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Aboriginal and Torres Strait Islander

Health Performance Framework 2012 report

Western Australia

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

Aboriginal and Torres Strait Islander Health Performance Framework

2012 report

Western Australia

Australian Institute of Health and Welfare
Canberra

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Contents

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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
CIs	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, 10th revision
ICD-10-AM	International statistical classification of disease and related health problems, 10th revision, Australian modification, 4th 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
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 Western Australia finds areas of improvement in the health of Aboriginal and Torres Strait Islander people living in Western Australia, including:

- a 35% decline in overall mortality from 1991 to 2010 and a 17% decline in avoidable mortality from 1997 to 2010
- a 27% decline in deaths due to circulatory disease, the leading cause of death for Indigenous Australians from 1997–2010
- a 62% decline in infant mortality rates from 1991–2010, and a significant narrowing of the gap between Indigenous and non-Indigenous Australians
- 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 rates for Indigenous children are close to those for non-Indigenous children by age 2
- an increase in episodes of care provided by Indigenous primary health care services between 2008–09 and 2010–11 (from 305,712 to 473,132)
- some improvements in literacy for Indigenous students in Year 3 and 7 between 2008 and 2011.

Areas of concern include:

- high rates of smoking during pregnancy (51%)
- 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 (9 times the rate of non-Indigenous Australians for diabetes and twice the rate for circulatory diseases)
- no improvement in incidence rates of treated end-stage renal disease in recent years (currently 12 times the rate for non-Indigenous Australians)
- high rates of hospitalisations and deaths due to injury (particularly assault, suicide and transport accidents)
- over one-quarter (29%) of Indigenous Australians aged 15 and over in Western Australia live in overcrowded housing
- barriers to accessing appropriate health care, such as cultural competency, continue to remain a problem
- lower access to procedures in hospitals
- unemployment rates continue to remain higher for Indigenous persons than non-Indigenous Australians (17% compared with 3% in 2008).

Key findings

A summary of the key findings from this report for Western Australia 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

Overall mortality

- Between 1991 and 2010, there has been a 35% decline in the mortality rate for Aboriginal and Torres Strait Islander people living in Western Australia.

Avoidable mortality

- Deaths from avoidable causes declined by 16% for Indigenous people in Western Australia between 1997 and 2010.

Infant and child mortality

- The Indigenous infant mortality rate for Western Australia declined by 62% between 1991 and 2010, and the gap between Indigenous and non-Indigenous Australians has narrowed by 67%.
- Significant declines were also evident for child mortality, with a 44% decline in the rate for Indigenous children and a 44% narrowing of the gap between Indigenous and non-Indigenous Australians between 1991 and 2010.

Circulatory diseases

- Deaths from circulatory diseases declined by 27% for the Indigenous population in Western Australia between 1997 and 2010.

Areas needing further work

Chronic disease

- The majority of Indigenous deaths in Western Australia in 2006–2010 were due to chronic diseases (for example, circulatory disease, cancer, diabetes, respiratory disease, kidney disease). Indigenous persons died at 9 times the rate of non-Indigenous Australians from diabetes and twice the rate from circulatory diseases.
- Diabetes is 3.5 times more prevalent among the Indigenous population than the non-Indigenous population in Western Australia 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 Western Australia in 2008–2010 was almost 12 times the rate for non-Indigenous people. There has been no statistically significant change between 1991 and 2010.

Injury

- In Western Australia, hospitalisation rates for assault for Indigenous Australians were 21 times the rate for non-Indigenous Australians during 2008–10. Indigenous Australians were twice as likely to be hospitalised for intentional self-harm as non-Indigenous Australians.

Disability

- In 2008, more than half (52%) of Indigenous Australians aged 18 and over in non-remote areas of Western Australia had a disability or long-term health condition. Of these, about 8% had a profound or severe core activity limitation, which was twice the rate of non-Indigenous Australians.

Low birthweight

- Low birthweight is nearly 3 times as common among babies of Indigenous mothers as among babies of non-Indigenous mothers in Western Australia (15% compared with 6%), and has not shown any signs of improvement in recent years.

Determinants of health

Areas of improvement

Access to functional housing

- In 2008, almost all Indigenous households in Western Australia reported that they had working facilities for washing people (98.6%), 94.2% reported working facilities for washing clothes/bedding, 93.1% reported working facilities for storing/preparing food and 99.3% reported working sewerage systems.

Education

- There have been some increases in the proportion of Indigenous Year 3 and Year 7 students achieving literacy benchmarks between 2008 and 2011 in Western Australia, and the gap has narrowed. For example, the proportion of Indigenous students achieving the Year 3 reading benchmark increased from 57% to 70%; the proportion reaching the Year 3 grammar/punctuation benchmark increased from 51% to 59%; and the proportion reaching the Year 7 reading benchmark increased from 63% to 73%.

Risky alcohol consumption

- In 2004–05, the proportion of Indigenous adults in Western Australia that reported drinking at risky/high-risk levels in the last 12 months (43%) was lower than the proportion of Indigenous adults nationally (47%), and similar to the proportion for non-Indigenous adults in Western Australia (42%).

Areas needing further work

Smoking

- In 2008, 41% of Indigenous people aged 15 and over in Western Australia were current daily smokers, which although lower than the proportion for Indigenous people nationally (45%), was two and a half times the rate for non-Indigenous people in Western Australia.

Smoking during pregnancy

- In 2009, 51% of Indigenous mothers living in Western Australia smoked during pregnancy which was 3 times the rate for non-Indigenous mothers.

Physical activity, nutrition, overweight & obesity

- In 2004–05, 52% of Indigenous people aged 15 and over reported their physical activity level as sedentary, compared with 30% of non-Indigenous people of the same age in Western Australia.
- Compared with non-Indigenous people in Western Australia, Aboriginal and Torres Strait Islander people aged 12 and over were 7 times as likely to report no usual daily vegetable intake, and more than twice as likely to report no usual daily fruit intake.
- About 35% of Indigenous persons aged 18 years and over in Western Australia were obese in 2004–05 compared with 17% of non-Indigenous persons.

Overcrowding

- According to the 2008 National Aboriginal and Torres Islander Social Survey (NATSISS), about 29% of Indigenous Australians aged 15 years and over in Western Australia lived in overcrowded households, compared with 2% of non-Indigenous Australians.

Unemployment

- Unemployment rates continue to remain higher for Indigenous people in Western Australia than corresponding rates for non-Indigenous Australians (17% compared with 3% in 2008).

Education

- Despite some improvements in literacy and numeracy, the proportion of Indigenous students in Western Australia achieving the reading, writing and numeracy benchmarks in Years 3, 5, 7 and 9 remain below the corresponding proportions for all students.

Income

- In 2008, 52% of Aboriginal and Torres Strait Islander people living in Western Australia were in the bottom 20% of mean equivalised household incomes. This compared with 17% of non-Indigenous persons in Western Australia.

Transport

- In 2006, 30% of Indigenous households in Western Australia reported that they did not have ready access to motor vehicles.

- In 2008, about 10% of Aboriginal and Torres Strait Islander people aged 15 years 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 Western Australia 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 Western Australia since the introduction of the National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes in July 2009.
- There has been also been an increase in the total number of allied healthcare services claimed through Medicare by Indigenous Australians in Western Australia between 2009–10 and 2010–11 from 6,116 to 11,816 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 Western Australia in 2010–11.

Increased availability of Indigenous-specific services

- There has been an increase in episodes of care provided by Indigenous primary health care services in Western Australia between 2008–09 and 2010–11 (from 305,712 to 473,132).

Immunisation

- Immunisation coverage rates for Indigenous children in Western Australia are close to those for other children by the age of 2 (88% compared with 91%).

Areas needing further work

Access to health care

- In 2008 in Western Australia, 21% of Indigenous Australians aged 15 and over reported having problems accessing dentists, 11% reported problems accessing doctors, and 8% reported problems accessing hospitals. These proportions were higher than those reported for Indigenous people nationally.
- Indigenous Australians had lower rates of hospitalisations with a procedure recorded compared with non-Indigenous Australians in Western Australia.
- Indigenous Australians resident in Western Australia were discharged from hospital against medical advice at almost 6 times the rate of non-Indigenous Australians between July 2008 and June 2010.

Screening

- Breast cancer screening rates in Western Australia for Indigenous women aged 50–64 are lower than for other women of this age (28% compared with 57% in 2008–09), and are lower than for Indigenous women nationally.

Health workforce

- In 2006, 1.5% of Indigenous persons aged 15 and over living in Western Australia were employed in health-related occupations, which was lower than the proportion of Indigenous people nationally (2.0%).
- Aboriginal and Torres Strait Islander people are under-represented in training for various health professions. In 2010, 1.5% of undergraduate students enrolled in, and 1% of undergraduate students who had completed, health-related courses in Western Australia were Aboriginal and/or Torres Strait Islander.

Table S1: Key measures of Aboriginal and Torres Strait Islander health, Western Australia and national(a)

		National	Western Australia					
		Current period	Current period			Trends		
Topic	Measure—Indigenous population	Indig	Indig	Non-Indig	Gap(b)	Indig	Non-Indig	Gap(b)
Health status and outcomes								
Low birthweight	Proportion of low-birthweight liveborn babies per 100 live births (2007–2009)	12.3	15.0*	5.7*	9.3	—	—	—
Hospitalisations	Age-standardised hospitalisation rate for total hospitalisations (excluding dialysis) per 1,000 population (2008–09 to 2009–10)	408.5	480.8*	315.2*	165.6	↓	↑	↓
Disease incidence and prevalence	Proportion (age-standardised) of persons reporting circulatory disease as a long-term condition (2004–05)	21.7	20.1*	16.9*	3.2	n.a.	n.a.	n.a.
	Proportion (age-standardised) of persons reporting diabetes as a long-term condition (2004–05)	12.6	16.9*	4.8*	12.1	n.a.	n.a.	n.a.
	Age-standardised incidence rate of cancer per 100,000 population (2004–2008)	458.8	425.4*	472.0*	–46.6	n.a.	n.a.	n.a.
	Age-standardised incidence rate of end-stage renal disease per 100,000 population (2008–2010)	68.3	107.1*	9.2*	97.9	—	↑	—
Self-assessed health status	Proportion (age-standardised) of persons aged 15 and over reporting very good/excellent health (2007–08)	37.9	35.3*	57.9*	–22.6	n.a.	n.a.	n.a.
Community functioning	Recognises homeland (2008)	72	75	. .	. .	n.a.	. .	. .
	Speaks an Indigenous language (2008)	19	23	. .	. .	n.a.	. .	. .
	Lived in only 1 dwelling in last 12 months (2008)	78	77	. .	. .	n.a.	. .	. .
	Not a victim of physical or threatened violence in the last 12 months (2008)	75	72	. .	. .	n.a.	. .	. .
	Adult participated in sport/social/community activities in last 3 months (2008)	89	87	. .	. .	n.a.	. .	. .
Social & emotional wellbeing	Proportion of persons reporting high/very high levels of psychological distress (2008)	31.7	33.3	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	8.0*	4.9*	3.1	n.a.	n.a.	n.a.

(continued)

Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, Western Australia and national(a)

		National	Western Australia					
		Current period	Current period			Trends		
Topic	**Measure—Indigenous population**	**Indig**	**Indig**	**Non-Indig**	**Gap(b)**	**Indig**	**Non-Indig**	**Gap(b)**
Oral, ear and eye health	Age-standardised hospitalisation rate per 1,000 population for hospitalisations for dental problems (2008–09 to 2009–10)	2.0	1.6*	2.2*	–0.6	n.a.	n.a.	n.a.
	Proportion of children aged 0–14 with ear/hearing problems (2008)	8.6	9.0	n.a.	n.a.	n.a.	n.a.	n.a.
	Prevalence of low vision in eligible Indigenous adults (2008)	9.4	12.0	. .	. .	n.a.	. .	. .
	Prevalence of blindness in eligible Indigenous adults (2008)	1.9	1.8	. .	. .	n.a.	. .	. .
Mortality	Life expectancy at birth, males 2005–2007	67.2	65.0*	79.0*	–12.0	n.a.	n.a.	n.a.
	Life expectancy at birth, females 2005–2007	72.9	70.4*	82.9*	12.5	n.a.	n.a.	n.a.
	Infant mortality rate per 1,000 liveborn infants (2006–2010)	8.1	8.3*	3.0*	5.3	↓	↓	↓
	Child 0–4 mortality rate per 100,000 population (2006–2010)	217.5	268.7*	76.6*	198.1	↓	↓	↓
	Perinatal mortality rate per 1,000 births (2006–2010)	12.0	13.8*	10.3*	3.5	n.a.	n.a.	n.a.
	Age-standardised mortality rate per 100,000 population (2006–2010)	1115.1	1,431.2*	574.2*	857.0	↓	↓	—
	Age-standardised mortality rate for circulatory diseases per 100,000 population (2006–2010)	351.0	414.8*	181.2*	233.6	↓	↓	—
	Age-standardised mortality rate for avoidable and preventable deaths (0–74) per 100,000 population (2006–2010)	519.4	684.7*	141.9*	542.8	↓	↓	—
Determinants of health								
Housing	Proportion of people aged 15 and over living in overcrowded households (2008)	25.1	28.5*	1.8*	26.7	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	17.6*	3.4*	14.2	n.a.	n.a.	n.a.

(continued)

Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, Western Australia and national[a]

		National	Western Australia					
		Current period	Current period			Trends		
Topic	**Measure—Indigenous population**	**Indig**	**Indig**	**Non-Indig**	**Gap[b]**	**Indig**	**Non-Indig**	**Gap[b]**
Education	Apparent retention rate for year 7/8 to Year 12—males (2011)	46.1	38.8*	75.8*	–37.0	n.a.	n.a.	n.a.
	Apparent retention rate for year 7/8 to Year 12—females (2011)	51.3	42.0*	86.4*	–44.4	n.a.	n.a.	n.a.
	Apparent retention rate for year 11 to Year 12—males (2011)	66.4	51.5*	78.0*	–26.5	n.a.	n.a.	n.a.
	Apparent retention rate for year 11 to Year 12—females (2011)	68.5	53.9*	85.1*	–31.2	n.a.	n.a.	n.a.
	Proportion of persons aged 25–64 who had a post-school qualification (2008)	40.2	39.7*	60.0*	–20.3	n.a.	n.a.	n.a.
Literacy & numeracy	Proportion of Year 3 students achieving reading benchmark (2011)	76.3	70.0*	93.8*	–23.8	↑	↑	↓
	Proportion of Year 3 students achieving writing benchmark (2011)	79.9	79.8*	96.5*	–16.7	—	↓	—
	Proportion of Year 3 students achieving numeracy benchmark (2011)	83.6	86.9*	96.0*	9.1	—	—	—
	Proportion of Year 3 students achieving grammar/punctuation benchmark (2011)	70.9	59.3*	93.3*	–34.0	↑	↑	↓
Employment	Labour force participation rate (2008)	64.5	67.7*	82.6*	–5.1	n.a.	n.a.	n.a.
	Unemployment rate (2008)	16.6	16.9*	2.9*	14.0	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)	49.2	52.0*	16.9*	35.1	n.a.	n.a.	n.a.
Transport	Proportion of households with at least one motor vehicle (2006)	71.9	70.0*	90.2*	–20.2	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	23.9*	12.9*	21.0	n.a.	n.a.	n.a.
	Age-standardised imprisonment rate per 100,000 adults (2011)	1,867.6	3,105.7*	170.1*	2935.6	↑	↑	↑
	Rate of children aged 0–16 on child protection substantiations per 1,000 children (2010–11)	34.9	17.9*	1.4*	17.9*	n.a.	n.a.	n.a.

(continued)

Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, Western Australia and national(a)

		National	Western Australia					
		Current period	Current period			Trends		
Topic	**Measure—Indigenous population**	**Indig**	**Indig**	**Non-Indig**	**Gap**(b)	**Indig**	**Non-Indig**	**Gap**(b)
Health behaviours	Proportion (age-standardised) of persons aged 15 and over who are current daily smokers (2008 and 2007–08)	44.6	41.3*	16.1*	25.2	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	43	42	1	n.a.	n.a.	n.a.
	Proportion of persons aged 18 and over who used illicit drugs in last 12 months (2008)	23.3	25.1	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	52*	30*	22	n.a.	n.a.	n.a.
	Age- standardised proportion of mothers who smoked during pregnancy (2009)	51.9	52.7*	12.2*	40.5	n.a.	n.a.	n.a.
	Proportion of infants (0–3) currently being breastfed (2008)	20.7	30.6*	20.7*	9.9	n.a.	n.a.	n.a.
Overweight & obesity	Proportion (age-standardised) of persons aged 18 and over who are obese (2004–05)	33.7	35.2*	17.4*	17.8	n.a.	n.a.	n.a.
Health System Performance								
Early detection and prevention, health promotion	Proportion of 2 year olds fully vaccinated (2011)	92.3	88.0(c)	91.0(c)	–3.0	n.a	n.a	n.a.
	Proportion of discrete Indigenous communities with at least one health promotion program (2006)	67.4	60.6	. .	. .	n.a.	. .	. .
	Age-standardised participation rates for women aged 50–69 in BreastScreen Australia programs (2008–09)	36.5	28.1*(c)	57.2*(c)	–29.1	n.a.	n.a.	n.a.
	Rate per 1,000 of child 0–14 health checks (2010–11)	112.5	93.3	n.a.	n.a.	↑	n.a.	n.a.
	Rate per 1,000 of adult 15–54 health assessments (2010–11)	120.0	116.3	n.a.	n.a.	↑	n.a.	n.a.
	Rate per 1,000 of adult 55+ health assessments (2010–11)	209.3	236.8	n.a.	n.a.	↑	n.a.	n.a.

(continued)

Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, Western Australia and national(a)

		National	Western Australia					
		Current period	Current period			Trends		
Topic	**Measure—Indigenous population**	**Indig**	**Indig**	**Non-Indig**	**Gap(b)**	**Indig**	**Non-Indig**	**Gap(b)**
Chronic disease management/care planning	Age-standardised rate per 1,000 of General Practice Management Plans (GPMP)s (2010–11)	102	85*	35*	50	n.a	n.a	n.a.
	Age-standardised rate per 1,000 of Team Care Arrangements (TCAs) (2010–11)	83	60*	25*	35	n.a	n.a	n.a.
	Age-standardised rate per 1,000 of allied health items claimed (2010–11)	599	242*	257*	–15	↑	n.a.	n.a.
	Age-standardised proportions of whether person in non-remote areas have a written asthma action plan (2004–05)	17.7	16.6	15.1	1.5	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	60.5*	86.0*	–19.5	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	413.6*	31.8*	381.8	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	1.7*	0.3*	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	37.8	. .	. .	n.a.	. .	. .
	Proportion of Indigenous persons experiencing discrimination (2008)	27.3	33.7	. .	. .	n.a.	. .	. .
	Proportion of Indigenous persons aged 15 and over experiencing problems accessing health services (2008)	29.9	33.5	. .	. .	n.a.	. .	. .
Access to health services	Age-standardised rate per 1,000 population of MBS non-GP referred services claimed (2010–11)	6,376	5,069*	4,531*	538	n.a.	n.a.	n.a.
	Proportion aged 15 and over who had problems accessing a dentist (2008)	19.5	20.5	n.a.	n.a.	n.a.	n.a.	n.a.
	Proportion aged 15 and over who had problems accessing a doctor (2008)	9.5	11.1	n.a.	n.a.	n.a.	n.a.	n.a.
	Proportion aged 15 and over who had problems accessing a hospital (2008)	6.6	8.4	n.a.	n.a.	n.a.	n.a.	n.a.
	Episodes of health care provided by Indigenous primary health care services (2010–11)	2498,067	473,132	. .	. .	↑	. .	. .

(continued)

Table S1 (continued): Key measures of Aboriginal and Torres Strait Islander health, Western Australia and national(a)

		National	Western Australia					
		Current period	Current period			Trends		
Topic	**Measure—Indigenous population**	**Indig**	**Indig**	**Non-Indig**	**Gap(b)**	**Indig**	**Non-Indig**	**Gap(b)**
Access to health services	Elective surgery waiting times in public hospitals—50th percentile (days) (2010–11)	39	32	29	3	n.a.	n.a.	n.a.
	Emergency department waiting times—proportion meeting national benchmark (2010–11)	66	62	59	3	n.a.	n.a.	n.a.
	Age-standardised community mental health-care service contacts per 1,000 population (2009–10)	841.8	554.4*	284.5*	269.9	n.a.	n.a.	n.a.
	Proportion of presentations to emergency departments which were after hours (2008–09 to 2009–10)	57.6	57.9	55.7	2.2	n.a.	n.a.	n.a.
	Whether usually goes to the same GP/health service (2004–05)	91.0	90.2	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	99.6	100.0	0.4	n.a.	n.a.	n.a.
	Proportion of Indigenous primary health care services accredited (2010–11)	70.9	71.9	. .	. .	n.a.	. .	. .
Workforce, training and resources	Indigenous health workforce as a proportion of the Indigenous population aged 15+ (2006)	2.0	1.5	. .	. .	n.a.	. .	. .
	Per cent of undergraduates enrolled in health related courses who were Indigenous (2010)	1.8	1.5	. .	. .	n.a.	. .	. .
	Per cent of VET students enrolled in health related courses who were Indigenous (2010)	4.7	6.4	. .	. .	n.a.	. .	. .
	Estimated health expenditure per person (2008–09)	$4,758	$5,226*	$1,932*	$3,294	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 health system performance relating to Aboriginal and Torres Strait Islander people in Western Australia. 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, assess to secondary/tertiary care, the health workforce and expenditure.

The tiers and domains of the HPF and selected measures are shown in Figure 1. There are currently 68 indicators that can be reported against at national level but not all can be reported for Western Australia 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		
Health conditions 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	**Human function** 1.13 Community functioning 1.14 Disability 1.15 Ear health 1.16 Eye health	**Deaths** 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
	Life expectancy and wellbeing 1.17 Perceived health status 1.18 Social and emotional wellbeing 1.19 Life expectancy at birth	

Tier 2 - Determinants of health		
Environmental factors 2.01 Housing 2.02 Access to functional housing with utilities 2.03 Environmental tobacco smoke	**Community capacity** 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	**Health behaviours** 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
Socioeconomic factors 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		**Person-related factors** 2.22 Overweight and obesity

Tier 3 - Health system performance		
Effective/appropriate/efficient 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	**Accessible** 3.14 Access to services compared with need 3.15 Access to prescription medicines* 3.16 Access to after-hours primary health care	**Capable** 3.19 Accreditation 3.20 Aboriginal and Torres Strait Islander people training for health related disciplines
Responsive 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	**Continuous** 3.17 Regular GP or health service 3.18 Care planning for chronic diseases	**Sustainable** 3.21 Expenditure on Aboriginal and Torres Strait Islander health compared to need 3.22 Recruitment and retention of staff

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

* Measures for which Western Australia 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 Western Australia as at 30 June 2011 was about 88,000 people (ABS 2012), accounting for more than 13% of Australia's Indigenous population. Indigenous people represent 3.8% of the Western Australian population, which is slightly higher than the proportion of Indigenous people in the total Australian population (3.0%).

Table 1: Preliminary estimated resident population by Indigenous status, Western Australia 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.
Western Australia	88,277	13.2	2,263,938	10.5	2,352,215	10.5	3.8	96.2
Australia[(a)]	**669,736**	**100.0**	**21,654,197**	**100.0**	**22,323,933**	**100.0**	**3.0**	**97.0**

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

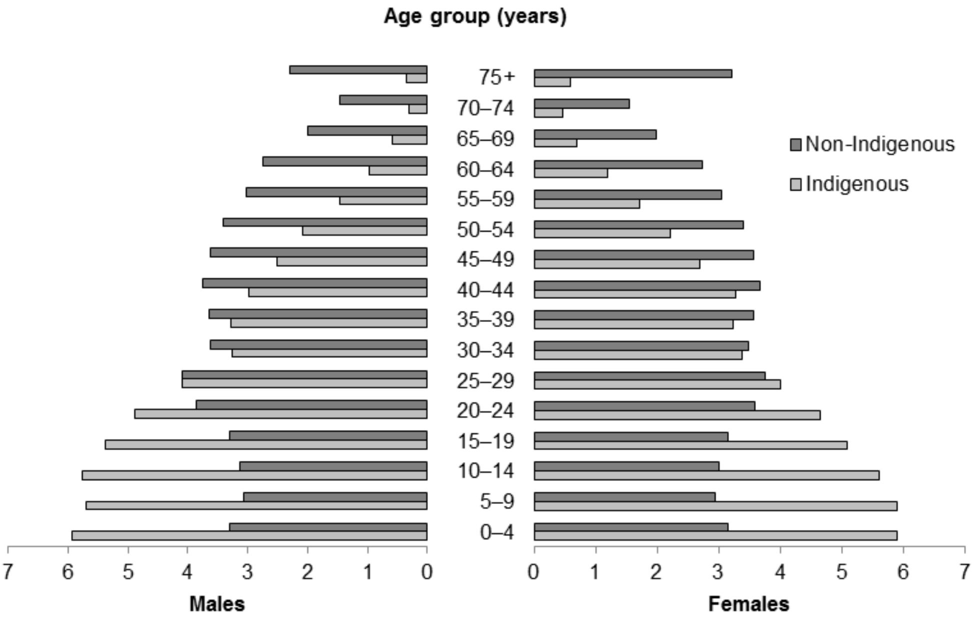
Source: AIHW analysis of ABS preliminary population estimates based on 2011 Census.

The Aboriginal and Torres Strait Islander population has an age structure that is significantly younger than that of other Australians. For example, in Western Australia, Aboriginal and Torres Strait Islander people aged under 15 constitute 34.8% of the Indigenous population, whereas this age group represents about 19.2% of the total Western Australian population. Conversely, those aged 65 and over comprise only 3.0% of the Indigenous population in Western Australia, compared with 12.1% of the total Western Australian population (Figure 2).

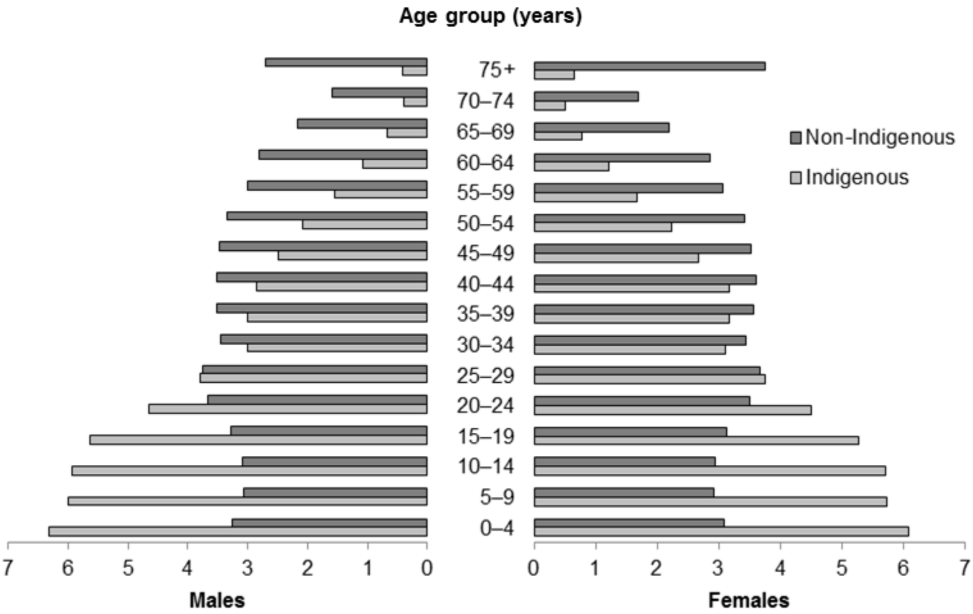
In 2006 in Western Australia, more than half of Aboriginal and Torres Strait Islander people lived in *Major cities* (34.4%), *Inner regional* (8.0%) and *Outer regional* areas (14.9%). Over one-third lived in *Remote* (17.1%) and *Very remote* (25.5%) areas. In Australia, about three-quarters of the total Indigenous population in Australia live in *Major cities* (32.1%), *Inner regional* (21.4%) and *Outer regional* areas (21.9%), with just under one-quarter in *Remote* (9.3%) and *Very remote* (15.4%) areas (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.

Western Australia



Australia



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

Figure 2: Population profile, by Indigenous status, age and sex, Western Australia and Australia, 2011

Table 2: Estimated resident population by remoteness area and Indigenous status, Western Australia and Australia, 2006

	Indigenous		Non-Indigenous		Total			
	No.	**Per cent**	**No.**	**Per cent**	**No.**	**Per cent**	**Per cent Indig.**	**Per cent Non-Indig.**
			Western Australia					
Major cities	24,429	34.4	1,446,074	72.7	1,470,503	71.4	1.7	98.3
Inner regional	5,711	8.0	252,859	12.7	258,570	12.6	2.2	97.8
Outer regional	10,601	14.9	180,956	9.1	191,557	9.3	5.5	94.5
Remote	12,159	17.1	80,588	4.1	92,747	4.5	13.1	86.9
Very remote	18,066	25.5	27,938	1.4	46,004	2.2	39.3	60.7
Western Australia	**70,966**	**100.0**	**1,988,415**	**100.0**	**2,059,381**	**100.0**	**3.4**	**96.6**
			Australia					
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
Australia	**517,043**	**100.0**	**20,180,837**	**100**	**20,697,880**	**100**	**2.5**	**97.5**

Note: 2011 Census estimates are not yet available by remoteness.

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 Chapter 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. Western Australia had adequate identification Indigenous identification for hepatitis B, hepatitis C, chlamydia, syphilis and gonorrhoea for the current reporting period.

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

Health conditions

- 1.01 Low birthweight
- 1.02 Top reasons for hospitalisation
- 1.03 Injury and poisoning
- 1.04 Respiratory disease
- 1.05 Circulatory disease
- 1.06 Acute rheumatic fever and 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 and sexually transmissible infections

Human function

- 1.13 Community functioning
- 1.14 Disability
- 1.15 Ear health
- 1.16 Eye health

Life expectancy and wellbeing

- 1.17 Perceived health status
- 1.18 Social and emotional wellbeing
- 1.19 Life expectancy at birth

Health outcomes

- 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

* Data is not available for Western Australia 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 Western Australia 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.

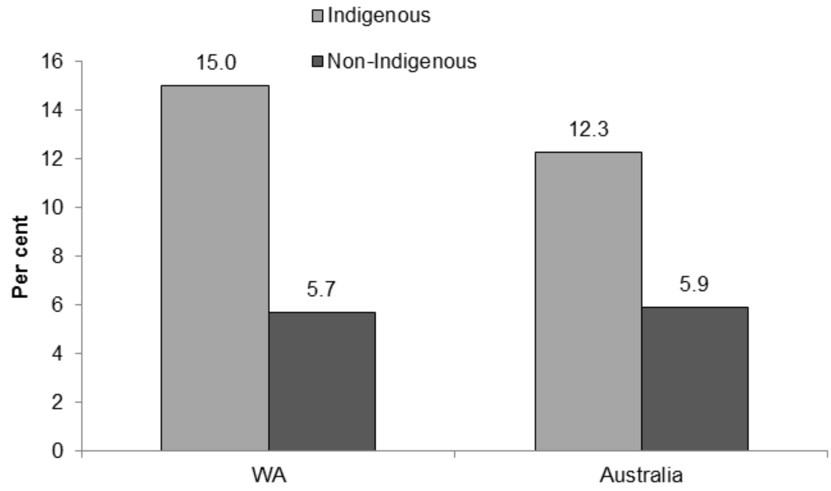
1.01 Low birthweight

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.

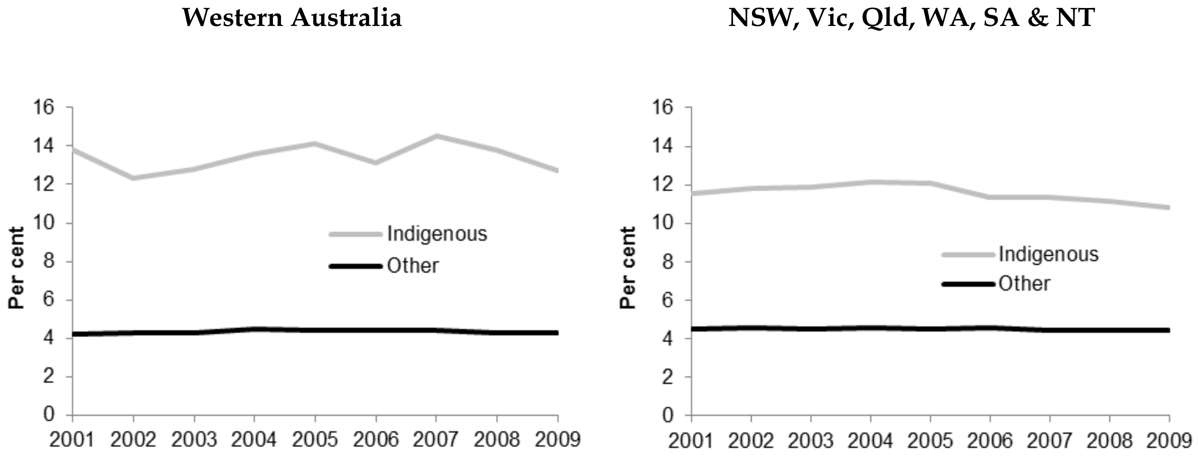
Key findings

- Over the 3 years from 2007 to 2009 in Western Australia, liveborn babies born to Indigenous mothers were nearly 3 times as likely to be of low birthweight as liveborn babies born to non-Indigenous mothers (15% compared with 6%) (Figure 1.01.1).
- These figures were slightly higher for Australia; however, babies born to Indigenous mothers were around twice as likely to be of low birthweight as babies born to non-Indigenous mothers (12% compared with 6%) (Figure 1.01.1).
- From 2001 to 2009 in Western Australia, there were no significant changes in the proportions of low birthweight singleton babies born to Indigenous and other Australian mothers (Figure 1.01.2).
- Over the same period in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there was a significant decrease of 8% over the period in the proportion of low birthweight singleton babies born to Indigenous mothers and no significant change in the proportion of low birth weight babies born to other Australian mothers.



Source: AIHW (unpublished) National Perinatal Data Collection.

Figure 1.01.1: Proportion of low birthweight liveborn babies, by Indigenous status of mother, Western Australia and Australia, 2007–2009



Source: AIHW analyses of NPSU National Perinatal Data Collection (unpublished).

Figure 1.01.2: Proportion of low birthweight singleton liveborn babies, by Indigenous status of mother, Queensland and NSW, Vic, Qld, WA, SA & NT combined, 2001–2009

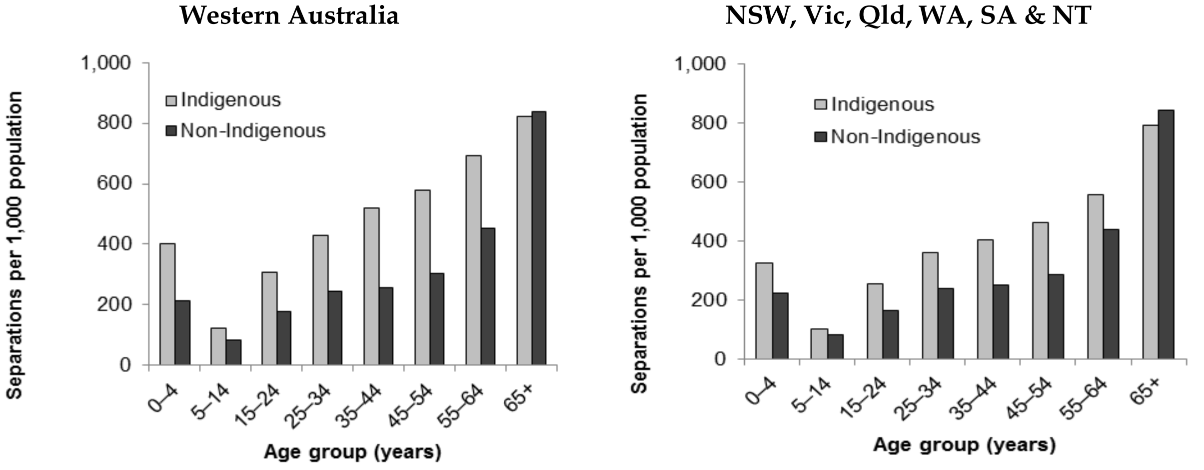
1.02 Top reasons for hospitalisation

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 10th 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 Western Australia, there were 1,436,758 hospitalisations (excluding dialysis), 4% of which were of Indigenous people (Table 1.02.2, Appendix 2). Indigenous people in Western Australia were hospitalised at 1.5 times the rate of non-Indigenous people, which is higher than the rate ratio in the six jurisdictions combined (New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined) (1.3 times).
- In Western Australia, when hospitalisations for dialysis are excluded, Indigenous people had higher hospitalisations rates than non-Indigenous people across all age groups, except in the 65 and over age group where the rate was similar. The greatest differences were for those aged 0–4, 35–44 and 45–54, where Indigenous people were hospitalised at about twice the rate of non-Indigenous people in the corresponding age groups (Figure 1.02.1).
- The most common principal diagnosis for hospitalisations among Indigenous people in Western Australia was injury and poisoning, followed by diseases of the respiratory system. These were also the two most common principal diagnoses for hospitalisations among Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and Northern Territory combined (Table 1.02.1).
- The greatest differences in hospitalisation rates between Indigenous and non-Indigenous Australians in Western Australia were for diseases due to injury & poisoning & certain other consequences of external causes (rate difference 42.4 per 1,000 population) and diseases of the respiratory system (rate difference 42.1 per 1,000 population) (Table 1.02.1).
- Between 1998–99 and 2009–10 in Western Australia there was significant decrease in the total hospitalisation rate (excluding dialysis) for Indigenous people (average yearly decrease of 4.4 per 1,000 population) and a significant increase in the rate for non-Indigenous people (average yearly increase of 3.1 per 1,000 population), leading to a significant decrease in the gap (32%).
- In 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 2.2 per 1,000 for Indigenous Australians and 3.3 per 1,000 for non-Indigenous people) (Figure 1.02.2).
- Between 2004–05 and 2009–10 in Western Australia, there was no significant change in the total hospitalisation rate (excluding dialysis) for Indigenous people, but a significant increase in the rate for non-Indigenous people (8%), leading to a significant decrease in the gap (14%).
- Over the same period, in New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory combined, there were significant increases in the total hospitalisations rates (excluding dialysis) for Indigenous and non-Indigenous people (13% and 7%, respectively), and a significant increase in the gap (34%) (Figure 1.02.2a, Appendix 2).


Western Australia

NSW, Vic, Qld, WA, SA & NT

Source: AIHW analyses of National Hospital Morbidity Database.

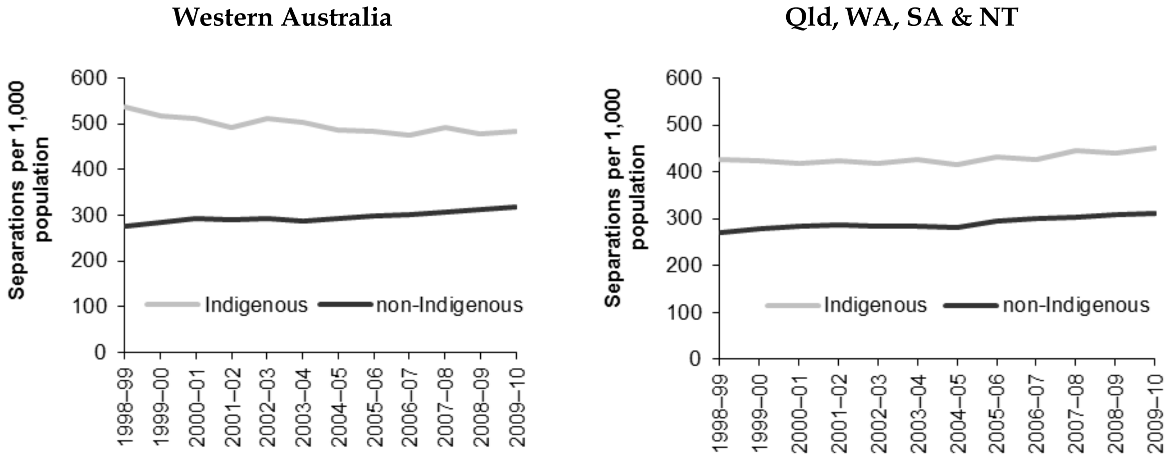
Figure 1.02.1: Age-specific hospitalisation rates (excluding dialysis), by Indigenous status, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010

Table 1.02.1: Age-standardised hospitalisation rates (per 1,000 population) by principal diagnosis and Indigenous status, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010

	Western Australia				NSW, Vic, Qld, WA, SA & NT			
Principal diagnosis	**Indig.**	**Non-Indig.**	**Rate Ratio**	**Rate Diff.**	**Indig.**	**Non-Indig.**	**Rate Ratio**	**Rate Diff.**
Injury & poisoning	65.2	22.8	2.9*	42.4*	46.9	23.5	2.0*	23.4*
Respiratory diseases	56.2	14.0	4.0*	42.1*	43.2	16.0	2.7*	27.3*
Digestive diseases	38.3	38.5	1.0	–0.2	36.1	37.1	0.97*	–1.0*
Symptoms, signs and abnormal findings	37.0	23.2	1.6*	13.8*	36.0	24.0	1.5*	12.0*
Circulatory diseases	35.5	18.5	1.9*	17*	33.9	19.8	1.7*	14.0*
Pregnancy and childbirth	35.2	21.4	1.6*	13.9*	33.0	21.8	1.5*	11.1*
Mental and behavioural disorders	32.8	12.9	2.6*	20*	25.8	14.2	1.8*	11.6*
Endocrine, nutritional and metabolic diseases	29.2	8.6	3.4*	20.6*	20.0	6.9	2.9*	13.1*
Genitourinary Diseases	22.8	16.1	1.4*	6.7*	20.0	16.9	1.2*	3.1*
Skin diseases	18.9	5.7	3.3*	13.2*	13.2	5.7	2.3*	7.5*
Infectious and parasitic diseases	13.8	4.8	2.9*	9.1*	11.3	5.3	2.1*	5.9*
Other	95.8	128.8	0.7	–33.0	89.2	118.8	0.8*	–29.6
Subtotal	480.8	315.2	1.5*	165.6*	408.5	310.0	1.3*	98.5*
Care involving dialysis	764.0	49.2	15.5*	714.8*	446.8	40.9	10.9*	405.9*
Total	**1,244.8**	**364.4**	**3.4***	**880.3***	**855.3**	**351.1**	**2.4***	**504.2***

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

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.02.2: Age-standardised hospitalisation rates (excluding dialysis) by Indigenous status, Western Australia and Qld, WA, SA & NT combined, 1998–99 to 2009–10

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).

