 2.22.7: Proportion of Indigenous persons aged 15 years and over that ran out of food and couldn't afford to buy more at some time over the last 12 months,[(a)] 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	**8**	**2**	**4.0**	**17**	**3**	**5.7**	**24**	**5**	**5.0**	**76**	**95**	**0.8**
Total no.	19,676	283,628	. .	42,674	425,252	. .	62,350	708,880	. .	19,5913	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.

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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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 comparisons between population groups. Use of the data for other purposes should be undertaken 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 assist non-remote respondents in understanding 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 (see definitions above), 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 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.

References

ABS (Australian Bureau of Statistics) 2002. National Health Survey: Aboriginal and Torres Strait Islander results, Australia 2001. ABS cat. no. 4715.0. Canberra: ABS.

ABS 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: user's guide 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

2.23 Breastfeeding practices

The breastfeeding status of Aboriginal and Torres Strait islander infants, breastfeeding duration, breastfeeding and other sources of food and reasons why mothers stopped breastfeeding

Data sources

Data for this indicator 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 six-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 through 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 (ORS); 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 breast milk 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 to 88% of non-Indigenous infants.
- Approximatley 13% of Indigenous infants aged 0–3 years were currently being breastfed compared to 16% of non-Indigenous infants of the same age.
- A similar proportion of Indigenous and non-Indigenous infants aged 0–3 years 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 to 156 weeks for non-Indigenous children.

Breastfeeding status by state/territory

- In Queensland a significantly lower proportion of Indigenous infants aged 0–3 years had ever been breastfed (79%) compared to non-Indigenous infants (89%) (Table 2.23.1; Figure 2.23.1).

Table 2.23.1: Breastfeeding status, by state/territory and Indigenous status, persons aged 0–3 years in non-remote areas, 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.(a)**	**Indig.**	**Non-Indig.**
Breastfeeding measure	**Proportion (%)**																	
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 months to 12 months	21	25	22(g)	25	19(f)	20	14(f)	16	16(g)	19	15(f)	18	16(f)	24	15(f)	n.p.	19	22
12 months or more(b)	11	13	10(g)	14	18(f)	13	15(f)	16	10(g)	17	9(g)	15	17(f)	23(f)	13(f)	n.p.	13	14
Currently breastfeeding	8(f)	13	9(f)	15	12(f)	17	30(f)	24	18(f)	13	11(g)	17	17(f)	21(f)	29(f)	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*(f)	7*	20	10	19(f)	10(f)	30(f)	19	14(f)	14(f)	5(g)	4(f)	11(f)	n.p.	21*	12*
Total(c)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	n.p.	100	100
Total Persons	**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)(d)	78(e)	104(e)	56(e)	104(e)	117(e)	87(e)	83(e)	109(e)	52(e)	104(e)	65(e)	84(e)	78(e)	70(e)	78(e)	n.p.	130	156
Minimum duration of breastfeeding among fully breastfed children (weeks)(d)	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 as the non-Indigenous sample for this area was insufficient for purposes of estimation for these characteristics.

(b) Includes length of time child has been breastfed not known.

(c) Includes breastfeeding status not known.

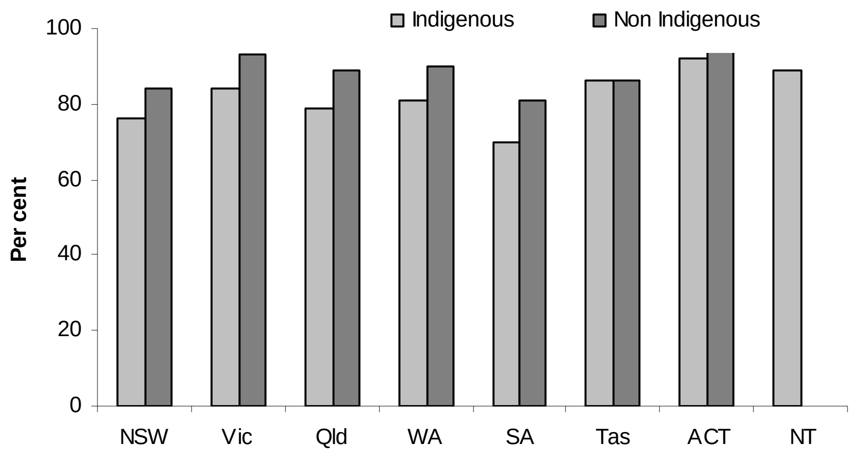
(d) Excludes children currently breastfed and children who had been fully breastfed for less than 1 week.

(e) 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.

(f) Estimates having a relative standard error of 25% to 50% should be used with caution.

(g) Estimates having a relative standard error greater than 50% are considered too unreliable.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.



Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Figure 2.23.1: Ever breastfed, by Indigenous status and state/territory, persons aged 0–3 years, non-remote areas, 2004–05

Breastfeeding status by remoteness

- In 2004–05, approximately 20% of Indigenous children aged 0–3 years were currently being breastfed, 60% had previously been breastfed but not currently, and 19% had never been breastfed (Table 2.23.2).
- Breastfeeding status varied by remoteness, with a higher proportion of Indigenous children in remote areas currently being breastfed than Indigenous children in non-remote areas (Figure 2.23.2). Approximately 42% of Indigenous children aged 0–3 years in remote areas were currently being breastfed, 43% had previously been breastfed and 14% had never been breastfed. This compared to 13%, 65% and 21% of Indigenous infants in non-remote areas respectively.
- At ages 0–6 months, 6–12 months and 1–3 years, a higher proportion of Indigenous infants in remote areas were breastfeeding their children than in non-remote areas.

Table 2.23.2: Breastfeeding status, by remoteness and length at which child breastfed, Indigenous persons aged 0–3 years, 2004–05

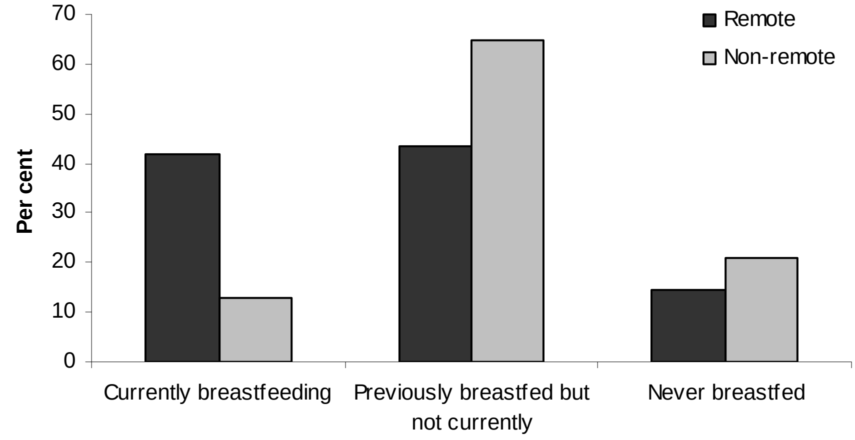
	Less than 6 months			6 months to <12 months			12 months—3 years			Total aged 0–3 years		
Breastfeeding status	**Remote**	**Non-remote**	**Total**	**Remote**	**Non-remote**	**Total**	**Remote**	**Non-remote**	**Total**	**Remote**	**Non-remote**	**Total**
						(per cent)						
Currently breastfeeding	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 persons	**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% to 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 2.23.2: Breastfeeding status, by remoteness, Indigenous persons 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 Australians aged 0–3 years in non-remote areas were breastfed when they were first taken home from hospital (Table 2.23.3).
- The proportion of Indigenous infants aged 0–3 years who were breastfed when they were first taken home from hospital ranged from 89% in the Australian Capital Territory to 98% in the Northern Territory.

Table 2.23.3: Breastfeeding status when first taken home from hospital, by state/territory, Aboriginal and Torres Strait Islander Australians 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[(b)]	4[(b)]	—	3[(b)]	2[(b)]	4[(b)]	11[(b)]	—	2[(a)]
No hospital	—	—	—	1[(b)]	—	—[(b)]	—	2[(b)]	—[(b)]
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 of between 25% to 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.

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 prior to survey. Approximately 31% were breastfed exclusively, 8% received solid or semi-solid food and 13% received breastmilk substitutes in the 24 hours prior to survey (Table 2.23.4).

Table 2.23.4: Breastfeeding and other sources of food in last 24 hours, Aboriginal and Torres Strait Islander Australians aged up to 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) Estimates having a relative standard error of between 25% and 50% should be used with caution.

(c) Breastmilk replacements includes infants fed infant formula and/or tinned, powdered or fresh milk.

(d) Fully breastfed is comprised of 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 National Health Survey.

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 to 10%) (Table 2.23.5).
- 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 2.23.5: 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
Sub 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 not known age first given solid food.

(b) Includes not known whether given solid food.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey,

Reasons why stopped breastfeeding

- In 2004–05, the main reason why 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 2.23.6) Approximately 16% of Indigenous infants were no longer breastfed due to 'other problems with breastfeeding' (for example, cracked nipples).

Table 2.23.6: Aboriginal and Torres Strait Islander persons aged 0–3 years, by main reason stopped breastfeeding, non-remote areas, 2004–05

Main reason stopped breastfeeding	Proportion (%)
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 breastfed[(c)]	**100**
Total persons	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.

(c) Total comprises all persons who are not currently breastfed.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Data quality isssues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

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 NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publication (ABS 2006a).

Breastfeeding data

The following points should be considered when interpreting data on breastfeeding from the NATSIHS:

- *The sample size of respondents 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 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 for the child; this occurred for around 27% of children 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, where they did not seek clarification from the interviewer. It should also be kept in mind that the inclusion of both children who are still breastfeeding at the time of the survey with those who have ceased 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.

2.24 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 six-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. It should be noted 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:

- 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–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

- After adjusting for differences in age structure, in 2004–05, approximately 3% of Indigenous Australians aged 18 years and over were underweight, 27% were of acceptable weight, 26% were overweight and 28% were obese and for 16%, body mass was not known. In comparison, 2% of non-Indigenous adults were underweight, 41% were of acceptable weight, 33% were overweight and 16% were classified as obese and for 8%, body mass was not known (Table 2.24.1). Non-Indigenous Australians were therefore more likely to be of acceptable weight or overweight, while Indigenous Australians were more likely to be obese.

- Of those with a known body mass index, approximately 4% of Indigenous Australians aged 18 years and over were underweight, 32% were of acceptable weight, 31% were overweight and 34% were obese. In comparison, 3% of non-Indigenous adults were underweight, 44% were of acceptable weight, 36% were overweight and 18% were classified as obese (Figure 2.24.1).

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 59% and 60% of Indigenous people, and between 54% and 56% of non-Indigenous people, were overweight or obese.
- A higher proportion of Indigenous males were overweight (32%) compared to Indigenous females (20%), however, Indigenous females were more likely to be obese (29% compared to 27% for Indigenous males).

Table 2.24.1: Proportion of adults who are underweight, of acceptable weight, overweight or obese, by Indigenous status, sex and age group, 2004–05

	18–24		25–34		35–44		45–54		55+		Total(a)	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
						Males						
Underweight	4.3(b)	2.9	2.6(b)	0.6(c)	1.2(b)	0.6(b)	2.7(b)	0.3(c)	1.3(b)	1.0	2.1*	1.0*
Acceptable weight	42.4*	57.5*	34.2	38.4	29.3	27.7	24.3	27.5	20.6*	33.3*	28.2*	35.2*
Overweight	26.6	26.3	34.3	40.7	28.3*	44.5*	34.4*	43.3*	33.0*	42.9*	31.9*	40.8*
Obese	15.2*	6.3*	21.9	16.8	32.6*	21.0*	29.4	23.1	30.4*	17.9*	27.4*	17.8*
Not known	11.4*	7.1*	7.0*	3.5*	8.7	6.2	9.2	5.7	14.6*	4.8*	10.5*	5.3*
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**
						Females						
Underweight	7.8	9.2	4.1(b)	4.5	5.4(b)	3.2	2.9(b)	1.8	2.4(b)	2.9	4.1	3.9
Acceptable weight	39.5*	55.9*	31.5*	51.9*	23.7*	49.0*	24.2*	42.4*	18.4*	37.8*	25.6*	46.0*
Overweight	15.5	17.3	18.0	22.4	20.0	23.6	21.8	26.9	23.0	29.2	20.3*	24.8*
Obese	14.7*	7.2*	28.4*	12.7*	29.9*	14.7*	33.9*	18.0*	32.8*	18.0*	29.4*	14.9*
Not known	22.6*	10.5*	18.0*	8.5*	20.9*	9.5*	17.2*	10.8*	23.5*	12.2*	20.6*	10.5*
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**

(continued)

Table 2.24.1: Proportion of adults who are underweight, of acceptable weight, overweight or obese, by Indigenous status, sex and age group, 2004–05

	18–24		25–34		35–44		45–54		55+		Total(a)	
	Indigenous	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
							Persons					
Underweight	6.1	6.0	3.4	2.5	3.5(b)*	1.9*	2.8(b)*	1.1*	1.9(b)	2.0	3.2*	2.4*
Acceptable weight	40.9*	56.7*	32.7*	45.2*	26.3*	38.4*	24.2*	35.1*	19.4*	35.7*	26.8*	40.7*
Overweight	20.7	21.9	25.6*	31.5*	23.8*	34*	27.8*	35.0*	27.6*	35.8*	25.7*	32.6*
Obese	14.9*	6.7*	25.4*	14.7*	31.1*	17.8*	31.8*	20.5*	31.7*	18.0*	28.4*	16.3*
Not known	17.3*	8.8*	12.9*	6.1*	15.3*	7.9*	13.4*	8.3*	19.4*	8.7*	15.9*	7.9*
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**
Total no.	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	258,297	14,753,256

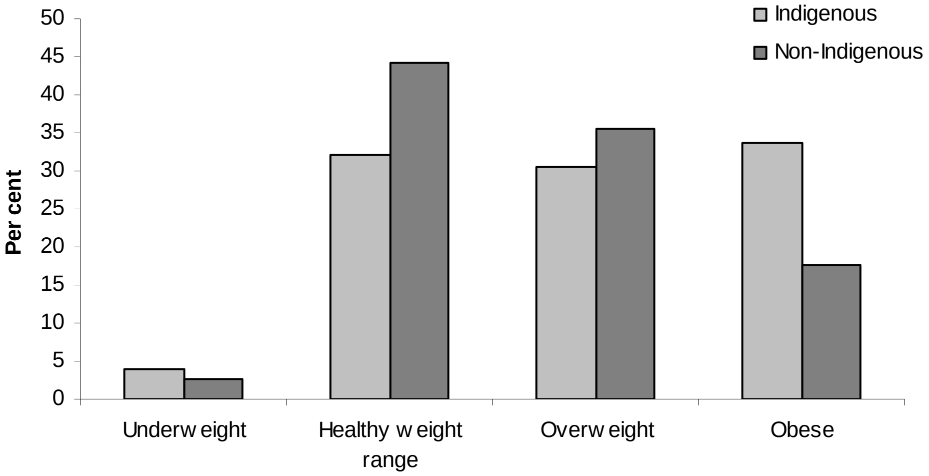
* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Age-standardised proportions.

(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.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.



Note: Excludes those with a not known or not stated BMI.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Figure 2.24.1: Percentage of adults underweight, acceptable weight, overweight and obese, by Indigenous status, 2004–05

Time series analysis

- 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 and obese in 1995, which was lower than the proportions reported in 2001 (56%) and 2004–05 (60%) (Table 2.24.2).

Table 2.24.2: Proportion of Indigenous Australians aged 18 years who are overweight/ obese, by remoteness, 1995, 2001 and 2004–05

	1995	2001	2004–05
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 not known or not stated BMI.

Source: ABS and AIHW analysis of the 1995 and 2001 National Health Surveys (Indigenous supplement) and 2004–05 NATSIHS.

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 as 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 overcomes 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, regional 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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 National Health Survey the height and weight information could not be obtained for approximately 16% of Indigenous Australians and 8% of non-Indigenous Australians (ABS 2002). 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 2003). 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.

References

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ABS 2002. National Health Survey: Aboriginal and Torres Strait Islander results, Australia 2001. ABS cat. no. 4715.0. Canberra: ABS.

ABS 2003. National Health Survey: user's guide. ABS cat. no. 4363.0.55.001. Canberra: ABS.

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

Cunningham J & Mackerras D. 1998. Overweight and obesity: Indigenous Australians 1994. ABS cat. no. 4702.0. Canberra: ABS.

Health system performance (Tier 3)

3.01 Antenatal care

Number, rate and percentage of Indigenous women who utilised 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 is at least 400 grams or the gestational age is 20 weeks or more

Data sources

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 (the Midwives Collection). 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 care sessions attended during pregnancy and the type of healthcare professional consulted. New South Wales and the Northern Territory do not record the number of sessions of antenatal care attended or the type of professional consulted but do record the duration of pregnancy at first antenatal session. The Australian Capital Territory also records this information. Data on the use of antenatal care services are not available for Victoria, Western Australia or Tasmania.

Analyses

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, the Australian Capital Territory and the Northern Territory for 2003 are presented below.

- In 2003, in New South Wales, Queensland, South Australia, the Australian Capital Territory 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 838 per 1,000 in the Australian Capital Territory to 982 per 1,000 in Queensland.
- In the three jurisdictions where data are collected on the duration of pregnancy at first antenatal visit (New South Wales, the Australian Capital Territory and the Northern Territory), Indigenous mothers were three to five 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.
- In the Australian Capital Territory, data were provided on the number of Indigenous and non-Indigenous mothers attending one–five and six or more antenatal sessions. Indigenous mothers were less likely to have attended six or more sessions than non-Indigenous mothers (525 per 1,000 compared to 723 per 1,000).

Table 3.01.1: Use of antenatal services by mothers, by Indigenous status, NSW, Qld, SA, ACT and NT, 2003[(a)(b)(c)]

		NSW			Qld[(d)]			SA			ACT[(e)]			NT[(f)]		
		No.	Rate per 1,000[(g)]	Rate ratio[(h)]	No.	Rate per 1,000[(g)]	Rate ratio[(h)]	No.	Rate per 1,000[(g)]	Rate ratio[(h)]	No.	Rate per 1,000[(g)]	Rate ratio[(h)]	No.	Rate per 1,000[(g)]	Rate ratio[(h)]
Total attended at least one antenatal session																
	Indigenous	2,073	959.3	1.0	2,808	981.8	1.0	355	946.7	1.0	67	837.5	1.0	1,344	962.8	1.0
	Non-Indigenous	82,441	995.3		46,485	996.6		15,333	996.4		4,088	874.1		2,204	991.9	
No. of sessions attended[(e)]																
1	Indigenous	n.a.	n.a.	n.a.	129	45.1	8.0*	14	39.4	13.0*	n.a.	n.a.	n.a.	71	50.9	5.9*
	Non-Indigenous	n.a.	n.a.		263	5.6		44	2.9		n.a.	n.a.		19	8.6	
2–4	Indigenous	n.a.	n.a.	n.a.	545	190.6	3.3*	77	216.9	11.4*	n.a.	n.a.	n.a.	329	235.7	3.7*
	Non-Indigenous	n.a.	n.a.		2,713	58.2		300	19.6		n.a.	n.a.		143	64.4	
5 or more	Indigenous	n.a.	n.a.	n.a.	2,134	746.0	0.8*	264	743.7	0.8*	n.a.	n.a.	n.a.	1,015	727.1	0.8*
	Non-Indigenous	n.a.	n.a.		43,509	933.0		14,989	977.6		n.a.	n.a.		2,061	927.5	

(continued)

Table 3.01.1 (continued): Use of antenatal services by mothers, by Indigenous status, NSW, Qld, SA, ACT and NT, 2003[a][b][c]

Duration of pregnancy at first antenatal session[i]																
First trimester (<14 weeks)	Indigenous	1,129	522.4	0.8*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15	187.5	0.5 *	455	325.9	0.6*
	Non-Indigenous	52,867	638.3		n.a.	n.a.		n.a.	n.a.		1,835	392.3		1,154	519.4	
Second trimester (14–28 weeks)	Indigenous	748	346.1	1.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	40	500.0	1.1	557	399.0	1.2*
	Non-Indigenous	26,893	324.7		n.a.	n.a.		n.a.	n.a.		2,083	445.4		758	341.1	
Third trimester (>28 weeks)	Indigenous	196	90.7	2.8*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	19	237.5	4.5*	203	145.4	2.7*
	Non-Indigenous	2,681	32.4		n.a.	n.a.		n.a.	n.a.		249	53.2		121	54.5	

*Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.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) Data not collected in NSW or NT. Data on number of sessions attended for the ACT are available, however, could only be categorised into 1–5 sessions and 6 or more sessions. Indigenous and non-Indigenous rates for mothers attending 1–5 sessions are 312.5 and 150.7 per 1,000 (rate ratio 2.1). Indigenous and non-Indigenous rates for mothers attending 6 or more sessions are 525.0 and 723.3 per 1,000 (rate ratio 0.7).

(f) In the NT, the sum of the three trimesters does not make up the total who attended at least one antenatal session due to invalid gestation age at first antenatal session in a small proportion of records.

(g) Rate 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.

(h) Rate ratio: Indigenous rate divided by the non-Indigenous rate.

(i) Data not collected in Qld or SA.

Source: State/territory Perinatal Collections.

Time series analyses

Data on the antenatal care of Indigenous mothers are available for 1998–2004 for New South Wales and South Australia, 1998–2003 for Queensland and the Australian Capital Territory and 2000, 2001, 2003 and 2004 for the Northern Territory.

- In New South Wales over the period 1998–2004, there were non-significant increases in the rate at which Indigenous mothers attended at least one antenatal care session during pregnancy. Over the same period, there were significant increases in the rate at which non-Indigenous mothers attended at least one antenatal care session during pregnancy (Table 3.01.2; Figure 3.01.1).
- In Queensland, over the period 1998–2003, 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 1998–2004, there were non-significant increases in the rate at which Indigenous mothers attended at least one antenatal care session during pregnancy. Over the same period, there were significant increases in the rate at which non-Indigenous mothers attended at least one antenatal care session.
- 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 the Australian Capital Territory had between 10–15% of non-residents who gave birth in the Territory.
- In the Northern Territory, data were only provided for 2000, 2001, 2003 and 2004. This was because in 1998, 1999 and 2002 a system error occurred where 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 3.01.2: Mothers who attended at least one antenatal care session, by Indigenous status, NSW, Qld, SA, ACT and NT, 1998–2004[(a)(b)]

	1998	1999	2000	2001	2002	2003	2004	Annual change[(c)]
					Number			
NSW								
Indigenous	1,909	1,947	1,968	1,980	2,008	2,073	2,191	. .
Non-Indigenous	81,536	83,103	83,543	81,560	81,683	82,441	81,490	. .
Qld								
Indigenous	2,657	2,783	2,735	2,636	2,644	2,808	n.a.	. .
Non-Indigenous	44,559	44,998	45,443	45,977	45,451	46,485	n.a.	. .
SA								
Indigenous	289	325	307	296	331	355	385	. .
Non-Indigenous	14,418	15,160	14,588	14,920	14,976	15,333	15,446	. .
ACT[(d)]								
Indigenous	56	56	53	51	69	67	n.a.	. .
Non-Indigenous	4,490	4,442	4,549	4,305	4,453	4,088	n.a.	. .
NT[(e)]								
Indigenous	n.p.	n.p.	1,252	1,421	n.p.	1,344	1,269	. .
Non-Indigenous	n.p.	n.p.	2,145	2,209	n.p.	2,204	2,095	. .
					Rate per 1,000[(f)]			
NSW								
Indigenous	934.4	945.6	934.9	938.4	931.8	959.3	949.3	2.5
Non-Indigenous	984.9	990.5	990.9	991.9	991.5	995.3	994.4	1.4*
Qld								
Indigenous	972.9	976.8	976.4	978.8	971.7	981.8	n.a.	0.9
Non-Indigenous	996.6	995.7	994.1	995.0	996.9	996.6	n.a.	0.1
SA								
Indigenous	932.3	928.6	933.1	945.7	945.7	946.7	932.2	1.7
Non-Indigenous	997.4	997.4	996.8	997.1	997.2	996.4	996.6	0.1*
ACT[(d)]								
Indigenous	933.3	949.2	1,000.0	980.8	958.3	837.5	n.a.	−13.5
Non-Indigenous	998.0	999.1	998.9	997.7	999.3	874.1	n.a.	−17.7
NT[(e)]								
Indigenous	n.p.	n.p.	946.3	959.5	n.p.	962.8	952.7	n.p.
Non-Indigenous	n.p.	n.p.	968.0	988.4	n.p.	991.9	994.8	n.p.
					Rate ratio[(g)]			
NSW	0.9	1.0	0.9	0.9	0.9	1.0	1.0	0.0
Qld	1.0	1.0	1.0	1.0	1.0	1.0	n.a.	0.0
SA	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.0
ACT	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.0
NT[(e)]	n.p.	n.p.	1.0	1.0	n.p.	1.0	1.0	n.p.

(continued)

Table 3.01.2 (continued): Mothers who attended at least one antenatal care session, by Indigenous status, NSW, Qld, SA, ACT and NT, 1998–2004[(a)(b)]

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–2004

n.p. Not published.

(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) Rate 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.

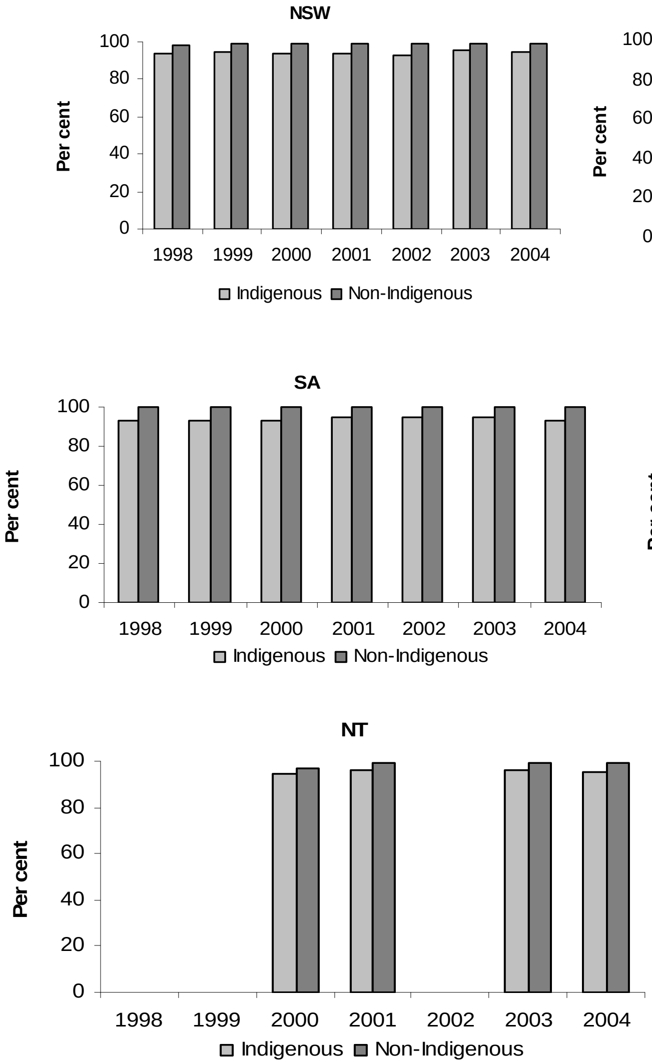
(d) Rate ratio Indigenous:non-Indigenous.

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

(f) A high proportion of births in ACT hospitals are for non-ACT mothers (10–15%).

(g) 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.

Source: AIHW analysis of state/territory Perinatal Collections.



Source: AIHW analysis of state/territory Perinatal Collections.

Figure 3.01.1: Percentage of mothers who attended at least one antenatal care sessions, by Indigenous status, NSW, Qld, SA, ACT and NT 1998–2004.

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 at all.

The Australian Capital Territory, Queensland and South Australia collect data on the number of antenatal care visits during pregnancy and the type of healthcare professional consulted. However, the categories for this latter item are not comparable.

New South Wales and the Northern Territory do not record the number of sessions of antenatal care attended or the type of professional consulted, but do record the duration of pregnancy at first antenatal visit. The Australian Capital Territory also records this information.

The Northern Territory data suffer from under-recording in Aboriginal communities and have suffered from IT problems which make reporting difficult (personal communication).

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.

3.02 Immunisation (child and adult)

Vaccination coverage rates among Indigenous Australian children and adults

Data sources

Data for this measure come 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 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 six-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 Australian Childhood Immunisation Register (ACIR)

The Australian Childhood Immunisation Register (ACIR), managed by Medicare Australia, holds information on childhood immunisation coverage. All children under 7 years of age, 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.

It should be noted 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

Self-reported data

Childhood immunisation

The 2004–05 National Aboriginal and Torres Strait Islander Health Survey 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 National Health Survey 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 3.02.1).
- In 2004–05, 78% of Indigenous children aged 0–6 years in non-remote areas were fully immunised against diptheria/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, however 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 3.02.2). 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 3.02.1: Immunisation status of children aged 0–6 years, by Indigenous status, non-remote areas, 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(d)
Not immunised	n.p.	1(b)	—	—
Not known if immunised	n.p.	—(b)	—	—
Total(e)	**100**	**100**	. .	**100**
Status for selected vaccinations(f)(g)				
Diptheria, 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 3.02.1 (continued): Immunisation status of children aged 0–6 years, by Indigenous status, non-remote areas, 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 schedule started.

Source: ABS 2006 (2001 National Health Survey and 2004–05 NATSIHS).

Table 3.02.2: Factors influencing decision to immunise children aged 0–6 years, 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: ABS and AIHW analysis of 2001 National Health Survey (Indigenous supplement) and 2004–05 NATSIHS.

Adult immunisation

Data on immunisation of Indigenous persons aged 50 years and over come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey 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 3.02.3).
- 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 to 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 3.02.4).
- 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. The National Indigenous Pneumococcal and Influenza Immunisation Program provides free pneumococcal and influenza vaccines for all Indigenous people aged 50 years and over and those in the 15–49 years age group who are deemed at 'high risk' (for example, those with debilitating diseases or illnesses). For all other Australians, vaccinations are recommended and provided free of charge from the age of 65 years. In 2004–05, a lower proportion of Indigenous persons aged 50 years and over had been vaccinated against influenza and pneumonia in the last 12 months (60% and 34% respectively) than non-Indigenous persons aged 65 years and over (73% and 43% respectively) (Figure 3.02.1).

Table 3.02.3: 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[(c)]	**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[(d)]	**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[(c)]	**100**	**100**	**100**	**100**	**100**	**100**
			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[(d)]	**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[(c)]	**100**	**100**	**100**	**100**	**100**	**100**

(continued)

Table 3.02.3 (continued): Immunisation status, by sex and remoteness, Indigenous persons aged 50 years and over, 2001 and 2004–05

(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 ‘pneumonia vaccination status’ not known and not applicable.

(d) Includes ‘influenza vaccination status’ not known and not applicable.

Source: 2004–05NATSIHS.

Table 3.02.4: 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

n.p. Not for publication.

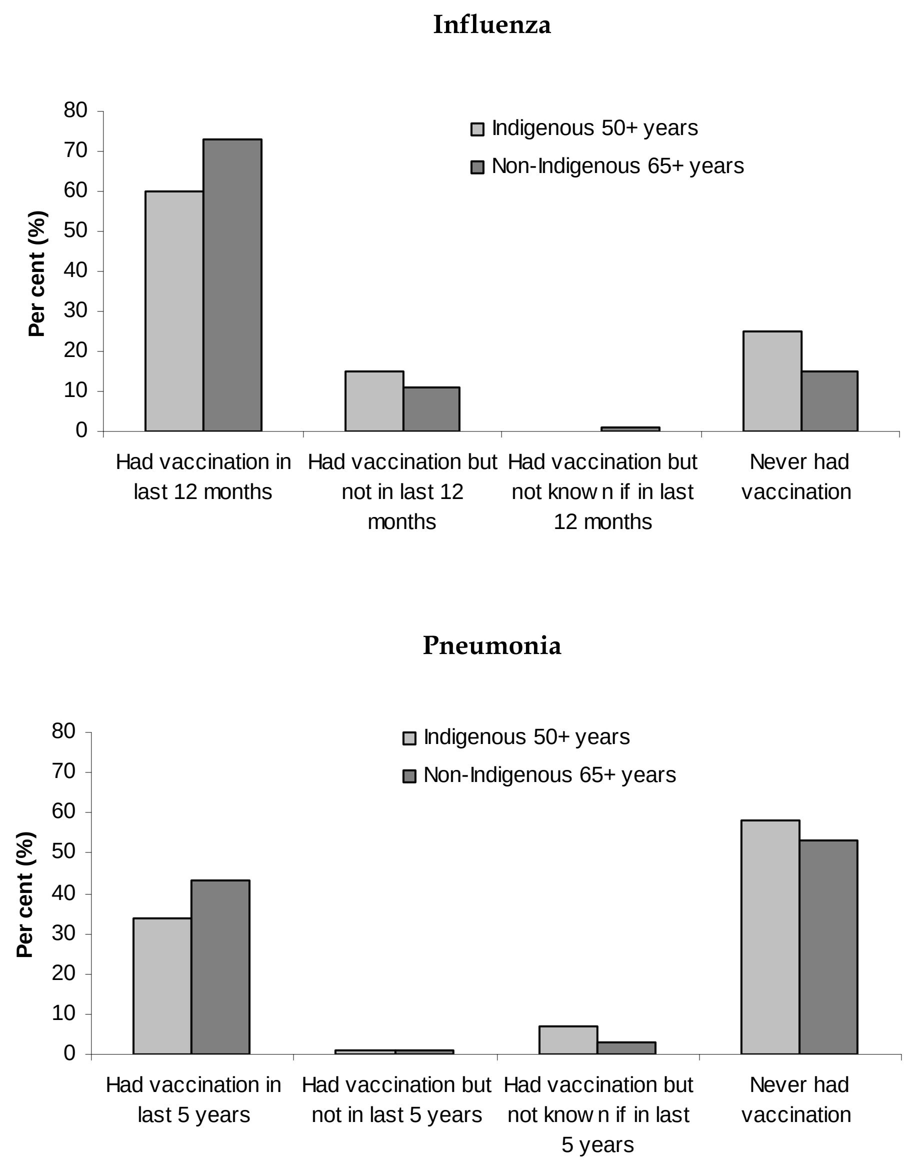
(a) Estimate has a relative standard error of 25% to 50% and should be used with caution.

(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: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.



Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Figure 3.02.1: 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 3.02.5).

- 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 3.02.6). 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 3.02.5: 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**
				Per cent				
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: ABS and AIHW analysis of 2004–05 NATSIHS

Table 3.02.6: 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	66	13	20	100	39	n.p.	54	100
4th and 5th quintile	41	23(f)	36	100	19(f)	n.p.	76	100
Index of disparity								
1st quintile	63	16	20	100	38	n.p.	54	100
5th quintile	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 3.02.6 (continued): Immunisation status, by selected population characteristics, Indigenous persons aged 50 years and over, 2004–05

	Influenza				Pneumonia			
	per cent							
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							
Treatment when seeking health care in last 12 months compared to 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

n.p. Not for publication.

(a) Includes 'don't know' responses.

(b) Includes 'Had influenza vaccination but not known if in the last twelve 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 twelve 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: ABS and 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 vaccination was provided free of charge (Table 3.02.7). In 2001, approximately 30% of Indigenous Australians aged 50 years and over in non-remote areas received influenza vaccinations free of charge compared to 67% of non-Indigenous Australians.

Table 3.02.7: 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.

n.p. Not for publication

(a) Ratio Indigenous:non-Indigenous.

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

Source: ABS and AIHW analysis of 2001 National Health Survey (Indigenous supplement) and 2004–05 NATSIHS.

Immunisation register data

The Australian Childhood Immunisation Register collects information on childhood immunisation coverage.

Childhood immunisation

Vaccination coverage rates for children aged 1 year, 2 years and 6 years as at 31 December 2005 for New South Wales, Victoria, Western Australia, South Australia and the Northern Territory are presented below.

- As at 31 December 2005, Aboriginal and Torres Strait Islander children had lower coverage for all vaccines at 12 months of age (85% compared to 91%), while at 2 and 6 years of age they had similar vaccination coverage to non-Indigenous children (90% and 92% at 2 years of age and 84% and 85% at 6 years of age). This suggests that there is perhaps 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 diptheria-tetanus-pertussis (DTP) and polio (OPV) 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 3.02.8).
- Vaccination coverage for all vaccines for Indigenous children aged 1 year ranged from 74% in South Australia to 88% in New South Wales (Table 3.02.9).

- In South Australia and Western Australia, Indigenous children aged 1 year had lower coverage for all vaccines than non-Indigenous children (Table 3.02.9). In New South Wales, Victoria and the Northern Territory, coverage rates were similar.
- Vaccination coverage for all vaccines for Indigenous children aged 2 years ranged from 88% in Western Australia to 93% in Victoria (Table 3.02.10).
- 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 79% in Western Australia to 89% in the Northern Territory (Table 3.02.11).
- Vaccination coverage rates were similar for Indigenous and non-Indigenous children aged 6 years in each state and territory.

Table 3.02.8: Vaccination coverage estimates for children at age 1, 2 and 6 years, by Indigenous status, NSW, Vic, WA, SA and NT, as at 31 December 2005[(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	93.9	94.8	1.0	97.9	95.9	1.0	—	—	—
DTP (diphtheria, tetanus and pertussis)	86.0	92.6	0.9*	94.9	95.2	1.0	85.3	85.5	1.0
OPV (oral polio vaccine)	85.6	92.5	0.9*	94.7	95.2	1.0	85.6	85.7	1.0
HIB (Haemophilus influenza type B)	93.1	94.5	1.0	91.6	93.6	1.0	—	—	—
MMR (measles, mumps, rubella)	0.0	0.0	—	93.1	93.8	1.0	85.4	85.7	1.0
All vaccines	**84.6**	**91.1**	**0.9***	**89.9**	**92.1**	**1.0**	**84.3**	**84.6**	**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 2004, 1 July and 30 September 2003, and 1 July and 30 September 1999 respectively.

(b) Includes data from NSW, Vic, WA, SA and NT only.

(c) Ratio—coverage estimate for Indigenous children divided by coverage estimate for non-Indigenous children.

Note: Data for Victoria contain an error in the number of Aboriginal children aged 72–75 months appearing on the register.

Source: AICR, Medicare Australia.

Table 3.02.9: 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 2005(a)

	State/territory																	
	NSW			Vic			WA			SA			NT			NSW, Vic, WA, SA, NT(b)		
Vaccines	**Indig.**	**Non-Indig.**	**Ratio(c)**	**Indig.**	**Non-Indig.**	**Ratio(c)**	**Indig.**	**Non-Indig.**	**Ratio(c)**	**Indig.**	**Non-Indig.**	**Ratio(c)**	**Indig.**	**Non-Indig.**	**Ratio(c)**	**Indig.**	**Non-Indig.**	**Ratio(c)**
	%	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**		**%**	**%**	
Hepatitis B	96.0	95.2	1.0	94.2	94.9	1.0	90.8	93.2	1.0	90.1	95.0	0.9	93.4	95.9	1.0	93.9	94.8	1.0
DTP (diphtheria, tetanus and pertussis)	88.9	92.4	1.0	88.4	93.5	0.9	80.0	91.1	0.9*	76.0	92.4	0.8	87.6	93.5	0.9	86.0	92.6	0.9*
OPV (oral polio vaccine)	88.4	92.2	1.0	88.9	93.4	1.0	79.2	91.0	0.9*	76.0	92.4	0.8	87.3	93.3	0.9	85.6	92.5	0.9*
HIB (Haemophilus influenza type B)	95.0	94.2	1.0	93.7	95.1	1.0	90.5	93.4	1.0	88.4	94.7	0.9	92.8	95.5	1.0	93.1	94.5	1.0
MMR (measles, mumps, rubella)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
All vaccines	**87.6**	**90.8**	**1.0**	**86.5**	**92.0**	**0.9**	**78.1**	**89.4**	**0.9***	**74.4**	**91.7**	**0.8***	**86.7**	**92.5**	**0.9**	**84.6**	**91.1**	**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 2004.

(b) Data for these five jurisdictions should not be assumed to represent the immunisation experience in the other jurisdictions.

(c) Ratio—coverage estimate for Indigenous children divided by coverage estimate for non-Indigenous children.

Note: Includes data from NSW, Vic, WA, SA and NT only.

Source: ACIR, Medicare Australia.

