# CHAPTER 7 HEALTH STATUS

## INTRODUCTION

Aboriginal and Torres Strait Islander people are more likely to report poorer self-assessed health, and have higher rates of hospitalisation and higher prevalence rates for many health conditions than other Australians. The burden of disease suffered by Indigenous Australians is estimated to be two-and-a-half times greater than the burden of disease in the total Australian population. Long-term health conditions responsible for much of the ill-health experienced by Indigenous people include circulatory diseases, diabetes, respiratory diseases, musculoskeletal conditions, kidney disease, and eye and ear problems. For most of these conditions, Indigenous Australians experience an earlier onset of disease than other Australians.

The Indigenous population is disadvantaged across a range of socioeconomic dimensions that affect health outcomes, such as income, employment, educational attainment and home ownership (see Chapters 2, 3 and 4). In addition, Indigenous people are often more exposed to certain health risks such as smoking, poor nutrition, alcohol misuse, overcrowded living conditions and violence (see Chapter 8).

This chapter outlines the national data from a number of different health data collections to provide an overview of the health status of Aboriginal and Torres Strait Islander people. The chapter begins by providing information on the self-assessed health of Indigenous Australians, and the relationship between health status and various socio-demographic factors.

The chapter then provides an overview of the main causes of ill-health using self-reported prevalence data for selected health conditions, visits to general practitioners and admissions to hospitals. For the first time, a detailed section is included with information on the social and emotional wellbeing of Aboriginal and Torres Strait Islander people. Finally, specific causes of ill-health are examined in more detail, including circulatory system diseases, diabetes, chronic kidney disease, cancer, injury, respiratory diseases, communicable diseases, arthritis and other musculoskeletal conditions, eye and vision problems, ear and hearing problems, and oral health.

The quality and completeness of data vary between different sources and across jurisdictions. In many of the administrative data sources used in this chapter, such as the hospitals data, Indigenous people are under-identified and the rates of illness reported are therefore likely to be underestimates of the true rates of illness in the Aboriginal and Torres Strait Islander population.

## SELF-ASSESSED HEALTH

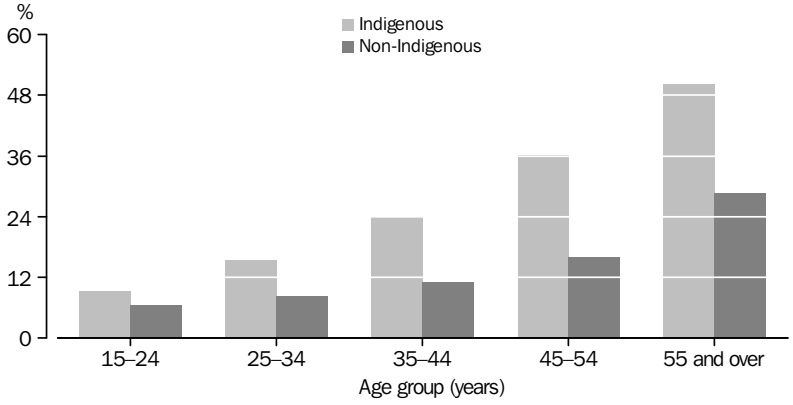
Self-assessed health status provides an overall measure of a population's health based on individuals' personal perceptions of their own health. Health is recognised as having physical, mental, social, and spiritual components and measures of health must therefore go beyond more objective measures such as morbidity and mortality. Self-assessed health provides a suitable broad measure of health status. It is dependent on an individual's awareness of their health as well as the social constructs and definitions of health that surround them. There may therefore be inconsistencies between a person's own self-assessed health status and their health status as measured by objective health assessment techniques (AHMAC 2006). Despite self-assessed health status being a subjective measure of health status, international studies have found it has strong predictive power for subsequent mortality (Quesnel-Vallee 2007).

In the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), around 43% of the Indigenous population aged 15 years and over reported their health as very good or excellent, 35% reported their health as being good and 22% reported their health as fair or poor. After adjusting for differences in the age structures of the Indigenous and non-Indigenous populations, Indigenous Australians were twice as likely as non-Indigenous Australians to report their health as fair or poor in 2004–05 (ABS 2006c).

The proportion of both Indigenous and non-Indigenous Australians reporting fair or poor health was higher in older age groups (graph 7.1). Around one in ten Indigenous Australians aged 15–24 years ( 9%) reported fair or poor health compared with 50% of those aged 55 years and over (ABS 2006c).

Indigenous females were more likely to report their health as fair or poor than Indigenous males (24% compared with 19% respectively). Indigenous Australians aged 15 years and over in non-remote areas were more likely than those in remote areas to report fair or poor health (23% compared with 19%) (AIHW 2007a).

**7.1** PERSONS REPORTING FAIR OR POOR HEALTH, by Indigenous status and age—2004–05




*Source: ABS 2004–05 NATSIHS, 2004–05 NHS*

*Changes over time in self-assessed health*

Between 1994 and 2004–05, the proportion of Indigenous Australians who reported their health as fair or poor increased from 18% to 22%. There were corresponding decreases in the proportions reporting their health status as good and excellent/very good (table 7.2). The increase in the proportion reporting fair/poor health was more pronounced among Indigenous females, rising from 17% in 1994 to 24% in 2004–05.

**7.2** SELF-ASSESSED HEALTH STATUS, Indigenous persons aged 15 years and over, by sex—1994 and 2004–05

| | | 1994 NATSIS | | | 2004–05 NATSIHS | | |
|---|---|---|---|---|---|---|---|
| | | *Males* | *Females* | *Persons* | *Males* | *Females* | *Persons* |
| Excellent/very good | % | 48.8 | 42.1 | 45.3 | 44.9 | 41.7 | 43.2 |
| Good | % | 32.8 | 40.9 | 37.1 | 35.7 | 34.1 | 34.9 |
| Fair/poor | % | 18.1 | 16.8 | 17.5 | 19.4 | 24.1 | 21.9 |
| **Total** | no. | **102 200** | **112 400** | **214 600** | **139 600** | **154 000** | **293 600** |

*Source: ABS 1994 NATSIS, 2004–05 NATSIHS*

*Self-assessed health and socioeconomic factors*

Health status is related to socioeconomic status—people with higher socioeconomic status generally enjoy better health than those with lower socioeconomic status. In 2004–05, Indigenous adults with relatively high equivalised household incomes (as measured by the fourth and fifth quintiles) were more likely to report very good or excellent health than those with lower equivalised household incomes (49% compared with 33%) (table 7.3). For more information on equivalised income and income quintiles, see Glossary.

Indigenous males and females who had completed Year 12 or equivalent were also much more likely to report very good or excellent health (54% of males and 50% of females) compared with those whose highest level of schooling was Year 9 or below (28% of males and 29% of females). Similarly, employed Aboriginal and Torres Strait Islander people were more likely than those who were unemployed to report very good or excellent health (48% compared with 41%) (table 7.3). Those who were not in the labour force were even less likely than the unemployed to report very good or excellent health (29%), however, this is probably also age-related (i.e. older people comprise a greater share of those who are not in the labour force, and a smaller share of those with very good or excellent health).