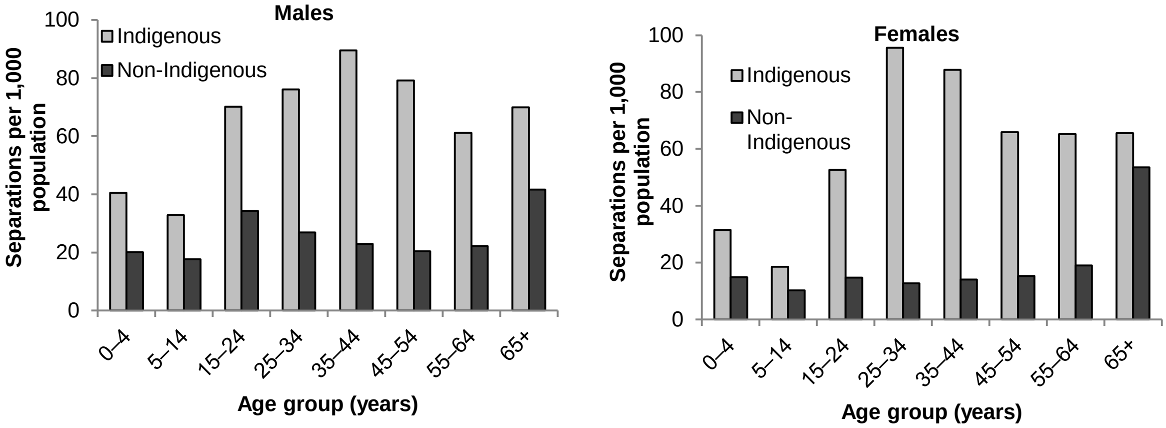
Injury data can be viewed in terms of the damage sustained to the body (for example, broken bones, head injuries), or by the external cause of the injury (for example, falls, poisoning and drowning), both of which are recorded by hospitals on admission.

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

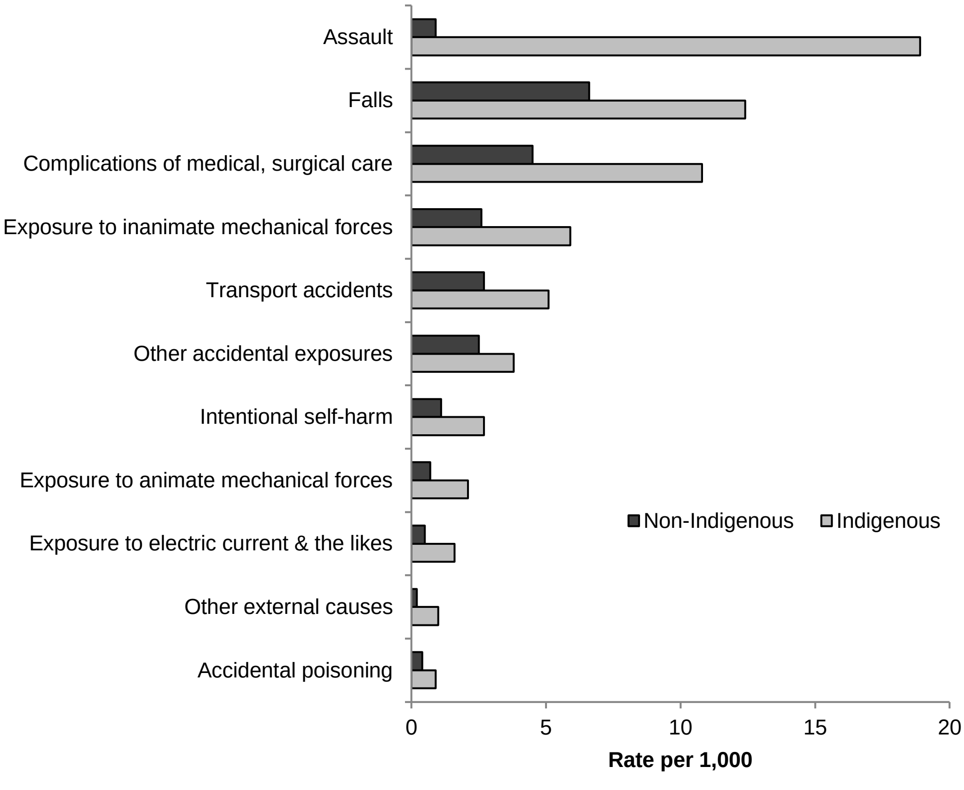
- Between July 2008 and June 2010, there were 8,796 hospitalisations of Indigenous people in Western Australia with a principal diagnosis of injury and poisoning in Western Australia (Table 1.03.1, Appendix 2).
- After adjusting for differences in age-structure, Indigenous people were hospitalised for injury and poisoning at almost 3 times the rate of non-Indigenous people in Western Australia (65.2 compared with 22.8 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 in Western Australia (Figure 1.03.1). The same pattern was evident in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, except for females aged 65 and over where the rate was similar (Figure 1.03.1).

- Between July 2008 and June 2010 in Western Australia, assault was the most common cause of hospitalisation for Indigenous people with a principal diagnosis of injury and poisoning (31%), followed by accidental falls (16%). These two external causes were also the most common cause of hospitalisation for Indigenous people with a principal diagnosis of injury and poisoning in the six jurisdictions combined (Table 1.03.2, Appendix 2).
- Indigenous people in Western Australia were hospitalised for assault at 21 times the rate of non-Indigenous people and for exposure to animate mechanical forces at 3 times the rate of non-Indigenous people (Figure 1.03.2). In the six jurisdictions combined, ratios were 12 and 2 times for these diagnoses respectively (Table 1.03.2, Appendix 2).
- Between 1998–99 and 2009–10 in Western Australia there was significant decrease in the hospitalisation rate for injury and poisoning for Indigenous people of 0.5 per 1,000 population per year, while there was significant increase in the rate for non-Indigenous people (average yearly increase of 0.1 per 1,000 population).
- In Queensland, Western Australia, South Australia and the Northern Territory combined, there was no significant change in the hospitalisation rate among Indigenous people, but a significant increase for non-Indigenous people over this period (an average yearly increase of 0.2 per 1,000) (Figure 1.03.3).
- Between 2004–05 to 2009–10 in Western Australia, there was no significant change in the hospitalisation rate for injury and poisoning for Indigenous people, but a significant increase in the rate for non-Indigenous people (11%).
- Over the same period, in New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory combined, there were significant increases in hospitalisation rates for injury and poisoning for Indigenous and non-Indigenous people (14% and 9%, respectively), and a significant increase in the gap (19%) (Figure 1.03.3a, Appendix 2).



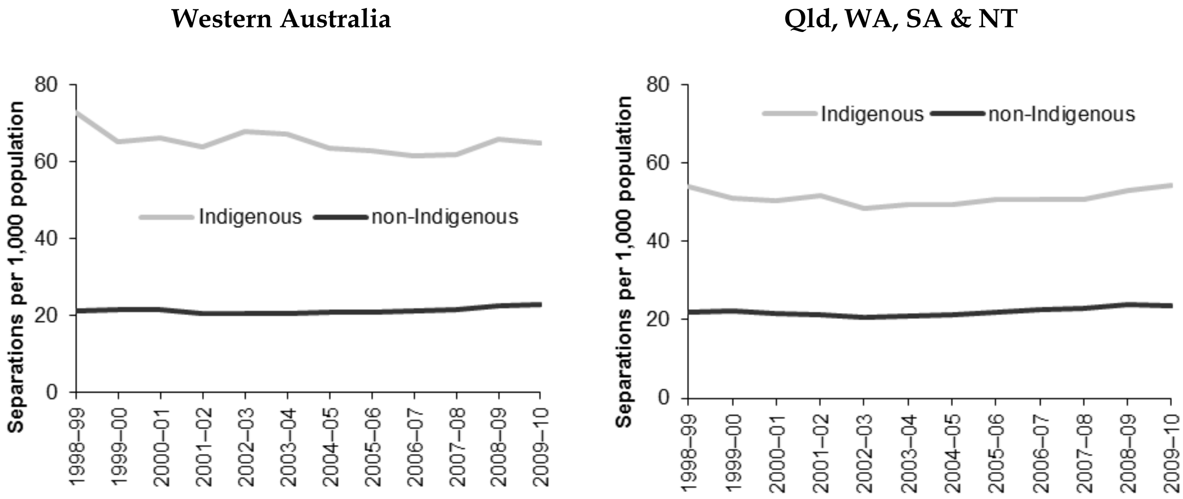
Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.03.1: Age-specific hospitalisation rates for a principal diagnosis of injury and poisoning, by Indigenous status and sex, Western Australia, July 2008 to June 2010



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, Western Australia, July 2008 to June 2010



Western Australia

Qld, WA, SA & NT

Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.03.3: Age-standardised hospitalisation rates for injury and poisoning, by Indigenous status, Western Australia and Qld, WA, SA & NT combined, 1998–99 to 2009–10

1.04 Respiratory diseases

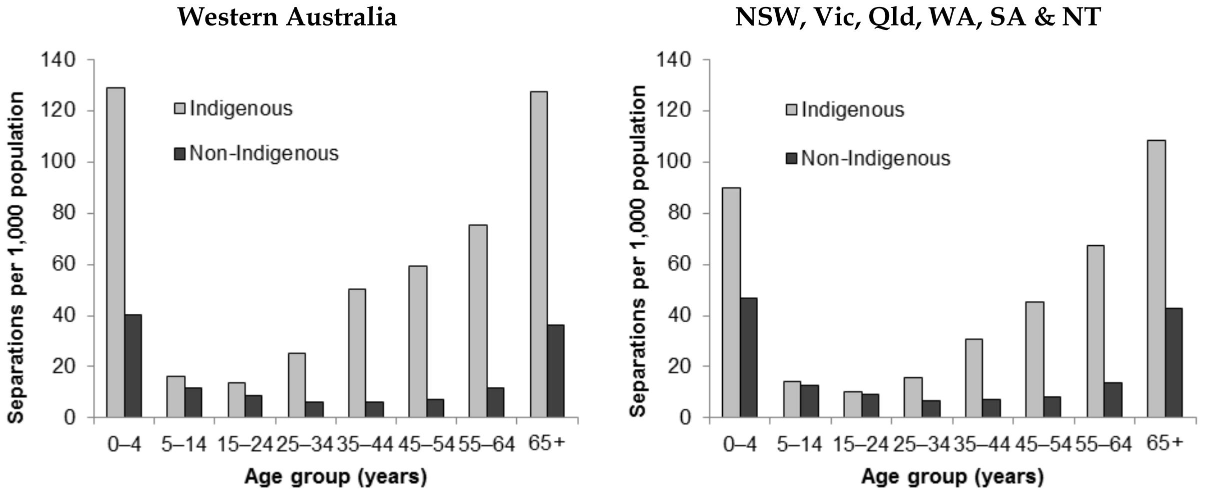
Respiratory diseases are leading causes of illness, disability and mortality around the world. Common among them are asthma, chronic obstructive pulmonary disease, influenza and pneumonia. While all respiratory diseases result in high use of health services, pneumonia and chronic obstructive pulmonary 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 Western Australia, there were 6,722 hospitalisations of Indigenous people with a principal diagnosis of respiratory diseases (rate of 56.2 per 1,000 population) (Table 1.04.1).
- After adjusting for differences in age structure, Indigenous people in Western Australia were hospitalised for respiratory diseases at 4 times the rate of non-Indigenous people (Table 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 Western Australia were hospitalised for respiratory diseases at a higher rate than non-Indigenous people in all age groups in Western Australia. The biggest differences were in the 35–44 and 45–54 age groups, where Indigenous hospitalisation rates were about 8 times as high as 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 Western Australia, Indigenous people were hospitalised for respiratory diseases at a rate of 56.2 per 1,000 population which was higher than the rate for Indigenous people in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (43.2 per 1,000) (Table 1.04.1).
- In Western Australia, there was a significant decline 31% and 18%, respectively in hospitalisation rates for respiratory diseases among both Indigenous and non-Indigenous people from 1998–99 to 2009–10. Over the same period in Queensland, Western Australia, South Australia and the Northern Territory combined there was a significant decrease in the hospitalisation rate for respiratory diseases among Indigenous people (12%), but no significant change in the rate for non-Indigenous people, leading to a significant decrease in the gap (15%) (Figure 1.04.2).
- Between 2004–05 and 2009–10 in Western Australia, there was no significant change in hospitalisation rates for respiratory diseases among Indigenous and non-Indigenous people. Over this period, a similar pattern was observed for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (Figure 1.04.2a, Appendix 2).



Source: AIHW analyses of National Hospital Morbidity Database.

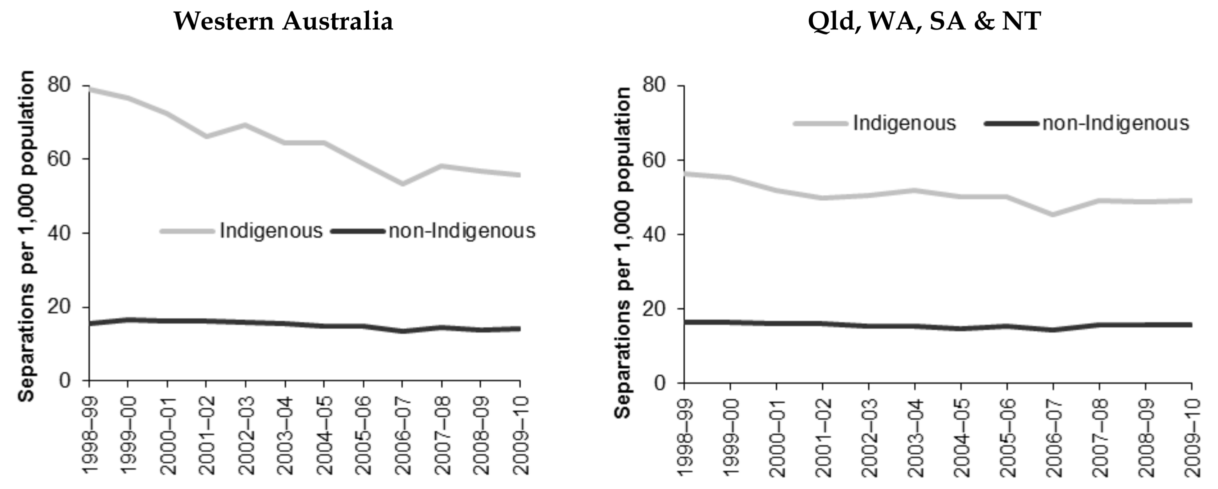
Figure 1.04.1: Age-specific hospitalisation rates for all respiratory diseases, by Indigenous status, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010

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

	Western Australia				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	3,274	54.5	3.6*	39.3*	17,475	43.3	2.5*	25.8*
Females	3,448	58.1	4.5*	45.0*	17,868	43.5	3.0*	28.8*
Persons	6,722	56.2	4.0*	42.1*	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.



Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.04.2: Age standardised hospitalisation rates for all respiratory diseases, by Indigenous status, Western Australia and Qld, WA, SA & NT combined, 1998–99 to 2009–10

1.05 Circulatory disease

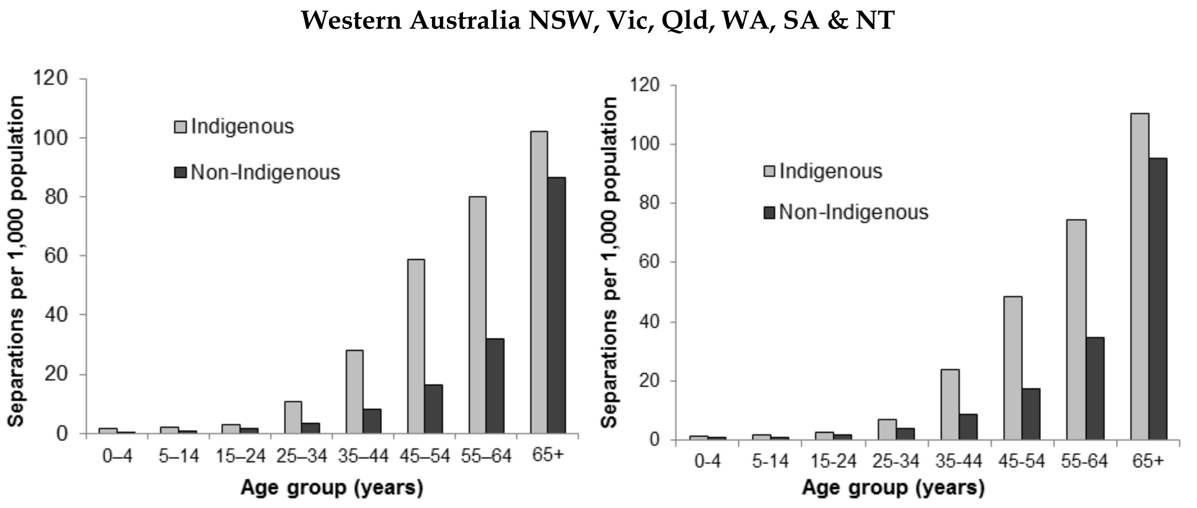
Cardiovascular diseases include coronary heart disease, stroke, peripheral vascular disease, heart failure and rheumatic heart disease. Collectively, these diseases are the largest cause of death in Australia, and account for the largest health-care expenditure of any disease group (AIHW 2011a). Circulatory 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 Western Australia, 8.4% of Indigenous males and 13.5% of Indigenous females reported heart or circulatory conditions as a long-term condition. This compared with 9.5% and 14% of Indigenous males and females nationally (Table 1.05.1, Appendix 2).
- In Western Australia, after adjusting for differences in age-structure, Indigenous females were more likely than non-Indigenous females to report heart and circulatory conditions, except for males in Western Australia. The proportion of Indigenous and non-Indigenous males reporting heart and circulatory conditions was similar (Table 1.05.1, Appendix 2).
- Prevalence of heart and circulatory conditions was highest among Indigenous people aged 55 and over (about 48% in Western Australia and 54% in Australia). In Western Australia, the greatest disparity in prevalence rates between Indigenous and non-Indigenous people was in the 45–54 age group (difference of 11.2, ratio of 2.2) (Table 1.05.1, Appendix 2).
- Between July 2008 and June 2010, there were 2,872 hospitalisations of Indigenous people in Western Australia with a principal diagnosis of circulatory disease. Indigenous people in Western Australia were hospitalised for circulatory diseases at a rate of 35.5 per 1,000 population. This was similar to 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 Western Australia were hospitalised for circulatory diseases at 1.6 and 2.3 times the rate of non-Indigenous males and females in Western Australia (Table 1.05.2, Appendix 2).
- Indigenous people in Western Australia had higher hospitalisation rates for circulatory disease than non-Indigenous people across all age groups. The greatest difference in hospitalisation rates occurred in the 25–34, 35–44 and 45–54 age groups where Indigenous people were hospitalised at over 3 times the rate of non-Indigenous people (Figure 1.05.1).
- Of all hospitalisations with a principal diagnoses of circulatory disease, ischaemic heart disease was the most common reason for hospitalisation among Aboriginal and Torres Strait Islander people (43% in both Western Australia and six jurisdictions combined) (Table 1.05.2, Appendix 2).
- Aboriginal and Torres Strait Islander people in Western Australia were hospitalised for ischaemic heart disease at almost 3 times the rate of non-Indigenous people. This compares with 2.3 times the rate of non-Indigenous people in the six jurisdictions combined (Table 1.05.2, Appendix 2).
- In Western Australia, over both the long term (1998–99 to 2009–10) and short term (2004–05 to 2009–10) there was a significant decrease in hospitalisation rates for circulatory disease among Indigenous people (16% and 9%, respectively). Over the long term there was also a significant decrease in the rate among non-Indigenous people (17%), but there was no significant change in the non-Indigenous rate over the short term (Figure 1.05.2; Figure 1.05.2a, Appendix 2).
- Between 1998–99 and 2009–10, in Queensland, Western Australia, South Australia and the Northern Territory combined, there was no significant change in the hospitalisation rate for circulatory disease among Indigenous people, but there was a significant decline

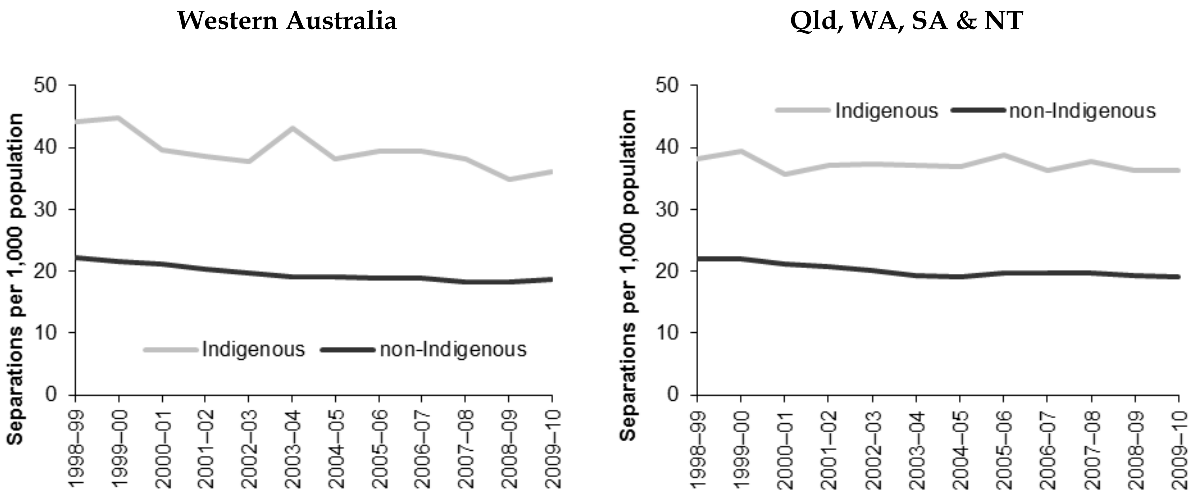
in hospitalisation rates among non-Indigenous people (average annual decline of 0.2 per 1,000). A similar pattern was seen in the short term (2004–05 to 2009–10) for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (Figure 1.05.2; Figure 1.05.2a, Appendix 2).



Western Australia NSW, Vic, Qld, WA, SA & NT

Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.05.1: Age-specific hospitalisation rates with a principal diagnosis of circulatory disease, by Indigenous status, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010



Western Australia

Qld, WA, SA & NT

Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.05.2: Age-standardised hospitalisation rates for circulatory disease, by Indigenous status, Western Australia and Qld, WA, SA & NT combined, 1998–99 to 2009–10

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.

Key findings

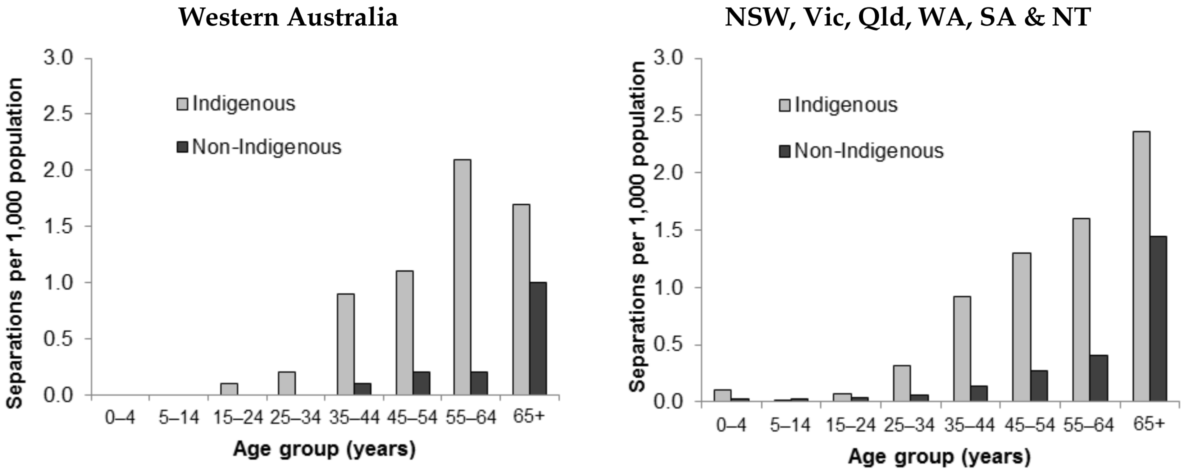
- In 2004–05 in Western Australia, about 6% of Indigenous males and 8% of Indigenous females in Western Australia reported high blood pressure or hypertension. This was similar to the proportions reported for Indigenous people nationally (7% for males and 8% for females) (Table 1.07.1).
- In 2004–05 in Western Australia, after adjusting for differences in age structure between the Indigenous and non-Indigenous populations, Indigenous males were slightly more likely to have reported high blood pressure or hypertension than non-Indigenous males (rate ratio 1.1). Indigenous females were more likely than non-Indigenous females to have reported high blood pressure or hypertension (rate ratio of 1.5).
- In both Western Australia and nationally, high blood pressure or hypertension was most prevalent among those aged 55 and over for both Indigenous and non-Indigenous Australians (Table 1.07.1).
- Prevalence of high blood pressure or hypertension was higher among Indigenous people in remote areas of Western Australia (7% for males and 9% for females) than among Indigenous people in non-remote areas (5% for males and 8% for females). Similar trends were also observed nationally (Table 1.07.2, Appendix 2).
- Between July 2008 and June 2010 in Western Australia, Indigenous Australians were hospitalised with a principal diagnosis of hypertensive disease at 0.8 per 1,000 population. This was slightly lower than the rate in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (0.9 per 1,000 population) (Table 1.07.3, Appendix 2).
- After adjusting for differences in age structure, Indigenous people in Western Australia were hospitalised for hypertensive disease at almost 4 times the rate of non-Indigenous people (Table 1.07.3, Appendix 2).
- In Western Australia, Indigenous people had higher hospitalisation rates for hypertensive disease than non-Indigenous people across all age groups. The greatest difference in rates was in the 35–44 age group where Indigenous people were hospitalised at 9.4 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, Western Australia and Australia, 2004–05

	Male		Female	
Age group	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
		Western Australia		
25–34	5	5	3	2
35–44	15	4	9	4
45–54	22	19	33	16
55+	33	36	44	34
Crude proportion	6	n.a.	8	n.a.
Total age-standardised	**13**	**12**	**17**	**11**
		Australia		
25–34	4	3	5	2
35–44	14	6	11	4
45–54	22	15	24	13
55+	39	32	46	36
Crude proportion	7	n.a.	8	n.a.
Total age-standardised	**14**	**10**	**16**	**10**

n.a. Not available.

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



Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.07.1: Age-specific hospitalisation rates for principal diagnosis of hypertensive disease, by Indigenous status, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010

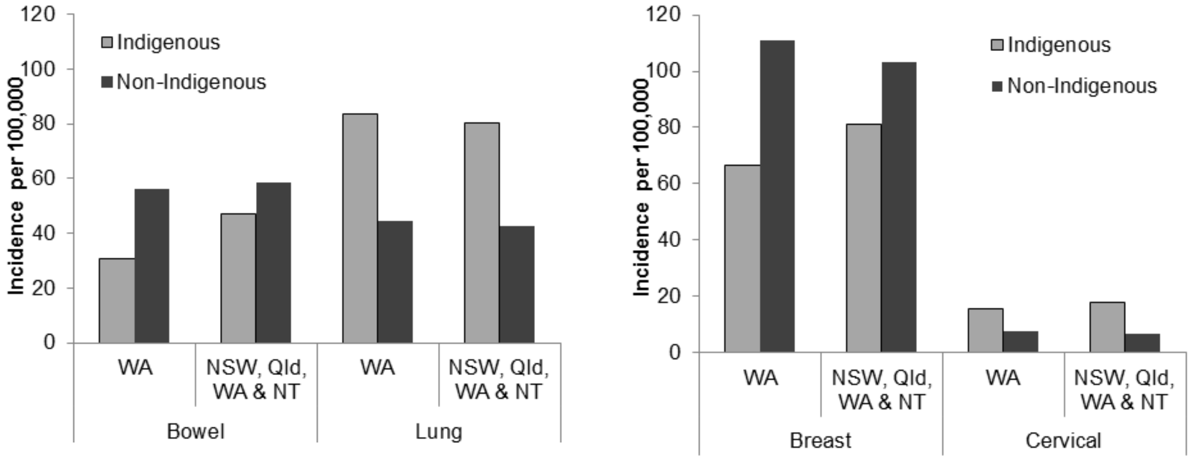
1.08 Cancer

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.

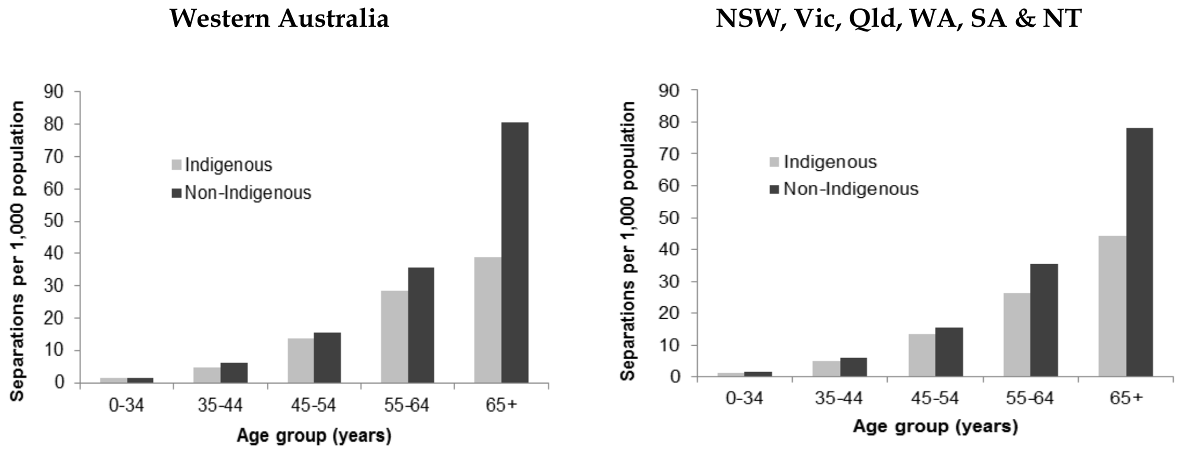
Key findings

- 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 Western Australia in 2004–08 shows that lung cancer and cervical cancer incidence rates are much higher among the Indigenous population than the non-Indigenous population: 1.9 and 2.0 times higher 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 Western Australia 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 (11 per 1,000 population compared with 17 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). The lower hospitalisation rate for Indigenous people with cancer may be due to a lack of access to hospital services to treat such conditions, rather than a lower prevalence of cancer in the Indigenous population.
- Between July 2008 and June 2010, hospitalisation rates for neoplasms for Indigenous people in Western Australia were lower than the rates for non-Indigenous people in all age groups, except 0–34 age group. Indigenous people had lower hospitalisation rates for neoplasms than non-Indigenous people in all age groups for New South Wales, Victoria, Queensland, Western Australia, South Australia and Northern Territory combined (Figure 1.08.2).
- From 1998–99 to 2009–10 in Western Australia, there were significant increases in hospitalisation rates for cancer among both Indigenous and non-Indigenous people (an average yearly increase of 0.3 per 1,000 population for both). In Queensland, Western Australia, South Australia and the Northern Territory combined, there were also significant increases in hospitalisation rates among Indigenous and non-Indigenous people (an average yearly increase of 0.3 per 1,000 for Indigenous Australians and 0.2 per 1,000 for non-Indigenous people) (Figure 1.08.3).
- Over the short-term period 2004–05 and 2009–10 in Western Australia, there was no significant change in the hospitalisation rate for cancer among Indigenous people, but a significant increase among non-Indigenous people (8%) (Figure 1.08.3a, Appendix 2).
- Between 2006 and 2010 in Western Australia, there were 351 deaths of Indigenous Australians due to cancer, of which 68 deaths were due to lung cancer. The mortality rate from all cancer for Indigenous people in Western Australia was 1.5 as high as that for non-Indigenous people. Indigenous people died from lung cancer at 1.8 times the rate, and from cervical cancer at 6 times the rate, of non-Indigenous people (Table 1.08.1).



Source: AIHW analyses of Cancer Registry Data.

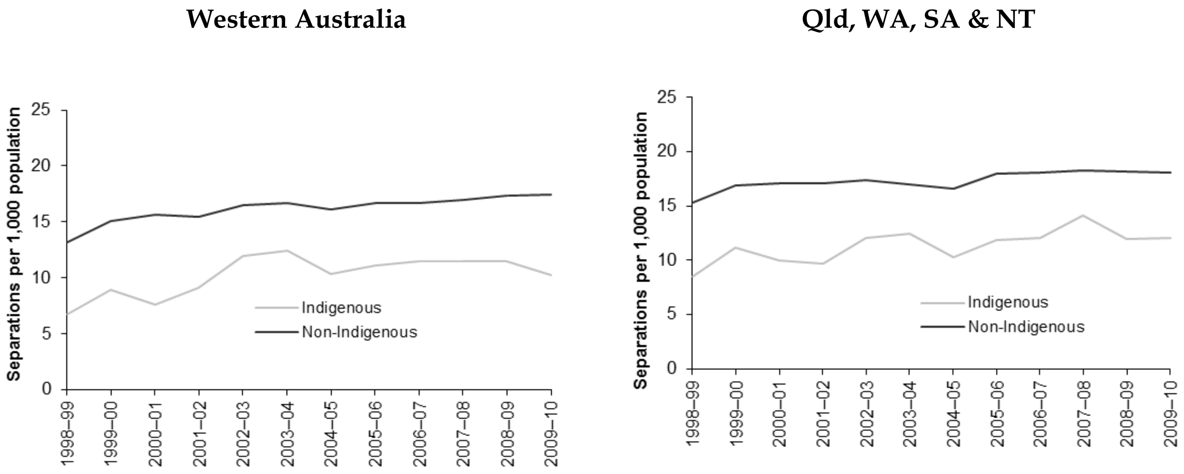
Figure 1.08.1: Age-standardised incidence rates of selected cancers by Indigenous status, Western Australia and NSW, Qld, WA and NT combined, 2004–08


Western Australia

NSW, Vic, Qld, WA, SA & NT

Source: AIHW analyses of National Hospital Morbidity Database.

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


Western Australia

Qld, WA, SA & NT

Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.08.3: Age-standardised hospitalisation rates from cancer (neoplasms), Western Australia and Qld, WA, SA and NT combined, 1998–99 to 2009–10

Table 1.08.1: Cancer mortality, by Indigenous status, Western Australia and NSW, Qld, WA, SA and NT combined, 2006–2010

	Number		Per cent		Rate per 100,000			
Underlying cause of death	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Rate ratio**	**Rate difference**
				Western Australia				
Digestive organ cancers (C15–C26)	104	4,973	29.6	26.8	74.9	47.3	1.6*	27.6*
Lung cancer (C34)	68	3,628	19.4	19.5	60.8	34.5	1.8*	26.3*
Cervical cancer (C53)	11	123	3.1	0.7	7.0	1.2	6.0*	5.8*
Total neoplasms (C00–C97, D00–D48)	**351**	**18,569**	**100.0**	**100.0**	**264.5**	**177.0**	**1.5***	**87.5***
				NSW, Qld, WA, SA and NT				
Digestive organ cancers (C15–C26)	594	38,528	28.2	26.8	67.9	47.7	1.4*	20.2*
Lung cancer (C34)	502	27,064	23.8	18.9	59.6	33.4	1.8*	26.1*
Cervical cancer (C53)	58	793	2.8	0.6	4.8	1.0	4.8*	3.8*
Total neoplasms (C00–C97, D00–D48)	**2,107**	**143,569**	**100.0**	**100.0**	**244.6**	**178.0**	**1.4***	**66.6***

* 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.

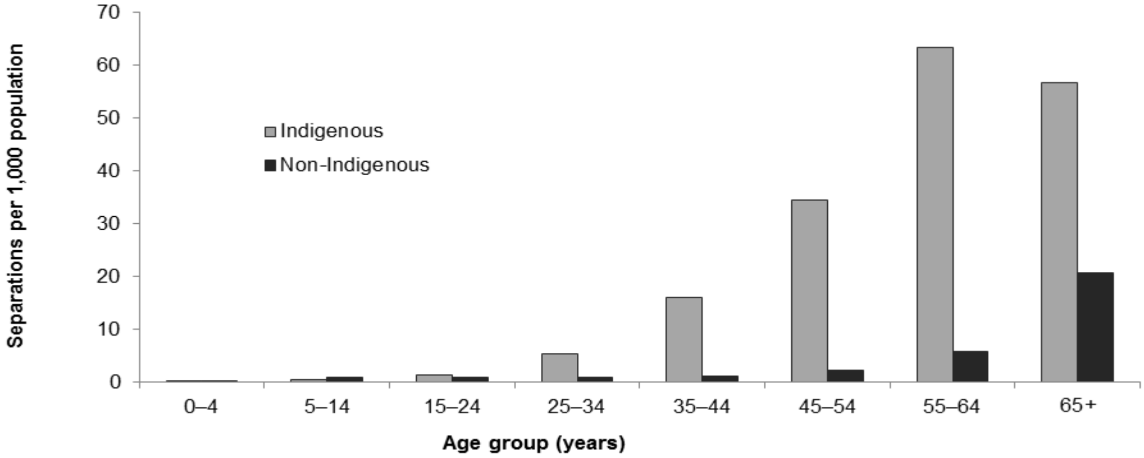
Key findings

- In 2004–05 in Western Australia, about 8% of Indigenous males and 9% of Indigenous females reported diabetes or high sugar levels. These were higher than the proportions nationally (5% and 7% respectively) (Table 1.09.1).
- Diabetes was similar among Indigenous people living in remote areas of Western Australia (9%) and Indigenous people in non-remote areas (8%) (Table 1.09.1).
- After adjusting for differences in age structure, Indigenous people were more than 3 times as likely to report diabetes or high sugar levels as non-Indigenous people. Prevalence of diabetes was highest among Indigenous and non-Indigenous people aged 55 and over (43% and 14% respectively) (Table 1.09.2, Appendix 2).
- Between July 2008 and June 2010, there were 1,715 hospitalisations of Indigenous people resident in Western Australia with a principal diagnosis of diabetes mellitus. Indigenous people were hospitalised with a principal diagnosis of diabetes at a rate of 21.2 per 1,000 population. This was higher 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 were hospitalised for diabetes at 5.3 times the rate of non-Indigenous people in Western Australia (Table 1.09.3, Appendix 2).
- Indigenous people had much higher hospitalisation rates for diabetes than non-Indigenous people in all age groups from 15–24 onwards. The greatest difference in rates was in the 45–54 age group where Indigenous people were hospitalised at over 15 times the rate of non-Indigenous people (Figure 1.09.1).
- Between 2001–02 and 2009–10 in Western Australia, there were significant increases in hospitalisation rates for diabetes among Indigenous and non-Indigenous people (an average yearly increase of 0.7 per 1,000 population for Indigenous and 0.2 per 1,000 for non-Indigenous), and a significant increase in the gap (30%). A similar pattern was observed in Queensland, Western Australia, South Australia and the Northern Territory combined (Figure 1.09.2).
- Between 2004–05 and 2009–10 in Western Australia, there was no significant change in the hospitalisation rate for diabetes among Indigenous people, but a significant increase among non-Indigenous people (28%). A similar pattern was observed in the total of jurisdictions with adequate Indigenous identification over this period (New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory) (Figure 1.09.2a, Appendix 2).

