



**Australian Government**  
**Australian Institute of  
Health and Welfare**



# The health and welfare of Australia's Aboriginal and Torres Strait Islander people an overview

2011

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The cover artwork is by Aboriginal artist James Baban. The painting is about health, wellbeing and support. It illustrates that Aboriginal and Torres Strait Islander people have unique cultures and ways of perceiving the world. Only through two-way culturally appropriate communication and engagement can relevant services and support be provided to Indigenous people.



# Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ANZDATA	Australia and New Zealand Dialysis and Transplant Registry
BEACH	Better the Evaluation and Care of Health (survey)
COAG	Council of Australian Governments
GP	general practitioner
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
PYLL	potential years of life lost
SMR	age-standardised mortality ratio
WHO	World Health Organization



# Key points

## Demographics

- The 2006 Aboriginal and Torres Strait Islander population was estimated to be about 517,000, constituting 2.5% of the total Australian population.
- The Indigenous population has a relatively young age structure. In 2006, the median age was 21 years, compared with 37 years for the non-Indigenous population.
- In 2008, nearly half (49%) of all Indigenous households were composed of families with dependent children, more than a third (39%) of which were one-parent families.

## Determinants of health and welfare

### *Socioeconomic factors*

- Younger Aboriginal and Torres Strait Islander adults have completed more years of schooling than their parents. In 2008, of those aged 25–34 years, more than three-quarters (78%) had completed Year 10 or above, compared with less than one-quarter (27%) of those aged 55 years and over.
- The Year 12 retention rate for Indigenous students rose from 31% in 1995 to 45% in 2009.
- Less than two-thirds (65%) of working-age Indigenous Australians were in the labour force in 2008, compared with nearly 4 out of 5 (79%) non-Indigenous Australians.
- In 2008, Indigenous households were nearly 2.5 times as likely to be in the lowest income bracket and 4 times less likely to be in the top income bracket as non-Indigenous households.
- Nearly half of all Indigenous children were living in jobless families in 2006—3 times the proportion of all children.

### *Housing*

- Between 1994 and 2008, the proportion of Indigenous households who were home owners or buyers rose from 26% to 32%.
- Between 2002 and 2008, the proportion of Indigenous households living in dwellings with structural problems fell from 34% to 26%.
- Poor access to public utilities and overcrowded houses remain significant problems, particularly in remote communities.

### *Community capacity*

- In 2006, nearly half (47%) of Indigenous families with dependent children were one-parent families, accounting for 45% of dependent children.
- One in 5 Indigenous adults reported being a victim of violence in the 12 months prior to the NATSISS.
- In 2008–09, the rate of substantiated child protection notifications for Indigenous children was close to 8 times the rate for other children.
- Indigenous Australians comprised more than one-quarter of all prisoners as at June 2010.
- Between 2000 and 2010, the Indigenous imprisonment rate rose by 52%.

### *Behavioural factors*

- Between 2002 and 2008, the proportion of current daily smokers among Aboriginal and Torres Strait Islander people decreased from 49% to 45%. But the rate is still more than double that for non-Indigenous Australians.
- Indigenous women were about twice as likely to be obese as non-Indigenous women, and Indigenous men were about 1.5 times as likely as non-Indigenous men in 2004–05.

### *Social and emotional wellbeing*

- In 2008, the majority of Aboriginal and Torres Strait Islander adults reported feelings of positive wellbeing, particularly in remote areas. But nearly one-third felt high/very high levels of psychological distress—more than twice the rate for non-Indigenous Australians.
- Three-quarters (77%) of Indigenous adults reported that they or their close friends or family had experienced at least one life stressor in the previous 12 months.
- More than one-quarter of Indigenous adults reported they had recently experienced discrimination.

## **Health and functioning**

### *Community functioning*

- About 1 in 9 Indigenous adults spoke an Aboriginal or Torres Strait Islander language as their main language at home in 2008.
- About 2 in 5 Indigenous adults spoke at least some words of an Indigenous language.
- Almost two-thirds (62%) of Indigenous adults identified with a clan, tribal or language group, an increase from 54% in 2002.

### *Disability*

- In 2008, an estimated 8% of Indigenous adults had a profound or severe core activity limitation. The level of need for assistance among Indigenous Australians was more than twice as high as that among non-Indigenous Australians.
- Physical disability was the most common disability type experienced by Indigenous Australians.

### *Health conditions*

- During 2007–09, Indigenous Australians were hospitalised for cardiovascular diseases at 1.7 times the rate for other Australians.
- The age-standardised rate for Indigenous Australians with diabetes was 12%, compared with 4% for non-Indigenous Australians.
- More than one-quarter of Indigenous Australians reported some form of respiratory disease in 2004–05. The hospitalisation rates for respiratory diseases among Indigenous children aged 0–4 years were almost twice the rate for other Australian children.
- The incidence rate for end-stage renal disease for Indigenous Australians more than doubled between 1991 and 2008, from 31 to 76 per 100,000 population.
- Although Indigenous Australians were significantly less likely to have been diagnosed with cancer than non-Indigenous Australians in 2003–2007, they were 3 times as likely to have been diagnosed with cervical cancer, and 1.6 times as likely to have been diagnosed with lung cancer.

- The rate of hospitalisation of Indigenous Australians for mental health problems was nearly twice that for other Australians.
- Injury and poisoning combined was the main cause of hospitalisation (excluding dialysis) for Indigenous Australians. The most common injuries were those inflicted by another person and accidental falls.

## **Mortality and life expectancy**

- For the 2005–2007 period, life expectancy at birth was estimated to be 67 years for Indigenous males and 73 years for Indigenous females, representing gaps of 11.5 and 9.7 years, respectively, compared with all Australians.
- Indigenous death rates have decreased since 1991. In particular, circulatory disease death rates have declined since 1997.
- Between 2004 and 2008, two-thirds (66%) of Indigenous deaths occurred before the age of 65 years compared with 20% of non-Indigenous deaths.
- In that same period, endocrine, metabolic and nutritional disorders contributed to Indigenous mortality at 6–7 times the non-Indigenous rates.
- The Indigenous male death rates due to external causes were more than 3 times those for non-Indigenous males aged 25 to 44 years.
- About 80% of the mortality gap (in terms of potential years of life lost) could be attributed to chronic diseases.

## **Health across the life stages**

### *Mothers and babies*

- In 2009, the total fertility rate for Aboriginal and Torres Strait Islander women was 2.6 babies, compared with 1.9 for all women in Australia.
- Motherhood during the teenage years was much more common among Indigenous girls (21% compared with 4% of all births in 2009).
- Babies born to Indigenous mothers were twice as likely as babies born to other Australian mothers to be of low birthweight in 2005–2007.
- The Indigenous infant mortality rate declined between 1991 and 2008, though it remains almost twice that of non-Indigenous infants.

### *Children*

- Aboriginal and Torres Strait Islander children aged 0–14 years died at more than twice the rate of non-Indigenous children. For Indigenous children aged 5–14 years, external causes were the leading cause of death between 2003 and 2007—3 times the rate for non-Indigenous children.
- The hospitalisation rate for assault on Indigenous children in 2007–2008 was more than 5 times the rate for non-Indigenous children. Indigenous children were hospitalised for burns and scalds at twice the rate of other children.
- The pneumonia hospitalisation rate for Indigenous children aged 0–4 years was more than 3 times the rate for other children in 2006–2009.
- Nearly 12% of Indigenous children who received a Child Health Check on or before 30 June 2009 had chronic suppurative otitis media—more than 3 times the rate the World Health Organization classes as a massive health problem.
- There was a rise in trachoma prevalence in four of the five regions surveyed between 2006 and 2008, with trachoma found to be at endemic rates (more than 5%) in the majority of regions.

### *Young people*

- In 2008, almost one-third of young Aboriginal and Torres Strait Islander people (aged 16–24 years) had high or very high levels of psychological distress—more than twice the rate of young non-Indigenous Australians.
- Indigenous young people were hospitalised more commonly for mental and behavioural disorders, at 1.8 times the non-Indigenous rate. The leading causes were schizophrenia, alcohol misuse and reactions to severe stress.
- Assault was the most common cause of injury hospitalisation for Indigenous young people (1,440 per 100,000 population), almost 5 times that of non-Indigenous young people (298 per 100,000).
- Indigenous young people died at a rate 2.5 times as high as that for non-Indigenous young people.

### *Older people*

- About 44% of older Aboriginal and Torres Strait Islander people reported their health status as fair/poor, and about 16% had profound or severe core activity limitations.
- A much higher proportion of Indigenous Australians with dementia were aged less than 75 years than non-Indigenous Australians in 2008–09.
- Mortality rates for Indigenous Australians aged 50–74 years were more than double the non-Indigenous rates in 2003–2007.

## **Health care and other support services**

### *Health care*

- Health checks for older Aboriginal and Torres Strait Islander people in the September quarter of 2009 were twice the rate recorded in the March quarter of 2006.
- Compared with non-Indigenous GP consultations between 2005 and 2010, Indigenous Australians had higher management rates for diabetes, infections, asthma and drug use, but lower management rates for preventative measures such as vaccinations and cardiac check-ups.
- Indigenous Australians used emergency health care services more often than non-Indigenous Australians, accounting for more than 3.8% of presentations in 2009–10.
- Admissions of Indigenous Australians in public hospitals were nearly 4 times the rate of other Australians.
- Indigenous Australians accounted for 6.5% of community mental health service contacts in 2008–09—close to 3 times the rate for non-Indigenous Australians.

### *Support services*

- More than one-third of Indigenous users of specialist disability services had intellectual disability as their primary reason for activity limitations. Aboriginal and Torres Strait Islander people with disability accessed support services at rates equivalent to those of non-Indigenous Australians in 2008–09.
- In 2008, Indigenous Australians with severe or profound core activity limitations encountered transport problems almost twice as often as those without disability, and had difficulty accessing health and community services.
- Of all aged care residents on 30 June 2009, only 0.6% of permanent residents and 0.9% of respite residents were identified as being of Aboriginal or Torres Strait Islander origin.
- Indigenous Australians aged under 65 years made proportionately higher use of residential aged care services than other Australians. At 30 June 2009, Indigenous Australians aged 60–64 years used residential aged care services at a rate of 6.7 per 1,000 population compared with 2.6 per 1,000 for other Australians.

- 
- At 30 June 2008, more than half (56%) of all Indigenous households were receiving housing assistance through various housing and rental programs.
  - Indigenous Australians accessed specialist homelessness services at relatively high rates, making up almost 1 in 5 of all users of services in 2008–09. Almost three-quarters of Indigenous clients were female.
  - Almost half of accompanying children aged 0–4 years presented to specialist homelessness services in 2008–09 were Indigenous.
  - In 2008–09, Indigenous couples, both with and without children, most often sought help due to accommodation problems including overcrowding.

### **Health and welfare expenditure**

- Indigenous health care expenditure accounted for 3.3% of national expenditure in 2006-07, or \$1.31 for every \$1.00 spent for services used by a non-Indigenous person.
- Health services for Indigenous Australians were predominantly government-funded.
- Indigenous Australians accounted for 8.5% of all government community support and welfare expenditure in 2008–09, or \$3.60 for every \$1.00 spent per non-Indigenous Australian.



# Chapter 1

## **Introduction**



# 1 Introduction

This report draws upon the latest available data to provide a contemporary perspective of the health and welfare of Aboriginal and Torres Strait Islander people, presenting a statistical picture of health and welfare in terms of determinants, outcomes and interventions.

The 2006 Aboriginal and Torres Strait Islander population was estimated to be about 517,000, constituting 2.5% of the total Australian population. Torres Strait Islander people represented about 10% of the Indigenous population (ABS 2008a). Distributed across the continent, Indigenous Australians are one of the most linguistically and culturally diverse populations in the world.

Indigenous Australians experience disproportionate levels of educational, employment and social disadvantage. Many Indigenous Australians also experience poorer health than other Australians, often dying at much younger ages, with an estimated life expectancy gap of 9.7 years for females and 11.5 years for males (ABS 2009e).

While summary measures of life expectancy and mortality are the most widely used indicators of a population's health and welfare, disease prevalence, social and emotional wellbeing, and issues of functioning and disability are also highly relevant.

A variety of underlying factors contribute towards health and welfare (referred to as determinants). A healthy beginning in a nurturing environment, with protection from physical and mental abuse, and opportunities for personal development—such as education and employment—are all important for a long and happy life.

In view of persistent and chronic disadvantage, the Council of Australian Governments (COAG) agreed to six specific targets and timelines for closing the gap between Indigenous and non-Indigenous Australians (Box 1.1). Various interventions are aimed at improving health and welfare. These include promotional activities, preventative strategies, remedial action and the provision of appropriate assistance and care.

## **Box 1.1: COAG Closing the Gap targets for Indigenous disadvantage**

- Close the gap in life expectancy within a generation (by 2030).
- Halve the gap in mortality rates for Indigenous children under 5 years within a decade (by 2018).
- Ensure all Indigenous 4-year olds in remote communities have access to early childhood education within 5 years (by 2013).
- Halve the gap in reading, writing and numeracy achievements for Indigenous children within a decade (by 2018).
- Halve the gap for Indigenous students in Year 12 equivalent attainment by 2020.
- Halve the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade (by 2018).

By presenting the Indigenous issues in the context of non-Indigenous Australians, the report outlines the gap between the two populations, and also helps to establish various factors that can be addressed to reduce Indigenous disadvantage. Where possible, differences within the Indigenous population and trends over time are also described.

Further, more detailed, information is available from the AIHW Indigenous observatory <http://www.aihw.gov.au/indigenousobservatory> as well as the ABS online publication *The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples*, (ABS 2010d; 2010e; 2011a).



## 1.2 Structure of this report

The remainder of this report provides the following information:

- Chapter 2 provides a quick overview of some of the key demographic characteristics of the Aboriginal and Torres Strait Islander population including age structure, geographical distribution and household composition.
- Chapter 3 looks at various factors that influence Indigenous health and wellbeing. Socioeconomic characteristics, housing and transport, community capacity, health behaviours and social and emotional wellbeing are all important determinants of health and welfare.
- Chapter 4 looks at the major diseases and injuries of Aboriginal and Torres Strait Islander people, as well as the prevalence of disability. In terms of diseases, it discusses mental health, circulatory diseases, diabetes, kidney disease, cancer, respiratory diseases, as well as eye and ear problems. It sets this in the context of community functioning.
- Chapter 5 describes Indigenous mortality patterns, including age-specific rates, causes of death, trends and life expectancy. It also presents analysis on the contribution of chronic diseases to the Indigenous adult mortality gap.
- Different age groups face particular health and welfare issues; Chapter 6 takes a closer look at some of the key stages of life, starting with the health of Indigenous infants, children and young people. Information on the health and welfare of older Indigenous Australians is also presented.
- Chapter 7 looks at health and welfare services accessed by Indigenous Australians, including those provided by hospitals, general practitioners and Indigenous community organisations. It also provides information on community-based services such as alcohol and drug use services, disability support, aged care and homelessness services.
- Chapter 8 details the sources, types and levels of expenditure on Indigenous health in the context of health care needs. It also presents some information on welfare expenditure.

# Chapter 2

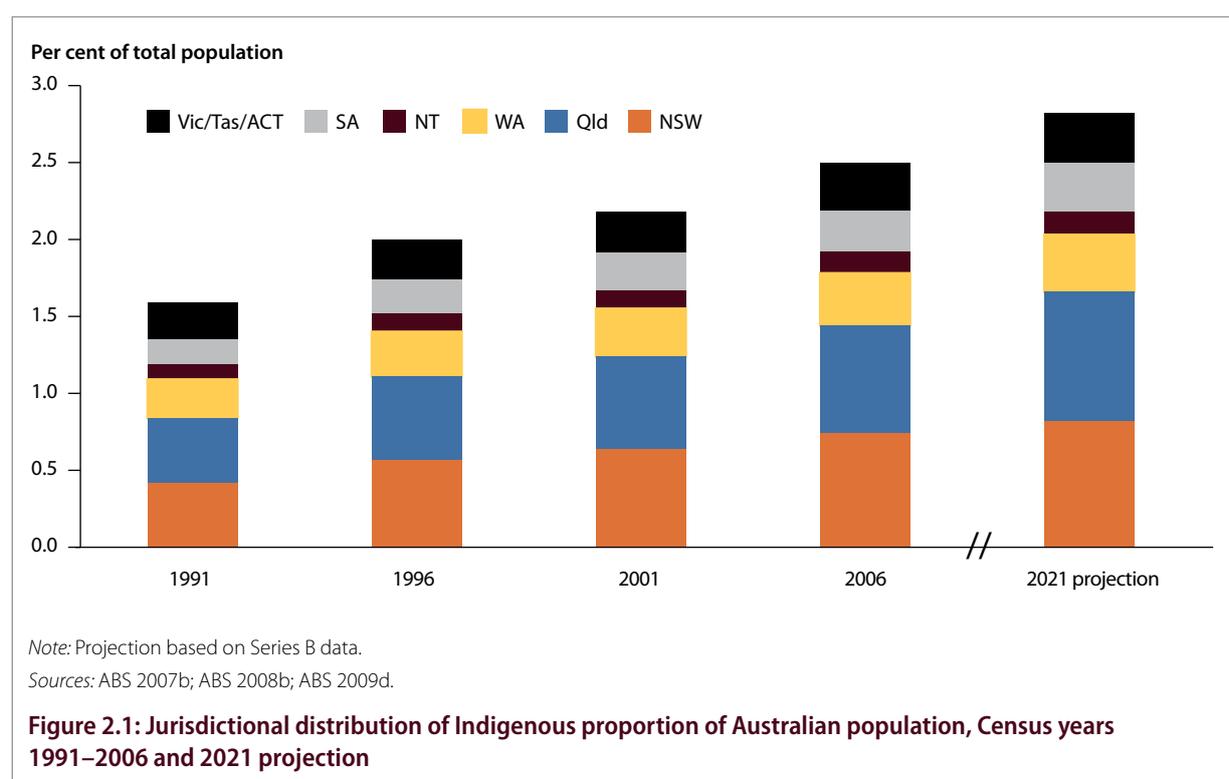
## **Demographic characteristics**



## 2. Demographic characteristics

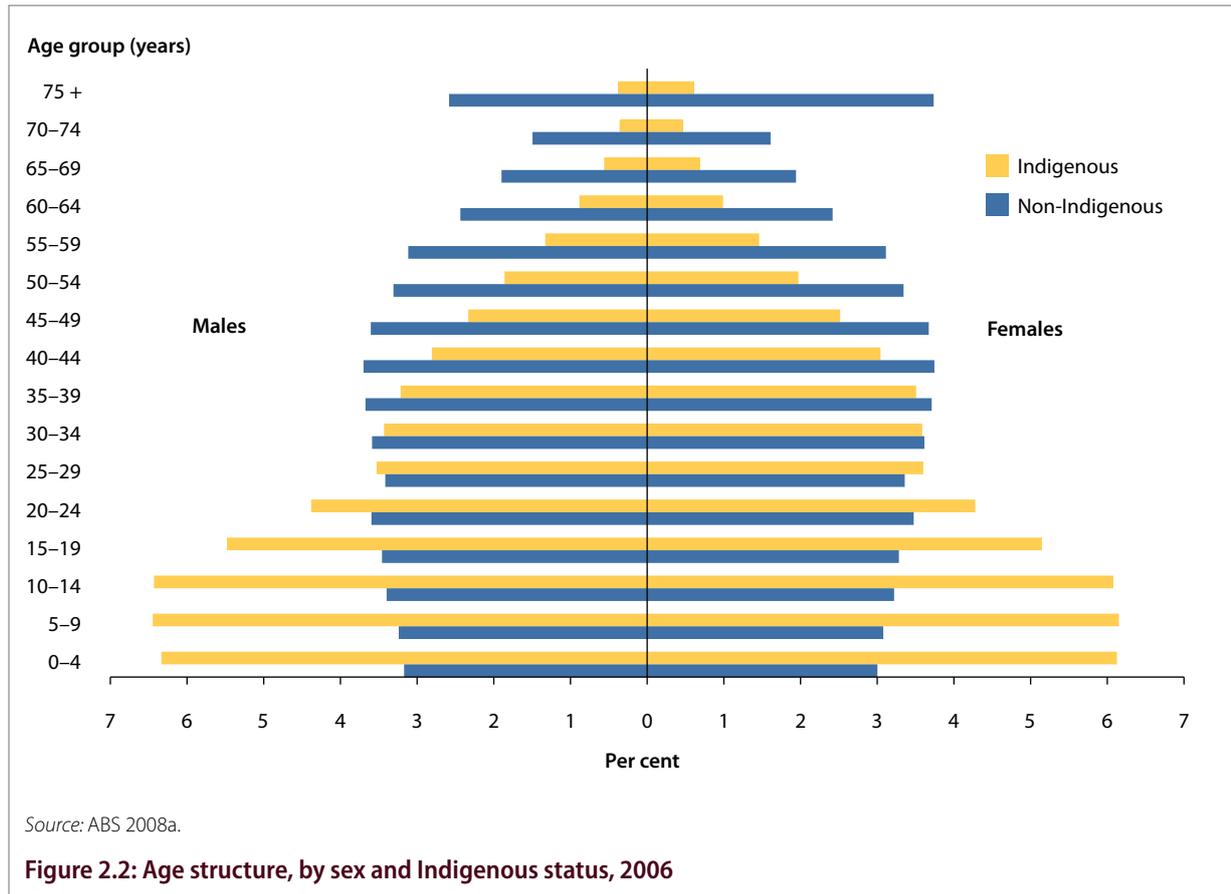
The proportion of the Australian population identifying as being of Aboriginal or Torres Strait Islander origin has increased over the two decades to 2006 (Figure 2.1). This is attributable to both population growth and improved identification. At the 1991 Census, the Indigenous population was estimated to be less than 1.6% of the Australian population (ABS 2007b). By 2006, the proportion was 2.5%. ABS projections suggest that by 2021, the Indigenous population will account for more than 2.8% of the Australian population (ABS 2008b; ABS 2009d).

In 2006, New South Wales, Queensland and Western Australia were home to 71% of the Indigenous population (ABS 2008a).



## 2.1 Age structure

The Indigenous population has a much younger age structure than the non-Indigenous population (Figure 2.2). In 2006, the median age of the Indigenous population—the age at which half the population is older and half is younger—was 21 years, compared with 37 years for the non-Indigenous population (ABS 2008a).



The age structure of the Torres Strait Islander population was broadly similar to that of the Aboriginal population, although it had a slightly larger proportion of persons aged 50 years and over (16%) than the Aboriginal population (11%). In the non-Indigenous population, those aged 50 years and over accounted for 31% of the population in 2006 (Table 2.1).

**Table 2.1: Age group composition of the Indigenous population, 2006**

Age group (years)	Aboriginal	Torres Strait Islander <sup>(a)</sup>	Non-Indigenous
	Per cent		
0-14	37	33	19
15-49	51	50	50
50+	11	16	31
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

(a) Persons of Torres Strait Islander origin only, excludes persons of both Aboriginal and Torres Strait Islander origin.

Note: Numbers may not add due to rounding.

Source: ABS 2008a.

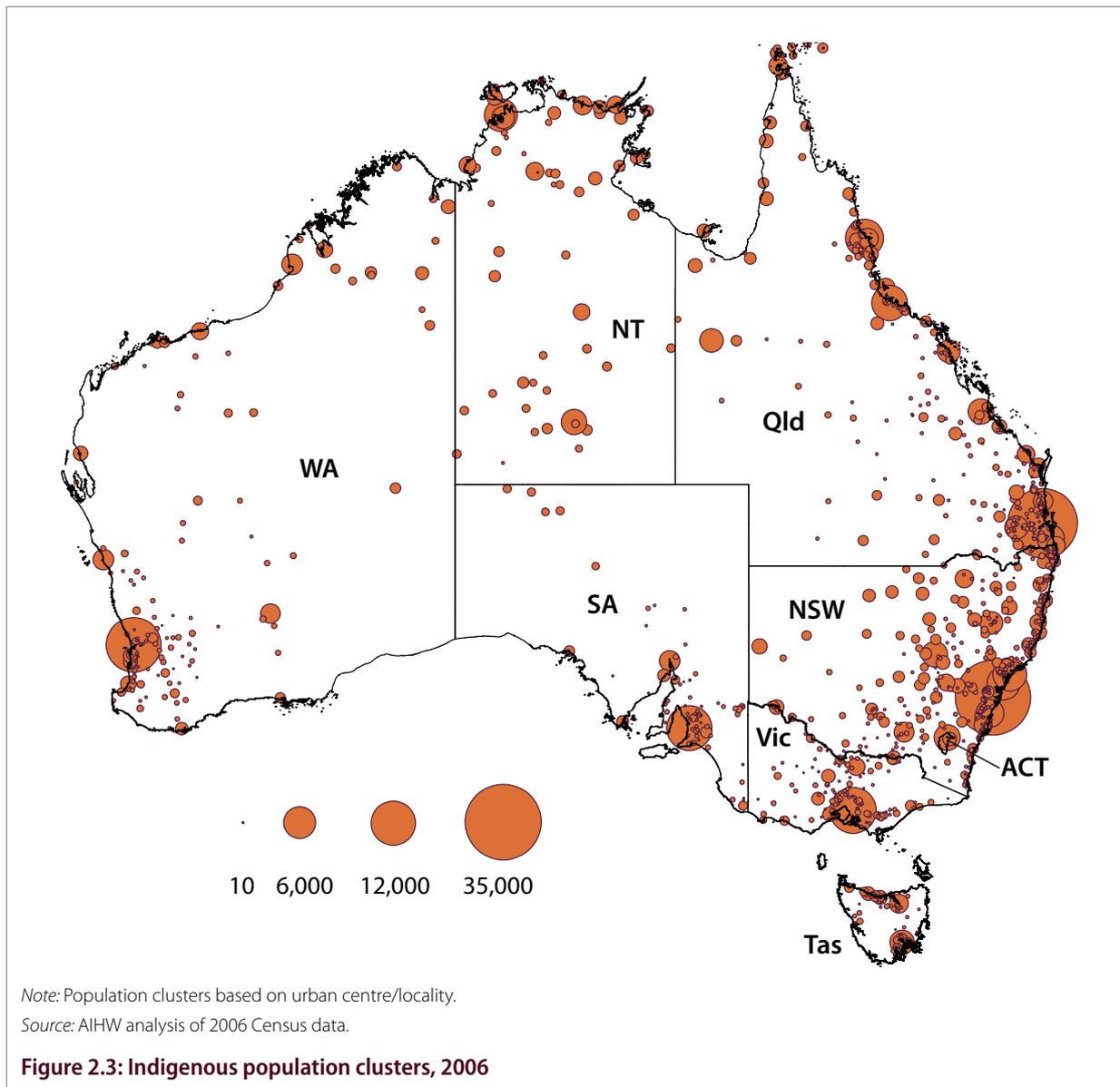
## 2.2 Geographical distribution

Contrary to the common perception that most Aboriginal and Torres Strait Islander people live in remote areas, the majority (75%) live in cities and non-remote regional areas, with about one-third of all Indigenous Australians living in *Major cities* (32%). A further 21% live in *Inner regional* areas and 22% in *Outer regional* areas. Only a quarter live in *Remote* (9%) or *Very remote* (15%) areas (ABS 2008a).

The geographical distribution of the Indigenous population seems to be relatively stable over time, with the 2006 proportions similar to those of a decade earlier. At the 1996 Census, 30% of the Indigenous population lived in major urban areas, 42% in other urban areas with 27% in the balance. In 1986, the proportion living in major urban areas was 24% (ABS 1998).

Note that when *Remote* and *Very remote* areas are taken together the term 'remote' is used with the balance referred to as 'non-remote'. Also, when *Inner regional* and *Outer regional* are taken together the term 'regional' is used.

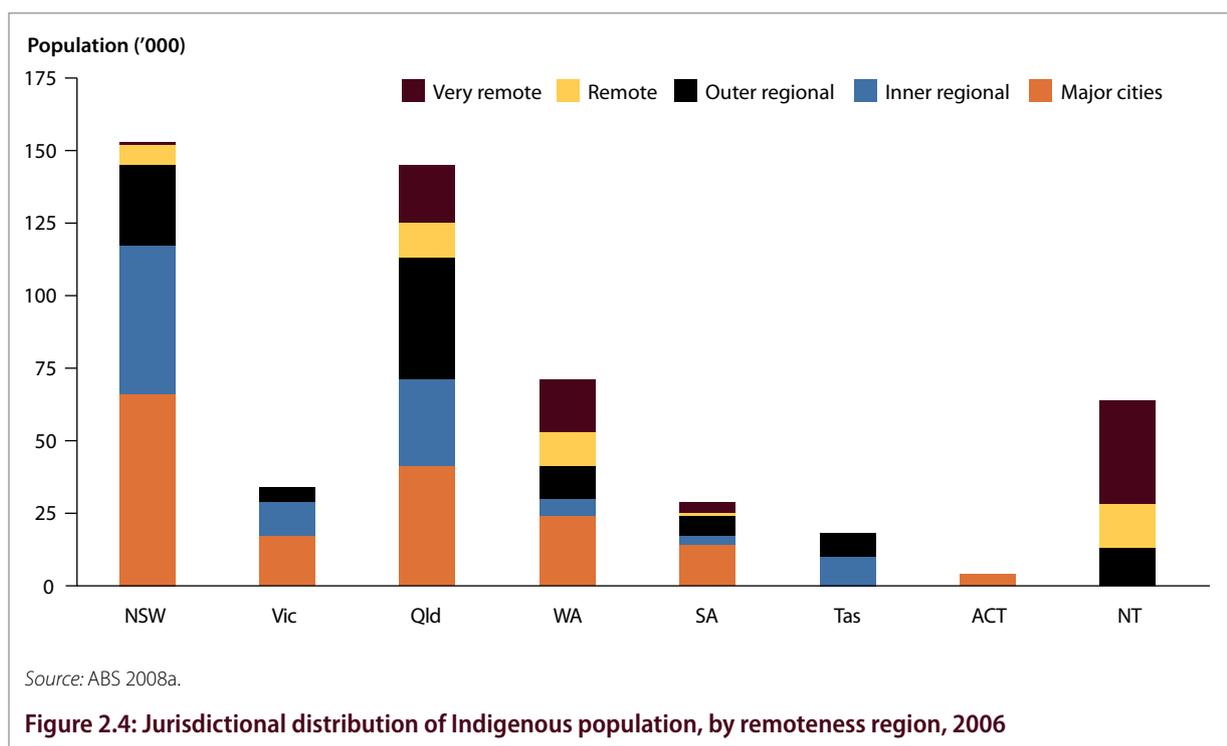
Figure 2.3 shows that the largest clusters of the Indigenous population are found in Australia's cities. As is the case for Australians as a whole, the distribution of Indigenous population is more heavily concentrated along the eastern seaboard.



The geographical distribution of Indigenous Australians differs markedly from state to state (Figure 2.4):

- In New South Wales, Victoria, South Australia and the Australian Capital Territory, the majority of the Indigenous population resides either in *Major cities* or *Inner regional* areas.
- In Queensland and Western Australia, more than half of the Indigenous population lives in *Outer regional*, *Remote* or *Very remote* areas.
- In the Northern Territory, 4 out of 5 Indigenous people live in either *Remote* or *Very remote* areas.

The vast majority of Aboriginal and Torres Strait Islander people living in *Very remote* areas live in discrete Indigenous communities. Further detail about services in these communities is provided in Chapter 3.

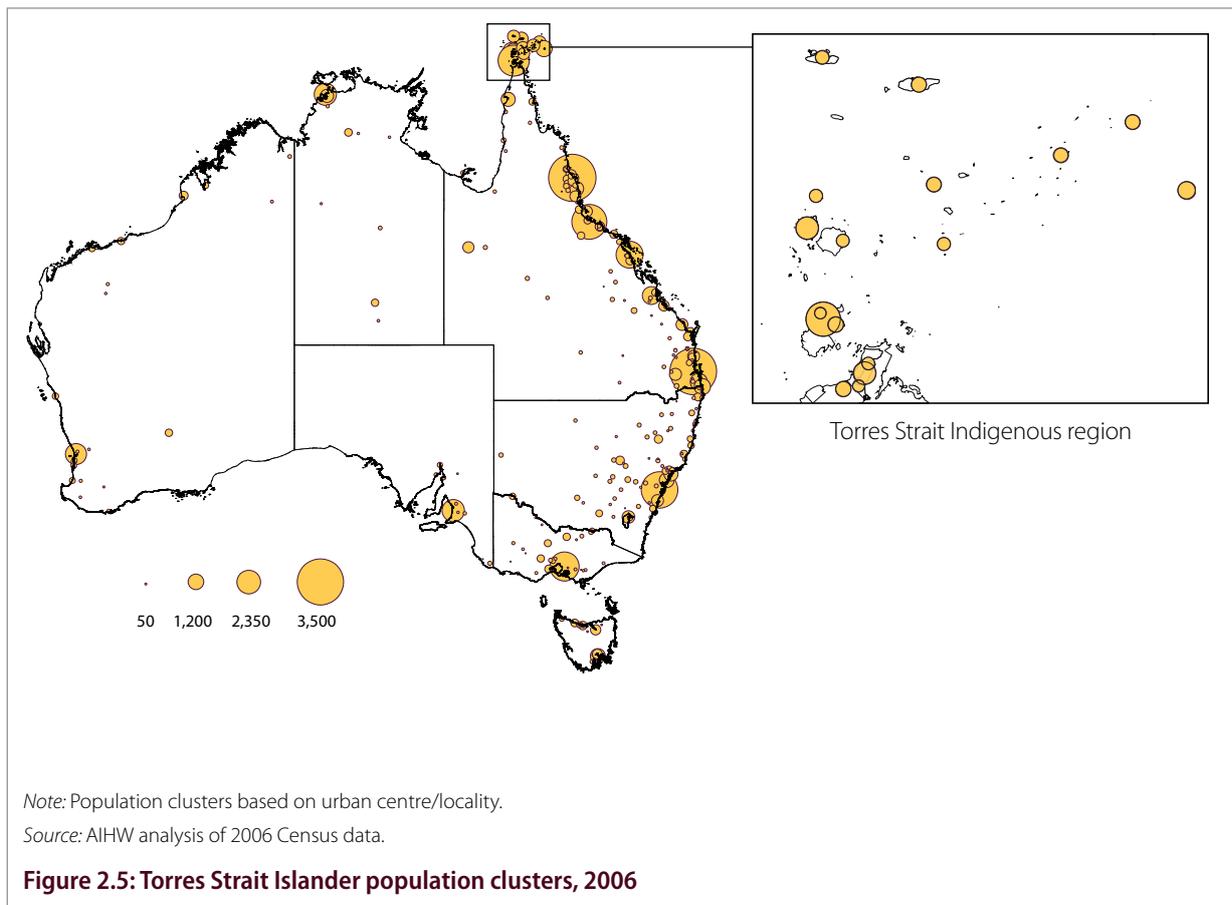


## Torres Strait Islanders

Torres Strait Islanders are a significant cultural group representing about 10% of the Indigenous population; in Queensland they make up nearly a quarter (23%) of the Indigenous population (ABS 2008a).

The Torres Strait Indigenous region (as described for Census purposes) includes the Torres Strait Islands, numerous small islands located in the waterway separating Cape York Peninsula and Papua New Guinea, and a small area of the mainland at the tip of Cape York.

The estimated residential population of Torres Strait Islander people in 2006 was 53,300, with 33,000 being of Torres Strait Islander origin only (ABS 2008a). Figure 2.5 shows the distribution of Torres Strait Islander people across Australia—the majority (61%) lived in Queensland. About 15% of Torres Strait Islander people resided in the Torres Strait Indigenous region, where they accounted for more than 83% of the population.

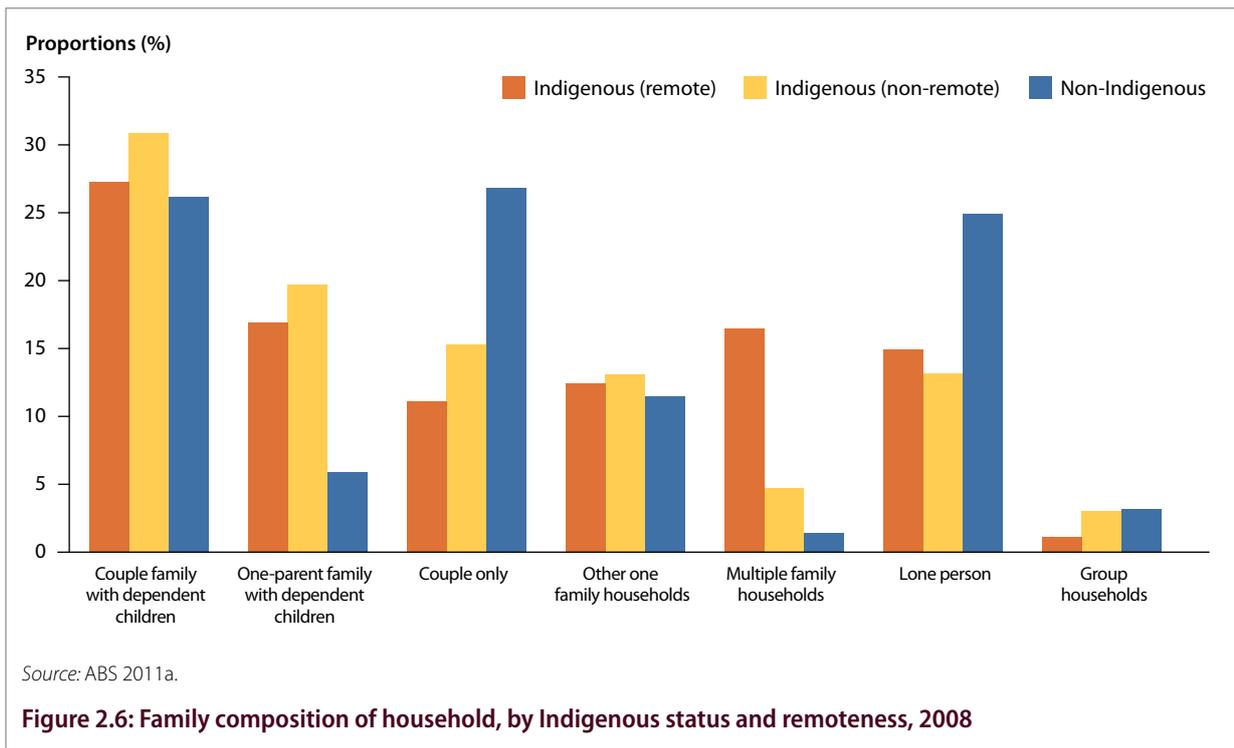


### 2.3 Household composition

The 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) defined Indigenous households as those where one or more of the usual residents identified as an Indigenous person. Households were then further categorised as either ‘all persons identified as Indigenous’ or ‘not all persons identified as Indigenous’ (ABS 2009g). In 2008, close to half (49%) of all Indigenous households were identified as ‘all Indigenous’; but the figure was much higher in remote areas, where 80% of households identified as ‘all Indigenous’, compared with 43% in non-remote areas.

Indigenous households vary a great deal in their composition (Figure 2.6). Analysis of the 2008 NATSISS and 2007–08 Survey of Income and Housing found that:

- the proportion of Indigenous households composed of couple families with dependent children (30%) was generally similar to that of non-Indigenous households (26%)
- a larger proportion of Indigenous households were one-parent families with dependent children (19% compared with 6%)
- a smaller proportion of Indigenous households were couples only (15% compared with 27%)
- a relatively large proportion of Indigenous households were multiple-family (6.7% compared with 1.4%)
  - The proportion of multiple-family Indigenous households was higher in remote areas (16%) than non-remote areas (4.7%).
- a smaller proportion of Indigenous households (13%) were lone person households compared with non-Indigenous households (25%) (ABS 2011a).



# Chapter 3

## **Determinants of health and welfare**



### 3 Determinants of health and welfare

A population’s level of health and wellbeing results from a complex interplay of factors. These determinants of health may be broadly organised into five inter-linked categories: socioeconomic characteristics, housing and transport, community capacity, behavioural factors, and social and emotional wellbeing. Like the Aboriginal and Torres Strait Islander Health Performance Framework (AHMAC 2006), various indicators can be used to monitor the role of particular health determinants (Figure 3.1).

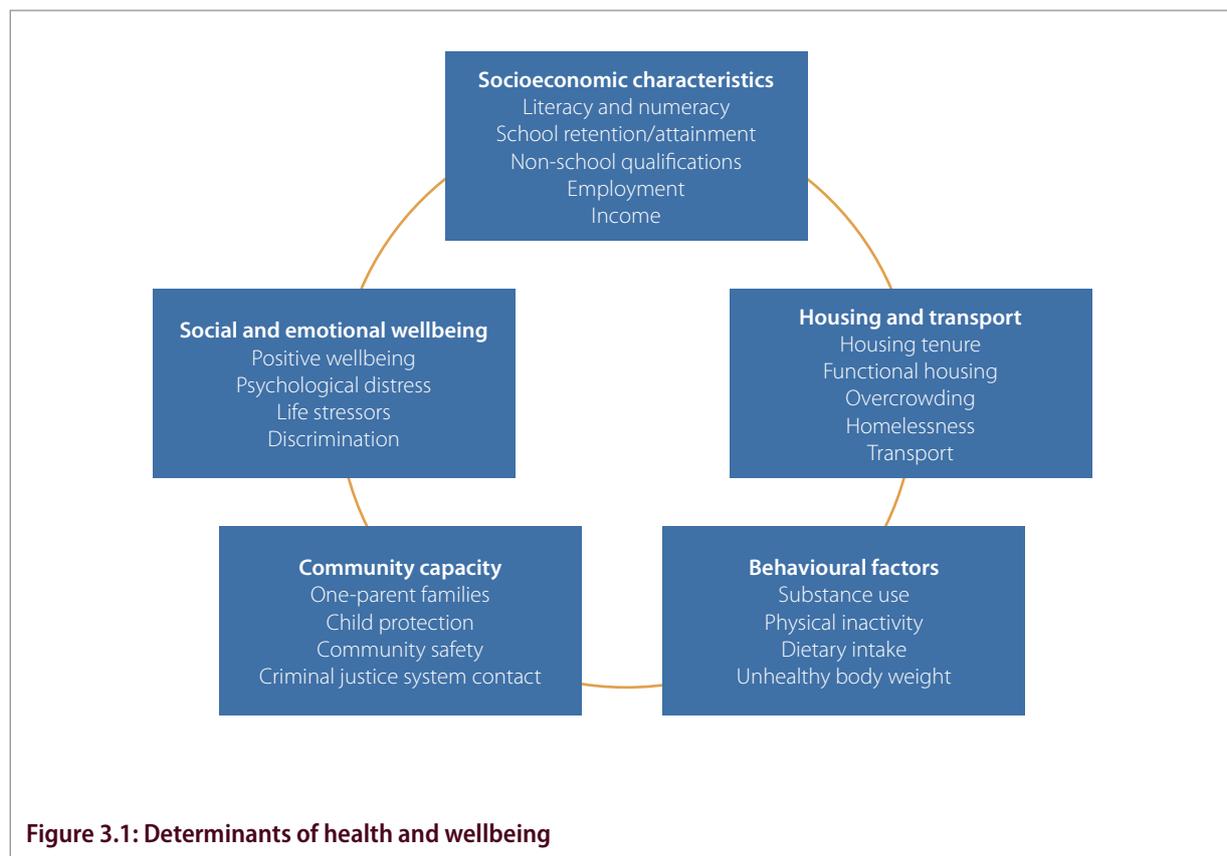


Figure 3.1: Determinants of health and wellbeing

#### 3.1 Socioeconomic factors

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

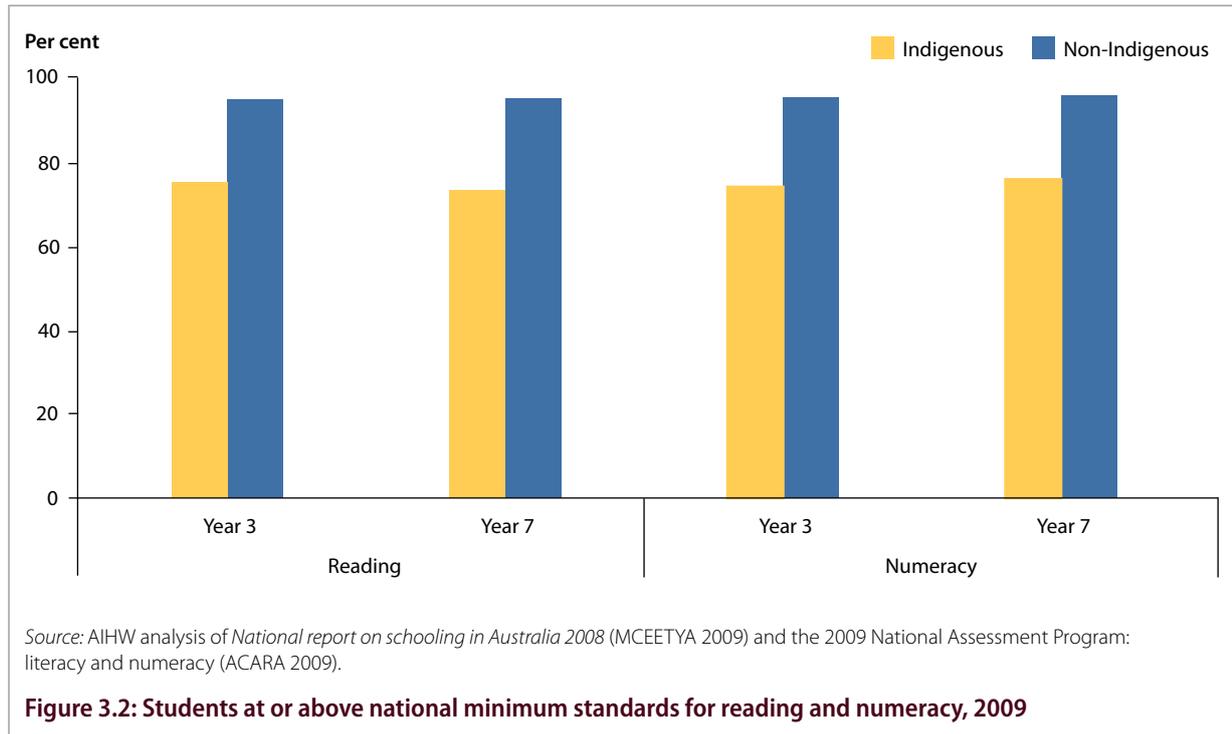
##### Education

Access to education is an important determinant of health and wellbeing and low education levels are often linked with poverty, unemployment, low-quality housing and reduced access to health services. Three of the six COAG Closing the Gap targets relate to Indigenous education.

### Literacy and numeracy

Students who do not attain minimum standards for literacy and numeracy in the early years of schooling will have difficulty progressing further, and are less likely to enter higher education. Three-quarters of Year 3 and Year 7 Aboriginal and Torres Strait Islander students met the national minimum standards for reading and numeracy in 2009 (Figure 3.2). In comparison, about 95% of non-Indigenous students were at or above the minimum standards for both reading and numeracy in both years.

It is a COAG target to halve the gaps in reading, writing and numeracy achievements for Indigenous children within a decade.

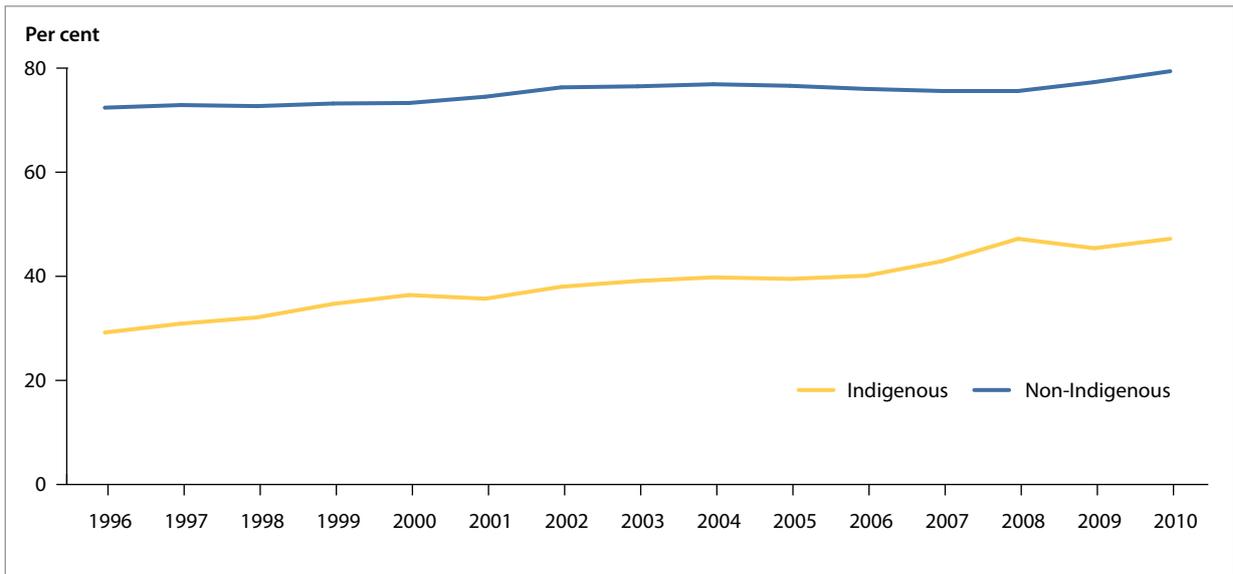


### School retention

School retention rates for Aboriginal and Torres Strait Islander students are much lower than those for non-Indigenous students.

In 2010, the Indigenous retention rate from Years 7/8 to Year 12 was 47% compared with 79% for non-Indigenous students.

The Year 12 retention rates for Indigenous students have increased substantially from 29% in 1996, but the gap remains of more than 30 percentage points (Figure 3.3). It is a COAG target to halve the gap for Indigenous students by 2020.



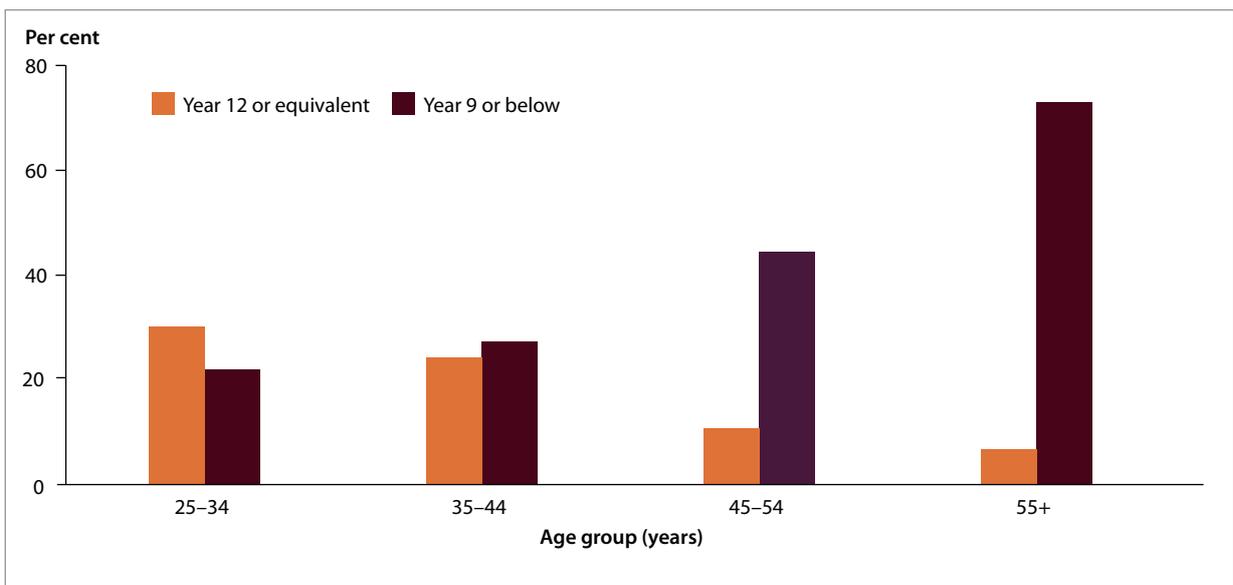
Source: ABS 2011b.

