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Australian Institute of  
Health and Welfare

Aboriginal and Torres Strait Islander  
Health Performance Framework 2012 report

**New South Wales**

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**Australian Institute of  
Health and Welfare**

*Authoritative information and statistics  
to promote better health and wellbeing*

# **Aboriginal and Torres Strait Islander Health Performance Framework**

**2012 report**

**New South Wales**

Australian Institute of Health and Welfare  
Canberra

Cat. no. IHW 88

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### **Australian Institute of Health and Welfare**

Board Chair

Dr Andrew Refshauge

Director

David Kalisch

Any enquiries about or comments on this publication should be directed to:

Communications, Media and Marketing Unit

Australian Institute of Health and Welfare

GPO Box 570

Canberra ACT 2601

Tel: (02) 6244 1032

Email: [info@aihw.gov.au](mailto:info@aihw.gov.au)

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# Abbreviations

ABS	Australian Bureau of Statistics
ACIR	Australian Childhood Immunisation Register
ACT	Australian Capital Territory
AGPAL	Australian General Practice Accreditation Limited
AHW	Aboriginal Health Worker
AIHW	Australian Institute of Health and Welfare
ANZDATA	Australian and New Zealand Dialysis and Transplant Registry
AODTS- NMDS	Alcohol and Other Drug Treatment Services National Minimum Data Set
ATSIHS	Australian Aboriginal and Torres Strait Islander Health Survey
BMI	body mass index
CDEP	Community Development Employment Projects scheme
CHINS	Community Housing and Infrastructure Needs Survey
CI <sub>s</sub>	confidence intervals
COAG	Council of Australian Governments
COPD	chronic obstructive pulmonary disease
DASR	Drug and Alcohol Services Reporting
DEEWR	(Australian Government) Department of Education, Employment and Workplace Relations
DoHA	(Australian Government) Department of Health and Ageing
DSNMDS	Disability Services National Minimum Data Set
ERP	estimated resident population
ESRD	end stage renal disease
FaCSIA	(Australian Government) Department of Families, Community Services and Indigenous Affairs
FaHCSIA	(Australian Government) Department of Families, Housing, Community Services and Indigenous Affairs
FTE	full-time equivalent
GP	general practitioner

GPA+	General Practice Accreditation Plus
GPMP	General Practice Management Plan
GSS	General Social Survey
HfL	Healthy for Life
HIV/AIDS	human immunodeficiency virus infection / acquired immunodeficiency syndrome
HPF	Aboriginal and Torres Strait Islander Health Performance Framework
ICD-10	International classification of diseases, 10 <sup>th</sup> revision
ICD-10-AM	International classification of disease and related health problems, 10 <sup>th</sup> revision, Australian modification, 4 <sup>th</sup> edition
IHO	Indigenous Housing Organisation
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
KPI	Key Performance Indicator
MBS	Medicare Benefits Schedule
MCEECDYA	Ministerial Council for Education, Early Childhood Development and Youth Affairs
NAGATSIHID	National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data
NAHA	National Affordable Housing Agreement
NAPEDCD	National Non-admitted Patient Emergency Department Care Database
NAPLAN	National Assessment Program – Literacy and Numeracy
NATSIHON	National Aboriginal and Torres Strait Islander Health Officials Network
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
NCMHCD	National Community Mental Health Care Database
NCVER	National Centre for Vocational Education Research
NDA	National Disability Agreement
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
NIRA	National Indigenous Reform Agreement
NMDS	National Minimum Data Set

NNDSS	National Notifiable Diseases Surveillance System
NOPSAD	National Opioid Pharmacotherapy Statistics Annual Data
NPAH	National Partnership Agreement on Homelessness
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
OSR	OATSIH Services Reporting
PES	Post-Enumeration Survey
PMRT	Performance Measurement and Reporting Taskforce
Qld	Queensland
SA	South Australia
SAAPNDC	Supported Accommodation Assistance Program National Data Collection
SAR	Service Activity Reporting
SEIFA	Socio-Economic Indexes For Areas
SHSC	Specialist Homelessness Services Collection
SIDS	sudden infant death syndrome
SIH	Survey of Income and Housing
STIs	sexually transmissible infections
TAFE	Technical and Further Education
Tas	Tasmania
TCA	Team Care Arrangement
VET	vocational education and training
Vic	Victoria
VII	Voluntary Indigenous Identification
WA	Western Australia
WHO	World Health Organisation

# List of symbols used in tables

–	nil or rounded to zero
0	zero
..	not applicable
n.a.	not available
n.e.c.	not elsewhere classified
n.f.d.	not further defined
n.p.	not publishable because of small numbers, confidentiality or other concerns about the quality of the data

# Executive summary

The *Aboriginal and Torres Strait Islander Health Performance Framework 2012* report for New South Wales finds areas of improvement in the health of Aboriginal and Torres Strait Islander people living in New South Wales, including:

- a 20% decline in avoidable mortality from 2001 to 2010
- a 25% decline in deaths due to circulatory disease, the leading cause of death for Indigenous Australians from 2001–2010
- a significant increase in health assessments recorded through Medicare since the introduction of the National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes in July 2009
- corresponding increases in allied health care services claimed by Indigenous Australians through Medicare since 1 July 2009. Indigenous Australians have higher rates of general practitioner management plans and team care arrangements than non-Indigenous Australians
- immunisation coverage for Indigenous children is similar to non-Indigenous children by age 2
- an increase in the proportion of pregnant women attending antenatal care
- a 15% decline in the rate of low birthweight between 2001 and 2009.

Areas of concern include:

- high rates of smoking during pregnancy (51%)
- lower rates of access to antenatal care in the first trimester of pregnancy
- more than half of those aged 18 and over in non-remote areas have a disability or long-term health condition
- mortality rates for chronic diseases are much higher for Indigenous Australians (almost 4 times the rate of non-Indigenous Australians for diabetes and almost twice the rate for circulatory diseases)
- a 286% increase in Indigenous Australians commencing end stage renal disease therapy since 1991 (currently 3 times the rate for non-Indigenous Australians)
- high rates of hospitalisations and deaths due to injury (particularly assault, suicide and transport accidents)
- barriers to accessing appropriate health care, such as cultural competency, continue to remain a problem
- lower access to procedures in hospitals
- a large unmet need for dental care for Indigenous children
- unemployment rates continue to remain higher for Indigenous people than for non-Indigenous people (21% compared with 4% in 2008).

# Key findings

A summary of the key findings from this report for New South Wales against the Aboriginal and Torres Strait Islander Health Performance Framework are outlined below. The main areas of improvement and areas of continuing concern are discussed for each tier of the framework (Health status and outcomes, Determinants of health, and Health system performance). A table of key statistics from the report is presented in Table S1.

## Health status and outcomes

### Areas of improvement

While the health status of Indigenous people in New South Wales is worse than their non-Indigenous counterparts against most indicators, significant health gains have been made in a number of areas:

#### Avoidable mortality

- There has been a 20% decline in the mortality rate for avoidable deaths between 2001 and 2010 for Indigenous persons living in New South Wales.

#### Circulatory diseases

- Deaths from circulatory diseases declined by 25% for the Indigenous population in New South Wales between 2001 and 2010.

#### Low birthweight

- There has been a significant decline in the proportion of babies born of low birthweight to Indigenous mothers in New South Wales between 2001 and 2009, and a significant narrowing of the gap between Indigenous and non-Indigenous Australians.

### Areas needing further work

#### Chronic disease

- The majority of Indigenous deaths in New South Wales in 2006–2010 were due to chronic diseases (for example, circulatory disease, cancer, diabetes, respiratory disease, kidney disease). Indigenous persons died at 4 times the rate of non-Indigenous Australians from diabetes and almost twice the rate from circulatory diseases.
- Diabetes is almost 3 times more prevalent among the Indigenous population than the non-Indigenous population in New South Wales based on data from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

#### Kidney disease

- The incidence rate of treated end-stage renal disease (ESRD) for Indigenous people living in New South Wales and the Australian Capital Territory combined in 2008–2010 was about 3 times the rate for non-Indigenous people, and has increased by 286% between 1991 and 2010.

## **Injury**

- Hospitalisations for assault were more than 6 times the rate for non-Indigenous Australians during 2008–10. Indigenous Australians were almost three times as likely to be hospitalised for intentional self-harm as non-Indigenous Australians in New South Wales.

## **Disability**

- In 2008, more than half (60%) of Indigenous Australians aged 18 and over in non-remote areas of New South Wales had a disability or long-term health condition. Of these, about 11% had a profound or severe core activity limitation, which was more than twice the rate of non-Indigenous Australians.

## **Oral health**

- The mean number of decayed teeth among Aboriginal and Torres Strait Islander children in New South Wales was around twice that for non-Indigenous children, indicating a large unmet need for dental care.

# **Determinants of health**

## **Areas needing further work**

### **Smoking**

- In 2008, 47% of Indigenous persons aged 15 and over in New South Wales were current daily smokers, which was almost three times the rate for non-Indigenous persons.

### **Smoking during pregnancy**

- In 2009 in New South Wales, 51% of Indigenous mothers smoked during pregnancy. Indigenous mothers were more than 4 times as likely as non-Indigenous mothers to smoke during pregnancy.

### **Risky alcohol consumption**

- In 2004–05, an estimated 49% of Indigenous persons aged 18 and over in New South Wales reported drinking alcohol at risky/high risk levels in the past 12 months. This was higher than the proportion for non-Indigenous persons in New South Wales (37%) and for Indigenous persons nationally (47%).

### **Physical activity, nutrition, overweight & obesity**

- In 2004–05, 54% of Indigenous people aged 15 and over reported their physical activity level as sedentary, compared with 35% of non-Indigenous persons of the same age in New South Wales.
- In 2008, 43% of Aboriginal and Torres Strait Islander children aged 4–14 in non-remote areas of New South Wales reported no usual daily vegetable intake and 74% reported no usual daily fruit intake.
- About 38% of Indigenous persons aged 18 and over in New South Wales were obese in 2004–05 compared with 18% of non-Indigenous persons.

## **Unemployment**

- Unemployment rates continue to remain higher for Indigenous people in New South Wales than for non-Indigenous Australians (21% compared with 4% in 2008) and are higher than the national rate of unemployment for Indigenous people (17%).

## **Income**

- In 2008, around half (52%) of Aboriginal and Torres Strait Islander people living in New South Wales were in the bottom 20% of mean equivalised household incomes. This compared with 21% of non-Indigenous persons in New South Wales.

## **Transport**

- In 2006, over one-quarter (28%) of Indigenous households in New South Wales reported that they did not have ready access to motor vehicles.
- In 2008, about 12% of Aboriginal and Torres Strait Islander people aged 15 and over reported that they often had difficulty, or could not get to places when needed.

## **Community safety**

- Aboriginal and Torres Strait Islander people are more likely to experience exposure to violence, child abuse and neglect, and contact with the criminal justice system (including imprisonment) than other Australians in New South Wales and across Australia.

# **Health system performance**

## **Areas of improvement**

### **Chronic disease detection and management**

- There has been a significant increase in health assessments provided to Indigenous Australians in New South Wales since the introduction of the National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes in July 2009.
- There has also been an increase in the total number of allied healthcare services claimed through Medicare by Indigenous Australians in New South Wales between 2009–10 and 2010–11 from 78,084 to 99,862 services.
- Rates of general practitioner management plan claims (GPMPs) and team care arrangements (TCAs) were nearly twice as high for Indigenous Australians compared with non-Indigenous Australians in New South Wales in 2010–11.

### **Antenatal care**

- The proportion of Indigenous women accessing antenatal care at least once during pregnancy has significantly increased in New South Wales between 1998 and 2009, and there has been a significant narrowing of the gap between Indigenous and non-Indigenous people. In 2009, 98% of Aboriginal and Torres Strait Islander women accessed antenatal care at least once during their pregnancy.

### **Immunisation**

- Immunisation coverage rates for Indigenous children in New South Wales are close to those for other children by age 2 at about 93%.

## **Areas needing further work**

### **Access to health care**

- In 2008 in New South Wales, 22% of Indigenous Australians aged 15 and over reported having problems accessing dentists, 11% reported problems accessing doctors, and 6% reported problems accessing hospitals.
- Indigenous Australians had lower rates of hospitalisations with a procedure recorded than non-Indigenous Australians in New South Wales.
- Indigenous Australians resident in New South Wales were discharged from hospital against medical advice at almost 4 times the rate of non-Indigenous Australians between July 2008 and June 2010.

### **Screening**

- Breast cancer screening rates in New South Wales for Indigenous women aged 50–64 years are lower than for other women of this age (37% compared with 54% in 2008–09).

### **Health workforce**

- Aboriginal and Torres Strait Islander people are under-represented in training for various health professions. In 2010, 2.2% of undergraduate students enrolled in, and 1.5% of undergraduate students who had completed, health-related courses in New South Wales were Aboriginal and/or Torres Strait Islander.

**Table S1: Key measures of Aboriginal and Torres Strait Islander health, New South Wales and national<sup>(a)</sup>**

Topic	Measure—Indigenous population	National	New South Wales					
		Current period	Current period			Trends		
		Indig	Indig	Non-Indig	Gap <sup>(b)</sup>	Indig	Non-Indig	Gap <sup>(b)</sup>
<b>Health status and outcomes</b>								
Low birthweight	Proportion of low-birthweight liveborn babies per 100 live births (2007–2009)	12.3	11.5*	5.6*	5.9	↓ <sup>(c)</sup>	↓ <sup>(c)</sup>	↓
Hospitalisations	Age-standardised hospitalisation rate for total hospitalisations (excluding dialysis) per 1,000 population (2008–09 to 2009–10)	408.5	351.6*	287.8*	63.8	↑	↑	↑
Disease incidence and prevalence	Proportion (age-standardised) of persons reporting circulatory disease as a long-term condition (2004–05)	21.7	22.4*	16.4*	6.0	n.a.	n.a.	n.a.
	Proportion (age-standardised) of persons reporting diabetes a long-term condition (2004–05)	12.6	10.2*	3.7*	6.5	n.a.	n.a.	n.a.
	Age-standardised incidence rate of cancer per 100,000 population (2004–2008)	458.8	505.6*	419.9	85.7	n.a.	n.a.	n.a.
	Age-standardised incidence rate of end-stage renal disease per 100,000 population (2008–2010)	68.3	29.3*	9.7*	19.6	↑	↑	↑
Self-assessed health status	Proportion (age-standardised) of persons aged 15 and over reporting very good/excellent health (2007–08)	37.9	37.1*	56.4*	–19.3	n.a.	n.a.	n.a.
Community functioning	Recognises homeland (2008)	72	65	..	..	n.a.	..	..
	Speaks an Indigenous language (2008)	19	3	..	..	n.a.	..	..
	Lived in 1 dwelling in last 12 months (2008)	78	81	..	..	n.a.	..	..
	Not a victim of physical or threatened violence in the last 12 months (2008)	75	75	..	..	n.a.	..	..
	Adult participated in sport/social/community activities in last 3 months (2008)	89	85	..	..	n.a.	..	..
Social & emotional wellbeing	Proportion of persons reporting high/very high levels of psychological distress (2008)	31.7	33.2	n.a.	n.a.	n.a.	n.a.	n.a.
Disability	Age-standardised proportion of persons aged 18 and over with a profound or severe core activity limitation, non-remote (2008)	9.9	10.9*	4.5*	6.4	n.a.	n.a.	n.a.

(continued)

**Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, New South Wales and national<sup>(a)</sup>**

Topic	Measure—Indigenous population	National	New South Wales					
		Current period	Current period			Trends		
		Indig	Indig	Non-Indig	Gap <sup>(b)</sup>	Indig	Non-Indig	Gap <sup>(b)</sup>
Oral, ear and eye health	Mean number of decayed teeth for children aged 5–6 (2007)	n.a.	2.22*	1.03*	1.19	n.a.	n.a.	n.a.
	Proportion of children aged 0–14 with ear/hearing problems (2008)	8.6	9.6	n.a.	n.a.	n.a.	n.a.	n.a.
	Prevalence of low vision in eligible Indigenous adults (2008)	9.4	5.7	..	..	n.a.	..	..
	Prevalence of blindness in eligible Indigenous adults (2008)	1.9	2.4	..	..	n.a.	..	..
Mortality	Life expectancy at birth, males (2005–2007)	67.2	69.9*	78.7*	–8.8	n.a.	n.a.	n.a.
	Life expectancy at birth, females (2005–2007)	72.9	75.0*	82.5*	–7.5	n.a.	n.a.	n.a.
	Infant mortality rate per 1,000 liveborn infants (2006–2010)	8.1	6.5*	4.2*	2.3	—	—	—
	Child 0–4 mortality rate per 100,000 population (2006–2010)	217.5	156.8*	100.6*	56.2	—	—	—
	Perinatal mortality rate per 1,000 births (2006–2010)	12.0	10.5*	8.8*	1.7	n.a.	n.a.	n.a.
	Age-standardised mortality rate per 100,000 population (2006–2010)	1115.1	961.7*	598.3*	363.4	—	↓	—
	Age-standardised mortality rate for circulatory diseases per 100,000 population (2006–2010)	351.0	338.9*	203.9*	135.0	↓	↓	—
Age-standardised mortality rate for avoidable and preventable deaths (0–74) per 100,000 population (2006–2010)	519.4	381.6*	147.6*	234.0	↓	↓	—	
<b>Determinants of health</b>								
Housing	Proportion of people aged 15 and over living in overcrowded households (2008)	25.1	15.4*	5.3*	10.1	n.a.	n.a.	n.a.
Environmental tobacco smoke	Proportion of children aged 0–14 living in households with daily smokers who smoke at home indoors (2008 and 2007–08)	21.6	22.5*	8.3*	14.2	n.a.	n.a.	n.a.

(continued)

**Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, New South Wales and national<sup>(a)</sup>**

Topic	Measure—Indigenous population	National	New South Wales					
		Current period	Current period			Trends		
		Indig	Indig	Non-Indig	Gap <sup>(b)</sup>	Indig	Non-Indig	Gap <sup>(b)</sup>
Education	Apparent retention rate for year 7/8 to Year 12—males (2011)	46.1	36.7*	71.0*	-35.3	n.a.	n.a.	n.a.
	Apparent retention rate for year 7/8 to Year 12—females (2011)	51.3	49.0*	80.9*	-31.9	n.a.	n.a.	n.a.
	Apparent retention rate for year 11 to Year 12—males (2011)	66.4	65.7*	85.7*	-20.0	n.a.	n.a.	n.a.
	Apparent retention rate for year 11 to Year 12—females (2011)	68.5	71.8*	90.2*	-18.4	n.a.	n.a.	n.a.
	Proportion of persons aged 25–64 who had a post-school qualification (2008)	40.2	40.9*	63.4*	-22.5	n.a.	n.a.	n.a.
Literacy & numeracy	Proportion of Year 3 students achieving reading benchmark (2011)	76.3	85.0*	95.8*	-10.8	—	—	—
	Proportion of Year 3 students achieving writing benchmark (2011)	79.9	88.1*	96.9*	-8.8	—	↓	—
	Proportion of Year 3 students achieving numeracy benchmark (2011)	83.6	89.2*	96.8*	-7.6	—	—	—
Employment	Labour force participation rate (2008)	64.5	59.9*	77.5*	17.6	n.a.	n.a.	n.a.
	Unemployment rate (2008)	16.6	20.9*	4.0*	16.9	n.a.	n.a.	n.a.
Income	Proportion of persons aged 18 and over in the bottom 20% of equivalised gross weekly household income (2008)	49	52*	21*	31	n.a.	n.a.	n.a.
Transport	Proportion of households with at least one motor vehicle (2006)	71.9	71.8*	84.8*	-13.0	n.a.	n.a.	n.a.
Community safety and criminal justice	Proportion of persons aged 18 and over who reported they were a victim of physical or threatened violence in last 12 months (2008)	20.5	22.0*	9.3*	12.7	n.a.	n.a.	n.a.
	Age-standardised imprisonment rate per 100,000 adults (2011)	1,867.6	1,985.2*	146.4*	1838.8	↑	—	↑
	Rate of children aged 0–16 on child protection substantiations per 1,000 children (2010–11)	34.9	46.6*	5.3*	41.3	n.a.	n.a.	n.a.

(continued)

**Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, New South Wales and national<sup>(a)</sup>**

Topic	Measure—Indigenous population	National	New South Wales					
		Current period	Current period			Trends		
		Indig	Indig	Non-Indig	Gap <sup>(b)</sup>	Indig	Non-Indig	Gap <sup>(b)</sup>
Health behaviours	Proportion (age-standardised) of persons aged 15 and over who are current daily smokers (2008 and 2007–08)	44.6	46.5*	17.8*	28.7	n.a.	n.a.	n.a.
	Proportion (age-standardised) of persons aged 18 and over who drank at risky/high risk levels in last 12 months (2004–05)	47	49*	37*	12	n.a.	n.a.	n.a.
	Proportion of persons aged 18 and over who used illicit drugs in last 12 months (2008)	23.3	25.4	n.a	n.a.	n.a.	n.a.	n.a.
	Proportion (age-standardised) of persons aged 15 and over reporting sedentary levels of physical activity, non-remote areas (2004–05)	51	54*	35*	19	n.a.	n.a.	n.a.
	Age- standardised proportion of mothers who smoked during pregnancy (2009)	51.9	46.6*	11.4*	35.2	n.a.	n.a.	n.a.
	Proportion of infants (0–3 years) currently being breastfed (2008)	20.7	12.7	n.a	n.a.	n.a.	n.a.	n.a.
Overweight & obesity	Proportion (age-standardised) of persons aged 18 and over who are obese (2004–05)	33.7	37.6*	17.8*	19.8	n.a.	n.a.	n.a.
<b>Health System Performance</b>								
Early detection and prevention, health promotion	Age- standardised proportion of mothers who attended at least one antenatal care session (2009)	97.0	98.2	99.0	–0.8	↑	—	↓
	Proportion of 2 year olds fully vaccinated (2011)	92.3	92.9 <sup>(c)</sup>	92.6 <sup>(c)</sup>	0.3	n.a	n.a	n.a.
	Proportion of discrete Indigenous communities with at least one health promotion program (2006)	67.4	50.0	..	..	n.a.	..	..
	Age-standardised participation rates for women aged 50–69 in BreastScreen Australia programs (2008–09)	36.5	37.0 <sup>(c)</sup>	54.2 <sup>(c)</sup>	17.2	n.a.	n.a.	n.a.
	Rate per 1,000 of child 0–14 health checks (2010–11)	112.5	103.2	n.a.	n.a.	↑	n.a.	n.a.
	Rate per 1,000 of adult 15–54 health assessments (2010–11)	120.0	121.8	n.a.	n.a.	↑	n.a.	n.a.
	Rate per 1,000 of adult 55+ health assessments (2010–11)	209.3	203.0	n.a.	n.a.	↑	n.a.	n.a.

(continued)

**Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, New South Wales and national<sup>(a)</sup>**

Topic	Measure—Indigenous population	National	New South Wales					
		Current period	Current period			Trends		
		Indig	Indig	Non-Indig	Gap <sup>(b)</sup>	Indig	Non-Indig	Gap <sup>(b)</sup>
Chronic disease management/care planning	Age-standardised rate per 1,000 of General Practice Management Plans (GPMPs) (2010–11)	102	125*	69*	56	n.a.	n.a.	n.a.
	Age-standardised rate per 1,000 of Team Care Arrangements (TCAs) (2010–11)	83	109*	58*	51	n.a.	n.a.	n.a.
	Age-standardised rate per 1,000 of MBS allied health services provided (2010–11)	599	968*	688*	280	↑	n.a.	n.a.
	Age standardised proportions of whether person in non-remote areas have a written asthma action plan (2004–05)	17.7	31.0*	23.5*	7.5	n.a.	n.a.	n.a.
Access to hospital procedures	Age-standardised proportions of hospitalisations with a procedure recorded (2008–09 to 2009–10)	60.0	59.8*	81.6*	–21.8	n.a.	n.a.	n.a.
Potentially preventable hospital admissions	Age-standardised hospitalisations rates for potentially preventable hospital admissions (2008–09 to 2009–10)	137.3	70.7*	26.1*	44.6	n.a.	n.a.	n.a.
Governance and cultural competency	Age-standardised per cent for discharge from hospital against medical advice (excluding mental and behavioural disorders) (2008–09 to 2009–10)	2.0	1.9*	0.5*	1.4	n.a.	n.a.	n.a.
	Proportion of Aboriginal and Torres Strait Islander primary health care services that have representatives on external boards (2009–10)	38.6	46.0	..	..	..	..	..
	Proportion of Indigenous persons experiencing discrimination (2008)	27.3	24.6	..	..	..	..	..
	Proportion of Indigenous persons aged 15 and over experiencing problems accessing health services (2008)	29.9	30.7	..	..	..	..	..
Access to health services	Age-standardised rate per 1,000 population of MBS non-GP referred services claimed (2010–11)	6,376	7,433*	5,813*	1,620	n.a.	n.a.	n.a.
	Proportion aged 15 and over who had problems accessing a dentist (2008)	19.5	22.1	n.a.	n.a.	n.a.	n.a.	n.a.
	Proportion aged 15 and over who had problems accessing a doctor (2008)	9.5	10.9	n.a.	n.a.	n.a.	n.a.	n.a.
	Proportion aged 15 and over who had problems accessing a hospital (2008)	6.6	5.5	n.a.	n.a.	n.a.	n.a.	n.a.

(continued)

**Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, New South Wales and national<sup>(a)</sup>**

Topic	Measure—Indigenous population	National	New South Wales					
		Current period	Current period			Trends		
		Indig	Indig	Non-Indig	Gap <sup>(b)</sup>	Indig	Non-Indig	Gap <sup>(b)</sup>
Access to health services	Episodes of health care provided by Indigenous primary health care services (2010–11)	2,498,067	521,753	..	..	—	..	..
	Elective surgery waiting times in public hospitals—50 <sup>th</sup> percentile (days) (2010–11)	39	50	47	3	n.a.	n.a.	n.a.
	Emergency department waiting times—proportion meeting national benchmark (2010–11)	66	71	74	–3	n.a.	n.a.	n.a.
	Age-standardised community mental health care service contacts per 1,000 population (2009–10)	841.8	1,459.1*	231.7*	1227.4	n.a.	n.a.	n.a.
	Proportion of presentations to emergency departments which were after hours (2008–09 to 2009–10)	57.6	58.8	57.6	–1.2	n.a.	n.a.	n.a.
	Whether usually goes to the same GP/health service (2004–05)	91.0	88.3	n.a.	n.a.	n.a.	n.a.	n.a.
Accreditation	Per cent of hospital admitted patient care episodes in accredited hospitals (2008–09 to 2009–10)	95.8	85.0*	91.9*	–6.9	n.a.	n.a.	n.a.
	Proportion of Indigenous primary health care services accredited (2010–11)	70.9	72.5	..	..	n.a.	..	..
Workforce, training and resources	Indigenous health workforce as a proportion of the Indigenous population aged 15+ (2006)	2.0	2.3	..	..	n.a.	..	..
	Per cent of undergraduates enrolled in health related courses who were Indigenous (2010)	1.8	2.2	..	..	n.a.	..	..
	Per cent of VET students enrolled in health related courses who were Indigenous (2010)	4.7	6.3	..	..	n.a.	..	..
	Estimated health expenditure per person (2008–09)	\$4,758	\$3,700*	\$1,914*	\$1,786	n.a.	n.a.	n.a.

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

(a) National data are the total jurisdictions combined for which data are available/reliable for reporting.

(b) Gap is the rate difference (Indigenous rate minus non-Indigenous rate).

(c) Comparison is Indigenous and Other Australians (where Other includes Indigenous status not stated).

↑ Statistically significant increase in long-term trends presented (see relevant measure in body of report and Appendix table for time period).

↓ Statistically significant decrease in long-term trends presented (see relevant measure in body of report and Appendix table for time period).

— No significant change in long-term trends presented (see relevant measure in body of report and Appendix table for time period).

n.a. Time trends data not available or not reported.

.. Not applicable.

Note: Figures reported in the current period column should not be compared as many of the measures are based on different denominators.



# Introduction

This report provides information on a range of indicators on health status, determinants of health and the health system performance relating to Aboriginal and Torres Strait Islander people in New South Wales. The report is based on the *Aboriginal and Torres Strait Islander Health Performance Framework 2012 report, detailed analysis*, the fourth in a series of reports against the Aboriginal and Torres Strait Islander Health Performance Framework (HPF). Analysis presented in this report includes both jurisdiction-specific measures and their comparison with national measures.

Detailed tables to support the analysis presented in this report can be found in Appendix 2 in the form of Excel tables.

The HPF comprises three tiers:

**Tier 1 – Health status and outcomes.** This tier covers prevalence of health conditions (for example, circulatory disease, diabetes), human function (for example, disability), life expectancy and well-being and deaths. It aims to provide an overall indication of current health status and recent trends on a range of issues including child and maternal health, chronic diseases, injury, communicable diseases, and social and emotional wellbeing.

**Tier 2 – Determinants of health.** This covers determinants of health that focus on factors outside the health system that affect the health of Aboriginal and Torres Strait Islander people. This includes socioeconomic status (for example, income and education), environmental factors (for example, overcrowding), community capacity (for example, child protection), health behaviours (for example, risky alcohol consumption and dietary behaviours) and person-related factors (for example, prevalence of overweight and obesity). Such factors have been shown to have a strong association with both disease and ill health.

**Tier 3 – Health system performance.** This covers 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, continuity, 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, access 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 68 indicators that can be reported against at national level but not all can be reported for New South Wales due to data availability and quality issues. Information on why these indicators were selected is in the Aboriginal and Torres Strait Islander Health Performance Framework 2012 policy report (AHMAC 2012).

Tier 1 - Health status and outcomes		
<b>Health conditions</b> 1.01 Low birthweight infants 1.02 Top reasons for hospitalisation 1.03 Injury and poisoning 1.04 Respiratory disease 1.05 Circulatory disease 1.06 Acute rheumatic fever & rheumatic heart disease * 1.07 High blood pressure 1.08 Cancer 1.09 Diabetes 1.10 Kidney disease 1.11 Oral health 1.12 HIV/AIDS, hepatitis C and sexually transmissible infections	<b>Human function</b> 1.13 Community functioning 1.14 Disability 1.15 Ear health 1.16 Eye health	<b>Deaths</b> 1.20 Infant and child mortality 1.21 Perinatal mortality 1.22 All causes age standardised deaths rates 1.23 Leading causes of mortality 1.24 Avoidable and preventable deaths
	<b>Life expectancy and wellbeing</b> 1.17 Perceived health status 1.18 Social and emotional wellbeing 1.19 Life expectancy at birth	
Tier 2 - Determinants of health		
<b>Environmental factors</b> 2.01 Housing 2.02 Access to functional housing with utilities 2.03 Environmental tobacco smoke	<b>Community capacity</b> 2.10 Community safety 2.11 Contact with the criminal justice system 2.12 Child protection 2.13 Transport 2.14 Indigenous people with access to their traditional lands	<b>Health behaviours</b> 2.15 Tobacco use 2.16 Risky alcohol consumption 2.17 Drug and other substance use including inhalants 2.18 Physical activity 2.19 Dietary behaviours 2.20 Breastfeeding practices 2.25 Health behaviours during pregnancy
<b>Socioeconomic factors</b> 2.04 Literacy and numeracy 2.05 Education Outcomes for young people 2.06 Educational participation and attainment of adults 2.07 Employment 2.08 Income 2.09 Index of disparity		<b>Person-related factors</b> 2.22 Overweight and obesity
Tier 3 - Health system performance		
<b>Effective/appropriate/efficient</b> 3.01 Antenatal care 3.02 Immunisation 3.03 Health promotion 3.04 Early detection and early treatment 3.05 Chronic disease management 3.06 Access to hospital procedures 3.07 Selected potentially preventable hospital admissions 3.08 Cultural competency	<b>Accessible</b> 3.14 Access to services compared with need 3.15 Access to prescription medicines 3.16 Access to after-hours primary health care	<b>Capable</b> 3.19 Accreditation 3.20 Aboriginal and Torres Strait Islander people training for health related disciplines
	<b>Responsive</b> 3.09 Discharge against medical advice 3.10 Access to mental health services 3.11 Access to alcohol and drug services 3.12 Aboriginal and Torres Strait Islander Australians in the health workforce 3.13 Competent governance	<b>Continuous</b> 3.17 Regular GP or health service 3.18 Care planning for chronic diseases

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

\* Measures for which New South Wales data are unavailable, or data are not of sufficient quality for reporting.

Note: The Safe domain of Tier 3 is measured within the National Health Performance Framework.

## Demographic information

The preliminary estimated resident Aboriginal and Torres Strait Islander population of New South Wales as at 30 June 2011 was about 208,000 people (ABS 2012), accounting for almost one-third (31.1%) of Australia's Indigenous population. Indigenous people represent 2.9% of the New South Wales population, which is similar to the proportion of Indigenous people in the total Australian population (3.0%).

**Table 1: Preliminary estimated resident population by Indigenous status, New South Wales and Australia, 30 June 2011**

	Indigenous		Non-Indigenous		Total			
	Number	Per cent	Number	Per cent	Number	Per cent	Per cent Indig.	Per cent Non-Indig.
New South Wales	208,364	31.1	7,003,104	32.3	7,211,468	32.3	2.9	97.1
<b>Australia<sup>(a)</sup></b>	<b>669,736</b>	<b>100.0</b>	<b>21,654,197</b>	<b>100.0</b>	<b>22,323,933</b>	<b>100.0</b>	<b>3.0</b>	<b>97.0</b>

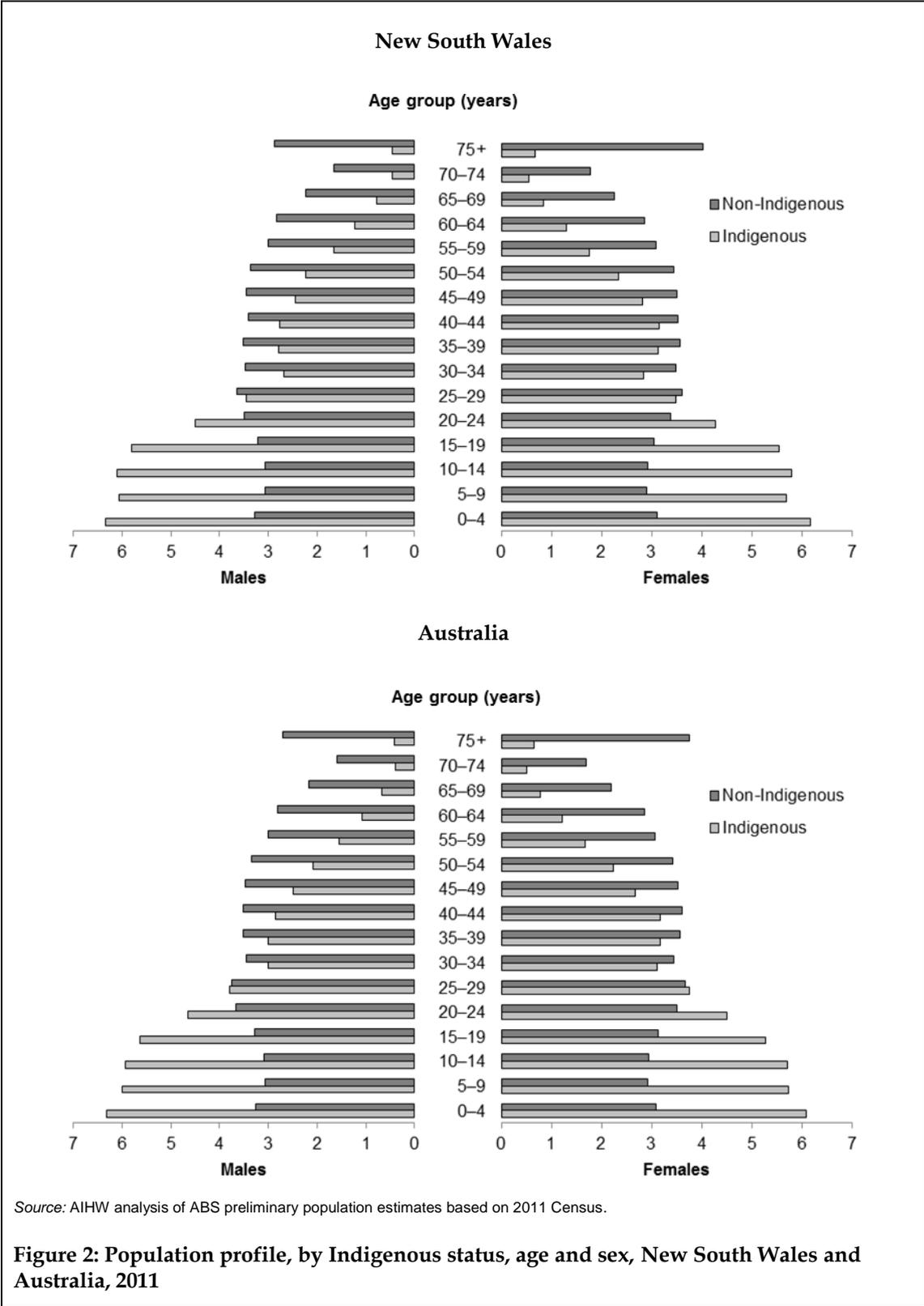
(a) Includes territories other than New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania, the Northern Territory and the Australian Capital Territory.

Source: AIHW analysis of ABS preliminary population estimates based on 2011 Census.

The Aboriginal and Torres Strait Islander population has an age structure that is significantly younger than that of other Australians. For example, in New South Wales, Aboriginal and Torres Strait Islander people aged under 15 constitute 36.1% of the Indigenous population, whereas this age group represents about 18.9% of the total New South Wales population. Conversely, those aged 65 and over comprise only 3.8% of the Indigenous population in New South Wales, compared with 14.5% of the total New South Wales population (Figure 2).

In New South Wales, the vast majority of Aboriginal and Torres Strait Islander people lived in *Major cities* (43.3%), *Inner regional* (33.2%) and *Outer regional* (18.4%) areas. Only about 5% of them lived in the *Remote* and *Very remote areas*. In comparison, about three-quarters of the total Indigenous population in Australia lived in *Major cities* (32.1%), *Inner regional* (21.4%) and *Outer regional* (21.9%) areas, with just under a quarter residing in *Remote* (9%) and *Very remote areas* (15%) (Table 2).

Note that Indigenous population estimates from the 2011 Census are not yet available by remoteness, therefore the latest available data by remoteness is for 2006 sourced from the 2006 Census which is reported in Table 2 below.



**Table 2: Estimated resident population by remoteness area and Indigenous status, New South Wales and Australia, 2006**

	Indigenous		Non-Indigenous		Total			Per cent Non-Indig.
	No.	Per cent	No.	Per cent	No.	Per cent	Per cent Indig.	
<b>New South Wales</b>								
Major cities	66,068	43.3	4,880,280	73.2	4,946,348	72.6	1.3	98.7
Inner regional	50,705	33.2	1,335,859	20.0	1,386,564	20.3	3.7	96.3
Outer regional	28,046	18.4	417,053	6.3	445,099	6.5	6.3	93.7
Remote	6,616	4.3	26,912	0.4	33,528	0.5	19.7	80.3
Very remote	1,250	0.8	3,298	0.0	4,548	0.1	27.5	72.5
<b>New South Wales</b>	<b>152,685</b>	<b>100.0</b>	<b>6,663,402</b>	<b>100.0</b>	<b>6,816,087</b>	<b>100.0</b>	<b>2.2</b>	<b>97.8</b>
<b>Australia</b>								
Major cities	165,804	32.1	13,996,454	69.4	14,162,258	68.4	1.2	98.8
Inner regional	110,643	21.4	3,975,150	19.7	4,085,793	19.7	2.7	97.3
Outer regional	113,280	21.9	1,854,024	9.2	1,967,304	9.5	5.8	94.2
Remote	47,852	9.3	267,199	1.3	315,051	1.5	15.2	84.8
Very remote	79,464	15.4	88,010	0.4	167,474	0.8	47.4	52.6
<b>Australia</b>	<b>517,043</b>	<b>100.0</b>	<b>20,180,837</b>	<b>100.0</b>	<b>20,697,880</b>	<b>100.0</b>	<b>2.5</b>	<b>97.5</b>

Source: AIHW analysis of ABS population estimates based on 2006 Census.

## Structure of this report

Part 1 presents analyses for Tier 1 – Health status and outcomes; Part 2 presents analyses for Tier 2 – Determinants of health, and Part 3 presents analyses for Tier 3 – Health system Performance. For each indicator, jurisdiction-specific data are analysed in comparison with national data, or data from a group of jurisdictions with sufficient data quality. Where possible, analyses are presented by age, sex and Indigenous status. Time trends are also presented where data are available.

This report presents the most recent data available at the time of writing, which varies by data source (see Table S1 for the most recent year/period for which key statistics are reported).

Detailed tables for each indicator are presented in Appendix 2 in the form of Excel tables. These include all tables included in this report, the underlying data used in Figures presented in this report, and tables which support statements made in the text of this report for which a table or figure is not presented (these are dot points with a reference to Appendix 2 in brackets at the end).

## Data sources and methodology

Data in this report come from more than 30 data sources (28 administrative data sets and 5 surveys). A description of all sources is in Appendix 1.

Health-related administrative data sets include the Australian Institute of Health and Welfare's (AIHW) National Hospital Morbidity Database, the AIHW National Mortality Database, the AIHW Community Mental Health Care Database, the AIHW National Perinatal Data Collection, the Australia and New Zealand Dialysis and Transplant Registry, the National Notifiable Diseases Surveillance System, the Service Activity Reporting Database and Medicare databases. Administrative data related to education include the Australian Bureau of Statistics (ABS) National Schools Statistics Collection, Department of Education, Employment and workplace relations (DEEWR) Higher Educations Statistics Collection and the National Centre for Vocational Education Research database. Community services related data include the AIHW National Child Protection Data collections.

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, and the Community Housing Infrastructure Needs Survey. Data from the Census of Population and Housing have also been used.

Age-standardised rates, rate differences and rate ratios have been used in many of the indicators to show how the Indigenous population fares relative to other Australians. 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 have used linear regression analysis to determine whether there have been significant increases or decreases in the observed rates. Many of the tables also include an asterisk (\*) to indicate that rates for the Indigenous and non-Indigenous populations are statistically different from each other at the  $p < 0.05$  level.

## Data limitations

There are a number of limitations of data in this report that should be noted. The main issue in most administrative data collections is the under-identification of Aboriginal and Torres Strait Islander people. 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. Appendix 1 presents a description of each data source and their main data limitations and data quality issues relating to Indigenous status.

For recent hospitalisations, New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory are considered as having data of sufficient quality to be included in the analyses. For longer-term hospital morbidity, data from only Queensland, Western Australia, South Australia and the Northern Territory are used. Longer-term mortality trend data are limited to three jurisdictions – Western Australia, South Australia and the Northern Territory, which have more than 10 years of adequate identification of Indigenous deaths in their recording systems. Queensland data from 1998 and NSW data from 2001 onwards are considered to be of adequate quality for mortality analyses.

Data on communicable diseases from the National Notifiable Disease Surveillance System have been assessed and found to have varying levels of completeness across diseases and jurisdictions. New South Wales had insufficient Indigenous identification for hepatitis B and hepatitis C, chlamydia and gonorrhoea. However, the state had adequate Indigenous identification to report syphilis for the current reporting period 2009–11.

The incompleteness of Indigenous identification means the number of hospital separations, deaths and disease notifications recorded as Indigenous result in underestimates of the true levels of hospitalisation and mortality.

Surveys are also subject to a number of data limitations due to sampling and non-sampling errors, such as bias in responses. 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.

## **Volatility due to small numbers and impact on Interpretation of changes over time**

Both small numbers and volatility in the data from year to year make it difficult to detect significant changes over time, and can greatly impact on any conclusions reached from a trend analysis. This is a particular problem when analysing trends for small populations such as the Indigenous population in the smaller jurisdictions.

Statistical methods can be used to model trend data in various ways and to determine whether there is a statistically significant trend. 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. Regression analysis has several advantages over other techniques for assessing trends. In general, regression modelling has the advantage of jointly considering the information contained in the series of rates (i.e. taking into account volatility from year to year), rather than considering each time point separately.

In this report, the average annual change in rates, rate ratios and rate differences are calculated using linear regression which uses the least squares method to calculate a straight line that best fits the data and returns an array that best describes the line. The simple linear regression line,  $Y = a + bX$ , or 'slope' estimate is used to determine the average annual change in the data over the period. The 95% confidence intervals (CIs) for the standard error of the slope estimate (average annual change) are used to determine whether the apparent increases or decreases in the data are statistically significant at the  $p < 0.05$  level.

The per cent change estimates presented in this report use the slope estimate to derive an end point in the time series, rather than the actual end point. This overcomes the problem of being reliant on the end data point to determine the significance of the trend. However the first data point in the time series is still used in the per cent change calculation and therefore care must be taken in selecting a sensible starting point.

Great care should be taken when assessing apparent changes over time, particularly those involving small numbers and a small number of data points.

## **Data improvement activities**

All jurisdictions are working towards improving the quality of Indigenous status in health data collections.

States and territories have agreed to improve Aboriginal and Torres Strait Islander data collection procedures in key data collections including implementation of the *National best*

*practice guidelines for the collection of Indigenous status in health data sets* published by the AIHW in 2008.

The AIHW is working with the states and territories in the development of an enhanced Perinatal National Minimum Data Set (NMDS) to include nationally consistent data items on antenatal care, smoking and alcohol use during pregnancy, and Indigenous status of the baby. Nationally consistent data items on smoking during pregnancy, gestational age at first antenatal visit, and Indigenous status of the baby have been added to the Perinatal NMDS (from 1 July 2009, 1 July 2010, and 1 July 2012, respectively). A data item on number of antenatal visits will be included in the Perinatal NMDS from 1 July 2013. Work is under way to progress data elements related to alcohol use in pregnancy.

The ABS and the AIHW work in partnership with jurisdictions to lead analysis of the level of Indigenous identification in key data sets. As part of this work, the AIHW conducted a study in 2011–12 to assess the level of under-identification in public hospitals data, which was a repeat of a study conducted in 2007. All states and territories have participated in the study to assess improvements in data quality. A report on the findings is expected to be published in April 2013, which will include new correction factors for the level of Indigenous under-identification in hospital separations data at the national, state/territory and remoteness levels.

As part of the data development work funded under the National Indigenous Reform Agreement (NIRA), the ABS will link Census records with death registration records to assess the level of identification in relation to the 2011 Census (this was undertaken for data from the 2006 Census and will be repeated).

The AIHW is also undertaking a project to develop an Enhanced Mortality Database by linking death registration records to several additional data sources that contain information on Aboriginal and Torres Strait Islander deaths (hospital, perinatal and residential aged care data). The enhanced data are expected to enable more accurate estimates of Aboriginal and Torres Strait Islander mortality, including life expectancy, to be made. Results from phase 1 of the project, which linked data for 2001 to 2006, produced national estimates of Aboriginal and Torres Strait Islander life expectancy at birth of 66.6 years for males and 72.7 for females, which was similar to the estimates produced by the ABS (AIHW 2012c).

## **Population data**

Indigenous population data are required when computing rates from administrative data collections. While the 2011 preliminary estimated resident population is the latest available data that gives an estimate of the number of Aboriginal and Torres Strait Islander people in the population, estimates are not yet available from the 2011 Census by remoteness or for years pre or post 2011. Denominators used to calculate proportions and rates in this report are therefore based on Indigenous population estimates and projections from the 2006 Census (ABS 2009a). The Census enumerated the Indigenous population from responses to a question on a person's Indigenous status. The Indigenous ERP for 2006 is computed using this enumerated figure, and adjusted for undercount based on results from the Post-Enumeration Survey (PES) as well as for non-response to the Indigenous status question (ABS 2009a). Population numbers for other years are projected based on assumed future levels of fertility, mortality and migration (ABS 2009a).

The use of Indigenous ERP based on the 2006 Census showed vastly different results in mortality time series to those published in previous national reports, which used 2001

census-based ERP. The implications of using 2006 census-based compared with 2001 census-based ERP were discussed in the 2010 state and territory reports on the Aboriginal and Torres Strait Islander Health Performance Framework.

## Statistical definitions

A number of statistic terms are used in this report. The definitions are:

*Incidence* is the number of new cases (of an illness or event, and so on) occurring during a given period.

*Prevalence* is the number or proportion (of cases, instances, and so forth) in a population at a given time.

*Crude rate* in this report refers to the number or proportion (of cases, instances, and so forth) in a population at a given time, unadjusted for age differences across the Indigenous and non-Indigenous populations.

*Age-standardised rate* in this report refers to a directly age-standardised rate in which the age-specific rates are multiplied by a constant population. This effectively removes the influence of the age structure on the summary rate to enable comparisons to be made between populations that have different age structures such as the Indigenous and non-Indigenous populations.

*Rate ratio* is calculated by dividing the rate for Indigenous Australians with a particular characteristic by the rate for non-Indigenous Australians with the same characteristic.

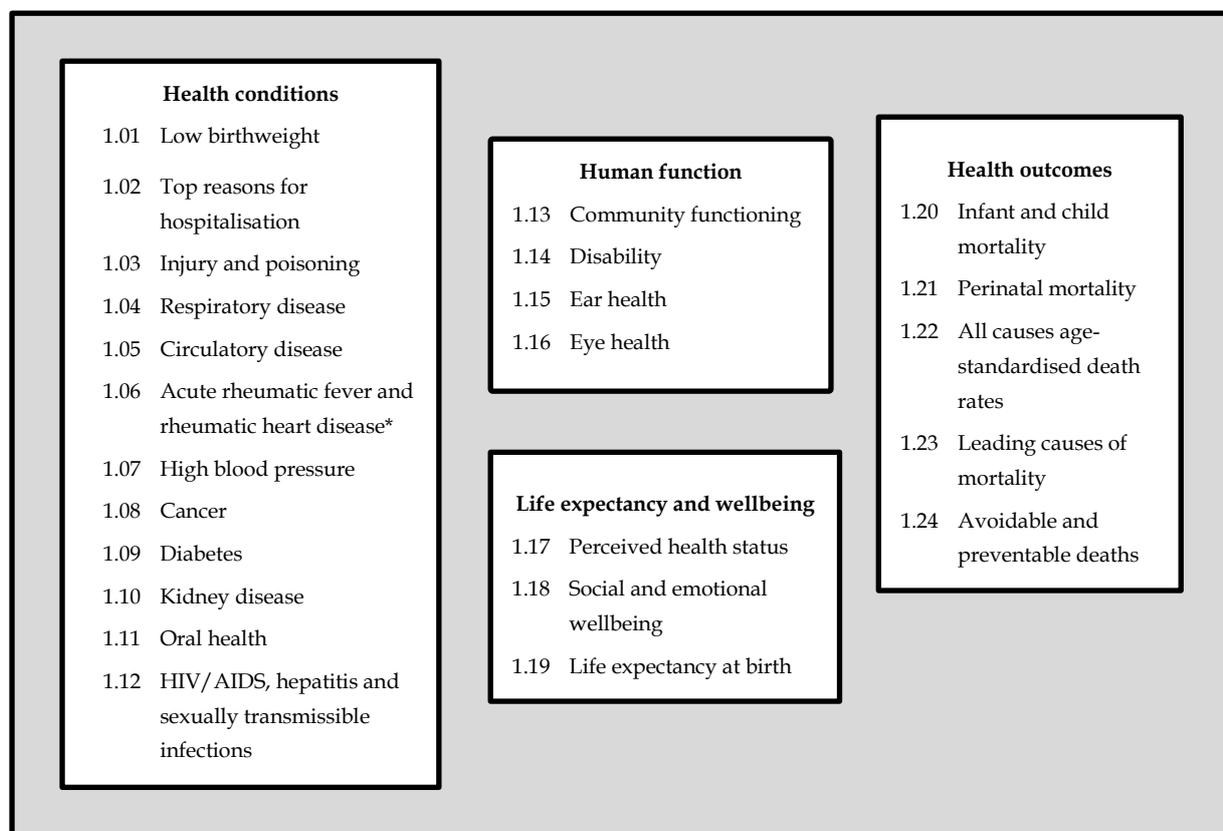
*Rate difference* is calculated by subtracting the rate for Indigenous Australians from the rate for non-Indigenous Australians for the characteristic of interest.

*Statistically significant difference*, for example between Indigenous and non-Indigenous or over time, is denoted as 'significant' in the text and denoted with a \* against relevant statistics in tables. The word 'significant' is not used outside its statistical context.

*Average annual change* is used for rates, rate ratios and rate differences to reflect the average annual change in these statistics over the specified period.

*Percentage change* is used for rates, rate ratios and rate differences and is the difference between the first year and the last year of the specified period based on the average annual change over the period.

# Part 1: Health status and outcomes



\* Data is not available for New South Wales for this indicator.

The first part of this report, Health status and outcomes, presents Tier 1 measures of the Aboriginal and Torres Strait Islander Health Performance Framework. It provides measures of the health status of Aboriginal and Torres Strait Islander people on a range of health issues. Data are presented on the health conditions that cause the highest morbidity and mortality among the Indigenous population. Comparisons with the non-Indigenous population and changes over time are examined to assess whether the gap is narrowing or widening. Tier 1 comprises four sections: Health conditions, Human function, Life expectancy and wellbeing, and Health outcomes.

## Health conditions

This section presents data for 12 measures that cover the leading causes of morbidity and mortality in the Indigenous population (such as injury, respiratory diseases, circulatory diseases, cancer, diabetes, kidney disease, oral health and sexually transmitted infections, or STIs), as well as low birthweight.

No data are currently available in New South Wales on incidence or prevalence of acute rheumatic fever or rheumatic heart disease, although data on hospitalisations for rheumatic heart disease are included in the measure on circulatory disease.

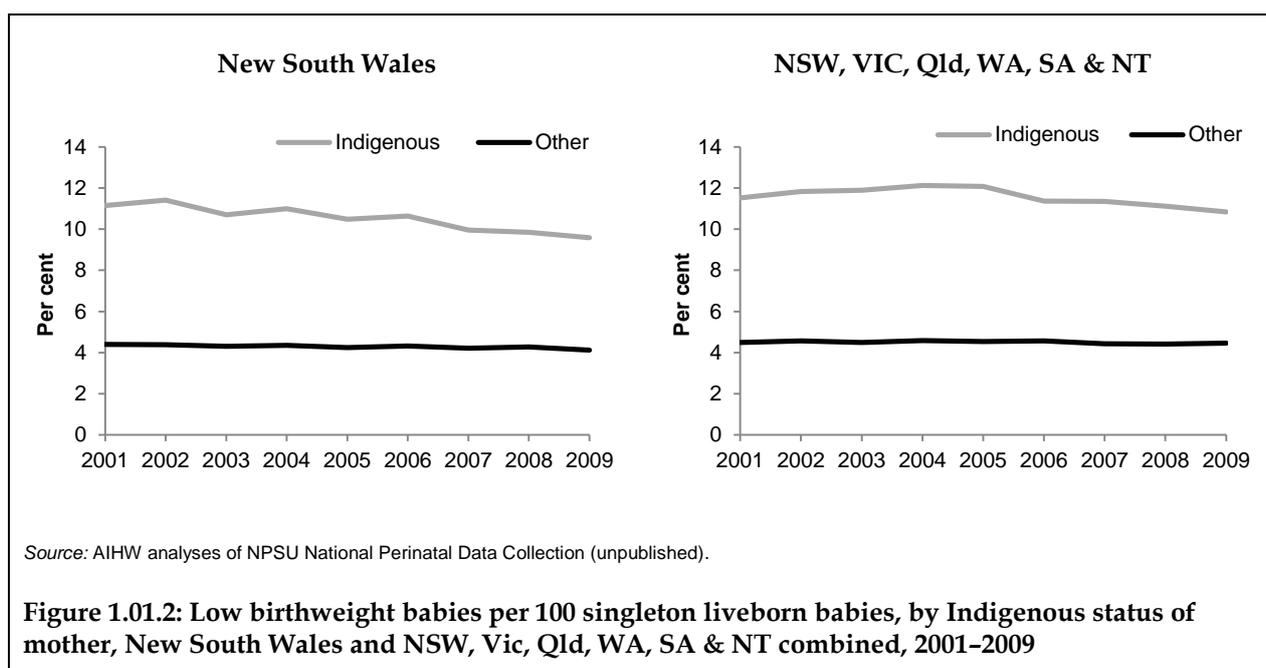
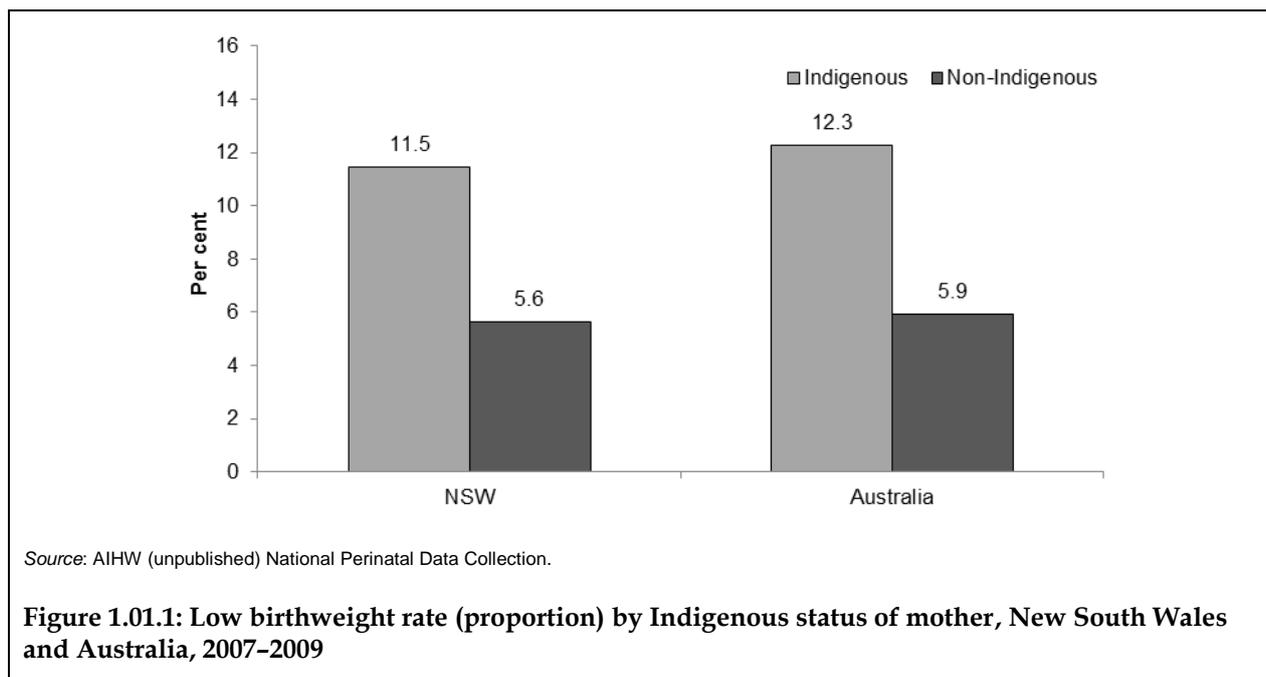
### 1.01 Low birthweight

Birthweight is a key indicator of infant health and a principal determinant of a baby's chance of survival and good health. For newborns, low birthweight (defined as less than 2,500 grams) poses a greater risk of lengthy hospitalisation after birth, the need for resuscitation, and death. Low birthweight is a risk factor for neurological and physical disabilities and for ill health in childhood, with the risk of adverse outcomes increasing with decreasing birthweight (Ford et al. 2003).

Data are presented on the proportion of low birthweight among babies born to Aboriginal and Torres Strait Islander mothers using data from the National Perinatal Data Collection.

#### Key findings

- Over the 3 years from 2007 to 2009 in New South Wales, liveborn babies born to Indigenous mothers were twice as likely to be of low birthweight as babies born to non-Indigenous mothers (11.5% compared with 5.6%) (Figure 1.01.1).
- These figures were slightly lower for Australia, however babies born to Indigenous mothers were still about twice as likely to be of low birthweight as babies born to non-Indigenous mothers (12.3% compared with 5.9%) (Figure 1.01.1).
- From 2001 to 2009 in New South Wales, the proportion of low birthweight singleton babies born to Indigenous and other Australian mothers decreased significantly by 0.21% and 0.03% per year respectively (Figure 1.01.2).
- Over the same period in New South Wales, Victoria, Western Australia, South Australia and the Northern Territory combined, there was a significant decrease of 0.11% per year in the proportion of low birthweight singleton babies born to Indigenous mothers and no significant change in the proportion of low birthweight babies born to other Australian mothers.



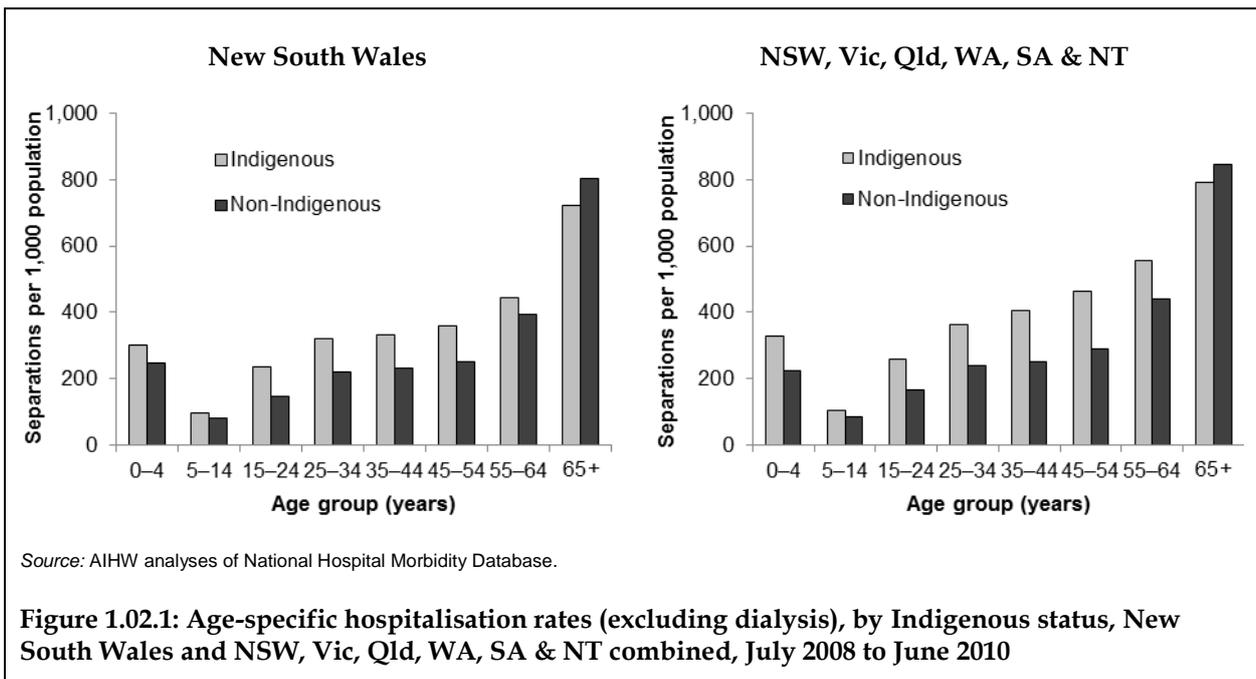
## 1.02 Top reasons for hospitalisation

Hospitalisation rates can be an indicator of the health of a population, although they only represent the most serious cases of ill health requiring inpatient hospital treatment (SCRGSP 2009). Rates of hospitalisation also indicate access to and use of hospital treatment, which is also affected by the availability of primary care and other services.

Data are presented on the leading causes of hospitalisation (at the International Classification of Diseases and Related Health Problems 10<sup>th</sup> Revision, Australian Modification (ICD-10 AM) Chapter level of diseases) among the Indigenous population compared with the non-Indigenous population.

## Key findings

- Between July 2008 and June 2010 in New South Wales, there were 88,760 hospitalisations (excluding dialysis) of Aboriginal and Torres Strait Islander people, and 4,221,521 hospitalisations of non-Indigenous people (Table 1.02.2, Appendix 2). Indigenous people in New South Wales were hospitalised at 1.2 times the rate of non-Indigenous people, which is similar to the rate ratio in the six jurisdictions combined (NSW, Vic, Qld, WA, SA &NT) (1.3 times).
- In New South Wales, when hospitalisations for dialysis are excluded, Indigenous people had higher hospitalisations rates than non-Indigenous Australians across all age groups, except for those aged 65 years and over. The greatest differences were for those aged 15–24 and 25–34, where Indigenous people were hospitalised at about 1.5 times to 1.6 times the rate of non-Indigenous people (Figure 1.02.1).
- The most common principal diagnosis for hospitalisations among Indigenous people in New South Wales excluding health conditions involving dialysis, was injury and poisoning (36.3 per 1,000), and diseases of the respiratory system (35.9 per 1,000). These were also the two most common principal diagnoses for hospitalisations among Indigenous Australians in the six jurisdictions combined.
- The greatest differences in hospitalisation rates between Indigenous and non-Indigenous Australians in New South Wales were for diseases of the respiratory system (rate difference 19.9 per 1,000 population) and mental and behavioural disorders (rate difference 17.1 per 1,000 population) (Table 1.02.1).
- From 2004–05 to 2009–10 in New South Wales, there was a significant increase in the total hospitalisation rates (excluding dialysis) for both Indigenous people and non-Indigenous people (an average yearly increase of 10.2 and 3.7 per 1,000, respectively) (Figure 1.02.2).
- In New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant increases in hospitalisation rates among Indigenous and non-Indigenous people over this period (an average yearly increase of 9.2 per 1,000 for Indigenous people and 4.1 per 1,000 for non-Indigenous people) (Figure 1.02.2).

