Part 4:
Aboriginal and Torres Strait Islander young people

Aboriginal and Torres Strait Islander people suffer much more ill health than other Australians (ABS & AIHW 2005). They die at much younger ages and are more likely to experience disability and reduced quality of life due to ill-health than other Australians (ABS & AIHW 2005). This health disadvantage begins at an early age and continues to impact on health and wellbeing throughout life.

The health inequalities experienced by Indigenous Australians reflect broader disadvantage across a range of socioeconomic factors that impact on health and wellbeing. In 2002, Aboriginal and Torres Strait Islander people reported lower incomes, higher rates of unemployment, poorer educational achievement and lower rates of home ownership than other Australians (ABS 2004f). Despite some improvement in the mortality of Indigenous Australians over the past decade, and increases in educational attainment, employment and home ownership, the gap in social and economic circumstances between Indigenous and non-Indigenous Australians remains large (ABS & AIHW 2005; Paradies & Cunningham 2002; Ring & Firman 1998).

However, socioeconomic status alone does not account for all of the variations in health status that exist between Indigenous and non-Indigenous Australians. The determinants of health and wellbeing are multifactorial—cultural, historical, environmental and socioeconomic factors can all contribute to health and wellbeing (Abbot & Close 2002; Booth & Carroll 2005). Aboriginal and Torres Strait Islander views of health are holistic, encompassing the social, emotional, spiritual and cultural wellbeing of an individual together with their families and communities (NATSIHC 2000). These aspects of wellbeing have been severely disrupted by the trauma and loss experienced by generations of Indigenous people as a result of dispossession of land and disruption of culture, family and community (NATSIHC 2003; Ring & Brown 2002).

The aim of Part 4 of this report is to present an overview of how young Aboriginal and Torres Strait Islander people are faring in terms of their health and wellbeing and highlights areas where there are opportunities for further gain. It draws together the information on Indigenous young people that is presented throughout the report, but also includes additional information in order to provide a more comprehensive picture of the issues affecting this population group. This part is presented in four sections—data quality, demographic characteristics of young Indigenous Australians, health status and outcomes, and factors influencing health.
Data quality

Over the last decade, there has been much progress in collecting information on Aboriginal and Torres Strait Islander people. The AIHW and the ABS, in partnership with state and territory authorities, are making considerable efforts to improve the completeness with which Aboriginal and Torres Strait Islander people are identified in administrative data sets and other key national data collections.

The availability and quality of data on Indigenous Australians are limited by a number of factors that include:

- uncertainties surrounding the estimation of the size and composition of the Indigenous Australian population
- incomplete identification of Indigenous Australians in administrative data collections including hospital records, and birth and death registrations
- the statistical and practical challenges of surveying a population that is small (2.4% of the total population), with a relatively high ‘remote area’ component, and the relevance of the questions and concepts used.

Good quality trend data are needed to properly assess changes in health status for Aboriginal and Torres Strait Islander people. Such data requires complete and consistent identification of Aboriginal and Torres Strait Islander people in Censuses, surveys and administrative data collections. Over the last few decades a considerable effort has been put into improving the enumeration of Indigenous Australians in successive Censuses, surveys and administrative data collections (AIHW & ABS 2006). However, the changes in the completeness of Indigenous identification that have occurred over time make it difficult, or impossible, to compare different time periods. For this reason, no trend analyses have been included in this section.

At present, there is considerable variation across the states and territories in the completeness of mortality and hospital data for Aboriginal and Torres Strait Islander people. The extent of under-counting of Indigenous people in hospital use and death records is not known. Currently, hospitalisation and mortality data from Queensland, Western Australia, South Australia and the Northern Territory are considered sufficient for statistical reporting on mortality and hospital use. Interpretation of results should take into account the relative quality of the data from these jurisdictions, and the fact that data from these jurisdictions are not necessarily representative of the jurisdictions excluded or of Australia as a whole.

In accordance with guidelines for the use of hospital data (AIHW 2005e), records where Indigenous status was not stated or inadequately described in hospital data were included in the other Australians category. This may lead to further underestimation of the number of Indigenous people in this data set. For mortality data, where Indigenous status was not stated or inadequately described, these records have been excluded from analysis, and therefore the categories for comparison are Indigenous and non-Indigenous. See Box 4.1 for more detail on terminology.

The AIHW has also examined the quality of Aboriginal and Torres Strait Islander identification and documented data quality improvement activities for a number of community services data collections, including the National Child Protection (NCP) Data Collection, the Supported Accommodation Assistance Program (SAAP) National Data Collection and the Juvenile Justice National Minimum Data Set, from which data were obtained for this report (AIHW 2007b).
Box 4.1: Terminology used to describe Aboriginal and Torres Strait Islander people and other Australians

‘Aboriginal and Torres Strait Islander people’, ‘Indigenous Australians’, and ‘Indigenous people’ are used interchangeably when referring to people who have identified as Aboriginal and/or Torres Strait Islander.

Non-Indigenous Australians are those that have stated they are not Aboriginal and/or Torres Strait Islander.

‘Other Australians’ is used when referring to people that have not identified as Aboriginal and/or Torres Strait Islander. This group includes those people who have said they are non-Indigenous but may also include individuals for whom the relevant information was not collected.

Demographic characteristics of young Indigenous Australians

Age and sex distribution

In 2001, there were estimated to be 116,698 Aboriginal and Torres Strait Islander people aged 12–24 years, representing 3.4% of all young Australians (see Table 1.3). Their number is projected to have grown to 143,128 (low series projection) by mid-2007 (AIHW & ABS 2006).

Table 4.1: Young Indigenous Australians aged 12–24 years, by age and sex, June 2001

<table>
<thead>
<tr>
<th>Age group</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>12–14 years</td>
<td>32,710</td>
<td>28.0</td>
</tr>
<tr>
<td>15–19 years</td>
<td>46,579</td>
<td>39.9</td>
</tr>
<tr>
<td>20–24 years</td>
<td>37,409</td>
<td>32.1</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>58,875</td>
<td>50.5</td>
</tr>
<tr>
<td>Females</td>
<td>57,823</td>
<td>49.5</td>
</tr>
<tr>
<td>Total Indigenous young people</td>
<td>116,698</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: ABS various years.