**Figure 3.3: Trends in school retention rates, between Years 7/8 and 12, by Indigenous status, 1996–2010**

The gap in retention rates between Indigenous and non-Indigenous students widens with each additional year of schooling. In 2010, the Year 10 retention rate for Indigenous students was 96% compared with 100% for non-Indigenous students. For Year 11, the rates were 72% and 93%, respectively (ABS 2011b).

**Educational attainment by Aboriginal and Torres Strait Islander adults**

Reflecting the upward trend in retention rates, in 2008, younger Aboriginal and Torres Strait Islander people were more likely to have completed Year 12 (Figure 3.4). In 2008, nearly one-third (30%) of those aged 25–34 years had completed Year 12, compared with only 7% of those aged 55 years and over. Nearly one-quarter (22%) of these young adults had completed Year 9 or below. This proportion was much lower than that of those aged 55 years and over, nearly three quarters (73%) of whom did not progress beyond Year 9.



Source: ABS 2009g.

**Figure 3.4: Levels of educational attainment, Aboriginal and Torres Strait Islander adults, by age group, 2008**

Year 12 completion rates for non-Indigenous young adults are significantly higher. According to the 2008 and 2009 Survey of Education and Work, nearly three-quarters (73%) of non-Indigenous persons aged 25–34 years had completed school to Year 12 (ABS 2010d).

### *Educational attainment of children's carers*

International research has demonstrated that maternal education is a determinant of child health and survival (ABS & AIHW 2008). A large majority (77%) of Aboriginal and Torres Strait Islander carers of children aged 0–14 years had not completed Year 12 (Table 3.1). Nearly one-third (29%) of carers had completed only Year 9 or below.

**Table 3.1: Educational attainment by Indigenous carers of children(a), 2008**

Highest level of school completed	Per cent
Completed Year 12	23
Completed Year 10 or 11	48
Completed Year 9 or below <sup>(b)</sup>	29
<b>Total</b>	<b>100</b>

(a) Child's main carer only.

(b) Includes persons who never attended school.

Note: Children aged 0–14 years.

Source: AIHW analysis of 2008 NATSISS.

### *Non-school qualifications*

Non-school qualifications include those obtained through vocational education and training and tertiary studies at university.

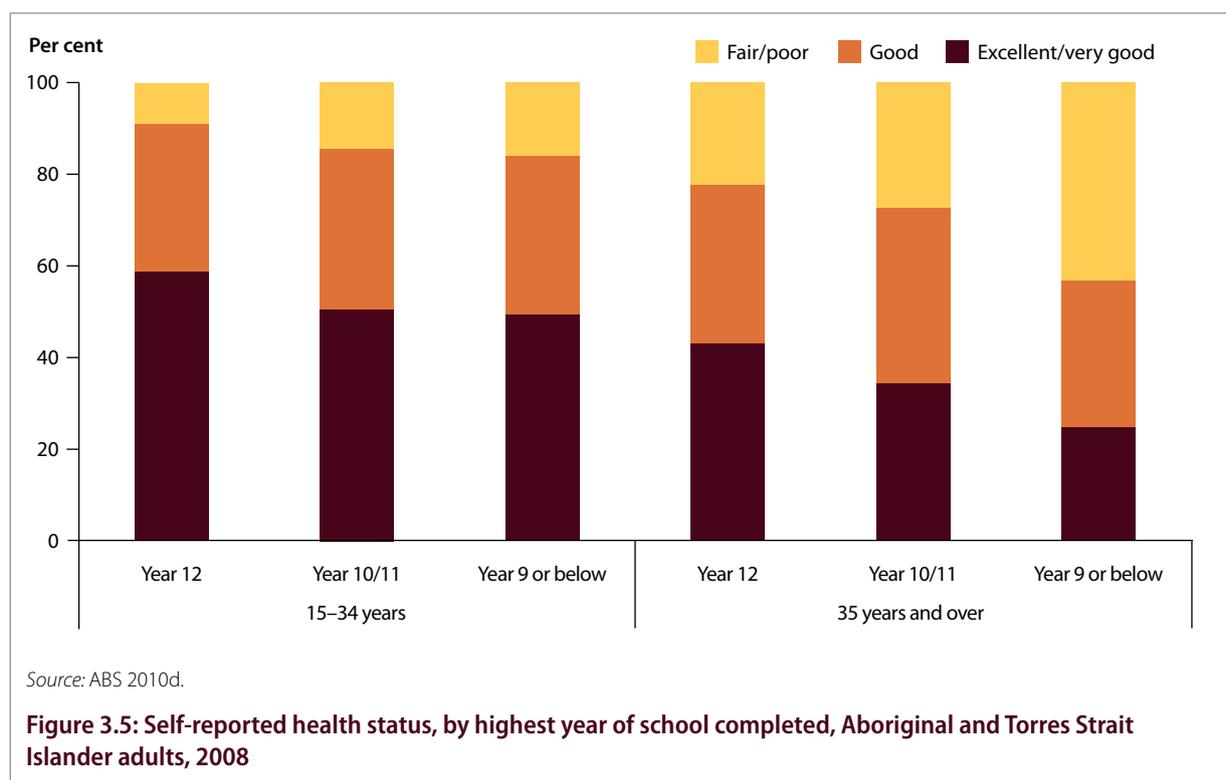
Analysis of the 2008 NATSISS and the 2007–08 National Health Survey showed that about 40% of Indigenous Australians aged 25–64 years had a non-school qualification compared with 61% of non-Indigenous Australians of this age group (AHMAC forthcoming).

- Only 6.5% of Indigenous Australians had a bachelor degree or higher compared with a quarter (25%) of non-Indigenous Australians. The Indigenous rate was higher in non-remote areas (7.5%) compared with remote areas (3.6%).
- One-quarter (25%) of both Indigenous and non-Indigenous Australians aged 25–64 years had a certificate as their highest level of non-school qualification. However, analysis of educational institution currently attended showed a higher proportion of Indigenous Australians, aged 15 years and over, studying at a TAFE, technical/business college or industry skill centre (6.0% versus 4.6%). For the age group 45 years and over, the Indigenous rate was 3.6% compared with 1.5% for non-Indigenous Australians.

### *Education and health status*

Results from the 2008 NATSISS show that higher levels of schooling were positively associated with health status (Figure 3.5).

- Aboriginal and Torres Strait Islander people aged 15–34 years who had completed Year 12 were more likely than those who had left school at Year 9 or below to rate their health as excellent/very good (59% compared with 49%). They were also less likely to rate their health as fair or poor (9% compared with 16%).
- While reported health levels were lower overall for Indigenous Australians aged 35 years and over, those who had completed Year 12 were much more likely to rate their health as excellent/very good—43% compared with 25% for those who only completed Year 9 or below.



There were similar associations between school completion and levels of psychological distress. Younger Aboriginal and Torres Strait Islander people who had completed Year 12 were less likely to have reported high or very high levels of psychological distress compared with those who had left school at Year 9 or below (29% compared with 35%). Among Indigenous Australians aged 35 years and over, the corresponding proportions were 20% and 37%, respectively (ABS 2010d).

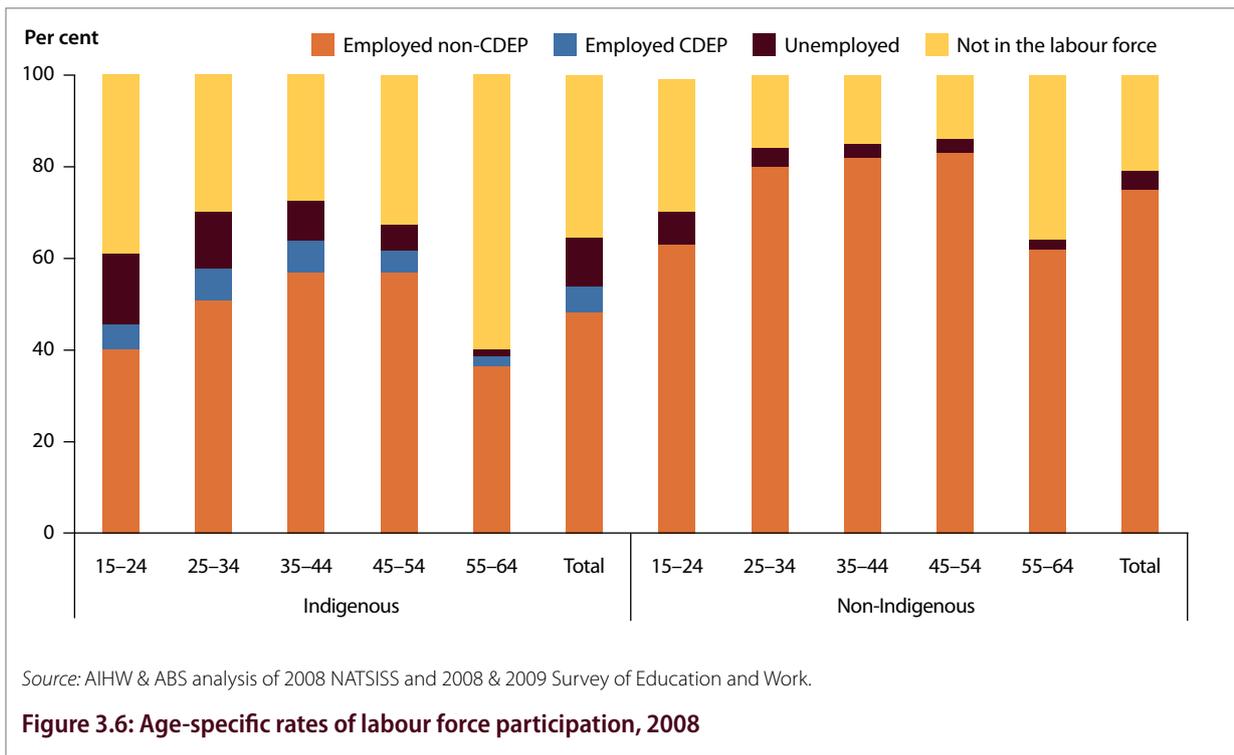
## Employment

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 due to a lack of viable industries and enterprises. Lower educational levels can also restrict employment opportunities in both remote and non-remote areas.

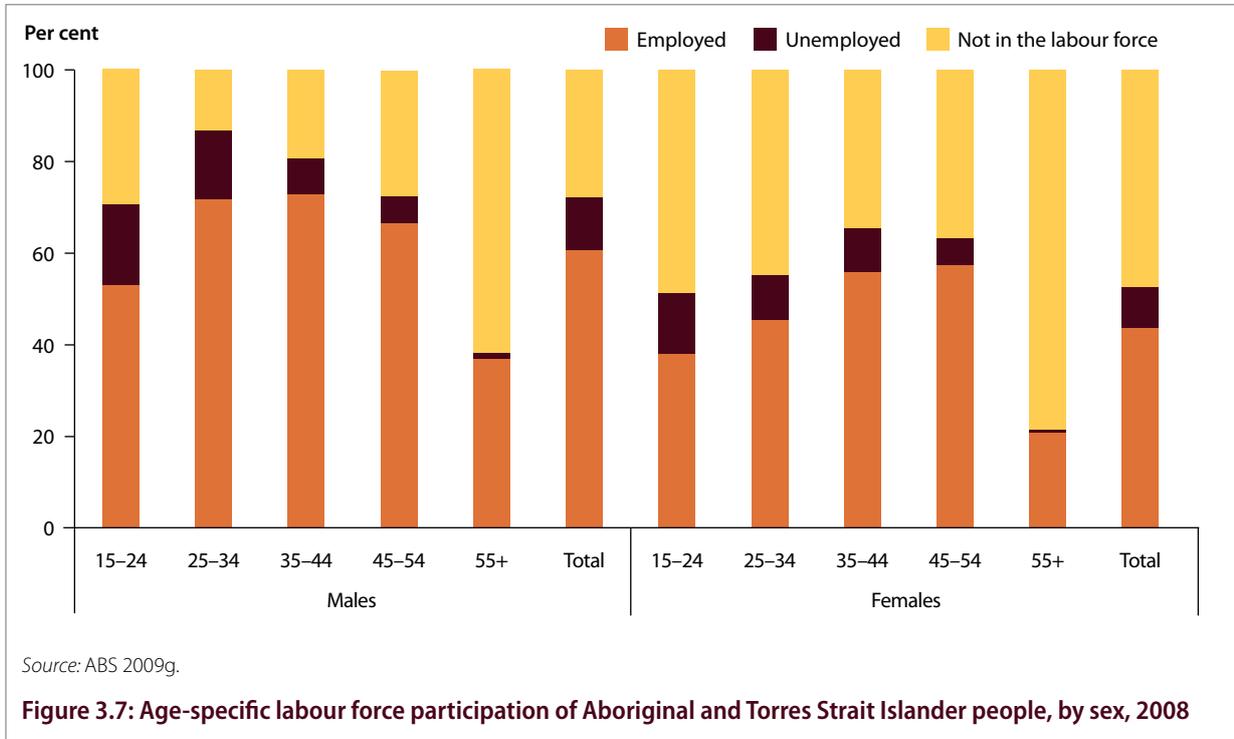
Labour force participation by Indigenous Australians is much lower than that of other Australians. In 2008, 65% of Indigenous Australians aged 15–64 years were considered to be in the labour force (includes employed and unemployed people) compared with 79% of non-Indigenous Australians (AHMAC forthcoming).

Of all Indigenous Australians considered to be in the workforce, 1 in 10 was participating in Community Development Employment Projects. Under recent changes, all new participants in Community Development Employment Projects will be classified as income support recipients.

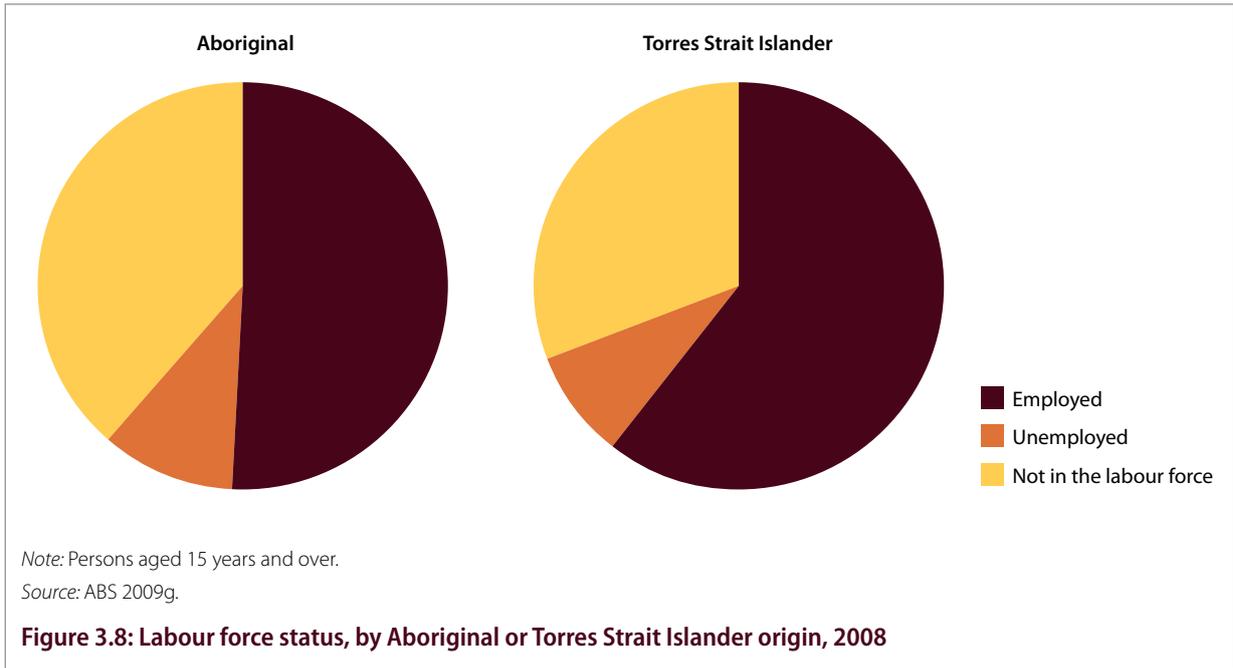
The unemployment rate for Indigenous Australians was higher than non-Indigenous Australians across all age groups (Figure 3.6). It is a COAG target to halve the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade (by 2018).



Indigenous men were more likely to be in the labour force than Indigenous women (Figure 3.7). In the prime working years between the ages of 25 and 54 years, Indigenous women were half as likely to be in the labour force as Indigenous men (39% compared with 19%, respectively).

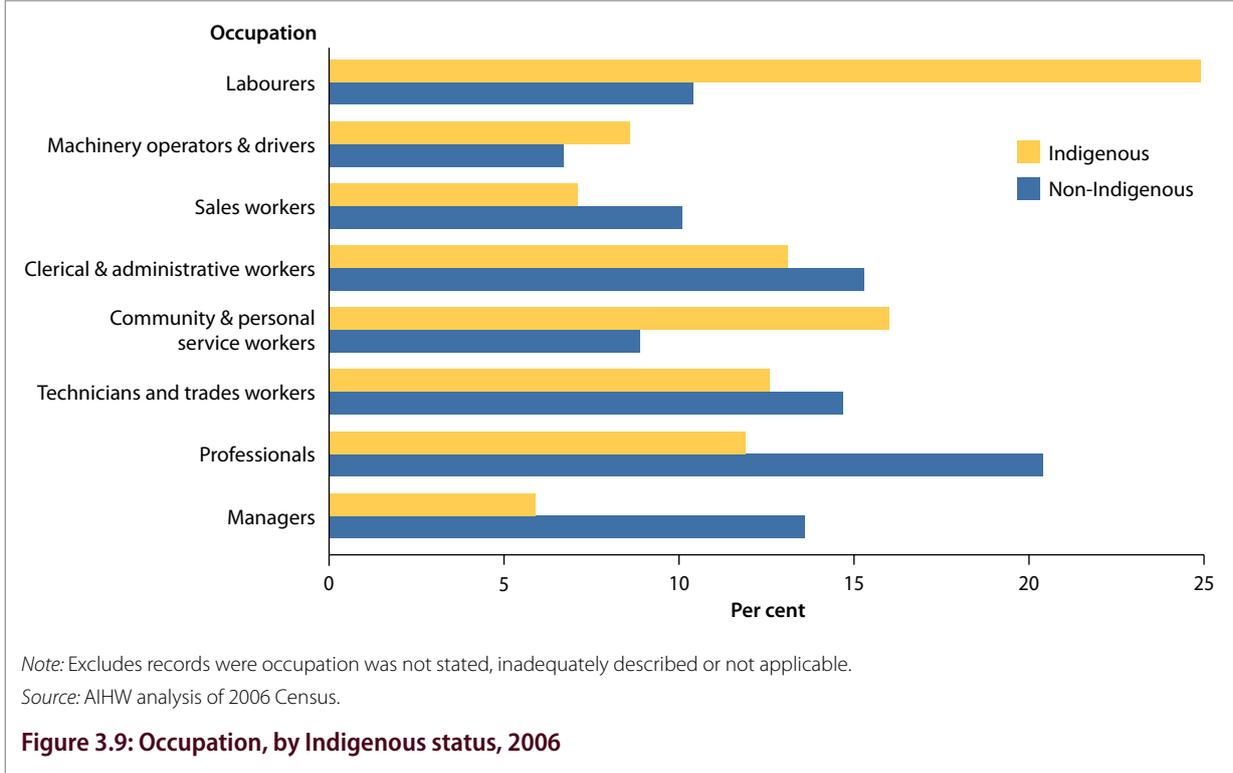


Torres Strait Islander people aged 15 years and over were more likely to be employed than Aboriginal people (61% compared with 51%), and less likely to be either unemployed or not in the labour force (Figure 3.8).



**Occupation**

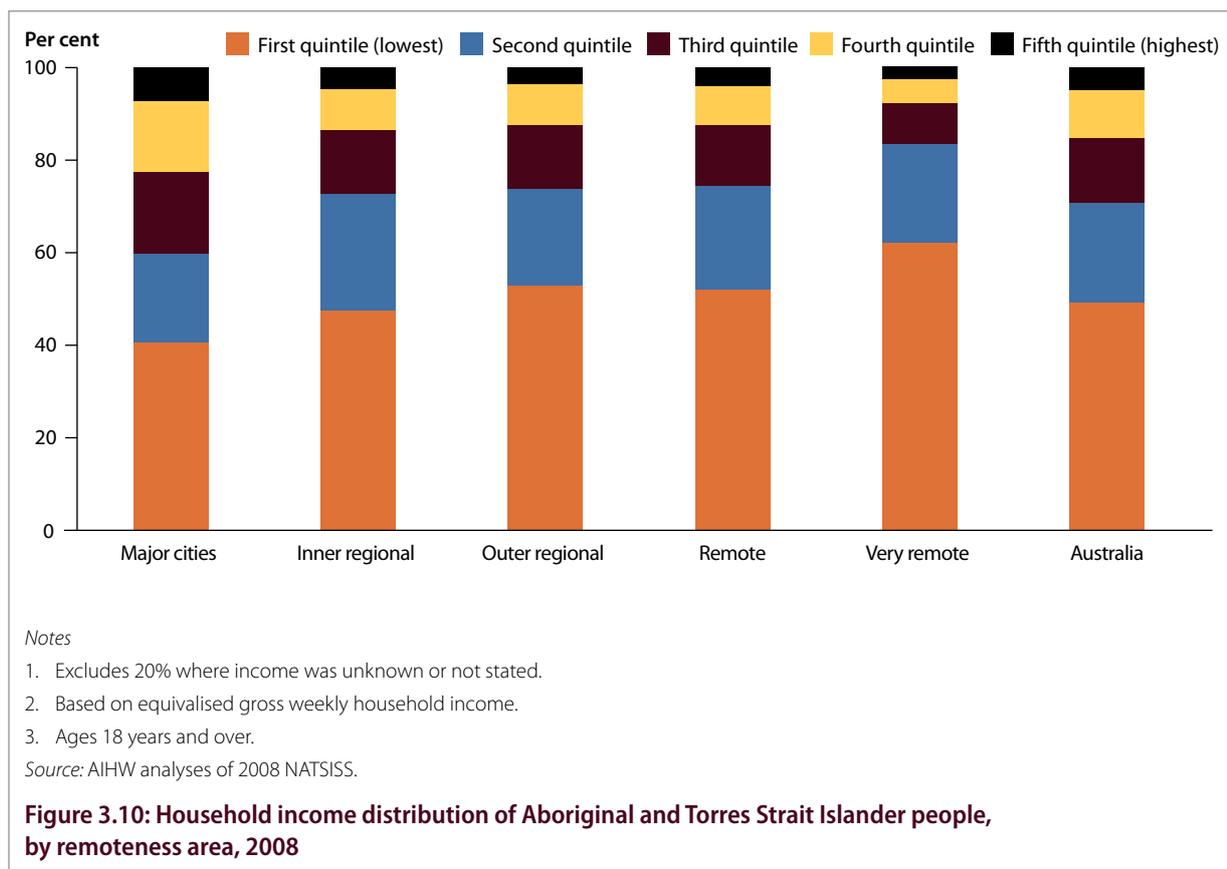
Analysis of the 2006 Census showed that a much larger proportion of Aboriginal and Torres Strait Islander workers were employed as labourers compared with non-Indigenous workers (25% compared with 10%) (Figure 3.9). Also, smaller proportions of Indigenous Australians stated their occupation as either managers (6%) or professionals (12%) compared with non-Indigenous Australians (14% and 20%, respectively).



## Income

Corresponding with relatively low levels of labour force participation, Indigenous households are over-represented in the lowest income bracket. In 2008, nearly half (49%) of Indigenous households were in the lowest income quintile while less than 5% were in the top income quintile (Figure 3.10).

Indigenous Australians living in regional and remote areas had lower incomes on average. Nearly two-thirds (62%) of those in *Very remote* areas were in the lowest household income quintile (Figure 3.10). The proportion of low-income earners living in *Major cities* was lower, but Indigenous Australians were still over-represented, with 41% in the lowest household income quintile.



## 3.2 Housing and transport

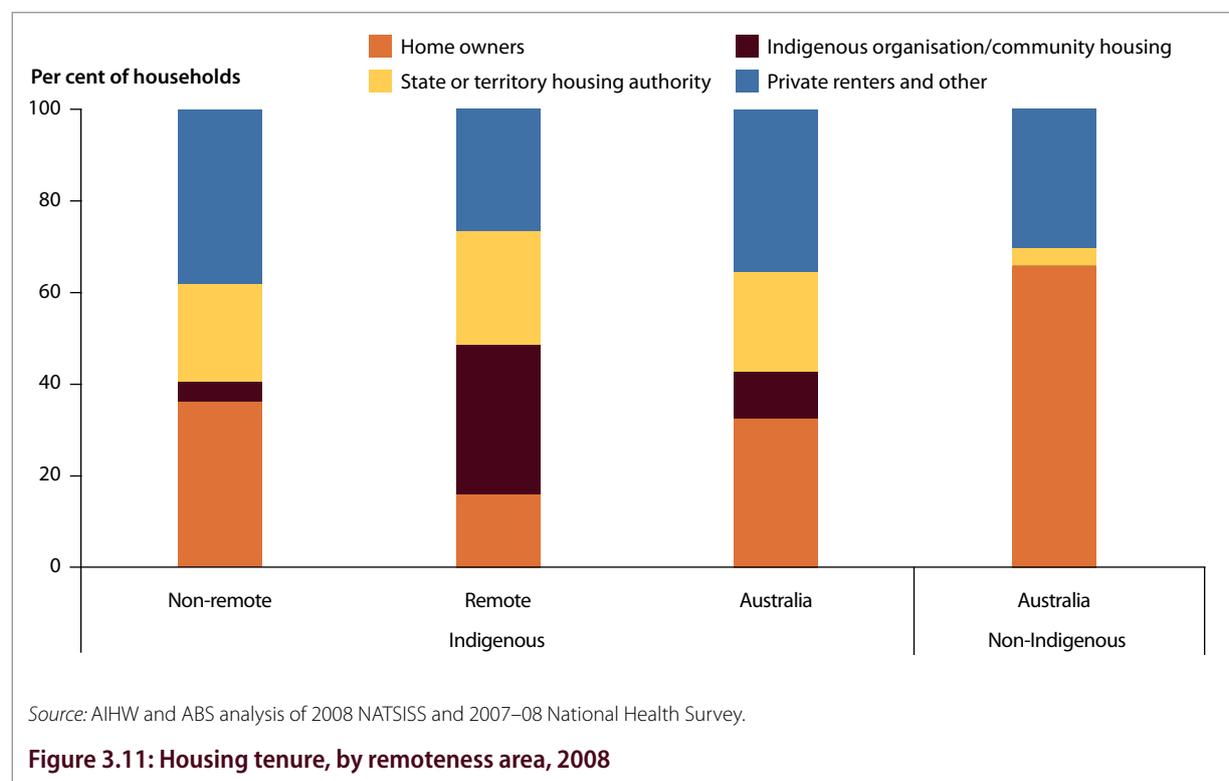
A lack of secure housing, inadequate or poorly maintained housing or a lack of functioning infrastructure can pose serious health risks. In comparison to non-Indigenous Australians, a higher proportion of Indigenous Australians reside in remote locations. These remote communities are often poorly serviced for transport, water supply, electricity supply, sewage disposal, health services, employment opportunities and housing. Access to reliable transportation is also an important resource for both individuals and the community.

### Housing tenure

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 in regards to the value of home ownership. Land tenure issues on Indigenous land in remote areas also affect home ownership rates.

One-third (32%) of Indigenous households were home owners or purchasers in 2008. Another third (33%) were private and other renters, and 32% were renters of some form of social housing.

Home ownership levels for Indigenous households were higher in non-remote areas (36%) than in remote areas (16%). The proportion renting from Indigenous or community housing organisations was much higher in remote areas (33%) than in non-remote areas (5%) (Figure 3.11).



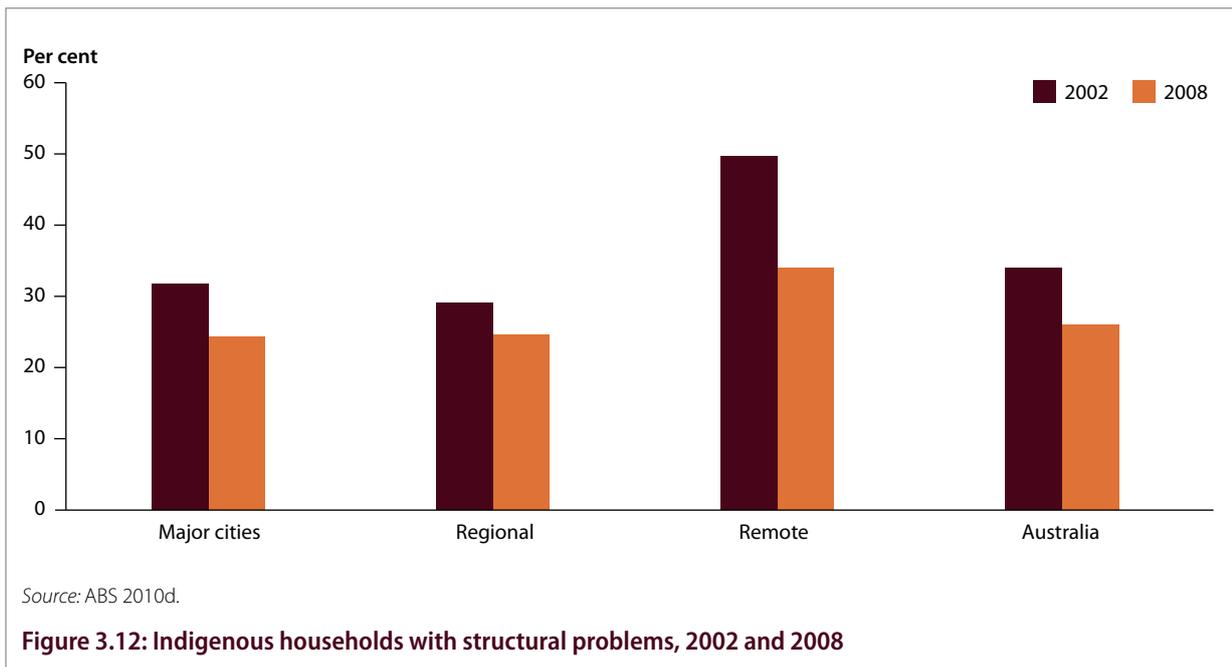
Between 1994 and 2008, there was a rise in the proportion of Indigenous households who were home owners or buyers, from 26% to 32%. Over the same period, there was also a significant increase in the proportion of Indigenous households who were renting privately, from 23% to 33%, and a decrease in those renting from state or territory housing authorities, from 35% to 22% (AHMAC forthcoming).

In comparison, non-Indigenous households were more likely to be home owners with more than two-thirds (66%) either outright owners or buyers. Less than one-third (29%) of non-Indigenous households were renting, with the large majority renting privately.

### Functional housing

Having access to basic household amenities—such as washing and laundry, safe storage and preparation of food, and safe waste removal—is important to ensuring a healthy living environment. These facilities are often of poor quality or unavailable in Indigenous households.

In 2008, more than one-quarter (26%) of Indigenous households reported living in dwellings with structural problems, such as major cracks in floors or walls, major electrical/plumbing problems and roof defects (ABS 2010d). But this was a decrease from 34% in 2002. In remote areas, where the proportion of dwellings with structural problems was higher, there was a decrease from 50% in 2002 to 34% in 2008 (Figure 3.12).



As well as structural problems, in 2008, 13% of all Aboriginal and Torres Strait Islander adults lived in dwellings with at least one faulty household facility. The proportion was highest in remote areas (28%), compared with 9% in regional areas and 8% in *Major cities* (ABS 2010e).

### Utilities in discrete Indigenous communities

The majority (87%) of all Aboriginal and Torres Strait Islander people living in *Very remote* areas in 2006 resided in a discrete Indigenous community—a geographic location, bounded by physical or ownership boundaries, and inhabited mostly by Aboriginal and Torres Strait Islander people (ABS 2007a). Almost three-quarters (73%) of the discrete Indigenous communities counted had a population of less than 50 people. Living in such small and isolated communities poses particular difficulties in accessing many services that most Australians take for granted. For example, the 2006 Community Housing and Infrastructure Needs Survey reported that:

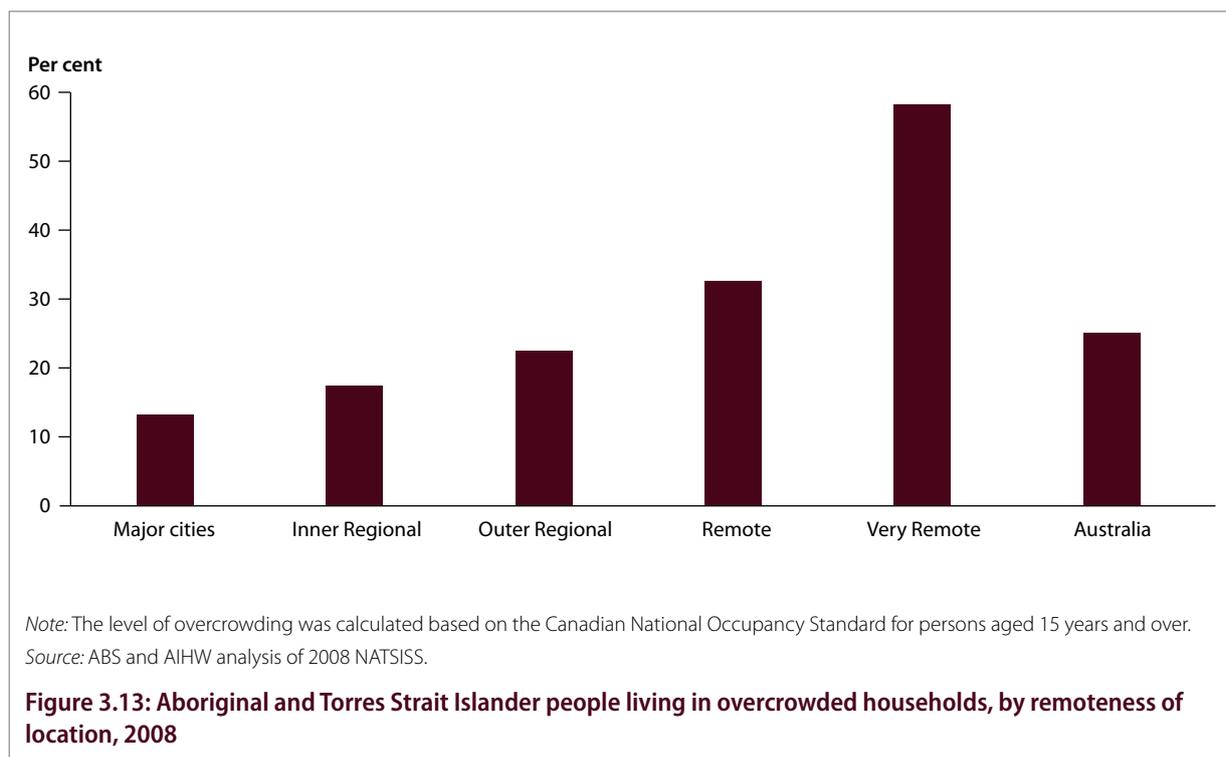
- Bore water was the main source of drinking water for more than half (58%) of all Indigenous communities, with 18% of communities obtaining their drinking water from nearby town water systems and 9% having no organised water supply.
- The most common source of electricity was community generators (32%), followed by state grid (23%), solar and solar hybrid (18%), and domestic generators (15%).
- Around half (53%) of all Indigenous communities reported public access to a telephone, and only 11% had public access to the internet (ABS 2007a).

### Overcrowding

Aboriginal and Torres Strait Islander people are more likely to live in multiple-family households (see Chapter 2). While allowing for close relationships with kin, overcrowding in today's housing can put stress on bathroom, kitchen and laundry facilities. Overcrowding has also been associated with poorer self-reported physical and mental health, and with higher rates of smoking and hazardous drinking (Shaw 2004). Overcrowding can also affect education, by limiting space to study.

In 2008, one-quarter (25%) of Indigenous Australians were living in overcrowded conditions. Indigenous home owners and buyers were the least likely to live in overcrowded households (13%), whereas almost one-third of renters (30%) were living in overcrowded accommodation (ABS 2010e). Analysis of the 2007–08 Survey of Income and Housing showed that only 4% of non-Indigenous Australians were living in overcrowded households.

The proportion of Indigenous Australians living in overcrowded conditions increased with remoteness of location—58% of those living in *Very remote* areas compared with 13% in *Major cities* (Figure 3.13).

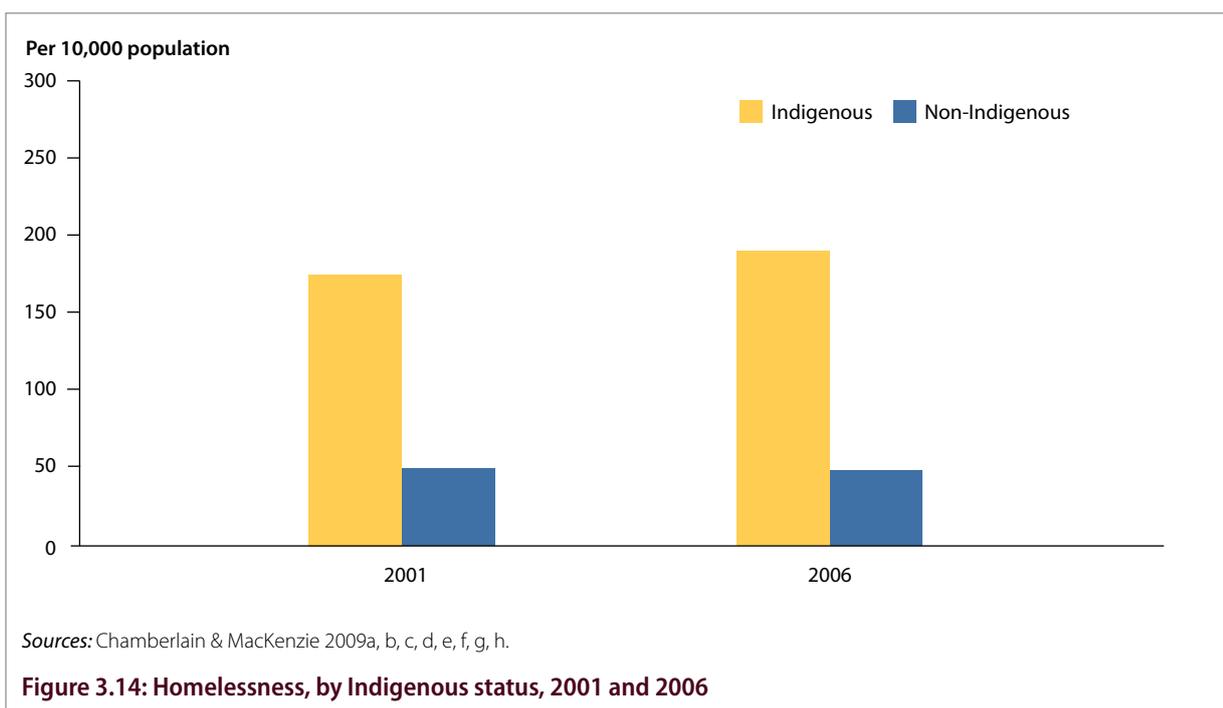


## Homelessness

Indigenous Australians are more likely to be homeless than non-Indigenous Australians due to a number of factors, including that many do not have the same access to affordable and secure housing as other Australians. Also, some segments of the Indigenous population are particularly mobile and often leave their home to access services or to observe cultural obligations. While perhaps preferring to stay with family and friends, already overcrowded accommodation may not allow this, and coupled with a lack of adequate temporary accommodation, contributes to the homelessness problem for Indigenous Australians.

While Indigenous Australians are significantly over-represented in the homeless statistics, it should be noted that a number of Indigenous itinerant people choose to live in public places and do not see themselves as homeless (AHURI 2004).

Conceptual issues aside, on Census night 2006, a total of 9,200 Indigenous Australians were homeless. At a rate of 191 per 10,000 population this was nearly 4 times the non-Indigenous rate (49 per 10,000) (Figure 2.14). While the Indigenous homelessness rate increased between 2001 and 2006 (from 176 to 191 per 10,000), the non-Indigenous rate was largely unchanged.



Almost 6 in 10 (59%) homeless Indigenous Australians were staying in hostels, shelters, refuges or were visitors to private dwelling with ‘no usual address’ (referred to as secondary homelessness) in 2006. More than one-quarter (27%) used improvised shelters or tents, or were sleeping out (primary homelessness). The remainder (14%) were staying in boarding houses or private hotels (tertiary homelessness).

More detailed information on homelessness can be found in *A profile of homelessness for Aboriginal and Torres Strait Islander people* (AIHW 2011a), available from the AIHW Indigenous observatory.

## 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. ABS analysis of the 2008 NATSISS and the 2006 General Social Survey revealed that:

- An estimated 11% of Indigenous Australians aged 18 years and over could not get to, or often had difficulty getting to, places needed, compared with 4% of non-Indigenous Australians. The proportion was higher for Indigenous Australians living in remote (18%) than in non-remote areas (8%).
- About half of all Indigenous households (51%) had access to a motor vehicle compared with 85% of non-Indigenous households.
- Nearly one-third (30%) of Indigenous adults living in non-remote areas used public transport in the 2 weeks before the survey; use of public transport by Indigenous adults was lower in remote areas (13% in the previous 2 weeks), with one of the key factors being the lack of availability of public transport (AHMAC forthcoming).

### 3.3 Community capacity

Community capacity is the ability or readiness 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 togetherness. Strong communities enable stable family structures, inter-generational care and social networks, which in turn lead to improved health outcomes.

A variety of indicators can be used to profile the capacity of a community in relation to health and wellbeing issues. These include the proportion of one-parent families, child protection, community safety, and contact with the criminal justice system.

#### Children in one-parent families

Being a child in a one-parent family is often associated with low socioeconomic status, poor educational attainment, and a lack of social support and networks. However, Aboriginal and Torres Strait Islander people often have more extensive and complex family relationships than most non-Indigenous Australians—relationships that may not easily translate into mainstream notions built around the nuclear family.

While the average Indigenous household size is larger than that of other Australian households, Indigenous children are twice as likely to live in one-parent families as non-Indigenous children. In 2006, nearly half (47%) of Indigenous families with dependent children were one-parent families, accounting for 45% of dependent children. In comparison, 1 in 5 (20%) of dependent non-Indigenous children lived in one-parent families (AHMAC 2008).

The higher rate of Indigenous children living in one-parent families contributed to nearly half (45%) of Indigenous children aged 0–14 years living in jobless families—3 times the proportion of all children (AIHW 2009a).

Indigenous one-parent families were more common in *Major cities* (24% of households) than in *Very remote* areas (14% of households).

Compared with other Indigenous Australians, a higher proportion of Indigenous single parents reported in the 2008 NATSISS (AHMAC forthcoming):

- fair/poor health status (27% compared with 21%)
- non-completion of Year 12 schooling (83% compared with 79%)
- not in the labour force (55% compared with 35%)
- living in rented accommodation (86% compared with 66%).

#### Child protection

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).

For children aged 0–17 years in 2009–10:

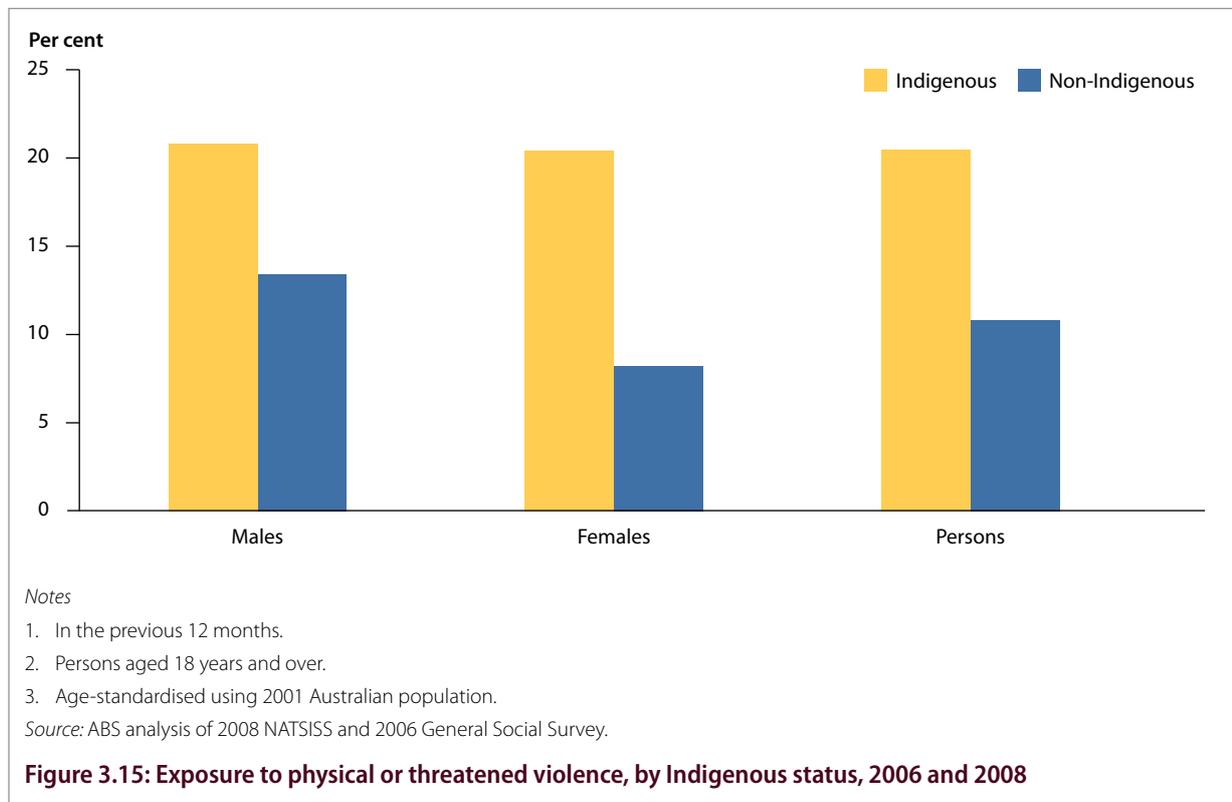
- The rate of substantiated child protection notifications for Indigenous children was 35 per 1,000 children, over 7 times the rate for other children (4.6 per 1,000).
- The rate of Indigenous children on care and protection orders was nine times higher than the rate for non-Indigenous children (48 versus 5.4 per 1,000 children).
- The rate of Indigenous children in out-of-home care was almost 10 times higher than the rate for non-Indigenous children (48 versus 5.0 per 1,000 children) (AIHW 2011f).

For Indigenous children, the most common type of abuse was neglect (38% of cases), closely followed by emotional abuse (34%). For non-Indigenous children, the most common type of abuse was emotional abuse (38%), followed by physical abuse (24%).

### Community safety

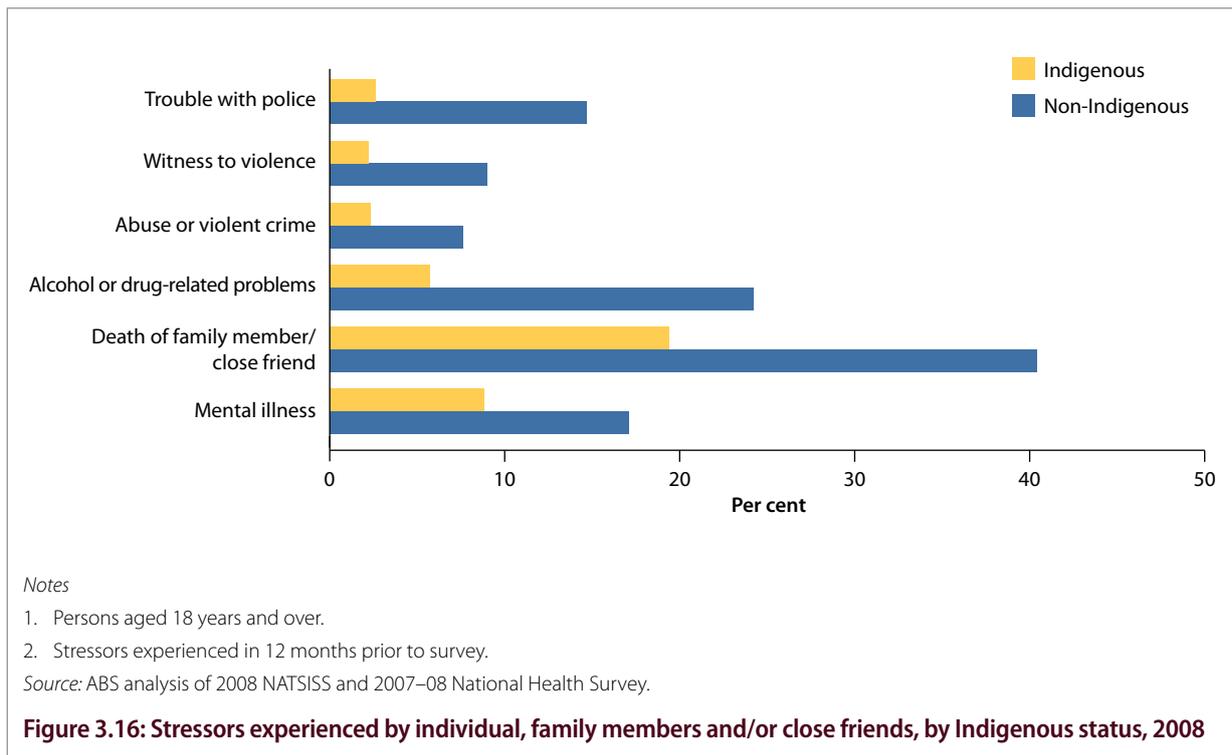
Community safety refers to the notion of being and feeling protected from harm. It is an important aspect of physical and mental wellbeing. Homicide and violence constitutes a high health risk factor. Stressors experienced by individuals, as well as their family members and/or close friends, also influence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

In 2008, 1 in 5 Indigenous Australians aged 18 years and over reported that they were a victim of physical or threatened violence in the previous 12 months (Figure 3.15). Compared with non-Indigenous males, Indigenous males were 1.6 times as likely to report being a victim of physical or threatened violence; Indigenous females were 2.5 times as likely (AHMAC forthcoming).



The 2008 NATSISS also reported on the prevalence and types of stressors experienced in the 12 months before the survey:

- 40% of Indigenous Australians experienced the death of a family member or close friend—more than double the rate of non-Indigenous Australians
- 24% either had, or someone close to them had, alcohol or drug-related problems in the 12 months preceding the survey—more than four times the rate of non-Indigenous Australians (Figure 3.16).