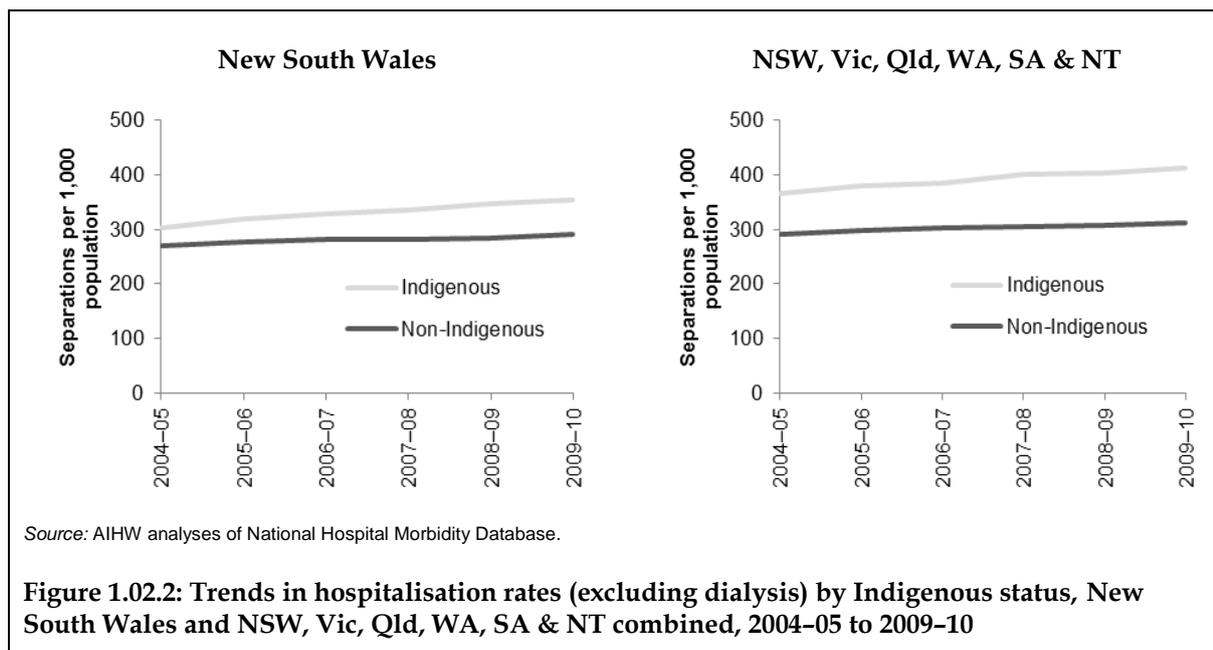


**Table 1.02.1: Hospitalisation rates per 1,000 by principal diagnosis and Indigenous status, New South Wales and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010, rate per 1,000**

Principal diagnosis	New South Wales				NSW, Vic, Qld, WA, SA & NT			
	Indig.	Non-Indig.	Rate ratio	Rate difference.	Indig.	Non-Indig.	Rate ratio	Rate difference
Injury & poisoning	36.3	22.8	1.6*	13.5*	46.9	23.5	2.0*	23.4*
Pregnancy and childbirth	30.0	20.8	1.4*	9.2*	33.0	21.8	1.5*	11.1*
Respiratory diseases	35.9	16.0	2.2*	19.9*	43.2	16.0	2.7*	27.3*
Digestive diseases	33.5	34.3	1.0	-0.8	36.1	37.1	0.97*	-1.0*
Symptoms, signs and abnormal findings	33.0	21.3	1.5*	11.7*	36.0	24.0	1.5*	12.0*
Mental and behavioural disorders	31.4	14.4	2.2*	17.1*	25.8	14.2	1.8*	11.6*
Circulatory diseases	31.1	19.4	1.6*	11.7*	33.9	19.8	1.7*	14.0*
Genitourinary Diseases	17.5	16.5	1.1*	1.0*	20.0	16.9	1.2*	3.1*
Skin diseases	7.8	4.9	1.6*	2.9*	13.2	5.7	2.3*	7.5*
Infectious and parasitic diseases	8.0	5.2	1.5*	2.7*	11.3	5.3	2.1*	5.9*
Endocrine, nutritional and metabolic diseases	11.9	5.9	2.8*	6.0*	20.0	6.9	2.9*	13.1*
Other	75.0	106.1	0.7*	-31.1*	89.2	118.8	0.8*	-29.6
<i>Subtotal</i>	<i>351.5</i>	<i>287.7</i>	<i>1.2*</i>	<i>63.8*</i>	<i>408.5</i>	<i>310.0</i>	<i>1.3*</i>	<i>98.5*</i>
Care involving dialysis	188.8	38.3	4.9*	150.4*	446.8	40.9	10.9*	405.9*
<b>Total</b>	<b>540.4</b>	<b>326.1</b>	<b>1.7*</b>	<b>214.3*</b>	<b>855.3</b>	<b>351.1</b>	<b>2.4*</b>	<b>504.2*</b>

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

Source: AIHW analyses of National Hospital Morbidity Database.



### 1.03 Injury and poisoning

Injury and poisoning are large contributors to Indigenous ill health, especially for younger people, and comprised 15% of the health gap between Indigenous and non-Indigenous Australians in 2003 (Vos et al. 2007). Various factors can affect a person’s risk of injury, including age, gender, and socioeconomic status. The incidence of intentional injury is much more common among Indigenous Australians than other Australians, reflecting issues including disadvantage, grief and discrimination (AHMAC 2006).

Injury data can be viewed in terms of the damage sustained to the body (for example, broken bones, head injuries), or by the external cause of the injury (for example, falls, poisoning and drowning), both of which are recorded by hospitals on admission.

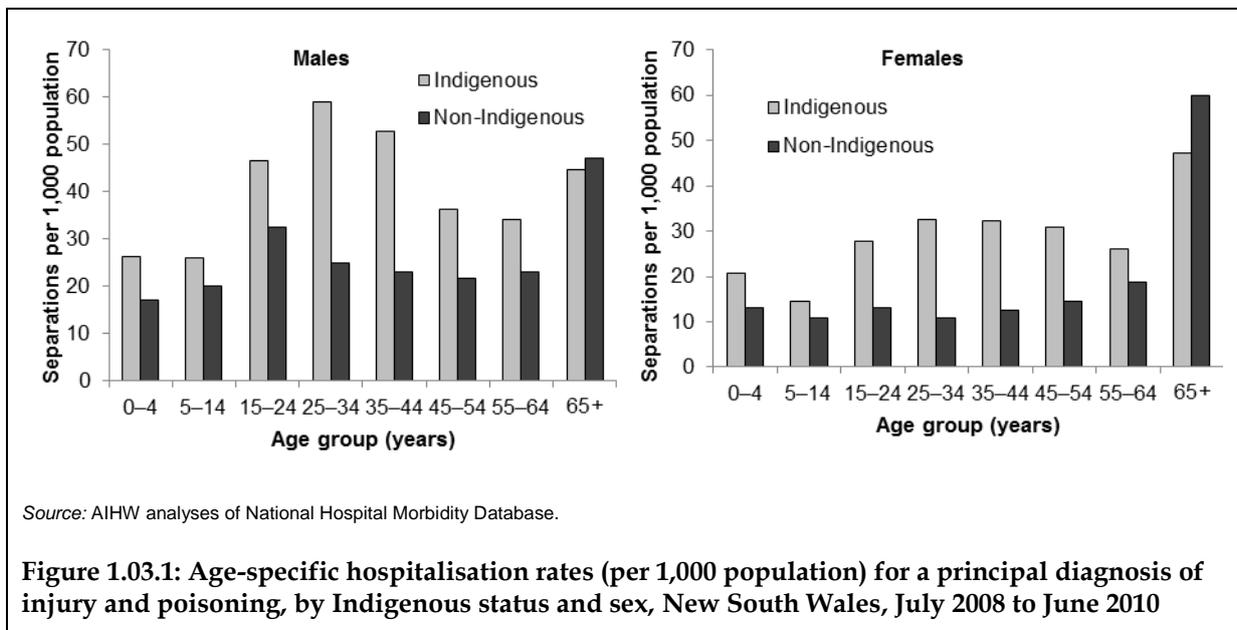
Data are presented on hospitalisations with a principal diagnosis of injury and poisoning for Aboriginal and Torres Strait Islander Australians compared with non-Indigenous Australians.

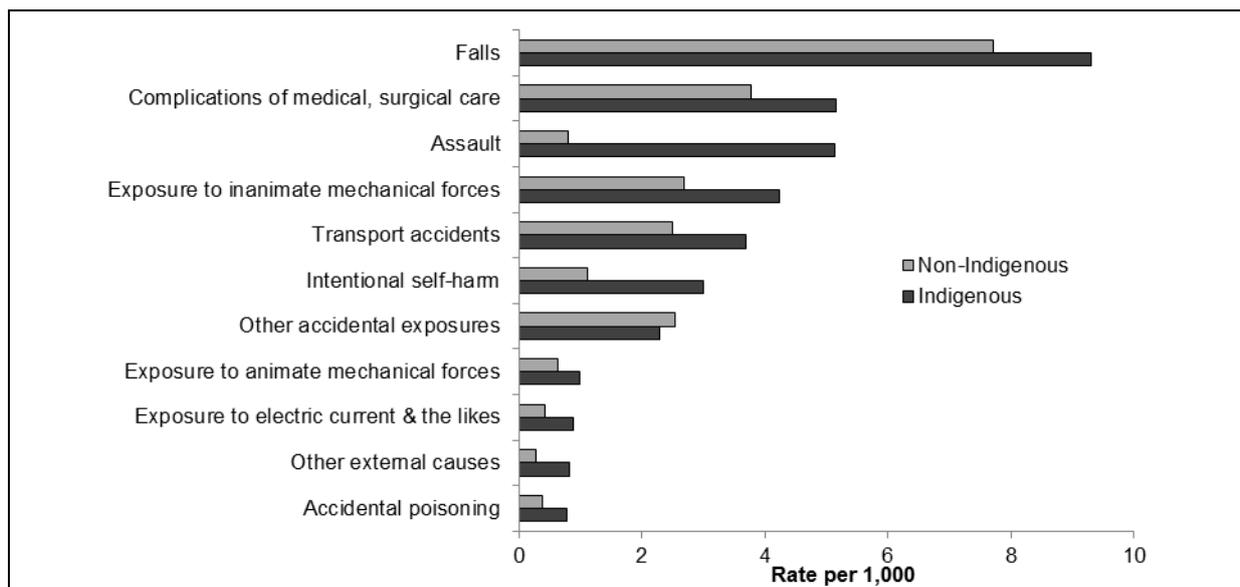
#### Key findings

- Between July 2008 and June 2010, there were 10,624 hospitalisations of Indigenous persons with a principal diagnosis of injury and poisoning in New South Wales (Table 1.03.1, Appendix 2).
- After adjusting for differences in age-structure, Indigenous people were hospitalised for injury and poisoning at 1.6 times the rate of non-Indigenous people in New South Wales (36 compared with 23 per 1,000 population) (Table 1.03.1, Appendix 2).
- Indigenous males and females had higher hospitalisation rates for injury and poisoning than non-Indigenous males and females across all age groups except those aged 65 and over (Figure 1.03.1). A similar pattern was evident in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.
- Between July 2008 and June 2010 in New South Wales, accidental falls was the most common cause of hospitalisation for Indigenous people with a principal diagnosis of injury and poisoning (22%), followed by assault (15%). In the six jurisdictions combined,

assault was the most common cause of hospitalisation for Indigenous people with a principal diagnosis of injury and poisoning (24%), followed by accidental falls (18%). (Table 1.03.2, Appendix 2).

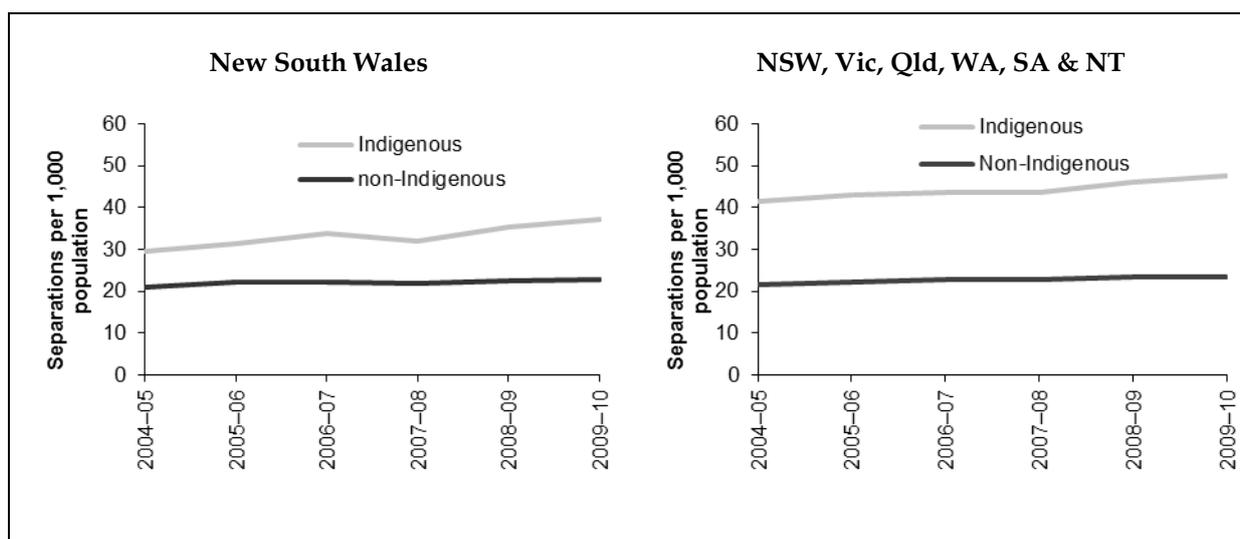
- Indigenous people in New South Wales were hospitalised for assault at more than 6 times the rate of non-Indigenous people and for intentional self-harm at almost three times the rate of non-Indigenous people (Figure 1.03.2). In the six jurisdictions combined, ratios were 12 and 2 for these diagnoses, respectively (Table 1.03.2, Appendix 2).
- From 2004–05 to 2009–10 in New South Wales, there was a significant increase in hospitalisation rates for injury and poisoning for both Indigenous people (average yearly increase 1.4 per 1,000 population) and non-Indigenous people (average yearly increase of 0.3 per 1,000) (Figure 1.03.3).
- In New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there was also significant increase in hospitalisation rates for injury and poisoning among both Indigenous people (average yearly increase 1.1 per 1,000 population) and non-Indigenous people (average yearly increase of 0.4 per 1,000) (Figure 1.03.3).





Source: AIHW analyses of National Hospital Morbidity database.

**Figure 1.03.2: External causes for hospitalisations with a principal diagnosis of injury and poisoning (age-standardised rates), by Indigenous status, New South Wales, July 2008 to June 2010**



Source: AIHW analyses of National Hospital Morbidity Database.

**Figure 1.03.3: Hospitalisation rates for injury and poisoning, by Indigenous status, New South Wales and NSW, Vic, Qld, WA, SA & NT combined, 2004-05 to 2009-10**

## 1.04 Respiratory diseases

Respiratory diseases are leading causes of illness, disability and mortality around the world. Common among them are asthma, chronic obstructive pulmonary disease, influenza and pneumonia. While all respiratory diseases result in high use of health services, pneumonia and chronic obstructive pulmonary disease, in particular, are leading underlying causes of death. Aboriginal and Torres Strait Islander Australians experience considerably greater mortality and morbidity from respiratory diseases than other Australians.

Data are presented on hospitalisations with a principal diagnosis of respiratory disease for Aboriginal and Torres Strait Islander Australians compared with non-Indigenous Australians.

## Key findings

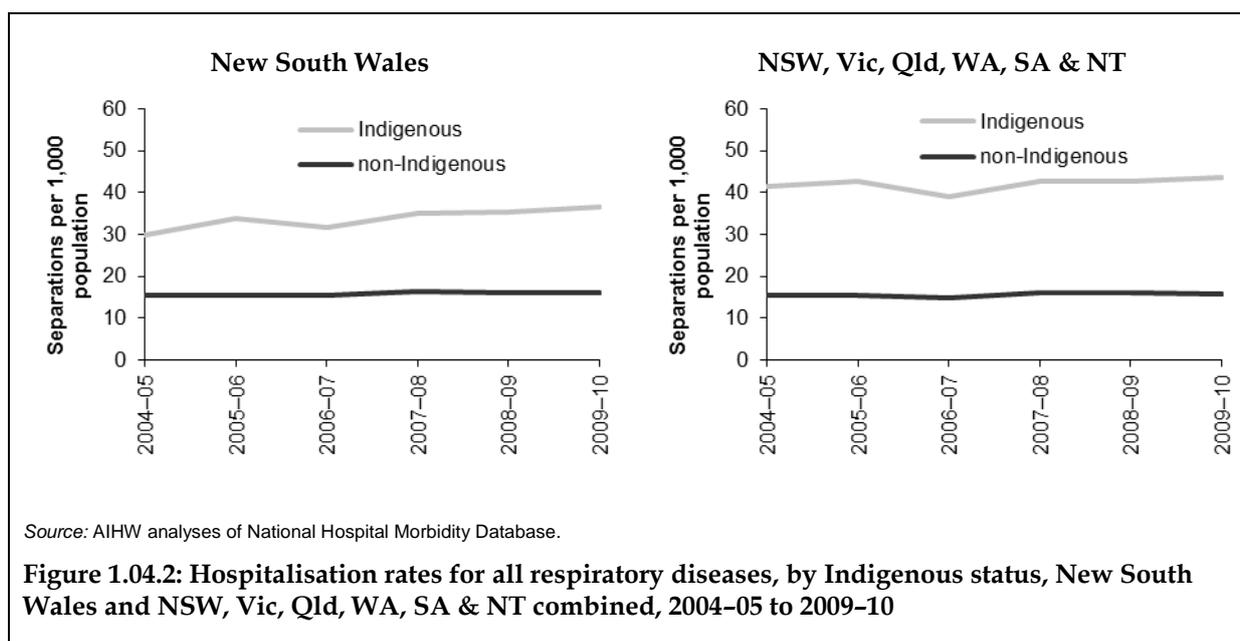
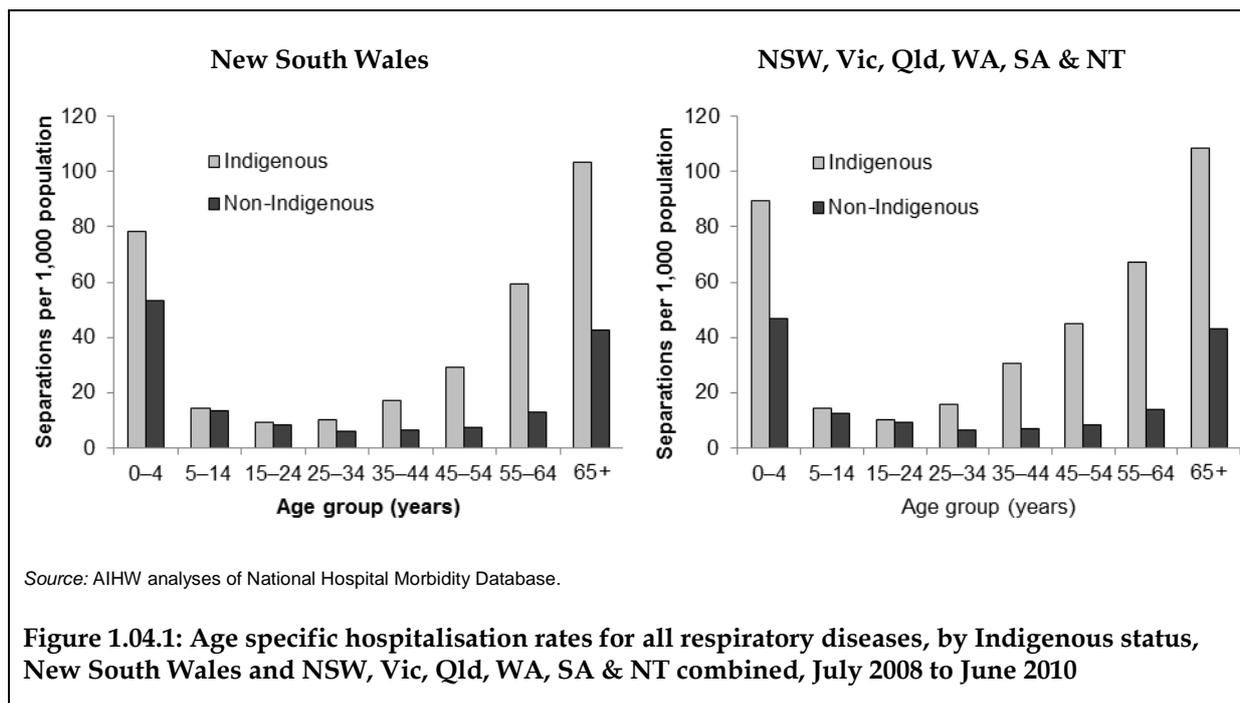
- Between July 2008 and June 2010 in New South Wales, there were 9,166 hospitalisations of Indigenous people with a principal diagnosis of respiratory diseases (rate of 36 per 1,000 population) (Table 1.04.1).
- After adjusting for differences in age-structure, Indigenous people in New South Wales, were hospitalised for respiratory diseases at more than twice the rate of non-Indigenous people (Figure 1.04.1). In New South Wales, Victoria, Queensland, South Australia, Western Australia and the Northern Territory combined, Indigenous people were hospitalised for respiratory diseases at almost 3 times the rate of non-Indigenous people.
- Indigenous people in New South Wales were hospitalised for respiratory diseases at a higher rate than non-Indigenous people in all age groups. The biggest differences were in the 45–54 and 55–64 years age groups, where Indigenous hospitalisation rates were about 4 and 4.5 times as high as rates for non-Indigenous people. A similar pattern was also evident for the six jurisdictions combined (Figure 1.04.1).
- Between July 2008 and June 2010 in New South Wales, Indigenous people were hospitalised for respiratory diseases at a rate of 36 per 1,000 population which was lower than for Indigenous people in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (43 per 1,000) (Table 1.04.1).
- In New South Wales there was a significant increase of 19% in hospitalisation rates for respiratory diseases among Indigenous people from 2004–05 to 2009–10 (Figure 1.04.2). Over the same period, there were no significant changes in hospitalisation rates for respiratory diseases among non-Indigenous people in New South Wales or among Indigenous and non-Indigenous people in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.

**Table 1.04.1: Hospitalisations for all respiratory diseases for Aboriginal and Torres Strait Islander people, by sex, New South Wales and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010**

	New South Wales				NSW, Vic, Qld, WA, SA & NT			
	Number	Number per 1,000	Rate ratio	Rate difference	Number	Number per 1,000	Rate ratio	Rate difference
Males	4,524	34.2	1.9*	16.4*	17,475	43.3	2.5*	25.8*
Females	4,642	37.5	2.6*	23.0*	17,868	43.5	3.0*	28.8*
Persons	9,166	35.9	2.2*	19.9*	35,343	43.2	2.7*	27.3*

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

Source: AIHW analyses of National Hospital Morbidity Database.



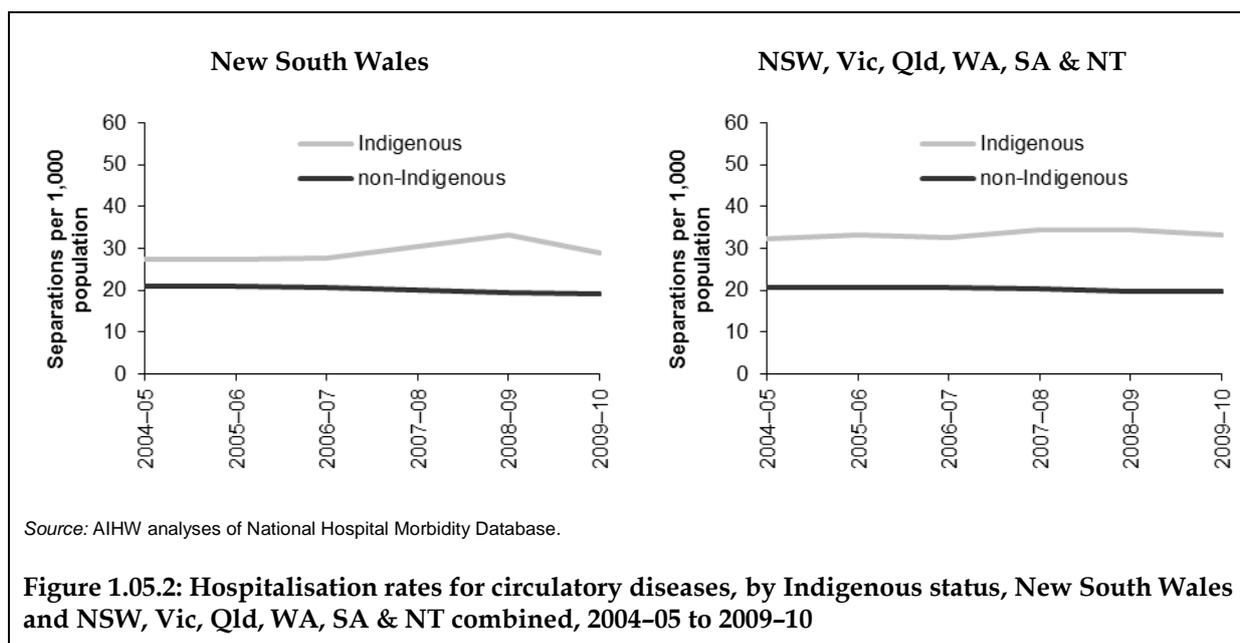
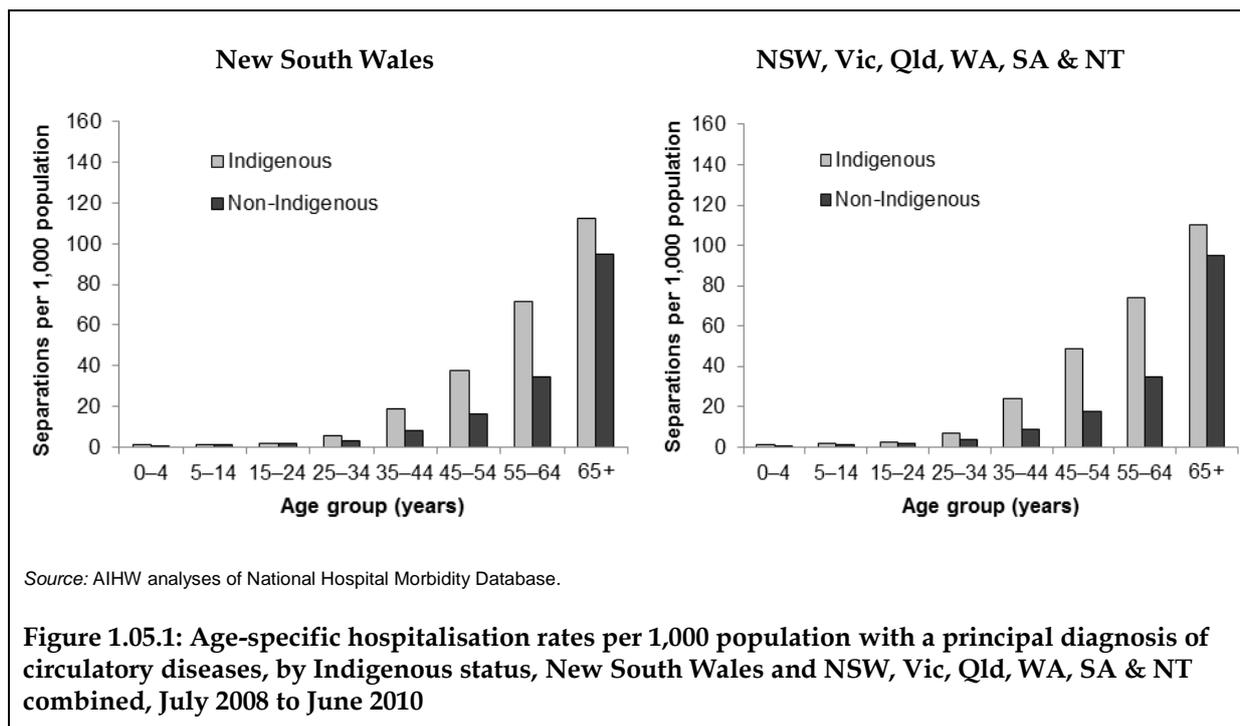
## 1.05 Circulatory disease

Cardiovascular diseases include coronary heart disease, stroke, peripheral vascular disease, heart failure and rheumatic heart disease. Collectively, these diseases are the largest cause of death in Australia, and account for the largest health-care expenditure of any disease group (AIHW 2011a). Circulatory disease accounted for 17% of the burden of disease in Indigenous Australians in 2003 (Vos et al. 2007) and 26% of mortality in 2006-10 (see indicator 1.23).

Data are presented on the prevalence of circulatory conditions using data from the 2004–05 NATSIHS, and hospitalisations with a principal diagnosis of circulatory disease for Aboriginal and Torres Strait Islander people.

## Key findings

- In 2004–05 in New South Wales, 10% of Indigenous males and 15% of Indigenous females reported heart or circulatory conditions as a current long-term condition. This compared with 10% and 14% of Indigenous males and females in Australia (Table 1.05.1, Appendix 2).
- In New South Wales, after adjusting for differences in age-structure, Indigenous males and females were more likely than non-Indigenous males and females to report heart and circulatory conditions (Table 1.05.1, Appendix 2).
- Prevalence of heart and circulatory conditions was highest among Indigenous people aged 55 and over (about 55% in New South Wales and 54% in Australia). In New South Wales, the greatest difference in prevalence rates between Indigenous and non-Indigenous people was in the 0–4 year age group (ratio of 2.2) (Table 1.05.1, Appendix 2).
- Between July 2008 and June 2010, there were 4,975 hospitalisations of Indigenous people in New South Wales with a principal diagnosis of circulatory disease. Indigenous people in New South Wales were hospitalised for circulatory diseases at a rate of 31.1 per 1,000 population. This was lower than the rate for Indigenous people in the New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (33.9 per 1,000) (Table 1.05.2, Appendix 2).
- After adjusting for differences in age structure, Indigenous males and females in New South Wales were hospitalised for circulatory diseases at 1.5 and 1.8 times the rate of non-Indigenous males and females in New South Wales (Table 1.05.2, Appendix 2).
- Indigenous people in New South Wales had higher hospitalisation rates for circulatory disease than non-Indigenous people across all age groups. The greatest difference in hospitalisation rates occurred in the 35–44 and 45–54 year age groups where Indigenous people were hospitalised at almost 3 times the rate of non-Indigenous people (Figure 1.05.1).
- Of all hospitalisations with a principal diagnosis of circulatory disease, ischaemic heart disease was the most common reason for hospitalisation among Aboriginal and Torres Strait Islander people (44% in New South Wales and 43% in the six jurisdictions combined) (Table 1.05.2, Appendix 2).
- Aboriginal and Torres Strait Islander people in New South Wales were hospitalised for rheumatic heart disease at over 3 times the rate of non-Indigenous people. This compares with almost 7 times the rate of non-Indigenous people in the six jurisdictions combined (Table 1.05.2, Appendix 2).
- Between 2004–05 and 2009–10 in New South Wales, there was no significant change in hospitalisation rates for circulatory disease among Indigenous Australians, while there was a significant decline of 0.4 per 1,000 per year for non-Indigenous Australians (Figure 1.05.2). A similar pattern was evident in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (Figure 1.05.2).



## 1.07 High blood pressure

High blood pressure, also referred to as hypertension, is a major risk factor for a number of diseases, including stroke, coronary heart disease, kidney disease, and peripheral vascular disease. High blood pressure is more common among Aboriginal and Torres Strait Islander people than other Australians and is a major contributor to the increased risk of heart attack, stroke and other circulatory diseases among Indigenous Australians (AIHW 2002).

Data are presented on self-reported prevalence of hypertension among Aboriginal and Torres Strait Islander Australians using data from the 2004–05 NATSIHS, and hospitalisations with a principal diagnosis of hypertension.

It should be noted that reported prevalence of high blood pressure from the NATSIHS reported in this section are for 'current' conditions. Prevalence of conditions that were 'ever reported' will be higher.

### **Key findings**

- In 2004–05 in New South Wales, among persons of all ages, about 6% of Indigenous males and 8% of Indigenous females reported high blood pressure or hypertension as a current long-term health condition. This was similar to the proportions for Indigenous people nationally (7% for males and 8% for females) (Table 1.07.1). After adjusting for differences in age-structure, Indigenous males were 1.3 as likely, and Indigenous females 1.5 times as likely to have reported high blood pressure or hypertension.
- Prevalence of high blood pressure increases with age. Approximately 36% of Indigenous males and 51% of Indigenous females in New South Wales reported high blood pressure as a current condition in the 2004-05 NATSIHS.
- Between July 2008 and June 2010 in New South Wales, Indigenous Australians were hospitalised with a principal diagnosis of hypertensive disease at 0.9 per 1,000 population. This was the same as the rate in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (Table 1.07.2, Appendix 2).
- After adjusting for differences in age structure, Indigenous people in New South Wales were hospitalised for hypertensive disease at nearly 3 times the rate of non-Indigenous people.
- In New South Wales, Indigenous people had higher hospitalisation rates for hypertensive disease than non-Indigenous people for all age groups from 25–34 onwards. The greatest difference in rates was in the 25–34 year age group where Indigenous people were hospitalised at over 7 times the rate of non-Indigenous people (Figure 1.07.1).

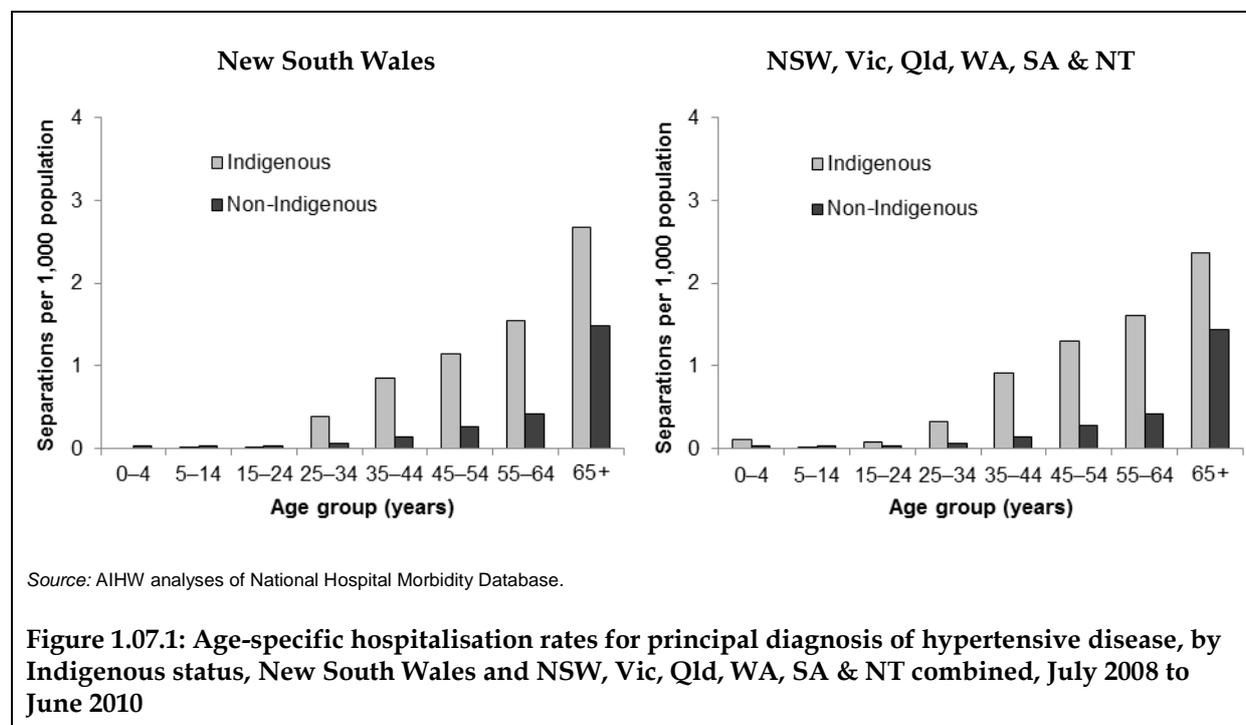
**Table 1.07.1: People reporting high blood pressure/hypertension, per cent, by Indigenous status, age group and sex, New South Wales and Australia, 2004–05**

Age group	Male		Female	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
<b>New South Wales</b>				
0–24	n.p.	n.p.	n.p.	n.p.
25–34	4	2	7	2
35–44	7	7	11	4
45–54	23	15	22	13
55+	36	30	51	35
<b>Crude proportion</b>	<b>6</b>	<b>10</b>	<b>8</b>	<b>12</b>
<b>Total age-standardised</b>	<b>13</b>	<b>10</b>	<b>17</b>	<b>11</b>
<b>Australia</b>				
0–24	n.p.	n.p.	n.p.	n.p.
25–34	4	3	5	2
35–44	14	6	11	4
45–54	22	15	24	13
55+	39	32	46	36
<b>Crude proportion</b>	<b>7</b>	<b>n.a.</b>	<b>8</b>	<b>n.a.</b>
<b>Total age-standardised</b>	<b>14</b>	<b>10</b>	<b>16</b>	<b>10</b>

n.a. Not available.

n.p. Numbers too small to publish.

Source: ABS and AIHW analyses of NATSIHS 2004–05 and NHS 2004–05.



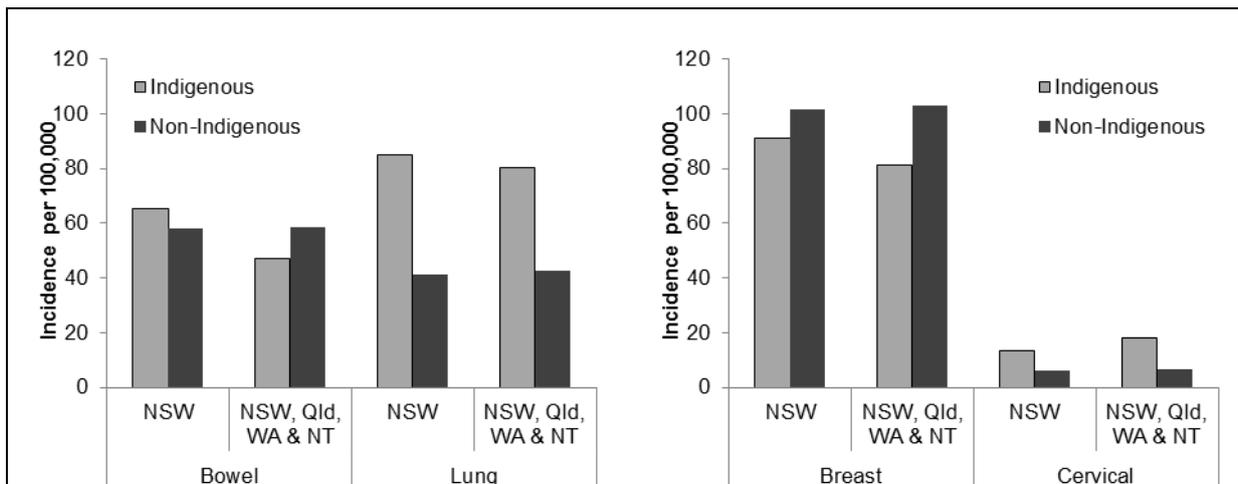
## 1.08 Cancer

Cancer was identified as a leading cause of morbidity and mortality in Australia in 2010, accounting for 19% of the total burden of disease (AIHW & AACR 2010). Recent research shows that the cancer survival rate is lower for Indigenous people who are diagnosed with cancer than non-Indigenous people (Cramb et al. 2012).

Data are presented on cancer incidence, hospital separation and mortality rates for Aboriginal and Torres Strait Islander people compared with non-Indigenous Australians.

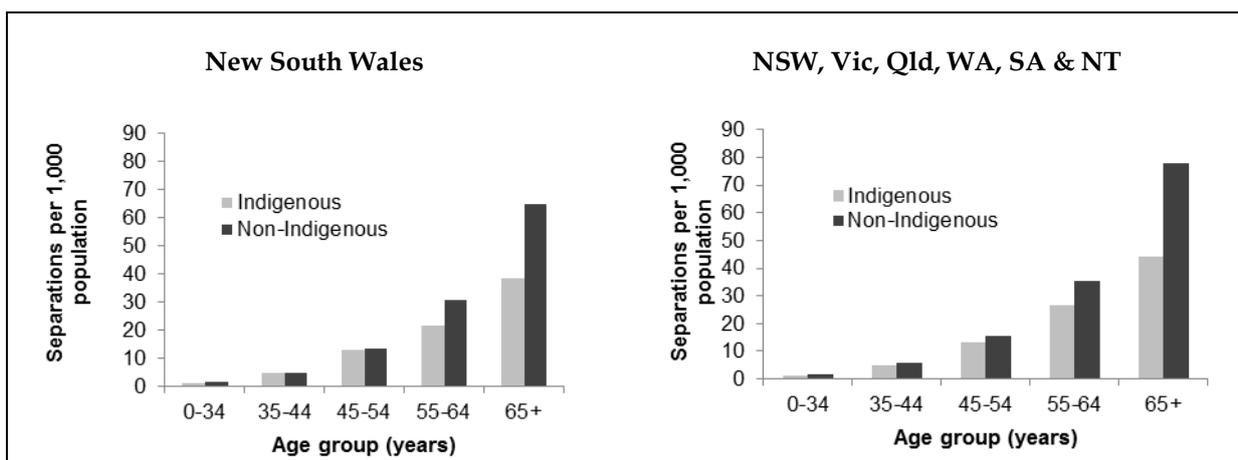
### Key findings

- State and territory population-based cancer registries receive information on cancer diagnoses from a variety of sources including hospitals, pathology laboratories, radiotherapy centres and registries of births, deaths and marriages. Data registered for New South Wales in 2004–08 shows that lung cancer and cervical cancer incidence rates are much higher among the Indigenous population than the non-Indigenous population: 2.1 and 2.2 times as high for these cancers, respectively. There is a similar pattern for New South Wales, Queensland, Western Australia and the Northern Territory combined (Figure 1.08.1).
- Hospital admissions data for New South Wales between July 2008 and June 2010 shows that the Indigenous population has generally lower rates of hospitalisations with a principal diagnosis of cancer (neoplasms) than the non-Indigenous population (10 per 1,000 population compared with 14 per 1,000). A similar pattern is evident for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (Table 1.08.2, Appendix 2).
- Between July 2008 and June 2010, hospitalisation rates for cancer for Indigenous people in New South Wales were similar to, or lower than the rates for non-Indigenous people in all age groups. A similar pattern was recorded for New South Wales, Victoria, Queensland, Western Australia, South Australia and Northern Territory combined (Figure 1.08.2).
- From 2004–05 to 2009–10 in New South Wales, there was a significant increase in hospitalisation rates for cancer among Indigenous people (average yearly increase of 0.5 per 1,000), while there was no significant change among non-Indigenous people (Figure 1.08.3).
- Over the same period in New South Wales, Victoria, Queensland, Western Australia and the Northern Territory combined, there was a significant increase in hospitalisation rates for cancer among Indigenous people (average yearly increase of 0.5 per 1,000), and non-Indigenous people (average yearly increase of 0.2 per 1,000) (Figure 1.08.3).
- Between 2006 and 2010 in New South Wales, there were 652 deaths of Indigenous Australians due to cancer, of which 179 deaths were due to lung cancer. The mortality rate from all cancer for Indigenous people in New South Wales was 1.3 times as high as that for non-Indigenous people. Indigenous people died from lung cancer at almost twice the rate, and from cervical cancer at 3 times the rate of non-Indigenous people (Table 1.08.1).



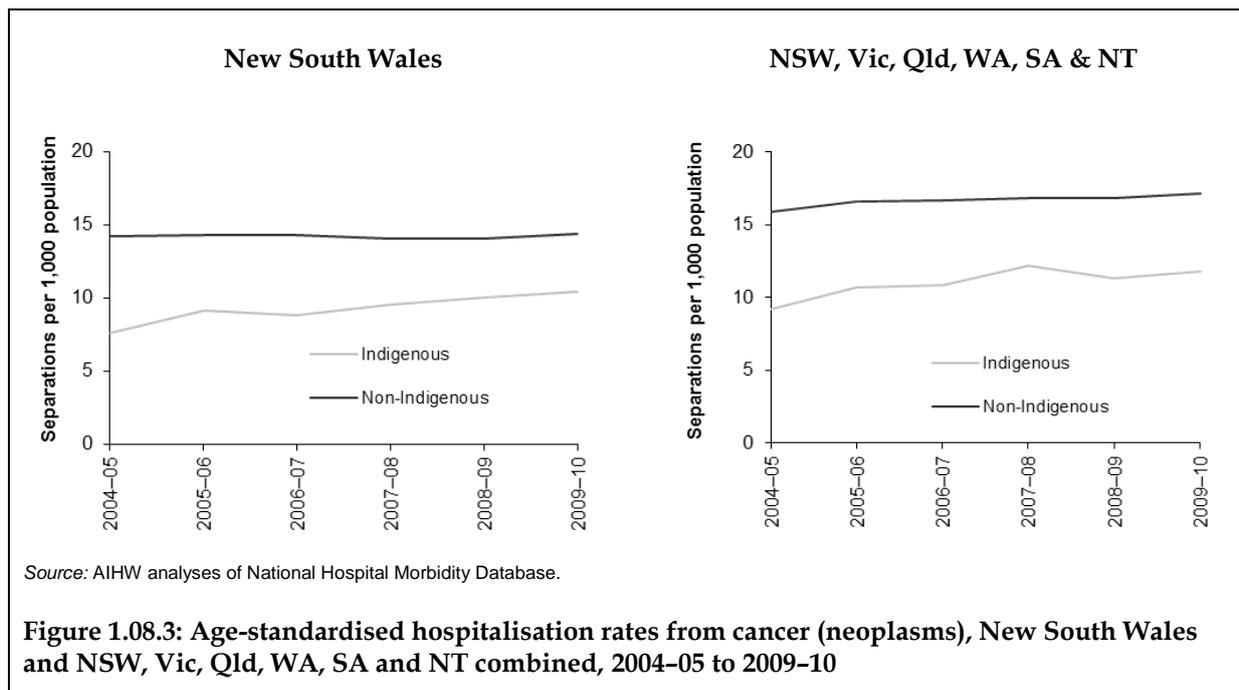
Source: AIHW analyses of Cancer Registry Data.

**Figure 1.08.1: Age-standardised incidence rates per 100,000 of selected cancers by Indigenous status, New South Wales and NSW, Qld, WA and NT combined, 2004–08**



Source: AIHW analyses of National Hospital Morbidity Database.

**Figure 1.08.2: Age-specific hospitalisation rates for cancer (neoplasms), by Indigenous status, New South Wales and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010**



**Table 1.08.1: Cancer mortality, by Indigenous status, New South Wales and NSW, Qld, WA, SA and NT combined, 2006-2010**

Underlying cause of death	Number		Age-standardised rate per 100,000			
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Rate ratio	Rate difference
<b>New South Wales</b>						
Digestive organ cancers (C15–C26)	189	18,712	65.4	48.5	1.3*	16.9
Lung cancer (C34)	179	12,625	60.1	32.7	1.8*	27.4
Cervical cancer (C53)	14	371	3.0	1.0	3.0*	2.0*
<b>Total neoplasms (C00–C97, D00–D48)</b>	<b>652</b>	<b>68,489</b>	<b>225.8</b>	<b>177.6</b>	<b>1.3*</b>	<b>48.2*</b>
<b>NSW, Qld, WA, SA &amp; NT</b>						
Digestive organ cancers (C15–C26)	594	38,528	67.9	47.7	1.4*	20.2*
Lung cancer (C34)	502	27,064	59.6	33.4	1.8*	26.1*
Cervical cancer (C53)	58	793	4.8	1.0	4.8*	3.8*
<b>Total neoplasms (C00–C97, D00–D48)</b>	<b>2,107</b>	<b>143,569</b>	<b>244.6</b>	<b>178.0</b>	<b>1.4*</b>	<b>66.6*</b>

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

Source: AIHW analysis of ABS Mortality Database.

## 1.09 Diabetes

Diabetes is a long-term (chronic) condition that can damage various parts of the body due to high glucose levels. Diabetes comprised 12% of the health gap between Indigenous and non-Indigenous Australians in 2003 (Vos et al. 2007). Diabetes prevalence is higher for Indigenous Australians than non-Indigenous Australians. Prevention, early detection and better management of diabetes will be important in closing the gap in life expectancy.

Data are presented on the self-reported prevalence of diabetes for Aboriginal and Torres Strait Islander Australians using data from the 2004–05 NATSIHS, as well as hospitalisation rates for persons diagnosed with diabetes.

It should be noted that reported prevalence of high blood pressure from the NATSIHS reported in this section are for 'current' conditions. Prevalence of conditions that were 'ever reported' will be higher.

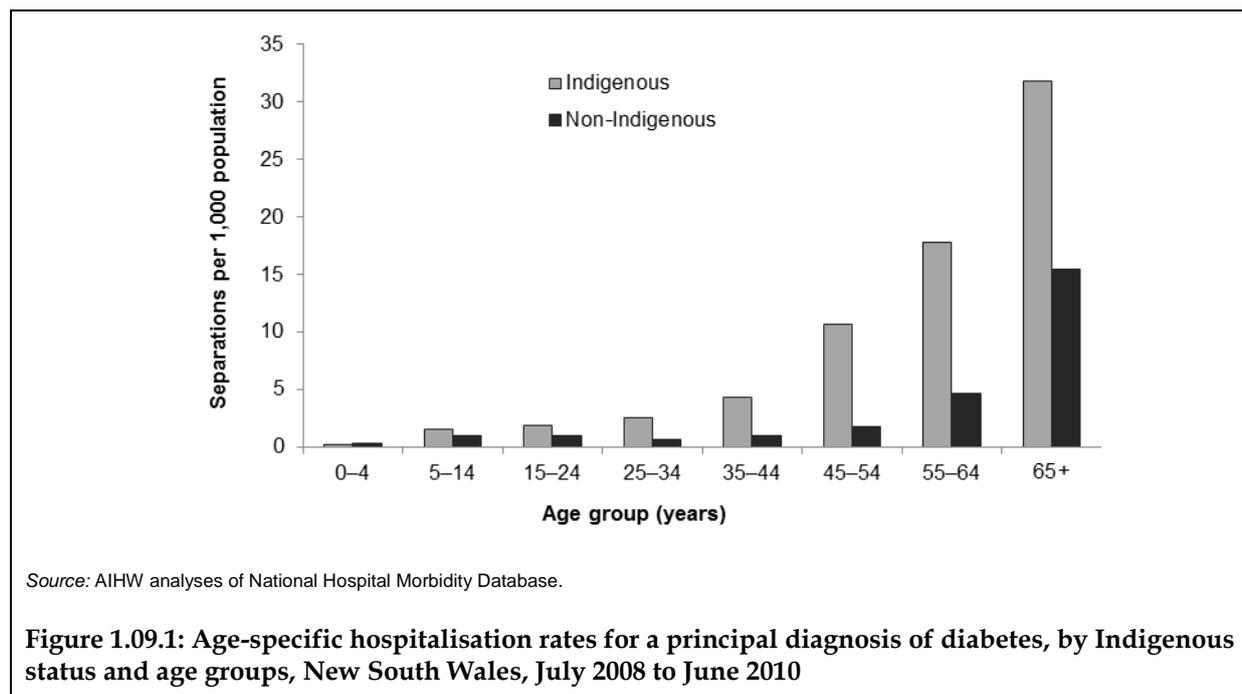
### Key findings

- In 2004–05 in New South Wales, of persons of all ages, 4.4% of Indigenous males and 5.5% of Indigenous females reported diabetes or high sugar levels as a current long-term health condition. This was lower than the proportions nationally (5.5% and 7.1% respectively) (Table 1.09.1).
- After adjusting for differences in age structure, Indigenous people were nearly 3 times as likely to report diabetes or high sugar levels as a current condition as non-Indigenous people in New South Wales.
- Prevalence of diabetes in New South Wales was highest among Indigenous and non-Indigenous people aged 55 and over (30% and 13% respectively) (Table 1.09.2, Appendix 2).
- Between July 2008 and June 2010, there were 1,529 hospitalisations of Indigenous people resident in New South Wales with a principal diagnosis of diabetes mellitus. Indigenous people were hospitalised with a principal diagnosis of diabetes at a rate of 8.7 per 1,000 population. This was lower than the rate for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (14.1 per 1,000 population) (Table 1.09.3, Appendix 2).
- After adjusting for differences in age structure, Indigenous people in New South Wales were hospitalised for diabetes at 3 times the rate of non-Indigenous people (Table 1.09.3, Appendix 2).
- Indigenous people had much higher hospitalisation rates for diabetes than non-Indigenous people in all age groups from 5–14 years onwards. The greatest difference in rates was in the 45–54 year age group where Indigenous people were hospitalised at more than 6 times the rate of non-Indigenous people (Figure 1.09.1).
- Between 2004–05 and 2009–10 in New South Wales, there were no significant changes in hospitalisation rates for diabetes among Indigenous people, while there was a significant increase for non-Indigenous people (average yearly increase of 0.1 hospitalisations per 1,000 population) (Figure 1.09.2). The same pattern was observed in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.

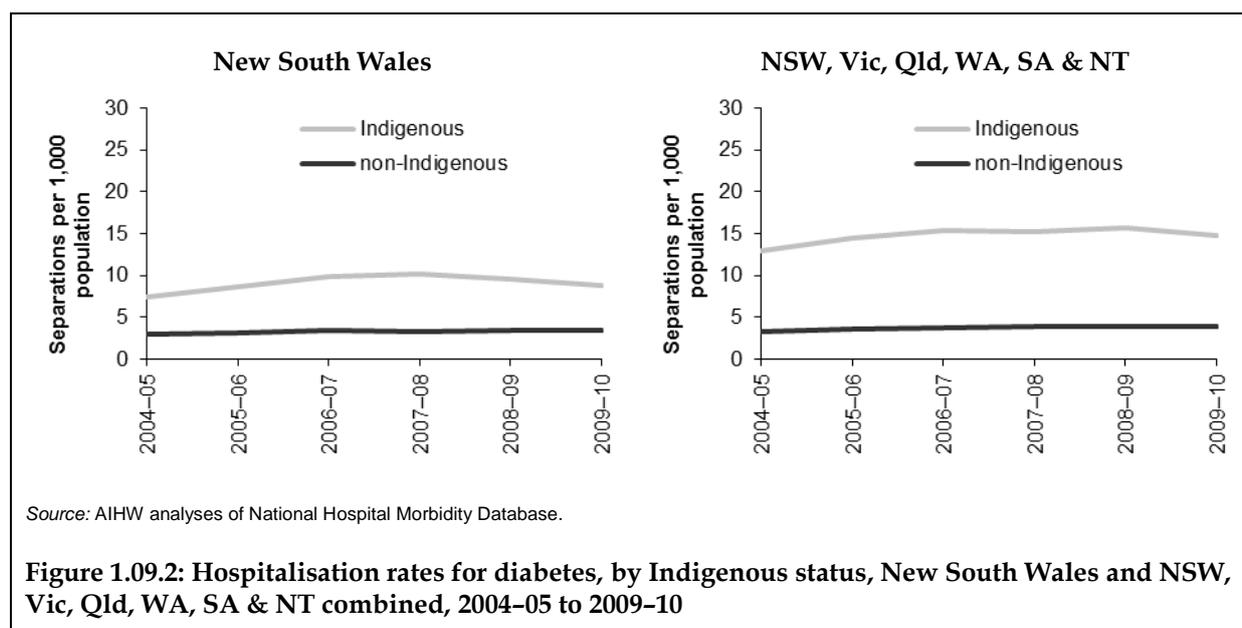
**Table 1.09.1: Aboriginal and Torres Strait Islander people reporting diabetes/high sugar levels, by sex, New South Wales and Australia, 2004–05**

	Male	Female	Total
	Per cent		
New South Wales	4.4	5.5	5.0
<b>Australia</b>	<b>5.5</b>	<b>7.1</b>	<b>6.3</b>

Source: AIHW analyses of NATSIHS 2004–05.



**Figure 1.09.1: Age-specific hospitalisation rates for a principal diagnosis of diabetes, by Indigenous status and age groups, New South Wales, July 2008 to June 2010**



**Figure 1.09.2: Hospitalisation rates for diabetes, by Indigenous status, New South Wales and NSW, Vic, Qld, WA, SA & NT combined, 2004-05 to 2009-10**

## 1.10 Kidney disease

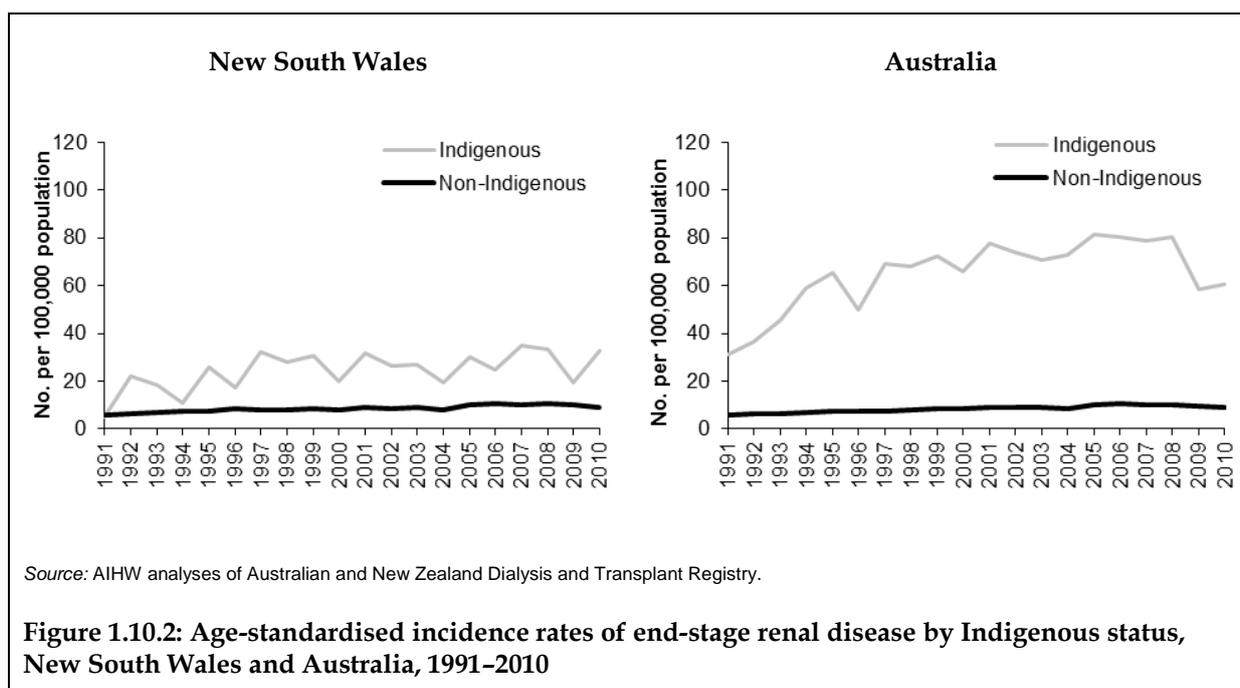
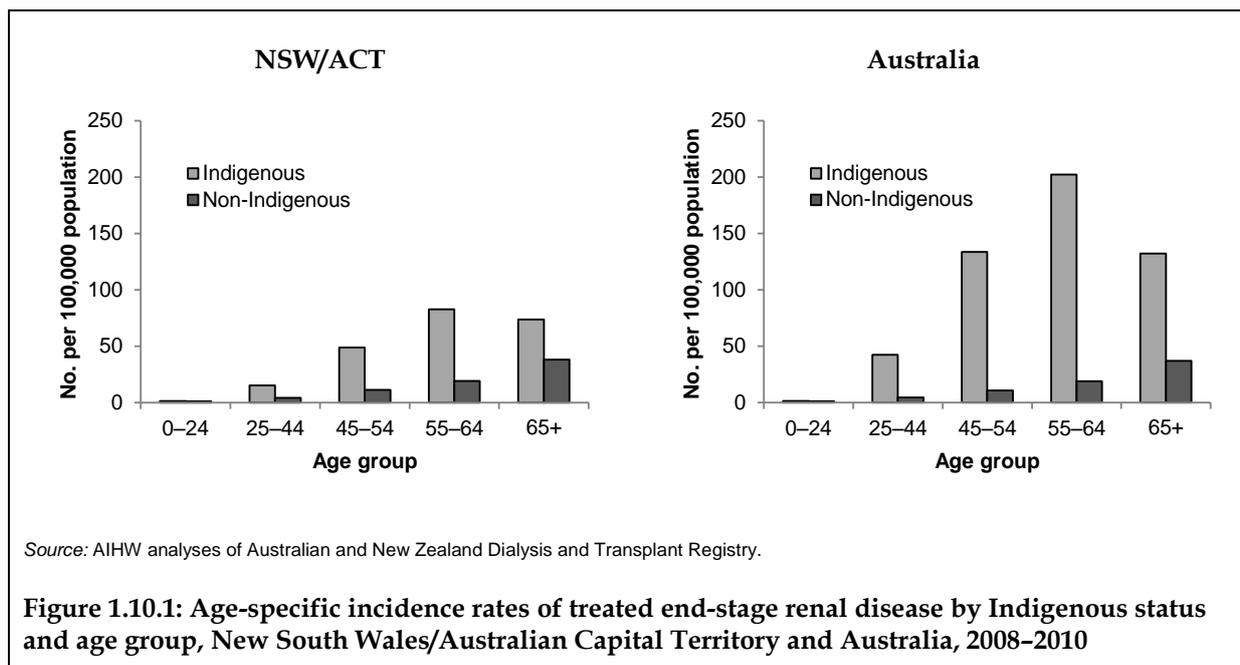
The kidneys can be damaged by various acute illnesses (for example, severe infections) or by progressive damage from chronic conditions such as elevated blood pressure (untreated hypertension) and long-standing high blood sugar levels (untreated diabetes). If the kidneys cease functioning entirely (known as end-stage renal disease, or kidney failure), it is necessary to have renal dialysis several times per week or undergo a kidney transplant (AIHW 2011a).

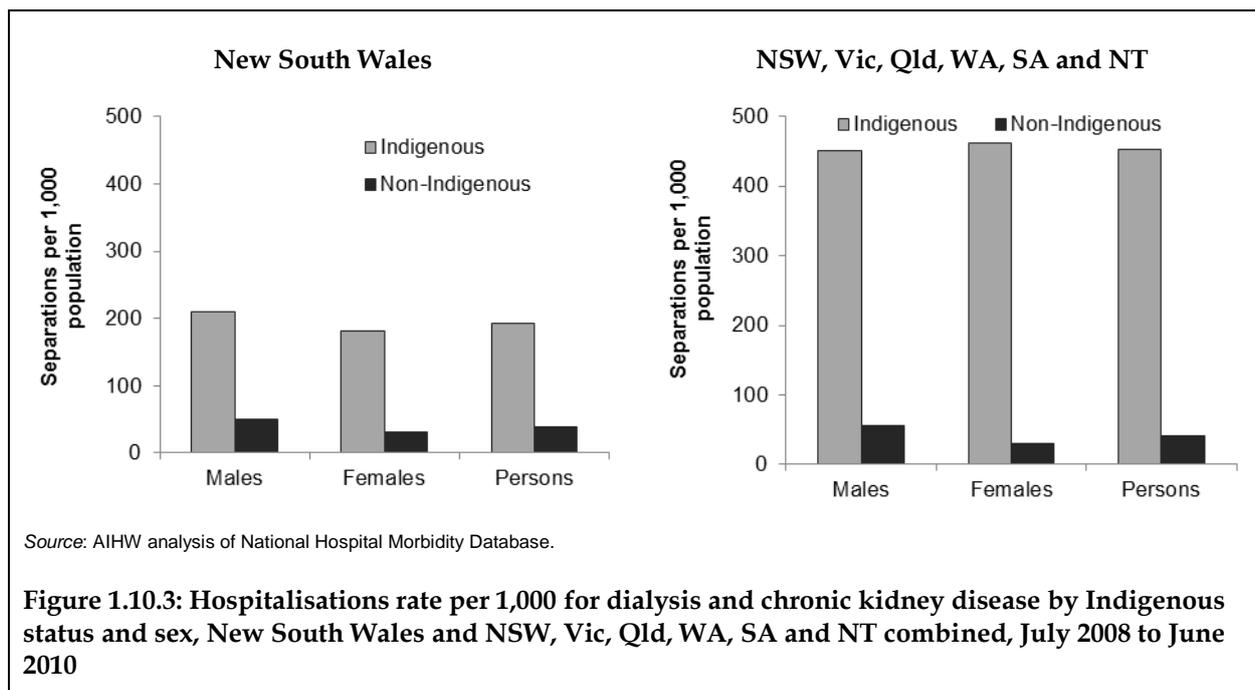
Kidney disease, in particular end-stage renal disease (ESRD), contributes substantially to the high burden of ill health experienced by Aboriginal and Torres Strait Islander people. Renal failure was estimated to contribute 5% of the burden of disease for Indigenous Australians in 2003 (Vos et al. 2007). Aboriginal and Torres Strait Islander people have very high levels of ESRD due to a range of risk factors.