After adjusting for age differences between the Indigenous and non-Indigenous populations, Indigenous adults were less likely than non-Indigenous adults with the same socioeconomic characteristics to report very good or excellent health. Apart from unemployed Indigenous and non-Indigenous females who were equally likely to report very good or excellent health, Indigenous to non-Indigenous sex-specific rate ratios were between 0.6 and 0.8 for the selected socioeconomic characteristics (table 7.3).

*Self-assessed health and socioeconomic factors continued*

**7.3** SELECTED SOCIOECONOMIC CHARACTERISTICS, Proportion of Indigenous persons aged 18 years and over with excellent/very good health—2004–05

| | PROPORTION WITH EXCELLENT/VERY GOOD HEALTH | | | INDIGENOUS TO NON-INDIGENOUS RATE RATIO(a) | | |
|---|---|---|---|---|---|---|
| | *Males* | *Females* | *Persons* | *Males* | *Females* | *Persons* |
| | % | % | % | rate | rate | rate |
| **Equivalised gross household income**(b) | | | | | | |
| Lowest quintile | 31.3 | 34.2 | 33.0 | 0.8 | 0.7 | 0.7 |
| Second quintile | 42.0 | 37.1 | 39.3 | 0.7 | 0.6 | 0.7 |
| Third quintile | 51.9 | 43.6 | 48.1 | 0.8 | 0.7 | 0.7 |
| Fourth and fifth quintile | 46.8 | 51.6 | 49.2 | 0.7 | 0.7 | 0.7 |
| **Highest year of school completed**(c) | | | | | | |
| Year 9 or below(d) | 28.3 | 28.5 | 28.4 | 0.8 | 0.7 | 0.7 |
| Year 10 or 11 | 45.5 | 39.8 | 42.4 | 0.6 | 0.6 | 0.7 |
| Year 12 or equivalent | 54.0 | 50.2 | 51.9 | 0.7 | 0.6 | 0.7 |
| **Labour force person** | | | | | | |
| Employed | 48.7 | 46.0 | 47.5 | 0.7 | 0.6 | 0.7 |
| Unemployed | 43.2 | 37.8 | 40.8 | 0.6 | 1.0 | 0.8 |
| Not in the labour force | 23.5 | 32.1 | 29.3 | 0.7 | 0.6 | 0.6 |

(a) Rate ratios are the age standardised rates for Indigenous persons divided by the rates for other persons. Rates are directly age standardised to the 2001 Australian population.
(b) The annual household income quintile boundaries are based on the equivalised gross household income per week for the total population of Australia. Boundaries are as follows: lowest quintile $0–264 per week; second quintile $265–426 per week; third quintile $427–611 per week; fourth quintile $612–869 per week; and fifth quintile $870 or more per week.
(c) Excludes persons still at school.
(d) Includes persons who never attended school.

*Source: AIHW analysis of the ABS 2004–05 NATSIHS*

*Self-assessed health status and other selected indicators*

According to the 2004–05 NATSIHS, Indigenous adults who reported having been removed from their natural families as children were more likely to report fair or poor health (35% of men and 41% of women) than those who had not (20% of men and 25% of women). Indigenous adults who spoke English as their main language at home were more likely to report fair or poor health (22% of men and 27% of women) than those who spoke an Aboriginal or Torres Strait Islander language at home (19% of both men and women).

## HEALTH CONDITIONS AND ILLNESS

This section provides an overview of Indigenous peoples' experience of ill-health using burden of disease and injury estimates, self-reported prevalence data, visits to general practitioners and admissions to hospitals. This is followed by more detailed information on the specific causes of ill-health. For information on the prevalence of need for assistance with core activities among Aboriginal and Torres Strait Islander people, see Chapter 5.

*Burden of disease and injury*

The burden of disease and injury for Indigenous Australians was assessed using Disability Adjusted Life Years (DALYS)—the sum of years of life lost due to premature death and years lived with disability (Vos et al 2007). In 2003 it was estimated that the burden of disease and injury for Indigenous Australians was 95,976 DALYS. This was 3.6% of the burden of disease for the total Australian population.

*Burden of disease and injury continued*

Cardiovascular disease (18%) and mental disorders (16%) were the leading causes of the disease burden in the Indigenous population (table 7.4). Intentional and unintentional injuries accounted for a further 13% of the disease and injury burden.

**7.4** DISABILITY ADJUSTED LIFE YEARS (DALYS), broad cause group, Indigenous persons—2003

| Cause | DALYS no. | Proportion of total % |
|---|---|---|
| Cardiovascular disease | 16 786 | 17.5 |
| Mental disorders | 14 860 | 15.5 |
| Chronic respiratory disease | 8 587 | 8.9 |
| Diabetes | 8 498 | 8.9 |
| Cancers | 7 817 | 8.1 |
| Unintentional injuries | 6 989 | 7.3 |
| Intentional injuries | 5 395 | 5.6 |
| Other | 27 044 | 28.2 |
| **All causes** | **95 976** | **100.0** |

*Source: Vos et al 2007*

LEADING SPECIFIC CAUSES OF THE BURDEN OF DISEASE

Ischaemic heart disease was the leading specific cause of the disease burden experienced by Indigenous males, accounting for 12% of the total Indigenous male burden. Type 2 diabetes, anxiety and depression, and suicide were the next three leading specific causes, together accounting for another 18% of the Indigenous male burden. For Indigenous females, the leading specific cause of the burden was anxiety and depression, accounting for 10% of the burden. Type 2 diabetes, ischaemic heart disease and asthma were the next three leading specific causes, accounting for a further 23% of the Indigenous female burden.

COMPARISON WITH THE AUSTRALIAN BURDEN OF DISEASE

Indigenous Australians suffer a burden of disease that is two-and-a-half times greater than the burden of disease in the total Australian population. This indicates a very large potential for health gain. Two-thirds of the difference in the burden of disease was due to mortality and one-third was due to disability which, in part, reflects a higher case fatality among Indigenous Australians. Non-communicable diseases, which include chronic illnesses such as cardiovascular disease, diabetes, mental disorders and chronic respiratory diseases were responsible for 70% of the observed difference in the burden of disease between the Indigenous and non-Indigenous population. If Indigenous Australians experienced the same burden rates as the total Australian population due to the 11 selected risk factors examined, 29% of the total Indigenous Australian burden of disease could be avoided. (Vos et al 2007).

*Prevalence of long-term health conditions*

Information about the self-reported prevalence of long-term health conditions is available from the 2004–05 NATSIHS, with comparable data for non-Indigenous people available from the 2004–05 National Health Survey (NHS). In the NATSIHS, respondents were asked whether they had any of a number of specific health conditions (e.g. asthma, cancer, arthritis, diabetes, etc.) or any other health conditions that had lasted, or were expected to last, for six months or more.