Table 3.02.10: 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 2005 (a)

Vaccines	State/territory																	
	NSW			Vic			WA			SA			NT			NSW, Vic, WA, SA, NT (b)		
	Indig.	Non-Indig.	Ratio(c)	Indig.	Non-Indig.	Ratio(c)	Indig.	Non-Indig.	Ratio(c)	Indig.	Non-Indig.	Ratio(c)	Indig.	Non-Indig.	Ratio(c)	Indig.	Non-Indig.	Ratio(c)
	%	%		%	%		%	%		%	%		%	%		%	%	
Hepatitis B	97.6	95.7	1.0	98.6	96.1	1.0	98.6	96.1	1.0	98.5	96	1.0	97.6	97.4	1.0	97.9	95.9	1.0
DTP (diphtheria, tetanus and pertussis)	94.3	95.1	1.0	95.7	95.4	1.0	95.2	95.2	1.0	94.7	95.5	1.0	96.1	96.6	1.0	94.9	95.2	1.0
OPV (oral polio vaccine)	94.3	94.9	1.0	95.7	95.4	1.0	94.9	95.2	1.0	93.9	95.4	1.0	95.5	96.4	1.0	94.7	95.2	1.0
HIB (Haemophilus influenza type B)	91.6	93.3	1.0	93.4	93.8	1.0	89.5	93.4	1.0	90.2	94.1	1.0	93.4	95.3	1.0	91.6	93.6	1.0
MMR (measles, mumps, rubella)	91.8	93.4	1.0	95.3	94.2	1.0	93.5	93.8	1.0	93.2	94.3	1.0	94.3	95.5	1.0	93.1	93.8	1.0
All vaccines	**89.1**	**91.8**	**1.0**	**92.9**	**92.5**	**1.0**	**88.4**	**91.6**	**1.0**	**90.2**	**92.7**	**1.0**	**91.6**	**94.1**	**1.0**	**89.9**	**92.1**	**1.0**

(a) Three-month cohort, for cohort born between 1 July and 30 September 2003.

(b) Data for these five jurisdictions should not be assumed to represent the immunisation experience in the other jurisdictions.

(c) Ratio—coverage estimate for Indigenous children divided by coverage estimate for non-Indigenous children.

Note: Includes data from NSW, Vic, WA, SA and NT only.

Source: ACIR, Medicare Australia.

Table 3.02.11: 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 2005(a)

	State/territory																	
	NSW			Vic(b)			WA			SA			NT			NSW, Vic, WA, SA,NT (c)		
Vaccines	Indig.	Non-Indig.	Rate ratio(d)	Indig.	Non-Indig.	Rate ratio(d)	Indig.	Non-Indig.	Rate ratio(d)	Indig.	Non-Indig.	Rate ratio(d)	Indig.	Non-Indig.	Rate ratio(d)	Indig.	Non-Indig.	Rate ratio(d)
	%	%		%	%		%	%		%	%		%	%		%	%	
Hepatitis B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
DTP (diphtheria, tetanus and pertussis)	84.9	85.7	1.0	88.6	88.0	1.0	80.5	80.9	1.0	86.4	82.7	1.0	90.7	81.1	1.1	85.3	85.5	1.0
OPV (oral polio vaccine)	85.4	85.8	1.0	88.3	88.2	1.0	80.5	81.3	1.0	86.4	82.7	1.0	91.8	82.8	1.1	85.6	85.7	1.0
HIB (Haemophilus influenza type B)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MMR (measles, mumps, rubella)	84.9	85.7	1.0	88.8	88.3	1.0	80.9	81.1	1.0	85.5	82.9	1.0	91.0	82.4	1.1	85.4	85.7	1.0
All vaccines	**84.0**	**84.7**	**1.0**	**88.1**	**87.3**	**1.0**	**79.2**	**79.6**	**1.0**	**85.0**	**81.7**	**1.0**	**89.2**	**80.0**	**1.1**	**84.3**	**84.6**	**1.0**

(a) Three-month cohort, for cohort born between 1 July and 30 September 2003.

(b) 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 was 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*.

(c) Data for these five jurisdictions should not be assumed to represent the immunisation experience in the other jurisdictions.

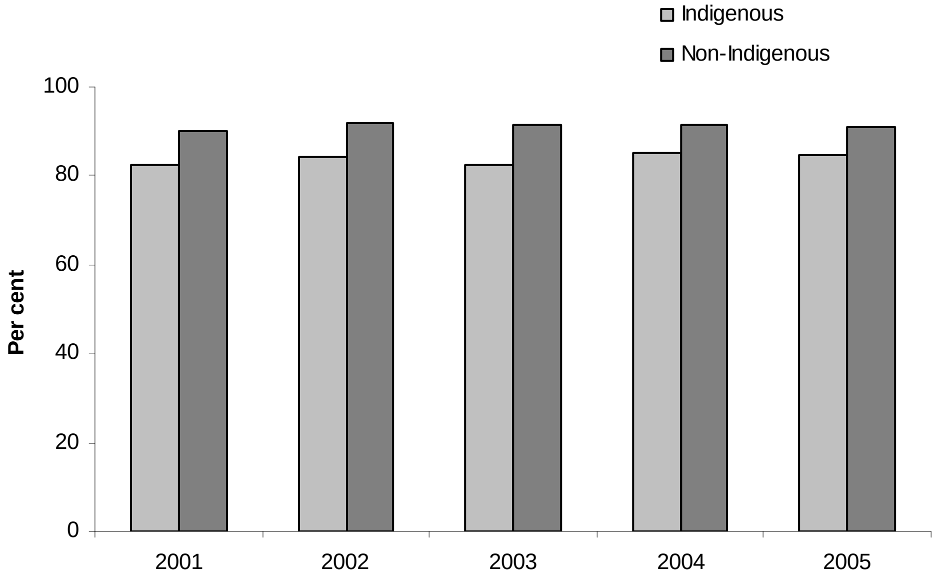
(d) Ratio—coverage estimate for Indigenous children divided by coverage estimate for non-Indigenous children.

Note: Includes data from NSW, Vic, WA, SA and NT only.

Source: ACIR, Medicare Australia.

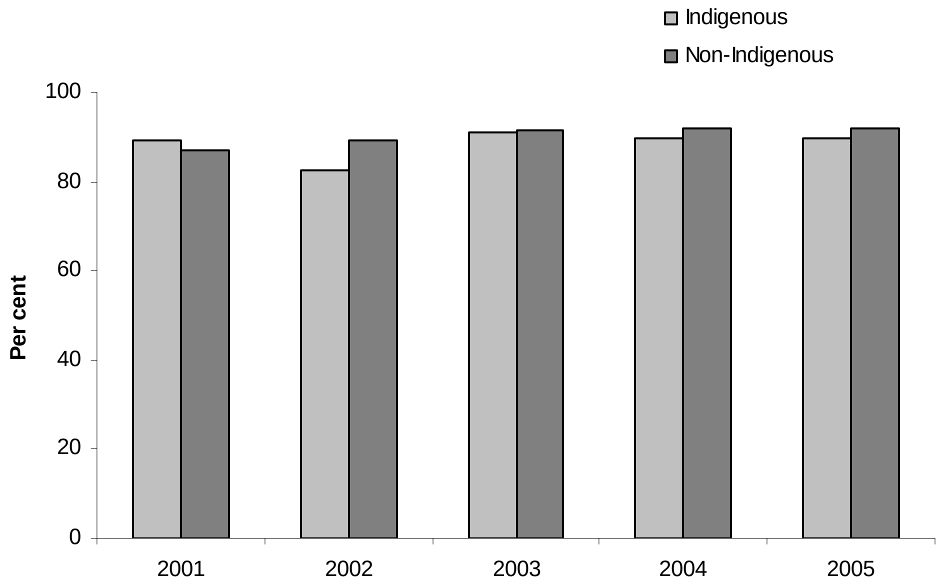
Time series analyses

- Between 2001 and 2005 there were no significant changes in the proportion of Indigenous and non-Indigenous children who were fully vaccinated at 1 year of age (Figure 3.02.2).
- Between 2001 and 2005, there were non-significant increases in the proportion of Indigenous children who were fully immunised at 2 years of age and significant increases in the proportion of non-Indigenous children who were fully immunised at 2 years of age (Figure 3.02.3).
- Between 2002 and 2005, there were non-significant increases in the proportion of Indigenous children who were fully immunised at 6 years of age and significant increases in the proportion of non-Indigenous children who were fully immunised at 6 years of age (Figure 3.02.4).



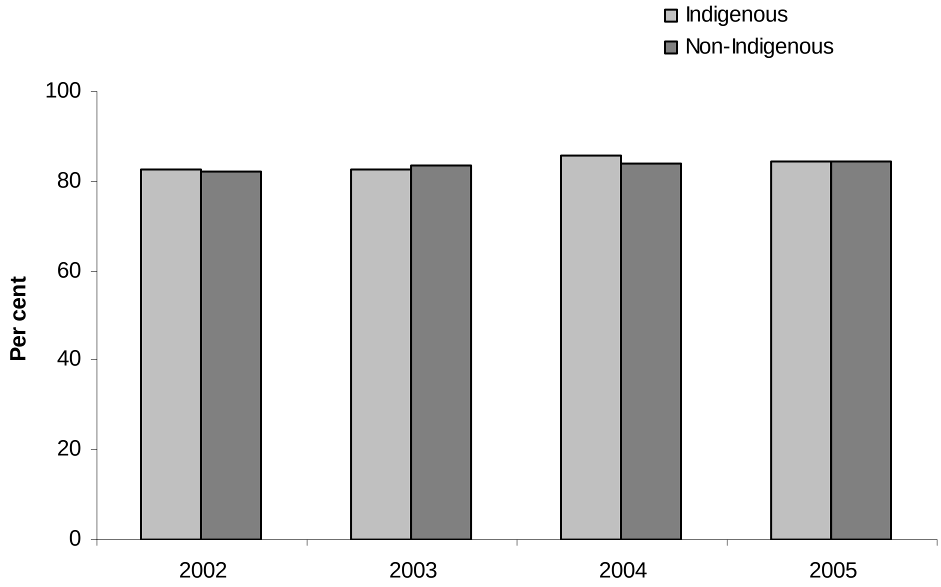
Source: AIHW analysis of ACIR, Medicare Australia.

Figure 3.02.2: 'Fully vaccinated' coverage rates for children at age 1 year in NSW, Vic, WA, SA and NT combined, by Indigenous status, 2001–2005



Source: AIHW analysis of ACIR, Medicare Australia.

Figure 3.02.3: 'Fully vaccinated' coverage rates for children at age 2 years in NSW, Vic, WA, SA and NT combined, by Indigenous status, 2001–2005



Note: Data not available for children at age 6 years for 2001.

Source: AIHW analysis of ACIR, Medicare Australia.

Figure 3.02.4: 'Fully vaccinated' coverage rates for children at age 6 years in NSW, Vic, WA, SA and NT combined, by Indigenous status, 2002–2005

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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 National Health Survey did not collect child immunisation data, therefore no comparative data are available for non-Indigenous children. The 2004–05 National Health Survey 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 national 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 seven 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 twelve 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. A study conducted in 2001 found that the ACIR underestimated overall Australian immunisation coverage by 2.7% at 12 months of age and 5% at 24 months (Hull et al. 2004). However, for Indigenous Australian children these estimates may not be valid, as there is the issue of both under-reporting of vaccinations given to the ACIR and incomplete identification of Indigenous Australian children. This means that 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. 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 due to the differences in the cohort used, population coverage, data collection method, method of calculating 'fully immunised' and vaccines included.

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Hull B, Lawrence G, MacIntyre CR, & McIntyre P 2004. Immunisation coverage: Australia 2001. In Menzies R, McIntyre P and Beard F (National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases). Vaccine preventable diseases and vaccination coverage in Aboriginal and Torres Strait Islander people, Australia, 1999 to 2002. Communicable Diseases Intelligence 28:Suppl. 1.

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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 and the Service Activity Reporting (SAR) database.

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 Department of Health and Ageing.

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 dataset 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 2006a). 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.

Service Activity Reporting database

The Service Activity Reporting database (SAR) collects data from approximately 140 Australian Government funded Aboriginal and Torres Strait Islander primary health 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 were between 97% and 99% during the period 2002–03 to 2004–05.

It should be noted 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 data

The Medicare database includes information on the number of health assessments for Indigenous and non-Indigenous Australians of different ages (Item numbers 704, 706, 708, 710, 700 and 702).

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 must also include 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.

- Annual health checks for Aboriginal and Torres Strait Islander children aged 0–14 years were only introduced into the MBS in May 2006. For the two month period May 2006 to June 2006, there were 423 health assessments of Indigenous children (a rate of 14 per 1,000 Indigenous children) (Table 3.03.1).
- Two yearly health checks for Aboriginal and Torres Strait Islander aged 15–54 years were introduced in the MBS in May 2004. Between July 2005 and June 2006, there were 8,747 health assessments of Indigenous Australians aged 15–54 years, which was a rate of 32 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 51 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. Between July 2005 and June 2006, there were 2,517 health assessments of Indigenous Australians aged 55 years and over (a rate of 69 per 1,000 population). The rate of MBS health assessments for Indigenous Australians aged 55 years and over ranged from 9 per 1,000 in the Australian Capital Territory to 80 per 1,000 in the Northern Territory.
- Over the two-year period 2004–2005, Indigenous Australians aged 55 years and over received MBS health assessments at a rate of 58 per 1,000. This was much lower than the rate at which all Australians aged 75 years and over received MBS health assessments during this period (175 per 1,000) (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 2006 (from 27 per

1,000 in January–March 2000 to 77 per 1,000 in April–June 2006). The average yearly increase in the rate was around 7 per 1,000 (Figure 3.03.1). The rate of MBS assessments for Indigenous Australians aged 15–54 years increased between the third quarter 2004 and the second quarter 2006 (from 232 per 1,000 to 264 per 1,000).

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, various years

	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	166	9	124	70	6	0	0	48	423
Rate per 1,000	18.3	5.0	14.1	16.2	3.6	0.0	0.0	13.9	13.9
Aboriginal and Torres Strait Islander health checks aged 15–54 years (MBS Item 710)[(b)]									
Number	1,658	386	2,752	1,667	452	10	9	1,813	8,747
Rate per 1,000	20.9	22.1	36.1	41.2	28.5	1.0	3.6	50.8	31.5
Aboriginal and Torres Strait Islander Health Assessments aged 55 years and older (MBS Item 704/706)[(c)]									
Number	800	158	713	394	92	13	2	345	2,517
Rate per 1,000	71.5	69.2	75.5	76.0	45.1	9.8	9.4	79.6	69.8

(a) Child health checks commenced in May 2006 and therefore these data are only for the two-month period May and June 2006. Rates are calculated using the 2006 Indigenous population projections for those aged 0–14 years divided by 6 to calculate an estimate for May–June. 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 2005 to 30 June 2006. Rates are calculated using the average of 2005 and 2006 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 2005 to 30 June 2006. Rates are calculated using the average of 2005 and 2006 Indigenous population projections for those aged 55 years and over.

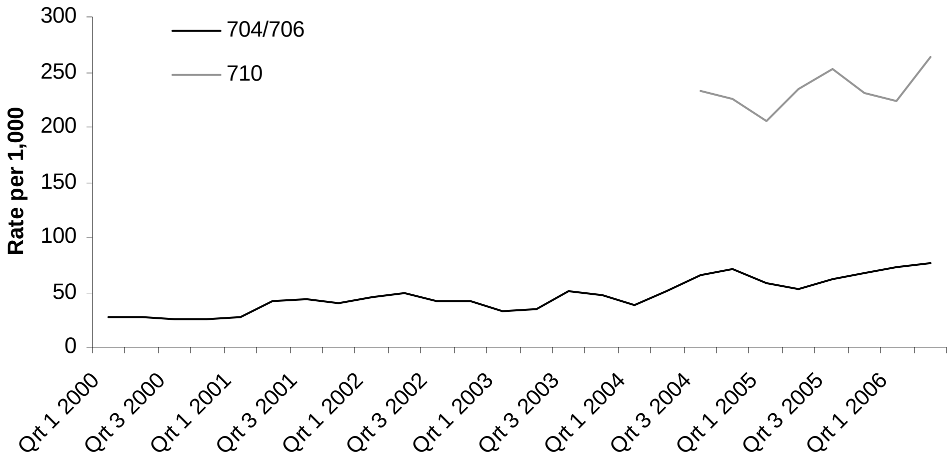
Source: AIHW analysis of Medicare data.

Table 3.03.2: Health assessments for older patients: Indigenous persons 55 years and older and all Australians aged 75 years and older, 2004–2005

	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	1,282	275	1,030	648	230	25	8	551	4,049
Rate per 1,000[(a)]	59.2	63.0	56.5	64.9	58.3	9.8	20.4	66.2	58.2
All Australian health assessments aged 75 years and older (MBS Item 700/702)									
Number	162,235	107,777	81,475	27,260	42,848	11,860	3,105	90	436,650
Rate per 1,000[(a)]	184.6	167.6	187.7	128.7	184.2	182.4	112.4	14.7	174.7

(a) Rates are calculated using the 2004 and 2005 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. Rates for Item 704/706 were calcualted using the Indigenous population estimates for 2000–2006, divided by 4 to obtain quarterly rates for each year.
2. Rates for Item 710 were calcualted using the Indigenous population estimates for 2004–2006, divided by 4 to obtain quarterly rates for each year.
3. The rate for Item 708 was calculated to be 69 per 1,000 for the two month period May 2006–June 2006.

Source: AIHW analysis of Medicare data.

Figure 3.03.1: Rate of MBS health checks/assessments for 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 2006

Breast screening

BreastScreen Australia, 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 two 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 target women in this age group, although women aged 40–49 years and those over 70 years may also use the service.

- Of the 1,618,306 women aged 40 years and over participating in screening through the BreastScreen Australia program in 2002–2003, there were 12,354 (0.8%) who identified themselves as Aboriginal or Torres Strait Islander. While 29,380 women in 2002–2003 were classified as not stating their Indigenous status, the true figure is higher because some jurisdictions classified these women as 'non-Indigenous' (AIHW 2006b).
- For the two-year period 2003–2004, 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 38% which was also markedly lower than the national rate for all females in that age group (55%). The participation rate for Indigenous women aged 40 years and over was

also lower than for non-Indigenous women of the same age (26% compared to 36% for all women) (Table 3.03.3).

- The breast screening participation rates for Indigenous women aged 50–69 years ranged from 19% in the Northern Territory to 50% in Queensland.
- The participation rates for Indigenous women aged 40 years and over and 50–69 years were slightly higher in 2003–2004 (26% and 38%) than in 1999–2000 (24% and 35%). There was little change in the participation rates for all women over the period 1999–2000 to 2003–2004 (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.

Table 3.03.3: Age-specific participation rates[(a)] in BreastScreen Australia programs of Indigenous and all women, by state/territory, 2003–2004 (per cent)

Age group	NSW	Vic[(b)]	Qld[(c)]	WA	SA	Tas	ACT	NT	Australia
Indigenous women									
40–49 years	12.2	5.5	28.3	10.3	6.1	15.1	4.2	6.4	14.8
50–59 years	31.8	45.7	49.8	28.7	32.9	38.8	28.9	19.0	35.7
60–69 years	41.9	44.1	50.0	43.0	38.7	37.2	47.8	18.0	40.7
70–79 years	29.4	28.2	37.1	23.9	14.3	n.a.	n.a.	12.5	27.3
80+	10.6	2.4	3.3	5.5	1.6	n.a.	n.a.	6.2	5.7
40+ (age-standardised rate)[(d)]	**25.2**	**26.4**	**37.5**	**22.7**	**20.1**	**n.a.**	**n.a.**	**12.8**	**26.3**
50–69 years (age-standardised rate)[(d)]	**35.8**	**45.1**	**49.9**	**34.3**	**35.1**	**38.2**	**36.3**	**18.6**	**37.7**
All women									
40–44 years	13.6	5.5	24.0	10.2	10.0	16.1	2.8	8.4	12.8
45–49 years	26.4	10.6	37.9	22.6	21.1	30.3	15.3	19.1	23.7
50–54 years	45.2	57.5	54.2	53.7	61.8	52.1	45.6	39.4	52.3
55–59 years	51.1	58.7	59.4	57.7	63.4	60.4	54.3	49.4	56.5
60–64 years	53.0	60.6	60.7	59.3	65.3	59.7	57.6	47.4	58.2
65–69 years	50.9	57.8	60.8	56.5	62.3	59.8	52.9	42.6	56.2
70–74 years	39.6	50.5	53.2	18.4	22.9	43.7	16.2	29.9	41.2
75–79 years	29.0	14.5	18.1	8.8	11.7	9.2	6.4	17.7	19.3
80–84 years	14.2	2.7	5.0	3.3	3.8	3.3	3.0	12.9	7.4
85+ years	3.5	0.5	1.4	0.6	0.6	0.5	0.6	2.5	1.7
40+ (age-standardised rate)[(d)]	**34.6**	**34.1**	**42.1**	**33.1**	**36.4**	**37.8**	**28.3**	**28.7**	**35.9**
50–69 years (age-standardised rate)[(d)]	**49.5**	**58.5**	**58.2**	**56.5**	**63.1**	**57.3**	**51.8**	**44.4**	**55.4**

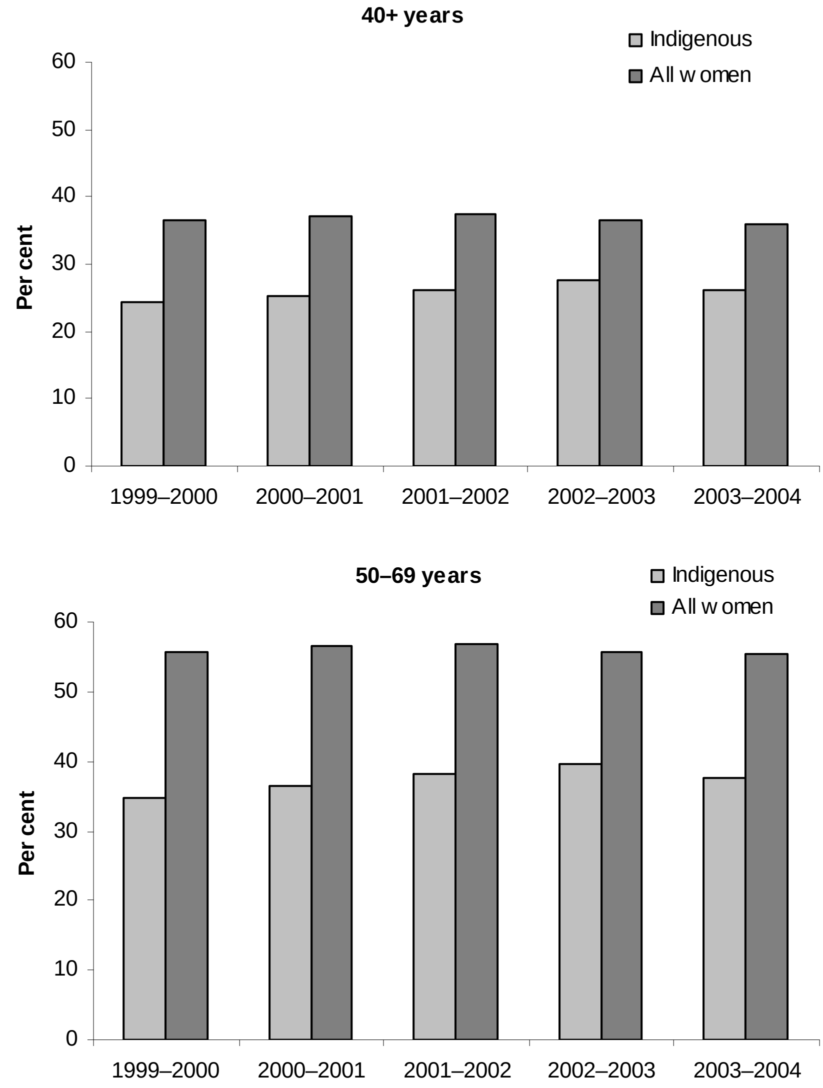
(a) The participation rate is the number of women screened in the reference period, divided by the number of women in the reference period based on ABS Estimated Resident Populations.

(b) Victorian postcodes allocated to the Albury/Wodonga area (NSW jurisdiction) are included in Victoria's jurisdiction and account for the slight decrease in participation rates when compared to participation rates published by BreastScreen Victoria.

(c) For Indigenous women in Queensland the 70–79 years category includes all women aged over 70 years.

(d) Rates are directly age standardised to the Australian 2001Standard population.

Source: SCRGSP 2006.



Source: SCGRSP 2006- Report on Government Services 2006

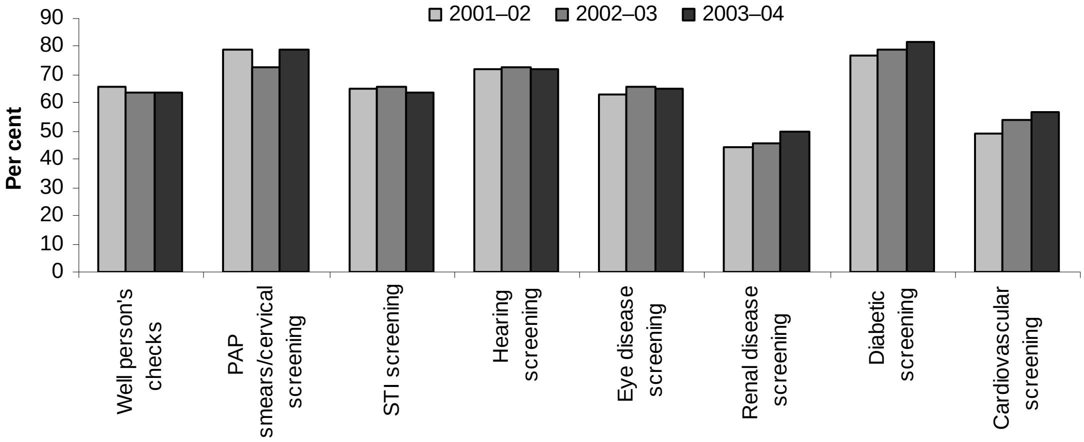
Figure 3.03.2: Participation rates BreastScreen Australia programs of women 40+ years and women 50-69 years, Indigenous and all women 1999–2000 to 2003–2004.

Aboriginal and Torres Strait Islander primary health care services

Screening activities

The Service Activity Report includes data on health-related activities undertaken or facilitated by Aboriginal and Torres Strait Islander primary health care services, including a range of 'screening' programs.

- In 2003–04, approximately 82% of respondent Aboriginal and Torres Strait Islander primary health care services provided diabetic screening, 79% provided Pap smear/cervical screening, 72% provided hearing screening, 65% provided eye disease screening, 64% provided regular age/sex appropriate well persons checks and Sexually transmitted infection (STI) screening, 57% provided cardiovascular screening and 50% provided renal disease screening (Figure 3.03.3).
- Between 2001–02 and 2003–04, there was little change in the proportion of Aboriginal and Torres Strait Islander primary health care services providing most screening services. Over this period there was a slight increase in the proportion of Aboriginal and Torres Strait Islander primary health care services providing diabetic screening and cardiovascular screening.



Source: DoHA Service Activity Report 2003–04, 2002–03, 2001–02.

Figure 3.03.3: Percentage of respondent Aboriginal and Torres Strait Islander primary health care services providing screening activities, 2001–02, 2002–03 and 2003–04

Additional information

Cervical cancer

No data are currently available on cervical cancer screening by Indigenous status. Data on the mortality of Indigenous women from cervical cancer are presented below.

- Over the period 2001–2004 in Queensland, Western Australia, South Australia and the Northern Territory combined there were 27 deaths of Indigenous women from cervical cancer. Indigenous women died at around five times the rate of non-Indigenous women in these states and territories (11 per 100,000 compared to 2 per 100,000) (AIHW 2006c).
- The age-standardised rate for Indigenous women aged 20–69 years, which is the target age for cervical cancer screening, was 9.9 per 100,000 compared to 2.0 per 100,000 for non-Indigenous women of the same age.

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 five-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 to 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, five-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, 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 within 12 months monthly statistics had become relatively stable.

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 dataset 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 2006b).

Service Activity Reporting data

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health care services were between 97% and 99% during the period 2002–03 to 2004–05. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. While 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.*

References

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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) of data collection.

The SAR collects data from approximately 140 Australian Government funded Aboriginal and Torres Strait Islander 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 Aboriginal and Torres Strait Islander primary health care services were between 97% and 99% during the period 2002–03 to 2004–05.

It should be noted 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 2 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 once it is established, that is, once it has been diagnosed.

Analyses

Aboriginal and Torres Strait Islander primary health care services

Chronic disease management

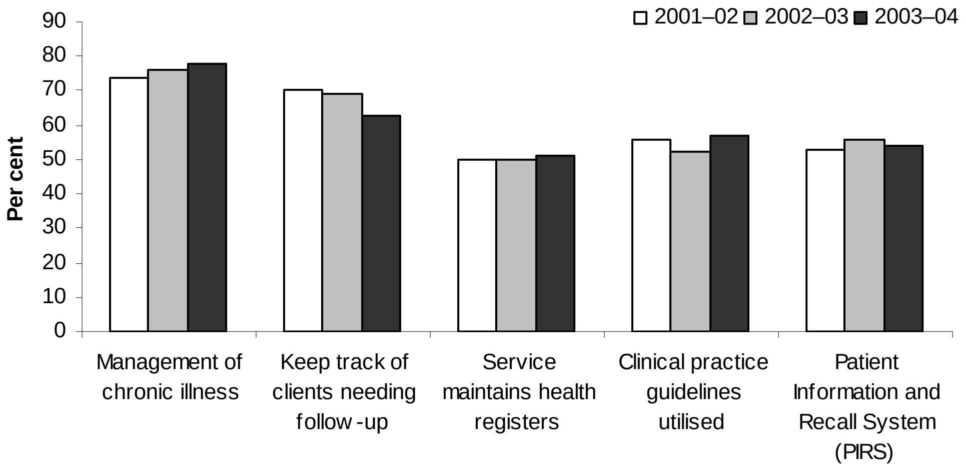
- In 2003–04, there were 138 respondent Aboriginal and Torres Strait Islander primary health care services. Not all services provide clinical care. Approximately 77% of these services had a doctor working at the service.
- Approximately 78% of Aboriginal and Torres Strait Islander primary health care services provided management of chronic illness, 63% reported keeping track of clients needing follow-up (for example, through monitoring sheets/follow-up files), 54% used patient information recall systems which automatically provide reminders for follow-up and routine health checks, 51% reported they maintained health registers (for example, chronic disease register) and 57% utilised clinical practice guidelines. Approximately 54% of Aboriginal and Torres Strait Islander 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 3.04.1).

- There was little change in the proportion of Aboriginal and Torres Strait Islander primary health care services providing management of chronic illness, maintaining health registers and utilising clinical practice guidelines between 2001–02 and 2003–04 (Figure 3.04.1). There was a slight decline in the proportion of Aboriginal and Torres Strait Islander primary health care services keeping track of clients needing follow-up, for example, through monitoring sheets/follow-up files (from 70% to 63%) and a slight increase in those utilising patient information recall systems for follow-up (from 53% to 54%) between 2001–02 and 2003–04.

Table 3.04.1: Percentage of respondent Aboriginal and Torres Strait Islander primary health care services providing chronic disease management activities and use of Patient Information and Recall Systems, 2003–04

	per cent
Chronic disease management activities	
Management of chronic illness	78
Keep track of clients needing follow-up (e.g. through monitoring sheets/follow-up files)	63
Service maintains health registers (e.g. Chronic Disease Register)	51
Clinical practice guidelines utilised (e.g. Central Australian Remote Practitioners Association, diabetes guidelines)	57
Patient Information and Recall Systems (PIRS)	
PIRS which automatically provides reminders for follow-up and routine health checks	54

Source: DoHA Service Activity Report 2003–04.



Source: DoHA Service Activity Report 2003–04, 2002–03, 2001–02.

Figure 3.04.1: Percentage of respondent Aboriginal and Torres Strait Islander primary health care services that provide management of chronic disease, 2001–02, 2002–03, 2003–04

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 during 2004. All registrations in Central Australia were for Indigenous Australians and all but two in the Top End were Indigenous. 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 Aboriginal and Torres Strait Islander 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 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 three-weekly administration is recommended. Pharmacokinetic data suggest that prolonging the dosing interval beyond four weeks may increase the risk of breakthrough ARF, therefore 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, while 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 Aboriginal and Torres Strait Islander 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

Service Activity Reporting (SAR) data collection

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health care services were between 97% and 99% during the period 2002–03 to 2004–05. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. While 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 while 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

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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 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 change in a type of care (for example, from acute to rehabilitation).

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

Hospitalisations with a procedure recorded

Table 3.05.1 presents the proportion of hospitalisations with a procedure recorded between June 2002 and July 2004 by a number of demographic variables. This table includes all states and territories as 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 2002 and June 2004, there were around 10.8 million hospitalisations with a procedure reported in Australia, 2.5% (287,857) of which were hospitalisations recorded for Indigenous patients. In public hospitals, excluding procedures for haemodialysis, there were around 4.8 million hospitalisations with a procedure reported, 2.6% (126,847) of which were hospitalisations recorded for Indigenous patients. Over half of all hospitalisations had more than one procedure performed.
- While 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 2002 and June 2004, excluding care involving dialysis, 53% of Indigenous hospitalisations in public hospitals had a procedure recorded, compared with 70% of other hospitalisations in public hospitals (Table 3.05.1).
- The proportion of hospitalisations with a procedure recorded was highest for Indigenous patients aged 55–64 years (56%). Patients who were hospitalised in remote or very remote areas were less likely to undergo a procedure (43% of Indigenous and 55% of other patients) compared to those hospitalised in major cities (68% and 72% for Indigenous and other patients respectively).

Table 3.05.1: Proportion of hospitalisations with a procedure recorded by Indigenous status, public hospitals, July 2002 to June 2004[(a)]

	Indigenous	Other[(b)]
	%	**%**
Overall	52.6	69.6
Sex		
Males	52.0	69.5
Females	53.3	69.8
Age group (years)		
Under 1	40.2	47.4
1–14	46.9	57.0
15–34	49.4	63.7
35–54	49.7	70.9
55–64	55.7	75.9
65+	54.5	75.0
Place of residence		
Major cities	68.3	72.0
Regional (inner and outer)	52.1	66.6
Remote/very remote	43.1	55.3
Unknown	54.8	57.3
Same-day admission		
Yes	57.0	73.7
No	51.3	66.9
Patient accommodation		
Private	63.0	74.6
Public	52.7	68.9

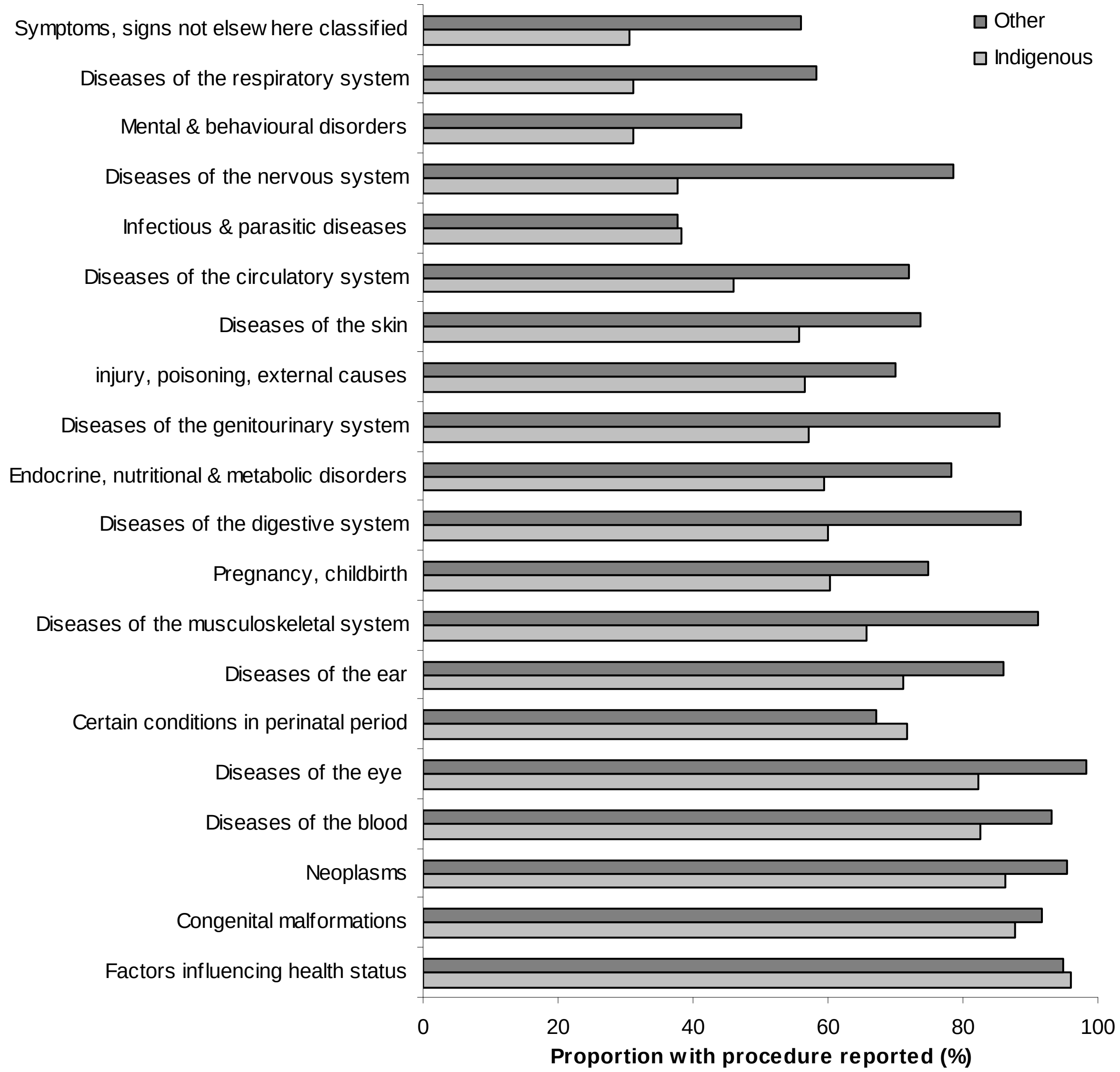
(a) Hospitalisations with a principal diagnosis of care involving dialysis (Z49) have been excluded.

(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 and cause-specific rates of other Australians.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

- Between July 2002 and June 2004, in Queensland, Western Australia, South Australia and the Northern Territory combined, although the overall rate of procedures per 1,000 population was higher for Indigenous persons, Figure 3.05.1 shows that the proportion of separations with a procedure 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, 38% of separations for Indigenous patients had a procedure reported, compared with 78% of separations for other patients. Factors influencing health status and contact with health services, which includes dialysis, infectious and parasitic diseases and certain conditions originating in the perinatal period were the only chapters for which the proportion of separations with procedures was higher for Indigenous patients.



Note: Proportions are indirectly age standardised using the age- and cause-specific rates of other Australians as the standard.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 3.05.1: Proportion of separations with a procedure reported, by principal diagnosis and Indigenous status, Qld, WA, SA and NT, July 2002 to June 2004

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 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 2002 to June 2004, there were 374,670 hospital procedures performed on Indigenous patients in Queensland, Western Australia, South Australia and the Northern Territory combined. Approximately 35% of these procedures were for haemodialysis (Table 3.05.2).
- Procedures on the urinary system was the most frequently reported procedure chapter for Indigenous patients (135,119). For haemodialysis the number of procedures per 1,000 population for persons identified as Indigenous was about 15 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 1.4 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, chemotherapy and radiation, oncology, dental services, digestive and gynaecological procedures.