Data are presented on the incidence of ESRD among Aboriginal and Torres Strait Islander people using data from the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA), as well as hospitalisation rates with a principal diagnosis of chronic kidney disease. ANZDATA presented is for New South Wales and the Australian Capital Territory combined.

### Key findings

- Between 2008 and 2010 in New South Wales and the Australian Capital Territory, there were 82 cases of end-stage renal disease registered to ANZDATA for Indigenous Australians. After adjusting for differences in age-structure, the incidence rate of ESRD for Indigenous Australians was 3 times as high as non-Indigenous Australians (29.3 compared with 9.7 per 100,000). The incidence rate for Indigenous people in New South Wales and the Australian Capital Territory was much lower than nationally (29.3 compared with 68.3 per 1,000) (Table 1.10.1, Appendix 2).
- The incidence rate of ESRD for Indigenous Australians was higher than for non-Indigenous Australians across all age groups. The greatest difference in incidence rates occurred in the 45–54 and 55–64 year age groups, where the incidence rate for Indigenous Australians was more than 4 times the rate for non-Indigenous Australians (Figure 1.10.1).
- Between 1991 and 2010, there were significant increases in the incidence rates of ESRD among Indigenous people (0.8 cases per 100,000 per year, equivalent to a 286% reduction over the period) and non-Indigenous people (0.2 cases per 100,000 per year, equivalent to a 65% reduction over the period) in New South Wales (Figure 1.10.2).
- Nationally, between 1991 and 2010, there was a significant increase in incidence rates for ESRD for both Indigenous and non-Indigenous people (an average of 30 and 4 per 100,000 population per year), and a significant increase in the gap (Figure 1.10.2).
- Between July 2008 and June 2010, the age-standardised hospitalisation rate for dialysis and chronic kidney disease for Indigenous people was much lower in New South Wales than in the New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (194 compared with 453 per 1,000 population). Indigenous males were hospitalised for chronic kidney disease at over four times the rate, and Indigenous females at six times the rate, of non-Indigenous Australians in New South Wales (Figure 1.10.3).





## 1.11 Oral health

Aboriginal and Torres Strait Islander people are more likely than other Australians to have a range of oral health problems, such as having lost all their teeth and gum disease. They are more likely to have untreated teeth and gum disease and less likely to have received preventive dental care (Jamieson et al. 2010). Periodontal disease (that is, of the gums) is associated with poor oral hygiene, infrequent dental visits, smoking, low education and income levels, and certain medical conditions such as diabetes. Research has also found an association between periodontal disease and pre-term, low birthweight babies, rheumatoid arthritis and cardiovascular disease ( NATSIHC & SCoATSIH 2003; Thompson et al. 2004) and with inhalant use (Jamieson et al. 2010).

Data are presented on the prevalence of teeth or gum problems for Aboriginal and Torres Strait Islander children using data from the 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS), hospitalisation rates for dental conditions for Indigenous Australians compared with non-Indigenous Australians and on the mean number of decayed, missing or filled teeth.

### Key findings

- In 2007 in New South Wales, the mean number of decayed teeth for Indigenous children aged 5–6, 8–10, and 12–14 years was higher than for non-Indigenous children (about twice the number) (Table 1.11.1).
- In 2008 in New South Wales, about 33% of Indigenous children aged 0–14 reported teeth or gum problems. This was similar to the proportion nationally (32%) (Figure 1.11.1).
- Between July 2008 and June 2010, Indigenous people resident in New South Wales were hospitalised for dental problems at a rate of 1.6 per 1,000 population which was higher than the rate for non-Indigenous residents (1.3 per 1,000), and lower than the rate for Indigenous people in the New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (2.0 per 1,000) (Figure 1.11.3).

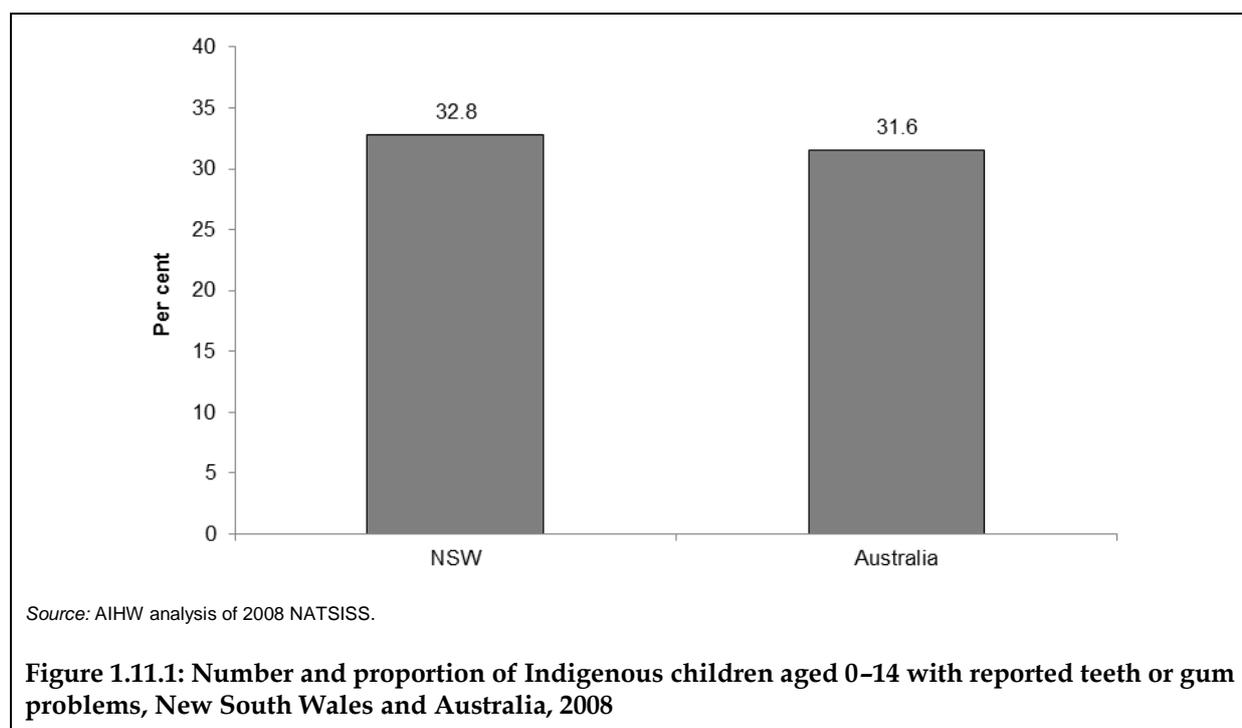
- Indigenous people were hospitalised for dental problems at a higher rate than non-Indigenous people between the ages of 0 and 14 and between 25 and 44, while rates were similar among those aged 15 to 24, and lower for those aged 45 and over. A similar pattern was observed in the six jurisdictions combined (Figure 1.11.2).

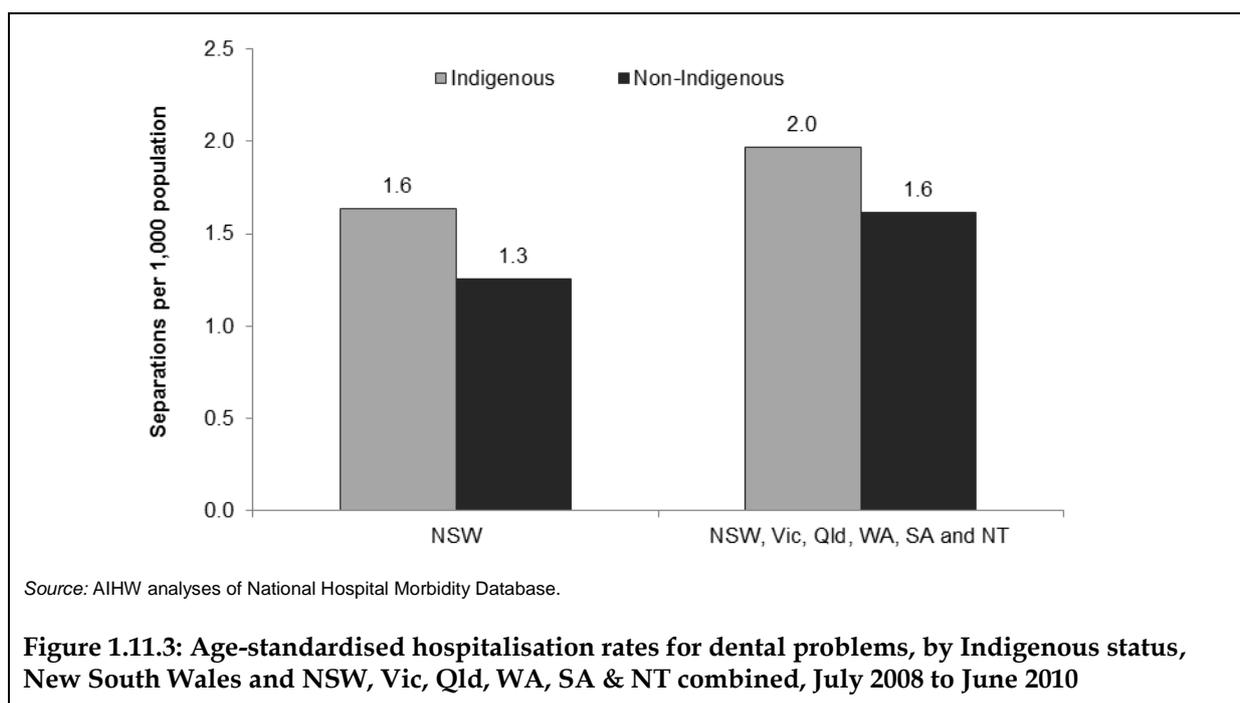
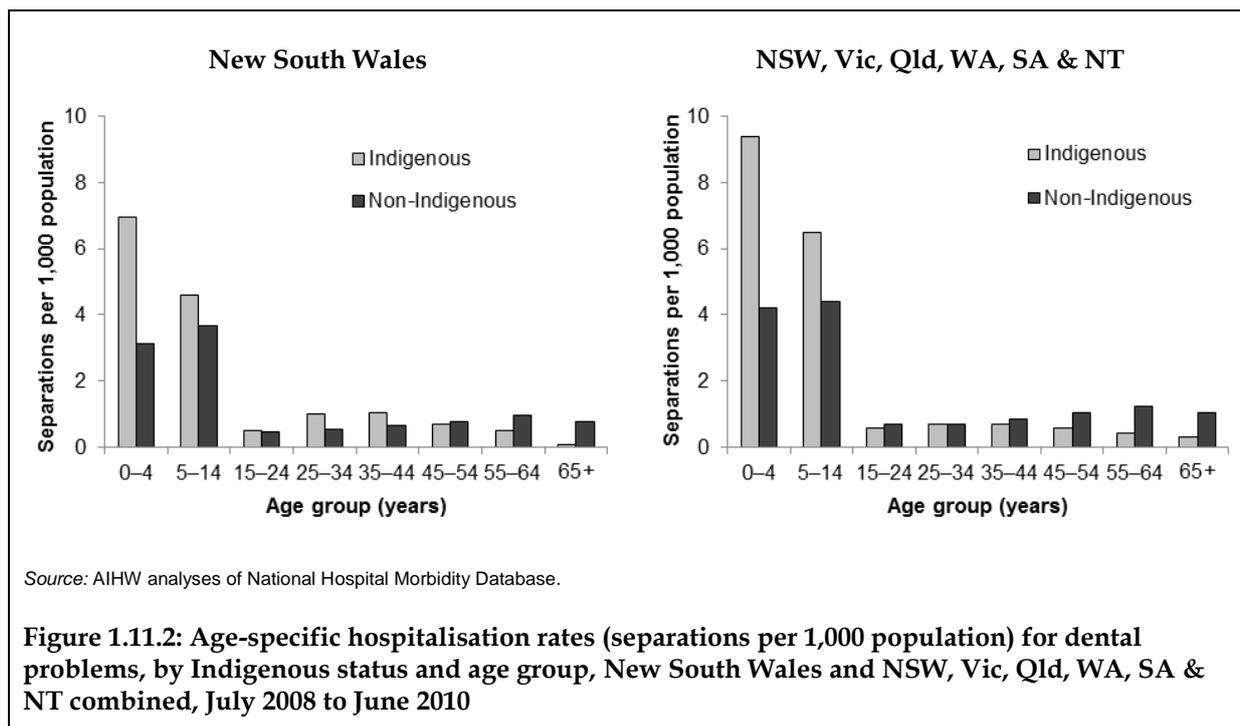
**Table 1.11.1: Mean number of decayed, missing or filled teeth for children aged 5 to 14, by Indigenous status, New South Wales, 2007**

	Indigenous	Non-Indigenous	Ratio
<b>5–6 year olds, deciduous teeth</b>			
decayed	2.22	1.03	2.2*
missing	0.33	0.09	3.7
filled	0.49	0.33	1.5
<b>dmft</b>	<b>3.04</b>	<b>1.44</b>	<b>2.1*</b>
<b>8–10 year olds, permanent teeth</b>			
Decayed	0.46	0.23	2.0*
missing	0.05	0.01	5.0
Filled	0.12	0.16	0.8*
<b>DMFT</b>	<b>0.63</b>	<b>0.40</b>	<b>1.6</b>
<b>12–14 year olds, permanent teeth</b>			
Decayed	0.67	0.36	1.9*
missing	0.05	0.02	2.5
Filled	0.45	0.30	1.5*
<b>DMFT</b>	<b>1.18</b>	<b>0.68</b>	<b>1.7*</b>

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

Source: AIHW Dental Statistics Research Unit.





## 1.12 HIV/AIDS, hepatitis and sexually transmissible infections

Bacterial STIs (including syphilis, chlamydia and gonorrhoea) can have serious long-term effects if not diagnosed or treated such as infertility in women after gonorrhoea and chlamydia, and heart and brain damage caused by syphilis (Bowden et al. 2002; Couzos & Murray 2003). Hepatitis and Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) are viral infections that can both be fatal. Several STIs (chlamydia,

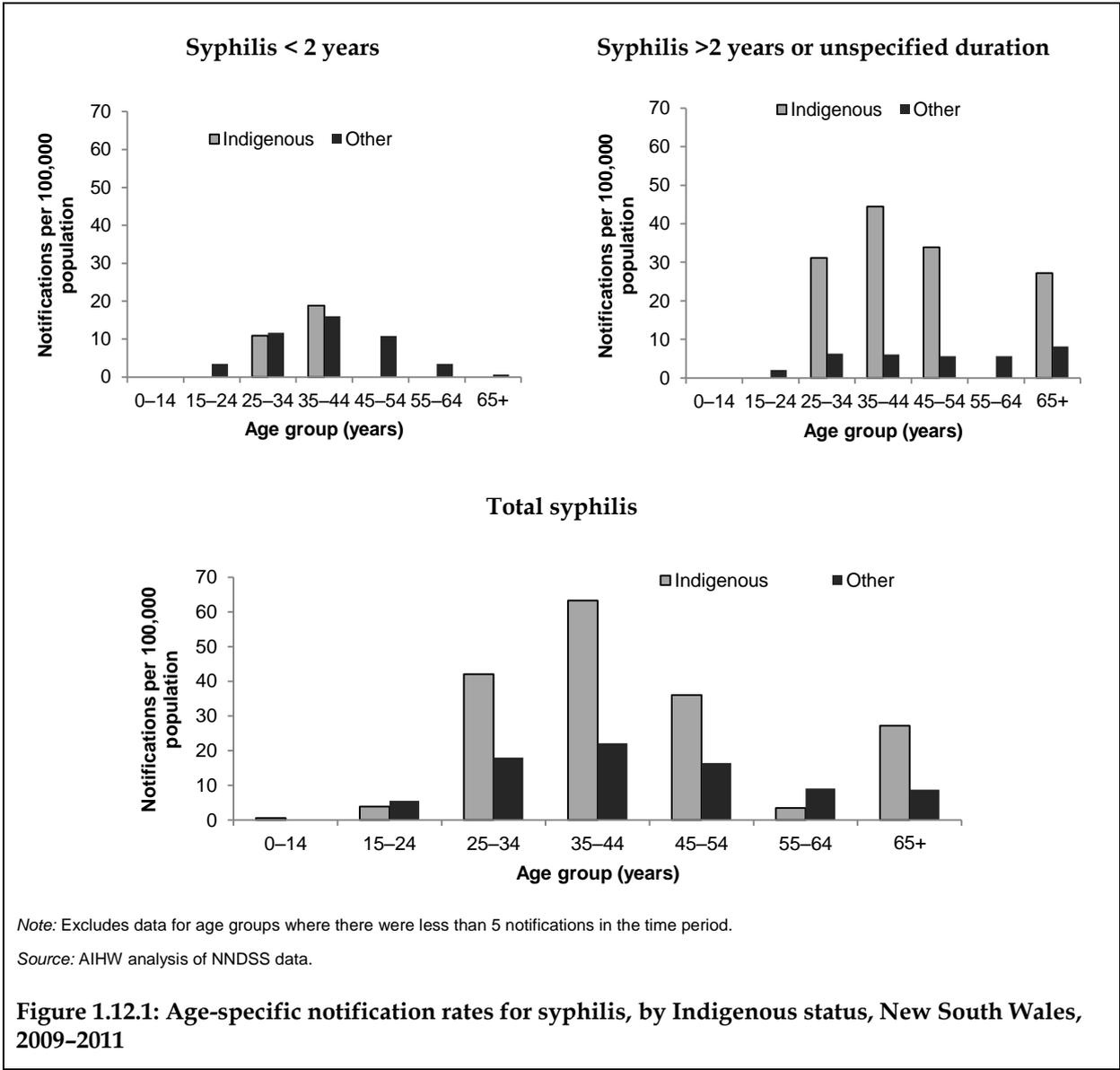
gonorrhoea, syphilis and donovanosis) are much more common for Aboriginal and Torres Strait Islander people than for other Australians.

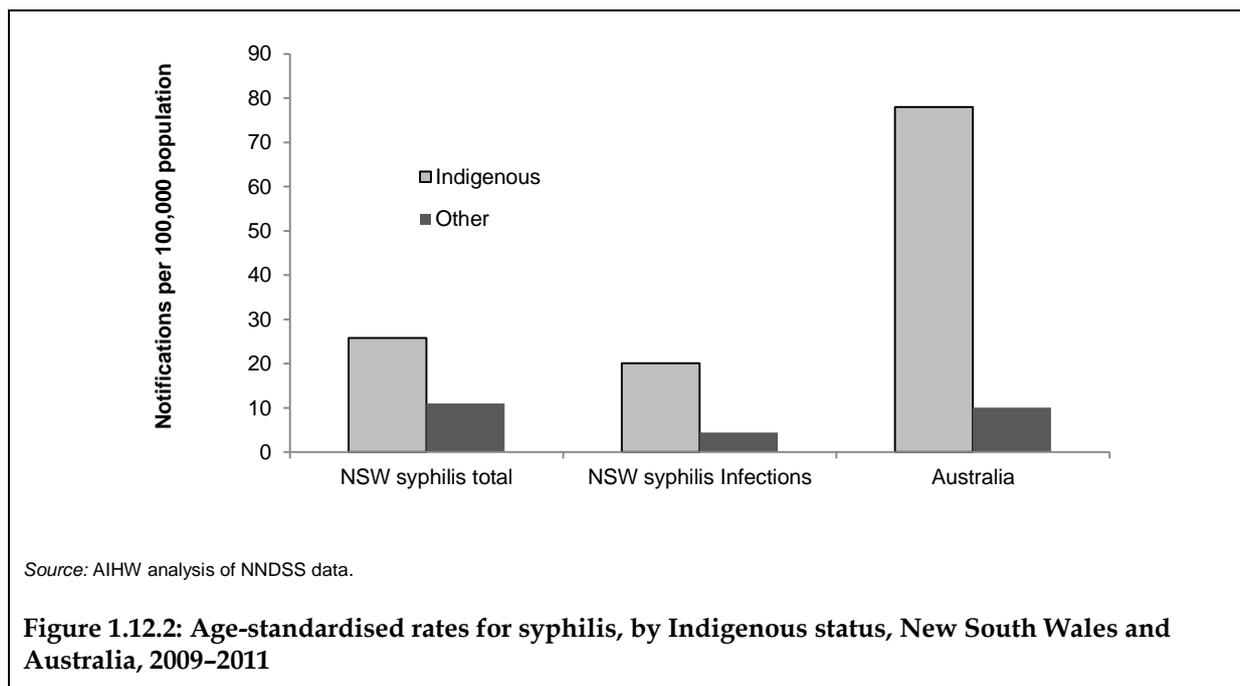
Data are presented on the rates of notified sexually transmissible infections for syphilis, for Aboriginal and Torres Strait Islander people compared with other Australians using data from the National Notifiable Disease Surveillance System. Data for other STIs that are notifiable (donovanosis, chlamydia, gonorrhoea, hepatitis B and hepatitis C) are not presented due to poor coverage of Indigenous notifications for these diseases in New South Wales.

No data is included for New South Wales on HIV/AIDS notification rates due to the small number of cases.

### **Key findings**

- Between 2009 and 2011, there were 2,428 notifications of syphilis in New South Wales, of which 3.8% were for Indigenous people.
- In New South Wales, notification rates for syphilis less than 2 years duration and syphilis greater than 2 years and unspecified duration categories were highest among Indigenous people aged 35–44 (Figure 1.12.1).
- Notification rates for syphilis greater than 2 years and unspecified duration were generally higher among Indigenous people than among other people for all age-groups. The greatest disparity was observed in the 35–44 year age group, in which the rate for Indigenous people was 7.4 times the rate for other people (Figure 1.12.1).
- After adjusting for differences in age structure, notification rates for syphilis among Indigenous people in New South Wales were 2.3 times as high as for other people (Figure 1.12.2).
- The notification rate for syphilis was much lower for Indigenous people in New South Wales than for Indigenous people nationally (3.8 per 100,000 compared with 13.7 per 100,000) (Figure 1.12.2).





## Human function

A basic aspect of health and wellbeing is how well people function from day to day. The Aboriginal and Torres Strait Islander view of health recognises that achieving optimal conditions for health and wellbeing requires a holistic and whole-of-life view that encompasses the social, emotional and cultural wellbeing of the whole community (AIHW 2011a). This section presents information on 4 measures of human function: community functioning, disability, ear health and eye health.

### 1.13 Community functioning

Aboriginal and Torres Strait Islander people have long sought health outcomes encompassing the physical, social, cultural and emotional elements of life. This includes the ability to live proudly and freely as Aboriginal and Torres Strait Islander people. Functioning is about the things people achieve or experience, consistent with their account of wellbeing. The conversion of capabilities into functioning is influenced by the values and personal features of individuals, families and communities and by the environment in which they live. Hence it is likely that different cultures will give greater or lesser priority to different aspects of functioning (Office of Aboriginal Health et al. 2004).

Data are presented on selected measures of aspects of community functioning for Aboriginal and Torres Strait Islander people using data from the 2008 NATSISS.

#### Key findings

##### **Connectedness to country, land and history; culture and identity**

Of Indigenous people in New South Wales aged 15 and over:

- 65% reported recognition of their homeland, 3% spoke an Aboriginal or Torres Strait Islander language, 55% had attended an Aboriginal and Torres Strait Islander cultural event in the last 12 months and 52% identified with a clan or language group.
- 90% felt able to have a say with family and friends some, most, or all of the time, 95% had contact with family or friends from outside their household at least once a week and 81% had friends to confide in (Table 1.13.1, Appendix 2).

### **Resilience**

Of Indigenous people in New South Wales aged 15 and over:

- 73% did not avoid situations due to past discrimination, 83% agreed that their doctor could be trusted and 64% agreed that the local school could be trusted.
- 39% of employed people said work allowed them to fulfil cultural responsibilities, 47% knew someone in an organisation they would feel comfortable contacting and 85% had participated in sport, social or community activities in the three months before the survey (Table 1.13.1, Appendix 2).

### **Leadership**

In New South Wales, 34% of children aged 3–14 had spent time with an Indigenous leader or Elder in the last week (Table 1.13.1, Appendix 2).

### **Having a role, structure and routine**

Of Indigenous people in New South Wales aged 15 and over, 81% had lived in only one dwelling in the last 12 months (Table 1.13.1, Appendix 2).

### **Feeling safe**

In New South Wales, of Indigenous people aged 15 and over, 79% felt safe at home alone after dark and 75% had not experienced physical and/or threatened violence in the last 12 months.

### **Vitality**

Of Indigenous people in New South Wales, aged 15 and over:

- 48% had no disability or long-term health condition and 68% had experienced low/moderate levels of psychological distress in the 4 weeks before the survey.
- 72% said they could easily get to places as needed (Table 1.13.1, Appendix 2).

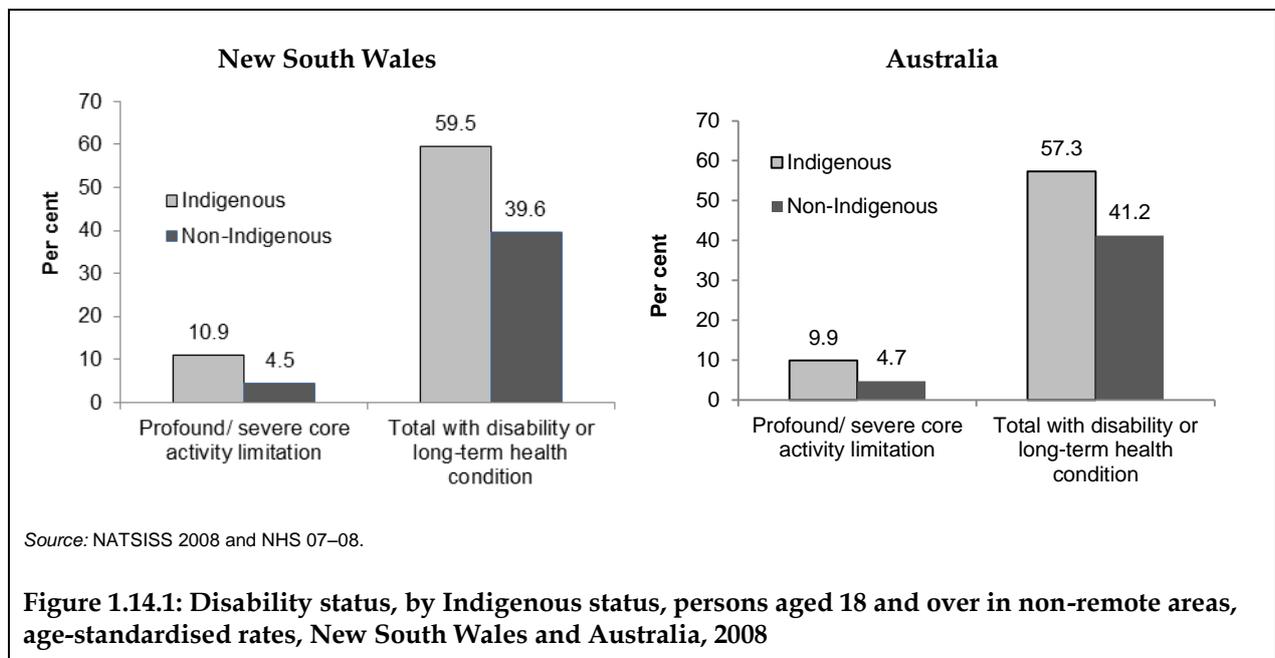
## **1.14 Disability**

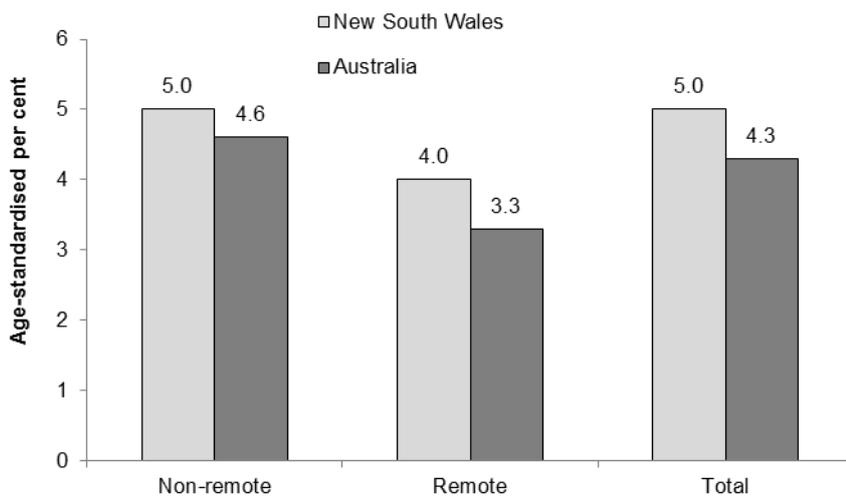
A disability may be an impairment of body structure or function, a limitation in activities, and/or a restriction in participation of a person in specific activities. Aboriginal and Torres Strait Islander people are at greater risk of disability in part because they may be more frequently subject to factors including low birthweight, chronic disease and infectious diseases (for example, otitis media, especially among young children). In addition, there may be increased risk of acquiring disability through accidents, injury and substance abuse.

Data are presented on the self-reported prevalence of disability among Aboriginal and Torres Strait Islander people using data from the 2008 NATSISS and the 2006 Census; data on the use of disability support services is presented using data from the 2009–10 Disability Services National Minimum Data Set.

## Key findings

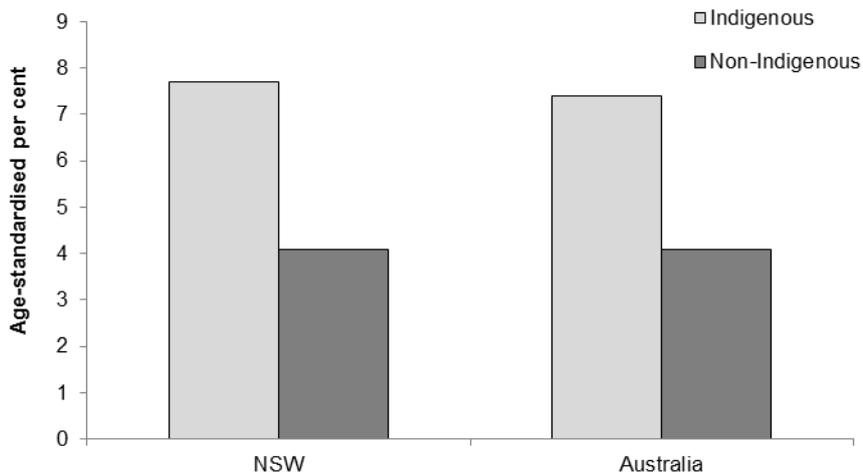
- According to the 2008 NATSISS, about 60% of Indigenous Australians aged 18 and over in non-remote areas of New South Wales had a disability or long-term health condition in 2008. About 11% had a profound or severe core activity limitation, meaning that they always or sometimes needed assistance with at least one activity of everyday living (self-care, mobility or communication). These proportions were slightly higher than those reported for Indigenous Australians nationally (Figure 1.14.1).
- In non-remote areas of New South Wales, Indigenous Australians aged 18 and over were 1.5 times as likely as non-Indigenous Australians to have a disability or a long-term health condition. The differences in rates were more marked for profound/severe core activity limitation, with Indigenous Australians 2.4 times as likely as non-Indigenous Australians to have such a limitation (Figure 1.14.1).
- According to the 2006 Census, the proportion of Indigenous people who needed assistance with one or more core activities in the areas of self-care, mobility and communication, was 5% in New South Wales and 4.3% in Australia.
- Indigenous people living in non-remote areas were less likely to report a core activity need for assistance than Indigenous people in remote areas (4% compared with 5% in New South Wales) (Figure 1.14.2).
- After adjusting for differences in age structure, Indigenous people in New South Wales were nearly twice as likely to have a core activity need for assistance than non-Indigenous people in 2006 (Figure 1.14.3).
- In 2009–10, Indigenous people in New South Wales aged under 65 used disability support services at over twice the rate of non-Indigenous people (28.5 compared with 12.4 per 1,000 population). The rate of disability service use was higher in New South Wales than nationally for Indigenous people (Table 1.14.1).





Source: ABS & AIHW 2008.

**Figure 1.14.2: Proportion of people with a core activity need for assistance, Indigenous Australians, New South Wales and Australia, 2006**



Source: ABS & AIHW analysis of 2006 Census.

**Figure 1.14.3: Age-standardised proportion of people with a core activity need for assistance, by Indigenous status, New South Wales and Australia, 2006**

**Table 1.14.1: Users of disability support services, by Indigenous status and sex, persons aged under 65, New South Wales and Australia, 2009–10**

	Indigenous			Non-Indigenous			Rate ratio	Rate difference
	Number	Crude no. per 1,000	Age std. no. per 1,000	Number	Crude no. per 1,000	Age std. no. per 1,000		
<b>NSW</b>								
Males	2,894	36.6	35.1	45,659	15.1	15.2	2.3	19.9
Females	1,736	22.1	22.0	28,584	9.5	9.5	2.3	12.4
Persons	4,631	29.4	28.5	74,251	12.3	12.4	2.3	16.1
<b>Australia</b>								
Males	8,472	31.4	33.2	150,896	16.0	16.1	2.1	17.1
Females	5,398	20.1	22.0	98,614	10.7	10.6	2.1	11.4
Persons	13,873	25.8	27.6	249,594	13.4	13.4	2.1	14.2

Source: Unpublished data from the 2009–10 Disability Services National Minimum Data Set.

## 1.15 Ear health

Conductive hearing loss, especially in childhood, can lead to social and learning difficulties and behavioural problems in school, which may have a negative effect on educational outcomes. Conductive hearing loss among Aboriginal and Torres Strait Islander people is widespread and much more common than in the broader Australian population.

Data are presented on children's ear health using self-reported prevalence data from the 2008 NATSISS, 2004–05 NATSIHS, and hospitalisation rates for diseases of the ear and mastoid process.

### Key findings

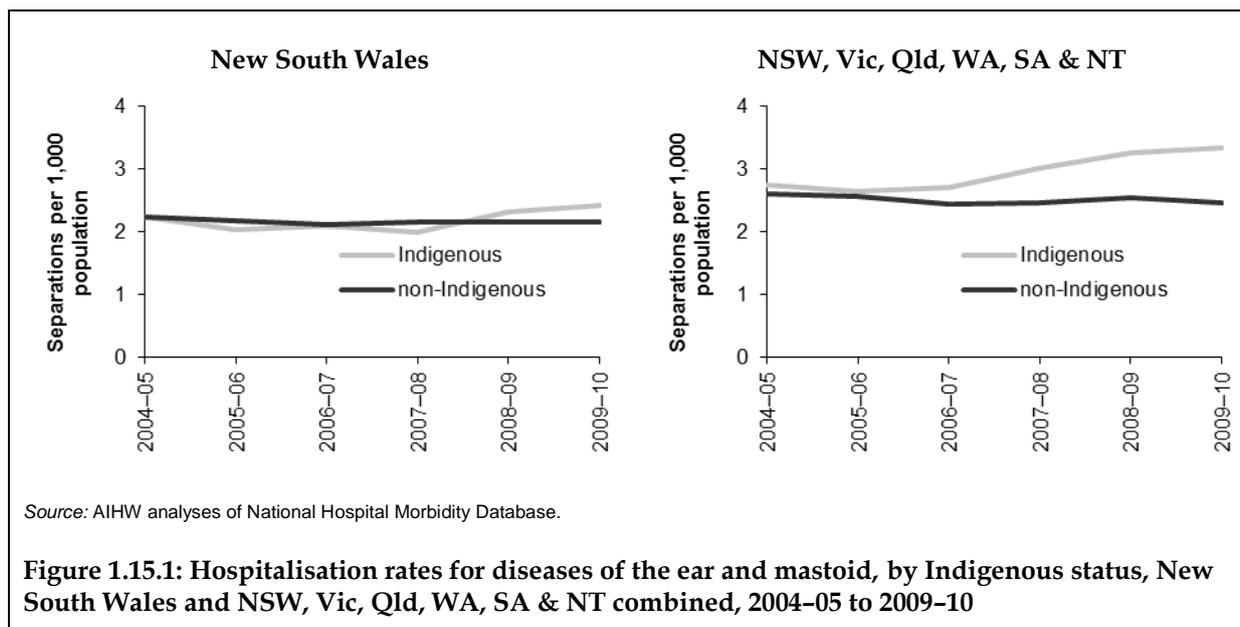
- According to the 2008 NATSISS, about 10% of Indigenous children aged 0–14 in New South Wales had ear or hearing problems. This compared with 9% of Indigenous children nationally (Table 1.15.3, Appendix 2). These proportions were almost the same as those reported in the 2004–05 NATSIHS (9% and 10% respectively) (Table 1.15.1).
- Indigenous children in New South Wales were five times as likely to report ear or hearing problems as non-Indigenous children in 2004–05. Diseases of the ear and mastoid were more prevalent among Indigenous children aged 5–14 than Indigenous children aged 0–4 (12% compared with 6%) (Table 1.15.1).
- Complete/partial deafness or hearing loss and otitis media were more prevalent among Indigenous children than non-Indigenous children both in New South Wales and nationally. In New South Wales, about 5% of Indigenous children aged 0–14 reported complete or partial hearing loss or deafness (predominantly temporary hearing loss associated with middle ear infection), compared with 0.5% of non-Indigenous children, and 5% of Indigenous children reported otitis media, compared with 1% of non-Indigenous children (Table 1.15.1).
- Prevalence rates for diseases of the ear were higher among Indigenous females aged 0–14 in New South Wales than nationally (11% compared with 9%), while the rate for Indigenous males was lower in New South Wales than nationally (9% compared with 10%) (Table 1.15.2 Appendix 2).

- Between July 2008 and June 2010, Indigenous people in New South Wales were hospitalised with a principal diagnosis of diseases of the ear and mastoid process at a rate of 2.4 per 1,000 population, which was slightly higher than for non-Indigenous people in New South Wales (2.2 per 1,000), and lower than for Indigenous people in New South Wales, Victoria, Queensland, South Australia, Western Australia and the Northern Territory combined (3.3 per 1,000) (Table 1.15.4, Appendix 2).
- From 2004–05 to 2009–10 in New South Wales, there were no significant changes in hospitalisation rates for diseases of the ear and mastoid process among Indigenous and non-Indigenous people. There was also no significant change in the gap between Indigenous and non-Indigenous people (Figure 1.15.1).
- Over the same period in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there was a significant increase of 0.1 per 1,000 yearly in average in hospitalisation rates for diseases of the ear and mastoid process among Indigenous people (Figure 1.15.1).

**Table 1.15.1: Diseases of the ear and mastoid reported for children aged 0–14, by Indigenous status, New South Wales and Australia, 2004–05**

	0–4 years		5–14 years		Total 0–14 years	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
Per cent						
<b>New South Wales</b>						
Complete/ partial deafness or hearing loss	2.7	0.3	5.9	0.5	4.8	0.5
Otitis media	2.5	1.8	5.6	1	4.6	1.2
Other diseases of the ear and mastoid	0.3	0	1.1	0.3	0.8	0.2
<b>Total</b>	<b>5.5</b>	<b>2.2</b>	<b>12.1</b>	<b>1.7</b>	<b>9.9</b>	<b>1.9</b>
<b>Australia</b>						
Complete/ partial deafness or hearing loss	1.8	0.5	5.9	1.6	4.5	1.2
Otitis media	3.6	1.8	4.7	1.4	4.4	1.5
Other diseases of the ear and mastoid	0.4	0.1	1.5	0.5	1.2	0.4
<b>Total</b>	<b>5.5</b>	<b>2.3</b>	<b>11.5</b>	<b>3.4</b>	<b>9.5</b>	<b>3.0</b>

Source: ABS and AIHW analyses of NATSIHS 2004–05 and NHS 2004–05.



## 1.16 Eye health

The World Health Organization (WHO) and the Australian Government have identified eye health as an important health area. Although often being unnoticed, eye illnesses affect a large proportion of Australians of all ages. Indigenous Australian are reported to be at higher risk of vision loss than the general population, with blindness rates among Indigenous population 6 times those among non-Indigenous/other Australians (Taylor et al. 2011).

Data are presented on self-reported eye and sight problems among Aboriginal and Torres Strait Islander Australians using data from the 2008 National Indigenous Eye Health Survey; the 2008 NATSISS; and hospitalisation rates for diseases of the eye and adnexa.

### Key findings

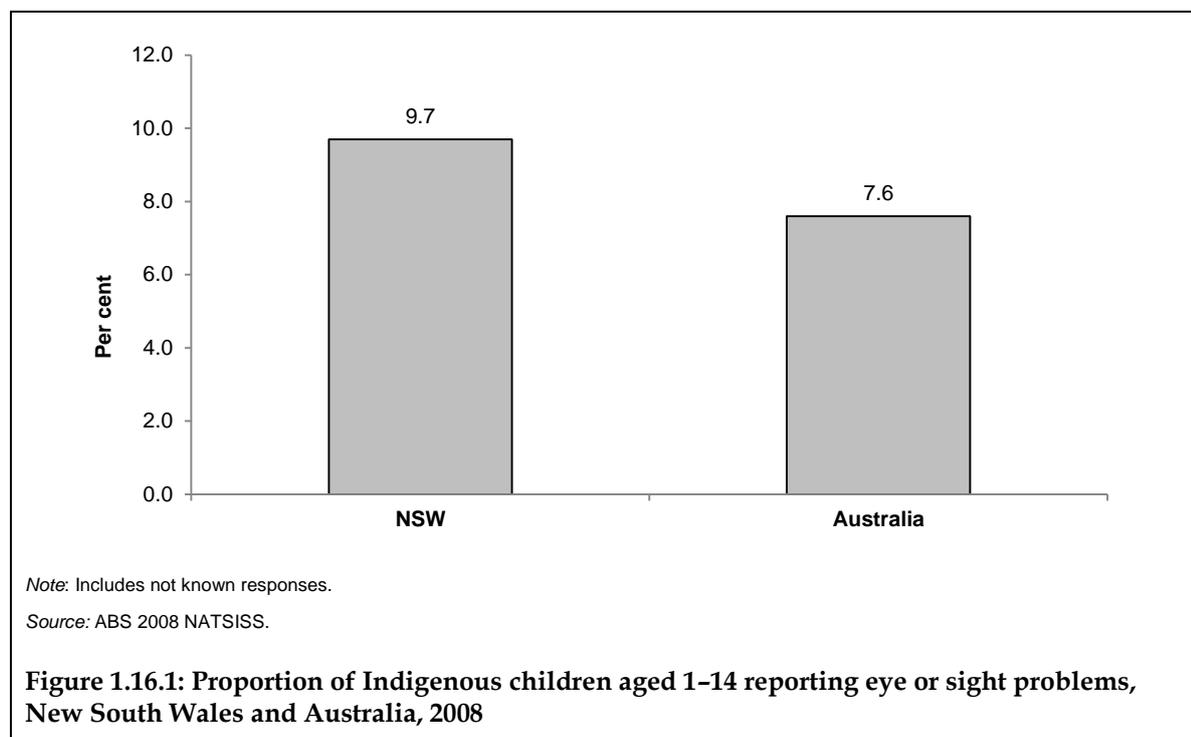
- The National Indigenous Eye Health Survey conducted in 2008 found, in New South Wales, about 6% of Indigenous adults who participated in the survey had low vision and 2% were blind. Of those Indigenous adults with vision loss, the most common causes were refractive error (50%), cataracts (15%) and diabetic eye disease (15%) (Table 1.16.1).
- According to the 2008 NATSISS, about 9.7% of Indigenous children aged 1-14 in New South Wales were reported to experience eye or sight problems. This proportion is higher than for Indigenous children in Australia (7.6%) (Figure 1.16.1).
- Between July 2008 and June 2010, Indigenous Australians in New South Wales were hospitalised with a principal diagnosis of diseases of the eye and adnexa at a rate of 6.1 per 1,000 population, which was lower than the rate for non-Indigenous Australians (11.1 per 1,000) and similar to the rate for Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (Figure 1.16.2).
- Hospitalisation rates for diseases of the eye and adnexa were lower for Indigenous people than non-Indigenous people in New South Wales for the age groups from 5-24 onwards. A similar pattern was recorded for the six jurisdictions combined (Table 1.16.2, Appendix 2).

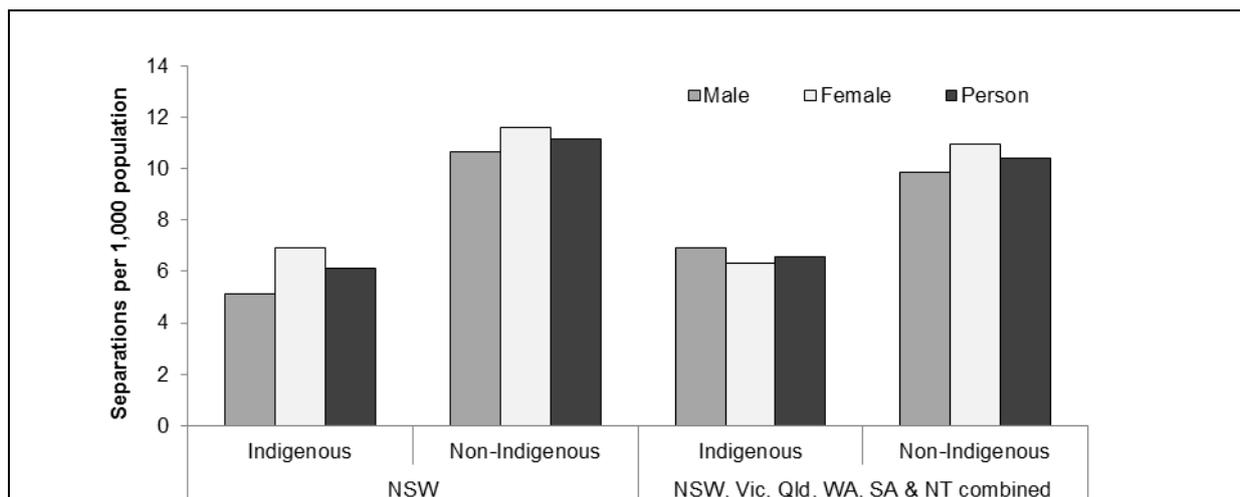
- From 2004–05 to 2009–10 in New South Wales, there were significant increases in hospitalisation rates for diseases of the eye and adnexa for both Indigenous and non-Indigenous people (an average yearly increase of 0.4 per 1,000) (Figure 1.16.3).
- Over the same period in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there were also significant increases in hospitalisation rates for diseases of the eye and adnexa for Indigenous people (average yearly increase 0.2 per 1,000) and non-Indigenous Australians (average yearly increase 0.3 per 1,000) (Figure 1.16.3).

**Table 1.16.1: Prevalence of vision loss in Indigenous adults surveyed, New South Wales, 2008**

	Low vision	Blindness	Cause of vision loss				Total
			Refractive error	Cataract	Diabetic eye disease	Other	
Per cent	5.7	2.4	50.0	15.0	15.0	20.0	100.0
Number	14	6	10	3	3	4	20

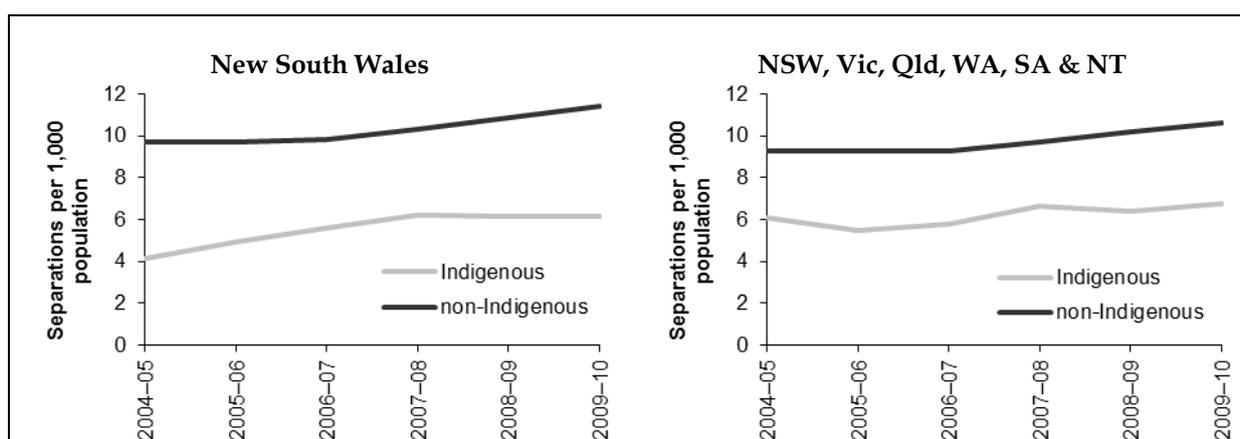
Source: AIHW analysis of National Indigenous Eye Health Survey, 2008.





Source: AIHW analyses of National Hospital Morbidity Database.

**Figure 1.16.2: Age-standardised hospitalisations rate per 1,000 for principal diagnosis of diseases of the eye and adnexa, by Indigenous status and sex, New South Wales and NSW, Vic, Qld, WA, SA and NT combined, 2008-09 to 2009-10**



Source: AIHW analyses of National Hospital Morbidity Database.

**Figure 1.16.3: Age-standardised hospitalisation rates from diseases of the eye and adnexa, New South Wales and NSW, Vic, Qld, WA, SA and NT combined, 2004-05 to 2009-10**

## Life expectancy and wellbeing

Research shows that persons in better health in general have a longer life expectancy than those in poorer health (Lubitz et al. 2003).

In the previous section, measures on specific health conditions have been analysed. In this section, data on perceived health status, social emotional wellbeing and life expectancy is presented.

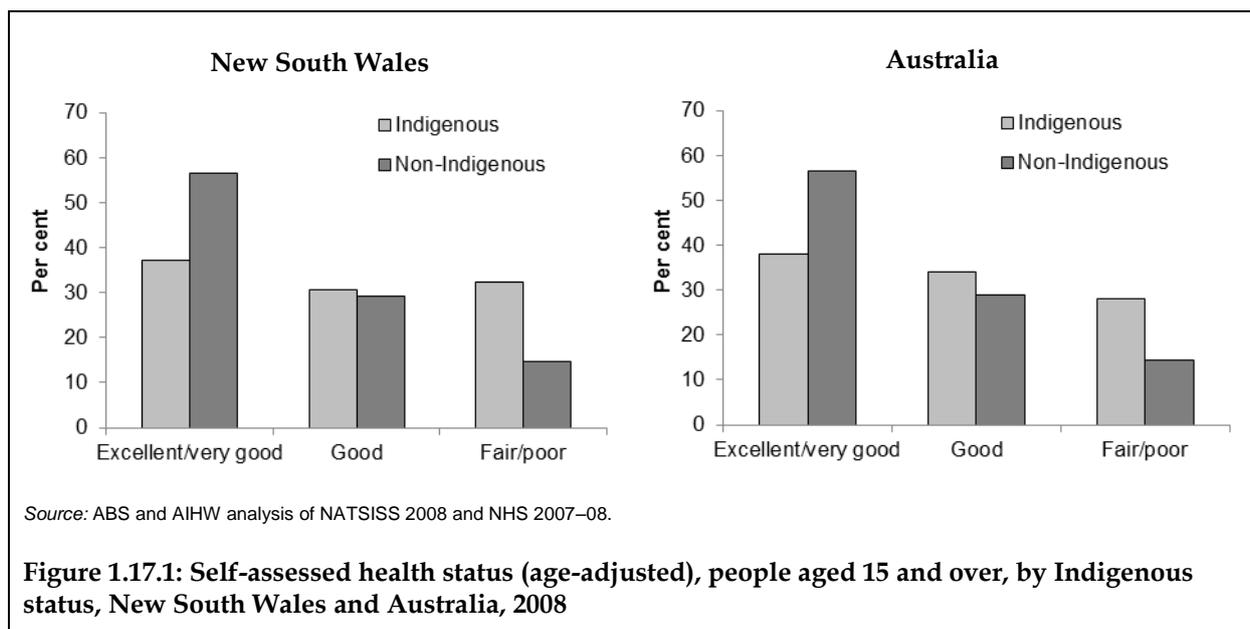
## 1.17 Perceived health status

Self-assessed health status provides a measure of the overall level of a population's health based on individuals' personal perceptions of their own health.

Data are presented on the self-assessed health status of Aboriginal and Torres Strait Islander Australians compared with non-Indigenous Australians using data from the 2008 NATSISS and 2007–08 NHS.

### Key findings

- In 2008, after adjusting for differences in age structure between the Indigenous and non-Indigenous populations, Indigenous people in New South Wales were more likely than non-Indigenous people to report their health as fair or poor, and less likely to report their health as excellent or very good. The same pattern was evident for Australia (Figure 1.17.1).
- The proportion of Indigenous people reporting fair or poor health was higher in New South Wales than for Australia (32% compared with 28%) (Figure 1.17.1).
- In New South Wales, the proportion of Indigenous people reporting excellent or very good health decreased with age, being highest among those aged 15–24 (58%) and lowest among those aged 55 and over (21%) (Table 1.17.1, Appendix 2).



## 1.18 Social and emotional wellbeing

Social and emotional wellbeing is a holistic concept related to individual, family and community experience. For Aboriginal and Torres Strait Islander people, health is not just the physical wellbeing of the individual but the 'social, emotional and cultural wellbeing of the whole community' (Social Health Reference Group 2004).

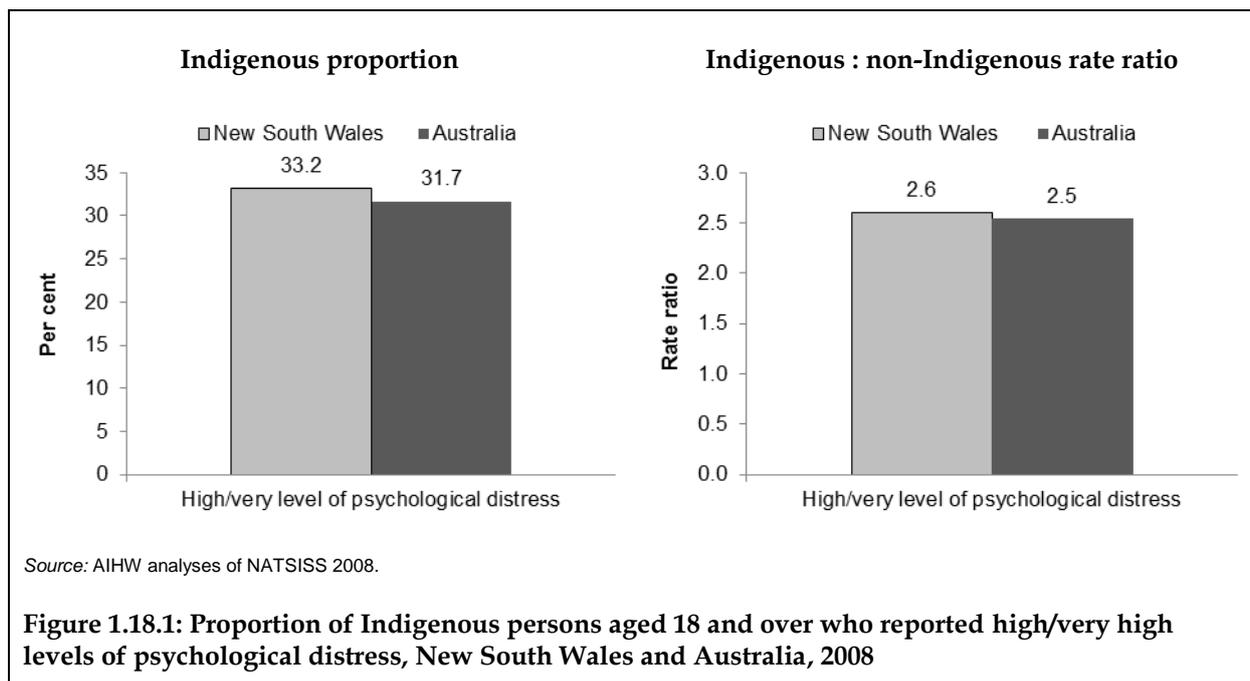
Data are presented on levels of psychological distress among Indigenous adults; and selected positive life events experienced by Indigenous children using data from the 2008 NATSISS.

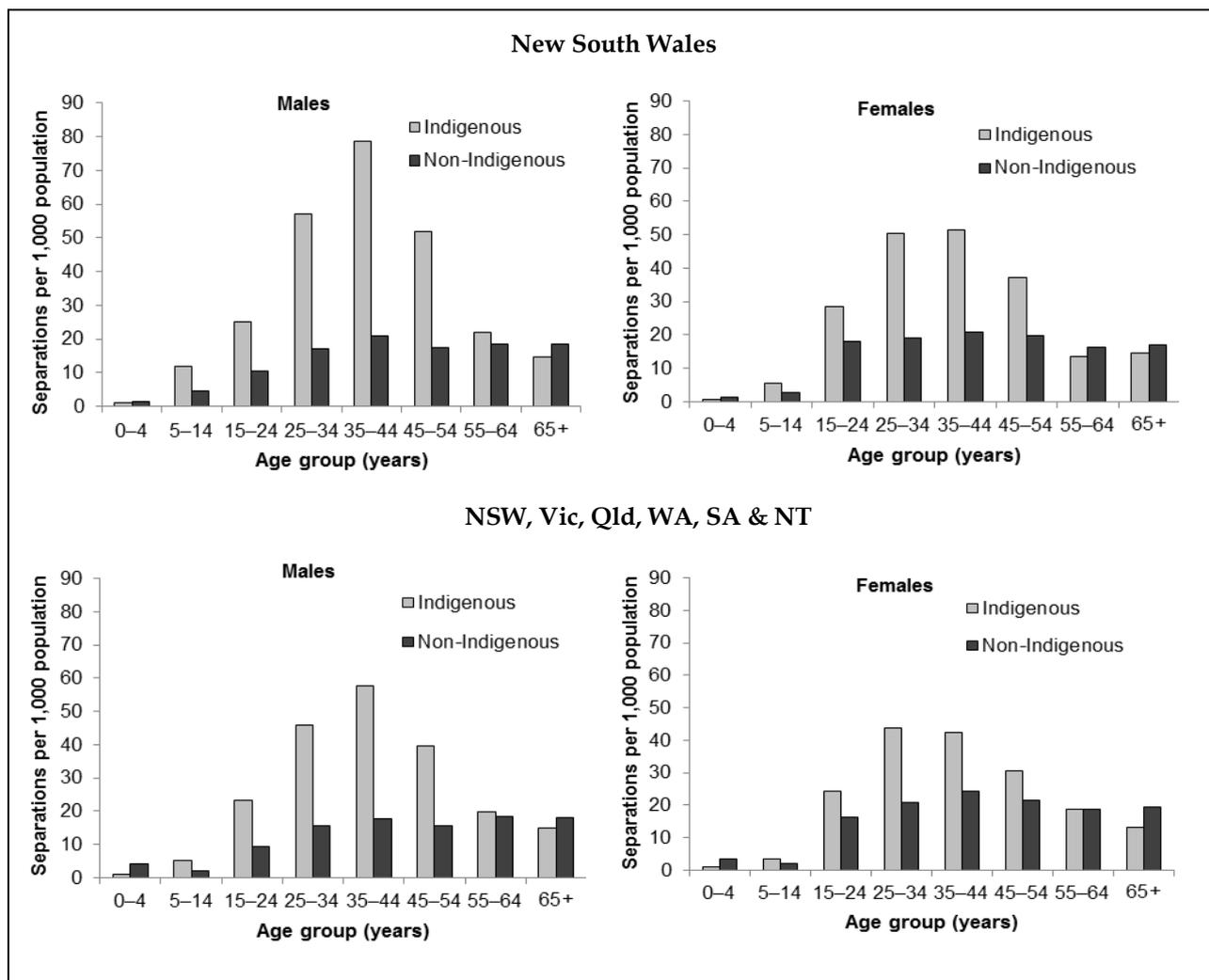
Hospitalisation rates for mental health-related conditions and deaths from suicide are also presented.

## Key findings

- According to the 2008 NATSISS, 33% of Indigenous people aged 18 and over in New South Wales reported high/very high levels of psychological distress. This was similar to the proportion reported for Indigenous people nationally (32%) (Figure 1.18.1).
- After adjusting for differences in age structure, Indigenous adults in New South Wales were 2.6 times as likely to report high/very high levels of psychological distress as non-Indigenous adults in 2008.
- In 2008, about 81% of Indigenous people aged 18 and over in New South Wales reported feeling calm and peaceful all/most/some of the time; about 88% reported feeling happy all/most/some of the time; 79% reported full of life all/most/some of the time and 75% reported having lots of energy all/most/some of the time (Table 1.18.1, Appendix 2).
- In 2008, over half (59%) of Indigenous children in New South Wales aged 4 to 14 reported experiencing selected positive life events in the last 12 months, which was lower than the proportion nationally (62%) (Table 1.18.2, Appendix 2). A positive life event was defined as whether the child received an award, prize or other recognition; whether the child had a positive experience with the police; or whether the child went on a holiday or trip away.
- Between July 2008 and June 2010 in New South Wales, Indigenous males and females had higher hospitalisation rates for mental health-related conditions than non-Indigenous males and females across all age groups with the exception of the 0–4 and 65 and over age groups. Hospitalisation rates for mental health-related conditions were highest among those aged 35–44 for Indigenous males and females in New South Wales (Figure 1.18.2).
- The hospitalisation rate for mental health related conditions for Indigenous people in New South Wales was higher than the rate for Indigenous people in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (32.5 per 1,000 compared with 26.7 per 1,000 population) (Table 1.18.3, Appendix 2).
- After adjusting for differences in age structure, Indigenous males were 2.6 times as likely as non-Indigenous males, and Indigenous females were 1.9 times as likely as non-Indigenous females, to be hospitalised for mental health-related conditions (Table 1.18.3, Appendix 2).
- The majority of Indigenous hospitalisations in New South Wales due to mental health related conditions were for mental and behavioural disorders due to psychoactive substance use (36%) and schizophrenia, schizotypal and delusional disorders (21%). Indigenous people were hospitalised at around 4 times the rate of non-Indigenous people for these conditions, respectively (Table 1.18.4, Appendix 2).
- Between 2004–05 and 2009–10 in New South Wales, there were significant increases in hospitalisation rates for mental health-related conditions among both Indigenous people (average yearly increase in the rate of 0.4 hospitalisations per 1,000 population) and non-Indigenous people (average increase in the rate of 0.3 per 1,000 population) (Figure 1.18.3).

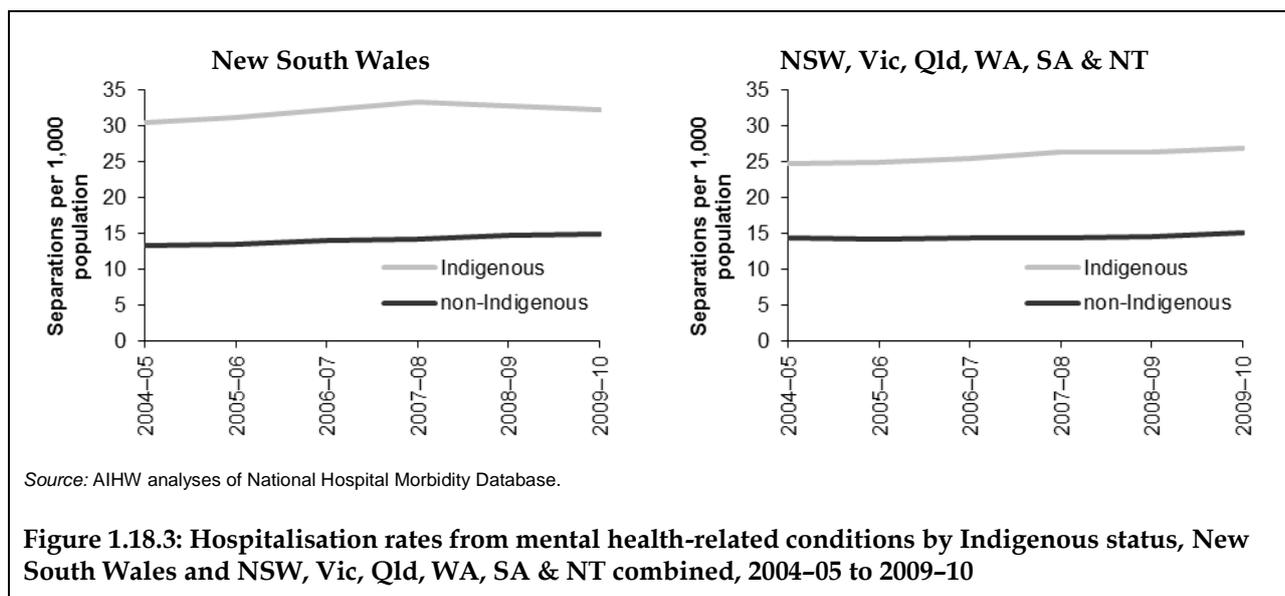
- In New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there was a significant increase in hospitalisation rates for mental health-related conditions among Indigenous and non-Indigenous people (Figure 1.18.3).
- In New South Wales, after adjusting for differences in age structure between the two populations, the rate of suicide among Indigenous people aged 0–74 was 1.6 times the rate among non-Indigenous people. This was lower than the ratio in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined, where the rate of suicide among Indigenous people aged 0–74 was over twice the rate among non-Indigenous people (Table 1.18.5, Appendix 2).