*Prevalence of long-term health conditions continued*

Around two-thirds of Indigenous people (65%) reported at least one long-term health condition in 2004–05 (ABS 2006c). Eye/sight problems (30%), asthma (15%), musculoskeletal conditions (including back conditions and arthritis) (13%) and heart and circulatory diseases (12%) were the most commonly reported long-term health conditions among Indigenous people (table 7.5).

The NATSIHS did not specifically ask about mental health or psychological problems in the context of long-term health conditions, but respondents in non-remote areas were shown a prompt listing that included mental health conditions when asked if they had any other long-term health conditions. Some 22% of Aboriginal and Torres Strait Islander people in non-remote areas indicated that they had a long-term mental or behavioural condition when responding to this question (AIHW forthcoming).

## 7.5 PREVALENCE OF SELECTED LONG-TERM HEALTH CONDITIONS AND AGE STANDARDISED RATE RATIOS—2001 and 2004–05

| | 2001 | | | 2004–05 | | |
|---|---|---|---|---|---|---|
| *Long-term health conditions* (a) | *Indigenous* % | *Non-Indigenous* % | *Rate ratio* (b) rate | *Indigenous* % | *Non-Indigenous* % | *Rate ratio* (b) rate |
| Arthritis | 8.1 | 13.7 | 1.2 | 9.1 | 15.4 | 1.2 |
| Asthma | 16.5 | 11.5 | 1.5 | 15.1 | 10.2 | 1.6 |
| Back pain/problems n.e.c., disc disorders | 15.2 | 20.9 | 1.0 | 13.1 | 16.2 | 1.2 |
| Diabetes/high sugar levels | 5.2 | 3.2 | 3.3 | 6.1 | 3.8 | 3.4 |
| Ear/hearing problems | 14.6 | 13.8 | 1.1 | (c) 12.2 | (c) 12.7 | (c) 1.0 |
| Eye/sight problems | 29.2 | 51.7 | 0.9 | (c) 30.2 | (c) 52.2 | (c) 0.9 |
| Heart, circulatory problems/diseases | 10.5 | 17.0 | 1.1 | 11.8 | 18.0 | 1.3 |
| Kidney disease | 1.2 | 0.3 | 5.3 | 1.8 | 0.3 | 10.0 |
| Neoplasms/cancer | **0.8 | 1.7 | 0.7 | 0.8 | 2.0 | 0.7 |
| Osteoporosis | *0.3 | 1.6 | 0.4 | 0.9 | 3.0 | 0.7 |

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

(a) ICD-10 based output classification.

(b) Rate ratios are the age standardised rates for Indigenous persons divided by the rates for non-Indigenous persons.

(c) Difference between Indigenous and non-Indigenous data is not statistically significant.

*Source: ABS 2001 NHS, 2001 NHS(I), 2004–05 NATSIHS, 2004–05 NHS*

Indigenous people had a higher prevalence of most types of long-term health conditions compared with non-Indigenous people (table 7.5). The differences were greatest for kidney disease, (where the overall age standardised Indigenous rate was 10 times the non-Indigenous rate) and diabetes/high sugar levels (three times higher).

Between 2001 and 2004–05, there was a significant decrease in the proportion of Indigenous Australians reporting ear and hearing problems (from 15% to 12%) and a significant increase in the proportion of Indigenous Australians reporting kidney problems (from 1% to 2%).

*Encounters with general practitioners*

Information about encounters with general practitioners (GPs) is available from the 'Bettering the Evaluation and Care of Health' (BEACH) survey. Encounters can be direct consultations (the patient was seen by the GP) or indirect consultations (the patient was not seen by a GP but a clinical service was provided). Information is collected from a random sample of approximately 1,000 GPs from across Australia each year. A sample of 100 consecutive encounters is collected from each GP.

Over the period 2001–02 to 2005–06, there were 496,100 GP encounters recorded in the BEACH survey, of which 7,682 encounters (1.5%) were with patients who identified as Aboriginal and/or Torres Strait Islander. The number of GP encounters with Indigenous Australians in the BEACH survey is likely to be underestimated. This may be due to lower attendance in general practices where other services exist (e.g. Aboriginal Community Controlled Health Services), failure by GPs to record the Indigenous status of patients, or reluctance on the part of patients to identify as Indigenous (AIHW 2002a). However, other evidence, such as continuing lower levels of access to MBS-funded services (AHMAC 2006) suggests that Indigenous people are accessing primary health care services at a lower rate than non-Indigenous people. The reliability of the results of the BEACH survey has been tested in a sub-study in 2003 of about 9,000 patient encounters during the survey. The sub-study found that when the question on Indigenous status was asked of the patient within the context of a series of questions about origin and cultural background, 2.2% identified as Aboriginal or Torres Strait Islander—twice the rate recorded in the BEACH survey for that year (AIHW: Britt et al 2003).

Table 7.6 presents the number and age standardised rate of selected problems managed at GP encounters with Indigenous and other patients over the period 2001–02 to 2005–06. Respiratory problems were the most frequently managed problems at GP encounters with both Indigenous and other patients (around 20 per 100 encounters). Circulatory problems and endocrine and metabolic problems (including diabetes) were also frequently managed at encounters with Indigenous clients (20 and 19 per 100 encounters respectively).

The rate of GP encounters for non-gestational diabetes was three times higher for Indigenous patients than for other patients (10 compared with 3 per 100 encounters) (table 7.6). For most types of problems managed, however, GP encounter rates were similar for Indigenous and other Australians. Contrasting the problems identified in table 7.6 with hospitalisation rates for similar conditions (table 7.8) suggests a much higher use of hospital services by Indigenous people in comparison to GP services. It is impossible to know, however, how much of this difference is a reflection of under-identification of Indigenous people in BEACH data or to what extent it represents lower use of GP services by Indigenous Australians.

*Encounters with general practitioners continued*

**7.6** PROBLEMS MANAGED BY GENERAL PRACTITIONERS, by Indigenous status of patient—2001–02 TO 2005–06

| | NUMBER | | RATE(b) | | |
|---|---|---|---|---|---|
| *Problems managed*(a) | *Indigenous* | *Other* | *Indigenous* | *Other* | *Ratio* |
| Respiratory | 1 582 | 96 697 | 20.3 | 19.8 | 1.0 |
| Circulatory | 1 034 | 81 995 | 19.8 | 16.7 | 1.2 |
| Endocrine and metabolic | 1 139 | 55 339 | 18.6 | 11.3 | 1.6 |
| Diabetes—non-gestational(c) | 587 | 15 017 | 10.2 | 3.1 | 3.3 |
| Musculoskeletal | 1 048 | 84 712 | 15.3 | 17.3 | 0.9 |
| Skin | 1 231 | 82 684 | 14.7 | 16.9 | 0.9 |
| Psychological | 983 | 56 822 | 12.0 | 11.6 | 1.0 |
| Digestive | 804 | 48 966 | 10.9 | 10.0 | 1.1 |
| Pregnancy and family planning | 485 | 21 157 | 4.7 | 4.4 | 1.1 |
| Ear | 395 | 19 708 | 4.1 | 4.0 | 1.0 |
| Other | 2 665 | 179 319 | 35.9 | 36.7 | 1.0 |
| **Total problems** | **11 366** | **727 399** | **156.4** | **148.8** | **1.1** |

(a) Classified according to ICPC-2 chapter codes (Classification Committee of the World Organization of Family Doctors (WICC) 1998).