Table 3.05.2: Hospital procedures, by type of procedure reported and Indigenous status, Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

	Number		Per cent		Rate per 1,000[(e)]		
	Indigenous	Other[(f)]	Indigenous	Other[(f)]	Indigenous	Other[(f)]	Ratio[(g)]
Procedures on urinary system	135,119	665,088	36.1	7.0	476.4	45.4	10.5*
Haemodialysis	*131,021*	*463,186*	*35.0*	*4.8*	*462.9*	*31.6*	*14.6**
Non-invasive, cognitive and interventions, not elsewhere classified	113,857	4,167,749	30.4	43.7	284.1	287.0	1.0
Obstetric procedures	17,659	355,160	4.7	3.7	25.5	25.4	1.0
Dermatological and plastic procedures	14,715	492,928	3.9	5.2	31.1	33.8	0.9*
Procedures on musculoskeletal system	13,545	447,253	3.6	4.7	28.4	30.7	0.9*
Imaging services	13,208	367,669	3.5	3.9	37.4	25.2	1.5*
Procedures on digestive system	12,473	917,151	3.3	9.6	36.3	62.5	0.6*
Dental services	11,153	326,564	3.0	3.4	12.8	23.2	0.6*
Procedures on cardiovascular system	10,757	335,142	2.9	3.5	32.7	22.9	1.4*
Gynaecological procedures	8,584	363,198	2.3	3.8	17.1	25.2	0.7*
Procedures on respiratory system	7,590	124,940	2.0	1.3	17.2	8.6	2.0*
Procedures on eye and adnexa	2,965	175,556	0.8	1.8	13.3	12.1	1.1*
Chemotherapeutic and radiation oncology procedures	2,991	294,962	0.8	3.1	9.5	20.0	0.5*
Procedures on nervous system	2,937	156,269	0.8	1.6	6.5	10.7	0.6*
Procedures on ear and mastoid process	2,534	50,303	0.7	0.5	3.2	3.6	0.9*
Procedures on nose, mouth and pharynx	2,069	141,767	0.6	1.5	3.7	9.9	0.4*
Procedures on male genital organs	1,067	63,131	0.3	0.7	2.0	4.4	0.4*
Procedures on breast	649	47,565	0.2	0.5	1.9	3.2	0.6*
Procedures on blood and blood-forming organs	649	37,725	0.2	0.4	1.9	2.6	0.7*
Procedures on endocrine system	149	8,391	0.0	0.1	0.4	0.6	0.8*
Total (excluding dialysis)	***243,709***	***9,104,685***	***65.0***	***95.5***	***578.4***	***627.3***	***0.9****
Total (including haemodialysis)[(h)]	**374,670**	**9,538,513**	**100.0**	**100.0**	**1,041.1**	**656.9**	**1.6***

(continued)

Table 3.05.2 (continued): Hospital procedures, by type of procedure reported and Indigenous status, Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

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

(u) Categories are based on the ICD-10-AM (National Centre for Classification in Health 2004).

(v) Financial year reporting.

(w) Data are presented by state/territory of usual residence of the patient and are reported for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(x) Directly age standardised using the Australian 2001 Standard population.

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

(z) Rate ratio Indigenous:other.

(aa) Includes procedures for the procedure category was not stated.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Time series analyses

Hospital procedure rates, rate ratios and rate differences between Indigenous and other Australians over the five-year period 1998–99 to 2003–04 excluding haemodialysis procedures are presented in Table 3.05.3 and Figure 3.05.2.

- Over the period 1998–99 to 2003–04, 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 44 per 1,000 for Indigenous Australians and 50 per 1,000 for other Australians.
- There were no significant changes in the hospitalisation rate ratios or rate differences between Indigenous and other Australians over the period.

It should be noted 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 impact on 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 procedures may reflect better access to hospitals/hospital procedures rather than a worsening of health.

Table 3.05.3: Age-standardised hospital procedure rates, rate ratios and rate differences (excluding dialysis), Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2001–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Persons	389.1	406.4	504.0	519.1	561.7	599.7	43.8*
Other Australian[(b)] rate per 1,000							
Persons	414.1	413.6	560.5	580.4	625.0	632.1	49.8*
Rate ratio[(c)]							
Persons	0.9	1.0	0.9	0.9	0.9	0.9	0.0
Rate difference[(d)]							
Persons	–25.0	–7.2	–56.5	–61.3	–63.3	–32.3	–0.6

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

(c) Other includes hospitalisations for non-Indigenous Australians and those for whom Indigenous status was not stated.

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

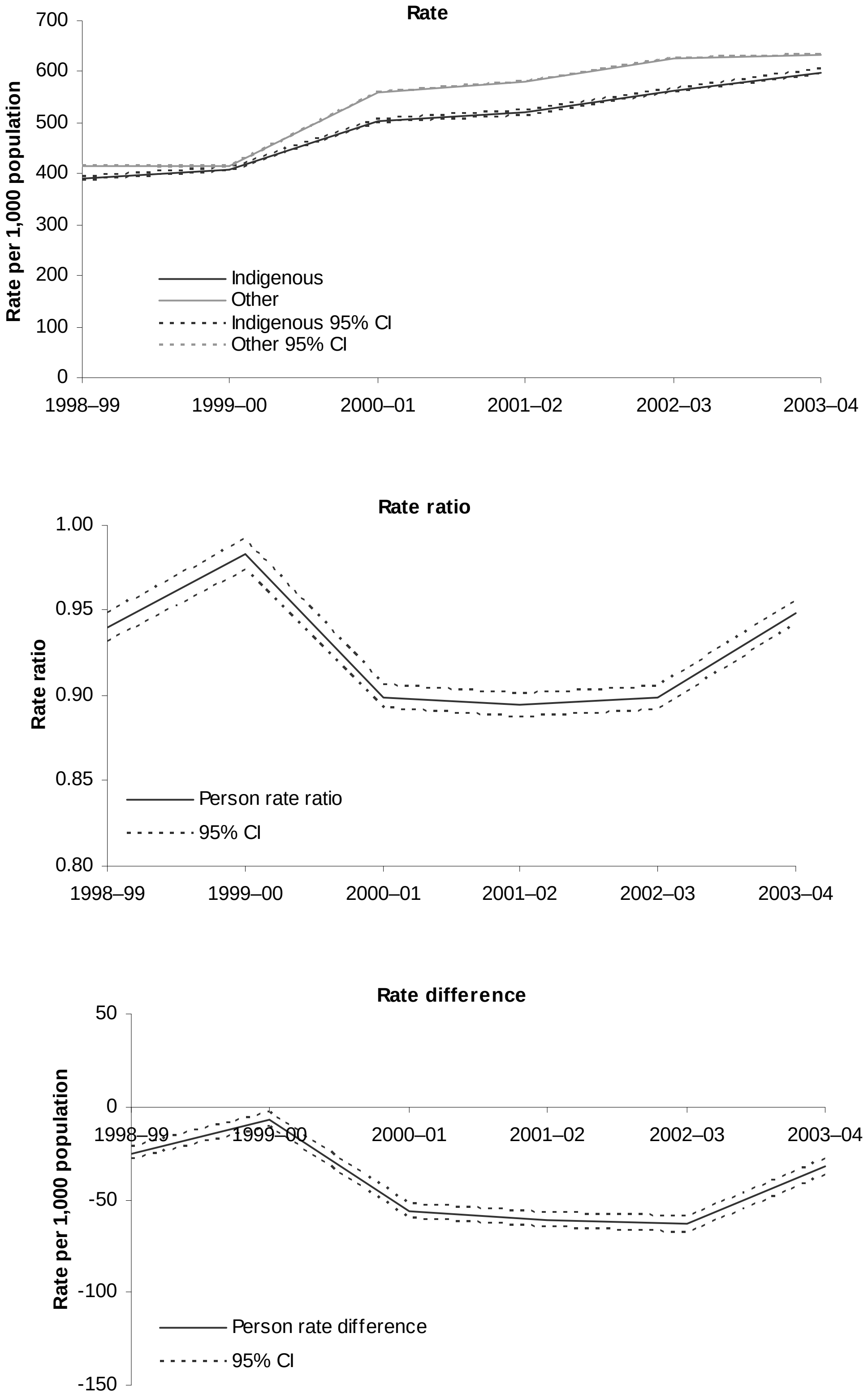
(e) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

Notes:

Rates have been directly age standardised using the Australian 2001 Standard population.

Excludes procedures for haemodialysis (block no. 1060 for 2002–03 to 2003–04 and block no. 1059 for 1998–99 to 2001–02).

Source: AIHW analysis of AIHW National Hospital Morbidity Database.


Rate

Rate ratio

Rate difference

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 3.05.2: Hospital procedure rates, rate ratios and rate differences between Indigenous and other Australians, Qld, WA, SA and NT, 1998–99 to 2003–04

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 3.05.4). 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. 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 bypass 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 3.05.5). The age-adjusted procedure rate for PCI is around 40% lower than other Australians, while 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 be more complex cases (measured by the number of comorbidities). In 2002–03 Aboriginal and Torres Strait Islander 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 3.05.4: 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 $p<.05$ 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) Rate difference—hospitalisation rate for Indigenous Australians divided by hospitalisation rate 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 3.05.5: 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<.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) Rate difference—hospitalisation rate for Indigenous Australians divided by hospitalisation rate for other Australians.

Source: AIHW 2006.

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 their lung cancer and prostate cancer, but not breast cancer (Hall et al. 2004).

Data quality issues

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.

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 people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%.

The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1001 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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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, 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

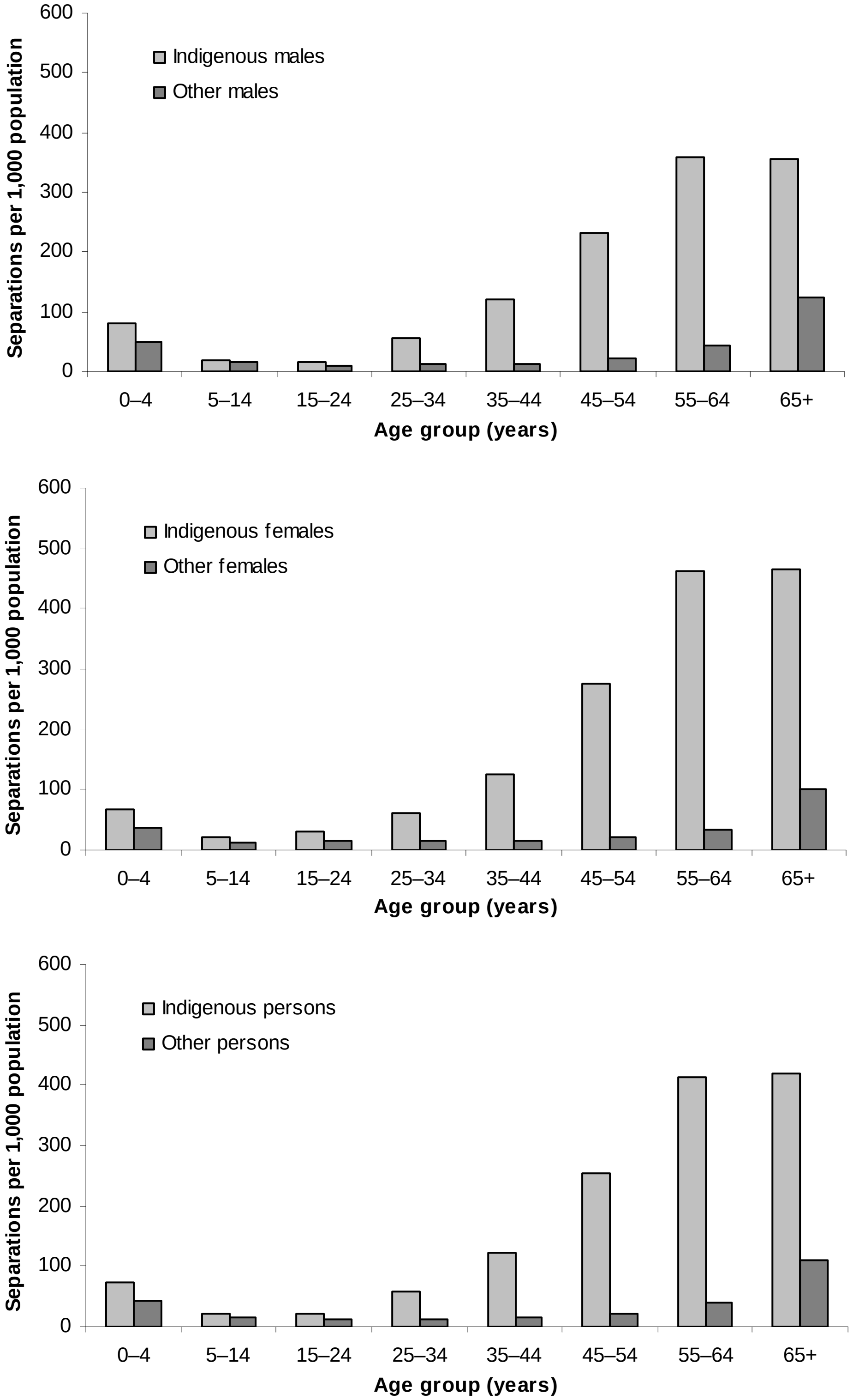
Age-standardised rates and ratios have been used for this indicator as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians,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

Hospitalisations

- For the two-year period July 2002 to June 2004, there were 502,864 ambulatory care sensitive hospital admissions in Queensland, Western Australia, South Australia and the Northern Territory combined, 52,160 (10.4%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples.
- Ambulatory care sensitive conditions represented 20% of all hospital admissions of Aboriginal and Torres Strait Islander Australians in the four jurisdictions.

Hospitalisations by age and sex

- In the two-year period July 2002 to June 2004, 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 9–10 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 11–12 times the rate of other females.
- For both Indigenous and other Australian males and females, hospitalisation rates increased with age, being highest among those aged 65 years and over.
- Approximately 44% of Indigenous Australians hospitalised for ambulatory care sensitive conditions were males (22,859) and 56% were females (29,301).



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 3.06.1: Age-specific hospitalisation rates for ambulatory care sensitive hospital admissions, by Indigenous status and sex, Qld, WA, SA and NT, July 2002 to June 2004

Hospitalisations by state/territory

Table 3.06.1 presents the number of ambulatory care sensitive hospital admissions for the two-year period July 2002 to June 2004 in Queensland, Western Australia, South Australia and the Northern Territory.

- Indigenous Australians in Queensland, South Australia and the Northern Territory were hospitalised for ambulatory care sensitive conditions at around four times the rate of other Australians. In Western Australia, Indigenous Australians were hospitalised at around 10 times the rate of other Australians.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians were hospitalised for ambulatory care sensitive conditions at around five times the rate of other Australians.

Table 3.06.1: Hospitalisations for ambulatory care sensitive hospital admissions, by Indigenous status and sex, Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

	Indigenous				Other[(e)]				
	Number	Rate per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Number	Rate per 1,000[(f)]	LCL 95%[(g)]	UCL 95%[(h)]	Ratio[(i)]
Qld									
Males	7,539	110.8	107.3	114.2	119,491	34.3	34.1	34.5	3.2*
Females	8,579	119.2	116.1	122.3	111,597	29.5	29.3	29.6	4.0*
Persons	16,118	115.2	112.9	117.5	231,088	31.7	31.6	31.8	3.6*
WA									
Males	9,458	261.2	254.8	267.5	56,647	32.8	32.5	33.1	8.0*
Females	13,664	351.2	344.5	357.8	55,897	29.2	29.0	29.5	12.0*
Persons	23,122	308.8	304.1	313.4	112,544	30.8	30.6	31.0	10.0*
SA									
Males	1,862	118.2	111.2	125.2	50,668	113.5	109.0	118.0	3.5*
Females	2,177	134.9	128.0	141.8	50,600	29.4	29.2	29.7	4.6*
Persons	4,039	127.9	122.9	132.8	101,268	31.2	31.0	31.3	4.2
NT									
Males	4,000	113.5	109.0	118.0	3,720	35.4	34.0	36.8	3.2*
Females	4,881	127.7	123.5	131.9	2,083	22.5	21.4	23.6	5.7*
Persons	8,881	121.0	117.9	124.1	5,804	29.7	28.8	30.6	4.1*
Qld, WA, SA, NT									
Males	**22,859**	**149.2**	**146.7**	**151.7**	**230,526**	**33.6**	**33.5**	**33.8**	**4.4***
Females	**29,301**	**177.8**	**175.4**	**180.2**	**220,177**	**29.2**	**29.1**	**29.3**	**6.1***
Persons	**52,160**	**164.7**	**163.0**	**166.4**	**450,704**	**31.2**	**31.1**	**31.3**	**5.3***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004): ICD-10-AM codes J10 J11 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 E130E131 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 E643E86 K522 K528 K529 N390 N10 N12 N11 N136 K250 K251 K252 K254 K255 K256 K260 K261 K262K264 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 associated diagnosis, and some are principal diagnosis with the exclusion of some procedure codes. For more information on coding used, and 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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.

Note: Person numbers and rates include hospitalisations for which sex was indeterminate or 'not stated'.

Source: AIHW analysis of AIHW 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 Queensland, Western Australia, South Australia and the Northern Territory combined for the two-year period July 2002 to June 2004.

- In the two-year period July 2002 to June 2004, diabetes complications were the most common type of ambulatory sensitive condition among Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined; followed by convulsions and epilepsy; and ear, nose and throat infections. Indigenous Australians were hospitalised at around 12, 6 and 2 times the rate of other Australians for these conditions respectively.
- Chronic obstructive pulmonary disease (COPD) was the fourth most common ambulatory sensitive condition for which Indigenous Australians were hospitalised, at almost five times the rate of other Australians.
- For most ambulatory sensitive care conditions, other Australians had a greater average length of stay in hospital than Indigenous Australians (4.9 days compared to 3.8 days). This contrasts with the length of stay for all conditions combined which was higher for Indigenous Australians (3.1) than other Australians (2.1).
- Congestive heart failure and COPD were responsible for the greatest average number of days in hospital of these conditions, with Indigenous Australians staying an average of around 6 days in hospital compared to 8 days for other Australians.

Table 3.06.2: Top 10 ambulatory care sensitive hospital admissions, by Indigenous status, Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

	Separations						Average bed days		Total bed days	
	Number Indigenous	**Indigenous rate per 1,000(e)**	**LCL 95%(f)**	**UCL 95%(g)**	**Other rate per 1,000(e)**	**Ratio(h)**	**Indigenous**	**Other(i)**	**Indigenous**	**Other(i)**
Diabetes complications	26,789	101.2	99.8	102.5	8.3	12.2*	4.4	6.6	117,184	803,056
Convulsions and epilepsy	3,943	8.4	8.1	8.7	1.4	6.1*	2.5	3.0	9,818	58,203
Ear, nose and throat infections	3,074	4.2	4.0	4.4	1.8	2.3*	2.1	1.8	6,496	44,590
Chronic Obstructive Pulmonary Disease	2,910	13.6	13.0	14.2	2.7	5.0*	5.5	7.7	15,916	306,156
Asthma	2,706	5.2	4.9	5.5	1.9	2.7*	2.5	2.5	6,685	69,136
Cellulitis	2,589	5.8	5.5	6.1	1.3	4.3*	3.5	5.0	9,175	97,269
Pyelonephritis	2,336	7.1	6.7	7.5	1.9	3.8*	3.7	4.8	8,688	131,131
Dental problems	2,276	3.0	2.8	3.1	2.7	1.1	1.6	1.1	3,615	44,464
Angina	1,687	6.7	6.3	7.1	2.3	2.9*	2.5	2.8	4,174	94,458
Congestive cardiac failure	1,583	7.1	6.7	7.5	2.0	3.5*	5.7	7.6	8,077	226,645
Total(j)	**52,160**	**164.7**	**163.0**	**166.4**	**31.2**	**5.3***	**3.8**	**4.9**	**189,828**	**1,875,108**

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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) Ratio - Indigenous:Other.

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

(j) 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 AIHW 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 Queensland, Western Australia, South Australia and the Northern Territory combined for the two-year period July 2002 to June 2004.

- In the two-year period July 2002 to June 2004, 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 pyelonephritis (chronic infection of the kidneys). Indigenous infants were hospitalised at around three times the rate of other infants for ear, nose and throat infections and at similar rates to other infants for pyelonephritis. Ear, nose and throat infections and pyelonephritis accounted for approximately 6% and 1% of all hospitalisations of Indigenous infants.
- Ear, nose and throat infections were also a common reason for hospitalisation among Indigenous Australians aged 1–14 years of age who were hospitalised at twice the rate of other Australians at this age. Ear, nose and throat infections accounted for 6% of total hospitalisations of Indigenous Australians in this age group.
- Pyelonephritis and cellulitis (bacterial infection of the skin) were common ambulatory care sensitive conditions causing hospitalisation among Aboriginal and Torres Strait Islander peoples aged 15–24 years. Indigenous Australians of this age were hospitalised at three and four times the rate of other Australians for these conditions respectively. These conditions together accounted for approximately 2% 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 six and 23 times the rate of other Australians for diabetes complications in these age groups. Diabetes complications were responsible for 7%, 14% and 14% of total hospitalisations of Indigenous Australians in these age groups respectively.
- Chronic obstructive pulmonary disease 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 eight 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, Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

Age group (years)	Condition	Indigenous Number	Indigenous Rate per 1,000[(f)]	Indigenous LCL 95%[(g)]	Indigenous UCL 95%[(h)]	Other[(e)] Number	Other[(e)] Rate per 1,000[(f)]	Other[(e)] LCL 95%[(g)]	Other[(e)] UCL 95%[(h)]	Rate ratio[(i)]
<1	Ear, nose and throat infections	705	48.9	45.3	52.5	2,606	15.2	14.6	15.8	3.2
	Pyelonephritis	127	8.8	7.3	10.3	1,255	7.3	6.9	7.7	1.2
	Convulsions and epilepsy	110	7.6	6.2	9.1	869	5.1	4.7	5.4	1.5
1–14	Ear, nose and throat infections	1,575	7.8	7.5	8.2	13,251	5.0	4.9	5.0	1.6
	Dental conditions	1,563	7.8	7.4	8.2	17,263	6.5	6.4	6.6	1.2
	Asthma	1,295	6.4	6.1	6.8	13,933	5.2	5.1	5.3	1.2
15–24	Pyelonephritis	319	2.9	2.6	3.2	2,254	1.1	1.1	1.2	2.6
	Cellulitis	305	2.8	2.5	3.1	1,275	0.6	0.6	0.7	4.3
	Diabetes complications	297	2.7	2.4	3.0	2,166	1.1	1.0	1.1	2.5
25–44	Diabetes complications	6,768	41.9	40.9	42.9	9,381	2.2	2.2	2.3	18.9
	Convulsions and epilepsy	1,857	11.5	11.0	12.0	4,532	1.1	1.0	1.1	10.7
	Cellulitis	949	5.9	5.5	6.3	3,808	0.9	0.9	0.9	6.5
45–64	Diabetes complications	15,513	229.6	226.0	233.2	35,198	10.0	9.9	10.1	23.0
	COPD	1,255	18.6	17.5	19.6	8,413	2.4	2.3	2.4	7.8
	Angina	955	14.1	13.2	15.0	10,563	3.0	2.9	3.0	4.7
65+	Diabetes complications	4,144	260.3	252.3	268.2	72,824	40.4	40.1	40.7	6.4
	COPD	967	60.7	56.9	64.6	30,654	17.0	16.8	17.2	3.6
	Congestive cardiac failure	430	27.0	24.5	29.6	26,152	14.5	14.3	14.7	1.9

(continued)

Table 3.06.3 (continued): Major ambulatory care sensitive hospital admissions, by age group and Indigenous status, Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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) Rate 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 AIHW National Hospital Morbidity Database.

Time series analyses

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australian's for ambulatory care sensitive conditions are presented below.

It should be noted 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 impact on 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 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 five-year period 1998–99 to 2003–04 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 prior 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 2003–04. The fitted trend implies an average yearly increase in the rate for females of around 19 per 1,000, most of which is attributable to an increase in rates in 2003–04. These 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 0.8 per 1,000. These 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 2003–04, 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 2003–04

	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000					
Males	120.7	117.0	126.6	171.3	16.2*
Females	135.6	141.1	152.7	202.1	21.1*
Persons	128.9	130.6	141.1	187.6	18.6*
Other Australians rate per 1,000[(b)]					
Males	31.6	32.0	32.6	34.6	1.0*
Females	28.2	28.1	28.6	29.8	0.5*
Persons	29.7	29.8	30.4	32.0	0.8*
Rate ratio[(c)]					
Males	3.8	3.7	3.9	4.9	0.4
Females	4.6	4.7	5.0	6.3	0.6*
Persons	4.3	4.4	4.6	5.9	0.5*
Rate difference[(d)]					
Males	89.1	84.99	94.0	136.7	15.2*
Females	105.9	111.3	122.3	170.1	20.4*
Persons	99.3	100.8	110.7	155.6	17.9*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 2001–01 to 2003–04.

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

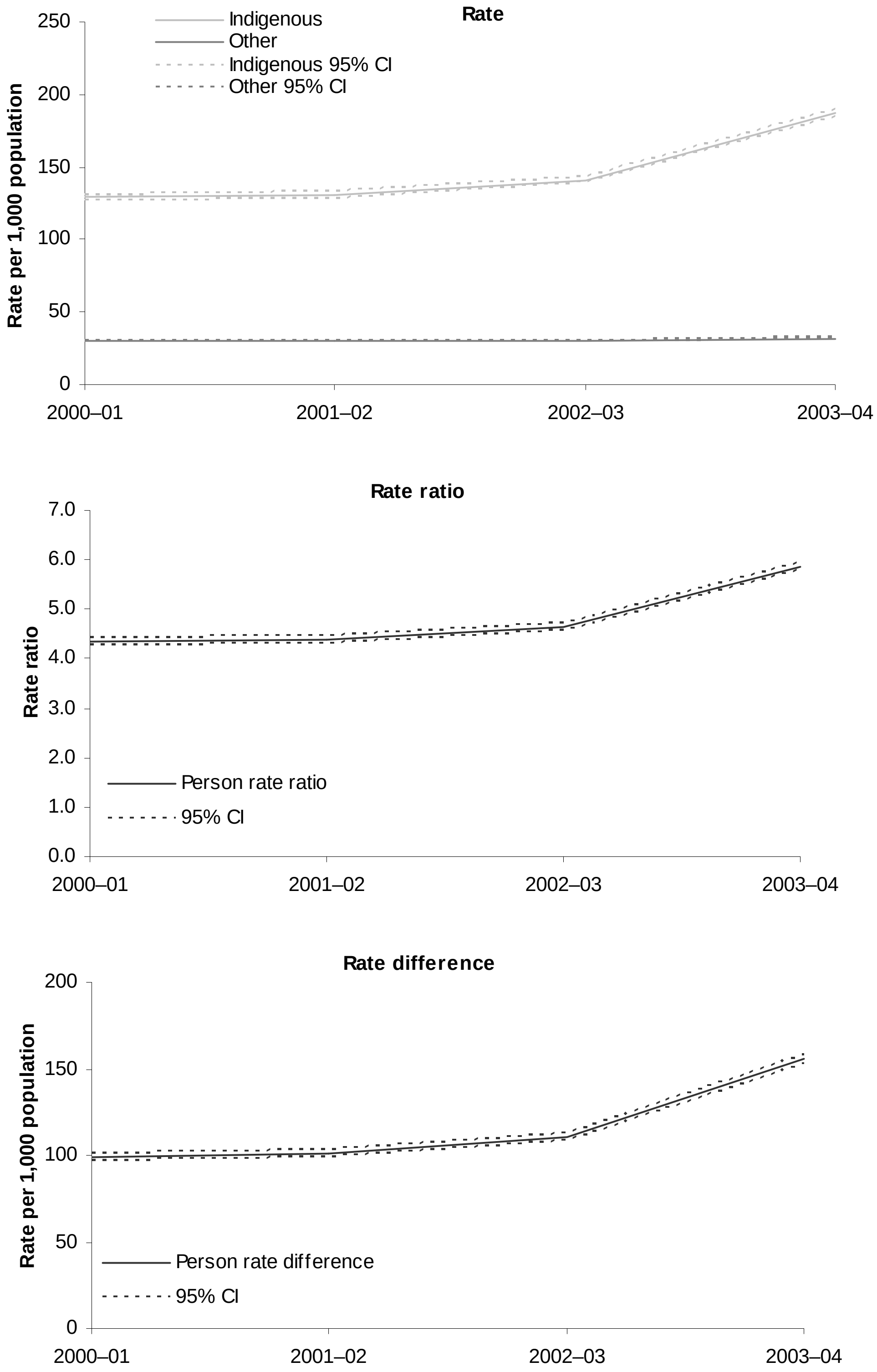
(b) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

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, 2000–01 to 2003–04

Vaccine-preventable conditions

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for vaccine-preventable conditions such as influenza, diphtheria, measles, mumps and rubella over the period 1998–99 to 2003–04 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 apparent declines in hospitalisation rates for vaccine-preventable conditions (predominantly influenza) among Indigenous and other Australians during the period 1998–99 to 2003–04, however, these declines were only statistically significant for Indigenous females and other females. The fitted trend implies an average yearly decline in the rate of around 1.9 per 1,000 for Indigenous females and 0.4 per 1,000 for other females.
- 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 Aboriginal and Torres Strait Islander 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 were significant declines in the hospitalisation rate ratios between Indigenous and other Australians for vaccine-preventable conditions over the period 1998–99 to 2003–04. There were significant declines in the hospitalisation rate differences between Indigenous and other females.

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 2003–04

	1998–99	1999–2000	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	16.9	1.9	1.6	1.5	1.4	1.5	–2.3
Females	13.5	2.5	1.6	1.4	1.1	1.3	–1.9*
Persons	15.1	2.2	1.6	1.4	1.3	1.4	–2.0
Other Australian rate per 1,000[(b)]							
Males	4.3	0.7	0.4	0.4	0.4	0.4	–0.6
Females	3.0	0.5	0.4	0.4	0.3	0.3	–0.4*
Persons	3.6	0.6	0.4	0.4	0.4	0.4	–0.5
Rate ratio[(c)]							
Males	3.9	2.8	3.5	3.4	3.4	3.7	0.0
Females	3.8	4.1	3.9	3.5	3.1	3.5	–0.1*
Persons	4.2	3.7	3.8	3.5	3.4	3.7	–0.1*
Rate difference[(d)]							
Males	12.6	1.2	1.1	1.0	1.0	1.1	–1.7
Females	10.0	1.9	1.2	1.0	0.8	0.9	–1.4*
Persons	11.5	1.6	1.2	1.0	0.9	1.0	–1.6

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

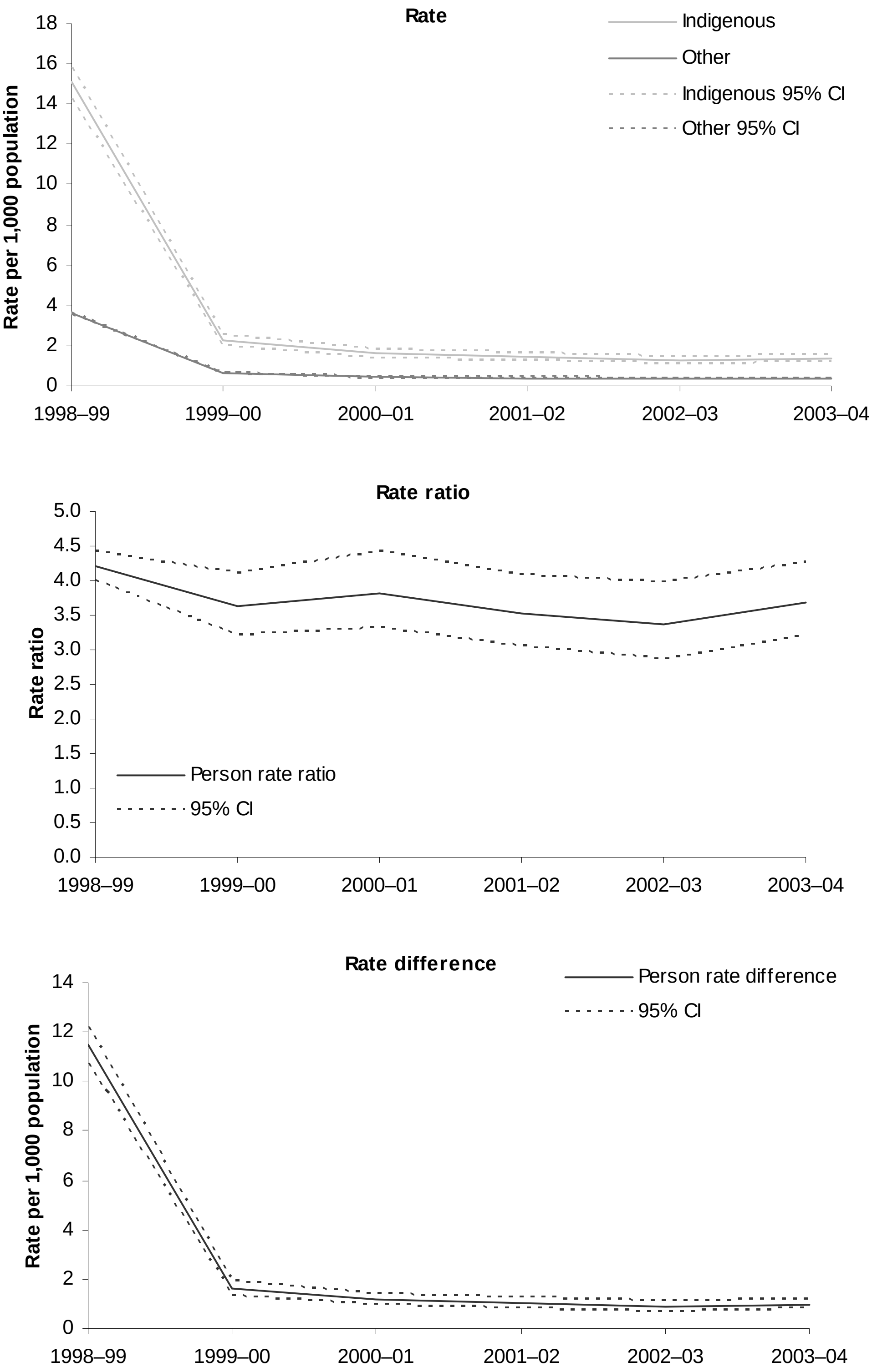
(b) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

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, 1998–99 to 2003–04

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 2003–04 are presented in Table 3.06.6 and Figure 3.06.4. This period has been used for analysis as 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 prior 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 2003–04. The fitted trend implies an average yearly increase in the rate of around 19 per 1,000, most of which is attributable to an increase in rates in 2003–04. 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 0.5 per 1,000. These increases were statistically 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 2000–01 to 2003–04. 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 2003–04.

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 2003–04

	2001–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000					
Males	88.5	84.5	94.8	138.4	16.0*
Females	100.9	106.3	119.0	168.0	21.4*
Persons	95.4	96.8	108.3	154.0	18.7*
Other Australian rate per 1,000[(b)]					
Males	19.4	19.6	20.1	21.8	0.8*
Females	14.8	14.5	14.9	15.7	0.3
Persons	16.9	16.8	17.3	18.5	0.5*
Rate ratio[(c)]					
Males	4.6	4.3	4.7	6.4	0.6
Females	6.0	6.3	6.9	9.1	1.0*
Persons	5.6	5.8	6.3	8.3	0.9*
Rate difference[(d)]					
Males	69.0	64.9	74.7	116.7	15.3*
Females	84.0	89.5	101.7	149.5	20.9*
Persons	78.5	80.0	91.0	135.5	18.2*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 2000–01 to 2003–04.

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

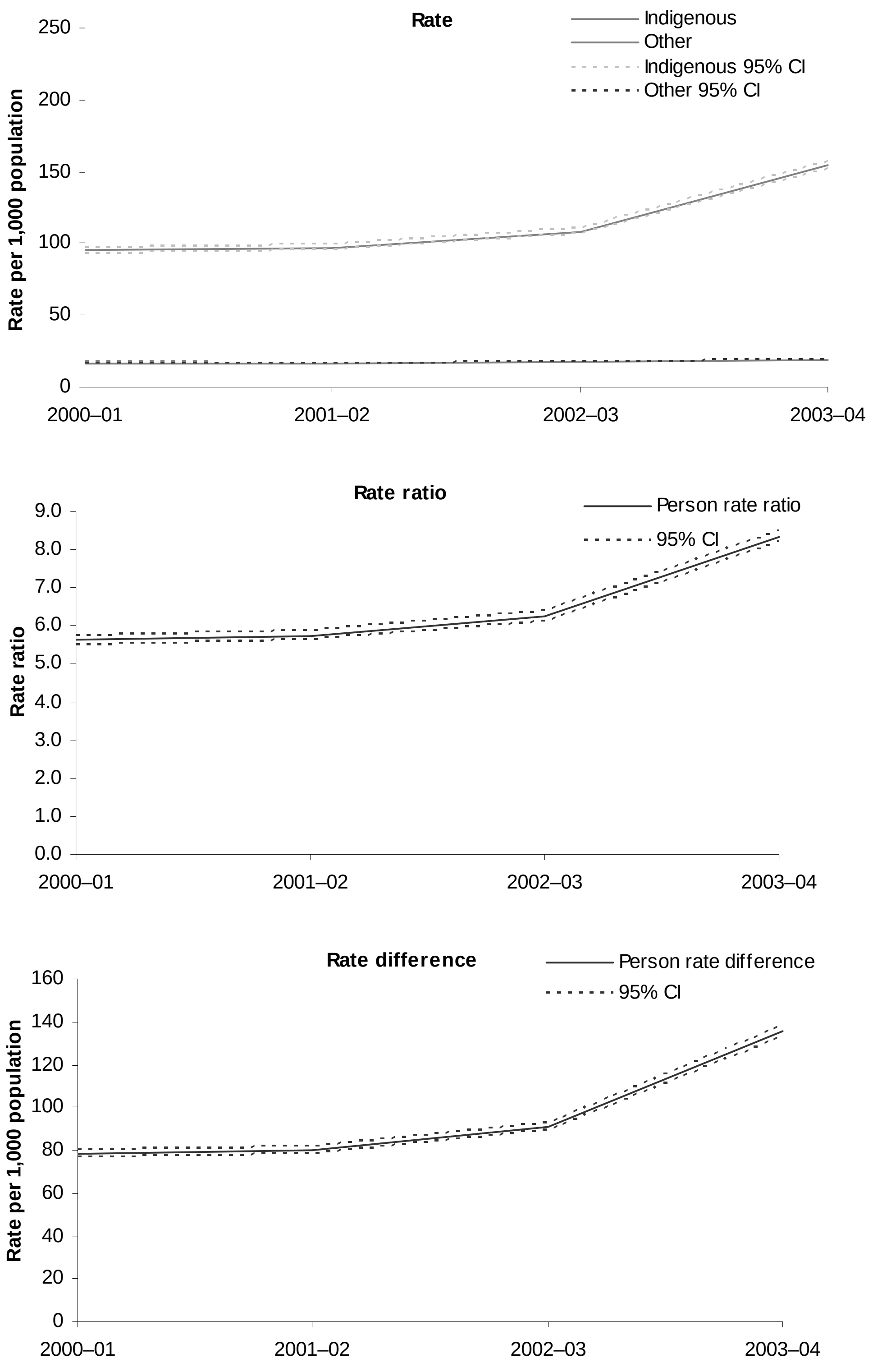
(b) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW 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, 2000–01 to 2003–04

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 2003–04 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 significant declines in hospitalisation rates for potentially preventable acute conditions among Indigenous females during the period 1998–99 to 2003–04. The fitted trend implies an average yearly decline in the rate of around 1 per 1,000.
- There were significant increases in hospitalisation rates for other Australians during the same period, with an average yearly increase in the rate of 0.4 per 1,000.
- There were significant declines in both the hospitalisation rate ratios and rate differences between Indigenous and other Australians over the period 1998–99 to 2003–04, reflecting a relative and absolute decline in the gap between hospitalisation rates for Indigenous and other Australians. The declines in hospitalisation rate ratios were significant for both males and females and the declines in hospitalisation rate differences were significant for females but not for males.