- Of all young Indigenous Australians in 2001, 28% were aged between 12 and 14 years and 40% were 15–19 year olds. Combined, 12–19 year olds comprised 68% of young Indigenous Australians aged 12–24 years.
- The proportions of young Indigenous males and young Indigenous females was very similar (50.5% compared with 49.5% respectively).

There was a higher proportion of Indigenous young people aged 12–14 years compared with all Australians (28% and 23% of 12–24 year olds respectively) and a lower proportion of Indigenous young people aged 20–24 years (32% compared with 39% of 12–24 year olds). This is consistent with the younger age structure of the Indigenous population (Figure 1.1). Among the Indigenous population, 26% were aged 12–24 years in 2001, compared with 18% for all Australians.

Regional status

People living in Remote and Very Remote areas of Australia are disadvantaged in educational and employment opportunities, income, access to goods and services and, in some areas, access to basic necessities such as clean water and fresh food (AIHW 2003e). Rates of smoking, physical activity, risky alcohol consumption and poorer nutrition are also higher outside of Major Cities. This could adversely affect the health of young people living in those areas (AIHW 2003e).
Table 4.2: Young Indigenous Australians and all young Australians aged 15–24 years, by region, 2001

<table>
<thead>
<tr>
<th>Region</th>
<th>Indigenous</th>
<th>All Australians</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>Major Cities</td>
<td>25,923</td>
<td>30.9</td>
</tr>
<tr>
<td>Inner Regional</td>
<td>16,627</td>
<td>19.8</td>
</tr>
<tr>
<td>Outer Regional</td>
<td>18,737</td>
<td>22.3</td>
</tr>
<tr>
<td>Remote</td>
<td>7,408</td>
<td>8.8</td>
</tr>
<tr>
<td>Very Remote</td>
<td>15,294</td>
<td>18.2</td>
</tr>
<tr>
<td><strong>Young people aged 15–24 years by region</strong></td>
<td><strong>83,988</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: ABS various years.

- In 2001, 31% of young Indigenous people aged 15–24 years lived in Major Cities, 42% in Inner Regional and Outer Regional areas and 27% in Remote or Very Remote areas. By comparison, over two-thirds (69%) of all young people aged 15–24 years lived in Major Cities and only 3% lived in Remote or Very Remote areas in 2001.
- Indigenous young people accounted for over 50% of all young Australians living in Very Remote areas.

As more than one-quarter of young Indigenous people live in Remote or Very Remote areas, they are likely to experience difficulties in accessing health services. In addition, a lack of trained Indigenous staff among health and welfare professionals and other workers and a lack of understanding about the knowledge and values of Indigenous people can discourage Indigenous people in all regions from accessing services that are available (AIHW 2003a).

**Fertility**

Birth rates among the Indigenous population are higher compared with the total Australian population. This is shown by the difference in the total fertility rate between Indigenous Australians and all Australians (2.06 babies for Indigenous women compared with 1.81 babies for all Australian women in 2005) (ABS 2006d).

Indigenous women also tend to give birth at younger ages than non-Indigenous women, with teenage (women aged under 20 years) births far more common among Indigenous women than among other women. In 2005, the teenage fertility rate of Indigenous women (69 babies per 1,000 women) was more than 4 times the fertility rate of all teenage women (16 babies per 1,000), while the fertility rate of Indigenous women aged 20–24 years was more than twice the fertility rate of all women in this age group (122 per 1,000 compared with 53 babies per 1,000 women) (ABS 2006d). The 20–24 year age group was the peak age group for births to Indigenous women, compared with 30–34 years for all women (ABS 2006d).

Teenage pregnancies are associated with a number of adverse reproductive outcomes such as fetal complications and low birthweight (Fraser et al. 1995). In 2004, the proportion of pre-term births and babies of low birthweight among Indigenous mothers was around twice that of non-Indigenous mothers (AIHW: Laws et al. 2006a).

**Health status and outcomes**

As with the Indigenous population as a whole, young Aboriginal and Torres Strait Islander people suffer poorer health than their non-Indigenous counterparts. Young Aboriginal and Torres Strait Islander people experience higher rates of death, injury and disability than other young Australians, and are more likely to live with certain chronic diseases.

In 2004–05, young Indigenous Australians aged 15–24 years were more likely to report fair or poor health than non-Indigenous young people (9% compared with 7%), and were less likely to report excellent or very good health (59% compared with 70%) (ABS 2006).
This section looks at factors directly related to health status, such as life expectancy, disability and activity limitation, health conditions including mental health, injury and poisoning, chronic diseases, communicable diseases, and deaths.

**Life expectancy**

The estimated life expectancy at birth for Aboriginal and Torres Strait Islander people is much lower than for other Australians, a reflection of higher death rates, particularly in the mid-adult and older age groups. For the period 1996–2001, the life expectancy at birth was estimated at 59 years for Indigenous males and 65 years for Indigenous females—well below the 77 years for all Australian males and 82 years for all Australian females in 1998–2000 (17–18 years lower) (ABS & AIHW 2005). The life expectancy of Aboriginal and Torres Strait Islander people is similar to that of the total Australian population in 1901–1910 for males and in 1920–1922 for females (ABS & AIHW 2005).

**Disability and activity limitation**

Indigenous Australians aged 18–24 years were 1.5 times as likely to have a disability or long-term health condition as non-Indigenous young people (ABS & AIHW 2005). According to the 2002 National Aboriginal and Torres Strait Islander Social Survey, an estimated 18,800 Indigenous Australians aged 15–24 years had a disability or long-term health condition (23% of young Indigenous people). Of these, 1 in 6 had a profound or severe core activity limitation, meaning that they always or sometimes needed assistance with at least one activity of everyday living (self-care, mobility or communication). For more information on disability among Indigenous Australians, see ABS & AIHW (2005).

**Health conditions**

Information on general practitioner (GP) visits and hospital admissions can provide an understanding of the extent of ill-health among Aboriginal and Torres Strait Islander young people.

The ABS 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) collected information on health related actions taken by young Indigenous Australians aged 15–24 years in the 2 weeks prior to interview (12 months for hospital separations).