(b) Per 100 encounters. Rates are directly age standardised using the total encounters over the period 2001–02 to 2005–06 as the standard.

(c) ICPC-2 codes T89-T90.

*Source: BEACH survey of general practice, AGPSCC*

*Hospitalisations*

Hospitalisation statistics are not a measure of prevalence or incidence of a disease, but can provide insights into the health of the population who use hospitals, through data on the number of, and reasons for, hospitalisations. The principal diagnosis is the main reason for the patient's episode of hospital care (see box 7.7 for information on the hospitalisations data and box 7.9 on Indigenous identification in these data.)

**7.7** HOSPITALISATIONS DATA

Hospitalisation data provides a measure of a population's use of hospital services. A number of qualifications need to be made about hospitalisation data with regard to Indigenous identification, which is incomplete in some jurisdictions. In this publication, hospital separations (hospitalisations) for 2005–06 are presented for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory for public and most private hospitals, and have not been adjusted for under-identification. Box 7.9 provides detailed information about the identification of Indigenous status in the hospitalisations data.

All hospitalisations are presented by principal diagnosis or the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. Disease categories are based on the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM Fifth Edition).

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

*Hospitalisations continued*

reflect differences between observed hospitalisations of Aboriginal and Torres Strait Islander people and those expected if they had the same hospitalisation rate as other Australians.

All hospitalisation rates have been calculated using the average of the Indigenous and non-Indigenous Estimated Resident Population projections for the years 2005 and 2006 based on the 2001 Census. The data are presented by state of residence, rather than state of hospitalisation as this is more consistent with the population data used to calculate rates. State of residence is also likely to have a greater impact on health status than state of hospitalisation.

Hospitalisations for which Indigenous status was not reported are included with the non-Indigenous hospitalisations under the 'Other' category. This is because a preliminary analysis of the data indicated that the demographic profile of patients for whom Indigenous status was not recorded was similar to that of 'non-Indigenous' patients. In 2005–06, there were approximately 128,900 hospitalisations for which the Indigenous status of the patient was not reported in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, compared with approximately 243,100 hospitalisations recorded for Indigenous people. In these six jurisdictions, the proportion of records where Indigenous status was not reported declined from approximately 11.8% of hospitalisations in 1997–98 to 1.8% of hospitalisations in 2005–06.

in 2005–06, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, the most common diagnosis for hospitalisation of Indigenous Australians was for care involving dialysis which is used in the treatment of kidney failure. Indigenous Australians were also commonly hospitalised for injury (e.g. transport accidents, assault and suicide); pregnancy and childbirth (e.g. complications of labour and delivery); respiratory diseases (e.g. influenza and pneumonia); digestive diseases (e.g. diseases of the liver, intestines and oral cavity); mental and behavioural disorders (e.g. schizophrenia and psychoactive substance use) and circulatory diseases (e.g. ischaemic heart disease and cerebrovascular disease). 'Symptoms, signs and abnormal clinical and laboratory findings' was also a common diagnosis for Indigenous Australians and includes a broad range of conditions such as Sudden Infant Death Syndrome (SIDS), convulsions, fever of unknown origin, pain in throat and chest, and abdominal and pelvic pain (table 7.8).

Hospitalisation rates for Indigenous Australians were higher than for other Australians for many diagnoses (table 7.8). Indigenous Australians were hospitalised for care involving dialysis at 14 times the rate, and for endocrine, nutritional and metabolic diseases, which includes diabetes, at three times the rate for other Australians.

## 7.8 HOSPITALISATIONS OF INDIGENOUS PERSONS(a), by principal diagnosis—2005–06

| *Principal diagnoses (ICD-10-AM chapter)* | *Observed hospitalisations* no. | *Expected hospitalisations* no. | *Ratio*(b) rate |
|---|---|---|---|
| Factors influencing health status and contact with health services (Z00–Z99) | 108 682 | 18 634 | 5.8 |
| Care involving dialysis (Z49) | 100 153 | 7 392 | 13.5 |
| Other (Z00–Z48, Z50–Z99) | 8 529 | 11 241 | 0.8 |
| Injury, poisoning and certain other consequences of external causes (S00–T98) | 18 843 | 9 383 | 2.0 |
| Complications of pregnancy, childbirth and the puerperium (O00–O99) | 18 012 | 11 548 | 1.6 |
| Diseases of the respiratory system (J00–J99) | 15 722 | 6 877 | 2.3 |
| Diseases of the digestive system (K00–K93) | 12 906 | 13 342 | 1.0 |
| Symptoms, signs and abnormal clinical and laboratory findings, n.e.c. (R00–R99) | 10 461 | 6 723 | 1.6 |
| Mental and behavioural disorders (F00–F99) | 10 083 | 5 318 | 1.9 |
| Diseases of the circulatory system (I00–I99) | 7 859 | 3 799 | 2.1 |
| Diseases of the genitourinary system (N00–N99) | 6 220 | 5 614 | 1.1 |
| Diseases of the skin and subcutaneous tissue (L00–L99) | 5 599 | 2 073 | 2.7 |
| Certain infectious and parasitic diseases (A00–B99) | 5 249 | 2 562 | 2.0 |
| Endocrine, nutritional and metabolic diseases (E00–E89) | 4 797 | 1 610 | 3.0 |
| Other (C00–D48, G00–H95, M00–M99, P00–Q99)(c) | 18 609 | 21 265 | 0.9 |
| **Total**(d) | **243 106** | **108 793** | **2.2** |

(a) Data are for NSW, Vic., Qld, WA, SA and NT combined. These six jurisdictions are considered to have adequate levels of Indigenous identification. Data exclude private hospitals in the NT.

(b) Ratio is observed hospitalisations divided by expected hospitalisations. Expected hospitalisations are calculated based on the age, sex and cause-specific rates of other Australians.

(c) Includes: diseases of the musculoskeletal system and connective tissue, neoplasms, diseases of the nervous system, certain conditions originating in the perinatal period, diseases of the ear and mastoid process, diseases of the eye and adnexa, diseases of the blood and blood-forming organs and certain disorders involving the immune system, and congenital malformations, deformations and chromosomal abnormalities.

(d) Includes hospitalisations for which no principal diagnosis was recorded.

*Source: AIHW National Hospital Morbidity Database*

*Hospitalisations continued*

## 7.9 IDENTIFICATION OF INDIGENOUS PERSONS IN HOSPITAL RECORDS

Information on the number of hospitalisations of Indigenous people is limited by the accuracy with which Indigenous patients are identified in hospital records. Problems associated with identification result in an underestimation of morbidity patterns and hospitalisation use among Aboriginal and Torres Strait Islander persons. At present, it is not possible to ascertain the extent to which a change in hospitalisation rates for Indigenous people is due to differences in Indigenous identification or a genuine change in hospital use/ health status.