Table 1.09.1: Aboriginal and Torres Strait Islander people reporting diabetes/high sugar levels, by sex and remoteness area, Western Australia and Australia, 2004–05

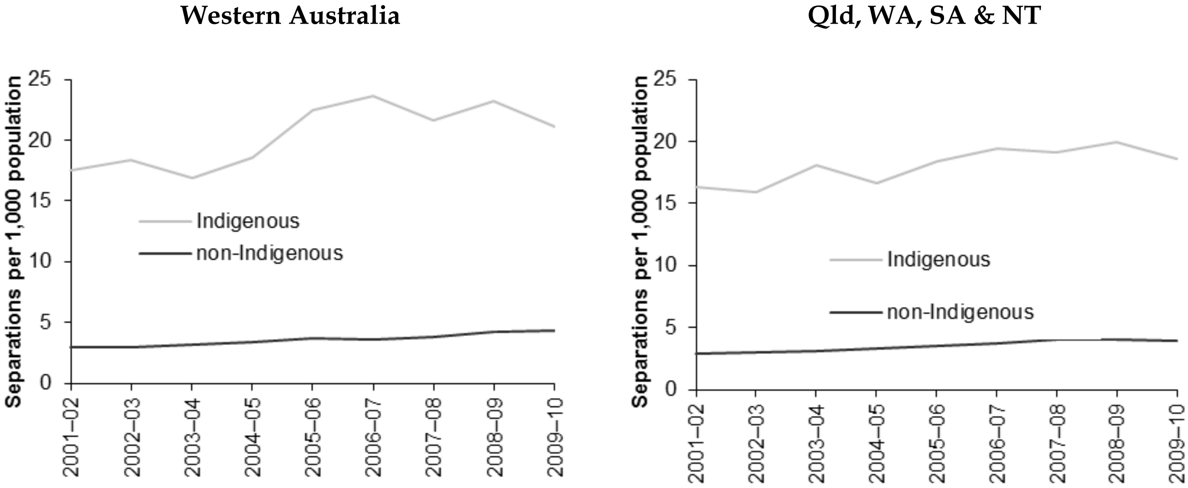
	Western Australia			Australia		
	Male	Female	Total	Male	Female	Total
	Per cent			Per cent		
Remote	8	10	9	8	10	9
Non-remote	8	8	8	4	6	5
Total	**8**	**9**	**8**	**5**	**7**	**6**

Source: AIHW analyses of NATSIHS 2004–05.



Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.09.1: Age-specific hospitalisation rates for a principal diagnosis of diabetes, by Indigenous status and age group, Western Australia, July 2008 to June 2010



Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.09.2: Age-standardised hospitalisation rates for diabetes, by Indigenous status, Western Australia and Qld, WA, SA & NT combined, 2001–02 to 2009–10

1.10 Kidney disease

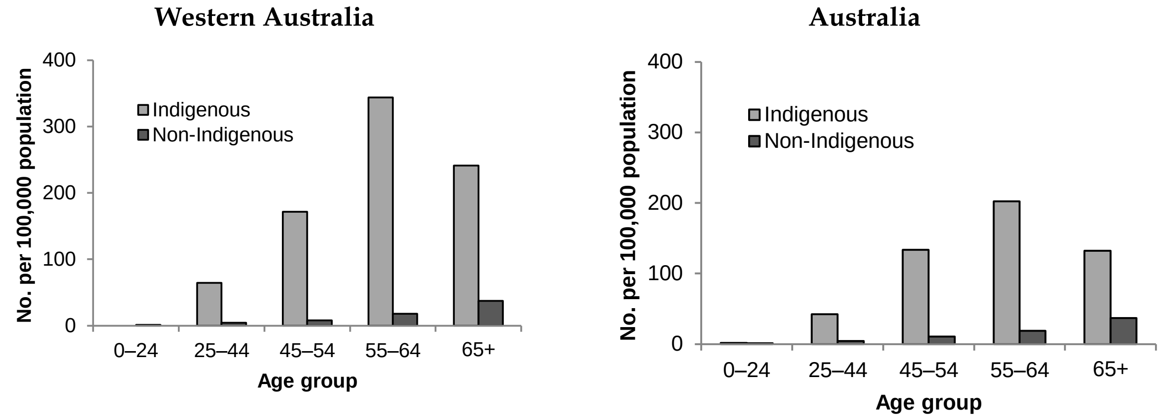
The kidneys can be damaged by various acute illnesses (for example, severe infections) or by progressive damage from chronic conditions such as elevated blood pressure (untreated hypertension) and long-standing high blood sugar levels (untreated diabetes). If the kidneys cease functioning entirely (known 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.

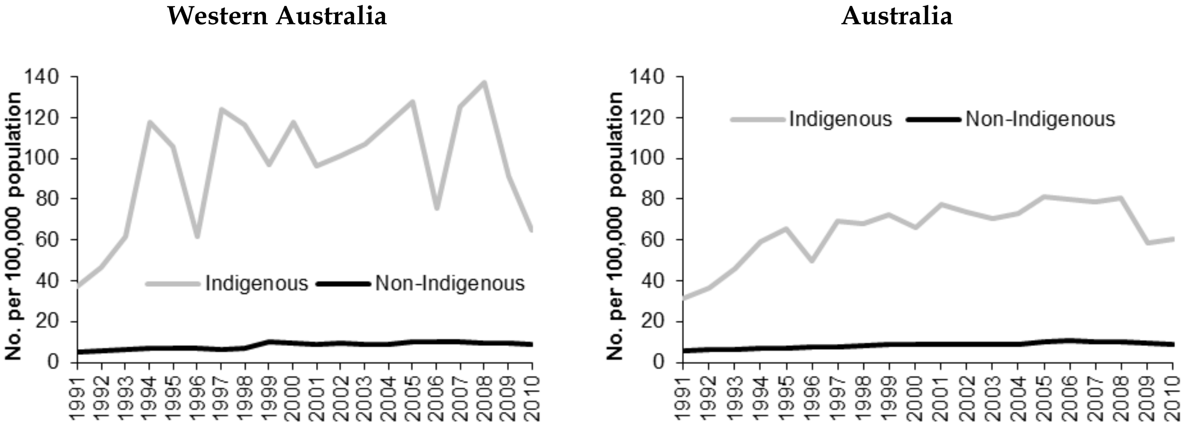
Key findings

- Between 2008 and 2010 in Western Australia, there were 132 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 almost 12 times as high as non-Indigenous Australians (107 compared with 9.2 per 100, 000). Incidence rates were similar for Western Australia and nationally (Table 1.10.1, Appendix 2).
- In Western Australia, the incidence rate of ESRD for Indigenous Australians was higher than for non-Indigenous Australians across all age groups except for those aged 0–24. The greatest disparity in incidence rates occurred in the 45–54 age group, where the incidence rate for Indigenous Australians was 21.2 times the rate for non-Indigenous Australians (Figure 1.10.1).
- Between 1991 and 2010, there was no significant change in the incidence rate of ESRD among Indigenous people in Western Australia. There was a significant increase in the incidence rate among non-Indigenous people, averaging 0.2 cases per 100,000 per year (Figure 1.10.2). These data should be interpreted with caution due to the small number of cases among Indigenous people each year in Western Australia.
- 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 lower in Western Australia than in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (773.8 compared with 453.0 per 1,000 population). Indigenous males were hospitalised for chronic kidney disease at 11 times the rate, and Indigenous females at 24 times the rate, of non-Indigenous Australians in Western Australia (Figure 1.10.3).



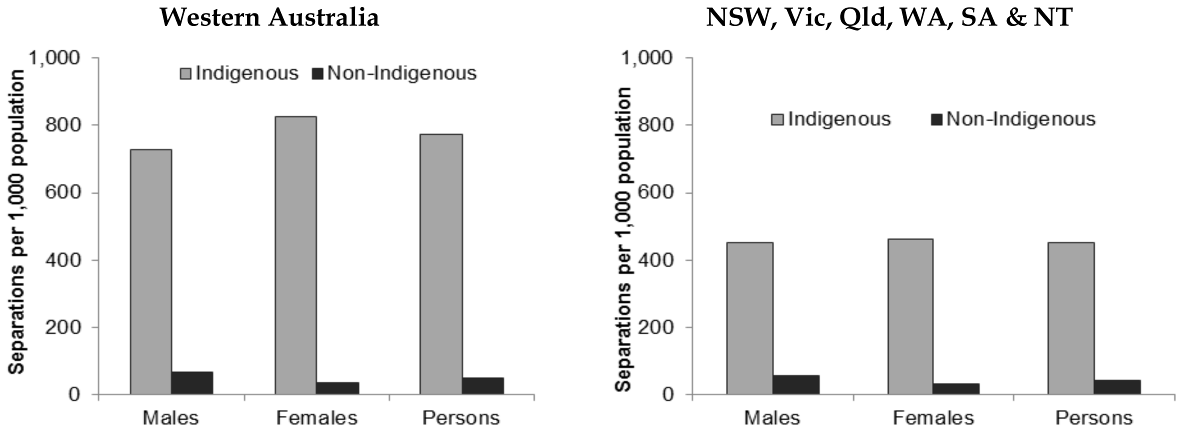
Source: AIHW analyses of Australian and New Zealand Dialysis and Transplant Registry.

Figure 1.10.1: Age-specific incidence rates of end-stage renal disease by Indigenous status and age group, Western Australia and Australia, 2008–2010



Source: AIHW analyses of Australian and New Zealand Dialysis and Transplant Registry.

Figure 1.10.2: Age-standardised incidence rates of end-stage renal disease by Indigenous status, Western Australia and Australia, 1991–2010


Western Australia

NSW, Vic, Qld, WA, SA & NT

Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.10.3: Age standardised hospitalisation rates for dialysis and chronic kidney disease by Indigenous status and sex, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010

1.11 Oral health

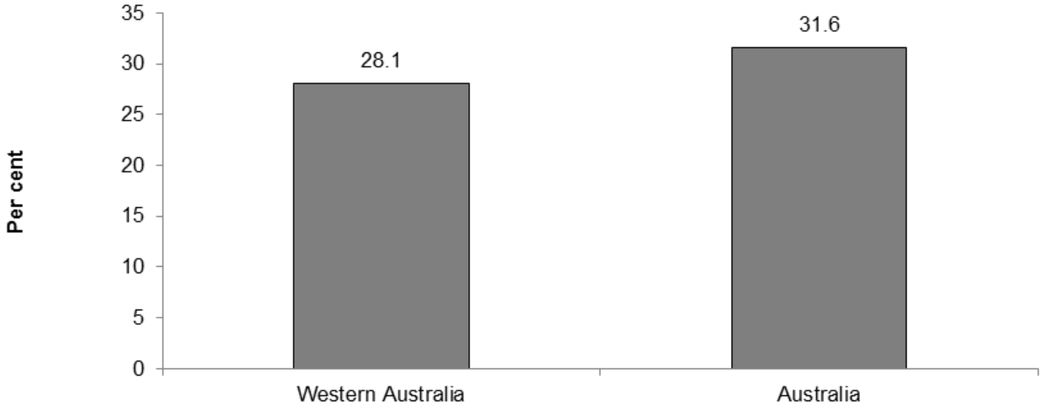
Aboriginal and Torres Strait Islander people are more likely than other Australians to have a range of oral health problems, such as having lost all their teeth and gum disease. They are more likely to have untreated teeth and gum disease and less likely to have received preventive dental care (Jamieson 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), and hospitalisation rates for dental conditions for Indigenous Australians compared with non-Indigenous Australians.

Key findings

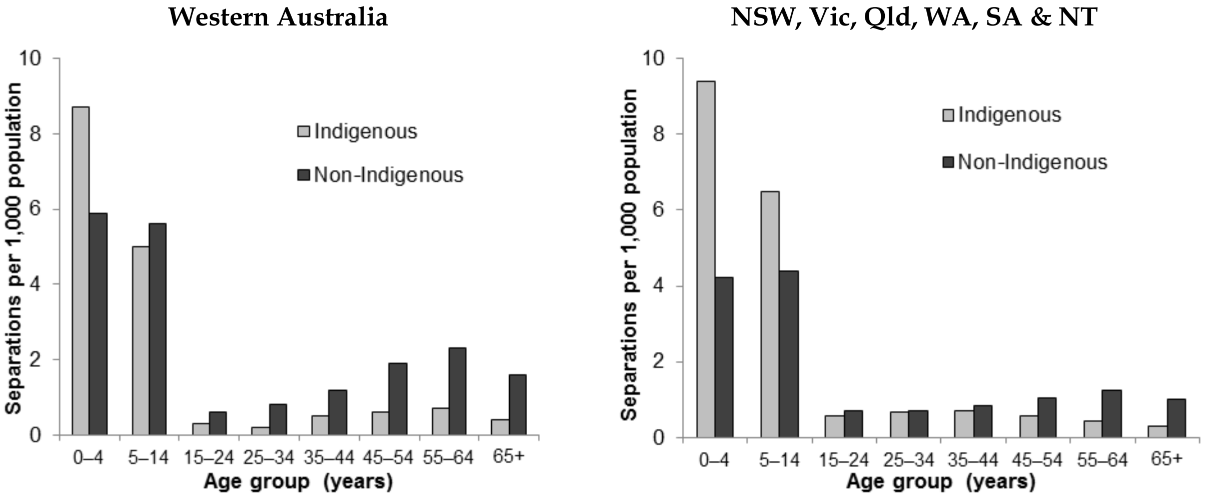
- In 2008 in Western Australia, about 28% of Indigenous children aged 0–14 reported teeth or gum problems. This was lower than the proportion nationally (32%) (Figure 1.11.1).
- Between July 2008 and June 2010, Indigenous Australians resident in Western Australia were hospitalised for dental problems at a rate of 1.6 per 1,000 population which was lower than the rate for non-Indigenous residents (2.2 per 1,000), and lower than the rate for Indigenous people in the New South Wales, Victoria, Queensland, Western Australia, South Australia and Northern Territory combined (2.0 per 1,000) (Figure 1.11.3).
- Indigenous people in Western Australia were hospitalised for dental problems at lower rates than non-Indigenous people across all age groups, except for those aged 0–4. In the six jurisdictions combined, Indigenous people were hospitalised for dental problems at lower rates than non-Indigenous people across all age groups, except for those aged 0–4 and 5–14 (Figure 1.11.2). The lower hospitalisation rate for Indigenous people for dental

problems may be due to a lack of access to hospital services to treat such conditions, rather than a lower prevalence of dental problems in the Indigenous population.



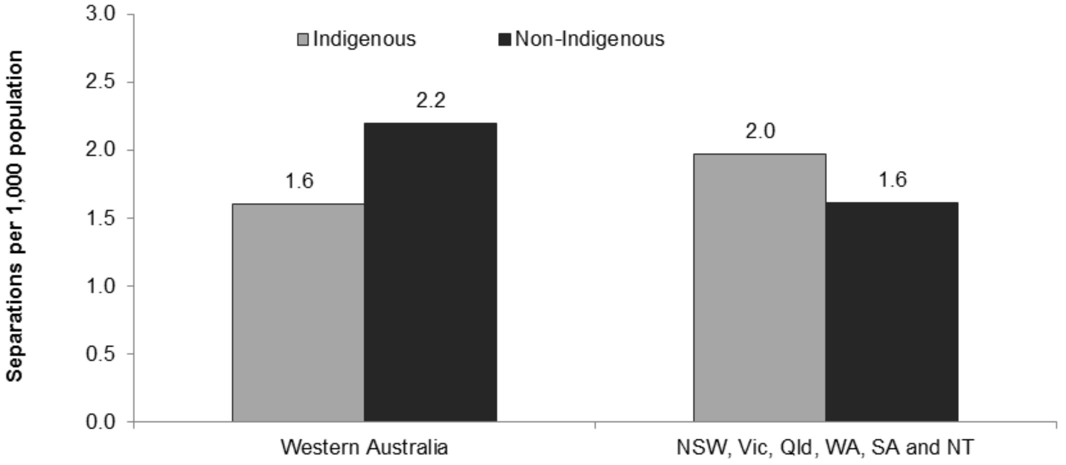
Source: AIHW analysis of 2008 NATSISS.

Figure 1.11.1: Proportion of Indigenous children aged 0–14 with reported teeth or gum problems, Western Australia and Australia, 2008



Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.11.2: Age-specific hospitalisation rates for dental problems, by Indigenous status and age group, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.11.3: Age-standardised hospitalisation rates for dental problems, by Indigenous status, Western Australia and NSW, Vic, Qld, WA, SA and NT combined, July 2008 to June 2010

1.12 HIV/AIDS, hepatitis and sexually transmissible infections

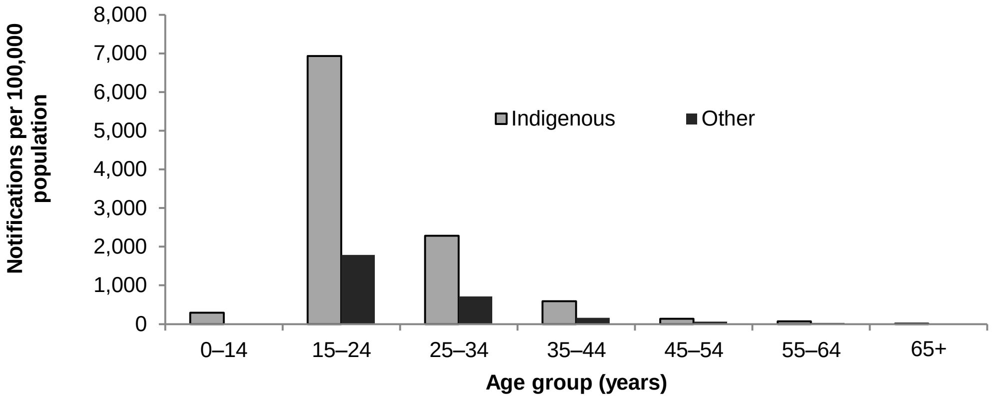
Bacterial STIs (including syphilis, chlamydia and gonorrhoea) can have serious long-term effects if not diagnosed or treated, such as infertility in women after gonorrhoea and chlamydia, and heart and brain damage caused by syphilis (Bowden et al. 2002; Couzos & Murray 2003). Hepatitis and Human immunodeficiency 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 chlamydia, gonorrhoea, syphilis, hepatitis B and hepatitis C for Aboriginal and Torres Strait Islander people compared with other Australians using data from the National Notifiable Disease Surveillance System. Data are not presented on donovanosis, HIV or AIDS due to small numbers.

Key findings

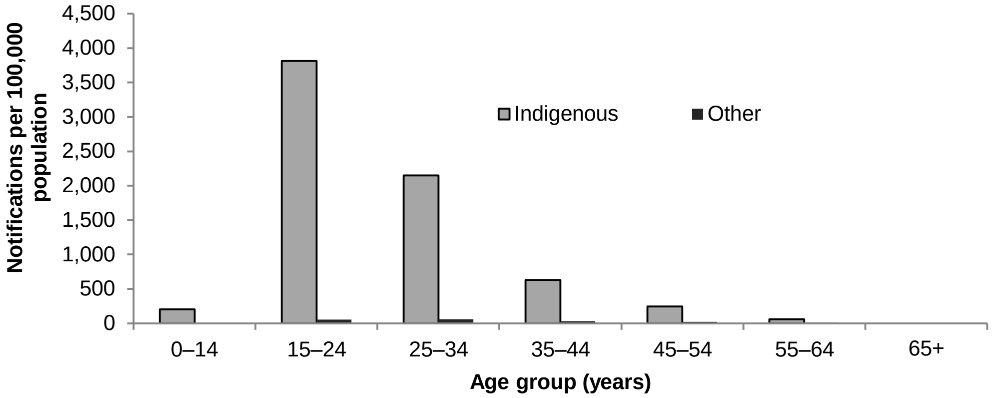
- Between 2009 and 2011, in Western Australia, there were 30,689 notifications of chlamydia, 562 notifications of syphilis, 4,554 notifications of gonorrhoea, 3,293 notifications of hepatitis C and 2,235 notifications of hepatitis B, of which 14.5%, 25.6%, 63.8%, 12.8% and 6.4% were for Indigenous people, respectively.
- In Western Australia, notification rates for chlamydia and gonorrhoea were highest among Indigenous people aged 15–24, rates for syphilis and hepatitis C were highest among Indigenous people aged 25–34 and rates for hepatitis B were highest among Indigenous people aged 65 and over. A similar pattern was seen for other people in Western Australia (Figures 1.12.1a, 1.21.1b, 1.21.1c, 1.21.1d).
- Notification rates in Western Australia for chlamydia, gonorrhoea, syphilis, hepatitis C and hepatitis B were generally higher among Indigenous people than among other people for all age groups. The greatest disparity was observed in the 0–14 age group for gonorrhoea where the rate for Indigenous children was over 400 times the rate of other children (Figures 1.12.1a, 1.21.1b, 1.21.1c, 1.21.1d).

- After adjusting for differences in age structure, notification rates for chlamydia among Indigenous people in Western Australia were nearly 4 times as high as for other people, notification rates for syphilis were 12 times as high as other people, notification rates for gonorrhoea were 42 times as high, notification rates for hepatitis C were 4 times as high and notification rates for hepatitis B were almost 3 times as high as for other people (Figure 1.12.2).
- Notification rates for chlamydia, gonorrhoea and hepatitis C were higher among Indigenous people in Western Australia than in the jurisdictions combined with adequate coverage of Indigenous notifications (Figure 1.12.2).
- Between 1994–1996 and 2009–2011, there was no significant change in the notification rate for gonorrhoea for Indigenous people. Over the same period there was a significant increase in the rate for non-Indigenous people (average yearly increase of 0.5 per 100,000 population). In Western Australia, South Australia and the Northern Territory combined, there was a significant increase for Indigenous people (average yearly increase of 27.5 per 100,000 population), and no significant change for other people, leading to a significant increase in the rate gap (average yearly increase of 27 per 100,000 population) (Figure 1.12.3).
- From 1994–1996 to 2009–2011, there were significant increases in the notification rates for chlamydia for both Indigenous people (average yearly increase of 67.1 per 100,000) and other people (average yearly increase of 23.5 per 100,000). Over the same period there were also significant increases in the notification rates for gonorrhoea for both Indigenous and non-Indigenous people in Western Australia, South Australia and the Northern Territory combined (Figure 1.12.4).



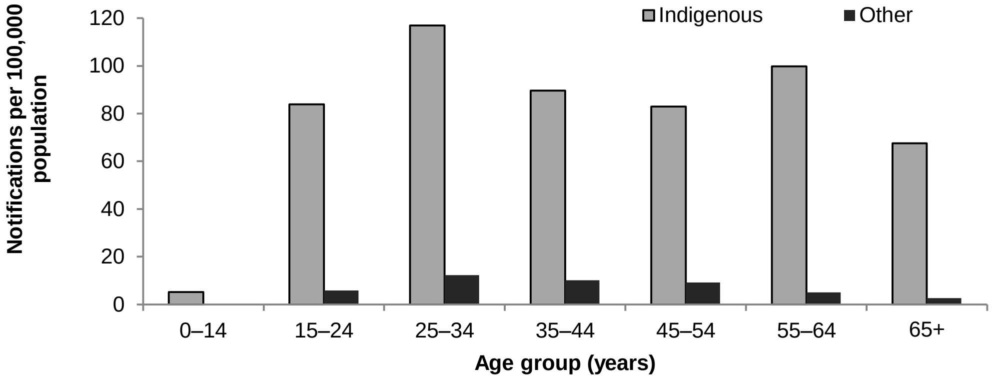
Source: AIHW analyses of NNDSS.

Figure 1.12.1a: Age-specific notification rates for chlamydia, by Indigenous status, Western Australia, 2009–2011



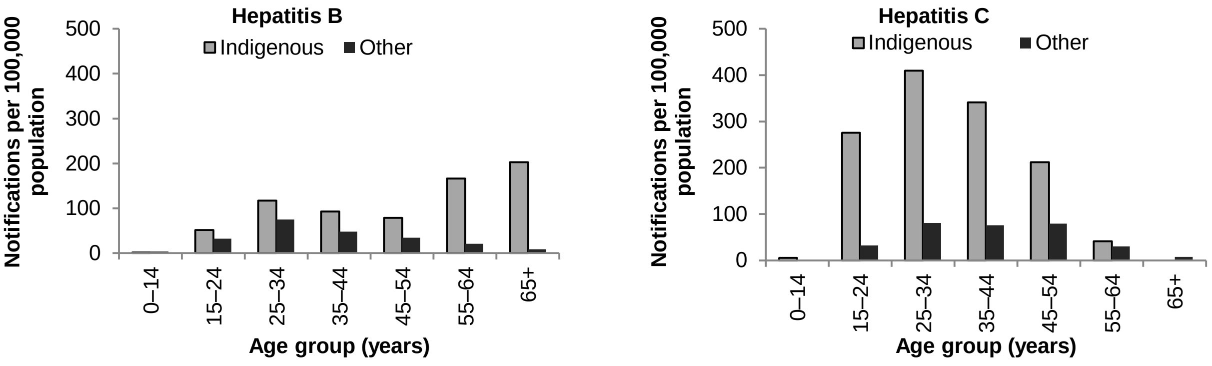
Source: AIHW analyses of NNDSS.

Figure 1.12.1b: Age-specific notification rates for gonorrhoea, by Indigenous status, Western Australia, 2009–2011



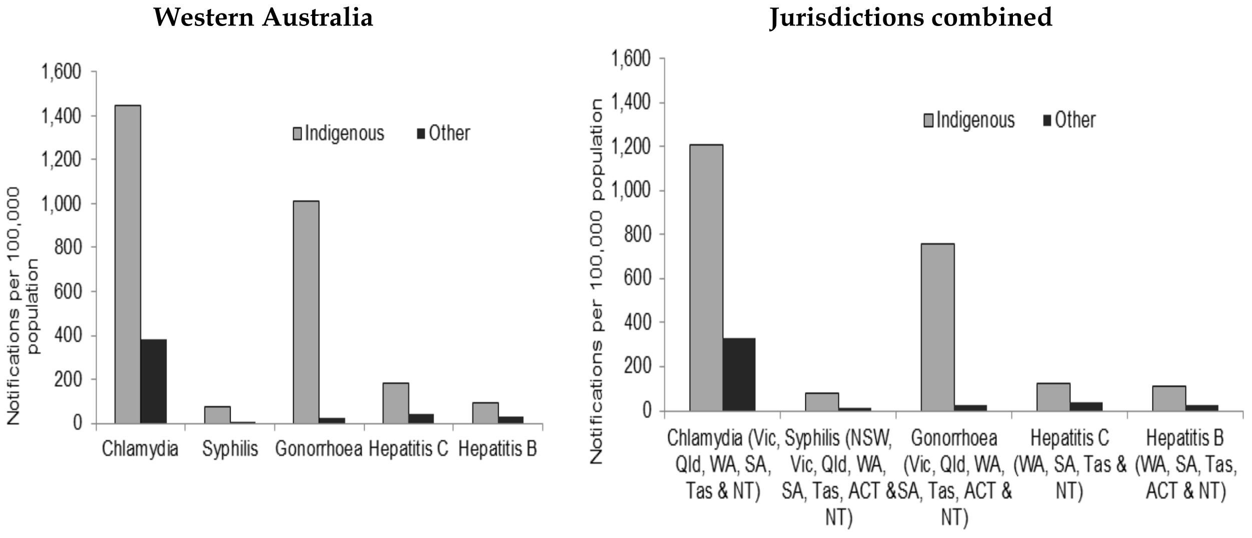
Source: AIHW analyses of NNDSS.

Figure 1.12.1c: Age-specific notification rates for syphilis, by Indigenous status, Western Australia, 2009–2011



Source: AIHW analyses of NNDSS.

Figure 1.12.1d: Age-specific notification rates for hepatitis B and hepatitis C, by Indigenous status, Western Australia, 2009–2011



Western Australia

Jurisdictions combined

Source: AIHW analyses of NNDSS.

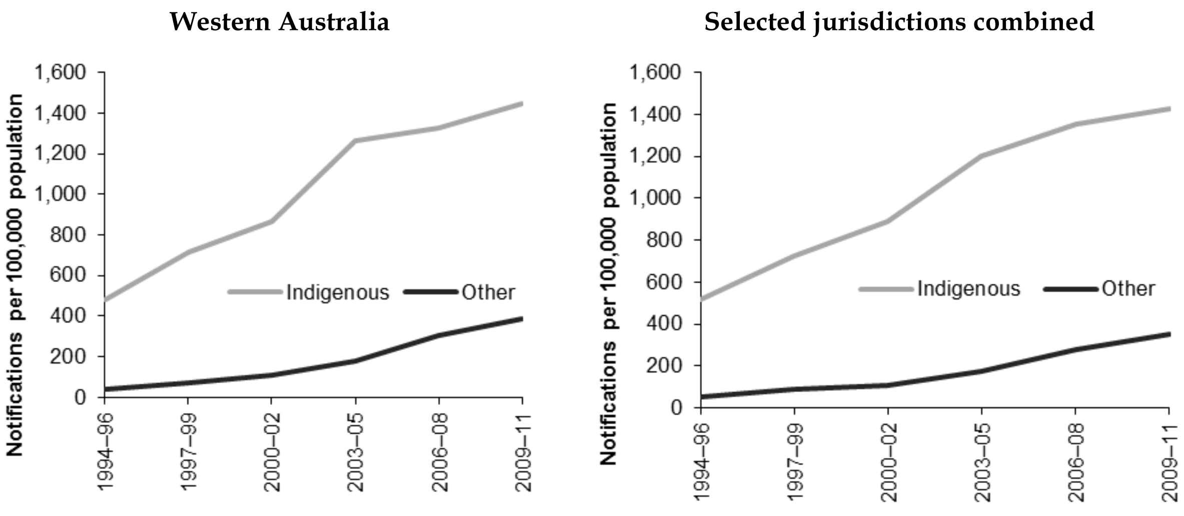
Figure 1.12.2: Age-standardised notification rates for chlamydia, syphilis, gonorrhoea, hepatitis C and hepatitis B, Western Australia and selected jurisdictions combined, 2009–2011

Western Australia

Selected jurisdictions combined

Source: AIHW analysis of NNDSS data.

Figure 1.12.3: Age-standardised notification rates for gonorrhoea, Western Australia and WA, SA & NT combined 1994–1996 to 2009–2011



Source: AIHW analysis of NNDSS data.

Figure 1.12.4: Age-standardised notification rates for chlamydia, Western Australia and WA, SA & NT combined 1994–1996 to 2009–2011

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 Western Australia aged 15 and over:

- 75% reported recognition of their homeland, 23% spoke an Aboriginal or Torres Strait Islander language, 70% had attended an Aboriginal and Torres Strait Islander cultural event in the last 12 months and 62% identified with a clan or language group.
- 89% 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 71% had friends to confide in (Table 1.13.1, Appendix 2).

Resilience

Of Indigenous people in Western Australia aged 15 and over:

- 61% did not avoid situations due to past discrimination, 79% agreed that their doctor could be trusted and 74% agreed that the local school could be trusted.
- 29% of employed people said work allowed them to fulfil cultural responsibilities, 31% knew someone in an organisation they would feel comfortable contacting and 87% had participated in sport, social or community activities in the three months before the survey (Table 1.13.1, Appendix 2).

Leadership

In Western Australia, 49% 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 Western Australia aged 15 and over, 77% had lived in only one dwelling in the last 12 months (Table 1.13.1, Appendix 2).

Feeling safe

In Western Australia, of Indigenous people aged 15 and over, 81% felt safe at home alone after dark and 72% had not experienced physical and/or threatened violence in the last 12 months.

Vitality

Of Indigenous people in Western Australia aged 15 and over:

- 54% had no disability or long-term health condition and 67% had experienced low/moderate levels of psychological distress in the 4 weeks before the survey.
- 71% said they could easily get to places as needed (Table 1.13.1, Appendix 2).

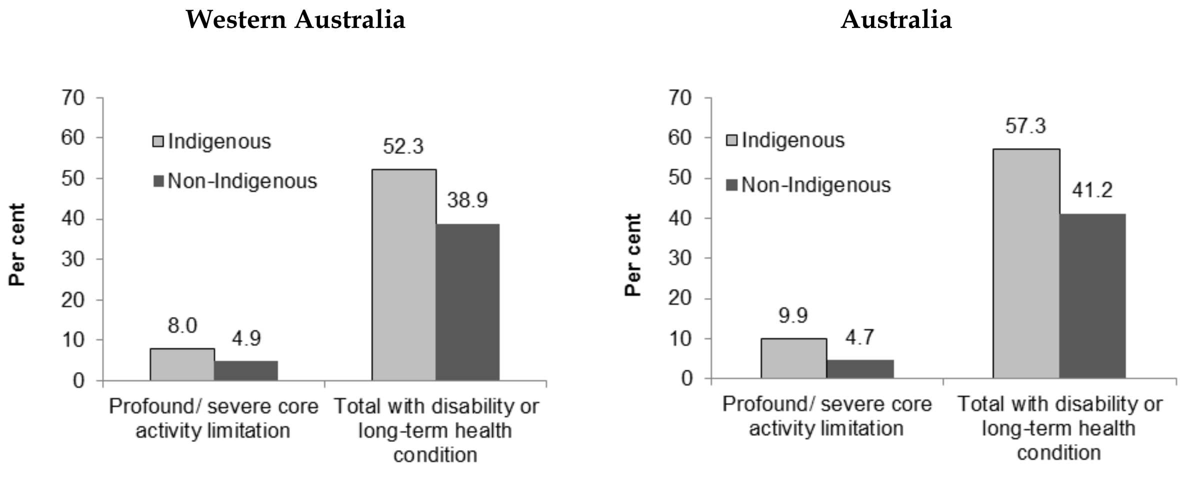
1.14 Disability

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.

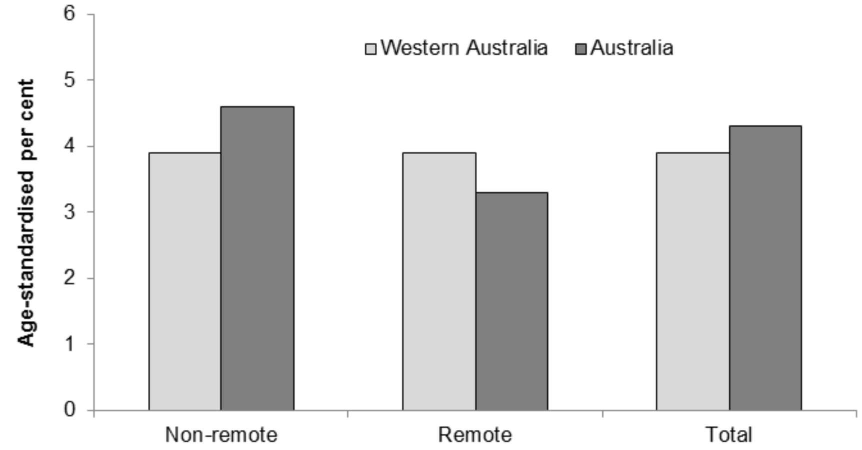
Key findings

- According to the 2008 NATSISS, more than half (52%) of Indigenous Australians aged 18 and over in non-remote areas of Western Australia had a disability or long-term health condition in 2008. About 8% 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 lower than those reported for Indigenous Australians nationally (Figure 1.14.1).
- In non-remote areas of Western Australia, Indigenous Australians aged 18 and over were 1.3 times as likely as non-Indigenous Australians to have a disability or a long-term health condition. The difference was larger for profound/severe core activity limitation, with Indigenous Australians 1.6 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 about 4% in both Western Australia and Australia.
- The same proportion (3.9%) of Indigenous people living in remote and non-remote areas reported a core activity need for assistance (Figure 1.14.2).
- After adjusting for differences in age structure, Indigenous people in Western Australia were more than 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 Western Australia aged under 65 used disability support services at 2.6 times the rate of non-Indigenous people (27.8 compared with 10.6 per 1,000 population). The rate of disability service use was similar in Western Australia and nationally for Indigenous people (Table 1.14.1).



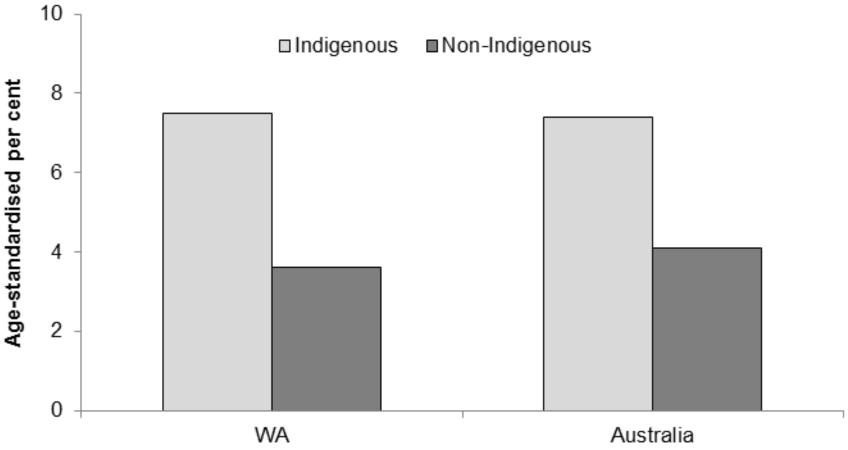
Source: ABS & AIHW 2008.

Figure 1.14.1: Disability status, by Indigenous status, persons aged 18 and over in non-remote areas, age-standardised rates, Western Australia and Australia, 2008



Source: ABS & AIHW 2008.

Figure 1.14.2: Proportion of Indigenous people with a core activity need for assistance, Western Australia 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, Western Australia and Australia, 2006

Table 1.14.1: Users of disability support services, by Indigenous status and sex, persons aged under 65 years, Western Australia and Australia, 2009–10

	Indigenous			Non-Indigenous				
	Number	Crude no. per 1,000	Age std. no. per 1,000	Number	Crude no. per 1,000	Age std. no. per 1,000	Rate ratio	Rate difference
WA								
Males	1,147	31.0	31.7	12,468	12.6	12.8	2.5*	18.8*
Females	778	21.5	23.8	7,584	8.1	8.2	2.9*	15.6*
Persons	1,925	26.3	27.8	20,052	10.5	10.6	2.6*	17.2*
Australia								
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*

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

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

1.15 Ear Health

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. 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

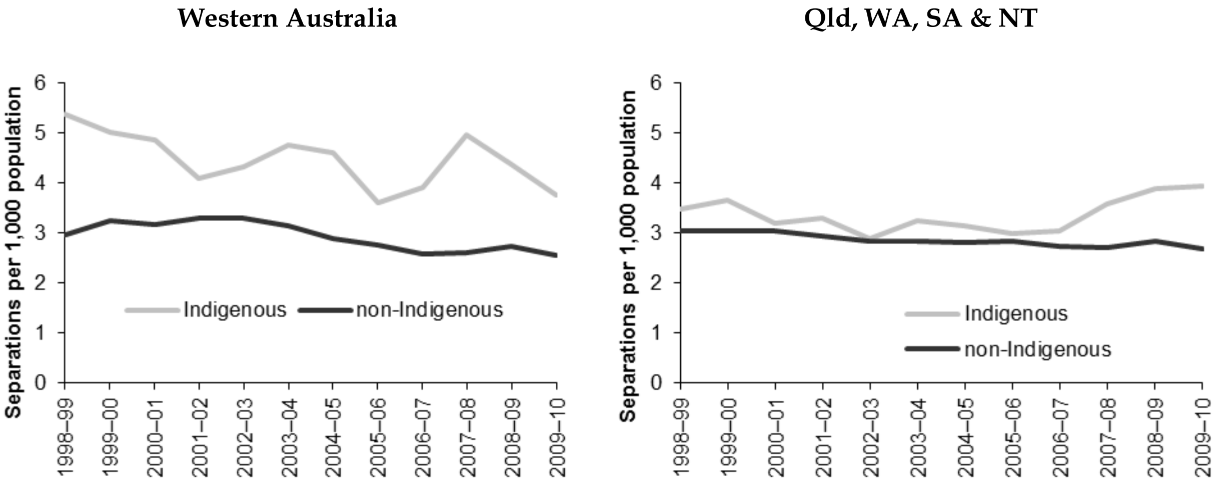
- According to the 2008 NATSISS, about 9% of Indigenous children aged 0–14 in Western Australia had ear or hearing problems. This was similar to the national figure (8.6%) (Table 1.15.3, Appendix 2). This was slightly lower than the proportions reported in the 2004–05 NATSIHS (10.7% and 9.5% for Indigenous children in Western Australia and nationally) (Table 1.15.1).
- In Western Australia in 2004–05, Indigenous children were more than twice as likely to report ear or hearing problems as non-Indigenous children. Diseases of the ear and mastoid were more prevalent among Indigenous children aged 5–14 than Indigenous children aged 0–4 years (13.6% compared with 5%) (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 Western Australia and nationally. In Western Australia, about 5% of Indigenous children aged 0–14 reported complete or partial hearing loss or deafness, compared with 2.3% of non-Indigenous children, and 4.2% of Indigenous children reported otitis media, compared with 1.8% of non-Indigenous children (Table 1.15.1).
- Prevalence rates for diseases of the ear were higher among Indigenous children aged 0–14 in remote areas of Western Australia (16% males and 12% females) than non-remote areas (9% males and 7% females) (Table 1.15.2 Appendix 2).