Results from the ABS 2004–05 NATSIHS indicated that:

- Lower proportions of Indigenous young people accessed primary health care services—15% of Indigenous young people consulted a GP/specialist and 3% consulted a dentist, compared with 17% and 6% of non-Indigenous young people respectively.
- Indigenous young people were more likely to make use of tertiary health care services, such as being admitted to hospital or visiting casualty/outpatients than non-Indigenous young people (16% of Indigenous young people were admitted to hospital and 5% visited casualty/outpatients, compared with 12% and 2% of non-Indigenous young people respectively).

Hospital separation statistics are not a measure of the prevalence or incidence of a disease, but can provide some insights into the health status of various population groups. In 2004–05, Indigenous young people aged 12–24 years were more likely than other young Australians to be hospitalised for most diseases and conditions, indicating a higher occurrence of acute illness.

In Queensland, Western Australia, South Australia and the Northern Territory, the most common diagnosis for young Indigenous Australians aged 12–24 years hospitalised during 2004–05 was ‘pregnancy, childbirth and the puerperium’, followed by ‘injury, poisoning and other external causes’, ‘contact with health services’ (51% of which was care involving dialysis) and mental and behavioural disorders. This was similar to the pattern for other young Australians, although rates were higher for Indigenous young people (Table 4.3).
Table 4.3: Hospital separations for Indigenous young people aged 12–24 years, by principal diagnosis, 2004–05

<table>
<thead>
<tr>
<th>Principal diagnosis</th>
<th>Observed hospitalisations</th>
<th>Expected hospitalisations</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy, childbirth and the puerperium (O00–O99)</td>
<td>6,431</td>
<td>2,541</td>
<td>2.5</td>
</tr>
<tr>
<td>Injury, poisoning and other consequences of external causes (S00–T98)</td>
<td>3,069</td>
<td>1,898</td>
<td>1.6</td>
</tr>
<tr>
<td>Contact with health services (Z00–Z98)</td>
<td>2,456</td>
<td>1,063</td>
<td>2.3</td>
</tr>
<tr>
<td>Mental and behavioural disorders (F00–F99)</td>
<td>1,330</td>
<td>928</td>
<td>1.4</td>
</tr>
<tr>
<td>Genitourinary system (N00–N99)</td>
<td>731</td>
<td>616</td>
<td>1.2</td>
</tr>
<tr>
<td>Skin diseases (L00–L99)</td>
<td>726</td>
<td>395</td>
<td>1.8</td>
</tr>
<tr>
<td>Respiratory system (J00–J99)</td>
<td>706</td>
<td>587</td>
<td>1.2</td>
</tr>
<tr>
<td>Certain infectious and parasitic diseases (A00–B99)</td>
<td>276</td>
<td>201</td>
<td>1.4</td>
</tr>
<tr>
<td>Circulatory system (I00–I99)</td>
<td>238</td>
<td>113</td>
<td>2.1</td>
</tr>
<tr>
<td>Nervous system (G00–G99)</td>
<td>208</td>
<td>159</td>
<td>1.3</td>
</tr>
<tr>
<td>Ear diseases (H65–H95)</td>
<td>153</td>
<td>63</td>
<td>2.4</td>
</tr>
<tr>
<td>Other</td>
<td>2,575</td>
<td>4,074</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Total hospital separations</strong></td>
<td><strong>18,899</strong></td>
<td><strong>11,187</strong></td>
<td><strong>1.7</strong></td>
</tr>
</tbody>
</table>

Note: For data quality reasons, this table includes data for Queensland, Western Australia, South Australia and public hospitals in Northern Territory only. The data presented here are not necessarily representative of the jurisdictions excluded.

Source: AIHW National Hospital Morbidity Database.

- In 2004–05, the hospital separation rate for Aboriginal and Torres Strait Islander young people aged 12–24 years was 1.7 times the rate for other young Australians.

- Indigenous young people had higher separation rates than other young Australians for a number of diagnoses. The largest disparities in separation rates were for ‘pregnancy, childbirth and puerperium’ (2.5 times), ear diseases (2.4 times), ‘contact with health services’ (2.3 times), the circulatory system (2.1 times), and skin disease (1.8 times).

**Mental health**

National data on the prevalence of mental illness among young Indigenous Australians are not available. The age-standardised hospital separation rate for mental and behavioural disorders among Indigenous 12–24 year olds was 2,028 per 100,000 young people in 2004–05 (1,989 for males and 2,070 for females) (ICD-10-AM codes F00–F99). This rate was 1.6 times that of other young Australians. Separation rates increased with age, from 394 per 100,000 young people for 12–14 year olds to 1,570 per 100,000 young people aged 15–19 years and 2,942 per 100,000 for 20–24 years-olds.

Schizophrenia was the main mental and behavioural disorder associated with hospitalisation among young Indigenous males aged 12–24 years in 2004–05 (35%). This was followed by mental and behavioural disorders due to psychoactive substance use (32%) (13% due to alcohol use alone) and reaction to severe stress and adjustment disorder (9%). Among young Indigenous females, the main reasons for mental and behavioural disorder separations were psychoactive substance use (25%) (9% due to alcohol use alone), reaction to severe stress and adjustment disorder (16%) and schizophrenia (15%). Use of alcohol was responsible for 42% and 35% of hospital separations for psychoactive substance use among young Indigenous males and females respectively.

Over 49,000 community mental health services contacts were made by young Indigenous people aged 15–24 years in 2003–04 and 58% of the contacts had a specific principal diagnosis. The most common principal diagnoses among young Indigenous people were schizophrenia (accounting for 32% of the service contacts), and depressive disorders (15%) (NCHMCD, unpublished data).
Injury and poisoning

As for other young Australians, injury has a major, but largely preventable, impact on the health of Indigenous young people. In 2004–05, 16% of hospital separations among Indigenous young people aged 12–24 years were for injury. While this proportion was similar to that for other young Australians (15%), the patterns of injury due to specific external causes differed somewhat between the two groups. Assault was the leading external cause of injury among Indigenous young people, accounting for 33% of all injury hospital separations. In contrast, assault accounted for 7% of hospital separations for injury among other young Australians, with transport accidents being the leading cause (23% of injury hospital separations).