Information on the quality of Indigenous identification in hospital data is provided annually to the Australian Institute of Health and Welfare by the states and territories. For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data was of acceptable quality (AIHW 2007b). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (20% or less overall under-identification of Indigenous patients) in their hospital separations data. These six states and territories

*Hospitalisations continued*

have therefore been included in all analyses of Indigenous hospitalisations data in this report.

From the AIHW study, it was possible to produce factors for the level of under-identification in hospital data for each jurisdiction. The use of these factors to adjust 2005–06 hospitalisations data resulted in an 11% increase in hospitalisations recorded for Indigenous people. Therefore, the adjusted age standardised hospitalisation rate for Indigenous Australians was 2.4 times the rate for other Australians instead of 2.2 times the rate.

## SPECIFIC CAUSES OF ILL-HEALTH

The following section covers prevalence of various conditions as well as information on hospitalisations for specific conditions such as diabetes, respiratory diseases, circulatory diseases, ear and hearing problems, eye and vision problems and musculoskeletal diseases.

*Mental health and social and emotional wellbeing*

From the perspective of Indigenous Australians, mental health and social and emotional wellbeing are part of a holistic understanding of life that encompasses not only the wellbeing of the individual, but also the wellbeing of their family and community (Swan & Raphael 1995). In addition, social and emotional wellbeing refers to more than simply the presence or absence of illness (i.e. a deficit approach); it also incorporates a strengths perspective that refers to the wellness of the individual.

Until recently, the majority of national data on the social and emotional wellbeing of Aboriginal and Torres Strait Islander people centred on the use of mental health services. These data consistently indicate higher usage rates of mental health services by Indigenous Australians when compared with other Australians.

For the first time, national data about the social and emotional wellbeing of Indigenous adults were collected in the 2004–05 NATSIHS. The social and emotional wellbeing module in the 2004–05 NATSIHS included measures of psychological distress, the impact of psychological distress, positive wellbeing, feelings of anger, experiences of stressors, perceptions of discrimination, cultural identification, and removal from family. Some selected findings from the 2004–05 NATSIHS and other data sources are reported below.

### LIFE STRESSORS

In the 2004–05 NATSIHS, respondents aged 18 years and over were asked to indicate which (if any) of 15 stressors they, their family and/or friends had experienced during the previous 12 months (ABS 2006c). Four in ten (42%) of Indigenous respondents reported that they, their family and/or friends had experienced the death of a family member or close friend in the previous year, 28% indicated serious illness or disability, 20% reported alcohol-related problems, 19% reported that a member of their family had been sent to jail or was in jail, 17% reported not being able to get a job, and 17% reported overcrowding at home.

Non-Indigenous comparisons are not available for 2004–05 as a question on life stressors was not asked of non-Indigenous Australians in the 2004–05 NHS. However, data from the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) and 2002

*Mental health and social and emotional wellbeing continued*

## LIFE STRESSORS *continued*

General Social Survey (GSS) show that Indigenous Australians aged 18 years and over were 1.4 times as likely as non-Indigenous Australians to report experiencing at least one stressor in the previous 12 months (83% compared with 57%) (ABS 2004d). Specifically, Indigenous adults were three-and-a-half times as likely as non-Indigenous adults to have been affected by alcohol/drug-related problems and/or abuse/violent crime and were twice as likely to have reported the death of a family member/close friend. In addition, Indigenous adults in non-remote areas were twice as likely as non-Indigenous adults to have reported mental illness as a stressor.

## PSYCHOLOGICAL DISTRESS

Five questions from the Kessler Psychological Distress Scale were used to measure psychological distress in the 2004–05 NATSIHS. The responses to these five questions were then scored and summed to create a 'Kessler–5' (K5) psychological distress score. The results indicated that 27% of Indigenous adults had high or very high levels of psychological distress, with Indigenous females significantly more likely than Indigenous males to report high levels of psychological distress (32% and 21%, respectively) (AIHW forthcoming). The proportions of Indigenous people reporting high or very high levels of psychological distress did not differ significantly by age group or geographic remoteness.

By utilising data from both the 2004–05 NATSIHS and the 2004–05 NHS, the levels of psychological distress among Indigenous and non-Indigenous Australians can be compared. After adjusting for age differences between the Indigenous and non-Indigenous populations, Indigenous Australians were twice as likely as non-Indigenous Australians to report high or very high levels of psychological distress. This difference applied to males as well as to females (AIHW forthcoming).

Among Indigenous Australians who indicated some level of psychological distress (i.e. those who answered 'a little of the time', 'some of the time', 'most of the time' or 'all of the time' to at least one K5 question), 21% indicated having been unable to work or carry out their normal activities because of their distress for at least one day during the previous four weeks, while 12% had seen a doctor or other health professional at least once for this reason over the same time period. One in seven (15%) of those who indicated some level of psychological distress indicated that physical health problems were the main cause of those feelings all or most of the time.

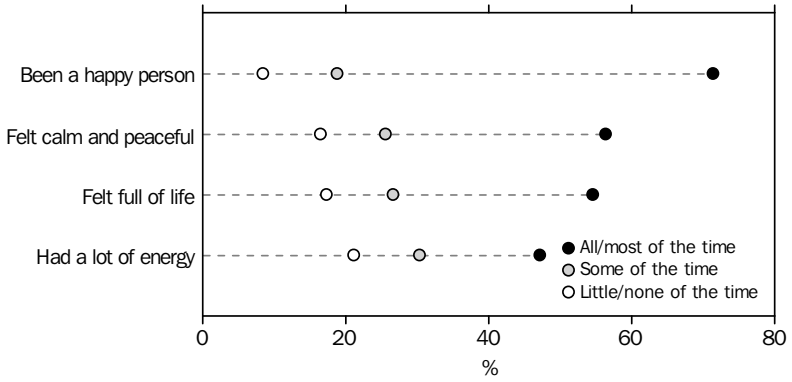
## POSITIVE WELLBEING

Four items were selected from the mental health and vitality scales of the Medical Outcome Short Form Health Survey (SF-36) to provide a measure of positive wellbeing in the 2004–05 NATSIHS. These items measured the extent to which respondents felt calm/peaceful, happy, full of life, and had lots of energy in the previous four weeks. More than half of the adult Indigenous population reported being happy (71%), calm and peaceful (56%) and/or full of life (55%) all or most of the time, while just under half (47%) said they had a lot of energy all or most of the time (graph 7.10). Only a relatively small proportion (between 2% and 7%) of Indigenous Australians said they experienced these feelings of positive wellbeing 'none of the time' (AIHW 2007a).

*Mental health and social and emotional wellbeing continued*

POSITIVE WELLBEING *continued*

**7.10** POSITIVE WELLBEING INDICATORS(a), Indigenous persons aged 18 years and over—2004–05




(a) In the four weeks prior to interview.