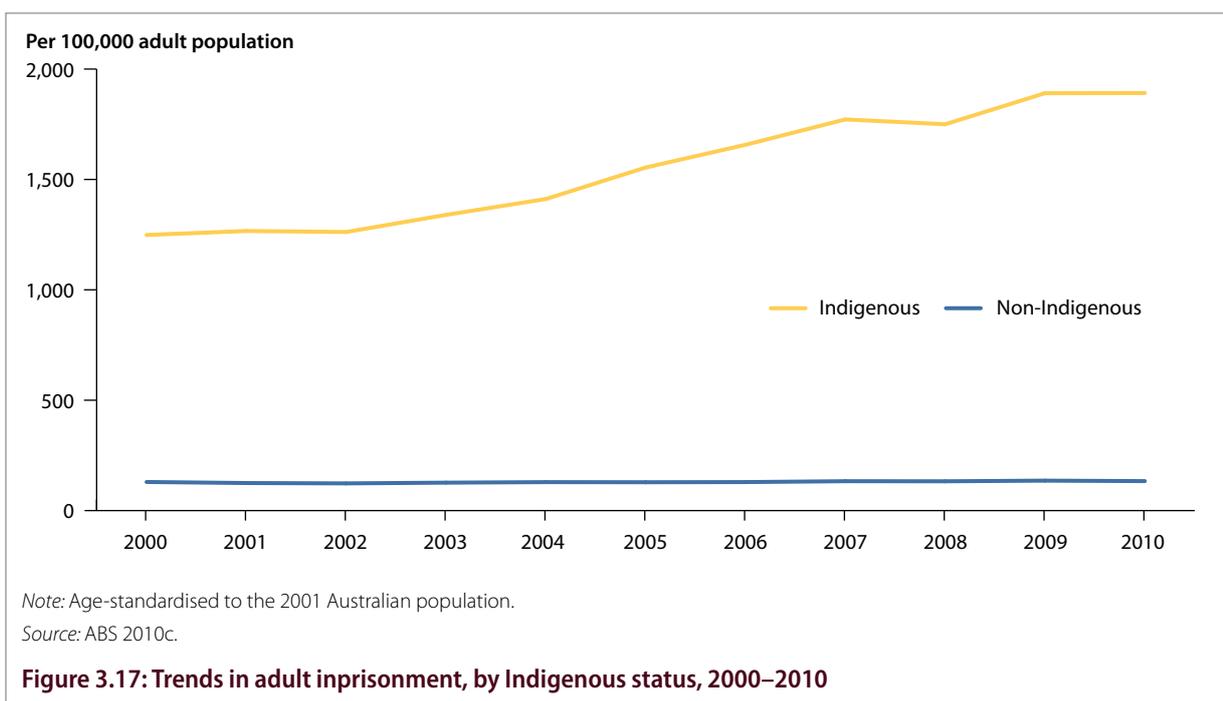


### Contact with the criminal justice system

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). Adverse employment consequences and a lack of positive role-models in the community further erode the capacity of the Indigenous community to support its structures (Woodward 2003).

Nearly 7,600 Indigenous Australians were imprisoned in June 2010, 91% of them male. They made up more than a quarter (26%) of all prisoners, a much higher proportion than their representation in the Australian population (ABS 2010c). In Western Australia and South Australia, Indigenous Australians were more than 20 times as likely to be imprisoned than non-Indigenous Australians.

Over the decade to 2010, the Indigenous imprisonment rate (age-standardised) has increased by 52%, from 1,248 per 100,000 adult population in 2000 to 1,892 per 100,000 in 2010 (Figure 3.17). No such increase was noted among non-Indigenous adults.



### 3.4 Behavioural factors

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. The contribution of some key behavioural risk factors to various chronic diseases and conditions are presented in Table 3.2.

**Table 3.2: Relationships between selected chronic diseases and risk factors**

Risk factor	Disease/condition					
	Kidney disease	Asthma	Coronary heart disease	Depression	Type 2 diabetes	Stroke
Tobacco smoking	✓	✓	✓			✓
Physical inactivity			✓	✓	✓	✓
Alcohol misuse			✓	✓	✓	✓
Poor nutrition	✓		✓		✓	✓
Obesity	✓		✓		✓	✓

Source: Adapted from AIHW 2008.

Information on patient risk factors (overweight/obesity, daily smoking and at-risk alcohol consumption) is collected from general practitioner encounter data. A 2009 report (Britt & Miller) showed that over the period 2001–2008, Aboriginal and Torres Strait Islander patients were almost 4 times as likely to have all three risk factors when compared with all patients (14% compared with 3.9%). Indigenous patients were also less than half as likely to have none of the risk factors (11% compared with 27%).

The 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) was the most recent survey that collected comprehensive information on health risk factors among Aboriginal and Torres Strait Islander people. But more recent information on smoking, alcohol consumption and illicit drug use is available from the 2008 NATSISS.

## Substance use

Alcohol, tobacco and illicit substances are widely used by both Indigenous and non-Indigenous Australians. However, substance use plays a significant role in the gap 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.

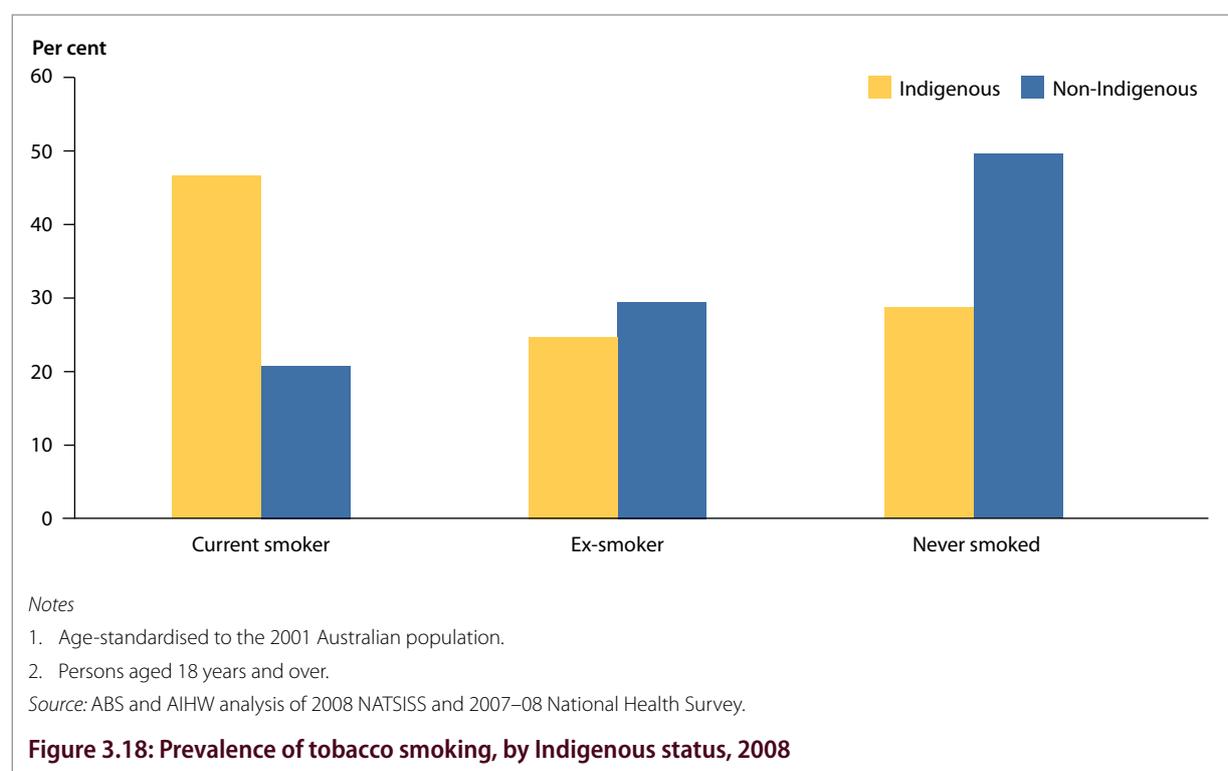
More detailed information can also be found in *Substance use among Aboriginal and Torres Strait Islander people* (AIHW 2011).

### 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 (the rates for which have declined substantially since the 1950s).

According to the 2008 NATSISS, almost half (47%) of Indigenous persons aged 15 years and over were current smokers. In 2008, 1 in 5 (20%) Indigenous adults were ex-smokers, an increase from 15% in 2002. Indigenous Australians living in remote areas were more likely to be current smokers than those living in *Major cities* (53% and 42%, respectively) (ABS 2009g).

The age-adjusted rate of current daily smoking for Indigenous Australians was more than double the rate for non-Indigenous Australians (Figure 3.18).



Risk factor data from general practitioner encounters for the period 2001–2008 showed that Indigenous patients were almost 3 times as likely to be daily smokers (47%) than those in the total adult sample (17%) (Britt & Miller 2009).

Between 2002 and 2008, the proportion of Indigenous Australians, aged 15 years and over, who were current daily smokers decreased from 49% to 45%. This was the first statistically significant decline in smoking rates within the Indigenous population since the ABS Indigenous Household Survey Program began in 1994 (ABS 2010d).

### *Alcohol consumption*

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).

In terms of risky long-term (or chronic) alcohol consumption—based on the amount consumed regularly on a usual drinking day—the 2008 NATSISS found:

- about 17% of Indigenous Australians aged 15 years and over reported consumption patterns at risky or high-risk levels
- Indigenous men were more likely to consume alcohol at risky or high-risk levels than women (20% compared with 14%)
- Indigenous Australians aged 35–44 years were most likely to report drinking at risky or high-risk levels (22%), followed by those aged 25–34 years (19%).

In terms of risky short-term (or binge) drinking—recently consuming a large quantity of alcohol in a single day—the 2008 NATSISS found:

- more than one-third (37%) of Indigenous Australians aged 15 years and over reported consuming risky or high-risk amounts of alcohol in the 2 weeks before the interview
- binge drinking was more common among Indigenous men (46%) than women (28%).

Since 2002, there has been a small decrease (from 31% to 27%) in the proportion of Indigenous Australians who did not drink in the 12 months before being interviewed.

Data from general practitioner encounters for the period 2001–2008 also showed that Indigenous patients were 1.5 times as likely to be ‘at-risk drinkers’ when compared with all patients (39% compared with 26%), but were also more likely to be non-drinkers (37% compared with 29%) (Britt & Miller 2009).

### *Illicit substance use*

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).

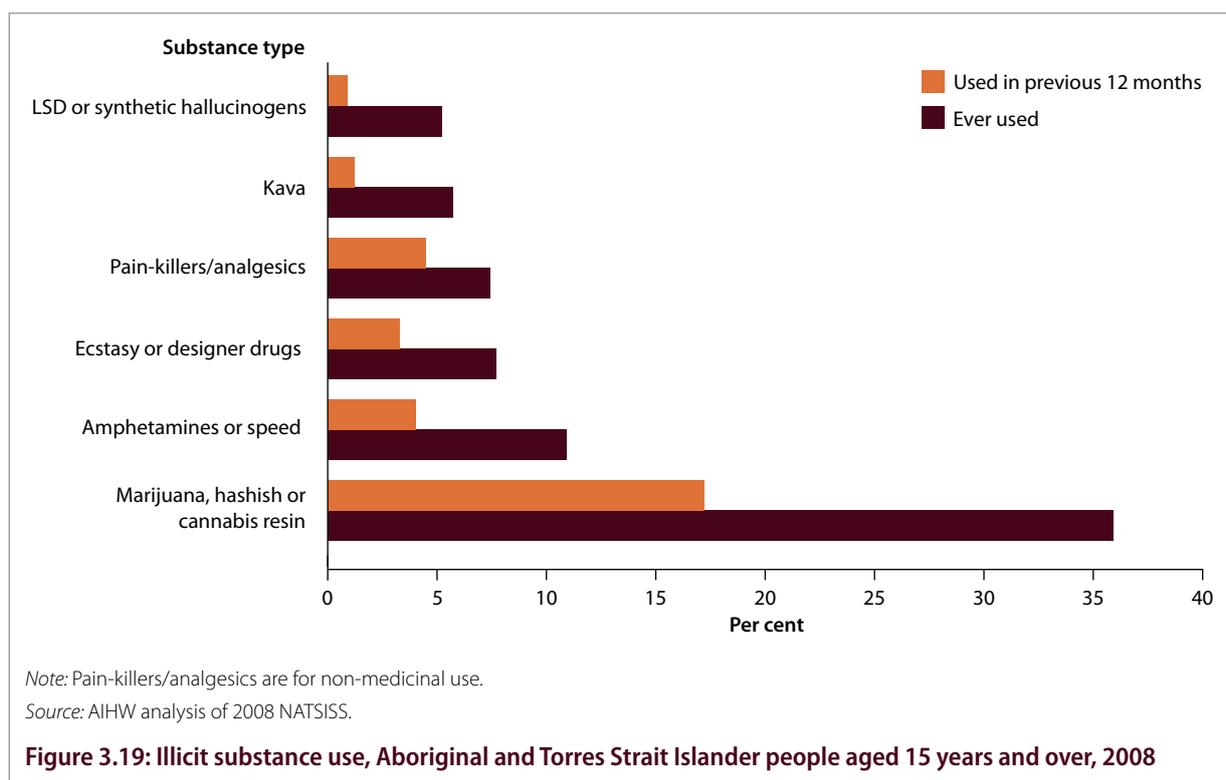
As well as being a large contributing factor for illness, accidents and injury, illicit drug use may also have severe social and economic impacts on communities, including domestic violence, crime and assaults.

In 2008, among Aboriginal and Torres Strait Islander people aged 15 years and over who completed a substance use form:

- 43% reported that they had tried at least one illicit substance in their lifetime
- 23% reported using an illicit substance in the 12 months before the interview.

Indigenous men were more likely than Indigenous women to have ever used illicit substances (51% compared with 36%), and to have used substances in the previous 12 months (28% compared with 17%).

Marijuana was the most common substance used in the previous 12 months (17%), followed by non-medicinal use of prescribed drugs including pain-killers/analgesics (5%), followed by amphetamines or speed (4%) (Figure 3.19).



Compared with those who had never used illicit substances, a higher proportion of Indigenous Australians who had used substances in the previous 12 months smoked cigarettes regularly (68% compared with 38%), and consumed alcohol at risky/high-risk levels (31% compared with 13%).

### *Rates of treatment for alcohol and other drug use*

According to 2008–09 data from the Alcohol and Other Drug Treatment Services National Minimum Data Set, Indigenous clients reported the same four main drugs of concern as the total population. These were alcohol (54% of episodes), cannabis (23%), opioids (10%, with heroin accounting for 6%) and amphetamines (8%).

There were, however, differences between Indigenous and non-Indigenous Australians in principal drugs of concern, with:

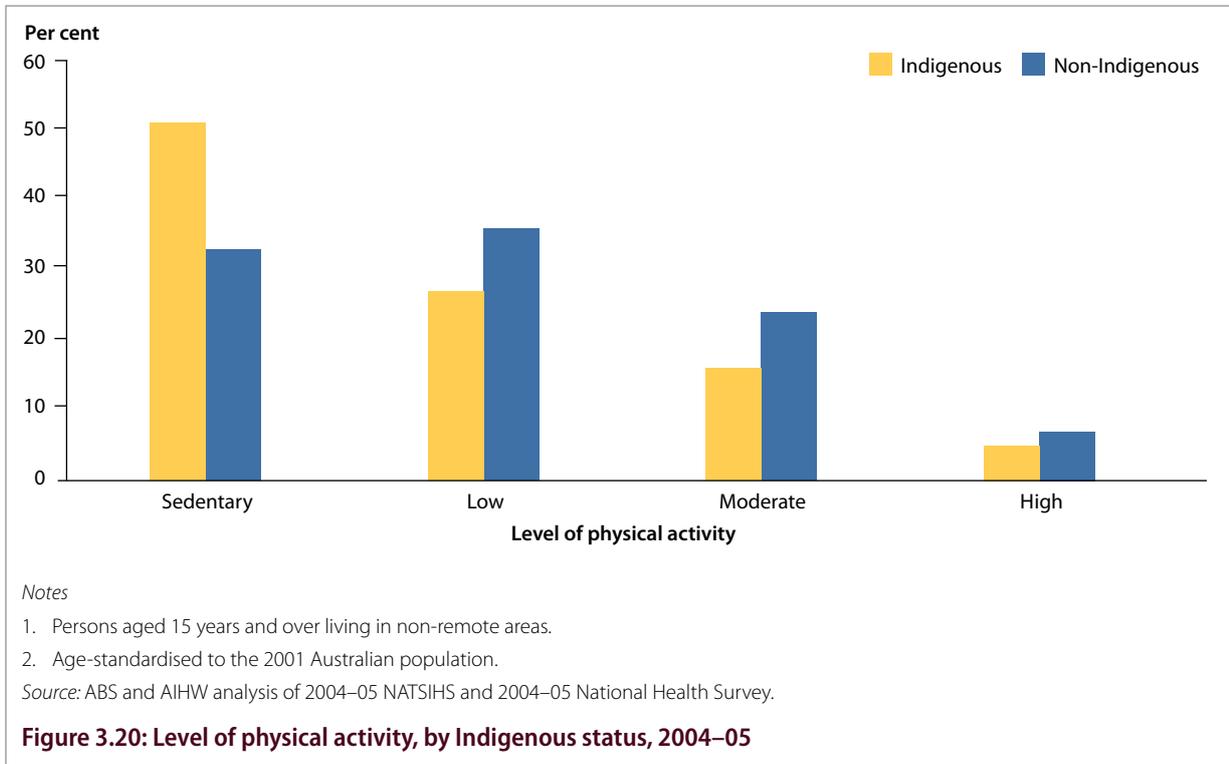
- a higher proportion of Indigenous clients nominating alcohol as their main drug of concern than non-Indigenous clients (54% compared with 45%)
- a lower proportion of Indigenous clients nominating opioids as their main drug of concern (10% compared with 16%).

Data from the Office for Aboriginal and Torres Strait Islander Health Services Reporting also showed that, in 2008–09, alcohol, tobacco and nicotine, cannabis and marijuana, or multiple drug use, were the most common substances for which treatment or help was provided (AIHW 2010a). The vast majority of services provided treatment or help to clients for alcohol (89% of all services), and cannabis and marijuana (87%). Just over three-quarters of services provided treatment or help for tobacco and nicotine, or for multiple drug use (both 76%).

### **Physical inactivity**

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.

An estimated three-quarters of Aboriginal and Torres Strait Islander people (aged 15 years and over) living in non-remote areas reported sedentary or low levels of physical activity in the 2 weeks before the 2004–05 NATSIHS. A higher proportion of Indigenous women reported being sedentary compared with Indigenous men. Indigenous Australians were 1.5 times as likely as non-Indigenous Australians to report being sedentary (Figure 3.20).

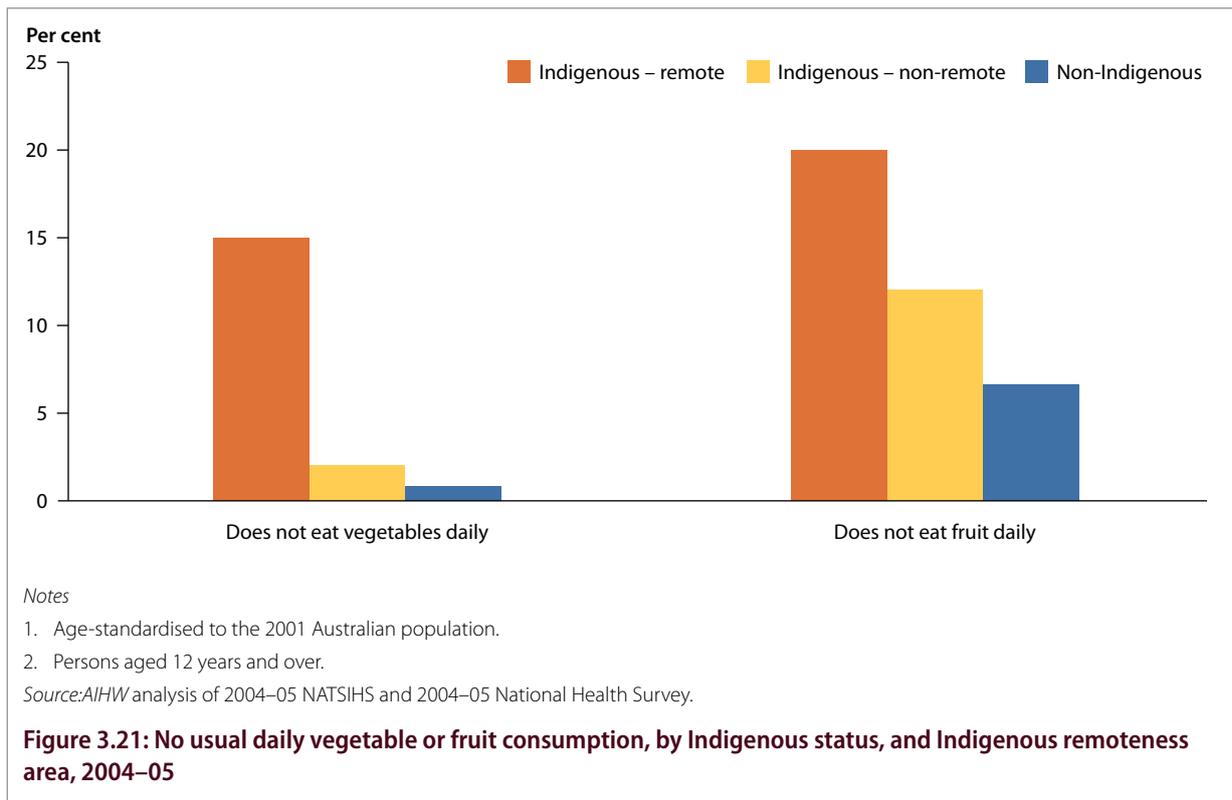


## Dietary behaviour

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). A 2008 survey in the Northern Territory found that 55% of surveyed communities did not have access to any fresh food for extended periods (Hudson 2010).

The 2004–05 NATSIHS showed that less than half (42%) of Indigenous Australians aged 12 years and over in non-remote areas had the recommended daily intake of fruit (2 or more serves daily) and only 1 in 10 (10%) had the recommended daily intake of vegetables (5 or more serves daily).

The survey also revealed that 1 in 5 (20%) of Indigenous Australians aged 12 years and over in remote areas had no usual daily fruit intake, and 15% of Indigenous Australians in remote areas reported no usual daily vegetable intake (Figure 3.21). Overall, Indigenous Australians were twice as likely to report no usual daily fruit intake and 7 times as likely to report no daily vegetable intake as non-Indigenous Australians.



## Unhealthy body weight

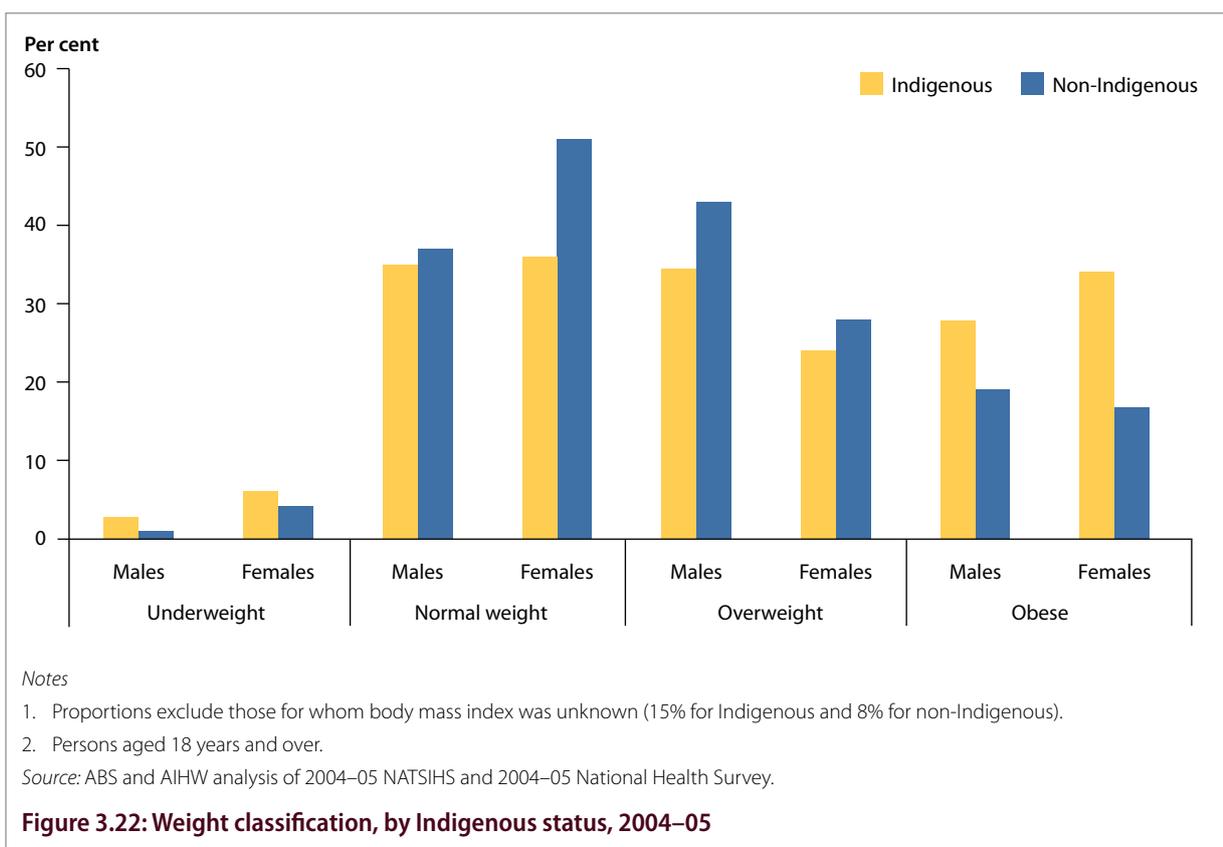
Many health problems are associated with being either underweight or overweight.

Of those aged 18 years and over, a higher proportion of Aboriginal and Torres Strait Islander men (34%) than women (24%) were overweight in 2004–05 (Figure 3.22). But Indigenous women were more likely to be obese than Indigenous men (34% compared with 28%).

Indigenous women were about twice as likely to be obese as non-Indigenous women, and Indigenous men about 1.5 times as likely as non-Indigenous men in 2004–05 (Figure 3.22).

Data from general practitioner encounters for the period 2001–2008 showed that Indigenous patients were more likely to be overweight or obese (66%) when compared with all patients (57%) (Britt & Miller 2009). The analysis also showed that 44% of Indigenous women were obese, compared with 22% of all adult patients.

Figure 3.22 also shows that a higher proportion of Indigenous adults are underweight. The Child Health Check Initiative in the Northern Territory showed that almost 1 in 10 (9%) of Indigenous children (aged 0–15 years) were underweight, and 4% of Indigenous children had stunted growth (based on mean height for age) (AIHW & DoHA 2009). Of the children aged 0–4 years, 9% showed signs of wasting (based on mean weight for height).



### How much of the disease burden is due to risky health behaviours?

The most recent study of the contribution of risk factors to the Indigenous disease burden using 2003 data showed that the joint contribution of 11 selected health determinants to the total burden (ill health, disability and premature death) was 37% (Vos et al. 2007).

- Tobacco smoking was estimated to contribute the greatest burden—12% of the total health burden.
- This was followed by overweight/obesity (11%) and physical inactivity (8.4%).
- Alcohol was responsible for 5.4% of the total burden through alcohol abuse and harmful use, homicide, violence, and suicide.
- Low fruit and vegetable consumption was responsible for 3.5% of the total burden of disease in the Indigenous population, an important risk factor for ischaemic heart disease.
- About 1.2% of the total burden was attributed to unsafe sex, primarily through cervical cancer, chlamydia and HIV/AIDS.

The health gap is the difference between the number of healthy years of life lost through disability or death and the number that would have been lost if Indigenous Australians had the same rates of disease and injury as the total Australian population. Almost half (49%) of this health gap was caused by the 11 risk factors.

### 3.5 Social and emotional wellbeing

The concept of social and emotional wellbeing used in this report is based on the Indigenous Australian perspective that may take account of broader historical dimensions.

#### Positive wellbeing

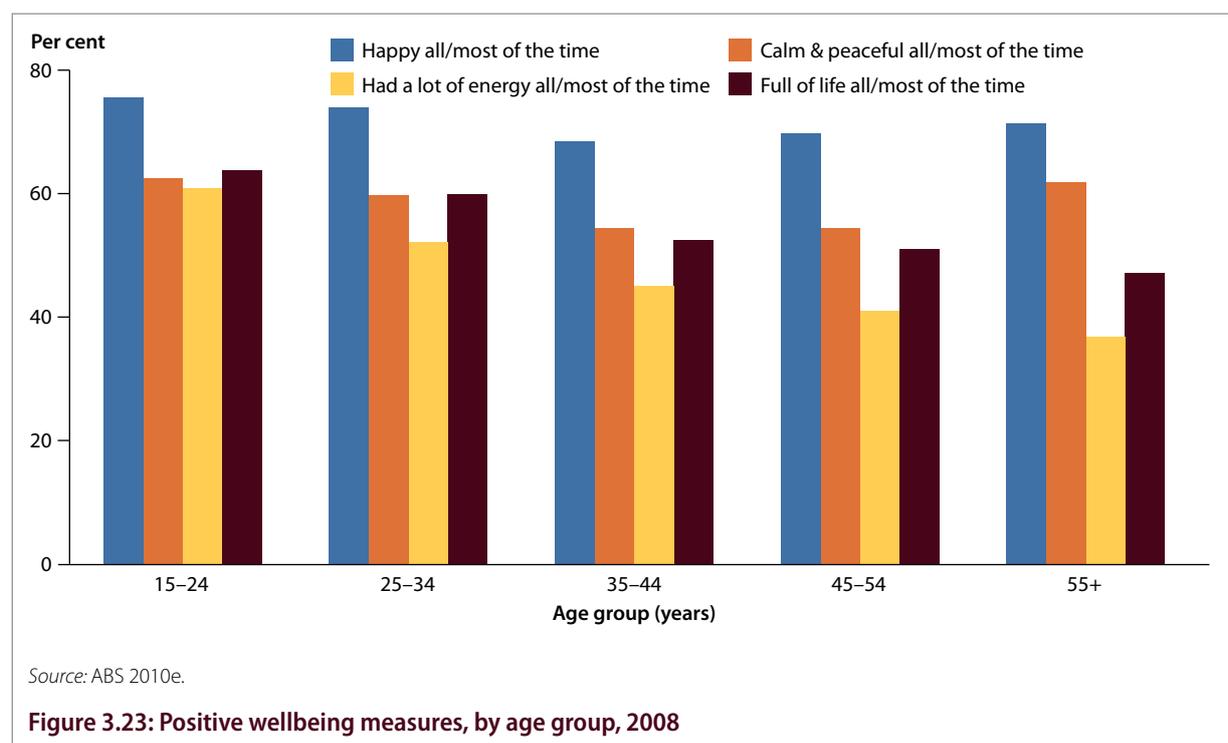
The 2008 NATSISS positive wellbeing module aimed to identify positive emotional states, such as happiness and vitality (ABS 2010e). The majority of Aboriginal and Torres Strait Islander adults (aged 15 years and over) reported feeling happy (72%), calm and peaceful (59%) and full of life (57%) all or most of the time in the 4 weeks before the interview, and half (50%) said they had a lot of energy all or most of the time.

- Rates of positive wellbeing were higher in remote areas than non-remote areas.
- Indigenous men were more likely than women to report feeling calm or peaceful (63% compared with 56%), full of life (60% compared with 54%) and having a lot of energy (56% compared with 44%) all or most of the time.
- Overall, positive wellbeing was more common among young people, particularly in terms of feeling full of life and having a lot of energy (Figure 3.23).

Rates of happiness were higher among Indigenous adults who were employed (77% compared with 68% unemployed), and among those who had completed school to Year 12 (74% compared with 68% of those who had left school at Year 9 or below).

Indigenous adults who reported being happy all/most of the time were less likely to be a current daily smoker (42% compared with 52%) and to have used illicit substances in the previous 12 months (19% compared with 26%).

Rates of positive wellbeing were similar for both Torres Strait Islander adults and all Indigenous adults. Rates for all four indicators were higher among Torres Strait Islander adults living in the Torres Strait Indigenous region than for those living elsewhere.



## Psychological distress

The 2008 NATSISS collected information on psychological distress using five questions from the Kessler Psychological Distress Scale. A high score on this scale indicates that the person may be having feelings of anxiety or depression regularly, whereas a low score indicates that the person is having these feelings less often or not at all (ABS 2010e).

Nearly one-third (31%) of Indigenous adults (aged 15 years and over) had high/very high levels of psychological distress—more than twice the rate for non-Indigenous Australians. Rates of high/very high levels of psychological distress were higher among women (34%) than men (27%).

Psychological distress was also associated with poorer health outcomes. Those with high/very high levels of distress were more likely to:

- report fair/poor health (37% compared with 15% of those with lower levels of distress)
- be current daily smokers (54% compared with 41%)
- drink at chronic risky/high-risk levels (21% compared with 16%)
- have used illicit substances in the previous 12 months (27% compared with 18%)
- have been a victim of physical or threatened violence (35% compared with 18%).

People with disability or long-term health conditions were more than twice as likely to report high/very high levels of distress (43% compared with 19% of people without disability or long-term health conditions).

## Life stressors

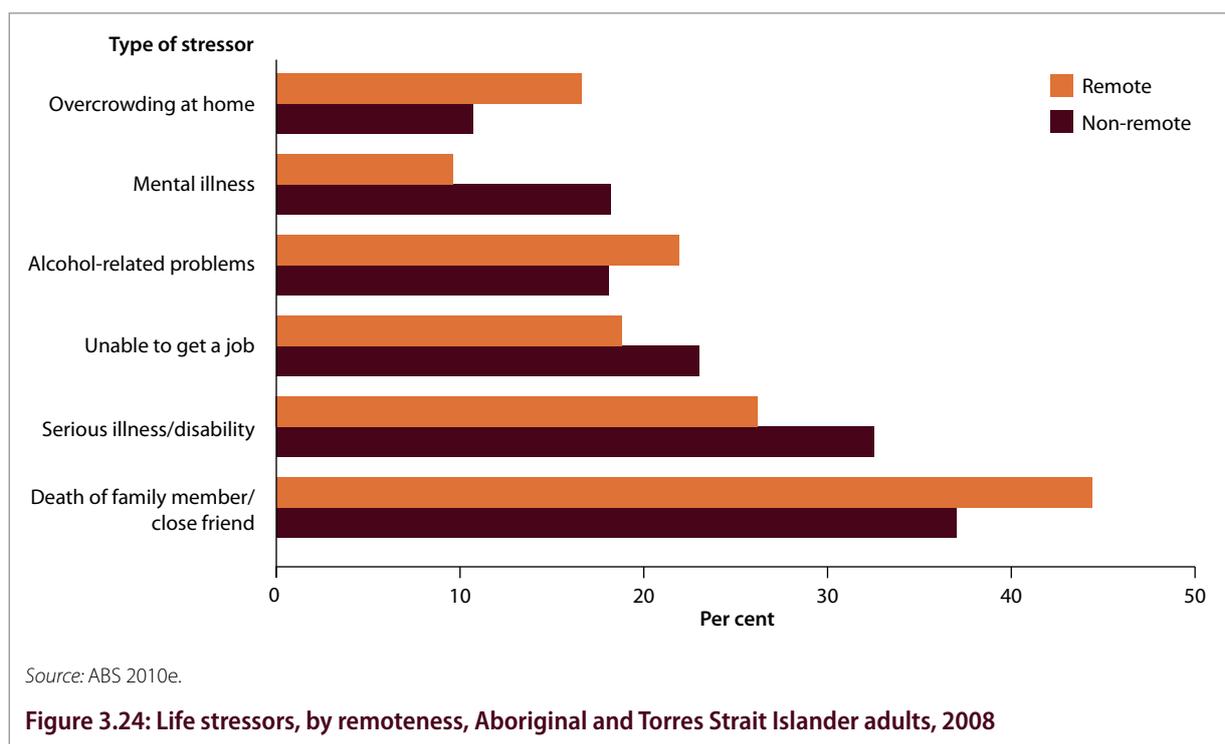
Stressful life events, such as a death in the family or a serious illness, can have a significant effect on social and emotional wellbeing. These stressors may affect an individual either through direct experience or indirectly through the problems of a close family member or friend (ABS 2010e).

In 2008, 77% of Indigenous adults (aged 15 years or over) reported that they or their close friends or family had experienced at least one life stressor in the previous 12 months. The most common types of stressors reported were the death of a family member or close friend (39%), serious illness or disability (31%) and inability to get a job (22%).

People in remote areas reported higher rates for death of a family member/close friend, alcohol-related problems and overcrowding, while people in non-remote areas were more likely to report serious illness/disability, mental illness and inability to get a job (Figure 3.24).

In 2008, about two-thirds (65%) of Indigenous children (aged 4–14 years) were reported to have experienced at least one stressor in the previous 12 months. The most common types of stressors reported were death of close family member/friend (22%), problems keeping up with school work (20%) and being scared/upset by an argument or someone's behaviour (19%).

- Boys were more likely than girls to report having problems keeping up with school work (24% compared with 16%).
- Stressors were more common among children living in non-remote areas than remote areas (66% compared with 60%).
- Children who experienced stressors reported lower rates of excellent/very good health (73% compared with 83%).



## Discrimination

Evidence suggests that discrimination and racism are associated with various adverse health conditions among Aboriginal and Torres Strait Islander people (AIHW 2009d). In this context, the term ‘discrimination’ refers to self-reported situations/places in which the person received unfair treatment as a result of being Indigenous (ABS 2010e).

In 2008, 27% of Indigenous adults (aged 15 years and over) reported having experienced discrimination in the previous 12 months. The most common situations or places where discrimination was experienced included the general public (11%), police/security personnel/courts of law (11%), and at work or when applying for work (8%).

Indigenous Australians who had been removed from their natural families experienced higher rates of discrimination (45% compared with 26%). Discrimination was also more common among those who were unemployed (41% compared with 25% of those employed), or who had a disability or long-term health condition (32% compared with 22% without disability).

Indigenous Australians who had experienced discrimination were more likely to report high/very high levels of psychological distress (44% compared with 26%), and to be in fair/poor health (28% compared with 20%). They were also more likely to engage in binge drinking (42% compared with 35%), and to have recently used illicit substances (28% compared with 17%).

Indigenous Australians who had experienced discrimination were less likely to trust the police, their local school, their doctor and/or hospital and other people in general.



# Chapter 4

## **Health and functioning**



## 4 Health and functioning

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.

In addition to community functioning, this chapter provides an overview of Indigenous disability and the main health conditions that face Indigenous Australians.

### 4.1 Community functioning

The concept of community functioning tries to capture social, emotional and cultural wellbeing of the whole community. The measure seeks to add value to health analyses by helping to frame more traditional, single-issue measures in a quality-of-life concept that is defined by Aboriginal and Torres Strait Islander people (AHMAC forthcoming). A measure of community functioning was developed through consultations with Aboriginal and Torres Strait Islander people. The measure includes a number of important elements or themes: connectedness to country, land and history; culture and identity; resilience; leadership; having a role, structure and routine; feeling safe; vitality (AHMAC forthcoming). This section includes selected measures of some of these aspects.

#### Speaking an Aboriginal or Torres Strait Islander language

Aboriginal and Torres Strait Islander people are a linguistically and culturally diverse population. The 2004 National Indigenous Languages Survey found that, of more than 250 known Australian Indigenous languages, about 145 were still spoken, but the vast majority of these languages were either severely or critically endangered. About 20 languages were considered safe or strong because they were spoken by persons of all age groups (AIATSIS 2005).

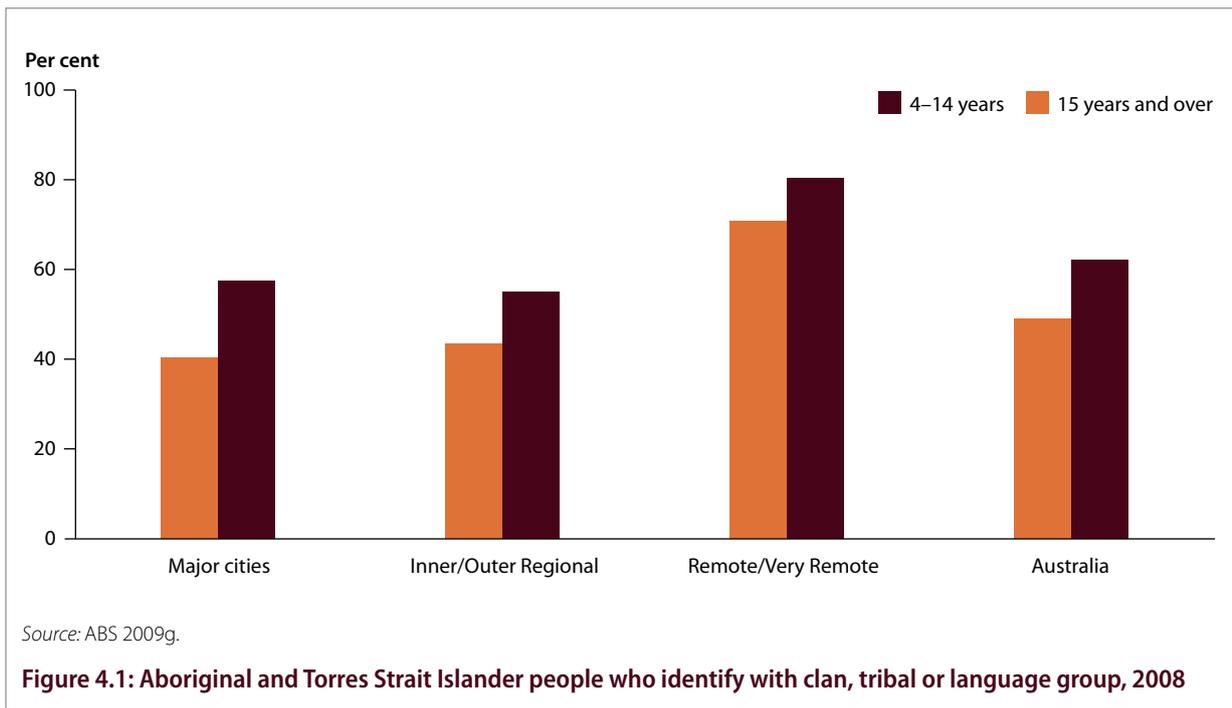
According to the 2008 NATSISS, about 1 in 9 (11%) Indigenous Australians aged 15 years and over spoke an Aboriginal or Torres Strait Islander language as their main language at home (ABS 2009g). Most (90%) of these speakers lived in remote areas where 42% of people spoke an Indigenous language (as their main language) at home. In non-remote areas, the proportion was less than 2%.

A larger proportion of the population spoke at least some words. In 2008, 2 out of 5 (40%) Indigenous Australians aged 15 years and over spoke, or spoke some words of, an Indigenous language (ABS 2009g). Again, the numbers were highest for those living in remote areas (73%) compared with those living in *Major cities* (32%) and regional areas (28%).

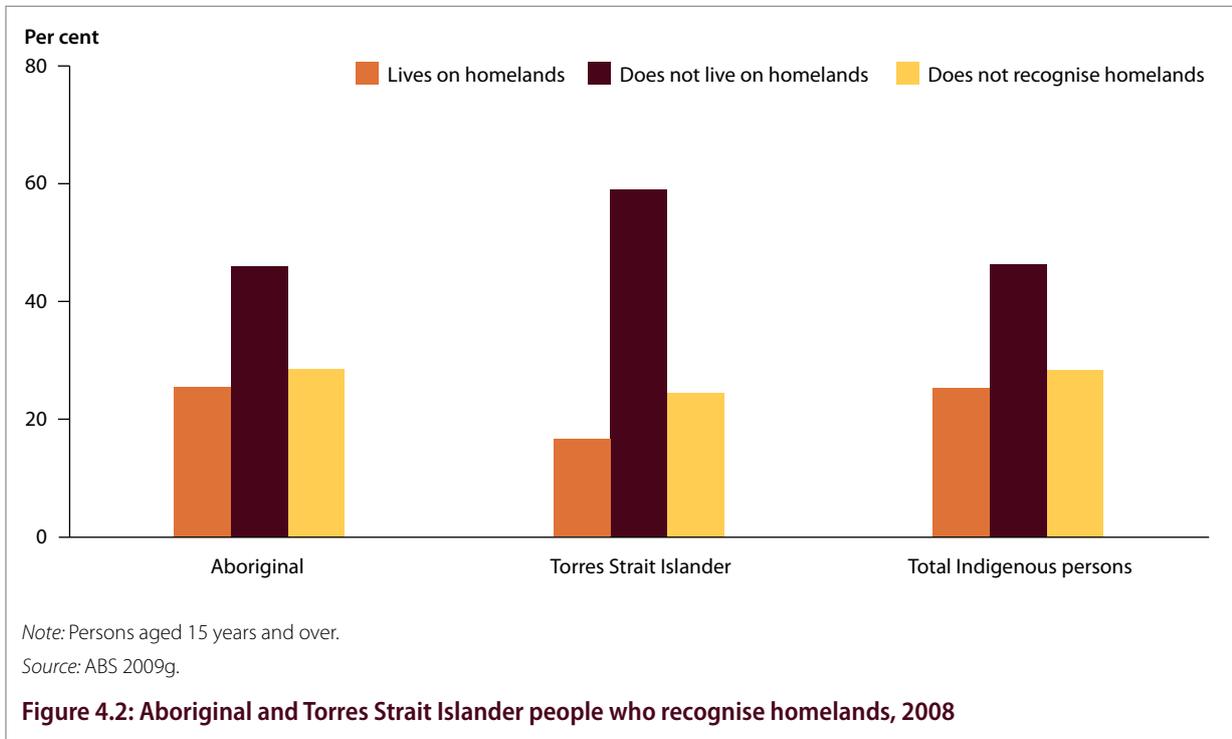
#### Cultural identity

Being involved in Indigenous cultural events, ceremonies or organisations also provides an indication of cultural attachment. In 2008, 73% of Aboriginal and Torres Strait Islander children aged 4–14 years and 63% of those aged 15 years and over were involved in cultural events, ceremonies or organisations in the 12 months before the NATSISS interview (ABS 2009g). The highest participation rates were for people living in remote areas.

Almost two-thirds (62%) of Indigenous Australians aged 15 years and over identified with a clan, tribal or language group (Figure 4.1), an increase from 54% in 2002. Rates of identification were higher for people living in remote areas. Indigenous children aged 4–14 years were less likely to identify with a clan, tribal or language group, with only 49% identifying as such.



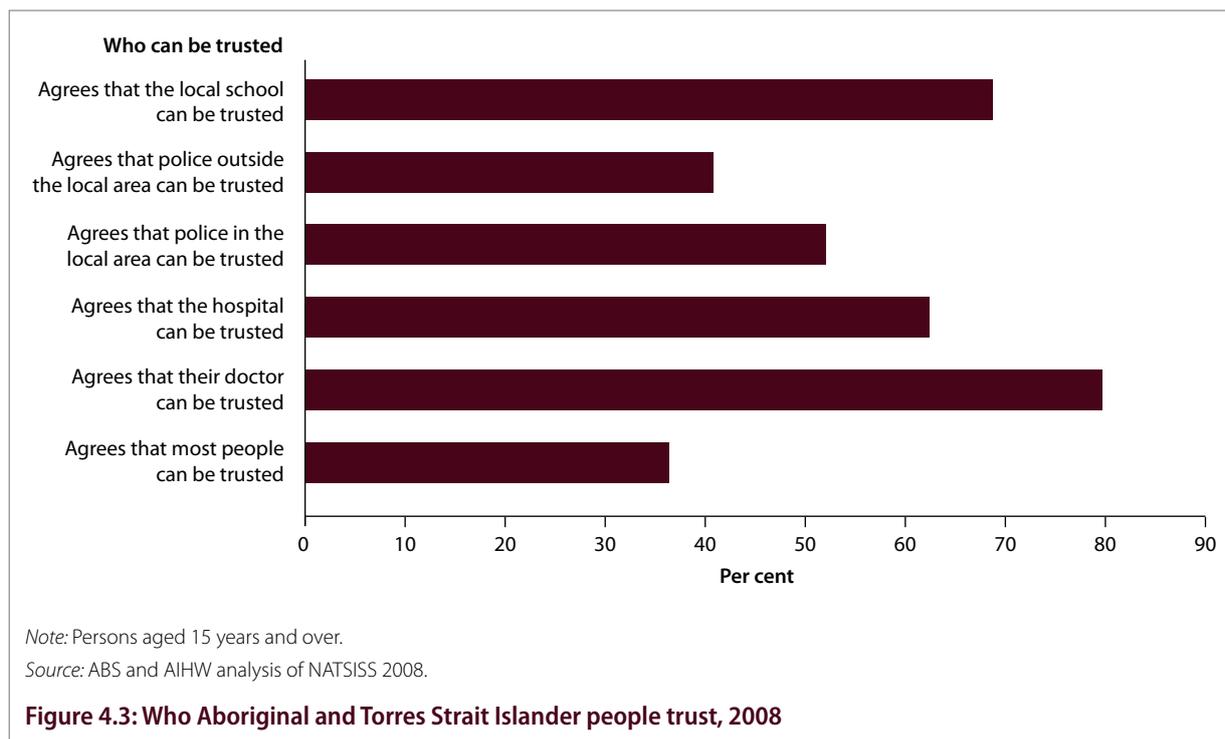
In 2008, a quarter (25%) of all Indigenous Australians lived on homelands. An additional 46% recognised homelands but did not live on them (Figure 4.2). Torres Strait Islander people were less likely to live on homelands (17%) but more likely overall to live on or recognise homelands than Aboriginal people (76% compared with 72%).



## Trust

Trust involves the ability to cope well with differences, and to optimise what one has through engaging in decision-making, the use of coping strategies, and the ability to control choices and options (AHMAC forthcoming). The 2008 NATSISS found that:

- 80% of Indigenous Australians agreed that their doctor could be trusted
- 69% agreed that the local school could be trusted
- 52% agreed that police in local area could be trusted (Figure 4.3).



## Leadership

Leadership refers to strong vision and direction from elders in family and community (both male and female), and strong role models who have time to listen and advise (AHMAC forthcoming). Very few data items from 2008 NATSISS measured aspects of this theme, and the following information was only available for children: 42% of children aged 3–14 years had spent time with an Indigenous leader or elder in the previous week. Nearly a quarter (22%) of Aboriginal and Torres Strait Islander people considered that encouragement from elders and council would help a child in secondary school complete Year 12.

## Having a role, structure and routine

This theme involves being valued and acknowledged within family, community and society. It is about knowing boundaries and culturally acceptable behaviours that support a person's role in the community, and that support participating in paid and unpaid roles using capabilities and skills from non-formal education (AHMAC forthcoming).

Some measures from the 2008 NATSISS include:

- in the 12 months before the survey, 78% of Aboriginal and Torres Strait Islander people had lived in one dwelling—suggesting stability in housing and routine
- informal learning activities were done with most children aged 0–14 years (94%).