Table 4.4: Injury and poisoning hospital separations for Indigenous young people aged 12–24 years, by external cause, 2004–05

<table>
<thead>
<tr>
<th>External cause</th>
<th>Males Observed</th>
<th>Males Expected</th>
<th>Males Ratio</th>
<th>Females Observed</th>
<th>Females Expected</th>
<th>Females Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assault (X85–Y09, Y87.1)</td>
<td>457</td>
<td>119</td>
<td>3.8</td>
<td>546</td>
<td>18</td>
<td>31.0</td>
</tr>
<tr>
<td>Transport accidents (V00–V99, Y86)</td>
<td>277</td>
<td>321</td>
<td>0.9</td>
<td>105</td>
<td>104</td>
<td>1.0</td>
</tr>
<tr>
<td>Accidental falls (W00–W19)</td>
<td>241</td>
<td>209</td>
<td>1.2</td>
<td>110</td>
<td>62</td>
<td>1.8</td>
</tr>
<tr>
<td>Intentional self-harm (X60–X84, Y87.0)</td>
<td>86</td>
<td>49</td>
<td>1.8</td>
<td>126</td>
<td>49</td>
<td>1.1</td>
</tr>
<tr>
<td>Other</td>
<td>748</td>
<td>649</td>
<td>1.2</td>
<td>373</td>
<td>237</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>All injury separations</strong></td>
<td><strong>1,809</strong></td>
<td><strong>1,347</strong></td>
<td><strong>1.3</strong></td>
<td><strong>1,260</strong></td>
<td><strong>541</strong></td>
<td><strong>2.3</strong></td>
</tr>
</tbody>
</table>

Note: For data quality reasons, this table includes data for Queensland, Western Australia, South Australia and public hospitals in Northern Territory only. The data presented here are not necessarily representative of the jurisdictions excluded.

Source: AIHW National Hospital Morbidity Database.

- In 2004–05, the injury hospital separation rate for young Indigenous males aged 12–24 years was 1.3 times the rate for other young males, and the rate for young Indigenous females aged 12–24 years was 2.3 times the rate for other young females.
- Among young Indigenous females, separation rates for assault and accidental falls were substantially higher than for other young females (31.0 and 1.8 times as high respectively). Young Indigenous males had higher hospital separation rates for assault (3.8 times the rate for other young males) and intentional self-harm (1.8).

There were 205 deaths of young Indigenous Australians aged 12–24 years due to injury and poisoning during the period 2002–2004—a rate of 137 per 100,000 young people, which was almost 4.5 times that for young non-Indigenous Australians (31 per 100,000 young people) (data are for Queensland, Western Australia, South Australia and the Northern Territory only). The male rate was higher than the female rate for all age groups. The death rate was lowest among those aged 12–14 years and increased with age.

External causes of injury and poisoning accounted for the majority of deaths among Indigenous young people aged 12–24 years in 2002–2004 (Table 4.5).

Chronic diseases

Many of the chronic diseases affecting young Aboriginal and Torres Strait Islander people are similar to those affecting all young Australians. However, rates for some conditions, such as asthma and diabetes, are higher among young Indigenous people than among all young people. Additionally, rheumatic heart disease, which is largely associated with socioeconomic disadvantage, almost exclusively affects Indigenous people (Box 4.2).
In 2004–05, 59% of young Indigenous Australians aged 12–24 years reported a long-term condition, compared with 63% of all young Australians. The same proportion of young Indigenous people reported multiple long-term conditions as all young Australians (34%).

Asthma was the long-term condition most frequently reported by young Indigenous people (16%), followed by hay fever and allergic rhinitis (13%) and long-sightedness (10%).

The long-term conditions reported most frequently were similar for both Indigenous and all young people in 2004–05 (see Figure 2.13), although 5% of young Indigenous Australians reported complete or partial deafness, and 6% reported problems of psychological development. The prevalence of anxiety-related problems was similar between Indigenous and all young Australians (3.7% and 3.4% respectively). The proportion of Indigenous young people reporting asthma was higher compared with all young Australians (16% compared with 9%).
Box 4.2: Rheumatic heart disease among Aboriginal and Torres Strait Islander people

Rheumatic heart disease is caused by the long-term damage done to the heart muscle or heart valves by acute rheumatic fever. Acute rheumatic fever is a delayed complication of an untreated throat infection from Group A Streptococcus bacteria and there is some evidence that it may also be caused by streptococcal skin sores (AIHW 2004c). It can affect the heart valves, the heart muscle and its lining, the joints and the brain. Repeated or prolonged episodes of rheumatic fever in childhood and adolescence can cause permanent damage to the heart valves (rheumatic heart disease). In many Indigenous children, episodes of acute rheumatic fever are not being diagnosed, and are therefore not treated (Carapetis et al. 1996).

Both acute rheumatic fever and rheumatic heart disease are important and preventable causes of ill health and death. They are a significant problem in the Indigenous Australian population of northern and central Australia, among children in particular. In contrast, they are extremely rare in other Australian children (Carapetis et al. 1996). Australia’s Aboriginal and Torres Strait Islander peoples living in remote areas have among the highest rates of these diseases in the world (AIHW 2004c).

Acute rheumatic fever and rheumatic heart disease are typically associated with overcrowding, poor sanitary conditions and other aspects of social and economic disadvantage. In Australia, some population group’s limited access to medical care for diagnosis and treatment of these diseases is also recognised as a contributing factor to their occurrence (Couzos & Carapetis 2003).

Data on the incidence of acute rheumatic fever and the prevalence of rheumatic heart disease are from regional disease registers for the Top End and Central Australia (see AIHW (2004e) for further information). Hospital separations data are from the AIHW National Hospital Morbidity Database.

Incidence of acute rheumatic fever

Acute rheumatic fever is frequently under-reported because of difficulty in diagnosis and reduced awareness of the disease—therefore its true incidence is underestimated. The peak age of incidence of acute rheumatic fever is 5–14 years, but cases do occur in adults (AIHW 2004e).

In 2002, Aboriginal children aged 5–14 years accounted for 32 cases of acute rheumatic fever in the Top End of the Northern Territory (55% of all cases diagnosed in this area)—a rate of 346 per 100,000 Indigenous children. There were no reported cases of acute rheumatic fever among non-Indigenous children living in the area. Data from Central Australia present a similar picture. In 2002, the highest incidence rate was found among 5–14 year olds (15 cases or 365 per 100,000 Indigenous children, representing 56% of all cases diagnosed in this area).