- Between July 2008 and June 2010, Indigenous people in Western Australia were hospitalised with a principal diagnosis of diseases of the ear and mastoid process at 4.1 per 1,000 population which was higher than for non-Indigenous people in Western Australia (2.6 per 1,000), and higher 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).
- Analysis of long term trends for the period 1998–99 to 2009–10 indicate that in Western Australia there were significant decreases in the hospitalisation rates for diseases of the ear and mastoid among both Indigenous and non-Indigenous people (average yearly decrease of 0.1 per 1,000 population for both). Over the same period, in Queensland, Western Australia, South Australia and the Northern Territory combined, there was no significant change in the hospitalisation rate for diseases of the ear and mastoid among Indigenous people, but a significant decrease among non-Indigenous people (an average yearly decrease of 0.03 per 1,000 population) and a significant increase in the gap (rate difference) (Figure 1.15.1).
- Analysis of short term trends for the period 2004–05 to 2009–10 indicate that in Western Australia, there was no significant change in the hospitalisation rate for diseases of the ear and mastoid among Indigenous people, but a significant decrease in the rate for non-Indigenous people (9%). Over the same period, in New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory combined, there was a significant increase in hospitalisation rates for diseases of the ear and mastoid for Indigenous people (27%), and no significant change in the rate for non-Indigenous people, leading to a significant increase in the gap (rate difference) (Figure 1.15.1a, Appendix 2).

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

	0–4 years		5–14 years		Total 0–14 years	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
			Per cent			
			Western Australia			
Complete/ partial deafness or hearing loss	1.1	0.0	7.1	3.4	5.0	2.3
Otitis media	3.8	2.9	4.5	1.4	4.2	1.8
Other diseases of the ear and mastoid	0.0	0.6	2.5	0.7	1.7	0.6
Total	**5.0**	**2.9**	**13.6**	**5.4**	**10.7**	**4.6**
			Australia			
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
Total	**5.5**	**2.3**	**11.5**	**3.4**	**9.5**	**3.0**

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


Western Australia

Qld, WA, SA & NT

Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.15.1: Age standardised hospitalisation rates for diseases of the ear and mastoid, by Indigenous status, Western Australia and Qld, WA, SA & NT combined, 1998–99 to 2009–10

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 the 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

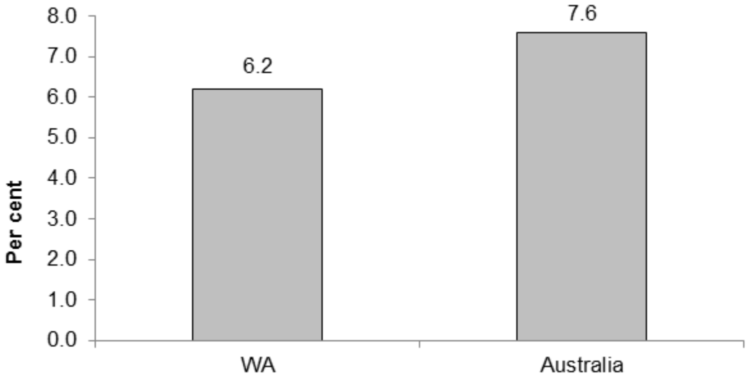
- The National Indigenous Eye Health Survey conducted in 2008 found, in Western Australia, about 12% of Indigenous adults who participated in the survey had low vision and 2% were blind. Of those Indigenous adults with vision loss, the most common causes were refractive error (36%), cataracts (36%) and diabetic eye disease (13%) (Table 1.16.1).
- According to the 2008 NATSISS, about 6.2% of Indigenous children aged 1–14 in Western Australia were reported to experience eye or sight problems. This proportion is slightly lower than for Indigenous children in Australia (7.6%) (Figure 1.16.1).
- Between July 2008 and June 2010, Indigenous Australians in Western Australia were hospitalised with a principal diagnosis of diseases of the eye and adnexa at a rate of 7.7 per 1,000 population, which was lower than the rate for non-Indigenous Australians (11.4 per 1,000) and higher than the rate for Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (6.6 per 1,000) (Figure 1.16.2).

- Hospitalisation rates for diseases of the eye and adnexa were lower for Indigenous people than non-Indigenous people in Western Australia across all age groups, except for the 0–4 age group. A similar pattern was recorded for six jurisdictions combined (Table 1.16.2, Appendix 2). The lower hospitalisation rate for Indigenous people for diseases of the eye may be due to a lack of access to hospital services to treat such conditions, rather than a lower prevalence of eye diseases in the Indigenous population.
- Between 1998–99 and 2009–10 in Western Australia, there was a significant decrease in the hospitalisation rate for diseases of the eye and adnexa for Indigenous people (average yearly decrease of 0.4 per 1,000 population) and a significant increase in the rate for non-Indigenous people (average yearly increase of 0.1 per 1,000 population). A similar pattern was observed in Queensland, Western Australia, South Australia and the Northern Territory combined (Figure 1.16.3).
- From 2004–05 to 2009–10 in Western Australia, there was no significant change in the hospitalisation rate for diseases of the eye and adnexa among Indigenous people, but a significant increase in the rate for non-Indigenous people (25%)(Figure 1.16.3a, Appendix 2). In New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory combined, there were significant increases in the hospitalisation rates for diseases of the eye and adnexa among Indigenous and non-Indigenous people (16% and 15%, respectively) (Figure 1.16.3a, Appendix 2).

Table 1.16.1: Prevalence of vision loss in Indigenous adults surveyed, Western Australia, 2008

			Cause of vision loss						
	Low vision	Blindness	Refractive error	Cataract	Diabetic eye disease	Glaucoma	Trachoma	Other	Total
Per cent	12.0	1.8	35.9	35.9	12.8	2.6	5.1	7.7	100.0
Number	34	5	14	14	5	1	2	3	39

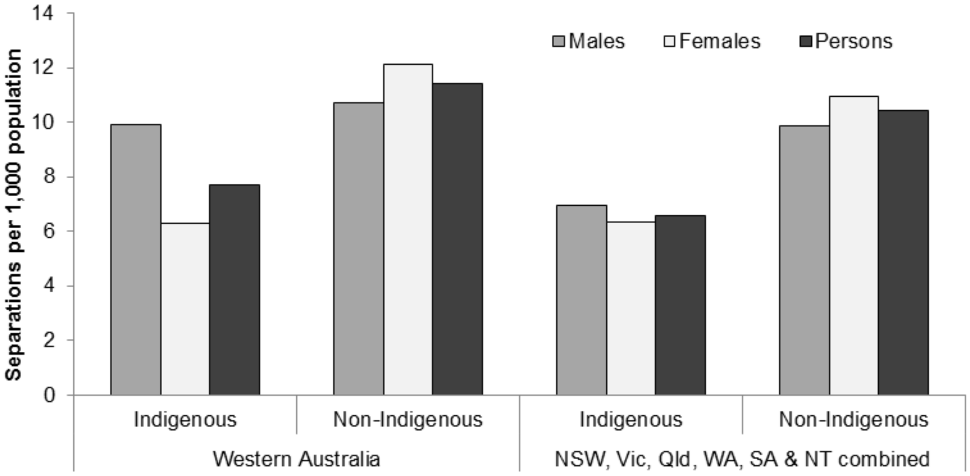
Source: AIHW analysis of National Indigenous Eye Health Survey, 2008.



Note: Includes not known responses.

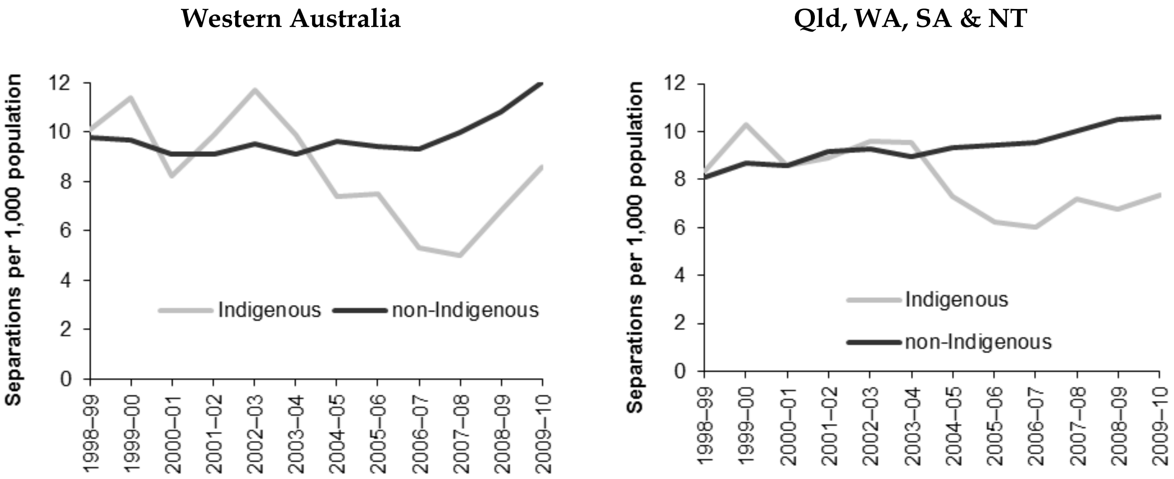
Source: ABS 2008 NATSISS.

Figure 1.16.1: Proportion of Indigenous children aged 1–14 reporting eye or sight problems, Western Australia and Australia, 2008



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.16.2: Age-standardised hospitalisation rates for principal diagnosis of diseases of the eye and adnexa, by Indigenous status and sex, Western Australia and NSW, Vic, Qld, WA, SA and NT combined, July 2008 to June 2010



Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.16.3: Age-standardised hospitalisation rates for diseases of the eye and adnexa, by Indigenous status, Western Australia and Qld, WA, SA and NT combined, 1998–99 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.

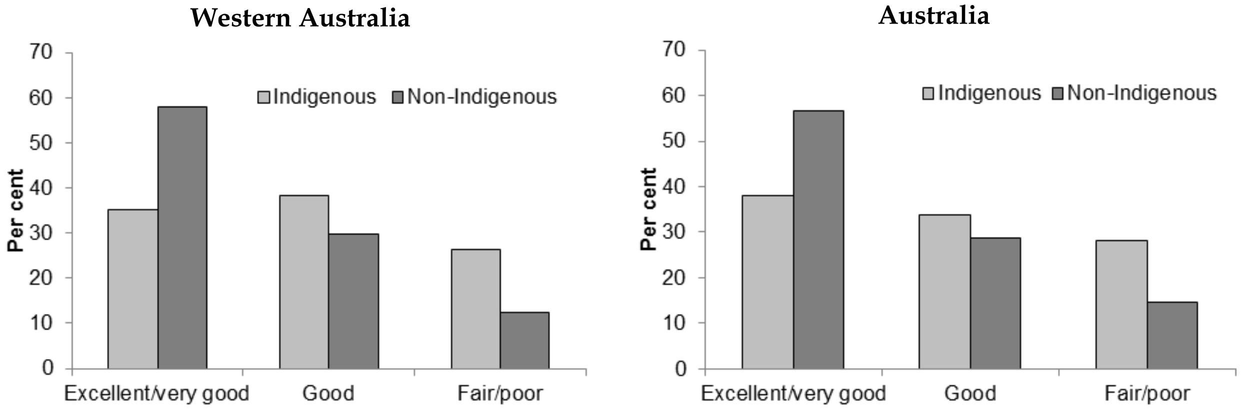
1.17 Perceived health status

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.

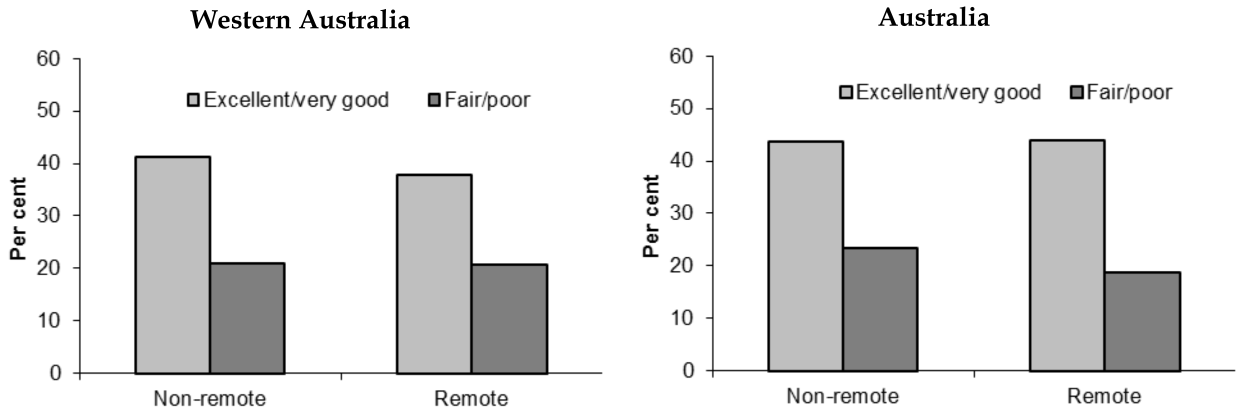
Key findings

- In 2008, after adjusting for differences in age structure between the Indigenous and non-Indigenous populations, Indigenous people in Western Australia were more likely than non-Indigenous people to report their health as good or fair or poor, and less likely to report their health as excellent/very good. The same pattern was evident for Australia (Figure 1.17.1).
- The proportion of Indigenous people reporting fair or poor health was similar in Western Australia and nationally (26% compared with 28%) (Figure 1.17.1).
- In Western Australia, the proportion of Indigenous people reporting excellent or very good health decreased with age being highest among those aged 15–24 (52%) and lowest among those aged 55 and over (22%) (Table 1.17.1, Appendix 2).
- A similar proportion of Indigenous people aged 15 years and over in non-remote Western Australia reported fair or poor health (21%) to Indigenous people in remote Western Australia (21%) (Figure 1.17.2).



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

Figure 1.17.1: Self-assessed health status (age-adjusted), people aged 15 and over, by Indigenous status, Western Australia and Australia, 2008



Source: AIHW analyses of NATSISS 2008.

Figure 1.17.2: Self-assessed health, Indigenous Australians aged 15 and over, by remoteness, Western Australia and Australia, 2008

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).

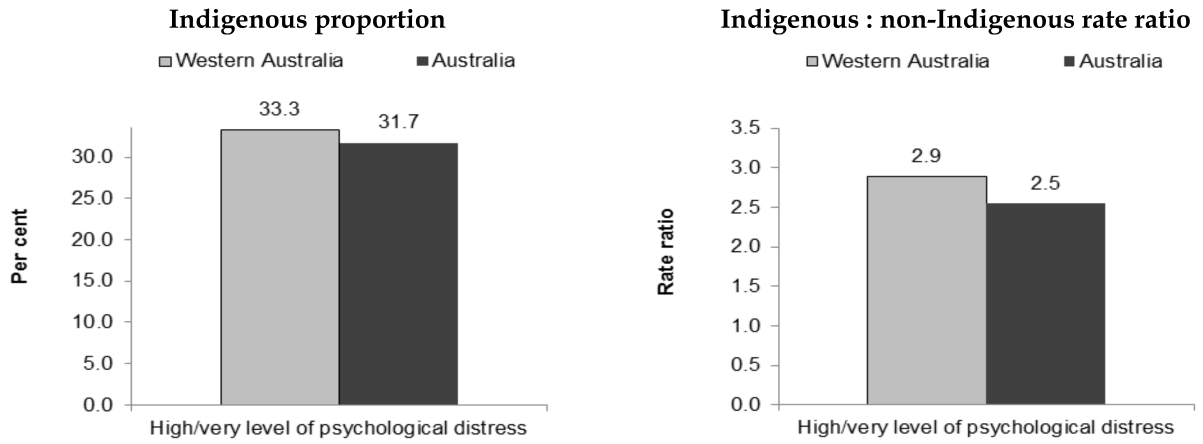
Data are presented on levels of psychological distress among Indigenous adults; and selected positive life events experienced by Indigenous children using data from the 2008 NATSISS. Hospitalisation rates for mental health-related conditions and deaths from suicide are also presented.

Key findings

- According to the 2008 NATSISS, 33% of Indigenous people aged 18 and over in Western Australia 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 Western Australia were 3 times as likely to report high/very high levels of psychological distress as non-Indigenous adults in 2008.
- In 2008, about 84% of Indigenous people aged 18 and over in Western Australia reported feeling calm and peaceful all/most/some of the time; about 92% reported feeling happy all/most/some of the time; 85% reported full of life all/most/some of the time and 80% reported having lots of energy all/most/some of the time (Table 1.18.1. Appendix 2).
- In 2008, nearly two-thirds (63%) of Indigenous children in Western Australia aged 4 to 14 reported experiencing positive life events in the last 12 months which was similar to the proportion reported 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 Western Australia, Indigenous males and females had higher hospitalisation rates for mental health-related conditions than non-

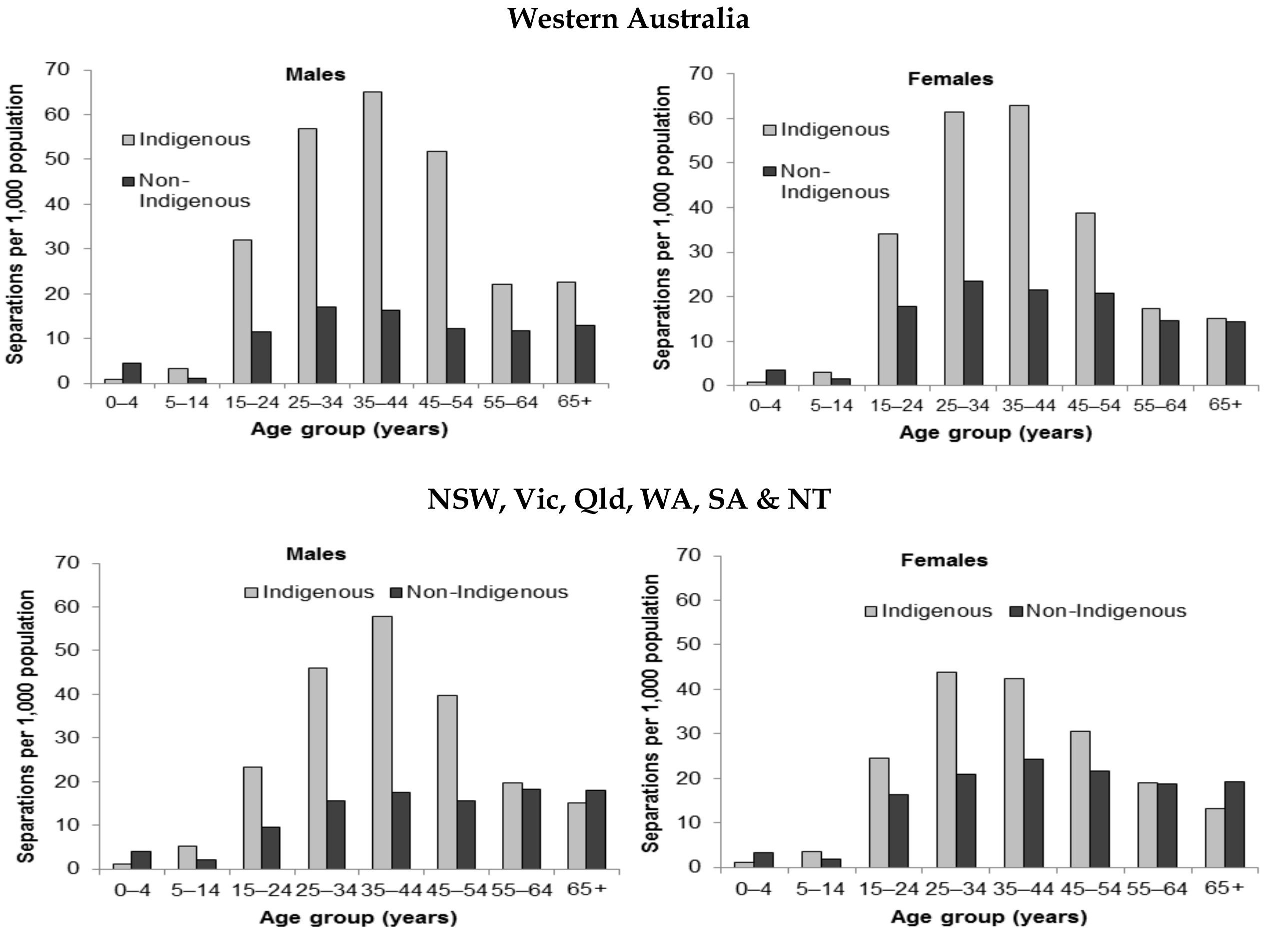
Indigenous males and females across all age groups with the exception of the 0–4 age group (Figure 1.18.2).

- Hospitalisation rates for mental health-related conditions were highest among those aged 35–44 for both Indigenous males (65 per 1,000) and Indigenous females (63 per 1,000) in Western Australia (Figure 1.18.2).
- Hospitalisation rates for mental health-related conditions for Indigenous people in Western Australia were higher than for Indigenous people in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined (34 per 1,000 compared with 27 per 1,000) (Table 1.18.3, Appendix 2).
- After adjusting for differences in age structure, Indigenous males were over three times as likely as non-Indigenous males, and Indigenous females were twice 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 Western Australia due to mental health-related conditions were for mental and behavioural disorders due to psychoactive substance use (42%) and schizophrenia, schizotypal and delusional disorders (25%). Indigenous people were hospitalised at six and around five times the rate of non-Indigenous people for these conditions, respectively (Table 1.18.4, Appendix 2).
- Over the long term period 1998–99 to 2009–10 in Western Australia, there was no significant change in the rate of hospitalisations due to mental health-related conditions for Indigenous people, while there was a significant decrease in the rate for non-Indigenous people (average yearly decrease of 0.3 per 1,000 population) (Figure 1.18.3).
- Over the short term period 2004–05 to 2009–10 in Western Australia, there was a significant increase in the rate of hospitalisations due to mental health-related conditions among Indigenous people (average yearly increase of 0.8 per 1,000 population), and no significant change in the rate for non-Indigenous people (Figure 1.18.3a, Appendix 2).
- Over both the short and long term, in the total of jurisdictions with adequate Indigenous identification in hospital data, there were significant increases in the rate of hospitalisations due to mental health related conditions among Indigenous people, and a significant increase in the gap (Figure 1.18.3; Figure 1.18.3a, Appendix 2).
- In Western Australia, after adjusting for differences in age-structure between the two populations, the rate of suicide among Indigenous people aged 0–74 was over 3 times the rate of non-Indigenous people. This was higher than the ratio in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined, in which Indigenous people aged 0–74 died from suicide at around twice the rate of non-Indigenous people (Table 1.18.5, Appendix 2).



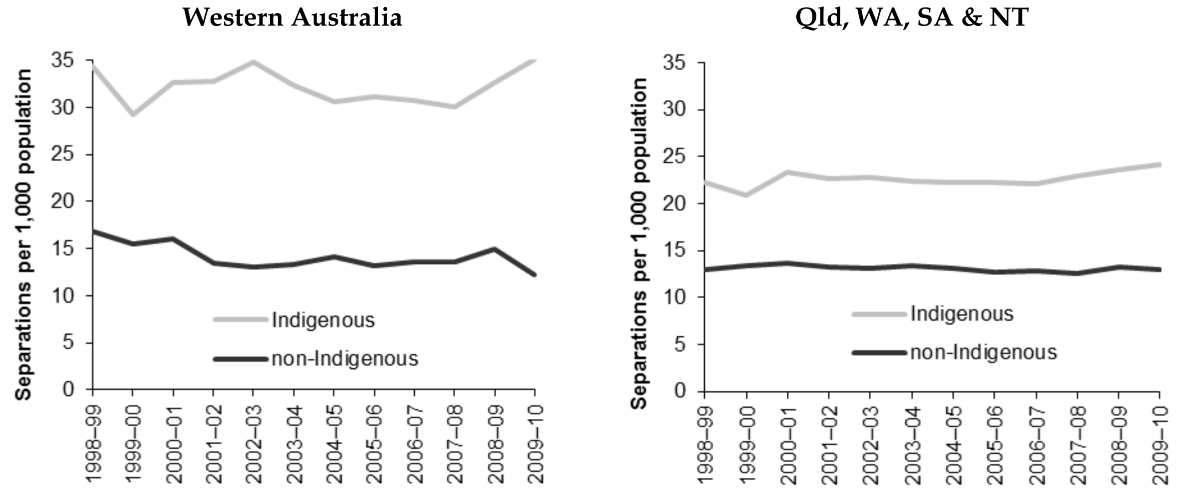
Source: AIHW analyses of NATSISS 2008.

Figure 1.18.1: Proportion of Indigenous persons aged 18 and over who reported high/very high levels of psychological distress, Western Australia and Australia , 2008



Source: AIHW analyses of National Hospital Morbidity Database.

Figure 1.18.2: Age-specific hospitalisation rates for mental health-related conditions, by Indigenous status, Western Australia 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: Age-standardised hospitalisation rates for mental health-related conditions, by Indigenous status, Western Australia and Qld, WA, SA & NT combined, 1998–99 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 recognised 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 Western Australia was 65 years for males and 70.4 years for females. Life expectancy was considerably higher for non-Indigenous males (79) and non-Indigenous females (82.9) in Western Australia.
- Life expectancy was slightly lower for Indigenous males and females in Western Australia than nationally (Table 1.19.1).

Table 1.19.1: Life expectancy at birth, by Indigenous status and sex, Western Australia and Australia, 2005–2007

	Indigenous		Non-Indigenous	
	Males	**Females**	**Males**	**Females**
Western Australia	65.0	70.4	79.0	82.9
Australia	**67.2**	**72.9**	**78.7**	**82.6**

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 reflect 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 94 deaths of Aboriginal and Torres Strait Islander infants in Western Australia. The infant mortality rate for this period was 8.3 per 1,000 live births for Indigenous infants compared with 3 per 1,000 live births for non-Indigenous infants.
- Infant mortality rates in Western Australia were similar to New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined for Indigenous infants (8.3 and 8.1 per 1,000 respectively), and were lower for non-Indigenous infants (3 compared with 4.1 per 1,000) (Table 1.20.1).
- From 1991 to 2010 in Western Australia, there were significant decreases in the infant mortality rates for both Indigenous and other Australians (average yearly decrease of 0.8 per 1,000 live births equivalent to a 62% decline for Indigenous and average yearly decrease of 0.1 per 1,000 live births equivalent to a 46% decline for other Australians), leading to a significant decrease in the gap (67%). Over the same period, a similar pattern was observed in Western Australia, South Australia and the Northern Territory combined (Figure 1.20.1).
- From 2001 to 2010 in Western Australia, there was a significant decrease in the infant mortality rate for Indigenous Australians (average yearly decrease of 1.1 per 1,000 live births, equivalent to a 64% decline over the period), no significant change in the infant mortality rate for non-Indigenous Australians and a significant decrease in the gap

(77%). Over the same period, in New South Wales, Queensland, Western Australia, South Australia, and the Northern Territory combined, there were significant decreases in the infant mortality rates for Indigenous and non-Indigenous Australians (46% and 13%, respectively), and a significant decrease in the gap (74%) (Figure 1.20.1a, Appendix 2).

- Between 2006 and 2010 in Western Australia, the mortality rate for Indigenous children aged 0–4 was 268.7 per 100,000 population, three and a half times higher than the rate for non-Indigenous children in the same age group. The child mortality rate for Indigenous was higher in Western Australia than that of the five jurisdictions combined (Table 1.20.2).
- Over the long term, from 1991 to 2010, in Western Australia, there were significant decreases in Indigenous and non-Indigenous mortality rates among children aged 0–4 (44% and 47%, respectively). Over the same period, there were also significant declines in mortality rates among Indigenous and other children aged 0–4 in Western Australia, South Australia and the Northern Territory combined (47% and 44%, respectively) (Figure 1.20.2).
- Analysis of trends from 2001 to 2010, indicate that in Western Australia, there were no significant changes 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), and a significant decrease in the gap (26%) (Figure 1.20.2a, Appendix 2).

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

	Indigenous		Non-Indigenous			
	Deaths	No. per 1,000	Deaths	No. per 1,000	Rate ratio	Rate difference
WA	94	8.3	416	3	2.8*	5.3*
NSW, Qld, WA, SA & NT	**533**	**8.1**	**3,955**	**4.1**	**2.0***	**4.0***

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

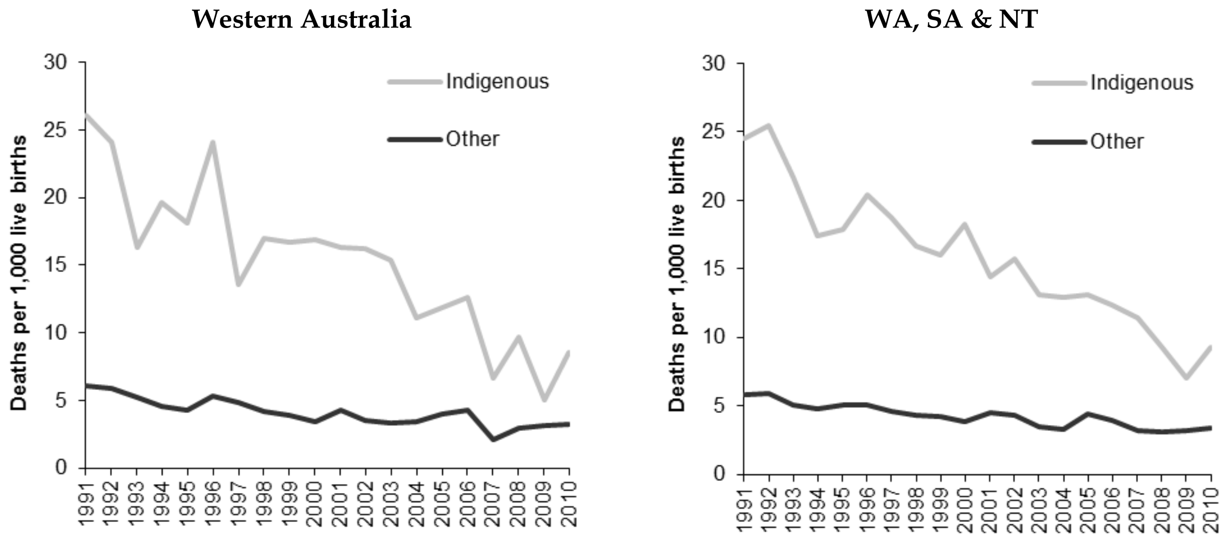
Source: ABS and AIHW analysis of ABS Mortality Database.

Table 1.20.2: Mortality rates among children aged 0–4 years, by Indigenous status, Western Australia and NSW, Qld, WA, SA & NT combined, 2006–2010

	Number of deaths		No. per 100,000			
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Rate ratio	Rate difference
WA	115	512	268.7	76.6	3.5*	192.1*
NSW, Qld, WA, SA & NT	**645**	**4,675**	**217.5**	**100.4**	**2.2***	**117.1***

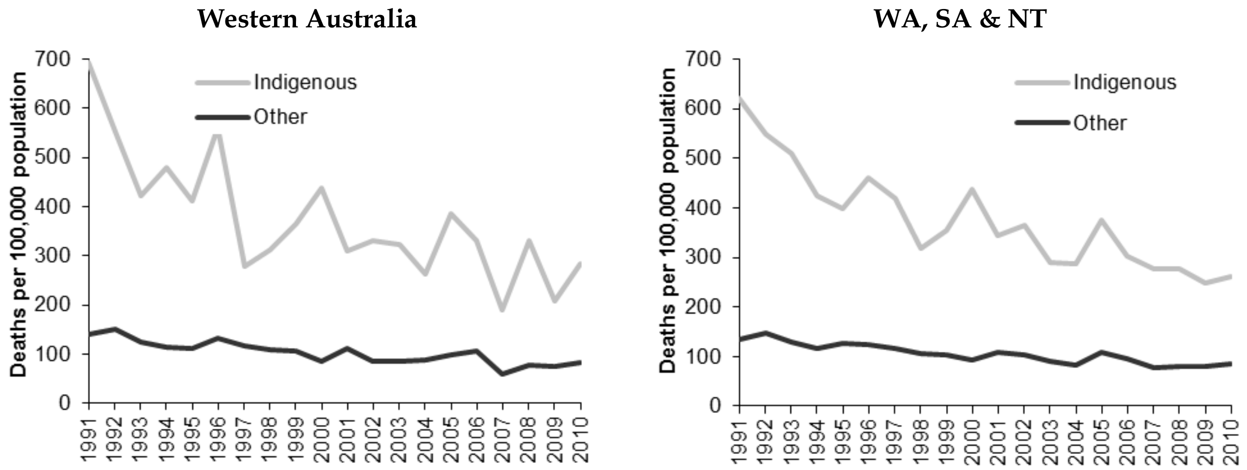
* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p < 0.05 level.

Source: AIHW analysis of ABS Mortality Database.



Source: AIHW analyses of National Mortality Database.

Figure 1.20.1: Infant mortality rates, by Indigenous status, Western Australia and WA, SA & NT combined, 1991 to 2010



Source: AIHW analyses of National Mortality Database.

Figure 1.20.2: Mortality rates among children aged 0–4, by Indigenous status, Western Australia and WA, SA & NT combined, 1991 to 2010

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 for this indicator 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 Western Australia was 9.8 per 1,000 births compared with 6.8 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 Western Australia in 2006–2010 was lower than that in 2001–2005 (9.8 compared with 13.8 per 1,000 births) (Table 1.21.1).

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

	Indigenous		Non-Indigenous			
	Number	No. per 1,000	Number	No. per 1,000	Rate ratio	Rate difference
			2001–2005			
WA	118	13.8	1,099	10.3	1.3*	3.5*
NSW, Qld, WA, SA & NT	**757**	**14.2**	**8,063**	**9.6**	**1.5***	**4.6***
			2006–2010			
WA	122	9.8	948	6.8	1.4*	3.0*
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.

Note: Care should be taken when interpreting mortality rates for Queensland due to recent changes in the timeliness of birth and death registrations. Queensland deaths data for 2010 have been adjusted to minimise the impact of late registration of deaths on mortality indicators.

Source: ABS Perinatal Deaths Collection.

1.22 All-causes age-standardised death rates

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 Western Australia, there were 2,230 deaths of Aboriginal and Torres Strait Islander people. The age-standardised mortality rate for Indigenous Australians was 2.5 times the rate for non-Indigenous Australians (Table 1.22.1).
- The age-standardised mortality rate for Indigenous and non-Indigenous Australians in Western Australia was higher than the rates in New South Wales Queensland, Western

Australia, South Australia and the Northern Territory combined. The rate for non-Indigenous Australians in Western Australia was lower than that in the five jurisdictions combined (Table 1.22.1).

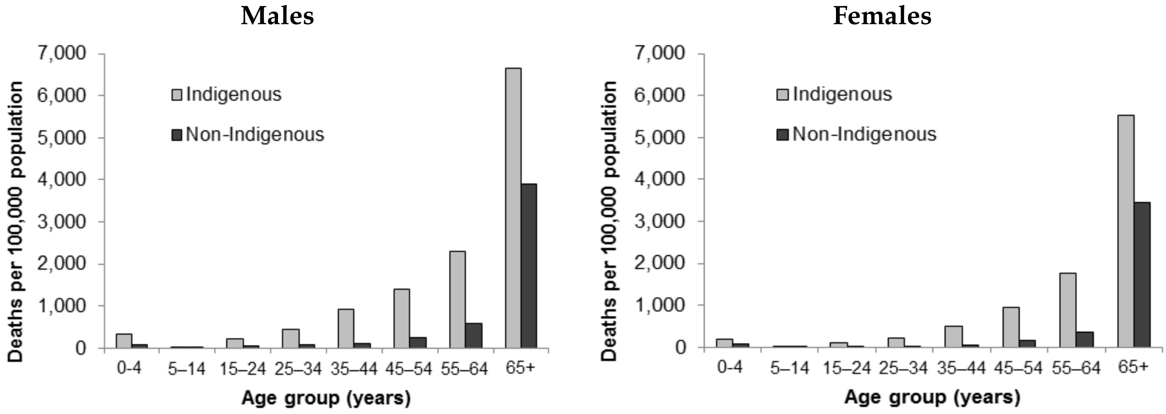
- Indigenous males and females in Western Australia had higher mortality rates than non-Indigenous males and females across all age groups. The greatest disparity in rates was in the 35–44 age group where the Indigenous mortality rate was over 7 times the rate of non-Indigenous people (Figure 1.22.1).
- From 1991 to 2010 in Western Australia there were significant decreases in the total mortality rate for both Indigenous and other Australians (a decrease of 35% and 31%, respectively). A similar pattern was observed for Western Australia, South Australia and the Northern Territory combined (Figure 1.22.2).
- Analysis of trends from 2001 to 2010 in Western Australia indicate, there was no significant change in the total mortality rate for Indigenous people and a significant decrease for non-Indigenous people (9%). Over the same period, in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant decreases in the total mortality rates for both Indigenous and non-Indigenous people (5% and 9%, respectively) (Figure 1.22.2a, Appendix 2).

Table 1.22.1: All causes mortality, by Indigenous status, Western Australia and NSW, Qld, WA, SA & NT combined, 2006–2010

	Number			Rate per 100,000			
	Indigenous	Non-Indigenous	Not stated	Indigenous	Non-Indigenous	Ratio	Rate difference
Western Australia	2,230	59,276	458	1,431.2	574.2	2.5*	857.0*
NSW, Qld, WA, SA & NT	**11,132**	**479,933**	**5,441**	**1,151.1**	**597.0**	**1.9***	**554.0***

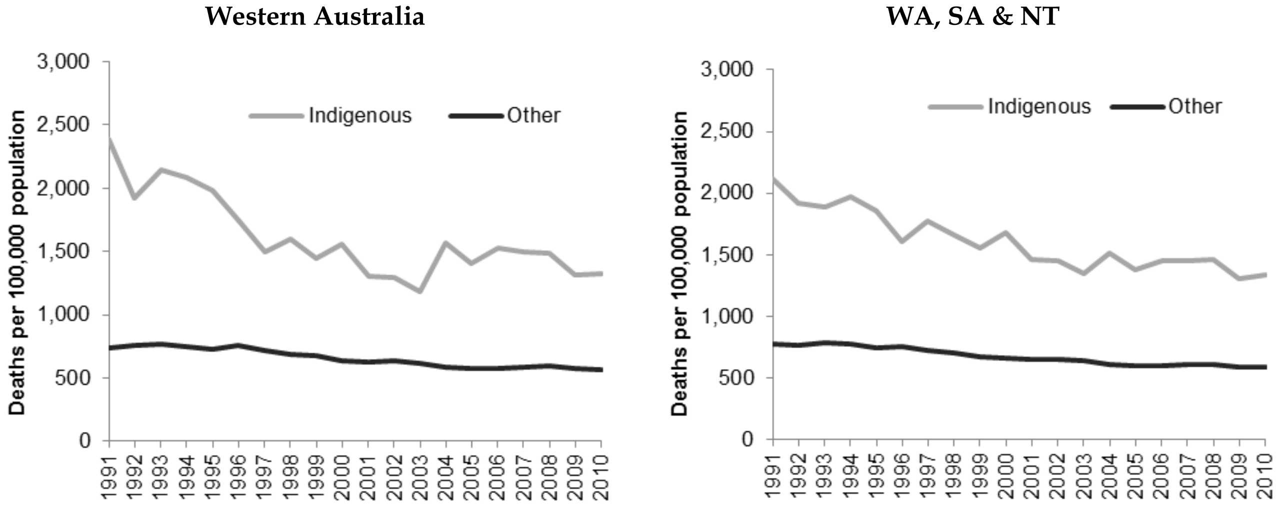
* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p < 0.05 level.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analyses of National Mortality Database.

Figure 1.22.1: All causes age-specific mortality rates, by Indigenous status and sex, Western Australia, 2006–2010



Source: AIHW analyses of National Mortality Database.

Figure 1.22.2: Age-standardised mortality rates by Indigenous status, Western Australia and WA, SA & NT combined, 1991 to 2010

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 death for Aboriginal and Torres Strait Islander Australians (based on ICD–10 Chapter level disease coding).

Key findings

- From 2006 to 2010 in Western Australia, the most common cause of death among Indigenous people was circulatory diseases (25.5%), followed by external causes (18.3%) and neoplasms (cancer) (15.7%). These were also the most common causes of death among 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 Western Australia for circulatory diseases was 2.3 times the rate; for external causes 3.4 times the rate; and for neoplasms (cancer) 1.5 times the rate; of non-Indigenous people.
- The greatest disparity in mortality rates between Indigenous and non-Indigenous people in Western Australia was for diabetes, with the Indigenous mortality rate nearly 9 times the rate of non-Indigenous people (Table 1.23.1). The Indigenous mortality rates for kidney disease and cervical cancer, were more than 5 times the rate on non-Indigenous people.
- From 1997 to 2010 in Western Australia, there was a significant decline in mortality from circulatory diseases for Indigenous Australians (decline of 12.3 per 100,000 population per year, equivalent to a 27% decline over the period), and a significant increase for other

Australians (increase of 0.3 per 100,000 population per year, equivalent to a 1.5% increase over the period), but no significant change in the gap. Over the same period in Western Australia, South Australia and the Northern Territory combined, there was a significant decline in mortality from circulatory diseases for both Indigenous and other Australians (41% and 37% respectively), and a significant decrease in the gap (44%) (Figure 1.23.1).

- From 2001 to 2010 in Western Australia, there was no significant change in the mortality rate from circulatory diseases among Indigenous Australians, but a significant decrease for non-Indigenous Australians (24% decline). Over the same period in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined, there was a significant decline in mortality from circulatory diseases for both Indigenous and non-Indigenous Australians (decline of 11.0 and 6.8 per 100,000 population per year, respectively), and a significant decrease in the gap (21%) (Figure 1.23.1a, Appendix 2).