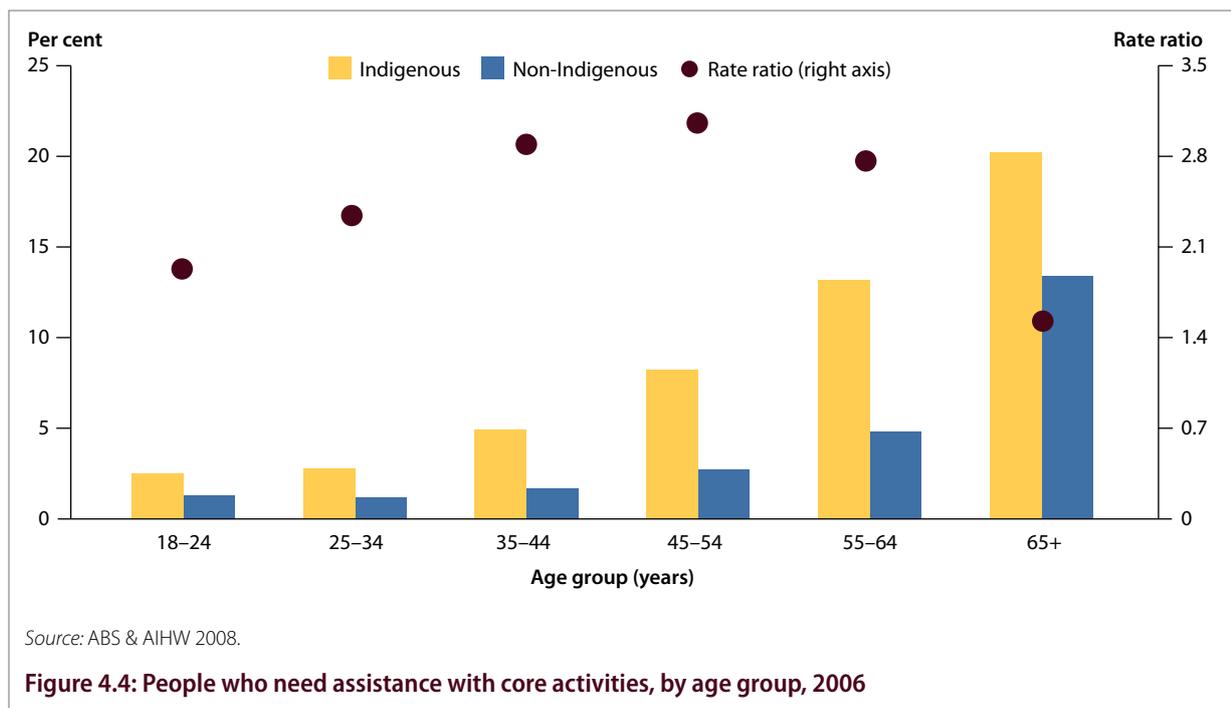
## 4.2 Disability

A disability may be an impairment of structure or function, or a restriction in participation of specific activities. This section focuses on Aboriginal and Torres Strait Islander people with severe or profound core activity limitation, that is, those who need help with at least one core activity (self-care, mobility or communication) some or all of the time, toward whom specialist disability services are generally aimed.

Indigenous Australians are often subject to many predisposing factors in regards to disability, including low birthweight, and higher rates of chronic and infectious diseases, accidents, violence, mental health problems and substance abuse. The 2008 NATSISS estimated that 8% of those aged 15 years or over had a profound or severe core activity limitation (ABS 2009g).

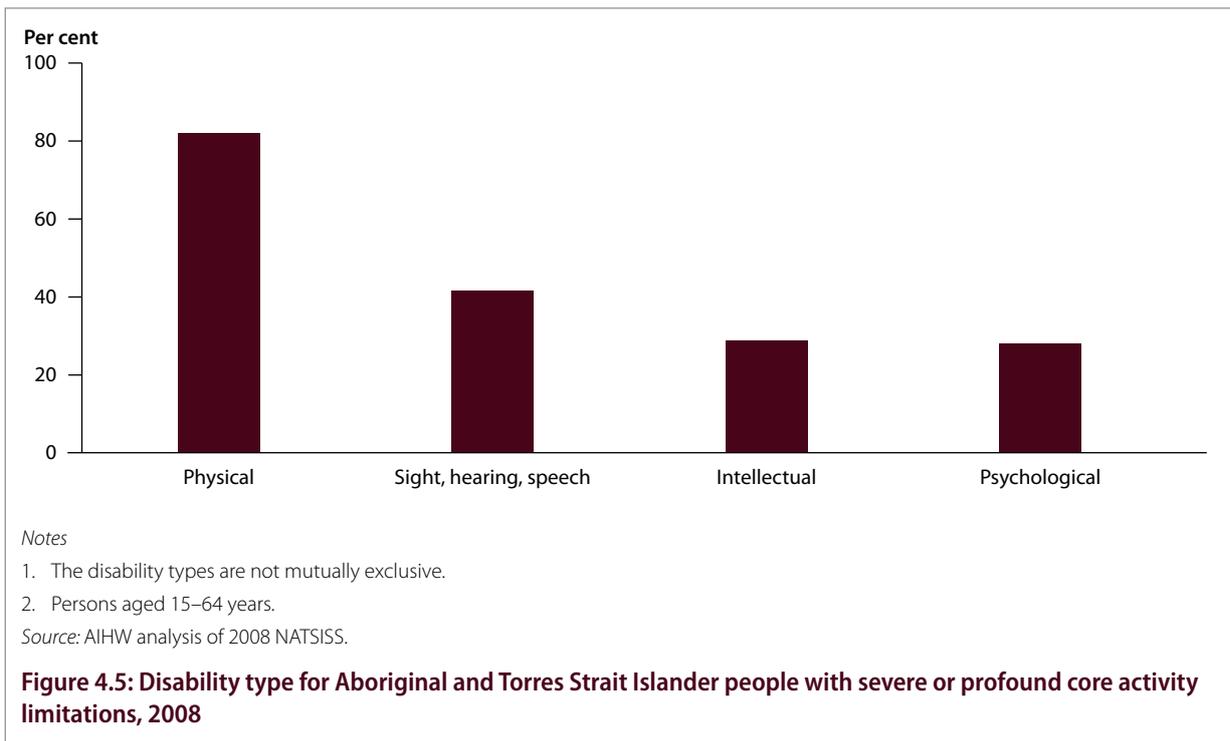
The proportion of people with disability or long-term health condition in 2008 was similar for males (48%) and females (51%), and for those living in remote and non-remote areas (49% compared with 50%) (ABS 2011a).

The need for assistance with core activities increases with age for both Indigenous and non-Indigenous Australians but Indigenous Australians face increasing rates of disability at younger ages (Figure 4.4). The need for assistance among Indigenous Australians overall was more than twice as high as that among non-Indigenous Australians (AIHW 2009b).



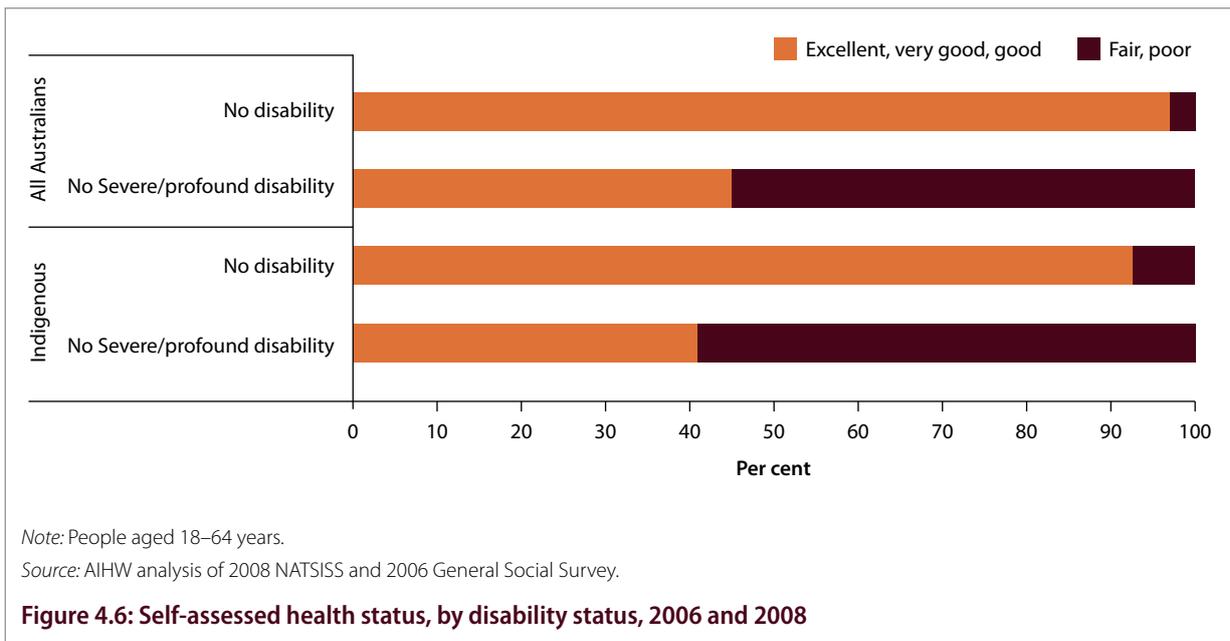
### Disability type

Physical disability is the most common disability type experienced by Aboriginal and Torres Strait Islander people. Of those aged 15–64 years with severe or profound activity limitation, 82% had a physical disability (Figure 4.5). Sight, hearing and speech related disabilities were the next most common type, at 42%.



### Disability and health status

While self-assessed health status is a subjective measure, perceptions of health are important to mental and physical wellbeing. In 2008 Indigenous Australians and all Australians with severe or profound disability aged 18–64 years had similar perceptions of health (Figure 4.6). More than half (59% of Indigenous Australians and 55% of all Australians with severe or profound disability) assessed their health as poor or fair, compared with only 8% and 3% of Indigenous Australians and all Australians without disability, respectively.



More details on Indigenous disability can be found in *Aboriginal and Torres Strait Islander people with disability* (AIHW 2011c), available from the AIHW Indigenous observatory.

### 4.3 Health conditions

A study of Indigenous burden of disease and injury by Vos and others (2007) showed that non-communicable diseases and injuries explained 70% and 15%, respectively, of the health gap between Indigenous and non-Indigenous Australians. The analysis showed that injury and diabetes were much larger contributors to the Indigenous burden of disease than to that of the whole Australian population. On the other hand, cancer contributed a smaller proportion of the Indigenous burden.

Another important feature of the Indigenous disease pattern is the continued high occurrence of certain diseases (and resulting conditions) that are now virtually unknown in the non-Indigenous population. Notable among these are trachoma, otitis media and rheumatic heart disease.

The need to use a variety of data sources to generate profiles of various diseases is illustrated by their ranking on the different bases of prevalence, health service use, cause of death and disease burden in the Indigenous population (Table 4.1).

**Table 4.1: Ranking of major diseases, conditions and injuries that cause ill health (and mortality), among Aboriginal and Torres Strait Islander people, various measures and years**

Self-reported prevalence 2004–05		GP encounters 2005–06 to 2009–10		Hospitalisations 2007–09 <sup>(a)</sup>		Cause of death data 2004–08 <sup>(b)</sup>		Burden of disease and injury 2003	
Condition	Per cent	Condition	Rate	Condition	Per cent	Condition	Per cent	Condition	Per cent
Eye/sight problems	30	Respiratory	21	Injury and poisoning	16	Cardiovascular disease	27	Cardiovascular disease	18
Respiratory	27	Psychological problems	16	Respiratory	13	Cancer	18	Mental disorders	16
Musculo-skeletal	22	Skin problems	16	Digestive	11	Injury/other external	15	Injury	13
Mental/behavioural problems	14	Diabetes/other metabolic	15	Mental disorders	9	Respiratory	8	Chronic respiratory	9
Ear/hearing problems	12	Musculoskeletal	14	Cardiovascular diseases	7	Diabetes/other metabolic	8	Diabetes	9
Cardiovascular problems	12	Cardiovascular	13	Genitourinary disease	5	Digestive	6	Cancer	8

(a) Proportions exclude hospitalisations for care involving dialysis. Top conditions listed exclude: pregnancy, childbirth and the puerperium; and symptoms, signs and abnormal clinical and laboratory findings.

(b) Data are for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined.

Sources: 2004–05 NATSIHS; BEACH survey of general practice, AGPSCC; AIHW National Hospital Morbidity Database; AIHW National Mortality Database; Vos et al. 2007.

#### Cardiovascular diseases

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.

An estimated 12% of Aboriginal and Torres Strait Islander people reported suffering from heart disease and/or circulatory conditions, long-term, in 2004–05. The prevalence of these conditions in the Indigenous population was ranked fifth (ABS 2006). But cardiovascular diseases account for 17% of the Indigenous disease burden (Vos et al. 2007). The burden was comprised predominantly of years of life lost, which contributed 24% to the fatal burden, compared with 9.5% of the non-fatal burden (or years

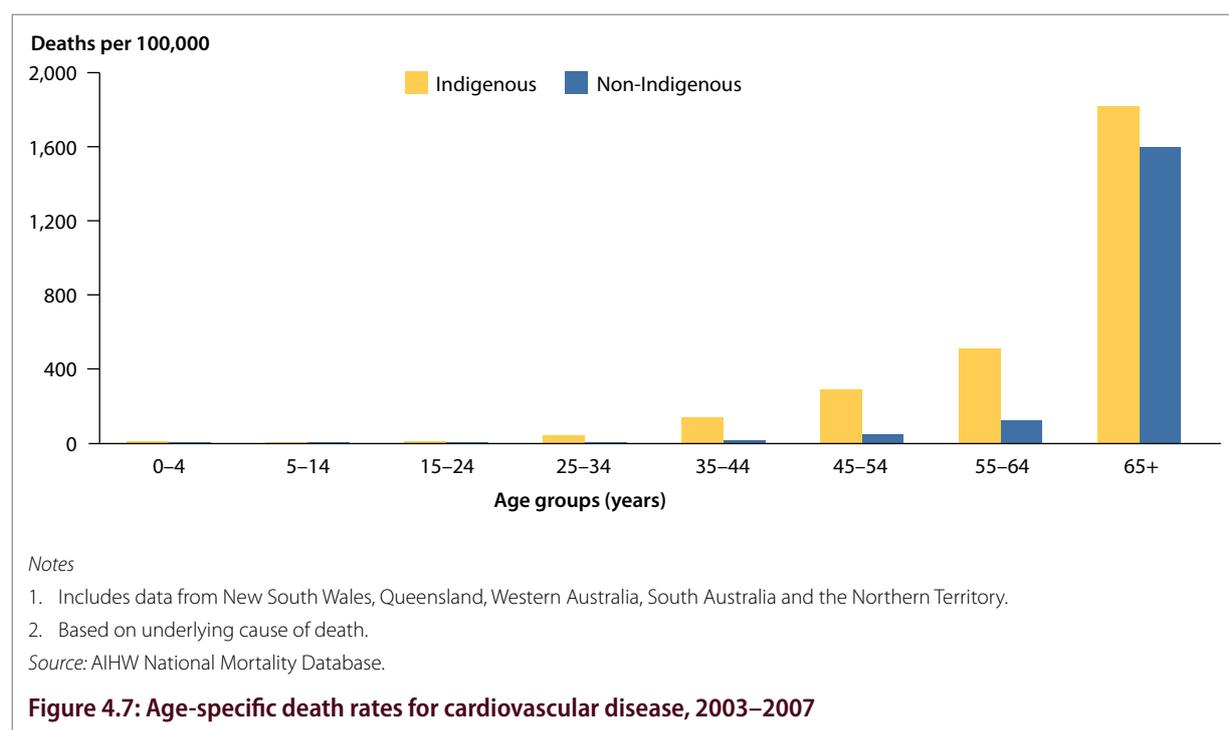
lived with disability). This difference is due to the sudden onset and high fatality rates of cardiovascular disease, as well as the potential for survivors to recover with relatively low levels of associated disability. The figures were similar to that for all Australians, with CVD accounting for 18% of the disease burden and 29% of the fatal burden (Begg et al. 2007).

Between 2003 and 2008, Indigenous Australians visiting a GP had lower management rates of cardiovascular disease than non-Indigenous patients, at 13 and 17 per 100 encounters, respectively (Fahrudin & Britt 2009). This may be because Indigenous Australians are:

- not accessing general practitioner services at the same rate as other Australians
- accessing Indigenous-specific health services instead
- under-identified in the data.

Hospitalisations for cardiovascular diseases accounted for 3% of all hospitalisations for Indigenous Australians in 2007–09. After adjusting for age differences, Indigenous Australians were hospitalised for cardiovascular diseases at 1.7 times the rate of other Australians. The difference was most pronounced for those aged 35–54 years.

Between 2003 and 2007, cardiovascular diseases accounted for 2,865 Indigenous deaths, amounting to 27% of all Indigenous deaths, or 127 per 100,000 population. A significant proportion of these deaths (37%) occurred in those aged 45 to 64 years—a much higher figure than for non-Indigenous Australians (9%)—leading to extensive loss of potential years of life (Figure 4.7). For both Indigenous and other Australians, the mortality rates were higher for older people.



### Rheumatic heart disease

Rheumatic heart disease is caused by long-term damage done to the heart muscle or heart valves as a result of acute rheumatic fever. Acute rheumatic fever is a delayed complication of a throat or possibly skin infection caused by Group A *Streptococcus* bacterium. Both acute rheumatic fever and rheumatic heart disease are important and preventable causes of ill-health and death. They are typically associated with overcrowding, poor sanitary conditions and other aspects of socioeconomic disadvantage. Limited access to medical care for adequate diagnosis and/or appropriate treatment of these diseases contributes to their occurrence and recurrence in some population subgroups (Couzos & Carapetis 2003).

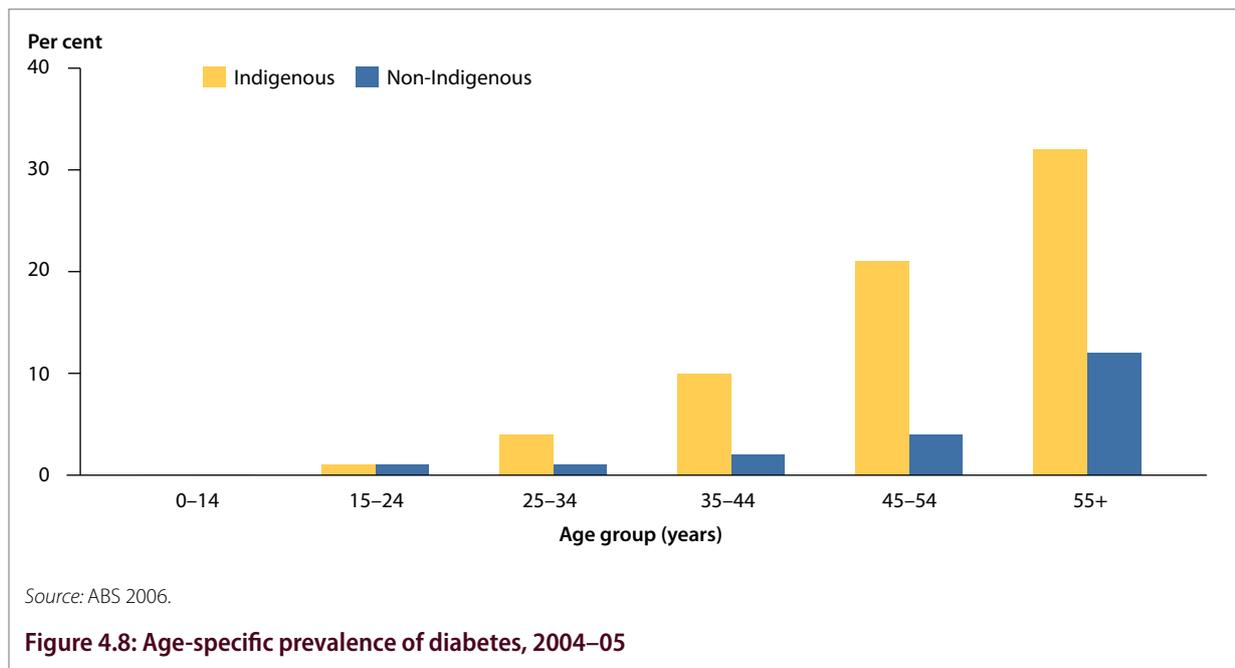


A register of persons with known or suspected rheumatic fever and rheumatic heart disease has operated in the Top End of the Northern Territory since 1997 and in Central Australia since 2002. Between 2005 and 2008, there were 211 new or recurrent cases of acute rheumatic fever in the Northern Territory, 99% of which were for Aboriginal and/or Torres Strait Islander people. Over this period, more than half (58%) of Indigenous Australians who suffered acute rheumatic fever were aged 5–14 years, with the disease creating a foundation for continuing health problems throughout their lives.

## Diabetes

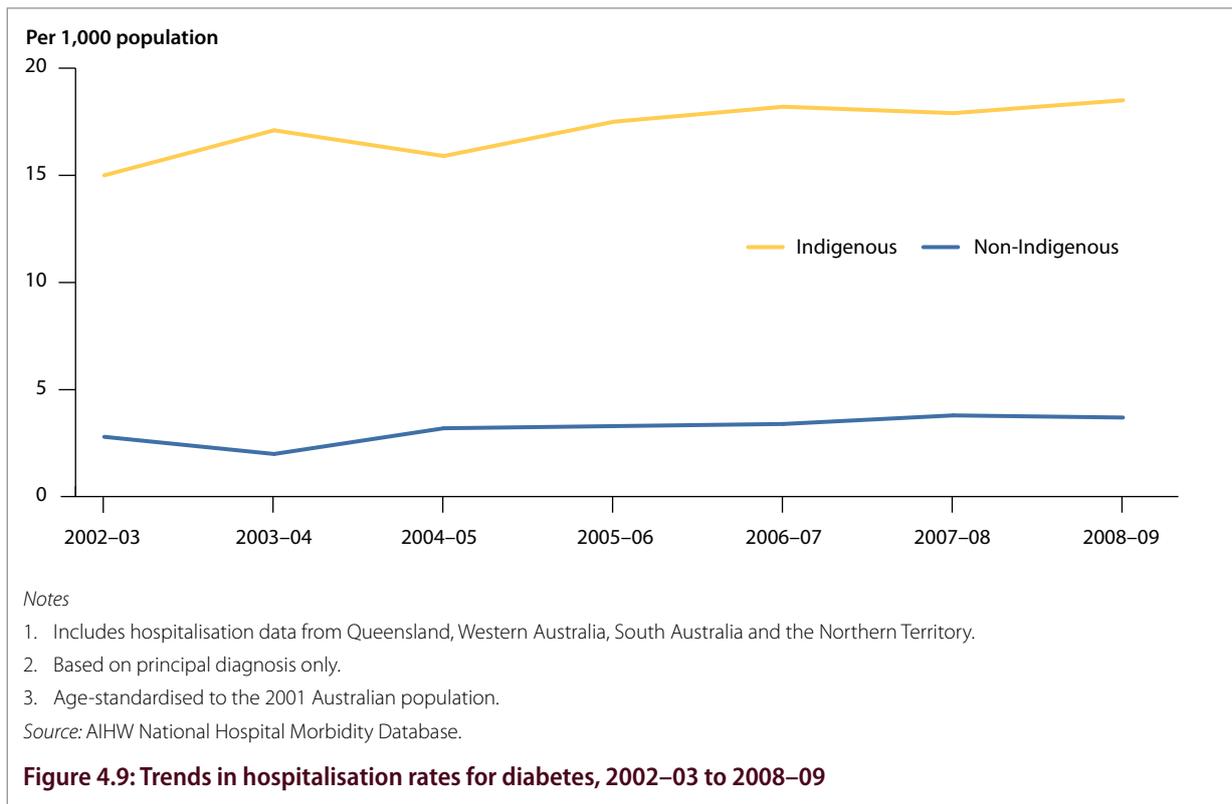
Diabetes is a long-term (chronic) condition in which blood glucose levels become too high because the body produces little or no insulin, or cannot use insulin properly. There are several types of diabetes, but the most common form is Type 2 diabetes, which is generally associated with insufficient physical activity, poor diet and obesity.

An estimated 6% of Aboriginal and Torres Strait Islander people reported diabetes as a long-term health condition in 2004–05 (ABS 2006). For both Indigenous and non-Indigenous Australians, the prevalence of diabetes increased with age (Figure 4.8). However, onset is earlier for Indigenous Australians, resulting in an overall age-standardised rate of 12% for Indigenous Australians with diabetes compared with 4% for non-Indigenous Australians.



Between 2005–06 and 2009–10, diabetes problems were managed at a rate of 8 per 100 GP encounters for Indigenous Australians—more than double the non-Indigenous rate.

About 2% of hospitalisations for Indigenous Australians were for diabetes in 2007–09. Between 2002–03 and 2008–09, hospitalisation rates for diabetes for Indigenous Australians increased by 23% in Queensland, Western Australia, South Australia and the Northern Territory combined (Figure 4.9). The rate for other Australians increased by 33% for the same period, although from a smaller base.

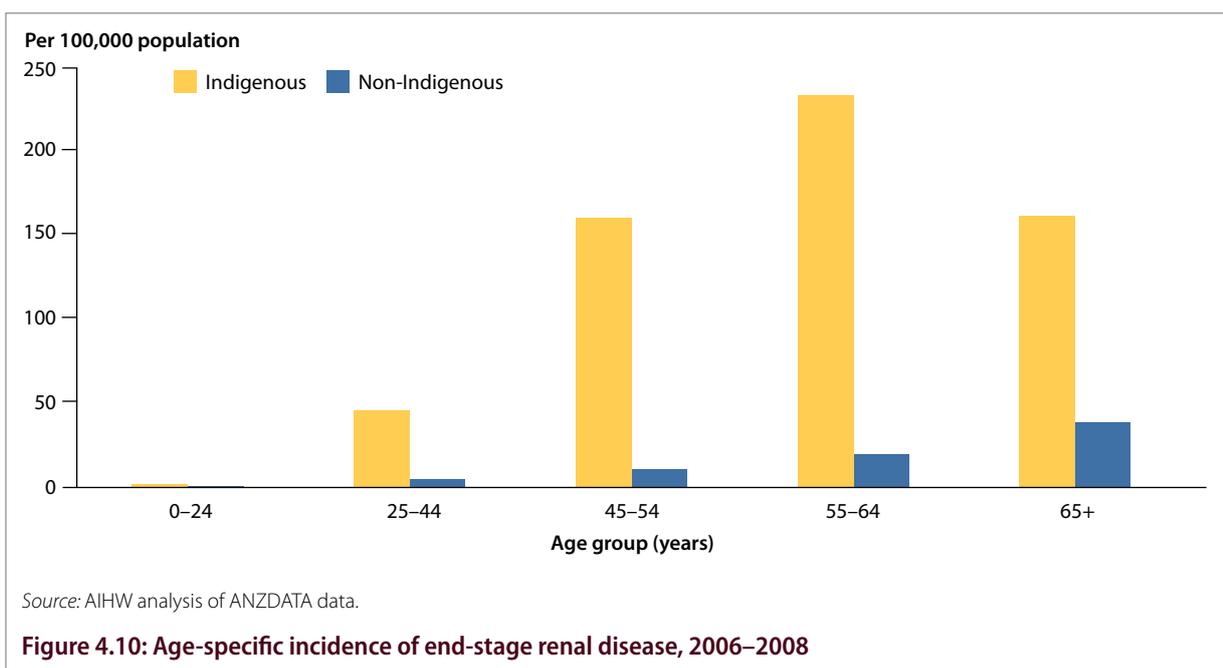


Diabetes causes more deaths in the Indigenous population than in the non-Indigenous population. In the 2004–2008 period, diabetes was responsible for 7.2% of total Indigenous deaths compared with 2.5% of non-Indigenous deaths. Comparing age-standardised mortality rates, the Indigenous rate of deaths caused by diabetes is nearly 7 times the rate for other Australians.

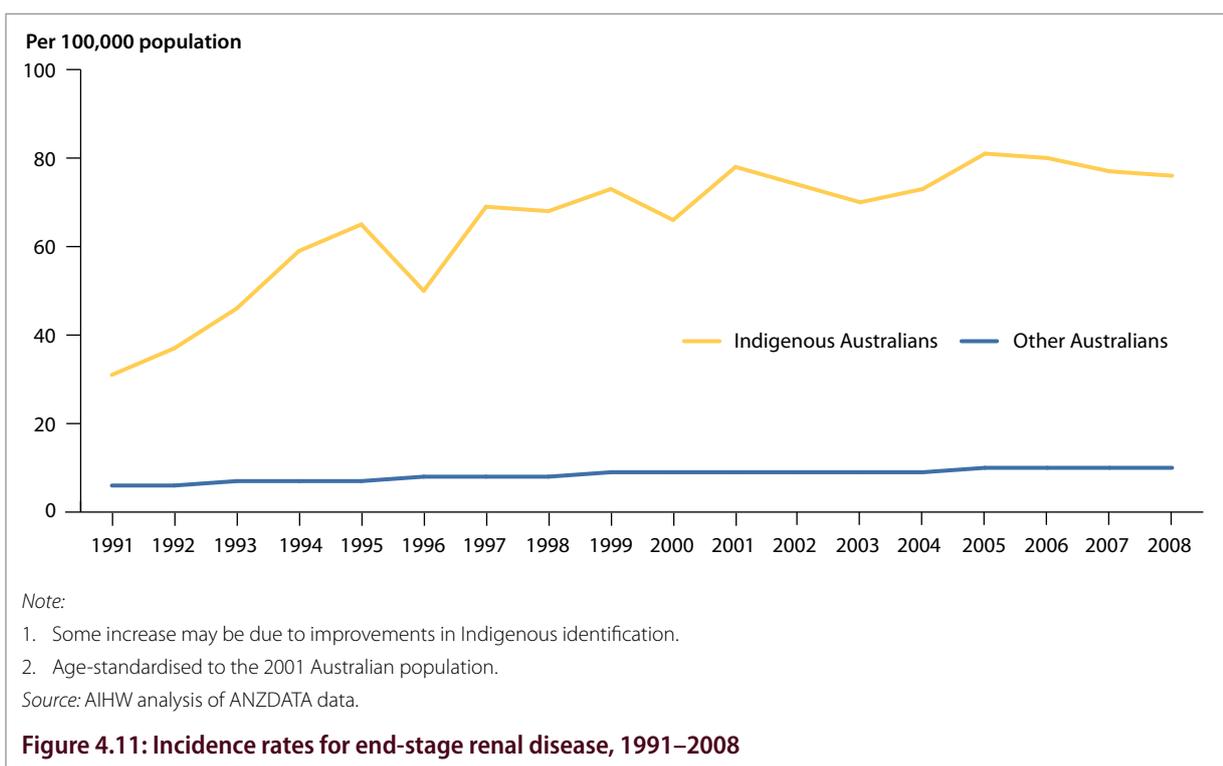
## Kidney disease

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.

The Australia and New Zealand Dialysis and Transplant Registry (ANZDATA) holds information on Aboriginal and Torres Strait Islander people with end-stage renal disease. In 2006–2008, 7,300 new patients were registered with ANZDATA, 700 (10%) of which identified as Aboriginal or Torres Strait Islander. Indigenous Australians starting end-stage renal disease treatment were much younger, on average, than other Australians. This is in part because many Indigenous Australians have chronic conditions such as diabetes and hypertension at younger ages than other Australians, which, if left untreated, often lead to an earlier onset of end-stage renal disease (AHMAC 2006). Almost two-thirds (63%) of Indigenous Australians registered with ANZDATA were aged less than 55 years, compared with less than one-third (30%) of other Australians registered (Figure 4.10).



The age-standardised incidence rate for end-stage renal disease for Indigenous Australians more than doubled between 1991 and 2008, from 31 to 76 per 100,000 population (Figure 4.11). In contrast, rates for other Australians have risen only slightly from 6 to 10 per 100,000 population over the same period. Some of this increase may be due to improvements in the identification of Indigenous patients. A lower rate of transplantation also contributes to the higher rate of end-stage renal disease prevalence among Indigenous Australians (McDonald et al.2009). A study by Cass and others (2007) concluded that transplantations were more likely to be recommended for patients who were young, of normal weight and described as compliant. They were less likely to be recommended for smokers, or for people with diabetes or heart disease. The study also found that geographical location was a significant determinant.



In the 2007–09 period, there were about 243,100 hospitalisations of Indigenous Australians for chronic kidney disease and its resulting conditions, accounting for 44% of Indigenous hospitalisations. Of all hospitalisations for chronic kidney disease and its resulting conditions, almost all (98%) were for care involving dialysis. It should be noted that the rates of hospitalisation for dialysis reflect individuals accessing services many times—an individual reliant on treatment may undergo dialysis 2 to 3 times each week.

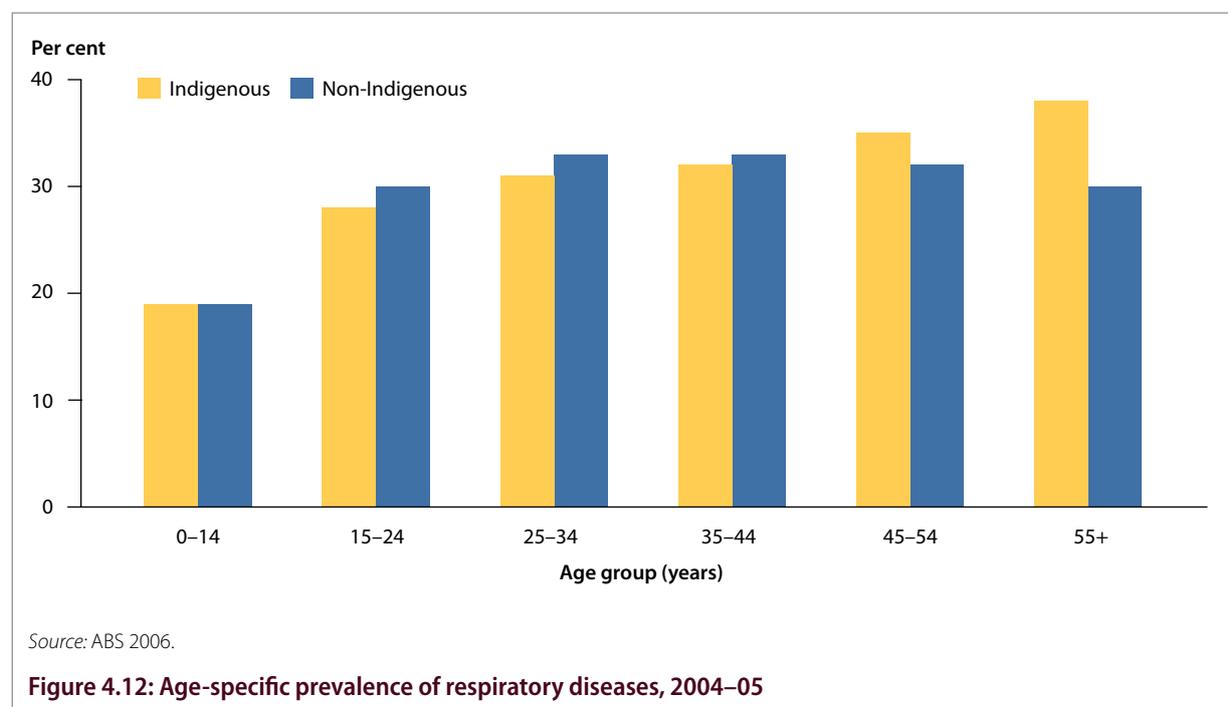
There were about 8 times as many hospitalisations for chronic kidney disease of Indigenous men and 15 times as many hospitalisations of Indigenous women as hospitalisations of other Australian men and women, respectively.

Chronic kidney disease was responsible for 2.5% of all Indigenous deaths between 2004 and 2008. The age-standardised death rate for Indigenous Australians from chronic kidney disease was more than 3 times as high as the rate for non-Indigenous Australians.

### Respiratory diseases

Respiratory diseases are leading causes of illness, disability and mortality around the world. Common among them are asthma, chronic obstructive pulmonary disease (comprising chronic bronchitis and emphysema), 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.

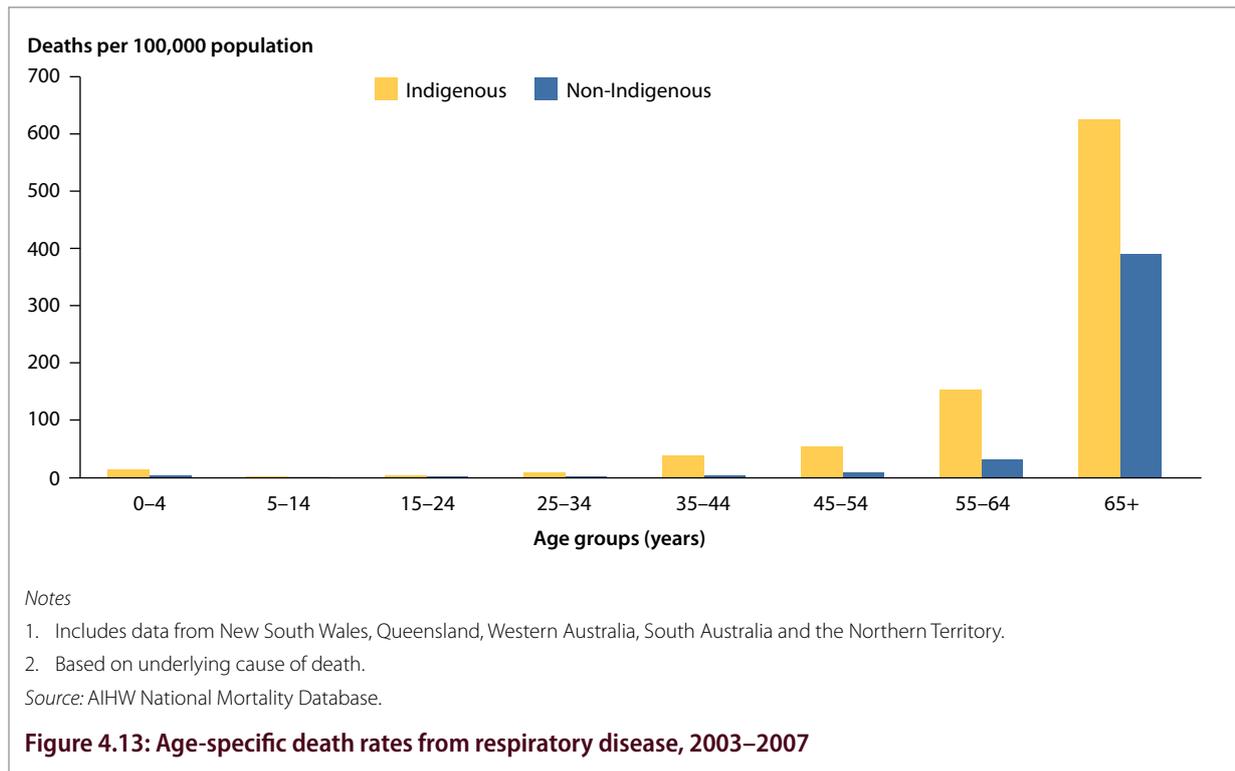
More than one-quarter (27%) of Aboriginal and Torres Strait Islander people reported some form of respiratory disease in the 2004–05 NATSIHS. The proportion ranged from 19% for those aged 0–14 years to 38% for those aged 55 years and over (Figure 4.12). In all age groups the proportions were similar for Indigenous and non-Indigenous Australians, except for those aged 55 years and over, where 38% of Indigenous Australians and 30% of non-Indigenous Australians reported respiratory disease.



Between 2005–06 and 2009–10, Respiratory diseases were the most often managed problems at GP encounters with Aboriginal and Torres Strait Islander patients (21 per 100 encounters). A 2009 report (Britt & Miller) also showed that both acute bronchitis and asthma were managed significantly more often at encounters with Indigenous Australians.

There were about 33,600 hospitalisations of Indigenous Australians with a principal diagnosis of respiratory disease in 2007–09, representing about 6% of all Indigenous hospitalisations. The hospitalisation rates for respiratory diseases among Indigenous children aged 0–4 years were almost twice the rate for other Australian children. Indigenous adults (aged 25 years and over) were hospitalised for respiratory disease at 2 to 5 times the rates of other Australians.

Respiratory diseases were responsible for 7.8% of all Indigenous deaths between 2004 and 2008. Death rates for respiratory disease were highest for Indigenous Australians aged 65 years and over (Figure 4.13).



## Cancer

Cancer includes various diseases in which abnormal cells proliferate and spread out of control after being affected by a carcinogen or after developing a random genetic mutation. These cells form a mass which is called a tumour or neoplasm.

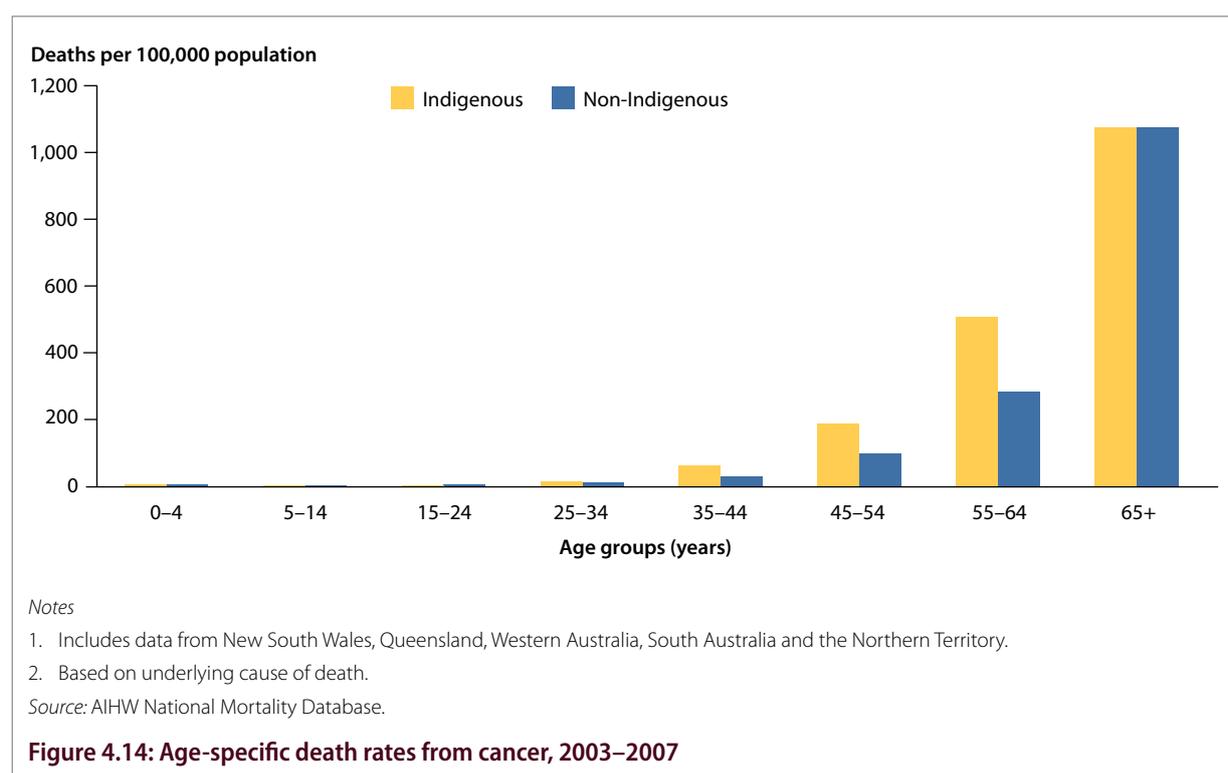
An average of 458 Aboriginal and Torres Strait Islander people were diagnosed with cancer each year (excluding skin cancers) between 2003 and 2007, representing 1% of all cancer cases diagnosed (AIHW & AACR 2010). Of the nine selected cancers, lung cancer (average of 71 cases per year) was the most commonly diagnosed cancer among Indigenous Australians, followed by breast cancer in women (49 cases per year) and bowel cancer (37 cases per year).

The age-standardised incidence rates for all cancers combined indicate that Indigenous Australians were significantly less likely overall to have been diagnosed with cancer than non-Indigenous Australians in 2003–2007 (385 and 433 cases per 100,000 people, respectively).

However, the incidence rate for cervical cancer was almost 3 times as high for Indigenous women as for non-Indigenous women (18 and 7 cases per 100,000 women, respectively). Incidence rates of cancer of unknown primary site and lung cancer were also significantly higher for Indigenous Australians than non-Indigenous Australians (2.0 and 1.6 times as likely, respectively).

Just over 1% of hospitalisations for Indigenous Australians in 2007–09 were for cancer. Hospitalisation rates for both Indigenous and other Australians increased with age but were lower for Indigenous Australians in each age group.

Cancer was responsible for 18% of total Indigenous deaths compared with 30% of all non-Indigenous deaths in 2004–2008. Although cancer death rates were similar for Indigenous and non-Indigenous Australians aged less than 35 years and 65 years and over, Indigenous Australians in the middle age groups had higher mortality rates than non-Indigenous Australians (Figure 4.14).



## Eye and vision problems

A loss of vision can affect development, communication, ability to work, health and quality of life. Despite having better vision early in life, the Indigenous population has a much higher rate of vision problems. Almost all (94%) of vision loss in Aboriginal and Torres Strait Islander people is unnecessary, as it is preventable or treatable. Yet more than one-third (35%) of Indigenous adults reported they have never had an eye examination.

The 2008 National Indigenous Eye Health Survey looked at 1,694 children aged 5–15 years and 1,189 adults aged 40 years and over. Overall, 1.5% of Indigenous children had low vision and 0.2% were blind, while 9.4% of adults had low vision and 1.9% were blind.

Comparison with the 1980 National Trachoma Eye Health Program, shows a dramatic reduction in the amount of blindness caused by corneal disease (84% of which was then due to trachoma) from 52% to 9% over the 28 years. The prevalence of blindness from cataract dropped slightly from 40% in 1980 to 30% in 2008. However, the prevalence of blindness due to diabetes increased from 4% to 9% over the period.

The most common cause of bilateral blindness in Indigenous adults was cataract—causing 32% of blindness—and the most common cause of low vision was uncorrected refractive error—causing 54% of low vision.

Table 4.2 shows that when adjusted for age differences, Indigenous children are less likely to suffer from vision loss. However, over the age of 40 years, Indigenous adults had 6 times the rate of blindness, and almost 3 times as much vision loss as other Australian adults.

**Table 4.2: Prevalence of vision loss (per cent)**

Vision loss	National Indigenous Eye Health Survey	Other Australians	Relative risk
Low vision			
Children	1.40	6.36 <sup>(a)</sup>	0.2
Adults	14.42	5.19 <sup>(b)</sup>	2.8
Blindness			
Children	0.18	0.28	0.6
Adults	2.79	0.45 <sup>(b)</sup>	6.2

(a) From data provided by the Sydney Myopia Study (Robaei et al. 2005; Robaei et al. 2006a; Robaei et al. 2006b).

(b) From data synthesised from the Melbourne Visual Impairment project and the Blue Mountains Eye Study (Taylor et al. 2005).

Note: Age-standardised to the 2006 Australian population.

Source: Taylor et al. 2010.

The 2008 NATSISS found a higher prevalence of eye problems than the National Indigenous Eye Health Survey, with 7% of Aboriginal and Torres Strait Islander children aged 0–14 years experiencing eye or sight problems. More than one-third of the problems reported (37%) were due to difficulty reading or seeing close up (long-sightedness), and 28% were for difficulty seeing far away (short-sightedness). For those with eye or sight problems, 61% wore glasses or contact lenses (ABS 2010d).

Eye and vision problems were managed by general practitioners at a rate of 2 per 100 encounters with Indigenous Australians.

More details on eye health can be found in *Eye health in Aboriginal and Torres Strait Islander people* (AIHW 2011i), available from the AIHW Indigenous observatory.

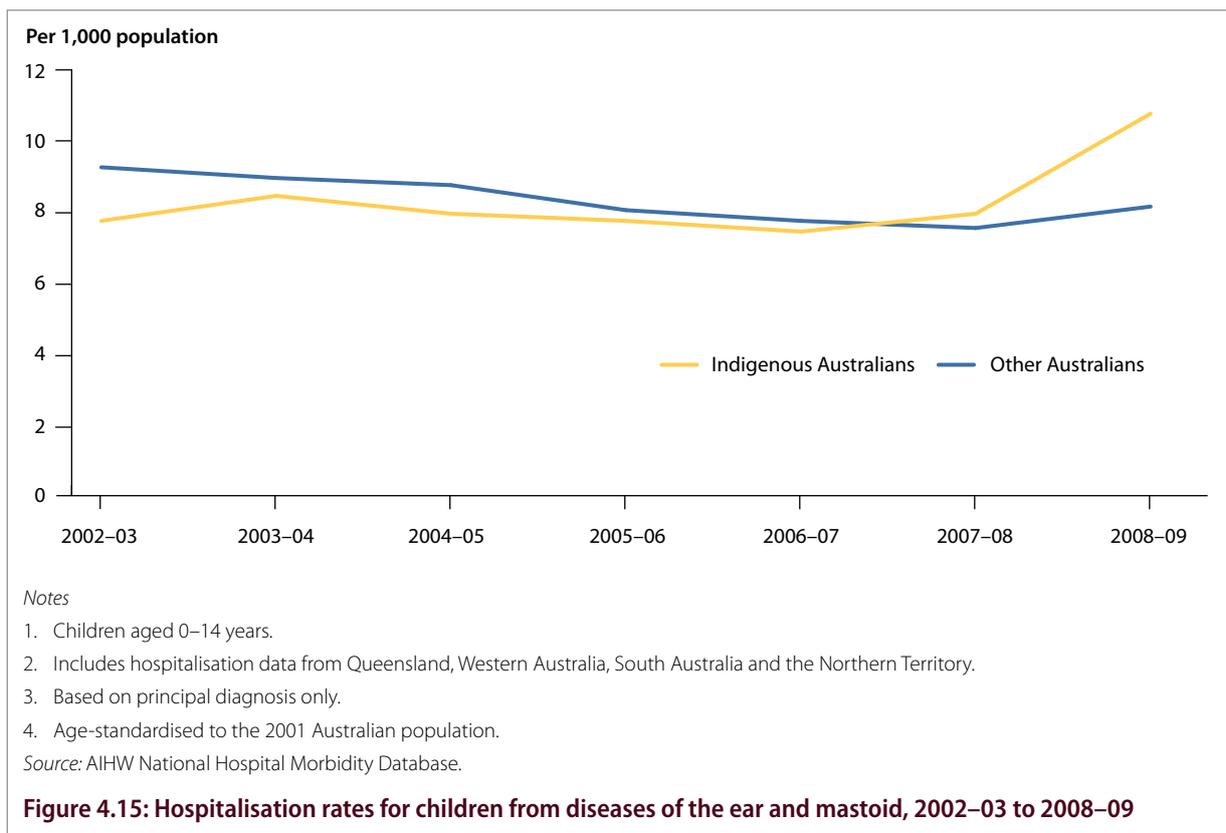
## Ear and hearing problems

The most common ear problems among Aboriginal and Torres Strait Islander people are disorders of the middle ear, specifically bacterial and viral infections leading to otitis media. Otitis media is a common childhood disease, the recurrence of which can lead to hearing loss, deafness and further complications such as learning difficulties.

Using data from the 2008 NATSISS, it was estimated that 9% of Indigenous children aged 0–14 years had ear or hearing problems. More than one-third (35%) of the problems experienced were runny ears or glue ear (otitis media), and 28% were hearing loss or partial deafness (ABS 2010d).