Prevalence of rheumatic heart disease

The prevalence of rheumatic heart disease is higher among 15–24 year olds than 5–14 year olds. In 2002, the prevalence in Central Australia among Indigenous young people was highest among 15–24 year olds, with a rate of 18.6 per 1,000 population, and second highest after the 25–44 year age group in the Top End of the Northern Territory, with a rate of 19.8 per 1,000 population. The corresponding rates for other Australians aged 15–24 years were 0.5 per 1,000 and 0.3 per 1,000 population respectively.

Hospital separations

Among young Indigenous Australians aged 12–24 years, the age-standardised hospital separation rate for acute rheumatic fever and rheumatic heart disease was 134.4 per 100,000 young people in 2004–05 (ICD-10-AM codes I00–I02 and I05–I09), which is 100 times that for other Australians (1.3 per 100,000 young people) (data for Qld, WA, SA and NT only).
Asthma

As mentioned previously in this part of the report, the estimated prevalence of asthma among young Indigenous people aged 12–24 years in 2004–05 was 16% (12% for males and 19% for females). This compares with 9% for all young Australians.

Among young Indigenous Australians aged 12–24 years, the age-standardised hospital separation rate for asthma was 144 per 100,000 young people in 2004–05 (111 per 100,000 for young males and 178 per 100,000 for young females), which is one-third higher than the rate of other Australians (107 per 100,000 young people) in Qld, WA, SA and NT. The rate for young Indigenous females was 1.6 times the rate for young Indigenous males, however when the age group is broken down, young Indigenous males aged 12–14 years had a higher rate than Indigenous females of the same age. The rate was highest overall among those aged 12–14 years, followed by those aged 20–24 years.

Diabetes

In 2004–05, the age-standardised hospital separation rate for diabetes was 318 per 100,000 young people among young Indigenous Australians aged 12–24 years. This is more than 3 times as high as the rate for other young Australians (104 per 100,000 young people) in Qld, WA, SA and the NT. The difference is largely due to separations of young Indigenous females for diabetes mellitus in pregnancy.

Communicable diseases

Pertussis was the vaccine-preventable disease with the most notifications for Indigenous young people aged 12–24 years in 2005 (40 notifications), with a notification rate of 30 per 100,000 young Indigenous persons (see Table 2.23). By comparison, the rate for all young people was 43 per 100,000 young people. Over the last 4 years, the rate of notification for pertussis remained fairly constant among young Indigenous people.

In 2005, there were 18 cases (a rate of 13 per 100,000) of incident hepatitis C reported for young Indigenous people aged 12–24 years, accounting for 14% of total incidents of hepatitis C reported for young people. By comparison, the rate for all young people was 3.5 per 100,000.

Sexually transmitted infections

In 2005, chlamydia and gonorrhoea were the most commonly notified sexually transmitted infections among Indigenous Australians aged 12–24 years, with rates of 2,067 and 1,699 per 100,000 young Indigenous people respectively (see Table 2.24). Notifications for chlamydia and gonorrhoea among Indigenous young people accounted for 13% and 64% of all notifications for young people for these respective infections. There were 177 notifications of syphilis among young Indigenous people, accounting for 56% of the total number notified for young people in 2005 (a rate of 131 per 100,000).

Similar to trends among all young Australians, between 2002 and 2005, the rate of chlamydia and gonorrhoea notifications among young Indigenous people increased (by 13% and 34% respectively) and the notification rate for syphilis decreased (by 54%).

Deaths

Between 2002 and 2004, there were 273 deaths among Aboriginal and Torres Strait Islander people aged 12–24 years in Queensland, Western Australia, South Australia and the Northern Territory. This represents an age-standardised rate of 158 per 100,000 young people, which is almost 4 times the rate for other young Australians. The death rate for young Indigenous males was almost twice that for young Indigenous females (209 compared with 107 per 100,000 young people). Deaths among young people comprised 6% of deaths in the Indigenous population compared with 1% of deaths in the non-Indigenous population.
As for non-Indigenous young people, injury and poisoning accounts for the majority of deaths among young Aboriginal and Torres Strait Islander people. During 2002–2004, 75% (205 deaths) of all deaths among Indigenous young people aged 12–24 years were due to injury and poisoning, compared with 70% of deaths among non-Indigenous young people. For Indigenous young people, the age-standardised rate was 4 times that of other young Australians in Queensland, Western Australia, South Australia and the Northern Territory.

Patterns of mortality among Indigenous young people differ slightly from those for non-Indigenous young people. During 2002–2004, the leading cause of death among Indigenous young people was suicide (accounting for 29% of deaths), followed by land transport accidents (26%) and assault (7%). Over the same period, the leading causes of death among non-Indigenous young people were land transport accidents (33%), suicide (19%), and accidental poisoning (4%).

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>Male</th>
<th>Female</th>
<th>Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>Intentional self-harm (suicide) (X60–X84)</td>
<td>61</td>
<td>18</td>
<td>79</td>
</tr>
<tr>
<td>Land transport accidents (V01–V89)</td>
<td>53</td>
<td>18</td>
<td>71</td>
</tr>
<tr>
<td>Assault (homicide) (X85–Y09)</td>
<td>7</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>Symptoms, signs and ill-defined conditions (R00–R99)</td>
<td>10</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Accidental threats to breathing (W75–W84)</td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Other causes</td>
<td>44</td>
<td>35</td>
<td>79</td>
</tr>
<tr>
<td><strong>Total deaths</strong></td>
<td>183</td>
<td>90</td>
<td>273</td>
</tr>
</tbody>
</table>

(a) Leading causes of death were determined using the classifications developed by Becker et al. 2006.

Note: For data quality reasons, this table includes data for Queensland, Western Australia, South Australia and the Northern Territory only. The data presented here are not necessarily representative of the jurisdictions excluded.

Source: AIHW National Mortality Database.

- During 2002–2004, one-third and one-fifth of deaths among young Indigenous males and females respectively were due to intentional self-harm (suicide).
- The proportion of deaths due to land transport accidents was higher among young Indigenous males (29%) compared with females (20%). In contrast, the proportion of deaths due to assault was higher among young Indigenous females (12%) compared with males (4%).

Factors influencing health

As discussed in the introduction to Part 4, the determinants of health and wellbeing are multifactorial—cultural, historical, environmental and socioeconomic factors all contribute to the poorer health and wellbeing of Indigenous Australians (Abbot & Close 2002; Booth & Carroll 2005).