Source: AIHW analyses of National Hospital Morbidity Database.

**Figure 1.18.2: Age-specific hospitalisation rates for mental health-related conditions, by Indigenous status and sex, New South Wales and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010**



Source: AIHW analyses of National Hospital Morbidity Database.

**Figure 1.18.3: Hospitalisation rates from mental health-related conditions by Indigenous status, New South Wales and NSW, Vic, Qld, WA, SA & NT combined, 2004-05 to 2009-10**

## 1.19 Life expectancy at birth

Life expectancy at birth is an estimate of how long a person born today would live, on average, if current mortality rates remained constant throughout the person's life. It is internationally recognized as a key measure of the health of populations. Indigenous Australians have much higher death rates than non-Indigenous Australians. This difference persists across all ages and for all major underlying causes of death, and results in shorter estimated life expectancies for Indigenous Australians. Closing the life expectancy gap between Aboriginal and Torres Strait Islander people and non-Indigenous Australians within a generation has been adopted by the Council of Australian Governments (COAG) as one of the six targets to address Indigenous disadvantage.

Data are presented on life expectancy estimates produced by the ABS for the Indigenous population and the non-Indigenous population.

### Key findings

- Between 2005 and 2007, the life expectancy at birth for Indigenous people in New South Wales was 69.9 years for males and 75.0 for females. Life expectancy was considerably higher for non-Indigenous males (78.7) and non-Indigenous females (82.5) in New South Wales.
- Life expectancy was higher for Indigenous males and females in New South Wales than nationally (Table 1.19.1).

**Table 1.19.1: Life expectancy at birth, by Indigenous status and sex, New South Wales and Australia, 2005–2007**

	Indigenous		Non-Indigenous	
	Males	Females	Males	Females
New South Wales	69.9	75.0	78.7	82.5
<b>Australia</b>	<b>67.2</b>	<b>72.9</b>	<b>78.7</b>	<b>82.6</b>

Source: ABS 2009.

## Deaths

This section looks at patterns and trends in Indigenous mortality, both at all-cause and cause-specific levels. The cause of death statistics presented are based on the underlying, or primary, cause of death, which is the disease or injury that initiated the sequence of events leading directly to death (ABS 2009b).

Specific measures discussed in this section include infant and child mortality, perinatal mortality, all-causes age-standardised mortality, leading cause of mortality and avoidable and preventable deaths.

## 1.20 Infant and child mortality

Infant and child mortality are key measures of child health and the overall health of a population, and reflects the effectiveness of the health system in maternal and perinatal health. One of the COAG Closing the Gap targets is to halve the gap in mortality rates for Indigenous children under 5 years within a decade (by 2018).

Data are presented on infant (up to 12 months) and child (0–4 years) mortality rates for Aboriginal and Torres Strait Islander people compared with non-Indigenous Australians.

## Key findings

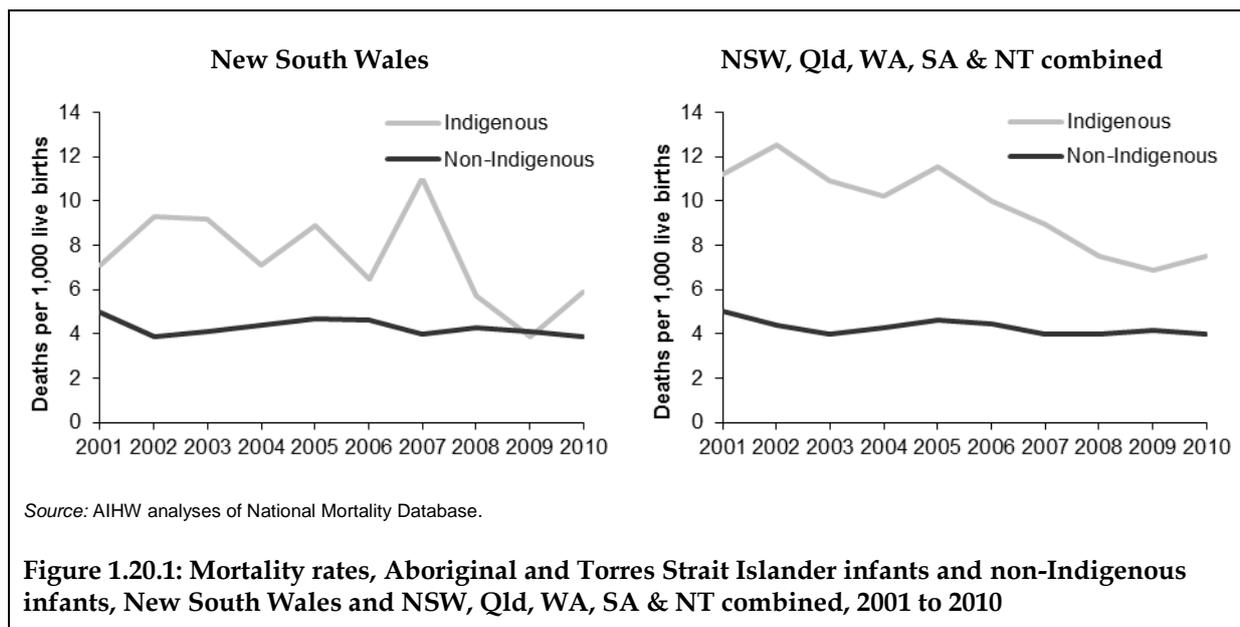
- For 2006–2010, there were 129 deaths of Aboriginal and Torres Strait Islander infants in New South Wales. The infant mortality rate for this period was 6.5 per 1,000 live births for Indigenous infants, compared with 4.2 per 1,000 live births for non-Indigenous infants.
- Infant mortality rates in New South Wales were lower than in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined for Indigenous infants (6.5 compared with 8.1 per 1,000), and were similar for non-Indigenous infants (4.2 compared with 4.1 per 1,000) (Table 1.20.1).
- From 2001 to 2010 in New South Wales, there was a non-significant decline in infant mortality rates (Figure 1.20.1). Over the same period, there were significant declines in mortality rates for both Indigenous and non-Indigenous infants in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined (46% and 13% respectively).
- Mortality rates from SIDS for Indigenous infants were three times as high as for non-Indigenous infants in New South Wales (0.9 compared with 0.3 per 1,000 live births) (Table 1.20.3, Appendix 2).
- Between 2006 and 2010 in New South Wales, the mortality rate for Indigenous children aged 0–4 was 157 per 100,000 population, which was 1.6 times the rate for non-Indigenous children in the same age group. The child mortality rate for Indigenous was lower in New South Wales than in the five jurisdictions combined (Table 1.20.2).
- From 2001 to 2010 in New South Wales, there was no significant trend in Indigenous and non-Indigenous mortality rates among children aged 0–4. Over the same period, there were significant declines in mortality rates among Indigenous and non-Indigenous children aged 0–4 in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined (19% and 10% respectively) (Figure 1.20.2).

**Table 1.20.1: Infant mortality rates per 1,000 live births, by Indigenous status, New South Wales and NSW, Qld, WA, SA & NT combined, 2006–2010**

	Indigenous		Non-Indigenous		Rate ratio	Rate difference
	Deaths	No. per 1,000	Deaths	No. per 1,000		
New South Wales	129	6.5	1,835	4.2	1.5*	2.3*
<b>NSW, Qld, WA, SA &amp; NT</b>	<b>533</b>	<b>8.1</b>	<b>3,955</b>	<b>4.1</b>	<b>2.0*</b>	<b>4.0*</b>

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

Source: ABS and AIHW analysis of ABS Mortality Database.

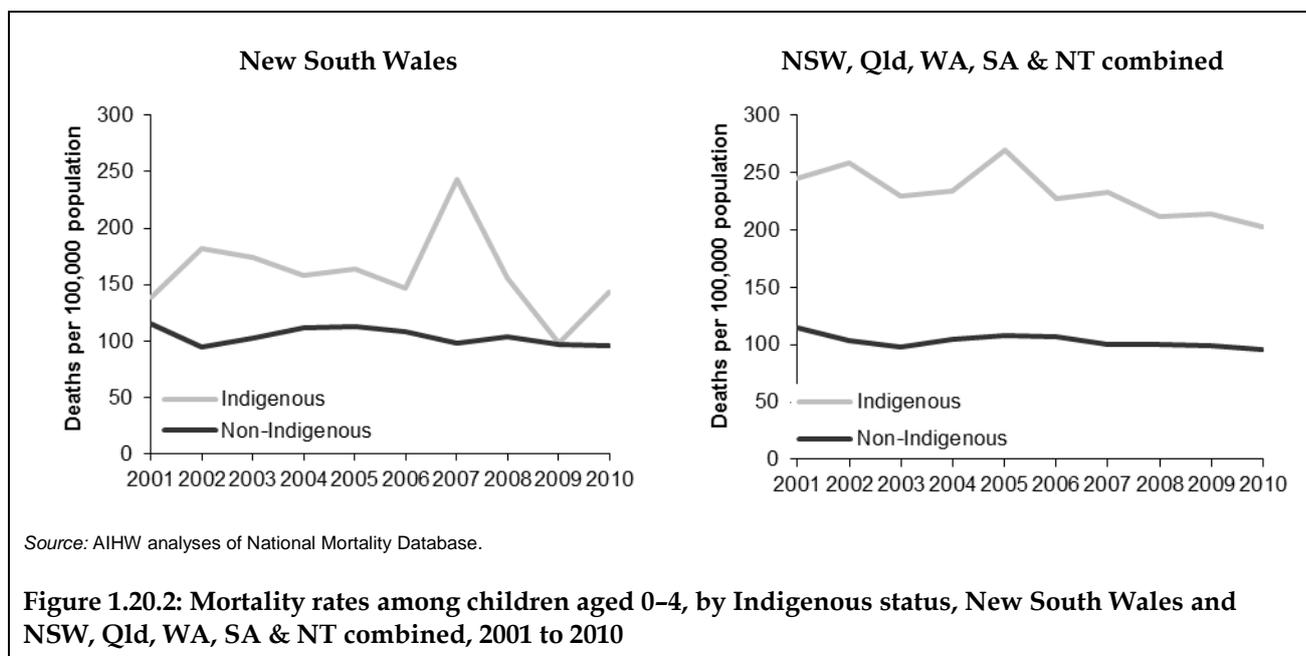


**Table 1.20.2: Mortality rates among children aged 0-4, by Indigenous status, New South Wales and NSW, Qld, WA, SA & NT, 2006-2010**

	Number of deaths		No. per 100,000		Rate ratio	Rate difference
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous		
NSW	156	2,145	156.8	100.6	1.6*	56.2*
<b>NSW, Qld, WA, SA &amp; NT</b>	<b>645</b>	<b>4,675</b>	<b>217.5</b>	<b>100.4</b>	<b>2.2*</b>	<b>117.1*</b>

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

Source: AIHW analysis of ABS Mortality Database.



## 1.21 Perinatal mortality

Perinatal mortality includes fetal deaths (stillbirths) and deaths of liveborn babies within the first 28 days after birth (neonates). Perinatal mortality reflects the health status and health care of a population, including access to maternal services for women, and health care in the neonatal period. Broader social factors relating to the mother such as maternal education, nutrition, smoking, alcohol use in pregnancy, and socioeconomic disadvantage are also associated with perinatal mortality in babies.

Data presented come from the ABS Perinatal Deaths Collection. Data are presented on the number of Aboriginal and Torres Strait Islander perinatal deaths per 1,000 births.

### Key findings

- From 2006 to 2010, the perinatal mortality rate for Indigenous babies in New South Wales was 8.7 per 1,000 births compared with 8.0 per 1,000 births for non-Indigenous babies.
- Over the same period, the perinatal mortality rate for Indigenous babies in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined was 12.0 per 1,000 births compared with 8.1 per 1,000 births for non-Indigenous babies.
- The perinatal mortality rate for Indigenous babies in New South Wales was lower over the period 2006 to 2010 than in 2001 to 2005 (8.7 compared with 10.5 per 1,000 births, respectively) (Table 1.21.1).

**Table 1.21.1: Perinatal mortality rates per 1,000 births, by Indigenous status, New South Wales and NSW, Qld, WA, SA & NT combined, 2001–2005 to 2006–2010**

	Indigenous		Non-Indigenous		Rate ratio	Rate difference
	Number	No. per 1,000	Number	No. per 1,000		
<b>2001–2005</b>						
New South Wales	172	10.5	3,650	8.8	1.2*	1.8*
NSW, Qld, WA, SA & NT	757	14.2	8,063	9.6	1.5*	4.6*
<b>2006–2010</b>						
New South Wales	174	8.7	3,649	8	1.1	0.6
NSW, Qld, WA, SA & NT	810	12.0	8,069	8.1	1.5*	3.9*

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

Source: ABS Deaths Perinatal Collection.

## 1.22 All-causes age-standardised death rate

The overall mortality rate of a population provides a summary measure of the overall health status of that population and is particularly useful to compare one population with another or to measure improvements over time.

Data are presented on age-standardised mortality rates for the Aboriginal and Torres Strait Islander population and the non-Indigenous population.

## Key findings

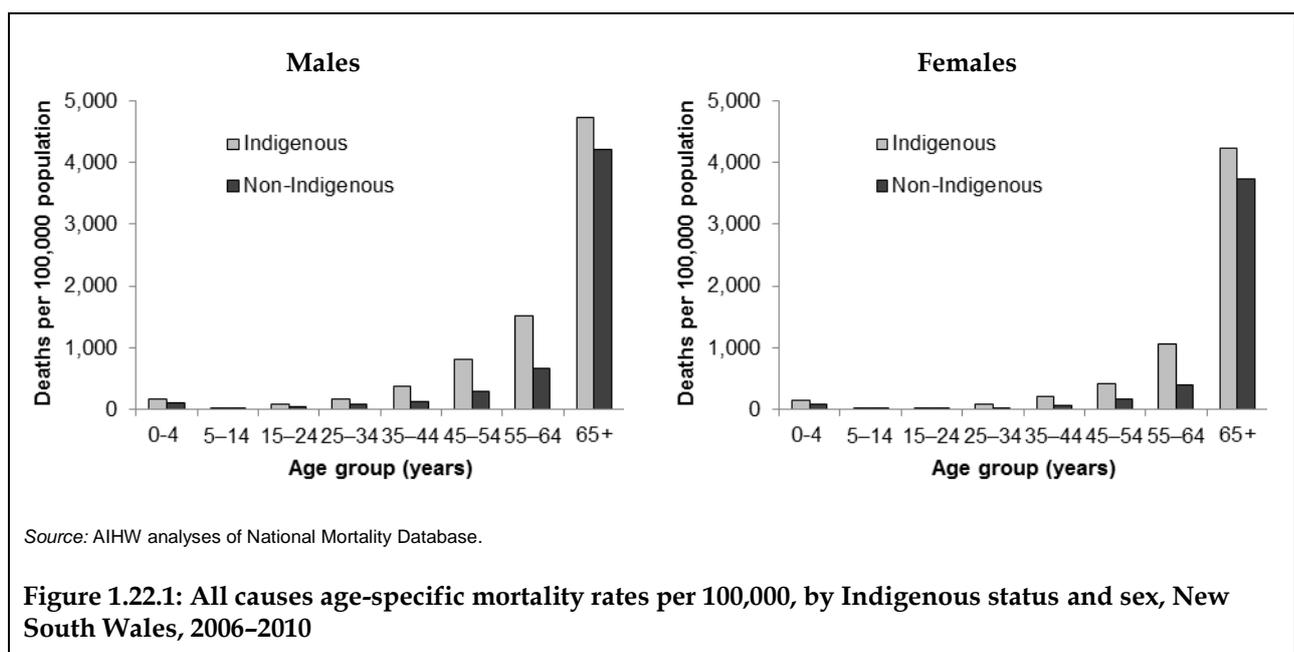
- From 2006 to 2010 in New South Wales, there were 2,903 deaths of Aboriginal and Torres Strait Islander people. The age-standardised mortality rate for Indigenous Australians was 1.6 times the rate for non-Indigenous Australians (Table 1.22.1).
- The age-standardised mortality rate for Indigenous Australians in New South Wales was lower than the rate in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined (Table 1.22.1).
- Indigenous males and females in New South Wales had higher mortality rates than non-Indigenous males and females across all age groups. The greatest difference in rates was in the 35–44 and 45–54 year age groups where the Indigenous mortality rate was about 3 times the rate of non-Indigenous people (Figure 1.22.1).
- From 2001 to 2010, in New South Wales, there were no significant changes in the all-cause mortality rate for Indigenous people. Rates for non-Indigenous Australians significantly declined by an average of 6.2 per 100,000 population per year, equivalent to a 9% decline over the period). Significant decreases in all-cause mortality rates were observed for both Indigenous and non-Indigenous Australians in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined (average annual declines of 7.3 and 6.5 per 100,000 population, respectively) (Figure 1.22.2).

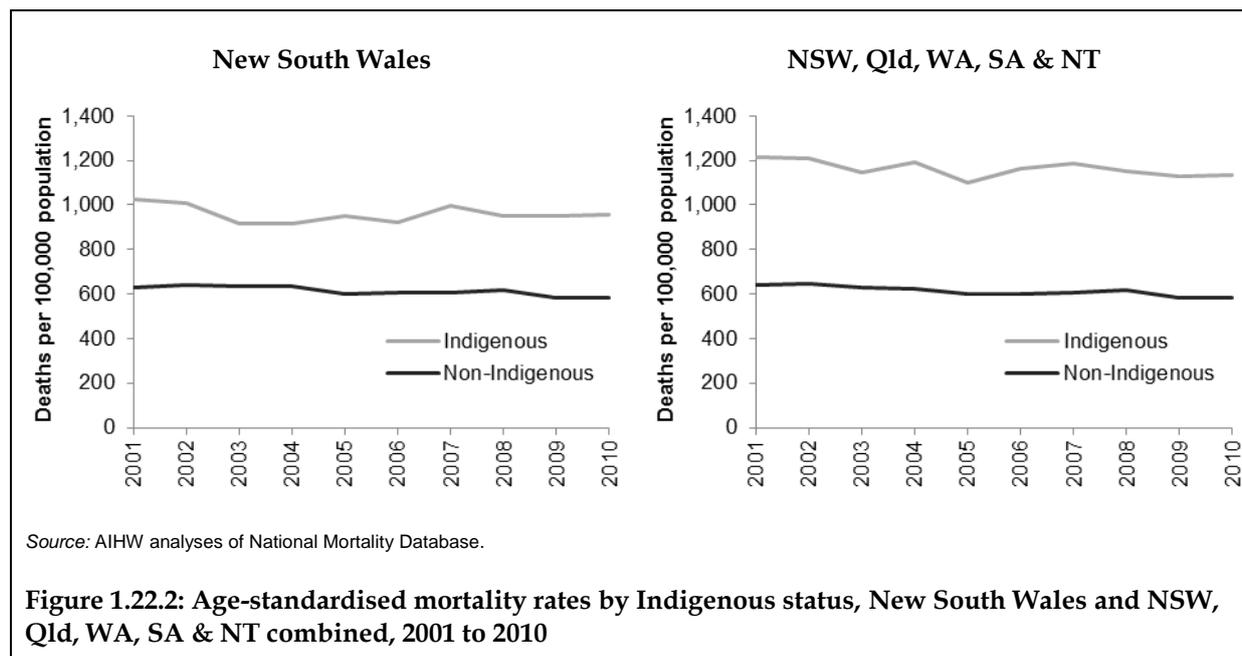
**Table 1.22.1: All causes mortality, by Indigenous status, New South Wales and NSW, Qld, WA, SA & NT combined, 2006–2010**

	Number			Rate per 100,000			Ratio	Rate difference
	Indigenous	Non-Indigenous	Not stated	Indigenous	Non-Indigenous			
NSW	2,903	231,732	1,859	961.7	598.3	1.6*	363.4*	
<b>NSW, Qld, WA, SA &amp; NT</b>	<b>11,132</b>	<b>479,933</b>	<b>5,441</b>	<b>1,151.1</b>	<b>597.0</b>	<b>1.9*</b>	<b>554.0*</b>	

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

Source: AIHW analysis of National Mortality Database.





### 1.23 Leading causes of mortality

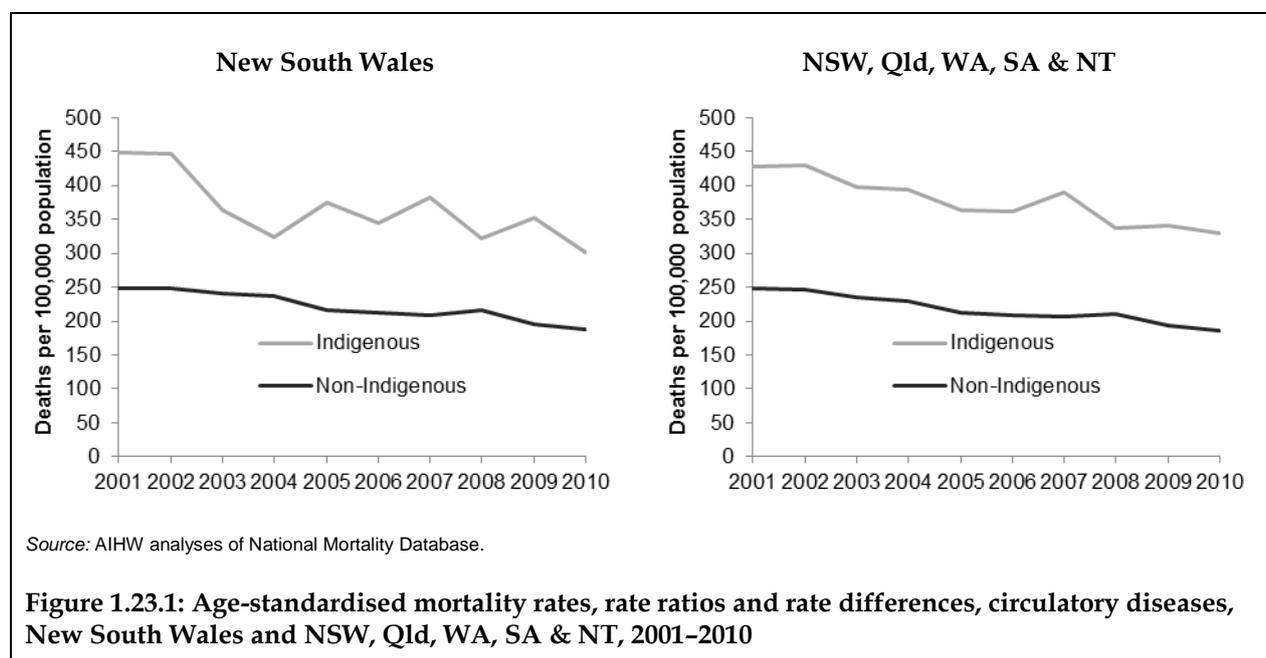
The gap between the Aboriginal and Torres Strait Islander population and the rest of the Australian population for particular causes of death provides an indication of the prevention, prevalence and management of particular diseases for Aboriginal and Torres Strait Islander people, relative to the rest of the population.

Data are presented on the leading causes of death for Aboriginal and Torres Strait Islander Australians (based on ICD-10 Chapter level disease coding).

#### Key findings

- From 2006 to 2010 in New South Wales, the most common cause of death among Indigenous people was circulatory diseases (30%), followed by neoplasms (cancer) (22%). These were also the most common causes of death among non-Indigenous people in New South Wales and among Indigenous and non-Indigenous people in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined (Table 1.23.1).
- The Indigenous mortality rate in New South Wales was 1.7 times the rate of non-Indigenous people for circulatory diseases and 1.3 times the rate of non-Indigenous people for neoplasms (cancer).
- The greatest disparity in mortality rates between Indigenous and non-Indigenous people in New South Wales was for diabetes, with the Indigenous mortality rate at 3.5 times the rate of non-Indigenous people (Table 1.23.1). The Indigenous mortality rate for cervical cancer was 3 times the rate of non-Indigenous people.
- From 2001 to 2010 in New South Wales, there was a significant decline in mortality from circulatory diseases for both Indigenous and non-Indigenous people (decline of 12.5 and 6.8 per 100,000 population per year, respectively, equivalent to a 25% decline over the period) (Figure 1.23.1). There was no significant change in the gap (rate difference). Over the same period, significant declines were also observed for both Indigenous and non-

Indigenous people in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined (decline of 23% and 25% respectively) (Figure 1.23.1).



**Table 1.23.1: Causes of mortality, by Indigenous status, New South Wales and NSW, Qld, WA, SA & NT combined, 2006–2010**

Underlying cause of death	New South Wales					NSW, Qld, WA, SA & NT				
	Per cent		Age-standardised rate per 100,000			Per cent		Age-standardised rate per 100,000		
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Rate ratio	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Rate ratio
Circulatory diseases (I00–I99)	30.3	34.5	338.9	203.9	1.7*	26.3	33.9	351.0	201.0	1.7*
Neoplasms (C00–C97, D00–D48)	22.5	29.6	225.8	177.6	1.3*	18.9	29.9	244.6	178.0	1.4*
External causes (V01–Y98)	11.2	5.3	53.0	34.1	1.6*	15.0	5.9	84.3	37.1	2.3*
Digestive organ cancers (C15–C26)	6.5	8.1	65.4	48.5	1.3*	5.3	8.0	67.9	47.7	1.4*
Lung cancer (C34)	6.2	5.4	60.1	32.7	1.8*	4.5	5.6	59.6	33.4	1.8*
Cervical cancer (C53)	0.5	0.2	3.0	1.0	3.0*	0.5	0.2	4.8	1.0	4.8*
Respiratory diseases (J00–J99)	8.8	8.4	104.9	49.6	2.1*	7.7	8.2	112.3	48.7	2.3*
Endocrine, metabolic & nutritional disorders (E00–E89)	5.8	3.4	58.1	20.3	2.9*	8.8	3.7	117.7	21.8	5.4*
Diabetes (E10–E14)	4.7	2.3	48.0	13.9	3.5*	7.6	2.6	101.8	15.2	6.7*
Digestive diseases (K00–K93)	5.2	3.4	41.1	20.5	2.0*	5.9	3.4	57.8	20.3	2.8*
Conditions originating in perinatal period (P00–P96)	2.4	0.4	4.7	3.1	1.5*	2.4	0.4	6.0	2.8	2.2*
Nervous system diseases (G00–G99)	2.3	3.8	21.7	22.5	1.0	2.5	4.0	26.5	24.0	1.1
Infectious & parasitic diseases (A00–B99)	2.2	1.7	20.1	10.1	2.0*	2.3	1.5	25.4	8.7	2.9*
Kidney diseases (N00–N29)	2.1	2.0	23.4	11.7	2.0*	2.9	1.9	40.3	11.4	3.5*
Other causes	7.2	7.5	63.7	44.6	1.4*	7.2	7.2	85.1	43.1	2.0*
<b>All causes</b>	<b>100.0</b>	<b>100.0</b>	<b>955.3</b>	<b>598.1</b>	<b>1.6*</b>	<b>100.0</b>	<b>100.0</b>	<b>1,151.1</b>	<b>597.0</b>	<b>1.9*</b>

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

Source: AIHW analyses of National Mortality Database.

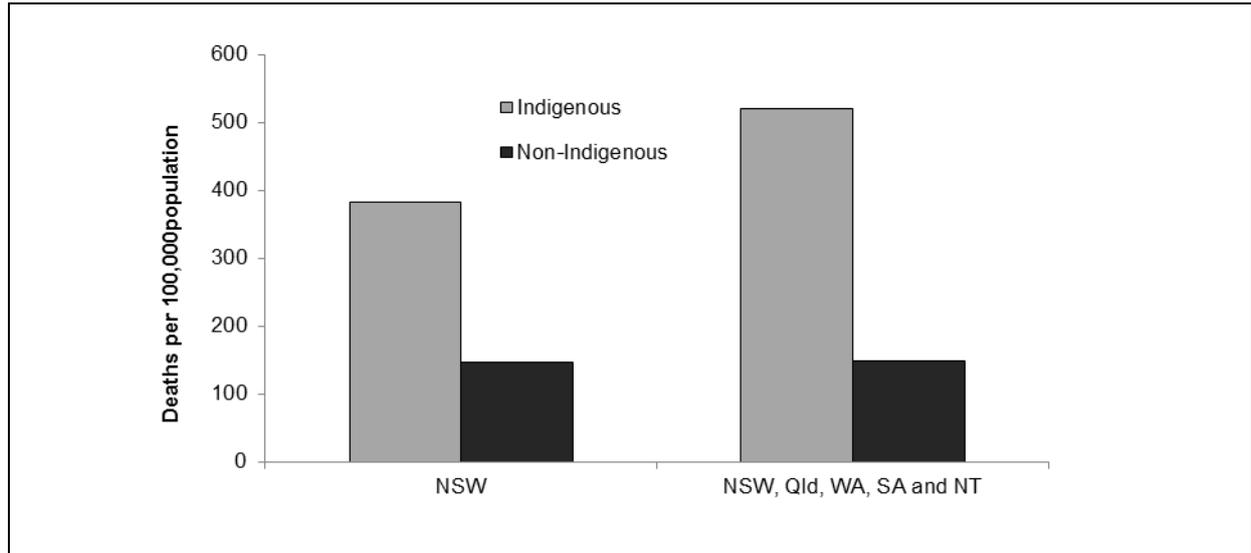
## 1.24 Avoidable and preventable deaths

Avoidable and preventable mortality refers to deaths from certain conditions that are considered avoidable given timely and effective health care (Page et al. 2011). This also includes deaths amenable to legal measures, such as traffic safety. Avoidable deaths have been used in a number of studies to measure the quality, effectiveness and accessibility of the health system (AHMAC 2012).

Data are presented for Aboriginal and Torres Strait Islander people aged 0–74.

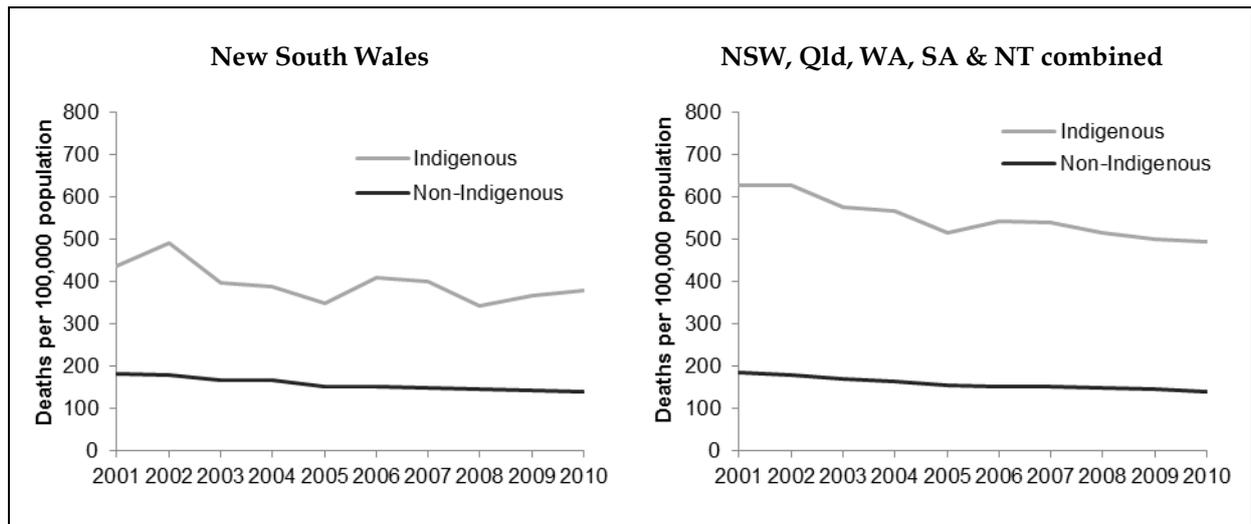
### Key findings

- For 2006–2010, the most common types of avoidable conditions causing death among Indigenous people in New South Wales were cancer (20.7%) and ischaemic heart disease (20.6%), followed by suicide (7.4%), diabetes (6.7%), alcohol-related disease (6.3%), and chronic obstructive pulmonary disease (6.1%).
- Indigenous mortality rates from cancer, suicide and road traffic accidents were about 1.5 times the rate of non-Indigenous people; and at 3.4 and 6.9 times the rate of non-Indigenous people from ischaemic heart disease and diabetes, respectively (Table 1.24.1).
- After adjusting for differences in age structure, the total avoidable mortality rate for Indigenous people in New South Wales was 2.6 times higher than for non-Indigenous people (Figure 1.24.1). In New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined the rate ratio was 3.5.
- Between 2001 and 2010 in New South Wales, there were significant declines in mortality rates from avoidable causes of death for both Indigenous and non-Indigenous people aged 0–74 of 20% and 24% respectively (Figure 1.24.2). There was no significant reduction in the gap (rate difference) between mortality rates from avoidable causes of death for Indigenous and non-Indigenous people aged 0–74 years.
- Over the same period, there were significant declines in mortality for Indigenous and non-Indigenous people in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined (of 21% and 23% respectively); and a significant narrowing of the gap of 21% (Figure 1.24.2).



Source: AIHW analysis of National Mortality Database.

**Figure 1.24.1: Total avoidable mortality rate by Indigenous status, people aged 0-74, New South Wales and NSW, Qld, WA, SA & NT combined, 2006 to 2010**



Source: AIHW analyses of National Mortality Database.

**Figure 1.24.2: Mortality rates for avoidable causes of death, Indigenous and non-Indigenous Australians aged 0-74, New South Wales and NSW, Qld, WA, SA & NT combined, 2001 to 2010**

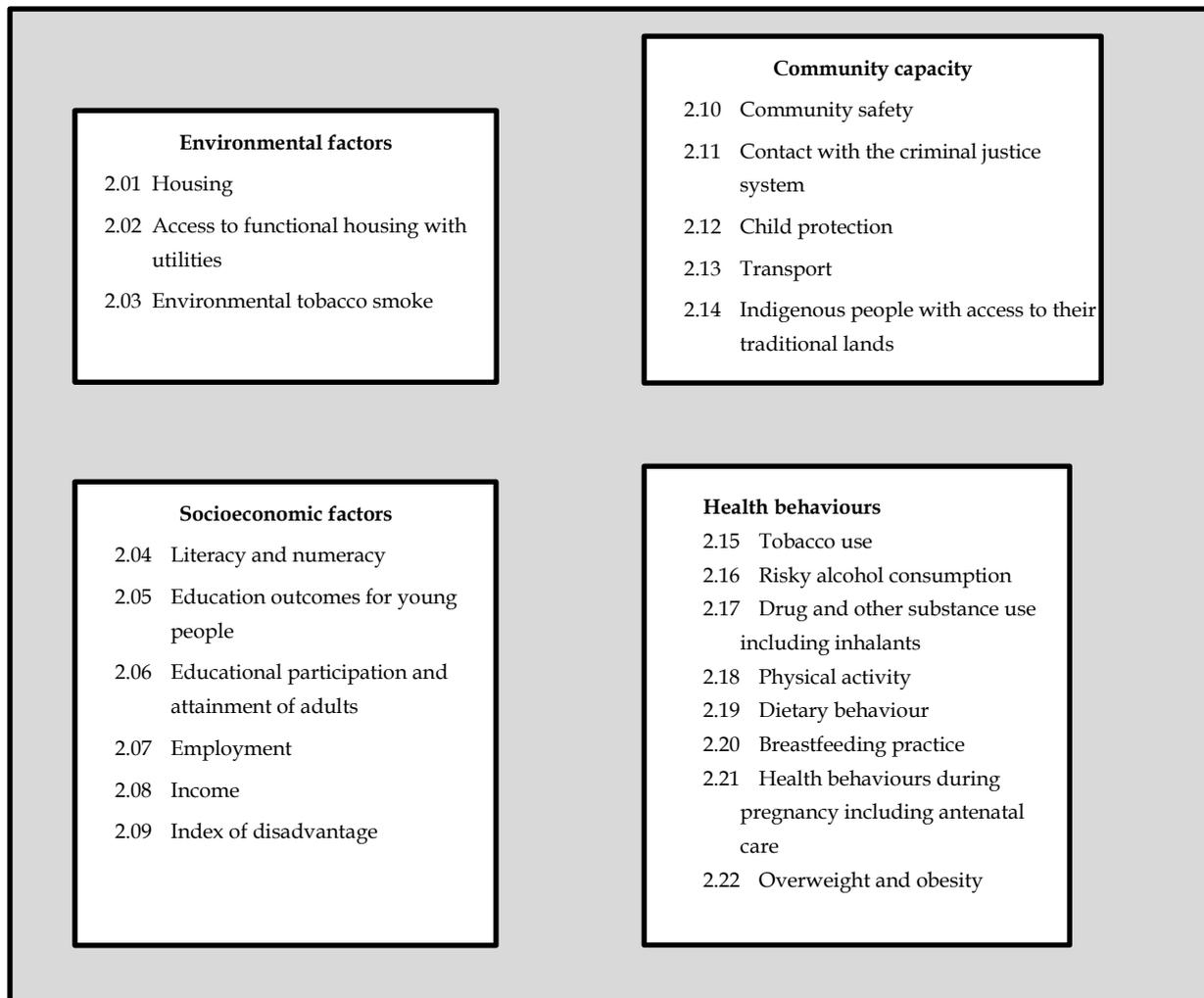
**Table 1.24.1: Avoidable mortality, by cause of death and Indigenous status, people aged 0–74, New South Wales, 2006 to 2010**

Cause of death	Number		Per cent		Age-standardised rate per 100,000		Ratio	Rate difference
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous		
Ischaemic heart disease	336	9,012	20.6	17.8	87.4	25.9	3.4*	61.5*
Cancer	338	19,538	20.7	38.5	90.5	55.7	1.6*	34.7*
<i>Digestive organ cancers (C15–C26)</i>	96	6,251	5.9	12.3	24.8	17.8	1.4*	7.0*
<i>Lung cancer</i>	147	6,775	9.0	13.3	40.1	19.2	2.1*	21.0*
<i>Cervical cancer (C53)</i>	14	237	0.9	0.5	3.1	0.7	4.5*	2.4*
Diabetes	109	1,566	6.7	3.1	30.9	4.5	6.9*	26.4*
Suicide	120	3,642	7.4	7.2	18.4	11.2	1.6*	7.3*
Road traffic injuries	55	1,569	3.4	3.1	7.1	4.8	1.5*	2.2*
Alcohol-related disease	102	1,421	6.3	2.8	21.7	4.1	5.3*	17.6*
Cerebrovascular disease	94	3,157	5.8	6.2	24.9	9.2	2.7*	15.7*
Selected invasive bacterial and protozoal infections	37	1,234	2.3	2.4	8.8	3.6	2.4*	5.2*
Chronic obstructive pulmonary disease	99	2,395	6.1	4.7	30.5	6.8	4.5*	23.7*
Nephritis and nephrosis	46	776	2.8	1.5	12.8	2.3	5.7*	10.5*
Complications of perinatal period	36	496	2.2	1.0	2.5	1.6	1.6*	0.9*
Violence	28	327	1.7	0.6	4.0	1.0	3.9*	3.0*
Birth defects	36	855	2.2	1.7	3.4	2.7	1.2	0.7
Rheumatic and other valvular heart disease	8	138	0.5	0.3	1.6	0.4	4.0*	1.2*
Other	186	4,641	11.4	9.1	37.1	13.9	2.7*	23.3*
<b>Total</b>	<b>1,630</b>	<b>50,767</b>	<b>100.0</b>	<b>100.0</b>	<b>381.6</b>	<b>147.6</b>	<b>2.6*</b>	<b>234.0*</b>

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

Source: AIHW analysis of AIHW National Mortality Database.

## Part 2 –Determinants of health



The second part of this report, Determinants of health, presents Tier 2 measures of the Aboriginal and Torres Strait Islander Health Performance Framework. It covers measures that affect health outcomes such as housing, education, employment and health risk factors including smoking and alcohol use. Data are presented on the key determinants of health in the Aboriginal and Torres Strait Islander population, with comparisons to the non-Indigenous population where data are available. Tier 2 comprises four sections: Environmental factors, Socioeconomic factors, Community capacity and Health behaviours.

## Environmental factors

This section focuses on environmental factors that affect health outcomes, such as conditions of housing, access to functional housing with utilities and environmental tobacco smoke.

### 2.01 Housing

Factors related to housing, such as overcrowding in housing and housing tenure type have potentially significant impacts on health. Living in overcrowded households may increase the risk of infectious diseases, such as meningitis, acute rheumatic fever, tuberculosis, and skin and respiratory infections (AIHW 2005). Overcrowding has also been associated with poorer self-reported physical and mental health, and higher rates of smoking and hazardous drinking (Shaw 2004). People who own their own home typically experience better health than those who rent (Hulse et al. 2010). Indigenous home ownership rates are relatively low compared with non-Indigenous households. This partly reflects the lower socioeconomic status of many Indigenous households, as well as cultural differences regarding the value of home ownership (AIHW 2011a).

Data are presented on rates of overcrowding and housing tenure for Indigenous and non-Indigenous people and households using data from the 2006 Census and 2008 NATSISS. Data on clients of specialist homelessness services from the Supported Accommodation Assistance Program data collection is also presented.

#### Canadian National Occupancy Standard for overcrowding

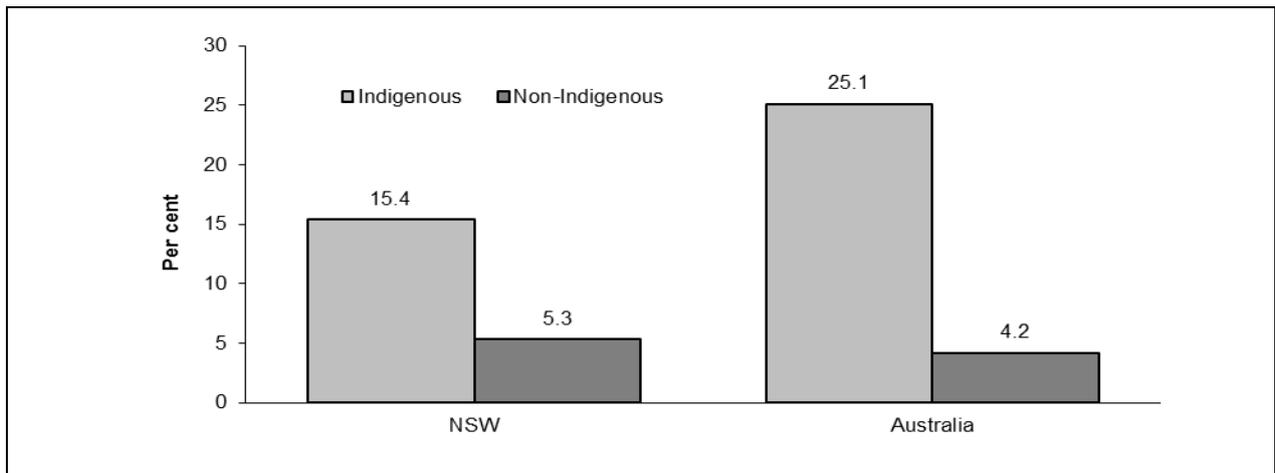
Data presented on overcrowding are based on the Canadian National Occupancy Standard of housing overcrowding, the measure most widely used in Australia. This standard specifies the number of bedrooms required in a dwelling based on the numbers, age, sex and relationships of household members. Households that require one more bedroom to meet the standard are considered to experience overcrowding (AIHW 2005).

#### Key findings

- According to the 2008 NATSISS, over fifteen per cent (15.4%) of Indigenous people aged 15 and over in New South Wales were living in overcrowded households, compared with 5.3% of non-Indigenous people. The proportion of Indigenous people living in overcrowded households in New South Wales was much lower than that reported nationally (15.4% and 25% respectively) (Figure 2.01.1).
- In New South Wales and the Australian Capital Territory combined, overcrowding varied by tenure type with 18% of Indigenous households in housing co-operative, community or church group housing overcrowded and 11.4% of Indigenous households in state or territory housing authority housing overcrowded based on data from the 2006 Census. This compared with 11% of private and other renters and 6.6% of home owners or buyers (Table 2.01.1, Appendix 2).
- In 2008 in New South Wales, about 33.5% of Indigenous households owned or were buying their own home, 35% were private and other renters, and 8.4% were renters of some form of social housing (state or territory housing authority/housing cooperative or church group/Indigenous housing organisation or community housing). This compared with 63% of non-Indigenous households who owned or were buying their home, 27%

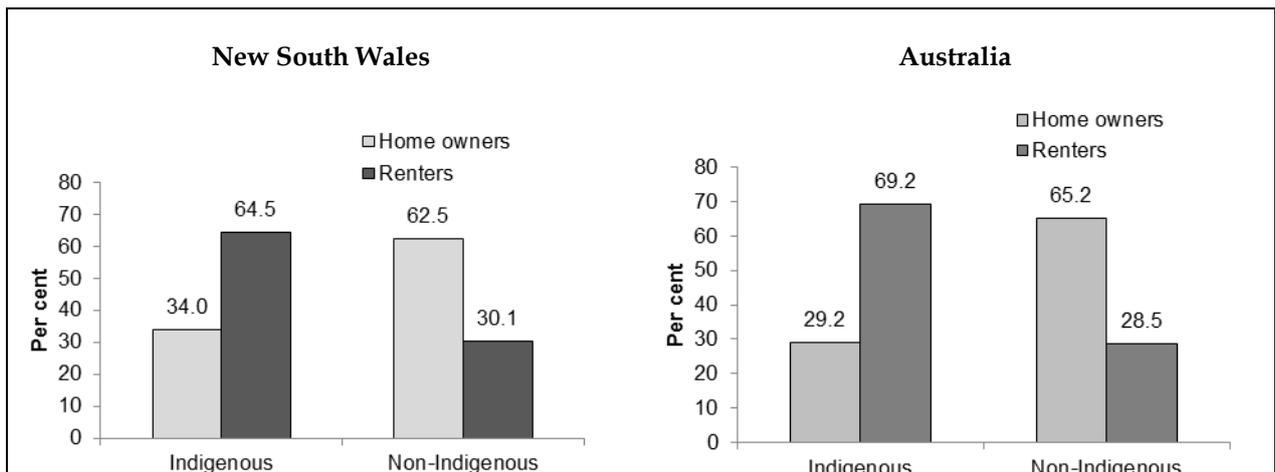
who were private and other renters, and less than 1% who were renters of some form of social housing (Table 2.01.2, Appendix 2).

- A higher proportion of Indigenous people aged 18 and over in New South Wales were home owners than Indigenous people nationally (34% compared with 29%), while a lower proportion were renters (65% in New South Wales compared with 69% nationally) (Figure 2.01.2).
- In 2009–10, there were 62,441 support periods for clients of specialist homeless services in New South Wales who identified as Aboriginal or Torres Strait Islander. This represented 14% of all support periods of clients of these services in New South Wales (Table 2.01.3, Appendix 2).



Source: AIHW analyses of NATSISS 2008.

**Figure 2.01.1: Proportion of Indigenous people aged 15 and over living in overcrowded housing, based on the Canadian Occupancy Standard, New South Wales and Australia, 2008**



Source: AIHW analyses of NATSISS 2008.

**Figure 2.01.2: Proportion of people aged 18 and over, by tenure type and Indigenous status, New South Wales and Australia, 2008**

## 2.02 Access to functional housing with utilities

Research on housing and health shows a relationship between inadequate housing and related infrastructure and poor health outcomes (Atkinson et al. 2007). Lack of access to clean water, adequate sanitation and reliable electricity services are associated with higher rates of infectious diseases (ABS & AIHW 2008). Having access to basic household amenities – such as washing people and clothes/bedding, safe storage and preparation of food, and safe waste removal – is important to ensuring a healthy living environment. These facilities are more likely of poor quality or unavailable in Indigenous households.

Data are presented on connection to water, sewerage and electricity services in Indigenous communities using data from the 2006 Community Housing and Infrastructure Needs Survey (CHINS). Information on the functionality of Indigenous housing facilities which are required to support healthy living practices is also presented using data from the 2008 NATSISS.

### Key findings

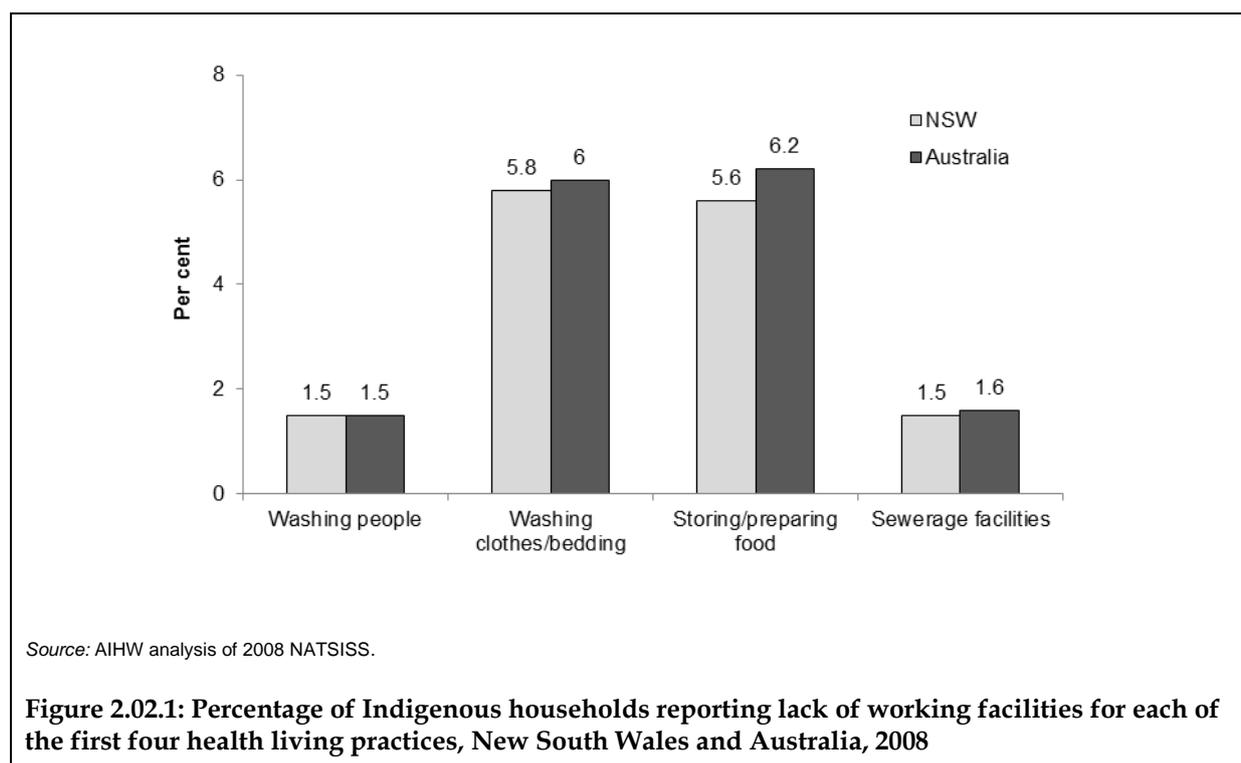
- According to the 2006 CHINS, of the 57 discrete Indigenous communities in New South Wales, 19% experienced overflows or leakages that lasted longer than 48 hours, nearly 6% had 10 or more overflows or leakages. These were lower than the proportions nationally (22% and 8% respectively). There were 3.5% of Indigenous communities with no organised sewerage system supply in New South Wales, higher than the proportion nationally at 2.1% (Table 2.02.2, Appendix 2).
- Of the 5 discrete Indigenous communities in New South Wales that were not connected to a town water supply and that sent their drinking water for testing in the 12 months before the 2006 CHINS, 4 (or 80%) provided samples that failed testing. This was higher than the proportion of discrete Indigenous communities nationally that provided water samples that failed testing (29%) (Table 2.02.1).
- According to the 2008 NATSISS, in New South Wales, 1.5% of Indigenous households did not have working facilities for washing people, 5.8% did not have facilities for washing clothes/bedding, 5.6% did not have facilities for storing/preparing food, and 1.5% did not have working sewerage systems. These proportions were similar to those nationally (1.5%, 6%, 6.2% and 1.6% respectively) (Figure 2.02.1).

**Table 2.02.1: Testing of drinking water in discrete Indigenous communities, New South Wales and Australia, 2006<sup>(a)(b)(c)</sup>**

	New South Wales		Australia			
	Number of communities	Per cent	Number of communities	Per cent	Reported usual population	Per cent
Did not fail testing	1	20.0	100	61.0	29,104	58.2
Failed testing	4	80.0	48	29.3	12,059	24.1
Test result not known	0	0.0	16	9.7	8,880	17.7
<b>Total communities water sent away for testing</b>	<b>5</b>	<b>83.3</b>	<b>164</b>	<b>78.1</b>	<b>50,043</b>	<b>89.5</b>
Not tested	1	16.7	45	21.4	4,796	8.6
Not stated whether water sent away for testing	0	0.0	2	0.9	1,100	2.0
<b>Total communities</b>	<b>6</b>	<b>100.0</b>	<b>211</b>	<b>100.0</b>	<b>54,939</b>	<b>100.0</b>

- (a) In the 12 months prior to the survey.  
 (b) Excludes communities connected to town supply.  
 (c) All discrete Indigenous communities for which water testing data were collected.

Source: ABS 2007; FaHCSIA and AIHW analyses of CHINS 2006.



**Figure 2.02.1: Percentage of Indigenous households reporting lack of working facilities for each of the first four health living practices, New South Wales and Australia, 2008**

## 2.03 Environmental tobacco smoke

Environmental tobacco smoke, or passive smoking, is a significant cause of morbidity and mortality. There is strong and consistent evidence that passive smoking increases a non-smoker's risk of lung cancer and ischaemic heart disease. Passive smoking is also associated with increased risk of respiratory conditions and otitis media in children (Thomson et al. 2012; Jacoby et al. 2008) and of respiratory disease in adults (NHMRC 1997).

Data are presented on the proportion of Aboriginal and Torres Strait Islander children aged 0–14 years who live in households with regular smokers using data from the 2008 NATSISS.

## Key findings

- In 2008 in New South Wales, about 62% of Indigenous children aged 0–14 lived in households with a daily smoker, compared with 32% of non-Indigenous children the same age (Table 2.03.1). In the same period nationally, about 65% of Indigenous children aged 0–14 lived in households with a daily smoker, compared with 32% of non-Indigenous children.
- About 23% of Indigenous children aged 0–14 in New South Wales were living in households with a daily smoker who smoked at home indoors, compared with 8% of non-Indigenous children of the same age. The proportions nationally were 22% for Indigenous children and nearly 7% for non-Indigenous children of the same age.

**Table 2.03.1: Children aged 0–14 living in households with smokers, by Indigenous status of children, New South Wales and Australia, 2008 and 2007–08**

		New South Wales	Australia
<b>Proportion of children living with daily smoker(s)<sup>(a)</sup></b>			
Indigenous	%	61.5	65.1
Non-Indigenous	%	31.9	32.2
Rate ratio		1.9*	2.0*
<b>Proportion of children with daily smoker who smokes at home indoors in household<sup>(a)</sup></b>			
Indigenous	%	22.5	21.6
Non-Indigenous	%	8.3	6.6
Rate ratio		2.7*	3.3*
<b>Total number of children aged 0–14 years<sup>(b)</sup></b>			
<b>Indigenous</b>	<b>No.</b>	<b>57,941</b>	<b>193,249</b>
<b>Non-Indigenous</b>	<b>No.</b>	<b>1,292,502</b>	<b>3,907,621</b>

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

(a) Proportions exclude not stated responses.

(b) Includes households in which the smoking status of members was not stated.

Source: ABS and AIHW analysis of NATSISS 2008 and NHS 2007–08.

## Socioeconomic factors

Socioeconomic factors of a population refer to characteristics such as education, employment and income. Their influence on health is both complex and profound. Socioeconomically disadvantaged people (such as those with low income or poor education) tend to live shorter and less healthy lives. Having a low income and/or lower levels of education limits choices and opportunities for improving health outcomes, and may influence other health-related factors, such as diet and access to health care.

This section focuses on socioeconomic factors that affect the health of Aboriginal and Torres Strait Islander people, such as literacy and numeracy, education outcomes for young people, educational participation and attainment of adults, employment, income and transport.

## 2.04 Literacy and numeracy

Poor literacy and numeracy skills can severely compromise children's ability to engage in school learning, to undertake future learning, to be successfully employed and to positively participate in society (Cope & Kalantzis 2000). Students who do not attain minimum standards for literacy and numeracy in the early years of schooling may have difficulty progressing further, and are less likely to enter higher education.

One of the six COAG targets is to halve the gap in reading, writing and numeracy achievements for Indigenous children within a decade (by 2018).

Data are presented on the proportion of Year 3, 5, 7 and 9 students achieving national benchmarks for literacy and numeracy using data from the National Assessment Program – Literacy and Numeracy (NAPLAN).

### Key findings

#### Reading

- In New South Wales in 2011, 85% of Year 3 Indigenous students achieved the reading benchmark, compared with 95.8% of non-Indigenous students; 77.8% of Year 5 Indigenous students achieved the reading benchmark, compared with 93.8% of non-Indigenous students; 82.6% of Year 7 Indigenous students achieved the reading benchmark, compared with 95.6% of non-Indigenous students; and 77.9% of Year 9 Indigenous students achieved the reading benchmark, compared with 93.7% of non-Indigenous students. The proportions of Indigenous students having achieved reading benchmarks were higher in New South Wales than nationally for all of the four year levels (Table 2.04.1).

#### Writing

- In New South Wales in 2011, 88.1% of Year 3 Indigenous students achieved the writing benchmark, compared with 96.9% of non-Indigenous students; 81.8% of Year 5 Indigenous students achieved the writing benchmark, compared with 95.7% of non-Indigenous students; 72.5% of Year 7 Indigenous students achieved the writing benchmark, compared with 93% of non-Indigenous students; and 55.9% of Year 9 Indigenous students achieved the writing benchmark, compared with 86.3% of non-Indigenous students. The proportions of Indigenous students having achieved writing benchmarks were higher in New South Wales than nationally for all of the four year levels (Table 2.04.1).

#### Spelling

- In New South Wales in 2011, 83.6% of Year 3 Indigenous students achieved the spelling benchmark, compared with 95.4% of non-Indigenous students; 80.2% of Year 5 Indigenous students achieved the spelling benchmark, compared with 94.5% of non-Indigenous students; 81.3% of Indigenous Year 7 students achieved the spelling benchmark, compared with 94.5% of non-Indigenous students; and 76.7% of Year 9 Indigenous students achieved the spelling benchmark, compared with 92.8% of non-Indigenous students. The proportions of Indigenous students having achieved spelling benchmarks were higher in New South Wales than nationally for all of the four year levels (Table 2.04.1).

### **Grammar and punctuation**

- In New South Wales in 2011, 81.8% of Year 3 Indigenous students achieved the grammar and punctuation benchmark, compared with 95.4% of non-Indigenous students; 76.2% of Year 5 Indigenous students achieved the grammar and punctuation benchmark, compared with 94.4% of non-Indigenous students; 74.6% of Year 7 Indigenous students achieved the grammar and punctuation benchmark, compared with 94.3% of non-Indigenous students; and 66.6% of Year 9 Indigenous students achieved the grammar and punctuation benchmark, compared with 91.3% of non-Indigenous students. The proportions of Indigenous students having achieved grammar and punctuation benchmarks were higher in New South Wales than nationally for all of the four year levels (Table 2.04.1).

### **Numeracy**

- In New South Wales in 2011, 89.2% of Year 3 Indigenous students achieved the numeracy benchmark, compared with 96.8% of non-Indigenous students; 83.4% of Year 5 Indigenous students achieved the numeracy benchmark, compared with 96% of non-Indigenous students; 80.5% of Year 7 Indigenous students achieved the numeracy benchmark, compared with 95.1% of non-Indigenous students; and 74.9% of Year 9 Indigenous students achieved the numeracy benchmark, compared with 93.9% of non-Indigenous students. The proportions of Indigenous students having achieved numeracy benchmarks were higher in New South Wales than nationally for all of the four year levels (Table 2.04.1).

### **Trends over time**

- In New South Wales, between 2008 and 2011 there was little change in the proportion of Indigenous students achieving the benchmarks for literacy and numeracy (Table 2.04.1, Appendix 2).

**Table 2.04.1: Proportion of Year 3, 5, 7 and 9 students at or above the national minimum standard for reading, writing, spelling, grammar & punctuation, and numeracy, by Indigenous status, New South Wales and Australia, 2011**

	Indigenous					Non-Indigenous				
	Reading	Writing	Spelling	Grammar & punctuation	Numeracy	Reading	Writing	Spelling	Grammar & punctuation	Numeracy
<b>New South Wales</b>										
<b>Year 3</b>	85.0	88.1	83.6	81.8	89.2	95.8	96.9	95.4	95.4	96.8
<b>Year 5</b>	77.8	81.8	80.2	76.2	83.4	93.8	95.7	94.5	94.4	96.0
<b>Year 7</b>	82.6	72.5	81.3	74.6	80.5	95.6	93.0	94.5	94.3	95.1
<b>Year 9</b>	77.9	55.9	76.7	66.6	74.9	93.7	86.3	92.8	91.3	93.9
<b>Australia</b>										
<b>Year 3</b>	76.3	79.9	71.7	70.9	83.6	94.9	96.2	94.1	94.4	96.4
<b>Year 5</b>	66.4	68.9	68.8	64.8	75.2	92.9	93.9	92.6	93.6	95.5
<b>Year 7</b>	77.1	66.9	73.8	67.0	76.5	95.7	92.6	93.5	94.3	95.5
<b>Year 9</b>	71.9	55.0	72.2	61.2	72.0	93.5	86.4	91.6	91.5	94.1

Source: Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA) 2008; MCEECDYA 2009–2011.

## 2.05 Education and outcomes for young people

Access to education by young people is an important determinant of health and wellbeing. Successful completion of Year 12 is critical to improving socioeconomic status. Higher levels of education improve employment prospects, future income, standard of housing and access to health care (ABS 2002; SCRGSP 2007; ABS & AIHW 2008). Higher levels of education have also been associated with reduced propensity to engage in risky health behaviours. COAG has committed to halve the gap in Indigenous Year 12 or equivalent attainment by 2020.

Data are presented on Year 10 and 12 retention rates and Year 12 attainment rates for Aboriginal and Torres Strait Islander people using data from the National Schools Statistics Collection.

### Apparent retention and attainment rates

Apparent retention rates are the percentage of full-time students of a given cohort group who continue from the beginning of secondary schooling to a specified 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.

Attainment rates are the proportion of Year 11 students who went on to achieve a Year 12 certificate.

### Key findings

- In 2011 in New South Wales, the apparent retention rate of full-time Indigenous students from Year 7–8 to Year 10 was 105.8% for males and 106.3% for females compared with 100.4% for non-Indigenous males and 101.4% for non-Indigenous females. Rates can be above 100% due to inter-state movements of students between Years 7-8 and Year 10.
- The apparent retention rate from Year 7–8 to Year 11 in New South Wales was 64.7% for Indigenous males and 74.4% for Indigenous females, compared with 84.7% and 90.7% for non-Indigenous males and females, respectively.
- The apparent retention rate from Year 7–8 to Year 12 for Indigenous students was much lower than for non-Indigenous students – 36.7% for Indigenous males and 49% for Indigenous females compared with 71% for non-Indigenous males and 80.9% for non-Indigenous females.
- The apparent retention rate from Year 10 to Year 12 was similar for both Indigenous and non-Indigenous male students (86%) in New South Wales. But the apparent retention rate for Indigenous female students was higher than for non-Indigenous female students (102.8% for Indigenous female students and 82.2% for non-Indigenous female students).
- In 2011, 65.7% of Indigenous male Year 11 students and 71.8% of Indigenous female Year 11 students went on to achieve a Year 12 certificate in New South Wales. This compared with 85.7% and 90.2% of non-Indigenous male and female Year 11 students.
- Apparent retention and attainment rates for Indigenous students in New South Wales were higher than the national rates for Year 7–8 to Year 10 and Year 10 to Year 12 (Table 2.05.1).