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 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	35.3	33.9	32.0	32.5	32.2	34.8	–0.2
Females	41.1	38.7	35.9	35.9	35.7	36.1	–1.0*
Persons	38.4	36.5	34.1	34.4	34.2	35.6	–0.6
Other Australian rate per 1,000[(b)]							
Males	10.2	10.7	11.0	11.3	11.4	11.8	0.3*
Females	11.0	11.6	12.4	12.6	12.8	13.2	0.4*
Persons	10.6	11.1	11.7	12.0	12.1	12.5	0.4*
Rate ratio[(c)]							
Males	3.5	3.2	2.9	2.9	2.8	3.0	–0.1*
Females	3.9	3.5	3.1	3.0	2.9	2.9	–0.2*
Persons	3.6	3.3	2.9	2.9	2.8	2.8	–0.2*
Rate difference[(d)]							
Males	25.1	23.3	21.0	21.1	20.8	23.0	–0.5
Females	30.5	27.6	24.2	23.9	23.6	23.6	–1.3*
Persons	27.8	25.4	22.4	22.4	22.1	23.0	–1.0*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

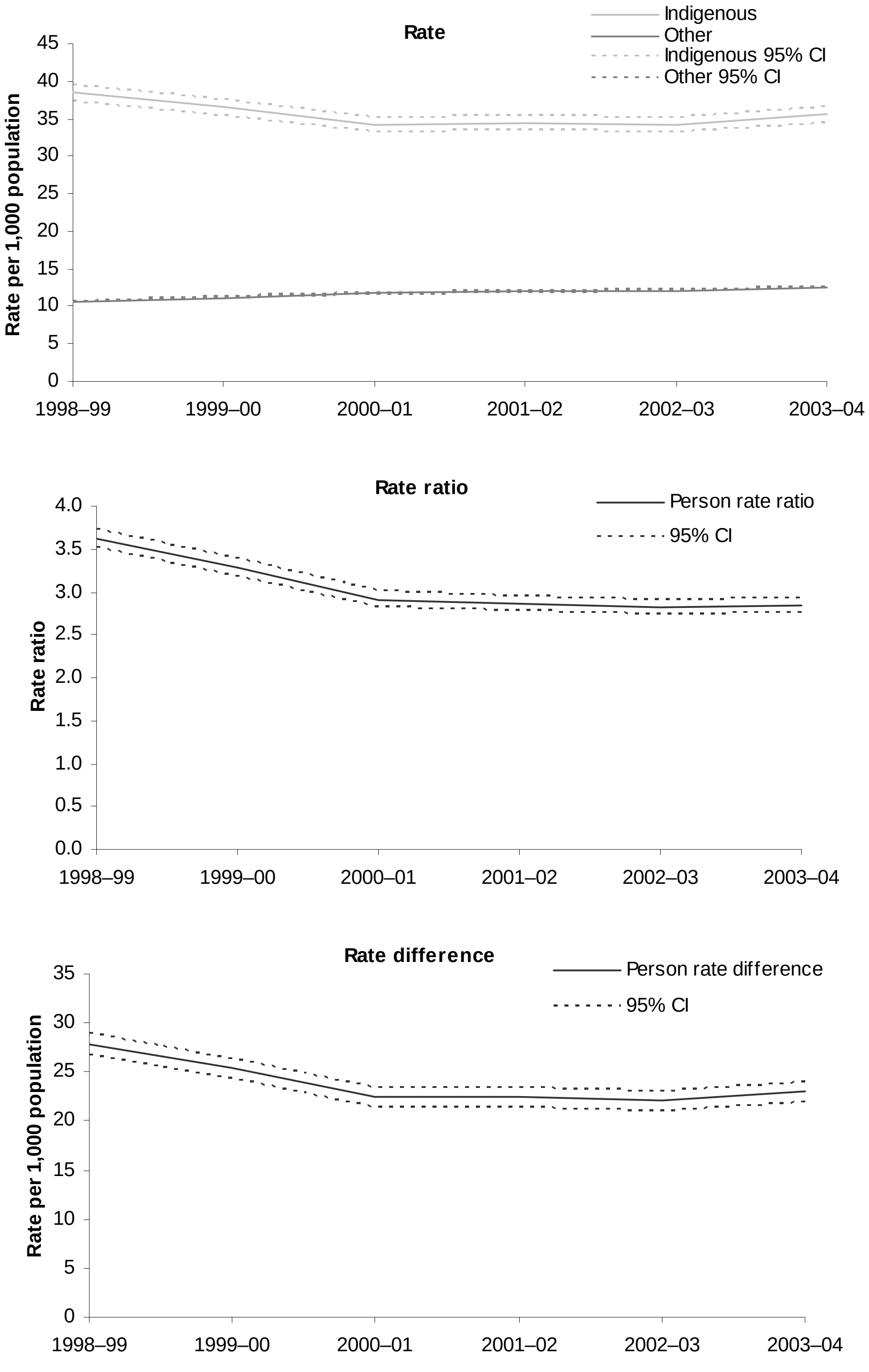
(b) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) Hospitalisation rates for Indigenous Australians minus hospitalisation rates for other Australians.

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

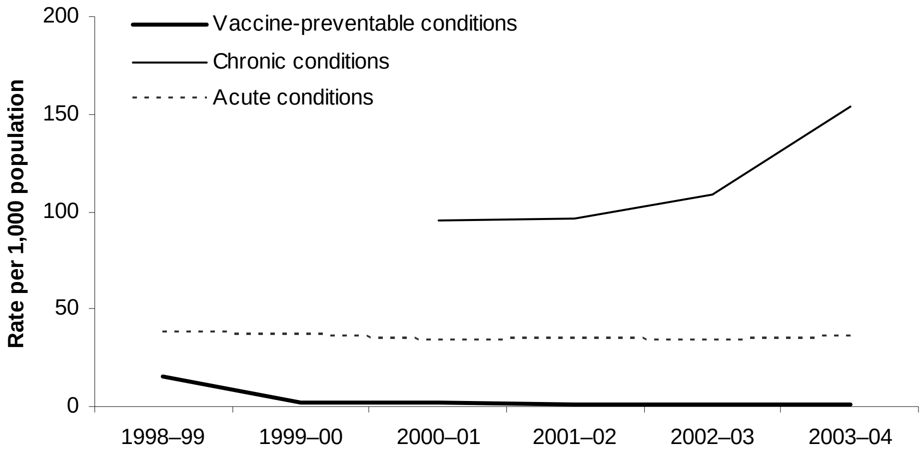
Source: AIHW analysis of AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW 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, 1998–99 to 2003–04

Figure 3.06.6 presents hospitalisation rates for Indigenous Australians for vaccine preventable, potentially preventable chronic and potentially preventable acute conditions. Indigenous Australians are hospitalised at much higher rates for chronic conditions than acute conditions or vaccine preventable conditions.



Source: AIHW analysis of AIHW 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, 1998–99 to 2003–04

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 of Aboriginal and Torres Strait Islander people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 *(ABS 2004).*

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Menzies R, McIntyre P and Beard F (National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases) 2004. Vaccine preventable diseases and vaccination coverage in Aboriginal and Torres Strait Islander people, Australia, 1999 to 2002. Communicable Diseases Intelligence 28(1): Suppl.1.

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3.07 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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 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 change in a type of care (for example, from acute to rehabilitation).

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 period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory combined, there were 21,023 hospitalisations where the patient left hospital against medical advice or was discharged at their own risk, 8,450 (40.2%) of which were hospitalisations of Indigenous patients.

- For approximately 3% of all hospitalisations of Indigenous Australians, the patient was discharged against medical advice.

Hospitalisations by age and sex

- A slightly higher proportion of Indigenous males were discharged from hospital against medical advice (3.2%) than Indigenous females (2.5%) (Table 3.07.1).
- Indigenous Australians aged 25–34 and 35–44 years were most likely to be discharged from hospital against medical advice. Indigenous Australians in these age groups were discharged from hospital against medical advice at 20–30 times the rate of other Australians (Table 3.07.2).

Table 3.07.1: Discharges from hospital against medical advice, by Indigenous status and sex (excluding mental and behavioural disorders), Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

	Number		Per cent[(e)]		Indigenous			Other[(f)]			
	Indigenous	Other[(f)]	Indigenous	Other[(f)]	Rate per 1000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate per 1,000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate Ratio[(j)]
Males	4,030	7,390	3.2	0.3	17.7	17.1	18.3	1.0	1.0	1.1	17.1*
Females	4,420	5,183	2.5	0.2	16.4	15.9	16.9	0.7	0.7	0.7	22.6*
Persons	**8,450**	**12,573**	**2.8**	**0.3**	**17.0**	**16.6**	**17.4**	**0.9**	**0.9**	**0.9**	**19.4***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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 2002–03 to 2003–04.

(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 AIHW National Hospital Morbidity Database.

Table 3.07.2: Discharges from hospital against medical advice, by Indigenous status and age group (excluding mental and behavioural disorders), Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

	Number		Per cent(e)		Indigenous			Other(f)			
Age group (years)	**Indigenous**	**Other(f)**	**Indigenous**	**Other(f)**	**Rate per 1,000(g)**	**95% LCL(h)**	**95% UCL(i)**	**Rate per 1,000(g)**	**95% LCL(h)**	**95% UCL(j)**	**Rate Ratio(j)**
0–4	587	344	4.3	0.2	8.0	7.5	8.8	0.4	0.3	0.4	21.1*
5–14	151	185	2.2	0.1	1.1	0.9	1.2	0.1	0.1	0.1	11.1*
15–24	1,448	2,275	9.7	0.7	13.2	12.5	13.9	1.1	1.1	1.2	11.5*
25–34	2,464	2,797	12.4	0.6	27.2	26.1	28.3	1.4	1.3	1.4	19.9*
35–44	2,200	2,428	7.9	0.5	31.0	29.7	32.3	1.1	1.1	1.1	27.9*
45–54	1,168	1,749	3.5	0.3	26.1	24.6	27.6	0.9	0.8	0.9	30.2*
55–64	313	1,237	1.3	0.2	13.7	12.2	15.3	0.8	0.8	0.8	16.7*
65+	119	1,558	0.7	0.1	7.5	6.1	8.8	0.9	0.8	0.9	8.6*
Total(k)	**8,450**	**12,573**	**2.8**	**0.3**	**17.0**	**16.6**	**17.4**	**0.9**	**0.9**	**0.9**	**19.4***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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 2002–03 to 2003–04.

(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 AIHW National Hospital Morbidity Database.

Hospitalisations by state/territory

- Overall, Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined were discharged from hospital against medical advice at 19 times the rate of other Australians.
- In Queensland, Indigenous Australians were discharged from hospital against medical advice at eight times the rate of other Australians. In Western Australia, South Australia and the Northern Territory, Indigenous Australians were discharged from hospital against medical advice at 29, 24 and 28 times the rate of other Australians in these jurisdictions respectively (Table 3.07.3; Figure 3.07.1).

Table 3.07.3: Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

	Number		Per cent[(e)]		Indigenous			Other[(f)]			
	Indig.	**Other**	**Indig.**	**Other**	**Rate per 1,000**[(g)]	**95% LCL**[(h)]	**95% UCL**[(i)]	**Rate per 1000**[(g)]	**95% LCL**[(h)]	**95% UCL**[(i)]	**Rate Ratio**[(j)]
Qld	1,653	6,876	1.5	0.3	7.5	7.1	7.9	0.9	0.9	1.0	8.0*
WA	2,832	3,094	3.4	0.3	23.6	22.6	24.6	0.8	0.8	0.8	28.8*
SA	857	2,345	3.1	0.2	18.9	17.5	20.2	0.8	0.8	0.8	24.0*
NT	3,108	258	3.8	0.5	28.9	27.8	30.1	1.1	0.9	1.2	27.5*
Qld, WA, SA and NT	**8,450**	**12,573**	**2.8**	**0.3**	**17.0**	**16.6**	**17.4**	**0.9**	**0.9**	**0.9**	**19.4***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p<.05$ 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 (National Centre for Classification in Health 2004).

(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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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 2002–03 to 2003–04.

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

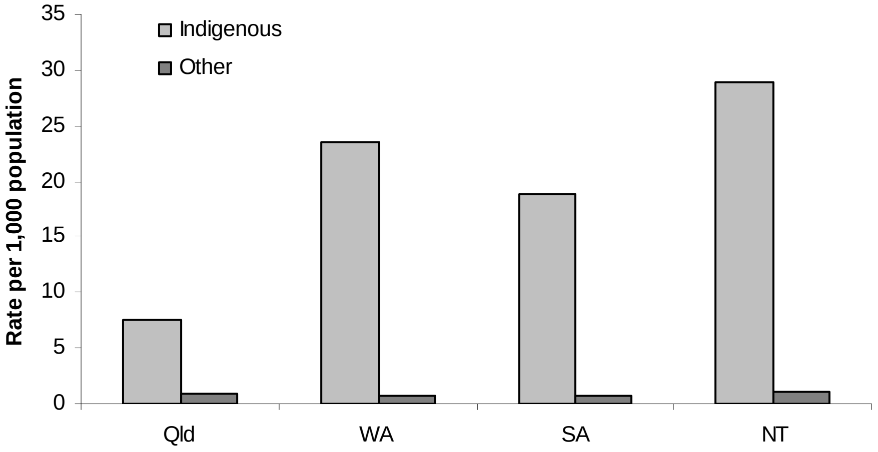
(g) Directly age standardised using the Australian 2001 Standard population.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio Indigenous:other.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 3.07.1: Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), Qld, WA, SA and NT, July 2002 to June 2004

Hospitalisations by principal diagnosis

- The most common principal diagnoses of hospitalisations of Indigenous Australians who were discharged against medical advice were injury and poisoning (2,027 separations) followed by respiratory diseases (1,228 separations). These two groups of diagnoses represented 39% 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 (8%), followed by diseases of the skin (7%) and symptoms, signs and abnormal clinical and laboratory findings (7%) (Table 3.07.4).
- Indigenous Australians who were hospitalised for injury and poisoning were discharged from hospital against medical advice at 19 times the rate of other Australians. Indigenous Australians who were hospitalised for respiratory diseases were discharged against medical advice at 42 times the rate of other Australians and Indigenous Australians who were hospitalised for infectious and parasitic diseases were discharged from hospital against medical advice at 41 times the rate of other Australians.

Table 3.07.4: Discharges from hospital against medical advice, by Indigenous status and principal diagnosis (excluding mental and behavioural disorders), Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

	Number		Per cent[(e)]		Indigenous			Other[(f)]			
	Indigenous	Other[(f)]	Indigenous	Other[(f)]	Rate per 1,000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate per 1000[(g)]	95% LCL[(h)]	95% UCL[(i)]	Rate Ratio[(j)]
Injury, poisoning and certain other consequences of external causes (S00–Y98)	2,027	2,865	8.0	0.9	3.8	3.6	4.0	0.2	0.2	0.2	19.1*
Diseases of the respiratory system (J00–J99)	1,228	908	5.4	0.4	2.6	2.5	2.8	0.1	0.1	0.1	41.7*
Diseases of the digestive system (K00–K93)	778	1,387	5.2	0.2	1.6	1.5	1.8	0.1	0.1	0.1	17.0*
Symptom, signs and abnormal clinical and laboratory findings, nec (R00–R99)	742	1,791	6.5	0.6	1.6	1.5	1.7	0.1	0.1	0.1	13.0*
Complications of pregnancy, childbirth and the puerperium (O00–O99)	644	1,070	2.7	0.3	0.9	0.9	1.0	0.1	0.1	0.1	12.4*
Diseases of the skin and subcutaneous tissue (L00–L99)	519	442	6.5	0.5	1.0	0.9	1.1	0.0	0.0	0.0	32.0*
Certain infectious and parasitic diseases (A00–B99)	438	265	5.7	0.4	0.8	0.7	0.8	0.0	0.0	0.0	40.5*
Endocrine, nutritional and metabolic diseases (E00–E90)	396	412	6.3	0.5	0.9	0.8	1.0	0.0	0.0	0.0	30.1*
Diseases of the circulatory system (I00–I99)	373	1,004	3.8	0.3	1.0	0.9	1.1	0.1	0.1	0.1	15.0*
Diseases of the genitourinary system (N00–N99)	315	490	3.9	0.2	0.6	0.6	0.7	0.0	0.0	0.0	18.9*
Diseases of the musculoskeletal system (M00–M99)	253	450	5.1	0.2	0.5	0.5	0.6	0.0	0.0	0.0	17.3*
Other[(k)]	736	1,486	0.5	0.1	1.5	1.4	1.6	0.1	0.1	0.1	14.8*
Total[(l)]	**8,450**	**12,573**	**2.8**	**0.3**	**17.0**	**16.6**	**17.4**	**0.9**	**0.9**	**0.9**	**19.4***

(continued)

Table 3.07.4 (continued): Discharges from hospital against medical advice, by Indigenous status and principal diagnosis (excluding mental and behavioural disorders), Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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 2002–03 to 2003–04.

(f) Includes hospitalisations for which no principal diagnosis was recorded. Excludes mental and behavioural disorders (F00–F99).

(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 hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(l) 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.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Time series analyses

The number and rate of hospitalisations for which Indigenous and other Australians were discharged against medical advice over the five-year period 1998–99 to 2003–04 are presented in Table 3.07.5.

- Over the period 1998–99 to 2003–04, 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 0.2 per 1,000. It should be noted that most of the increase took place between 1998–99 and 1999–00 after which rates remained relatively stable.
- Over the same period, there were no significant changes in the rates at which other Australians were discharged from hospital against medical advice.

It should be noted 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 impact on 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 to hospitals rather than a worsening of health.

Table 3.07.5: Discharges against medical advice, by Indigenous status (excluding mental and behavioural disorders), Qld, WA, SA and NT, 1998–99 to 2003–04[(a)(b)(c)(d)]

	Number		Indigenous			Other[(e)]			
	Indigenous	Other[(e)]	Rate per 1000[(f)]	95% LCL[(g)]	95% UCL[(h)]	Rate 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	0.9	0.9	19.9*
2003–04	4,514	6,534	17.8	17.2	18.3	0.9	0.9	0.9	19.7*

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004).

(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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. 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 AIHW 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 of Aboriginal and Torres Strait Islander people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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's 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.

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AIHW (Australian Institute of Health and Welfare) 2005. Improving the quality of Indigenous identification in hospital statistics. Health Services Series no. 25. AIHW cat. no. HSE 101. Canberra: AIHW.

National Centre for Classification in Health 2004. International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification. 4th Edition. National Centre for Classification in Health.

3.08 Access to mental health services

Access to mental health cares services such as hospitals, community mental health care, doctors and Aboriginal and Torres Strait Islander Primary Health Care Services by Aboriginal and Torres Strait Islander peoples

Data sources

Data for this indicator come from:

- National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)
- Bettering the Evaluation and Care of Health (BEACH) survey
- AIHW National Hospital Morbidity Database
- AIHW National Community Mental health Care Database
- Service Activity Reporting data for Australian Government funded Aboriginal and Torres Strait Islander primary health care organisations.

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 six-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 and the 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 five-year period 2000–01 to 2004–05, during which there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.6% of total GP encounters.

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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005a). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

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 Aboriginal and Torres Strait Islander 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 2003–04, Western Australia, Tasmania and the Northern 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.

Service Activity Reporting (SAR) database

The SAR database collects data from approximately 140 Australian Government funded Aboriginal and Torres Strait Islander primary health 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 were between 97% and 99% during the period 2002–03 to 2004–05.

It should be noted 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

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 National Aboriginal and Torres Strait Islander Health Survey on visiting a health professional for mental health related reasons are presented in Tables 3.08.1, 3.08.2a and 3.08.2b below.

- In 2004–05, approximately 12% of Indigenous Australians reported visiting a health professional about their feelings in the four weeks prior to survey (Table 3.08.1).
- The Northern Territory had the highest proportion of Indigenous Australians reporting they visited a health professional about their feelings (17%) followed by Victoria (16%); both 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 3.08.2a).
- A higher proportion of Indigenous Australians (20%) reported visiting an 'other health professional' than non-Indigenous Australians (13%). This difference was greatest in remote areas, where 32% of Indigenous Australians reported visiting an 'other health professional' compared with 13% of non-Indigenous Australians (Table 3.08.2b).

Table 3.08.1: Whether saw doctor or health professional about feelings in last four 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 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: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 3.08.2a: Whether saw doctor or health professional about feelings in last four 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

n.p. Not available for publication.

(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: ABS and AIHW analysis of 2004–05 NATSIHS

Table 3.08.2b: 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	—
None of above(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

n.a. Not available.

(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 National Health Survey.

(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: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Hospitalisations

- For the two-year period July 2002 to June 2004, there were 210,420 hospitalisations from mental health related conditions in Queensland, Western Australia, South Australia and the Northern Territory combined, 11,264 (5.4%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples.
- Mental health related conditions were responsible for 3.6% of all hospitalisations of Aboriginal and Torres Strait Islander Australians.

Hospitalisations by state/territory

Table 3.08.3 presents hospitalisations for a principal diagnosis of mental health related conditions in Queensland, Western Australia, South Australia and the Northern Territory, for the two-year period July 2002 to June 2004.

- In Western Australia and South Australia, Indigenous Australians were hospitalised for mental health related conditions at around three times the rate of other Australians in these states. In the Northern Territory, Indigenous Australians were hospitalised at around twice the rate of other Australians and in Queensland the rate ratio was 1.4.
- 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 Queensland, Western Australia and South Australia.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males were hospitalised from mental health related conditions at around twice the rate of other Australians in these jurisdictions. Indigenous females were hospitalised at a slightly higher rate than that of other females.

Table 3.08.3: Hospitalisations for principal diagnosis of mental health related conditions, by Indigenous status, sex and state/territory, Qld, WA, SA and NT, July 2002 to June 2004[a][b][c][d]

	Indigenous				Other[e]				
	Number	**Rate per 1,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Number**	**Rate per 1,000[f]**	**LCL 95%[g]**	**UCL 95%[h]**	**Ratio[i]**
Qld									
Males	2,422	23.0	22.0	24.1	48,912	13.3	13.2	13.4	1.7*
Females	1,941	17.3	16.4	18.2	59,752	16.1	16.0	16.2	1.1*
Persons	4,363	20.0	19.3	20.7	108,664	14.7	14.6	14.8	1.4*
WA									
Males	1,942	34.0	32.3	35.8	21,130	11.3	11.1	11.4	3.0*
Females	1,964	31.6	30.1	33.2	28,824	15.2	15.0	15.4	2.1*
Persons	3,906	32.7	31.6	33.9	49,954	13.2	13.1	13.3	2.5*
SA									
Males	834	36.9	33.9	39.9	17,799	12.0	11.8	12.2	3.1*
Females	1,135	45.2	42.3	48.1	21,361	13.6	13.5	13.8	3.3*
Persons	1,969	41.0	39.0	43.1	39,160	12.8	12.7	13.0	3.2*
NT									
Males	569	10.3	9.3	11.3	889	5.9	5.5	6.3	1.7*
Females	456	7.8	7.0	8.7	487	3.8	3.4	4.2	2.1*
Persons	1,026	9.0	8.4	9.7	1,378	5.0	4.7	5.3	1.8*
Qld, WA, SA, NT									
Males	**5,767**	**24.3**	**23.5**	**25.0**	**88,730**	**12.4**	**12.3**	**12.4**	**2.0***
Females	**5,496**	**21.3**	**20.6**	**21.9**	**110,424**	**15.1**	**15.1**	**15.2**	**1.4***
Persons	**11,264**	**22.7**	**22.2**	**23.2**	**199,156**	**13.8**	**13.7**	**13.8**	**1.6***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004): 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) 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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. 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.

Note: Person numbers and rates include hospitalisations for which sex was not stated.

Source: AIHW analysis of AIHW 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 3.08.4 and Figure 3.08.1 present ambulatory equivalent and non-ambulatory equivalent mental health related hospitalisations for Indigenous and non-Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory over the two-year period July 2002 to June 2004.
- Between July 2002 and June 2004, there were 1,291 ambulatory equivalent mental health related hospitalisations among Indigenous Australians (362 with specialised psychiatric care and 928 without specialised psychiatric care).
- Over the same period there were 9,969 non-ambulatory equivalent mental health related separations among Indigenous Australians (4,361 with specialised psychiatric care and 5,608 without specialised psychiatric care).
- Rates of ambulatory equivalent mental health related hospitalisation with specialised psychiatric care were lower for Indigenous Australians than other Australians (rate ratio 0.2).
- 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 around one-fifth the rate for other Australians (rate ratio of 0.2). In contrast, the rate of ambulatory-equivalent separations without specialised psychiatric care per 1,000 Indigenous population was double that for other Australians (rate ratio of 2.1).
- 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 2.1). The rate of such hospitalisations with specialised psychiatric care among Indigenous Australians was around 1.3 times that of other Australians. The rate of non-ambulatory-equivalent separations among Indigenous Australians without specialised psychiatric care was almost four times that of other Australians.

Table 3.08.4: Ambulatory-equivalent and non-ambulatory-equivalent mental health related hospitalisations, by Indigenous status and sex, Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

	Males					Females					Persons				
	No.	Rate per 1,000(e)	LCL 95%(f)	UCL 95%(g)	Ratio(h)	No.	Rate per 1,000(e)	LCL 95%(f)	UCL 95%(g)	Ratio(h)	No.	Rate per 1,000(e)	LCL 95%(f)	UCL 95%(g)	Ratio(h)
Ambulatory equivalent															
With specialised psychiatric care															
Indigenous	178	0.8	0.7	0.9	0.3*	185	0.7	0.6	0.8	0.2*	363	0.7	0.7	0.8	0.2*
Other(i)	19,423	2.6	2.6	2.7		30,890	4.3	4.2	4.3		50,313	3.4	3.4	3.5	
Without specialised psychiatric care															
Indigenous	457	1.9	1.7	2.1	2.4*	471	1.8	1.6	1.9	1.9*	928	1.8	1.7	2.0	2.1*
Other(i)	5,745	0.8	0.8	0.8		6,686	0.9	0.9	0.9		12,431	0.9	0.8	0.9	
Total Indigenous	**635**	**2.7**	**2.5**	**2.9**	**0.8***	**656**	**2.4**	**2.2**	**2.6**	**0.5***	**1,291**	**2.6**	**2.4**	**2.7**	**0.6***
Total Other(i)	**25,168**	**3.4**	**3.4**	**3.5**		**37,576**	**5.2**	**5.1**	**5.3**		**62,744**	**4.3**	**4.3**	**4.3**	
Non-ambulatory equivalent															
With specialised psychiatric care															
Indigenous	2,400	8.9	8.5	9.3	1.6*	1,960	7.2	6.9	7.6	1.1*	4,361	8.0	7.8	8.3	1.3*
Other(i)	40,832	5.7	5.6	5.7		46,487	6.4	6.3	6.4		87,321	6.1	6.0	6.1	
Without specialised psychiatric care															
Indigenous	2,731	12.7	12.1	13.3	3.9*	2,877	11.6	11.1	12.1	3.3*	5,608	12.1	11.7	12.5	3.6*
Other(i)	22,728	3.3	3.2	3.3		26,329	3.6	3.5	3.6		49,057	3.4	3.4	3.4	
Total Indigenous	**5,131**	**21.6**	**20.9**	**22.2**	**2.4***	**4,837**	**18.8**	**18.2**	**19.4**	**1.9***	**9,969**	**20.1**	**19.7**	**20.6**	**2.1***
Total Other(i)	**63,560**	**8.9**	**8.9**	**9.0**		**72,816**	**9.9**	**9.9**	**10.0**		**136,378**	**9.5**	**9.4**	**9.5**	

(continued)

Table 3.08.4 (continued): Ambulatory-equivalent and non-ambulatory-equivalent mental health related hospitalisations, by Indigenous status and sex, Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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 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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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.

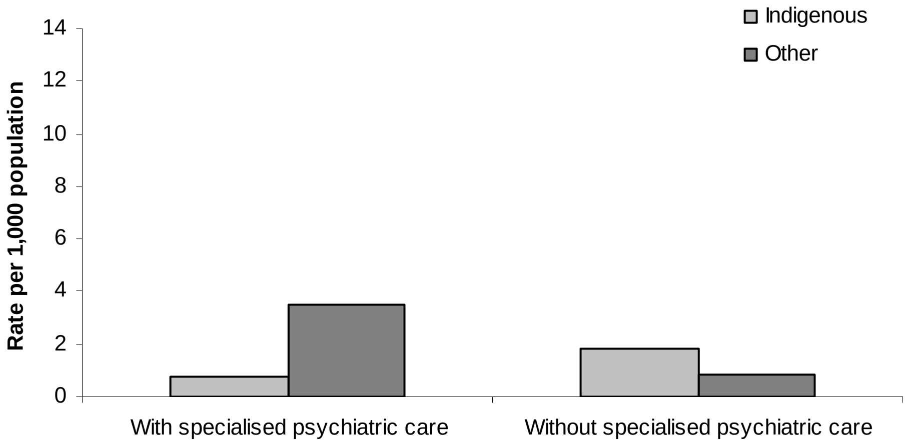
(g) UCL = upper confidence limit.

(h) Rate ratio Indigenous:other.

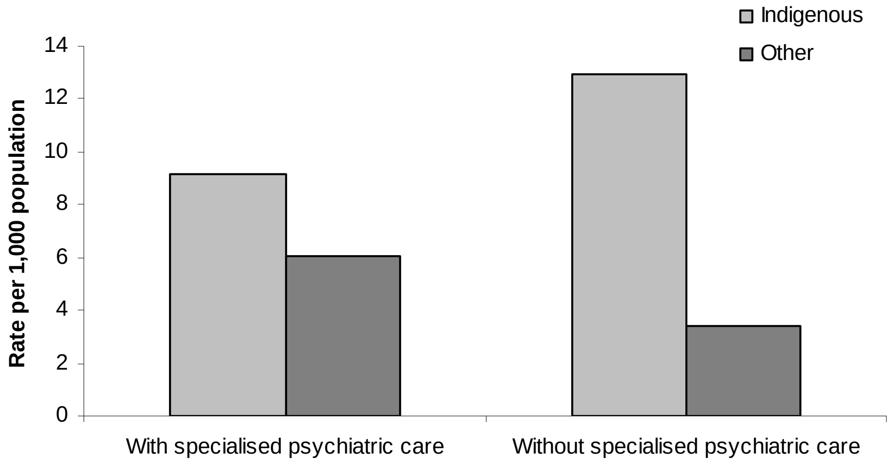
(i) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Ambulatory equivalent



Non-ambulatory equivalent



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 3.08.1: Ambulatory-equivalent and non-ambulatory-equivalent mental health related hospitalisation rates, by Indigenous status, Qld, WA, SA and NT, July 2002 to June 2004

Average length of stay

Table 3.08.5 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 Queensland, Western Australia, South Australia and the Northern Territory combined.

- In the period July 2002 to June 2004, the average length of stay in hospital for non-ambulatory-equivalent mental health related hospitalisations was similar for Indigenous Australians and other Australians (2.2 days compared to 2.1 days).
- The average length of stay for non-ambulatory-equivalent mental health related hospitalisations with specialised psychiatric care was 2.4 days for Indigenous Australians and 2.2 for other Australians, and without specialised psychiatric care was 1.8 days for both Indigenous and other Australians.
- For both Indigenous and other Australians, the total number of bed days was higher for ambulatory-equivalent separations with specialised psychiatric care than without specialised psychiatric care.

Table 3.08.5: Average length of stay for non-ambulatory-equivalent mental health related hospitalisations, by Indigenous status and sex, Qld, WA, SA and NT, July 2002 to June 2004[(a)(b)(c)(d)]

	Indigenous			Other(e)			Total		
	Males	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
					Patient days				
With specialised psychiatric care	52,393	29,509	81,902	745,028	688,534	1,433,562	797,421	718,043	1,515,464
Without specialised psychiatric care	8,936	9,011	17,947	113,134	147,497	260,631	122,070	156,508	278,578
Total	**61,329**	**38,520**	**99,849**	**858,162**	**836,031**	**1,694,193**	**919,491**	**874,551**	**1,794,042**
					Average length of stay (overnight)				
With specialised psychiatric care	2.3	2.5	2.4	2.3	2.1	2.2	2.3	2.1	2.2
Without specialised psychiatric care	2.1	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Total	**2.2**	**2.3**	**2.2**	**2.2**	**2.0**	**2.1**	**2.2**	**2.0**	**2.1**

* 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 ICD-10-AM (National Centre for Classification in Health 2004); 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 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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. 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.

Source: AIHW analysis of National Hospital Morbidity Database and AIHW Admitted Patient Mental Health Care Database.

Time series analyses

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for mental health related conditions over the five-year period 1998–99 to 2003–04 are presented in Table 3.08.6 and Figure 3.08.2.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates for mental health related conditions among Indigenous females during the period 1998–99 to 2003–04. The fitted trend implies an average yearly increase in the rate of around 0.7 per 1,000.
- 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. 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 2003–04. This reflects both a relative and absolute increase in the gap between hospitalisation rates for Indigenous and other Australians for mental health related conditions over the period 1998–99 to 2003–04.

It should be noted 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 impact on 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 3.08.6: Age-standardised hospitalisation rates, rate ratios and rate differences from mental health related conditions, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Males	24.4	24.4	26.1	24.9	24.5	24.1	–0.1
Females	19.2	17.0	20.5	20.4	21.3	21.2	0.7*
Persons	21.7	20.5	23.1	22.5	22.8	22.6	0.3
Other Australians rate per 1,000[(b)]							
Males	13.6	12.9	13.2	13.1	12.4	12.3	–0.2*
Females	14.9	14.8	15.0	14.7	15.1	15.2	0.1
Persons	14.2	13.9	14.1	13.9	13.8	13.8	–0.1*
Rate ratio[(c)]							
Males	1.8	1.9	2.0	1.9	2.0	1.9	0.03*
Females	1.3	1.1	1.4	1.4	1.4	1.4	0.04*
Persons	1.5	1.5	1.6	1.6	1.7	1.6	0.03*
Rate difference[(d)]							
Males	10.8	11.5	12.8	11.8	12.1	11.7	0.2
Females	4.3	2.1	5.5	5.7	6.2	6.0	0.6*
Persons	7.5	6.6	9.0	8.7	9.1	8.8	0.4*

* Represents results with statistically significant increases or decreases at the p<.05 level over the period 1998–99 to 2003–04.

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

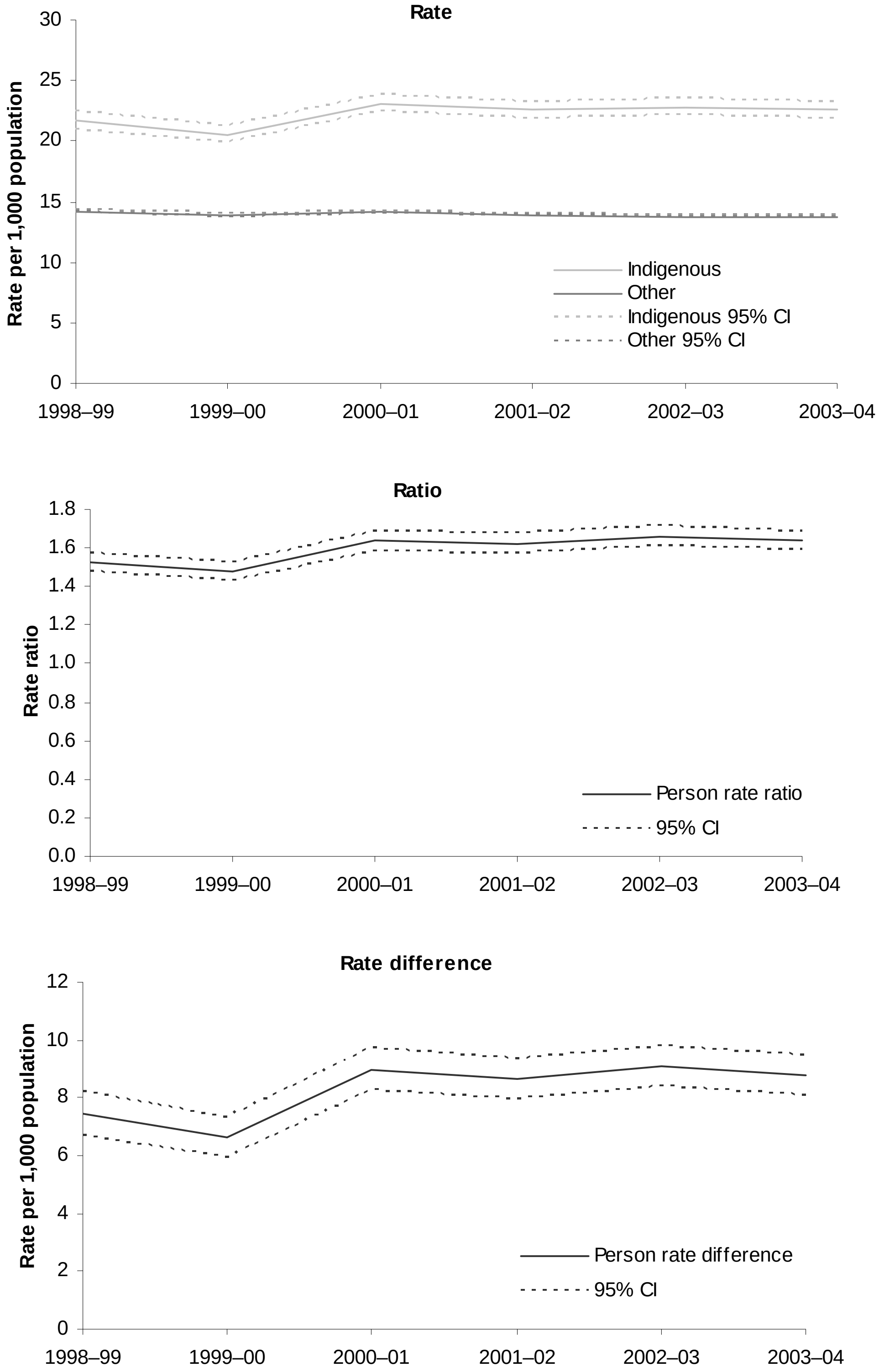
(b) Other includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 3.08.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from mental health-related conditions, Qld, WA, SA and NT, 1998–99 to 2003–04

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 2003–04, there were 4,911,735 clients of community mental health care services, of which 181,706 service contacts (3.7%) were for Aboriginal and/or Torres Strait Islander peoples.

Contacts by age and sex

- In 2003–04, Aboriginal and Torres Strait Islander 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 to 36 years for non-Indigenous Australians). For example, 24% and 22% of service contacts for Indigenous Australian males and females were for clients aged between 15 and 24 years compared with 16% and 17% of service contacts for other Australian males and females (Table 3.08.7).
- 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 3% respectively) than for other Australian males (7%) and females (15%). This may partly be a reflection of the younger age structure of the Indigenous population—life expectancy of Indigenous males and females is estimated at only 59 years and 65 years compared to 77 and 82 years for non-Indigenous males and females (ABS and AIHW 2005).
- In 2003–04, 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 twice as likely to be clients of community mental health care services as other Australians in these age groups.

Table 3.08.7: Community mental health care service contacts, by Indigenous status, sex and age group, 2003–04[(a)]

	Indigenous			Other[(b)]			
Sex and age group	No.	%	Rate per 1,000[(c)]	No.	%	Rate per 1,000[(c)]	Ratio[(d)]
Males							
Less than 15 yrs	11,285	11.1	121.0	237,474	9.7	121.9	1.0
15–24	24,583	24.2	525.2	398,591	16.4	292.2	1.8*
25–34	35,738	35.2	1,014.7	623,145	25.6	444.4	2.3*
35–44	20,771	20.4	733.7	507,752	20.8	347.1	2.1*
45–54	6,189	6.1	327.0	321,804	13.2	240.1	1.4*
55–64	1,837	1.8	188.5	156,889	6.4	151.8	1.2*
65 and over	1,079	1.1	185.7	178,763	7.3	156.2	1.2*
Total[(e)]	**101,670**	**100.0**	**445.1[(f)]**	**2,435,967**	**100.0**	**251.2**	**1.8[(f)]***
Females							
Less than 15 yrs	5,611	7.0	63.5	146,281	6.6	79.0	0.8
15–24	17,528	22.0	383.3	367,157	16.7	281.8	1.4*
25–34	23,588	29.6	623.3	414,740	18.8	295.5	2.1*
35–44	19,981	25.0	636.5	411,937	18.7	279.2	2.3*
45–54	8,671	10.9	429.0	331,956	15.1	245.2	1.7*
55–64	2,308	2.9	218.3	192,597	8.8	190.3	1.1*
65 and over	1,981	2.5	262.7	328,501	14.9	231.7	1.1*
Total[(e)]	**79,801**	**100.0**	**367.5[(f)]**	**2,200,588**	**100.0**	**224.2**	**1.5[(f)]***
Total[(e)]	**181,706**		**406.0[(f)]**	**4,730,029**		**236.9**	**1.7[(f)]***

* Represents results with statistically significant differences in the Indigenous/other Australians comparisons at the p<.05 level.

(a) These data should be interpreted with caution due to 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) Rate per 1,000 population based on the average 2003 and 2004 December populations.

(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: 2003–04 National Community Mental Health Care Database, AIHW.

Contacts by state/territory

- In 2003–04, 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 1.3% for Victoria to 26.4% for the Northern Territory (Table 3.08.8).
- There were more service contacts per 1,000 population for Aboriginal and Torres Strait Islander peoples than for other Australians (413.9 per 1,000 and 243.6 per 1,000 respectively). This was true in all jurisdictions with the exception of the Northern Territory. 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.

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.

Table 3.08.8: Community mental health care service contacts per 1,000 population, by Indigenous status and state and territory, 2003–04

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Indigenous	67,850	20,336	50,699	23,156	8,313	1,164	3,314	6,874	181,706
Non-Indigenous	1,001,817	1,579,464	833,808	389,221	274,797	50,905	121,772	18,535	4,270,319
Not stated	362,062	—	4,504	6,107	28,425	15,512	42,455	645	459,710
Total	**1,431,729**	**1,599,800**	**889,011**	**418,484**	**311,535**	**67,581**	**167,541**	**26,054**	**4,911,735**
				Rate per 1,000 population[(a)]					
Indigenous	545.6	788.3	382.9	388.7	316.4	262.7	810.5	114.3	413.9
Other Australians[(b)]	209.1	320.8	228.8	209.7	203.1	142.1	502.1	128.7	243.6
Ratio[c)]	2.6	2.5	1.7	1.9	1.6	1.8	1.6	0.9	1.7
Total	**215.3**	**323.3**	**234.3**	**215.0**	**205.2**	**140.2**	**506.0**	**122.6**	**247.3**

(a) Rates were directly age-standardised using the Australian 2001 Standard population.