A wide body of research has demonstrated strong associations between health risk factors and the onset and prognosis of a variety of chronic diseases (ABS & AIHW 2005). There is a higher prevalence of established risk factors among young Indigenous Australians compared with other young Australians—young Indigenous Australians are more likely to smoke, have higher proportions who are obese and physically inactive, have poorer nutrition and higher rates of substance use.

It is important to remember that these higher levels of risky health behaviour sit within a broader social and economic context of disadvantage, and socioeconomic status is an important determinant of the likelihood that individuals and populations are exposed to health risk factors (Blakely et al. 2004). The socioeconomic disadvantage experienced by Indigenous young people includes lower income, poorer educational outcomes and higher unemployment rates. Other factors influencing the health of Indigenous young people include poor housing, and exposure to violence.
Health behaviours

The following section looks at behavioural risk factors that affect health status such as weight, physical activity, nutrition, substance use and sexual and reproductive health.

Weight

Overweight and obesity are risk factors for kidney disease, Type 2 diabetes, cardiovascular diseases and other chronic conditions (AIHW 2006a). Overweight and obesity prevalence estimates for young Indigenous Australians aged 15–24 years from the ABS 2004–05 NATSIHS can be compared with prevalence estimates for all 15–24 year olds from the ABS 2004–05 National Health Survey (NHS).

The proportions of young Indigenous and all young people classified as overweight (but not obese) was similar (17% and 18% respectively), but a much lower proportion of Indigenous Australians were recorded as being in the normal or healthy weight range (41% compared with 57% respectively). Young Indigenous Australians aged 15–24 years were twice as likely to be obese as all young Australians (12% compared with 6%) (ABS 2006l).

Physical activity

A sedentary lifestyle doubles the risk of cardiovascular disease, Type 2 diabetes and obesity. It also increases the risks of colon and breast cancer, high blood pressure, lipid disorders, osteoporosis, depression and anxiety in later life (ABS & AIHW 2005).

In 2002, around one-quarter (24%) of young Indigenous males and two-fifths (42%) of young Indigenous females aged 15–24 years had not played sport or participated in physical recreation activities in the last 12 months (ABS 2004f).

Nutrition

Over the last 200 years, the diet of many Aboriginal and Torres Strait Islander people has changed from a fibre-rich, high protein, low saturated fat ‘traditional’ diet to one which is high in refined carbohydrates and saturated fats. Such changes, along with physical inactivity, have increased the risk of obesity and chronic disease, including Type 2 diabetes (AIHW 2006a).
• In 2004–05, less than one-quarter (22%) of young Indigenous people aged 12–18 years reported eating the recommended number of serves of fruit each day. Around 27% reported having 2 serves of fruit a day and 42% reported eating 1 serve or less. While these proportions were similar for all 12–18 year olds, Indigenous young people were more likely to not eat any fruit (10% compared with 7%).

• Approximately 35% of Indigenous 19–24 year olds consumed the daily recommended number of serves or more of fruit, compared with 43% of all 19–24 year olds. A further 50% consumed 1 serve or less and 15% did not eat any fruit.

• While only 7% of Indigenous 19–24 year olds ate the recommended number of serves of vegetables (compared with 8% for all 19–24 year olds), approximately 60% of Indigenous 12–18 year olds consumed the recommended daily serves of vegetables (compared with 47% for all 12–18 year olds). Around 50% of 19–24 year olds had 2 serves of vegetables or less each day and a further 39% had 3 to 4 serves.

Substance use

Tobacco smoking increases the risk of coronary heart disease, stroke, peripheral vascular disease, numerous cancers, and a variety of other diseases and conditions. Based on results from the ABS 2004–05 NATSIHS, one in two young Indigenous young people aged 18–24 years were current daily smokers—a rate twice as high as for other young Australians (50% compared with 26% respectively). Just over one-third (35%) of young Indigenous people aged 18–24 years had never smoked, compared with over half (58%) of non-Indigenous young people.

Excessive alcohol consumption is associated with wide ranging impacts on the health, safety and wellbeing of individuals and communities (Ministerial Council on Drug Strategy 2006). Long-term health problems associated with excessive alcohol consumption include diabetes, liver disease and some forms of cancer. Drinking to intoxication is also associated, in the short term, with an increased risk of motor vehicle accidents, falls, burns, suicidal ideation and self-harm and can lead to anti-social behaviour, domestic violence and family breakdown (ABS & AIHW 2005). According to the ABS 2004–05 NATSIHS, Indigenous young people aged 18–24 years were more likely than their non-Indigenous counterparts to have a level of alcohol consumption that is classified as risky or high risk (16% compared with 14%) (ABS 2006l). Similar proportions of Indigenous and non-Indigenous young people reported that they never consumed alcohol (9% and 8% respectively).

Indigenous Australians are also at risk of ill health through the harmful use of substances such as marijuana, heroin, amphetamines and inhalants. In 2004–05, an estimated 28% of Indigenous people aged 18 years or over in non-remote areas had reported recently using an illicit substance within the last 12 months and 50% reported trying an illicit substance at least once in their lifetime (AIHW 2006a).

Petrol sniffing is a type of substance abuse that is particularly widespread in Indigenous communities in rural and remote regions of Australia. It is most common among adolescents and young adults (8–30 years), with rates 3 times as high in males than in females. Due to the remoteness of the communities where petrol sniffing occurs and the fact that it is often a concealed activity, the number of people engaging in this type of substance abuse is hard to estimate. A study of the Anangu population in 2000 indicated that around 12% of the population between the ages of 10 and 35 years were engaged in petrol sniffing (Nganampa Health Council as cited by Aboriginal and Torres Strait Islander Social Justice Commissioner 2004).

Sexual and reproductive health

Based on results from the ABS 2004–05 NATSIHS, condoms and the contraceptive pill were the main methods of contraception reported by young Indigenous women aged 18–24 years in 2004–05 (25% and 16% respectively). An estimated 14% of young Indigenous women reported primarily not using any contraception (see Table 3.17).
Infection with the sexually transmissible human papilloma virus (HPV) is believed to be necessary, though not sufficient, for development of cervical cancer (NHMRC 2005). Infection with a high-risk form of the virus may result in a lesion that may eventually progress to cancer. Pre-cancerous changes or lesions can be detected through a Pap smear, and if they are promptly treated, cervical cancer can be prevented. According to the ABS 2004–05 NATSIHS, around half (52%) of young Indigenous women reported having regular Pap smear tests. This is similar to the proportion for all young women aged 20–24 years (around 50%). Indigenous women in remote areas were less likely than their non-remote counterparts to have heard of Pap smears (94% compared with 79%).