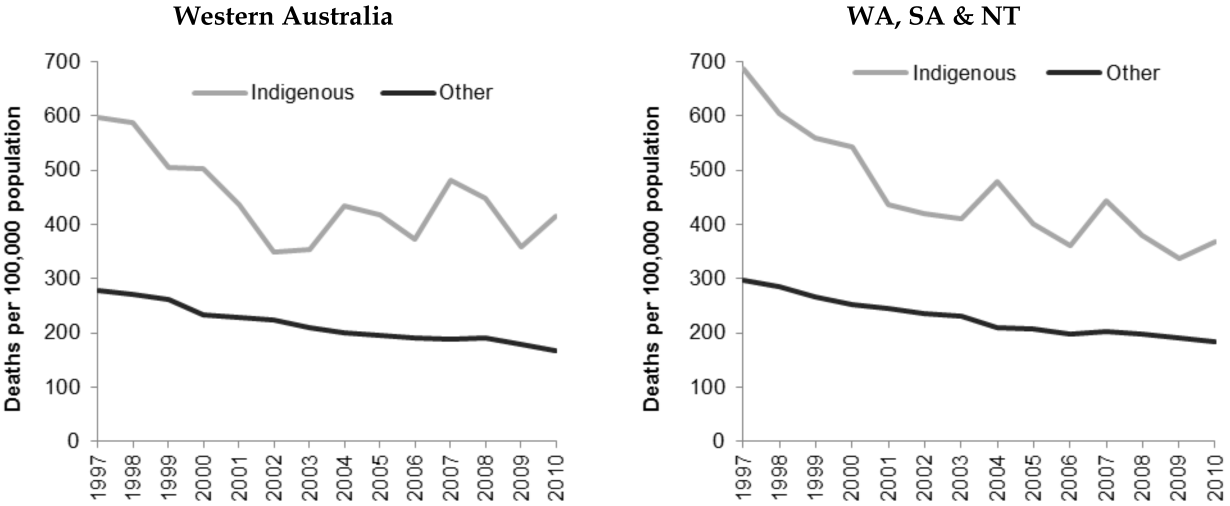
Table 1.23.1: Causes of mortality, by Indigenous status, Western Australia and NSW, Qld, WA, SA & NT combined, 2006–2010

	Western Australia					**NSW, Qld, WA, SA and NT**				
	Per cent		**Age-standardised rate per 100,000**			**Per cent**		**Age-standardised rate per 100,000**		
Underlying cause of death	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Rate ratio**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Rate ratio**
Circulatory diseases (I00–I99)	25.5	31.2	414.8	181.2	2.3*	26.3	33.9	351.0	201.0	1.7*
External causes (V01–Y98)	18.3	7.2	137.4	40.6	3.4*	15.0	5.9	84.3	37.1	2.3*
Neoplasms (C00–C97, D00–D48)	15.7	31.3	264.5	177.0	1.5*	18.9	29.9	244.6	178.0	1.4*
Digestive organ cancers (C15–C26)	*4.7*	*8.4*	*74.9*	*47.3*	*1.6**	*5.3*	*8.0*	*67.9*	*47.7*	*1.4**
Lung cancer (C34)	*3.0*	*6.1*	*60.8*	*34.5*	*1.8**	*4.5*	*5.6*	*59.6*	*33.4*	*1.8**
Cervical cancer (C53)	*0.5*	*0.2*	*7.0*	*1.2*	*6.0**	*0.5*	*0.2*	*4.8*	*1.0*	*4.8**
Endocrine, metabolic & nutritional disorders (E00–E89)	9.7	4.1	165.3	23.9	6.9*	8.8	3.7	117.7	21.8	5.4*
Diabetes (E10–E14)	*8.5*	*2.9*	*145.5*	*16.8*	*8.7**	*7.6*	*2.6*	*101.8*	*15.2*	*6.7**
Respiratory diseases (J00–J99)	6.6	7.4	122.8	42.8	2.9*	7.7	8.2	112.3	48.7	2.3*
Digestive diseases (K00–K93)	6.4	3.5	72.2	20.0	3.6*	5.9	3.4	57.8	20.3	2.8*
Kidney diseases (N00–N29)	3.1	1.8	55.4	10.3	5.4*	2.9	1.9	40.3	11.4	3.5*
Nervous system diseases (G00–G99)	3.0	4.9	42.0	28.3	1.5*	2.5	4.0	26.5	24.0	1.1
Infectious & parasitic diseases (A00–B99)	2.6	1.3	29.1	7.2	4.0*	2.3	1.5	25.4	8.7	2.9*
Conditions originating in perinatal period (P00–P96)	1.5	0.3	5.3	1.9	2.8*	2.4	0.4	6.0	2.8	2.2*
Other causes	7.4	7.0	122.5	41.1	3.0*	7.2	7.2	85.1	43.1	2.0*
All causes	**100.0**	**100.0**	**1,431.2**	**574.2**	**2.5***	**100.0**	**100.0**	**1,151.1**	**597.0**	**1.9***

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

Note: Care should be taken when interpreting mortality rates for Queensland due to recent changes in the timeliness of birth and death registrations. Queensland deaths data for 2010 have been adjusted to minimise the impact of late registration of deaths on mortality indicators.

Source: AIHW analyses of National Mortality Database.



Source: AIHW analyses of National Mortality Database.

Figure 1.23.1: Age-standardised mortality rates, circulatory diseases, by Indigenous status, Western Australia and WA, SA and NT combined, 1997–2010

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. 2006). 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).

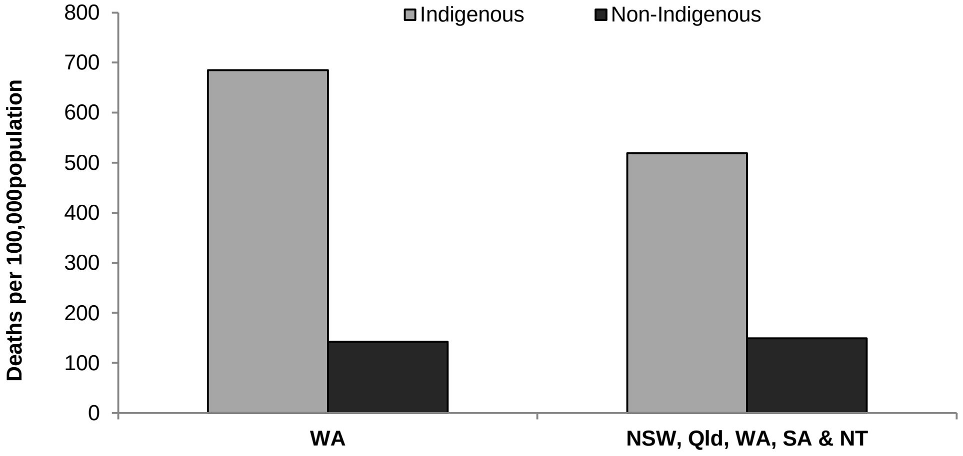
Data are presented for Aboriginal and Torres Strait Islander people aged 0–74.

Key findings

- For 2006–2010, the most common types of avoidable conditions causing death among Indigenous people in Western Australia were ischaemic heart disease (19%), followed by cancer (13%), diabetes (11%), suicide (10%), road traffic injuries (9%) and alcohol-related disease (6%) (Table 1.24.1).
- Indigenous mortality rates for diabetes, alcohol-related disease, selected invasive bacterial and protozoal infections, nephritis and perinatal and violence were over 10 times the rate of non-Indigenous people; and from ischaemic heart disease, cervical cancer, road traffic injuries and cerebrovascular disease at between 5 and 8 times the rate of non-Indigenous people (Table 1.24.1).
- After adjusting for differences in age structure, the total avoidable mortality rate for Indigenous people in Western Australia was nearly 5 times higher than for non-Indigenous people. In New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined the rate ratio was 3.5 (Figure 1.24.1).
- Between 1997 and 2010 in Western Australia, there were significant declines in mortality rates from avoidable causes of death for both Indigenous Australians aged 0–74 (decline of 10.5 per 100,000 population per year, equivalent to a 16% decline over the period), and other Australians aged 0–74 (decline of 5.7 per 100,000 population per year, equivalent to a 35% decline over the period) but no significant change in the gap. Over the same

period in Western Australia, South Australia and the Northern Territory combined, there were also significant declines in the mortality rates from avoidable causes for both Indigenous and other Australians (decline of 17.1 and 6.1 per 100,000 population per year, respectively), and a significant decrease in the gap (20%) (Figure 1.24.2).

- Analysis of trends for the period 2001 to 2010 indicate that in Western Australia there was no significant change in the mortality rate from avoidable causes of death among Indigenous Australians, but a significant decrease for non-Indigenous Australians (decline of 3.6 per 100,000 population per year). Over the same period in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant declines in the mortality rate from avoidable causes of death for both Indigenous and non-Indigenous Australians (decline of 14.9 and 4.8 per 100,000 population per year, respectively), and a significant decrease in the gap (Figure 1.24.2a, Appendix 2).



Source: AIHW analysis of National Mortality Database.

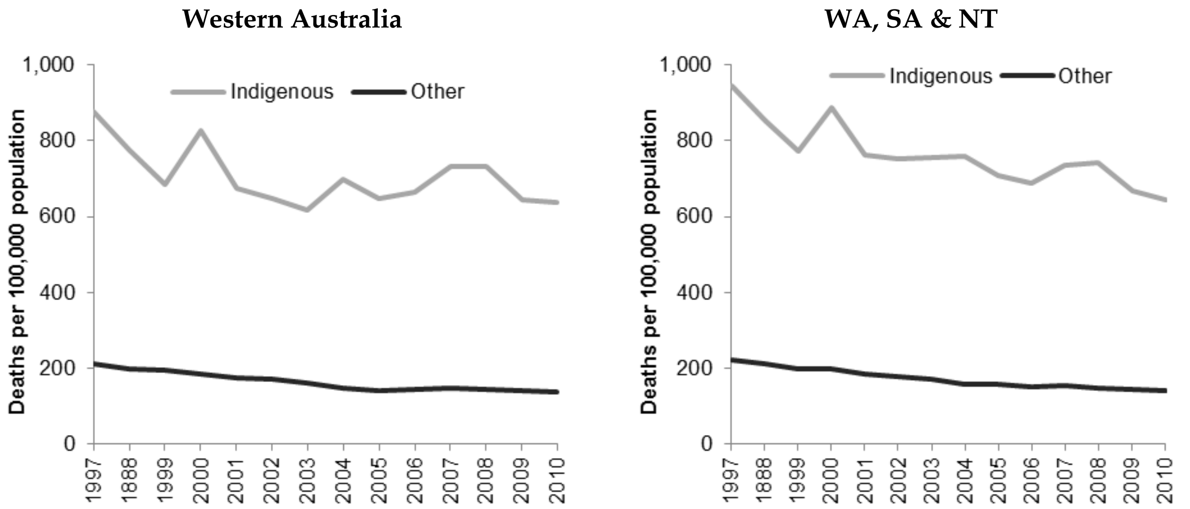
Figure 1.24.1: Total avoidable mortality age standardised rates by Indigenous status, people aged 0–74, Western Australia and NSW, Qld, WA, SA & NT combined, 2006–2010

Table 1.24.1: Avoidable mortality, by cause of death and Indigenous status, people aged 0–74, Western Australia, 2006–2010

	Number		Per cent		Age-standardised rate per 100,000			
Cause of death	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Ratio**	**Rate difference**
Ischaemic heart disease	266	2,456	18.8	17.0	146.3	24.1	6.1*	122.2*
Cancer	180	5,577	12.7	38.6	113.0	54.0	2.1*	58.9*
Digestive organ cancers (C15–C26)	*54*	*1,704*	*3.8*	*11.8*	*30.5*	*16.5*	*1.8**	*14.0**
Lung cancer	*55*	*1,972*	*3.9*	*13.6*	*41.2*	*19.2*	*2.2**	*22.0**
Cervical cancer (C53)	*10*	*77*	*0.7*	*0.5*	*5.7*	*0.7*	*7.6**	*5.0**
Diabetes	152	503	10.7	3.5	91.5	5.0	18.4*	86.5*
Suicide	137	1,200	9.7	8.3	38.6	11.9	3.2*	26.7*
Road traffic injuries	127	829	9.0	5.7	40.9	8.2	5.0*	32.7*
Alcohol-related disease	82	350	5.8	2.4	33.4	3.3	10.0*	30.1*
Selected invasive bacterial and protozoal infections	73	270	5.2	1.9	33.1	2.7	12.3*	30.4*
Cerebrovascular disease	66	711	4.7	4.9	38.3	7.1	5.4*	31.2*
Nephritis and nephrosis	56	177	4.0	1.2	32.7	1.8	18.3*	30.9*
Violence	44	100	3.1	0.7	15.9	1.0	16.0*	14.9*
Birth defects	31	208	2.2	1.4	7.7	2.1	3.7*	5.6*
Chronic obstructive pulmonary disease	26	530	1.8	3.7	22.3	5.3	4.2*	17.0*
Complications of perinatal period	20	116	1.4	0.8	3.3	1.2	2.7*	2.1*
Rheumatic and other valvular heart disease	19	38	1.3	0.3	8.0	0.4	21.5*	7.6*
Other	138	1,384	9.7	9.6	59.7	13.7	4.3*	45.9*
Total	**1,417**	**14,449**	**100.0**	**100.0**	**684.7**	**141.9**	**4.8***	**542.8***

* 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.



Source: AIHW analyses of National Mortality Database.

Figure 1.24.2: Age-standardised mortality rates for avoidable causes of death, by Indigenous status, Australians aged 0–74, Western Australia and WA, SA & NT combined, 1997–2010

Part 2 –Determinants of health

Environmental factors

2.01 Housing

2.02 Access to functional housing with utilities

2.03 Environmental tobacco smoke

Community capacity

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

Socioeconomic factors

2.04 Literacy and numeracy

2.05 Education outcomes for young people

2.06 Educational participation and attainment of adults

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Health behaviours

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 behaviour

2.20 Breastfeeding practice

2.21 Health behaviours during pregnancy including antenatal care

2.22 Overweight and obesity

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.

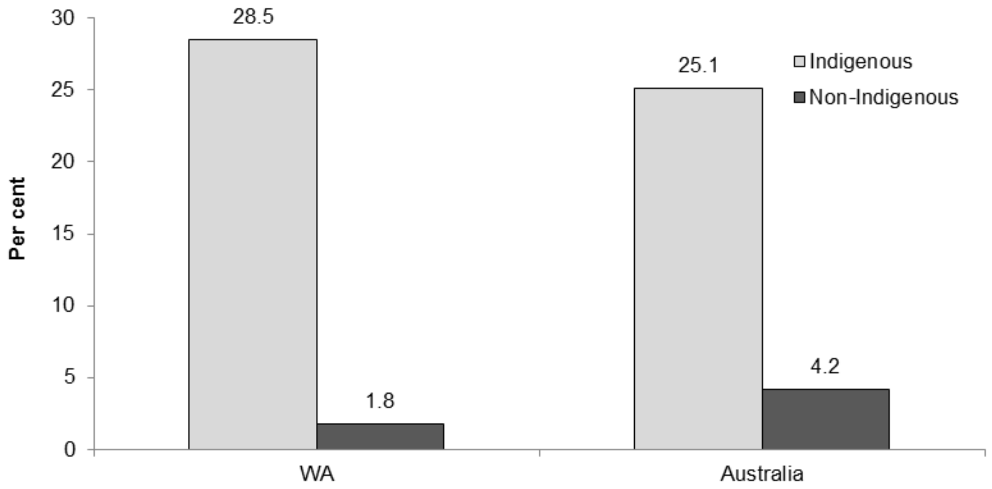
Canadian National Occupancy Standard for overcrowding

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

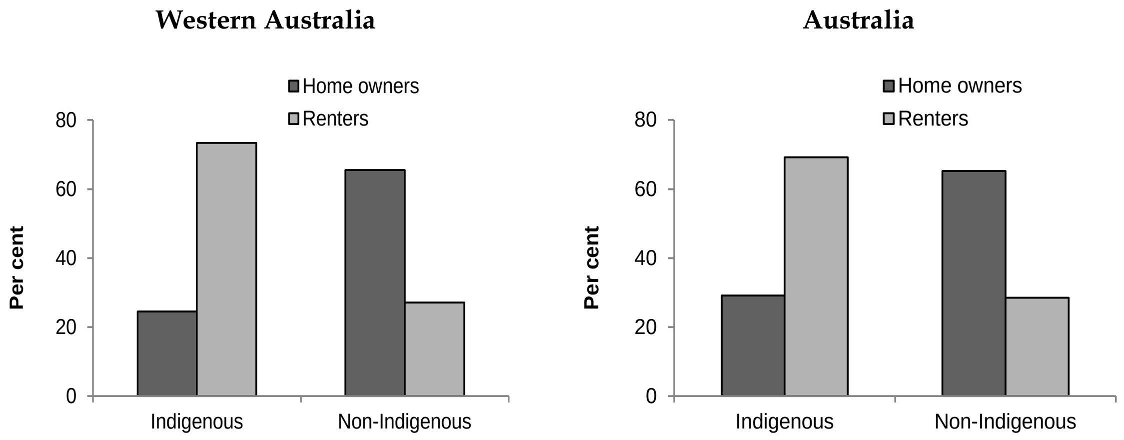
- According to the 2008 NATSISS, nearly three in ten (29%) Indigenous people aged 15 and over were living in overcrowded households compared with 2% of non-Indigenous people. The proportion of Indigenous people living in overcrowded households in Western Australia was higher than that reported nationally (25%) (Figure 2.01.1).
- Overcrowding varied by tenure type, with 42% of Indigenous households in housing co-operative, community or church group housing overcrowded and 21% of Indigenous households in state or territory housing authority housing overcrowded based on data from the 2006 Census. This compared with 10% of private and other renters and 7% of home owners or buyers (Table 2.01.1, Appendix 2).
- In 2008 in Western Australia, about 28% of Indigenous households owned or were buying their own home, 30% were private and other renters, and 40% 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 65% of non-Indigenous households who owned or were buying their home, 25% private and other renters, and 4% renters of some form of social housing (Table 2.01.2, Appendix 2).

- A lower proportion of Indigenous people aged 18 and over in Western Australia were home owners or buyers than Indigenous households nationally (25% compared with 29%) and a higher proportion were renters (73% in Western Australia and 69% nationally) (Figure 2.01.2).
- In 2009–10, there were 15,937 support periods for clients of specialist homeless services in Western Australia who identified as Aboriginal or Torres Strait Islander. This represented 29% of all support periods for clients of these services in Western Australia (Table 2.01.3, Appendix 2).



Source: AIHW analyses of NATSISS 2008.

Figure 2.01.1: Proportion of people aged 15 and over living in overcrowded households, by Indigenous status, Western Australia 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, Western Australia 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 to be 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 271 discrete Indigenous communities in Western Australia, 3% had no organised sewerage supply, 10% had pit toilets and 24% experienced overflows or leakages that lasted longer than 48 hours, compared with national proportions 2%, 17% and 22% respectively (Table 2.02.2, Appendix 2).
- Of the 50 discrete Indigenous communities in Western Australia that were not connected to a town water supply and that sent their drinking water away for testing in the 12 months prior to the 2006 CHINS, 38% (19) 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 2008 in Western Australia, 1.4% of Indigenous households did not have working facilities for washing people, 5.8% did not have facilities for washing clothes/bedding, 6.9% did not have facilities for storing/preparing food, and 0.7% did not have working sewerage systems. These proportions were similar to those nationally except for working sewerage systems for which proportions were lower in Western Australia (Figure 2.02.1).

Table 2.02.1: Testing of drinking water in discrete Indigenous communities, Western Australia and Australia, 2006[a][b][c]

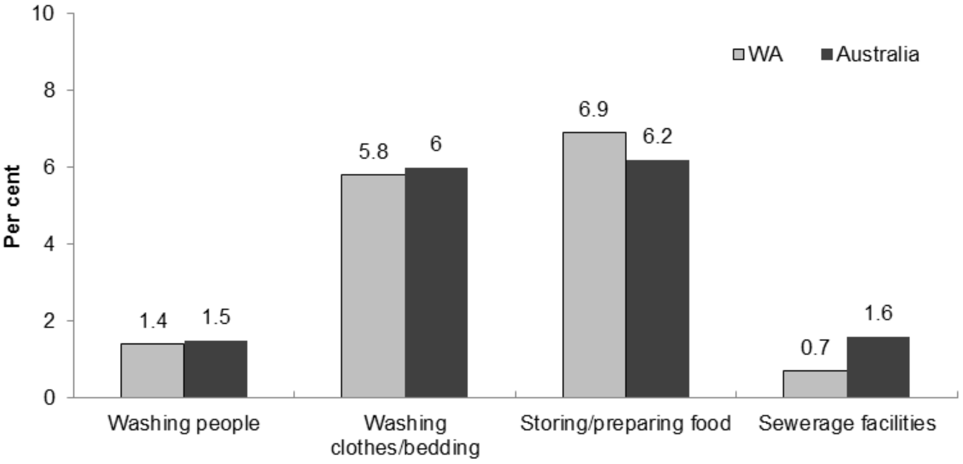
	Western Australia		Australia			
	Number of communities	Per cent	Number of communities	Per cent	Reported usual population	Per cent
Did not fail testing	30	60.0	100	61.0	29,104	58.2
Failed testing	19	38.0	48	29.3	12,059	24.1
Test result not known	1	2.0	16	9.7	8,880	17.7
Total communities water sent away for testing	**50**	**94.3**	**164**	**78.1**	**50,043**	**89.5**
Not tested	3	5.7	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
Total	**53**	**100.0**	**211**	**100.0**	**54,939**	**100.0**

(a) In the 12 months before the survey.

(b) Excludes communities connected to town supply.

(c) All discrete Indigenous communities for which water testing data were collected.

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



Note: Excludes households for which information about working facilities was not reported.

Source: AIHW analyses of NATSISS 2008.

Figure 2.02.1: Percentage of Indigenous households reporting lack of working facilities for each of the first four healthy living practices, Western Australia 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 Western Australia, two in three (67%) Indigenous children aged 0–14 lived in households with a daily smoker, compared with one in three (34%) 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 18% of Indigenous children aged 0–14 in Western Australia were living in households with a daily smoker who smoked at home indoors, compared with 3.4% of non-Indigenous children of the same age. The proportions nationally were 22% for Indigenous children and 7% for non-Indigenous children of the same age.
- A higher proportion of Indigenous children aged 0–14 in remote (including very remote) areas of Western Australia lived in households with a regular smoker (73%) than non-remote areas of Western Australia (62%). This same pattern was evident nationally (Table 2.03.2, Appendix 2).
- The proportion of Indigenous children aged 0–14 who lived in households with a regular smoker who smoked at home indoors was higher in remote areas of Western Australia (24%) than in non-remote areas (11%). This same pattern was evident nationally (24% in remote areas compared with 21% in non-remote areas (Table 2.03.2, Appendix 2).

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

			WA	Australia
Proportion of children living with daily smoker(s)[(a)]	Indigenous	%	66.7	65.1
	Non-Indigenous	%	34.2	32.2
	Rate ratio		1.9*	2.0*
Proportion of children with daily smoker who smokes at home indoors in household[(a)]	Indigenous	%	17.6	21.6
	Non-Indigenous	%	3.4	6.6
	Rate ratio		5.1*	3.3*
Total number of children aged 0–14 years[(b)]	**Indigenous**	**No.**	**25,405**	**193,249**
	Non-Indigenous	**No.**	**394,744**	**3,907,621**

* 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 lower levels of education) tend to live shorter and less healthy lives. Having a low income and/or poor 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 Western Australia in 2011, 70.4% of Year 3 Indigenous students achieved the reading benchmark, compared with 93.8% of non-Indigenous students; 55% of Year 5 Indigenous students achieved the reading benchmark, compared with 92.2% of non-Indigenous students; 72.6% of Year 7 Indigenous students achieved the reading benchmark, compared with 96.3% of non-Indigenous students; and 63.9% of Year 9 Indigenous students achieved the reading benchmark, compared with 92.6% of non-Indigenous students. The proportions of Indigenous students having achieved reading benchmarks were lower in Western Australia than nationally for all of the four year levels (Table 2.04.1).

Writing

- In Western Australia in 2011, 74.6% of Year 3 Indigenous students achieved the writing benchmark, compared with 96.3% of non-Indigenous students; 56.4% of Year 5 Indigenous students achieved the writing benchmark, compared with 93% of non-Indigenous students; 60.7% of Year 7 Indigenous students achieved the writing benchmark, compared with 93.5% of non-Indigenous students; and 47.4% of Year 9 Indigenous students achieved the writing benchmark, compared with 85.4% of non-Indigenous students. The proportions of Indigenous students having achieved writing benchmarks were lower in Western Australia than nationally for all of the four year levels (Table 2.04.1).

Spelling

- In Western Australia in 2011, 63.3% of Year 3 Indigenous students achieved the spelling benchmark, compared with 93.8% of non-Indigenous students; 59% of Year 5 Indigenous students achieved the spelling benchmark, compared with 91.9% of non-Indigenous students; 67.6 % of Indigenous Year 7 students achieved the spelling benchmark, compared with 93.6% of non-Indigenous students; and 64.6% of Year 9 Indigenous students achieved the spelling benchmark, compared with 89.73% of non-Indigenous students. The proportions of Indigenous students having achieved spelling benchmarks were lower in Western Australia than nationally for all of the four year levels (Table 2.04.1).

Grammar and punctuation

- In Western Australia in 2011, 59.3% of Year 3 Indigenous students achieved the grammar and punctuation benchmark, compared with 93.3% of non-Indigenous students; 50.8% of Year 5 Indigenous students achieved the grammar and punctuation benchmark, compared with 92.6% of non-Indigenous students; 57.5% of Year 7 Indigenous students achieved the grammar and punctuation benchmark, compared with 94.6% of non-Indigenous students; and 49.6% of Year 9 Indigenous students achieved the grammar and punctuation benchmark, compared with 90.3% of non-Indigenous students. The proportions of Indigenous students having achieved grammar and punctuation benchmarks were lower in Western Australia than nationally for all of the four year levels (Table 2.04.1).

Numeracy

- In Western Australia in 2011, 79.8% of Year 3 Indigenous students achieved the numeracy benchmark, compared with 96.5% of non-Indigenous students; 67% of Year 5 Indigenous students achieved the numeracy benchmark, compared with 95.4% of non-Indigenous students; 72.2% of Year 7 Indigenous students achieved the numeracy benchmark, compared with 96.3% of non-Indigenous students; and 67.3% of Year 9 Indigenous students achieved the numeracy benchmark, compared with 93.6% of non-Indigenous students. The proportions of Indigenous students having achieved numeracy benchmarks were lower in Western Australia than nationally for all of the four year levels (Table 2.04.1).

Trends over time

- Between 2008 and 2011 in Western Australia, there have been some increases in the proportion of Indigenous Year 3 and Year 7 students achieving literacy benchmarks. For example, the proportion of Indigenous students achieving the Year 3 reading benchmark increased from 57% to 70%; the Year 3 grammar/punctuation benchmark increased from 51% to 59%; and the Year 9 reading benchmark increased from 63% to 73%. The gap has also narrowed for these benchmarks (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, Western Australia and Australia, 2011

	Indigenous					Non-Indigenous				
	Reading	Writing	Spelling	Grammar & punctuation	Numeracy	Reading	Writing	Spelling	Grammar & punctuation	Numeracy
					Western Australia					
Year 3	70.4	74.6	63.3	59.3	79.8	93.8	96.3	93.8	93.3	96.5
Year 5	55.0	56.4	59.0	50.8	67.0	92.2	93.0	91.9	92.6	95.4
Year 7	72.6	60.7	67.6	57.5	72.2	96.3	93.5	93.6	94.6	96.3
Year 9	63.9	47.4	64.6	49.6	67.3	92.6	85.4	89.7	90.3	93.6
					Australia					
Year 3	76.3	79.9	71.7	70.9	83.6	94.9	96.2	94.1	94.4	96.4
Year 5	66.4	68.9	68.8	64.8	75.2	92.9	93.9	92.6	93.6	95.5
Year 7	77.1	66.9	73.8	67.0	76.5	95.7	92.6	93.5	94.3	95.5
Year 9	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 Western Australia, the apparent retention rate of full-time Indigenous students from Year 7–8 to Year 10 was 94% for males and 91% for females, compared with 102% for non-Indigenous males and 103% for non-Indigenous females.
- The apparent retention rate from Year 7–8 to Year 11 was 78% for Indigenous males and 77% for Indigenous females, compared with 99% and 101% 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—39% for Indigenous males and 42% for Indigenous females, compared with 76% for non-Indigenous males and 86% for non-Indigenous females.
- The apparent retention rate from Year 10 to Year 12 was lower for Indigenous female students than that for non-Indigenous female students (70% for Indigenous females, compared with 92% for non-Indigenous females), while the rate was higher for Indigenous male students (85%) than that for non-Indigenous male students (74%).
- In 2011, 52% of Indigenous male Year 11 students and 54% of Indigenous female Year 11 students went on to achieve a Year 12 certificate in Western Australia. This compared with 78% and 85% of non-Indigenous male and female Year 11 students.
- Apparent retention and attainment rates for Indigenous students in Western Australia were lower than the national rates for Indigenous students for Year 7–8 to Year 10, Year 7–8 to Year 12, and Year 11 to Year 12, while the rates were higher in Western Australia than in Australia for Year 7–8 to Year 11 and Year 10 to Year 12 (Table 2.05.1).

Table 2.05.1: Apparent retention and attainment rates, by Indigenous status and sex, Western Australia and Australia, 2011[(a)(b)(c)]

	Western Australia		Australia	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
	Per cent		Per cent	
Year 7–8 to Year 10[(a)]				
Males	93.9	101.8	98.4	100.7
Females	90.9	102.6	99.0	101.8
Year 7–8 to Year 11[(a)]				
Males	77.6	98.6	71.4	91.1
Females	76.5	101.2	75.2	96.5
Year 7–8 to Year 12[(a)]				
Males	38.8	75.8	46.1	75.9
Females	42.0	86.4	51.3	85.8
Year 10 to Year 12[(b)]				
Males	84.9	73.7	51.5	76.4
Females	69.6	92.1	55.6	84.9
Year 11 to Year 12[(c)]				
Males	51.5	78.0	66.4	84.2
Females	53.9	85.1	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

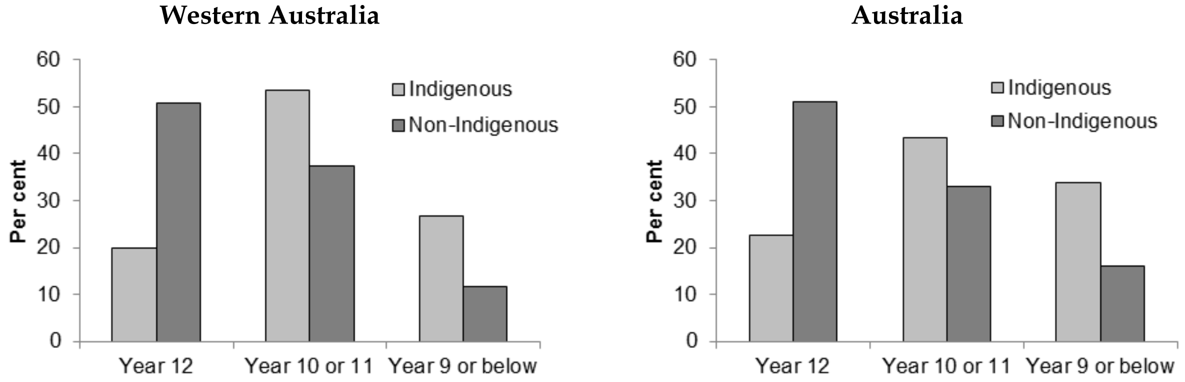
People who go on to higher education (universities and other tertiary institutions) and graduate with a degree or diploma are more likely to obtain full-time work and earn higher incomes than those who do not. Likewise, people who complete a vocational education and training (VET) course are more likely 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 Western Australia, the proportion of Indigenous Australians aged 15 and over who were studying was higher than non-Indigenous Australians (18% compared with 16%). These rates are similar to those nationally (Table 2.06.1).
- A higher proportion of Indigenous people from Western Australia attended 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).

- Indigenous people aged 18 and over were less likely than non-Indigenous people to have completed Year 12 (20% compared with 51%) in Western Australia in 2008. A higher proportion of Indigenous adults than non-Indigenous adults reported that the highest year of school completed was Year 9 or below (27% compared with 12%). The proportion of Indigenous people who completed Year 12 was lower in Western Australia than nationally (20% compared with 23%) (Figure 2.06.1).
- In Western Australia in 2008 about 40% of Indigenous people aged 25–64 had a post-school qualification compared with 62% of non-Indigenous people. The most commonly held qualification was for a certificate course for both Indigenous and non-Indigenous people in Western Australia (Table 2.06.2).



Note: Year 9 or below includes people who never attended school.

Source: ABS and AIHW analysis of NATSISS 2008.

Figure 2.06.1: Highest level of school completed, by Indigenous status, people aged 18 and over, Western Australia and Australia, 2008

Table 2.06.1: Educational institution currently attended, by Indigenous status, people aged 15 and over, Western Australia and Australia, 2008

	Educational participation		Secondary school	TAFE/technical college/ business college/ industry skills centre	University/other higher education	Total currently studying[(a)]	Not studying	Total[(a)]	Total number
WA	Indigenous	%	7.7*	6.5*	2.5*	18.2	81.8	100.0	43,826
	Non-Indigenous	%	4.3*	4.9*	5.5*	15.8	84.2	100.0	1,614,710
	Rate ratio		1.8	1.3	0.5	1.2	1	. .	. .
Australia	Indigenous	%	8.4*	6.0*	2.7*	19.0*	81.0*	100.0	327,101
	Non-Indigenous	%	4.2*	4.6*	5.6*	15.6*	84.4*	100.0	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.

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, Western Australia and Australia, 2008

	Highest post-school qualification[(a)]		Bachelor degree or above[(b)]	Advanced diploma/ diploma	Certificate	*Total with post-school qualification[(c)]*	Does not have a post-school qualification	Total	Total number of people
WA	Indigenous	%	6.0*	5.1*	24.5	39.7*	60.3*	100	28,073
	Non-Indigenous	%	24.6*	10.1*	26.3	62.3*	37.7*	100	1,091,885
	Rate ratio		0.2	0.5	0.9	0.6	1.6	. .	. .
Australia	Indigenous	%	6.5*	5.6*	24.7	40.2*	59.9*	100.0	207,342
	Non-Indigenous	%	24.9*	9.8*	24.9	61.4*	38.6*	100.0	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 Western Australia, the labour force participation rate for Indigenous people aged 15–64 was estimated to be 68%, with 17% 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 83%, with 3% of non-Indigenous participants unemployed (Figure 2.07.1).
- The labour force participation rate for Indigenous people aged 15–64 was slightly higher in Western Australia than nationally (68% compared with 65%, while the unemployment rate was the same (17% in Western Australia and nationally).
- An estimated 56% of Indigenous people aged 15–64 were employed in Western Australia in 2008 (10% in Community Development Employment Projects, or CDEP, and 46% in non-CDEP) and 11% were unemployed. Of the non-Indigenous population, 80% were employed and 2.4% were unemployed (Table 2.07.1).

Source: NATSISS 2008 and NHS 2007–08.

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

Table 2.07.1: Labour force status of people aged 15–64, by Indigenous status, Western Australia and Australia, 2008

	WA		Australia	
	Indigenous.	Non-Indigenous	Indigenous	Non-Indigenous
	Per cent		Per cent	
In the labour force				
Employed CDEP	10.2	. .	5.6	. .
Employed non-CDEP	46.1	. .	48.2	. .
Total employed	*56.3*	*80.3*	*53.8*	*76.0*
Unemployed	11.4	2.4	10.7	2.9
Not in the labour force	32.3	17.4	35.5	21.1
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: NATSISS 2008 and NHS 2007–08.

2.08 Income

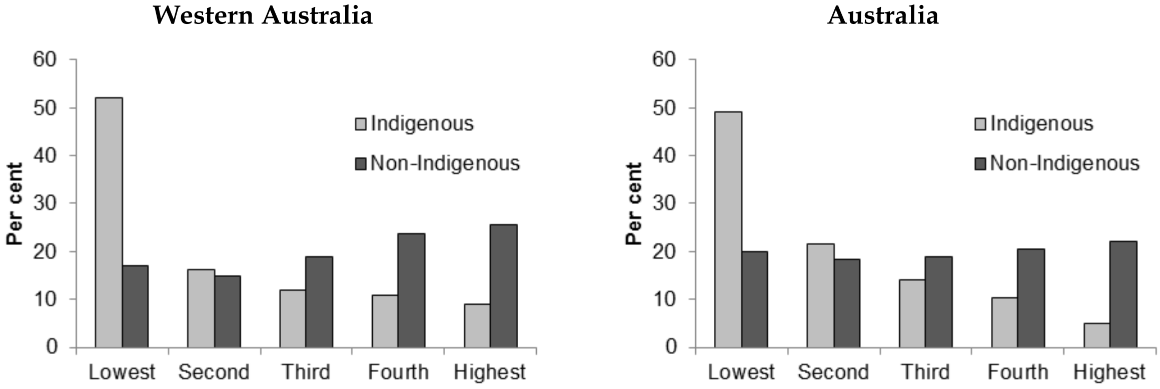
Low income is associated with a wide range of disadvantages, including shorter life expectancy, low levels of education, substance abuse, reduced social participation, and contact with the criminal justice system. People with lower socioeconomic status, including many Aboriginal and Torres Strait Islander 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 Western Australia were in the lowest quintile (most disadvantaged) of equivalised gross weekly household income and 9% were in the highest (least disadvantaged), compared with 17% in the lowest quintile and 26% in the highest for non-Indigenous people aged 18 and over (Figure 2.08.1). This same pattern was evident nationally, with 49% of Indigenous people aged 18 years and over in the lowest quintile and 5% in the highest, and 20% of non-Indigenous people were in the lowest quintile and 22% in the highest.
- In 2008 in Western Australia, the mean equivalised gross weekly household income for Indigenous people aged 18 and over was $621 per week, compared with $1,051 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).



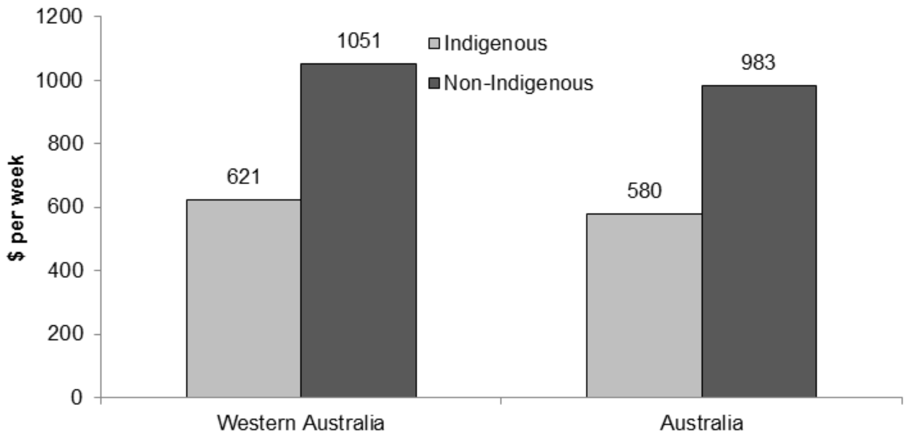
(a) Equivalised gross household income quintile boundaries for Indigenous Australians are: first (0 to $435); second ($436 to $686); third ($687 to $952); fourth ($953 to $1,380); and fifth ($1,381 or more).

(b) Equivalised gross household income quintile boundaries for non-Indigenous Australians are: first (0 to $423); second ($424 to $666); third ($667 to $925); fourth ($926 to $1,341); and fifth ($1,342 or more).

(c) Proportions excluding people whose gross household income is not stated.

Source: NATSISS 2008 and SIH 2007–08.

Figure 2.08.1: Proportion of people aged 18 and over in each equivalised gross weekly household income quintile(a)(b)(c), by Indigenous status, Western Australia and Australia, 2008



Source: NATSISS 2008 and SIH 2007–08.