In 2007–09, there were 4,200 hospitalisations of Indigenous Australians for diseases of the ear and mastoid process (temporal bone behind the ear), representing 0.8% of all Indigenous hospitalisations.

Overall, hospitalisation rates for ear and hearing problems among Indigenous Australians were similar to those for other Australians. Hospitalisations were highest among children aged 0–4 years for both Indigenous and other Australians. In 2008–09, there was a rise in hospitalisations rates for ear and hearing problems for Indigenous children (Figure 4.15).



For every 100 encounters with Indigenous Australians between 2005–06 and 2009–10, GPs managed 5 ear or hearing problems. A 2009 report (Britt & Miller) showed that acute otitis media was the third most common type of infection managed at encounters with Indigenous Australians, at a rate double that of encounters with other Australians in the 2000–2008 period. GPs managed chronic otitis media and serous otitis media significantly more often at encounters with Indigenous Australians than at those with other Australians.

## Mental health

Problems and conditions, such as anxiety, depression, schizophrenia and substance abuse disorders, affect mental health both in the short and long term. Some of these problems are known to be commonly prevalent in Indigenous populations.

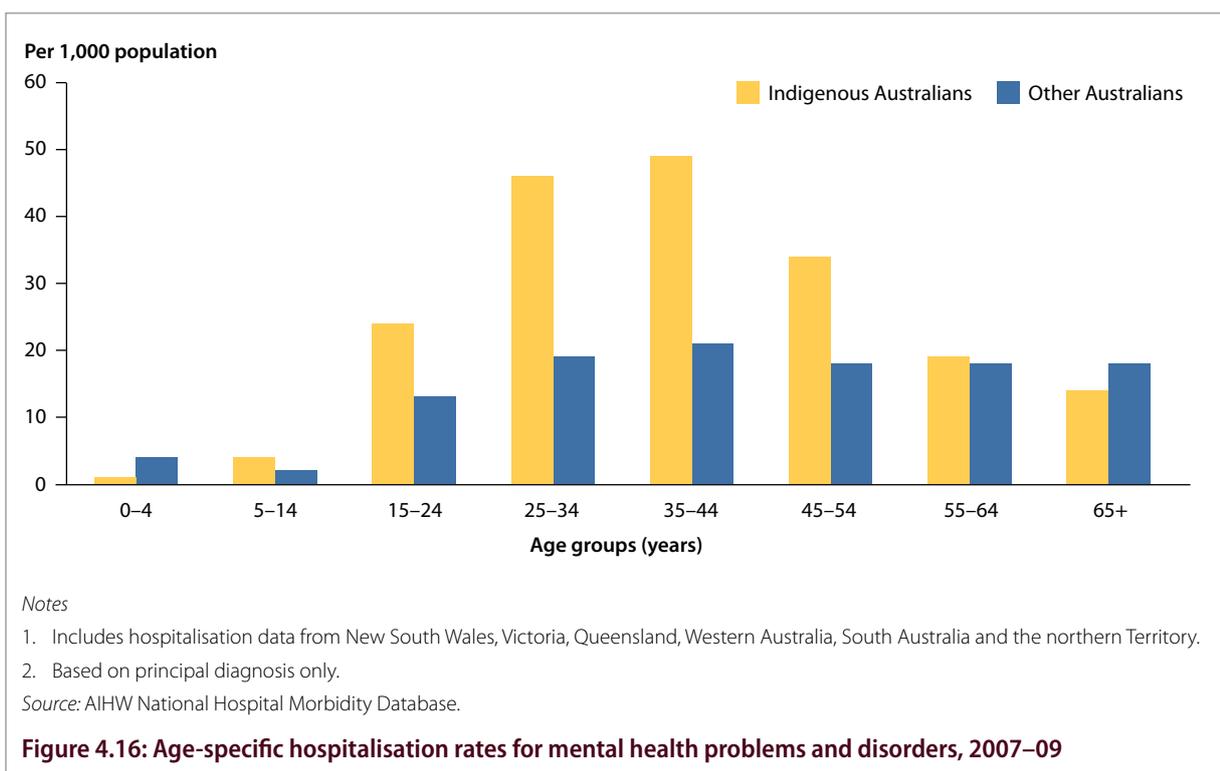
Mental disorders were found to be the second highest cause of the burden of disease in the Indigenous population (Vos et al. 2007). They were estimated to account for 15% of Indigenous disability-adjusted life years, a proportion similar to that for the non-Indigenous population.

Information on psychological distress, positive wellbeing, life stressors and discrimination can be found in the social and emotional wellbeing section of Chapter 3.

Figure 4.16 compares age-specific hospitalisation of Aboriginal and Torres Strait Islander people for mental health problems and disorders with that of other Australians. In the 2 years to June 2009, the rate of hospitalisations of Indigenous Australians for these problems was 26 per 1,000 population. The rate was higher than that noted for other Australians, a rate ratio of 1.8 (see Box 4.1 for an explanation of rate ratios).

Indigenous hospitalisation for mental health problems peaked for those aged 25–34 years and 35–44 years (46 and 49 per 1,000 population, respectively), and declined considerably in older Indigenous Australians.

The rate of Indigenous Australian hospitalisation was higher than that for other Australians in all age groups other than those aged 0–4 years and those above 65 years of age. At the peak rate, Indigenous Australians were more than twice as likely to be hospitalised for mental health problems as other Australians.



Mental health problems were managed by general practitioners at a rate of 16 per 100 encounters with Indigenous Australians between 2005–06 and 2009–10, significantly higher than the rate (11 per 100) for encounters with all Australians over the period (Britt et al. 2010).

The upcoming section on injury and poisoning shows that death due to intentional self-harm has the highest age-standardised death rate of any specific category for Indigenous males, more than double that for non-Indigenous males.

#### Box 4.1 Rate ratios and rate differences

Rate ratios and rate differences measure the relationship between two population figures; however, they do it in slightly different ways. Rate differences ( $R1 - R2$ ) measure the literal, or absolute, gap between populations without respect to their relative size. Rate ratios ( $R1/R2$ ), on the other hand, take scale into account—a difference of 5 is much more significant if the comparative figure is 10 rather than 1,000.

Rate ratios are often used to describe the degree of inequality. But in some situations this ratio can be misleading. A large rate ratio does not necessarily imply that an event has a large absolute impact. Events that are rare in one population can produce large rate ratios in the comparative population, even if the prevalence is relatively low.

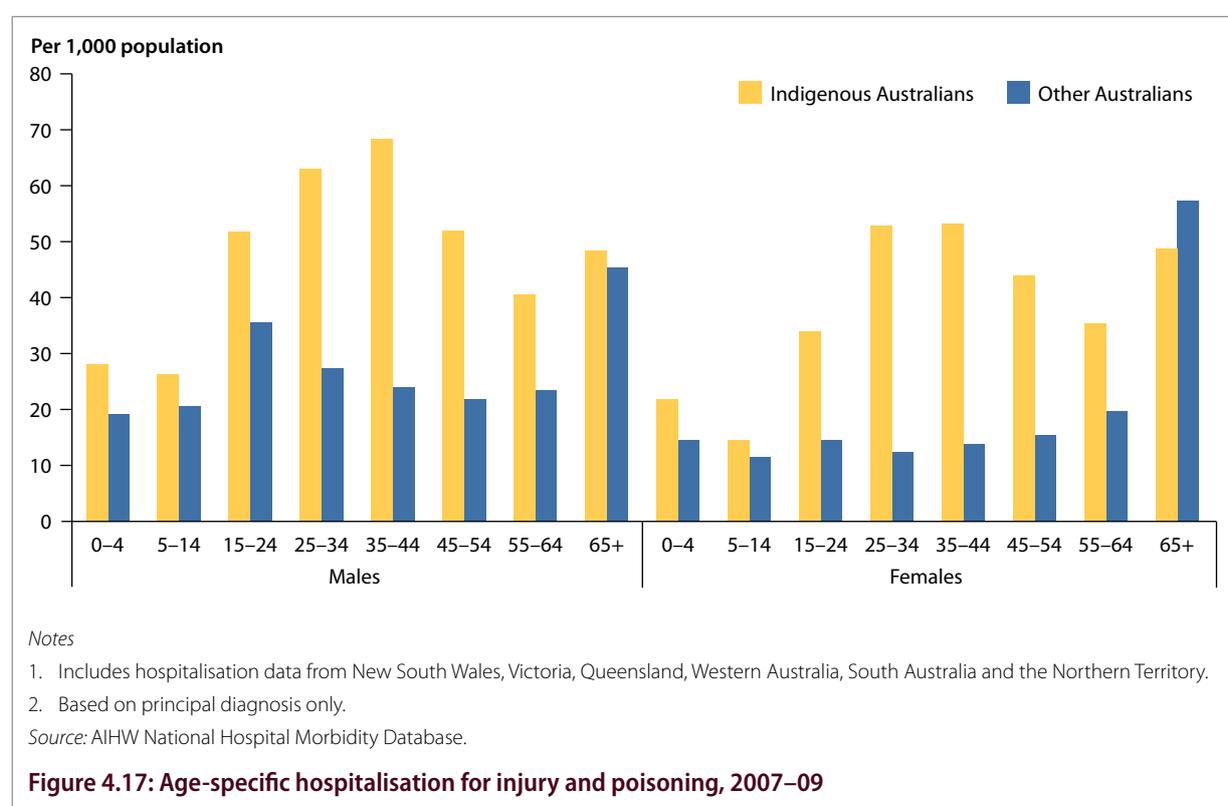
### Injury and poisoning

Injury and poisoning are large contributors to Indigenous ill health, especially for younger people. Various factors can affect a person's risk of injury, including age, gender, alcohol use and socioeconomic status. Widespread hurt, loss, and suffering in Indigenous communities also leads to an increase in self-harm, making the incidence of intentional injury much more common among Indigenous Australians than other Australians (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.

Injury and poisoning combined was the main cause of hospitalisation (excluding dialysis for kidney disease) for Indigenous Australians, accounting for 41,300 hospitalisations, or 7% of all Indigenous hospitalisations, in 2007–09. More than half (57%) of these hospital episodes were for Indigenous males. The most commonly recorded types of injury were those inflicted by another person (25% of all injury hospitalisations) and accidental falls (18%).

Rates of hospitalisation due to injury and poisoning varied with age and gender (Figure 4.17). In all age groups, except for those aged 65 years and over, Indigenous males were more likely to be hospitalised for injury and poisoning than Indigenous females. For Indigenous Australians, rates were highest among those aged 25–44 years, while for other Australians rates were highest for those aged 65 years and over.



External causes of death include intentional self-harm, transport accidents, assaults and accidental poisoning. These causes are large contributors to Indigenous morbidity, and were responsible for 15% of total Indigenous deaths compared with 5.7% of non-Indigenous deaths for the 2004–2008 period. The rates are especially high among young males. Based on 2003–2007 data, the death rates due to external causes for Indigenous men aged 25–34 and 35–44 years were more than 3 times the rates for non-Indigenous men (Figure 4.18).

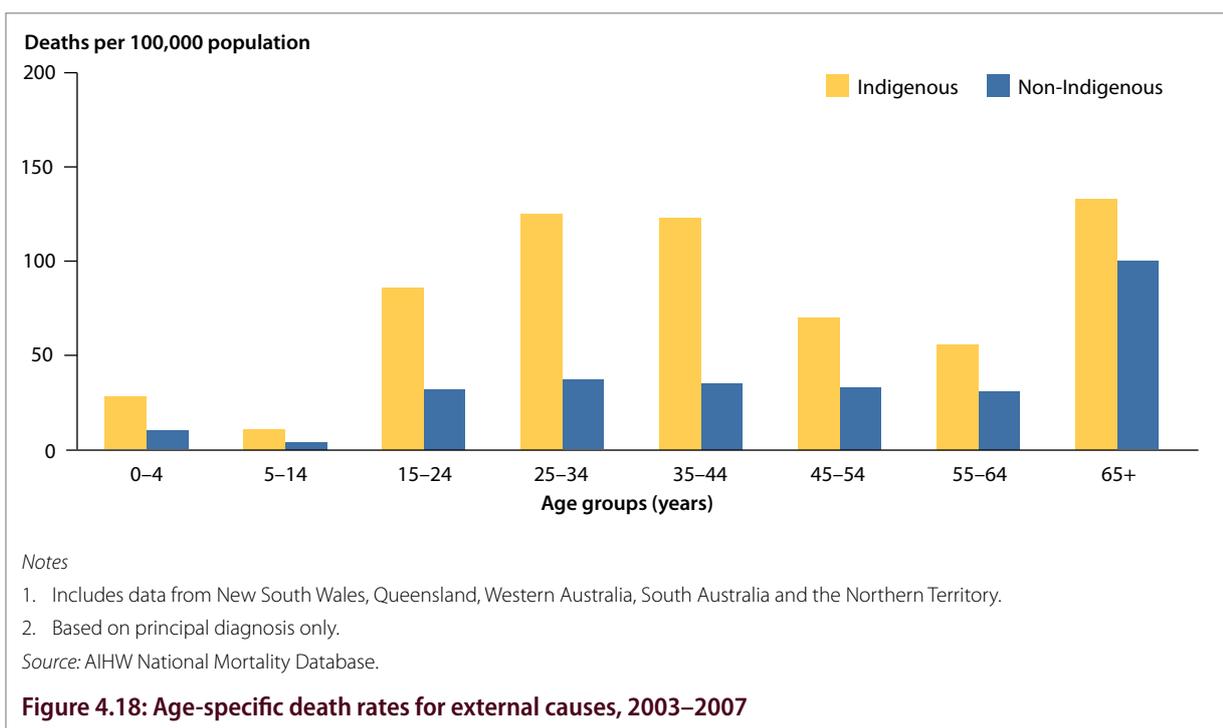
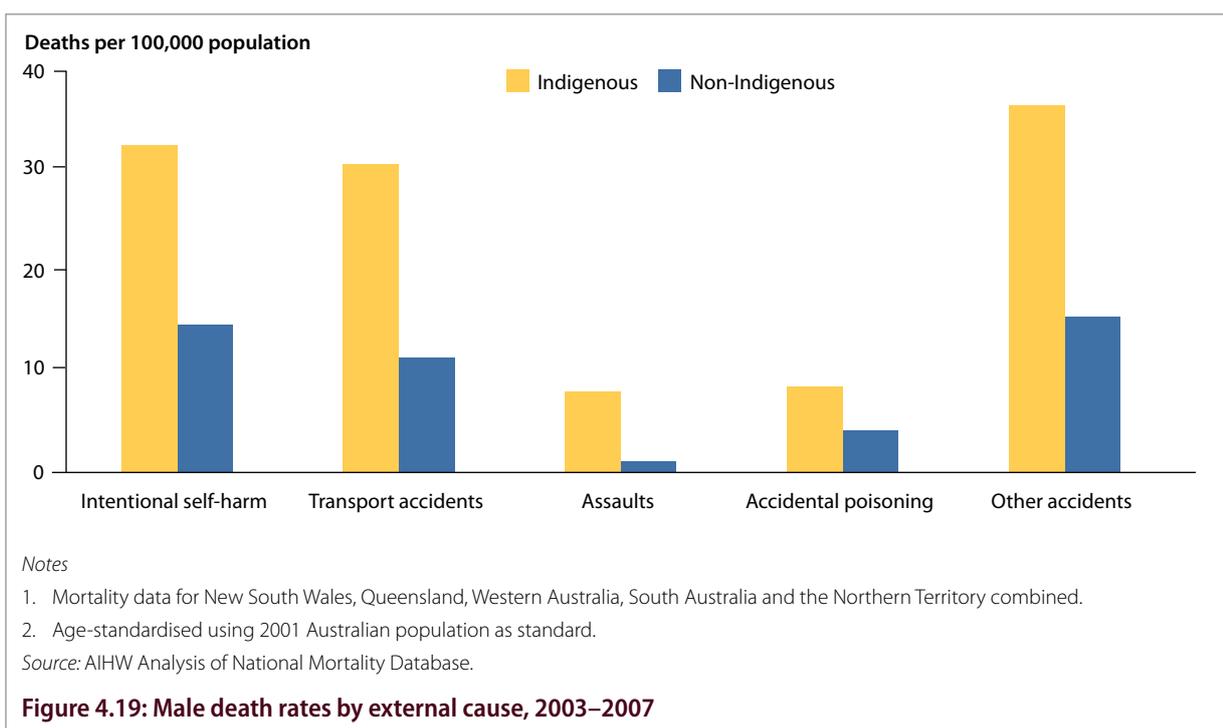


Figure 4.19 shows the age-standardised death rates due to different types of external causes for Indigenous males for the years 2003–2007.

- Intentional self-harm had the highest death rate of any specific category for Indigenous males—more than double that for non-Indigenous males.
- The death rates due to assaults showed the greatest proportionate difference between Indigenous and non-Indigenous males—more than 7 times as high.
- The Indigenous male death rates relating to transport accidents, accidental poisoning, and other accidents were all more than double the rate for non-Indigenous males.



# Chapter 5

## **Mortality and life expectancy**



## 5 Mortality and life expectancy

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. Certain chronic diseases and conditions make much larger contributions to Indigenous mortality than is the case for non-Indigenous Australians.

Two of the COAG Closing the Gap targets for Indigenous disadvantage relate to mortality and life expectancy. These are to close the gap in life expectancy within a generation, and halve the gap in mortality rates for Indigenous children under 5 years within a decade (by 2018).

This chapter looks at patterns and trends in Indigenous mortality, both at all-cause and cause-specific levels. The cause of death statistics presented in this chapter 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).

Untimely deaths due to relatively high rates of chronic disease increase the mortality gap between the Indigenous and non-Indigenous adult populations. This chapter presents analysis quantifying the extent of this gap, using the measure 'potential years of life lost'.

While some 2009 mortality data were available at the time of writing, the majority of data used in this chapter are for 2008 and earlier. In some instances 2007 data, which was the latest available data by both age and cause, have been used.

### 5.1 Life expectancy

For the period 2005–2007, life expectancy at birth was estimated to be 67.2 years for Indigenous males and 72.9 years for Indigenous females, compared with 78.7 and 82.6 years, respectively, for non-Indigenous males and females—a difference of 11.5 years for males and 9.7 years for females.

Differences in Indigenous and non-Indigenous life expectancy estimates are lower than those reported previously. However, this change is not entirely due to underlying trends in mortality patterns, but also results from methodological changes that have improved the estimation of Indigenous life expectancy (see Box 5.1 for more information).

#### Box 5.1: Measuring life expectancy

Life expectancy at birth is a summary measure of mortality that estimates the number of years a child would live if that child hypothetically experienced the prevailing death rates throughout its life. The estimates in this chapter are based on the ABS Experimental Life Tables, which make adjustments to registered mortality data according to identification of Indigenous status (ABS 2009e).

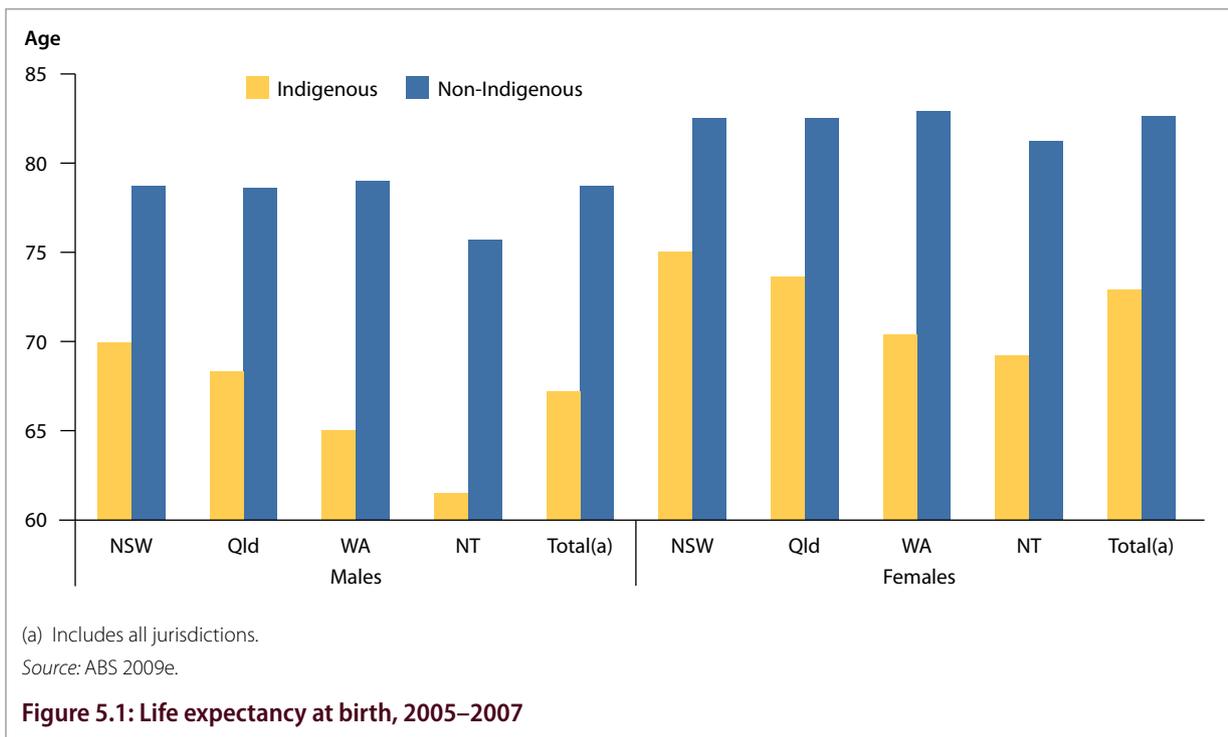
Reliable estimation of Indigenous life expectancy is constrained by identification issues, both in terms of inadequate identification of Indigenous deaths in the national mortality database (the numerator), and uncertainty about the size of the Indigenous population (the denominator) resulting from changed Census procedures and self-identification.

Despite measurement issues, the gap in life expectancy between Indigenous and non-Indigenous Australians remains substantial—although more on a par with gap estimates for indigenous people of New Zealand and Canada (AIHW 2011g).

The life expectancy of Indigenous Australians in 2005–2007 varied greatly between states and territories (Figure 5.1):

- The life expectancy of Indigenous males varied from 61.5 years in the Northern Territory to 69.9 years in New South Wales—a gap of 8.4 years.
- For Indigenous females, the difference ranged from 69.2 years in the Northern Territory to 75.0 years in New South Wales—a gap of 5.8 years.
- The Indigenous to non-Indigenous gap in life expectancy was the highest for males in the Northern Territory (14.2 years) and for females in Western Australia (12.5 years).

Indigenous life expectancy was not estimated for other jurisdictions because of the low numbers of Indigenous deaths identified.



See *Comparing life expectancy of indigenous people in Australia, New Zealand, Canada and the United States* (AIHW 2011g) for some of the issues involved with estimating indigenous life expectancy, available from the AIHW Indigenous observatory.

## 5.2 All-cause mortality

In 2009, 2,405 deaths were registered where the deceased was identified as being of Aboriginal or Torres Strait Islander origin, representing 1.7% of all deaths (ABS 2009c).

The age distribution of deaths among Aboriginal and Torres Strait Islander people is very different from that among non-Indigenous Australians (Figure 5.2). Over the 2004–2008 period, two-thirds (66%) of deaths among Indigenous Australians occurred before the age of 65 years, compared with only 20% of deaths for non-Indigenous Australians of this age.

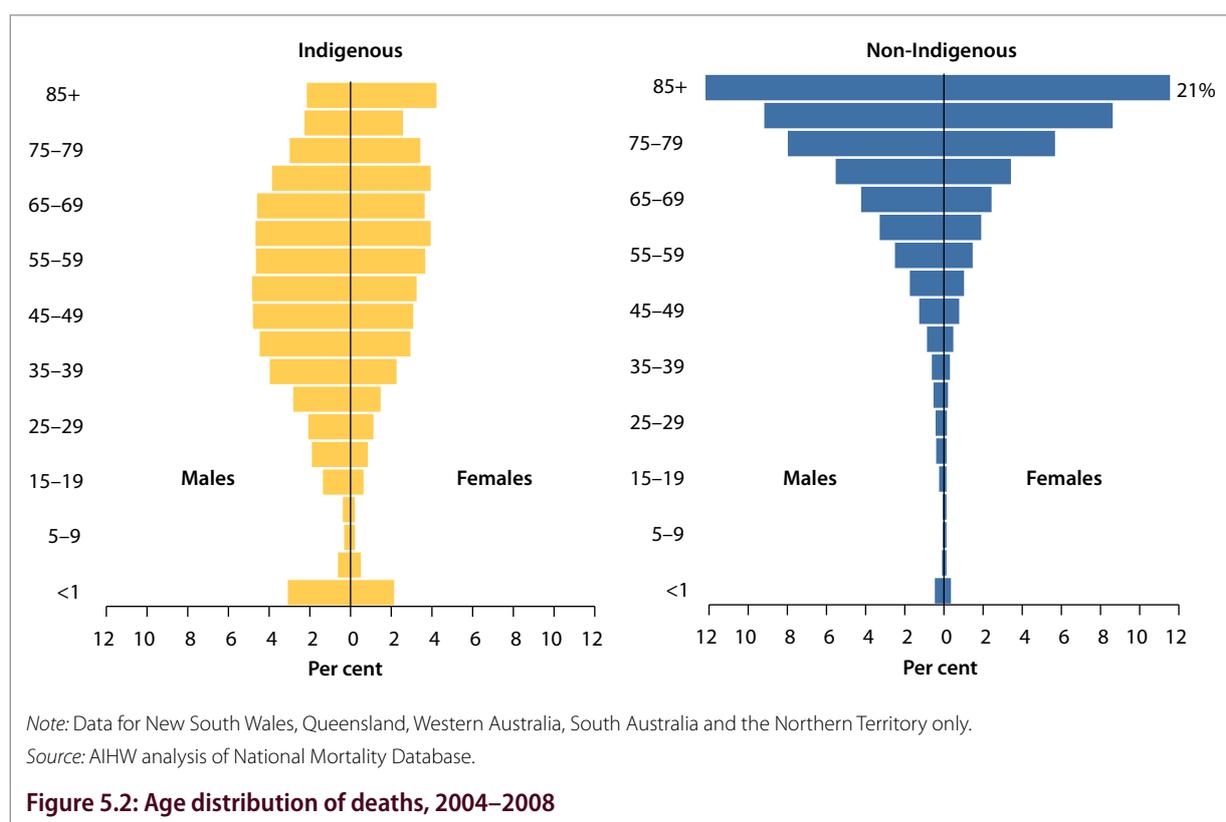


Table 5.1 shows the age-specific patterns of Indigenous mortality for both sexes, and compares them with those for the non-Indigenous population for the 2005–2009 period. The death rates for the Indigenous population were consistently higher than the non-Indigenous rates across all age groups, but especially for those below 65 years. The highest death rate ratio for both sexes was for those aged 35–44 years—with male and female Indigenous death rates 5.0 and 5.4 times the non-Indigenous rates, respectively.

**Table 5.1: Age-specific death rates<sup>(a)</sup>, 2005–2009<sup>(b)(c)</sup>**

Age group (years)	Males			Females		
	Indigenous	Non-Indigenous	Rate ratio	Indigenous	Non-Indigenous	Rate ratio
0 <sup>(d)</sup>	10	5	2.2	8	4	2.0
1–4	61	23	2.6	52	18	2.9
5–14	24	11	2.3	17	8	2.1
15–24	154	58	2.7	74	23	3.2
25–34	313	87	3.6	160	34	4.7
35–44	648	131	5.0	369	68	5.4
45–54	1,076	280	3.9	683	167	4.1
55–64	1,935	661	2.9	1,411	390	3.6
65+	5,642	4,181	1.3	4,864	3,676	1.3

*Notes*

(a) Deaths per 100,000 population, except age 0.

(b) Data are for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined.

(c) Deaths where Indigenous status was not stated are excluded. As a result, age-specific death rates may be underestimated.

(d) Infant deaths per 1,000 live births.

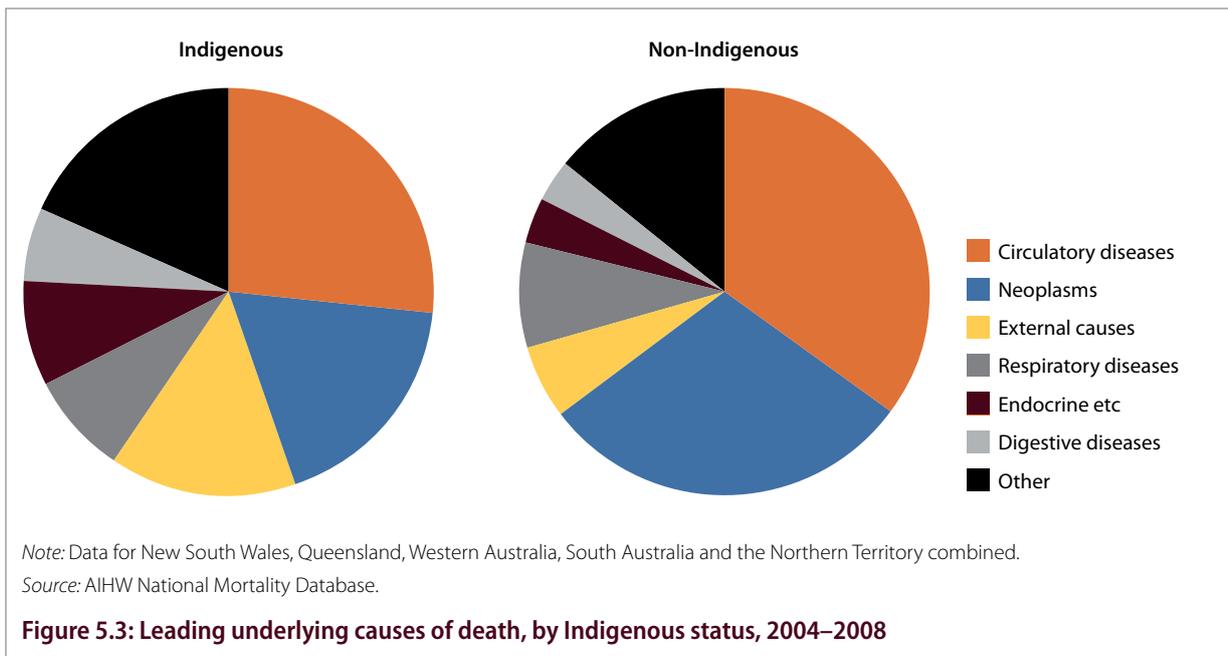
Source: ABS 2009c.

Analysis of 2004–2008 mortality data showed that the age-standardised death rate for Indigenous males (1,381 per 100,000 population) was 1.9 times the rate for non-Indigenous males (712 per 100,000). The female death rate ratio was slightly higher at 2.0, albeit based on lower death rates (1,021 versus 521 per 100,000 population).

### 5.3 Leading causes of Indigenous mortality

The five major underlying causes of Indigenous deaths between 2004 and 2008 were circulatory diseases, neoplasms (tumours), external causes (including injury), respiratory diseases and endocrine disorders (Figure 5.3). The same diseases and conditions were also the topmost causes of death in the non-Indigenous population, although their proportional contributions and rankings were different.

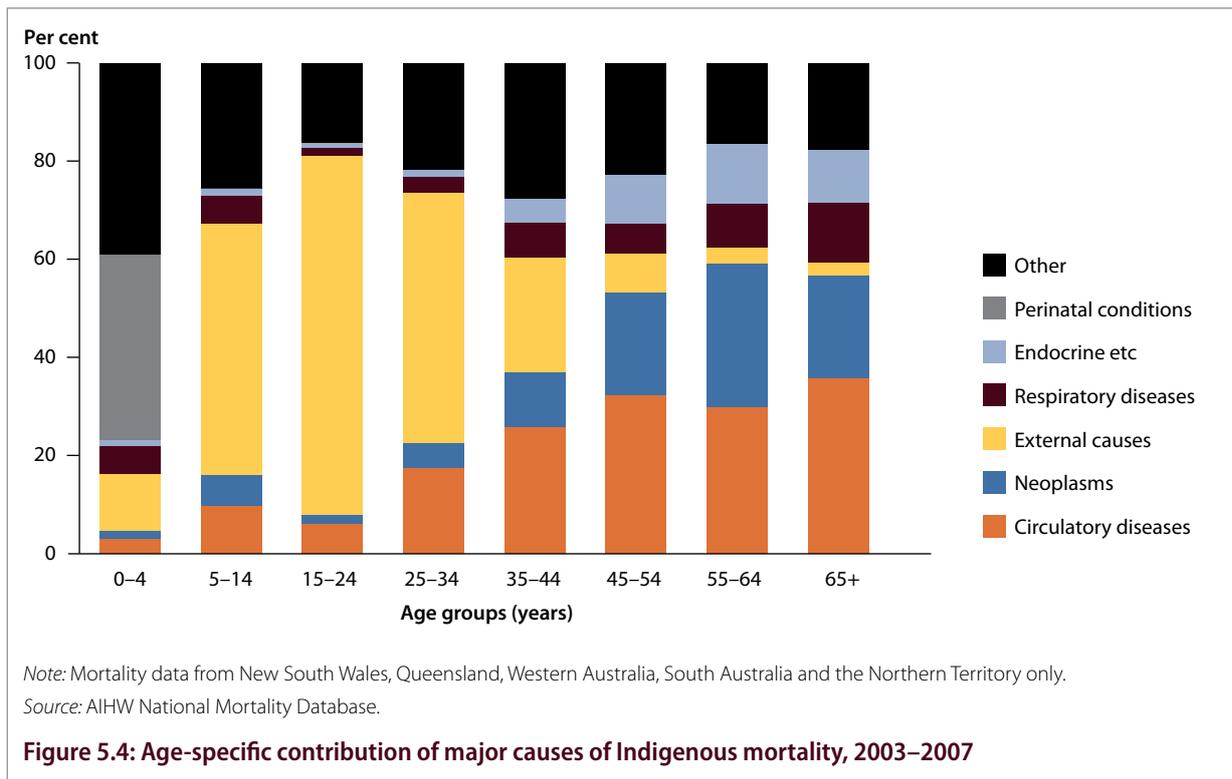
- Circulatory diseases and neoplasms were the two leading causes of deaths for both Indigenous and non-Indigenous Australians—accounting for two-thirds (65%) of non-Indigenous deaths, and less than half (45%) of all Indigenous deaths.
- External causes (including injury) contributed disproportionately (1 in 7) to Indigenous deaths compared with non-Indigenous deaths (1 in 18).
- Endocrine disorders, mostly diabetes, were also much higher contributors to Indigenous deaths.



### Age-specific mortality by cause

In 2003–2007, the contribution of particular causes of death varied with age (Figure 5.4):

- In the younger age groups, external causes of death were responsible for a large proportion of Indigenous deaths.
- Cardiovascular (or circulatory) diseases and neoplasms contributed to the majority of deaths in Indigenous Australians aged 45 years and over.
- The proportions due to endocrine, metabolic and nutritional disorders and respiratory conditions generally increased with age.



### Age-standardised mortality by cause

Age-standardised mortality ratios (SMRs; explained in Box 5.2) provide further insight to the particular mortality contributions by major underlying causes of death.

#### Box 5.2: Standardised mortality ratio and excess deaths

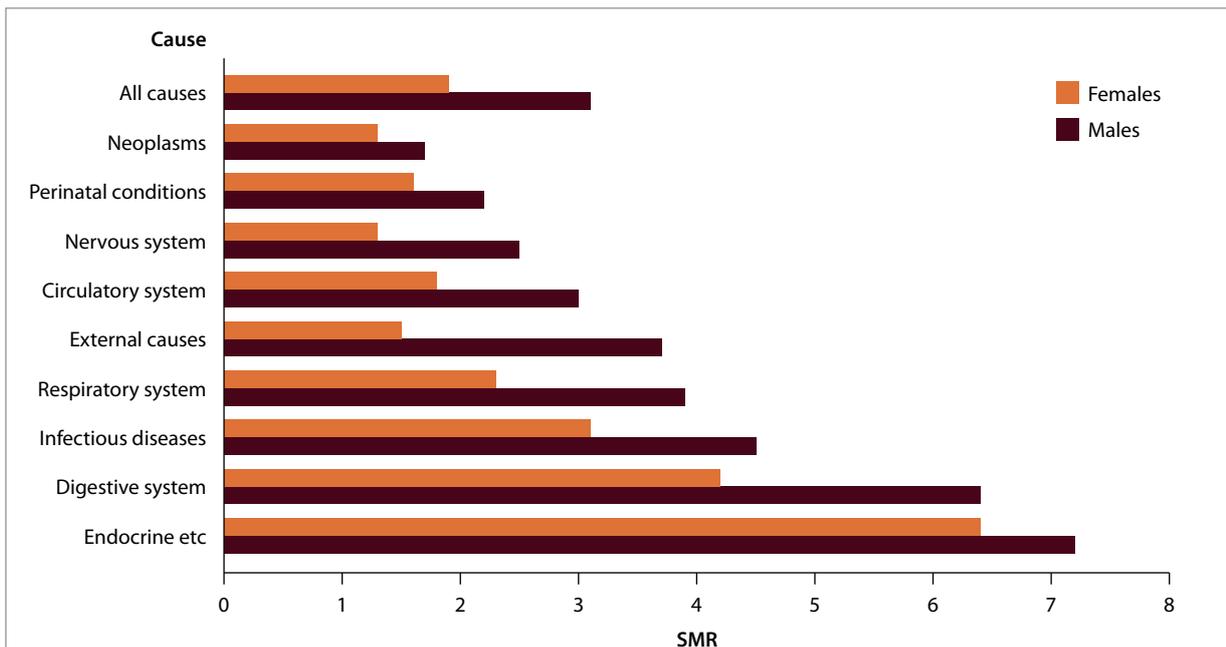
A commonly used measure to compare cause-specific mortality patterns is the standardised mortality ratio (SMR). Because the likelihood of particular causes of death tend to vary with age, the SMR accounts for any differences in the age structure between the population groups being compared.

The SMRs presented in this chapter are calculated using indirect age-standardisation. This method involves the calculation of the 'expected' number of Indigenous deaths based on age, sex and cause-specific death rates for non-Indigenous persons. The SMR is then calculated by dividing the observed by the expected number of deaths.

It must be noted in making these comparisons that a high SMR does not necessarily reflect a high number of deaths in the population of interest, particularly if the cause or condition has a low death rate in the base population. (See also Box 4.1 on rate ratios.)

Figure 5.5 shows that in 2004–2008:

- endocrine, metabolic and nutritional disorders were responsible for a much higher rate of Indigenous than non-Indigenous deaths—7 times in Indigenous males and 6 times in Indigenous females
- death rates for digestive diseases (including liver diseases) were also much higher for both Indigenous males and females (SMRs of 6 and 4, respectively)
- neoplasms had the lowest SMRs of all causes shown, but were still greater than 1, indicating a higher age-adjusted death rate for Indigenous Australians.



*Notes*

1. Mortality data for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined.
2. Indirectly age-standardised using the 2001 Australian population.

Source: AIHW analysis of National Mortality Database.

**Figure 5.5: Standardised mortality ratios, Indigenous to non-Indigenous, 2004–2008**

## 5.4 Premature mortality due to chronic diseases

Deaths that occur prematurely result in the loss of many potential years of life. So a more complete measure of the mortality gap between Indigenous and other Australian adults is ‘potential years of life lost’ (PYLL) which gives greater weight to deaths at younger ages (see Box 5.3 for how it is calculated). This section quantifies the extent of this gap that is attributable to chronic diseases.

### Box 5.3: Mortality gap due to chronic diseases

Potential years of life lost (PYLL) are calculated from deaths that occur before a particular age, one considered to be a reasonable number of years of life attained. In this report, deaths after the age of 35 and before the age of 75 are included. The lower limit of 35 years was chosen because most chronic diseases are unlikely to lead to deaths early in childhood or among young adults. So a person dying at 35 years has potentially lost 40 years of life, while a person dying at age 80 is deemed to have lost no years of life.

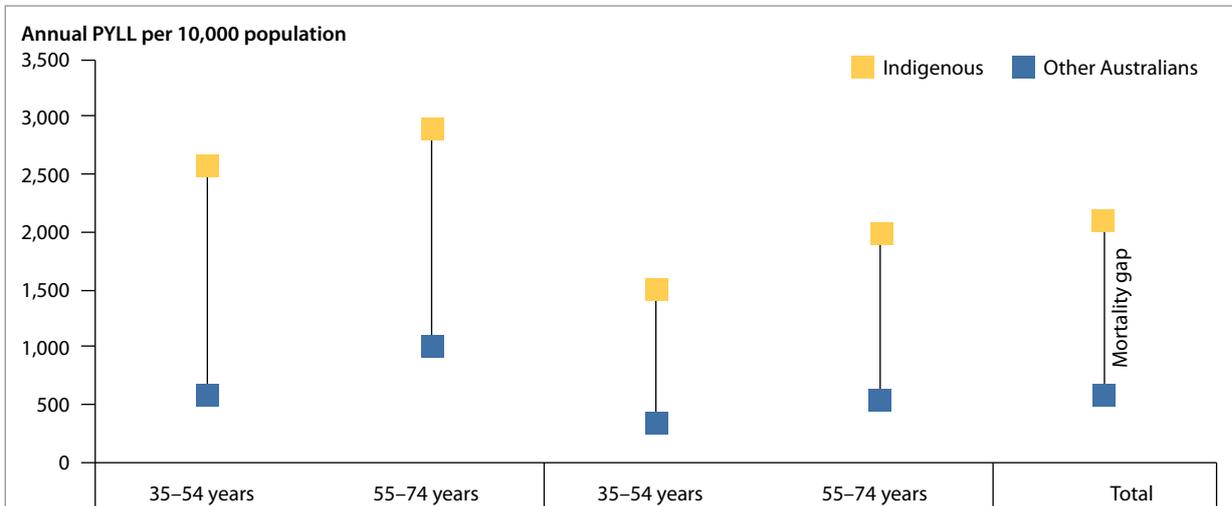
For a population, an annual PYLL rate is calculated by summing all individual potential years of life lost in 1 year and dividing by the relevant population number. In this case 3 years of data (2005–2007) have been averaged due to the relatively small numbers.

The mortality gap between the Indigenous and non-Indigenous populations is calculated as:

$$\text{Mortality gap} = \text{Annual PYLL rate for Indigenous Australians} - \text{Annual PYLL rate for other Australians}$$

There were 4,060 Indigenous deaths during 2005–2007 in the age range 35 to 74 years—an annual death rate of 105 deaths per 10,000 population. These deaths amounted to 81,286 potential years of life lost over this 3-year period, an average annual PYLL rate of about 2,100 per 10,000 population.

Both the annual death rate and PYLL rate were markedly higher among Indigenous Australians than other Australians. The difference in death rates was 60.9 deaths per 10,000 population, which equated to a mortality gap of just over 1,500 PYLL per 10,000 population. The gap was greater among males than females (Figure 5.6). The mortality gap was not markedly different between the 35–54 and 55–74 age groups as the older age group had higher death rates, while the younger group lost more potential years of life.

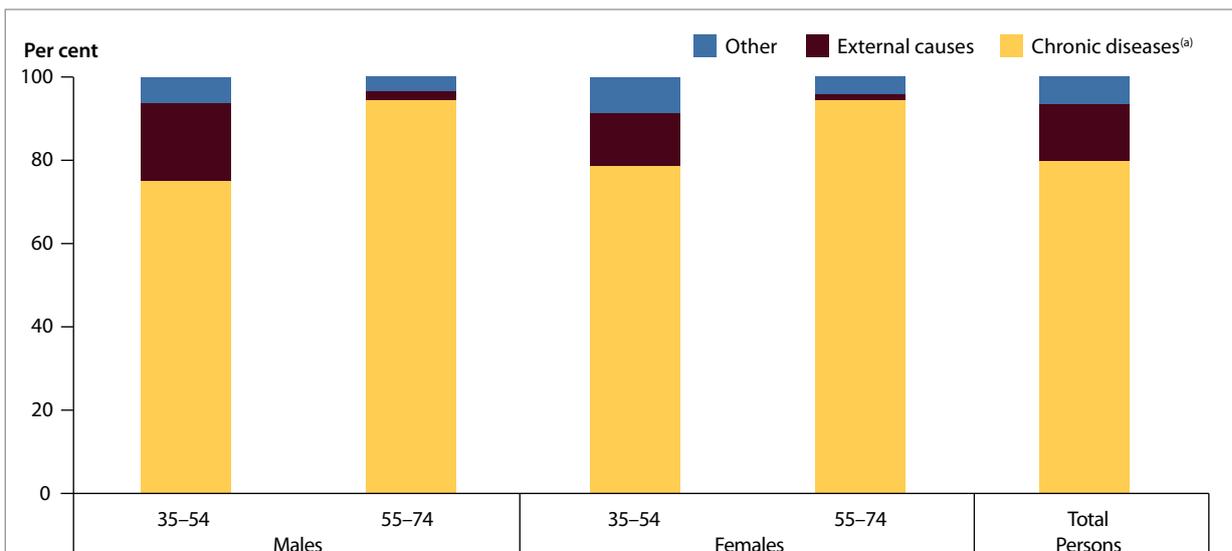


(a) Estimates are derived from death data for 2005–2007, and population data for 2006 times 3.

Source: AIHW National Mortality Database.

**Figure 5.6: Mortality gap between Indigenous and other Australians, by age and sex, 2005–2007<sup>(a)</sup>**

About 80% of this mortality gap can be attributed to chronic diseases (Figure 5.7). Among males aged 35–54 years, almost 75% of the mortality gap was due to chronic diseases, and among males aged 55–74 years, it was almost 95%. Equivalent figures were 79% and 95% for females. Although the focus of this analysis is on the contribution of chronic diseases, the considerable contribution made by external causes among Indigenous Australians aged 35–54 years is noteworthy.

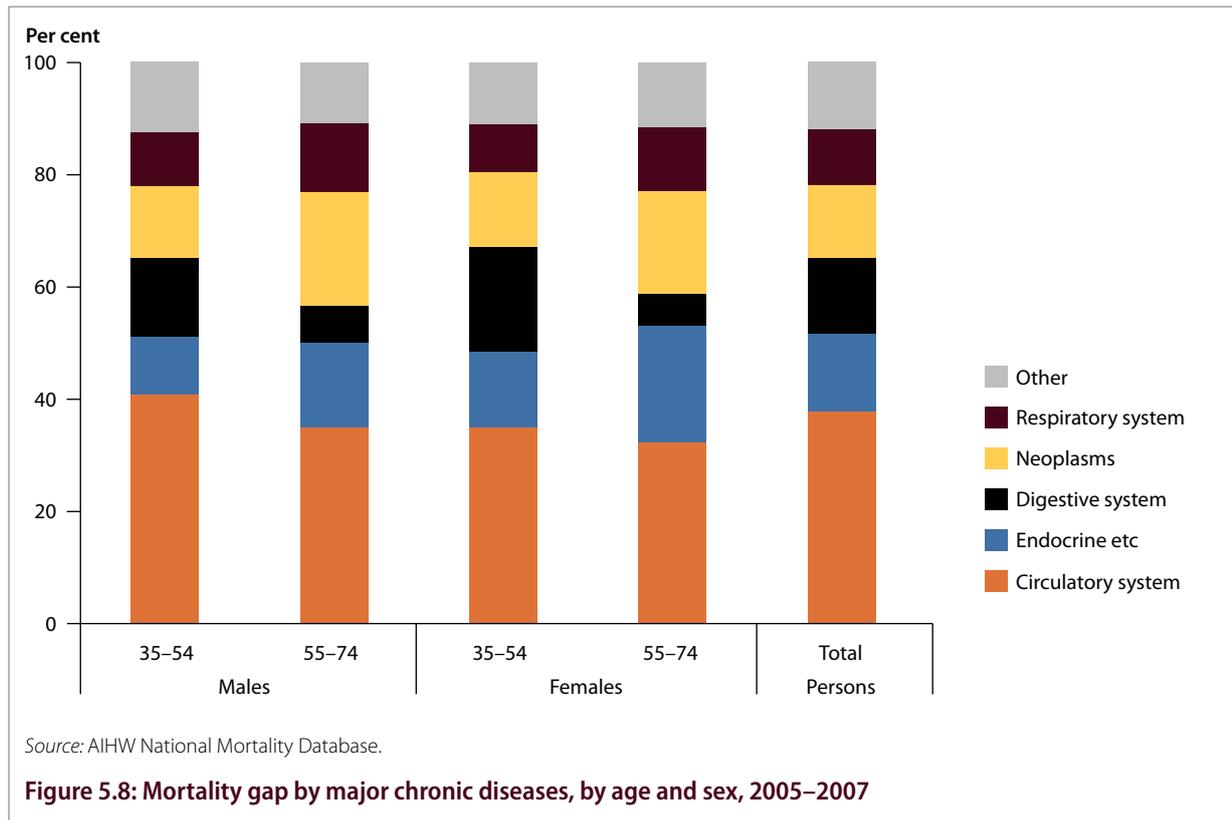


(a) Includes some acute diseases, but most deaths are due to chronic diseases.

Source: AIHW National Mortality Database.

**Figure 5.7: Mortality gap proportions by broad disease groups, by age and sex, 2005–2007**

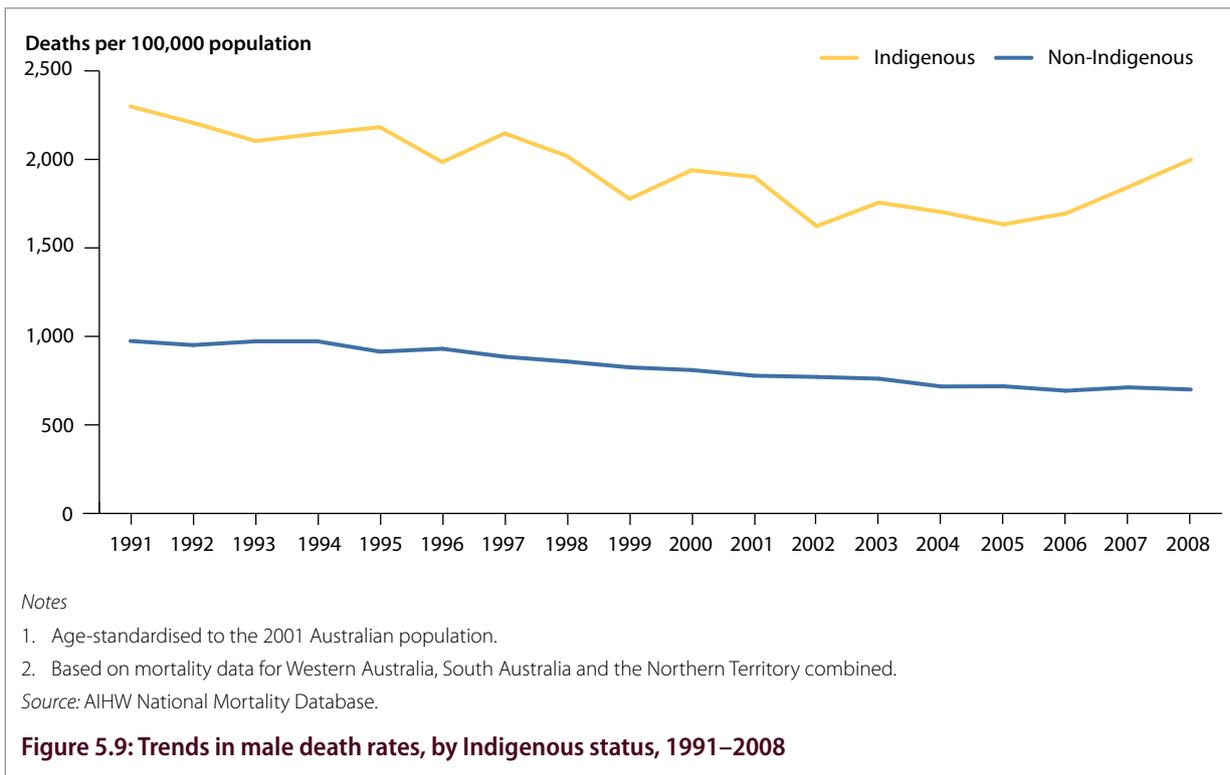
The greatest contribution to the mortality gap between Indigenous and other Australian adults due to chronic diseases was from circulatory diseases, followed by endocrine, nutritional and metabolic diseases. Diseases of the digestive system were more important for explaining the gap among those aged 35–54 years, whereas diseases of the respiratory system were more important among those aged 55–74 years. Overall, neoplasms made the fourth biggest contribution to the mortality gap (Figure 5.8). Together these five chronic diseases explained almost 90% of the adult mortality gap caused by chronic diseases.