**Community and family capacity**

This section describes some of the factors related to family and community that impact on the wellbeing of Aboriginal and Torres Strait Islander young people. These include parent health, child protection, juvenile justice and homelessness.

**Parental health**

Parents with a disability or chronic health condition may pay less attention to the needs of their children, or may be unable to provide their children with sufficient physical, emotional, or economic support. With higher rates of chronic illness and disability among Indigenous people, it could be expected that Indigenous parents experience poorer health than their non-Indigenous counterparts. Results for parents responding to the HILDA survey suggest that this may be the case, although the results are based on a small Indigenous sample and should therefore be interpreted with caution.

Indigenous parents with co-resident children aged 12–24 years and responding to the HILDA survey were more likely than non-Indigenous parents to report their health as fair or poor (30% compared with 17%) and less likely to report their health as good or excellent (20% compared with 45%).

**Child protection**

Indigenous young people are over-represented in the child protection system. Likely reasons for this include the intergenerational effects of the 'stolen generation' such as separation from family and culture, the poor socioeconomic status of Indigenous families, family violence and cultural differences in child-rearing practices (AIFS 2005; AIHW: Al-Yaman et al. 2006; Cunneen & Libesman 2000; Memmott et al. 2001).

The AIHW compiles national data on child protection notifications, investigations and substantiations, children on care and protection orders, and children in out-of-home care. These are discussed under Child protection in Part 3 of this report and also in Child protection Australia 2005–06 (AIHW 2007a). During 2005–06, Indigenous young people aged 12–16 years were almost four times as likely to be the subject of a substantiated child protection report than other young Australians—a rate of 19 per 1,000 Indigenous young people, compared with 5 per 1,000 among other young Australians.

Indigenous young people aged 12–16/17 years were also 6 times as likely as other young Australians to be on care and protection orders and to be placed in out-of-home care. In 2005–06, the rate of Indigenous young people on care and protection orders was 29 per 1,000 young people, compared with 5 per 1,000 for other Australians. Similarly, 25 per 1,000 Indigenous young people were in out-of-home care, compared with 4 per 1,000 for other Australians.

The Aboriginal Child Placement Principle outlines the preferential order for the placement of Aboriginal and Torres Strait Islander children when they are placed outside their immediate family: with the child’s extended family; within the child’s Indigenous community; then with other Indigenous people. All jurisdictions have adopted the Aboriginal Child Placement Principle either
in legislation or policy. The impact of the Principle is reflected in the relatively high proportion (76%) of Indigenous children who were placed either with Indigenous caregivers or with relatives at 30 June 2006.

**Homelessness**

The rate of homelessness among Indigenous Australians is considerably higher than among other Australians. While 2.4% of the Australian population identify as Indigenous, 9% of the homeless population at the 2001 Census were Indigenous (ABS 2003b).

Young Indigenous people are over-represented among Supported Accommodation Assistance Program (SAAP) clients (see *Homelessness* in Part 3 of this report or AIHW (2006e) for a description of SAAP). In 2004–05, 19% of SAAP clients aged 12–24 years were Indigenous. Among young people aged 12–24 years, the age-standardised rate for seeking SAAP assistance for Indigenous females (74 per 1,000) was 8 times the rate for non-Indigenous females (9 per 1,000), and the rate for Indigenous males (27 per 1,000) was 4 times the rate for non-Indigenous males (6 per 1,000).

**Juvenile justice**

National data on young people under juvenile justice supervision, either pre-sentence or sentenced, are available from the Juvenile Justice National Minimum Data Set (JJ NMDS) (AIHW 2006f). Indigenous young people experience high rates of imprisonment and juvenile justice supervision. In 2005, the Indigenous imprisonment rate for young people aged 18–24 years (2,404 per 100,000) was 13 times the non-Indigenous rate (181 per 100,000) (see Table 3.28). Indigenous young people accounted for almost one-third of the prison population aged 18–24 years, despite accounting for only 2% of the total Australian population aged 18–24 years.

In 2003–04, the rate of Indigenous 12–17 year olds in juvenile justice supervision was 13 times the non-Indigenous rate (5,430 per 100,000 compared with 409 per 100,000). This pattern was observed for both sexes (see Figure 3.21).

**Socioeconomic factors**

The following section presents information on socioeconomic factors which are important determinants of health, including education, employment, income and parental socioeconomic status.

**Education**

As for all Australians, education is generally considered to be a key factor in improving the health and wellbeing of Indigenous Australians (ABS & AIHW 2005). Higher levels of educational attainment improve employment prospects, which, in turn, affect income, standard of housing and access to health care.

In 2004, Indigenous students were less likely to achieve the national benchmarks for reading, writing and numeracy compared with all students. These benchmarks represent a minimum level of competence for literacy and numeracy at various grade levels, and non-achievement of these indicate that the student will have difficulty progressing satisfactorily at school (MCEETYA 2006). The proportion of Indigenous Year 7 students reaching the benchmarks for reading (71%), writing (79%) and numeracy (78%) was significantly lower than the proportions of all Year 7 students reaching these benchmarks (91%, 94%, and 82% respectively) (see Figure 3.5). Poorer educational performance in earlier years of schooling may have a cumulative effect on young Indigenous people as they move through the various stages of education and development.
The lower achievement of Indigenous students compared with other Australian students is also apparent in the results of the OECD’s 2003 Programme for International Student Assessment. In all areas of assessment, the average achievement of Indigenous students was considerably below the average achievement of other Australian students and, in many cases, significantly below international averages (Thomson & Fleming 2004).