**Table 2.05.1: Apparent retention and attainment rates, by Indigenous status and sex, New South Wales and Australia, 2011<sup>(a)(b)(c)</sup>**

	New South Wales		Australia	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
	Per cent		Per cent	
<b>Year 7–8 to Year 10<sup>(a)</sup></b>				
Males	105.8	100.4	98.4	100.7
Females	106.3	101.4	99.0	101.8
<b>Year 7–8 to Year 11<sup>(a)</sup></b>				
Males	64.7	84.7	71.4	91.1
Females	74.4	90.7	75.2	96.5
<b>Year 7–8 to Year 12<sup>(a)</sup></b>				
Males	36.7	71.0	46.1	75.9
Females	49.0	80.9	51.3	85.8
<b>Year 10 to Year 12<sup>(b)</sup></b>				
Males	85.6	85.7	51.5	76.4
Females	102.8	82.2	55.6	84.9
<b>Year 11 to Year 12<sup>(c)</sup></b>				
Males	65.7	85.7	66.4	84.2
Females	71.8	90.2	68.5	89.1

(a) Retention rate = Year 10, 11 or 12 students as a proportion of the corresponding cohort from the first year of secondary schooling (Year 7–8).

(b) Retention rate = Year 12 students as a proportion of the corresponding cohort from Year 10.

(c) Retention rate = Year 12 students as a proportion of the corresponding cohort from Year 11.

Source: ABS 2010; ABS and AIHW analysis of National Schools Statistics Collection (NSSC).

## 2.06 Educational participation and attainment of adults

People who go on to higher education (universities and other tertiary institutions) and graduate with a degree or diploma are more likely to obtain full-time work and earn higher incomes than those who do not. Likewise people who complete a vocational education and training (VET) course are more likely to be employed after the completion of their course than they were before (SCRGSP 2007).

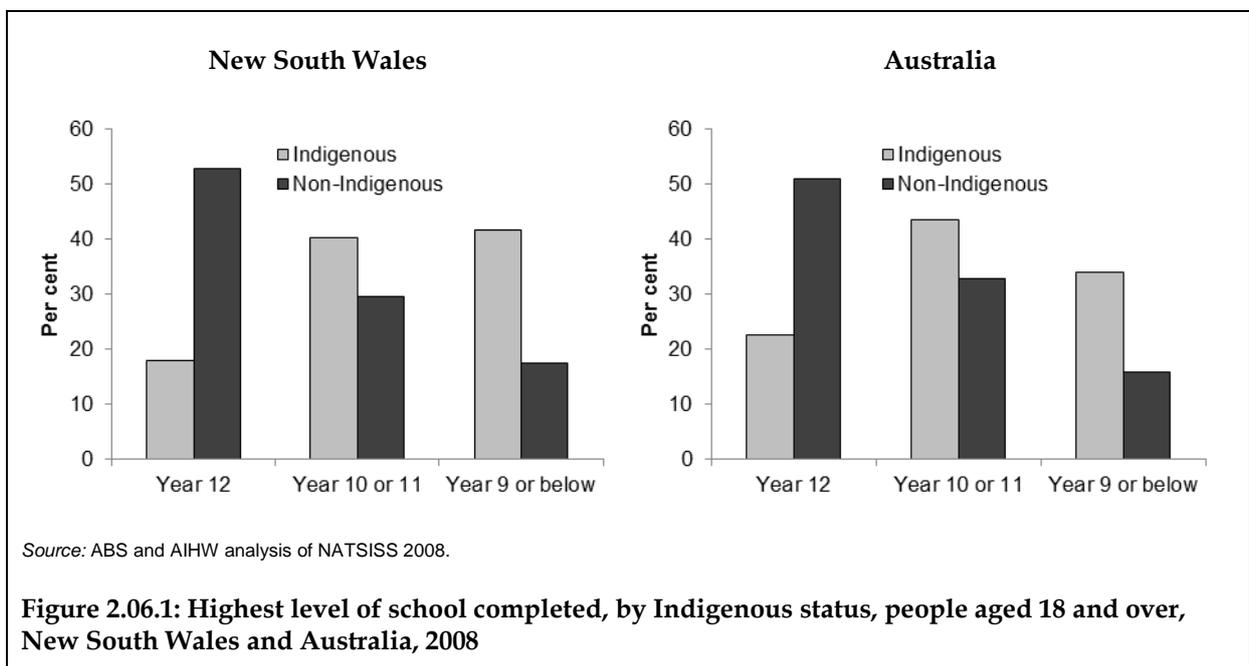
Data are presented on educational participation (people undertaking formal education or training) and educational attainment (people who have completed a particular level of school education or post-school qualification) of Aboriginal and Torres Strait Islander adults compared with non-Indigenous adults using data from the 2008 NATSISS.

### Key findings

- In 2008 in New South Wales, the proportion of Indigenous Australians aged 15 and over who were studying was higher than that for non-Indigenous Australians (20% compared with 15.2%). These rates are similar to those nationally (Table 2.06.1).
- A higher proportion of Indigenous people from New South Wales attended a secondary school or a technical institution in 2008 than non-Indigenous people, but the proportion

of Indigenous people who attended a university or other higher education was less than half that of non-Indigenous people (Table 2.06.1).

- In New South Wales, only 18% of Indigenous people had completed Year 12, compared with 53% for non-Indigenous people in New South Wales in 2008. In contrast, a higher proportion of Indigenous adults than non-Indigenous adults reported that the highest year of school completed was Year 9 or below (42% compared with 18%). The proportion of Indigenous people who completed Year 12 was lower in New South Wales than nationally (18% compared with 23%) (Figure 2.06.1).
- In New South Wales in 2008 about 41% of Indigenous people aged 25–64 had a post-school qualification compared with 63% of non-Indigenous people. The most commonly held qualification was for a certificate course for Indigenous people and bachelor degree or above for non-Indigenous people in New South Wales (Table 2.06.2).



**Table 2.06.1: Educational institution currently attended, by Indigenous status, people aged 15 and over, New South Wales and Australia, 2008**

	Educational participation		Secondary school	TAFE/technical college/ business college/industry skills centre	University/other higher education	Total currently studying <sup>(a)</sup>	Not studying	Total <sup>(a)</sup>	Total number
<b>New South Wales</b>	Indigenous	%	9.2*	6.6	2.2 <sup>(b)</sup>	20.0*	80.0*	100	96,367
	Non-Indigenous	%	4.4*	4.7	4.8*	15.2*	84.8*	100	5,400,320
	Rate ratio		2.1	1.4	0.5	1.3	0.9	..	..
<b>Australia</b>	Indigenous	%	8.4*	6.0*	2.7*	19.0*	81.0*	100	327,101
	Non-Indigenous	%	4.2*	4.6*	5.6*	15.6*	84.4*	100	16,374,202
	Rate ratio		2.0	1.3	0.5	1.2	1.0	..	..

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

(a) Includes other educational institution, not further defined.

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

Source: ABS and AIHW analysis of NATSISS 2008.

**Table 2.06.2: Whether has a post-school qualification, by Indigenous status, people aged 25–64, New South Wales and Australia, 2008**

	Highest post- school qualification <sup>(a)</sup>		Bachelor degree or above <sup>(b)</sup>	Advanced diploma/ diploma	Certificate	Total with post- school qualification <sup>(c)</sup>	Does not have a post-school qualification	Total	Total number of people
<b>New South Wales</b>	Indigenous	%	5.9*	5.8*	26.3	40.9*	59.1*	100	60,442
	Non-Indigenous	%	27.0*	8.7*	25.2	63.4*	36.6*	100	3,627,960
	Rate ratio		0.2	0.7	1.0	0.6	1.6	1	..
<b>Australia</b>	Indigenous	%	6.5*	5.6*	24.7	40.2*	59.9*	100	207,342
	Non-Indigenous	%	24.9*	9.8*	24.9	61.4*	38.6*	100	10,997,331
	Rate ratio		0.3	0.6	1.0	0.7	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 and graduate certificate.

(c) Includes people with a post-school qualification undetermined.

Source: NATSISS 2008 and NHS 2007–08.

## 2.07 Employment

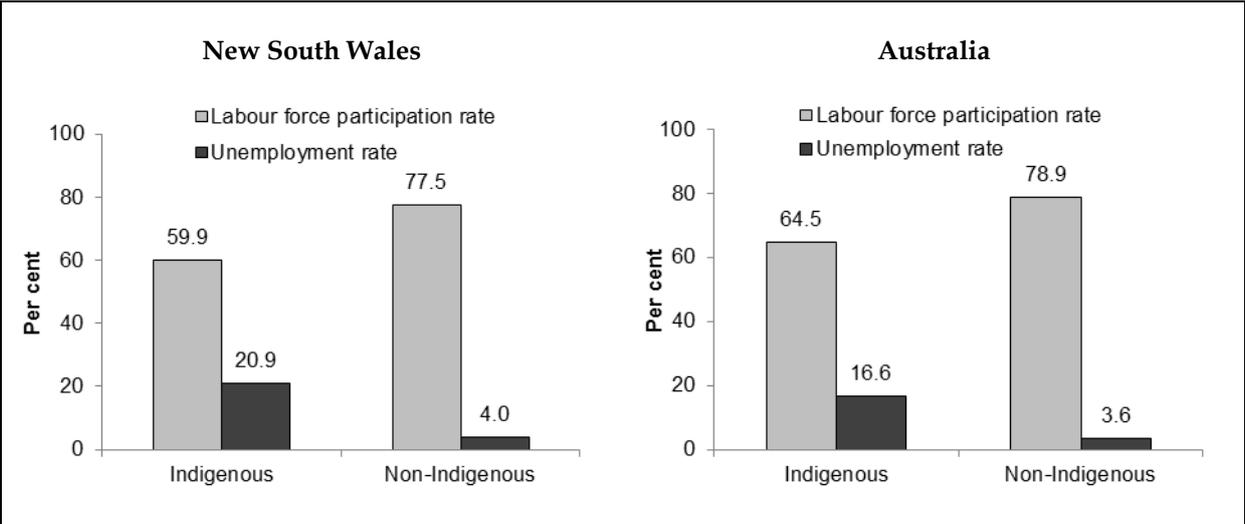
Participation in employment has important consequences for living standards and social and emotional wellbeing, including self-esteem, opportunities for self-development and participation in the community. Long periods out of the workforce can have negative effects on an individual’s health (both physical and psychological) (McLure 2000).

Aboriginal and Torres Strait Islander people have relatively low levels of employment, due to several factors. For those living in remote locations, there are few employment opportunities because of a lack of viable industries and enterprises. Lower educational levels can also restrict employment opportunities in remote and non-remote areas (AIHW 2011a).

Data are presented on the employment status of Aboriginal and Torres Strait Islander people aged 15–64 compared with non-Indigenous Australians using data from the 2008 NATSISS and 2007–08 NHS.

### Key findings

- In 2008 in New South Wales, the labour force participation rate for Indigenous people aged 15–64 was estimated to be 60%, with 21% of those in the labour force unemployed and looking for full-time or part-time work. In comparison, the labour force participation rate for non-Indigenous people was 77.5%, with 4% of non-Indigenous participants unemployed (Figure 2.07.1).
- The labour force participation rate for Indigenous people aged 15–64 was slightly lower in New South Wales than nationally (60% compared with 64.5%), and the unemployment rate was higher (21% in New South Wales compared with 17% nationally).
- An estimated 47% of Indigenous people aged 15–64 were employed in New South Wales in 2008 (2% in Community Development Employment Projects, or CDEP, and 45% in non-CDEP) and 12.5% were unemployed. Of the non-Indigenous population, 74% were employed and 3% were unemployed (Table 2.07.1).



Source: ABS & AIHW analysis of 2008 NATSISS.

**Figure 2.07.1: Unemployment and labour force participation rates, people aged 15–64, by Indigenous status, New South Wales and Australia, 2008**

**Table 2.07.1: Labour force status of people aged 15–64, by Indigenous status, New South Wales and Australia, 2008**

	New South Wales		Australia	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
	Per cent		Per cent	
In the labour force				
Employed CDEP	1.9*	..	5.6	..
Employed non-CDEP	45.4	..	48.2	..
<b>Total employed</b>	<b>47.3</b>	<b>74.4</b>	<b>53.8</b>	<b>76.0</b>
Unemployed	12.5	3.1	10.7	2.9
Not in the labour force	40.1	22.5	35.5	21.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\* Estimate has a relative standard error between 25% and 50% and should be used with caution.

Source: NATSISS 2008 and NHS 2007–08.

## 2.08 Income

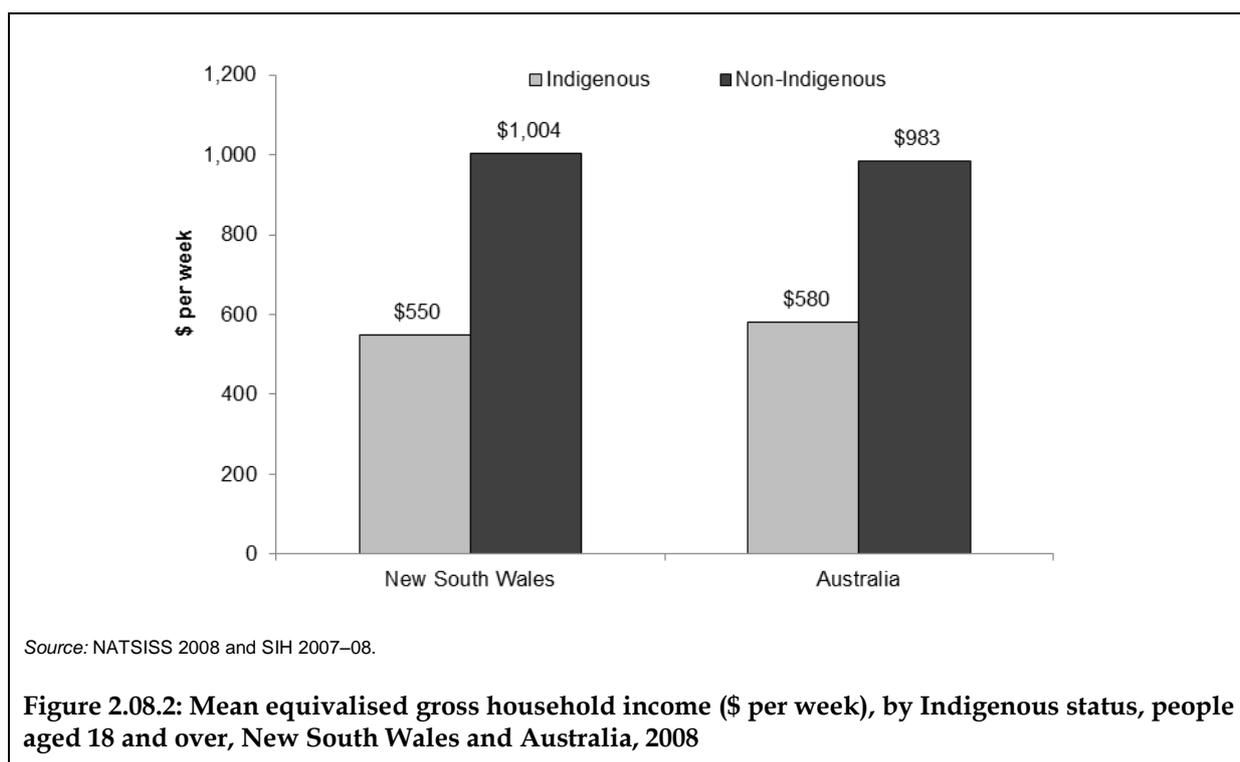
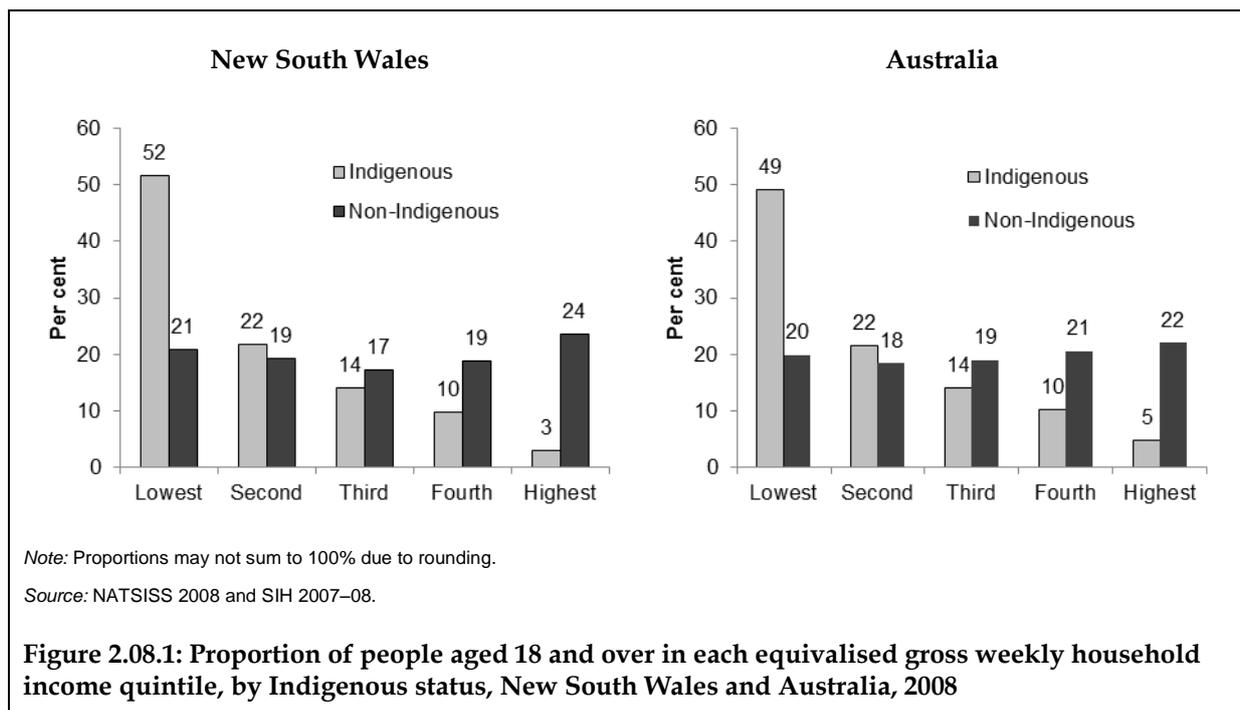
Low income is associated with a wide range of disadvantages including shorter life expectancy, low levels of education, substance abuse, reduced social participation, and contact with the criminal justice system. People with lower socioeconomic status, including many Aboriginal and Torres Strait Islander people, also have poorer health status and a significantly higher burden of disease (Begg et al. 2007).

Data are presented on equivalised gross household and individual income of Aboriginal and Torres Strait Islander people using data from the 2008 NATSISS and 2007–08 Survey of Income and Housing.

Equivalised gross household income refers to the amount of income per household after adjusting for household size.

### Key findings

- According to the NATSISS, in 2008, 52% of Indigenous people aged 18 and over in New South Wales were in the lowest quintile (most disadvantaged) of equivalised gross weekly household income and 3% were in the highest (least disadvantaged). The proportion of non-Indigenous people was similar across all five quintiles, with 21% in the lowest quintile and 24% in the highest (Figure 2.08.1). This same pattern was evident nationally, with 49% of Indigenous people aged 18 and over in the lowest quintile and 5% in the highest. Twenty per cent of non-Indigenous people were in the lowest quintile and 22% in the highest.
- In 2008 in New South Wales, the mean equivalised gross weekly household income for Indigenous people aged 18 and over was \$550 per week, compared with \$1,004 per week for non-Indigenous people. Nationally, the mean equivalised gross weekly household income for Indigenous people aged 18 and over was \$580, compared with \$983 for non-Indigenous people (Figure 2.08.2).



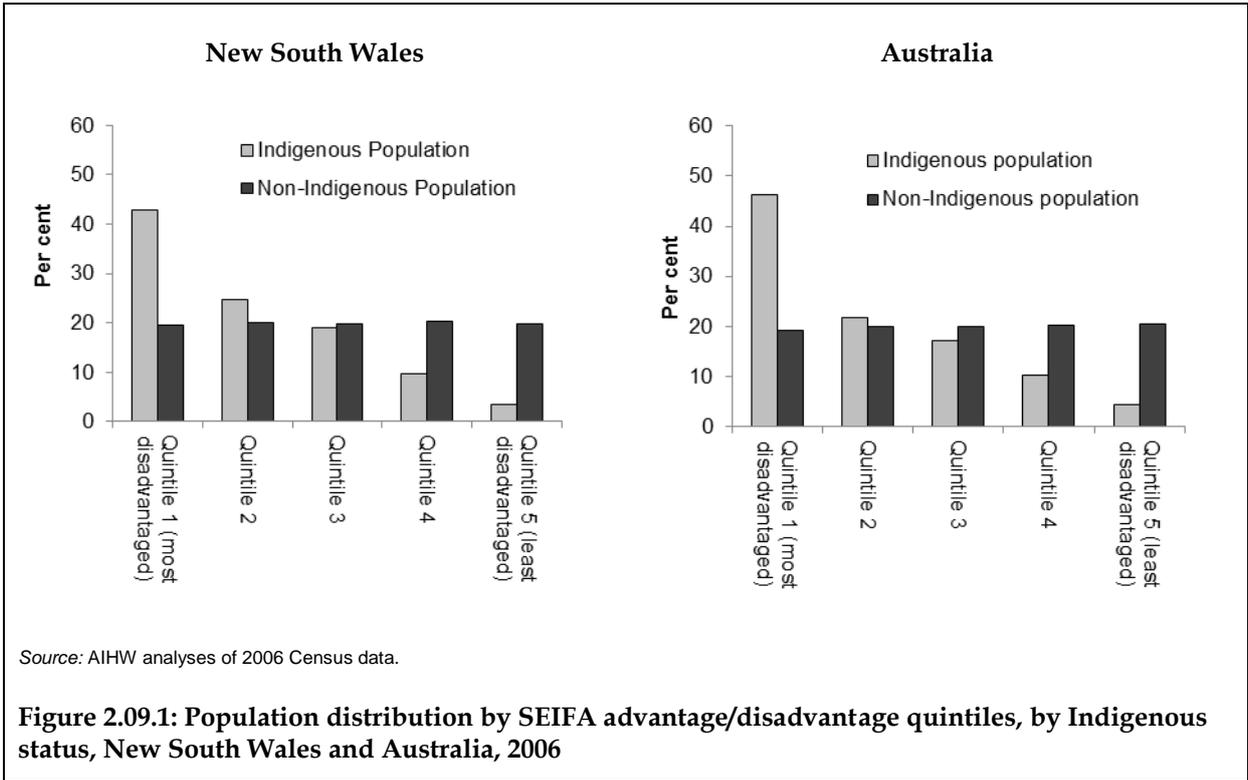
## 2.09 Index of disadvantage

The links between different forms of disadvantage, such as poverty, unemployment, low levels of education, racism and consequent social dysfunction, stress, social exclusion and poor health, are well documented (Wilkinson and Marmot 2003; Marmot 2005; Paradies 2006; Saunders and Davidson 2007; Sassi 2009).

Data are presented on the relative disadvantage within the Aboriginal and Torres Strait Islander population compared with the non-Indigenous population using an index developed by the ABS to allow measurement of relative socioeconomic status at a small area level known as Socio-Economic Indexes for Areas (SEIFA). SEIFA analysis presented below uses the Index of Relative Socio-Economic Advantage and Disadvantage and is based on data from the 2006 Census at the geographical level.

**Key findings**

- In 2006 in New South Wales, a greater proportion of the Indigenous population was in the most disadvantaged quintile of socioeconomic status than the non-Indigenous population (43% compared with 20%) (Figure 2.09.1). Only 3% of the Indigenous population was in the least disadvantaged quintile, compared with 20% of the non-Indigenous population.
- Compared with the Indigenous population nationally, New South Wales had a similar proportion of Indigenous people in the most disadvantaged quintile of socioeconomic status (43% compared with 46%) and a lower proportion of Indigenous people in the least disadvantaged quintile (3% compared with 4%).



**Community capacity**

Community capacity refers to the capacity of a population to deliver a sustainable environment for health and wellbeing to its members. It includes providing resources (human or other), leadership and a feeling of community cohesion. Strong communities support stable family structures, inter-generational care and social networks, which in turn lead to improved health outcomes (AIHW 2011a).

A variety of indicators can be used to profile the capacity of a community in relation to health and wellbeing. This section presents data on child protection, community safety, and contact with the criminal justice system.

## 2.10 Community safety

Community safety refers to the notion of being and feeling protected from harm. It is an important aspect of physical and mental wellbeing. Stressors experienced by individuals, as well as their family members and/or close friends, also influence the sense of community safety.

Community safety here includes three parameters, namely experience of personal injury or death as a result of violence; experience of threatened violence or a social setting in which violence is common; and 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 are presented on experience of physical or threatened violence, stressors experienced in the last 12 months, and reported community/neighbourhood problems using data from the 2008 NATSISS. Hospitalisations and death from assault are also reported.

### Key findings

- According to the 2008 NATSISS, about 25% of Indigenous people aged 15 and over in New South Wales reported being a victim of physical or threatened violence in the last 12 months. This was the same as the proportion nationally (Table 2.10.2, Appendix 2).
- After adjusting for differences in age structure, Indigenous people aged 18 and over were 2.4 times as likely as non-Indigenous people to report being a victim of physical or threatened violence in the last 12 months in New South Wales (Table 2.10.1).
- In 2008 in New South Wales, about 79% of Indigenous people aged 18 and over or their family members and close friends, experienced at least one stressor in the previous 12 months compared with 48% of non-Indigenous people. The most common stressors for Indigenous people were death of a family member or close friend (37%) and alcohol- or drug-related problems (23%) (Table 2.10.1). These proportions were lower than those reported nationally.
- Of Indigenous people aged 15 and over in New South Wales, 77% reported neighbourhood/community problems present, compared with 74% nationally. Theft and dangerous/noisy driving were most commonly reported as a neighbourhood/community problem in New South Wales (49% for theft and 46% for dangerous/noisy driving) (Figure 2.10.1).
- Between July 2008 and June 2010, there were 1,552 hospitalisations of Indigenous people in New South Wales with a principal diagnosis of assault. Indigenous people in New South Wales were hospitalised for assault at 6.5 times the rate of non-Indigenous Australians. In New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous people were hospitalised at over 12 times the rate of non-Indigenous people (Table 2.10.3, Appendix 2).
- Between 2006 and 2010, there were 28 deaths from assault of Indigenous people in New South Wales. The Indigenous mortality rate from assault was nearly 4 times the rate of non-Indigenous people. In New South Wales, Queensland, Western Australia, South

Australia and the Northern Territory combined, the Indigenous mortality rate from assault was nearly 9 times the rate of non-Indigenous people (Table 2.10.4, Appendix 2).

**Table 2.10.1: Issues of community safety, people aged 18 and over, by Indigenous status, New South Wales and Australia, 2008**

	New South Wales		Australia	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
	Per cent		Per cent	
Victim of physical or threatened violence in last 12 months <sup>(a)</sup>	22.0*	9.3*	20.5*	10.8*
<b>Stressors experienced by individual, family members and/or close friends in last 12 months<sup>(b)</sup></b>				
Mental illness	18.0*	8.3*	17.1*	8.8*
Death of family member or close friend	37.1*	19.5*	40.4*	19.4*
Alcohol or drug-related problems	23.4*	5.1*	24.2*	5.7*
Abuse or violent crime	7.4*	2.0*	7.6*	2.4*
Witness to violence	9*	1.6*	9.0*	2.2*
Trouble with the police	14.5*	1.9*	14.7*	2.6*
<i>One or more of the above stressors</i>	<i>57.4*</i>	<i>29.2*</i>	<i>59.1*</i>	<i>30.2*</i>
You, a family member or friend spent time in gaol	13.1	..	12.8	..
Overcrowding at home	9.8	..	12.7	..
Treated badly / discrimination	9.3	..	10.2	..
<i>Total experienced stressors<sup>(c)(d)</sup></i>	<i>79.3*</i>	<i>47.9*</i>	<i>79.0*</i>	<i>49.1*</i>
No stressors reported	20.7*	52.1*	21.0*	50.9*
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

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

(a) For this variable only, non-Indigenous comparison has been sourced from General Social Survey (GSS) 2006.

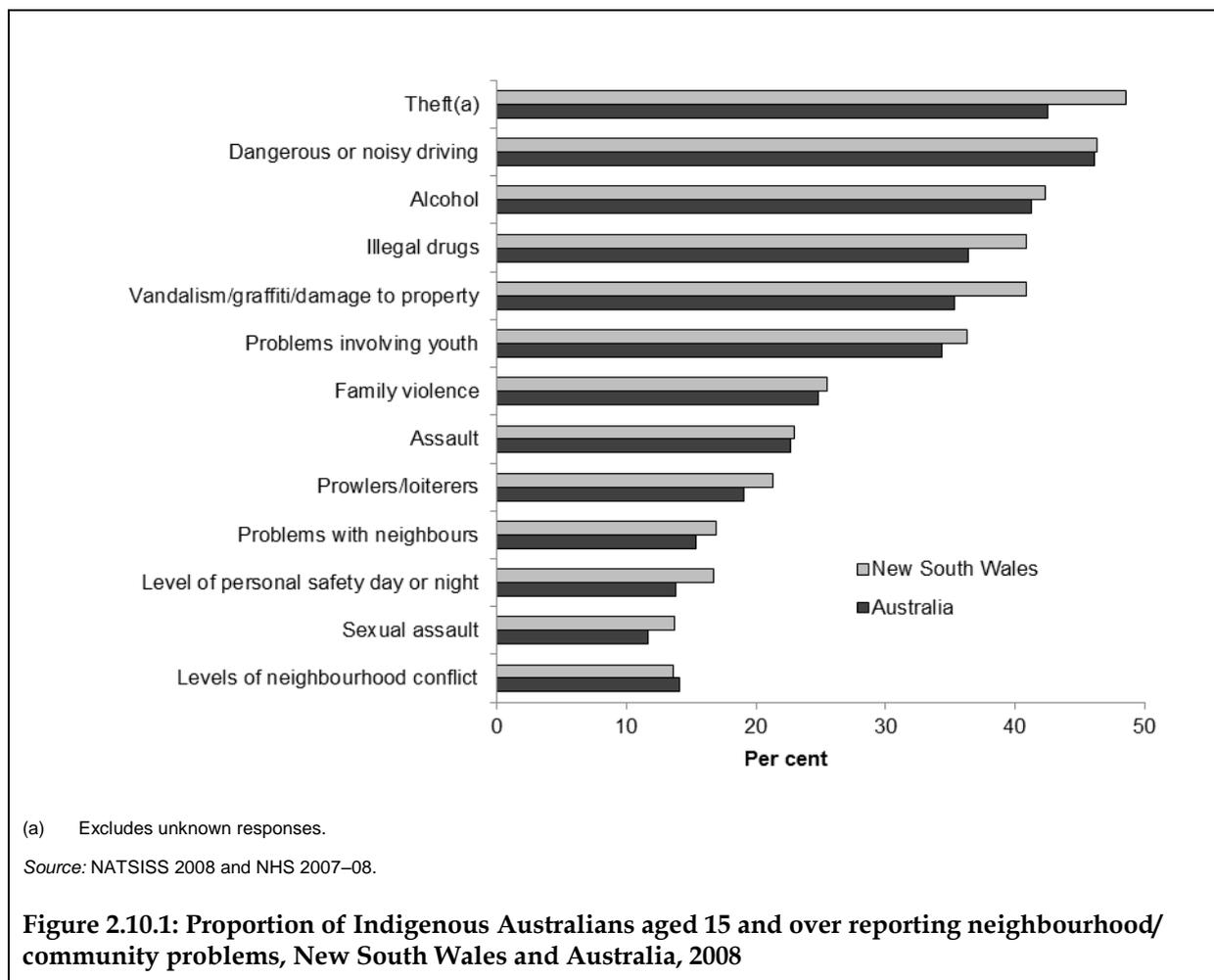
(b) In the 2008 NATSISS, Indigenous Australians were asked about 24 separate stressors, and in the 2007–08 NHS, non-Indigenous Australians were asked about 14 separate stressors.

(c) Sum of components may exceed total, as people may have reported more than one type of stressor.

(d) Includes all other types of stressors not listed here.

Note: Excludes stressors not stated.

Source: NATSISS 2008 and NHS 2007–08.



## 2.11 Contact with the criminal justice system

The rate of incarceration is relatively high among Aboriginal and Torres Strait Islander people compared with non-Indigenous Australians. This not only affects the health and wellbeing of those imprisoned, but also of their families and children (Levy 2005). Adverse employment consequences and a lack of positive role-models in the community further erode the capacity of the Indigenous community to support its structures (Woodward 2003).

Data are presented on Aboriginal and Torres Strait Islander people in prison custody, as well as deaths in custody.

### Key findings

- As at 30 June 2011, there were 2,294 Indigenous and 7,729 non-Indigenous people in prison custody in New South Wales. Nationally, there were 7,656 Indigenous and 21,426 non-Indigenous people in prison custody (Table 2.11.1). The age-standardised rate of imprisonment for Indigenous people in New South Wales was 1,986 per 100,000, which was about 14 times the rate for non-Indigenous people (147 per 100,000). Imprisonment rates were higher in New South Wales than the national rates for both Indigenous and non-Indigenous Australians.
- In New South Wales, the age-standardised imprisonment rate of Indigenous people increased by 44% between 2001 and 2011 (although a small decline is evident between

2009 and 2011). Nationally, the age-standardised imprisonment rate of Indigenous people increased by 58% between 2001 and 2011 (Figure 2.11.1).

- There were 2 deaths of Indigenous people in custody (police and prison) in New South Wales in 2010–11. This represented 8% of all deaths in custody in New South Wales. Nationally, Indigenous people represented one-quarter (25%) of deaths in custody (Table 2.11.2, Appendix 2).
- In New South Wales, from 1998–99 to 2010–11 there were between zero and 0.61 Indigenous deaths in custody per 100 Indigenous prisoners. Over the same period there were between 0.14 and 0.42 non-Indigenous deaths per 100 non-Indigenous prisoners (Table 2.11.3, Appendix 2).

**Table 2.11.1: People in prison custody, by Indigenous status, New South Wales and Australia, 30 June 2011**

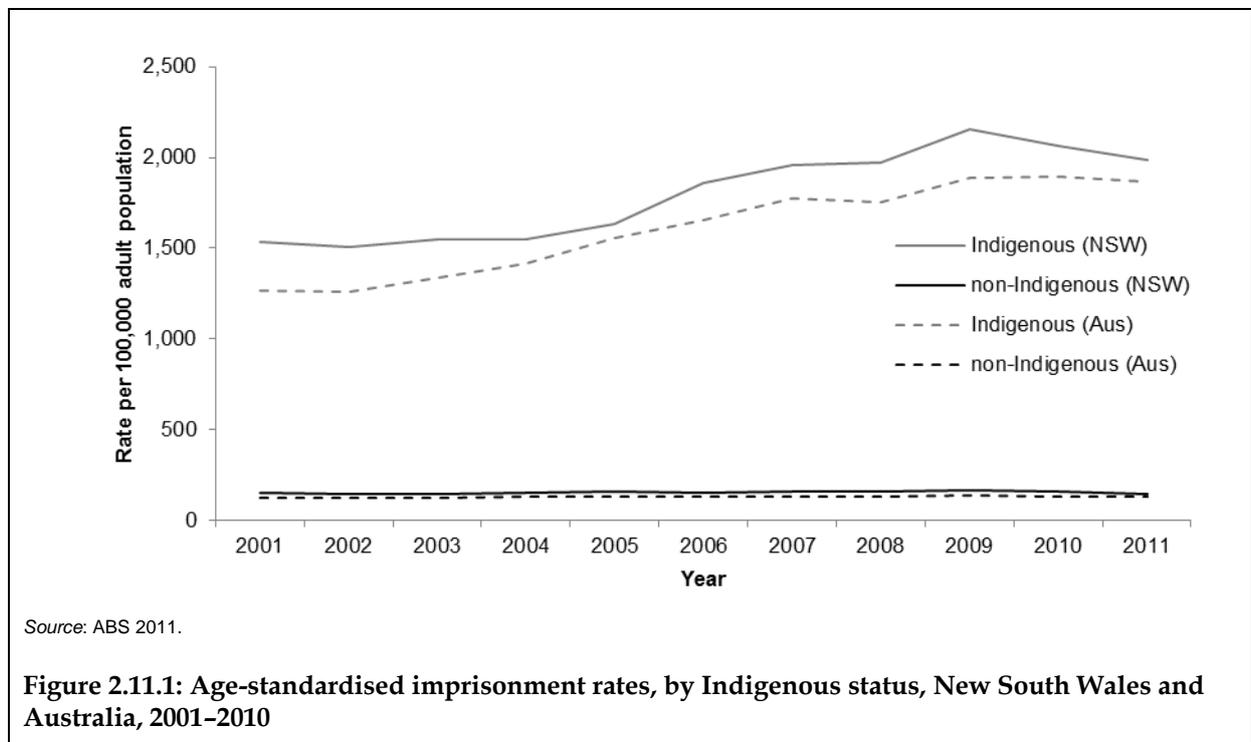
	Indigenous			Non-Indigenous			Age standardised rate ratio <sup>(c)</sup>
	Number	Crude rate <sup>(a)</sup>	Age standardised rate <sup>(b)</sup>	Number	Crude rate <sup>(a)</sup>	Age standardised rate <sup>(b)</sup>	
NSW	2,294	2,350.9	1,985.2	7,729	139.2	146.4	13.6
<b>Australia</b>	<b>7,656</b>	<b>2,247.5</b>	<b>1,867.6</b>	<b>21,426</b>	<b>125</b>	<b>130.2</b>	<b>14.3</b>

(a) Number per 100,000 adult population.

(b) Number per 100,000 adult population directly age standardised to 2001 Australian standard population.

(c) The ratio of Indigenous to non-Indigenous imprisonment is calculated by dividing the Indigenous age-standardised rate by the non-Indigenous age-standardised rate.

Source: ABS 2011.



**Figure 2.11.1: Age-standardised imprisonment rates, by Indigenous status, New South Wales and Australia, 2001–2010**

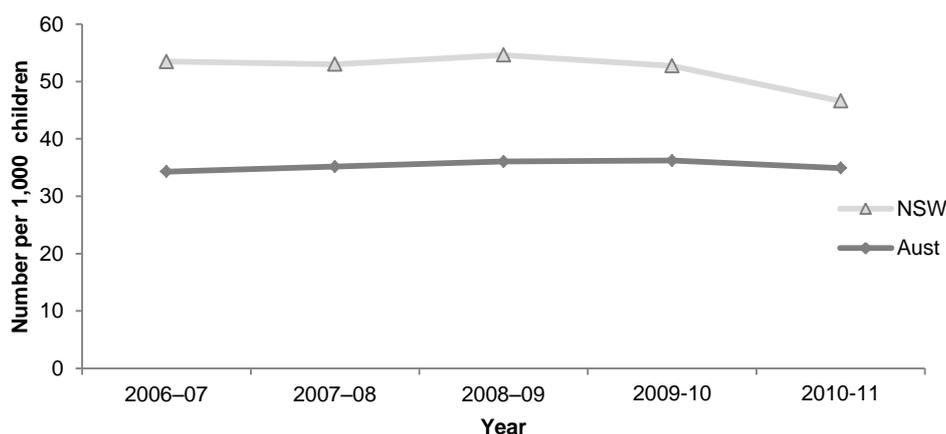
## 2.12 Child protection

Child protection services 'receive and assess allegations of child abuse and neglect, and/or harm to children and young people; provide and refer clients to family support and other relevant services; and intervene to protect children' (AIHW 2012a; SCRGSP 2005). Aboriginal and Torres Strait Islander children are over-represented in the child protection system. The reasons for this are complex, and include the intergenerational effects of separation from family and culture, perceptions arising from cultural differences in child-rearing practices, and the relative socioeconomic disadvantage of Indigenous Australians (HREOC 1997; Stanley et al. 2003).

Data are presented on Aboriginal and Torres Strait Islander children who were the subject of a substantiation, on care and protection orders and in out-of-home care. Substantiations refer to child protection notifications made to relevant authorities that were investigated and it was concluded that there was reasonable cause to believe that the child had been, was being or was likely to be abused or neglected or otherwise harmed.

### Key findings

- In 2010–11, there were 3,126 Indigenous children aged 0–16 who were the subject of substantiation in New South Wales. Indigenous children aged 0–16 were more likely to be the subject of substantiation than non-Indigenous children aged 0–16 (47 per 1,000 compared with 5.3 per 1,000). Substantiation rates for both Indigenous children and non-Indigenous children were higher in New South Wales than across Australia (Table 2.12.2, Appendix 2).
- The rate of Aboriginal and Torres Strait Islander children in New South Wales who were the subject of substantiations showed a slight decline between 2006–07 and 2010–11 (from 53.5 to 46.6 per 1,000 children). Rates for Indigenous children nationally remained relatively stable over the period (Figure 2.12.1).
- As at 30 June 2011, there were 4,900 Indigenous children aged 0–17 who were on care and protection orders in New South Wales. Indigenous children were over 10 times more likely to be on care and protection orders than other children (69 per 1,000 compared with 6.7 per 1,000). The rate of Indigenous children on care and protection orders was higher in New South Wales than nationally (69 compared with 51 per 1,000) (Table 2.12.3, Appendix 2).
- As at 30 June 2011, there were 5,737 Indigenous children aged 0–17 who were in out-of-home care in New South Wales. Indigenous children were over 11 times more likely to be in out-of-home care than other children (81 per 1,000 compared with 7 per 1,000). The rate of Indigenous children in out-of-home care was higher in New South Wales than nationally (81 compared with 52 per 1,000) (Table 2.12.4, Appendix 2).
- About 82% of Aboriginal and Torres Strait Islander children in out-of-home care in New South Wales were placed with relative/kin, other Indigenous caregivers and other Indigenous relative/kin. This compared with 69% nationally (Table 2.12.1).



Source: AIHW analysis of National Child Protection Data Collection 2011.

**Figure 2.12.1: Rates (No. per 1,000 children) of Aboriginal and Torres Strait Islander and other children aged 0-16 who were the subject of substantiation, New South Wales and Australia, 2006-07 to 2010-11**

**Table 2.12.1: Aboriginal and Torres Strait Islander children in out-of-home care: Indigenous status and relationship of carer, New South Wales and Australia, 30 June 2011**

Relationship	NSW	Australia
	Number	
Indigenous relative/kin	2,887	4,803
Other Indigenous caregiver	1,024	2,055
Other relative/kin	796	1,657
<i>Total placed with relatives/kin, other Indigenous caregivers or in Indigenous residential care</i>	<i>4,707</i>	<i>8,515</i>
Other caregiver	1,005	3,788
<i>Total not placed with relatives/kin, other Indigenous caregivers or in Indigenous residential care</i>	<i>1,005</i>	<i>3,788</i>
<b>Total</b>	<b>5,712</b>	<b>12,303</b>
	Per cent	
Indigenous relative/kin	50.5	39.0
Other Indigenous caregiver	17.9	16.7
Other relative/kin	13.9	13.5
<i>Total placed with relatives/kin, other Indigenous caregivers or in Indigenous residential care</i>	<i>82.4</i>	<i>69.2</i>
Other caregiver	17.6	30.8
<i>Total not placed with relatives/kin, other Indigenous caregivers or in Indigenous residential care</i>	<i>17.6</i>	<i>30.8</i>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

*Notes*

1. This table does not include Aboriginal and Torres Strait Islander children who were living independently or whose living arrangements were unknown.
2. Percentages in the table may not add to 100 due to rounding.
3. Family group homes and residential care are reported under other caregiver.

Source: AIHW Child Protection Collections 2011.

## 2.13 Transport

Transport can be an important resource, providing communities with greater opportunity to pursue employment, educational, social and health outcomes. With limited or no public transport options, remote Indigenous communities face various challenges, which not only have a significant impact on their ability to receive goods and services, but also to access timely health care.

Data are presented on the use of transport by Aboriginal and Torres Strait Islander people, including access to motor vehicles and perceived difficulty with transport using data from the 2006 Census and the 2008 NATSISS.

### Key findings

- According to the 2006 Census, nearly three-quarters (72%) of Indigenous households and 85% of other households in New South Wales had at least one vehicle, compared with a similar proportion (72%) of Indigenous households and 87% of other households nationally (Table 2.13.1).
- The ratio of people to vehicles was higher for Indigenous households with at least one registered vehicle in 2006, with 1.55 people per vehicle in New South Wales, compared with 1.29 people per vehicle for other households. Nationally, the ratio was 1.59 for Indigenous households and 1.19 for other households.
- According to the 2008 NATSISS, Indigenous people in New South Wales and nationally were more likely than non-Indigenous people to have difficulty getting to the places they needed to. In 2008, 26% of Indigenous people living in New South Wales reported that they sometimes or often had difficulty, or could not get to places, compared with 20% of non-Indigenous people. A similar pattern was observed nationally (25% for Indigenous and 16% for non-Indigenous) (Figure 2.13.1).

**Table 2.13.1: Households with at least one registered vehicle, by Indigenous status, New South Wales and Australia, 2006**

	Ratio of people aged 17 and over in occupied private dwellings to vehicle <sup>(a)</sup>			Proportion of households <sup>(b)</sup> with at least one vehicle		
	Indigenous <sup>(c)</sup>	Other <sup>(d)</sup>	Total	Indigenous <sup>(c)</sup>	Other <sup>(d)</sup>	Total
<b>State/territory</b>						
NSW <sup>(e)</sup>	1.55	1.29	1.29	71.8	84.8	84.5
Australia <sup>(f)</sup>	1.59	1.19	1.19	71.9	87.2	86.9

(a) Excludes motorbikes.

(b) Defined as all households (excluding visitor households), in an occupied private dwelling, being Australian usual residents.

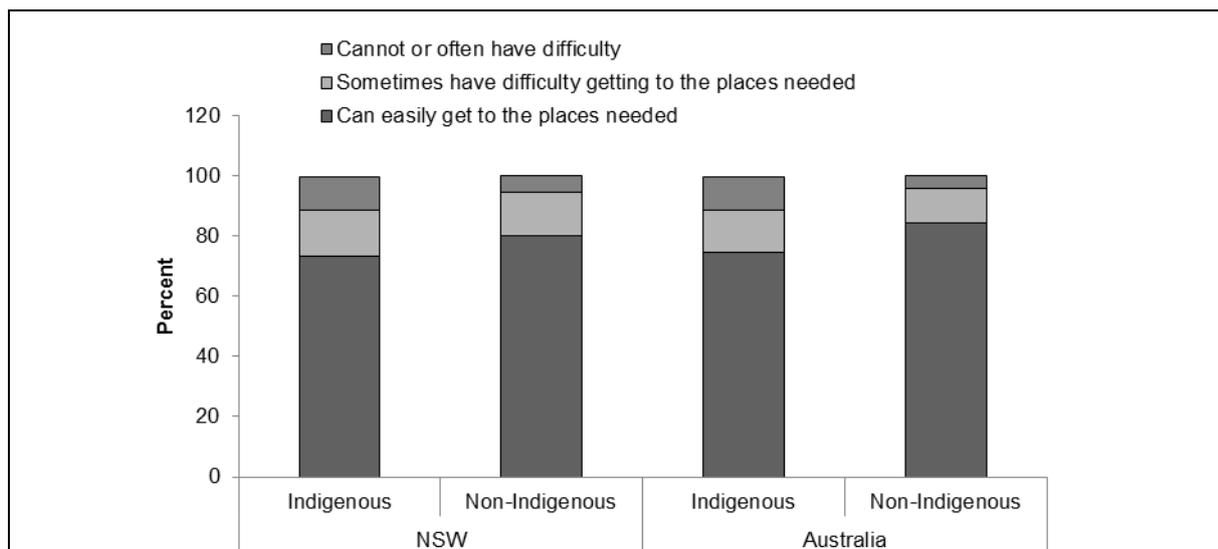
(c) An Indigenous household is defined where a family within the household contains one or more people of Aboriginal or Torres Strait Islander origin or where a lone person is of Aboriginal or Torres Strait Islander origin.

(d) Includes households where Indigenous status was 'not stated'.

(e) Includes Territory of Jervis Bay.

(f) Includes Territories of Christmas Island and Cocos Islands.

Source: ABS and AIHW analysis of 2006 Census data.



Source: ABS and AIHW analyses of NATSISS 2008 and General Social Survey (GSS) 2006.

**Figure 2.13.1: Difficulty with transport, by Indigenous status, New South Wales and Australia, people aged 18 and over, 2008**

## 2.14 Indigenous people with access to their traditional lands

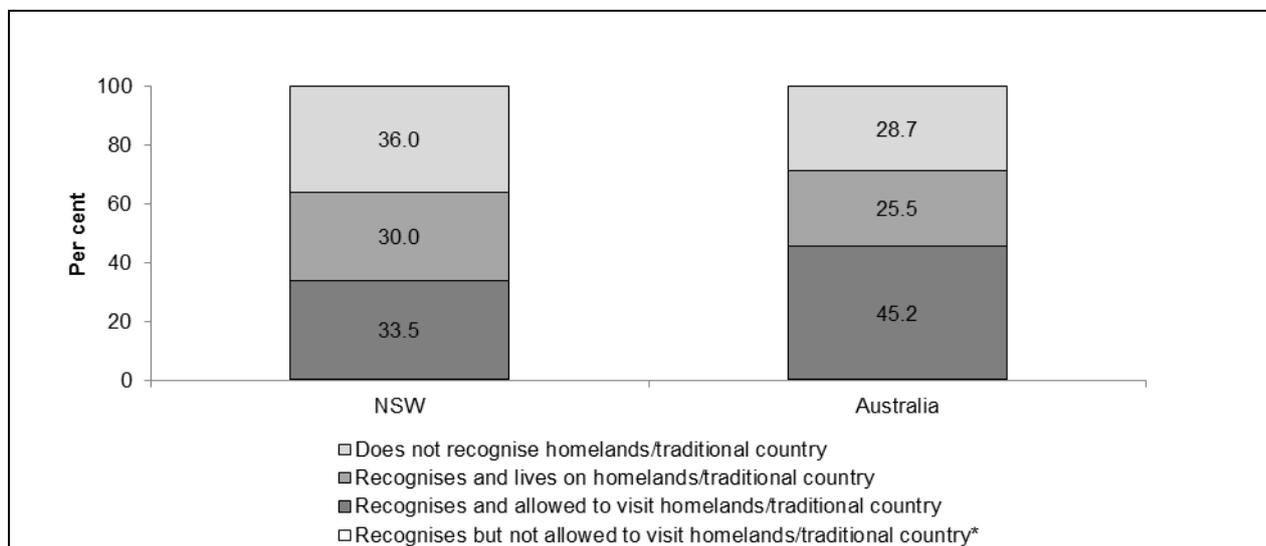
Loss of traditional lands has been associated with trauma, illness and poor social outcomes experienced by Aboriginal and Torres Strait people today (Northern Land Council & Central Land Council 1994; Royal Commission into Aboriginal Deaths in Custody 1991). Ongoing access to traditional lands has been found to have a positive association with health among Aboriginal and Torres Strait Islander people (McDermott et al. 1998).

Data are presented on the proportion of Aboriginal and Torres Strait Islander people living on or visiting traditional areas of land with which they have ancestral and/or cultural links using data from the 2008 NATSISS.

### Key findings

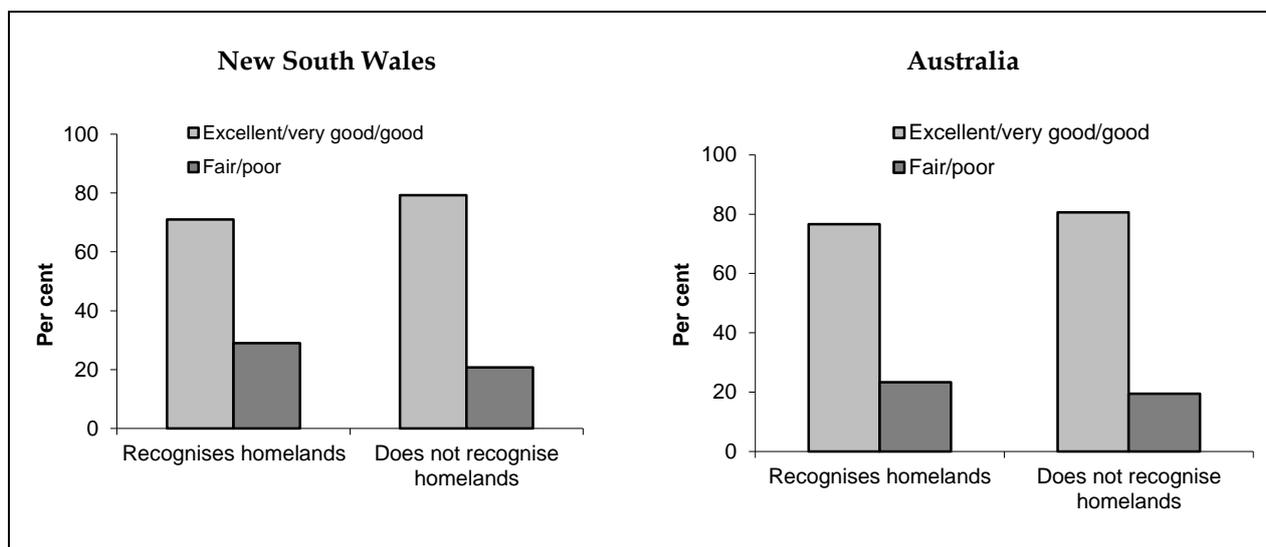
- According to the NATSISS, in 2008 in New South Wales, 33.5% of Indigenous people aged 15 and over recognised and were allowed to visit their homelands/traditional country. Nationally, 45% of Indigenous people recognised their homelands and were allowed to visit (Figure 2.14.1). “Allowed to visit” in this context most likely means that the elders and/or Indigenous tribal group/clan give permission for the person to visit the area as they identify with the clan or tribal group and speak the relevant Indigenous language.
- About 30% of Indigenous people in New South Wales and 26% of Indigenous people nationally lived on their homelands.
- About 36% of Indigenous people in New South Wales reported they did not recognise their homelands and 0.5% reported they were not allowed to visit their homelands. This compared with 29% and 0.6% for Indigenous people nationally.
- In 2008 in New South Wales, Indigenous Australians who did not recognise their homelands/traditional country were more likely to report excellent/very good/good

health (79%) than those who did recognise their homelands/traditional country (71%). The data for Australia showed similar patterns, though the difference was smaller (81% for Indigenous people who did not recognise their homelands/traditional country compared with 77% for Indigenous people who recognised their homelands/traditional country) (Figure 2.14.2).



Source: ABS & AIHW analyses of NATSISS 2008.

**Figure 2.14.1: Access to homelands/traditional country, Indigenous Australians aged 15 and over, New South Wales and Australia, 2008**



Source: AIHW analyses of NATSISS 2008.

**Figure 2.14.2: Self-assessed health status by whether Indigenous people recognise/do not recognise homelands/traditional country, New South Wales and Australia, 2008**

## Health behaviours

In addition to various socioeconomic and community factors, individual behaviours play a key role in health and wellbeing outcomes. These include adverse health behaviours, such as tobacco smoking, physical inactivity, poor nutrition, alcohol consumption and illicit drug use. Many of these behaviours are more prevalent in populations with lower socioeconomic status, but this relationship is complex.

This section presents data on tobacco use, alcohol consumption, substance use, breastfeeding practices, physical activity level, and dietary behaviour using data from the 2008 NATSISS and 2004–05 NATSIHS.

### 2.15 Tobacco use

Tobacco is one of the most widely used legal drugs in Australia, but its use is more prevalent in the Indigenous population than in the non-Indigenous population. Tobacco use plays a significant role in the gaps between Indigenous and non-Indigenous Australians in life expectancy and health (Catto & Thomson 2008). Under the COAG Closing the Gap National Health Partnership, the Australian and state/territory governments are making significant investments in programs to tackle the high rates of smoking among Indigenous Australians.

Data are presented on the smoking status of Indigenous Australians using data from the 2008 NATSISS, with non-Indigenous comparisons from the 2007–08 NHS.

#### Key findings

- According to the NATSISS, in 2008 in New South Wales, about 47% of Indigenous people aged 15 and over were current daily smokers, 1.7% were smokers who smoked weekly or less than weekly; 22% were ex-smokers and 30% had never smoked (Table 2.15.1).
- A slightly higher proportion of Indigenous people aged 15 and over in New South Wales were current daily smokers than Indigenous people nationally (47% compared with 45%).
- Indigenous people in New South Wales were 2.6 times as likely to be current daily smokers as non-Indigenous people in New South Wales.
- In New South Wales, Indigenous adults aged 25–34 and 45–54 were most likely to report being current smokers (56% and 55% respectively) (Table 2.15.2, Appendix 2).

**Table 2.15.1: Smoking status, by state/territory and Indigenous status, persons aged 15 and over, New South Wales and Australia 2008**

Smoker status (%)	New South Wales			Australia		
	Indigenous	Non-Indigenous	Rate ratio	Indigenous	Non-Indigenous	Rate ratio
Current daily smoker	46.5	17.8	2.6	44.6	18.0	2.5
Current smoker other <sup>(a)</sup>	1.7	1.8	1.0	2.2	1.8	1.2
Ex-smoker	21.9	27.2	0.8	19.7	28.6	0.7
Never smoked	29.9	53.3	0.6	33.5	51.6	0.6
<b>All persons</b>	<b>100.0</b>	<b>100.0</b>	<b>..</b>	<b>100.0</b>	<b>100.0</b>	<b>..</b>
<b>Total number of persons</b>	<b>96,367</b>	<b>5,400,320</b>	<b>0.02</b>	<b>327,101</b>	<b>16,374,202</b>	<b>0.02</b>

(a) Includes current smoker weekly and current smoker less than weekly.

Source: ABS and AIHW analysis of 2008 NATSISS and 2007–08 NHS.

## 2.16 Risky and high-risk alcohol consumption

Excessive consumption of alcohol is a major risk factor for conditions such as liver disease, pancreatitis, diabetes and some types of cancer. Alcohol is also a frequent contributor to motor vehicle accidents, injuries and suicide. It can also lead to anti-social behaviour, domestic violence and family breakdown. Current levels of risky alcohol consumption (both chronic and binge) are a concern for Indigenous and non-Indigenous Australians alike, and are major risk factors for morbidity and mortality in both populations (AIHW 2006).

Data are presented on self-reported alcohol consumption at risky/high-risk levels by Aboriginal and Torres Strait Islander people compared with the non-Indigenous population using data from the 2004–05 NATSIHS.

### Risky/high-risk alcohol consumption

The consumption of alcohol at risky and high-risk levels was defined as alcohol consumption that exceeded the National Health and Medical Research Council (NHMRC) guidelines for low risk drinking in the short or long term. These guidelines are outlined below:

**Short-term risky drinking** is consumption of more than 6 but fewer than 11 standard drinks on any one day for males, and more than 4 but fewer than 7 standard drinks for females.

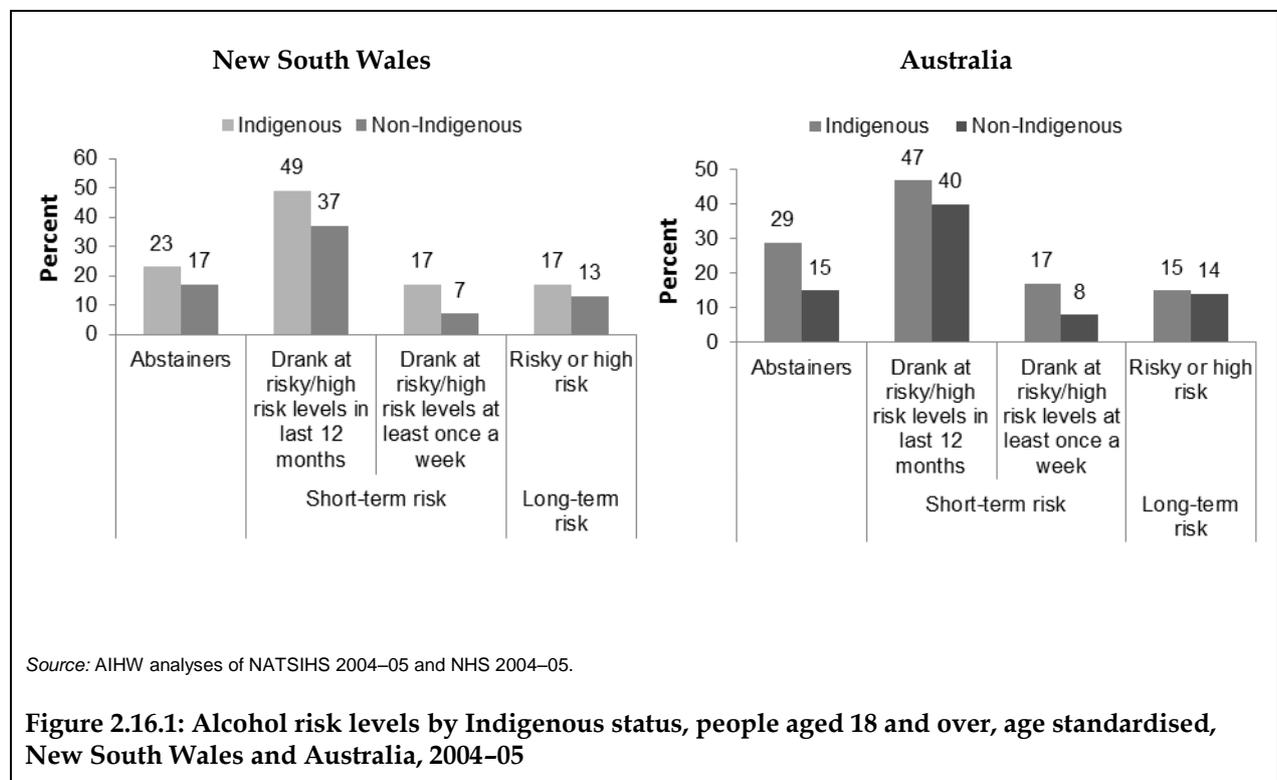
**Short-term high-risk drinking** is consumption of 11 or more standard drinks on any one day for males, and more than 7 standard drinks for females.

**Long-term risky drinking** is average consumption of more than 4 but fewer than 6 standard drinks per day (amounting to 29 but fewer than 42 per week) for males, and more than 2 but fewer than 5 standard drinks per day (amounting to 15 but fewer than 28 per week) for females.

**Long-term high-risk drinking** is average consumption of more than 6 standard drinks per day (amounting to 43 or more per week) for males, and more than 4 standard drinks per day (amounting to 29 or more per week) for females.

## Key findings

- In 2004–05 in New South Wales, Indigenous adults were more likely than non-Indigenous adults to report having abstained from alcohol consumption in the last 12 months (23% compared with 17%) (Figure 2.16.1).
- In New South Wales, about 49% of Indigenous adults drank at short-term risky/high-risk levels in the last 12 months, and 17% reported drinking at short-term risky/high-risk levels at least once a week. This compared with 37% of non-Indigenous adults who reported drinking at short-term risky/high-risk levels in the last 12 months and 7% who reported drinking at this level at least once a week. These proportions are similar for Indigenous Australians nationally.
- About 17% of Indigenous adults in New South Wales drank at long-term risky/high-risk levels in the last 12 months, compared with 13% of non-Indigenous adults. The proportions nationally were 15% and 14% for Indigenous and non-Indigenous adults, respectively.



## 2.17 Drug and other substance use including inhalants

Illicit substance use includes the use of drugs whose production, sale or possession is prohibited; and the misuse of substances that are legally available (for example, the use of solvent and petrol as inhalants, and the non-medical use of prescribed drugs such as pain-killers). As well as being a large contributing factor for illness, accidents and injury, illicit drug use may also have severe social and economic impacts on communities, including domestic violence, crime and assaults (AIHW 2011a).

Data are presented on the self-reported use of illicit drugs and other substances (for example, inhalants and pain-killers) among Aboriginal and Torres Strait Islander people using data

from the 2008 NATSISS. Comparable data are not available for the non-Indigenous population.

## Key findings

- In 2008, in New South Wales, about 59% of Indigenous males and 41% of Indigenous females aged 18 and over reported that they had ever used illicit substances. These proportions were higher than those reported nationally (54% and 38% respectively).
- In New South Wales, about 32% of Indigenous males and 20% of Indigenous females aged 18 and over reported illicit substance use in the last 12 months. These were higher than the proportions nationally (30% of Indigenous males and 18% of Indigenous females).
- Marijuana/hashish/cannabis resin was the most commonly reported type of substance used by Indigenous adults in the last 12 months. In 2008, 18.6% of Indigenous adults in New South Wales used marijuana, hashish or cannabis resin, slightly higher than the rate nationally (17.6%) (Table 2.17.1).