Figure 2.08.2: Mean equivalised gross household income ($ per week), by Indigenous status, people aged 18 and over, Western Australia and Australia, 2008

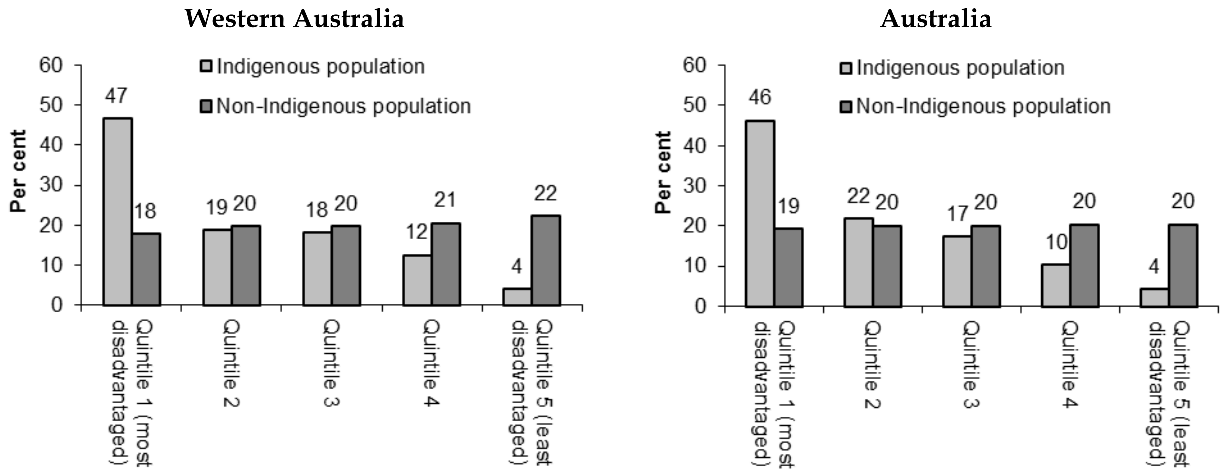
2.09 Index of disadvantage

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 Western Australia, a greater proportion of the Indigenous population was in the most disadvantaged quintile of socioeconomic status than the non-Indigenous population (47% compared with 18%) (Figure 2.09.1). Only 4% of the Indigenous population was in the least disadvantaged quintile, compared with 22% of the non-Indigenous population.
- Compared with the Indigenous population nationally, Western Australia had a similar proportion of Indigenous people in the most disadvantaged quintile of socioeconomic status (47% in Western Australia, 46% nationally) and the same proportion of Indigenous people in the least disadvantaged quintile (4% in Western Australia and nationally).



Note: Proportions may not sum to 100% due to rounding.

Source: AIHW analyses of 2006 Census data.

Figure 2.09.1: Population distribution by SEIFA advantage/disadvantage quintiles, by Indigenous status, Western Australia and Australia, 2006

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 29% of Indigenous people aged 15 and over in Western Australia reported being a victim of physical or threatened violence in the last 12 months. This was higher than the proportion nationally (25%) (Table 2.10.2, Appendix 2).
- After adjusting for differences in age structure, Indigenous people aged 18 and over were almost twice as likely as non-Indigenous people to report being a victim of physical or threatened violence in the last 12 months in Western Australia (Table 2.10.1).
- In 2008 in Western Australia, about 81% 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 49% of non-Indigenous people. The most common stressors for Indigenous people were death of a family member or close friend (49%) and alcohol- or drug-related problems (31%) (Table 2.10.1). These proportions were higher than those reported nationally.
- Of Indigenous people aged 15 and over in Western Australia, 77% reported neighbourhood/community problems present, compared with 74% nationally. Alcohol and dangerous/noisy driving were most commonly reported as a neighbourhood/community problem in Western Australia (50% for alcohol and 49% for dangerous/noisy driving) (Figure 2.10.1).
- Between July 2008 and June 2010, there were 2,749 hospitalisations of Indigenous people in Western Australia with a principal diagnosis of assault. Indigenous people in Western

Australia were hospitalised for assault at 21 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 12 times the rate of non-Indigenous people (Table 2.10.3, Appendix 2).

- Between 2006 and 2010, there were 44 deaths from assault of Indigenous people in Western Australia. The Indigenous mortality rate from assault was 16 times the rate of non-Indigenous Australians. In New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined, the Indigenous mortality rate from assault was 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, Western Australia and Australia, 2008

	Western Australia		Australia	
	Indig.	**Non-Indig.**	**Indig.**	**Non-Indig.**
	Per cent		**Per cent**	
Victim of physical or threatened violence in last 12 months[(a)]	23.9*	12.9*	20.5*	10.8*
Stressors experienced by individual, family members and/or close friends in last 12 months				
Mental illness	15.6*	8.5*	17.1*	8.8*
Death of family member or close friend	47.8*	19.8*	40.4*	19.4*
Alcohol or drug-related problems	31.1*	7.6*	24.2*	5.7*
Abuse or violent crime	10.9*	3.3*	7.6*	2.4*
Witness to violence	11.7*	3.4*	9.0*	2.2*
Trouble with the police	17.7*	3.3*	14.7*	2.6*
One or more of the above stressors	*63.7**	*31.1**	*59.1**	*30.2**
You, a family member or friend spent time in gaol	17.1	. .	12.8	. .
Overcrowding at home	13.5	. .	12.7	. .
Treated badly / discrimination	14.1	. .	10.2	. .
Total experienced stressors[(b)c)]	*80.5**	*49.4**	*79.0**	*49.1**
No stressors reported	19.5*	50.6*	21.0*	50.9*
Total	**100.0**	**100.0**	**100.0**	**100.0**

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

. . Data not collected for non-Indigenous Australians.

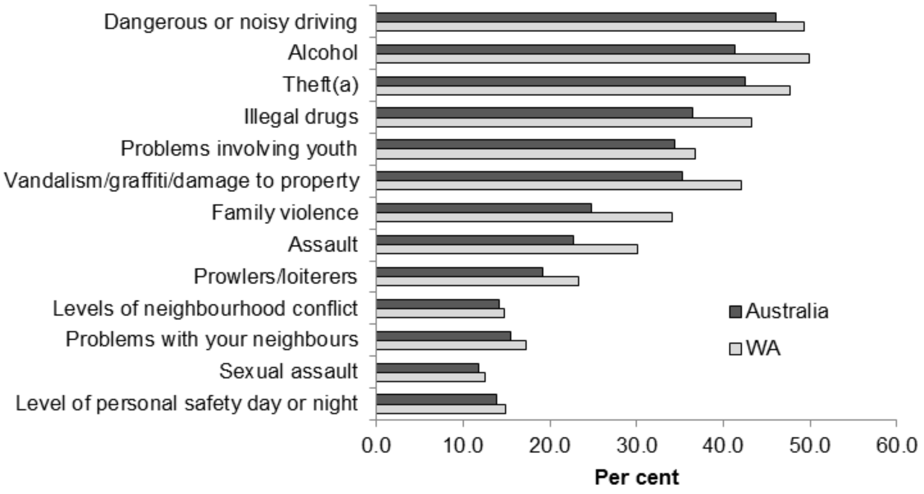
(a) For this variable only, non-Indigenous comparison has been sourced from General Social Survey (GSS) 2006.

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

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

Note: Excludes stressors not stated.

Source: NATSISS 2008 and NHS 2007–08.



Source: NATSISS 2008 and NHS 2007–08.

Figure 2.10.1: Proportion of Indigenous Australians aged 15 and over reporting neighbourhood/ community problems, Western Australia and Australia, 2008

2.11 Contact with the criminal justice system

The rate of incarceration is relatively high among Aboriginal and Torres Strait Islander people. This not only affects the health and wellbeing of those imprisoned, but also of their families and children (Levy 2005).

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 1,772 Indigenous and 2,876 non-Indigenous people in prison custody in Western Australia. 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 Western Australia was 3,106 per 100,000, which was about 18 times the rate for non-Indigenous people (170 per 100,000). Imprisonment rates were higher in Western Australia than the national rates for both Indigenous and non-Indigenous Australians.
- In Western Australia, the age-standardised imprisonment rate of Indigenous people increased significantly by 69% between 2001 and 2011. Nationally, over the same period, the age-standardised imprisonment rate of Indigenous people increased significantly by 58%, with an average yearly increase of about 73 per 100,000 (Figure 2.11.1).
- There were 7 deaths of Indigenous people in custody (police and prison) in Western Australia in 2010–11. This represented 64% of all deaths in custody in Western Australia. Nationally, Indigenous people represented one-quarter (25%) of deaths in custody (Table 2.11.2, Appendix 2).
- In Western Australia, 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 0.04 and 0.45 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, Western Australia and Australia, 30 June 2011

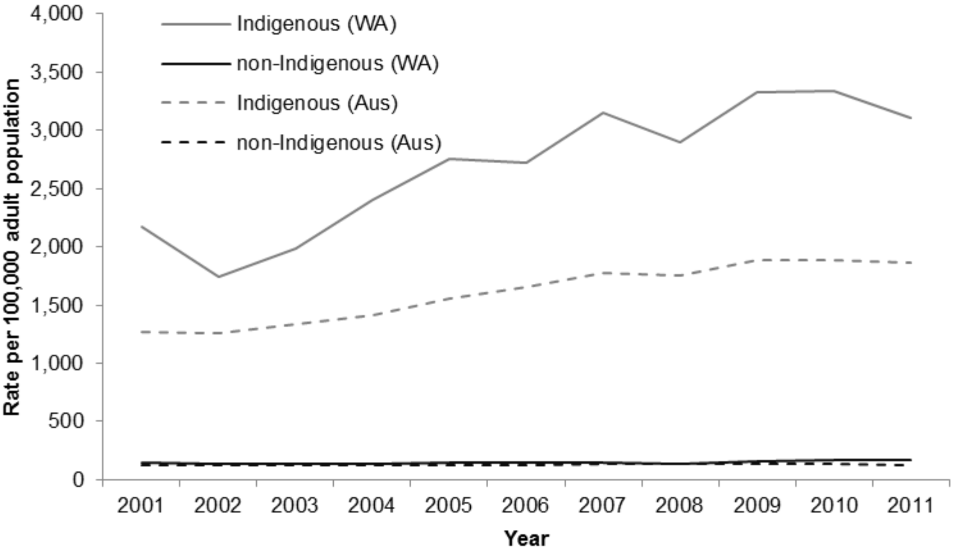
	Indigenous			Non-Indigenous			
	Number	Crude rate[(a)]	Age-standardised rate[(b)]	Number	Crude rate[(a)]	Age-standardised rate[(b)]	Age-standardised rate ratio[(c)]
WA	1,772	3,809.9	3,105.7	2,876	165.2	170.1	18.3
Australia	**7,656**	**2,247.50**	**1,867.60**	**21,426**	**125**	**130.2**	**14.3**

(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.



Source: ABS 2011.

Figure 2.11.1 Age-standardised imprisonment rates, by Indigenous status, Western Australia and Australia, 2001–2010

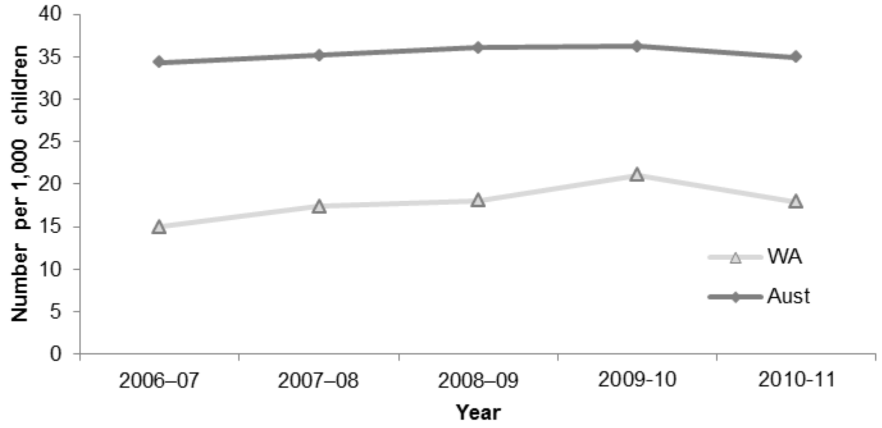
2.12 Child protection

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 527 Indigenous children aged 0–16 who were the subject of a substantiation in Western Australia. Indigenous children aged 0–16 were more likely to be the subject of substantiation than other children aged 0–16 (18 per 1,000 compared with 1.4 per 1,000). Substantiation rates for both Indigenous children and non-Indigenous children were lower in Western Australia than across Australia (Table 2.12.2, Appendix 2).
- Between 2006–07 and 2010–11 in Western Australia, the rate of Aboriginal and Torres Strait Islander children who were the subject of substantiations remained relatively stable (ranging from 15 per 1,000 in 2006–07 to 21 per 1,000 in 2009–10). Rates for Indigenous children nationally were also stable over this period (Figure 2.12.1). Changes in child protection rates over time should be interpreted with caution due to growth in the Western Australian child and the Aboriginal child populations between 2006 and 2011.
- As at 30 June 2011, there were 1,496 Indigenous children aged 0–17 who were on care and protection orders in Western Australia. Indigenous children were 15 times more likely to be on care and protection orders than other children (48 per 1,000 compared with 3.2 per 1,000). The rate of Indigenous children on care and protection orders was slightly lower in Western Australia than nationally (48 compared with 51 per 1,000) (Table 2.12.3, Appendix 2).
- As at 30 June 2011, there were 1,448 Indigenous children aged 0–17 who were in out-of-home care in Western Australia. Indigenous children were 16 times more likely to be in out-of-home care than other children (46 per 1,000 compared with 3 per 1,000). The rate of Indigenous children in out of home care was lower in Western Australia than nationally (46 compared with 52 per 1,000) (Table 2.12.4, Appendix 2).
- About 71% of Aboriginal and Torres Strait Islander children in out-of-home care in Western Australia were placed with relative/kin, other Indigenous caregivers or Indigenous residential care. 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, Western Australia 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, Western Australia and Australia, 30 June 2011

Relationship	**WA**	**Australia**
	Number	
Indigenous relative/kin	654	4,803
Other Indigenous caregiver	204	2,055
Other relative/kin	171	1,657
Total placed with relatives/kin, other Indigenous caregivers or in Indigenous residential care	*1,029*	*8,515*
Other caregiver	417	3,788
Total not placed with relatives/kin, other Indigenous caregivers or in Indigenous residential care	*417*	*3,788*
Total	**1,446**	**12,303**
	Per cent	
Indigenous relative/kin	45.2	39.0
Other Indigenous caregiver	14.1	16.7
Other relative/kin	11.8	13.5
Total placed with relatives/kin, other Indigenous caregivers or in Indigenous residential care	*71.2*	*69.2*
Other caregiver	28.8	30.8
Total not placed with relatives/kin, other Indigenous caregivers or in Indigenous residential care	*28.8*	*30.8*
Total	**100.0**	**100.0**

Notes

1. This table does not include Indigenous children who were living independently or whose living arrangements were unknown.
2. Percentages in tables may not add to 100 due to rounding.
3. Family group homes and residential care are reported under other caregiver.
4. Please note that the Department of Child Protection prefers the use of the term Aboriginal rather than Indigenous.

Source: AIHW analysis of National Child Protection Data Collection 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, 70% of Indigenous households and 90% of other households in Western Australia had at least one vehicle, compared with 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 1.57 people per vehicle in Western Australia, compared with 1.07 people per vehicle for other households. Nationally, the ratio was 1.59 for Indigenous households and 1.19 for others.
- According to the 2008 NATSISS, Indigenous people in Western Australia were more likely than non-Indigenous people to have difficulty getting to the places they needed to. In 2008, 27% of Indigenous people living in Western Australia reported that they sometimes or often had difficulty, or could not get to places, compared with 12% 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, Western Australia and Australia, 2006

	Ratio of people aged 17 and over in occupied private dwellings to vehicle[(a)]			Proportion of households[(b)] with at least one vehicle		
	Indigenous[(c)]	Other[(d)]	Total	Indigenous[(c)]	Other[(d)]	Total
State/territory						
WA	1.57	1.07	1.08	70	90.2	89.7
Australia[(e)]	1.59	1.19	1.19	71.9	87.2	86.9

(a) Excludes motorbikes.

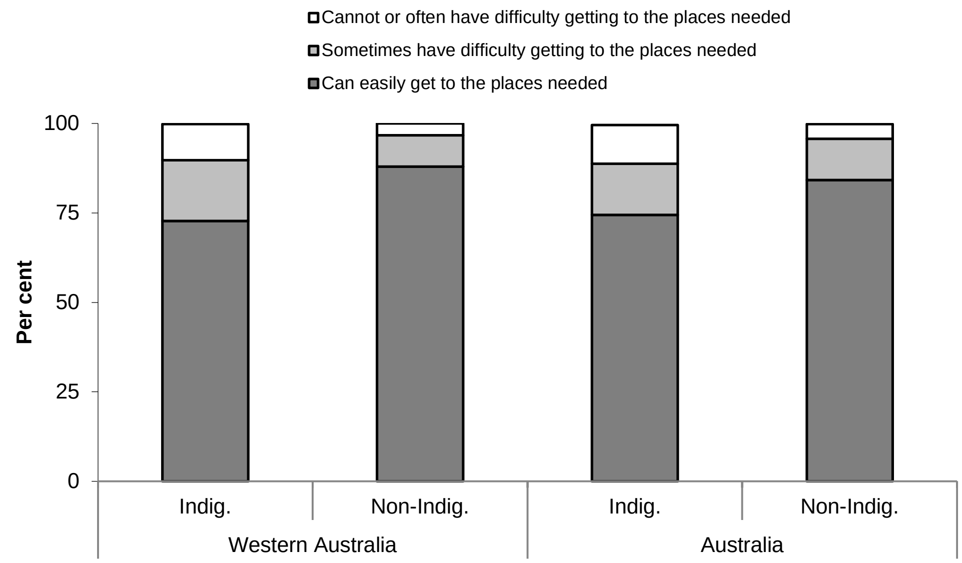
(b) Defined as all households (excluding visitor households), in an occupied private dwelling, being Australian usual residents.

(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 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, Western Australia 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

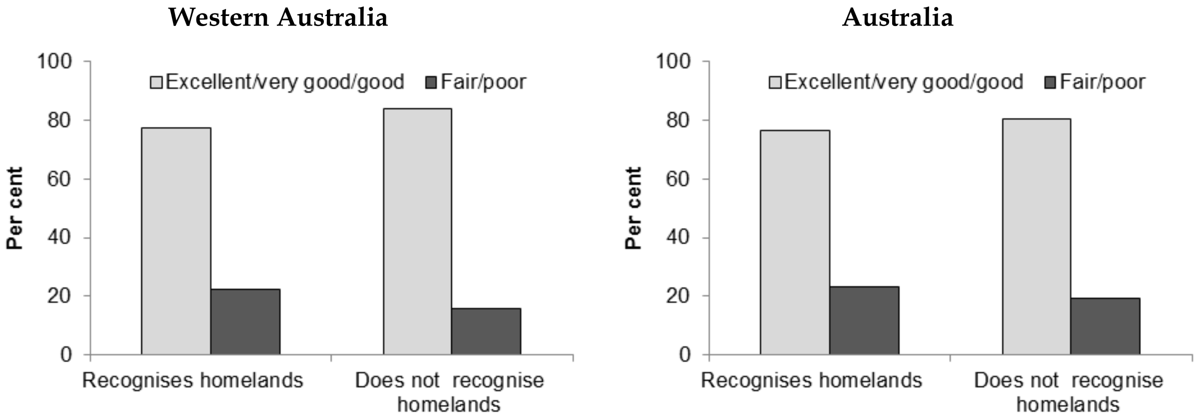
- According to the NATSISS, in 2008 in Western Australia, 44% of Indigenous people aged 15 and over recognised and were allowed to visit their homelands/traditional country. Nationally, 45% of Indigenous people recognised their homelands and were allowed to visit (Figure 2.14.1).
- About 31% of Indigenous people in Western Australia and 26% of Indigenous people nationally lived on their homelands.
- About 24% of Indigenous people in Western Australia reported they did not recognise their homelands and 0.9% reported they were not allowed to visit their homelands. This compared with 29% and 0.6% for Indigenous people nationally.
- In 2008 in Western Australia, Indigenous people who did not recognise their homelands/traditional country were more likely to report excellent/very good/good health (84%) than those who did recognise their homelands/traditional country (78%). The data for Australia showed similar patterns (81% compared with 77%) (Figure 2.14.2).

* The proportion of Indigenous Australians aged 15 and over who recognise but are not allowed to visit their homeland/traditional country was 0.9% for WA and 0.6% Australia.

Note: Proportions and numbers exclude not stated responses.

Source: AIHW analyses of NATSISS 2008.

Figure 2.14.1: Access to homelands/traditional country, Indigenous Australians aged 15 and over, Western Australia 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, Western Australia 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

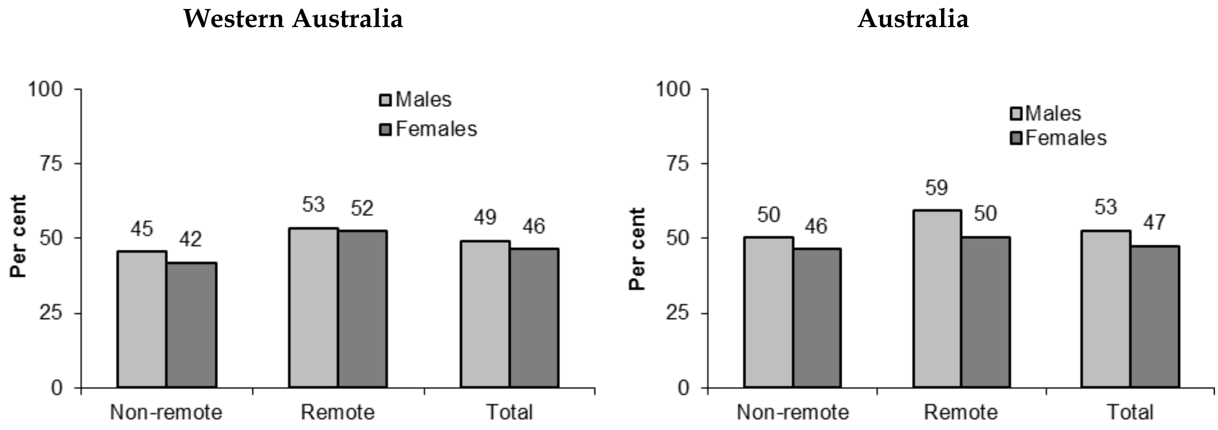
- According to the NATSISS, in 2008 in Western Australia, about 41% of Indigenous people aged 15 and over were current daily smokers, 3% were smokers who smoked weekly or less than weekly; 19% were ex-smokers and 37% had never smoked (Table 2.15.1).
- A lower proportion of Indigenous people aged 15 and over in Western Australia were current daily smokers than Indigenous people nationally (41% compared with 45%).
- Indigenous people in Western Australia were more than two and a half (2.6) times as likely to be daily smokers as non-Indigenous people in Western Australia.
- In Western Australia, Indigenous adults aged 25–34 and 35–44 were most likely to report being current smokers (57% and 55% respectively) (Table 2.15.2, Appendix 2).
- Indigenous adults in remote (including very remote) Western Australia were more likely to be current smokers (53% for males and 52% for females) than Indigenous adults in non-remote Western Australia (45% for males and 42% for females). A similar pattern was evident nationally (Figure 2.15.1).

Table 2.15.1: Smoking status by Indigenous status, persons aged 15 and over, Western Australia and Australia 2008

	WA			Australia		
Smoker status (%)	**Indigenous**	**Non-Indigenous**	**Rate ratio**	**Indigenous**	**Non-Indigenous**	**Rate ratio**
Current daily smoker	41.3	16.1	2.6	44.6	18.0	2.5
Current smoker other[(a)]	2.9	1.6	1.8	2.2	1.8	1.2
Ex-smoker	18.6	32.2	0.6	19.7	28.6	0.7
Never smoked	37.2	50.1	0.7	33.5	51.6	0.6
All persons	**100**	**100.0**	**..**	**100.0**	**100.0**	**..**
Total number of persons	**43,826**	**1,614,710**	**0.03**	**327,101**	**16,374,202**	**0.02**

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

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



Source: AIHW analyses of NATSISS 2008.

Figure 2.15.1: Indigenous people aged 18 and over reporting they are a current smoker, by sex and remoteness, Western Australia and Australia, 2008

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.

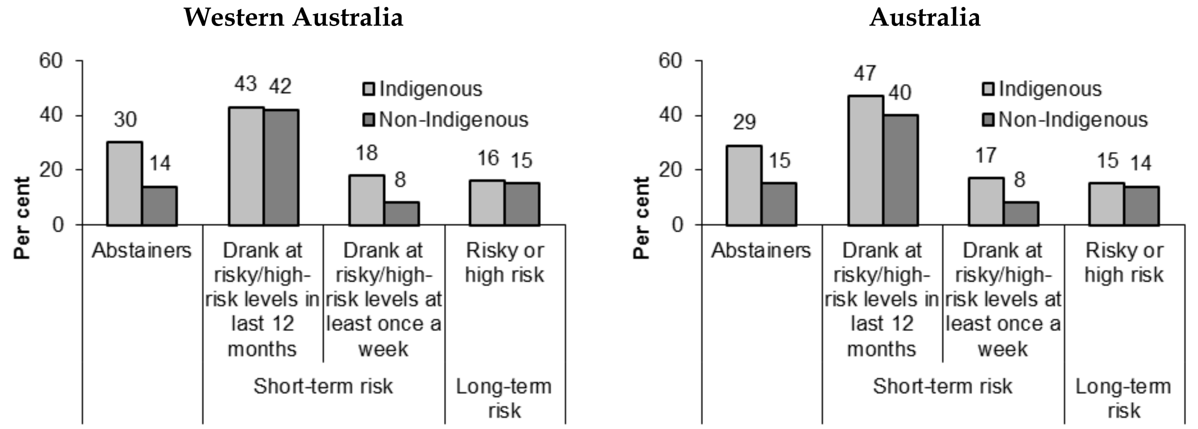
Short-term high-risk drinking is consumption of 11 or more standard drinks on any one day for males, and more than 7 standard drinks for females.

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 Western Australia, Indigenous adults were more likely than non-Indigenous adults to report having abstained from alcohol consumption in the last 12 months (30% compared with 14%) (Figure 2.16.1).
- About 43% of Indigenous adults in Western Australia reported drinking at short-term risky/high-risk levels in the last 12 months, which was lower than the proportion of Indigenous adults nationally (47%), and similar to the proportion for non-Indigenous adults in Western Australia (42%).
- About 18% of Indigenous adults in Western Australia reported drinking at short-term risky/high-risk levels at least once a week, which was similar to the proportion for Indigenous adults nationally, and more than twice the proportion of non-Indigenous adults in Western Australia (8%).
- About 16% of Indigenous adults in Western Australia drank at long-term risky/high-risk levels in the last 12 months, compared with 15% of non-Indigenous adults. The proportions nationally were 15% and 14% for Indigenous and non-Indigenous adults respectively.



Notes

1. Risk level based on Australian Alcohol Guidelines 2000.
2. Based on responses to questions in 2004–05 National Health Survey/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.
3. Long-term risk level based on consumption in week before interview.

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

Figure 2.16.1: Alcohol risk levels by Indigenous status, people aged 18 and over, age standardised, Western Australia and Australia, 2004–05

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 Western Australia, 54% of Indigenous males and 37% of Indigenous females aged 18 and over reported that they had ever used illicit substances. These proportions were similar to those reported nationally (54% and 38% respectively).
- In Western Australia, about 31% of Indigenous males and 20% of Indigenous females aged 18 and over reported illicit substance use in the last 12 months prior to the National Aboriginal and Torres Islanders Social Survey 2008. This was slightly 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, about 21% of Indigenous adults in Western Australia used marijuana, hashish or cannabis resin, higher than the rate nationally (18%) (Table 2.17.1).

Table 2.17.1: Substance use, Indigenous Australians aged 18 years and over, by sex, Western Australia and Australia, 2008

	WA			Australia		
	Males	Females	People	Males	Females	People
	Per cent			Per cent		
Used substances in last 12 months						
Marijuana, hashish or cannabis resin	25.1	16.7	20.5	24.3	11.6	17.6
Amphetamines or speed	6.4	2.3	4.1	6.1	2.8	4.3
Ecstasy or designer drugs	3.3	1.5	2.4	4.8	2.1	3.4
LSD or synthetic hallucinogens	0.7	0.6	0.7	1.5	0.5	0.9
Pain killers or analgesics for non-medical purposes	7.1	3.7	5.3	5.3	4.5	4.8
Naturally occurring hallucinogens	0.8	0.2	0.5	1.1	0.2	0.6
Cocaine	1.3	0.3	0.8	1.2	0.5	0.8
Other analgesics	0.8	0.3	0.5	0.6	0.2	0.4
Volatile solvents	1.6	0.5	1.0	0.6	0.2	0.4
Tranquillisers or sleeping-pills for non-medical purposes	2.8	1.3	2.0	1.8	1.2	1.5
Kava	0.6	0.4	0.5	1.8	0.7	1.2
Total used substance in last 12 months	**31.4**	**19.7**	**25.1**	**29.8**	**17.6**	**23.3**
Used substance but not in last 12 months	22.5	17.5	19.8	24.4	19.8	22.0
Total used substance[(a)]	**54.0**	**37.2**	**44.9**	**54.3**	**37.5**	**45.3**
Never used substance	45.6	62.4	54.7	45.4	61.7	54.1
Not stated	0.4	0.5	0.4	0.3	0.8	0.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

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

Source: AIHW analyses of NATSISS 2008.

2.18 Physical activity

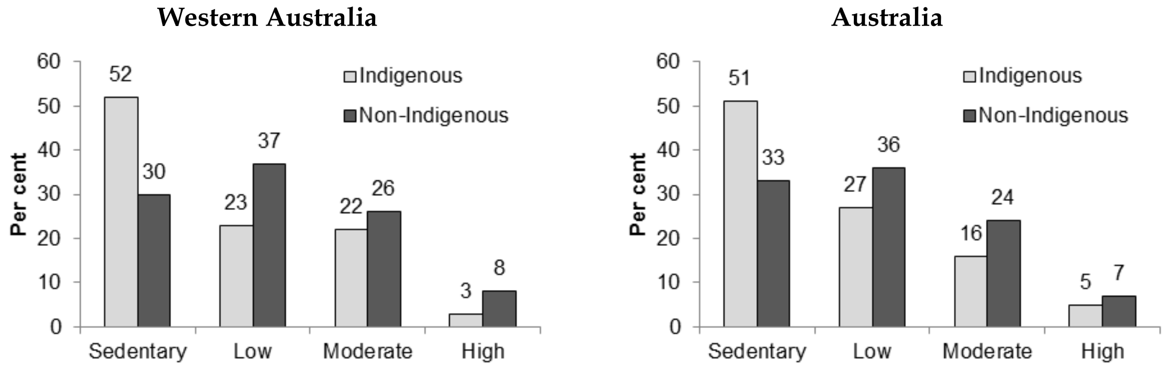
Physical inactivity is associated with several preventable chronic diseases, including cardiovascular disease, hypertension and diabetes, all of which are highly prevalent in the Indigenous population. It is also related to overweight and obesity, important risk factors for multiple diseases.

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

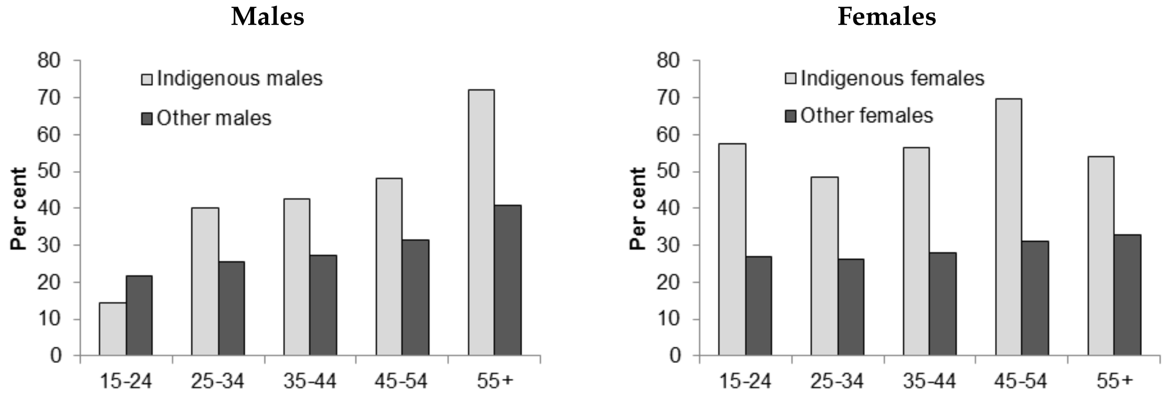
- In 2004–05, more than half (52%) of Indigenous people aged 15 and over reported their exercise level as sedentary in the 2 weeks before the survey, 23% reported it as low, 22% as moderate and 3% as high.
- Nationally, 51% of Indigenous Australians reported their exercise level as sedentary, 27% as low, 16% as moderate and 5% as high.

- 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 Western Australia reported their exercise level as sedentary (Figure 2.18.1).
- In Western Australia, sedentary levels of physical activity generally increased with increasing age for Indigenous males. Indigenous males aged 15–24 were least likely (14%), and those aged 55 and over were most likely (72%), to report a sedentary level of physical activity (Figure 2.18.2). For Indigenous females in Western Australia, those aged 45-54 were most likely to report a sedentary level of physical activity.
- 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 (Table 2.18.1, Appendix 2).



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

Figure 2.18.1: People aged 15 and over, level of physical activity, non-remote areas, by Indigenous status, Western Australia and Australia, 2004–05



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, Western Australia, 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 Western Australia, of Indigenous people aged 12 and over, 93% reported eating vegetables daily, 85% reported eating fruit daily, 16% reported usually consumed low fat or skim milk and 21% reported never or rarely adding salt to food after cooking.
- Indigenous people in Western Australia were less likely than non-Indigenous people to report eating vegetables and fruit daily (Table 2.19.1).
- Indigenous people living in remote areas of Western Australia were less likely than those in non-remote areas to eat vegetables and fruit daily and more likely to add salt after cooking and to consume whole milk as opposed to low-fat milk (Table 2.19.1).
- In 2004–05 in Western Australia, 18% of Indigenous people aged 12 and over living in non-remote areas reported having the recommended daily intake of vegetables and 38% reported having the recommended daily intake of fruit. This compared with 20% and 53% for vegetable and fruit intake, respectively, for the non-Indigenous population (Figure 2.19.1).
- According to the 2008 NATSISS, 42% of Indigenous children aged 4 to 14 years living in non-remote areas of Western Australia reported having the recommended daily intake of vegetables and 79% the recommended daily intake of fruit. This compared with 43% and 74% for daily vegetable and fruit intake respectively for Indigenous children aged 4 to 14 living in non-remote areas nationally (Figure 2.19.2).

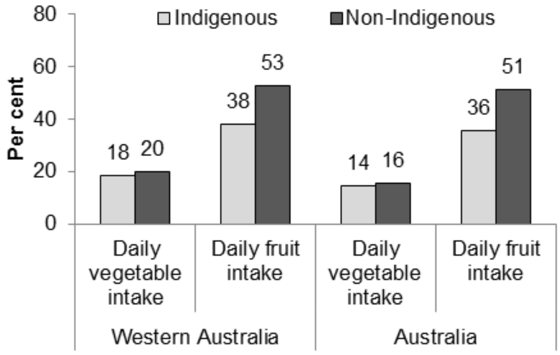
Table 2.19.1: Selected dietary habits, by remoteness and Indigenous status, people aged 12 and over, Western Australia and Australia, 2004–05

	Western Australia				Australia			
	Indigenous			Non-Indigenous	Indigenous			Non-Indigenous
Dietary behaviours	Remote	Non-remote	Total Indig.	Total non-Indig.	Remote	Non-remote	Total Indig.	Total non-Indig.
	Per cent				Per cent			
Vegetable intake								
Eats vegetables daily	87	99	93	99	84	98	95	99
Does not eat vegetables daily	13	1	7	1	15	2	5	1
Total[(a)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Fruit intake								
Eats fruit daily	77	93	85	94	80	88	86	93
Does not eat fruit daily	23	7	15	6	20	12	14	7
Total[(a)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Usual type of milk consumed								
Whole	87	71	78	41	87	76	79	45
Low/reduced fat	5	22	14	39	4	14	11	31
Skim	2	3	2	10	2	5	5	13
Total drinks milk[(b)]	**95**	**96**	**95**	**95**	*95*	*97*	*96*	*95*
Does not drink milk	4	4	4	5	5	3	4	5
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Salt added after cooking								
Never/rarely	12	29	21	..	16	35	30	. .
Sometimes	24	19	21	..	30	23	25	. .
Usually	62	52	57	..	53	43	46	. .
Total	**100**	**100**	**100**	**..**	**100**	**100**	**100**	**. .**

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

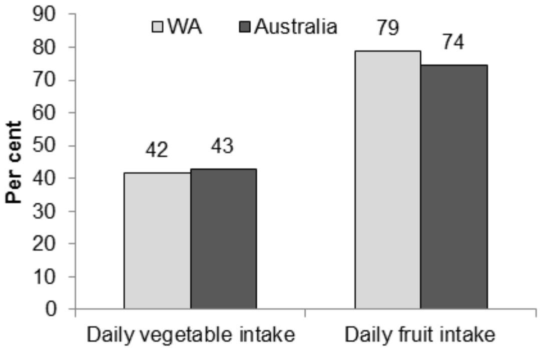
(b) Includes 'soy milk' and other types of milk.

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, Western Australia 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, Western Australia 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 Western Australia, about 85% of Indigenous infants aged 0–3 years had ever been breastfed, compared with 77% of Indigenous infants of the same age nationally; and 31% of Indigenous infants aged 0–3 in Western Australia were currently being breastfed, compared with 21% nationally (Table 2.20.1).
- The median age at which Indigenous children stopped being completely breastfed was 22 weeks in Western Australia and 17 weeks across Australia.
- In 2008, 57% of Indigenous infants under 1 year of age in Western Australia were currently breastfed, higher than the rate nationally (47%) (Figure 2.20.1).
- Among Indigenous infants aged 0–3 years in Western Australia, 41% were first regularly given solid food when they were between 3 and 6 months old, and 38% 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 Western Australia and nationally were regularly given solid food (93% and 91%, respectively) (Table 2.20.2, Appendix 2).

Table 2.20.1: Breastfeeding status, Indigenous infants aged 0–3 years, Western Australia and Australia, 2008

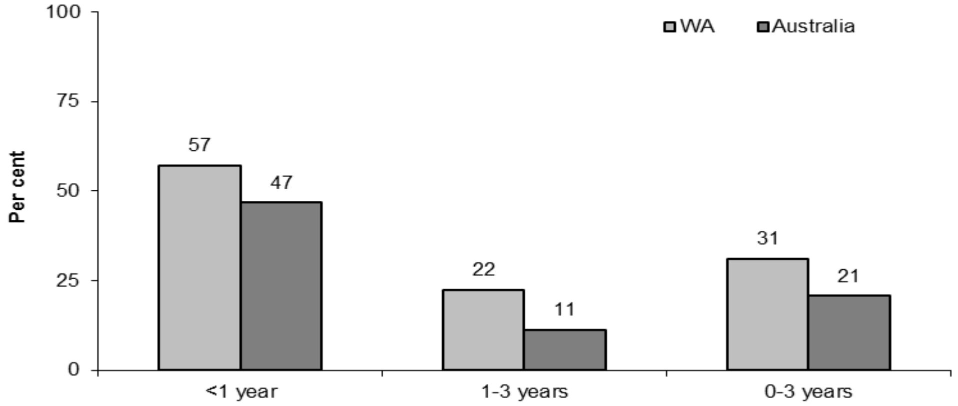
Breastfeeding measure	Western Australia	Australia
	Per cent	
Child breastfed		
Currently breastfeeding	30.6	20.7
Not currently breastfeeding		
Age child stopped being completely breastfed		
Less than 6 months	28.3	33.7
Between 6 and 12 months	7.4*	10.4
12 months or older	18	11.6
Total[(a)]	*54.1*	*56.6*
Ever breastfed	84.7	77.3
Never breastfed	15.3	22.7
Total[(b)]	**100**	**100.0**
Total people	**6,623**	**52,648**
Median age at which child stopped being completely breastfed (weeks)	22	17
Mean age at which child stopped being completely breastfed (weeks)	36	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.



Note: Excludes children for whom breastfeeding status was not known.

Source: AIHW analysis of NATSISS 2008.