Table 4.6: Apparent school retention rates, full-time students, selected years (per cent)

<table>
<thead>
<tr>
<th>From Year 7/8</th>
<th>1996</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Junior Secondary (Year 10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous</td>
<td>75.8</td>
<td>86.0</td>
<td>91.4</td>
</tr>
<tr>
<td>Non-Indigenous</td>
<td>97.3</td>
<td>98.2</td>
<td>98.9</td>
</tr>
<tr>
<td>To Senior Secondary (Year 12)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous</td>
<td>29.2</td>
<td>36.3</td>
<td>40.1</td>
</tr>
<tr>
<td>Non-Indigenous</td>
<td>72.4</td>
<td>74.5</td>
<td>75.9</td>
</tr>
</tbody>
</table>


- In 2006, the apparent retention rate for Indigenous students from Year 7/8 to Year 12 was considerably lower than the rate for non-Indigenous school students (40% compared with 76%) (ABS 2007b) (see the Glossary for more information on apparent retention rates).
- Apparent retention rates for Indigenous students have increased between 1996 and 2006, from 76% to 91% for retention to Year 10 and from 29% to 40% for retention to Year 12.

In 2002, Indigenous young people aged 15–24 years were less likely to have a post-school qualification than all young people (15% compared with 25%). Indigenous young people were also approximately 15 times less likely to have a bachelor degree or above and around 23% less likely to have a certificate or diploma than all young Australians (ABS 2002a, 2004f).

Although there has been an increase in educational attainment, the attendance and achievement of Indigenous Australians remain below that of other Australians. This is partly due to chronic health problems such as middle ear infection and nutritional deficiencies that prevent their regular attendance at school. There are also other factors such as lack of access to educational institutions, financial constraints and social, cultural and language barriers affecting school participation (ABS & AIHW 2005).

Employment and income

Young Indigenous Australians experience lower levels of employment and higher levels of unemployment than young non-Indigenous people. In 2001, Indigenous Australians aged 15–24 years were more likely to be unemployed than other young Australians—13% compared with 9% (Figure 4.3). Half of young Indigenous people (50%) were not in the labour force (that is, neither employed or looking for work), compared with one-third of other young Australians (34%).
Only about one-third of Indigenous young people aged 15–24 years are employed (34%), compared with more than half of other Australian young people (57%). Of those Indigenous young people who were employed, around one-fifth were in community development employment programs (CDEP) and the remainder were in other types of employment.

The CDEP allows members of Indigenous communities to exchange unemployment benefits for opportunities to undertake work and training in activities which are managed by a local Aboriginal or Torres Strait Islander community organisation (ABS 2001b). However, these programs have quite restricted training opportunities for Indigenous people (AIHW 2003a).

The full-time participation rate is the proportion of the population, at specific ages, that are in full-time education or training, or in full-time work, or in both part-time education or training and part-time work. In 2001, the full-time participation rates were lower for those aged 20–24 years than for those aged 15–19 years among both Aboriginal and Torres Strait Islander and other Australian young people. However, for every age between 12–24 years, the full-time participation rate was lower for Indigenous than for other Australian young people. For young people aged 24 years, the full-time participation rate of other Australian young people was more than twice that of young Indigenous Australians in 2001 (66% compared with 31%).

In 2001, although the proportion of young people aged 15–24 years with personal income was similar between Indigenous and other Australian young people, the income distribution was different (Table 4.7).
### Table 4.7: Gross weekly income of Indigenous and other Australian young people aged 15–24 years, 2001

<table>
<thead>
<tr>
<th>Gross weekly income</th>
<th>Indigenous Australians</th>
<th>Other Australians</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Per cent</td>
</tr>
<tr>
<td>Negative/nil income</td>
<td>11,578</td>
<td>17.4</td>
</tr>
<tr>
<td>With income</td>
<td>55,102</td>
<td>82.6</td>
</tr>
<tr>
<td>Total</td>
<td>66,680</td>
<td>100.0</td>
</tr>
</tbody>
</table>

#### Income distribution

<table>
<thead>
<tr>
<th>Income range</th>
<th>Indigenous Australians</th>
<th>Other Australians</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1–$119</td>
<td>11,524</td>
<td>465,587</td>
</tr>
<tr>
<td>$120–$199</td>
<td>19,555</td>
<td>297,139</td>
</tr>
<tr>
<td>$200–$399</td>
<td>14,915</td>
<td>455,037</td>
</tr>
<tr>
<td>$400–$599</td>
<td>6,007</td>
<td>356,171</td>
</tr>
<tr>
<td>$600–$799</td>
<td>2,016</td>
<td>165,970</td>
</tr>
<tr>
<td>$800–$999</td>
<td>494</td>
<td>48,344</td>
</tr>
<tr>
<td>$1,000 or more</td>
<td>591</td>
<td>29,263</td>
</tr>
<tr>
<td>Total</td>
<td>55,102</td>
<td>1,817,511</td>
</tr>
</tbody>
</table>


- Among those young people aged 15–24 years with personal incomes, other Australian young people had higher weekly incomes than Indigenous Australians—56% of Indigenous young people had incomes of less than $200 per week, compared with 42% of other Australian young people.
- The proportion of Indigenous young people who had incomes of $400 or more per week was 17%, compared with 33% of other Australian young people.

### Socioeconomic status of parents

When looking at the social and economic circumstances of young people, it is important to also consider the socioeconomic status of their parents. Young people who are still living in the family home, and particularly those who are financially dependent on their parents, will share the same social and economic circumstances as their parents.

One measure of socioeconomic status for which data are available for parents of young people is education. Based on results from the 2004 HILDA survey, almost one-quarter of Indigenous young people aged 12–24 years were living in a household where no parent had completed junior secondary school (Year 10). The corresponding figure for non-Indigenous young people was 9% (see Table 3.17). These results are based on a small Indigenous sample and should therefore be interpreted with caution.

### Environmental factors

#### Housing environment

Adequate housing is a major factor affecting wellbeing. Overcrowded housing increases the risk of infectious diseases such as meningococcal disease, rheumatic fever, tuberculosis, and respiratory infections (Waters 2001). However, overcrowding can be a subjective measure, and may be influenced by cultural norms. Indigenous people may have different views about what constitutes overcrowding, especially in remote areas where living in large family groupings may be culturally acceptable or non-problematic (Keys Young 1998).

Many Indigenous people live in housing conditions that are considered overcrowded and that are unacceptable by general Australian standards because they do not satisfy the basic requirements of shelter, safe drinking water and adequate waste disposal (AIHW 2006a). In 2001, the proportion of Indigenous households that were overcrowded was six times as high as that of other households (9.5% compared with 1.6%) (AIHW 2005f).