**Table 2.17.1: Substance use, Indigenous Australians aged 18 and over, by sex, New South Wales and Australia, 2008**

	New South Wales			Australia		
	Males	Females	People	Males	Females	People
	Per cent			Per cent		
<b>Used substances in last 12 months</b>						
Marijuana, hashish or cannabis resin	25.9	12.1	18.6	24.3	11.6	17.6
Amphetamines or speed	8.5	4.2	6.2	6.1	2.8	4.3
Ecstasy or designer drugs	5	2	3.4	4.8	2.1	3.4
LSD or synthetic hallucinogens	1.4	0.4	0.9	1.5	0.5	0.9
Pain killers or analgesics for non-medical purposes	4.2	4.5	4.4	5.3	4.5	4.8
Naturally occurring hallucinogens	1.3	–	0.6	1.1	0.2	0.6
Cocaine	0.8	0.6	0.7	1.2	0.5	0.8
Other analgesics	0.2	0.2	0.2	0.6	0.2	0.4
Volatile solvents	–	0.2	0.1	0.6	0.2	0.4
Tranquillisers or sleeping-pills for non-medical purposes	1.3	1.7	1.5	1.8	1.2	1.5
Kava	2	1.3	1.7	1.8	0.7	1.2
<b>Total used substance in last 12 months</b>	<b>31.5</b>	<b>19.9</b>	<b>25.4</b>	<b>29.8</b>	<b>17.6</b>	<b>23.3</b>
Used substance but not in last 12 months	27.3	20.4	23.6	24.4	19.8	22
<b>Total used substance<sup>(a)</sup></b>	<b>58.7</b>	<b>40.5</b>	<b>49.1</b>	<b>54.3</b>	<b>37.5</b>	<b>45.3</b>
Never used substance	41.3	59.2	50.7	45.4	61.7	54.1
Not stated	–	0.4	0.2	0.3	0.8	0.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes 'whether used in last 12 months' not known.

Source: AIHW analyses of NATSISS 2008.

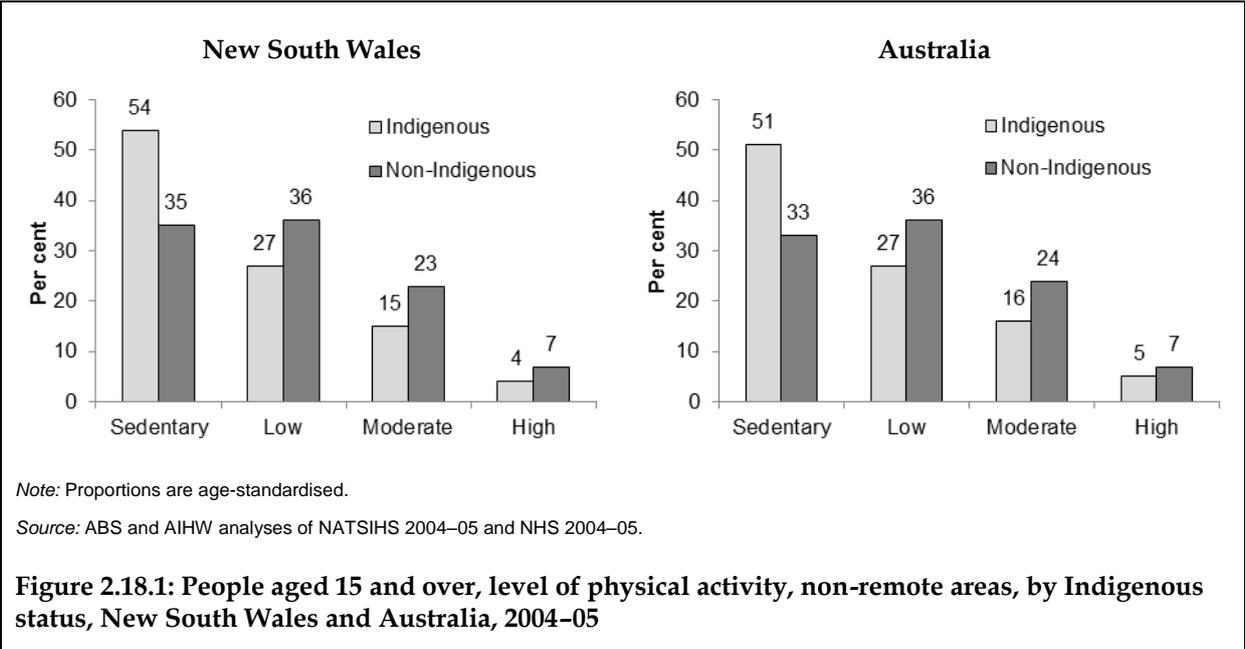
## 2.18 Physical activity

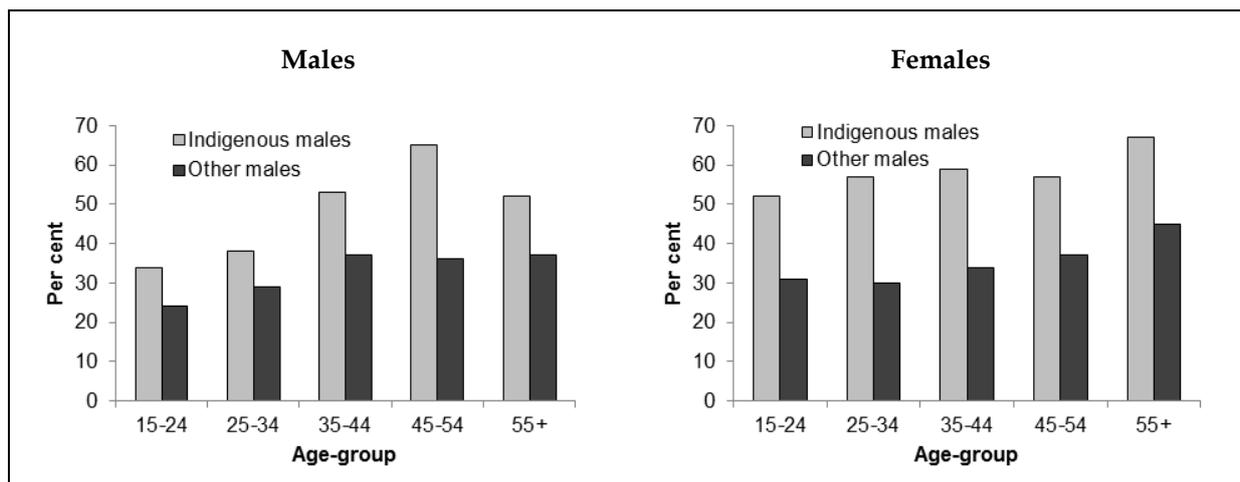
Physical inactivity is associated with several preventable chronic diseases, including cardiovascular disease, hypertension and diabetes, all of which are highly prevalent in the Indigenous population. It is also related to overweight and obesity, important risk factors for multiple diseases.

Data are presented on self-reported physical activity levels of Aboriginal and Torres Strait Islander and non-Indigenous adults using data from the 2004–05 NATSIHS. Data are reported for non-remote areas only as information on physical activity were not collected for remote areas of Australia in the NATSIHS.

### Key findings

- In 2004–05, over half (54%) of Indigenous people aged 15 and over reported their exercise level as sedentary in the 2 weeks before the survey, 27% reported it as low, 15% as moderate and 4% as high. This same pattern was evident nationally, with 51% of Indigenous Australians reporting their exercise level as sedentary, 27% as low, 16% as moderate and 5% as high (Figure 2.18.1).
- After adjusting for differences in age structure between the Indigenous and non-Indigenous populations, a higher proportion of Indigenous than non-Indigenous people in non-remote areas of New South Wales reported their exercise level as sedentary (Figure 2.18.1).
- Sedentary levels of physical activity generally increased with increasing age. In New South Wales, Indigenous people aged 15–24 were least likely (34% for males and 52% for females), and those aged 45–54 were most likely (65% for males and 57% for females), to report a sedentary level of physical activity (Figure 2.18.2).
- Indigenous people with a sedentary level of exercise were less likely to report excellent/very good/good health status than Indigenous people with high physical activity (73% compared with 94%) (Table 2.18.1, Appendix 2).





Source: AIHW analyses of NATSIHS 2004–05 and NHS 2004–05.

**Figure 2.18.2: People aged 15 and over reporting a sedentary level of physical activity by Indigenous status, sex and age group, non-remote areas, New South Wales, 2004–05**

## 2.19 Dietary behaviour

Over a long period, the traditional fibre-rich, high-protein, low saturated fat diet of many Indigenous communities has changed to one that is high in refined carbohydrates and saturated fats. Additionally, for Aboriginal and Torres Strait Islander people living in remote areas, access to a variety of foods, including fruit and vegetables, is limited. This is due to the higher costs for handling and transporting goods to remote communities, the lack of appropriate storage facilities in communities and the lack of suitable local produce to buy (NHMRC 2000).

Data are presented on fruit and vegetable consumption, type of milk consumed and salt intake using data from the 2004–05 NATSIHS and 2008 NATSISS.

### Recommended guidelines for intake of fruit and vegetables

The National Health and Medical Research Council guidelines recommend a minimum of 5 serves of vegetables per day and 2 serves of fruit per day for adults aged 19 and over. The guidelines also recommend the minimum daily intake of vegetables and fruit for children and adolescents according to age. For those aged 4–7, the recommended daily intake is 2 serves of vegetables and 1 serve of fruit; for those aged 8–11 it is 3 serves of vegetables and 1 serve of fruit; for those aged 12–18, it is 4 serves of vegetables and 3 of fruit.

### Key findings

- In 2004–05, in New South Wales, of persons aged 12 and over, 99% of Indigenous and 99% of non-Indigenous people reported eating vegetables daily, 88% of Indigenous and 93% of non-Indigenous people reported eating fruit daily and 78% of Indigenous and 47% of non-Indigenous people usually consumed whole milk (Table 2.19.1).
- In 2004–05 in New South Wales, 13% of Indigenous people aged 12 and over living in non-remote areas reported having the recommended daily intake of vegetables and 36% reported having the recommended daily intake of fruit. This compared with 13% and

52% for vegetable and fruit intake, respectively, for the non-Indigenous population (Figure 2.19.1).

- According to the 2008 NATSISS, 43% of Indigenous children aged 4 to 14 living in non-remote areas of New South Wales reported having the recommended daily intake of vegetables and 74% the recommended daily intake of fruit. These percentages were similar to those reported for non-remote areas of Australia (Figure 2.19.2).

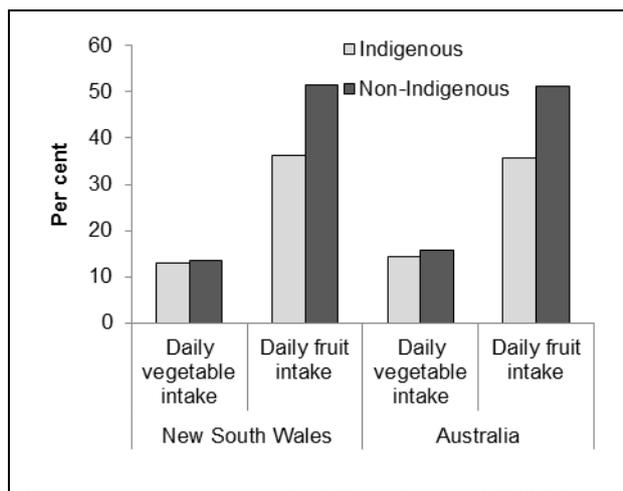
**Table 2.19.1: Selected dietary habits, by remoteness and Indigenous status, people aged 12 and over, New South Wales and Australia, 2004–05**

Dietary behaviours	New South Wales		Australia			
	Total Indigenous	Total non-Indigenous	Indigenous		Non-Indigenous	
			Remote	Non-remote	Total Indigenous	Total non-Indigenous
	Per cent		Per cent			
Vegetable intake						
Eats vegetables daily	99	99	84	98	95	99
Does not eat vegetables daily	1	1	15	2	5	1
<b>Total<sup>(a)</sup></b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Fruit intake						
Eats fruit daily	88	93	80	88	86	93
Does not eat fruit daily	12	7	20	12	14	7
<b>Total<sup>(a)</sup></b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Usual type of milk consumed						
Whole	78	47	87	76	79	45
Low/reduced fat	11	27	4	14	11	31
Skim	6	14	2	5	5	13
<i>Total drinks milk<sup>(b)</sup></i>	96	95	95	97	96	95
Does not drink milk	4	5	5	3	4	5
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Salt added after cooking						
Never/rarely	34	..	16	35	30	..
Sometimes	23	..	30	23	25	..
Usually	43	..	53	43	46	..
<b>Total</b>	<b>100</b>	<b>..</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>..</b>

(a) Includes 'whether eats fruit/vegetables' not known.

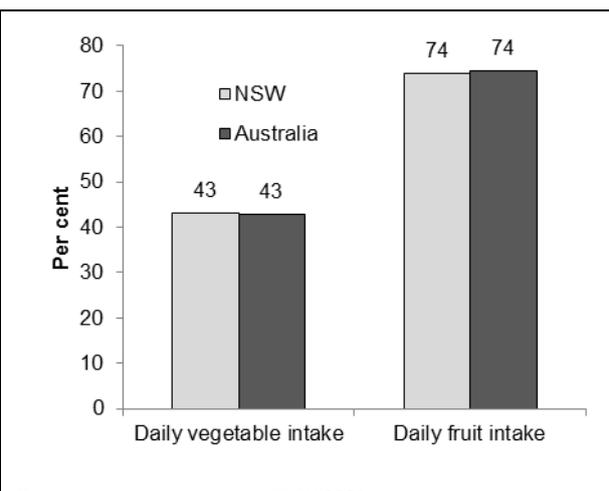
(b) Includes 'soy milk' and other types of milk.

Source: ABS and AIHW analyses of NATSIHS 2004–05 and NHS 2004–05.



Source: AIHW analyses of NATSIHS 2004–05 and NHS 2004–05.

**Figure 2.19.1: Percentage of Australians aged 12 and over who had the recommended daily intake of vegetables and fruit, by Indigenous status, non-remote areas, New South Wales and Australia, 2004–05**



Source: AIHW analyses of NATSISS 2008.

**Figure 2.19.2: Percentage of Indigenous children aged 4–14 who had the recommended daily intake of vegetables and fruit, non-remote areas, New South Wales and Australia, 2008**

## 2.20 Breastfeeding practices

Breastfeeding provides many benefits to young children including to reduce children’s risk for sudden infant death syndrome (SIDS) and many types of infections and allergies. Breast milk may also help protect young children from some health problems, such as eczema, obesity, asthma, and diabetes (Lawrence & Lawrence 2009; Public Health Agency of Canada, et al. 2011).

Data are presented on the breastfeeding practices of Aboriginal and Torres Strait Islander mothers, including the breastfeeding status of Aboriginal and Torres Strait Islander infants, breastfeeding duration, and age at which infants are first given solid food using data from the 2008 NATSISS.

### Key findings

- In 2008 in New South Wales and the Australian Capital Territory combined, about 69% of Indigenous infants aged 0–3 years had ever been breastfed, compared with 77% of Indigenous infants the same age nationally; and 13% of Indigenous infants aged 0–3 years in New South Wales and the Australian Capital Territory combined were currently being breastfed compared with 21% nationally (Table 2.20.1).
- The median age at which Indigenous children stopped being completely breastfed was 13 weeks in New South Wales and the Australian Capital Territory combined and 17 weeks across Australia.
- In 2008, 40% of Indigenous infants under 1 year of age in New South Wales were currently breastfed, lower than the rate nationally (47%) (Figure 2.20.1).
- Among Indigenous infants aged 0–3 years in New South Wales, 45% were first regularly given solid food when they were between 3 and 6 months old, and 29% when they were between 6 and 9 months old. Nationally, 43% were first regularly given solid food when

they were between 3 and 6 months old, and 30% when they were between 6 and 9 months old (Table 2.20.2, Appendix 2).

- Similar proportions of Indigenous infants aged 0–3 in New South Wales and nationally were regularly given solid food (89% and 91%, respectively) (Table 2.20.2, Appendix 2).

**Table 2.20.1: Breastfeeding status, Indigenous infants aged 0–3 years, New South Wales and the Australian Capital Territory combined and Australia, 2008**

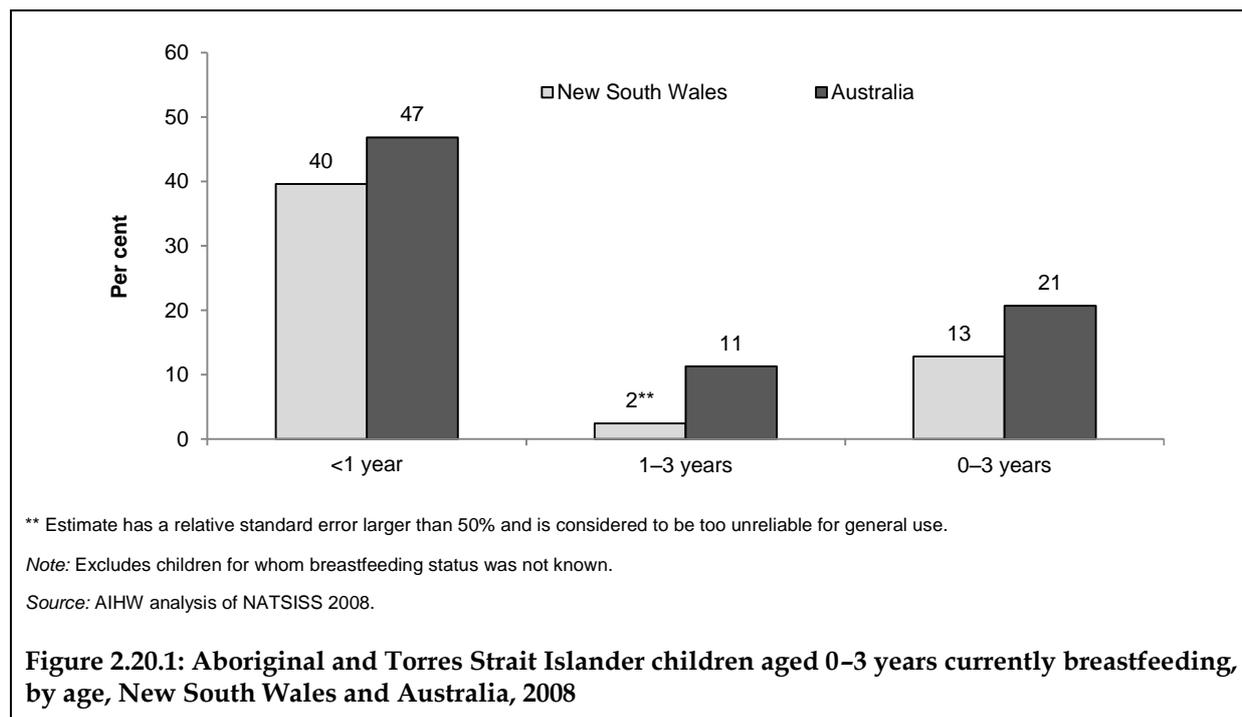
Breastfeeding measure	NSW/ACT	Australia
	Per cent	
Child breastfed		
Currently breastfeeding	12.7	20.7
Not currently breastfeeding		
Age child stopped being completely breastfed		
Less than 6 months	38.6	33.7
Between 6 and 12 months	11.9*	10.4
12 months or older	4.5*	11.6
<i>Total<sup>(a)</sup></i>	<i>55.8</i>	<i>56.6</i>
Ever breastfed	68.5	77.3
Never breastfed	31.5	22.7
<b>Total<sup>(b)</sup></b>	<b>100.0</b>	<b>100.0</b>
<b>Total people</b>	<b>16,133</b>	<b>52,648</b>
Median age at which child stopped being completely breastfed (weeks)	13	17
Mean age at which child stopped being completely breastfed (weeks)	18	27

\* Estimate has a relative standard error between 25% and 50% and should be used with caution.

(a) Includes age at which child stopped breastfeeding not stated.

(b) Excludes children for whom breastfeeding status was not known.

Source: NATSISS 2008.



## 2.21 Health behaviours during pregnancy

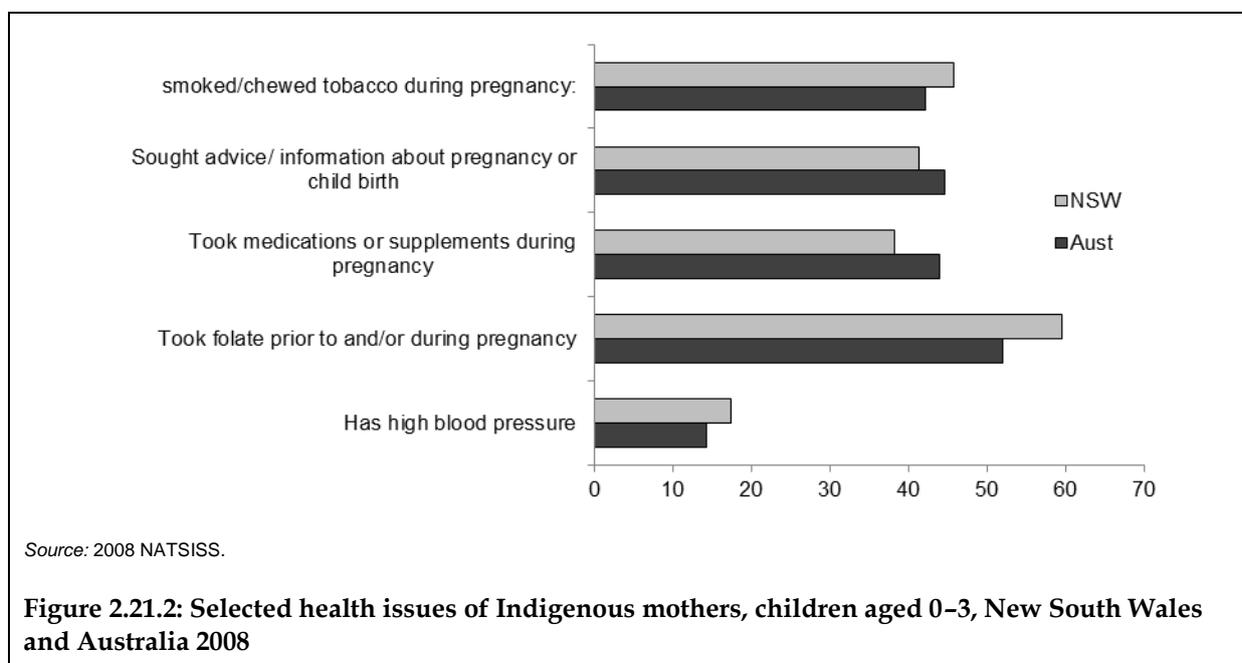
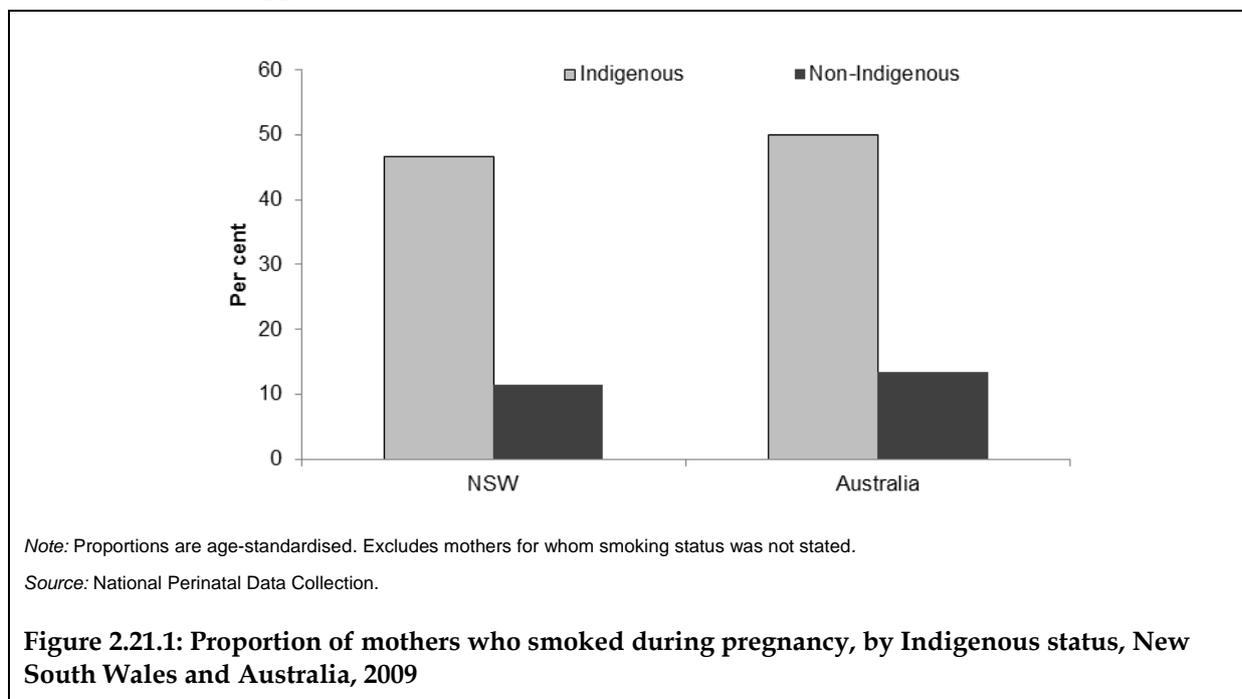
Health behaviours during pregnancy can have major impacts on the health outcomes of mothers and their children. Smoking during pregnancy can result in health problems for the newborn, including low birthweight, intrauterine growth restriction, prematurity, placental complications, birth defects, lung function abnormalities and respiratory symptoms and perinatal mortality (Jauniaux & Burton 2007; Julvez et al. 2007). Drinking alcohol while pregnant may result in a range of impairments in cognitive, social and emotional functioning over the child's lifetime (France et al. 2010). Nutrition before and during pregnancy is also critical to fetal development (McDermott et al. 2009).

Data are presented on smoking during pregnancy from the National Perinatal Data Collection, health issues of mothers from the NATSISS, and risk factors of mothers reported during antenatal care from the Healthy for Life (HfL) data collection.

### Key findings

- In New South Wales in 2009, about 51% of Aboriginal and Torres Strait Islander mothers smoked during pregnancy. This was similar to the proportion nationally (52%) (Table 2.21.1, Appendix 2).
- After adjusting for differences in age-structure, Aboriginal and Torres Strait Islander mothers in New South Wales were over 4 times as likely as non-Indigenous mothers to report smoking during pregnancy (Figure 2.21.1).
- According to the 2008 NATSISS, in New South Wales, about 46% of Indigenous mothers of children aged 0-3 reported that they smoked/chewed tobacco during pregnancy, 41% reported that they sought advice about pregnancy and child birth, 38% took medications or supplements during pregnancy, 60% took folate before/or during pregnancy, and 17% had high blood pressure (Figure 2.21.2).

- A higher proportion of Indigenous mothers in New South Wales reported smoking during pregnancy and had high blood pressure than Indigenous mothers nationally.
- Of mothers in New South Wales and the Australian Capital Territory combined who were regular clients of a Healthy for Life Indigenous primary health-care service and attended antenatal care in the first trimester, 49% reported smoking, 22% reported low/high-risk alcohol consumption and 18% reported using illicit drugs in 2009-10 (Table 2.21.2, Appendix 2).



## Person-related factors

This section is on one measure – overweight and obesity.

### 2.22 Overweight and obesity

Overweight and obesity is a major current health problem for Australia, with more than 60% of Australian adults overweight or obese in 2007–08 (AIHW 2011b). The consequences of being overweight or obese are many and varied, including the risk of suffering coronary heart disease, Type 2 diabetes, some cancers, knee and hip problems, and sleep apnoea. Obesity is closely associated with risk factors for some of the major causes of morbidity and mortality amongst Aboriginal and Torres Strait Islander people, such as diabetes (NHMRC 2000). Obesity was estimated to contribute 16% of the health gap between Aboriginal and Torres Strait Islander people and the total Australian population in 2003 (Vos et al. 2007).

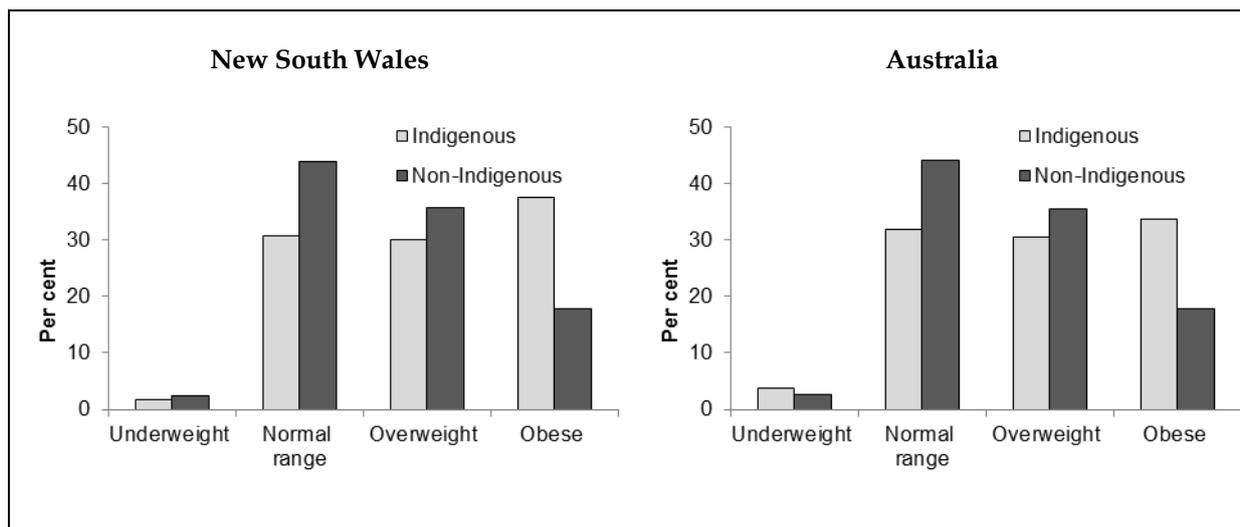
Data are presented on the prevalence of overweight and obesity among Aboriginal and Torres Strait Islander adults based on body mass index using data from the 2004–05 NATSIHS.

#### Body mass index

Body mass index (BMI), is calculated by dividing weight in kilograms by height in metres squared. The normal range of BMI is between 18.5 and 25. A person is underweight if his/her BMI is less than 18.5, or overweight if the BMI is equal to or more than 25. A person is obese if the BMI is equal to or more than 30.

#### Key findings

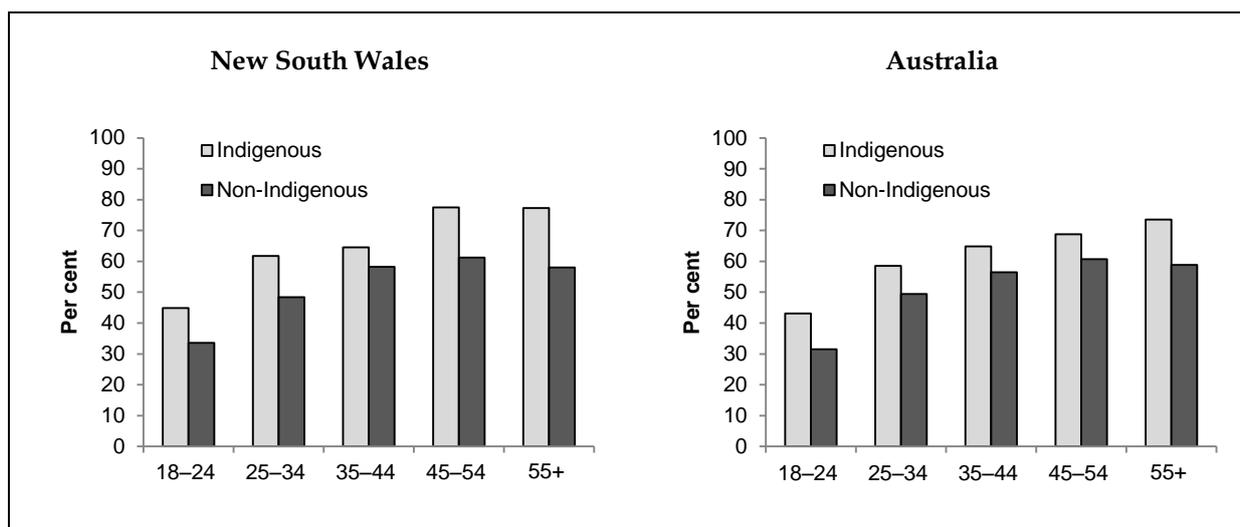
- In 2004–05, after adjusting for differences in age structure, about 2% of Indigenous adults in New South Wales whose BMI was known were underweight, 31% were of acceptable weight, 30% were overweight but not obese, and 38% were obese. This compared with 2%, 44%, 36% and 18% for non-Indigenous adults in New South Wales in these BMI categories, respectively (Figure 2.22.1).
- Similar proportions of Indigenous adults in New South Wales and nationally were overweight or obese.
- A higher proportion of Indigenous adults were overweight or obese than non-Indigenous adults across all age groups (Figure 2.22.2). Indigenous adults aged 45–54 and 55 and over were most likely to be overweight or obese (around 77%) while non-Indigenous adults aged 45–54 were most likely to be overweight or obese (61%).



Note: Excludes those with an unknown body mass index.

Source: AIHW analyses of NATSIHS 2004–05 and NHS 2004–05.

**Figure 2.22.1: Proportion of Indigenous adults who are underweight, normal weight, overweight and obese, age-standardised, by Indigenous status, New South Wales and Australia, 2004–05**

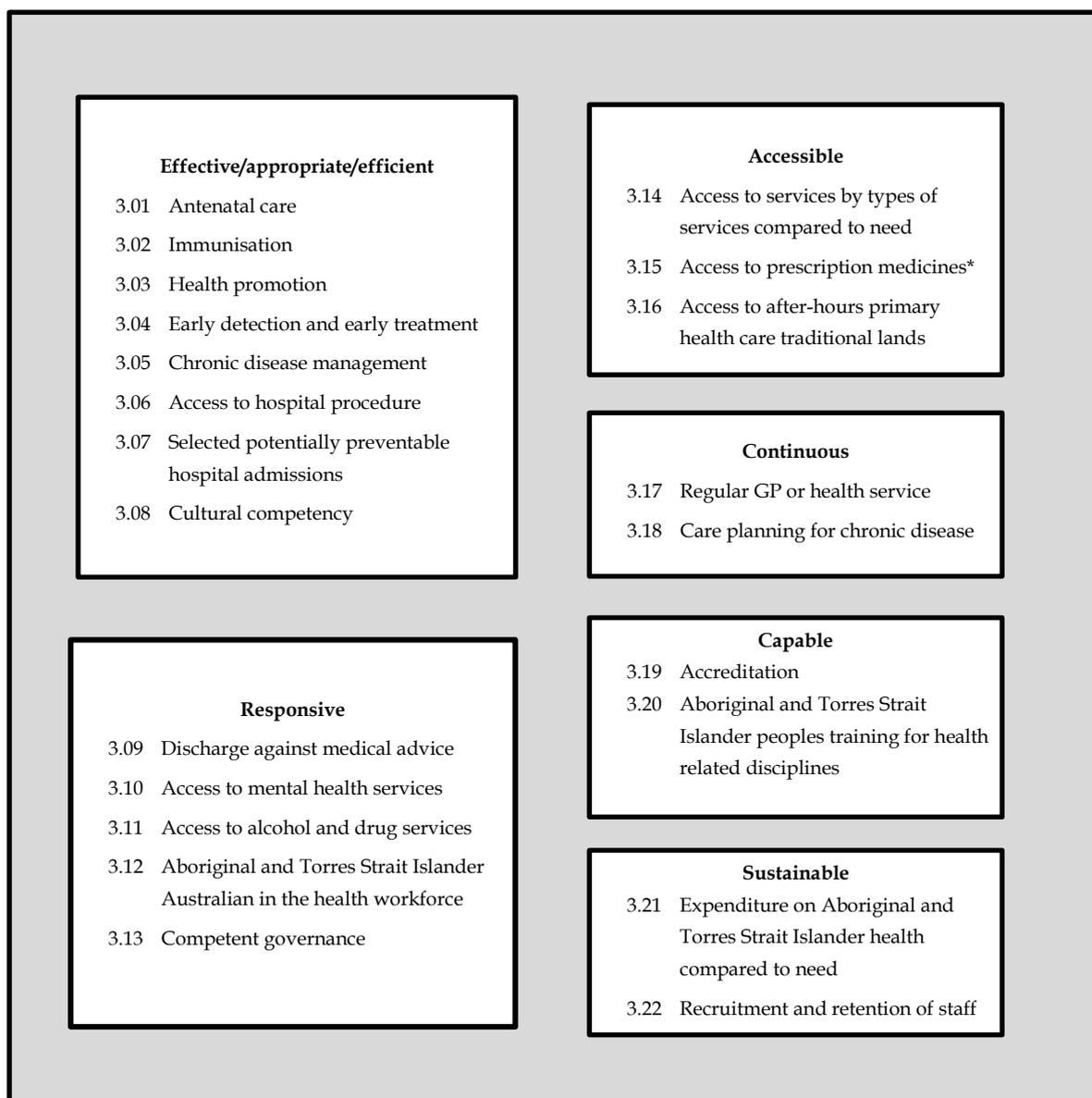


Note: Excludes those with an unknown body mass index.

Source: AIHW analyses of NATSIHS 2004–05 and NHS 2004–05.

**Figure 2.22.2: Proportion of adults overweight or obese, by age group, by Indigenous status, New South Wales and Australia, 2004–05**

## Part 3: Health system performance



\* Data for NSW is not available for this indicator

The third part of this report, Health system performance, presents Tier 3 measures of the Aboriginal and Torres Strait Islander Health Performance Framework. Tier 3 aims to cover the entire health system, including Indigenous specific services and programs, and mainstream services. The measures examine a number of different factors, including child and maternal health, health promotion, access to care, early detection and chronic disease management, the health workforce and adequacy of resources.

Tier 3 is structured around addressing five key questions:

- Is the health system effective/appropriate/efficient?
- Is the health system responsive to needs of Indigenous people?
- Is health care accessible?

- Is there continuity in quality health care?
- Is the health system capable and sustainable?

## Is the health system effective/appropriate/efficient?

This section includes measures on effectiveness, appropriateness and efficiency of the health system in the following areas: antenatal care, immunisation, health promotion, early detection and early treatment, chronic disease management, access to hospital procedures, potentially preventable hospital admissions and cultural competency.

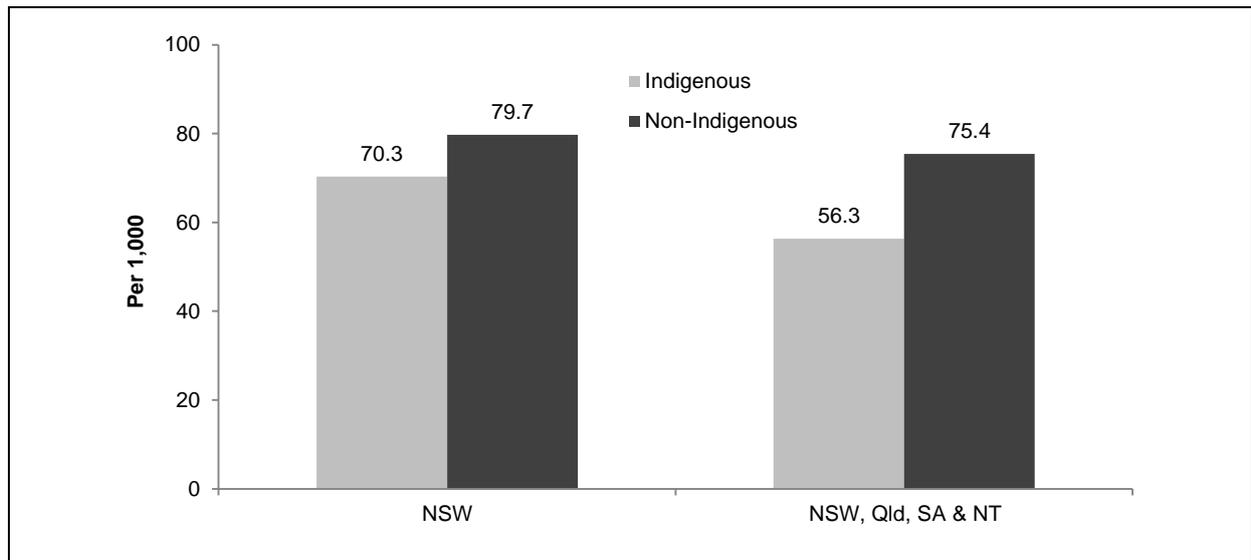
### 3.01 Antenatal care

Antenatal care is an important part of pregnancy and evidence shows there is a strong relationship between regular antenatal care and positive child health outcomes (particularly for antenatal care in the first trimester). Receiving antenatal care at least four times during pregnancy, as recommended by the WHO, increases the likelihood of receiving effective maternal health interventions (WHO 2011). The purpose of antenatal visits is to monitor the health of mother and baby, provide health advice, identify complications, and provide intervention if needed.

Data are presented on the proportion of mothers who attended at least one antenatal care session, and the proportion of women who attended antenatal care in the first trimester.

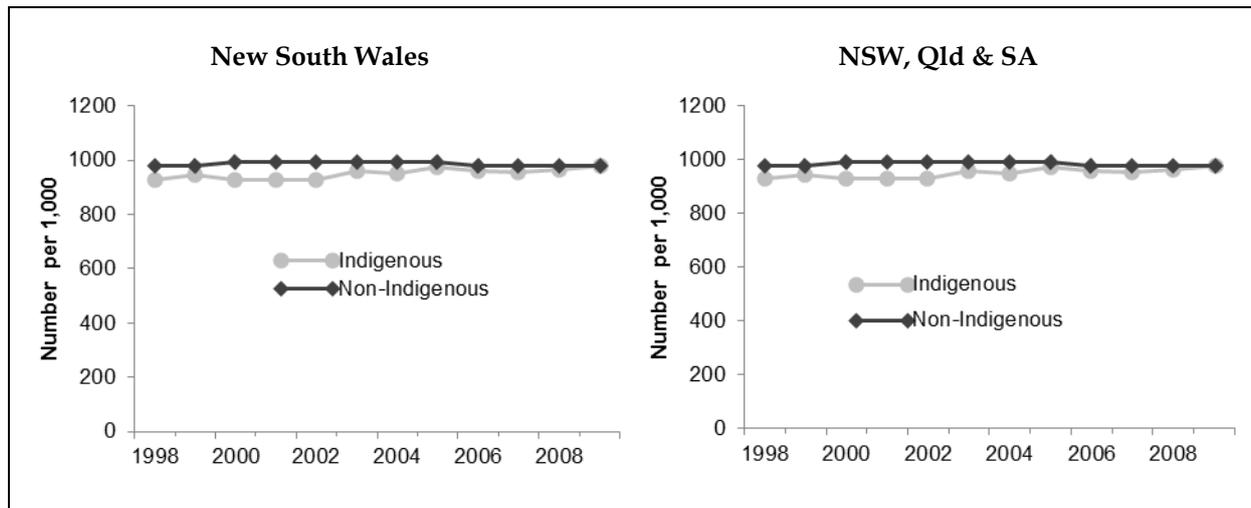
#### Key findings

- In 2009 in New South Wales, about 98% of Indigenous mothers and almost 99% of non-Indigenous mothers attended at least one antenatal care session during pregnancy (Table 3.01.1, Appendix 2).
- Indigenous mothers in New South Wales were less likely to attend antenatal care in the first trimester than non-Indigenous mothers (70% compared with 80%). Indigenous mothers in New South Wales had higher rates of attending antenatal care in the first trimester than Indigenous mothers nationally (70% compared with 56%) (Figure 3.01.1).
- Between 1998 and 2009 in New South Wales, there was a significant increase in the rate of Indigenous mothers who attended at least one antenatal care session during pregnancy of 4.4% over this period while there was no significant change for non-Indigenous mothers (Figure 3.01.2). Over the same period in New South Wales, Queensland and South Australia combined, the rates of Indigenous and non-Indigenous mothers who attended at least one antenatal care session during pregnancy significantly increased by 4% and 1.7% respectively.



Source: AIHW analyses of States and Territories Perinatal Collections.

**Figure 3.01.1: Age-standardised rate of 1,000 who attended antenatal care in the first trimester, by Indigenous status, New South Wales and NSW, Qld, SA & NT combined, 2009**



Source: AIHW analyses of State and Territory Perinatal Collections.

**Figure 3.01.2: Mothers who attended at least one antenatal care session, by Indigenous status, New South Wales and NSW, Qld & SA combined, 1998-2009**

### 3.02 Immunisation

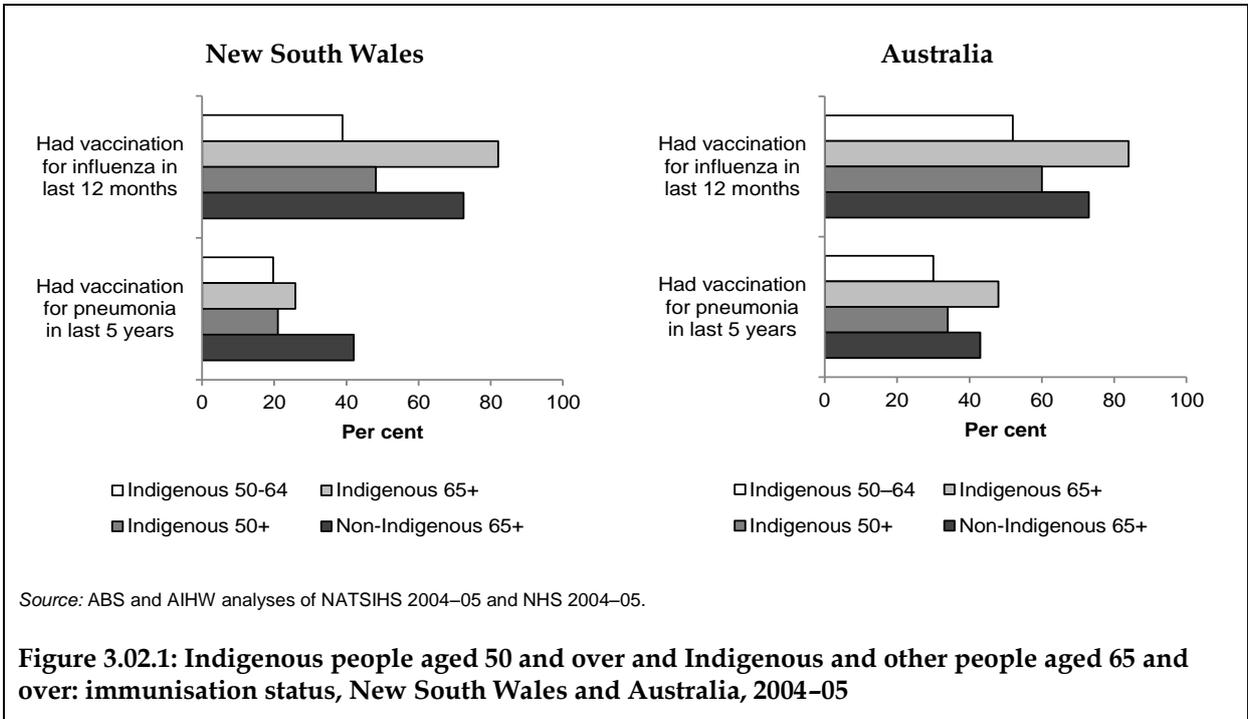
Immunisation is an effective way of protecting people against harmful diseases before they come into contact with them in the community. Immunisation therefore not only protects individuals, but also others in the community, by reducing the spread of disease. The Immunise Australia Program aims to reduce morbidity and mortality associated with several vaccine-preventable diseases by funding a series of age-specific vaccinations as outlined in the National Immunisation Program Schedule (DoHA 2010). Increasing the proportion of

Indigenous children who are fully vaccinated is one of the agreed outcomes of the Indigenous Early Childhood Development National Partnership (COAG 2009).

Data are presented on vaccination coverage rates among Indigenous Australian children using data from the Australian Childhood Immunisation Register, and immunisation of influenza and pneumonia by Indigenous adults using data from the 2004–05 NATSIHS.

**Key findings**

- As at December 2011 in New South Wales, about 87% of Indigenous children aged 1 year were fully vaccinated compared with 92% of other children. Children aged 2 were vaccinated at almost 93% for both Indigenous and other children. Children aged 5 were fully vaccinated at 85% for Indigenous and 90% for other children (Table 3.02.1).
- Vaccination coverage rates for Indigenous children in New South Wales were similar to those nationally for all three aged groups.
- According to the 2004–05 NATSIHS, about 48% of Indigenous people aged 50 and over in New South Wales had been vaccinated against influenza in the previous 12 months and 21% had been vaccinated against pneumonia in the previous 5 years. These proportions were lower than those reported nationally (60% and 34% respectively) (Figure 3.02.1).
- In 2004–05 in New South Wales, a higher proportion of Indigenous people aged 65 and over had been vaccinated against influenza in the last 12 months than non-Indigenous people of the same age (82% compared with 72%). But a lower proportion of Indigenous people had been vaccinated against pneumonia in the last 5 years (26%) than non-Indigenous people of aged 65 and over (42%). Nationally, a higher proportion of Indigenous people aged 65 and over had been vaccinated against influenza in the last 12 months and pneumonia in the last 5 years (Figure 3.02.1).



**Table 3.02.1: Vaccination coverage estimates for selected diseases for children 'fully vaccinated' at 1, 2 and 5 years of age, by Indigenous status, New South Wales and Australia, as at 31 December 2011**

	New South Wales	Australia
	Per cent	
<b>1 year of age</b>		
Indigenous	87.2	85.2
Other	91.8	93.5
Ratio	1.0	0.9
Rate difference	-4.6	-8.3*
<b>2 years of age</b>		
Indigenous	92.9	92.3
Other	92.6	92.6
Ratio	1.0	1.0
Rate difference	0.3	-0.3
<b>5 years of age</b>		
Indigenous	84.9	86.5
Other	89.8	90.1
Ratio	1.0	1.0
Rate difference	-3.6*	-3.6*

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

Source: AIHW analysis of ACIR Medicare Australia data.

### 3.03 Health promotion

Health promotion includes interventions designed to enable people to increase control over, and to improve or protect their health. Health promotion can help strengthen community capacity and focus on determinants of health. It includes public policy interventions, social marketing, information to support healthy lifestyles, mass media campaigns and promoting social responsibility for health (AHMAC 2012). Currently there are limited methods for measuring the nature and level of health promotion programs and activities and their reach for Aboriginal and Torres Strait Islander people.

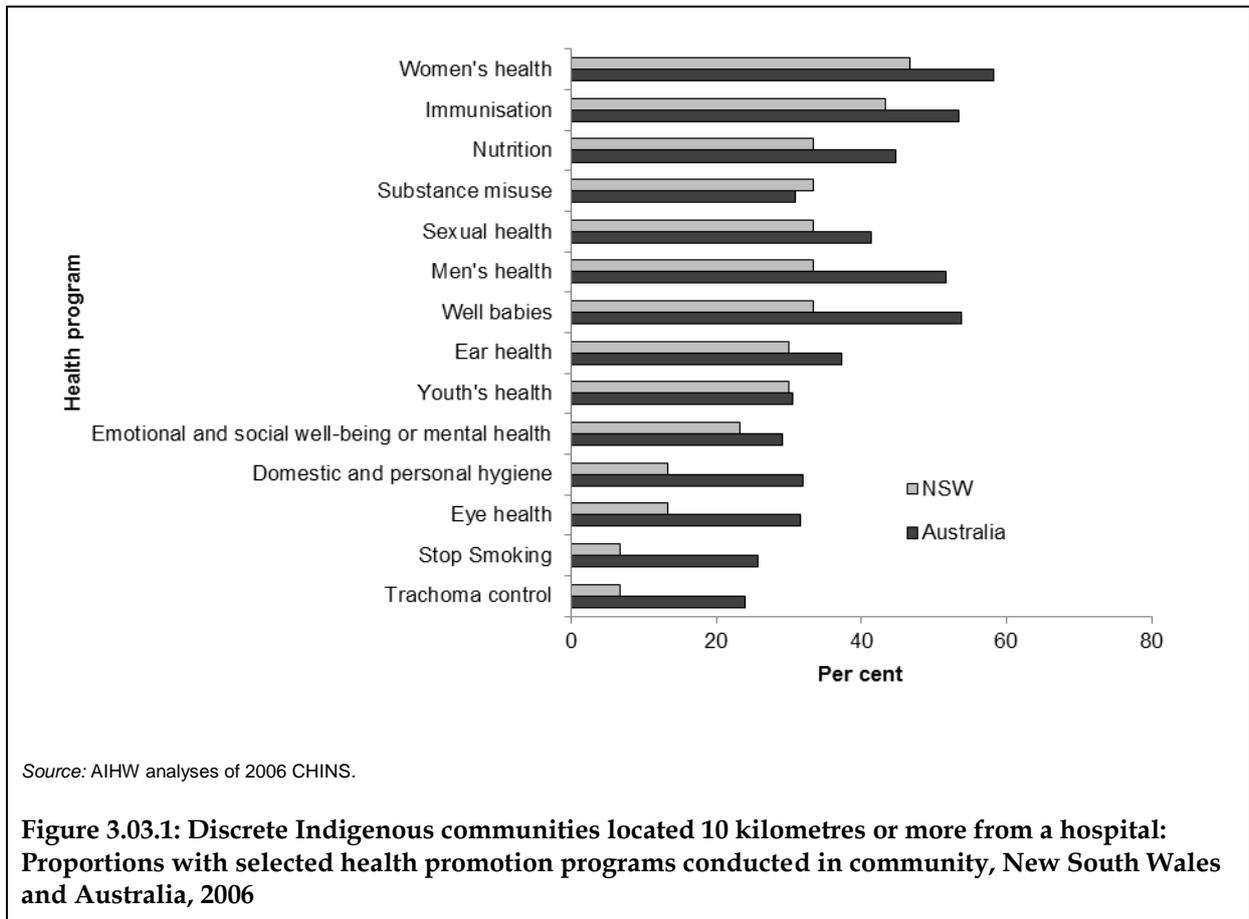
Data are presented on health promotion programs conducted in discrete Indigenous communities and by Indigenous primary health care services using data from the 2006 Community Housing and Infrastructure Needs Survey (CHINS) and the Office for Aboriginal and Torres Strait Islander Health (OATSIH) Services Reporting data collection.

#### Key findings

- In 2006, according to the CHINS, 15 out of the 30 (50%) discrete Indigenous communities in New South Wales that were 10 kilometres or more from a hospital, had at least one health promotion program running in the community. This was lower than the proportion nationally (67%).
- The most common health promotion programs conducted in New South Wales discrete Indigenous communities were women's health (47%), followed by immunisation (43%),

nutrition, substance misuse, sexual health, men's health and well babies programs (all at 33%) (Figure 3.03.1).

- In 2010–11, of the 47 Aboriginal and Torres Strait Islander primary health care services in New South Wales reporting to the OATSIH Services Reporting (OSR) about two-thirds (68%) conducted sport/recreation/physical education groups, about half (49%) conducted mothers and babies groups, 30% conducted alcohol use treatment/prevention groups, and 43% conducted tobacco use treatment/prevention groups (Table 3.03.1).



**Table 3.03.1: Proportion of Aboriginal and Torres Strait Islander primary health-care services that ran health promotion/prevention group activities in 2010–11, New South Wales and Australia**

Health promotion/prevention group activities	New South Wales	Australia
	Per cent	
Community-based education and prevention groups	70.2	70.6
Sport/recreation/physical education groups	68.1	64.5
Support groups	51.1	49.3
Mothers' and babies' groups	48.9	58.3
Men's groups	48.9	56.9
Living skills groups (e.g. cooking, nutrition groups)	46.8	64.5
Women's groups	46.8	60.2
Antenatal groups	42.6	43.6
Tobacco use treatment/prevention groups	42.6	33.6
Chronic disease management groups	38.3	42.7
Cultural groups	29.8	50.2
Alcohol use treatment/prevention groups	29.8	26.1
Youth groups	23.4	40.8
Counselling groups	21.3	29.9
Other substance use treatment/prevention groups	19.1	17.1
Other groups activities	6.4	12.8
<b>Total number of services that ran selected group</b>	<b>47</b>	<b>211</b>

Source: AIHW analysis of OSR data collection.

### 3.04 Early detection and early treatment of disease

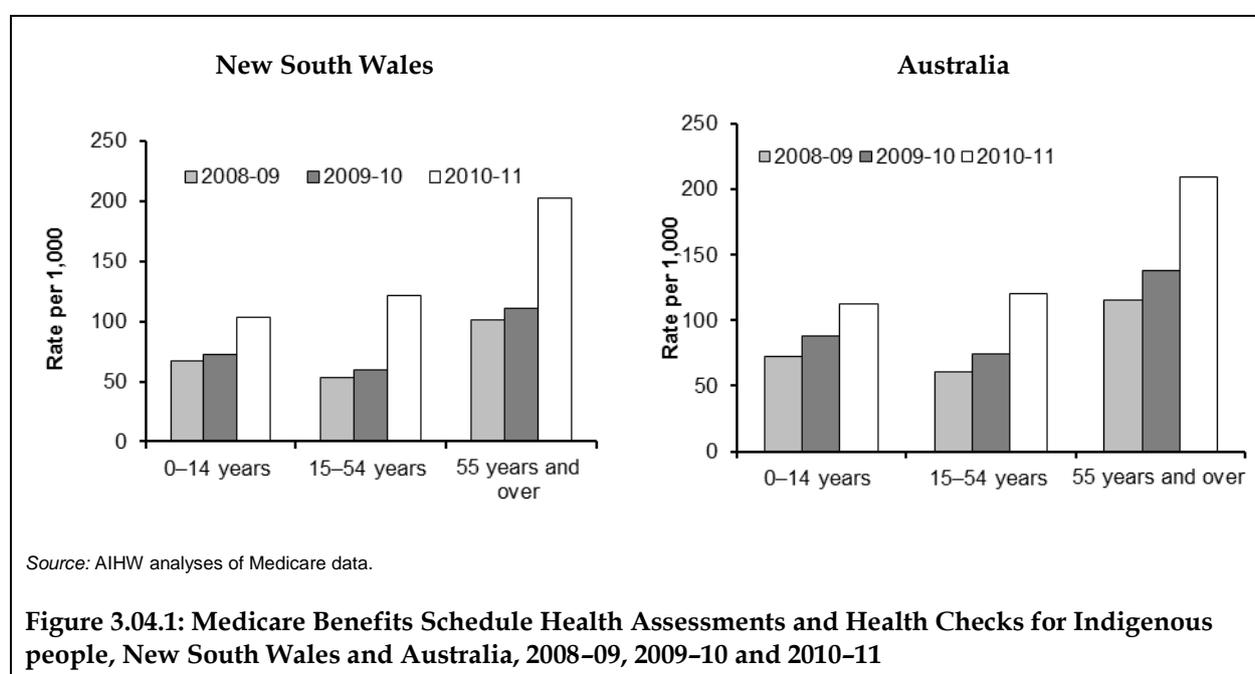
Early detection is the discovery of a disease or condition at an early stage of its onset or development. Disease screening, and regular health checks help prevent or delay the onset of a variety of conditions. Population-based screening activities, such as breast, bowel and cervical cancer screening programs, focus on detecting diseases in their early or pre-disease stages or to prevent occurrence of disease in the first place (cervical screening) to reduce morbidity and mortality. National programs for breast and cervical cancer screening were implemented in Australia in the early 1990s, and the national program for bowel cancer screening was implemented in 2006. Several item numbers are available under the Medicare Benefits Schedule (MBS) to encourage primary care providers to carry out regular health assessments, including some specific items for Aboriginal and Torres Strait Islander patients.

Data are presented on the health assessment and disease screening of Aboriginal and Torres Strait Islander people using MBS data, data from BreastScreen Australia and data from the OSR data collection.

#### Key findings

- In New South Wales from July 2010 to June 2011:
  - 103 per 1,000 Indigenous children aged 0–14 years had an annual child health check
  - 122 per 1,000 Indigenous people aged 15–54 years had a two-yearly health check
  - 203 per 1,000 Indigenous people aged 55 and over had an annual health assessment.

- In 2010–11, rates of Indigenous people in New South Wales undertaking health checks and health assessments was similar to the rates for Indigenous people nationally (Figure 3.04.1).
- There has been a significant increase in health assessments provided to Indigenous Australians in New South Wales since the introduction of the National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes in July 2009. The rate of child health checks increased 1.5 times and the rate of adult health assessments doubled between 2008–09 and 2010–11 (Figure 3.04.1).
- The BreastScreen Australia program focuses on women aged 50–69, although women aged 40 and over may also receive free screening. In 2008–09 in New South Wales, the proportion of Indigenous women aged 50–69 participating in the BreastScreen Australia program was markedly lower than the rate for other women in that age group (37% compared with 54%).
- For women aged 40 and over, about 22% of Indigenous women in New South Wales participated in the BreastScreen Australia program compared with 29% of other women (Table 3.04.1).
- BreastScreen participation rates were similar for Indigenous women in New South Wales and for Indigenous women nationally for all age groups except 40–49 for which rates for Indigenous women in New South Wales were lower (Table 3.04.1).
- In 2010–11, of the 55 Aboriginal and Torres Strait Islander primary health-care services in New South Wales reporting to the OSR data collection, 67% routinely organised pneumococcal immunisations, 71% routinely organised influenza immunisation, 75% organised child immunisation, and 56% conducted sexually transmissible infection contact tracing (Table 3.04.2, Appendix 2).



**Table 3.04.1: Age-specific participation rates<sup>(a)</sup> in BreastScreen Australia program, Indigenous and other women, New South Wales and Australia, 2008–2009**

Age group (years)	New South Wales		Australia	
	Indigenous	Other	Indigenous	Other
		<b>Per cent</b>		
40–49	7.2	9.0	12.4	14.8
50–59	34.3	52.1	34.4	53.4
60–64	40.2	58.3	39.2	59.7
65+	22.6	20.4	24.3	24.5
<b>40+ (age-standardised rate)<sup>(b)</sup></b>	<b>22.3</b>	<b>28.8</b>	<b>24.5</b>	<b>32.5</b>
<b>50–69 (age-standardised rate)<sup>(b)(c)</sup></b>	<b>37.0</b>	<b>54.2</b>	<b>36.5</b>	<b>55.5</b>
		<b>Rate ratio<sup>(c)</sup></b>		
<b>40+</b>	<b>0.8*</b>	..	<b>0.8*</b>	..
<b>50–69</b>	<b>0.7*</b>	..	<b>0.7*</b>	..
		<b>Rate difference<sup>(d)</sup></b>		
<b>40+</b>	<b>-6.5*</b>	..	<b>-7.9*</b>	..
<b>50–69</b>	<b>-17.2*</b>	..	<b>-19.0*</b>	..

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

(a) Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the 2008 and 2009 ABS estimated resident population.

(b) Rates are directly age-standardised to the Australian 2001 standard population.

(c) Rate ratio Indigenous: other women.

Note: Other women includes women in the 'not stated' category for Aboriginal and Torres Strait Islander status.

Source: AIHW analysis of BreastScreen Australia data.

### 3.05 Chronic disease management

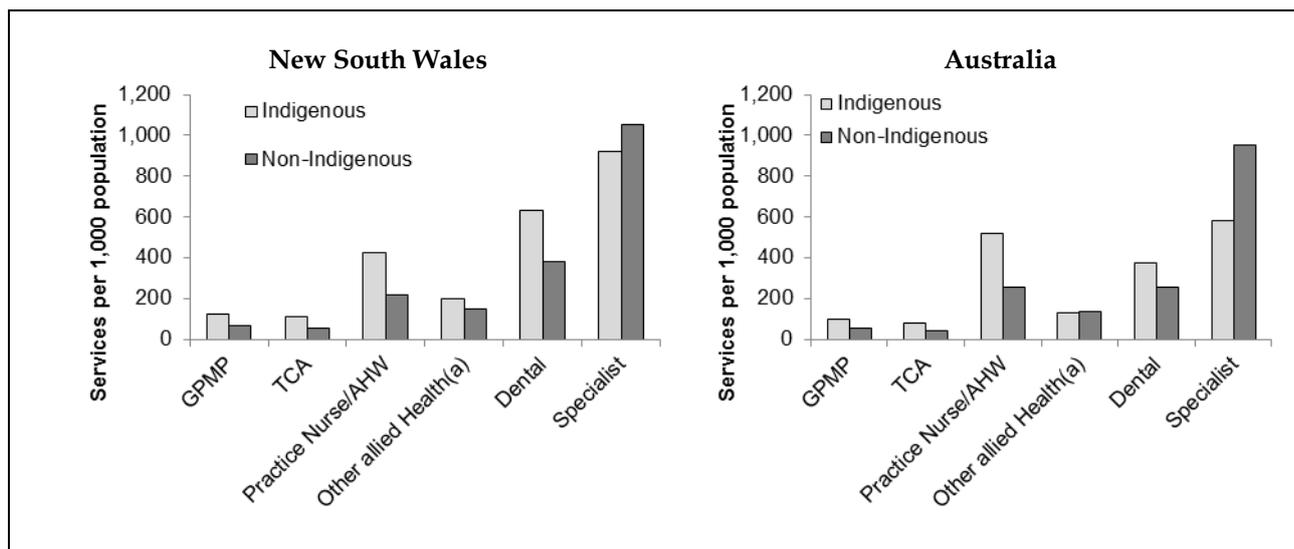
Chronic diseases are accountable for a large part of the disease burden in Australia, and many of these diseases are avoidable if the known risk factors are managed (AIHW 2012b). Better management of these conditions is an important factor in meeting the target of closing the life expectancy gap between Indigenous and non-Indigenous Australians within a generation. Effective management of chronic disease can delay the progression of disease, improve quality of life, increase life expectancy, and decrease the need for high-cost interventions.