*Source: ABS 2004–05 NATSIHS*

Indigenous people aged 55 years and over were more likely than those in the younger age groups to report feeling happy and calm/peaceful all or most of the time however the only statistically significant difference was between the rates for this older group and those aged 25–34 years. Indigenous people aged 55 years and over were least likely to report feeling full of life or having a lot of energy all or most of the time (AIHW forthcoming).

### HOSPITALISATIONS FOR MENTAL AND BEHAVIOURAL DISORDERS

Data on hospitalisations for mental and behavioural disorders provide a measure of the use of hospital services by those with problems related to mental health. In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there were 5,504 hospitalisations of Indigenous males and 4,579 hospitalisations of Indigenous females for mental and behavioural disorders (table 7.11). This represented 5% and 3% of all hospitalisations of Indigenous males and females respectively.

There were more hospitalisations of Indigenous males and females than expected based on the rates for other Australians for most types of mental and behavioural disorders (table 7.11). In particular, hospitalisations for 'mental and behavioural disorders due to psychoactive substance use' were almost five times higher for Indigenous males and around three times higher for Indigenous females than for other males and females.

Hospitalisation rates for intentional self-harm may also be indicative of mental illness and distress. In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians were more likely to be hospitalised for intentional self-harm than other Australians (rates were three times as high for Indigenous males and twice as high for Indigenous females) (see table 7.26).

## 7.11 HOSPITALISATIONS OF INDIGENOUS PERSONS FOR MENTAL AND BEHAVIOURAL DISORDERS(a), by principal diagnosis—2005–06

| | MALES | | | FEMALES | | |
|---|---|---|---|---|---|---|
| | *Observed* | *Expected* | *Ratio* | *Observed* | *Expected* | *Ratio* |
| Mental disorders due to psychoactive substance use (F10–F19) | 2 436 | 538 | 4.5 | 1 331 | 400 | 3.3 |
| Schizophrenia, schizotypal and delusional disorders (F20–F29) | 1 517 | 558 | 2.7 | 1 035 | 412 | 2.5 |
| Mood and neurotic disorders (F30–F48) | 1 111 | 906 | 1.2 | 1 816 | 1 790 | 1.0 |
| Disorders of adult personality and behaviour (F60–F69) | 93 | 51 | 1.8 | 143 | 168 | 0.8 |
| Organic mental disorders (F00–F09) | 81 | 34 | 2.4 | 71 | 30 | 2.3 |
| Other mental and behavioural disorders (F50–F59, F70–F99) | 266 | 186 | 1.4 | 183 | 264 | 0.7 |
| **Total** | **5 504** | **2 273** | **2.4** | **4 579** | **3 064** | **1.5** |

(a) Data are for NSW, Vic., Qld, WA, SA and NT combined, based on state/territory of usual residence. Data exclude private hospitals in the NT.

*Source: AIHW National Hospital Morbidity Database*

### *Circulatory system diseases*

Circulatory system diseases include coronary heart disease, stroke, peripheral vascular disease, hypertension and heart failure. The main underlying problem in circulatory system diseases is atherosclerosis, a process that clogs blood vessels with deposits of fat, cholesterol and other substances that have built up in the inner lining of the vessels. It is most serious when it affects the blood supply to the heart (which can lead to angina, heart attack or sudden death) or to the brain (which can lead to a stroke).

#### PREVALENCE OF CIRCULATORY DISEASE

In 2004–05, an estimated 12% of Indigenous people reported suffering from heart disease and/or other circulatory conditions (table 7.5). The reported prevalence of heart and circulatory conditions was higher among older people. For example, 54% of Indigenous people aged 55 years and over reported a heart or circulatory condition compared with 11% of those aged 25–34 years (ABS 2006c).

Hypertensive disease (high blood pressure) was the most common type of heart or other circulatory condition reported by both Indigenous and non-Indigenous Australians in 2004–05 (15% and 11% respectively). After adjusting for age differences between the Indigenous and non-Indigenous populations, Indigenous people were one-and-a-half times as likely as non-Indigenous people to have hypertensive disease (AIHW 2007a).

#### HOSPITALISATIONS FOR CIRCULATORY DISEASES

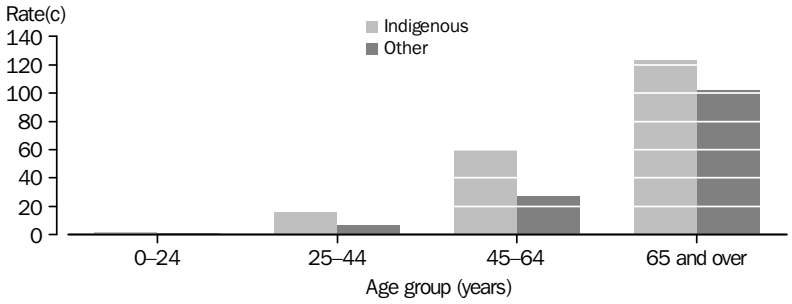
In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, diseases of the circulatory system were the main reason for 4,181 hospitalisations of Indigenous males, representing 4% of hospitalisations for Indigenous males. For Indigenous females, the comparative figures were 3,678 hospitalisations, representing 3% of hospitalisations for Indigenous females (table 7.13).

Indigenous Australians had higher hospitalisation rates for diseases of the circulatory system than other Australians across all age groups. The differences were most marked in relative terms among those aged 25–44 years and 45–64 years, where Indigenous hospitalisation rates were more than twice the rates for other Australians (graph 7.12).

*Circulatory system diseases continued*

HOSPITALISATIONS FOR CIRCULATORY DISEASES *continued*

**7.12** HOSPITALISATION RATES, CIRCULATORY DISEASES(a)(b), by Indigenous status and age—2005–06




(a) Data for NSW, Vic, Qld, WA, SA and NT combined.
(b) Based on principal diagnosis.
(c) Rates are per 1,000 population.

Note: ICD-10-AM codes I00–I99.

*Source: AIHW National Hospital Morbidity Database*

Indigenous Australians were hospitalised at higher rates than other Australians for most types of circulatory system diseases (table 7.13). For the most common type of circulatory system disease (ischaemic heart disease), there were over twice as many hospitalisations of Indigenous males and four times as many hospitalisations of Indigenous females as for other Australian males and females. Hospitalisations for hypertensive disease were also substantially higher in the Indigenous population than among other Australians. Most notably, hospitalisations for rheumatic heart disease were 8 and 13 times higher for Indigenous males and females respectively. These large differences are to some extent determined by the very low prevalence of rheumatic heart disease in the non-Indigenous population (see section on rheumatic heart disease).