(b) Other 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 due to likely under identification of Indigenous Australians.

Source: AIHW 2005b.

General practitioner encounters

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. Data for the five-year period 2000–01 to 2004–05 are presented in Table 3.08.9.

Mental health-related problems are among the top five most common types of problems managed at GP encounters with Aboriginal and Torres Strait Islander patients. The other four most common types of problems managed at GP encounters with Indigenous patients are respiratory conditions, skin problems, musculoskeletal conditions and circulatory conditions.

- In the period 2000–01 to 2004–05 there were 7,296 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 10,955 problems were managed. Of these, 8.8% (971) were mental health related problems.
- 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 3.08.9: Most frequently reported mental health related problems managed by general practitioners, by Indigenous status of the patient, 2001–01 to 2004–05[(a)(b)(c)]

	Number		% of total problems		Crude rate per 100 encounters						Age-standardised rate 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)(j)	971	56,499	8.8	7.8	13.3	11.0	15.6	12.1	11.8	12.4	12.6	12.1	1.0

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

(l) Combined financial year data for five years.

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

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

(o) LCL = lower confidence interval.

(p) UCL = upper confidence interval.

(q) Directly age-standardised rate per 100 encounters. Figures do not add to 100 as more than one problem can be managed at each encounter.

(r) Rate ratio Indigenous:other.

(s) Includes multiple ICPC–2 or ICPC – 2 PLUS codes.

(t) ICPC–2 codes: P02, P04–P05, P08–P13, P18–P20, P22–P25, P27–P29, P71, P75–P82, P85–P86, P98–P99.

Source: AIHW analysis of BEACH data.

Aboriginal and Torres Strait Islander Primary Health Care Services

Information on client contacts with emotional and social well-being staff or psychiatrists in Aboriginal and Torres Strait Islander Primary Health Care Services is available from the Service Activity Reporting database.

- In 2003–04 there were 97,570 client contacts with emotional and social well-being staff or psychiatrists; this was 3.7% of the estimated total contacts made to Aboriginal and Torres Strait Islander Primary Health Care Services.

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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national 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 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.

(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 people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005a).

It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated data for Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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's 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 and Torres Strait Islander peoples (for example, Maoris 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 2003–04. Only Western Australia, Tasmania and the Northern Territory reported that the quality of their data was acceptable.

(continued)

Data quality issues (continued)

Service Activity Reporting data

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health care services were between 97% and 99% during the period 2002–03 to 2004–05. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. While 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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3.09 Aboriginal and Torres Strait Islander Australians in the health workforce

Number and proportion of Aboriginal and Torres Strait Islander Australians in the health workforce

Data sources

The ABS Census of Population and Housing is conducted by the ABS at five-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.

While 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 however, 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 2001 are presented in the tables and figures below.

- In 2001, there were approximately 3,260 Indigenous Australians employed in health-related occupations, which represented 0.9% of the total health workforce.

Health workforce by age and sex

- In 2001, the majority of Aboriginal and Torres Strait Islander people employed in the health workforce were aged 35–44 years (1,047 people). The proportion of health workers who were Indigenous was highest among those aged 15–24 years (1.3%) and lowest among those aged 55–64 years (0.5%) (Table 3.09.1; Figure 3.09.1).
- Indigenous females represented a higher proportion of the health workforce than Indigenous males across all age groups.
- In the total health workforce, the majority of people employed in the health workforce were also aged 35–44 years. Females represented over three-quarters (76%) of the total health workforce (Table 3.09.2).

Table 3.09.1: Aboriginal and Torres Strait Islander health workforce,(a) by age and sex, 2001

	Age group					
	15–24	**25–34**	**35–44**	**45–54**	**55–64**	**Total**
			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 (%)			
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**

(a) Occupation as defined by the Australian Standard Classification of Occupation.

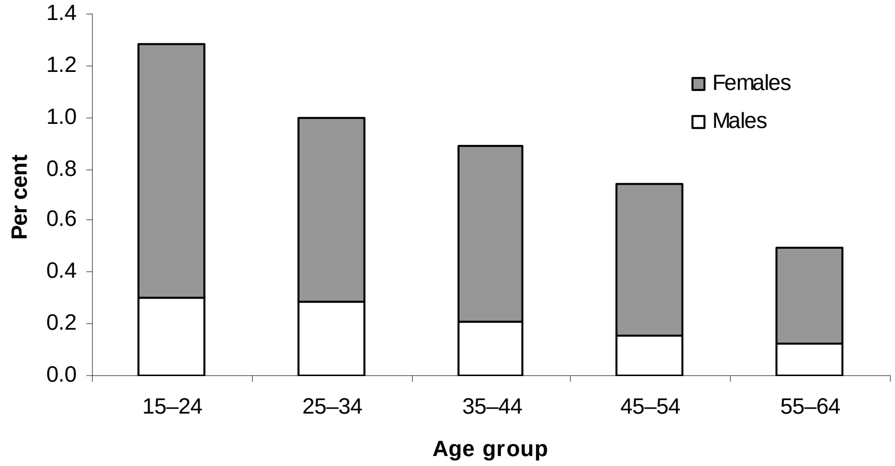
Source: ABS unpublished data (Census of Population and Housing).

Table 3.09.2: Total health workforce,(a) by age and sex, 2001

	Age group					
	15–24	**25–34**	**35–44**	**45–54**	**55–64**	**Total**
			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 (%)			
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**

(a) Occupation as defined by the Australian Standard Classification of Occupation.

Source: ABS unpublished data (Census of Population and Housing).



Source: ABS unpublished data (Census of Population and Housing).

Figure 3.09.1: Indigenous health workforce as a proportion of the total health workforce, by age group and sex, 2001

Indigenous health workforce by state/territory

- In 2001, the Northern Territory had the highest proportion of health workers of Aboriginal or Torres Strait Islander origin (9%), and Victoria and the Australian Capital Territory had the lowest (0.3%) (Table 3.09.3; Figure 3.09.2). This was well below the proportion of the state/territory population that was Indigenous in 2001.
- The proportion of Indigenous Australians who were employed in health-related occupations in 2001 ranged from 0.5% in the Northern Territory and the Australian Capital Territory, to 0.9% in Victoria (Figure 3.09.3).

Table 3.09.3: Indigenous health workforce,[(a)] by state/territory, 2001

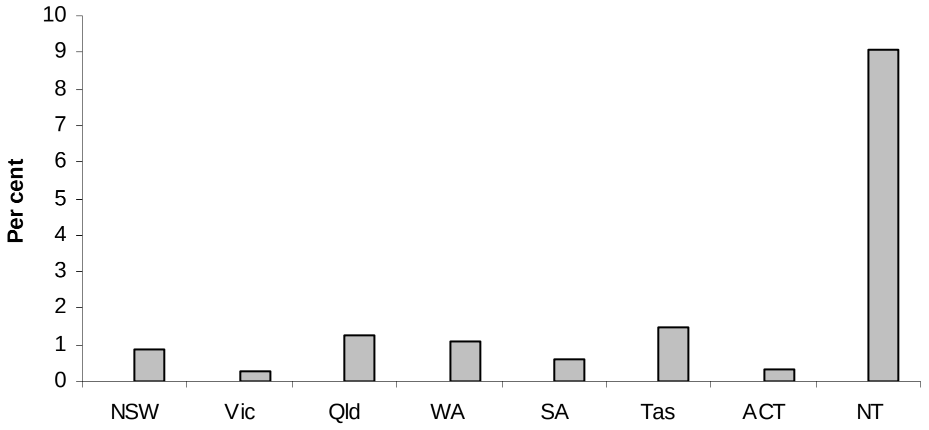
	NSW[(b)]	Vic	Qld	WA[(c)]	SA	Tas	ACT	NT	Australia
Number of Indigenous health workers	1,070	263	863	393	206	139	20	306	3,260
Indigenous health workers as a proportion of total health workforce	**0.9**	**0.3**	**1.2**	**1.1**	**0.6**	**1.5**	**0.3**	**9.1**	**0.9**
Indigenous health workers as a proportion of the Indigenous population	0.8	0.9	0.7	0.6	0.8	0.8	0.5	0.5	0.7
Proportion of state/territory population that is Indigenous	2.1	0.6	3.5	3.5	1.7	3.7	1.2	28.8	2.4

(a) Occupation as defined by the Australian Standard Classification of Occupation.

(b) Includes Territory of Jervis Bay.

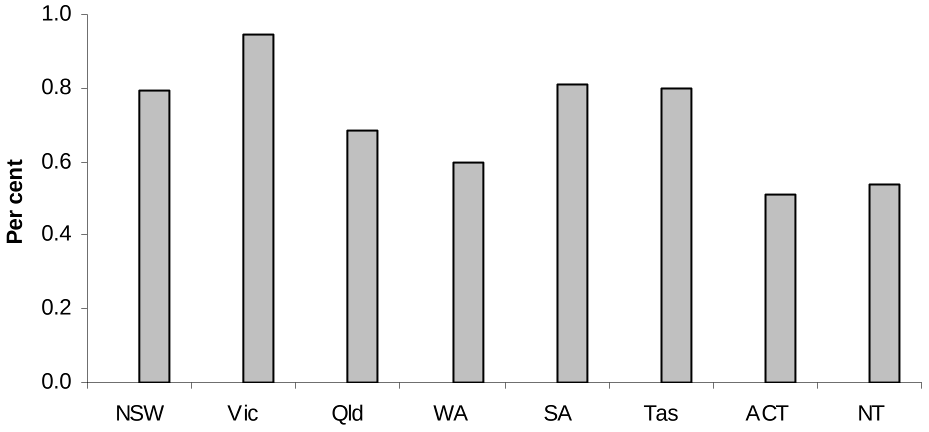
(c) Includes Territories of Christmas Island and Cocos Islands.

Source: ABS unpublished data (Census of Population and Housing).



Source: ABS unpublished data (Census of Population and Housing).

Figure 3.09.2: Indigenous health workforce as a proportion of total health workforce, by state/territory, 2001



Source: ABS unpublished data (Census of Population and Housing).

Figure 3.09.3: Indigenous health workforce as a proportion of the Indigenous population, by state/territory, 2001

Health workforce by occupation

- Aboriginal and Torres Strait Islander people comprised 93% of all Aboriginal and Torres Strait Islander health workers, 0.8% of all nurses, 0.6% of all dental workers, 0.5% of all allied health professionals, 0.3% of all medical workers and 0.1% of all pharmacists (Table 3.09.4).
- In 2001, there were 87 Indigenous people working as medical practitioners and 1,899 Indigenous people working as nurses, 982 of whom were registered or enrolled nurses.

After nursing, Indigenous people were most commonly employed as Aboriginal and Torres Strait Islander health workers (844 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 3.09.4: Employment in health-related occupations (health workforce), 2001[(a)]

	Indigenous	All persons	Proportion who were Indigenous
	No.	No.	%
Aboriginal and Torres Strait Islander health workers	844	906	93.2
Medical workers			
Health service managers	72	6,456	1.1
Medical practitioners	87	45,079	0.2
Medical imaging professionals	17	8,279	0.2
Total	***176***	***59,814***	***0.3***
Dental workers			
Dental practitioners	14	7,811	0.2
Dental associate professionals	17	4,475	0.4
Dental assistants	124	13,053	0.9
Total	***155***	***25,339***	***0.6***
Nursing workers			
Nurse managers	29	7,328	0.4
Registered nurses	782	140,781	0.6
Personal care and nursing assistants	795	50,533	1.6
Enrolled nurses	200	19,405	1.0
Other nurses(b)	93	21,877	0.4
Total	***1,899***	***239,924***	***0.8***
Pharmacists	12	13,130	0.1
Allied health professionals			
Ambulance officers and paramedics	82	6,689	1.2
Physiotherapists	29	10,119	0.3
Psychologists	23	9,105	0.3
Dieticians	18	1,982	0.9
Other(c)	22	9,735	0.2
Total	***174***	***37,630***	***0.5***
Total	**3,260**	**376,743**	**0.9**

(a) Occupation as defined by the Australian Standard Classification of Occupation.

(b) Includes nursing not further defined, educators and researchers, midwives, mental health, developmental disability.

(c) Includes optometrists, speech pathologists, chiropractors and osteopaths, podiatrists.

Note: Small numbers may be rounded in order to protect the confidentiality of individuals; this may affect proportions.

Source: ABS unpublished data (Census of Population and Housing).

Time series analyses

The number and proportion of Indigenous Australians in the health workforce from the 1996 Census are presented below to enable comparisons over time with the 2001 data presented earlier.

- In 1996, there were approximately 2,831 Indigenous Australians employed in health-related occupations, which represented 0.8% of the total health workforce. This was slightly lower than that reported in 2001 (0.9%).
- The proportion of the health workforce who were of Aboriginal and Torres Strait Islander origin was similar in 1996 and 2001 for most health-related occupations with the exception of enrolled nurses which had a higher representation in 1996 (2.3%) than in 2001 (1.0%) and dieticians which had a lower representation in 1996 (0.2%) than in 2001 (0.9%) (Table 3.09.5).
- The age and sex structure of the Indigenous and total health workforce was similar in 1996 and 2001 (Tables 3.09.6 and 3.09.7).

Table 3.09.5: Employment in health-related occupations (health workforce), 1996[(a)]

	Indigenous	All persons	Proportion who were Indigenous
	No.	No.	%
Aboriginal and Torres Strait Islander health workers	667	704	94.7
Medical workers			
Health service managers	28	4,994	0.6
Medical practitioners	60	41,169	0.1
Medical imaging professionals	8	6,718	0.1
Total	***96***	***52,881***	***0.2***
Dental workers			
Dental practitioners	12	7,153	0.2
Dental associate professionals	17	4,322	0.4
Dental assistants	117	11,239	1.0
Total	***146***	***22,714***	***0.6***
Nursing workers			
Nurse managers	13	6,148	0.2
Registered nurses	608	133,199	0.5
Personal care and nursing assistants	570	42,549	1.3
Enrolled nurses	560	24,493	2.3
Other nurses(b)	70	21,391	0.3
Total	***1,821***	***227,780***	***0.8***
Pharmacists	5	11,775	0.0
Allied health professionals			
Ambulance officers and paramedics	48	5,952	0.8
Physiotherapists	16	8,789	0.2
Psychologists	14	6,784	0.2
Dieticians	4	1,695	0.2
Other(c)	14	7,782	0.2
Total	***96***	***31,002***	***0.3***
Total	**2,831**	**346,856**	**0.8**

(a) Occupation as defined by the Australian Standard Classification of Occupation.

(b) Includes nursing not further defined, educators and researchers, midwives, mental health, developmental disability.

(c) Includes optometrists, speech pathologists, chiropractors and osteopaths, podiatrists.

Note: Small numbers may be rounded in order to protect the confidentiality of individuals; this may affect proportions.

Source: ABS unpublished data (Census of Population and Housing).

Table 3.09.6: Aboriginal and Torres Strait Islander health workforce,(a) by age and sex, 1996

	Age group					
	15–24	**25–34**	**35–44**	**45–54**	**55–64**	**Total**
			Number			
Male	119	227	230	90	30	696
Female	283	585	736	422	109	2,135
Total	**33,510**	**93,045**	**115,400**	**77,613**	**27,288**	**346,856**
			Proportion of total health workforce (%)			
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**

(a) Occupation as defined by the Australian Standard Classification of Occupation.

Source: ABS unpublished data (Census of Population and Housing).

Table 3.09.7: Total health workforce,(a) by age and sex, 1996

	Age group					
	15–24	**25–34**	**35–44**	**45–54**	**55–64**	**Total**
			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 (%)			
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**

(a) Occupation as defined by the Australian Standard Classification of Occupation.

Source: ABS unpublished data (Census of Population and Housing).

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. While 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 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.

Error due to the recording (for example, difficult to read) or inaccurate coding (misinterpretation of role) of occupation may also affect results.

References

ABS (Australian Bureau of Statistics) 1996. Occasional paper: Population issues: Indigenous Australians. ABS cat. no. 4708.0. Canberra: ABS.

3.10 Access to services by type of service compared to need

Access to services by types of service compared to need (for example, primary care, hospital, dental and allied health and post-acute care and palliative care)

Data sources

Data for this indicator come from:

- ABS 2004–05 National Aboriginal and Torres Strait Islander Health Survey
- ABS 2002 National Aboriginal and Torres Strait Islander Social Survey
- ABS 2001 Community Housing Infrastructure Needs Survey
- AIHW National Hospital Morbidity Database
- DoHA general practitioner and Medicare data
- DoHA Service Activity Reporting database
- AIHW health expenditure data.

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 six-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. It 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 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, Community Services and Indigenous Affairs (FaCSIA) through funding from FaCSIA and OATSIH. Results from this survey were published in April 2007. Data from the CHINS is held by FaCSIA and the ABS.

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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005a). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two 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 change in a type of care (for example, from acute to rehabilitation).

General practitioner data

The Department of Health and Ageing (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 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 populations, 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 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 Department of Health and Ageing.

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 dataset is not complete. Aboriginal and Torres Strait Islanders who had identified as Indigenous in this database as at 1 July 2005 numbered 80,658.

Service Activity Reporting (SAR) database

The SAR database collects data from approximately 140 Australian Government funded Aboriginal and Torres Strait Islander primary health 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 were between 97% and 99% during the period 2002–03 to 2004–05.

It should be noted 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.

Health expenditure data

The report on expenditures on health services for Aboriginal and Torres Strait Islander peoples is produced every three years. The latest report covers expenditure for the 2001–02 financial year and was published in the AIHW report *Expenditures on health for Aboriginal and Torres Strait Islander people 2001–02* (AIHW 2005b).

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 Aboriginal and Torres Strait Islander people either on an overall population or per capita basis should be treated with caution as it is an estimate (AIHW 2005b).

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

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 NATSIS collected information on Indigenous Australians' access to health services. These data are presented in the Tables 3.10.1–3.10.13 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 to 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.

Access to health care by age group and sex

- 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 3.10.1).
- Indigenous and non-Indigenous Australians aged 0–14 years were most likely to have visited a dentist in the last 2 weeks (5% and 7% respectively).
- In 2004–05, a higher proportion of Indigenous females had accessed health care in the last 2 weeks (45%) than Indigenous males (38%) (Table 3.10.2).
- Indigenous females were more likely to have visited hospital in the last 12 months (18%), and visited a doctor or other health professional in the last 2 weeks (22% and 20% respectively) than Indigenous males (14%, 18% and 15% respectively).

Table 3.10.1: 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 accessed health care(d)	***35***	***33***	***36***	***36***	***47****	***42****	***45****	***39****	***50****	***43****	***66****	***57****	***42***	***42***	***47****	***42****
Didn't access 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.

(c) 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.

(d) Persons aged 2 years and over.

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

(f) Components may not add to total as persons may have reported more than one type of action.

(g) Totals are directly age standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Table 3.10.2: Accessing health care, by sex, Indigenous Australians, 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***
Did not access 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 as persons may have reported more than one type of action.

Source: ABS and AIHW Analysis of 2004–05 NATSIHS.

Access to health care by state/territory and remoteness

- 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 3.10.3).
- 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 to 44%) (Table 3.10.4).
- In non-remote areas of Australia, Indigenous Australians accessed health care at similar rates to non-Indigenous Australians (46% compared to 43%) (Table 3.10.5).

Table 3.10.3: Accessing health care, Indigenous Australians, 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 caree[e]	***38.6***	***45.1***	***40.7***	***43.4***	***40.0***	***38.3***	***34.7***	***51.6***	***41.9***
Did not access 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 as persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS

Table 3.10.4: 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 National Health Survey 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 as 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 National Health Survey.

Table 3.10.5: 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 as 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 National Health Survey.

Access to health care over time

- Between 2001 and 2004–05, there was little change in the proportion of Indigenous and non-Indigenous Australians accessing health care (Table 3.10.6).

Table 3.10.6: Accessing health care, by Indigenous status, 2001 and 2004–05

Accessing health care[(a)]	2001 Indigenous	2001 Non-Indigenous	2001 Rate ratio	2004–05 Indigenous	2004–05 Non-Indigenous	2004–05 Rate ratio
			per cent			
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 as persons may have reported more than one type of action.

Note: Data are age standardised.

Source: ABS and AIHW analysis of 2001 National Health Survey (Indigenous supplement), 2004–05 NATSIHS and 2004–05 National Health Survey.

Access to services 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 to 51% of Indigenous Australians who spoke English at home (Table 3.10.7).
- 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 to 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 to 48%). This was particularly the case with consulting a dentist (9% compared to 3%), and consulting other health professionals (24% compared to 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 3.10.7: 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
Total number	**220,036**	**36,829**	**78,799**	**81,026**	**222,215**	**15,657**	**125,995**	**348,315**	**28,843**	**180,376**	**9,515**	**211,312**	**37,470**	**474,310**
							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
Total number	**1,3329,097**	**1,419,989**	**3,137,639**	**3,290,095**	**3,450,462**	**4,132,149**	**230,906**	**n.a.**	**7,847,957**	**7,432,057**	**n.a.**	**n.a.**	**n.a.**	**1,9292,387**

(continued)

* 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) 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 as persons may have reported more than one type of action.

Note: Data are age standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

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 to 44%) (Table 3.10.8a).
- 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 long-term health conditions reported they accessed health care in the last 12 months (Table 3.10.8b).

Table 3.10.8a: Accessing health care, by self-assessed health status, and Indigenous status, persons aged 15 years and over, 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****
Did not access 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 as 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 National Health Survey.

Table 3.10.8b: 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 with a long-term condition (age standardised)			Total with a long-term condition	
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***
Did not access 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	. .	100.6	3,951.0

* 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 as 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 National Health Survey.

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 to 29% of non-Indigenous people (Table 3.10.9).
- Approximately 25% of Indigenous people reported it had been 2 weeks or less since their last visit to a doctor compared to 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 to 28% of non-Indigenous people.
- There was little change in the time since last dentist and doctor consultation for Indigenous and non-Indigenous Australians between 2001 and 2004–05.

Table 3.10.9: 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.

Whether needed to access health care and reasons why didn't

- Table 3.10.10 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 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 to 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 3.10.10: Whether needed to go to a dentist, doctor, other health professional or hospital and reasons didn't go, by remoteness, sex and age, Indigenous Australians, 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 dentist in last 12 months but didn't								
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 3.10.10 (continued): Whether needed to go to a dentist, doctor, other health professional or hospital and reasons didn't go, by remoteness area, sex and age, Indigenous Australians, 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 and didn't(b)	**22,982**	**8,840**	**15,430**	**16,392**	**3,873**	**19,382**	**8,567**	**31,822**

(continued)

Table 3.10.10 (continued): Whether needed to go to a dentist, doctor, other health professional or hospital and reasons didn't go, by remoteness area, sex and age, Indigenous Australians, 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 as 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 3.10.11 and 3.10.12 below.

- 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 3.10.11).
- 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 to 49%) (Table 3.10.12).
- 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 to not get private health insurance were that they could not afford it (65%), and that they felt that Medicare cover was sufficient (19%).

Table 3.10.11: Indigenous persons requiring co-payment for last visit to GP/specialist or other health professional, non-remote areas, 2004–05

Whether co-payment required at last consultation for those who had consulted this type of health professional in the last 2 weeks[(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 prior to 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) Yes, No and Not stated/Don't know may not add up to 100% due to rounding effects.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 3.10.12: Private health insurance, by Indigenous status, (non-remote areas only), 2004–05

	Indigenous	Non-Indigenous	Ratio
	%	%	%
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	1.0
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	1.0
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	1.0
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% as persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 National Health Survey.

Treatment when seeking health care

- In 2004–05, approximately 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 3.10.13).
- A higher proportion of Indigenous people in remote areas reported they were treated better than non-Indigenous people (11% compared to 3%).
- Approximately 16% of Indigenous people felt that they were treated badly when they sought health care because they were Aboriginal and Torres Strait Islander.
- 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 3.10.13: Treatment when seeking health care in the last 12 months, by remoteness, Indigenous Australians, 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 as persons may have reported more than one type of action.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Community housing

The 2001 CHINS collected information on health services from 1,216 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 1,216 discrete Indigenous communities in 2001, over two-thirds (841 communities or 69%) were located 100 kilometres or more from the nearest hospital. These communities represented 53% of the reported population living in these communities (Table 3.10.14).
- Community health centres were more likely to be located near or within Indigenous communities than were hospitals. In addition to the 10% of communities located within 10 kilometres of a hospital, 23% of communities were located less than 10 kilometres from a community health centre. These communities represented 58% of the reported population living in these communities.
- Overall, 85% of Indigenous people in communities were located within 10 kilometres of either a hospital or a community health centre.

Table 3.10.14: Distance to nearest health facility, discrete Indigenous communities, 2001

Distance to nearest health facility	Hospital				Community health centre			
	Communities		Reported usual population		Communities[(a)]		Reported usual population	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Located within community	9	0.7	15,800	14.6	183	15.0	59,902	55.4
Less than 10 km	118	9.7	13,894	12.9	98	8.1	2,616	2.4
10–24 km	76	6.3	6,232	5.8	200	16.4	4,283	4.0
25–49 km	68	5.6	5,019	4.6	207	17.0	4,095	3.8
50–99 km	102	8.4	9,909	9.2	225	18.5	4,231	3.9
100–249 km	298	24.5	19,464	18.0	135	11.1	2,657	2.5
250 km or more	543	44.7	37,758	34.9	39	3.2	598	0.6
Total(b)	**1,216**	**100.0**	**108,085**	**100.0**	**1,216(c)**	**100.0(c)**	**108,085(c)**	**100.0(c)**

(a) Communities located more than 10 kilometres from the nearest hospital.

(b) Includes 'distance to nearest health facility' not stated.

(c) Totals include communities located within 10 kilometres of the nearest hospital.

Source: ABS 2002—2001 Community Housing and Infrastructure Needs Survey.

Health professionals within communities

- Approximately half (49%) of all communities with a population of 50 or more had a male Indigenous health worker working in the community, and three-quarters (76%) had a female Indigenous health worker working in the community (Table 3.10.15).
- About 25% of communities had male Indigenous health workers working on a daily basis and about 52% had female Indigenous health workers working on a daily basis.
- Approximately 88% of communities had a registered nurse working in the community and 87% had a doctor working in the community.
- Around half of communities had a registered nurse working in the community on a daily basis and only 11% had a doctor working on a daily basis.

Table 3.10.15: Selected health professionals working in the community, discrete Indigenous communities with a population of 50 or more located 10 kilometres or more from the nearest hospital, 2001

Work in the community	**Male Indigenous health worker**		**Female Indigenous health worker**		**Registered nurse**		**Doctor**	
	Number	**Per cent**	**Number**	**Per cent**	**Number**	**Per cent**	**Number**	**Per cent**
Daily	60	24.8	125	51.7	118	48.8	26	10.7
Weekly or fortnightly	24	9.9	32	13.2	62	25.6	140	57.9
Monthly	13	5.4	16	6.6	19	7.9	34	14.0
Three monthly	5	2.1	6	2.5	4	1.7	4	1.7
Less than three monthly	16	6.6	5	2.1	9	3.7	7	2.9
Total with health prof. working in community	*118*	*48.8*	*184*	*76.0*	*212*	*87.6*	*211*	*87.2*
Do not work in community	117	48.3	52	21.5	30	12.4	31	12.8
Total communities[(a)]	**242**	**100.0**	**242**	**100.0**	**242**	**100.0**	**242**	**100.0**

(a) Includes 'Whether selected health professionals work in community' not stated.

Source: ABS 2002—2001 Community Housing and Infrastructure Needs Survey.

Access to medical emergency air service

- In 2001, 525 (43%) of discrete Indigenous communities had access to a medical emergency air service accounting for 64,721 (60%) people living in these communities (Table 3.10.16).
- Over half (55%) of communities with access to a medical emergency air service were located 250 kilometres or more from the nearest hospital.

Table 3.10.16: Discrete Indigenous communities: access to medical emergency air services, all communities and reported usual population, 2001

	Access to medical emergency air service		No access to medical emergency air service		Total	
Distance to nearest hospital	**No. of communities**	**Usual population**	**No. of communities**	**Usual population**	**No. of communities**	**Usual population**
10–24 km	28	2,656	48	3,576	76	6,232
25–49 km	26	3,273	42	1,746	68	5,019
50–99 km	40	8,514	62	1,395	102	9,909
100–249 km	144	16,004	154	3,460	298	19,464
250 km or more	287	34,274	256	3,484	543	37,758
All communities 10 km or more from nearest hospital	525	64,721	562	13,661	1,087	78,382
All communities[(a)]	**525**	**64,721**	**564**	**13,670**	**1,216**	**108,085**

(a) Includes communities located less than 10 kilometres from nearest hospital. Includes ‘Distance to nearest hospital’ not stated.

Source: SCRGSP 2003—ABS 2001 Community Housing and Infrastructure Needs Survey.

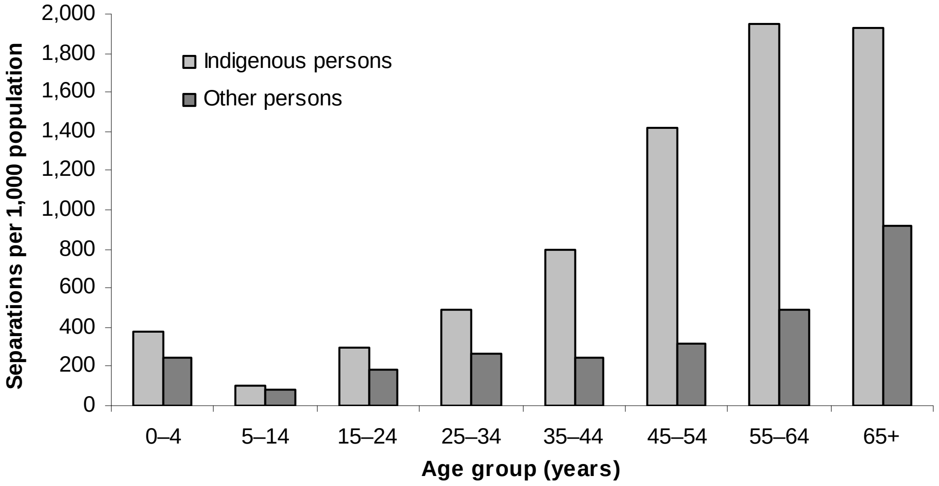
Hospitalisations

- In the two-year period July 2002 to June 2004 there were a total of 5,193,610 hospitalisations in Queensland, Western Australia, South Australia and the Northern Territory. Of these, 312,292 or 6% were hospitalisations of Indigenous Australians. For 6.7% of hospitalisations, Indigenous status was not stated.

An analysis of hospitalisations excluding those for routine dialysis are presented in Measure 1.02.

Hospitalisations by age group

- For the period 2002–03 to 2003–04, Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined had higher hospitalisation rates than other Australians across all age groups (Figure 3.10.1).
- 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 National Hospital Morbidity Database.

Figure 3.10.1: Age-specific hospitalisation rates, by Indigenous status and sex, Qld, WA, SA and NT, July 2002 to June 2004

Hospitalisations by state/territory

- In the period July 2002 to June 2004, Indigenous Australians in Queensland were hospitalised at around 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, while in the Northern Territory, Indigenous Australians were hospitalised at five times the rate of other Australians (Table 3.10.17).

Table 3.10.17: Hospitalisations, by Indigenous status, sex and state/territory, Qld, WA, SA and NT, July 2002 to June 2004(a)(b)(c)(d)

	Indigenous				Other(e)				
	Number	Rate per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Number	Rate per 1,000(f)	LCL 95%(g)	UCL 95%(h)	Ratio(i)
Qld									
Males	49,432	704.2	696.0	712.4	1,167,904	329.2	328.6	329.8	2.1*
Females	62,259	757.8	750.5	765.1	1,328,510	354.3	353.7	354.9	2.1*
Persons	111,691	732.3	726.8	737.7	2,496,414	340.0	339.6	340.4	2.2*
WA									
Males	34,845	774.9	764.8	785.1	575,294	323.0	322.2	323.8	2.4*
Females	52,392	1,083.0	1,072.3	1,093.7	642,675	337.1	336.2	337.9	3.2*
Persons	87,237	935.4	928.0	942.8	1,217,969	327.6	327.0	328.2	2.9*
SA									
Males	13,428	885.1	866.1	904.0	521,610	935.1	922.9	947.3	2.6*
Females	16,505	910.4	893.9	926.9	593,127	362.9	362.0	363.8	2.5*
Persons(j)	29,933	897.5	885.1	909.9	1,114,738	349.2	348.5	349.8	2.6*
NT									
Males	33,894	935.1	922.9	947.3	26,131	223.8	220.6	227.0	4.2*
Females	49,440	1,344.5	1,330.9	1,358.1	26,042	238.3	235.0	241.7	5.6*
Persons(j)	83,431	1,157.8	1,148.5	1,167.2	52,197	231.3	229.0	233.7	5.0*
Qld, WA, SA and NT(d)									
Males	**131,599**	**785.2**	**779.7**	**790.6**	**2,290,939**	**327.7**	**327.3**	**328.2**	**2.4***
Females	**180,596**	**968.1**	**962.8**	**973.4**	**2,590,354**	**349.3**	**348.8**	**349.7**	**2.8***
Persons(j)	**312,292**	**882.2**	**878.5**	**886.0**	**4,881,318**	**336.4**	**336.1**	**336.7**	**2.6***

* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.05 level.

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

(k) Categories are based on the (ICD-10-AM) (National Centre for Classification in Health 2004); ICD-10-AM codes J12–J18.

(l) Financial year reporting.

(m) 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. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

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

(o) Directly age standardised using the Australian 2001 Standard population.

(p) LCL = lower confidence limit.

(q) UCL = upper confidence limit.

(r) Rate ratio Indigenous:other.

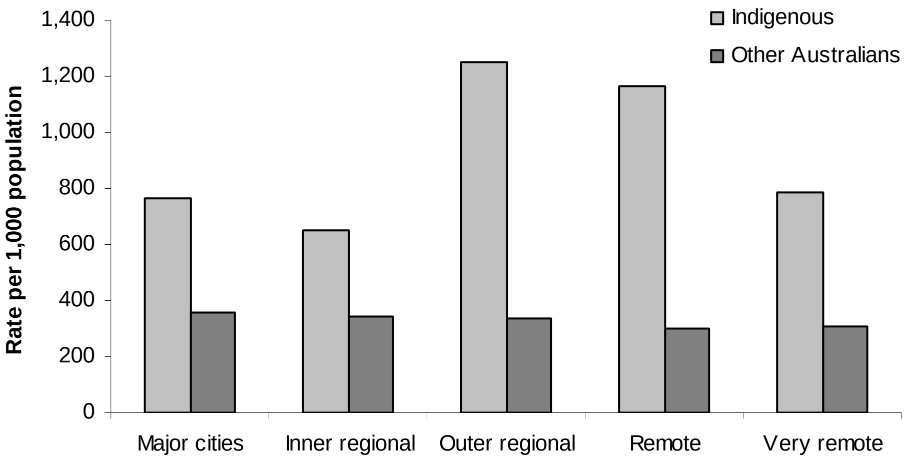
(s) Includes hospitalisations for which sex was 'indeterminate' or 'not stated'.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Hospitalisations by remoteness

- In the period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory, 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 three times the rate of other Australians (Figure 3.10.2).



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 3.10.2: Age-standardised hospitalisation rates, by Indigenous status and remoteness, Qld, WA, SA and NT, July 2002 to June 2004

Time series analyses

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians over the period 1998–99 to 2003–04 are presented in Table 3.10.18 and Figure 3.10.3.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates among Indigenous Australians during the period 1998–99 to 2003–04. The fitted trend implies an average yearly increase in the rate of around 45 per 1,000.
- There were also significant increases in hospitalisation rates among other Australians for the same period, with an average yearly increase in the rate of 5 per 1,000 population.
- There were significant increases in the hospitalisation rate ratios and rate differences between Indigenous and other Australians for the period 1998–99 to 2003–04. The fitted trend implies an average yearly increase of 0.1 in the hospitalisation rate ratio and 40 per 1,000 in the hospitalisation rate difference. This indicates a relative and absolute increase in the gap between hospitalisation rates for Indigenous and other Australians.

It should be noted 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 impact on 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 Australians are hospitalised. An increase in hospitalisation rates may also reflect better access to hospitals rather than a worsening of health.

Table 3.10.18: Age-standardised hospitalisation rates, rate ratios and rate differences, Qld, WA, SA and NT, 1998–99 to 2003–04

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change[(a)]
Indigenous rate per 1,000							
Persons	726.0	778.1	790.3	854.9	896.5	957.3	45.0*
Other Australian[(b)] rate per 1,000							
Persons	326.7	333.9	343.4	349.8	350.5	353.2	5.4*
Rate ratio[(c)]							
Persons	2.2	2.3	2.3	2.4	2.6	2.7	0.1*
Rate difference[(d)]							
Persons	399.3	444.2	446.9	505.2	546.1	604.1	39.7*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1998–99 to 2003–04.

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

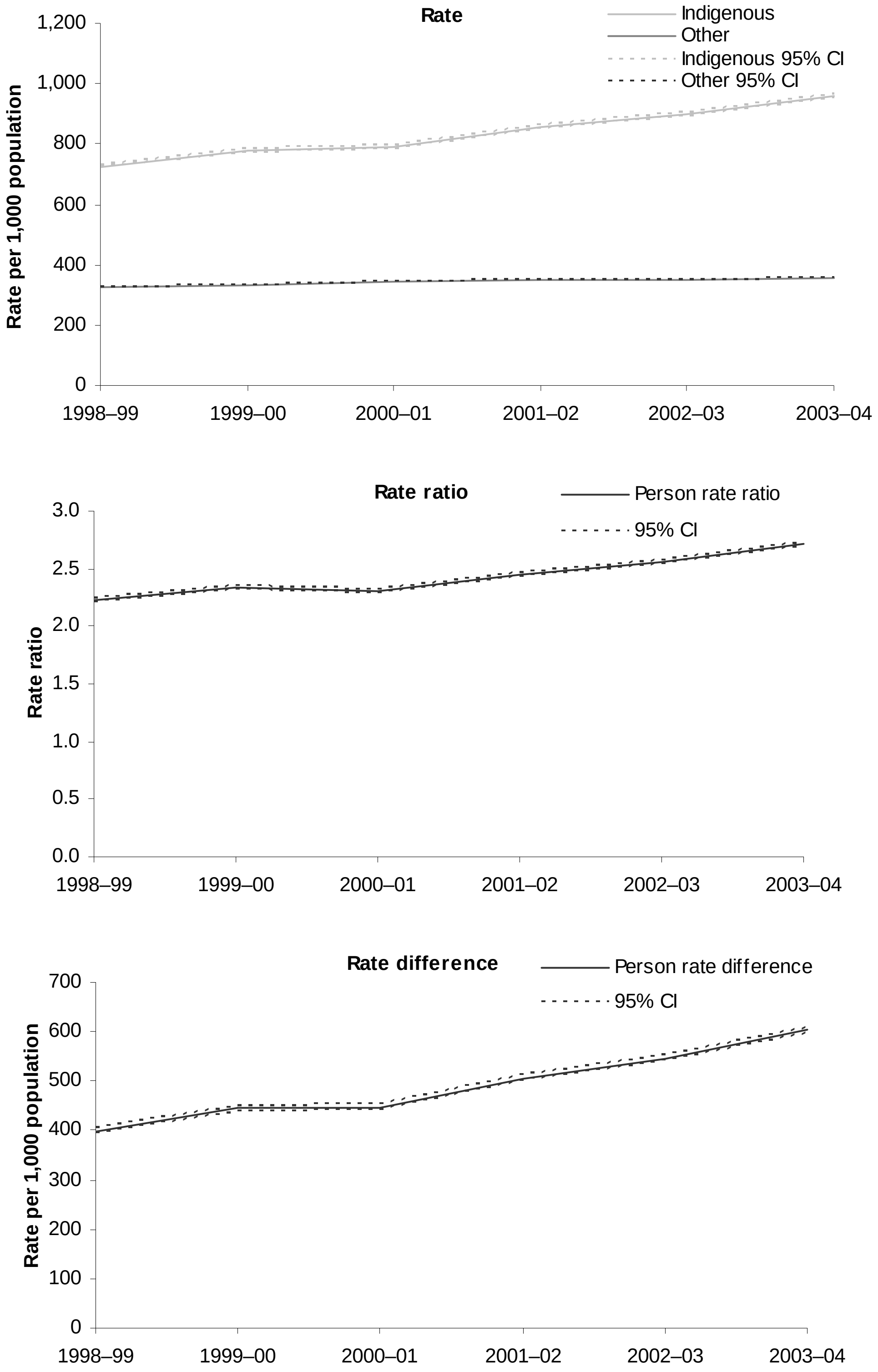
(b) ‘Other’ includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

(d) 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 AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

Figure 3.10.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians, Qld, WA, SA and NT, 1998–99 to 2003–04

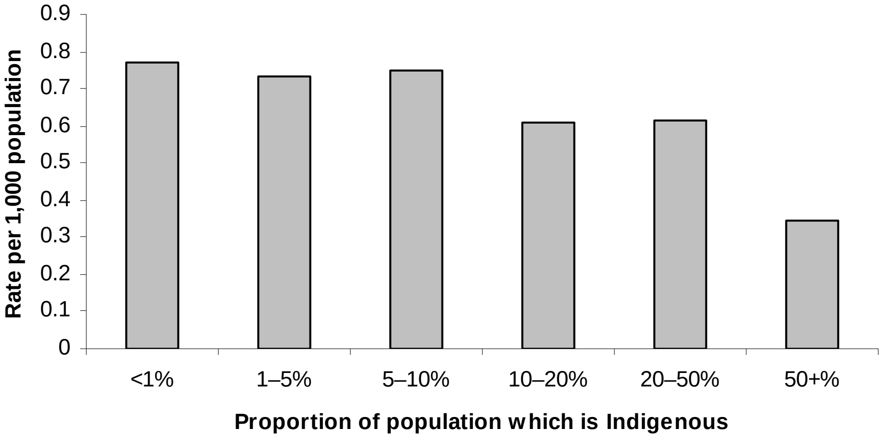
General practitioners

Information on the number of GPs working in Australia is available from DoHA. Data in Figure 3.10.4 present the number of full-time equivalent GPs per 1,000 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 percentage of the population living in these areas that was Indigenous.