Data are presented on the management of chronic disease by Indigenous primary health care services using Medicare data, data from the OSR collection, and the HfL data collection.

#### Key findings

- Medicare claims data show that in 2010–11, there were 12,422 general practitioner management plan claims (GPMPs) and 10,725 team care arrangements (TCAs) for Indigenous Australians in New South Wales. Rates were nearly twice as high for these services for Indigenous Australians compared with non-Indigenous Australians (Figure 3.05.1).

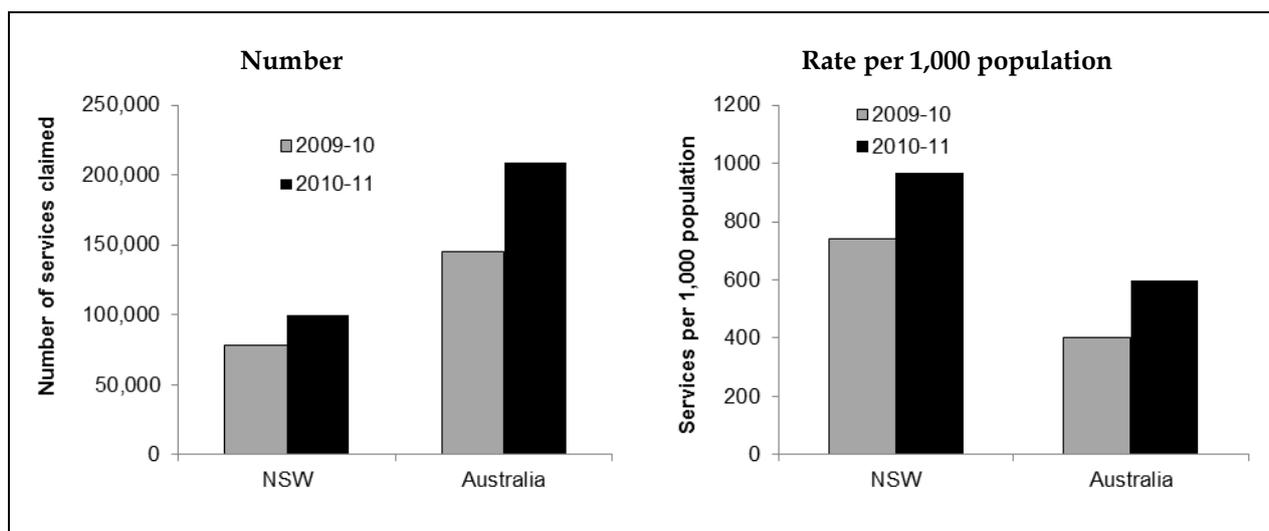
- Indigenous Australians in New South Wales also had higher rates of claims for nurse/Aboriginal Health Worker consultations, and dental consultations than non-Indigenous Australians.
- Rates of claims for MBS services for Indigenous Australians in New South Wales were higher than the rates reported nationally, except for practice nurse/AHW service in which rates were lower in New South Wales than nationally (425 compared with 522 per 1,000 population) (Figure 3.05.1).
- There has been an increase in the total number of allied health care services claimed through Medicare by Indigenous Australians in New South Wales between 2009–10 and 2010–11 (from 78,084 to 99,862 services). There has been a larger increase in the rate of allied health services claims for Indigenous people in New South Wales than nationally (Figure 3.05.2).
- Data on GPMPs and TCAs is not available by state/territory for 2009–10; however, national data suggests there has also been an increase in these services claimed by Indigenous Australians through Medicare since 1 July 2009.
- According to the OSR collection, in 2010–11 in New South Wales, 80% of Indigenous primary health-care services provided management of chronic illness, 82% reported keeping track of clients needing follow-up (for example, through monitoring sheets/follow-up files), 75% reported they maintained health registers (for example, chronic disease register) and 76% used clinical practice guidelines. These achievements are all higher in New South Wales than reported nationally, except for management of chronic illness (80% compared with 85%) and Patient Information and Recall Systems (63% compared with 72%) (Table 3.05.1).
- About 63% of Indigenous primary health-care services in New South Wales reported that they used Patient Information and Recall Systems, which automatically provide reminders for follow-up and routine health checks, compared with 72% nationally (Table 3.05.1).
- Between January and June 2010, of the Indigenous regular clients of Indigenous primary health care services in New South Wales and the Australian Capital Territory combined that were part of the Healthy for Life program that had Type 2 diabetes, 67% had a blood pressure test in the last 6 months and 50% had a HbA1C test in the last 6 months. These proportions were closely to those reported nationally (62% and 52% respectively) (Table 3.05.2).
- Over the same period, for New South Wales and the Australian Capital Territory combined, of the Indigenous regular clients with coronary heart disease, 68% had a blood pressure test in the last 6 months, which was similar to the proportion nationally (69%).



(a) Includes Aboriginal Health Workers (AHW).

Source: AIHW analyses of Medicare data.

**Figure 3.05.1: Age-standardised-rate of selected MBS services claimed per 1,000 population, by Indigenous status, New South Wales and Australia, 2010-11**



Source: AIHW analyses of Medicare data.

**Figure 3.05.2: Number and age-standardised rate per 1,000 population of MBS total allied health services claimed, Indigenous Australians, New South Wales and Australia, 2009-10 and 2010-11**

**Table 3.05.1: Percentage of respondent Indigenous primary health-care services that provide management of chronic disease, New South Wales and Australia, 2010–11**

	NSW	Australia
	Per cent	
Management of chronic illness	80.0	85.0
Keep track of clients needing follow-up	81.8	69.7
Service maintains health registers	74.5	74.4
Clinical practice guidelines utilised	76.4	75.2
Patient information and recall system	62.5	71.9

Source: AIHW OSR data collection.

**Table 3.05.2: Proportion and number of Indigenous regular clients<sup>(a)</sup> with Type 2 diabetes or coronary heart disease who had a blood pressure test in last 6 months, and an HbA1C test in the last 6 months (diabetes only), New South Wales & the Australian Capital Territory combined and Australia, 1 January–30 June 2010**

	NSW/ACT		Australia	
	Per cent	No.	Per cent	No.
Clients with Type 2 diabetes who had blood pressure test in last 6 months	66.6	995	62.2	8,253
Clients with coronary heart disease who had blood pressure test in last 6 months	68.4	430	69.4	2,748
Clients with Type 2 diabetes who had HbA1C test in last 6 months	49.6	741	51.8	6,874

(a) Indigenous regular clients aged 15 and over.

Source: AIHW HfL data collection.

### 3.06 Access to hospital procedures

Studies have shown that while Aboriginal and Torres Strait Islander people are more likely to be hospitalised than other people, they are less likely to receive a medical or surgical procedure while in hospital (ABS & AIHW 2008).

Data are presented on the key hospital procedure differentials between Aboriginal and Torres Strait Islander people and non-Indigenous Australians using data from the National Hospital Morbidity Database.

#### Key findings

- Between July 2008 and June 2010 in New South Wales, 60% of hospitalisations of Indigenous people had a procedure reported, compared with 82% of hospitalisations of non-Indigenous people. Nationally, these proportions were 60% and 81% respectively (Table 3.06.1).
- In New South Wales, Indigenous people hospitalised with a principal diagnosis of diseases of the eye were most likely to have a procedure reported (93%) followed by diseases of the blood and neoplasms (90%). Non-Indigenous people hospitalised with a principal diagnosis of diseases of the eye were most likely to have a procedure reported (98%), followed by neoplasms (96%) and diseases of the blood (93%).
- The proportion of hospitalisations with a procedure reported was lower for Indigenous patients than for non-Indigenous patients for all of the diagnosis chapters in New South Wales. The largest differences were for persons hospitalised for diseases of the nervous system and mental and behavioural disorders (Figure 3.06.1).

**Table 3.06.1: Number and proportion of hospitalisations with a procedure recorded<sup>(a)</sup>, by Indigenous status, New South Wales and Australia, July 2008 to June 2010**

	Indigenous		Non-Indigenous		Ratio <sup>(b)</sup>	Difference <sup>(c)</sup>
	No.	Per cent	No.	Per cent		
NSW	49,320	59.8	3,444,413	81.6	0.7*	-21.8*
<b>Australia</b>	<b>191,222</b>	<b>60.0</b>	<b>11,065,696</b>	<b>81.4</b>	<b>0.7*</b>	<b>-21.4*</b>

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

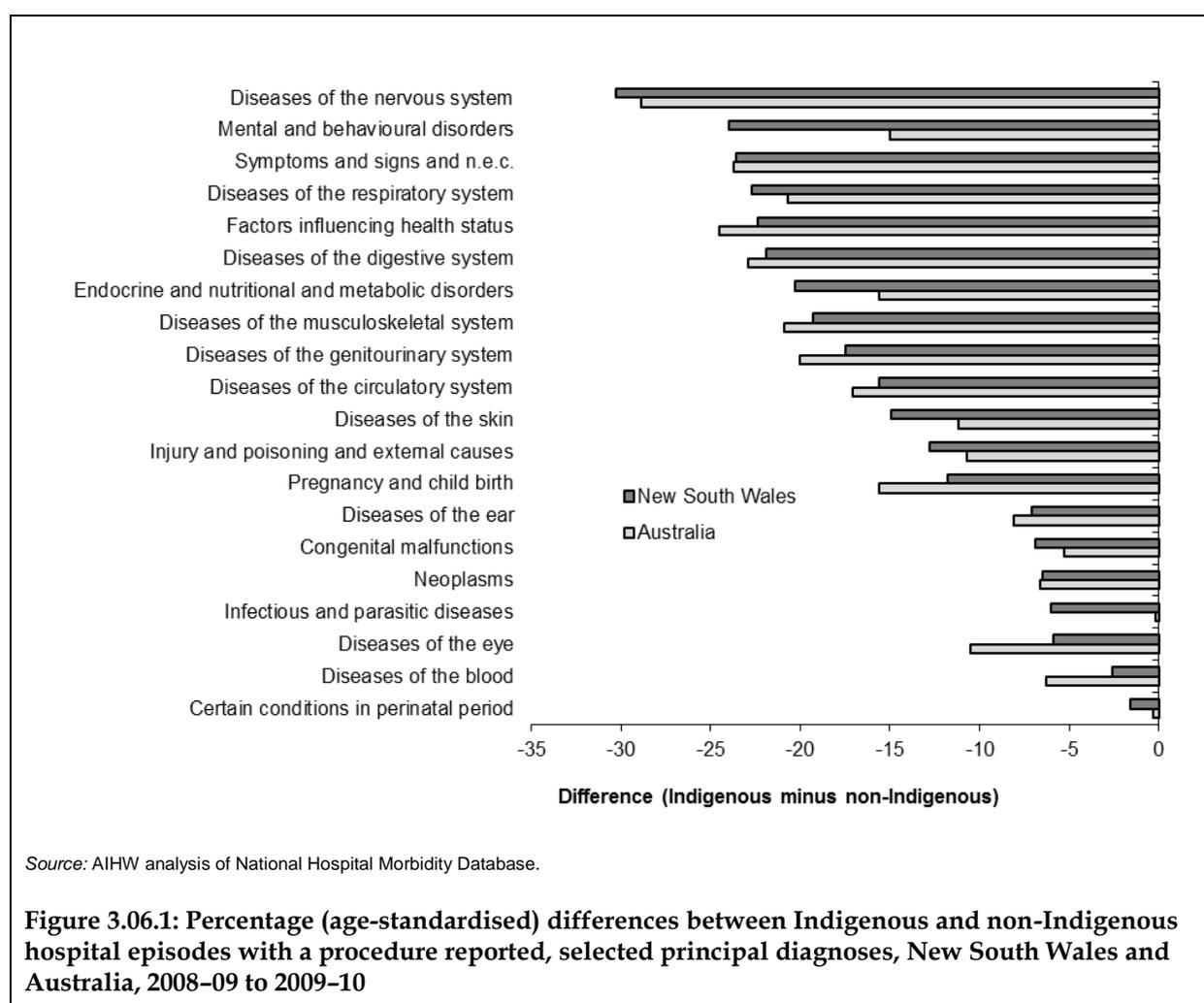
(a) Hospitalisations with a principal diagnosis of care involving dialysis (Z49) have been excluded.

(b) Ratio—Indigenous divided by non-Indigenous.

(c) Difference—Indigenous minus non-Indigenous.

Note: Proportions are age-standardised using the age-specific rates of non-Indigenous Australians.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

**Figure 3.06.1: Percentage (age-standardised) differences between Indigenous and non-Indigenous hospital episodes with a procedure reported, selected principal diagnoses, New South Wales and Australia, 2008-09 to 2009-10**

### 3.07 Selected potentially preventable hospital admissions

An indirect measure of access to primary care is the rate of potentially preventable hospitalisations. These are hospitalisations that could potentially have been prevented through the timely and appropriate provision of primary care or other non-hospital services. A high rate may indicate an inadequacy in non-hospital care; however, it may also reflect hospitals responding appropriately to a high prevalence of certain conditions which could have been prevented in other ways.

Data are presented on rates of potentially preventable hospital admissions for Aboriginal and Torres Strait Islander people compared with non-Indigenous Australians.

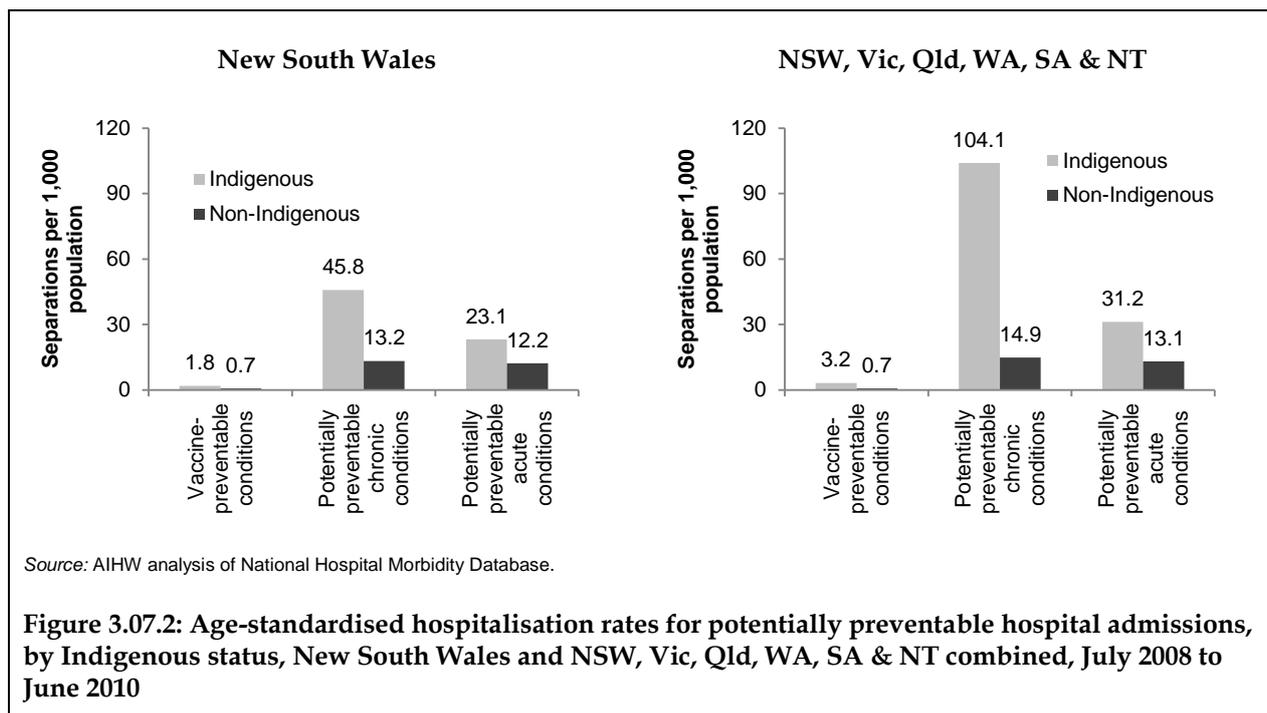
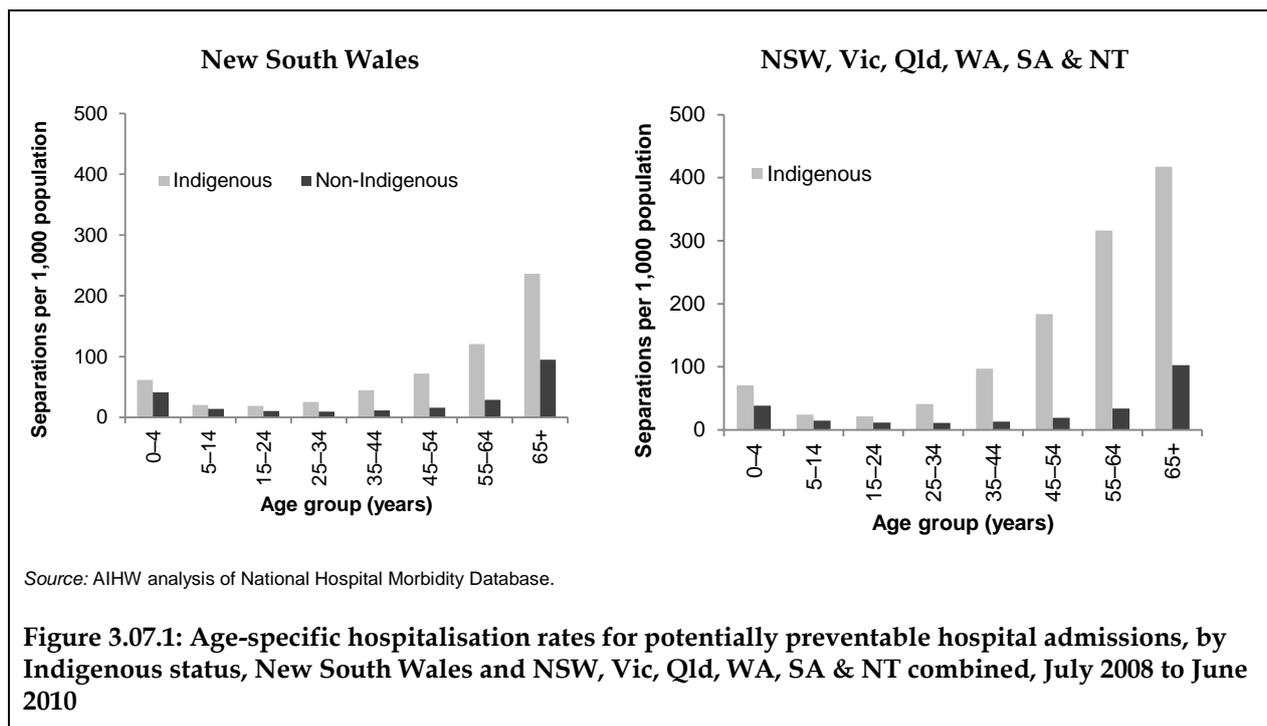
#### Potentially preventable conditions

Potentially preventable conditions can be divided into three categories:

- vaccine-preventable conditions, including influenza, pneumonia, tetanus, measles, mumps, rubella, diphtheria, pertussis and polio
- acute conditions, including dehydration, gastroenteritis, kidney infection, perforated ulcer, cellulitis, pelvic inflammatory disease, ear, nose and throat infections, and dental conditions
- chronic conditions, including diabetes, asthma, angina, hypertension, congestive heart failure and chronic obstructive pulmonary disease (COPD).

#### Key findings

- Between July 2008 and June 2010 in New South Wales, Indigenous people were hospitalised for potentially preventable conditions at a rate of 70.2 per 1,000 population, which was 2.7 times the rate of non-Indigenous people in New South Wales. This was much lower than the rate and rate ratio for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (137 per 1,000; rate ratio of 4.8) (Table 3.07.1, Appendix 2).
- Indigenous people had higher hospitalisation rates than non-Indigenous people for potentially preventable conditions across all age groups. Differences were particularly marked in the 45–54 year age group, where Indigenous people were hospitalised at 4.5 times of the rate of non-Indigenous people (Figure 3.07.1).
- In New South Wales, Indigenous people were hospitalised for chronic conditions at 3.5 times the rate of non-Indigenous Australians, for acute conditions at almost twice the rate, and for vaccine preventable conditions at nearly 2.6 times the rate of non-Indigenous Australians (Figure 3.07.2).
- Hospitalisation rates for Indigenous Australians for all of chronic conditions, acute conditions and vaccine preventable conditions were lower in New South Wales than in the six jurisdictions combined (Figure 3.07.2).
- Diabetes complications were the most common type of potentially preventable condition for which Indigenous people in New South Wales were hospitalised (22 per 1,000 population); followed by convulsions and epilepsy (12.3 per 1,000) and dental conditions (5.4 per 1,000). Indigenous people were hospitalised at 4.3 times the rate of non-Indigenous people for diabetes complications, at 4.9 times the rate for convulsions and epilepsy and 3.8 times the rate for dental conditions (Table 3.07.1, Appendix 2).



### 3.08 Cultural competency

Ensuring that the cultural diversity, rights, views, values and expectations of Aboriginal and Torres Strait Islander people are respected has been identified as an important principle in the delivery of culturally appropriate health services (AHMAC 2003). The National Aboriginal Health Strategy describes a broad Aboriginal view of health as 'not just the physical well-being of the individual but the social, emotional, and cultural well-being of the whole community'. A set of core measures of cultural competency in health and wellbeing service delivery is being developed by the National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data (NAGATSIHID) and the National Aboriginal and Torres Strait Islander Health Officials Network (NATSIHON).

Data are presented below on aspects of cultural competency that can be analysed from data available in the Health Performance Framework report, including data on cultural barriers to accessing services, discharge from hospital against medical advice and Indigenous people studying for and employed in health-related occupations.

#### Key findings

- In the NATSIHS 2004–05, 1 in 4 Indigenous people in New South Wales did not go to a dentist, and about 16% did not visit a doctor, when they needed to. About 32% did not visit a dentist and 12% did not visit a doctor because of the cost, and 22% did not visit a dentist and 16% did not visit a doctor because of waiting time too long or not available at time required (Table 3.08.1).
- Between July 2008 and June 2010, there were 2,712 hospitalisations where Indigenous people in New South Wales left hospital against medical advice or were discharged at their own risk. This represented about 1.9% of all hospitalisations for Indigenous people, which compares with 0.5% for non-Indigenous people (Table 3.09.2, Appendix 2). See section '3.09 Discharge against medical advice' for more information.
- According to the 2006 Census, there were 1,954 Indigenous people employed in health-related occupations in New South Wales. This represented 2.3% of the state's total Indigenous population aged 15 and over and 1.1% of the state's total health workforce (Figure 3.12.1, Appendix 2). See section '3.12 Aboriginal and Torres Strait Islander people in the health workforce' for more information.
- In 2010, it was estimated that there were 452 enrolments of Indigenous undergraduate students in health-related courses, making up 2.2% of the total students in these courses in New South Wales (Table 3.20.1, Appendix 2). See section '3.20 Aboriginal and Torres Strait Islander peoples training for health-related disciplines' for more information.

**Table 3.08.1: Whether needed to go to a doctor, hospital, dentist or other health professional, by reason didn't go, Aboriginal and Torres Strait Islander people, New South Wales and Australia, , 2004–05**

	Doctor		Hospital		Dentist		Other health professional	
	NSW	Aust.	NSW	Aust.	NSW	Aust.	NSW	Aust.
	Per cent							
Needed to go to service in the last 12 months but didn't	16	15	6	7	24	21	7	8
<b>Reasons didn't visit</b>								
Cost	12	12	4	4	32	29	32	28
Transport/distance	8	14	8	19	7	11	3	8
Waiting time too long or not available at time required	16	14	19	16	22	22	4	9
Not available in area	3	4	3	3	4	8	3	7
Too busy (including work, personal or family responsibilities)	28	24	13	16	12	14	22	25
Dislikes (service/professional/afraid /embarrassed)	10	10	21	16	18	21	12	12
Felt it would be inadequate	5	5	8	6	4	2	8	5
Decided not to seek care	24	26	23	25	15	13	19	17
Other	16	11	19	15	11	9	13	12

Source: ABS and AIHW analyses of NATSIHS 2004–05.

## Is the health system responsive to needs of Indigenous people?

This section includes measures on the responsiveness of the health system in the following areas: discharge against medical advice, access to mental health services, access to alcohol and other drug treatment services, Aboriginal and Torres Strait Islander people in the health workforce, and competent governance.

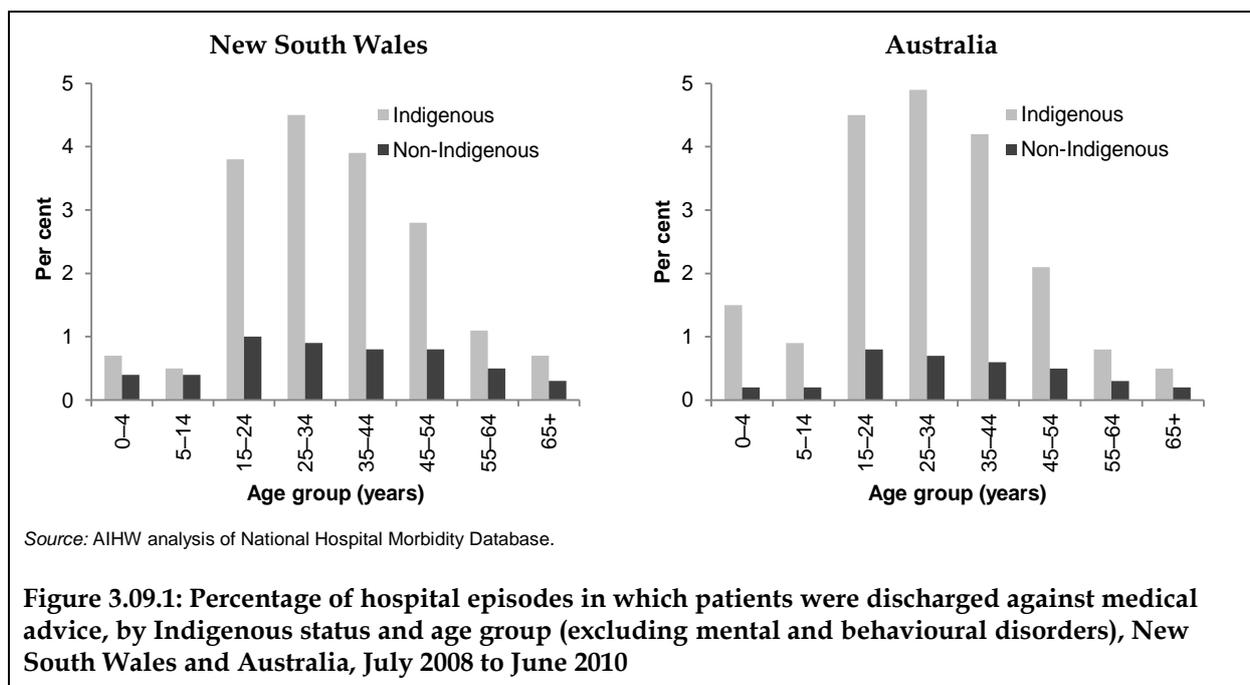
### 3.09 Discharge against medical advice

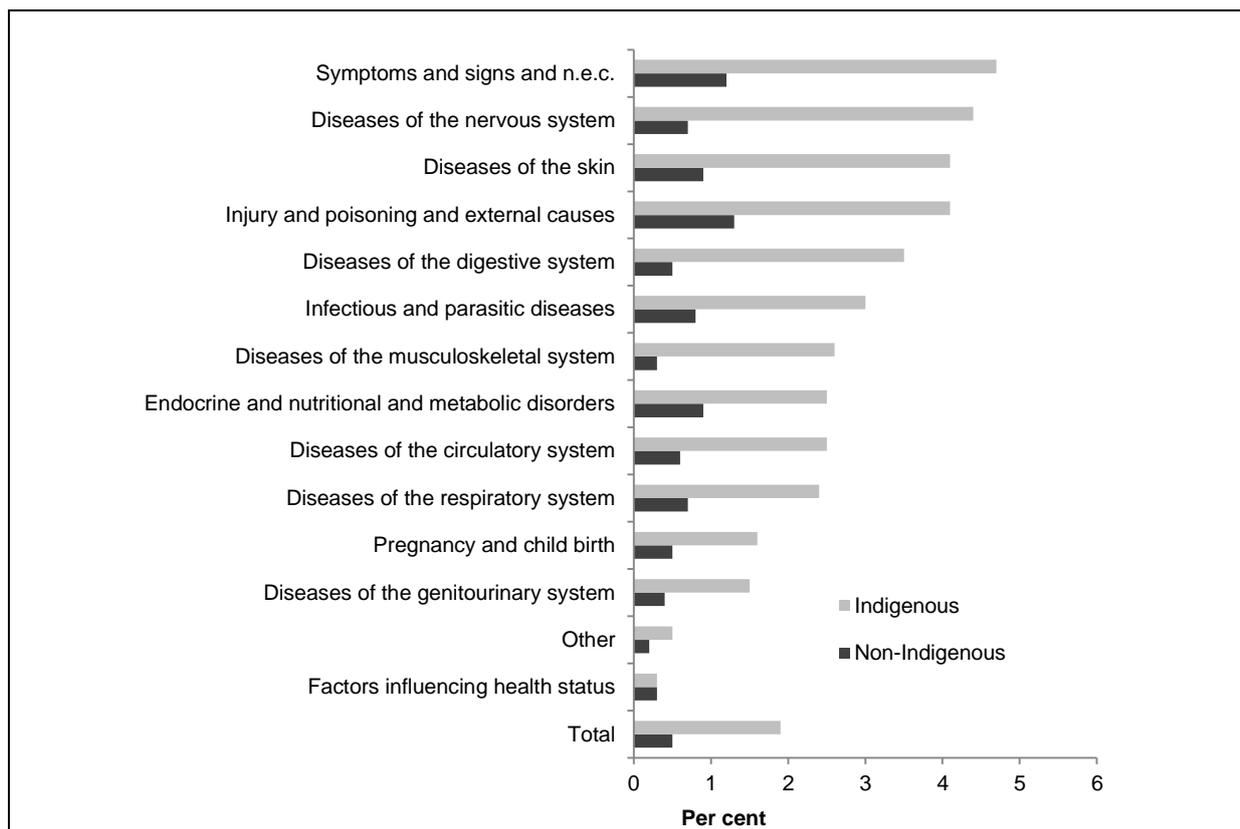
Discharge against medical advice provides indirect evidence of the extent to which hospital services are responsive to Indigenous Australian patients' needs, and the level of patient satisfaction with hospital services. Feedback on patient experiences, and community views of health-care services and providers are important for shaping health services and policy (AHMAC 2012).

Data are presented on rates at which Aboriginal and Torres Strait Islander people leave hospital against medical advice or are discharged at their own risk. Data for this measure come from the AIHW's National Hospital Morbidity Database. Hospitalisations for mental and behavioural disorders are excluded.

## Key findings

- Between July 2008 and June 2010, about 2.4% of hospitalisations of Indigenous people in New South Wales ended with discharge against medical advice. This proportion was the same as that for Indigenous people nationally (2.4%) (Table 3.09.1, Appendix 2).
- After adjusting for differences in age structure, Indigenous people in New South Wales were 3.7 times as likely as non-Indigenous people to discharge against medical advice. Nationally, the rate ratio was 5.1 (Table 3.09.1, Appendix 2).
- Indigenous people in New South Wales were much more likely to discharge from hospital against medical advice than non-Indigenous people across all age groups. Indigenous people aged 25–34 were most likely to discharge from hospital against medical advice (4.5%). Nationally, Indigenous people aged 25–34 were most likely to discharge from hospital against medical advice (4.9%) (Figure 3.09.1).
- The most common principal diagnoses for hospitalisations for which Indigenous people in New South Wales discharged against medical advice were symptoms and signs and n.e.c. (4.7%) followed by diseases of the nervous system (4.4%). Indigenous people discharged from hospital against medical advice at 3.9 times the rate of non-Indigenous people for symptoms and signs, and at 6.3 times the rate of non-Indigenous people for diseases of the nervous system (Figure 3.09.2).
- In New South Wales, the greatest disparity between hospitalisations involving discharge against medical advice for Indigenous and non-Indigenous people were for hospitalisations with principal diagnoses of the musculoskeletal system diseases (ratio of 8.7).
- Rates for Indigenous people who discharged from hospital against medical advice were lower in New South Wales than in Australia for all principal diagnosis categories, except for factors influencing health status and the nervous system diseases (Figure 3.09.2, Appendix 2).





Source: AIHW analysis of National Hospital Morbidity Database.

**Figure 3.09.2: Percentage (age-standardised) of hospital episodes in which patients were discharged against medical advice, by Indigenous status and principal diagnosis (excluding mental and behavioural disorders), New South Wales, July 2008 to June 2010**

### 3.10 Access to mental health services

Most mental health services address mental health conditions once they have emerged rather than the underlying causes of that distress. Nevertheless, early access to effective services can help reduce the consequences of mental health problems and help restore a person’s sense of emotional and social wellbeing. Therefore, the accessibility of mental health services for Aboriginal and Torres Strait Islander people is important (AHMAC 2012).

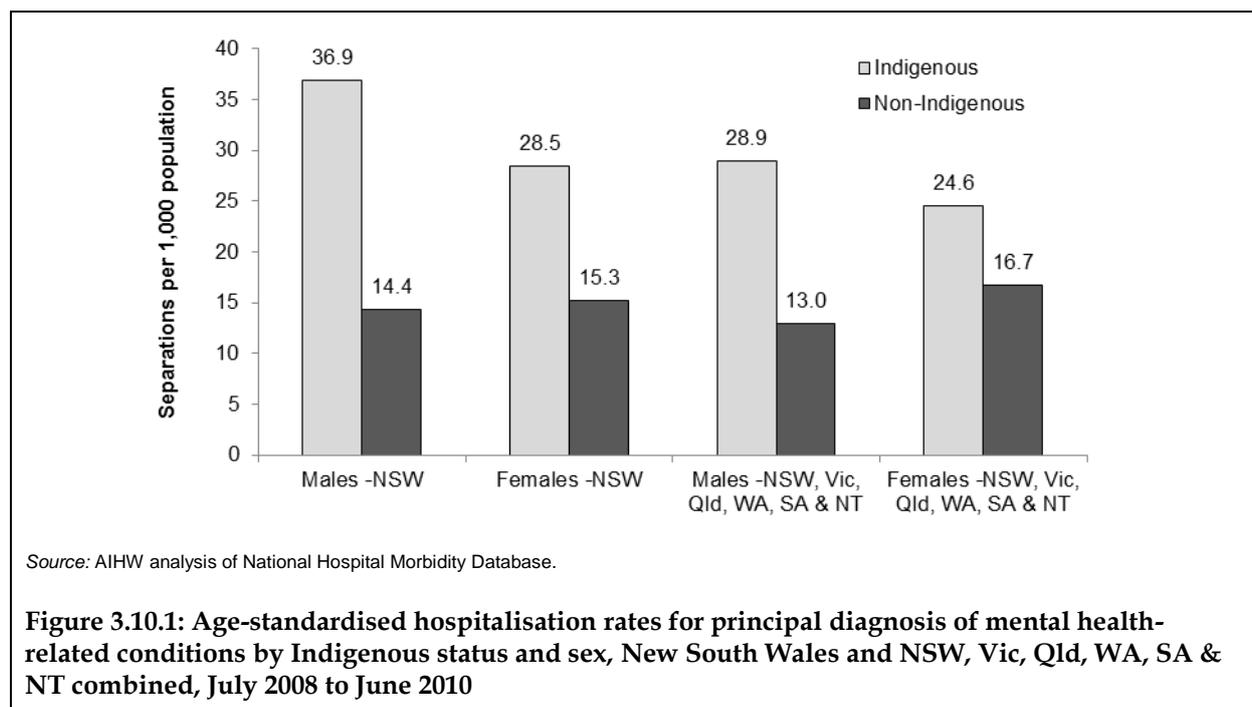
#### Mental health services

Mental health services include non-specialist services such as community-based health services, Aboriginal and Torres Strait Islander primary health care services and general practitioner (GP) visits; and specialist services, such as private psychiatrists, state mental health teams, and designated psychiatric services both in general hospitals and in specialist facilities.

Data are presented on access to mental health services as measured by hospitalisations for mental health-related conditions using data from the National Hospital Morbidity Database, and rates of contact with community mental health services using data from the National Community Mental Health Care Database.

## Key findings

- Between July 2008 and June 2010 in New South Wales, there were 9,057 hospitalisations of Indigenous people with a principal diagnosis of mental health-related conditions (Figure 3.10.1, Appendix 2).
- Indigenous males were hospitalised at 2.6 times the rate of non-Indigenous males, and Indigenous females were hospitalised at 1.9 times the rate of non-Indigenous females in New South Wales.
- Indigenous males and females in New South Wales were hospitalised for mental health-related conditions at higher rates (37 and 29 per 1,000) than Indigenous males and females in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (29 and 25 per 1,000) (Figure 3.10.1).
- Between 2004–05 and 2009–10 in New South Wales, there was a small significant increase in hospitalisation rates for mental health-related conditions among Indigenous people (average annual increase of 0.4 hospitalisations per 1,000 population) and non-Indigenous people (average annual increase of 0.3 hospitalisations per 1,000 population) (Table 3.10.2, Appendix 2).
- In 2009–10 in New South Wales, there were 209,543 client contacts with community mental health-care services for people who identified as Aboriginal or Torres Strait Islander (9.3% of total service contacts in New South Wales).
- Indigenous people in New South Wales were 6.3 times as likely as non-Indigenous people to be clients of a community mental health service (1,459 compared with 232 per 1,000 population) (Table 3.10.1).
- The rate of contact with community mental health services was higher in New South Wales than nationally for Indigenous people (1,459 compared with 842 per 1,000 population) and lower for non-Indigenous people (232 compared with 262 per 1,000 population).



**Table 3.10.1: Community mental health care service contacts per 1,000 population, by Indigenous status, New South Wales and Australia, 2009–10**

	New South Wales	Australia
	<b>Number</b>	
Indigenous	209,543	430,894
Non-Indigenous	1,604,984	5,583,400
Not stated	427,507	579,770
<b>Total</b>	<b>2,242,034</b>	<b>6,594,064</b>
	<b>Number per 1,000 population<sup>(a)</sup></b>	
Indigenous	1,459.1	841.8
Non-Indigenous	231.7	262.2
<b>Total</b>	<b>317.6</b>	<b>302.5</b>
	<b>Rate ratio and Rate difference</b>	
Ratio <sup>(b)</sup>	6.3	3.2
Rate difference <sup>(c)</sup>	1,227.4	579.8

(a) Rates were directly age-standardised using the Australian 2001 Standard population.

(b) Rate ratio Indigenous: non-Indigenous.

(c) Rate ratio difference is equal to Indigenous rate minus non-Indigenous.

*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 National Community Mental Health Care Database.

### 3.11 Access to alcohol and drug services

Alcohol and other drug services cover a variety of treatment interventions for alcohol and other drug use. Treatment services which reduce harm from alcohol and other drugs can significantly reduce the occurrence of injuries such as from motor vehicles accidents and assaults, reduce the level of diseases such as liver disease, and reduce the number of social disruptions (AIHW 2006). Reducing drug and alcohol related harm can improve health, social and economic outcomes at both individual and community levels (Steering Committee for the Review of Government Service Provision 2011).

Data are presented on treatment episodes provided to clients accessing alcohol and other drug treatment services using data from the Alcohol and Other Drug Treatment NMDS, and on clients of pharmacotherapy services using data from the National Opioid Pharmacotherapy Statistics Annual Data (NOPSAD) collection.

#### Key findings

- In 2009–10, there were 3,929 treatment episodes of clients of alcohol and other drug treatment services who identified as Aboriginal or Torres Strait Islander in New South Wales. This represented 11% of the total treatments episodes in New South Wales, slightly lower than that nationally (13%) (Table 3.11.2, Appendix 2).
- On a snapshot day in 2010, there were 2,092 Indigenous clients receiving pharmacotherapy for opioid dependence in New South Wales. Aboriginal and Torres Strait Islander clients represented 11% of all clients in New South Wales, compared with 9% of all clients in the four jurisdictions combined for which data were available (New

South Wales, Queensland, South Australia and the Australian Capital Territory) (Table 3.11.1).

- The number of Indigenous clients receiving pharmacotherapy for opioid dependence in New South Wales, on a snapshot day each year, has steadily increased between 2006 and 2010 (from 1,469 in 2006 to 2,092 in 2010) (Table 3.11.1).

**Table 3.11.2: Number of pharmacotherapy clients on a 'snapshot/specified' day by Indigenous status, New South Wales and NSW, Qld, SA & ACT combined, 2006–2010**

	2006	2007	2008	2009	2010
<b>New South Wales</b>					
Indigenous	1,469	1,521	1,653	1,843	2,092
Non-Indigenous	11,898	12,216	13,049	13,766	14,859
Not stated	2,988	2,611	2,466	2,259	2,163
<b>NSW, QLD, SA &amp; ACT</b>					
Indigenous	1,662	1,768	2,086	2,252	2,591
Non-Indigenous	16,354	17,203	20,273	21,406	23,316
Not stated	3,766	5,285	3,546	3,269	2,916

Source: National Opioid Pharmacotherapy Statistics Annual Data (NOPSAD) statistical report 2006 to 2010; Tables 2.4, 5.3, 8 and 10.

### 3.12 Aboriginal and Torres Strait Islander people in the health workforce

Aboriginal and Torres Strait Islander people are significantly under-represented in the health workforce, which may potentially contribute to reduced access to health services. An Indigenous health workforce is critical to ensuring that the health system has the capacity to address the needs of Aboriginal and Torres Strait Islander people. Indigenous health professionals may be able to better ensure culturally appropriate care in the services they deliver and improve the patient care of Indigenous Australians (Anderson et al. 2009).

Data are presented on the number and proportion of Aboriginal and Torres Strait Islander Australians in the health workforce using data from the 2006 Census.

#### Key findings

- In 2006, there were 1,954 people aged 15 and over in New South Wales who identified as Aboriginal or Torres Strait Islander who were employed in the health workforce (2.3% of Indigenous people aged 15 and over) (Figure 3.12.1). They accounted for 1.1% of the total health workforce, which was lower than the proportion of the New South Wales population aged 15 and over that is Indigenous (1.6%) (Figure 3.12.1).
- Nationally, 2.0% of Aboriginal and Torres Strait Islander people aged 15 and over were employed in the health workforce. This accounted for 1.0% of the total health workforce, which is lower than the proportion of the total Australian population aged 15 and over that is Indigenous (1.8%).



**Figure 3.12.1: Aboriginal and Torres Strait Islander people aged 15 and over in the health workforce as a proportion of the total health workforce, New South Wales and Australia, 2006**

### 3.13 Competent governance

Governance involves having the processes and institutional capacity to be able to exercise control through sound decision-making. Competent governance requires the means to establish good governance arrangements, with the ultimate aim of achieving the social, cultural, and economic developments sought by citizens (Dodson & Smith 2003).

Competent governance in the context of Indigenous health includes the involvement of Aboriginal Community Controlled Health Services which can offer comprehensive primary health care appropriate to Aboriginal and Torres Strait Islander people (AHMAC 2012; Larkins et al. 2006). It must also address the cultural responsiveness of mainstream service delivery for Indigenous clients and effective participation of Indigenous people on management committees, decision-making boards, and other relevant bodies (AHMAC 2012).

Data are presented on a number of measures of competent governance in mainstream and Indigenous-specific health services, including Aboriginal and Torres Strait Islander services participating in mainstream processes using data from the OSR data collection; and barriers to accessing health services using data from the 2008 NATSISS.

#### Key findings

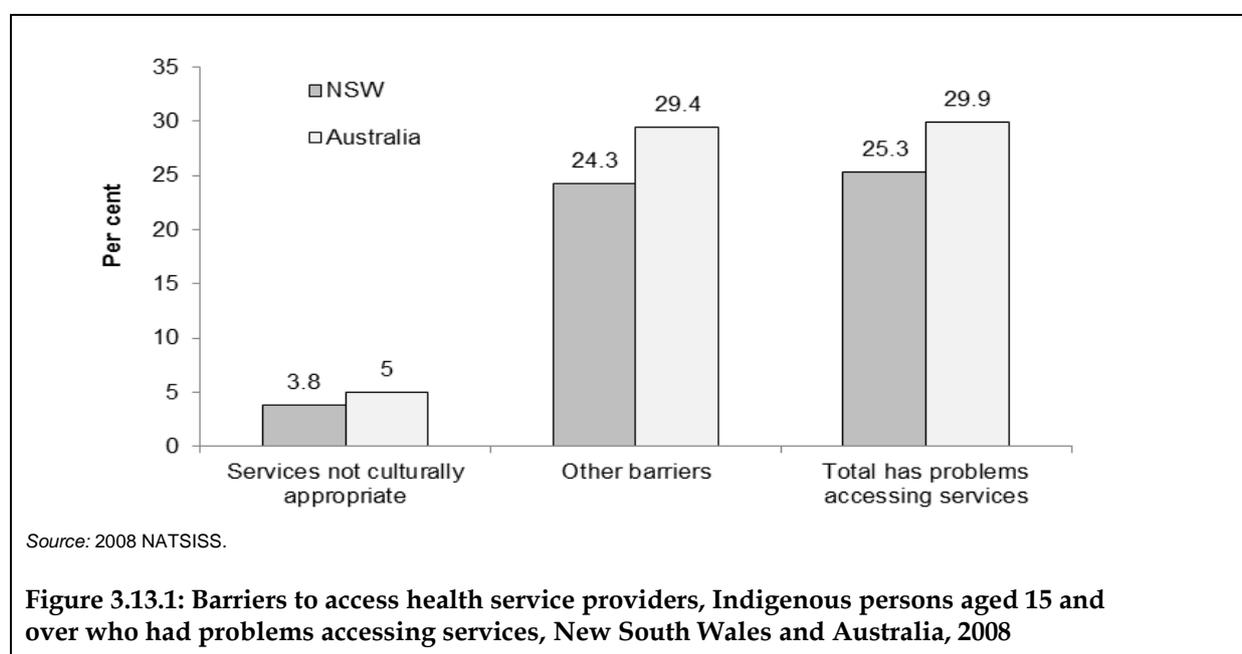
- In 2009–10 in New South Wales, 46% of Indigenous primary health-care services that reported in the OSR data collection had representatives on external boards (for example, hospitals), 56% participated in regional planning forums and 92% were involved in committees on health (for example, steering groups). These proportions were higher than those reported nationally other than for regional planning forums (Table 3.13.1).
- According to the 2008 NATSISS, one-quarter (25%) of Indigenous people aged 15 and over in New South Wales reported problems accessing services. This was lower than the proportion nationally (30%). Approximately 4% of Indigenous people aged 15 and over in New South Wales reported problems accessing services due to the service not being culturally appropriate (Figure 3.13.1).

- About one-quarter (25%) of Indigenous people aged 15 and over in New South Wales reported that they felt discriminated against in the last 12 months. This was slightly lower than the proportion nationally (27%) (Table 3.13.2, Appendix 2).

**Table 3.13.1: Number and proportion of Aboriginal and Torres Strait Islander primary health-care services participating in mainstream processes, New South Wales and Australia, 2009–10**

	New South Wales		Australia	
	Number	Per cent	Number	Per cent
Representation on external boards (e.g. hospitals)	23	46	86	38.6
Participation in regional planning forums (e.g. under the framework agreements)	28	56	129	57.8
Involvement in committees on health (e.g. steering groups)	46	92	181	81.2
<b>Total</b>	<b>50</b>	<b>100</b>	<b>223</b>	<b>100.0</b>

Source: AIHW OSR data collection.



Source: 2008 NATSISS.

**Figure 3.13.1: Barriers to access health service providers, Indigenous persons aged 15 and over who had problems accessing services, New South Wales and Australia, 2008**

## Is health care accessible?

This section includes measures on accessibility of the health system, such as access to services compared with need, and access to after-hours primary health care.

### 3.14 Access to services compared with need

Improving access to health-care services is an important component of ameliorating the demonstrated health inequalities between Indigenous and non-Indigenous Australians (Griew 2008; NACCHO 2009). Monitoring the extent to which health service availability and accessibility meets need is a critical component of policy development. Access to health care when needed is essential to closing the gap in life expectancy.

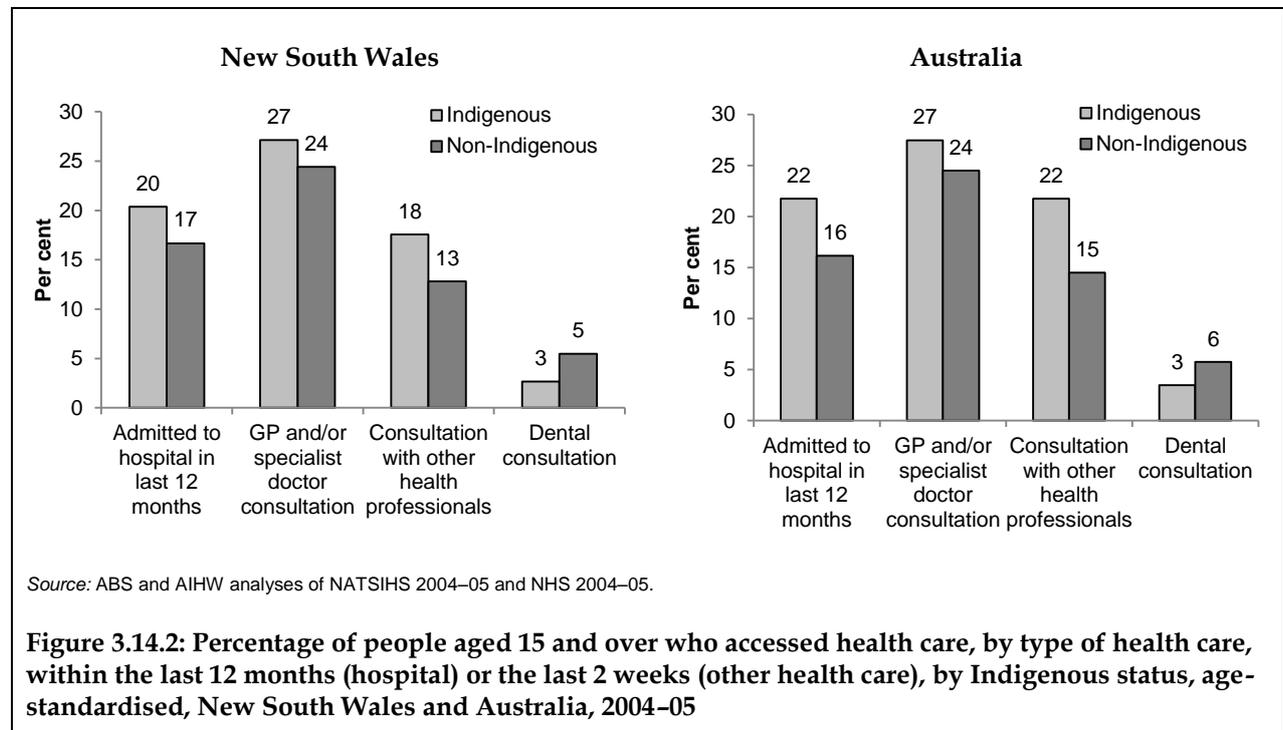
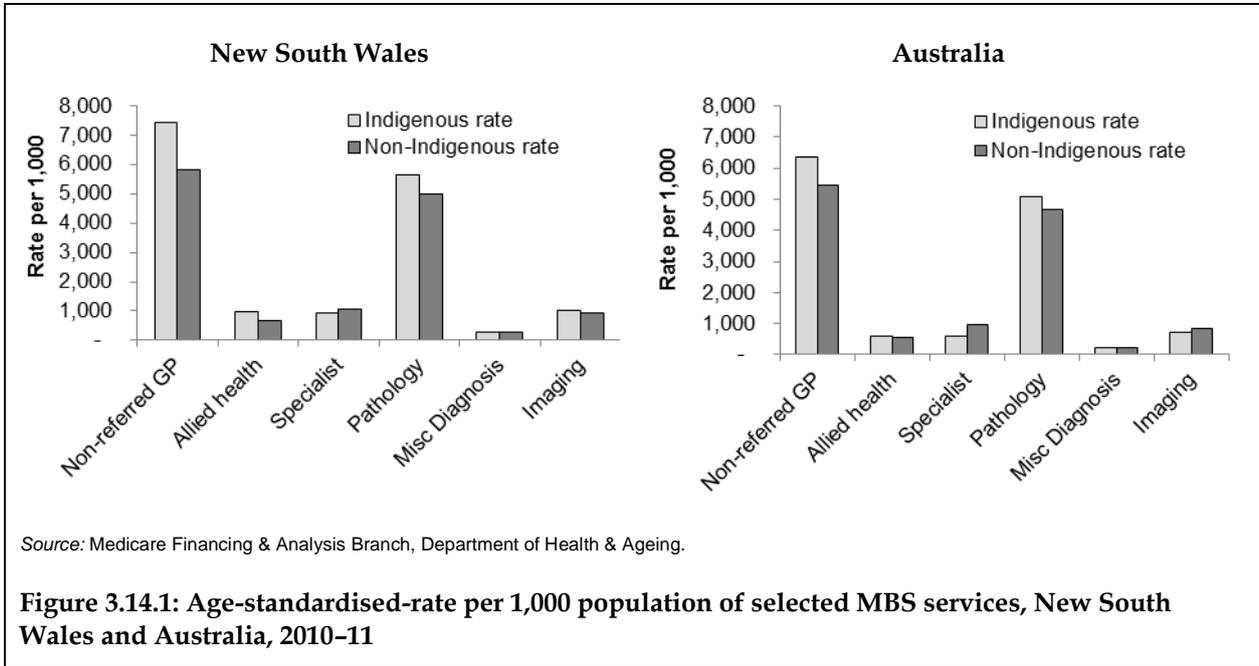
Data are presented on MBS services claimed and provided, self-reported access to health services and barriers to access using data from the 2008 NATSISS and 2004–05 NATSIHS,

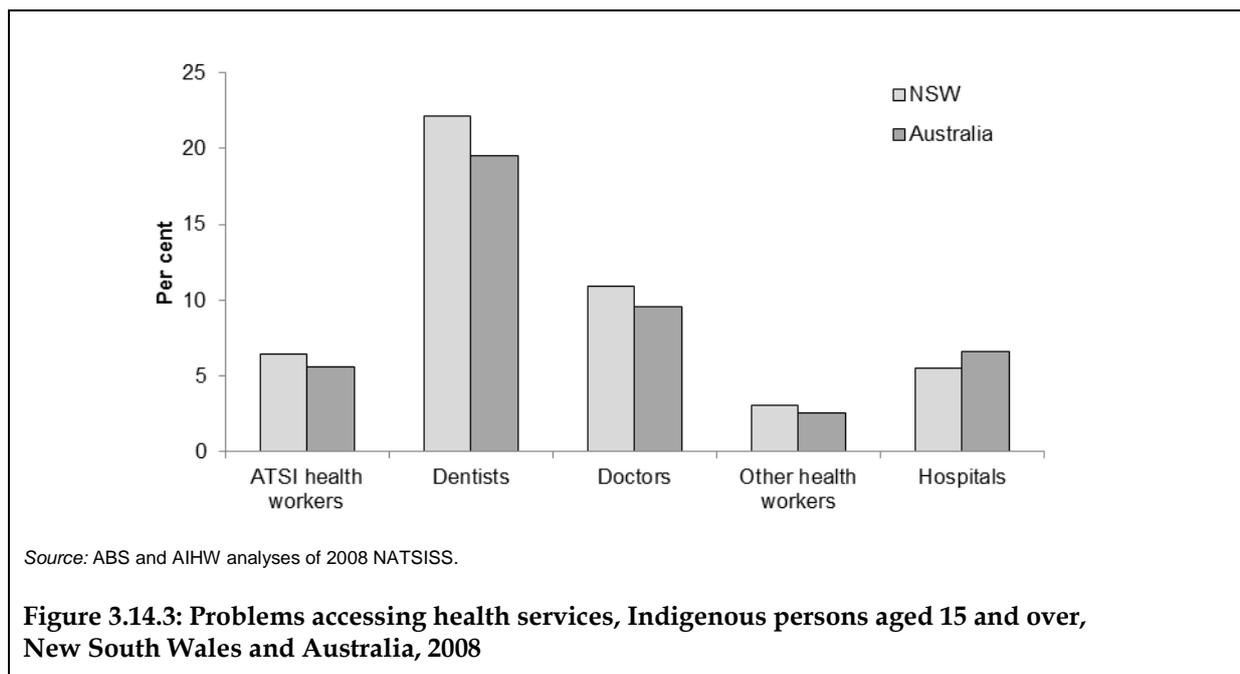
hospitalisation rates and waiting times; and episodes of health care provided by Indigenous primary health-care services using data from the OSR data collection.

## Key findings

- In 2010–11 in New South Wales, Indigenous Australians had more than 2 million Medicare claims, of which 970,624 were for non-referred GP consultations. Indigenous Australians were more likely than non-Indigenous Australians to have received services for non-referred GP consultations and allied health. Service claims for private specialists were lower for Indigenous Australians (Figure 3.14.1).
- According to the 2004–05 NATSIHS, after adjusting for differences in age structure, a higher proportion (20%) of Indigenous people aged 15 and over in New South Wales reported that they were admitted to hospital in the previous 12 months than non-Indigenous people aged 15 and over (17%) (Figure 3.14.2).
- In the 2 weeks before the NATSIHS, a higher proportion of Indigenous people than non-Indigenous people in New South Wales reported that they consulted other health professionals (18% compared with 13%) and a GP and/or specialist doctor (27% compared with 24% respectively) while a lower proportion of Indigenous people than non-Indigenous people reported that they consulted a dentist (2.7% compared with 5.5%). The above trends were also observed nationally.
- In 2008 in New South Wales, about 22% of Indigenous people aged 15 and over reported problems accessing a dentist, and 11% reported problems accessing a doctor, 6% problems accessing Aboriginal and Torres Strait Islander Health Workers, 6% problems accessing hospitals and 3% problems accessing other health workers. The proportion of Indigenous people in New South Wales reporting problems accessing these health services was higher than the proportions nationally, with the exception of problems accessing hospitals (Figure 3.14.3).
- Between July 2008 and June 2010, Indigenous people in New South Wales were hospitalised at a rate of 352 per 1,000 population (excluding dialysis), which was 1.2 times the rate for non-Indigenous Australians. These were lower than hospitalisation rates for Indigenous and non-Indigenous in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (Table 3.14.1, Appendix 2).
- In 2010–11, there were 427,736 episodes of health care provided to Aboriginal and Torres Strait Islander people by Indigenous primary health-care services reporting under the OSR in New South Wales. In 2010–11 the total number of episodes of care provided by these services in New South Wales was 521,753, which was lower than the number of episodes of care provided in 2009–10 but higher than the number of episodes of care provided in 2008–09 (Table 3.14.2, Appendix 2).
- In 2010–11, waiting times for elective surgery in public hospitals in New South Wales at the 50th percentile (representing number of days within which 50% of people were admitted) was 50 days for Indigenous Australians, compared with 47 days for non-Indigenous Australians. Nationally, waiting times at the 50th percentile were 39 days for Indigenous Australians compared with 36 days for non-Indigenous Australians (Table 3.14.3, Appendix 2).
- In New South Wales, about 71% of Indigenous Australians were treated within national benchmarks for emergency department waiting times in 2010–11 compared with 74% of other Australians. Nationally these proportions were 66% and 69% respectively. In terms

of performance across triage categories, 100% of Indigenous Australians in New South Wales were treated within national benchmarks for triage category 1 (need for resuscitation), compared with 66% and 68% for triage categories 3 and 4 (urgent and semi-urgent), respectively (Table 3.14.4, Appendix 2).





### 3.16 Access to after-hours primary care

An important component of comprehensive primary care services is the capacity for patients to access services after-hours. In the absence of after-hours primary health care, patients with more urgent needs may delay seeking care.

#### After-hours care

After-hours medical care is usually medical care provided at any time outside 8am to 6pm on weekdays (that are not public holidays) or 8am to 12pm on a Saturday (AHMAC 2012)

Data are presented on presentations to emergency departments after-hours using data from the National Non-admitted Patient Emergency Department Care Database. There are many reasons why people present at after-hours emergency departments, including difficulties accessing primary care during school and work hours.

#### Key findings

- From July 2008 to June 2010 in New South Wales, there were 2,287,383 episodes of care provided after-hours in emergency departments, 83,818 (3.7%) of which were for patients identified as Aboriginal or Torres Strait Islander. More than half of all presentations to emergency departments were for after-hours care (59% for Indigenous and 56% for non-Indigenous patients) (Table 3.16.1).
- There were 1,378,594 episodes of after-hours care provided by emergency departments for triage categories 4 (semi-urgent) and 5 (non-urgent) in New South Wales, 55,913 (4%) of which were for patients identified as Aboriginal and Torres Strait Islander. For Indigenous people, 58% of episodes to emergency departments for triage categories semi-urgent and non-urgent were after hours, which was slightly higher than the proportion for non-Indigenous people (55%).

**Table 3.16.1: Presentations to emergency departments after-hours by Indigenous status of the patient, New South Wales and Australia, July 2008 to June 2010**

	Semi-urgent and non-urgent		Total presentations	
	NSW	Australia	NSW	Australia
<b>After-hours presentations</b>				
Indigenous	55,913	185,864	83,818	307,001
Non-Indigenous	1,163,770	3,324,238	1,935,649	5,899,612
Not stated	158,911	189,794	267,916	337,933
<b>Total</b>	<b>1,378,594</b>	<b>3,699,896</b>	<b>2,287,383</b>	<b>6,544,546</b>
<b>Total emergency department presentations</b>				
Indigenous	96,470	335,796	142,568	533,170
Non-Indigenous	2,106,479	6,150,031	3,435,664	10,573,478
Not stated	276,088	332,699	459,040	581,074
<b>Total</b>	<b>2,479,037</b>	<b>6,818,526</b>	<b>4,037,272</b>	<b>11,687,722</b>
<b>Proportion of after-hours presentations out of all presentations to emergency department</b>				
Indigenous	58.0	55.4	58.8	57.6
Non-Indigenous	55.2	54.1	56.3	55.8
Not stated	57.6	57.0	58.4	58.2
<b>Total</b>	<b>55.6</b>	<b>54.3</b>	<b>56.7</b>	<b>56.0</b>

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database.

## Is there continuity in health care?

This section includes measures on continuity of health care, such as having a regular GP or health service, and care planning for chronic disease.

### 3.17 Regular GP or health service

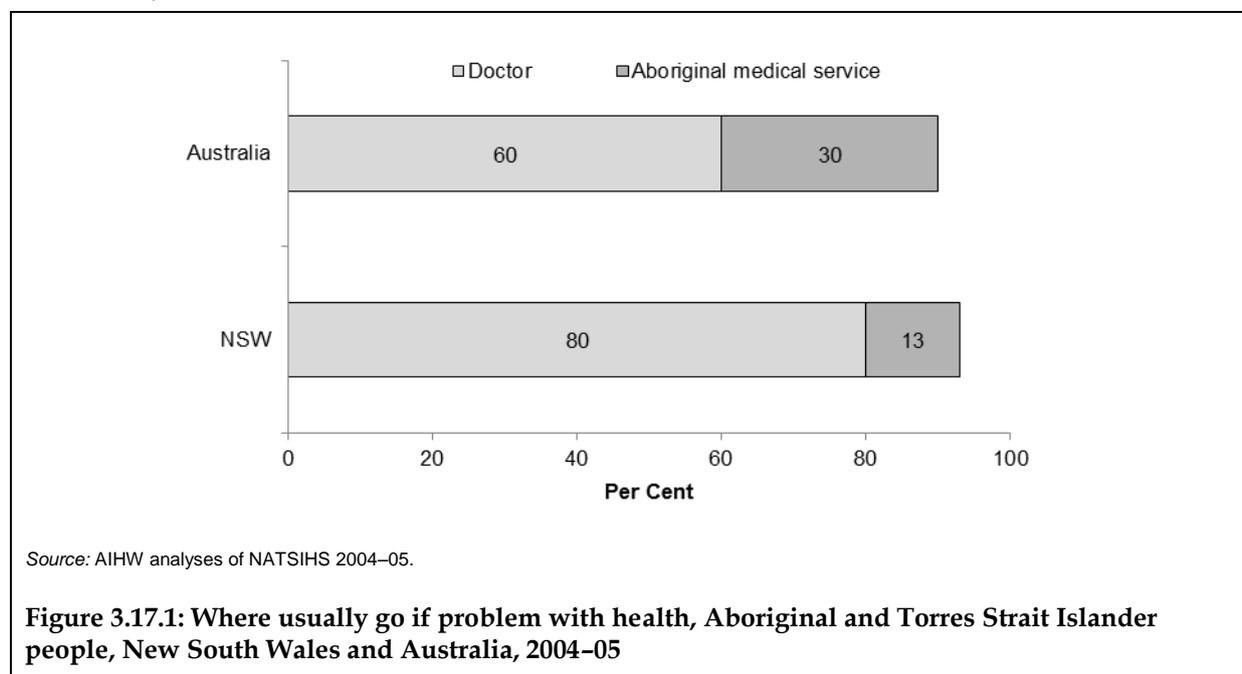
Having a usual primary care provider is associated with good communication between the patient and provider, greater trust in the provider, improved preventive care and better health outcomes (Mainous et al. 2001; Starfield 1998; Starfield & Shi 2004). Effective communication between the patient and provider is particularly relevant to the health of Indigenous Australians where communication issues can lead to health-care problems such as misdiagnosis or incorrect treatment, and lack of trust in the provider (AHMAC 2012).