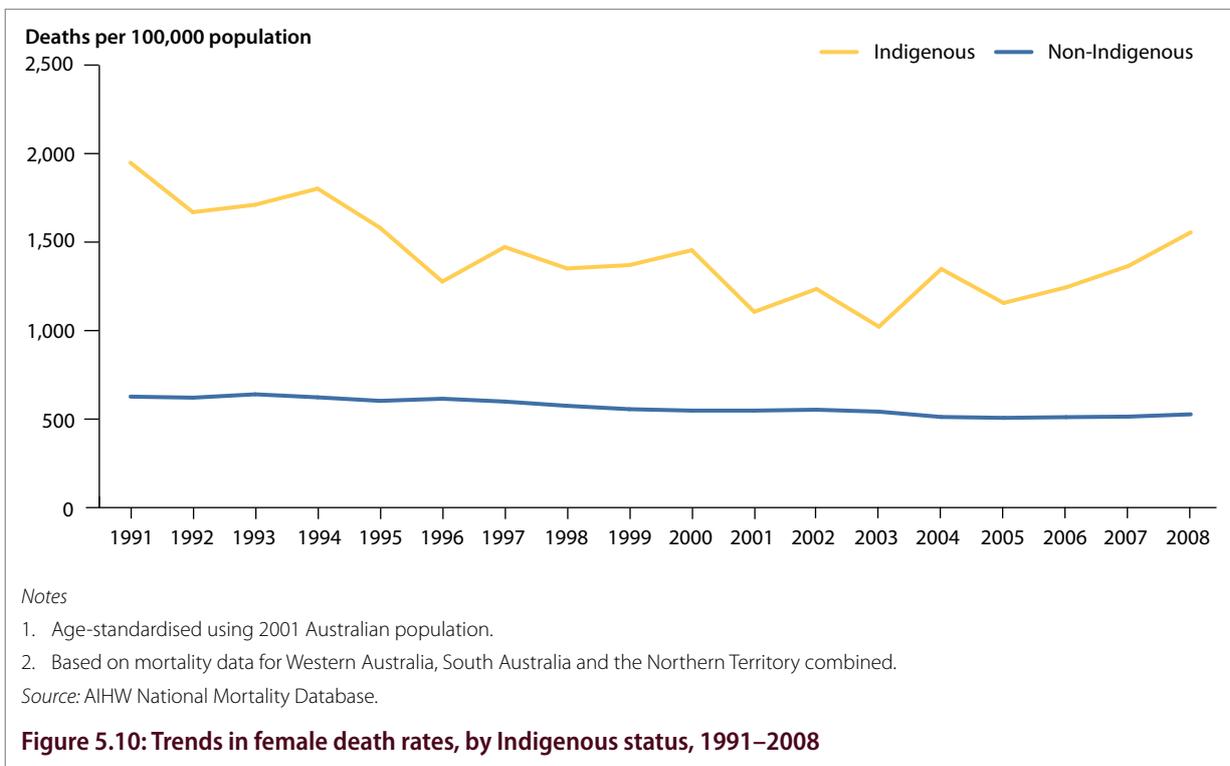
Further information can be found in *Contribution of chronic disease to the gap in adult mortality between Aboriginal and Torres Strait Islander and other Australians* (AIHW 2011h), available from the AIHW Indigenous observatory.

## 5.5 Trends in Indigenous mortality

While male Aboriginal and Torres Strait Islander death rates rose between 2005 and 2008, they had dropped by 28% between 1991 and 2005, resulting in a long-term significant decline in male Indigenous mortality rate for the period 1991–2008 (Figure 5.9).

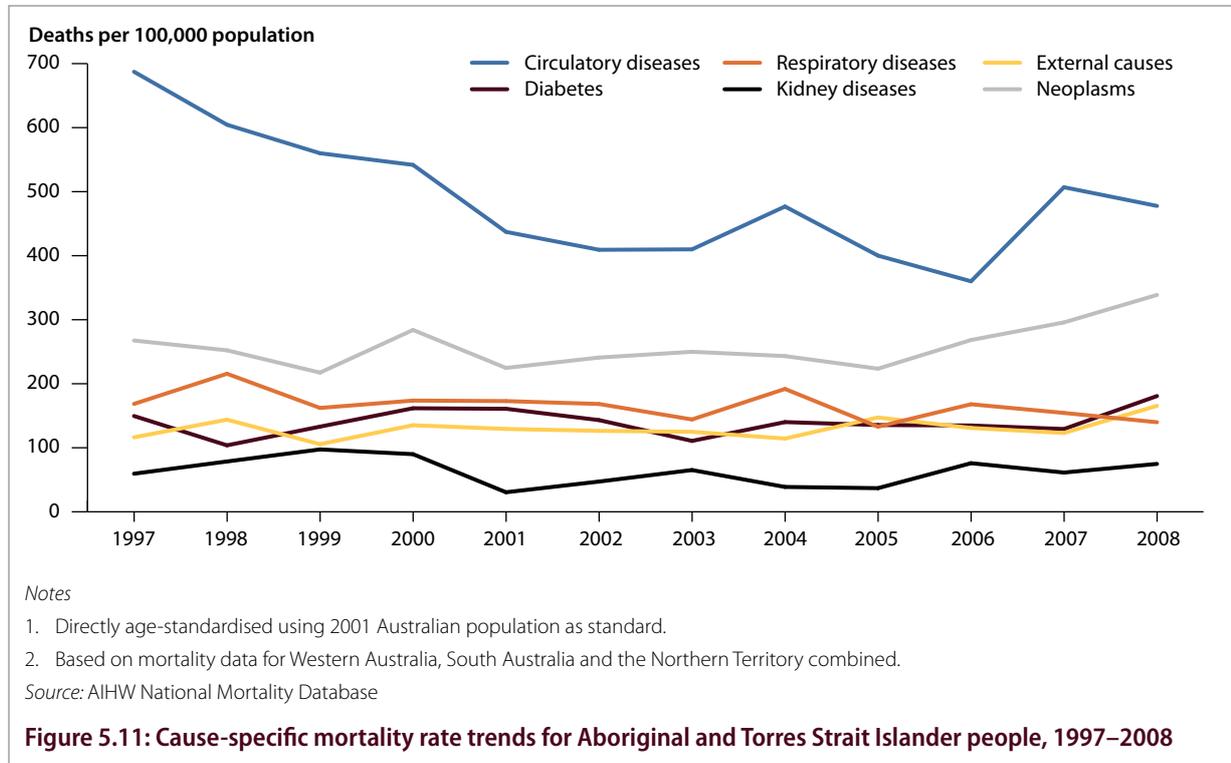


The trend has been the same for Aboriginal and Torres Strait Islander females, though with a faster long-term decline (Figure 5.10). While the rates rose from 2005, a 40% fall between 1991 and 2005 resulted in a significant decline over the period 1991–2008.



## Cause-specific trends

While circulatory disease death rates for Aboriginal and Torres Strait Islander people declined over the 1997–2008 period (Figure 5.11), Indigenous death rates for the other leading causes do not appear to have decreased significantly over the period.



Further information can be found in *Life expectancy and mortality of Aboriginal and Torres Strait Islander people* (AIHW 2011j), available from the AIHW Indigenous observatory.

# Chapter 6

## **Health across the life stages**



## 6 Health across the life stages

As people move through the various stages of life, many of the health and wellbeing challenges that they encounter seem particular to that age group. However, several conditions and lifestyle choices made earlier in life have consequences for health later in life, and need to be considered. Linking early-life factors with conditions in later life can identify various underlying risks and protective processes that operate throughout life.

Ideally, investigating life course processes requires data at multiple points, from birth (or before), youth, middle age and old age, and potentially across generations. Unfortunately, such longitudinal data are not available to chart the health and wellbeing of Aboriginal and Torres Strait Islander people across their lifetime. Instead this overview uses cross-sectional snapshots of selected life stages—mothers and babies, children, youth, and older persons—to help draw these connections.

### 6.1 Mothers and babies

Aboriginal and Torres Strait Islander babies are born with much lower life expectancy, more often with low birthweight, and with higher risks of perinatal and infant mortality. They are also exposed to various developmental and health risk factors early in life. So they often begin life with a distinct disadvantage.

In 2009, there were 15,800 births in Australia (5% of all registered births) where at least one parent identified as being of Aboriginal or Torres Strait Islander origin, with a sex ratio of 1,058 males to 1,000 females (ABS 2010a). Queensland and New South Wales recorded the highest numbers of Indigenous newborns (5,200 and 4,100, respectively), followed by Western Australia (2,400) and the Northern Territory (1,500).

#### Maternal risk factors and behaviours

Various maternal risk factors and behaviours affects the health of newborn babies and infants:

- Very young mothers have higher-than-normal rates of birth complications, including premature deliveries and stillbirths. Motherhood during the teenage years is much more common among Indigenous girls, at 21% compared with 4% of all births (ABS 2010a).
- Smoking during pregnancy is associated with poor perinatal outcomes. Analysis of the National Perinatal Data Collection revealed that more than half of Indigenous mothers (51% in 2007) were reported to have smoked tobacco during pregnancy, compared with 15% of non-Indigenous mothers.
- Excessive alcohol intake during pregnancy is associated with fetal alcohol syndrome, heart defects and low birthweight. Analysis of the 2008 NATSISS showed that 20% of Indigenous mothers reported consuming alcohol during pregnancy in 2008, although the majority (83%) reported drinking less during pregnancy.
- Pre-existing and gestational diabetes can lead to pre-term births and much heavier babies, which dispose the child to develop diabetes early in life. Of the 30,500 Indigenous mothers who gave birth in 2005–2007, 1.5% had pre-existing diabetes and 5.1% were diagnosed with gestational diabetes.
- Breastfeeding is important in promoting healthy growth and development, and offers protection against many conditions including diarrhoea and respiratory infections. In 2004–05, the breastfeeding rate in non-remote areas for Indigenous infants aged 1–3 years was 79%, compared with 88% for non-Indigenous infants (AHMAC 2008).

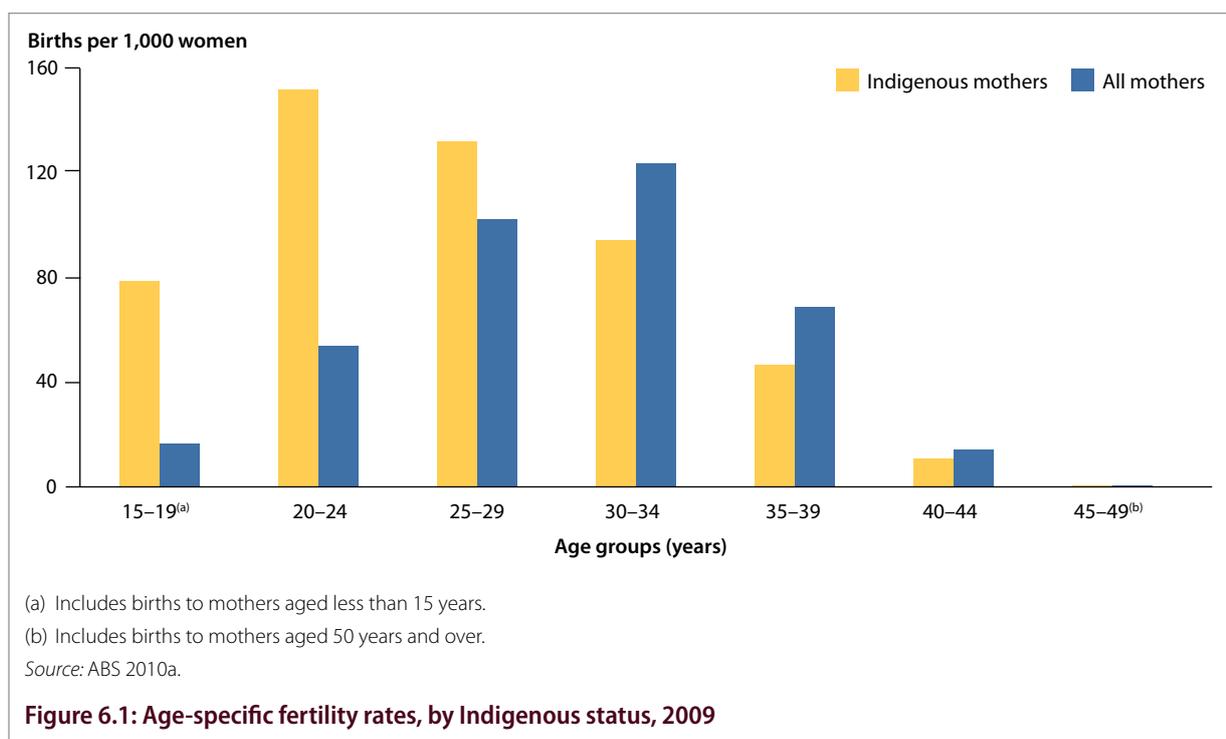
## Fertility patterns

Aboriginal and Torres Strait Islander women have a higher birth rate than non-Indigenous women. Of all mothers who gave birth in Australia in 2009, 4% were identified as being of Aboriginal and Torres Strait Islander origin. Births where at least one parent identified themselves as Indigenous accounted for 5% of all births (ABS 2010a).

In 2009, the total fertility rate for Indigenous women was 2.6 babies per woman, compared with 1.9 for all women in Australia (ABS 2010a). The total fertility rate is a summary measure that describes the average number of children a woman could expect to bear during her lifetime.

Indigenous women had higher birth rates at younger ages compared with all women in 2009 (Figure 6.1):

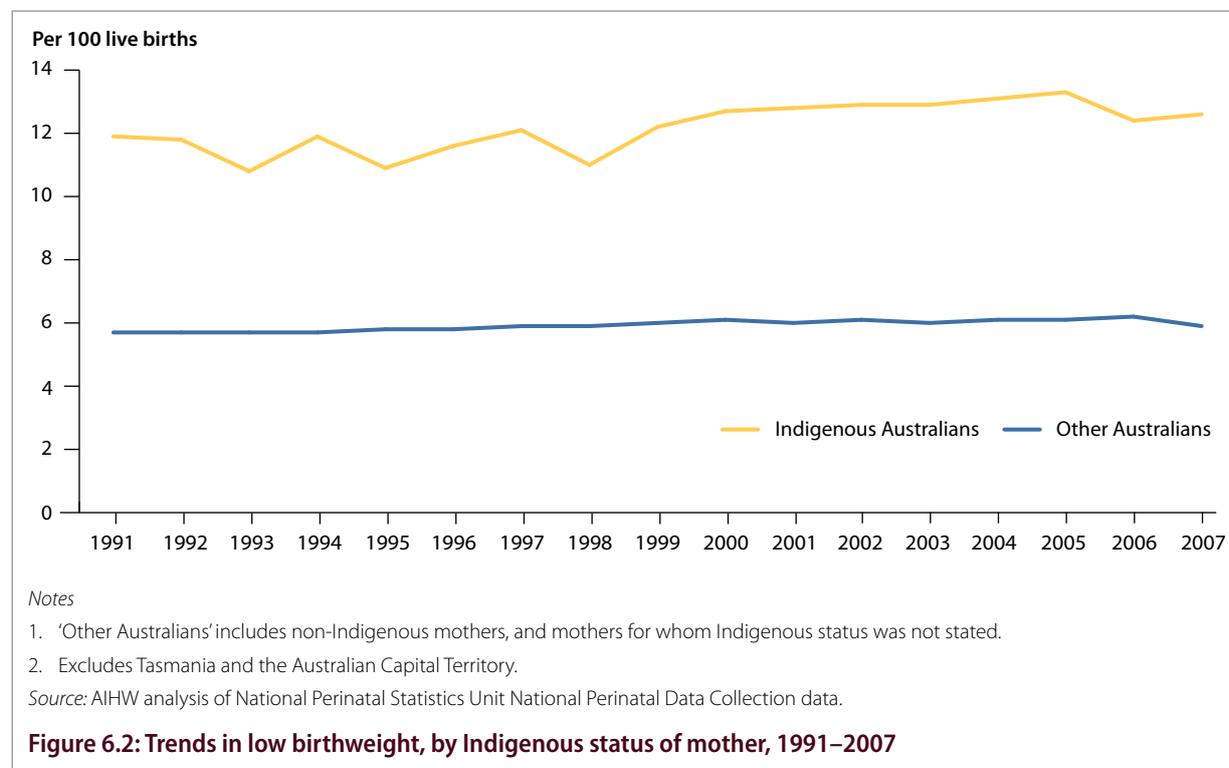
- The median age of Indigenous women who registered a birth was 24.5 years—6 years lower than the median age of all mothers (30.6 years).
- Births to Indigenous women aged less than 20 years amounted to 21%, compared with 4% for all women aged less than 20 years.
- The teenage fertility rate of Indigenous women (79 babies per 1,000 women) was almost 5 times the teenage fertility rate of all women (17 babies per 1,000 women).



## Birthweight

In 2005–2007, babies born to Indigenous Australian mothers were twice as likely to be of low birthweight (new babies weighing less than 2,500 grams) than babies born to other Australian mothers (13% compared with 6%). Low birthweight babies are at greater risk of poor health and death, require longer periods of hospitalisation after birth and are more likely to develop significant disabilities (Goldenberg & Culhane 2007). It has been suggested that reduced fetal growth is strongly associated with several chronic conditions later in life, including coronary heart disease, stroke, diabetes, and hypertension.

With the proportion of low birthweight babies born to Indigenous mothers growing, and the proportion born to non-Indigenous mother remaining steady, the gap has increased from about 5.5 percentage points in the 1990s to about 7 percentage points in 2007 (Figure 6.2).



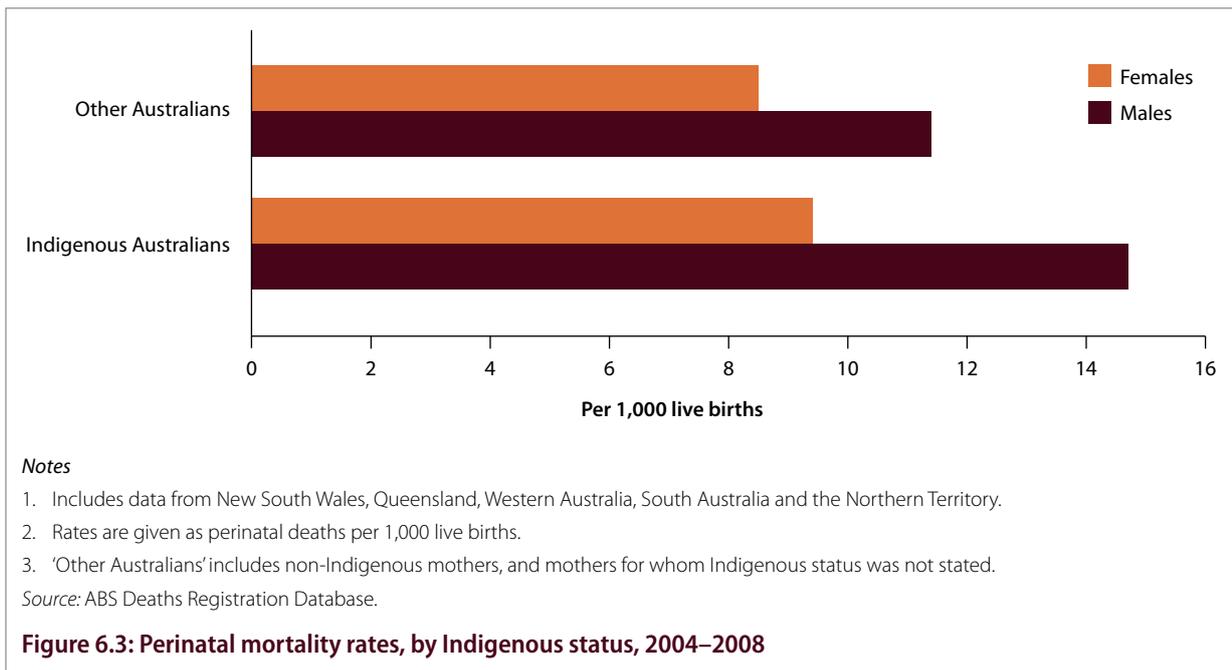
Various factors are known to contribute to low birthweight, including the mother's nutrition, smoking, alcohol intake, and illness during pregnancy, as well as multiple births (Ashdown-Lambert 2005; Moshin et al. 2003).

## Perinatal and infant mortality

Aboriginal and Torres Strait Islander babies have higher death rates, during both pregnancy and infancy, than non-Indigenous babies.

Perinatal mortality includes fetal deaths (stillbirths) and deaths of live-born babies within the first 28 days after birth (neonates). Over the period 2004–2008, the perinatal mortality rate for Indigenous babies was about 13 per 1,000 births compared with 9 per 1,000 births for other Australian babies (Figure 6.3).

The most common causes of Indigenous perinatal mortality were a group of conditions including birth trauma and disorders specific to the fetus/newborn (37%). Premature birth and inadequate fetal growth were contributing factors in one-third (33%) of deaths. The main conditions in the mother leading to perinatal deaths were complications of the placenta, cord and membranes (18%) (AHMAC forthcoming).



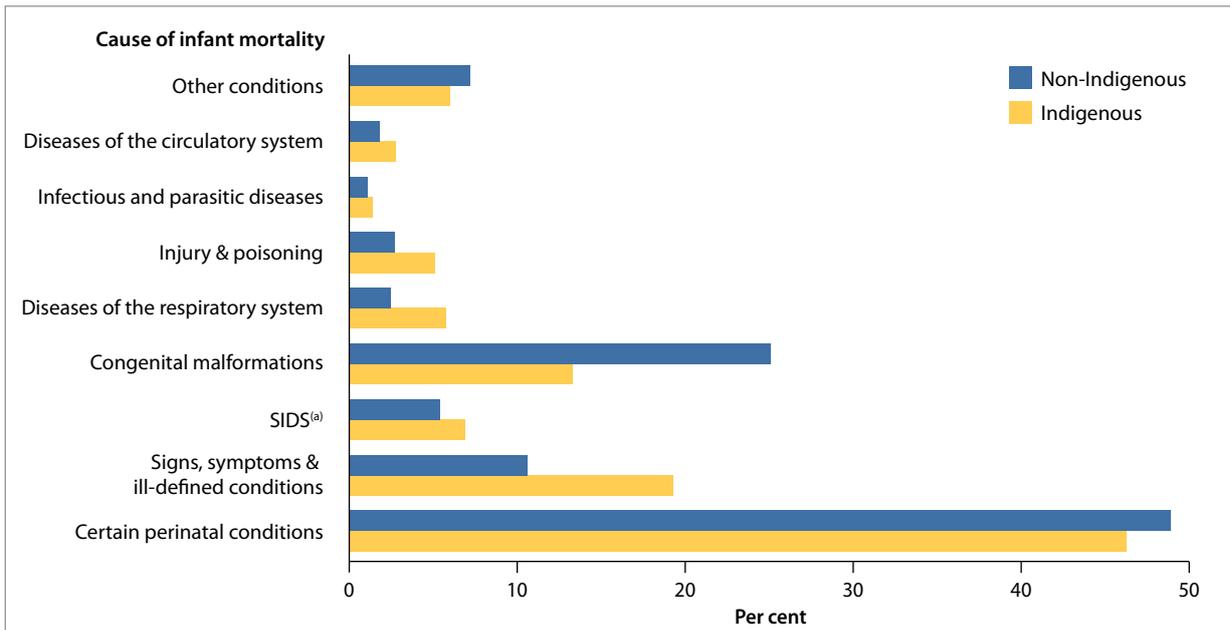
Infant mortality includes all deaths of newborns within the first 12 months of life. The Indigenous infant mortality rate for 2007–2009 was 7.8 per 1,000 live births—a fall from the 2004–2006 rate of 10.6 per 1,000, but almost double the non-Indigenous infant mortality rate of 4.0 per 1,000 (ABS 2009c).

- The Indigenous male infant mortality rate was a third higher (33%) than the female rate, at 8.9 compared with 6.7 per 1,000 births.

Figure 6.4 shows the leading causes of infant mortality for the 2004–2008 period:

- The most common cause of death among Indigenous infants included conditions originating in the perinatal period (46%) such as birth trauma, fetal growth, complications of pregnancy, and respiratory and cardiovascular disorders specific to the perinatal period.
- The second leading cause of death was signs, symptoms and ill-defined conditions (19%). This category includes sudden infant death syndrome (SIDS), which accounted for 7% of all Indigenous infant deaths.
- The third most common cause of infant deaths was congenital malformations, accounting for 13% of Indigenous infant deaths.

The contributions of various causes to non-Indigenous infant mortality were slightly different from those observed in Indigenous infant deaths. In particular, deaths due to congenital malformations were more common in non-Indigenous infants.



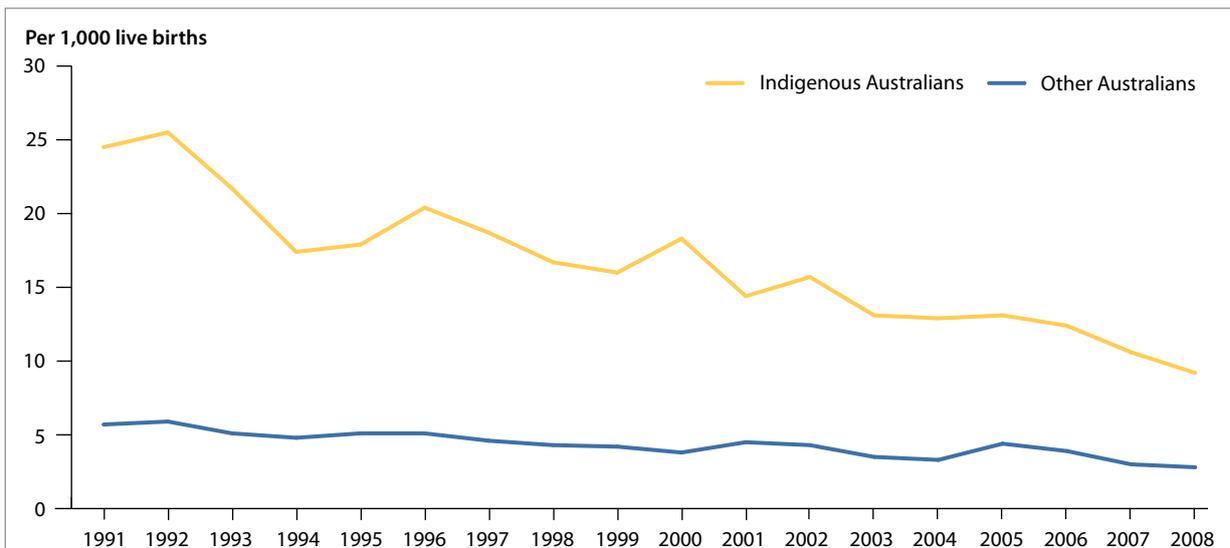
(a) SIDS is a subcategory of 'Symptoms, signs and ill-defined conditions'.

Note: Includes infant deaths from New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only.

Source: ABS analysis of National Mortality Database.

**Figure 6.4: Causes of infant mortality, by Indigenous status, 2004–2008**

The Indigenous infant mortality rate is declining faster than the non-Indigenous infant mortality rate (Figure 6.5). This trend has been noted consistently over the two decades to 2008. In 1991, the Indigenous infant mortality rate was 4.3 times as high as that of non-Indigenous infants. By 2008, the rate ratio was close to 3.3.



Notes

1. Includes infants from Western Australia, South Australia and the Northern Territory only.

2. 'Other Australians' includes deaths of non-Indigenous infants and those for whom Indigenous status was not stated.

Source: AIHW analysis of National Mortality Database

**Figure 6.5: Trends in infant mortality rates, by Indigenous status, 1991–2008**



Much variation was also noted in Indigenous infant mortality rates in various states and territories. In males, the range was from 9.2 per 1,000 live births in New South Wales to 19.6 per 1,000 in the Northern Territory in 2003–2007. Among Indigenous females, the infant mortality rate ranged from 6.7 in Queensland to 11.2 per 1,000 in the Northern Territory.

## 6.2 Children

Childhood and adolescence are periods of rapid physical growth and change (development of the body and motor coordination). Health disparities can often begin to accelerate during this formative period. This is particularly the case for Aboriginal and Torres Strait Islander children.

### Protection for life

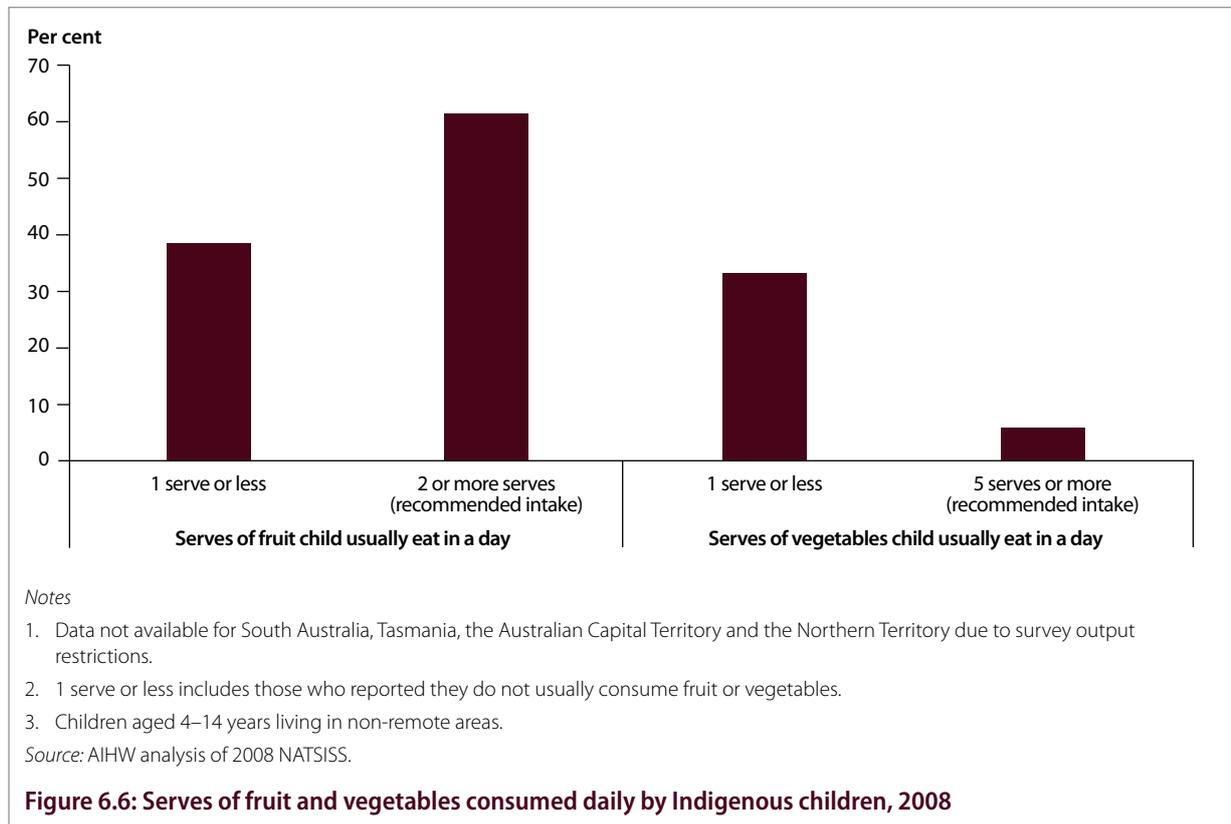
Positive parenting and disease prevention strategies not only reduce adverse health outcomes in childhood, but also set the stage for a healthy adult life. Prominent among these are immunisation and good diet and nutrition.

#### Vaccination

Indigenous children were less likely than non-Indigenous children to be fully vaccinated. In December 2009, vaccination coverage rates for Indigenous and non-Indigenous children aged 5 years were 78% and 83%, respectively. See Chapter 7 for more information on levels of immunisation.

#### Diet and nutrition

The nutritional levels of Indigenous children are lower than non-Indigenous children. The 2008 NATSISS found that among Indigenous children aged 4–14 years living in non-remote areas, 61% met the recommended daily fruit intake of 2 serves or more, and only 6% met the recommended daily vegetable intake of 5 serves or more (Figure 6.6).



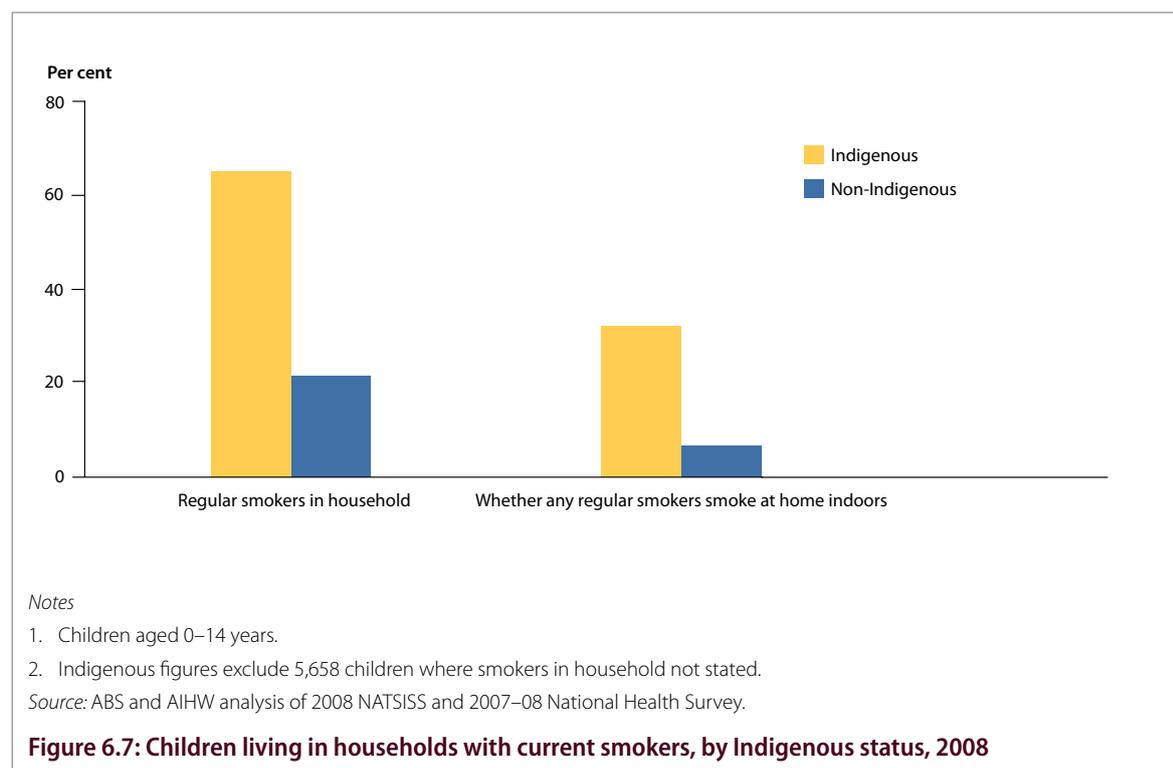
## A child's environment

A safe and nurturing environment is central to a child's physical and mental development. But too many children grow up in an environment of poverty, family dysfunction, deprivation and violence. Not only does this threaten healthy development, but research suggests that children who are maltreated are more likely to become juvenile offenders (Stewart et al. 2002), and have higher rates of injury-related hospital admissions (O'Donnell et al. 2010).

These problems are much greater for Aboriginal and Torres Strait Islander children. Two prominent examples are exposure to environmental tobacco smoke and violence in their homes and streets.

### *Exposure to environmental tobacco smoke*

Exposure to tobacco smoke increases a child's risk of ear infections, and developing asthma. In 2008, about 122,000 Indigenous children, aged 0–14 years, were living in households with a regular smoker (AHMAC forthcoming). That is, almost 2 out of 3 Indigenous children (65%) were exposed to environmental tobacco smoke, compared with less than 1 in 3 non-Indigenous children (32%). Indigenous children were also 3 times as likely as non-Indigenous children to live in households with a regular smoker who smoked at home indoors (Figure 6.7).

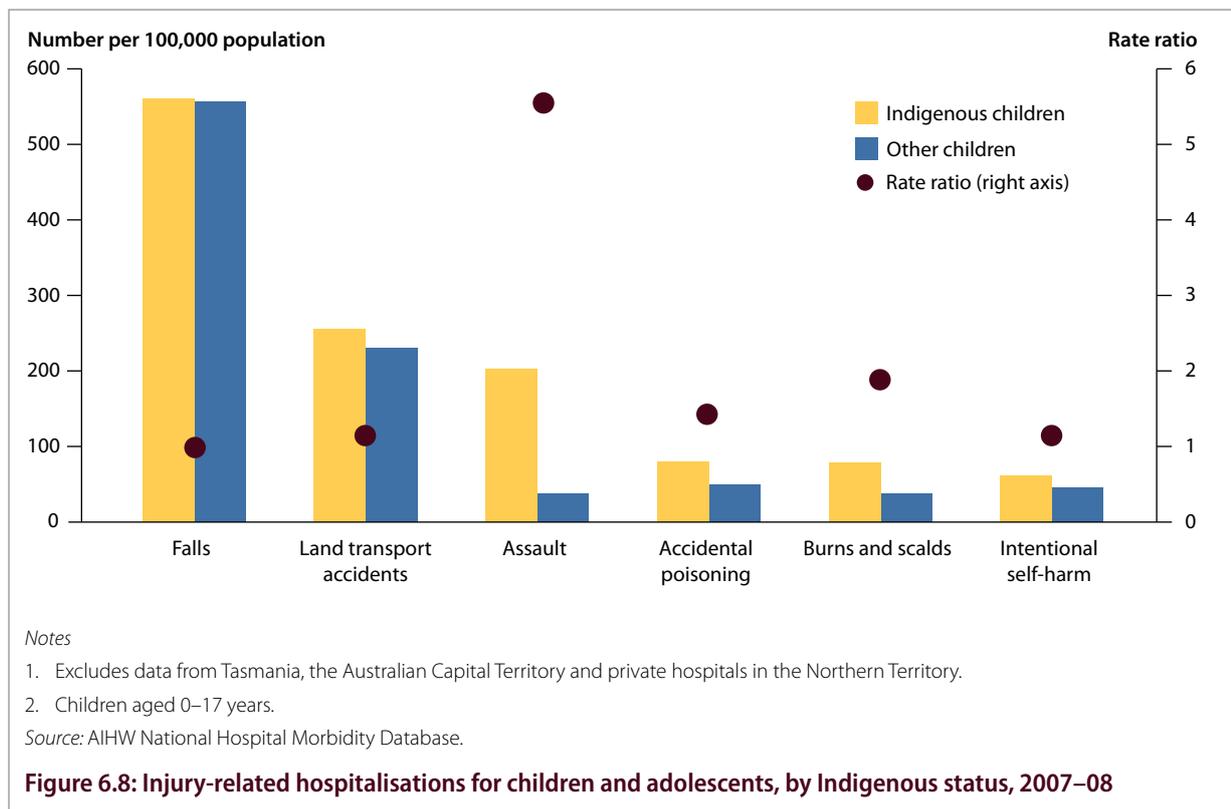


There was a slight reduction in the proportion of Indigenous children (aged 0–14 years) living in households with a regular smoker between 2004–05 and 2008, from 68% to 65%.

### *Injury and violence*

Aboriginal and Torres Strait Islander children have much higher exposure to violence, both in their homes and in the streets. They also come into contact with child protection and juvenile justice systems more often (see Chapter 3). Such unsafe living environments are reflected in higher rates of injury-related hospitalisation (and mortality) compared with non-Indigenous children. The immediate and long-term impact of injuries is another major aspect of the health of Indigenous children.

In 2007–08, the overall injury hospitalisation rate among Indigenous children and adolescents, aged 0–17 years, was 30% higher than for other Australian children. While the leading causes of injury-related hospitalisations for Indigenous children were the same as for other children—falls and land transport accidents—the rates were consistently higher for Indigenous children across all causes. In particular, the Indigenous hospitalisation rate for assault was more than 5 times the rate for other children. Indigenous children were also likely to be hospitalised for burns and scalds at twice the rate of other children (Figure 6.8).



Further information can be found in *Aboriginal and Torres Strait Islander child safety* (AIHW 2011b), available from the AIHW Indigenous observatory.

## Disease burden

Aboriginal and Torres Strait Islander children suffer more infectious and non-infectious diseases than non-Indigenous children. Many of these diseases have long-term consequences, in some cases leading to chronic diseases.

- The Northern Territory Emergency Response Child Health Check initiative found that nearly 12% of children examined had chronic suppurative otitis media—3 times the rate the World Health Organization classifies as a ‘massive public health problem’ (AIHW & DoHA 2009). Other populations classified with this level of prevalence include Tanzania, India and Guam (WHO 2004).
- The Northern Territory Surveillance Reporting Unit found a statistically significant increase in trachoma prevalence in four of the five regions surveyed between 2006 and 2008. The Northern Territory Emergency Response Child Health Check trachoma screening also found trachoma at endemic rates (more than 5%) in the majority of regions.
- Over the 2006–2009 period, Indigenous children (aged 5–14 years) living in the Top End of the Northern Territory and Central Australia accounted for almost two-thirds (62%) of all new and recurrent cases of acute rheumatic fever in Indigenous Australians. Very few cases of acute rheumatic fever were reported in non-Indigenous children.

- The pneumonia hospitalisation rate for Indigenous children, aged 0–4 years, was more than 3 times the rate for other children (15 and 4.3 per 1,000, respectively). A study has found the rate of pneumonia in Indigenous infants hospitalised in the Central Australian region to be among the highest reported in the world (O’Grady et al. 2010). Another study of Western Australian Indigenous children reported the rate of hospitalisation for pneumonia as 14 times the rate of non-Indigenous children (Carville et al. 2007).

## Childhood mortality

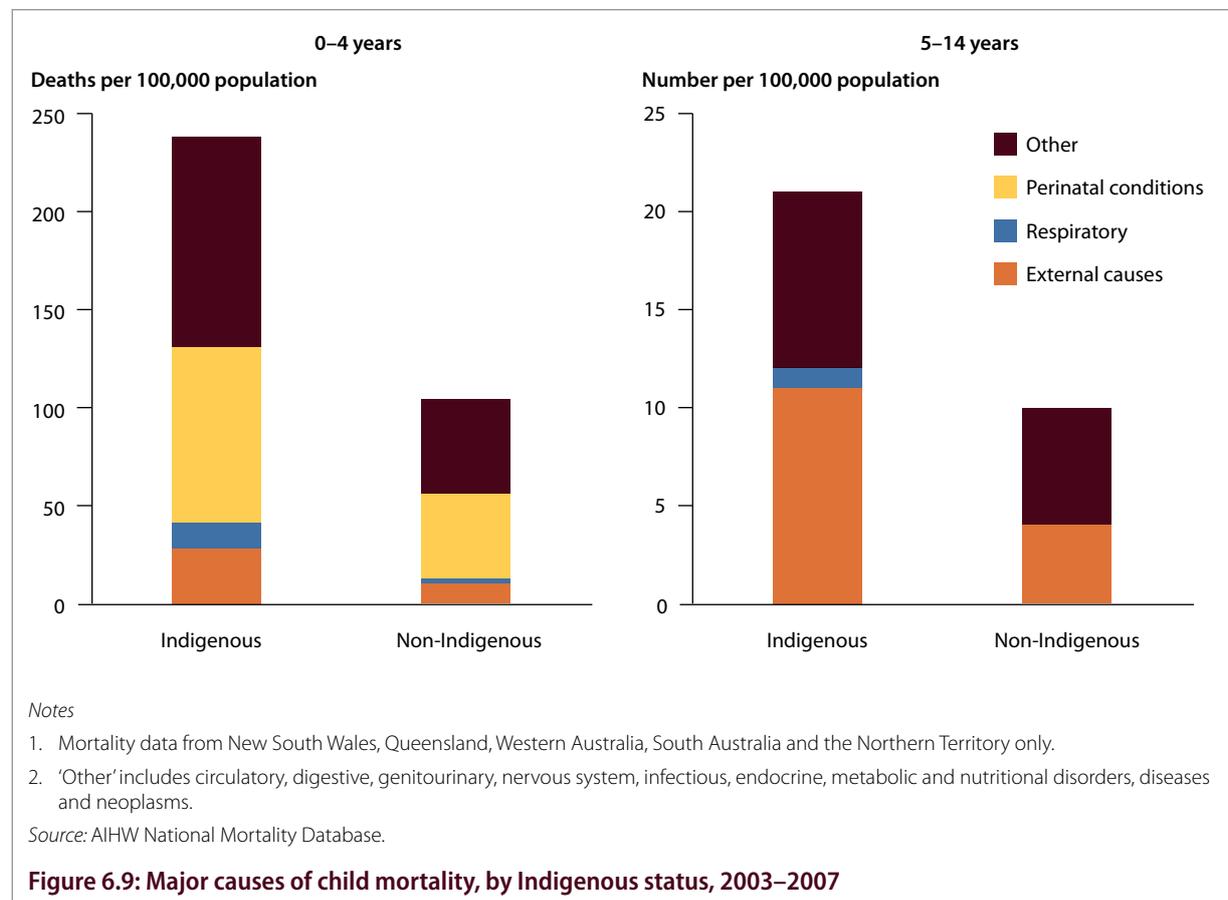
During 2003–2007, there were 817 deaths of Aboriginal and Torres Strait Islander children, aged 0–14 years, in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined. Indigenous children aged 0–14 years died at more than twice the rate of non-Indigenous children (Figure 6.9).

For Indigenous children aged 0–4 years:

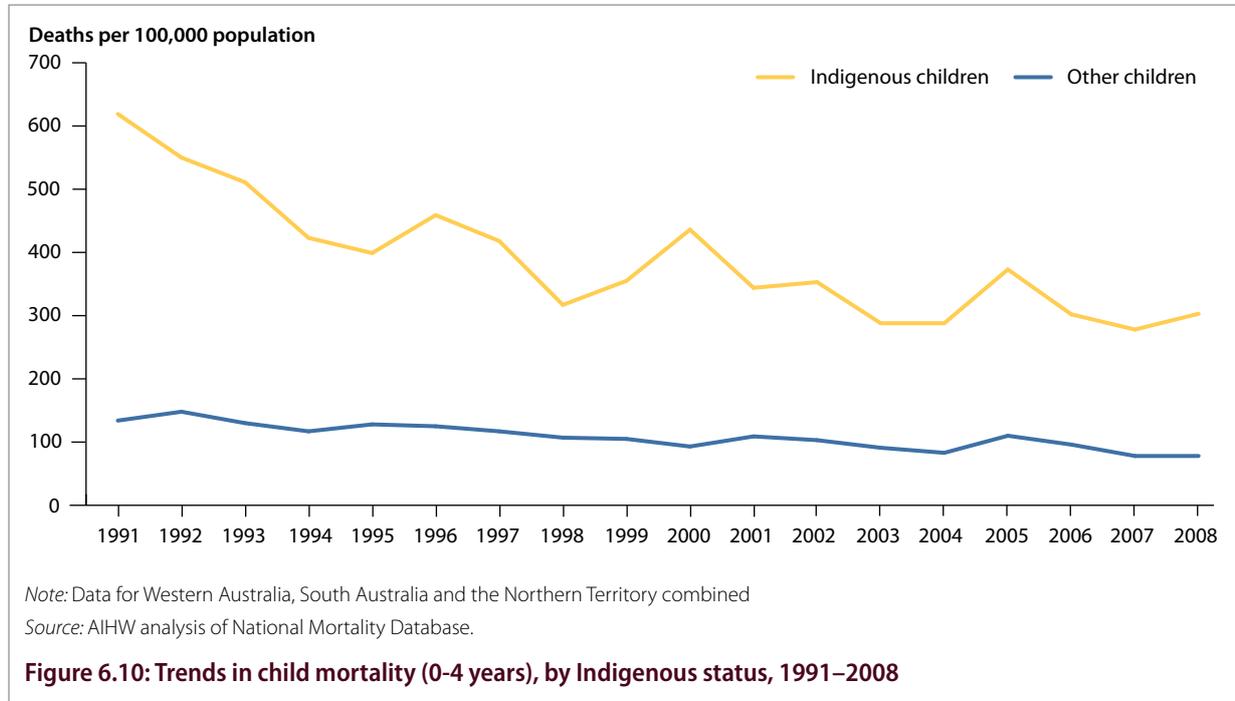
- perinatal conditions were the leading cause of death—more than twice the rate for non-Indigenous children
- external causes were the second leading cause of death—nearly 3 times the rate for non-Indigenous children
- respiratory diseases were the third leading cause—more than 4 times the rate for non-Indigenous children.

For those aged 5–14 years:

- external causes were the leading cause of death—3 times the rate for non-Indigenous children—and accounting for half of all Indigenous deaths in this age group.



Mortality rates of Indigenous children aged less than 5 years have been decreasing over the two decades to 2008 from more than 600 deaths per 100,000 in 1991 to about 300 in recent years (Figure 6.10). There are still significant disparities between the rates for Indigenous and non-Indigenous children. It is a COAG target to halve the gap in mortality rates for Indigenous children under 5 years by 2018.

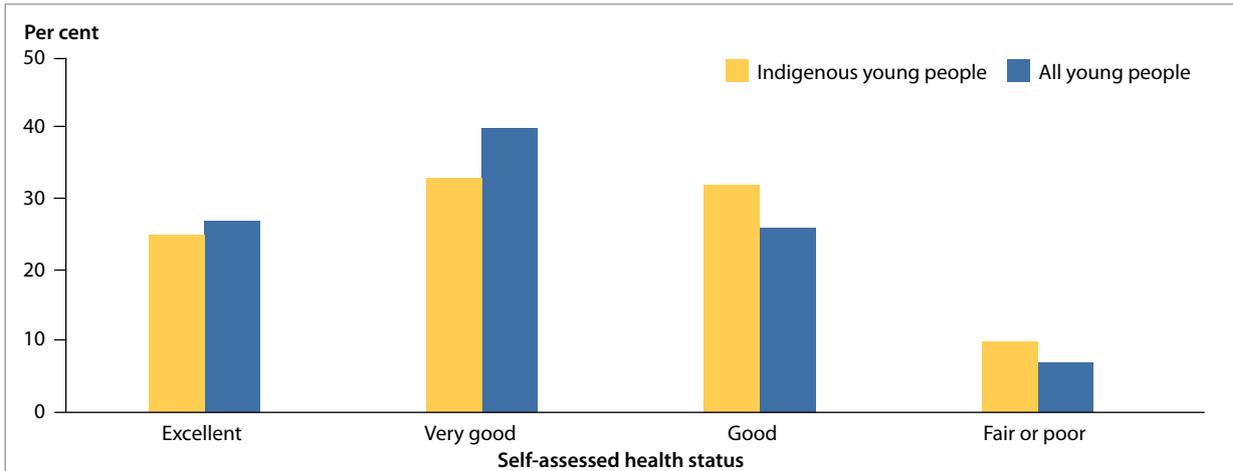


### 6.3 Young people

In this report, youth covers the period from puberty through to young adulthood. Over this period, the primary influences on a young person’s development and behaviour shift away from the direct actions of their carers towards their own decisions, networks and experiences. This is a period of physical and intellectual maturation.