- In 2004–05, there were approximately 14,509 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 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 SLAs in the first group with far more people per doctor than several SLAs in the second group.



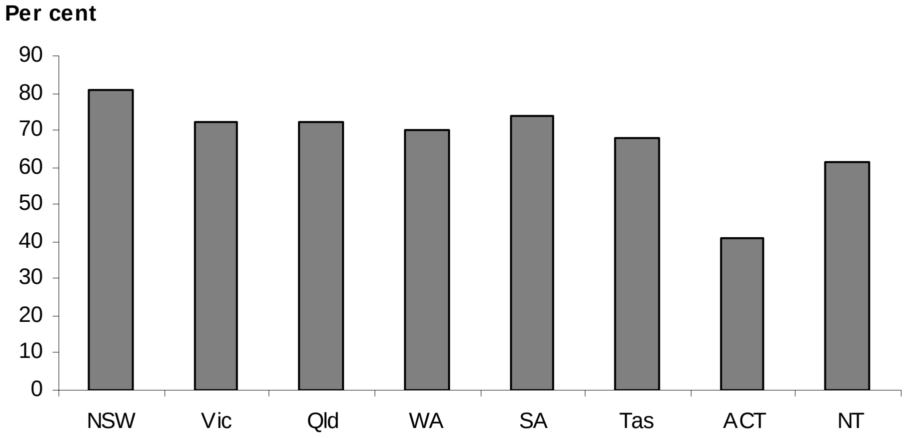
Source: Department of Health and Ageing.

Figure 3.10.4: Number of full-time equivalent GPs per 1,000 population, by areas of low through to high proportions of Indigenous populations, 2004–05

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, approximately 75% of medical services bulk billed. This ranged from 41% in the Australian Capital Territory to 81% in New South Wales (Figure 3.10.5).



Source: AIHW analysis of Medicare data.

Figure 3.10.5: Proportion of medical services that bulk bill, by state/territory, 2005

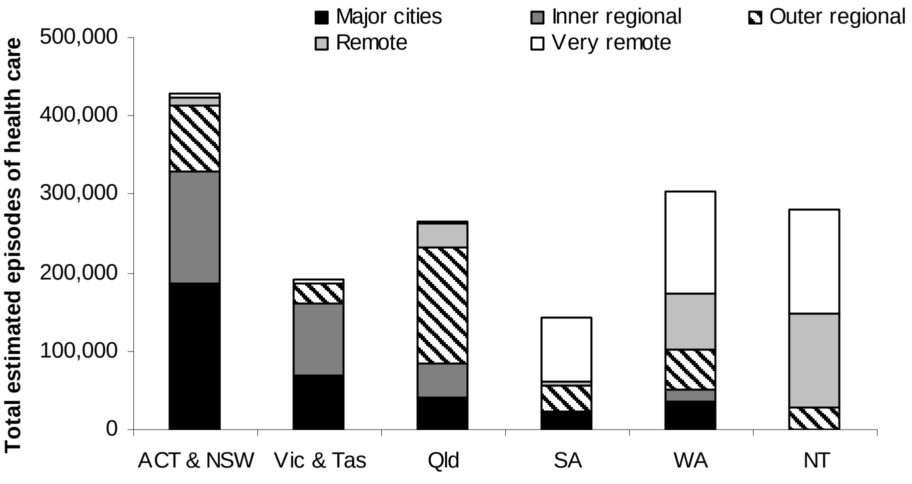
Aboriginal and Torres Strait Islander primary health care services

Data on Aboriginal and Torres Strait Islander primary health care services are available from the Service Activity Reporting data collection which is a joint project of the National Aboriginal Community Controlled Health Organisation and the Office of Aboriginal and Torres Strait Islander Health (OATSIH). Data presented here are for the 2003–04 financial year.

Episodes of health care by state/territory and remoteness area

Figure 3.10.6 shows the total estimated number of episodes of health care provided by respondent Aboriginal and Torres Strait Islander primary health care services by remoteness area in each state and territory.

- In 2003–04, 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 the Northern Territory were provided in remote and very remote areas of Australia, while for the other jurisdictions the majority of episodes of health care were provided in major cities, inner regional and outer regional areas. This reflects the geographic nature of these jurisdictions.

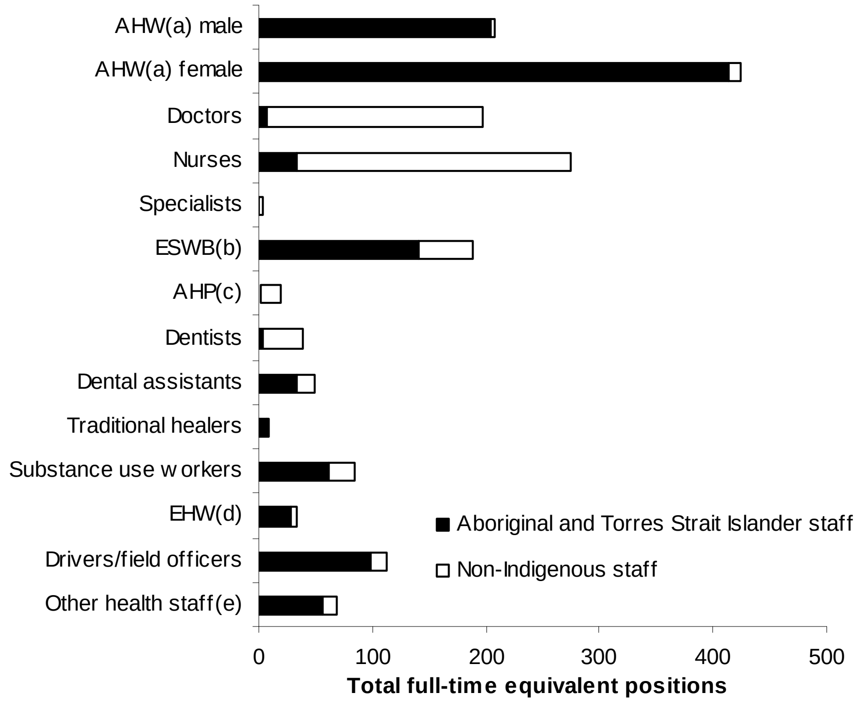


Source: Service Activity Reporting 2003–04.

Figure 3.10.6: Total episodes of health care provided by respondent Aboriginal and Torres Strait Islander primary health care services, by state/territory and remoteness, 2003–04

Health staff

- In 2003–04, a total of 197 full-time equivalent doctors and 275 full-time equivalent nurses were employed by Aboriginal and Torres Strait Islander primary health care services. The majority of doctors, nursers, allied health professionals and dentists were non-Indigenous (97%, 88%, 90% and 92% respectively). The majority of Aboriginal and Torres Strait Islander health workers, traditional healers, environmental health workers, substance use workers and drivers/field officers were Aboriginal and Torres Strait Islander Australians (Figure 3.10.7).



(a) AHW — Aboriginal Health Worker

(b) ESWB — emotional and social 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, family health workers, sobering up unit, life skills support workers.

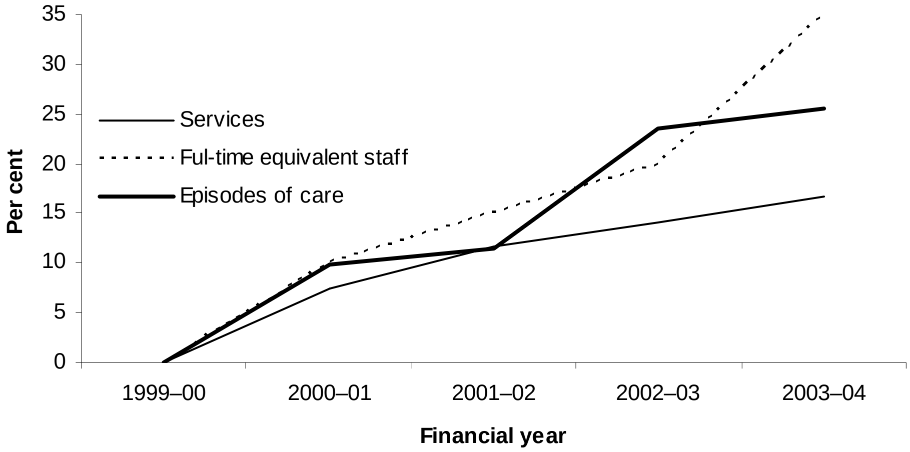
Source: Service Activity Reporting 2003–04.

Figure 3.10.7: 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 2004

Time series analyses

Data presented below include only those services that have been included in the SAR every year in the period 1999–00 to 2003–04.

- Over the period 1999–00 to 2003–04, there has been a steady rise in the number of Aboriginal and Torres Strait Islander primary health care services, from 120 services in 1999–00 to 140 services in 2003–04 (a rise of 17%) (Figure 3.10.8).
- Over the same period there was a steady increase in the total estimated episodes of health care provided to Indigenous and non-Indigenous clients. It has risen nationally from 1,004,000 in 1999–00 to 1,260,000 in 2003–04 (a rise of 26%) (85 services).
- There was a 35% rise in full-time equivalent staff employed by Aboriginal and Torres Strait Islander primary health care services between 1999–00 to 2003–04 (from 2,000 to 2,700) (107 services).



Note: Eighty five services provided valid episodes of health care data for the five years and 107 services provided data on full-time equivalent staff for the five years presented here.

Source: Service Activity Reporting 2003–04.

Figure 3.10.8: Cumulative per cent changes to Aboriginal and Torres Strait Islander primary health care services, 1999–00 to 2003–04

Expenditure on health services

- Expenditure on health goods and services for Aboriginal and Torres Strait Islander peoples during 2001–02 was estimated at $1,788.6 million (Table 3.10.19). About 62.7% of this was directed to two areas of expenditure—services provided to admitted patients in acute care hospitals ($682.5 million) and community health services ($439.9 million).
- On a per person basis, estimated expenditure on health for Aboriginal and Torres Strait Islander peoples averaged $3,900.83, compared with $3,308.35 for non-Indigenous people—a ratio of 1.18:1.
- Four major areas of expenditure had above parity Indigenous to non-Indigenous per capita expenditure ratios. These were community health services, public health activities, non-admitted patient services and admitted patient services. Expenditure on Aboriginal and Torres Strait Islander peoples was substantially lower than for other Australians for medical services, services for older people and pharmaceuticals.

Table 3.10.19: Total expenditure[(a)] on health, Indigenous and non-Indigenous people, by type of health good or service, current prices, 2001–02

	Total expenditure ($ million)			Expenditure per person ($)		
Health good or service type	Indigenous	Non-Indigenous	Indigenous share (%)	Indigenous	Non-Indigenous	Ratio
Hospitals	849.5	21,456.9	3.8	1,852.75	1,132.01	1.64
Admitted patient services	682.5	17,927.4	3.7	1,488.38	945.80	1.57
Private hospitals	11.5	5,057.1	0.2	25.08	266.80	0.09
Public hospitals	671.0	12,870.2	5.0	1,463.30	679.00	2.16
Non-admitted patient services	142.4	3,116.5	4.4	310.57	164.42	1.89
Emergency departments	34.6	615.7	5.3	75.51	32.48	2.32
Other services	107.8	2,500.8	4.1	235.06	131.94	1.78
Public (psychiatric) hospitals	24.7	413.0	5.6	53.80	21.79	2.47
Medical services	99.6	11,112.5	0.9	217.19	586.27	0.37
Medicare benefit items	75.9	9,185.4	0.8	165.47	484.60	0.34
Other	23.7	1,927.2	1.2	51.72	101.67	0.51
Community health services[(b)(c)]	439.9	2,810.5	13.5	959.30	148.27	6.47
Dental services[(b)]	21.8	3,734.2	0.6	47.59	197.01	0.24
Other professional services	16.9	2,252.4	0.7	36.76	118.83	0.31
Pharmaceuticals	66.2	9,011.6	0.7	144.36	475.43	0.30
Benefit-paid[(d)]	42.3	5,471.8	0.8	92.20	288.68	0.32
Other pharmaceuticals	23.9	3,539.8	0.7	52.16	186.75	0.28
Aids and appliances	15.8	2,474.0	0.6	34.51	130.52	0.26
Services for older people	49.9	4,591.6	1.1	108.83	242.24	0.45
Patient transport	62.8	892.7	6.6	136.95	47.09	2.91
Public health activities	72.5	1,029.9	6.6	158.15	54.33	2.91
Other health services (nec)	50.6	1,458.9	3.4	110.44	76.97	1.43
Health administration (nec)	43.1	1,883.6	2.2	93.99	99.37	0.95
Total	**1,788.6**	**62,708.9**	**2.8**	**3,900.83**	**3,308.35**	**1.18**

(a) Total expenditure by type of health good or service is the same as total funding.

(b) Community health services include state and territory government expenditure on dental services.

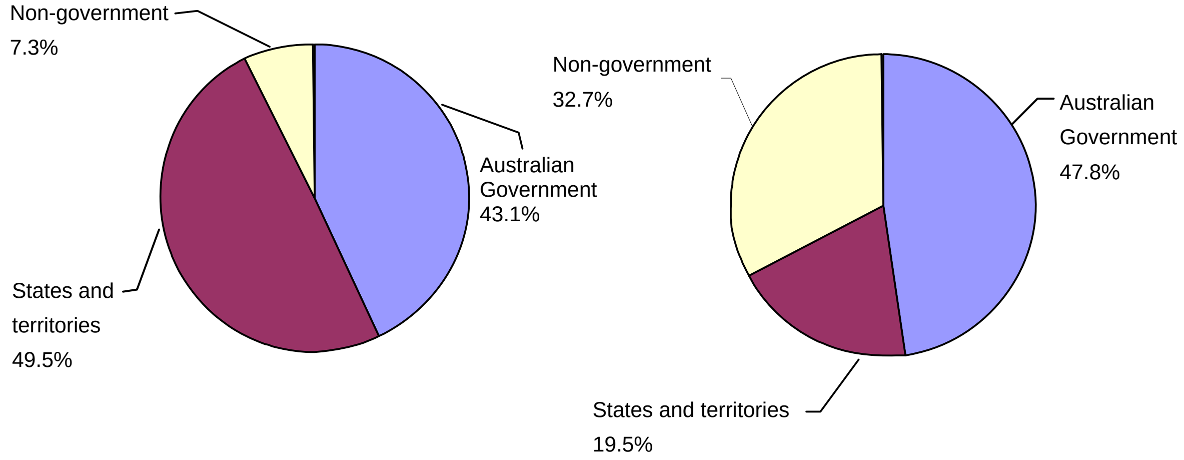
(c) Includes $186.3 million in OATSIH expenditure through the Aboriginal Community Controlled Health Services (ACCHSs). The Indigenous ratio for the non-ACCHS component of community health is estimated at 4.06:1 and for the non-ACCHS component of total at 1.07:1.

(d) Includes estimates of benefits via the Pharmaceutical Benefits Scheme and Repatriation Pharmaceutical Benefits Scheme.

Source: AIHW 2005b—Health expenditure database.

- Governments provided an estimated 92.7% of the funding used to pay for health goods and services for Aboriginal and Torres Strait Islander peoples during 2001–02 (Figure 3.10.9).
- The shares of funding provided by both the state and territory governments and the non-government sector for Indigenous Australians were quite different from their relative shares in respect to non-Indigenous people. The states and territories provided nearly half (49.5%) of the funding for Aboriginal and Torres Strait Islander peoples, compared with 19.5% for non-Indigenous Australians. Non-government sources, on the other hand, provided a much lower share (7.3%) of the funding for services for Indigenous people

than for non-Indigenous people (32.7%). The Australian Government's funding was similar for both groups—43.1% for Indigenous Australians and 47.8% for non-Indigenous people.



Source: AIHW 2005b.

Figure 3.10.9: Funding of expenditure on health, Indigenous and non-Indigenous people, by broad sources of funding, current prices, 2001–02

Additional information

Aboriginal and Torres Strait Islander people 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 Aboriginal and Torres Strait Islander people.

Transport

While 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 2002 National Aboriginal and Torres Strait Islander Social Survey on access to motor vehicles and difficulties with transport.

- In 2002 around 60% of Indigenous persons aged 18 years and over had access to a motor vehicle to drive compared to 85% of other Australians (Table 3.10.20). Around 12% of Indigenous Australians reported that they could not or often had difficulty getting to places needed, compared to only 4% of other Australians.
- Indigenous Australians in every state and territory were much more likely to report not having access to a motor vehicle(s), and to report having difficulty getting to places needed, than other Australians. 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 other Australians in these jurisdictions (ABS 2004a).

Table 3.10.20: Transport access, by Indigenous status, persons aged 18 years and over, 2002

	Indigenous			Other
	Remote	Non-remote	Total	Total
	Proportion (%)			
Transport access				
Has access to motor vehicle(s) to drive	47.5	64.4	59.7	85.2
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—2002 NATSISS.

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 clinics may provide a transport service for their patients, but these services are not available everywhere.

For more information on transport see Measure 2.15—Transport.

Affordability

Many privately provided health services involve direct out-of-pocket payments by patients. These impact more 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 Aboriginal and Torres Strait Islander peoples than on other Australians. Examples of this are services provided by dentists, physiotherapists and other health professionals not covered by Medicare, and pharmaceuticals 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 expenditures, which restrict the access of people in lower socioeconomic groups.

In the case of medical services, although they are subsidised under Medicare, if the services are not bulk billed, patients can face co-payments. 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 2002 NATSISS.

- In 2002, Indigenous Australians aged 18 years and over were four times more likely to be unable to raise $2,000 within a week for something important than other Australians.
- Indigenous Australians living in remote areas of Australia were more likely to have financial difficulties, with 73% unable to raise $2,000 compared to 47% in non-remote areas. An estimated 45% of Aboriginal and Torres Strait Islander peoples in non-remote areas of Australia reported having had at least one cash flow problem in the last year, compared to 19% of other Australians in those 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

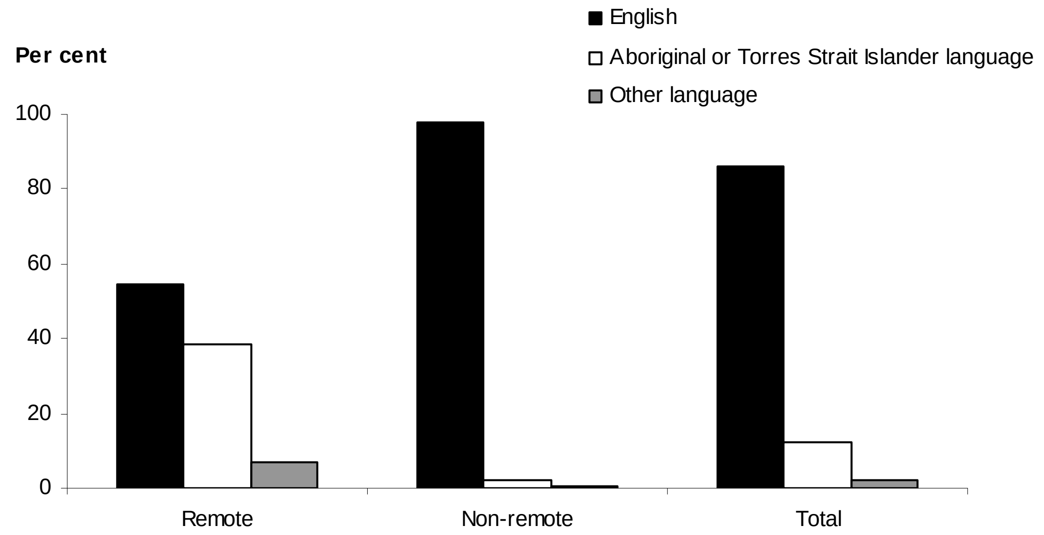
Measurement of the accessibility of health services involves factors other than the distance people must travel and the financial costs incurred (Ivers et al. 1997). Many Indigenous persons or communities do not have adequate access to either culturally appropriate services or to other suitable arrangements, 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 Aboriginal and Torres Strait Islander peoples 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 2002 NATSISS.

Language

- In 2002, about 14% of Indigenous peoples reported that they spoke a language other than English at home. This figure includes 12% who said they spoke an Indigenous language at home and 2% who said they spoke another language or for whom the language was not adequately described. Indigenous persons living in remote areas of Australia were much more likely to report speaking an Aboriginal or Torres Strait Islander language at home (39%) than those living in non-remote areas (2%) (Figure 3.10.10).

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).



Note: Other language may include some speakers of Oceanian pidgins and creoles.

Source: ABS 2004a—2002 NATSISS.

Figure 3.10.10: Main language spoken at home, Indigenous Australians aged 15 years and over, 2002

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 3.10.21).
- Indigenous persons living in remote areas were more likely to report experiencing difficulty (19%) than those in non-remote areas of Australia (8%) (Table 3.10.21).
- 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 3.10.21: Communication with service providers, by sex and remoteness, Indigenous persons aged 18 years and over, 2002

	Non-remote		Remote		Total	
	Males	**Females**	**Males**	**Females**	**Males**	**Females**
			Proportion (%)			
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 2005—2002 NATSISS, unpublished data.

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 to 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 identify 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, 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 address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publications (ABS 2004a and ABS 2006).

Community Housing and Infrastructure Needs Survey (CHINS)

The 2001 CHINS collected data on dwelling conditions for permanent dwellings in discrete Indigenous communities that were managed by Indigenous housing organisations. In 2001 CHINS information was collected on 616 Indigenous organisations which managed a total of 21,287 permanent dwellings. The majority of those dwellings were located in the Northern Territory (6,715), Queensland (5,673), New South Wales (4,079) and Western Australia (3,273) (ABS 2002).

The CHINS survey only covers discrete Indigenous communities, including approximately 108,000 Aboriginal and Torres Strait Islanders or 24% of the total Indigenous population. CHINS data is collected every five 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 national publication (ABS 2002).

(continued)

Data quality issues (continued)

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 of Aboriginal and Torres Strait Islander people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005a). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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.

(continued)

Data quality issues (continued)

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.

Service Activity Reporting (SAR) data collection

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health care services were between 97% and 99% during the period 2002–03 to 2004–05. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. While 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 while these are thought to be reasonable, there has been no audit to check the accuracy of these figures.*

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 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, while 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 (nec) 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.

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3.11 Access to prescription medicines

This measure has two components:

- *Pharmaceutical Benefits Scheme expenditure per capita for Indigenous Australians*
- *not filling prescriptions due to cost.*

Data sources

Data for this measure come from Indigenous Pharmaceutical Benefits Scheme (PBS) expenditure estimates based on the national, continuing survey of general practitioner activity entitled Bettering the Evaluation and Care of Health, or BEACH. Two years of survey data, collected between April 2001 and March 2003, have been used in this analysis to estimate PBS expenditure. This information has been published in the report *Expenditures on health for Aboriginal and Torres Strait islander peoples, 2001–02* (AIHW 2005).

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.

Since November 2002, Aboriginal and Torres Strait Islander people have been able to voluntarily identify through the Medicare system, however, limited numbers of Indigenous Australians are currently identified within Medicare data. Future reports may be able to use the voluntarily identified Medicare data.

There is currently no data source for statistics on not filling prescriptions due to cost for Indigenous Australians. This will be recommended for inclusion in the next National Aboriginal and Torres Strait Islander Health Survey.

Analyses

Pharmaceuticals expenditure

- Expenditure on pharmaceuticals for Aboriginal and Torres Strait Islander peoples in 2001–02 was estimated at $66.2 million which represented 0.7% of total expenditure on pharmaceuticals in Australia (Table 3.11.1).
- The majority of expenditure on pharmaceuticals ($42.3 million) was for benefit-paid pharmaceuticals.
- Per person expenditure for 2001–02 was estimated at $144 for Indigenous people and $475 for non-Indigenous people, which was a ratio of 0.3:1.

Table 3.11.1: Total and per person pharmaceuticals expenditure, by Indigenous status, current prices, 2001–02

	Total expenditure ($ million)			Expenditure per person ($)		
PBS	**Indigenous**	**Non-Indigenous**	**Indigenous share (%)**	**Indigenous**	**Non-Indigenous**	**Ratio**
Benefit-paid[(a)]	42.3	5,471.8	0.8	92.20	288.68	0.32*
Other pharmaceuticals	23.9	3,539.8	0.7	52.16	186.75	0.28*
Total pharmaceuticals	**66.2**	**9,011.6**	**0.7**	**144.36**	**475.43**	**0.30***

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

(a) Includes estimates of benefits via the Pharmaceutical Benefits Scheme (PBS) and Repatriation Pharmaceutical Benefits Scheme (RPBS).

Source: AIHW 2005.

PBS expenditure

- In 2001–02, benefits to Indigenous Australians through the Pharmaceutical Benefits Scheme were estimated at $34.3 million. Pharmaceutical benefits expenditures per person for Indigenous Australians were 37% of the non-Indigenous average (Table 3.11.2). The average shares of expenditure on mainstream pharmaceutical benefits were lower still, with a ratio of 0.22:1.
- 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 2001–02 on drugs dispensed under this Act was $11.6 million. The estimated ratio of Indigenous to non-Indigenous expenditure per person was 5.24:1.

Table 3.11.2: Total and per person expenditure incurred by the Health and Ageing portfolio on the Pharmaceutical Benefits Scheme, by Indigenous status, 2001–02

	Total expenditure ($ million)			Expenditure per person ($)		
Pharmaceutical benefits	**Indigenous**	**Non-Indigenous**	**Indigenous share (%)**	**Indigenous**	**Non-Indigenous**	**Ratio**
Mainstream PBS[(a)]						
GP prescribed	19.4	3,452.7	0.6	42.36	182.15	0.23
Specialist prescribed	3.1	712.0	0.4	6.64	37.56	0.18
Doctor's bag	0.1	9.7	1.2	0.26	0.51	0.50
Total mainstream PBS	*22.7*	*4,174.3*	*0.5*	*49.46*	*220.23*	*0.22*
Drugs dispensed under Section 100 of the *National Health Act*						
Remote area AHS	10.9	1.2	90.0	23.77	0.06	373.95
Other Section 100 drugs[(b)]	0.7	90.5	0.8	1.59	4.77	0.33
Total	*11.6*	*91.7*	*11.3*	*25.36*	*4.84*	*5.24*
Total pharmaceutical benefits	**34.3**	**4,266.0**	**0.9**	**234.63**	**634.26**	**0.37**

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

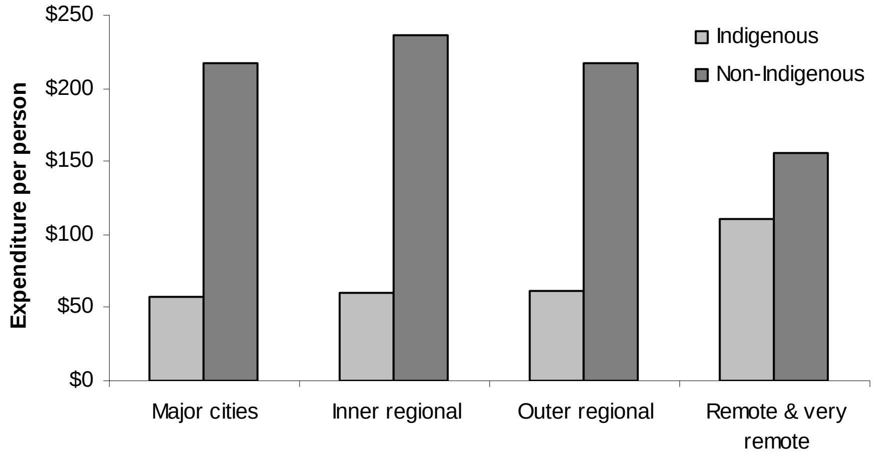
(a) Excludes expenditure through RPBS.

(b) Excludes highly specialised drugs dispensed from public and private hospitals.

Source: AIHW 2005.

PBS expenditure by remoteness

- In 2001–02, PBS expenditures on Aboriginal and Torres Strait Islander people were greater in more remote areas where the section 100 arrangements apply ($111 per person) than in major cities ($57 per person) (Figure 3.11.1).
- Average PBS expenditures for Indigenous Australians were lower than non-Indigenous people across all remoteness categories. The differences were most marked in the major cities, inner regions and outer regions where rate ratios were around 0.3:1.



Note: Excludes benefits paid through special supply arrangements of the PBS (other than payments to remote area AHS under Section 100 of the National Health Act 1953).

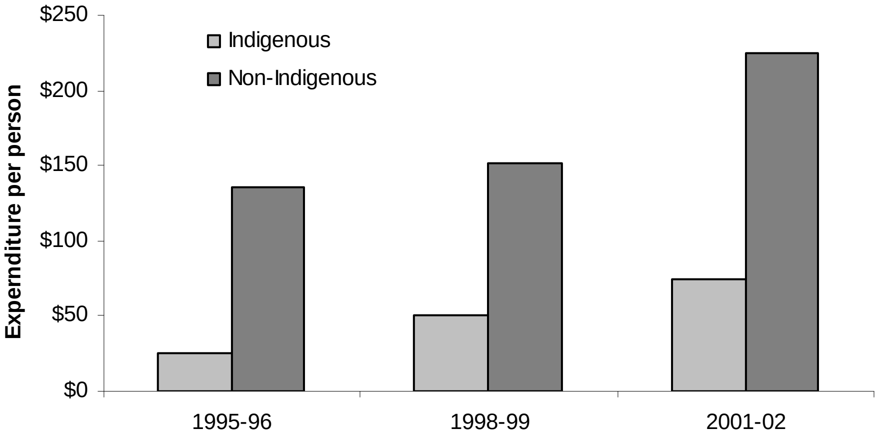
Source: AIHW 2005.

Figure 3.11.1: Estimated average health expenditures per person on pharmaceutical benefits, by Indigenous status and remoteness, 2001–02

PBS expenditure over time

Changes in expenditure over time should be interpreted with caution due to 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 $25.64 in 1995–96 to $50.46 in 1998–99.
- Expenditure increased by another 48% between 1998–99 and 2001–02 from $50.46 to $74.82.
- The Indigenous to non-Indigenous expenditure ratios were higher in 2001–02 than in 1995–96 (0.33 compared to 0.19) (Figure 3.11.2).



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 2005.

Figure 3.11.2: Average health expenditure per person by the Australian Government, on PBS, constant prices, 1995–96, 1998–99, 2001–02

Data quality issues

Expenditure data

BEACH estimates

Indigenous PBS expenditure estimates are calculated for the expenditure report using BEACH data by Indigenous status. 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.

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.

Medicare data

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, Torres Strait Islander or both in the Medicare database. As these data improve, it will be possible to utilise this identifier to undertake PBS expenditure calculations using the PBS database.

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3.12 Extent to which individuals have a 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 indicator 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 six-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.
- The majority of Indigenous Australians went to a doctor if they had a problem with their health (60%) followed by an Aboriginal medical service (30%). Approximately 7% of Aboriginal and Torres Strait Islander 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 3.12.1; Figure 3.12.1).
- Similar proportions of Indigenous males and females reported they usually went to the same GP or medical service (90% and 91% respectively) and visited a doctor or Aboriginal medical service if they had a problem with their health. Approximately 3% of Indigenous males reported they did not seek health care if they had a problem with their health compared to 1% of Indigenous females (Table 3.12.2).

Table 3.12.1: Regular health care, by age, Indigenous persons, 2004–05

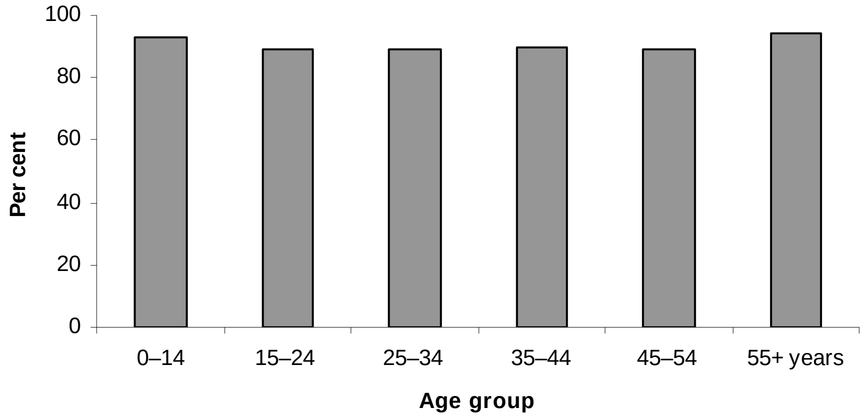
	0–14 years	15–24 years	25–34 years	35–44 years	44–54 years	55 years and over	Total
				per cent			
Where usually go if problem with health							
Doctor	62	62	54	56	61	62	60
Aboriginal medical service	30	28	33	31	30	30	30
Hospital	7	6	8	6	7	7	7
Don't seek health care	1[(a)]	2	3	3[(a)]	2[(a)]	—[(b)]	2
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) 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 3.12.1: Whether usually goes to the same GP/medical service, by age group, Indigenous Australians, 2004–05

Table 3.12.2: Regular health care, by sex, Indigenous persons, 2004–05

	Indigenous		
	Male	**Female**	**Persons**
		per cent	
Where usually go if problem with health			
Doctor	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) 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 for their regular health care was true across 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 with the majority of Indigenous people (about two-thirds and over) in the Australian Capital Territory, South Australia, Victoria, New South Wales and Tasmania using a doctor for their regular health care. A higher use of hospitals for regular health care was reported in Queensland and Western Australia compared to other jurisdictions at 12% and 14% respectively (Table 3.12.3).
- 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 for their regular health care decreased with remoteness from 80% in major cities to 6% in very remote areas. Likewise hospital use was higher in remote and very remote areas (Table 3.12.4; Figure 3.12.2).

Table 3.12.3: Regular health care, by state /territory, Indigenous persons, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					per cent				
Where usually go if problem with health									
Doctor	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) Includes traditional healer, other health care and not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

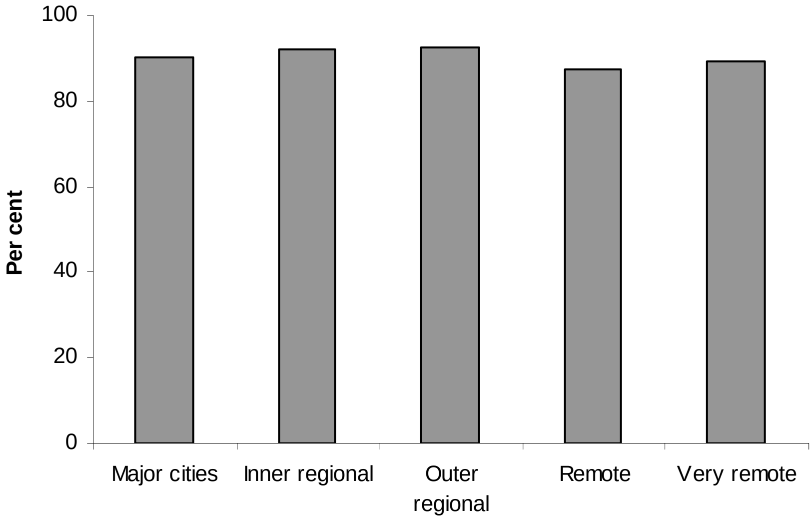
Table 3.12.4: Regular health care, by remoteness, Indigenous persons, 2004–05

	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
			per cent			
Where usually go if problem with health						
Doctor	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) Includes traditional healer, regular health care and not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.



Source: ABS and AIHW analsyis of 2004–05 NATSIHS.

Figure 3.12.2: Whether usually goes to the same GP/medical service, by remoteness, Indigenous Australians, 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 index of disadvantage (95%), those in non-remote areas (92%) and those with private health cover (93%) (Table 3.12.5).
- The proportion of Indigenous Australians who reported 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, and for those with any number of long-term conditions (Table 3.12.6).

Table 3.12.5: Whether usually goes to the same GP/medical service, by selected population characteristics, Indigenous Australians, 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) Includes not stated, inadequately described and non-verbal languages.

(c) 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 3.12.6: Regular health care, by summary health characteristics, Indigenous Australians, 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	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) 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) 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

- Those 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% compared with 70% for those without a usual GP or medical service). A similar proportion reported that they were treated worse (4%) or better (5%) than non-Indigenous people (Table 3.12.7).
- While the majority of Indigenous Australians reported that they were not treated badly because they were Aboriginal or Torres Strait Islander, 16% 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 3.12.7: Whether usually goes to the same GP/medical service, by discrimination, Indigenous Australians, 2004–05

	Whether usually go to same GP/medical service		
	Yes	**No**	**Total**
		per cent	
Treatment when seeking health care in last 12 months compared to 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**
Whether felt treated badly because Aboriginal or Torres Strait Islander in last 12 months			
Yes	16	15	16
No	84	84	84
Total(d)(e)	**100**	**100**	**100**
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**
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**

(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 as 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 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 NATSIHS content in order to address language and cultural appropriateness in traditional communities, as well as to assist respondents in understanding 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 national publication (ABS 2006).

Doctor/health service

The NATSIHS does not separately identify whether the person 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.

3.13 Accreditation across service types

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 four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04—Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% 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 two-year period July 2002 to June 2004. An aggregate of two years of data has been used as the number of hospitalisations for some conditions is likely to be small for a single year.

General practice

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. It should be noted 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 2004–05 there were 7,479 general practices. This number has been used as the denominator for calculating the proportion of accredited practices.

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 Queensland, Western Australia, South Australia and the Northern Territory combined over the two-year period July 2002 to June 2004 are presented in the tables below.

- Over the two-year period July 2002 to June 2004, there were approximately 272,424 hospitalisations of Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory combined in accredited public hospitals. This was 93% 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 3.13.1).

Hospital accreditation by state/territory and remoteness

- In the four jurisdictions, the proportion of hospitalisations of Indigenous Australians that were in accredited hospitals ranged from 86.5% in Western Australia to 99.8% in South Australia.
- Over the two-year period July 2002 to June 2004 in the four jurisdictions, approximately 94% of days spent by Indigenous patients and 98% of days spent by other Australians in hospital were in accredited hospitals (Table 3.13.2).

- Over the two-year period July 2002 to June 2004, the proportion of hospitalisations of Indigenous Australians that were in accredited hospitals was highest among those residing in major cities and inner regional areas (almost 100%) and lowest among those living in very remote areas (85%). The same pattern was evident for hospitalisations of other Australians (Table 3.13.3).

Table 3.13.1: Hospital separations, by Indigenous status and accreditation status, Qld, WA, SA and NT, July 2002 to June 2004[(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**
Qld	97,767	6,814	93.5	1,278,710	28,617	97.8
WA	65,708	10,274	86.5	637,034	21,617	96.7
SA	29,302	73	99.8	712,564	414	99.9
NT	79,647	3,784	95.5	51,468	729	98.6
Qld, WA, SA, NT	**272,424**	**20,945**	**92.9**	**2,679,776**	**51,377**	**98.1**

(a) Data are from public hospitals only.