Data are presented on the proportion of Aboriginal and Torres Strait Islander people who have a regular GP or Aboriginal medical service, using data from the 2004–05 NATSIHS.

#### Key findings

- According to the 2004–05 NATSIHS, 88% of Indigenous people in New South Wales reported they usually went to the same doctor or medical service. This was lower than the proportion nationally (91%).
- Indigenous people aged 55 and over were most likely to report that they usually went to the same doctor or health service (96%), followed by those aged 0–14 (91%) (Table 3.17.1, Appendix 2).

- In 2004–05, 80% of Indigenous people in New South Wales reported that they usually went to a doctor if they had a problem with their health, and 13% went to an Aboriginal medical service. Nationally, 60% of Indigenous people went to a doctor if they had a problem with their health, and 30% went to an Aboriginal medical service (Figure 3.17.1).



### 3.18 Care planning for clients with chronic diseases

Effective management of chronic disease can delay the progression of disease, decrease the need for high-cost interventions, improve quality of life, and increase life expectancy (AHMAC 2012). The development of care plans is one way in which the client and primary health-care provider can ensure appropriate care is arranged and coordinated. A care plan is a written action plan containing strategies for delivering care that address an individual’s specific needs, particularly patients with chronic conditions and/or complex care needs. It can be used to encourage collaboration with other service providers to achieve management goals for the patient, as well as to help encourage the patient to take informed responsibility for their care.

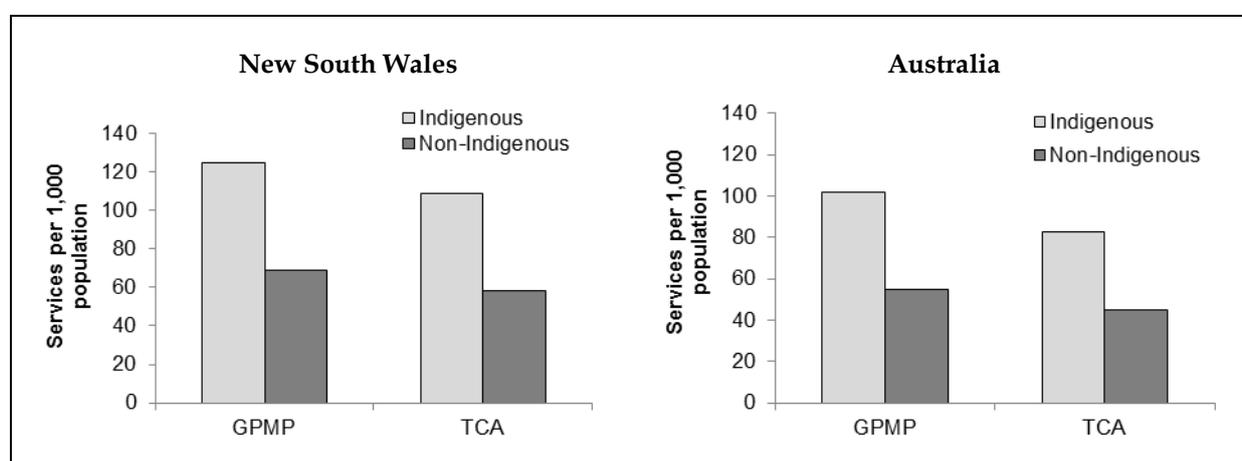
Data are presented on chronic disease management plans using MBS claims data and data from services funded under the Healthy for Life program. Data on written asthma plans are also presented using self-reported data from the 2004–05 NATSIHS.

#### Key findings

- Medicare claims data show that there was 12,422 general practitioner management plan (GPMPs) services and 10,725 team care arrangements (TCAs) claimed by Indigenous Australians in New South Wales in 2010–11. Rates of GPMPs and TCAs claimed were higher for Indigenous people in New South Wales than for Indigenous people nationally (Figure 3.18.1).
- After adjusting for differences in age structures of the two populations, Indigenous Australians in New South Wales received more claimed GPMPs than non-Indigenous

Australians (125 per 1,000 compared with 69 per 1,000) and also had a higher rate of TCAs claimed (109 per 1,000 compared with 58 per 1,000) (Figure 3.18.1).

- In the 6 months from January to June 2010 in New South Wales and the Australian Capital Territory combined, of the Indigenous regular clients of HfL services with Type 2 diabetes, 30% had a current GPMP and 26% had a TCA. This was higher than the proportions nationally (26% and 23% respectively) (Table 3.18.1).
- Over the same period, of the Indigenous regular clients of HfL services with coronary heart disease, 25% had a current GPMP and 20% had a TCA. This was lower than the proportions nationally (28 and 23% respectively).
- According to the 2004–05 NATSIHS, of the 18% of Indigenous people in non-remote areas of New South Wales who reported having asthma as a long-term health condition, 31% had a written asthma plan, compared with 24% of non-Indigenous people in non-remote New South Wales with asthma. These proportions were higher than those reported nationally (25% for Indigenous people and 22% for non-Indigenous people) (Table 3.18.2).



Source: Medicare Financing & Analysis Branch, Department of Health & Ageing.

**Figure 3.18.1: Rate of GPMPs and TCAs claimed through Medicare, by Indigenous status, New South Wales and Australia, 2010–11**

**Table 3.18.1: Proportion and number of Indigenous regular clients<sup>(a)</sup> with Type 2 diabetes or coronary heart disease with current chronic disease management plans (GPMP or TCA), New South Wales and Australia, 1 January–30 June 2010**

	New South Wales		Australia	
	No.	%	No.	%
Clients with Type 2 diabetes who had a current GPMP	410.0	29.6	3,112	26.1
Clients with Coronary heart disease who had a current GPMP	148.0	25.0	1,030	28.1
Clients with Type 2 diabetes who had a current TCA	318.0	26.0	2,566	22.8
Clients with Coronary heart disease who had a current TCA	101.0	20.3	792	22.6

(a) Indigenous regular clients aged 15 and over.

Source: AIHW HfL data collection.

**Table 3.18.2: Whether person(s) in non-remote areas have a written asthma action plan by Indigenous status, New South Wales and Australia, 2004–05**

Jurisdiction	Does have a written asthma action plan	Does not have a written asthma action plan	Never heard of a written asthma action plan	Total <sup>(a)</sup>	Total with asthma	Total people with asthma
	Per cent					No.
<b>New South Wales</b>						
Indigenous	31	61.6	7	100	18	22,331
Non-Indigenous	23.5	73.3	2.5	100	9.2	595,171
Rate ratio	1.3	0.8	2.8	..	2	..
<b>Australia</b>						
Indigenous	24.7	66.9	6.9	100.0	17.7	59,777
Non-Indigenous	22.4	71.9	5.2	100.0	10.2	1,939,245
Rate ratio	1.1	0.9	1.3	..	1.7	..

(a) Includes 'not known if has a written asthma action plan', which represents 1.5% of Indigenous people and 0.5% of non-Indigenous people with asthma in non-remote areas.

Note: Data have been directly age standardised using the 2001 Australian Standard population.

Source: AIHW analyses of NATSIHS 2004–05 and NHS 2004–05.

**Table 3.18.2: Proportion and number of Indigenous regular clients<sup>(a)</sup> with Type 2 diabetes or coronary heart disease with current chronic disease management plans (GPMP or TCA), New South Wales / Australian Capital Territory and Australia, 1 January–30 June 2010**

	NSW/ACT		Australia	
	Per cent	No.	Per cent	No.
Clients with Type 2 diabetes who had a current GPMP	29.6	410	26.1	3,112
Clients with Coronary heart disease who had a current GPMP	25.0	148	28.1	1,030
Clients with Type 2 diabetes who had a current TCA	26.0	318	22.8	2,566
Clients with Coronary heart disease who had a current TCA	20.3	101	22.6	792

(a) Indigenous regular clients aged 15 and over.

Source: AIHW HfL data collection.

## Is the health system capable and sustainable?

This section includes measures on the capability and sustainability of the health system, such as accreditation, Aboriginal and Torres Strait Islander people training for health-related disciplines, health expenditure and recruitment and retention of staff.

### 3.19 Accreditation

Accreditation is a process, usually voluntary, through which a recognised external body assesses the extent to which a health-care organisation meets applicable quality standards. Accreditation status provides one measure of the capability of services, based on their skills and knowledge, to provide quality health services to Aboriginal and Torres Strait Islander people (AHMAC 2012).

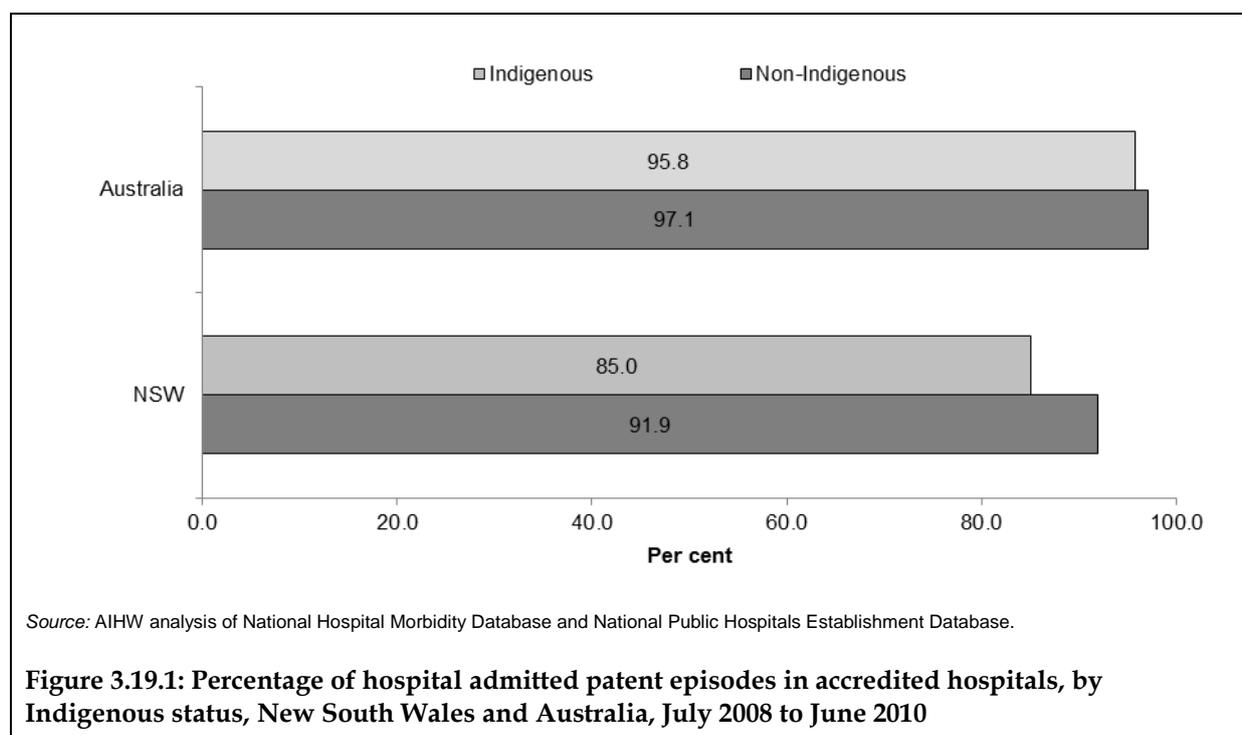
### Accreditation for hospitals and general practice in Australia

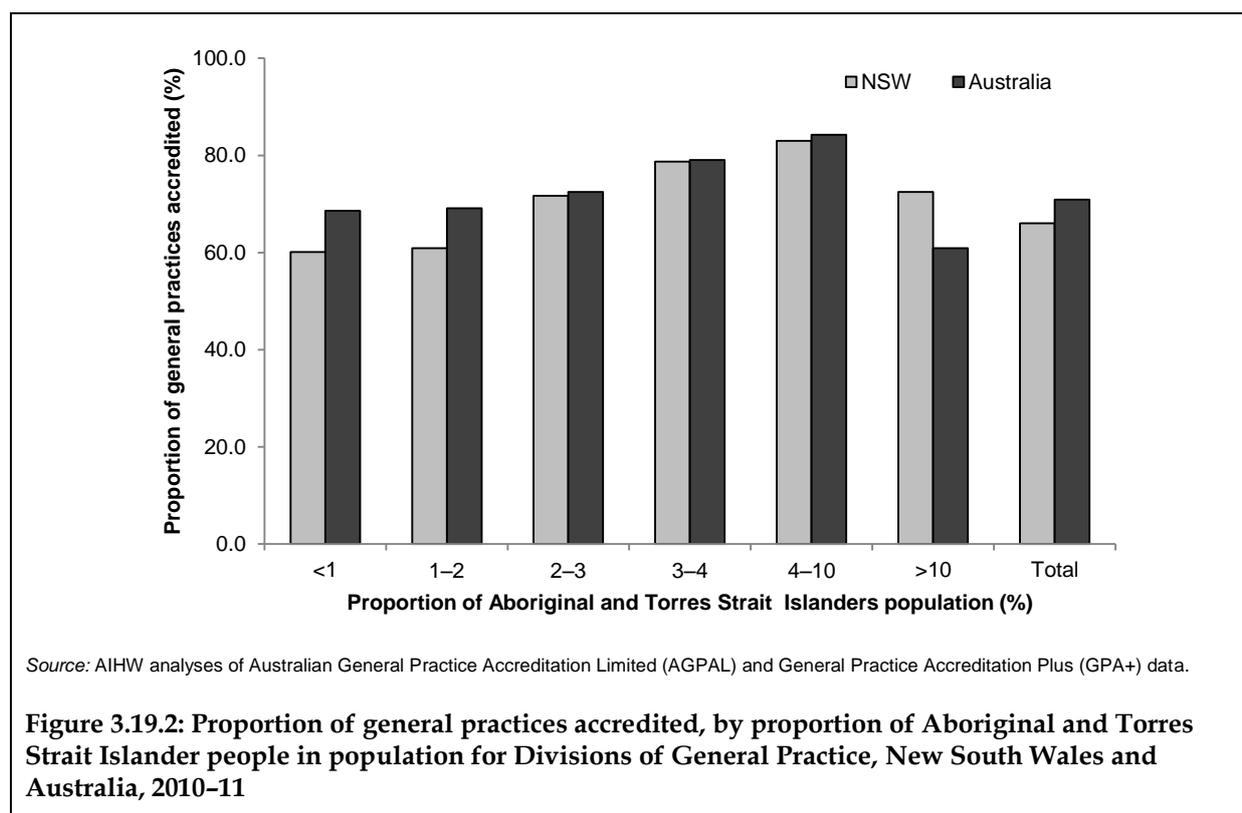
In Australia, there are accreditation systems for hospitals and general practice. Most hospitals are accredited by the Australian Council of Healthcare Standards Evaluation and Quality Improvement Program. Accreditation in general practice involves assessment against standards set by the Royal Australian College of General Practitioners and is undertaken through two registered providers of general practice accreditation in Australia; Australian General Practice Accreditation Limited (AGPAL) and General Practices Australia (GPA+).

Data are presented on the proportion of Aboriginal and Torres Strait Islander hospital separations that occurred in accredited hospitals using data from the National Public Hospitals Establishments Database. Data are also presented on the accreditation of general practices using data from AGPAL and GPA+.

### Key findings

- Between July 2008 and June 2010 in New South Wales, 85% of hospital admitted episodes for Indigenous people occurred in accredited hospitals compared with 96% of episodes for non-Indigenous people (Figure 3.19.1). In Australia, 96% of hospital admitted episodes for Indigenous people occurred in accredited hospitals, compared with 97% of episodes for non-Indigenous people.
- In 2010–11 in New South Wales, 2,103 general practices were accredited and 1,081 divisions were registered but not yet accredited. The proportion of general practices that were accredited was 66%, which was higher than the proportion nationally (71%).
- In New South Wales, the proportion of accredited general practices ranged from 60% in areas where less than 1% of the population was Indigenous, to 83% in areas where 4–10% of the population were Indigenous (Figure 3.19.2).





### 3.20 Aboriginal and Torres Strait Islander people training for health-related disciplines

Aboriginal and Torres Strait Islander people are significantly under-represented in the health workforce. Improving the participation of Aboriginal and Torres Strait Islander people in tertiary education for health-related disciplines is critical to increasing Aboriginal and Torres Strait Islander participation in the health workforce, and creating a workforce better capable of working with Indigenous Australians to improve health.

Data are presented on the proportion of Aboriginal and Torres Strait Islander Australians in tertiary education for health-related disciplines using data from the DEEWR Higher Education Statistics Collection and the National Centre for Vocational Education Research (NCVER) National VET Provider Collection.

#### Key findings

- In 2010 in New South Wales, there were 452 enrolments in health-related courses by Indigenous undergraduate domestic students, which was 2.2% of total undergraduate enrolments. In the same year there were 64 completions in health-related courses by Indigenous undergraduate students, which was 1.5% of total undergraduate completions in health-related courses (Table 3.20.1). This was slightly higher than the proportions nationally (1.8% of enrolments and 1.1% of completions) (Table 3.20.1, Appendix 2).
- In New South Wales, the most common type of health-related courses in which Indigenous students were enrolled or had completed in 2010 was nursing (200 enrolled and 27 completed).

- In 2010 in New South Wales, there were 1,574 Indigenous students enrolled in health-related courses in the VET sector and 207 Indigenous students who completed a health-related course in the VET sector. This was 6.3% and 4.0% of total VET enrolments and completions in health-related courses, respectively (Table 3.20.2). This was higher than the proportions nationally (4.7% of enrolments and 3.5% of completions) (Table 3.20.2, Appendix 2).
- In New South Wales, the most common types of health-related course in which Indigenous VET students were enrolled was public health (600 enrolled and 129 completed) and other health (800 enrolled and 37 completed).

**Table 3.20.1: Number of undergraduate domestic students<sup>(a)</sup> enrolled and completed<sup>(a)</sup> health-related courses<sup>(b)</sup> in the tertiary education sector, by qualification type, New South Wales, 2010**

	Enrolled			Completed		
	Aboriginal & Torres Strait Islander	Total	Per cent Aboriginal & Torres Strait Islander	Aboriginal & Torres Strait Islander	Total	Per cent Aboriginal & Torres Strait Islander
Medical studies	79	3,695	2.1	< 10	515	n.p.
Nursing	200	9,021	2.2	27	1,821	1.5
Pharmacy	0	1,448	0.0	0	324	0.0
Dental studies	< 10	689	n.p.	< 10	177	n.p.
Optical science	< 10	262	n.p.	< 10	34	n.p.
Public health	109	742	14.7	19	169	11.2
Radiography	14	1,182	1.2	< 10	371	n.p.
Rehabilitation therapies	43	3,792	1.1	< 10	817	n.p.
<b>Total</b>	<b>452</b>	<b>20,838</b>	<b>2.2</b>	<b>64</b>	<b>4,246</b>	<b>1.5</b>

(a) The data takes 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.

(b) Medical studies, nursing, pharmacy, dental studies, optical science, public health, radiography, rehabilitation therapies.

Source: AIHW analyses of Department of Education, Employment and Workplace Relations (DEEWR) Higher Education Statistics Collection.

**Table 3.20.2: Vocational education and training sector students enrolled and completed<sup>(a)</sup> health-related courses, New South Wales, 2010**

	Enrolled			Completed <sup>(b)</sup>		
	Aboriginal & Torres Strait Islander	Total	Per cent Aboriginal & Torres Strait Islander	Aboriginal & Torres Strait Islander	Total	Per cent Aboriginal & Torres Strait Islander
Medical studies	0	42	0.0	0	0	..
Nursing	111	2,459	4.5	26	743	3.5
Pharmacy	0	4	0.0	0	0	..
Dental studies	36	1,531	2.4	10	530	1.9
Optical science	3	353	0.8	0	73	0.0
Public health	600	9,751	6.2	129	1,859	6.9
Rehabilitation therapies	0	30	0.0	0	0	..
Complementary therapies	24	939	2.6	5	281	1.8
Other health	800	9,981	8.0	37	1,645	2.2
<b>Total</b>	<b>1,574</b>	<b>25,090</b>	<b>6.3</b>	<b>207</b>	<b>5,131</b>	<b>4.0</b>

(a) Represents number of enrolments and completions, students may be enrolled and complete more than one course.

(b) The number of qualifications completed in 2010 is based on preliminary data and will be revised upwards in the next collection.

Source: AIHW analyses of National Centre for Vocational Education Research (NCVER), National VET Provider Collection 2010.

### 3.21 Expenditure on Aboriginal and Torres Strait Islander health compared to need

Regular reporting of health expenditure is central to understanding the needs of the Indigenous population and how they are being met. The information is important for policy makers, program managers, community members, and all others interested in Indigenous health issues. The universal health-care system of Australia is intended to provide equal opportunities to all segments of the population, including Aboriginal and Torres Strait Islander people, to access health-care facilities. However, in addition to mainstream services, several programs aimed at Indigenous Australians have been funded by the Australian Government and state/territory governments to improve the health of this population.

Data is reported on government expenditure on health for Aboriginal and Torres Strait Islander people compared with other Australians using data from the AIHW Health Expenditure database.

#### Key findings

- In 2008–09 in New South Wales, the New South Wales Government was estimated to have spent, on average, \$3,700 per Indigenous person, compared with \$1,914 per non-Indigenous person. This represents an Indigenous/non-Indigenous expenditure ratio of 1.9 (Table 3.21.1).
- Throughout Australia, state/territory governments were estimated to have spent, on average, \$4,758 per Indigenous people, compared with \$1,915 per non-Indigenous person, equating to an Indigenous/non-Indigenous expenditure ratio of 2.5.

- The New South Wales Government spent more per person for Aboriginal and Torres Strait Islander people than for non-Indigenous people for all types of health goods and services, except for research.
- The ratio of Indigenous to non-Indigenous expenditure was higher in New South Wales than nationally for dental services (4.9 compared with 2.5). Conversely, the ratio of Indigenous to non-Indigenous expenditure was lower in New South Wales than nationally for other types of health goods and services.

**Table 3.21.1: Estimated state and territory health expenditure per person for Indigenous and non-Indigenous people, by area of expenditure, New South Wales and Total, 2008–09**

	New South Wales			Total		
	Expenditure per person (\$)			Expenditure per person (\$)		
	Indigenous	Non-Indigenous	Ratio	Indigenous	Non-Indigenous	Ratio
Public hospital services	2,601	1,526	1.7	3,283	1,458	2.3
<i>Admitted patient services<sup>(a)</sup></i>	1,934	1,163	1.7	2,554	1,122	2.3
<i>Non-admitted patients</i>	667	364	1.8	729	336	2.2
Private hospital services	..	..	..	11	16	0.7
Patient transport	137	90	1.5	209	92	2.3
Dental services	121	25	4.9	72	29	2.5
Community health services <sup>(b)</sup>	713	180	4.0	910	204	4.5
Public health services <sup>(b)</sup>	103	66	1.6	214	73	2.9
Research	25	27	0.9	30	23	1.3
Health administration <sup>(c)</sup>	..	..	..	29	20	1.5
<b>Total health expenditure</b>	<b>3,700</b>	<b>1,914</b>	<b>1.9</b>	<b>4,758</b>	<b>1,915</b>	<b>2.5</b>

(a) Admitted patient expenditure adjusted for Aboriginal and Torres Strait Islander under-identification.

(b) Includes other recurrent expenditure on health, not elsewhere classified, such as family planning previously reported under 'Other health services (n.e.c.)'.

(c) Health administration costs for New South Wales, Victoria, Tasmania and the Northern Territory are zero, as these jurisdictions have allocated administrative expenses into the functional expenditure categories in the table.

Source: AIHW 2011.

## 3.22 Recruitment and retention of staff

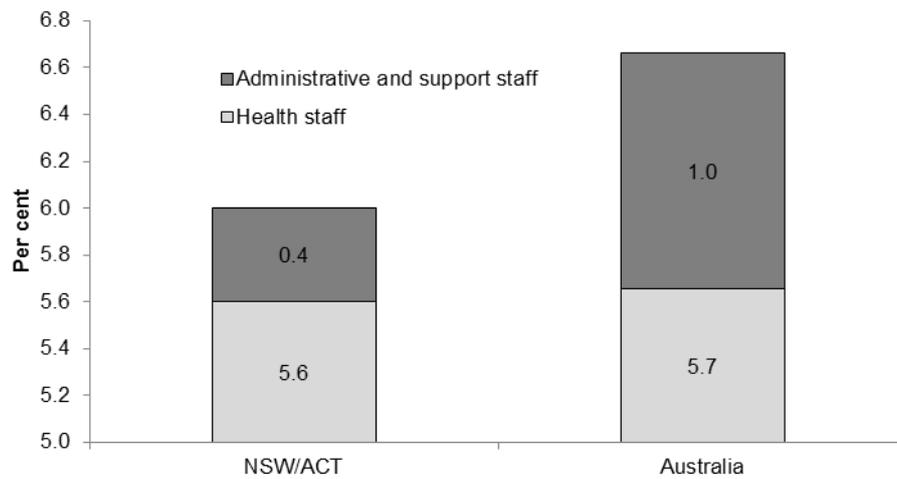
The capacity to recruit and retain appropriate staff is extremely important to the quality, continuity and sustainability of health-care services including Aboriginal and Torres Strait Islander primary health-care services, particularly in rural and remote areas.

Data are presented on the number of positions that are currently vacant in Indigenous primary health-care services using data from the OSR collection.

### Key findings

- For 2010–11 in New South Wales/Australian Capital Territory, 5.6% of full-time equivalent (FTE) health staff positions and 0.4% of administrative and support staff positions in Aboriginal and Torres Strait Islander primary health-care organisations were vacant (Figure 3.22.1). This was lower than the proportions of staff vacancies nationally

(5.7% of the FTE health staff positions and 1.0% of administrative and support staff positions).



Source: AIHW OSR data collection.

**Figure 3.22.1: Vacancies as a percentage of total positions (FTE) in Aboriginal and Torres Strait Islander primary health care organisations, New South Wales/Australian Capital Territory and Australia, at 2010-11**

# Appendix 1 Data sources and quality

## Alcohol and Other Drug Treatment Services National Minimum Data Set

The Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS-NMDS) is a collection of data from all publicly funded (at state, territory and/or Australian Government level) government and non-government agencies that provide one or more specialist alcohol and/or other drug treatment services. The NMDS counts treatment episodes completed during the collection period.

There is a diverse range of alcohol and other drug treatment services in Australia and not all of these are in the scope of the AODTS-NMDS. Clients receiving services that are funded solely by the Office for Aboriginal and Torres Strait Islander Health as Indigenous substance use services, Aboriginal primary health-care services, Aboriginal medical services and community controlled health services are not currently included in the scope of the AODTS-NMDS.

### In indicator:

- 3.11 Access to alcohol and drug services

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/498552>>.

## Australia and New Zealand Dialysis and Transplant Registry

In Australia, persons who develop end-stage renal disease (ESRD) and undertake dialysis or kidney transplantation are registered with the Australia and New Zealand Dialysis and Transplant Registry (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, comorbidities and patient deaths. The current registry began in 1977 and is coordinated by the Queen Elizabeth Hospital in Adelaide. All relevant hospitals and related satellite units in Australia and New Zealand participate.

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

### In indicator:

- 1.10 Kidney disease

## Australian Cancer Database

Each state and territory has its own cancer registry that draws on a number of sources; notifications from pathology laboratories, radiation oncology units, hospitals and registrars of births, deaths and marriages. Hospital admissions and deaths data allow for the collection and reporting of Indigenous status, whereas there is currently no Indigenous identifier in pathology forms, and inconsistent reporting through referring GPs/specialists/surgeons. Indigenous status is recorded for radiation oncology services in New South Wales, Queensland and the Northern Territory only.

Each jurisdictional cancer registry supplies data annually to the AIHW, which is compiled into the Australian Cancer Database. Indigenous identification is incomplete for all cancer registries, however, it has been assessed by the AIHW as having sufficient quality to report for Western Australia, Queensland, New South Wales and the Northern Territory. For current period reporting, 5 years of combined data are presented for these four jurisdictions. Time-series data by Indigenous status are not able to be reported.

**In indicator:**

- 1.08 Cancer

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/500417>>.

### **Australian Childhood Immunisation Register**

The Australian Childhood Immunisation Register (ACIR) is a national register that records details of vaccinations given to children aged under 7 who live in Australia. Immunisation coverage is produced at the national, state/territory and local level on a quarterly basis using the data recorded on the ACIR.

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.

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.

In this report, children for whom Indigenous status was not stated are included with 'non-Indigenous' under the 'other' category.

**In indicator:**

- 3.02 Immunisation

### **BreastScreen Australia**

BreastScreen Australia is a comprehensive population-based screening program for breast cancer. It 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, with a participation target of 70%. However, women aged 40–49, and 70 and older are able to attend for screening (AIHW 2011c).

The national program was established in 1991. It is a joint program of the Australian Government and state and territory governments. BreastScreen Australia is monitored annually and reported at the national level by the AIHW in the BreastScreen Australia monitoring report.

The standard ABS question is used to record Indigenous status in this database. While self-reported data are generally a robust source of data on Aboriginal and Torres Strait Islander status (AIHW 2011c), a significant cause of concern with the accuracy of these data is that some jurisdictions do not allow for the 'not stated' category. Further, some Aboriginal and Torres Strait Islander women may choose not to identify as such when presenting to a BreastScreen Australia service. 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 (AIHW 2011c).

**In indicator:**

- 3.04 Early detection and early treatment

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/491846>>.

## **Census of Population and Housing**

The Census of Population and Housing is conducted by the ABS every 5 years, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question for each household member.

Although the Census data are adjusted for undercount 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 2011 Census is the most recent, however, data for the Indigenous population was not yet released at the time of writing this report. Therefore, data in this report come from the 2006 Census. In 2006, the ABS enhanced the sample for the Post-Enumeration Survey to include remote areas. The measured undercount for Indigenous Australians was 11.5%.

**In indicators:**

- 1.14 Disability
- 1.19 Life expectancy at birth
- 2.01 Housing
- 2.02 Access to functional housing with utilities
- 2.09 Index of disadvantage
- 2.13 Transport
- 3.12 Aboriginal and Torres Strait Islander people in the health workforce

## **Child Dental Health Survey**

The Child Dental Health Survey is a national survey of the oral health status of school children enrolled in school dental services in each state and territory of Australia. Data are obtained each year from routine dental examinations conducted by non-calibrated dental health professionals within the school dental services. Children are enrolled from both public and private schools. The survey is managed by the AIHW Dental Statistics Research Unit.

Children in the CDHS were sampled by a number of strategies, using systematic sampling based on selecting children with certain birth dates. Indigenous status is obtained for all children except those from Western Australia, Tasmania and the Australian Capital Territory because of incomplete 'Indigenous status' data collected in these jurisdictions. Although Queensland and Victoria collect information on Indigenous status, the small numbers of Aboriginal and Torres Strait Islander children sampled in Victoria and the poor compliance with collection of Indigenous status in Queensland meant that these states were unable to provide reliable statistics. For these reasons, analyses of Aboriginal and Torres Strait Islander and non-Aboriginal and Torres Strait Islander children were confined to collections from New South Wales (NSW), South Australia (SA) and the Northern Territory (NT) only. It is

important to note that there was no service provision for pre-school children for SA and the NT.

The latest available data for Indigenous children is for 2007 for NSW and 2008 for SA and the NT.

**In indicator:**

- 1.11 Oral health

### **Community Housing and Infrastructure Needs Survey**

The Community Housing and Infrastructure Needs Survey (CHINS) collects data from all Aboriginal and Torres Strait Islander housing organisations and discrete Aboriginal and Torres Strait Islander communities in Australia. The latest CHINS was enumerated from 1 March to 30 June 2006. The data were collected through personal interviews with key community and Indigenous Housing Organisation (IHO) representatives knowledgeable about housing and infrastructure issues. The survey collected information on all Aboriginal and Torres Strait Islander communities throughout Australia. The Australian Bureau of Statistics (ABS) conducted the 2006 CHINS on behalf of, and with full funding from, the Department of Families, Community Services and Indigenous Affairs (FaCSIA). Information collected includes:

- details of current housing stock, dwelling management practices and selected income and expenditure arrangements of Indigenous organisations that provide housing to Aboriginal and Torres Strait Islander people
- details of housing and related infrastructure, such as water, electricity, sewerage, drainage, rubbish collection and disposal, as well as other facilities such as transport, communication, education, sport and health services, available in discrete Aboriginal and Torres Strait Islander communities.

The 2006 information was collected on 496 Indigenous housing organisations which managed a total of 21,854 permanent dwellings. Information was also collected on 1,187 discrete Indigenous communities with a combined population of 92,960. Most of these communities were in *Very remote* regions of Australia, with 73% (865) having a population fewer than 50 people.

**In indicators:**

- 1.13 Community functioning
- 2.02 Access to functional housing with utilities
- 3.03 Health Promotion

### **Community Mental Health Care Database**

Information on the use of community mental health services by Indigenous people is available from the AIHW National Community Mental Health Care Database (NCMHCD). The NCMHCD is a collation of data on specialised mental health services provided to non-admitted patients, in both government-operated community and hospital-based ambulatory care services, for example, community mental health services, outpatient clinics and day clinics.

The quality of the Indigenous identification in this database varies by jurisdiction and should be interpreted with caution. All state and territory health authorities provided information

on the quality of the data for the NCMHCD 2009–10. New South Wales, Victoria, Western Australia, Tasmania, and the Australian Capital Territory considered the quality of Indigenous status data to be acceptable. Queensland reported that the quality of Indigenous status data was acceptable at the broad level, however, there are quality issues regarding the coding of more specific details (that is, Aboriginal, Torres Strait Islander, or Both Aboriginal and Torres Strait Islander). Northern Territory considered the quality to be below the previous year's standard as a result of lack of compliance with non-mandated data collection items by new external (non-mental health) health service provider data entry. South Australia indicated that the quality of these data is uncertain at this stage.

**In indicator:**

- 3.10 Access to mental health services

### **Deaths in Custody Australia**

As a requirement of the Deaths in Custody Royal Commission, the Australian Institute of Criminology collects data on deaths in custody each year for all jurisdictions. Data collected include custodial authority (police, prison, juvenile justice/welfare), legal status (sentenced or unsentenced), cause of death, manner of death, location of death and most serious offence.

Indigenous status is determined by previous self-identification to prison authorities.

**In indicator:**

- 2.11 Contact with criminal justice system

### **Department of Education, Employment and Workplace Relations Higher Education Statistics Collection**

The Australian Government Department of Education, Employment and Workplace Relations (DEEWR) is the responsible agency for the Higher Education Statistics Collection, which includes information from higher education institutions, such as universities and vocational education and training colleges. This data collection contains statistics relating to students enrolled in higher education courses between 1 January and 31 December of each year in each Australian higher education provider.

Although universities design and produce their own enrolment forms, DEEWR has provided institutions with suggested wording for questions relating to Indigenous status (ABS 2003). About 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 record the 'not stated' responses separately.

**In indicators:**

- 3.20 Aboriginal and Torres Strait Islander people training for health-related disciplines

### **Disability Services National Minimum Data Set**

The purpose of the Disability Services National Minimum Data Set (DS NMDS) collection is to facilitate the annual collation of nationally comparable data about disability services, and to obtain reliable, consistent data with minimal load on the disability services field. Under the National Disability Agreement (NDA), the Disability Administrators in all Australian jurisdictions are responsible for ensuring that DS NMDS information will be comparable across all jurisdictions and years.

Services within the scope of the collection are those for which funding has been provided, during the specified period, by a government organisation operating under the NDA. Therefore, if a service type outlet did not receive NDA funding for the 2009–10 collection (i.e. its NDA funding dollars for the financial year are zero), then details of this outlet should not be included in the data collection.

A funded agency may receive funding from multiple sources. Where a funded agency is unable to differentiate service users and/or staff according to funding source (i.e. NDA or other), they are asked to provide details of all service users and staff (for each service type).

Most agencies funded under the NDA are asked to provide information about:

- each of the service types they are funded to provide (i.e. service type outlets they operate);
- all service users who received support over a specified reporting period; and
- the DS NMDS service type(s) the service user received.

The level of information a funded agency is asked to provide varies according to the particular service type (i.e. for each service type outlet).

**In indicator:**

- 1.14 Disability

## **Health Expenditure Data**

The AIHW reports biennially on expenditure on health for Aboriginal and Torres Strait Islander people. The latest report in the series, *Expenditure on health for Aboriginal and Torres Strait Islander people 2008–09*, was released in 2011.

There are a number of difficulties in reporting on Indigenous health expenditure, including limitations in the scope and definition of health expenditure, as well as inconsistencies in reporting expenditure on health goods and services across data providers.

Under-identification (where Indigenous people are not identified as such) and under-coverage (where the sample does not reflect the true population structure) of Indigenous Australians in health data collections (such as hospital separations) are further issues that affect data quality. Although under-identification adjustments are made to the data, the adjusted estimates may be an overestimate or under-estimates of actual health service use and expenditure by Indigenous people. The allocation of expenditure to Indigenous people either on an overall population or per capita basis should also be treated with caution, as Indigenous population estimates have similar issues of under-coverage and under-identification (AIHW 2009).

Estimates of the level of Indigenous under-identification were used to adjust some reported expenditure. In some states and territories, a single state wide average under-identification adjustment factor was applied. In others, differential under-identification factors were used, depending on the region in which the particular service(s) were located. In some jurisdictions, no Indigenous under-identification adjustment was considered necessary.

**In indicators:**

- 3.21 Expenditure on Aboriginal and Torres Strait Islander health compared with need

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/489552>>.

## Healthy for Life

The Healthy for Life (HfL) program is an ongoing program funded by the Office for Aboriginal and Torres Strait Islander Health of the Australian Government Department of Health and Ageing (DoHA). The program aims to improve the capacity and performance of primary health-care services to deliver high-quality maternal, children's and chronic disease care to Aboriginal and Torres Strait Islander people. This is carried out through population health approaches using best-practice and quality improvement principles.

Services participating in the HfL program are required to submit de-identified, aggregate service data for 11 essential indicators. These indicators cover maternal health, child health and chronic disease care on a regular basis (6 and 12 months), as well as information about the characteristics of their service and organisational infrastructure.

The Australian Government and the AIHW are working with the states and territories to develop a national key performance indicator (KPI) framework for Indigenous primary health-care services. The new national KPIs will replace the Healthy for Life program essential indicators and cover maternal and child health and chronic disease management. The AIHW is leading the development and refinement of the indicators, data standards and analyses and reporting back to services. The national KPI data collection will be implemented in three stages, with roll-out in 2012 and 2013.

### In indicators:

- 3.05 Chronic disease management
- 3.18 Care planning for clients with chronic diseases

## Medicare Database

Medicare enrolment application forms are lodged by persons wishing to enrol with Medicare at Medicare offices in each state/territory or by mail. Information from these forms is entered directly into the Medicare database, which is held by DoHA.

In November 2002, the ABS standard question on Indigenous identification was included on this form. The question is asked in relation to the cardholder and any other family member named on the card. Responding to the question is voluntary and there is an explanation of the reasons for the question and the use of the data included on the form. This is referred to as the Voluntary Indigenous Identifier (VII).

Because the VII was only introduced recently, the coverage of Aboriginal and Torres Strait Islander Australians in this database is not complete.

As at 1 February 2011, 297,000 Indigenous Australians were enrolled on the VII database. This represents 52.7% of the estimated total Indigenous population (DoHA 2012, unpublished).

Medicare data presented in this report have been adjusted for under-identification. There are a number of caveats to the VII adjustment methodology, including that as the VII sample is generated voluntarily, it is not truly random and cannot be perfectly representative of the Indigenous population until full coverage is achieved. There could therefore be biases in the data that are not addressed by the adjustment methodology.

### In indicator:

- 3.04 Early detection and early treatment

## **National Aboriginal and Torres Strait Islander Health Survey**

The 2004–05 National Aboriginal and Torres Strait Islander Health Survey (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. This included information on health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. The survey provides comparisons over time in the health of Indigenous Australians. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

It is planned to repeat the NATSIHS every 6 years, with the next one to be conducted during 2012–13 as part of the Australian Health Survey (will be called the Australian Aboriginal and Torres Strait Islander Health Survey, or ATSIHS).

### **In indicators:**

- 1.05 Circulatory disease
- 1.07 High blood pressure
- 1.09 Diabetes
- 1.15 Ear health
- 2.16 Risky and high-risk alcohol consumption
- 2.18 Level of physical activity
- 2.19 Dietary behaviour
- 2.22 Overweight and obesity
- 3.02 Immunisation
- 3.14 Access to services compared with need
- 3.17 Regular GP or health service
- 3.18 Care planning for clients with chronic diseases

## **National Aboriginal and Torres Strait Islander Social Survey**

The ABS conducted the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) between August 2002 and April 2003. The 2008 NATSISS was conducted between August 2008 and April 2009. The survey provides information about the Aboriginal and Torres Strait Islander populations of Australia for a wide range of areas of social concern including health, education, culture and labour force participation. For the first time, the 2008 NATSISS included children aged under 15. The NATSISS will be conducted every 6 years, with the next one planned for 2014.

The 2008 NATSISS collected information by personal interview from 13,300 Indigenous Australians across all states and territories of Australia, including those living in remote areas. The sample covered persons aged 15 and over who are usual residents in selected 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 2008 NATSISS has a relatively large level of under-coverage when compared with other ABS surveys. There was also an increase in under-coverage compared with previous ABS

Indigenous surveys. For example, the estimated under-coverage in the 2004–05 NATSIHS was 42%. The overall under-coverage rate for the 2008 NATSISS is about 53% of the in-scope population at the national level. This rate varies across the states and territories (ABS 2010).

Time series comparisons for the 2008 survey are available through the 1994 National Aboriginal and Torres Strait Islander Social Survey and the 2002 NATSISS. However, not all data elements align across the three (1994, 2002 and 2008) NATSISS surveys, hence care is required when reviewing results across the three surveys. There are no strictly comparable non-Indigenous results available for the 2008 NATSISS because the latest General Social Survey (which has been used in the past to compare with Indigenous results from the NATSISS) was run in 2006, with the next being run in 2010. Data from other ABS surveys run in 2008 may, however, be used to obtain rough non-Indigenous comparisons for some data items. Where possible, the ABS has provided recommendations for non-Indigenous data comparisons these have been adopted in this report.

#### **In indicators:**

- 1.11 Oral health
- 1.15 Ear health
- 1.14 Disability
- 1.13 Community functioning
- 1.17 Perceived health status
- 1.18 Social and emotional wellbeing
- 2.02 Access to functional housing with utilities
- 2.01 Housing
- 2.03 Environmental tobacco smoke
- 2.06 Educational participation and attainment of adults
- 2.08 Income
- 2.10 Community safety
- 2.13 Transport
- 2.14 Indigenous people with access to their traditional lands
- 2.15 Tobacco use
- 2.17 Drug and other substance use including inhalants
- 2.19 Dietary behaviour
- 3.14 Access to services compared with need

#### **National Assessment Program—Literacy and Numeracy**

The first National Assessment Program – Literacy and Numeracy (NAPLAN) tests were conducted in May 2008 for all Years 3, 5, 7 and 9 students in government and non-government schools. For the first time, all students in the same year level were assessed on the same test items in the domains of reading, writing, language conventions (spelling, grammar and punctuation) and numeracy. Before 2008, students had undertaken different tests in each state and territory. NAPLAN results are reported using five national achievement scales, one for each of the assessed aspects of literacy – reading, writing, spelling, grammar and punctuation – and one for numeracy. These reporting scales are

constructed so that any given scaled score represents the same level of achievement over time (2008 NAPLAN annual report).

Student achievements for literacy and numeracy are reported on five national achievement scales. The scales consist of 10 bands to cover the full range of student achievement across Year 3 to Year 9. School participation data are not collected.

The non-response for Aboriginal and Torres Strait Islander status is about 3% nationally. This information is captured from student test book covers where 3% of students did not state their Indigenous status on the test book cover.

**In indicator:**

- 2.04 Literacy and numeracy

### **National Child Protection Australia**

There are 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. 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 excluded, where possible, from calculations of rates and proportions. The counts for Aboriginal and Torres Strait Islander children are therefore likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

Note that Tasmania and the Australian Capital Territory have very small numbers, and statistics from these jurisdictions are susceptible to random fluctuations.

Reported rates for Aboriginal and Torres Strait Islander children in the child protection system for 2008–09 and later cannot be compared directly with those from previous years in earlier AIHW *Child protection Australia* publications. In previous years, rates were calculated using ABS Indigenous population data from the 1996 and 2001 Census; the latter projections are based on the data from the 2006 Census. For time series analyses presented in this measure, rates have been reported as they were in the corresponding referenced publications.

**In indicator:**

- 2.12 Child protection

## 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.

Hospitalisation data are presented for the 2 years from July 2008 to June 2010. An aggregate of 2 years of data has been used, because the number of hospitalisations for some conditions is likely to be small for a single year.

Hospital records are for 'separations' and not individuals, and as there can be multiple admissions for the same individual, hospital separation rates do not usually reflect the incidence or prevalence of the disease or condition in question. For example, it is not possible to identify whether one patient was admitted 5 times or five patients were admitted once. People who receive treatment at hospital but are not admitted are not counted in hospital records. Hospital separation data are also affected by variations in admission practices, and the availability of and access to hospital and non-hospital services.

Care types 7.3, 9 and 10 (Newborn – unqualified days only; organ procurement; hospital border) have been excluded from analysis.

Data are presented for the six jurisdictions that the AIHW has assessed as having adequate identification of Indigenous hospitalisations in 2006–08 – New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (public hospitals only). These six jurisdictions represent about 96% of the Indigenous population of Australia. National totals include separations for people resident in these six jurisdictions only and are not necessarily representative of the jurisdictions not included. Indigenous status data are reported for Tasmania and the Australian Capital Territory (public hospitals only) with caveats until further audits of the quality of data in these jurisdictions are completed.

Data are presented by state/territory of usual residence of the patient.

The following caveats have been recommended for analysis of hospitalisation data from selected jurisdictions (AIHW 2010):

- Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a small degree of Indigenous under-identification in data from New South Wales and South Australia, and relatively marked Indigenous under-identification in data from Queensland and Victoria).
- Interpretation of time series analysis should take into account the possible contribution of changes over time in ascertainment of Indigenous status. This will be reflected in Indigenous patient changes in hospitalisation rates for Indigenous people.

### In indicators:

- 1.02 Top reasons for hospitalisation
- 1.03 Injury and poisoning
- 1.04 Respiratory disease
- 1.05 Circulatory disease
- 1.07 High blood pressure
- 1.09 Diabetes

- 1.10 Kidney disease
- 1.11 Oral health
- 1.15 Ear health
- 1.18 Social and emotional wellbeing
- 2.10 Community safety
- 3.06 Access to hospital procedures
- 3.07 Selected potentially preventable hospitalisations
- 3.08 Cultural competency
- 3.09 Discharge against medical advice
- 3.14 Access to services compared with need

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/511338>>.

### **National Indigenous Eye Health Survey**

The Indigenous Eye Health Unit at the University of Melbourne collaborated with the Centre for Eye Research Australia and the Vision Cooperative Research Centre to conduct the National Indigenous Eye Health Survey in 2008.

The survey used a multi-stage, random cluster sample to obtain representative national data. The sample sites were grouped according to the Accessibility/Remoteness Index of Australia into five categories; *Major cities, Inner regional, Outer regional, Remote* and *Very remote*. The *Very remote* category was divided into *Very remote coastal* and *Very remote inland*. Within each category, five sample areas were randomly selected to yield 30 geographic areas containing about 300 Indigenous Australians.

A standardised eye examination was done on all participants. Overall, 1,694 children aged 5 to 15 years and 1,189 adults aged 40 years and above were examined.

#### **In indicator:**

- 1.16 Eye health

### **National Mortality Database**

The National Mortality Database is a national collection of de-identified unit record level data. It comprises most of the information recorded on death registration forms and medical (cause of death) certificates, including Indigenous status. The database is maintained by the Australian Institute of Health and Welfare (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 Australian Bureau of Statistics (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 and are presented by state/territory of usual residence rather than state/territory where death occurs.

It is considered likely that most deaths of Aboriginal and Torres Strait Islander people are registered. However, a proportion of these deceased are not reported as Aboriginal or Torres Strait Islander by the family, health worker or funeral director during the death registration process. That is, while data are provided to the ABS for the Indigenous status question for 99% of all deaths, there are concerns regarding the accuracy of the data. The Indigenous status question is not always directly asked of relatives and friends of the deceased by the funeral director.

While the identification of Indigenous Australians in deaths data is incomplete in all state and territory registration systems, 5 jurisdictions (NSW, Queensland, WA, SA and the NT) have been assessed by the ABS and the AIHW as having adequate identification. Longer term mortality trend data are limited to 3 jurisdictions (WA, SA and the NT) with adequate identification of Indigenous deaths in their recording systems from 1991 onwards. 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.

Deaths registered in 2010 with a usual residence of Queensland have been adjusted to exclude deaths registered in 2010 that occurred prior to 2007. This is to minimise the impact of late registration of deaths due to recent changes in the timeliness of death registrations in Queensland.

Western Australian Aboriginal and Torres Strait Islander deaths for 2007, 2008 and 2009, have been revised to correct for a data quality issue which resulted in the over-reporting of Indigenous deaths during this period.

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

Data have been combined for the 5-year period 2006–2010 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years.

#### **In indicators:**

- 1.08 Cancer
- 1.20 Infant and child mortality
- 1.21 Perinatal mortality
- 1.22 All causes age-standardised death rates
- 1.23 Leading causes of mortality
- 1.24 Avoidable and preventable deaths
- 2.10 Community safety

#### **National Non-admitted Patient Emergency Department Care Database**

The National Non-admitted Patient Emergency Department Care Database (NAPEDCD) is a national collection of de-identified data on emergency department episodes held at the AIHW. The database includes episode-level data on non-admitted patients treated in the emergency departments of public hospitals. These hospitals are classified in the public hospital peer groups of principal referral and specialist women's and children's hospitals and large hospitals. Data excludes patients who were admitted or arrived at the hospital by ambulance.

The NAPEDCD includes data on the type and length of emergency department visit, triage category, waiting times, patient demographics, arrival mode and departure status.

This data set includes the standard Indigenous status question. The identification of Indigenous patients is not considered complete and varies among jurisdictions.

It is recommended that these data only be reported as numbers and proportions and not rates, because the denominator would include Indigenous Australians not covered in this

collection. The quality of the data reported for Indigenous status in emergency departments has not been formally assessed; most states and territories advised that the Indigenous status data collected in an emergency department setting could be less accurate than the data collected for admitted patients (AIHW 2012d).

**In indicator:**

- 3.16 Access to After-hours primary health care

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/497269>>.

### **National Notifiable Diseases Surveillance System**

A set of 65 diseases and conditions are notifiable nationally to the National Notifiable Diseases Surveillance System (NNDSS), which is managed by DoHA.

Identification of Indigenous notifications in all states and territories is incomplete, with the level of completeness varying across diseases as well as jurisdictions. The NNDSS provided the AIHW with data on Indigenous status completeness by disease and jurisdiction. Using a cut-off of 50% completeness of Indigenous status for 2009–2011, Western Australia, South Australia, Tasmania and the Northern Territory were assessed to have adequate identification for chlamydia, syphilis, gonorrhoea, hepatitis B and hepatitis C. Of the remaining states/territories, Queensland and Victoria had adequate identification for syphilis, gonorrhoea and chlamydia; the Australian Capital Territory had adequate identification for syphilis, gonorrhoea and hepatitis B; and New South Wales had adequate identification for syphilis only.

Although data on hepatitis C is included in this indicator, sexual transmission is not considered the main route of transmission, hepatitis C primarily occurs among those with a history of injecting drug use. Data for hepatitis C included in this indicator are for newly acquired notifications only (excluding Queensland, as hepatitis C data are reported in a separate category).

All categories of syphilis (including infectious, latent and unknown duration) have been included in the analysis of data in this report, with the exception on New South Wales for which the category of greater than 2 years duration or unknown status have been excluded due to low completeness of Indigenous status for these data.

Three years have been combined for reporting due to the small number of Indigenous and non-Indigenous notifications for some STIs each year.

Other Australians includes notifications for non-Indigenous Australians and those for whom Indigenous status is not stated.

**In indicator:**

- 1.12 HIV/AIDS, hepatitis C and sexually transmissible infections

### **National Opioid Pharmacotherapy Statistics Annual Data collection**

The National Opioid Pharmacotherapy Statistics Annual Data (NOPSAD) collection is an administrative by-product collection (that is, secondary use). Data are collated in each jurisdiction from information already collected for the purposes of administering or providing a service (that is, primary use).

The main purpose of the current NOPSAD collection is to report jurisdictional data on the number of clients accessing pharmacotherapy for the treatment of opioid dependence, the

number of prescribers participating in the delivery of pharmacotherapy treatment, and quantitative information about the prescribing sector. From the collection, national information on pharmacotherapy can be reported.

In 2005, the AIHW took on the responsibility for managing, analysing and reporting on the NOPSAD collection.

The collection includes information on client's Indigenous status. Currently, Victoria and Western Australia are unable to provide data on the Indigenous status of clients receiving pharmacotherapy services.

**In indicator:**

- 3.11 Access to alcohol and drug services

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/487002>>.

### **National Perinatal Data Collection**

Perinatal data included in this report come from the AIHW National Perinatal Epidemiology and Statistics Unit National Perinatal Data Collection.

Each state and territory has a perinatal collection based on birth notifications completed by midwives and other staff, using information obtained from mothers and from hospital and other records. Perinatal notification forms are completed in Australia 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. State-level data are based on place of mother's usual residence rather than place where birth occurred. 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. Data on Indigenous status are not reported for Tasmania before 2005 as the not stated category for Indigenous status was included with the non-Indigenous category. Data for Tasmania and the Australian Capital Territory are not deemed of sufficient stability to support trends analysis (AIHW: Leeds KL et al. 2007).

Data on mothers for whom Indigenous status was 'not stated' have been excluded from analysis.

All jurisdictions collect Indigenous status of the mother for each baby. A data item on Indigenous status of the baby was added to the Perinatal NMDS from July 2012. Currently, data on antenatal care is not available from all jurisdictions. A nationally consistent data item on gestational age at first antenatal visit was added to the Perinatal NMDS from July 2010 and a data item on number of antenatal visits will be included in the Perinatal NMDS from 1 July 2013. Work is under way to progress data elements related to alcohol use in pregnancy.

**In indicators:**

- 1.01 Low birthweight infants
- 2.21 Health behaviours during pregnancy
- 3.01 Antenatal care

## **National Prisoner 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 from individual prisoners. It is uncommon for corrective services agencies to collect Indigenous status from anyone other than the prisoners themselves. However, the accuracy of these data has not been assessed.

### **In indicator:**

- 2.14 Contact with criminal justice system

## **National Public Hospitals Establishment Database**

The AIHW National Public Hospitals Establishment Database holds establishment-level data for public hospitals within the jurisdiction of the state and territory health authorities. Private hospitals and public hospitals not administered by the state and territory health authorities are not included. Information is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions that have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2006–08 – New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2010). These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

### **In indicator:**

- 3.19 Accreditation

## **National Schools Statistics Collections**

The National Schools Statistics Collection (NSSC) is a collaborative arrangement between state, territory and Australian Government education departments. It is managed by the Ministerial Council on Education, Early Childhood Development and Youth Affairs (MCEECDYA) Performance Measurement and Reporting Taskforce (PMRT). Information is provided on the number and characteristics of schools, students and staff. These data are derived from the annual Schools Census enumerated each August by the responsible authorities.

Care should be exercised in the interpretation of apparent retention rates, because the method of calculation does not take into account a range of factors. At the Australia level, these include students repeating a year of education, migration and other net changes to the school population. At lower levels of disaggregation, additional factors affecting the data, such as enrolment policies (which contribute to different age/grade structures between states and territories), inter-sector transfers and interstate movements of students, have not been taken into account. These and other factors affecting the interpretation of apparent retention rates are being looked at, where possible, in the ABS's review of apparent retention rates.

### **In indicator:**

- 2.05 Years 10 and 12 retention and attainment

### **National Vocational Education and Training Provider Collection**

The National Centre for Vocational Education Research is Australia's main provider of vocational education and training (VET) sector research and statistics. VET is a national system designed to give workers the skills for particular occupations and industries. The VET sector includes providers that receive public VET funding, such as technical and further education organisations, higher education institutions, other government providers (for example, agricultural colleges), community education providers, government-funded private registered training organisations, schools funded through government allocations for VET, and all other Australian Government and state recurrent and specific-purpose funded VET, regardless of the location of the training organisation.

Non-identification rates for Indigenous students in these data are high. Care also needs to be taken when comparing data across jurisdictions for load pass rates, as average module durations vary across jurisdictions.

#### **In indicators:**

- 3.20 Aboriginal and Torres Strait Islander people training for health-related disciplines

### **Office for Aboriginal and Torres Strait Islander Health Services Reporting data collection**

The AIHW has collected data from Aboriginal and Torres Strait Islander primary health-care services, stand-alone substance use services, and Bringing Them Home and Link Up counselling services that received funding through the Office for Aboriginal and Torres Strait Islander Health (OATSIH) for 2008–09 onwards.

OATSIH-funded services include both Indigenous community controlled health organisations and non-community controlled health organisations. Note that the OATSIH Services Reporting (OSR) only includes Aboriginal and Torres Strait Islander health organisations that receive at least some Australian Government funding to facilitate access to primary health care.

This collection, referred to as the OSR data collection replaces the Service Activity Reporting (SAR), Drug and Alcohol Services Reporting (DASR), and Bringing Them Home and Link Up counselling data collections previously collected by the OATSIH.

The counting rules used in OSR data analyses treats each auspice service as a single service and this yields a larger numerator and denominator when calculating rates whereas in earlier collections (SAR and DSAR) only the higher level service was counted. For example, a higher level service could have five auspice services under it and in OSR these will be counted as five individual services, whereas in SAR and DSAR it was counted as a single service. While this change only marginally affects the aggregate rates, caution should be exercised when comparing rates with earlier data collection periods.

The OSR data collection included 300 Australian Government-funded Aboriginal and Torres Strait Islander primary health-care services in 2010–11.

#### **In indicators:**

- 3.03 Health promotion
- 3.04 Early detection and early treatment

- 3.05 Chronic disease management
- 3.13 Competent governance
- 3.14 Access to services by types of service compared with need
- 3.22 Recruitment and retention of clinical management staff (including GPs)

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/495823>>.

### **Perinatal Deaths Collection**

The ABS perinatal deaths collection includes all perinatal deaths that occurred and were registered in Australia, including deaths of persons whose usual residence is overseas. Perinatal death statistics are produced from data collected by the ABS from the Registrar of Births, Deaths and Marriages in each State and Territory on a monthly basis.

Data in the Perinatal Deaths collection include demographic items, as well as Causes of Death information, which is coded according to the International Classification of Diseases (ICD). Perinatal statistics provide valuable information for the analysis of foetal, neonatal and perinatal deaths Australia.

While the identification of Indigenous Australians in deaths data is incomplete in all state and territory registration systems, 5 jurisdictions (NSW, Queensland, WA, SA and the NT) have been assessed by the ABS and the AIHW as having adequate identification.

Deaths registered in 2010 with a usual residence of Queensland have been adjusted to exclude deaths registered in 2010 that occurred prior to 2007. This is to minimise the impact of late registration of deaths due to recent changes in the timeliness of death registrations in Queensland.

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

Data have been combined for the 5-year period 2006–2010 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years.

#### **In indicator:**

- 1.21 Perinatal mortality

**Quality statement:** <<http://meteor.aihw.gov.au/content/index.phtml/itemId/449232>>.

### **Socio-Economic Indexes for Areas**

The ABS has developed four indexes to allow measurement of relative socioeconomic status at a small area level. These indexes summarise a range of socioeconomic variables associated with disadvantage. Each index summarises a different aspect of the socio-economic conditions of people living in an area. They each summarise a different set of social and economic information. The indexes take into account a range of factors in determining socio-economic conditions.

The indexes are:

- Index of Relative Socio-Economic Disadvantage
- Index of Relative Socio-Economic Advantage and Disadvantage
- Index of Economic Resources

- Index of Education and Occupation.

SEIFA uses a broad definition of relative socio-economic disadvantage in terms of people's access to material and social resources, and their ability to participate in society.

While SEIFA represents an average of all people living in an area, it does not represent the individual situation of each person. Larger areas are more likely to have greater diversity of people and households.

This report uses the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) in all presentation of data by SEIFA. This index is a continuum of advantage to disadvantage and is available for both urban and rural areas. Low values indicate areas of disadvantage, and high values indicate areas of advantage. It takes into account variables such as the proportion of families with high incomes, people with a tertiary education, and employment in skilled occupations (ABS 2003).

The Census does not collect all of the variables identified as being related to socioeconomic status. Some of the variables may be context-specific and some are associated with age (e.g. income), yet the methodology does not allow for age-standardisation. This is particularly relevant in the context of this performance measure where we are comparing two populations that have different age structures.

Analysis of SEIFA results at small area levels has found that within any area there will be individuals and subpopulations with very different characteristics from the overall population of the area. When judgments are made about the individual or subpopulation based on the characteristics of the area, there is considerable potential for error (Baker & Adhikari 2007). This issue is particularly relevant for the Indigenous.

**In indicator:**

- 2.09 Index of disadvantage

**Supported Accommodation Assistance Program National Data Collection**

The Supported Accommodation Assistance Program National Data Collection (SAAP NDC) was collected from 1996 to June 2011. It was designed to capture data on government response to homelessness, and focuses on services provided by agencies funded under the Supported Accommodation Assistance Program which specifically target and provide services to people who are homeless or at risk of homelessness. Therefore, service providers who do not receive government funding and general service providers (that is, which are not 'specialist homelessness agencies') are not included in this data collection.

From July 2011, the SAAP NDC was replaced by the Specialist Homelessness Services Collection (SHSC). The SHSC was developed by the AIHW in collaboration with the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs and relevant departments of all state and territory governments. Key differences between the SAAP NDC and SHSC include the expanded scope of agencies included in the SHSC, to agencies funded under the National Affordable Housing Agreement (NAHA) and National Partnership Agreement on Homelessness (NPAH); the inclusion of children as clients in their own right in SHSC (whereas accompanying children were recorded on their parent's form in SAAP NDC); and the monthly collection of client information and services provided for the SHSC (whereas SAAP NDC information was only collected at the end of a support period).

**In indicator:**

- 2.01 Housing

### **Survey of Income and Housing**

The Survey of Income and Housing is conducted by the ABS every 2 years, with the first survey beginning in 1994–95. The survey was developed to provide broad aggregates for households within Australia. The current survey was conducted during August 2007 and June 2008 and 9,345 households participated through a personal interview at their usual place of residence. The dwellings were selected through a stratified, multistage cluster design and the survey was conducted over 12 months to be representative of a yearly pattern. Participants were asked information regarding their household, including characteristics, costs, assets and liabilities and individual personal characteristics for residents over 15 years.

Very remote areas were not covered by the survey.

#### **In indicator:**

- 2.08 Income

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This report provides the latest information on how Aboriginal and Torres Strait Islander people in New South Wales are faring according to a range of indicators on health status, determinants of health and health system performance. Indicators are based on the Aboriginal and Torres Strait Islander Health Performance Framework. The report highlights the main areas of improvement and continuing concern. For example, death rates for avoidable causes and circulatory diseases have declined since 2001, but almost half of Aboriginal and Torres Strait Islander mothers smoke during pregnancy and unemployment rates continue to remain higher for Indigenous people than for non-Indigenous people.