**7.13** HOSPITALISATIONS OF INDIGENOUS PERSONS FOR DISEASES OF THE CIRCULATORY SYSTEM(a), by principal diagnosis—2005–06

| | MALES | | | FEMALES | | |
|---|---|---|---|---|---|---|
| | *Observed* | *Expected* | *Ratio*(b) | *Observed* | *Expected* | *Ratio*(b) |
| Ischaemic heart disease (I20–I25) | 1 904 | 787 | 2.4 | 1 406 | 359 | 3.9 |
| Other heart disease (I30–I52) | 1 228 | 538 | 2.3 | 1 039 | 385 | 2.7 |
| Cerebrovascular disease (I60–I69) | 343 | 143 | 2.4 | 309 | 124 | 2.5 |
| Hypertensive disease (I10–I15) | 112 | 27 | 4.2 | 189 | 33 | 5.6 |
| Rheumatic heart disease (I05–I09) | 54 | 6 | 8.4 | 134 | 10 | 12.8 |
| Other diseases of the circulatory system (I00–I02, I26–I28, I70–I99)(c) | 540 | 660 | 0.8 | 601 | 686 | 0.9 |
| **Total** | **4 181** | **2 161** | **1.9** | **3 678** | **1 598** | **2.3** |

(a) Data are for NSW, Vic., Qld, WA, SA and NT combined, based on state/territory of usual residence. Data exclude private hospitals in the NT.
(b) Ratio is observed hospitalisations divided by expected hospitalisations. Expected hospitalisations are calculated based on the age, sex and cause-specific rates of other Australians.
(c) Includes diseases of arteries, arterioles and capillaries, diseases of veins, lymphatic vessels and lymph nodes and other and unspecified disorders of the circulatory system.

*Source: AIHW National Hospital Morbidity Database*

*Rheumatic heart disease*

Rheumatic heart disease is caused by the 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 2003 and 2006 there were 250 new cases of acute rheumatic fever in the Top End and Central Australia, 246 (98%) of whom were Aboriginal and/or Torres Strait Islander people. Over this period, more than half (54%) of Indigenous people who suffered acute rheumatic fever were aged 5–14 years, with the disease creating a foundation for continuing health problems throughout their lives. Rates of rheumatic fever in the age group 5–14 years were 2.5 per 1,000 persons; considerably higher than the rates for those in younger and older age groups (table 7.14).

**7.14** NEW AND RECURRENT CASES OF ACUTE RHEUMATIC FEVER AMONG INDIGENOUS PERSONS(a), by age—2003–2006

| *Age group (years)* | *Number* | *Percent* | *Rate*(b) |
|---|---|---|---|
| 0–4 | 5 | 2.0 | 0.2 |
| 5–14 | 133 | 54.1 | 2.5 |
| 15–24 | 64 | 26.0 | 1.4 |
| 25–34 | 22 | 8.9 | 0.6 |
| 35–44 | 13 | 5.3 | 0.5 |
| 45 and over | 9 | 3.7 | 0.3 |
| **Total** | **246** | **100.0** | **1.1** |

(a) Data are for the Top End of NT and Central Australia.
(b) Rates are per 1,000 population.
*Source: AIHW analysis of Top End Rheumatic Heart Disease Register and Central Australian Rheumatic Heart Disease Register data.*

*Diabetes*

Diabetes mellitus (diabetes) is a significant health problem for Indigenous Australians. There are three main types of diabetes: Type 1, Type 2 and gestational diabetes. Type 1 diabetes is caused by a total lack, or near total lack of insulin, while Type 2 diabetes is marked by a reduced level of insulin or the inability of the body to use insulin properly (i.e. insulin resistance). Gestational diabetes occurs during pregnancy in about 3% to 8% of all females not previously diagnosed with diabetes and usually disappears after the baby is born (AIHW 2002b). Gestational diabetes increases the risk of subsequently developing Type 2 diabetes.

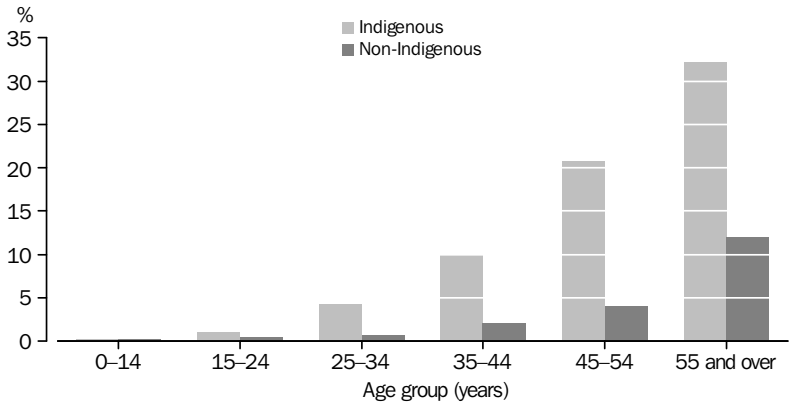
*Diabetes continued*

## PREVALENCE OF DIABETES

The overall proportion of Indigenous Australians reporting diabetes as a long-term health condition in 2004–05 was 6% (table 7.5). Indigenous people in remote areas were more likely to report having diabetes than those in non-remote areas (9% and 5% respectively). Prevalence of diabetes was highest among Indigenous people aged 55 years and over (32%) (ABS 2006c).

After adjusting for age differences between the Indigenous and non-Indigenous populations, Indigenous people were three times as likely as non-Indigenous people to report having diabetes in 2004–05 (table 7.5). The greatest differences in diabetes prevalence between Indigenous and non-Indigenous Australians were among those aged 35–44 years and 45–54 years where rates for Indigenous people were around five times those for non-Indigenous Australians (graph 7.15).

**7.15** PREVALENCE OF DIABETES/HIGH SUGAR LEVELS, by Indigenous status and age—2004–05




*Source: ABS 2004–05 NATSIHS*

## HOSPITALISATIONS DUE TO DIABETES

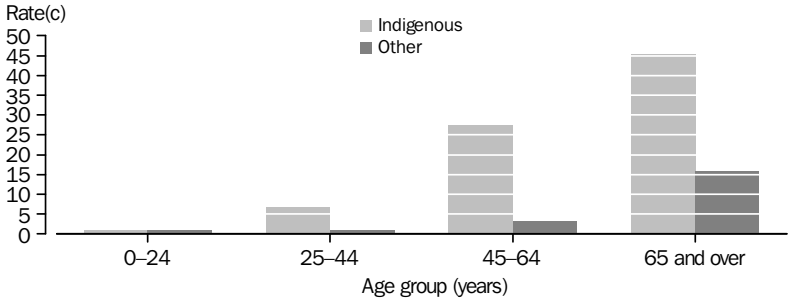
In 2005–06, diabetes was the principal diagnosis for 3,400 hospitalisations of Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, representing 1.4% of all hospitalisations in which the patient was Indigenous (53% were females). Despite a relatively low prevalence of Type 1 diabetes in the Indigenous population, 13% of hospitalisations of Indigenous people for diabetes were for Type 1 diabetes. Hospitalisation rates for diabetes for Indigenous persons ranged from around 7 per 1,000 population for those aged 25–44 years to 45 per 1,000 population for those aged 65 years and over (graph 7.16). Among people aged 25 years or over, hospitalisation rates for diabetes among Indigenous males and females were considerably higher than for other Australian males and females.