There were an estimated 138,400 young Aboriginal and Torres Strait Islander people aged 12–24 years in 2006, representing 3.7% of all Australians in that age group. This age group accounted for more than one-quarter of the total Indigenous population (27%), a significantly higher proportion than in the non-Indigenous population (18%) (ABS 2008a).

Young people mostly assess their health positively. More than 9 out of 10 young Indigenous Australians, aged 15–24 years, rated their health as ‘excellent’, ‘very good’ or ‘good’ in 2008 (Figure 6.11). The proportion was slightly less than that reported by all Australian youth in 2007–08, but this difference was not statistically significant.



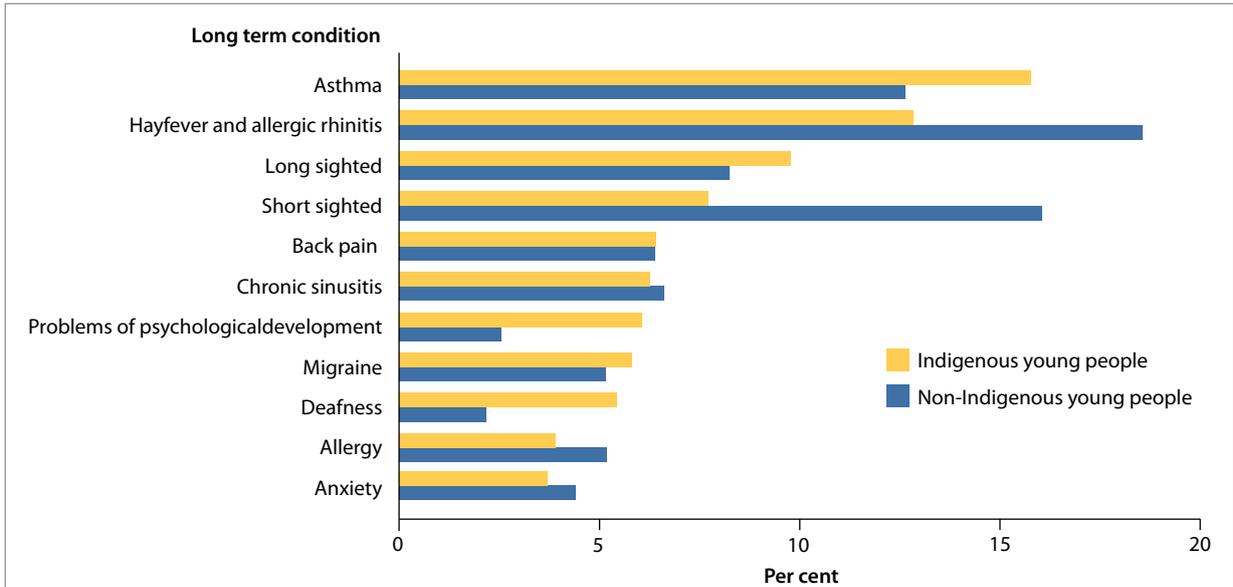
Note: Persons aged 15–24 years.  
 Source: AIHW analysis of 2008 NATSISS and 2007–08 National Health Survey.

**Figure 6.11: Self-assessed health status of young people, by Indigenous status, 2008**

### Disease and injury

Several diseases can take hold in these formative years. Most prominent of these are mental health problems and disorders, with interpersonal violence and intentional injuries constituting another major feature of this age group. Even unintentional injuries, such as those resulting from transport accidents, are more common. The pattern of disease and injury in young Aboriginal and Torres Strait Islander people is no different from that seen among other young people; however, the extent of the problem varies and in some cases is extraordinarily high.

In a 2004–05 assessment of the health of Indigenous young people (aged 12–24 years), 59% of young Indigenous Australians self-reported they had a long-term condition (Figure 6.12), with about 34% reporting two or more long-term conditions.



Note: Persons aged 12–24 years.  
 Source: AIHW analysis of the 2004–05 NATSIHS and 2004–05 National Health Survey.

**Figure 6.12: Common long-term conditions among young people, by Indigenous status, 2004–05**

### *Asthma*

Asthma was the most commonly reported long-term condition (16%) among young Aboriginal and Torres Strait Islander people in 2004–05. Hay fever and allergic rhinitis (14%) were also reported commonly by Indigenous young people during the 2004–05 NATSIHS.

The prevalence of asthma among Indigenous young people was not significantly different than that noted among non-Indigenous young people. Hay fever and allergic rhinitis on the other hand were significantly less common among Indigenous youth when compared with their non-Indigenous counterparts.

### *Diabetes*

Despite the high prevalence among Indigenous adults, diabetes is relatively less common among Indigenous young people. Type 1 diabetes, which commonly starts in this age group, is less prevalent in Indigenous than non-Indigenous young people. According to the National Diabetes Register, the incidence rate of Type 1 diabetes among Indigenous young people (aged 15–24 years) was 9 per 100,000 population in 2005–2007 compared with 13 per 100,000 population for non-Indigenous young people. But overweight (and obesity), a major risk factor for Type 2 diabetes, begins to take hold among Indigenous young people in this age group.

Hospitalisation for diabetes is more common among Indigenous than other young people. Based on 2008–2009 data from the National Hospital Morbidity Database, the hospitalisation rate for all types of diabetes was 2.4 times as high for Indigenous as for other young people.

### *Hearing problems*

Indigenous young people have one of the highest rates of hearing impairments (and loss) in Australia. Based on data from the 2004–05 NATSIHS, 8% of Indigenous young people aged 12–24 years had an ear disease. Compared with data from the 2004–05 National Health Survey, this was more than twice the rate among non-Indigenous young people (3%).

Otitis media, a common cause of hearing loss, was more prevalent among Indigenous young people than young people overall (1.6% and 0.4%, respectively). As a result of these ear diseases, Indigenous young people suffered from complete or partial deafness (5%) at more than twice the rates of that for non-Indigenous young people (2%).

### *Psychological distress and mental health*

The 2008 NATSISS found that almost one-third (33%) of Aboriginal and Torres Strait Islander young people (aged 18–24 years) had high or very high levels of psychological distress—more than twice the rate for non-Indigenous young people reported in the 2007–08 National Health Survey (14%).

Reflecting the higher prevalence of psychological distress, Indigenous young people were hospitalised much more commonly for mental and behavioural disorders. In 2008–09, there were a total of 2,643 hospitalisations for mental and behavioural disorders of Indigenous young people aged 12–24 years, a rate of 2,535 per 100,000 population. This was 3 times the rate for non-Indigenous young people that year. The leading causes for Indigenous young people were schizophrenia (306 per 100,000 persons), alcohol misuse (348 per 100,000) and reactions to severe stress (266 per 100,000).

Data from the 2004–05 health surveys show that Indigenous young people suffered from problems of psychological development at more than twice the rate of non-Indigenous young people.

### *Injury and poisoning*

In 2008–09, among Indigenous young people aged 15–24 years there were 4,003 hospitalisations due to injury, a rate of 3,809 per 100,000, 1.7 times the rate for other young people (2,243 per 100,000).

Assault was the most common cause of injury hospitalisation for Indigenous young people (1,195 per 100,000 population), almost 5 times that of other young people (229 per 100,000). The next most common injury types were exposure to inanimate mechanical forces (591 per 100,000) and transport accidents (500 per 100,000).

## **Health behaviours**

Many health-related behaviours can develop during adolescence, and can become lifelong habits causing various health problems later in life. Tobacco smoking, alcohol consumption and substance use are common health risk behaviours in this particular age group. The diet of many young people can also be low on certain important foods.

### *Tobacco smoking*

ABS and AIHW analysis of the 2008 NATSISS and 2007-08 National Health Survey showed that 4 in 10 young Indigenous Australians (aged 15–24 years) were daily smokers, more than twice the rate of non-Indigenous young people (16%). Analysis of the 2004–05 NATSIHS and National Health Survey also showed that Indigenous adolescents (aged 12–17 years) were far more likely to be exposed to environmental tobacco smoke—nearly 3 times as likely as all adolescents to live in households where a daily smoker smoked inside the home.

### *Alcohol consumption*

Harm from alcohol consumption is higher among young Indigenous Australians. Indigenous young people aged 18–24 years were more likely than non-Indigenous young people to drink at risky or high-risk levels for short-term harm at least once a week (23% and 15% respectively) in 2004–05. However similar proportions of Indigenous and non-Indigenous young people drank at risky or high-risk levels for long-term harm (16% and 14% respectively).

### *Other substance use*

Young Aboriginal and Torres Strait Islander people are also at increased risk of ill health through the harmful use of substances such as marijuana, heroin, amphetamines and inhalants. According to the 2008 NATSISS, an estimated 13% of Indigenous young people (aged 15–24 years) living in non-remote areas had used an illicit substance within the previous 12 months. More than one-third (37%) reported using an illicit substance at least once in their lifetime.

Marijuana was the substance most often used (10% of Indigenous young people), followed by pain killers or analgesics used for non-medical purposes (3%), and amphetamines or speed (2%).

### *Diet and nutrition*

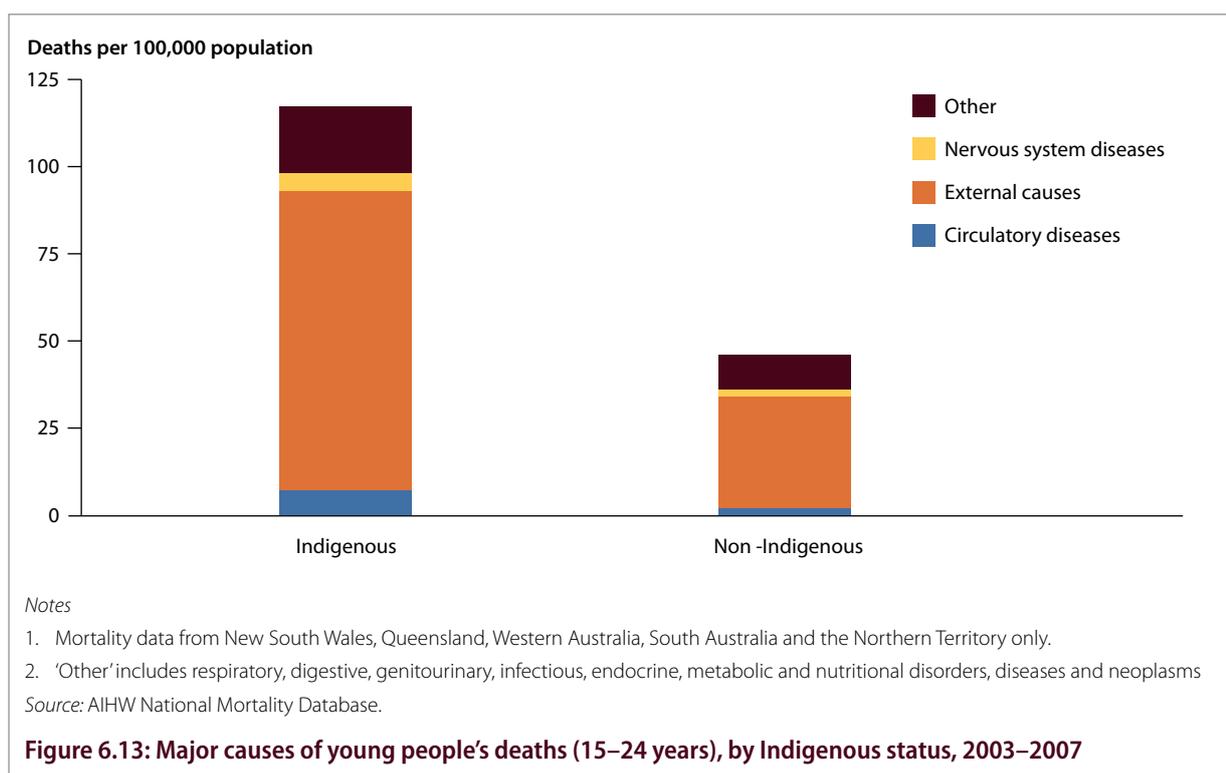
The diet and nutrition of young people in general is low on fruit and vegetables. They are less likely to meet the daily recommended serves of fruit and vegetables, and this is particularly the case for young Aboriginal and Torres Strait Islander people. Based on 2004–05 health survey data, only 5% of Indigenous young people had the daily recommended serves of fruit and vegetables compared with 8% of non-Indigenous young people.

## **Youth mortality**

Deaths of young Aboriginal and Torres Strait Islander people are disproportionate to their population size. During 2003–2007, more than 1 in 10 deaths of young people aged 12–24 years were identified as Indigenous. The death rate for Indigenous young people was 2.5 times as high as the rate for non-Indigenous young people, at 91 and 37 deaths per 100,000 population, respectively.

As with all deaths of young people, the death rate for young Indigenous males was twice as high as for young Indigenous females (154 and 71 per 100,000, respectively). The Indigenous youth death rate also increased with age, from 33 per 100,000 population for those aged 12–14 years, to 90 for those aged 15–19 years, to 141 for those aged 20–24 years.

External causes, which include injury and poisoning, was the leading cause of death among Indigenous young people aged 15–24 years—nearly 3 times that for non-Indigenous young people (84 compared with 31 per 100,000 population, respectively) (Figure 6.13).



More information on Indigenous youth can be found in the publication *Young Australians: their health and wellbeing 2011* (AIHW forthcoming b).

## 6.4 Older people

Small in demographic numbers, older Aboriginal and Torres Strait Islander people play a central role in maintaining traditions and links to culture and traditions (Cotter et al. 2007). Because of their lower life expectancy, those aged 50 years and over are designated as older Indigenous Australians.

There were almost 60,000 Indigenous Australians aged 50 years and over in 2006, comprising 12% of the total Indigenous population, with one-quarter of them aged 65 years and over. The Indigenous age distribution differs considerably from the non-Indigenous population, where nearly a third (31%) were aged 50 years and over in 2006, and nearly 13% were aged 65 years and over (ABS 2009d).

### Health and disability

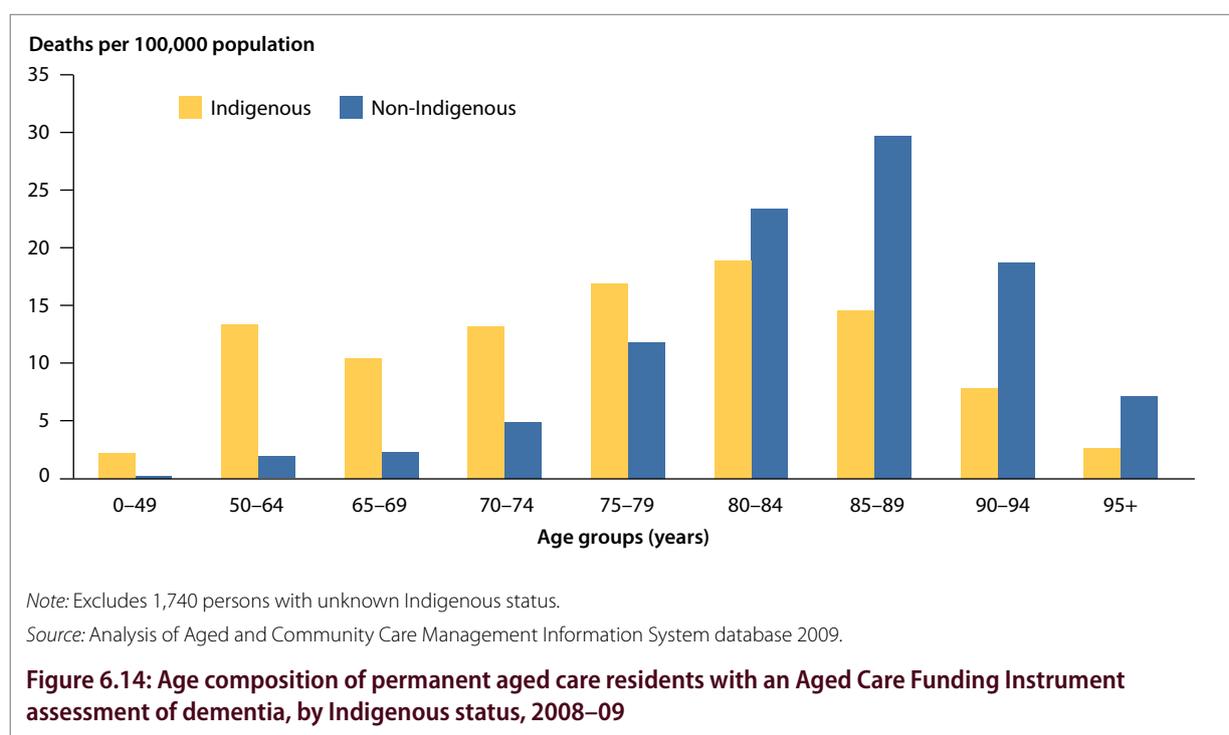
Only a quarter of older Aboriginal and Torres Strait Islander people (24%) rated their health as excellent/very good in the 2008 NATSISS (ABS 2010b). About 44% of older Indigenous Australians reported their health status as fair/poor. However, the level of psychological distress reported was on par with that reported by younger Indigenous Australians.

About 16% of older Indigenous Australians reported profound or severe core activity limitations (ABS 2010b), meaning they sometimes or always needed help with self-care, mobility, or communication tasks.

## Main conditions causing ill health

Cardiovascular disease is the leading cause of the disease burden among older Aboriginal and Torres Strait Islander people (Vos et al. 2007). Malignant neoplasms (cancer), diabetes, chronic respiratory disease, and nervous system and sense disorders are the other major causes of disease burden.

Dementia is a significant problem among older Indigenous Australians. In 2008–09, about 600 Indigenous aged care residents and about 102,000 other Australian residents had an Aged Care Funding Instrument assessment of dementia. A much higher proportion of Indigenous residents with dementia were aged less than 75 years—39% compared with 9% of non-Indigenous residents (Figure 6.14).

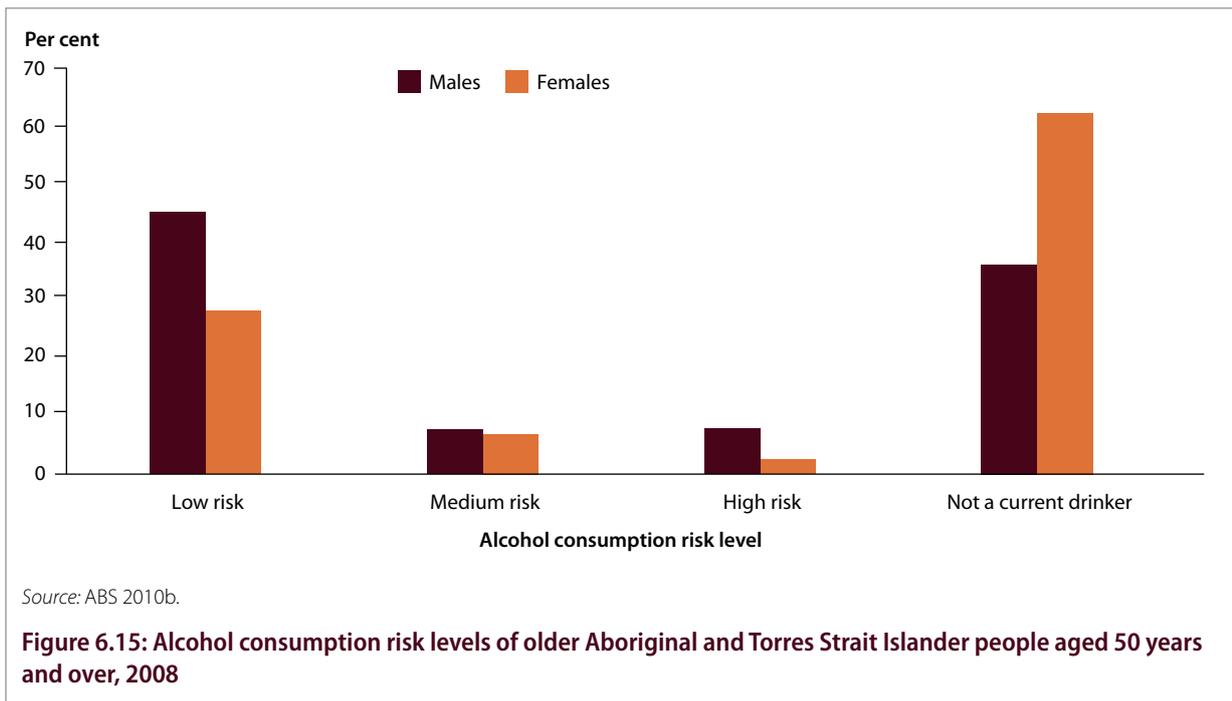


## Health risk factors

### Excessive alcohol consumption

According to the 2008 NATSISS, 5.0% of Aboriginal and Torres Strait Islander people aged 50 years and over consumed alcohol at high-risk levels, compared with 5.7% of Indigenous Australians in the 15–24 year age group. Half (50%) of the older age group never consumed or had not consumed alcohol in the previous 12 months, compared with 36% in the 15–24 year age group.

Indigenous women aged 50 years and over were more likely than Indigenous men to not be current drinkers (62% compared with 36%) (Figure 6.15).

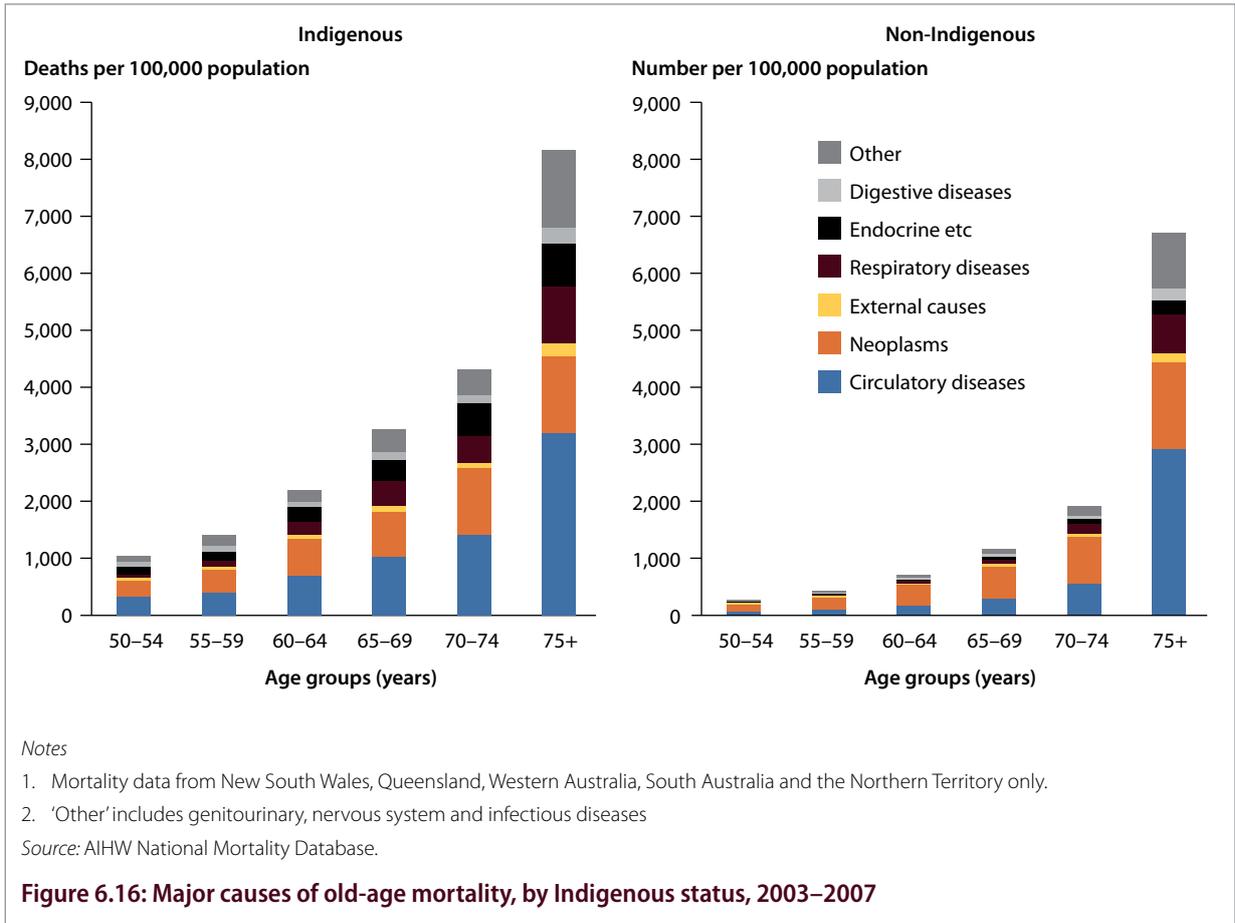


### Smoking

In the 2008 NATSISS, about one-third of Indigenous Aboriginal and Torres Strait Islander people aged 50 years and over reported being current smokers (36%), being ex-smokers (34%) or having never smoked (30%). A higher proportion of Indigenous women than men in this age group reported they had never smoked (38% compared with 21%) (ABS 2010b).

### Old-age mortality

The patterns of old-age mortality vary between the Indigenous and non-Indigenous populations (Figure 6.16). Mortality rates for Indigenous Australians aged 50–74 years were more than double the non-Indigenous rates between 2003 and 2007. While neoplasms accounted for about half of all deaths of non-Indigenous Australians aged 50–69 years, they accounted for less than one-third of all deaths of Indigenous Australians in that age group.



Further information can be found in *Older Aboriginal and Torres Strait Islander people* (AIHW 2011k), available from the AIHW Indigenous observatory.



# Chapter 7

## **Health care and other support services**



## 7 Health care and other support services

Access to quality care is important to help tackle the health disadvantage experienced by Aboriginal and Torres Strait Islander people. The issue is not only the provision of services, but also the effectiveness of care provided. This chapter looks at the use of health care and other support services by Indigenous Australians.

The nature and extent of health care needs of Indigenous Australians differ considerably from those of non-Indigenous Australians. The higher prevalence of disease increases the need for health care services. Disability support, aged care and housing support services are also used by Indigenous Australians at higher rates than other Australians. Several programs, both mainstream and Indigenous specific, have been developed to provide these services.

Further information on Indigenous health services can also be found in *Access to health services for Aboriginal and Torres Strait Islander people* (AIHW 2011d) available from the AIHW Indigenous observatory.

### 7.1 Preventive care

Preventive care is the first component of the health care continuum. Health promotion, vaccination, disease screening, and regular health checks all help prevent or delay the onset of a variety of conditions.

Various specific programs and initiatives have been developed, and existing ones tailored, to focus specifically on the health problems that affect Indigenous Australians. These programs are in addition to the nationwide prevention efforts by government and non-government agencies.

#### Health promotion

Health promotion includes lifestyle advice, social marketing, mass media campaigns and public policy interventions. Health promotion also includes promoting social responsibility for health, empowering individuals, and strengthening community capacity.

Based on data from the BEACH survey period 2004–05 to 2008–09, it is estimated that selected clinical treatments related to health promotion were provided in about 31% of GP encounters for Indigenous patients (AHMAC forthcoming). The most common of these were general (unspecified) advice/education, which was provided in an estimated 8.5% of GP encounters with Indigenous patients. This was followed by advice/education related to treatment (6.3% of encounters) and counselling/advice relating to nutrition and weight (6.2%), particularly for those with diabetes.

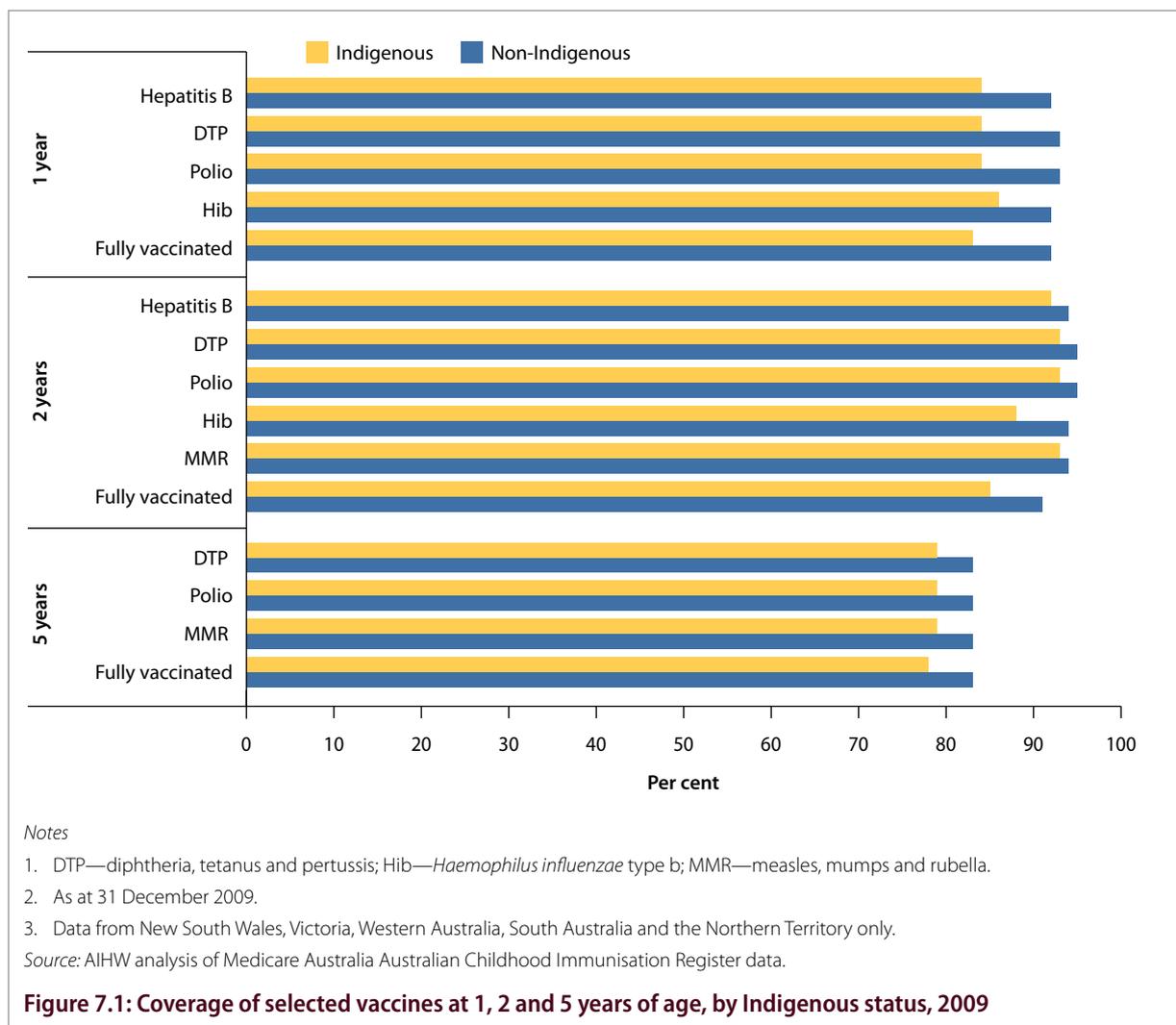
In 2007–08, 94% of Aboriginal and Torres Strait Islander primary health care services offered health promotion/education programs, 80% organised influenza vaccination and women's health programs, 79% organised pneumococcal vaccination, child vaccination and supplied free condoms, and 75% ran men's health programs. Health promotion activities are also a key feature of programs run by Aboriginal and Torres Strait Islander services specific to substance use.

#### Vaccination

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).

Aboriginal and Torres Strait Islander children are less likely than non-Indigenous children to be fully vaccinated. In December 2009, 83% of Indigenous children aged 1 year were fully vaccinated, compared with 92% of non-Indigenous children of the same age (Figure 7.1). The gap was narrower among

children aged 2 years, with the coverage of several vaccines exceeding 90% for both Indigenous and non-Indigenous children. However, the vaccination coverage was below 90% for both Indigenous and non-Indigenous children aged 5 years.



In addition to the above vaccines, hepatitis A and pneumococcal polysaccharide vaccines are available to Indigenous children in Queensland, South Australia, Western Australia and the Northern Territory through the National Immunisation Program Schedule. Coverage rates for both vaccines have risen to more than 50% since their addition to the schedule (Hull et al. 2010).

### Screening activities

Population-based screening activities focus on detecting diseases in their early or pre-disease stages to reduce morbidity and mortality. Screening for a variety of diseases is available to Australians with no apparent symptoms.

The BreastScreen Australia program, aimed at detecting early stage breast cancer, focuses on women aged 50–69 years, although women aged 40 years and over may also receive free screening (AIHW 2010c). In 2007 and 2008, more than one-third (36%) of Indigenous women in the target age group participated in BreastScreen Australia programs—a much lower proportion than the participation rate for non-Indigenous Australians (55%).

Aboriginal and Torres Strait Islander primary health care services also do various disease screening activities. While no volume-based data are available about the number of Indigenous Australians using these services, Table 7.1 shows the proportion of Indigenous Primary Health Care Services that provided particular screening services in 2008–09:

- PAP test/cervical screening and well person's checks were the most common types of screening activity provided—each reported by 80% of the services.
- More than 70% of the services also offered screening for sexually-transmissible infections (STI), hearing and diabetes.

There has been a considerable increase between 2001–02 and 2008–09 in the provision of screening by these services:

- The proportion of services offering screening for cardiovascular problems rose from 49% to 66%.
- The proportion of services offering sexually-transmissible infections screening rose from 65% to 73%.

However, the proportion of services offering child growth monitoring fell from 76% to 64% over the period.

**Table 7.1: Provision of disease screening by Aboriginal and Torres Strait Islander primary health care services, 2001–02 to 2008–09**

Screening activity	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
	Per cent							
Well person's checks	66	64	64	63	65	76	69	80
PAP tests/cervical screening	79	73	79	77	75	76	75	80
STI screening	65	66	64	65	63	67	64	73
Hearing screening	72	73	72	70	71	76	71	72
Eye disease screening	63	66	65	70	64	73	65	69
Renal disease screening	44	46	50	50	43	51	50	54
Diabetes screening	77	79	82	80	77	79	76	78
Cardiovascular screening	49	54	57	60	53	64	59	66
Child growth monitoring	76	75	71	72	65	72	72	64

Note: 2008–09 Office for Aboriginal and Torres Strait Islander Health Services Reporting data counts all auspice services individually when calculating rates, so caution should be exercised when comparing rates with earlier data collection periods.

Sources: AHMAC forthcoming.

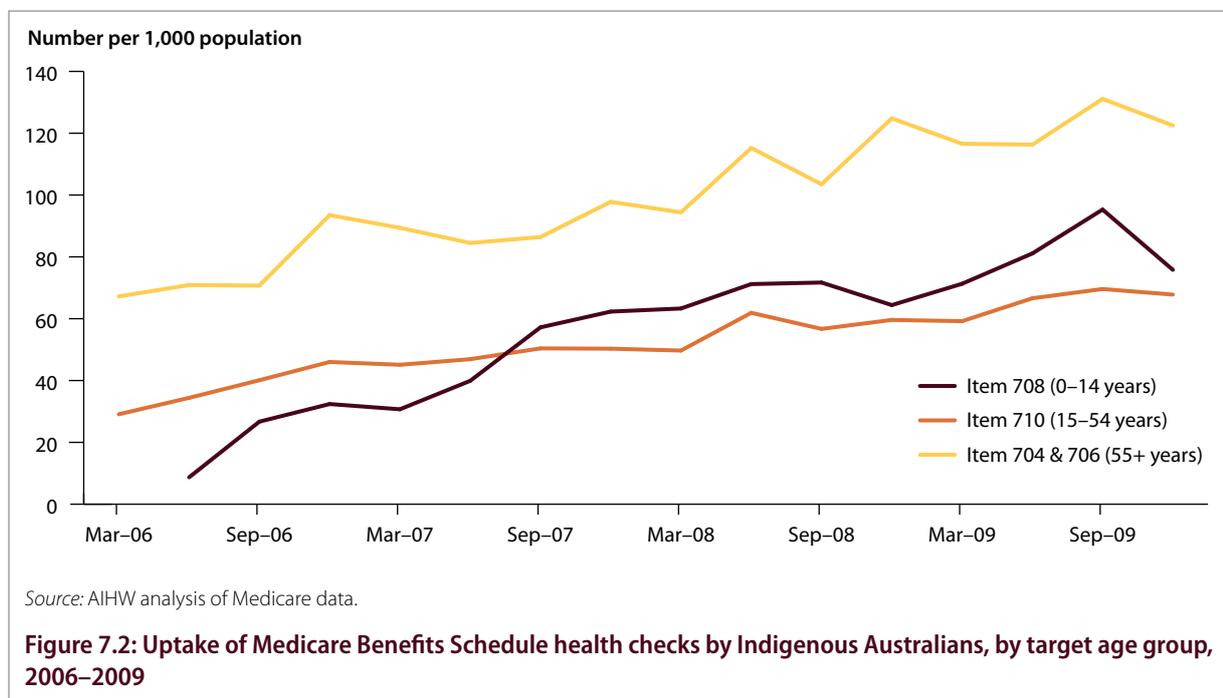
## Health checks and assessments

Several item numbers are available under the Medicare Benefits Schedule to encourage primary care providers to carry out regular health assessments, including some specific items for Aboriginal and Torres Strait Islander patients.

In 2008–09, primary care providers carried out:

- 72 Indigenous child health checks per 1,000 population (item number 708—annual checks recommended for children aged 0–14 years)
- 61 Indigenous adult health checks per 1,000 population (item number 710—biennial checks recommended for patients aged 15–54 years)
- 115 Indigenous older person health checks per 1,000 population (item numbers 704 & 706—annual checks recommended for individuals aged 55 years or over).

There have been considerable increases in the usage rate of these health checks between 2006 and 2009 (Figure 7.2). In particular, the health checks of older Indigenous Australians in the September quarter of 2009 were twice the rate recorded in the March quarter of 2006.



## 7.2 Primary and community health services

### GP consultations

Based on 2009–10 Medicare data, Indigenous Australians accessed mainstream non-referred GP-type service at a similar rate as non-Indigenous Australians (about 5,630 compared with 5,550 per 1,000 population), although Indigenous Australians had a higher rate of long/complex consultations compared with non-Indigenous Australians (AHMAC forthcoming).

According to the BEACH survey of GPs, between April 2005 and March 2010, 1.2% of patients visiting GPs were of Aboriginal or Torres Strait Islander origin. Indigenous Australians had:

- higher management rates for diabetes, infections, asthma and drug use
- lower management rates for cardiovascular diseases, particularly hypertension, lipid disorders and oesophageal disease
- lower rates of preventive measures such as immunisation/vaccinations and cardiac check-ups (mainly blood pressure) (Fahrudin & Britt 2009).

### Aboriginal Community Controlled Health Services

In 2008–09 the Australian Government provided funding through the Office for Aboriginal and Torres Strait Islander Health to 211 primary health care services. Two-thirds of the services were located in *Outer Regional*, *Remote* or *Very Remote* areas. Based on data from 191 of these services, 2.1 million episodes of care were provided (AIHW 2010a). Note that a number of these services are also reimbursed through Medicare and included in the GP consultation figures above.

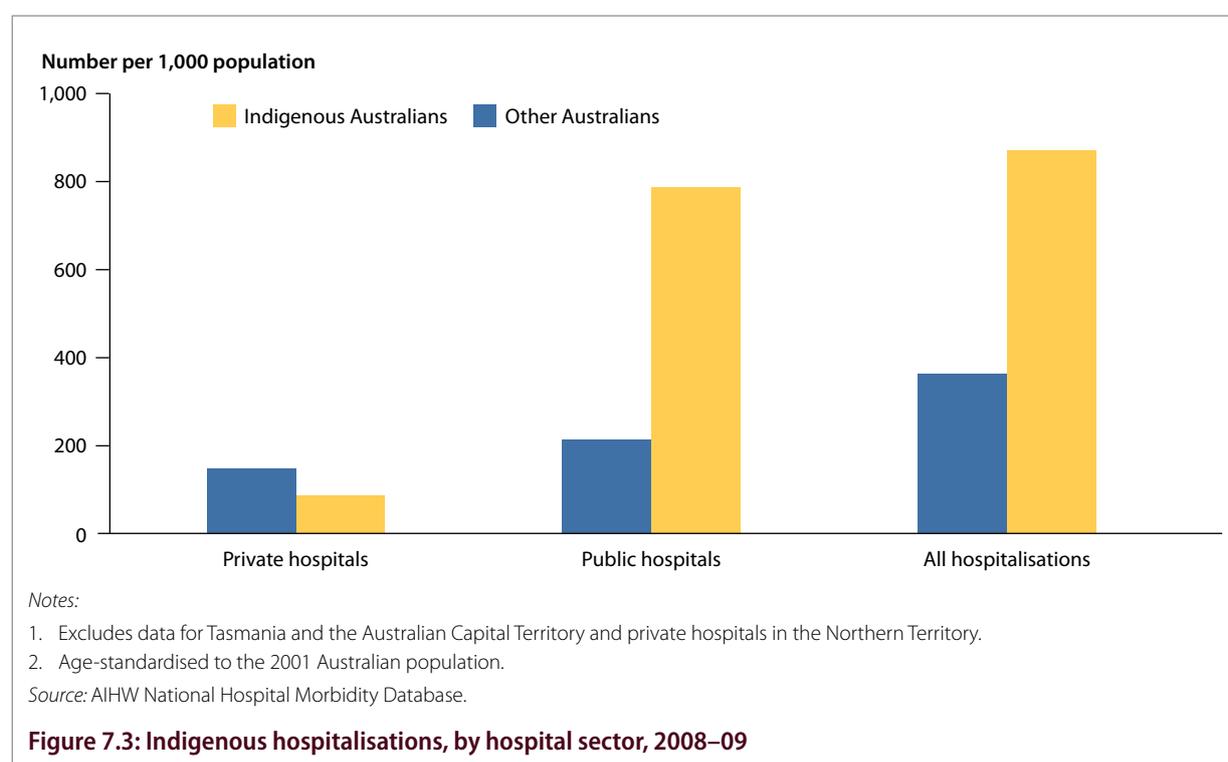
Information about clinical health care in 2008–09 was provided by 201 services, describing various activities, including ongoing management of chronic disease. The large majority (85%) of services provided diagnosis and treatment of illness and disease, and just over half provided outreach clinics (55%) or dental care (52%).

In addition, almost all services (94%) provided access to one or more specialist support services such as audiology, optometry and podiatry, and 7 out of 10 services provided scripts for pharmaceuticals.

### 7.3 Hospital services

Of more than 8 million hospitalisations (an episode of care/treatment for an admitted patient) recorded across Australia in 2008–09, about 3.5% were for Aboriginal and Torres Strait Islander people. The Indigenous hospitalisation rate (870 per 1,000 population) was 2.4 times the rate for other Australians (Figure 7.3). In public hospitals the Indigenous rate (786 hospitalisations per 1,000 population) was 3.7 times that for other Australians (213 per 1,000). Indigenous Australians were relatively less likely to be admitted to private hospitals (87 compared with 148 hospitalisations per 1,000 population).

Indigenous Australians were 2.5 times as likely to be hospitalised for acute care compared with other Australians.



### Procedures and elective surgery

While hospitalisation rates are relatively higher for Aboriginal and Torres Strait Islander people, they are less likely than other Australians to undergo a procedure while in hospital. A procedure is a clinical intervention that is either surgical, carries an anaesthetic risk, requires specialised training or requires special facilities or services available only in an acute care setting. Excluding hospitalisations for care involving dialysis, and adjusting for differences due to population age structure, at least 1 procedure was recorded in 59% of hospitalisations for Indigenous Australians compared with 81% for other Australians.

Indigenous procedure rates were lower for all principal diagnosis groups except perinatal, and significantly lower for diseases of the nervous and respiratory systems.

Overall, there were 34 elective surgery hospitalisations per 1,000 population for Indigenous Australians compared with 60 per 1,000 for other Australians in 2008–09. Almost all (87%) Indigenous hospitalisations were for public elective surgery—that is, surgery done in a public hospital or as a public patient in a private hospital.

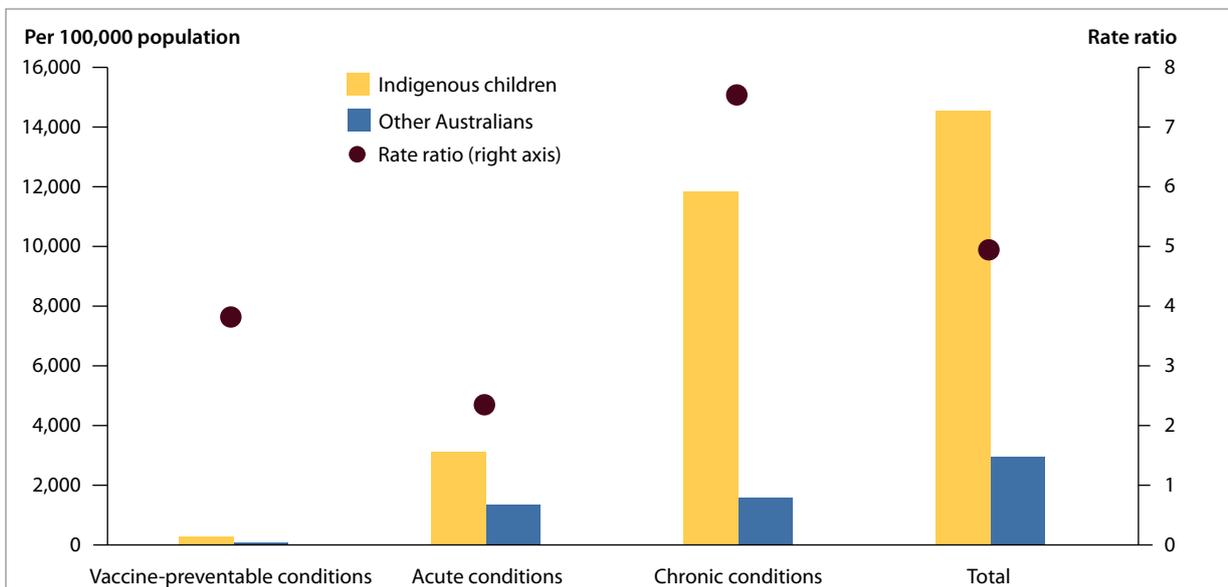
In 2009–10, the median waiting time for Indigenous Australians for some elective surgery procedures was notably longer than for other Australians. In particular, the median waiting times for cataract extraction and coronary artery bypass graft were nearly double. For all procedures combined, the median waiting time for Indigenous Australians was 15% longer than for other Australians.

### Potentially preventable hospitalisations

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.

In 2008–09, more than 690,000 hospitalisations were recorded that could be classified as potentially preventable (AIHW 2010b). Excluding Tasmania and the Australian Capital Territory, 6.8% of potentially preventable hospitalisations were for Aboriginal and Torres Strait Islander people. The age-standardised hospitalisation rate was higher for Indigenous Australians than other Australians for each category of potentially preventable hospitalisations (Figure 7.4).

- Overall, the potentially preventable hospitalisation rate for Indigenous Australians (14,564 per 100,000 population) was 4.9 times the rate for other Australians (2,956 per 100,000).
- There were 11,844 hospitalisations for chronic conditions per 100,000 Indigenous population compared with 1,575 per 100,000 for the population as a whole—a rate ratio of 7.5.



*Notes*

1. Excludes data for Tasmania and the Australian Capital Territory and private hospitals in the Northern Territory.
2. Age-standardised to the Australian 2001 population.
3. Total includes multiple potentially preventable conditions.

Source: AIHW National Hospital Morbidity Database data.

**Figure 7.4: Potentially preventable hospitalisations, by Indigenous status, 2008–09**

## Emergency department visits

Indigenous Australians use emergency health care services more often than non-Indigenous Australians. In 2009–10, there were about 193,000 emergency department presentations by people identifying as Aboriginal or Torres Strait Islander, accounting for 3.8% of all presentations in these hospitals (based on public hospitals classified as principal referral, specialist women's and children's hospitals or large hospitals).

In 2009–10, as in previous years, similar proportions of Indigenous and other Australians were seen within the recommended time for each triage category.

## 7.4 Indigenous participation in the medical workforce

### Medical practitioners

In 2008, 153 medical practitioners identified themselves as Aboriginal and/or Torres Strait Islander, representing about 0.2% of the employed practitioners for whom Indigenous status was provided. The Northern Territory had the highest proportion of Indigenous medical practitioners, at 1.2%.

Indigenous medical practitioners were, on average, about 3.5 years younger than non-Indigenous practitioners (42.1 years and 45.6 years, respectively). A higher proportion of Indigenous practitioners were female than for non-Indigenous practitioners (45% and 35%, respectively) (AIHW 2010f).

### Nurses

In 2008, there were 1,598 employed nurses who identified themselves as Aboriginal and/or Torres Strait Islander, representing about 0.6% of nurses for whom Indigenous status was provided. The Northern Territory had the highest proportion of Indigenous nurses, at 1.2%.

Indigenous nurses were, on average, about 2.4 years younger than non-Indigenous nurses (41.6 years and 44.0 years, respectively). A higher proportion of Indigenous nurses were male than for non-Indigenous nurses (14.4% and 9.4%, respectively) (AIHW 2010g).

## 7.5 Specialised services

### Mental health services

Mental health services are provided in various settings, including community mental health services, hospitals (admitted patient care), residential care and prisons.

More than 366,000 community mental health service contacts were reported for Aboriginal and Torres Strait Islander people in 2008–09, accounting for 6.5% of all service contacts for which Indigenous status was recorded. The age-standardised contact rate for Indigenous Australians (731 per 1,000 population) was almost 3 times the rate for non-Indigenous Australians (254 per 1,000 population).

In addition to outpatient services, hospitals provide mental health-related care to admitted patients on a same-day or overnight basis. More than 12,400 mental health-related hospitalisations were recorded for Indigenous Australians in 2008–09. After adjusting for population size and structure, Indigenous Australians had relatively fewer ambulatory-equivalent mental health-related hospitalisations than other Australians (a rate ratio of 0.6), but relatively more non-ambulatory hospitalisations—both with and without specialised psychiatric care (rate ratios of 1.8 and 3.7, respectively).

About 3,500 episodes of care were provided by government-funded residential mental health facilities in 2008–09. Indigenous residents accounted for 2.4% of episodes for which Indigenous status was recorded.

The National Prisoner Health Census done in mid-2009 found that a smaller proportion of Indigenous Australians entering prison (27%) were referred to prison mental health services than non-Indigenous Australians (32%). Indigenous prisoners also reported lower levels of mental health issues than non-Indigenous prisoners (26% and 41%, respectively), and were less likely to be currently taking medication for mental health related conditions.

### **Alcohol and other drug services**

In 2008–09, about 17,000 alcohol and/or other drug treatment episodes were provided by publicly funded services to Indigenous clients, accounting for 12% of all episodes.