(b) Data are reported for Qld, WA, SA and NT only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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 per cent 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 AIHW National Public Hospitals Establishment Database.

Table 3.13.2: Hospital patient days, by Indigenous status and accreditation status, Qld, WA, SA and NT, July 2002 to June 2004[(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
Qld	312,634	16,782	94.9	4,837,302	137,485	97.2
WA	152,029	32,817	82.2	2,690,936	35,721	98.7
SA	172,028	114	99.9	2,730,177	40,634	98.5
NT	244,650	8,348	96.7	174,812	1,712	99.0
Total	**881,341**	**58,061**	**93.8**	**10,433,227**	**215,552**	**98.0**

(a) Data are from public hospitals only.

(b) Data are reported for Qld, WA, SA and NT only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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 AIHW National Public Hospitals Establishment Database.

Table 3.13.3: Hospital separations, by Indigenous status, accreditation status and remoteness, July 2002 to June 2004[(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	48,334	104	99.8	1,608,658	2,117	99.9
Inner regional	19,383	96	99.5	503,564	1,196	99.8
Outer regional	84,803	4,678	94.8	445,266	28,011	94.1
Remote	45,881	3,292	93.3	86,256	14,392	85.7
Very remote	72,489	12,748	85.0	34,034	5,497	86.1
Total[(b)]	**272,424**	**20,945**	**92.9**	**2,679,776**	**51,377**	**98.1**

(a) Data are from public hospitals only.

(b) Data are reported for Qld, WA, SA and NT only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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 AIHW National Public Hospitals Establishment Database.

Hospital accreditation by hospital category

- In Queensland, Western Australia, South Australia and the Northern Territory combined, all hospitalisations of Indigenous and other Australians in principal referral hospitals, large hospitals and psychiatric hospitals were in accredited hospitals (Table 3.13.4). Between 74% and 89% of hospitalisations of Indigenous Australians and 74% and 94% of hospitalisations of other Australians in small hospitals were in accredited hospitals. Only 62% of Indigenous and 66% of other Australian hospitalisations in multi-purpose service hospitals were in accredited hospitals.

Table 3.13.4: Hospital separations, by Indigenous status, accreditation status and hospital category (peer group), Qld, WA, SA and NT, July 2002 to June 2004[(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	136,655	2[(d)]	100.0	1,473,858	38[(d)]	100.0
Specialist women's and children's	11,115	—	100.0	203,436	—	100.0
Large hospitals						
Large major cities	3,708	—	100.0	161,933	35[(d)]	100.0
Large regional and remote	37,094	—	100.0	187,344	53[(d)]	100.0
Medium hospitals						
Medium major cities and regional group 1	14,538	18	99.9	164,705	302	99.8
Medium major cities and regional group 2	5,746	2,016	74.0	155,039	17,177	90.0
Small hospitals						
Small regional acute	3,437	829	80.6	54,645	3,893	93.3
Small non-acute	4,568	562	89.0	72,160	4,262	94.4
Remote acute	38,022	13,472	73.8	36,665	13,212	73.5
Sub- and non-acute hospitals						
Multi-purpose service	4,466	2,706	62.3	20,105	10,566	65.6
Hospice	—	—	100.0	11	—	100.0
Rehabilitation	37	—	100.0	2,423	—	100.0
Mothercraft	87	—	100.0	5,220	7	99.9
Other non-acute	10,753	—	100.0	119,938	6	100.0
Other hospitals						
Psychiatric	791	—	100.0	8,516	—	100.0
Un-peered and other acute	1,407	1,340	51.2	13,778	1,794	88.5
Total	**272,424**	**20,945**	**92.9**	**2,679,776**	**51,345**	**98.1**

(a) Data are from public hospitals only.

(b) Data are reported for Qld, WA, SA and NT only. These four jurisdictions are considered to have adequate levels of Indigenous identification, 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 four 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'.

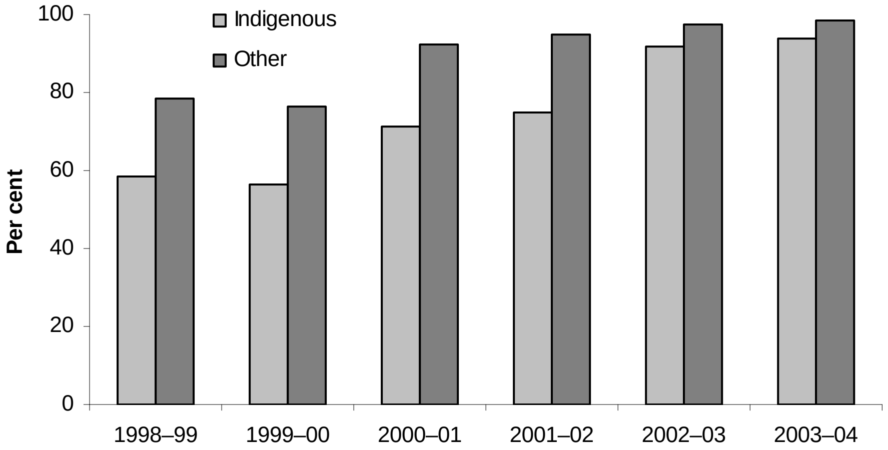
(d) The number of separations in non-accredited principal referral and large hospitals are small as these numbers represent patients living in Queensland, Western Australia, South Australia and the Northern Territory, but have been referred to non-accredited hospitals in New South Wales. People living in New South Wales are not included in the analyses. All principal referral and large hospitals in these four jurisdictions are accredited.

Source: AIHW analysis of AIHW National Public Hospitals Establishment Database.

Time series analyses

- Between 1998–99 and 2003–04 in Queensland, Western Australia, South Australia and the Northern Territory combined, there were increases in the proportion of hospitalisations of Indigenous and other Australians in accredited hospitals (from 59% to 94% for Indigenous separations and from 78% to 99% for other separations) (Figure 3.13.1).

While the difference between the proportion of Indigenous and non-Indigenous separations in accredited hospitals has appeared to decline between 1998–99 and 2003–04, this is likely to be the result of more hospitals in rural and remote areas obtaining accreditation in recent years, at which a higher proportion of Indigenous Australians are hospitalised than non-Indigenous Australians.



Source: AIHW analysis of AIHW National Public Hospitals Establishment Database.

Figure 3.13.1: Proportion of hospitalisations in accredited public hospitals, by Indigenous status, Qld, WA, SA and NT, 1998–99 to 2003–04

General practice accreditation

Table 3.13.5 and Figure 3.13.2 present data on the number and proportion of general practices accredited in Australia based on the Annual Survey of Divisions of General Practice.

- In 2004–05, the Annual Survey of Divisions of General Practice estimated that there were 7,479 general practices in Australia, 4,656 (62.3%) of which were accredited.
- Approximately 55% of general practices in areas where less than 1% of the population was Indigenous were accredited. Between 65% and 85% of general practices were accredited in areas where between 1–2% and 4–10% of the population were Indigenous. In areas where more than 10% of the population were Indigenous, only 54% of general practices were accredited (Figure 3.13.2).

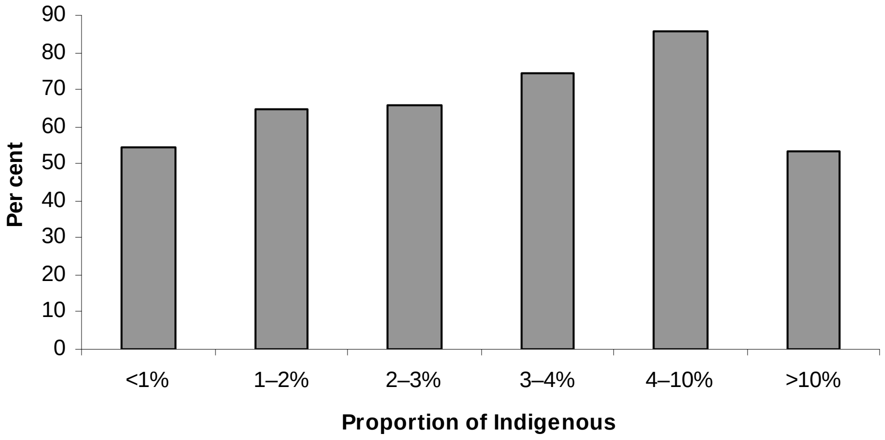
Table 3.13.5: Number and per cent of general practices accredited by Divisions of General Practice, by proportion of the population that are Indigenous, 2004–05

Proportion of Indigenous[(a)]	Total number of practices	Number accredited	Per cent accredited
<1%	3,162	1,731	54.7
1–2%	2,042	1,323	64.8
2–3%	993	650	65.5
3–4%	386	287	74.4
4–10%	578	495	85.6
>10%	318	170	53.5
Total	**7,479**	**4,656**	**62.3**

(a) Aboriginal and Torres Strait Islander 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: Aboriginal and Torres Strait Islander 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 3.13.2: Per cent of general practices accredited by Divisions of General Practice, by proportion of the population that is Indigenous, 2004–05

Table 3.13.6 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 the two registered providers of general practice accreditation—AGPAL and GPA+.

- As at July 2006, there were 3,877 general practices accredited and 384 general practices registered for accreditation but not yet accredited, through AGPAL and GPA+.
- 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 (909 and 1,357 practices respectively).

Table 3.13.6: Number of general practices accredited through AGPAL and GPA+, by proportion of the population that is Indigenous, as at July 2006

Proportion of Indigenous[(a)]	**Accreditation status**	**Number**
<1%	Accredited	1,550
	Registered but not yet accredited	93
1–2%	Accredited	1,357
	Registered but not yet accredited	119
2–3%	Accredited	681
	Registered but not yet accredited	52
3–4%	Accredited	303
	Registered but not yet accredited	24
4–10%	Accredited	443
	Registered but not yet accredited	41
>10%	Accredited	184
	Registered but not yet accredited	33
Total	**Accredited**	**4,518**
	Registered but not yet accredited	**352**

(a) Aboriginal and Torres Strait Islander 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 AGPAL and GPA+ unpublished data.

Accreditation of Aboriginal and Torres Strait Islander primary health care services

- It is estimated that Aboriginal and Torres Strait Islander specific primary health care services provide GP services to around 40% of the Aboriginal and Torres Strait Islander population (DoHA unpublished data).
- Of the 106 Aboriginal and Torres Strait Islander specific primary health care services that employed a general practitioner, 53 are accredited and 19 are registered for becoming accredited with AGPAL as at May 2006 (AGPAL unpublished data, November 2005).
- GPA+ has eight Aboriginal and Torres Strait Islander specific primary health care services fully accredited and two registered for accreditation as at February 2006. On this basis, 77% of Aboriginal and Torres Strait Islander specific primary health care services that employ a GP in some capacity are either registered for accreditation or fully accredited.
- The Quality Improvement Council accredits health and community organisations that do not employ a GP. Eight Aboriginal and Torres Strait Islander specific primary health care services are currently accredited through the Council.

Data quality issues

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.

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 people. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data)*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations*

(continued)

Data quality issues (continued)

- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

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 proxy looking at areas of Indigenous populations and accreditation status of practices in these areas is suggested. This proxy is limited in that people do not necessarily visit GPs in the area they live.

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.

References

AIHW (Australian Institute of Health and Welfare) 2005. Improving the quality of Indigenous identification in hospitals separations data. AIHW cat. no. HSE 101. Canberra: AIHW.

Australian Council on Health Care Standards 2005. The ACHCS national report on health services accreditation performance: 2003–2004. Canberra: Australian Council on Health Care Standards.

ABS & AIHW (Australian Bureau of Statistics and 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.

3.14 Aboriginal and Torres Strait Islander Australians in tertiary education 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, Science and Training. 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 Department of Education, Science and Training. Data for 2004 are presented below.

- In 2004, there were approximately 846 Indigenous undergraduate students enrolled in health-related courses and 103 Indigenous undergraduate students who completed a health-related course (Table 3.14.1).
- The most common type of health-related course in which Indigenous undergraduate students were enrolled or had completed in 2004 was nursing (425 enrolled and 38 completed) followed by public health (253 enrolled and 34 completed).
- Approximately 1.3% of all undergraduate students enrolled in health-related courses in 2004 were Indigenous. Only 0.7% of undergraduate students who completed a health-related course in 2004 were of Aboriginal and Torres Strait Islander origin.

- Public health had the highest Indigenous representation of all health-related courses. Approximately 7% of students enrolled in this course were Indigenous and 5% of students who completed this course in 2004 were Indigenous.
- The proportion of university students enrolled in health-related courses who were of Aboriginal and Torres Strait Islander origin was similar in most states and territories (between 1% and 2%) except in the Northern Territory where around 15% of students enrolled in health-related courses were Indigenous (Figure 3.14.1).

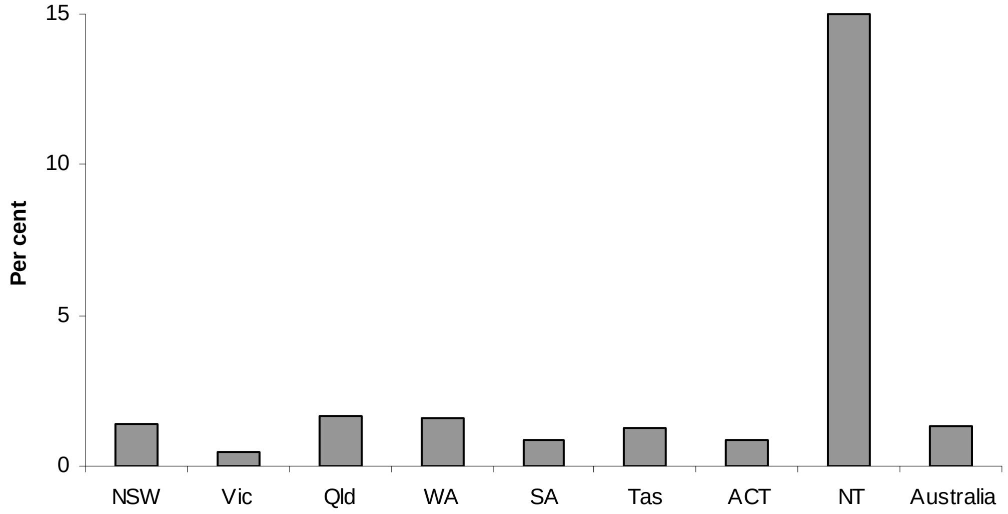
Table 3.14.1: Undergraduate students enrolled in and completed health-related courses, Indigenous and total students,[(a)] 2004

	Enrolled			**Completed**		
	Indigenous	**Total**	**Indigenous as a proportion of total**	**Indigenous**	**Total**	**Indigenous as a proportion of total**
	No.	**No.**	**%**	**No.**	**No.**	**%**
Nursing	425	30,355	1.4	38	8,110	0.5
Public health	253	3,576	7.1	34	708	4.8
Medical studies	103	9,571	1.1	13	1,730	0.8
Rehabilitation therapies	41	10,838	0.4	9	2,291	0.4
Pharmacy	9	4,575	0.2	3	984	0.3
Radiography	8	1,945	0.4	2	519	0.4
Optical science	5	583	0.9	2	157	1.3
Dental studies	4	1,601	0.2	2	336	0.6
Total[(b)]	**846**	**62,773**	**1.3**	**103**	**14,795**	**0.7**

(a) Based on ABS narrow fields of education.

(b) 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 3.14.1: Indigenous university students enrolled in health-related course as proportion of students in health-related courses, by state/territory, 2004

Vocational education and training (VET) sector

Data on Indigenous students enrolled and who have completed health-related courses in the vocational education and training sector are available from NCVER. Data for 2004 are presented below.

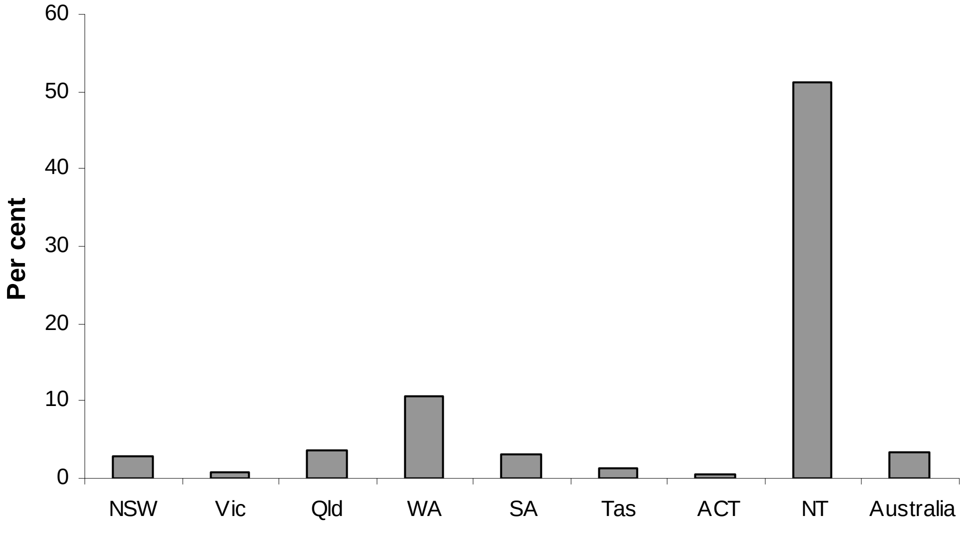
- In 2004, there were approximately 4,039 Indigenous students enrolled in health-related courses in the VET sector and 199 Indigenous students who completed a health-related course in the VET sector (Table 3.14.2).
- The most common type of health-related course in which Indigenous VET students were enrolled or had completed in 2004 was public health (2,123 enrolled and 123 completed) followed by nursing (172 enrolled and 40 completed).
- Approximately 3.9% of all VET sector students enrolled in health-related courses in 2004 were Indigenous and 3.1% of VET sector students who completed a health-related course in 2004 were of Aboriginal and Torres Strait Islander origin.
- Medical studies and public health had the highest Indigenous representation of all health-related courses. Approximately 5% of VET sector students enrolled in these courses were Indigenous. Approximately 2% of VET sector students who had completed a course in medical studies and 9% of students who had completed a course in public health in 2004 were of Aboriginal and Torres Strait Islander origin.
- The proportion of VET sector students enrolled in health-related courses who were of Aboriginal and Torres Strait Islander origin ranged from 0.5% in the Australian Capital Territory to 51% in the Northern Territory (Figure 3.14.2).

Table 3.14.2: Vocational education and training sector students enrolled and completed health-related courses,[(a)] 2004

	Enrolled			Completed		
	Indigenous	Total	Indigenous as a proportion of total	Indigenous	Total	Indigenous as a proportion of total
	No.	No.	%	No.	No.	%
Public health	2,123	45,953	4.6	123	1,327	9.3
Nursing	172	13,140	1.3	40	2,182	1.8
Medical studies	62	1,219	5.1	1	45	2.2
Dental studies	54	3,286	1.6	18	1,000	1.8
Complementary therapies	33	3,708	0.9	6	763	0.8
Rehabilitation therapies	18	1,170	1.5	0	161	0.0
Optical science	5	910	0.5	0	106	0.0
Pharmacy	0	23	0.0	0	9	0.0
Other health	1,572	33,213	4.7	11	837	1.3
Total	**4,039**	**102,622**	**3.9**	**199**	**6,430**	**3.1**

(a) Qualification field of education classification.

Source: AIHW analysis of NCVER, National VET Provider Collection 2004, unpublished data.



Source: AIHW analysis of NCVER, National VET Provider Collection 2004, unpublished data.

Figure 3.14.2: Indigenous vocational education and training sector students enrolled in health-related course as proportion of students in health-related courses, by state/territory, 2004

Aboriginal and Torres Strait Islander Health Worker occupations

Tables 3.14.3 and 3.14.4 present the number and rate of VET sector students completing a course aimed at Aboriginal and Torres Strait Islander Health Workers in 2004.

- In 2004, approximately 111 VET sector students had completed a course aimed at Aboriginal and Torres Strait Islander Health Worker occupations in Australia. The majority of these course completions were at the certificate III or IV level (99 or 89%) (Table 3.14.3).
- Western Australia had the highest number of students completing a course aimed at Aboriginal and Torres Strait Islander Health Worker occupations (47), followed by Queensland (28).
- Of all VET sector students who had completed a course aimed at Aboriginal and Torres Strait Islander Health Worker occupations in 2004, 72% were female (79 course completions) and 28% were males (31 course completions) (Table 3.14.4).

Table 3.14.3: 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, 2004

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Certificate I	—	—	—	—	—	—	—	—	—
Certificate II	—	—	—	—	—	—	—	—	—
Certificate III	—	—	7	23	11	—	—	8	49
Certificate IV	—	—	10	24	7	—	—	9	50
Diploma or higher	1	—	11	—	—	—	—	–	12
Total	**1**	**—**	**28**	**47**	**18**	**—**	**—**	**17**	**111**

(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 per 1,000 population have not been presented as the numbers are too small to produce rates.

Source: NCVER, National VET Provider Collection 2004, unpublished data.

Table 3.14.4: 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, 2004

	Males	Females	Persons
	No.	**No.**	**No.**
Certificate I	0	0	0
Certificate II	0	0	0
Certificate III	16	32	48
Certificate IV	13	37	50
Diploma or higher	2	10	12
Total	**31**	**79**	**110**

(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 per 1,000 population have not been presented as the numbers are too small to produce rates.

Source: NCVER, National VET Provider Collection 2004, unpublished 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 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 2003, 3.9% of government-funded VET students in Australia identified themselves as Indigenous, while 13.8% of students did not report their Indigenous status (SCRGSP 2005).

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.

3.15 Expenditure on Aboriginal and Torres Strait Islander health

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 2005 report—*Expenditures on health for Aboriginal and Torres Strait Islander people 2001–02,* published by the AIHW (AIHW 2005).

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 Aboriginal and Torres Strait Islander people either on a overall population or per capita basis should be treated with caution as it is an estimate (AIHW 2005).

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 3.15.1 and 3.15.2 below.

- Expenditure on health goods and services for Aboriginal and Torres Strait Islander peoples during 2001–02 was estimated at $1,789 million (Table 3.15.1) or 3% of total health expenditure. Almost three-quarters of this expenditure (72%) was related to two major program areas—services provided in hospitals ($850 million) and community health services ($440 million).
- On a per person basis, average expenditure on health goods and services for Aboriginal and Torres Strait Islander peoples was $3,901, which was 18% higher than the expenditure for non-Indigenous Australians ($3,308).
- In four major program areas, average expenditure on services for Indigenous people was greater than for non-Indigenous Australians (Figure 3.15.1). These were community health services, which had an Indigenous to non-Indigenous expenditure ratio per person of 6:1; public health (which includes services such as alcohol and drug services, cancer screening and environmental health) with a ratio of 3:1; and admitted and non-admitted patient services in acute-care hospitals, both with ratios of 2:1. 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, pharmaceuticals and private dental services was less than half that for non-Indigenous Australians.

Table 3.15.1: Total expenditure on health, Indigenous and non-Indigenous people, by type of health good or service, current prices, 2001–02

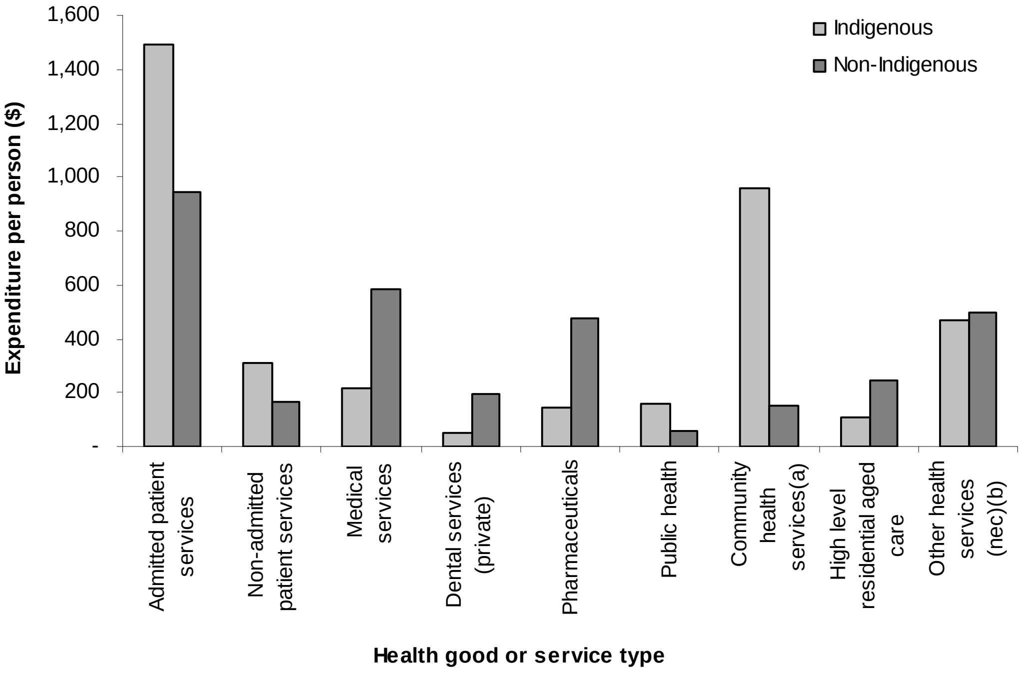
	Total expenditure ($ million)			Expenditure per person ($)		
Health good or service type	**Indigenous**	**Non-Indigenous**	**Indigenous share (%)**	**Indigenous**	**Non-Indigenous**	**Ratio**
Hospitals	849.5	21,456.9	3.8	1,852.75	1,132.01	1.64
Admitted patient services	682.5	17,927.4	3.7	1,488.38	945.80	1.57
Private hospitals	11.5	5,057.1	0.2	25.08	266.80	0.09
Public hospitals	671.0	12,870.2	5.0	1,463.30	679.00	2.16
Non-admitted patient services	142.4	3,116.5	4.4	310.57	164.42	1.89
Emergency departments	34.6	615.7	5.3	75.51	32.48	2.32
Other services	107.8	2,500.8	4.1	235.06	131.94	1.78
Public (psychiatric) hospitals	24.7	413.0	5.6	53.80	21.79	2.47
Medical services	99.6	11,112.5	0.9	217.19	586.27	0.37
Medicare benefit items	75.9	9,185.4	0.8	165.47	484.60	0.34
Other	23.7	1,927.2	1.2	51.72	101.67	0.51
Community health services(a)(b)	439.9	2,810.5	13.5	959.30	148.27	6.47
Dental services (private)(a)	21.8	3,734.2	0.6	47.59	197.01	0.24
Other professional services	16.9	2,252.4	0.7	36.76	118.83	0.31
Pharmaceuticals	66.2	9,011.6	0.7	144.36	475.43	0.30
Benefit-paid(c)	42.3	5,471.8	0.8	92.20	288.68	0.32
Other pharmaceuticals	23.9	3,539.8	0.7	52.16	186.75	0.28
Aids and appliances	15.8	2,474.0	0.6	34.51	130.52	0.26
High level residential aged care	49.9	4,591.6	1.1	108.83	242.24	0.45
Patient transport	62.8	892.7	6.6	136.95	47.09	2.91
Public health activities	72.5	1,029.9	6.6	158.15	54.33	2.91
Other health services (nec)	50.6	1,458.9	3.4	110.44	76.97	1.43
Health administration (nec)	43.1	1,883.6	2.2	93.99	99.37	0.95
Total	**1,788.6**	**62,708.9**	**2.8**	**3,900.83**	**3,308.35**	**1.18**

(a) Community health services include state and territory government expenditure on dental services.

(b) Includes $186.3 million in OATSIH expenditure through the Aboriginal Community Controlled Health Services (ACCHS). The Indigenous ratio for the non-ACCHS component of community health is estimated at 4.06:1 and for the non-ACCHS component of the total at 1.07:1.

(c) Includes estimates of benefits via the PBS and RPBS.

Source: AIHW 2005: Table 2.1.



(a) Community health services include state and territory government expenditure on dental services.

(b) Composed of public (psychiatric) hospitals; other professional services; aids and appliances; patient transport; and other health (nec).

Source: AIHW 2005: Table 2.1.

Figure 3.15.1: Expenditure per person on health, Indigenous and non-Indigenous people, by broad area of expenditure, all funding sources, current prices, 2001–02

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, etc. Because distinctions are not always easy to make, there is some approximation in these estimates.

- In 2001–02, 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—1.23:1 compared with 1.14:1 (Table 3.15.2). 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 $1,697 per person compared to $1,050 per person for non-Indigenous people. Expenditure on primary medical services and pharmaceuticals was lower for Indigenous

people ($181 and $130 per person respectively) than for non-Indigenous people ($373 and $395 per person respectively).

Table 3.15.2: Estimated expenditure on primary and secondary/tertiary health services, by area of expenditure and Indigenous status, 2001–02

	Primary				Secondary/tertiary			
	Total ($ million)		Per person ($)		Total ($ million)		Per person ($)	
Health good or service type	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Hospitals	71.2	1,558.3	155.29	82.21	778.3	19,898.6	1,697.47	1,049.80
Admitted patient services	n.a.	n.a.	n.a.	n.a.	682.5	17,927.4	1,488.38	945.80
Non-admitted patient services	71.2	1,558.3	155.29	82.21	71.2	1,558.3	155.29	82.21
Public (psychiatric) hospitals	n.a.	n.a.	n.a.	n.a.	24.7	413.0	53.80	21.79
Medical services	82.9	7,071.0	180.79	373.05	16.7	4,041.6	36.40	213.22
MBS services	59.2	5,143.8	129.06	271.37	16.7	4,041.6	36.40	213.22
Other	23.7	1,927.2	51.72	101.67	n.a.	n.a.	n.a.	n.a.
Community health services[(a)(b)]	439.9	2,810.5	959.30	148.27	n.a.	n.a.	n.a.	n.a.
Dental services (private)[(c)]	21.8	3,734.2	47.59	197.01	n.a.	n.a.	n.a.	n.a.
Other professional services	8.4	1,126.2	18.38	59.42	8.4	1,126.2	18.38	59.42
Pharmaceuticals	59.6	7,479.6	129.93	394.61	6.6	1,532.0	14.44	80.82
Aids and appliances	14.2	2,053.4	31.06	108.33	1.6	420.6	3.45	22.19
Services for older people	n.a.	n.a.	n.a.	n.a.	49.9	4,591.6	108.83	242.24
Patient transport	31.4	178.5	68.48	9.42	31.4	714.1	68.48	37.68
Public health activities	72.5	1,029.9	158.15	54.33	n.a.	n.a.	n.a.	n.a.
Total[(d)]	**801.9**	**27,041.7**	**1,748.96**	**1,426.64**	**892.9**	**32,324.7**	**1,947.45**	**1,705.36**
Ratio Indigenous:non-Indigenous			*1.23:1*				*1.14:1*	

(a) Includes expenditure on dental services by state and territory governments.

(b) Includes $186.3 million in OATSIH expenditure through ACCHS.

(c) Excludes expenditure of dental services by states and territories.

(d) Excludes expenditure on health administration and health services (nec).

Source: AIHW 2005: Table 2.3.

Australian Government expenditure

On a per person basis, the Australian Government spent an estimated $888.39 per Aboriginal and Torres Strait Islander person in 2001–02, compared with $1,027.67 for non-Indigenous people. In 2001-02, the total expenditure on Office of Aboriginal and Torres Strait Islander Health (OATSIH) funded ACCHS services for Indigenous Australians was $166 million. Per person expenditure on OATSIH funded ACCHS services was $362 for Indigenous Australians compared to $1 for non-Indigenous Australians. Spending through OATSIH's major Indigenous-specific funding programs also showed substantial increase over the period.

State/territory government expenditure

State/territory government expenditure on health goods and services for Indigenous Australians is presented in Table 3.15.3 below.

- In 2001–02, state and territory governments were estimated to have spent, on average, $2,749 per Indigenous Australian compared with $1,141 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 Aboriginal and Torres Strait Islander peoples than for non-Indigenous people (Table 3.15.3). Expenditure on community health services for Indigenous people was four times that for non-Indigenous people, expenditure on public health activities 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 ($4,522) and Western Australia ($3,850) had the highest average expenditure per person for Indigenous people. This is, at least in part, explained by the large proportions of their Indigenous population living in remote areas. Tasmania, which had the lowest average expenditure per person ($816), was the only jurisdiction where the estimated expenditure per person for Indigenous Australians was lower than that for non-Indigenous people ($1,478), but the uncertainty as to what is actually spent on health for Indigenous Australians in Tasmania is huge and these numbers should be treated with great caution.

Table 3.15.3: Estimated state/territory health expenditure per person for Indigenous and non-Indigenous people, by program, 2001–02 ($)

Health good or service type	Expenditure per person ($)								
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Acute care hospitals									
Indigenous	1,317.78	1,338.43	1,573.16	2,748.22	1,429.21	458.48	1,778.69	2,788.15	1,754.12
Non-Indigenous	891.78	868.17	699.11	922.95	650.52	826.46	1,024.99	796.61	834.16
Total	900.52	865.34	734.07	1,016.57	658.91	851.47	1,028.13	1,363.22	855.88
Admitted patient services									
Indigenous	978.01	968.80	1,218.67	2,387.24	1,174.54	230.55	1,503.47	2,677.39	1,443.55
Non-Indigenous	700.87	725.11	548.33	761.88	512.51	585.87	849.03	726.21	669.74
Total	706.55	726.52	576.22	848.57	518.94	611.34	850.96	1,281.21	688.01
Non-admitted patient services									
Indigenous	339.77	369.63	354.49	360.98	254.66	227.93	275.22	110.76	310.56
Non-Indigenous	190.91	143.06	150.78	161.07	138.00	240.59	175.95	70.40	164.42
Total	193.96	144.37	157.85	168.00	139.97	240.12	177.17	82.01	167.87
Emergency departments									
Indigenous	70.40	162.32	—	165.37	152.72	20.73	—	95.70	75.51
Non-Indigenous	40.24	34.19	—	35.69	74.30	21.88	—	52.17	32.48
Total	40.86	34.93	—	40.19	75.63	21.84	—	64.69	33.50
Other non-admitted patient services									
Indigenous	269.38	207.31	—	195.66	101.94	207.19	—	15.06	135.37
Non-Indigenous	150.67	108.87	—	125.38	63.70	218.71	—	18.24	101.14
Total	153.10	109.44	—	127.82	64.34	218.28	—	17.32	101.95
Public (psychiatric) hospitals									
Indigenous	54.41	—	62.83	63.55	194.03	15.65	—	—	53.80
Non-Indigenous	23.63	—	34.64	29.87	52.68	14.01	—	—	21.79
Total	24.26	—	35.62	31.03	55.07	14.07	—	—	22.54
Services for older people									
Indigenous	2.01	14.40	16.52	133.78	4.82	—	—	—	25.51
Non-Indigenous	6.76	20.66	32.81	66.90	26.92	—	—	—	22.16
Total	6.66	20.62	32.25	69.22	26.54	—	—	—	22.23
Patient transport									
Indigenous	71.71	45.38	154.14	25.78	72.45	26.25	46.67	275.16	109.45
Non-Indigenous	46.99	35.60	61.21	4.25	23.06	57.18	28.88	52.27	40.71
Total	47.49	35.66	64.44	5.00	23.90	56.04	29.10	116.37	42.33
Public health activities[(a)]									
Indigenous	67.01	281.66	61.78	67.65	78.31	39.79	67.26	424.86	122.65
Non-Indigenous	33.75	40.79	33.99	32.72	43.61	43.70	71.00	100.17	37.59
Total	34.43	42.19	34.96	33.93	44.20	43.56	70.96	193.55	39.60
Community health services									
Indigenous	659.09	697.83	497.68	495.97	353.75	201.55	570.07	955.13	594.93
Non-Indigenous	136.41	134.17	196.99	69.64	86.53	420.91	249.94	256.20	146.25
Total	147.13	137.43	207.42	84.42	91.05	412.82	253.86	457.20	156.84

(continued)

Table 3.15.3 (continued): Estimated state/territory health expenditure per person for Indigenous and non-Indigenous people, by program, 2001–02 ($)

Health good or service type	Expenditure per person ($) NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Health research									
Indigenous	13.49	3.73	10.15	25.78	97.87	—	21.05	52.57	22.84
Non-Indigenous	14.59	3.73	10.16	22.40	13.46	—	21.12	3.74	11.38
Total	14.57	3.73	10.16	22.51	14.88	—	21.12	17.79	11.65
Health administration (nec)[(b)]									
Indigenous	—	—	22.43	87.69	158.00	47.94	—	—	29.39
Non-Indigenous	—	—	16.28	43.98	44.56	102.52	—	—	13.22
Total	—	—	16.49	45.50	46.47	100.51	—	—	13.60
Other health services (nec)									
Indigenous	3.41	16.77	2.15	201.73	—	25.85	54.72	26.11	36.31
Non-Indigenous	3.82	4.55	1.37	101.46	—	13.54	30.19	4.71	13.38
Total	3.81	4.62	1.40	104.94	—	13.99	30.49	10.86	13.93
Total									
Indigenous	**2,188.92**	**2,398.19**	**2,400.84**	**3,850.16**	**2,388.43**	**815.49**	**2,538.46**	**4,521.98**	**2,749.00**
Non-Indigenous	**1,157.72**	**1,107.68**	**1,086.57**	**1,294.16**	**941.33**	**1,478.31**	**1,426.13**	**1,213.70**	**1,140.63**
Total	**1,178.87**	**1,109.60**	**1,136.80**	**1,413.12**	**961.02**	**1,492.45**	**1,433.66**	**2,158.99**	**1,178.61**
State funding of private hospital services									
Indigenous	0.26	0.38	1.95	18.38	0.01	3.91	—	—	3.43
Non-Indigenous	6.25	0.57	11.07	37.09	1.38	46.25	0.04	—	9.12
Total	6.12	0.57	10.75	36.44	1.36	44.69	0.04	—	8.99

(a) Expenditure data on public health activities were sourced from the National Public Health Expenditure Project and Government Procurement Card reporting mechanisms.

(b) Health administration expenditure was allocated differently across jurisdictions.

Source: AIHW 2005: Table 5.2.

Regional health expenditure

Estimated average health expenditures per person by remoteness area for Indigenous and non-Indigenous people are presented in Table 3.15.4 and Figure 3.15.2. This analysis is restricted to the 52% of health services expenditure data that can be apportioned according to the Australian Standard Geographic Classification Remoteness Areas. It should be noted that some of the expenditure categories within this section are not directly comparable with estimates in other sections of this measure (see AIHW 2005).

- In 2001–02, average expenditures on health for Indigenous Australians were lower in major cities and inner regions, but substantially higher in outer regional, remote and very remote areas, compared with expenditure per person on non-Indigenous people.
- Expenditure on admitted patient services in public acute care hospitals for Aboriginal and Torres Strait Islander peoples was greatest in the more remote areas, as was expenditure by OATSIH through Aboriginal Community Controlled Health Services.
- Medicare expenditures for Aboriginal and Torres Strait Islander peoples were greatest in major cities and inner and outer regional areas, most likely because of better access to private general practitioners in these areas. Pharmaceutical Benefits Scheme (PBS)

expenditures, on the other hand, 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 expenditures on services for older people were higher for Indigenous Australians than for non-Indigenous Australians in remote and very remote areas.

Table 3.15.4: Estimated average health expenditures per person on selected health services, Indigenous and non-Indigenous people, by remoteness, 2001–02 ($)

Area of expenditure		Major cities[(a)(b)]	Inner regional[(b)]	Outer regional[(a)]	Remote and very remote	Total
Admitted patient services						
Public hospitals	Indigenous	973.18	844.17	1,557.72	2,416.18	1,463.30
	Non-Indigenous	645.01	713.07	808.74	813.29	679.00
Private hospitals	Indigenous	47.34	29.54	15.53	4.57	25.08
	Non-Indigenous	277.18	280.44	194.35	142.11	266.80
OATSIH[(c)]	Indigenous	173.26	211.84	288.78	546.80	306.47
Medicare (medical only)[(d)]	Indigenous	170.96	173.34	175.16	111.41	156.68
	Non-Indigenous	427.04	363.26	322.22	255.22	399.80
PBS[(e)]	Indigenous	57.52	60.65	62.08	110.58	73.23
	Non-Indigenous	217.71	236.75	216.59	155.14	220.29
Services for older people (Australian Government expenditure only)	Indigenous	53.33	23.10	78.58	114.49	69.20
	Non-Indigenous	176.72	215.17	138.17	46.65	178.20
Total for selected health services	**Indigenous**	**1,475.60**	**1,342.64**	**2,177.85**	**3,304.03**	**2,093.95**
	Non-Indigenous	**1,743.66**	**1,808.69**	**1,680.08**	**1,412.42**	**1,744.09**
Ratio Indigenous:non-Indigenous		**0.85**	**0.74**	**1.30**	**2.34**	**1.20**

(a) Darwin is included as an outer regional area under ARIA+.