Figure 2.20.1: Aboriginal and Torres Strait Islander children aged 0–3 years currently breastfeeding, by age, Western Australia and Australia, 2008

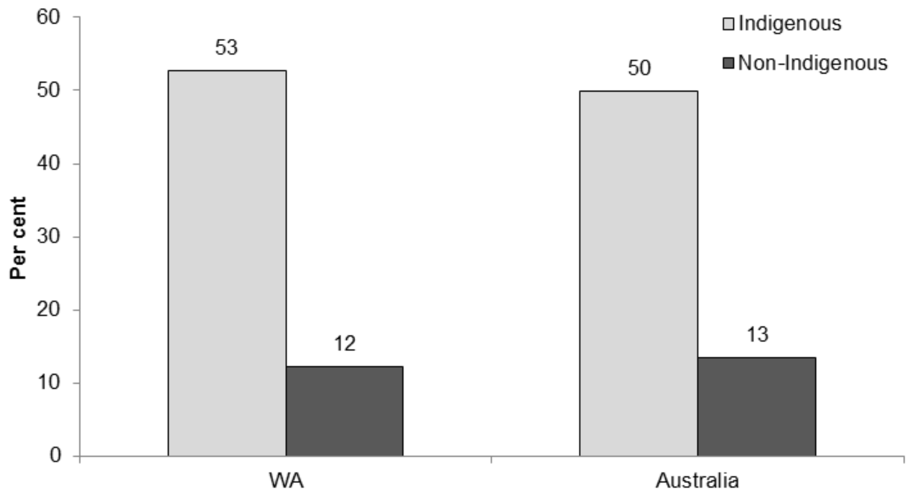
2.21 Health behaviours during pregnancy

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

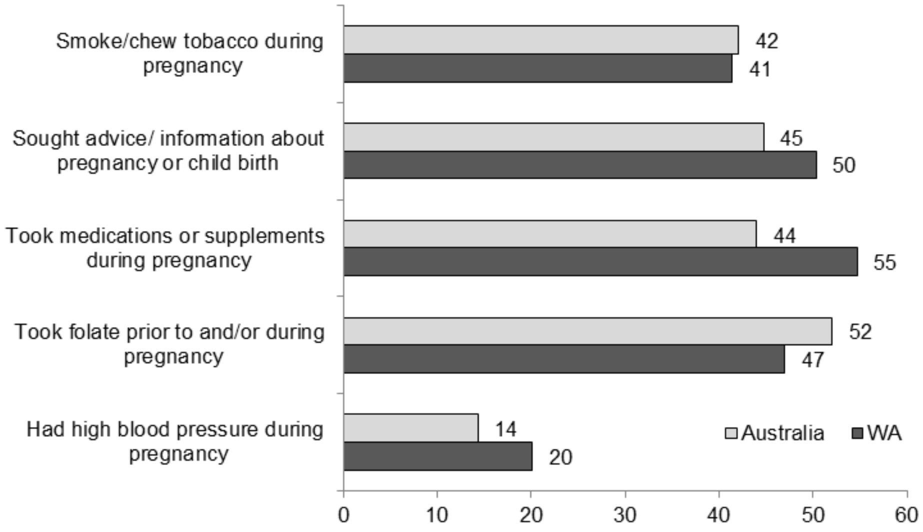
- In Western Australia in 2009, 51% of Aboriginal and Torres Strait Islander mothers smoked during pregnancy. This was similar to the proportion nationally (52%) (Table 2.21.1, Appendix 2).
- After adjusting for differences in age structure, Aboriginal and Torres Strait Islander mothers in Western Australia were more than 4 times as likely as non-Indigenous mothers to report smoking during pregnancy (Figure 2.21.1).
- According to the 2008 NATSISS, in Western Australia, about 41% of Indigenous mothers of children aged 0–3 years reported that they smoked/chewed tobacco during pregnancy, 50% reported that they sought advice about pregnancy and child birth, 55% took medications or supplements during pregnancy, 47% took folate before/or during pregnancy, and 20% had high blood pressure (Figure 2.21.2).
- A similar proportion of Indigenous mothers in Western Australia reported smoking during pregnancy compared with Indigenous mothers in Australia, and a higher proportion of Indigenous mothers in Western Australia reported having high blood pressure than Indigenous mothers nationally.
- Of mothers in Western Australia who were regular clients of a Healthy for Life Indigenous primary health-care service and attended antenatal care in the first trimester, 50% reported smoking, 44% reported low/high-risk alcohol consumption and 15% reported using illicit drugs in 2009–10 (Table 2.21.2, Appendix 2).



Note: Proportions are directly age-standardised. Excludes mothers for whom smoking status was not stated.

Source: National Perinatal Data Collection.

Figure 2.21.1: Proportion of mothers who smoked during pregnancy, by Indigenous status, Western Australia and Australia, 2009



Source: 2008 NATSISS.

Figure 2.21.2: Selected health issues of Indigenous mothers, children aged 0–3, Western Australia and Australia 2008

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).

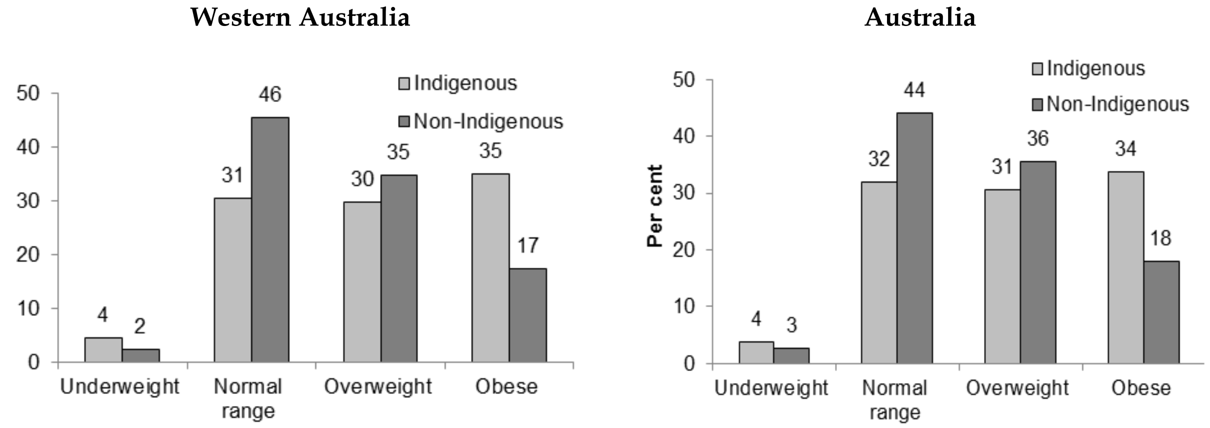
Data are presented on the prevalence of overweight and obesity among Aboriginal and Torres Strait Islander adults based on Body Mass Index using data from the 2004–05 NATSIHS.

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

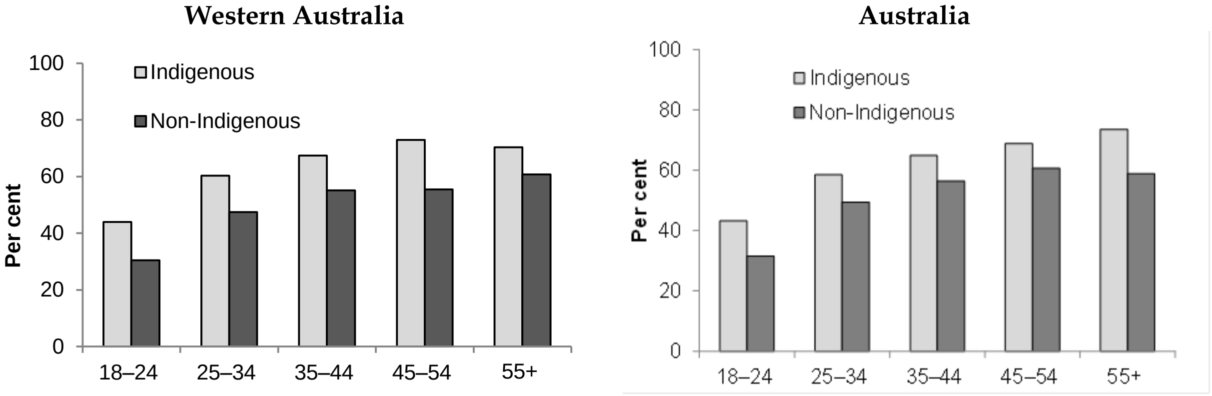
- In 2004–05, after adjusting for differences in age structure, about 4.5% of Indigenous adults in Western Australia whose BMI was known were underweight, 31% were of acceptable weight, 30% were overweight but not obese, and 35% were obese. This compared with 2.3%, 46%, 35% and 17% for non-Indigenous adults in Western Australia in these BMI categories, respectively (Figure 2.22.1).
- Similar proportions of Indigenous adults in Western Australia and nationally were overweight and obese.
- A higher proportion of Indigenous adults in Western Australia were overweight or obese than non-Indigenous adults across all age groups (Figure 2.22.2). Indigenous adults aged 45–54 were most likely to be overweight or obese (73%) while non-Indigenous adults aged 55 and over 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.

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

Part 3: Health system performance

Effective/appropriate/efficient

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 procedure

3.07 Selected potentially preventable hospital admissions

3.08 Cultural competency

Responsive

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 Australian in the health workforce

3.13 Competent governance

Accessible

3.14 Access to services by types of services compared to need

3.15 Access to prescription medicines*

3.16 Access to after-hours primary health care

Continuous

3.17 Regular GP or health service

3.18 Care planning for chronic disease

Capable

3.19 Accreditation

3.20 Aboriginal and Torres Strait Islander peoples training for health related disciplines

Sustainable

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

3.22 Recruitment and retention of staff

* Indicators for which data for Western Australia are not available for reporting

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?
- And 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: immunisation, health promotion, early detection and early treatment, chronic disease management, access to hospital procedures, potentially preventable hospital admissions and cultural competency.

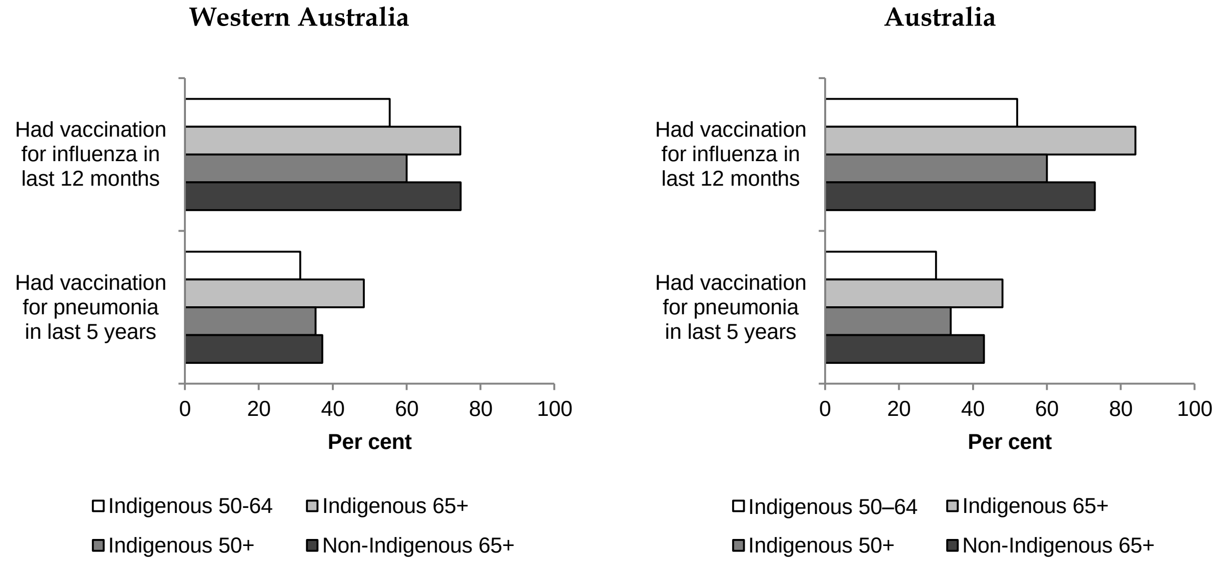
3.02 Immunisation

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 Western Australia, about 82% of Indigenous children aged 1 year were fully vaccinated compared with 91% of other Australian children. At age 2, a similar proportion of Indigenous and non-Indigenous children were fully vaccinated (88% and 91% respectively).
- Vaccination coverage rates for Indigenous children in Western Australia were lower than those nationally for ages 1 year, 2 year and 5 year olds (Table 3.02.1).
- According to the 2004–05 NATSIHS, about 60% of Indigenous people aged 50 and over in Western Australia had been vaccinated against influenza in the previous 12 months and 35% had been vaccinated against pneumonia in the previous 5 years. These proportions were similar to those reported nationally (60% and 34% respectively) (Figure 3.02.1).
- In Western Australia, a higher proportion of Indigenous people aged 65 and over had been vaccinated against pneumonia in the last 5 years (48%) than other people of the same age (37%). A similar proportion of Indigenous and other people aged 65 and over had been vaccinated against influenza in the last 12 months (75%).



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

Figure 3.02.1: Indigenous people aged 50 and over and Indigenous and other people aged 65 and over: immunisation status, Western Australia and Australia, 2004–05

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, Western Australia and Australia, as at 31 December 2011

		Western Australia	Australia
		Per cent	
1 year of age	Indigenous	81.6	85.2
	Other	91.1	93.5
	Ratio	0.9	0.9
	Rate difference	–9.5*	–8.3*
2 years of age	Indigenous	88.0	92.3
	Other	91.0	92.6
	Ratio	1.0	1
	Rate difference	–3.0	–0.3
5 years of age	Indigenous	80.1	86.5
	Other	87.2	90.1
	Ratio	0.9	1
	Rate difference	–7.1	–3.6*

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

Source: AIHW analysis of ACIR Medicare Australia data.

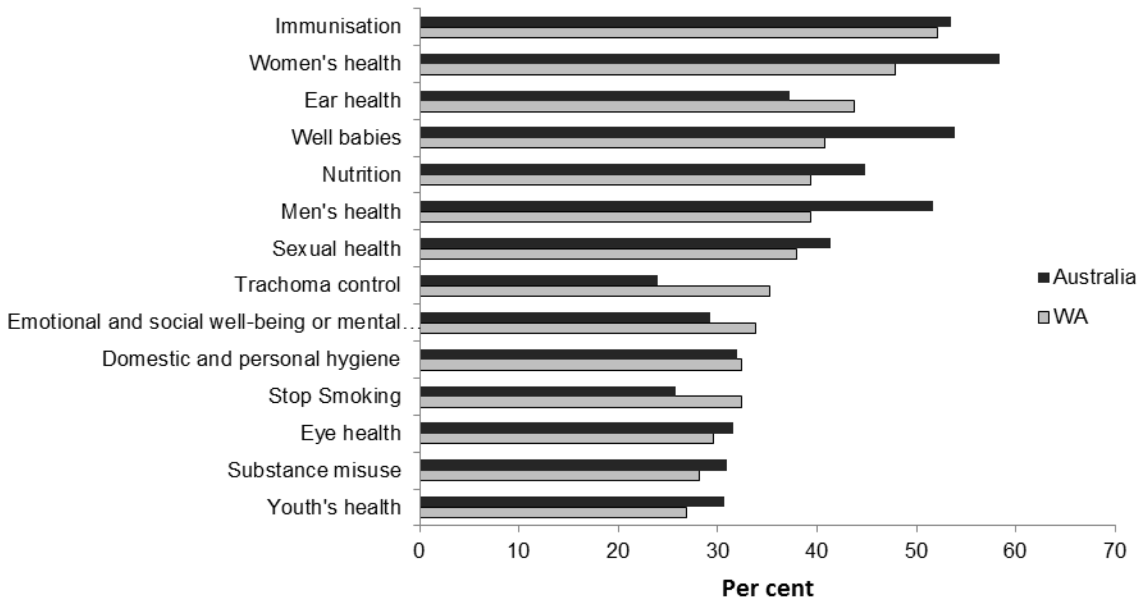
3.03 Health promotion

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 Office for Aboriginal and Torres Strait Islander Health (OATSIH) Services Reporting data collection.

Key findings

- In 2006, according to the CHINS, 43 out of the 71 (61%) discrete Indigenous communities in Western Australia 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 Western Australian in discrete Indigenous communities were immunisation (52%), followed by women's health (48%), ear health program (44%) and well babies programs (41%) (Figure 3.03.1).
- In 2010–11, of the 33 Aboriginal and Torres Strait Islander primary health-care services in Western Australia reporting to the OATSIH Services Reporting (OSR), about two-thirds (64%) conducted sport/recreation/physical education groups, about three-quarters (73%) conducted mothers and babies groups, 15% conducted alcohol use treatment/prevention groups, and 27% conducted tobacco use treatment/prevention groups (Table 3.03.1).



Source: AIHW analyses of 2006 CHINS.

Figure 3.03.1: Discrete Indigenous communities located 10 kilometres or more from a hospital: Proportions with selected health promotion programs conducted in community, Western Australia and Australia, 2006

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, Western Australia and Australia

Health promotion/prevention group activities	Western Australia	Australia
	Per cent	
Community-based education and prevention groups	78.8	70.6
Mothers' and babies' groups	72.7	58.3
Living skills groups (e.g. cooking, nutrition groups)	66.7	64.5
Women's groups	66.7	60.2
Sport/recreation/physical education groups	63.6	64.5
Antenatal groups	48.5	43.6
Cultural groups	45.5	50.2
Chronic disease management groups	45.5	42.7
Men's groups	45.5	56.9
Support groups	42.4	49.3
Youth groups	39.4	40.8
Counselling groups	33.3	29.9
Tobacco use treatment/prevention groups	27.3	33.6
Other groups activities	27.3	12.8
Other substance use treatment/prevention groups	18.2	17.1
Alcohol use treatment/prevention groups	15.2	26.1
Total number of services that ran selected group	**33**	**211**

Source: AIHW analysis of OSR data collection.

3.04 Early detection and early treatment of disease

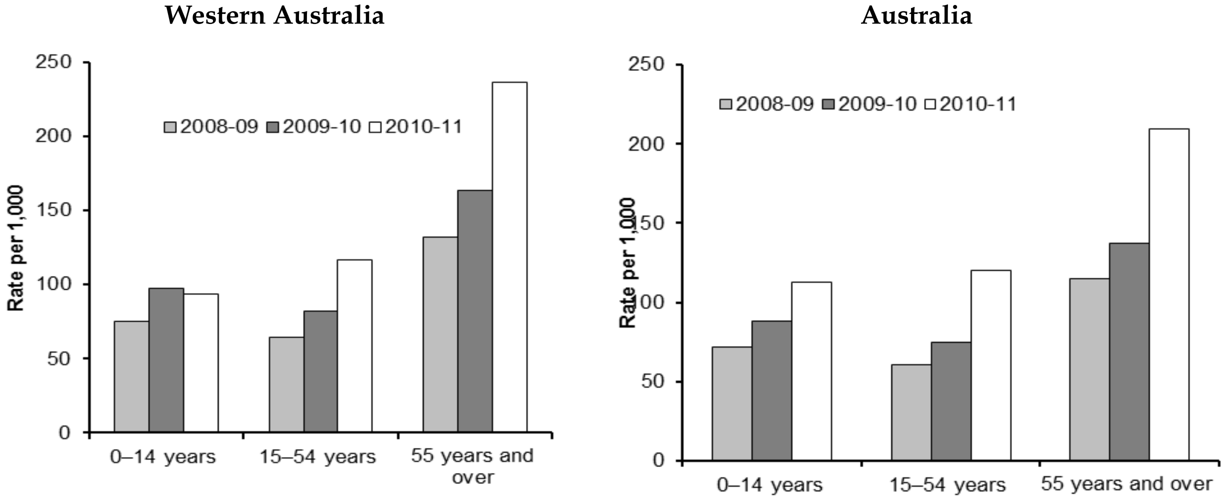
Early detection is the discovery of a disease or condition at an early stage of its onset or development. Disease screening, and regular health checks help prevent or delay the onset of a variety of conditions. Population-based screening activities, such as breast, bowel and cervical cancer screening 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 Western Australia from July 2010 to June 2011:
  - 93 per 1,000 Indigenous children aged 0–14 had an annual child health check
  - 116 per 1,000 Indigenous people aged 15–54 had a two-yearly health check
  - 237 per 1,000 Indigenous people aged 55 and over had an annual health assessment (Figure 3.04.1).
- The rate of Indigenous people in Western Australia undertaking health checks at age 0–14 was slightly lower than for Indigenous people nationally. The proportion of Indigenous people undertaking health assessment at age 15-54 was similar to the proportion of Indigenous people nationally. The proportion of Indigenous people undertaking health assessment at age 55 and over was higher in Western Australia than for Indigenous people nationally (Figure 3.04.1).
- There has been a significant increase in health assessments provided to Indigenous Australians in Western Australia since the introduction of the National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes in July 2009. Rates of child health checks and adult health assessments almost 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 Western Australia, 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 (28% compared with 57%).
- For women aged 40 and over, about 20% of Indigenous women in Western Australia participated in the BreastScreen Australia program compared with 34% of other women (Table 3.04.1).
- BreastScreen participation rates were lower for Indigenous women in Western Australia than for Indigenous women nationally for all age groups (Table 3.04.1).
- In 2010–11, of the 35 Aboriginal and Torres Strait Islander primary health-care services in Western Australia reporting to the OSR data collection, 22% routinely organised pneumococcal immunisations, 24% routinely organised influenza immunisation, 23%

organised child immunisation, and 24% conducted sexually transmissible infection contact tracing (Table 3.04.2, Appendix 2).



Source: AIHW analyses of Medicare data.

Figure 3.04.1: Medicare Benefits Schedule Health Assessments and Health Checks for Indigenous people, Western Australia and Australia, 2008–09, 2009–10 & 2010–11

Table 3.04.1: Age-specific participation rates[(a)] in BreastScreen Australia programs of Indigenous and other women, Western Australia and Australia, 2008–2009

	Western Australia		Australia	
Age group (years)	**Indigenous**	**Other**	**Indigenous**	**Other**
		Per cent		
40–49	11.6	16.4	12.4	14.8
50–59	26.1	55.3	34.4	53.4
60–64	29.3	60.6	39.2	59.7
65+	20.2	24.9	24.3	24.5
40+ (age-standardised rate)(b)	**19.9**	**38.3**	**24.5**	**32.5**
50–69 years (age-standardised rate)(b)(c)	**28.1**	**57.2**	**36.5**	**55.5**
		Rate ratio(c)		
40+	**0.6***		**0.8***	
50–69	**0.5***		**0.7***	
		Rate difference(d)		
40+	**–13.9***		**–7.9***	
50–69	**–29.1***		**–19.0***	

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

(d) Rate difference Indigenous: other women.

Source: AIHW analysis of BreastScreen Australia data.

3.05 Chronic disease management

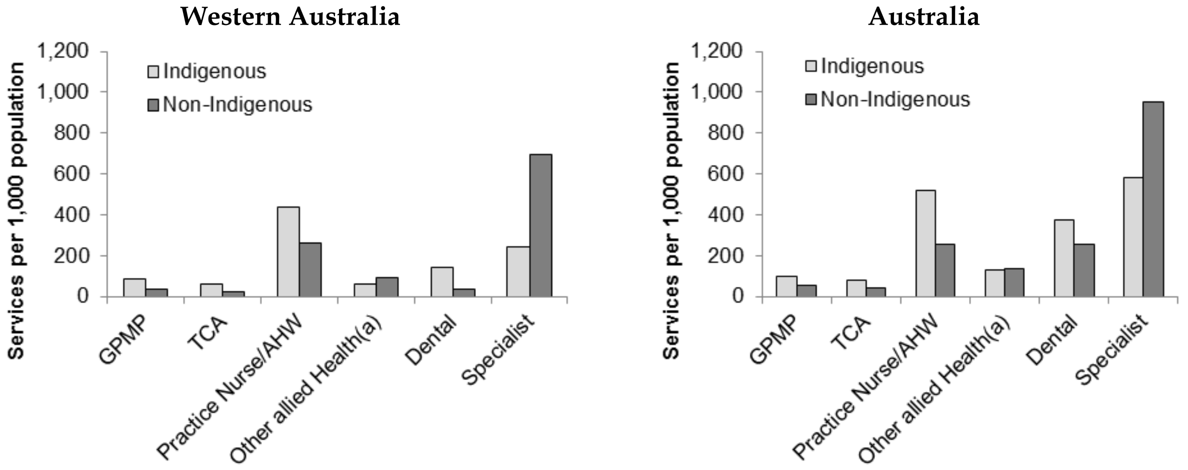
Chronic diseases are accountable for a large part of the disease burden in Australia, and many of these diseases are avoidable if the known risk factors are managed (AIHW 2012b). Better management of these conditions is an important factor in meeting the target of closing the life expectancy gap between 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 3,563 general practitioner management plan claims (GPMPs) and 2,532 team care arrangements (TCAs) for Indigenous Australians in Western Australia. Rates were more than twice as high for these services for Indigenous Australians compared with non-Indigenous Australians (Figure 3.05.1).
- Indigenous Australians in Western Australia also had higher rates of nurse/Aboriginal Health Worker consultations, and dental consultations claimed than non-Indigenous Australians.
- Rates of MBS services claimed were similar for Indigenous Australians in Western Australia and nationally, except for specialist services, dental and other allied health in which rates in Western Australia were about half of those nationally (242 compared with 580, 145 compared with 373 and 64 compared with 130 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 Western Australia between 2009–10 and 2010–11 from 6,116 to 11,816 services. The rate of allied health services claimed has also increased for Indigenous people in Western Australia from 117 to 242 per 1,000 population, which was a larger increase than that observed 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 Western Australia, 80% of Indigenous primary health-care services provided management of chronic illness, 69% reported keeping track of clients needing follow-up (for example, through monitoring sheets/follow-up files), 54% reported they maintained health registers (for example, chronic disease register) and 60% used clinical practice guidelines. These achievements are all higher nationally than in Western Australia (Table 3.05.1).
- About 69% of Indigenous primary health-care services in Western Australia 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).

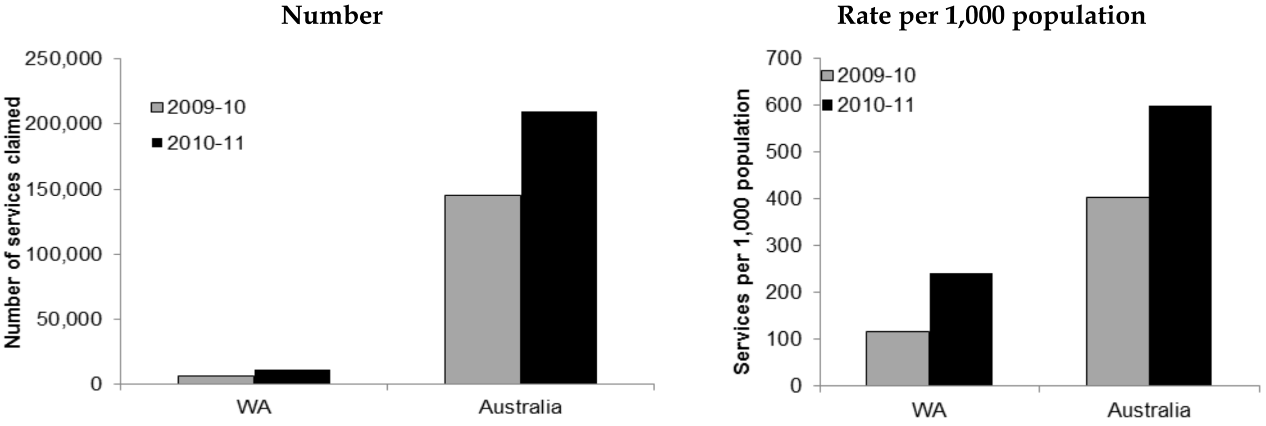
- Between January and June 2010, of the Indigenous regular clients of services in Western Australia that were part of the Healthy for Life program that had Type 2 diabetes, 56% had a blood pressure test in the last 6 months and 45% had a HbA1C test in the last 6 months. These proportions were lower than those reported nationally (62% and 52% respectively) (Table 3.05.2).
- Over the same period, of the Indigenous regular clients with coronary heart disease, 64% had a blood pressure test in the last 6 months, which was lower than 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, Indigenous and non-Indigenous Australians, Western Australia 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, Western Australia 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, Western Australia and Australia, 2010–11

	Western Australia	Australia
	Per cent	
Management of chronic illness	80.0	85.0
Keep track of clients needing follow-up	68.6	69.7
Service maintains health registers	54.3	74.4
Clinical practice guidelines utilised	60.0	75.2
Patient information and recall system	68.6	71.9

Source: AIHW OSR data collection.

Table 3.05.2: Proportion and number of Indigenous regular clients[(a)] with Type 2 diabetes or coronary heart disease who had a blood pressure test in last 6 months, and HbA1C result (diabetes only), Western Australia and Australia, 1 January–30 June 2010

	Western Australia		Australia	
	Per cent	No.	Per cent	No.
Clients with Type 2 diabetes who had blood pressure test in last 6 months	55.6	1,631	62.2	8,253
Clients with coronary heart disease who had blood pressure test in last 6 months	64.0	421	69.4	3,957
Clients with Type 2 diabetes who had HbA1C test in last 6 months	44.7	1,312	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 Western Australia, 61% of hospitalisations of Indigenous people had a procedure reported, compared with 86% of hospitalisations of non-Indigenous people. Nationally, these proportions were 60% and 81% respectively (Table 3.06.1).
- Indigenous people hospitalised with a principal diagnosis of neoplasms (cancer) were most likely to have a procedure reported (90%) followed by congenital malformations (89%). Non-Indigenous people hospitalised with a principal diagnosis of diseases of the eye and adnexa were most likely to have a procedure reported (99%), followed by neoplasms (96%).
- The proportion of hospitalisations in Western Australia with a procedure reported was lower for Indigenous patients than for non-Indigenous patients for all of the diagnosis chapters. The largest differences were for persons hospitalised for diseases of the

nervous system, symptoms, signs and abnormal findings and diseases of the digestive system (Figure 3.06.1).

Table 3.06.1: Number and proportion of hospitalisations with a procedure recorded[(a)], by Indigenous status, Western Australia and Australia, July 2008 to June 2010

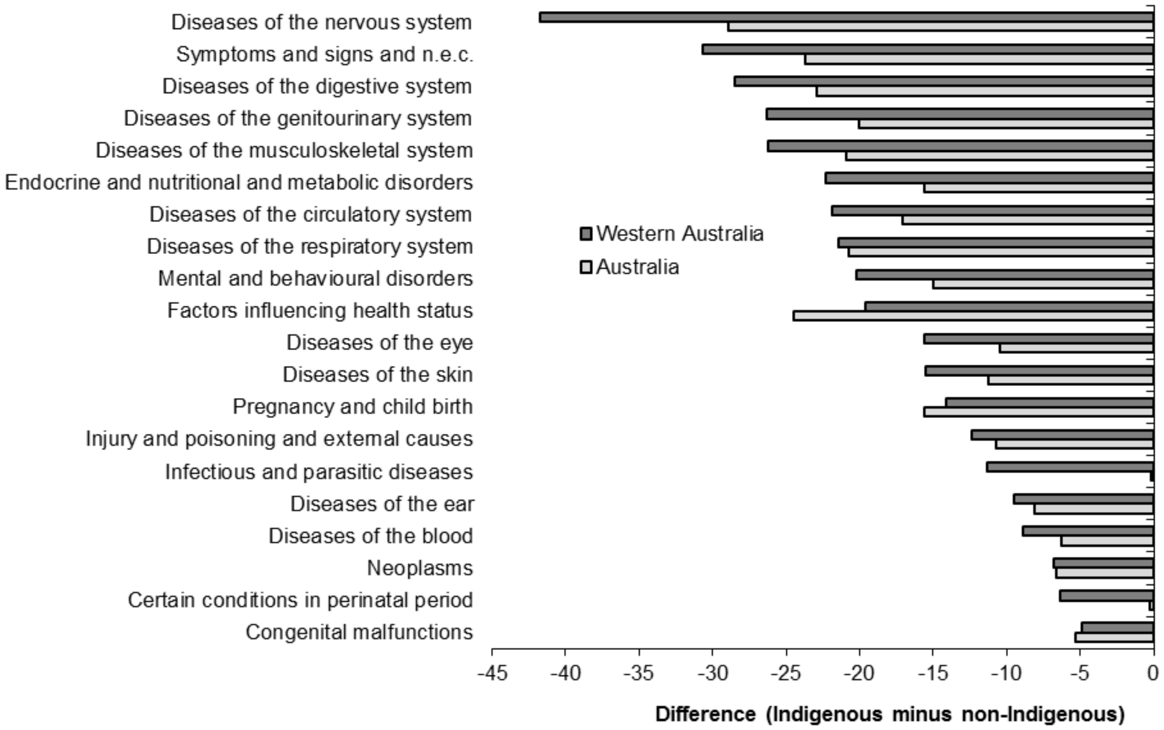
	Indigenous		Non-Indigenous			
	No.	Per cent	No.	Per cent	Ratio	Difference
WA	32,883	60.5	1,185,783	86.0	0.7*	–25.4*
Australia	191,222	60.0	11,065,696	81.4	0.7*	–21.4*

* 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.

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

Source: AIHW analysis of National Hospital Morbidity Database.



n.e.c. Not elsewhere classified.

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, Western Australia 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

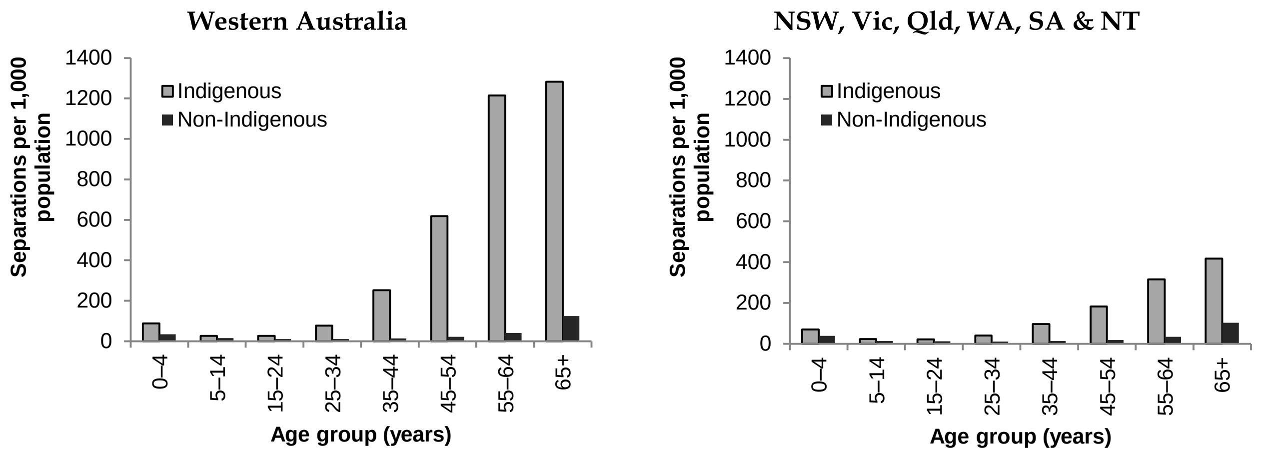
Potentially preventable conditions can be divided into three categories:

- 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

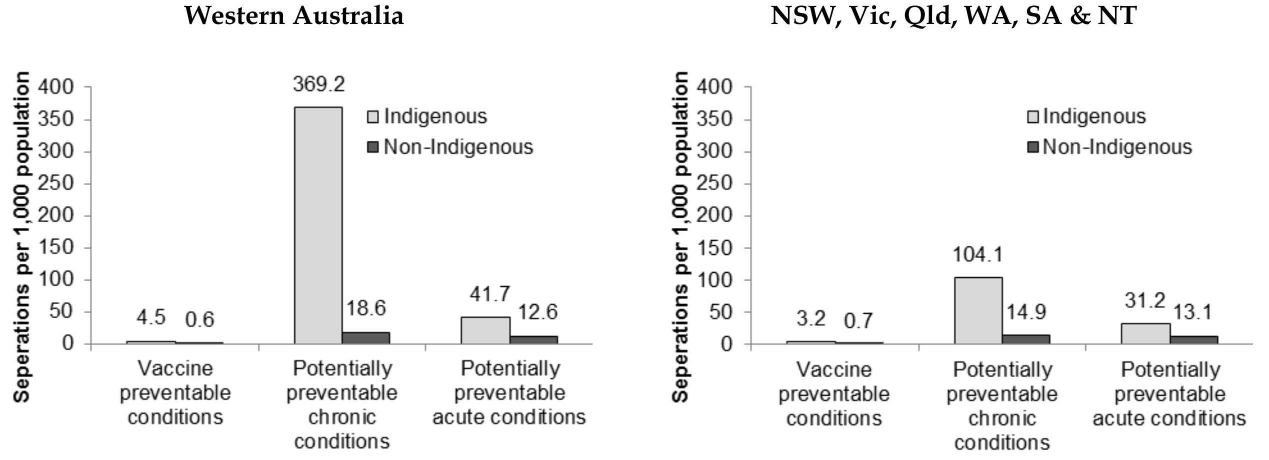
- Between July 2008 and June 2010 in Western Australia, Indigenous people were hospitalised for potentially preventable conditions at a rate of 413.6 per 1,000 population, which was 13 times the rate of non-Indigenous people in Western Australia. This was much higher than the rate and rate ratio for 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 55–64 year age group, where Indigenous people were hospitalised at 30 times of the rate of non-Indigenous people (Figure 3.07.1).
- In Western Australia, Indigenous people were hospitalised for chronic conditions at nearly 20 times the rate of non-Indigenous Australians, for acute conditions at more than 3 times the rate, and for vaccine preventable conditions at more than 7 times the rate of non-Indigenous Australians (Figure 3.07.2).
- Hospitalisation rates for Indigenous Australians for chronic conditions, acute conditions and vaccine preventable conditions were higher in Western Australia than in the six jurisdictions combined.
- Diabetes complications were the most common type of potentially preventable condition for which Indigenous people in Western Australia were hospitalised (343.6 per 1,000 population); followed by COPD (11 per 1,000) and convulsions and epilepsy (10 per 1,000). Indigenous people were hospitalised at 30 times the rate of non-Indigenous people for diabetes complications, at 5.4 times the rate for COPD and 9 times the rate for convulsions and epilepsy (Table 3.07.1, Appendix 2).

It should be noted that a coding rule was recently introduced in Western Australia whereby all patients hospitalised with a principal diagnosis of 'care involving dialysis' who were clinically documented as having diabetes must now have diabetes recorded as an additional diagnosis (AIHW & ABS 2008). This has led to a substantial increase in the number of hospitalisations for diabetes recorded as an additional diagnosis in Western Australia in recent years and is likely to at least partly explain the large difference in potentially preventable hospitalisations (specifically chronic conditions, and more specifically diabetes complications) between Western Australia and the six jurisdictions combined.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.07.1: Age-specific hospitalisation rates for potentially preventable hospital admissions, by Indigenous status, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.07.2: Age-standardised hospitalisation rates for potentially preventable hospital admissions, by Indigenous status, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010

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, about 1 in 5 Indigenous people in Western Australia did not go to a dentist, and about 14% did not visit a doctor, when they needed to. About 19% of Indigenous people did not visit a dentist because they disliked the service/professional, felt embarrassed or afraid, and 3% did not visit doctor because they felt the service would be inadequate (Table 3.08.1).
- Between July 2008 and June 2010, there were 2,447 hospitalisations where Indigenous people in Western Australia left hospital against medical advice or were discharged at their own risk. This represented about 1.7% of all hospitalisations for Indigenous people, which compares with 0.3% for non-Indigenous people (Table 3.09.1, Appendix 2). See section '3.09 Discharge against medical advice' for more information.
- According to the 2006 Census, there were 573 Indigenous people employed in health-related occupations in Western Australia. This represented 1.5% 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 162 enrolments of Indigenous undergraduate students in health-related courses, making up 1.5% of the total undergraduate students in these courses in Western Australia (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, Western Australia and Australia, 2004–05

	Doctor		Hospital		Dentist		Other health professional	
	WA	Aust	WA	Aust	WA	Aust	WA	Aust
	Per cent		Per cent		Per cent		Per cent	
Needed to go to service in the last 12 months but didn't	14	15	8	7	21	21	5	8
Reasons didn't visit								
Cost	7	12	3	4	30	29	19	28
Transport/distance	17	14	28	19	19	11	12	8
Waiting time too long or not available at time required	15	14	4	16	18	22	16	9
Not available in area	3	4	2	3	16	8	18	7
Too busy (including work, personal or family responsibilities)	15	24	13	16	11	14	27	25
Dislikes (service/professional/afraid /embarrassed)	12	10	13	16	19	21	8	12
Felt it would be inadequate	3	5	6	6	1	2	3	5
Decided not to seek care	38	26	33	25	15	13	22	17
Other	9	11	11	15	8	9	12	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.

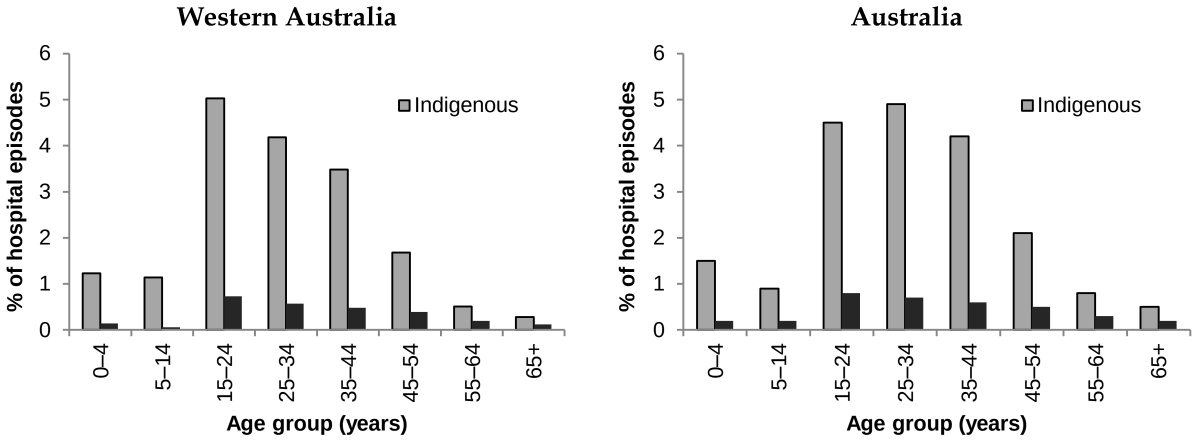
3.09 Discharge against medical advice

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.