The most common principal drug of concern identified by clients seeking treatment for their own drug use was alcohol, followed by cannabis and opioids. Compared with non-Indigenous clients, Indigenous clients were less likely to report an opioid as their principal drug of concern (10% and 16%, respectively).

Counselling was the most common treatment type for Indigenous and non-Indigenous clients alike (37% of episodes within each client group). Indigenous clients were more likely to undergo assessment only (18% compared with 14%) and less likely to access withdrawal management (12% compared with 17%).

#### *Pharmacotherapy for opioid dependence*

On a ‘snapshot day’ in 2009, there were 2,252 Indigenous clients receiving pharmacotherapy in New South Wales, Queensland, South Australia and the Australian Capital Territory (other jurisdictions were unable to provide information about clients’ Indigenous status). Aboriginal and Torres Strait Islander clients accounted for 8% of all clients in these jurisdictions. Most (80%) received methadone treatment.

#### *Aboriginal and Torres Strait Islander substance use services*

In 2008–09, 50 stand-alone services received funding from the Office for Aboriginal and Torres Strait Islander Health to provide substance use services to Indigenous Australians. The 45 services that responded to the 2008–09 services reporting questionnaire reported that:

- services were provided to 23,200 clients, of whom 77% were Indigenous Australians
- programs with specific targets were most commonly available for alcohol use (provided by 91% of services), cannabis/marijuana (80%), multiple drug use (58%) and tobacco/nicotine (49%)
- most (87%) services included traditional cultural elements in their treatment approach, such as bush camps, traditional healing, and mentor programs with elders.

### **Hearing services**

In 2008–09, Australian Hearing provided more than 11,000 services to Aboriginal and Torres Strait Islander clients under the Community Services Obligations program. Almost 60% of these services were provided to clients aged less than 21 years. The most common type of service provided was hearing assessment (about 7,300 services), followed by fitting of hearing devices (almost 2,100 services). Between 2003–04 and 2008–09 the number of services provided to Indigenous clients more than tripled.

Outreach visits to local communities also help Indigenous Australians access hearing services. In 2008–09, Australian Hearing delivered services—including hearing tests, support for babies and children, school programs, community education and health worker training—at 221 outreach sites. The number of outreach visits rose by 70% since 2005–06 when services were delivered at 130 sites (DoHA 2009a).

## **7.6 Support and care services**

Various support and care services are available in Australia, including disability and aged care services (including respite for carers), and housing and homelessness services.

## Disability support services

Disability support services are aimed at people with severe or profound disability, and their carers, to assist with daily living activities. The purpose of these services, funded under the National Disability Agreement, formerly the Commonwealth State and Territories Disability Agreement, is to support and enhance the participation of individuals in their community, in ways that are most effective for the individuals.

Specialist disability services are provided under a variety of programs and in many different ways, including support with accommodation, employment, respite care, and access to and participation in community facilities and activities. Generally, programs are available to all those with core activity limitations.

### Aboriginal and Torres Strait Islander users of disability support services

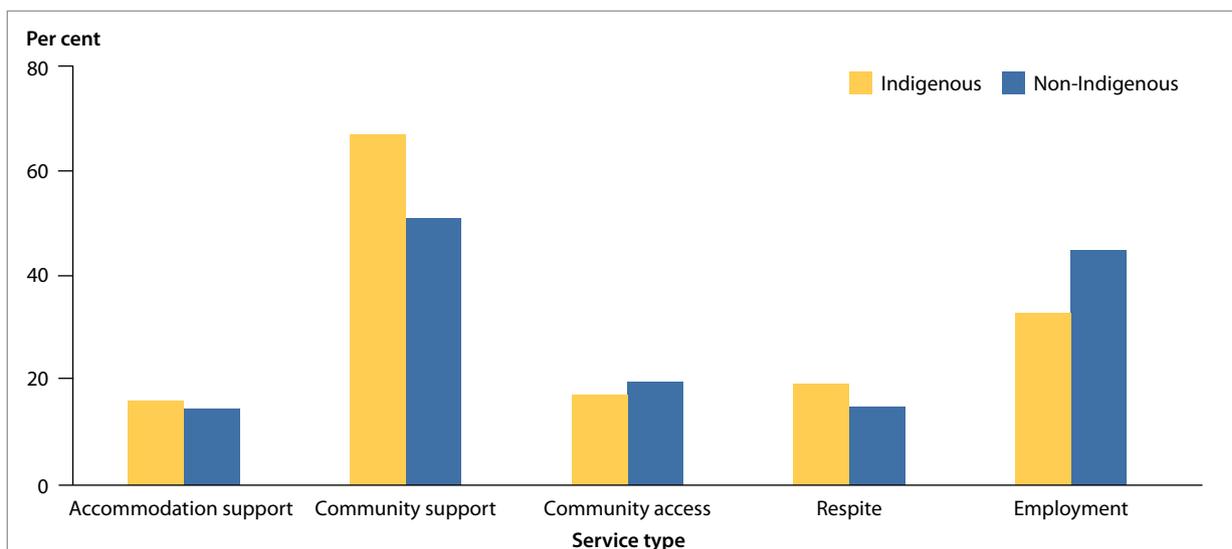
Aboriginal and Torres Strait Islander people, aged 0–64 years, are much more likely to need assistance with core activities compared with non-Indigenous Australians (see Chapter 4).

In 2008–09, more than 12,000 Indigenous Australians (aged 0–64 years) used specialist disability support services. More than one-third (34%) of Indigenous service users had intellectual disability as their primary reason for activity limitations, followed by physical (18%) and psychiatric (16%) disabilities. These disability types were also the major reasons for non-Indigenous Australians using specialist disability services.

Indigenous Australians with disability appear to be accessing levels of service and support equivalent to those of non-Indigenous Australians, with 329 Indigenous and 330 non-Indigenous service users per 1,000 potential population.

### Service types used

Community support is the most commonly used disability service type by Aboriginal and Torres Strait Islander people, followed by employment support (Figure 7.5). Community support services include individual therapy, early childhood intervention, case management, behaviour management and counselling.



Note: Persons aged 0–64 years.

Source: AIHW analysis of Commonwealth State and Territories Disability Agreement National Minimum Dataset 2008–09.

**Figure 7.5: Disability support service types used, 2008–09**

Indigenous service users tended to use more case management and fewer open employment services than their non-Indigenous counterparts:

- Case management assists people access services, coordinate care where multiple services are in use, and in care planning. In 2008–09, the Indigenous and non-Indigenous rates for case management services were 31% and 20%, respectively.
- Open employment services assist people with disability find or retain employment in the open job market. In 2008–09, the Indigenous and non-Indigenous rates for open employment services were 27% and 36%, respectively.

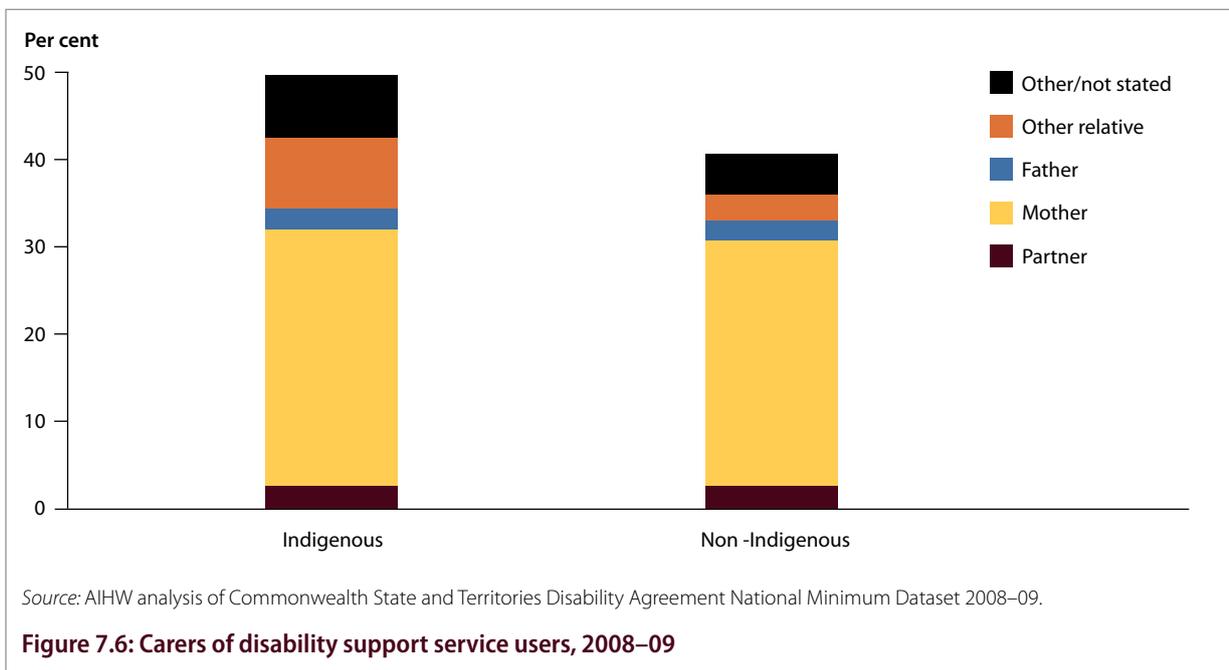
### Access

According to the 2008 NATSISS, nearly half (46%) of Aboriginal and Torres Strait Islander people aged 18–64 years with severe or profound disability said they had problems accessing service providers. These problems were not limited to specialist disability service providers, but included doctors, hospitals, dentists, legal services, employment services and others. Indigenous Australians with severe or profound core activity limitations encountered transport problems more than twice as often as Indigenous persons without disability (46% and 21%, respectively).

Analysis of the 2006 General Social Survey shows that these rates align with those of Australians generally.

### Carers of people with disability

Almost half (49%) of the Indigenous disability support service users, aged 0–64 years, had carers, compared with 41% of non-Indigenous users (Figure 7.6). Mothers were the most frequent carers (29%) among Indigenous users, followed by other female relatives (6.8%).



Further information on Indigenous disability support services can be found in *Aboriginal and Torres Strait Islander people with disability* (AIWH 2011c), available from the AIHW Indigenous observatory.

## Aged care services

The care needs of older Aboriginal and Torres Strait Islander people are quite different from those of their non-Indigenous counterparts. A greater percentage of Indigenous clients need dementia and aged care services at a relatively younger age. Also, older Indigenous Australians have greater levels of socioeconomic disadvantage and poor health, especially those living in rural and remote areas. Indigenous Australians often wish to be cared for in their own communities where they are close to the family, and where they can die on their land (Arkles et al. 2010).

Because of the high prevalence of various diseases and conditions leading to disability, the minimum age requirement for Indigenous Australians to use aged care facilities is 50 years, compared with 65 years normally stipulated for non-Indigenous Australians.

### *National Aboriginal and Torres Strait Islander Flexible Aged Care Program*

The National Aboriginal and Torres Strait Islander Flexible Aged Care Program has been established under the Aboriginal and Torres Strait Islander Aged Care Strategy to meet the care needs of older Aboriginal and Torres Strait Islander people, focusing on the issues of access and equity in rural and remote areas. The program provides mainly aged care services, many of which have been established in rural and remote areas close to Indigenous communities, where no aged care services were previously available. As of 30 June 2009, the program funded 29 such services, delivering 394 residential care places (AIHW 2010h).

### *Community aged care*

The Australian Government funds and regulates some community care directly, offering packaged care at different levels of assistance, depending on the needs of the client. Three major types of packages are available:

- Community Aged Care Packages are designed to meet the daily care needs of frail older people assessed as being eligible for low-level residential care, allowing them to stay in their own homes.
  - About 38,000 Australians were on Community Aged Care Packages at 30 June 2009, with just over 1,300 (3.5%) identified as being of Aboriginal or Torres Strait Islander origin.
  - Indigenous Australians used the packages at a rate of 2.4 per 1,000 population, compared with 1.7 per 1,000 for non-Indigenous Australians.
  - A much greater proportion of Indigenous recipients were aged under 65 years (34%) compared with non-Indigenous recipients (3.3%).
- Extended Aged Care at Home packages provide home and community care to older, frail people with more complex care needs who have been assessed as being eligible for high-level residential aged care.
  - Almost 4,200 people were receiving an Extended Aged Care at Home package at 30 June 2009, with less than 2%, or 60 people, identified as being of Aboriginal or Torres Strait Islander origin.
  - One-third (33%) of Indigenous clients were aged under 65 years, compared with 6.4% of non-Indigenous clients.
- The Extended Aged Care at Home program also provides help to people with dementia.
  - About 1,870 Australians were using Extended Aged Care at Home for people with dementia packages at 30 June 2009, with 0.9% of these recipients identified as being of Aboriginal or Torres Strait Islander origin.
  - There was a small proportion of total clients aged under 65 years (4%), but no identified Indigenous clients in that age group, and only 17 Indigenous clients aged over 65 years.

### Residential aged care

Residential aged care is subsidised by the Australian Government, and provides accommodation and other support services such as personal care, nursing care, and help with performing daily tasks (DoHA 2009b). While residential aged care is generally considered to be long term, the service is also used for short-term respite care.

At 30 June 2009, about 159,000 Australians were using permanent residential aged care services, and about 3,400 were in respite care. But this approach underestimates the use of residential aged care services for respite care which is mostly short term. Over 2008–09, of nearly 111,000 admissions for residential aged care, close to half were for short-term respite care.

Of all residents on 30 June 2009, 0.6% of permanent residents and 0.9% of respite residents were identified as being of Aboriginal or Torres Strait Islander origin.

Age-specific rates show that Indigenous Australians under 65 years make proportionately higher use of residential aged care services than do other Australians (Table 7.2). At 30 June 2009:

- Indigenous Australians aged 50–59 years used residential aged care services at higher rates than other Australians (4.9 compared with 1.3 per 1,000 population)
- for Indigenous Australians aged 60–64 years the rate was 6.7 per 1,000 population compared with 2.6 per 1,000 for other Australians
- for ages 65 years and over, 41 per 1,000 Indigenous residents were in permanent care, compared with 52 per 1,000 of other Australians.

**Table 7.2: Age- and sex-specific usage rates for permanent residents of aged care services<sup>(a)</sup>, 30 June 2009 (per 1,000 population)<sup>(b)</sup>**

Age group (years)	Indigenous Australians			Other Australians		
	Females	Males	Persons	Females	Males	Persons
50–54	1.7	1.9	1.8	0.5	0.6	0.6
55–59	4.5	5.3	4.9	1.2	1.4	1.3
60–64	6.9	6.5	6.7	2.4	2.8	2.6
65+	45.0	35.5	40.9	69.1	32.2	52.3
Total	2.1	1.5	1.8	10.4	4.3	7.4

(a) Recipients with unknown status are pro-rated.

(b) Ratios are calculated using ABS projections released in December 2004 (ABS 2004) and the Australian population figures released in December 2009 (ABS 2009a).

Source: Analysis of Aged and Community Care Management Information System database 2009.

Further information on Indigenous aged care services can be found in *Older Aboriginal and Torres Strait Islander people* (AIHW 2011k), available from the AIHW Indigenous observatory.

### Housing and homelessness services

Because of widespread poverty and a low rate of housing ownership, a large proportion of Indigenous households receive some form of government housing assistance. This assistance is provided through Indigenous-specific housing programs—including state owned and managed Indigenous housing and Indigenous community housing—as well as mainstream programs of public and community housing. Commonwealth rent assistance, which is provided to private renters on low incomes, is also available to Aboriginal and Torres Strait Islander clients. Specialist homelessness services for temporary accommodation and support services—such as domestic violence counselling, employment assistance and living skills development to homeless people—are available to Indigenous Australians.

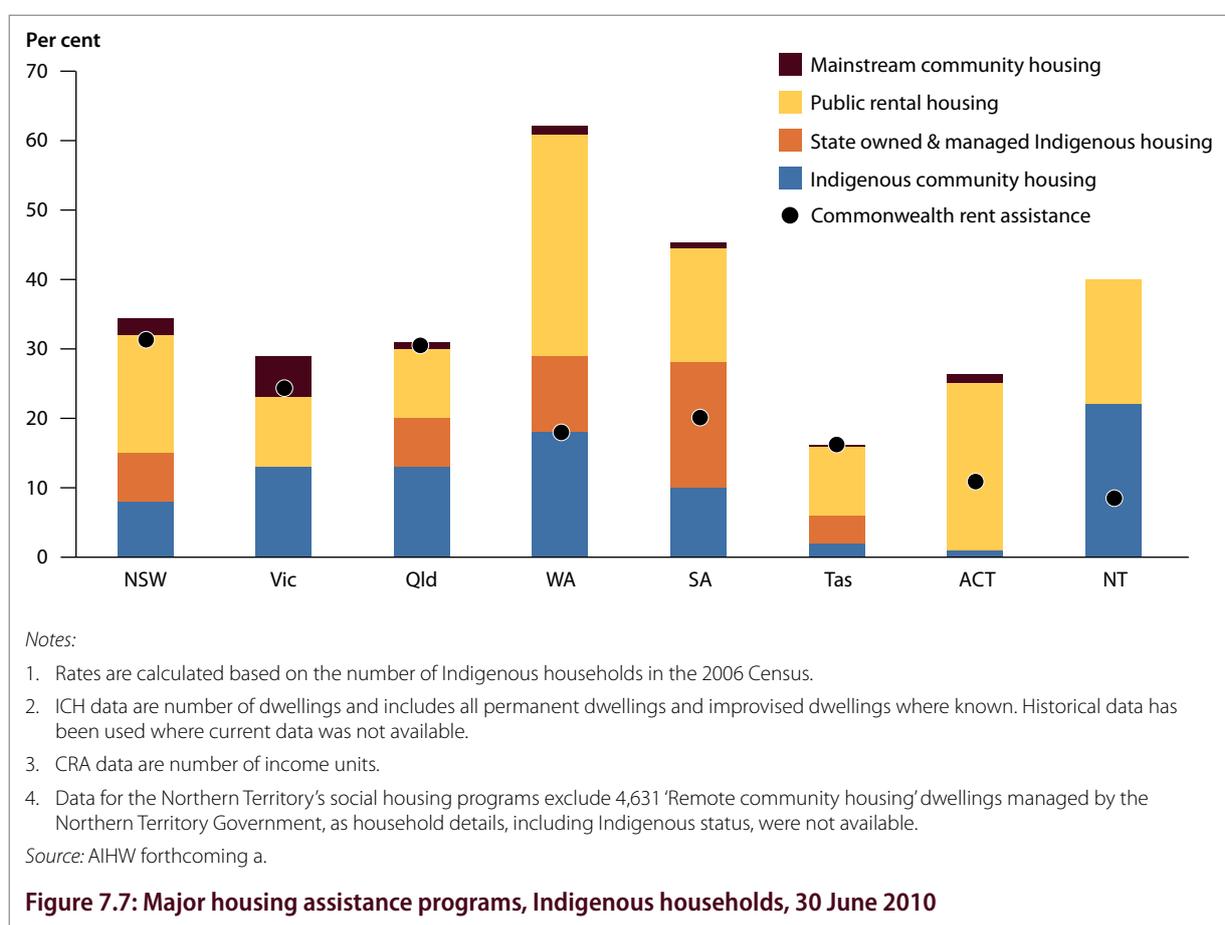
### Housing assistance

At 30 June 2010, an estimated 60,000 Indigenous households were receiving assistance through a range of housing programs including:

- 19,100 dwellings in the Indigenous community housing program
- 11,500 households in the state owned and managed Indigenous housing program
- 26,400 households in public rental housing
- 3,200 households in mainstream community housing

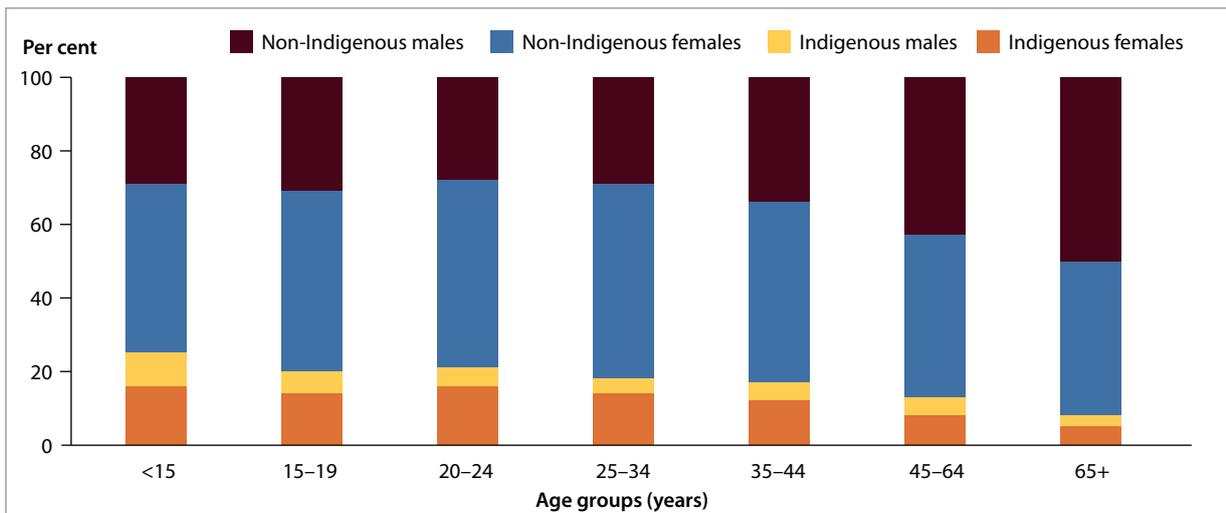
There were also 42,800 Indigenous income units (single persons, couples or family units) in receipt of Commonwealth rent assistance, as at 4 June 2010.

The proportion of Indigenous households on the housing assistance programs varied across the jurisdictions (Figure 7.7).



### Homelessness support services

Indigenous Australians access specialist homelessness services at a higher rate than non-Indigenous Australians, making up 17% of all users in 2008–09. However, the proportion of Indigenous clients of specialist homelessness services decreases with age. More than one-quarter (26%) of clients aged less than 15 years were Indigenous compared with 8% of clients aged 65 years and over (Figure 7.8).



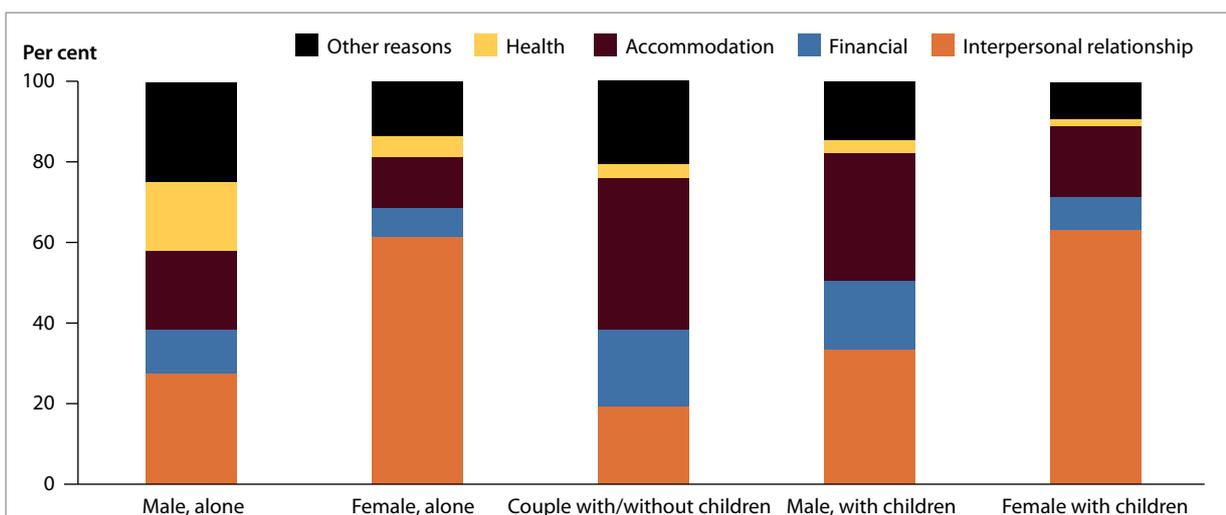
Source: Supported Accommodation Assistance Program Client Collection 2008-09.

**Figure 7.8: Demographic profile of specialist homelessness services clients, 2008-09**

Almost three-quarters (71%) of Indigenous clients of specialist homelessness services in 2008-09 were female, compared with 3 out of 5 (60%) non-Indigenous clients.

Of a total of 79,000 accompanying children (aged under 18 years with a parent/guardian who is a client) who presented to specialist homelessness services in 2008-09, almost one-quarter (24%) were Indigenous. The proportion was much higher among those aged 0-4 years, at almost half (47%).

Indigenous couples, both with and without children, most often (37%) sought assistance due to accommodation problems, with overcrowding being the most common reason (Figure 7.10). On the other hand, women with or without children most often cited interpersonal reasons for seeking assistance, with domestic/family violence being the most common reason (Figure 7.9).



Source: Supported Accommodation Assistance Program client collection 2008-09.

**Figure 7.9: Reasons for seeking housing assistance, by Indigenous client group, 2008-09**

Further information on Indigenous homelessness services can be found in *A profile of homelessness for Aboriginal and Torres Strait Islander people* (AIWH 2011a), available from the AIHW Indigenous observatory.

# Chapter 8

## **Health and welfare expenditure**



## 8 Health and welfare expenditure

Regular reporting of health and welfare 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 health expenditure estimates presented in this chapter consist of costs incurred in preventing, diagnosing and treating health problems and conditions. This generally includes spending on hospitals, general practitioners and specialists, health goods such as medications, aids and appliances, and other health services (community and public health). Research and administration support services are also included. The estimates are of direct expenditure, and do not cover other expenses incurred such as travel and accommodations costs.

This chapter also presents some recent estimates of welfare expenditure (IERSC 2010).

### 8.1 Indigenous health care expenditure

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 federal and state/territory governments to improve the health of this population. A prominent Indigenous-specific expenditure category is the grants given to the Aboriginal Community Controlled Health Organisations, which provide various health care services to mainly Indigenous clients.

#### Total spending

Indigenous health care expenditure was estimated to be \$2.9 billion in 2006–07 (AIHW 2009c). This accounted for 3.3% of the national expenditure on health care services (\$89.4 billion), a greater proportion than the Indigenous representation in the Australian population (2.5%).

At an individual level, in 2006–07, health care expenditure (excluding capital expenditure) per Indigenous person was \$5,568, compared with \$4,247 for a non-Indigenous person. This amounted to \$1.31 per Indigenous person for every \$1.00 spent for health care services availed by a non-Indigenous person.

Considering the high level of morbidity among Indigenous Australians, and mortality rates that are about double those for other Australians, these figures suggest that expenditure for Indigenous Australians may not be sufficient to match needs (AHMAC 2008).

#### Funding sources

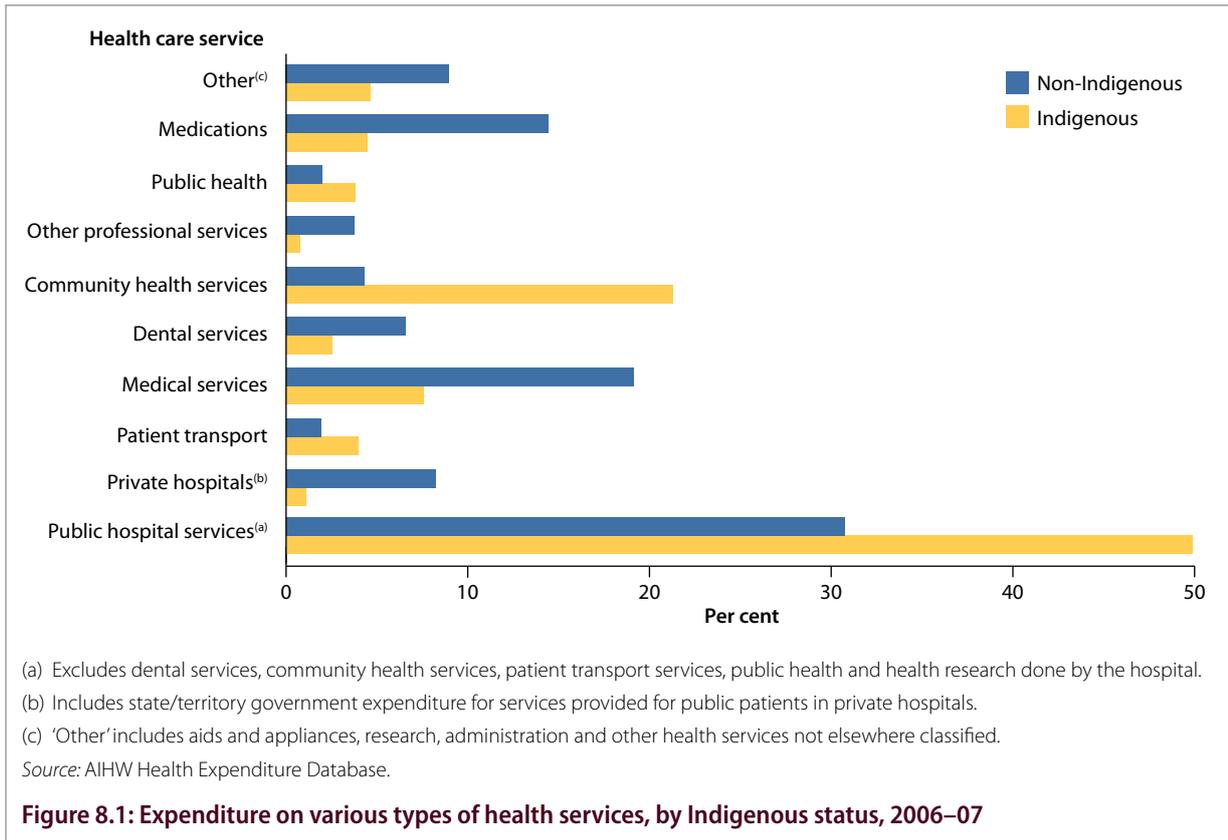
Health services for Indigenous Australians were overwhelmingly funded by governments, which contributed 93% of Indigenous health care in 2006–07—the state and territory governments provided 51% and the Australian Government 42% (AIHW 2009c). In contrast, government funding for non-Indigenous Australians accounted for about two-thirds (68%) of the total health expenditure, just over one-third of which was provided by state and territory governments.

#### What was the money spent on?

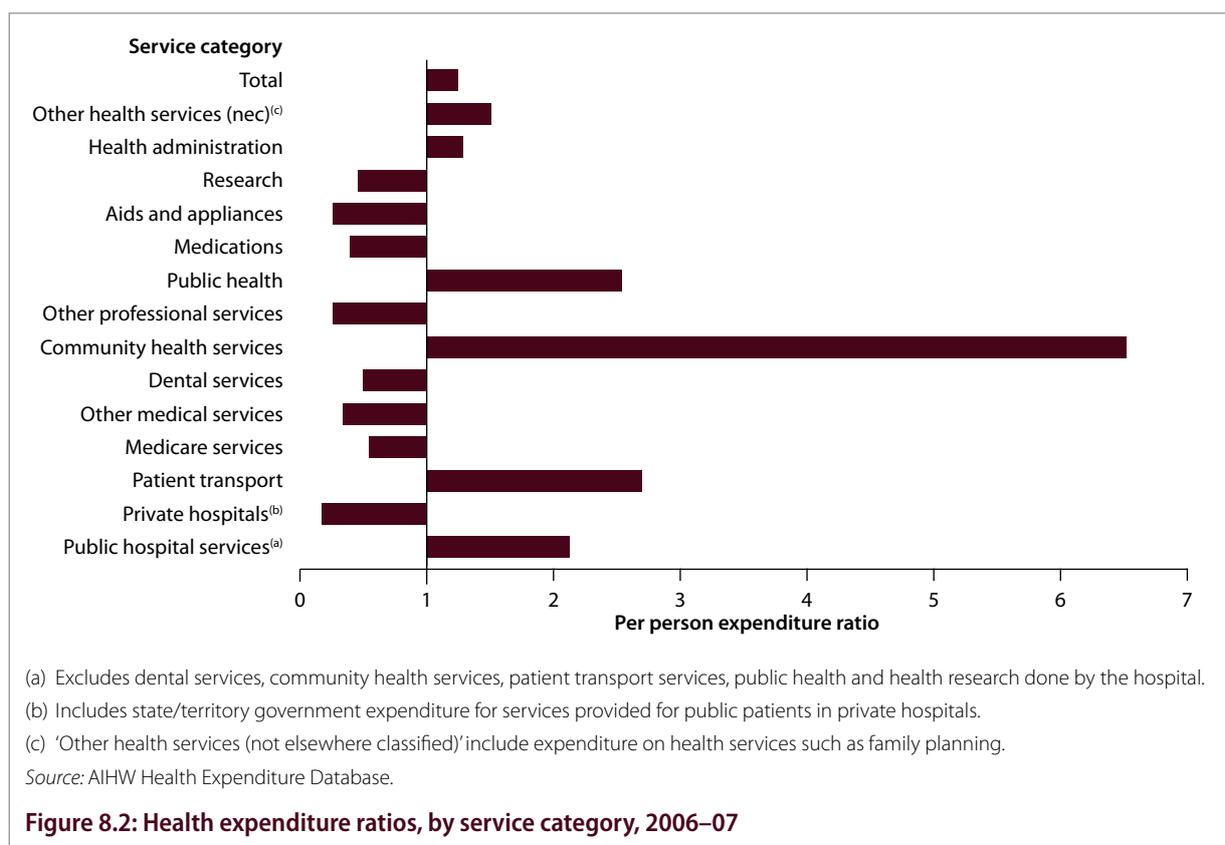
Aboriginal and Torres Strait Islander people are comparatively high users of public hospital and community health services, and comparatively low users of medical, pharmaceutical (including Section 100 drugs), dental and other health services. They are also much less likely than non-Indigenous Australians to use the services of private sector health providers, including doctors, specialists and private hospitals.

Half (50%) of the total Indigenous health care expenditure in 2006–07 was on public hospital services, and more than 21% was on community health services, including those provided by Aboriginal Community Controlled Health Organisations (Figure 8.1).

The Indigenous pattern of health expenditure is very different from that for non-Indigenous Australians. Less than one-third (31%) of non-Indigenous health care expenditure was on public hospital services, and only 4% was on community health services (Figure 8.1). On the other hand, non-Indigenous expenditure on medications was much higher (14% compared with 4%), as was expenditure on medical (general practitioner, specialist and other) services (19% compared with 8%).



At an individual level, Indigenous expenditure for public hospital services was more than twice the average for a non-Indigenous person (Figure 8.2). Spending on community health services was more than 6 times that for a non-Indigenous person. In contrast, per person Indigenous expenditure on medical services, medications and dental services was less than half that for a non-Indigenous person.



## Expenditure on hospital services by disease group

Admitted patient hospital services constituted the largest component of Indigenous health expenditure, accounting for half of total expenditure in 2006–07. Breaking up admitted patient expenditure by disease group provides further insight into Indigenous health outlays.

Table 8.1 compares Indigenous with non-Indigenous rate ratios for admitted patient expenditure on four major disease groups. The Indigenous to non-Indigenous rate ratios ranged from 1.18 to 2.90 in 2006–07, reflecting higher average Indigenous expenditure per hospital visit. The higher treatment costs may reflect factors such as late diagnosis, comorbidity, or the higher proportion of patients residing in more remote areas.

**Table 8.1: Per person hospital expenditure (public and private), by major disease group, 2006–07**

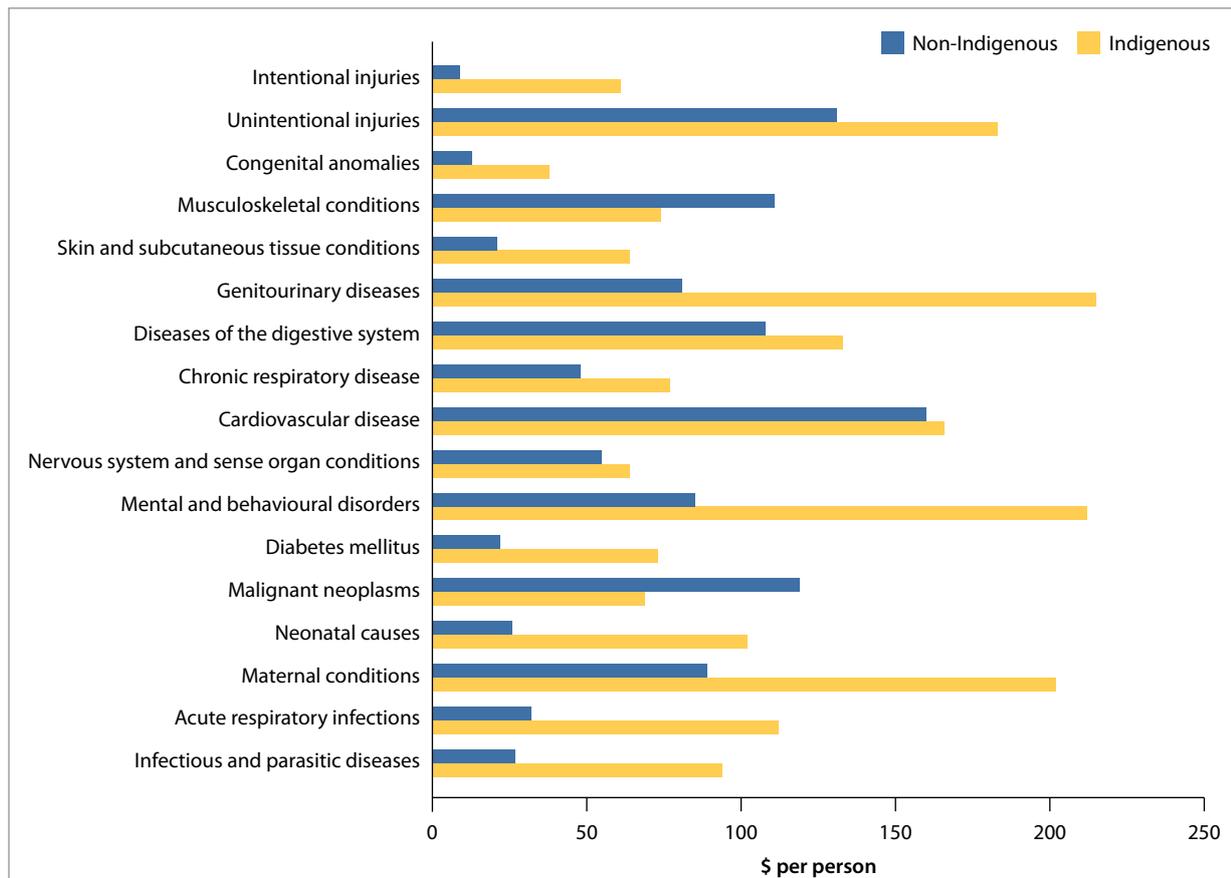
Disease group	Expenditure (\$) per person		Rate ratio
	Indigenous	Non-Indigenous	
Communicable diseases, maternal and neonatal conditions	519	179	2.90
Non-communicable diseases	1,242	879	1.41
Injuries	245	140	1.75
Signs, symptoms and ill-defined conditions	206	175	1.18

Source: AIHW National Hospital Morbidity Database.

At the specific disease level, expenditure levels varied greatly (Figure 8.3). The highest levels of per person Indigenous expenditure were on genitourinary diseases (which includes dialysis), mental and behavioural disorders, maternal conditions, and unintentional injuries. For non-Indigenous individuals, it was cardiovascular disease, followed by unintentional injuries and malignant neoplasms.

Consequently, the Indigenous to non-Indigenous per person rate ratios varied considerably. For intentional injuries, Indigenous hospitalisation expenditure was 7 times as high as for non-Indigenous Australians. Other high ratios were related to neonatal causes (3.9), acute respiratory infections (3.6), infectious and parasitic diseases (3.5) and diabetes mellitus (3.4). As well as being one of the highest per person expenditures, Indigenous expenditure for genitourinary diseases was 2.7 times as high as that for non-Indigenous Australians.

Hospital-related expenditure on problems such as musculoskeletal conditions and malignant neoplasms, on the other hand, was lower for Indigenous Australians, with rate ratios much lower than 1 (0.7 and 0.6, respectively).



Source: AIHW National Hospital Morbidity Database.

**Figure 8.3: Health expenditure for specific diseases in public and private hospitals, by Indigenous status, 2006–07**

### Trends in Indigenous health care expenditure

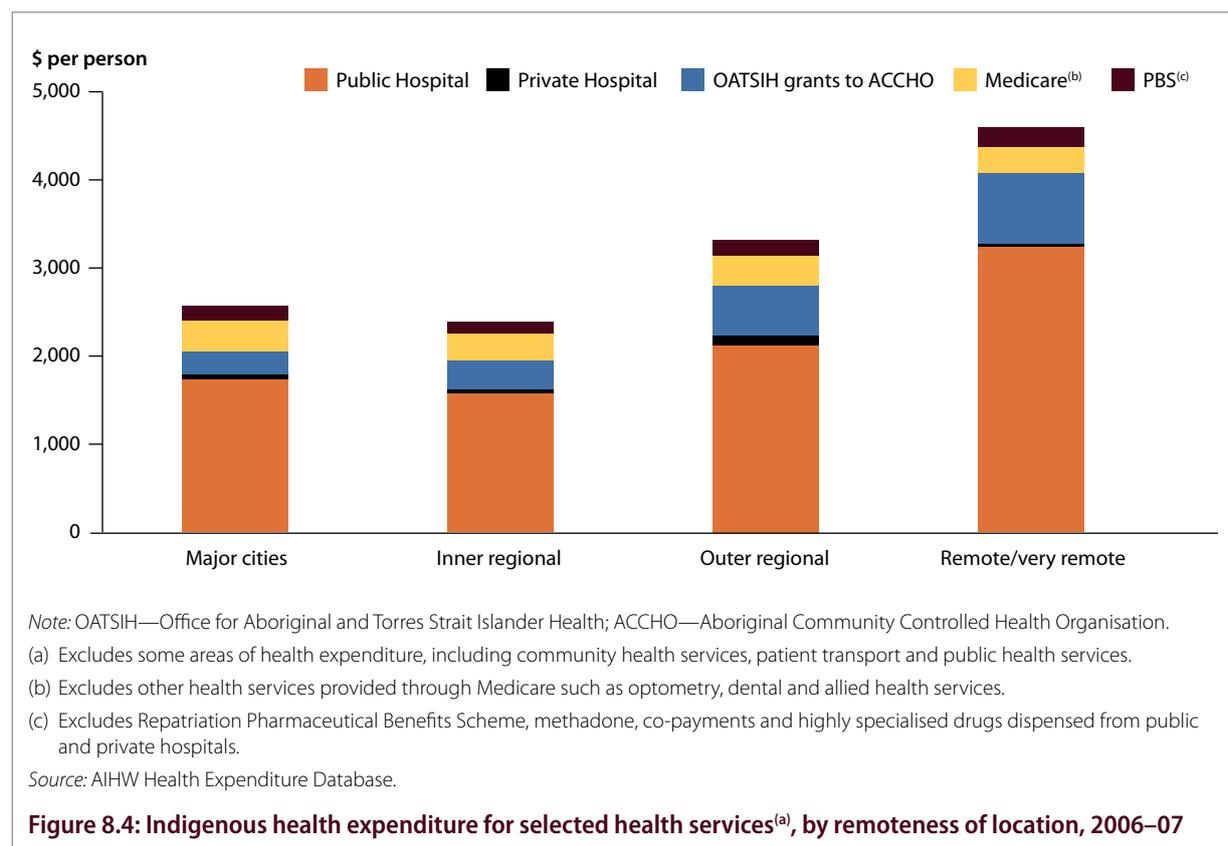
The Indigenous proportion of overall Australian health expenditure is on the rise. In particular, a large increase was noted between 2004–05 and 2006–07, when the Indigenous proportion of health expenditure rose from 2.8% to 3.3%. As well as policy interventions aimed at increasing Indigenous health expenditure, some of this growth may be attributable to increased identification of Aboriginal and Torres Strait Islander people.

Some variation was noted in health expenditure growth at the industry level. Higher growth was noted in the Indigenous use of public hospital services. Indigenous Medicare spending also increased at a higher rate during this period.

Care should be taken in interpreting trends in Indigenous health expenditure. As well as method changes, Indigenous identification is still improving in the two major data sources used—the National Hospital Morbidity Database and the Medicare administrative data.

### Expenditure by remoteness of location

The highest per person health spending in 2006–07 was for residents of remote areas (AIHW 2011e). Given that a large proportion of the Indigenous population (25%) live in these areas, remoteness of location greatly adds to Indigenous health expenditure (Figure 8.4).



The association between the remoteness of location and Indigenous health expenditure is not uniform across various categories of health care (AIHW 2010e). For example, in 2006–07, the Indigenous per person expenditure for:

- public hospitals was 1.9 times as high in remote areas as in *Major cities*
- grants to Aboriginal Community Controlled Health Organisations, were 3 times as high in remote areas as in *Major cities*.

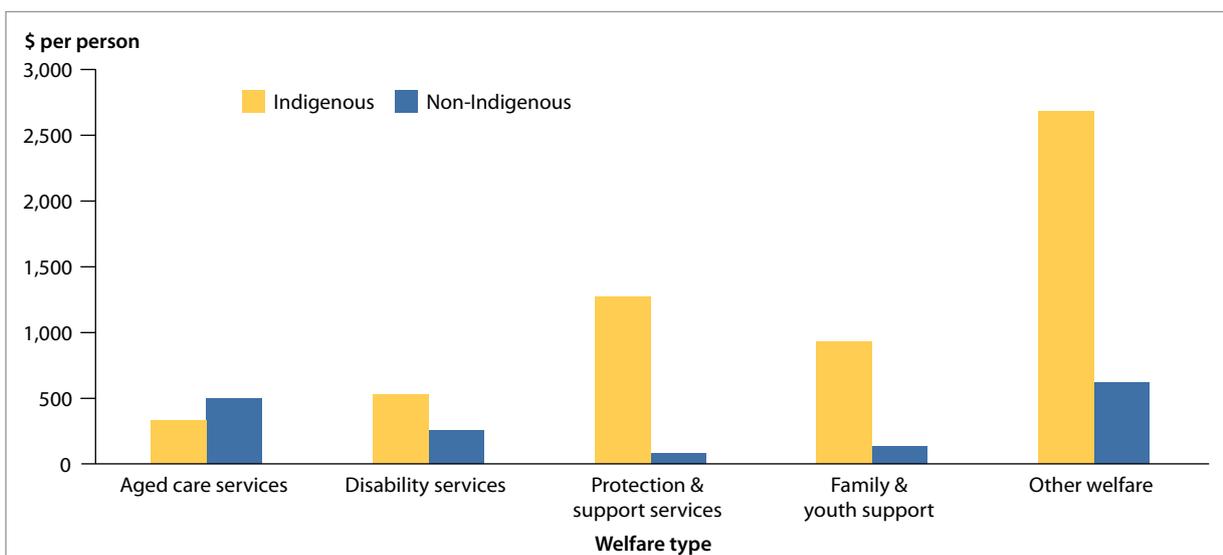
## 8.2 Welfare expenditure

This section presents expenditure estimates for community support and welfare services published in the *2010 Indigenous expenditure report* (IERSC 2010), and includes:

- aged care services—residential aged care services (high care, low care and respite care), support services for older people wishing to live at home, programs that promote the health and participation of older people in the community, and the support and regulation of the aged care industry
- disability services—accommodation support, community support, community access, employment programs, and other disability support (such as, respite care, advocacy and information services)

- protection and support services—activities related to child protection services and out-of-home care services
- family and youth support services—family support and assistance, child support payment, and homeless assistance for young people
- other welfare services—homeless assistance (other than for young people), general financial assistance and concessions, general community welfare, and support and welfare administration.

Expenditure related to Aboriginal and Torres Strait Islander people accounted for 8.5% (\$3.1 billion) of all general government community support and welfare expenditure in 2008–09. Government expenditure per person was estimated to be \$5,730 per Indigenous Australian, compared with \$1,578 per non-Indigenous Australian, or about \$3.60 for every \$1.00 spent per non-Indigenous person. Figure 8.5 shows per person expenditure by welfare service type.

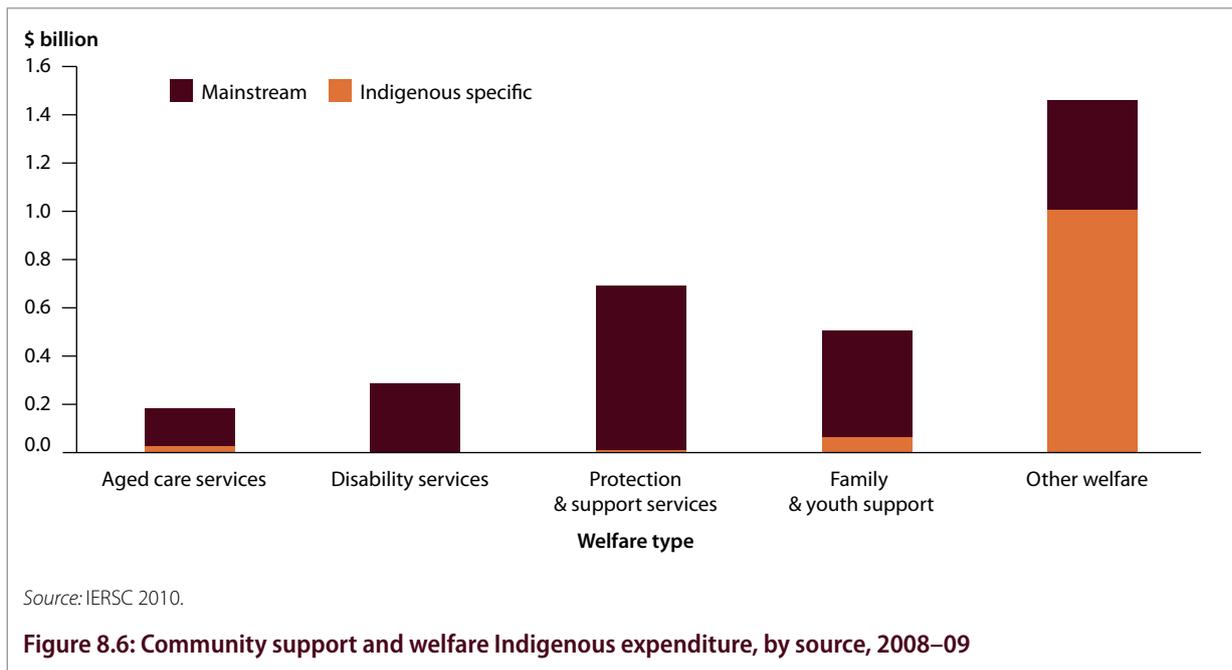


Source: IERSC 2010.

**Figure 8.5: Community support and welfare expenditure, per person, by Indigenous status, 2008–09**

It should be noted that these figures are expenditure per *person*, not expenditure per *user*, and should not be interpreted as a unit cost. In particular, Indigenous Australians are over-represented in disability services, child protection and support services, and assistance to families and young people.

Mainstream service expenditure accounted for about two-thirds (64%) of the estimated government expenditure on welfare services relating to Indigenous Australians. But the proportion varied across the service types (Figure 8.6).



Further information on Indigenous health expenditure can be found in *Expenditure on health for Aboriginal and Torres Strait Islander people 2006–07* (AIHW 2009c) and *Expenditure on health for Aboriginal and Torres Strait Islander people 2006–07: an analysis by remoteness and disease* (AIHW 2010e), available from the AIHW website.



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