(b) Hobart is included as an inner regional area under ARIA+.

(c) OATSIH expenditure on Aboriginal Community Controlled Health Services.

(d) Excludes Medicare benefits for optometry and dental services.

(e) Excludes benefits paid through special supply arrangements of the PBS (other than payments to remote area AHSs under section 100 of the *National Health Act 1953*).

Source: AIHW 2005: Table 7.2.

Source: AIHW 2005:Table 7.2

Figure 3.15.2: Estimated average health expenditures per person on selected health services, Indigenous and non-Indigenous people, by remoteness, 2001–02

Funding of health services

Funding for health goods and services for Aboriginal and Torres Strait Islander people is presented in Table 3.15.5 below.

- Governments provided an estimated 93% of the funding used to pay for health goods and services for Aboriginal and Torres Strait Islander peoples during 2001–02 while non-government sources such as out-of-pocket spending and insurers provided the remainder of the funding (Table 3.15.5).
- The Australian Government's funding was similar for Indigenous and non-Indigenous Australians (43% and 48% respectively), while 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 (50%) of the funding for Aboriginal and Torres Strait Islander peoples, compared with 20% for non-Indigenous Australians. Non-government sources, on the other hand, provided a much lower share of the funding for services for Indigenous people (7%) than for non-Indigenous people (33%). 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 Aboriginal and Torres Strait Islander peoples on publicly provided services, particularly public hospitals which are funded by the states and territories and have a higher use by Indigenous Australians. 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 2001–02 were services to admitted patients in acute care hospitals ($683 million), community health services ($440 million) and non-admitted patient services in acute care hospitals ($142 million).
- For non-Indigenous people, the top three areas of funding were admitted patient services in acute care hospitals ($17,927 million), medical services ($11,113 million) and pharmaceuticals ($9,012 million). Of the admitted patient services funding, more than one-quarter (28%) was by private hospitals, compared with only 2% in the case of Indigenous people.

Table 3.15.5: Health funding for Indigenous and non-Indigenous people, by service type and broad sources of funding, current prices, 2001–02 ($ million)

	Australian Government funding		**State/territory government funding**		**Non-government funding**		**Total funding = total expenditure**	
Health good or service type	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**
Admitted patient services	294.0	7,977.0	373.4	5,628.8	15.1	4,321.6	682.5	17,927.4
Private hospitals	6.2	1,753.8	1.6	172.9	3.7	3,130.5	11.5	5,057.1
Public hospitals	287.8	6,223.1	371.8	5,456.0	11.4	1,191.1	671.0	12,870.2
Non-admitted patient services	58.9	1,459.8	75.6	1,484.3	7.9	172.4	142.4	3,116.5
Emergency departments	13.9	307.3	18.8	273.6	2.0	34.7	34.6	615.7
Other services	45.1	1,152.4	56.8	1,210.7	5.9	137.7	107.8	2,500.8
Public (psychiatric) hospitals	—	0.2	23.6	394.6	1.1	18.2	24.7	413.0
Medical services	84.5	8,876.3	—	—	15.1	2,236.2	99.6	11,112.5
Community health services(a)	167.7	40.5	271.9	2,762.5	0.3	7.5	439.9	2,810.5
Dental services (private)(b)	1.5	349.1	—	—	20.3	3,385.1	21.8	3,734.2
Other professional services	6.6	556.5	—	—	10.2	1,695.9	16.9	2,252.4
Pharmaceuticals	36.0	4,690.2	1.5	0.7	28.7	4,320.8	66.2	9,011.6
Services for older people	30.5	3,379.2	11.7	420.0	7.7	792.4	49.9	4,591.6
Patient transport	12.6	121.0	47.6	327.7	2.6	443.9	62.8	892.7
Public health activities	31.2	557.5	41.3	472.3	—	—	72.5	1,029.9
Other health services(c)	47.9	1,958.0	39.1	719.2	22.5	3,139.3	109.6	5,816.6
All health goods and services	**771.5**	**29,965.2**	**885.7**	**12,210.2**	**131.4**	**20,533.5**	**1,788.6**	**62,708.9**
Share of total funding	*43.1*	*47.8*	*49.5*	*19.5*	*7.3*	*32.7*	*100.0*	*100.0*
Expenditure per person ($)	1,682.54	1,580.88	1,931.66	644.18	286.63	1,083.29	3,900.83	3,308.35
Ratio Indigenous:non-Indigenous	1.06:1		3.00:1		0.26:1		1.18:1	

(a) Includes funding of dental services by states and territories.

(b) Excludes funding of dental services by states and territories.

(c) Includes health administration (nec), aids and appliances, and other health services (nec).

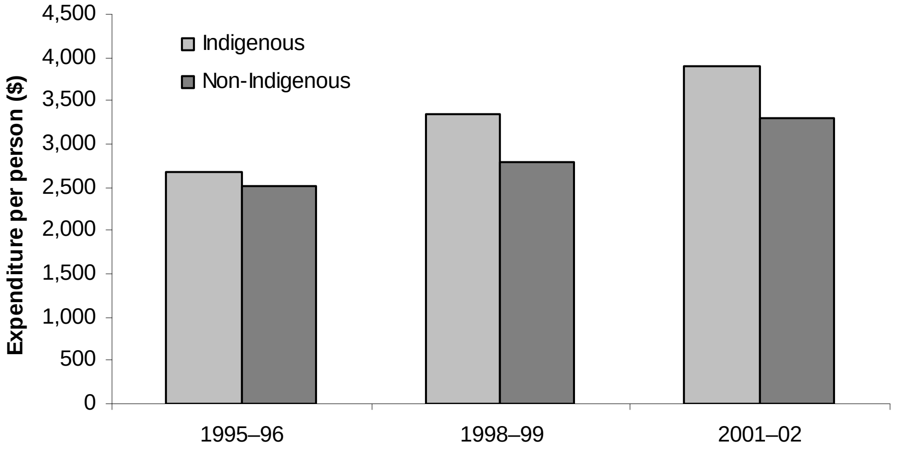
Source: AIHW 2005: Table 2.4.

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 and 2001–02. 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. While estimates for each of the three periods (1995–96, 1998–99 and 2001–02) have been included in the tables and figures below, discussion focuses on changes between 1998–99 and 2001–02.

Total government health expenditure

- Estimated expenditures on health for both Indigenous and non-Indigenous people increased between 1995–96, 1998–99 and 2001–02 (Figure 3.15.3). Estimated expenditure on health care for Aboriginal and Torres Strait Islander peoples rose by about 17% in constant prices between 1998–99 and 2001–02, while average expenditures for non-Indigenous people increased by around 19% per person in constant prices over the same period.
- The ratio of estimated Indigenous to non-Indigenous expenditures per person was 1.08:1, 1.22:1 and 1.18:1 in 1995–96, 1998–99 and 2001–02 respectively.



Note: Constant prices are calculated using the health price indexes from AIHW 2004:68.

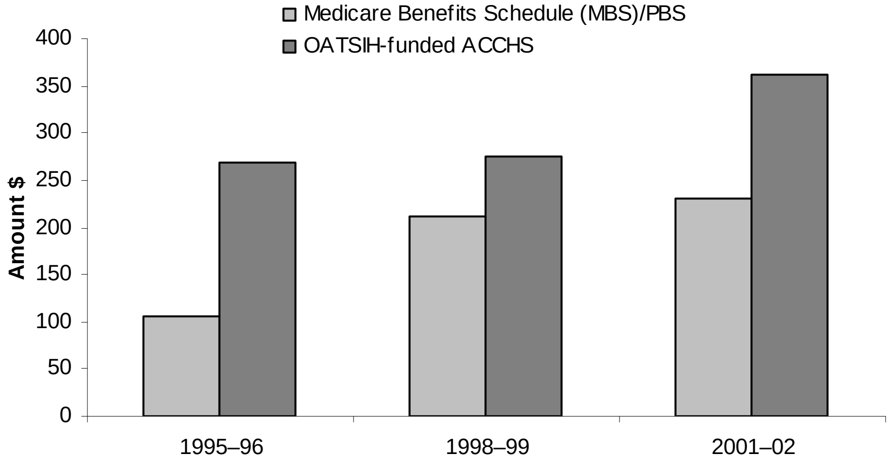
Source: AIHW 2005:Table 3.1.

Figure 3.15.3: Average health expenditure per person for Indigenous Australians and non-Indigenous people, in constant prices, 1995–96, 1998–99 and 2001–02

Australian Government expenditure

- Estimates of average expenditure per person by the Australian Government on its two largest mainstream programs—Medicare and PBS—increased by 9.8% from an estimated $211 in 1998–99 to $232 in 2001–02 (Figure 3.15.4).
- 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 that time, program funding for Indigenous health has increased by over $260 million, a real increase of 160% (see Figure 3.15.5). Total program funding of $485.8 million has been allocated in the 2006–07 Budget for Indigenous-specific health programs across the Health and Ageing portfolio, including the OATSIH funding of $377.97 million.

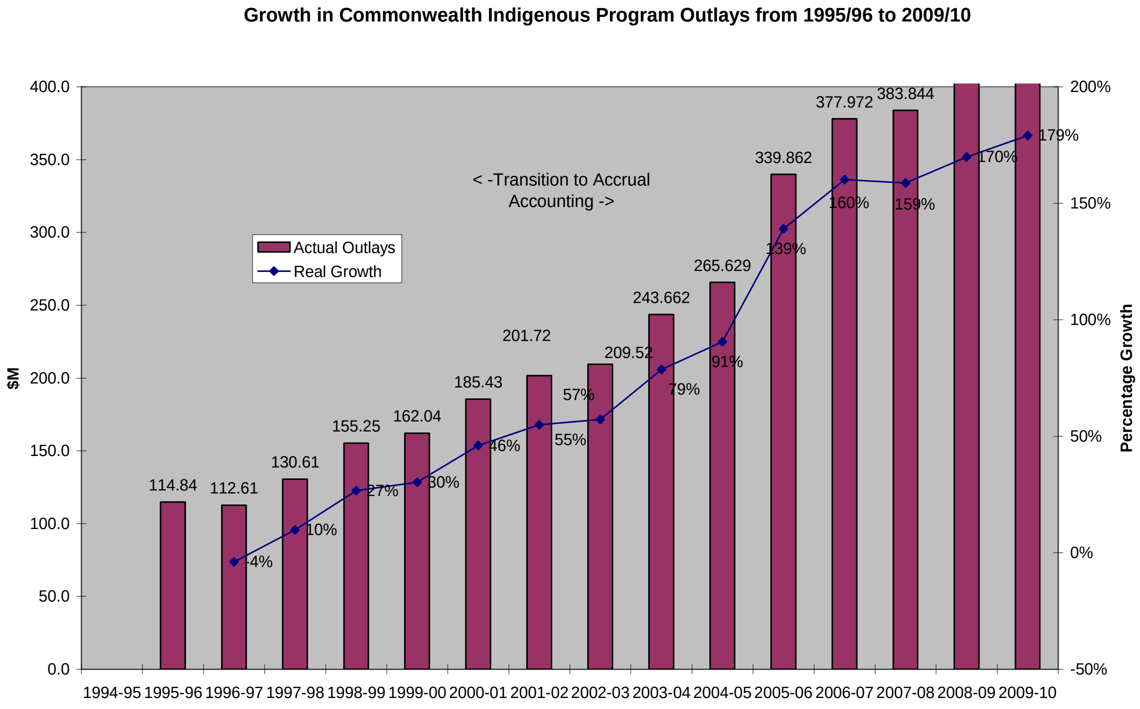
These funds are in addition to the funding provided through mainstream programs, such as Medicare and the PBS, which are becoming more responsive to meeting the health needs of Indigenous Australians.



Note: MBS/PBS estimates exclude MBS benefits paid for specified dental services and optometry services, which also attract MBS benefit payments from the Australian Government and do not include RPBS benefits for veterans.

Source: AIHW 2005:Table 4.8.

Figure 3.15.4: Average expenditure per person, incurred by the Australian Government on health for Aboriginal and Torres Strait Islander peoples in selected major programs, constant prices, 1995–96, 1998–99 and 2001–02 ($)



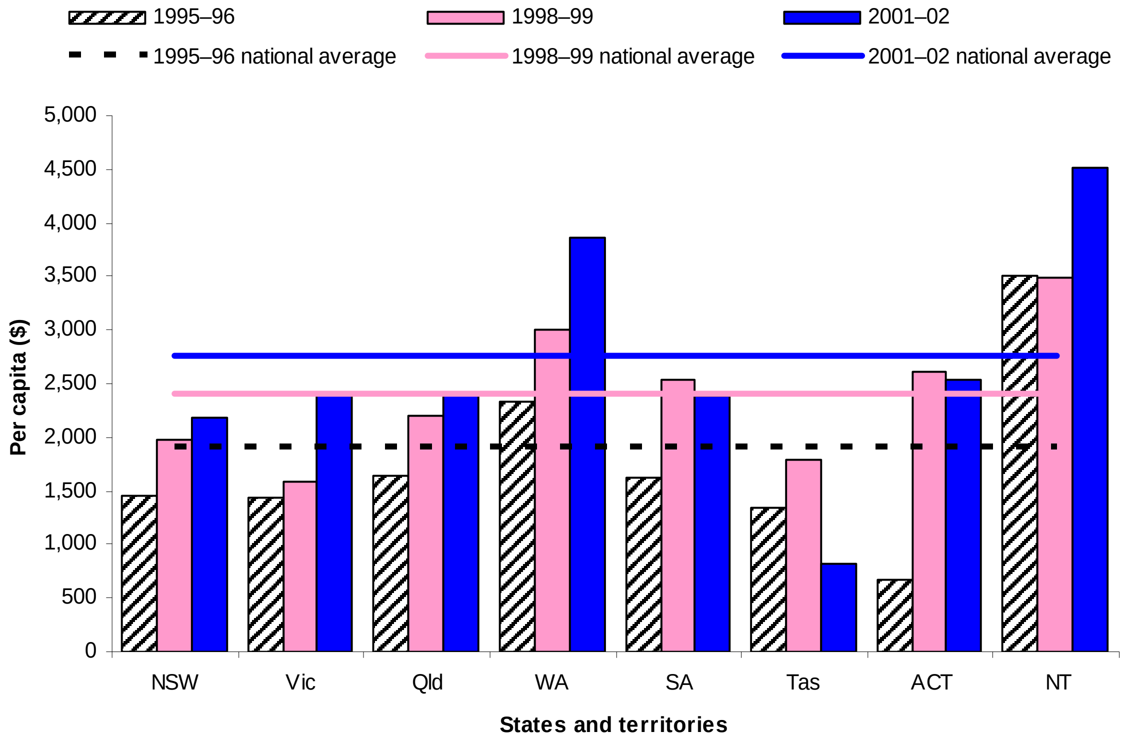
Source: Annual Reports/Portfolio Budget Statements

Figure 3.15.5: Estimated growth in expenditure by the Australian Government on Indigenous specific programs, 1995–96 to 2009–10

State/territory government expenditure

Average per person expenditures incurred by state and territory governments on health for Indigenous people over the period 1995–96 to 2001–02 are presented in Figure 3.15.6.

- Of the four jurisdictions with reported average per person expenditures above the national average in 1998–99 (Western Australia, South Australia, Australian Capital Territory and Northern Territory), only Western Australia and the Northern Territory remained above the national average in 2001–02.



Note: Constant price estimates for 1995–96 and 1998–99 have been calculated by applying specific implicit price deflators derived from the AIHW's health expenditure database to the reported estimates of expenditure (at current prices) for the individual areas of expenditure.

Sources: 1995–96 current price estimates—Deeble et al. 1998:120–3; 1998–99 current price estimates—AIHW 2001; 2001–02 unpublished state and territory health expenditure data.

Figure 3.15.6: Average expenditure per person, incurred by state/territory governments on health for Aboriginal and Torres Strait Islander peoples, constant prices,[(a)] 1995–96, 1998–99 and 2001–02 ($)

Funding

- There have been some shifts in the share of Australian Government, state and territory government and non-government funding per Indigenous persons between 1998–99 and 2001–02 (Table 3.15.6). State and territory governments' share of funding per Indigenous person has increased over this period (from 45% to 50%), while Australian Government and non-government shares of funding per Indigenous person have declined slightly (from 45% to 43% for Australian Government and from 10% to 7% for non-government).

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.

Table 3.15.6: Average funding per Indigenous person, constant prices, and shares of funding, by source of funds, 1995–96 to 2001–02

	Australian Government		State and territory governments		Non-government	
Year	Amount ($)	Share (%)	Amount ($)	Share (%)	Amount ($)	Share (%)
1995–96[(a)]	1,120.69	42.0	1,398.08	52.3	152.37	5.7
1998–99	1,512.08	45.3	1,503.00	45.0	322.58	9.7
2001–02	1,682.54	43.1	1,931.66	49.5	286.63	7.3

(a) There were substantial changes in estimating methods between 1995–96 and 1998–99.

Source: AIHW 2005: Table 3.3.

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 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, while 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 (nec) 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 people

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, Aboriginal and Torres Strait Islander people have been able to voluntarily identify through the Medicare system.

(continued)

Data quality issues (continued)

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 Aboriginal and Torres Strait Islander people through these programs are largely based on survey data. Future reports may be able to use the voluntarily identified Medicare data.

The national, continuing survey of general practitioner activity entitled Bettering the Evaluation and Care of Health (BEACH) is the principal source of data used in estimating the Aboriginal and Torres Strait Islander share of MBS and PBS benefits.

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.

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Deeble J, Mathers C, Smith L, Goss J, Webb R and Smith V 1998. Expenditures on health services for Aboriginal and Torres Strait Islander peoples. AIHW cat. no. HWE 6. Canberra: AIHW, Department of Health and Family Services and National Centre for Epidemiology and Population Health.

3.16 Recruitment and retention of clinical management staff

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 data collection, the Rural Workforce Agency National Minimum Dataset, 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 140 Australian Government funded Aboriginal and Torres Strait Islander 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 Aboriginal and Torres Strait Islander primary health care services were between 97% and 99% during the period 2002–03 to 2004–05.

It should be noted 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.

Rural Workforce Agency National Minimum Dataset

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. It does not directly answer the broader retention and recruitment questions but will provide useful information for this measure.

GP data

The Department of Health and Ageing 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. 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 SLAs in the first group with far more people per doctor than several SLAs in the second group.

A voluntary indigenous identifier was introduced into the Medicare database from November 2002. This data item requires further development prior to its use in this context. As these data improve, it will be possible to utilise this identifier to undertake calculations of GP retention in areas by Indigenous status of clients, however, currently these data are not available.

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 Service Activity Reporting (SAR) data collection, collected by DoHA, and is presented below.

Recruitment by staff category

- As at the 30 June 2004, there were approximately 1,850 full-time equivalent (FTE) health (clinical) staff and 1,030 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 full-time equivalent vacancies at this time was 138 health staff and 24 administrative and support staff, which was 7.4% and 2.3% of total funded full-time equivalent positions.
- The highest number of health staff vacancies in 2004 were for Aboriginal Health Workers (50), followed by nurses (27) and social and emotional wellbeing workers (17) (Table 3.16.1).
- Occupations with the highest proportion of health staff vacancies out of funded full-time equivalent positions for that occupation were dentists (11.3%), allied health professionals (9.1%) and nurses (8.9%).

Table 3.16.1: Number and percentage of health (clinical) staff and administrative and support (management) staff vacancies in Aboriginal and Torres Strait Islander primary health care organizations, at 30 June 2004

Staff category	Number	Per cent[(a)]
Health staff		
Aboriginal Health Worker	50	7.4
Doctors and specialists	14	6.5
Nurses	27	8.9
Emotional and social wellbeing workers	17	8.0
Allied health professionals	2	9.1
Dentists	5	11.3
Dental support	4	7.4
Traditional healers	—	—
Substance use workers	4	4.6
Environmental health workers	—	—
Drivers/field officers	4	3.4
Other health staff	11	13.7
Total health/clinical	**138**	**7.4**
Administrative and support staff		
CEO/admin/managers	3	1.0
Secretaries	6	1.9
Accountants	1	0.8
Information/data	—	—
Trainers/educators	1	2.6
Other support staff	13	5.8
Total administrative and support staff	**24**	**2.3**
Total	**162**	**5.6**

(a) Number of funded FTE vacancies divided by the total FTE positions multiplied by 100.

Source: Service Activity Reporting unpublished data.

Recruitment by state/territory and remoteness

- The Northern Territory had the highest proportion of health staff vacancies of total full-time equivalent positions in Aboriginal and Torres Strait Islander primary health care organisations (10%), and Victoria and Tasmania had the lowest proportion of health staff vacancies (5%) (Table 3.16.2; Figure 3.16.1).
- As at 30 June 2004, very remote areas of Australia had the highest proportion of health staff vacancies of total positions funded in Aboriginal and Torres Strait Islander primary health care organisations (9.5%). This compared to around 6% in major cities and remote areas and 7% in inner and outer regional areas (Table 3.16.3; Figure 3.16.2). The highest proportion of administrative and support staff vacancies of total positions funded in Aboriginal and Torres Strait Islander primary health care organisations were in remote areas of Australia (3.6%). This compared to around 2% of vacancies in other areas of Australia.

Table 3.16.2: Number and percentage[(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 2004

	NSW and ACT[(b)]		Vic and Tas[(b)]		Qld		WA		SA		NT	
Staff category	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Health staff	36	8.5	9	4.6	22	7.3	19	5.2	16	7.9	36	10.0
Administrative and support staff	5	2.7	n.p.	n.p.	5	2.7	3	1.5	n.p.	n.p.	8	3.7
Total	**41**	**6.7**	**n.p.**	**n.p.**	**27**	**5.5**	**22**	**3.9**	**n.p.**	**n.p.**	**44**	**7.6**

n.p. Not published due to small numbers.

(a) Number of funded FTE vacancies divided by the total FTE positions multiplied by 100.

(b) Jurisdictions have been combined due to the small number of services

Source: Service Activity Reporting unpublished data.

Note: Number of administrative and support staff not available for Victoria, Tasmania and South Australia.

Source: Service Activity Reporting unpublished data.

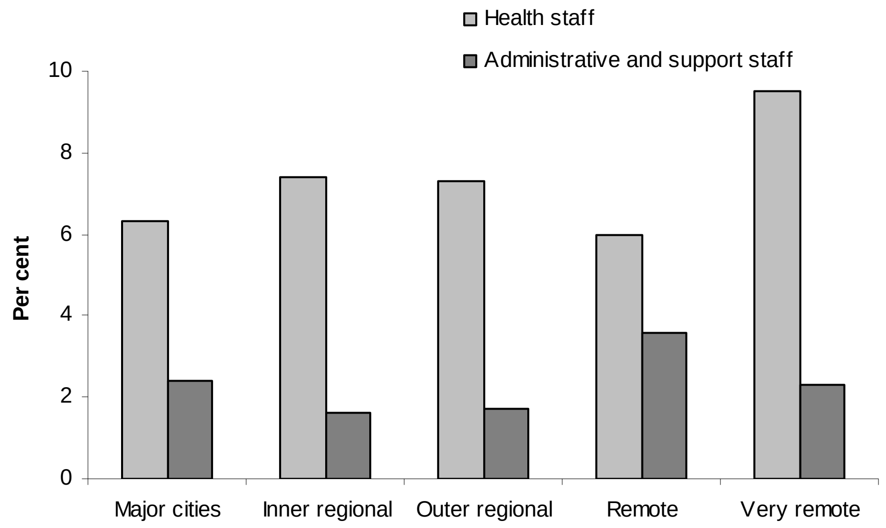
Figure 3.16.1: Proportion of health and administrative and support staff vacancies of total positions in Aboriginal and Torres Strait Islander primary health care organisations, by state/territory, at 30 June 2004

Table 3.16.3: Number and percentage[(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 2004

	Major cities		Inner regional		Outer regional		Remote		Very remote		Total	
Staff category	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Health staff	23	6.3	24	7.4	29	7.3	19	6.0	44	9.5	138	7.4
Administrative and support staff	4	2.4	3.	1.6	4	1.7	8	3.6	5	2.3	24	2.3
Total	**27**	**5.1**	**27**	**5.2**	**33**	**5.2**	**27**	**5.0**	**49**	**7.2**	**162**	**5.6**

(a) Number of funded FTE vacancies divided by the total FTE positions multiplied by 100.

Source: Service Activity Reporting unpublished data.



Source: Service Activity Reporting unpublished data.

Figure 3.16.2: Proporiton of health and administrative and support staff vacancies in Aboriginal and Torres Strait Islander primary health care organisations, by remoteness, at 30 June 2004

Recruitment by length of time vacant

- The majority of staff vacancies in Aboriginal and Torres Strait Islander health care organisations were vacant for between 4 and 25 weeks (62 health staff vacancies and 14 administrative and support staff vacancies) (Table 3.16.4).

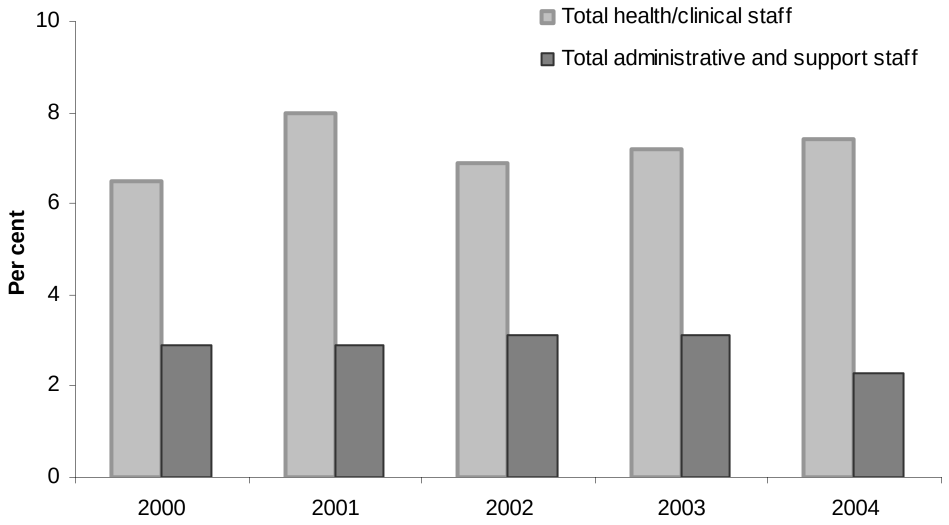
Table 3.16.4: Full-time equivalent health (clinical) staff and administrative and support (management) staff vacancies in Aboriginal and Torres Strait Islander primary health care organisations, by length of time vacant, at 30 June 2004

Staff category	1 week	2–3 weeks	4–25 weeks	26+ weeks
Health staff	7	9	62	60
Admin. and support staff	0	2	14	8
Total	**7**	**11**	**76**	**68**

Source: Service Activity Reporting unpublished data.

Time series analyses

- There has been little change in the proportion of administrative and support staff vacancies in Aboriginal and Torres Strait Islander health care organisations over the period June 2000 to June 2004 (Figure 3.16.3).



Note: Data are as at 30 June.

Source: AIHW analysis of Service Activity Reporting unpublished data.

Figure 3.16.3: Full-time equivalent health (clinical) staff and administrative and support (management) staff vacanices in Aboriginal and Torres Strait Islander primary health care organisations, 2000–2004

Retention

Information on the number of general practitioners (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 3.16.5 and Figure 3.16.4 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, Statistical Local Areas (SLAs) were grouped according to the percentage of the population living in these areas that was Indigenous.

- In 2004–05, there were approximately 14,509 full-time equivalent general practitioners 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 3.16.5).

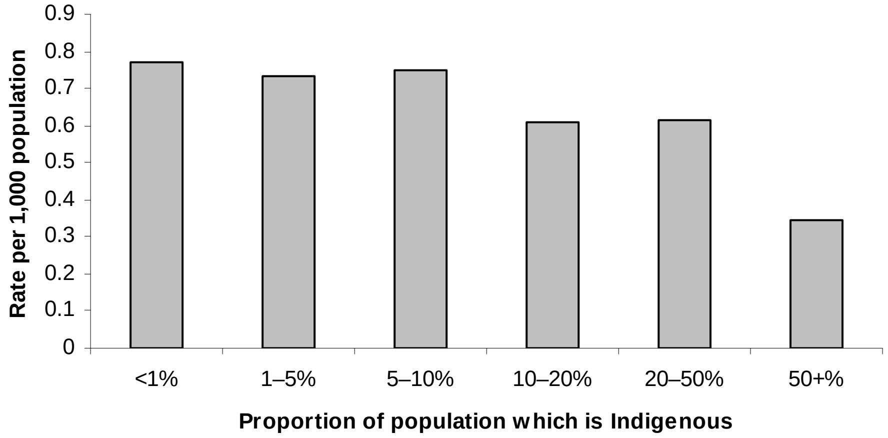
Care must be used in the interpretation of the data provided. There are two issues that have an effect on the quality of these data. First, the data include only those GPs claiming through the Medicare system. Consequently the full-time equivalent for doctors in remote areas, which are more likely to 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 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 3.16.5: Number of full-time equivalent GPs per 1,000 population, by areas of low through to high proportions of Indigenous populations, 2004–05

Proportion of SLA population which is Indigenous	Number of FTE GPs	Rate per 1,000 population
<1%	6,854	0.8
1–5%	6,623	0.7
5–10%	690	0.7
10–20%	233	0.6
20–50%	82	0.6
50+%	27	0.3
Total	**14,509**	**0.7**

Source: AIHW analysis of Australian Government Department of Health and Ageing unpublished data.



Source: AIHW analysis of Australian Government Department of Health and Ageing unpublished data.

Figure 3.16.4: Number of full-time equivalent GPs per 1,000 population, by areas of low through to high proportions of Indigenous populations, 2004–05

GPs by remoteness

Table 3.16.6 presents the number and proportion of full-time equivalent GPs by remoteness area.

- In 2004–05, 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 3.16.6: Number and proportion of full-time equivalent GPs, by remoteness, 2004–05

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 unpublished data.

GPs in rural areas

Table 3.16.7 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 2004.

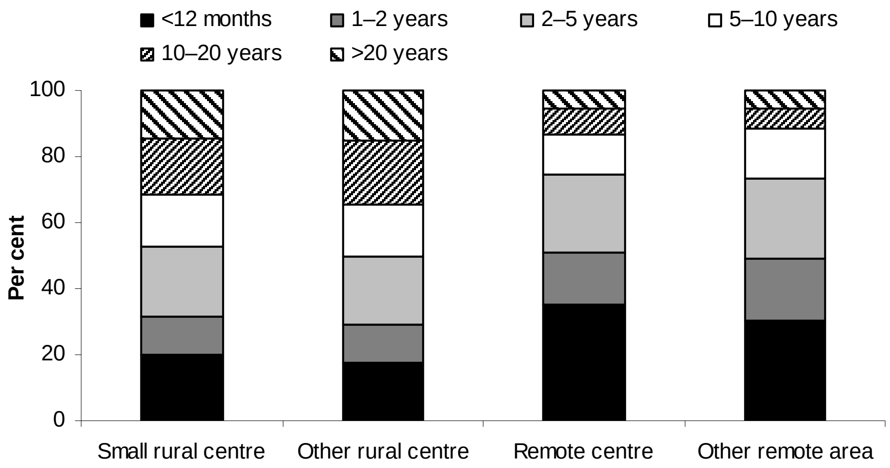
- As at 30 November 2004, the Rural Workforce Agency Annual Survey recorded a total of 3,801 general practitioners working in rural areas of Australia. Approximately 21% of general practitioners reported they had stayed in current practice for less than 12 months and only 14% had stayed in practice for more than 20 years (Table 3.16.7).
- 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 14% of general practitioners working in remote centres and other remote areas had stayed in practice for 10 years or more compared with 32% to 35% of general practitioners working in small rural centres and other rural centres (Figure 3.16.5).

Table 3.16.7: Number and proportion of GPs, by length of stay in current practice and remoteness, at 30 November 2004

RRMA[(a)] category	<12 months	1–2 years	2–5 years	5–10 years	10–20 years	>20 years	Total
				Number			
Small rural centre	263	149	273	205	217	193	**1,300**
Other rural centre	338	233	398	312	382	290	**1,953**
Remote centre	100	44	67	34	22	16	**283**
Other remote area	81	49	65	39	17	14	**265**
Total	**782**	**475**	**803**	**590**	**638**	**513**	**3,801**
				Proportion			
Small rural centre	20.2	11.5	21.0	15.8	16.7	14.8	**100.0**
Other rural centre	17.3	11.9	20.4	16.0	19.6	14.8	**100.0**
Remote centre	35.3	15.5	23.7	12.0	7.8	5.7	**100.0**
Other remote area	30.6	18.5	24.5	14.7	6.4	5.3	**100.0**
Total	**20.6**	**12.5**	**21.1**	**15.5**	**16.8**	**13.5**	**100.0**

(a) RRMA: Rural, remote and metropolitan areas.

Source: Rural workforce Agency Annual Survey unpublished data.



Source: AIHW analysis of Rural Workforce Agency Annual Survey unpublished data.

Figure 3.16.5: Proportion of GPs, by duration of practice and remoteness, at 31 November 2004

Additional information

Supply of health professionals

Data on the supply of health professionals are available from AIHW Labor Force Surveys. Data from the 2003 Medical Labour Force Survey and 2003 Nursing and Midwifery Labor Force Survey are summarised below.

- There were 56,207 registered medical practitioners working in medicine in Australia in 2003, a rise of 10% from 2000. The number of clinicians grew by 9% from 47,372 in 2000 to 51,819 in 2003. This is equivalent to an increase of 13 clinicians per 100,000 population (from 247 in 2000 to 261 in 2003). There was a 13% increase in specialist numbers between 2000 and 2003 (from 16,008 to 18,093), which equates to an increase of 7 specialists per 100,000 population (from 84 to 91). The number of specialists-in-training grew by 14% between 2000 and 2003 (from 5,162 to 5,892) and this equates to an increase of 3 per 100,000 population (AIHW 2005a).
- The supply of practitioners increased in all regions between 2000 and 2003, despite a decrease in average hours during that time. Increases in the full-time equivalent rate of supply ranged from 12 practitioners per 100,000 population in major cities and outer regional areas, to 5 practitioners per 100,000 population in very remote areas.
- The total number of nurses identified in 2003 by the Nursing and Midwifery Labour Force Survey was 273,378, comprising 218,615 registered nurses and 54,762 enrolled nurses. This represents a 5% increase in the number of nurses between 2001 and 2003. Overall, supply of nurses increased from 1,031 FTE nurses per 100,000 population in 2001 to 1,106 FTE nurses per 100,000 population in 2003 (AIHW 2005b).
- Across geographic regions in 2003, the level of supply ranged from 1,169 FTE nurses per 100,000 population in very remote areas to 1,029 FTE nurses in outer regional areas.

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)

Data quality issues

Service Activity Reporting data

Response rates to the SAR by Aboriginal and Torres Strait Islander primary health care services were between 97% and 99% during the period 2002–03 to 2004–05. The SAR collects service-level data on health care and health-related activities by survey questionnaire over a 12-month period. While 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 Aboriginal and Torres Strait Islander primary health care organisations

The Service Activity Reporting (SAR) data collection reports on the number of vacancies in Aboriginal and Torres Strait Islander 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 at 30 June and therefore does not include vacancies arising but filled during the course of a year.

Rural Workforce Agency National Minimum Dataset

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 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 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, Torres Strait Islander or both in the Medicare database. As these data improve, it will be possible to utilise this identifier to undertake calculations of GP retention in areas by Indigenous status of clients.

References

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AIHW 2005b. Nursing and Midwifery Labour Force Survey 2003. (National Health Labour Force Series no. 31). AIHW cat. no. HWL 31. Canberra: AIHW.

Health Workforce Queensland and New South Wales Rural Doctors Network 2005. Rural Workforce Agencies National Minimum Data Set Report as at 30 November 2004. Brisbane: Health Workforce Queensland.

Humphreys J, Jones MP, Jones J & Mara P 2002. Workforce retention in rural and remote Australia: Determining the factors that influence length of practice. Medical Journal of Australia 176(10): 472–6.

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 and National Dental Telephone Interview Survey), 2004–05 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, WAACHS
1.14 Life expectancy at birth	ABS population estimates based on the 2001 Census of Population and Housing; AIHW National Mortality Database
1.15 Perceived health status	NATSIHS, NATSISS
1.16 Median age at death	AIHW National Mortality Database
1.17 Social and emotional wellbeing	NATSIHS, NATSISS, AIHW National Hospital Morbidity Database, AIHW National Mortality Database, AIHW Community Mental Health Care Database, WAACHS, BEACH survey
1.18 Infant mortality rate	AIHW National Mortality Database
1.19 Perinatal mortality	ABS Deaths Registration Database
1.20 Sudden infant death syndrome	AIHW National Mortality Database
1.21 All causes age standardised deaths rates	AIHW National Mortality Database
1.22 Leading causes of mortality	AIHW National Mortality Database
1.23 Maternal mortality	National Perinatal Data Collection
1.24 Avoidable and preventable deaths	AIHW National Mortality Database
2.01 Access to functional housing with Utilities	CHINS, 2002 NATSISS
2.02 Overcrowding in housing	NATSIHS, NATSISS, Census of Population and Housing
2.03 Environmental tobacco smoke	NATSIHS
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)

(continued)

Appendix 1 (continued): List of measures and data sources

Measure	Data sources
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
2.07 Employment status including CDEP participation	NATSIHS
2.08 Income	NATSIHS, NATSISS
2.09 Housing tenure type	NATSIHS, NATSISS, Census of Population and Housing
2.10 Dependency ratio	ABS population estimates based on 2001 Census of Population and Housing
2.11 Single-parent families by age group	Census of Population and Housing, NATSIHS
2.12 Community safety	NATSISS, AIHW National Hospital Morbidity Database, AIHW National Mortality Database, Australian Institute of Criminology National Homicide Monitoring Program
2.13 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)
2.14 Child protection	AIHW National Child Protection Data collections
2.15 Transport	NATSIHS, NATSISS, Census of Population and Housing
2.16 Indigenous people with access to their traditional lands	NATSISS
2.17 Tobacco use	NATSIHS, 2004 National Drug Strategy Household Survey (NDSHS)
2.18 Tobacco smoking during pregnancy	AIHW National Perinatal Data Collection
2.19 Risky and high risk alcohol consumption	NATSIHS, AIHW National Hospital Morbidity Database, AIHW National Mortality Database, BEACH survey
2.20 Drug and other substance use including inhalants	NATSIHS, NATSISS, NDSHS, the AIHW Hospital Morbidity Database, AIC DUMA survey
2.21 Level of physical activity	NATSIHS
2.22 Dietary behaviours	NATSIHS
2.23 Breastfeeding practices	NATSIHS
2.24 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, Service Activity Reporting (SAR) database
3.04 Chronic disease management	SAR database
3.05 Differential access to key hospital procedures	AIHW National Hospital Morbidity Database
3.06 Ambulatory care sensitive hospital admissions	AIHW National Hospital Morbidity Databa
3.07 Discharge against medical advice	AIHW National Hospital Morbidity Databa

(continued)

Appendix 1 (continued): List of measures and data sources

Measure	Data sources
3.08 Access to mental health services	NATSIHS, BEACH survey, AIHW National Hospital Morbidity Database, AIHW National Community Mental health Care Database, SAR database
3.09 Aboriginal and Torres Strait Islander Australians in the health workforce	Census of Population and Housing
3.10 Access to services by types of service compared to need	NATSIHS, NATSISS, CHINS, AIHW National Hospital Morbidity Database, DoHA general practitioner and Medicare data, SAR database, AIHW health expenditure data
3.11 Access to prescription medicines	Indigenous Pharmaceutical Benefits Scheme (PBS) expenditure estimates based on the BEACH survey
3.12 Regular GP or health service	NATSIHS
3.13 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+)
3.14 Aboriginal and Torres Strait Islander people in Tertiary Education for health related disciplines	NCVER, Higher Education Statistics Collection
3.15 Expenditure on Aboriginal and Torres Strait Islander health compared to need	AIHW Expenditure Database
3.16 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)

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
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
ARF	acute rheumatic fever
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-AM	International statistical classification of disease and related health problems, 10th revision, Australian modification, 4th edition
ICD-10	International classification of diseases, 10th revision

ICPC-2	International Classification of Primary Care, 2nd edition
ICPC-2 PLUS	International Classification of Primary Care, extended 2nd edition
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
MBS	Medicare Benefits Schedule
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
nec	not elsewhere classified
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
SAR	Service Activity Reporting
SDQ	Strengths and Difficulties Questionnaire
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