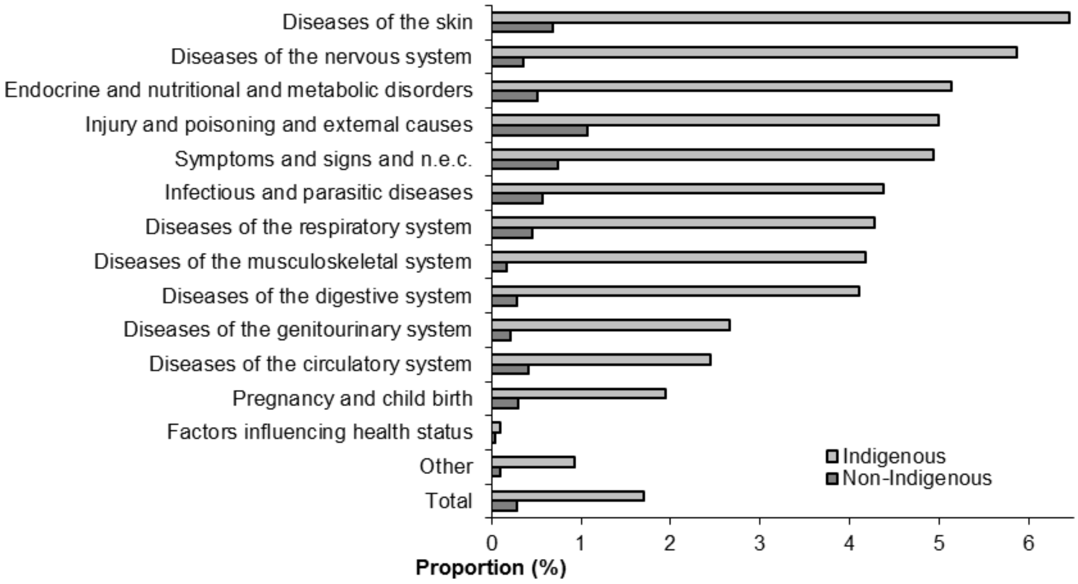
Key findings

- Between July 2008 and June 2010, about 2.1% of hospitalisations of Indigenous people in Western Australia ended with discharge against medical advice. This proportion was lower than that for Indigenous people nationally (2.4%).
- After adjusting for differences in age structure, Indigenous people in Western Australia were almost 6 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 Western Australia were much more likely to discharge from hospital against medical advice than non-Indigenous people across all age groups. Indigenous people aged 15–24 were most likely to discharge from hospital against medical advice (5.0%) in Western Australia. Nationally, Indigenous people aged 25–34 were also 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 Western Australia discharged against medical advice were diseases of the skin (6.5%) followed by diseases of the nervous system (5.9%). Indigenous people discharged from hospital against medical advice at 9.3 times the rate of non-Indigenous people for disease of the skin, and at 16.3 times the rate of non-Indigenous people for diseases of the nervous system (Figure 3.09.2).
- In Western Australia, the greatest disparity between hospitalisations involving discharge against medical advice for Indigenous and non-Indigenous people were for hospitalisations with a principal diagnosis of diseases of the musculoskeletal system (ratio of 24.6).
- Rates for Indigenous people who discharged from hospital against medical advice were lower in Western Australia than in Australia for 8 out of 14 principal diagnosis categories (Figure 3.09.2).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.09.1: Percentage of hospital episodes in which patients were discharged against medical advice, by Indigenous status and age group (excluding mental and behavioural disorders), Western Australia and Australia, July 2008 to June 2010



n.e.c. Not elsewhere classified.

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), Western Australia, 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.

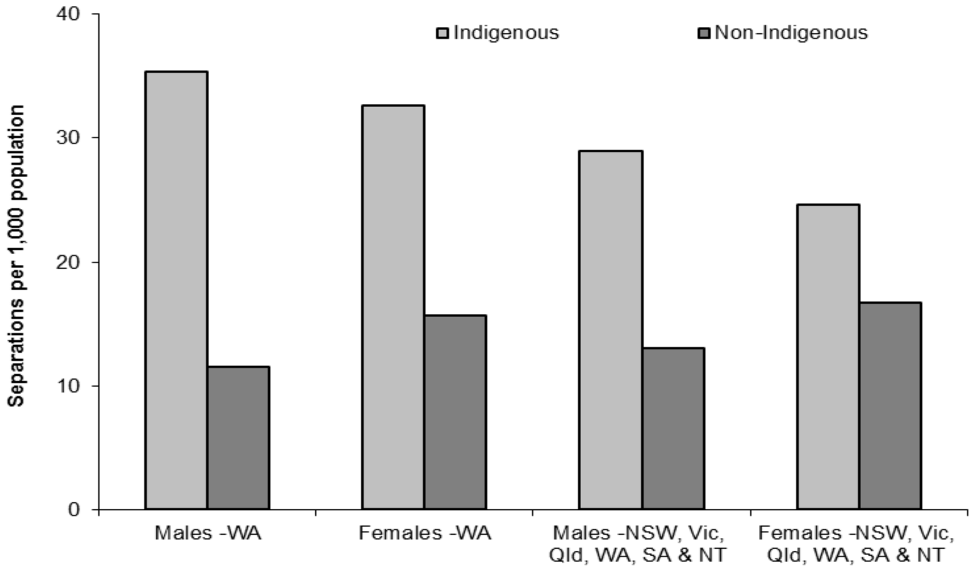
Data are presented on access to mental health services as measured by hospitalisations for mental health-related conditions using data from the National Hospital Morbidity Database, and rates of contact with community mental health services using data from the National Community Mental Health Care Database.

Key findings

- Between July 2008 and June 2010 in Western Australia, there were 4,525 hospitalisations of Indigenous people with a principal diagnosis of mental health-related conditions. Indigenous males were hospitalised at 3.1 times the rate of non-Indigenous males, and

Indigenous females were hospitalised at 2.1 times the rate of non-Indigenous females in Western Australia.

- Indigenous males and females in Western Australia were hospitalised for mental health-related conditions at lower rates (11.5 and 15.7 per 1,000) than Indigenous males and females in New South Wales, Victoria, Queensland, Western Australia, South Australia and Northern Territory combined (13.0 and 16.7 per 1,000 respectively) (Figure 3.10.1).
- Between 1998–99 and 2009–10 in Western Australia there were no significant changes in hospitalisation rates for mental health-related conditions among Indigenous people and a significant decline in hospitalisations rates for non-Indigenous people (Table 3.10.2, Appendix 2).
- In 2009–10 in Western Australia, there were 40,120 client contacts with community mental health-care services for people who identified as Aboriginal or Torres Strait Islander (5.9% of total service contacts in Western Australia).
- Indigenous people in Western Australia were 1.9 times as likely as non-Indigenous people to be clients of a community mental health service (554 compared with 285 per 1,000 population) (Table 3.10.1).
- The rate of contact with community mental health services was lower in Western Australia than nationally for Indigenous Australians (554 compared with 842 per 1,000 population) and higher in Western Australia than nationally for non-Indigenous Australians (285 compared with 262 per 1,000 population).



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.10.1: Age standardised hospitalisation rates for principal diagnosis of mental health-related conditions by Indigenous status and sex, Western Australia and NSW, Vic, Qld, WA, SA & NT combined, July 2008 to June 2010

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

	Western Australia	Australia
	Number	
Indigenous	40,120	430,894
Non-Indigenous	617,936	5,583,400
Not stated	22,078	579,770
Total	**680,134**	**6,594,064**
	Number per 1,000 population[(a)]	
Indigenous	554.4	841.8
Non-Indigenous	284.5	262.0
Total	**303.8**	**302.5**
	Rate ratio & Rate difference	
Ratio[(b)]	1.9	3.2
Rate Difference[(c)]	269.9	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.

Key findings

- In 2009–10, there were 3,754 Indigenous clients receiving alcohol and other drug treatment services in Western Australia. Aboriginal and Torres Strait Islander clients represented 22% of all clients in Western Australia, compared with 13% of all clients in Australia (Table 3.11.1).

Table 3.11.1: Number and proportion of treatments episodes for clients of alcohol and other drug treatment services, by Indigenous status, Western Australia and Australia, 2009–10

	Western Australia	Australia
Number		
Indigenous	3,754	18,442
Not Indigenous	13,284	119,629
Not stated	149	8,715
Total	**17,187**	**146,786**
Proportion		
Indigenous	21.8	12.6
Not Indigenous	77.3	81.5
Not stated	0.9	5.9
Total	**100.0**	**100.0**

Source: A&ODTS NMDS.

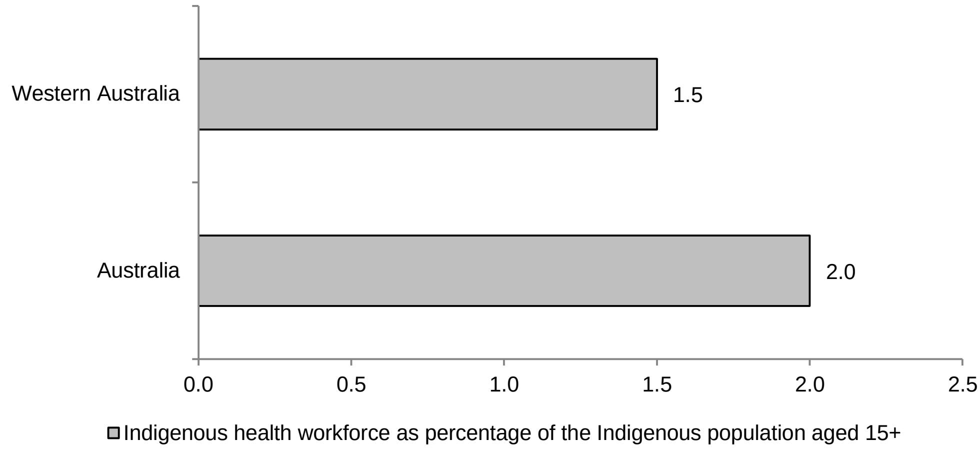
3.12 Aboriginal and Torres Strait Islander people in the health workforce

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 573 people aged 15 and over in Western Australia who identified as Aboriginal or Torres Strait Islander who were employed in the health workforce (1.5% 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 Western Australia population aged 15 and over that is Indigenous (2.4%) (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%).



Source: ABS and AIHW analyses of 2006 Census of Population and Housing.

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, Western Australia 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

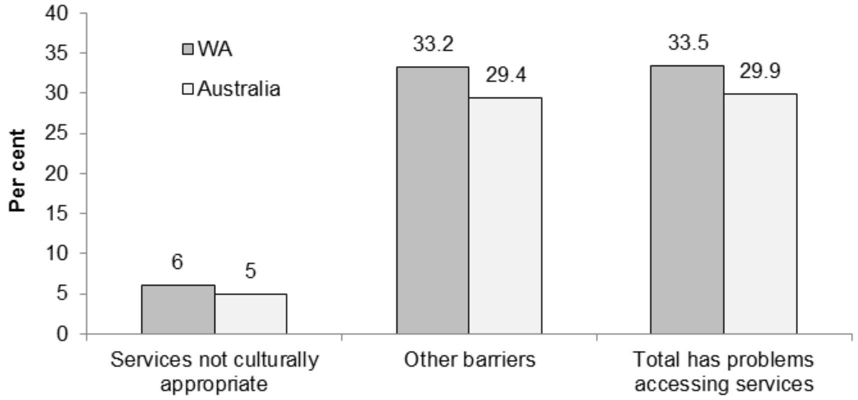
- In 2009–10 in Western Australia, 38% of Indigenous primary health-care services that reported in the OSR data collection had representatives on external boards (for example, hospitals), 68% participated in regional planning forums and 87% were involved in committees on health (for example, steering groups). These proportions were similar to, or higher than those reported nationally (Table 3.13.1).
- According to the 2008 NATSISS, 34% of Indigenous people aged 15 and over in Western Australia reported problems accessing services. This was higher than the proportion nationally (30%). About 6% of Indigenous people aged 15 and over in Western Australia reported problems accessing services due to the service not being culturally appropriate (Figure 3.13.1).

- About 34% of Indigenous people aged 15 and over in Western Australia reported that they felt discriminated against in the last 12 months. This was higher 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, Western Australia and Australia, 2009–10

	Western Australia		Australia	
	Number	Per cent	Number	Per cent
Representation on external boards (e.g. hospitals)	14	37.8	86	38.6
Participation in regional planning forums (e.g. under the framework agreements)	25	67.6	129	57.8
Involvement in committees on health (e.g. steering groups)	32	86.5	181	81.2
Total	**37**	**100.0**	**223**	**100.0**

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, Western Australia 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.

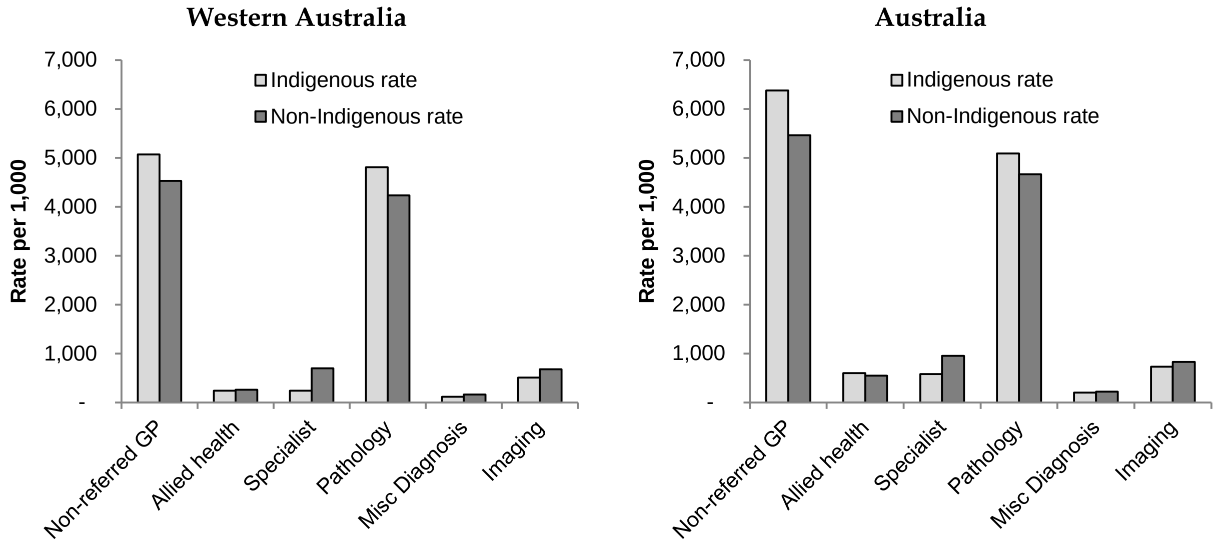
Data are presented on MBS services claimed and provided; self-reported access to health services and barriers to access using data from the 2008 NATSISS and 2004–05 NATSIHS, hospitalisation rates and waiting times, and episodes of health care provided by Indigenous primary health-care services using data from the OSR data collection.

Key findings

- In 2010–11 in Western Australia, Indigenous Australians had 628,000 Medicare claims, of which 300,000 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 imaging, private specialists and pathology were all lower for Indigenous Australians (Figure 3.14.1).
- According to the 2004–05 NATSIHS, after adjusting for differences in age structure, a higher proportion (25%) of Indigenous people aged 15 and over in Western Australia reported that they were admitted to hospital in the previous 12 months than non-Indigenous people aged 15 and over (18%) (Figure 3.14.2).
- In the 2 weeks before the NATSIHS, a higher proportion of Indigenous people than non-Indigenous people in Western Australia reported that they consulted other health professionals (20% compared with 15%) and a GP and/or specialist doctor (29% and 25% respectively), while a lower proportion of Indigenous people than non-Indigenous people consulted a dentist (2.2% compared with 6.3%). These trends were also observed nationally.
- In 2008 in Western Australia, about 21% of Indigenous people aged 15 and over reported problems accessing a dentist, 11% reported problems accessing a doctor, 7% reported problems accessing Aboriginal and Torres Strait Islander Health Workers, 8% problems accessing hospitals and 2% accessing other health workers. The proportion of Indigenous people in Western Australia reporting problems accessing these health services was higher than the proportion of Indigenous people nationally with the exception of other health workers where the proportion is about the same (Figure 3.14.3).
- Between July 2008 and June 2010, Indigenous people in Western Australia were hospitalised at a rate of 481 per 1,000 population (excluding dialysis), which was 1.5 times the rate for non-Indigenous Australians. This was higher than hospitalisation rates 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 418,116 episodes of health care provided to Aboriginal and Torres Strait Islander people by Indigenous primary health-care services reporting under the

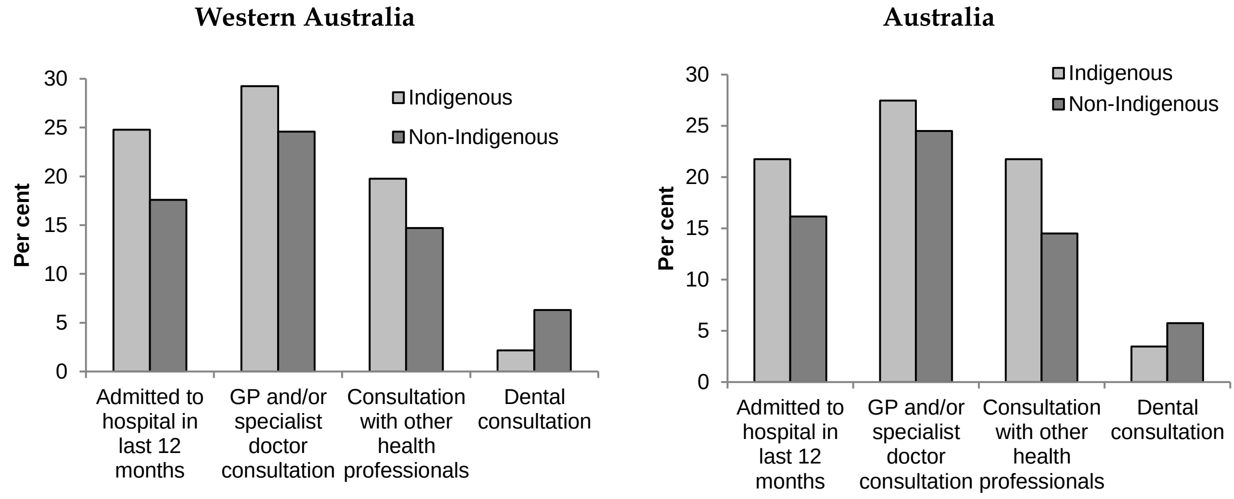
OSR in Western Australia (Table 3.14.2, Appendix 2). In 2010–11, the total number of episodes of care provided by these services in Western Australia was 473,132, which was higher than the number of episodes of care provided in 2008–09 (305,712) and 2009–10 (408,819) (Table 3.14.2, Appendix 2).

- In 2010–11, waiting times for elective surgery in public hospitals in Western Australia at the 50th percentile (representing number of days within which 50% of people were admitted) was 32 days for Indigenous Australians compared with 29 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).
- About 62% of Indigenous Australians in Western Australia were treated within national benchmarks for emergency department waiting times in 2010–11 compared with 59% of other Australians in Western Australia. Nationally these proportions were 66% and 69% respectively. In terms of performance across triage categories, 99% of Indigenous Australians in Western Australia were treated within national benchmarks for triage category 1 (need for resuscitation), compared with 50% and 63% for triage categories 3 and 4 (urgent and semi-urgent), respectively (Table 3.14.4, Appendix 2).



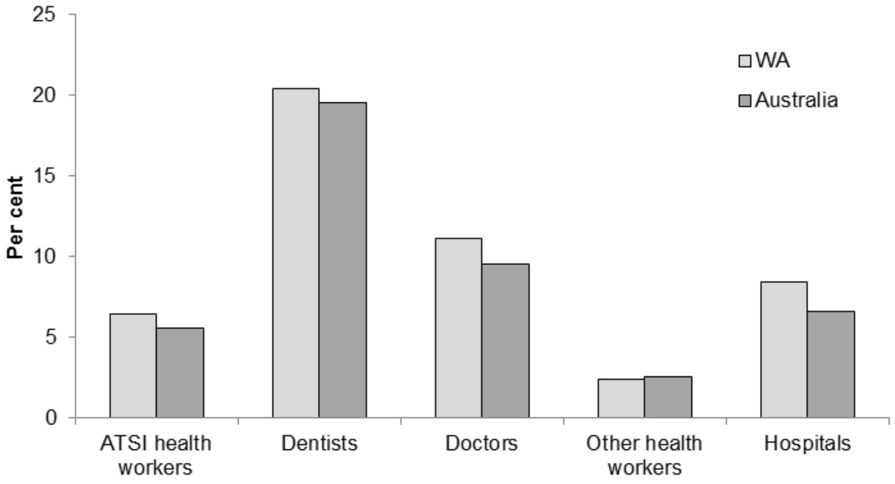
Source: Medicare Financing & Analysis Branch, Department of Health & Ageing.

Figure 3.14.1: Age-standardised-rate per 1,000 population of selected MBS services, Western Australia and Australia, 2010–11



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

Figure 3.14.2: Percentage of people aged 15 and over who accessed health care, by type of health care, within the last 12 months (hospital) or the last 2 weeks (other health care), by Indigenous status, age standardised, Western Australia and Australia, 2004–05



Source: ABS and AIHW analyses of 2008 NATSISS.

Figure 3.14.3: Problems accessing health services, Indigenous persons aged 15 and over, Western Australia and Australia, 2008

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 Western Australia, there were 1,166,995 episodes of care provided after hours in emergency departments, 87,734 (7.5%) 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 (58% for Indigenous and 56% for non-Indigenous patients) (Table 3.16.1).
- There were 364,862 episodes of after hours care provided by emergency departments for triage categories 4 (semi-urgent) and 5 (non-urgent) in Western Australia, 30,142 (8.2%) of which were for patients identified as Aboriginal and Torres Strait Islander. For Indigenous people, about 55% of episodes to emergency departments for triage categories semi-urgent and non-urgent were after hours, which was similar to the proportion for non-Indigenous people (54%).

Table 3.16.1: Presentations to emergency departments after hours by Indigenous status of the patient, Western Australia and Australia, July 2008 to June 2010

	Semi-urgent and non-urgent		Total presentations	
	Western Australia	Australia	Western Australia	Australia
After hours presentations				
Indigenous	30,142	185,864	50,772	307,001
Non-Indigenous	333,212	3,324,238	598,225	5,899,612
Not stated	1,508	189,794	3,460	337,933
Total	364,862	**3,699,896**	**652,457**	**6,544,546**
Total emergency department presentations				
Indigenous	54,495	335,796	87,734	533,170
Non-Indigenous	620,224	6,150,031	1,073,267	10,573,478
Not stated	2,788	332,699	5,994	581,074
Total	677,507	**6,818,526**	**1,166,995**	**11,687,722**
Proportion of after hours presentations out of all presentations to emergency department				
Indigenous	55.3	55.4	57.9	57.6
Non-Indigenous	53.7	54.1	55.7	55.8
Not stated	54.1	57.0	57.7	58.2
Total	**53.9**	**54.3**	**55.9**	**56.0**

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

Is there continuity in quality 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.

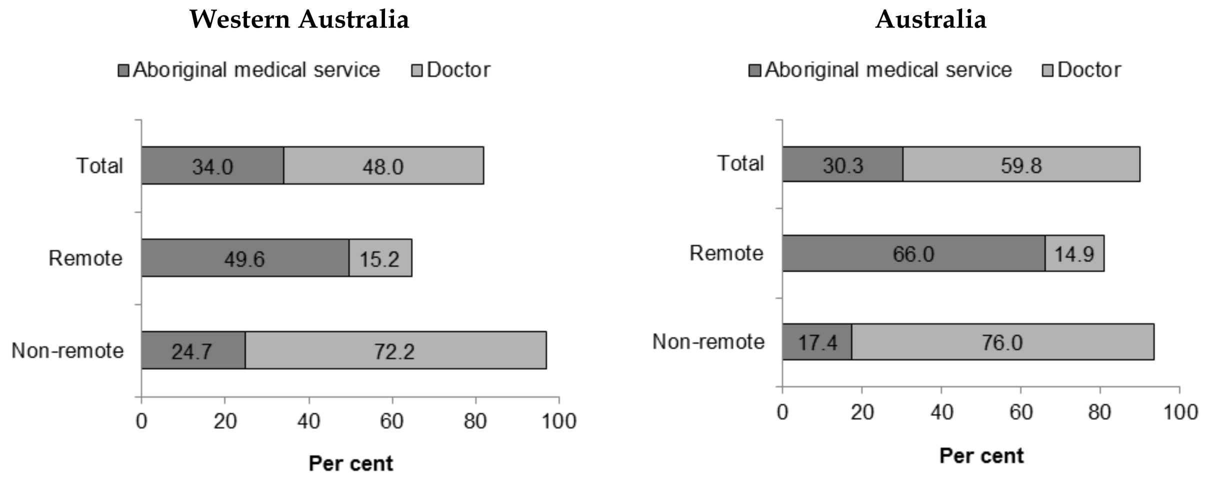
3.17 Regular GP or health service

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, 90% of Indigenous people in Western Australia reported they usually went to the same doctor or medical service. This was similar to the proportion nationally (91%).
- Indigenous people aged 0–14 and 55 and over were most likely to report that they usually went to the same doctor or health service (92%) (Table 3.17.1, Appendix 2).
- In 2004–05, about 48% of Indigenous people in Western Australia reported that they usually went to a doctor if they had a problem with their health, and 34% 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).
- The proportion of Indigenous people in Western Australia using Aboriginal medical services for their regular health care increased with remoteness, from 25% in non-remote areas to 50% in remote areas. The proportion of Indigenous people using a doctor for their regular health care decreased with remoteness, from 72% in non-remote areas to 15% in remote areas (Figure 3.17.1).
- In non-remote areas, Indigenous people in Western Australia were more likely to use Aboriginal medical services for their regular health care (25%) than Indigenous people nationally (17%). In contrast, in remote areas, Indigenous people in Western Australia were less likely to use Aboriginal medical services for their regular health care (50%) than Indigenous people nationally (66%).



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

Figure 3.17.1: Where usually go if problem with health, by remoteness area, Aboriginal and Torres Strait Islander people, Western Australia and Australia, 2004–05

3.18 Care planning for clients with chronic diseases

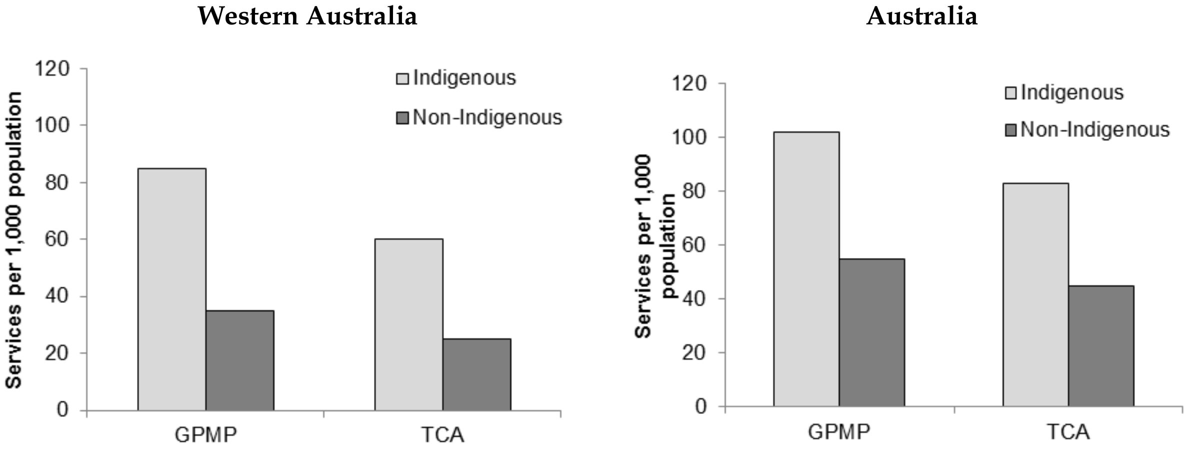
Effective management of chronic disease can delay the progression of disease, decrease the need for high-cost interventions, improve quality of life, and increase life expectancy (AHMAC 2012). The development of care plans is one way in which the client and primary health-care provider can ensure appropriate 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 5,363 GP management plan services and 2,532 team care arrangements claimed by Indigenous Australians in Western Australia in 2010–11. Rates of GPMPs and TCAs claimed were lower for Indigenous people in Western Australia than for Indigenous people nationally (Figure 3.18.1).
- After adjusting for differences in age structures of the two populations, Indigenous Australians in Western Australia received more claimed GPMPs than non-Indigenous Australians (85 per 1,000 compared with 35 per 1,000) and also had a higher rate of TCAs claimed (60 per 1,000 compared with 25 per 1,000) (Figure 3.18.1).
- In the 6 months from January to June 2010 in Western Australia, of the Indigenous regular clients of HfL services with Type II diabetes, 15% had a current GPMP and 11% had a TCA. This was lower than the proportions nationally (26 and 23% respectively) (Table 3.18.2).

- Over the same period, of the Indigenous regular clients of HfL services with coronary heart disease, 15% had a current GPMP and 8% had a TCA. This was lower than the proportions nationally (28 and 23% respectively).
- According to the 2004–05 NATSIHS, of the 6% of Indigenous people in non-remote areas of Western Australia who reported having asthma as a long-term health condition, 17% had a written asthma plan, compared with 15% of the non-Indigenous people in non-remote Western Australia with asthma. These proportions were lower than those reported nationally (25% for Indigenous people and 22% for non-Indigenous people) (Table 3.18.1).



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

Figure 3.18.1: Rate of GPMPs and TCAs claimed through Medicare, Indigenous and non-Indigenous Australians, Western Australia and Australia, 2010–11

Table 3.18.1: Proportion and number of Indigenous regular clients[(a)] with Type 2 diabetes or coronary heart disease with current chronic disease management plans (GPMP or TCA), Western Australia and Australia, 1 January–30 June 2010

	Western Australia		Australia	
	No.	**Per cent**	**No.**	**Per cent**
Clients with Type 2 diabetes who had a current GPMP	445	15.2	3,112	26.1
Clients with Coronary heart disease who had a current GPMP	98	14.9	1,030	28.1
Clients with Type 2 diabetes who had a current TCA	291	10.6	2,566	22.8
Clients with Coronary heart disease who had a current TCA	51	8.0	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, Western Australia and Australia, 2004–05

	Does have a written asthma action plan	Does not have a written asthma action plan	Never heard of a written asthma action plan	Total[(a)]	Total with asthma	Total people with asthma
			Per cent			Number
Western Australia						
Indigenous	16.6	72.8	10.3	100	5.6	6,808
Non-Indigenous	15.1	80.2	4.1	100	3.1	198,044
Rate ratio	1.1	0.9	2.5	. .	1.8	. .
Australia						
Indigenous	24.7	66.9	6.9	100	17.7	59,777
Non-Indigenous	22.4	71.9	5.2	100	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.

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).

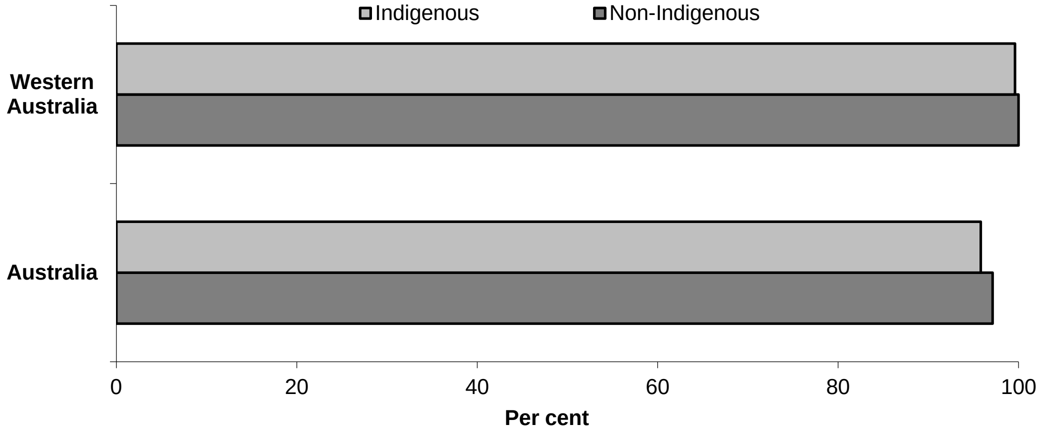
Accreditation for hospitals and general practice in Australia

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 the AGPAL and GPA+.

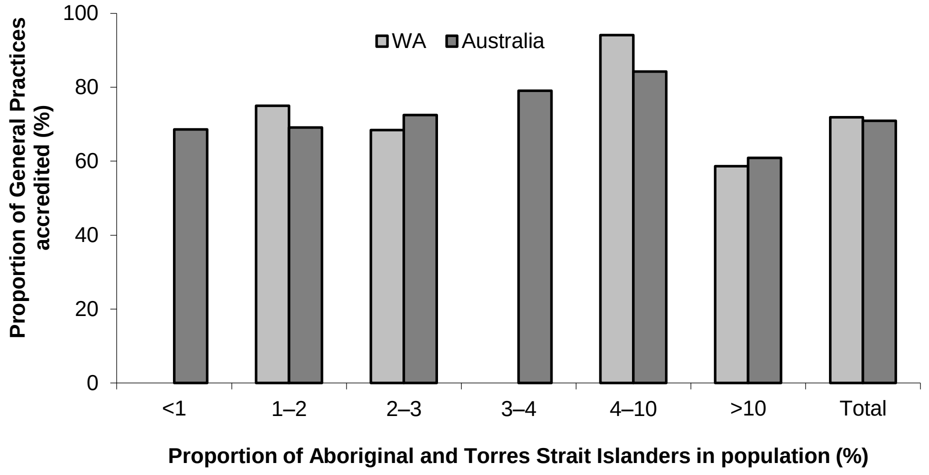
Key findings

- Between July 2008 and June 2010 in Western Australia, 99.6% of hospital admitted episodes for Indigenous people and 100% of hospital admitted episodes for non-Indigenous people occurred in accredited hospitals (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 Western Australia, 492 general practices were accredited and 193 practices were registered but not yet accredited. The proportion of general practices that were accredited was 72%, which was similar to the proportion nationally (71%).
- In Western Australia, the proportion of accredited general practices ranged from 59% in areas where greater than 10% of the population was Indigenous, to 94% in areas where 4–10% of the population was Indigenous. Note that there were no areas in Western Australia where less than 1% of the population were Indigenous (Figure 3.19.2).



Source: AIHW analysis of National Hospital Morbidity Database and National Public Hospitals Establishment Database.

Figure 3.19.1: Percentage of hospital admitted patient episodes in accredited hospitals, by Indigenous status, Western Australia and Australia, July 2008 to June 2010



Source: AIHW analyses of Australian General Practice Accreditation Limited (AGPAL) and General Practice Accreditation Plus (GPA+) data.

Figure 3.19.2: Proportion of general practices accredited, by proportion of Aboriginal and Torres Strait Islander people in the population, Western Australia and Australia, 2010–11

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 Western Australia there were 162 enrolments in health-related courses by Indigenous undergraduate domestic students, which was 1.5% of total undergraduate enrolments. In the same year there were 18 completions in health-related courses by Indigenous undergraduate students, which was 1.0% of total undergraduate completions in health-related courses. This was slightly lower than the proportions nationally (1.8% of enrolments and 1.1% of completions) (Table 3.20.1).
- In Western Australia, the most common type of health-related courses in which Indigenous students were enrolled or had completed in 2010 was public health (83 enrolled and 11 completed).
- In 2010 in Western Australia, there were 585 Indigenous students enrolled in health-related courses in the VET sector and 46 Indigenous students who completed a health-related course in the VET sector. This was 6.4% and 1.5% of total VET enrolments and completions in health-related courses, respectively. The enrolment per cent was higher

than the proportions nationally (4.7%), however, the completion per cent was lower than the proportion nationally (3.5%) (Table 3.20.2).

- In Western Australia, the most common type of health-related course in which Indigenous VET students were enrolled was public health (427 enrolled and 35 completed).

Table 3.20.1: Number of undergraduate domestic students[(a)] enrolled and completed[(a)] health-related courses[(b)] in the tertiary education sector, by qualification type, Western Australia, 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	23	2,472	0.9	< 10	346	n.p.
Nursing	41	4,153	1.0	< 10	737	n.p.
Pharmacy	0	379	0.0	0	93	0.0
Dental studies	< 10	316	n.p.	< 10	70	n.p.
Public health	83	1,099	7.6	11	173	6.4
Radiography	0	0	0.0	0	0	0.0
Rehabilitation therapies	n.p.	2,124	n.p.	< 10	372	n.p.
Total	**162**	**10,558**	**1.5**	**18**	**1798**	**1.0**

(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[(a)] health-related courses, Western Australia, 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	0	74	0	0	11	0.0
Nursing	91	2,680	3.4	6	1,170	0.5
Pharmacy	0	0		0	0	..
Dental studies	3	379	0.8	0	286	0.0
Optical science	0	24	0	0	5	0.0
Public health	427	4,175	10.2	35	707	5.0
Rehabilitation therapies	0	5	0	0	0	. .
Complementary therapies	28	440	6.4	1	187	0.5
Other health	36	1,345	2.7	4	614	0.7
Total	**585**	**9,122**	**6.4**	**46**	**2,980**	**1.5**

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

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 with 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 Western Australia, the Western Australian Government was estimated to have spent, on average, $5,226 per Indigenous person, compared with $1,932 per non-Indigenous person. This represents an Indigenous/non-Indigenous expenditure ratio of 2.7 (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 Western Australia Government spent more per person for Aboriginal and Torres Strait Islander people than for non-Indigenous people for public hospital services,

patient transport, and community health services, while for other types of health services, a similar or less amount was spent on Indigenous people.

- The ratio of Indigenous to non-Indigenous expenditure was higher in Western Australia than nationally for patient transport (4.5 compared with 2.3) and public hospital services (3.1 compared with 2.3). Conversely, the ratio of Indigenous to non-Indigenous expenditure was much lower in Western Australia than nationally for community health services (2.2 compared with 4.5), public health services (0.9 compared with 2.9) and dental services (1.0 compared with 2.5).

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

	Western Australia			**Total**		
	Expenditure per person ($)			**Expenditure per person ($)**		
	Indigenous	**Non-Indigenous**	**Ratio**	**Indigenous**	**Non-Indigenous**	**Ratio**
Public hospital services	4,296	1,395	3.1	3,283	1,458	2.3
Admitted patient services(a)	*3,189*	*1,103*	*2.9*	2,554	1,122	2.3
Non-admitted patients	*1107.3*	*291.7*	*3.8*	729	336	2.2
Private hospital services	65.6	111.7	0.6	11	16	0.7
Patient transport	187.2	41.9	4.5	209	92	2.3
Dental services	30.6	32	1.0	72	29	2.5
Community health services(b)	555.3	253.4	2.2	910	204	4.5
Public health services (b)	70.8	77.6	0.9	214	73	2.9
Research	5.9	6	1.0	30	23	1.3
Health administration	14.1	14.8	1.0	29	20	1.5
Total health expenditure	**5,226**	**1,932**	**2.7**	**4,758**	**1,915**	**2.5**

(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.)'.

Source: AIHW 2011.

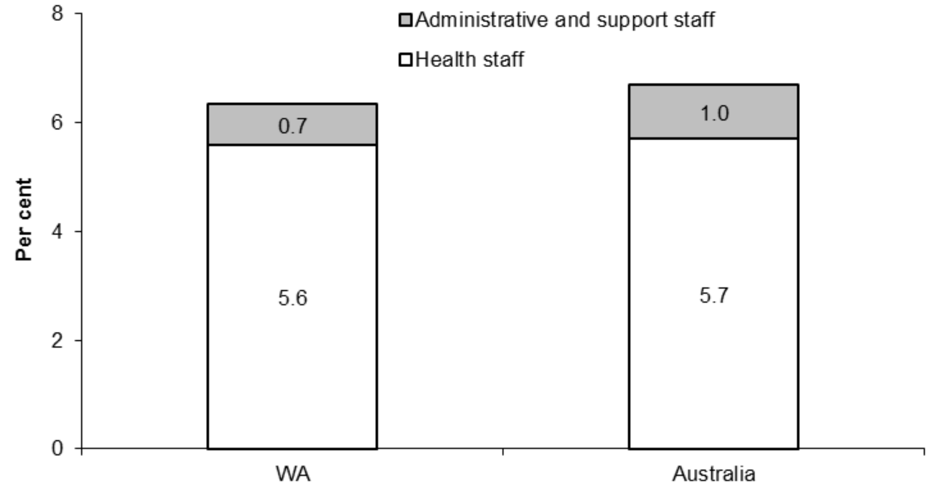
3.22 Recruitment and retention of staff

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 Western Australia, 5.6% of full-time equivalent (FTE) health staff positions and 0.7% of administrative and support staff positions in Aboriginal and Torres Strait Islander primary health-care organisations were vacant (Figure 3.22.1). This was similar to 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, Western Australia and Australia, 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

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 underestimates 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 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 Western Australia 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, while death rates for avoidable causes and circulatory diseases have declined since 1997, about half of Aboriginal and Torres Strait Islander mothers smoke during pregnancy and there has been no improvement in incidence rates of treated end-stage renal disease in recent years.