After adjusting for differences in the age structures of the Indigenous and non-Indigenous populations, hospitalisation rates for all types of diabetes for Indigenous males and females were four and five times those for other Australian males and females respectively. Hospitalisation rates for Type 2 diabetes for Indigenous males and females were 7 and 10 times those for other Australian males and females respectively.

*Diabetes continued*

HOSPITALISATIONS DUE TO DIABETES *continued*

**7.16** HOSPITALISATION RATES, DIABETES(a)(b), by Indigenous status and age—2005–06




(a) Data for NSW, Vic, Qld, WA, SA and NT combined.
(b) Based on principal diagnosis.
(c) Rates are per 1,000 population.

Note: ICD-10-AM codes E10-E14.

*Source: AIHW National Hospital Morbidity Database*

## DIABETES AS AN ASSOCIATED DIAGNOSIS

The data shown in graph 7.16 are for diabetes as a principal diagnosis only. However diabetes is more frequently reported as an additional or associated diagnosis (other diagnoses reported for a hospital episode) than as a principal diagnosis. In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, diabetes was recorded as an associated diagnosis for 37,378 hospitalisations of Indigenous Australians (excluding hospitalisations with a principal diagnosis of diabetes). It should be noted that there has been a substantial increase in the number of hospitalisations for diabetes recorded as an additional diagnosis in recent years, mainly due to a coding rule which was recently introduced in Western Australia whereby all patients hospitalised with a principal diagnosis of 'care involving dialysis' who were clinically documented as having diabetes must now have diabetes recorded as an additional diagnosis.

Among the complications of, or conditions associated with, diabetes, are coronary heart disease, stroke, peripheral vascular disease, digestive diseases, cancer of the pancreas, retinopathy and kidney disease (AIHW 2002b). In 2005–05, around 20% of hospitalisations of Indigenous Australians for care involving dialysis had diabetes as an associated diagnosis compared with 5% of hospitalisations for other Australians. Diseases of the circulatory system were the most common principal diagnosis for hospitalisations in which diabetes was an associated diagnosis (table 7.17). Approximately 58% of hospitalisations of Indigenous Australians for this disease category had diabetes recorded as an associated diagnosis, compared with 17% of other Australians.

**7.17** HOSPITALISATIONS OF PERSONS WITH DIABETES AS AN ADDITIONAL DIAGNOSIS(a)(b), by principal diagnosis and Indigenous status of patient—2005–06

| | NUMBER | | PROPORTION(c) | |
|---|---|---|---|---|
| | *Indigenous* | *Other*(d) | *Indigenous* | *Other*(d) |
| Factors influencing health status and contact with health services (Z00–Z99) | 19 836 | 79 827 | 24.3 | 5.0 |
| Care involving dialysis (Z49) | 18 861 | 41 487 | 20.4 | 5.4 |
| Diseases of the circulatory system (I00–I99) | 3 164 | 74 632 | 58.1 | 17.3 |
| Diseases of the respiratory system (J00–J99) | 2 505 | 26 982 | 28.7 | 8.8 |
| Diseases of the digestive system (K00–K93) | 1 964 | 45 859 | 29.8 | 5.9 |
| Symptoms, signs and abnormal clinical and laboratory findings, n.e.c. (R00–R99) | 1 903 | 37 310 | 33.4 | 8.7 |
| Injury, poisoning and certain other consequences of external causes (S00–T98) | 1 812 | 28 271 | 25.0 | 6.4 |
| Diseases of the genitourinary system (N00–N99) | 1 022 | 23 320 | 28.4 | 6.8 |
| Other (A00–H95), (L00–M99), (O00–Q99)(e) | 5 172 | 122 127 | 20.6 | 5.0 |
| **Total**(f) | **37 378** | **438 328** | **24.2** | **6.5** |

(a) Excludes hospitalisations with a principal diagnosis of diabetes.

(b) Data are for NSW, Vic., Qld, WA, SA and NT combined, based on state/territory of usual residence. Data exclude private hospitals in the NT.

(c) Indirectly standardised proportion of hospitalisations with diabetes as an additional diagnosis, based on the age, sex and cause-specific proportions of other Australians.

(d) Includes hospitalisations of non-Indigenous persons and hospitalisations for which the Indigenous status of the patient was not stated.

(e) Includes: diseases of the skin and subcutaneous tissue, diseases of the genitourinary system, neoplasms, complications of pregnancy childbirth and the puerperium, certain infectious and parasitic diseases, mental and behavioural disorders, diseases of the nervous system, diseases of the blood and blood-forming organs and certain disorders involving the immune system, endocrine nutritional and metabolic diseases, diseases of the eye and adnexa, diseases of the ear and mastoid process, diseases of the musculoskeletal system and connective tissue, certain conditions originating in the perinatal period, and congenital malformations, deformations and chromosomal abnormalities.

(f) Includes hospitalisations where the principal diagnosis was unknown.

*Source: AIHW National Hospital Morbidity Database*

### *Kidney disease*

The main function of the kidneys is 'to regulate the water content, mineral composition and acidity of the body' (Vander et al 1990:472). They are also involved in the excretion of metabolic waste products and of various chemicals. Kidney disease has a marked impact on the quality of life of those who have it as well as those who care for them. It is expensive to treat, and the rates of kidney disease are known to be high in some Indigenous communities (McDonald et al 2005; Shephard et al 2003).

The association between kidney disease and other aspects of the health of Indigenous people is extremely important. Diseases and conditions such as diabetes, high blood pressure, infections, low birthweight and obesity are risk factors for kidney disease (Catford et al 1997), and are all more common among Indigenous people than among other Australians. Socioeconomic disadvantage has also been shown to be associated with higher rates of renal disease among Indigenous Australians (Cass et al 2002; Cass et al 2004). Cass et al 2004, illustrated a number of pathways linking disadvantage and kidney disease including psychosocial factors, cultural factors, damaging health behaviours, factors related to the health care system and government/corporate policies.

The following section presents information from the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA), and the AIHW's National Hospital Morbidity Database.

*Kidney disease continued*

## CHRONIC KIDNEY DISEASE

Chronic kidney disease includes diabetic nephropathy, hypertensive renal disease, glomerular disease and chronic renal failure and end-stage renal disease (ESRD). ESRD results when the kidneys cease functioning almost entirely, leading to a build-up of waste products and excess water in the body causing progressively worse illness (AHMAC 2006). This is the last and most debilitating stage of chronic kidney disease in which dialysis or kidney transplantation is necessary to maintain life.

Information is available on Indigenous persons with ESRD from ANZDATA. In Australia, people who develop ESRD and undertake dialysis or kidney transplantation are registered with ANZDATA. The Registry is the most comprehensive and reliable source of information on people treated for ESRD. It compiles data on incidence and prevalence, renal complications, co-morbidities and patient deaths. Indigenous identification in the ANZDATA registry is based on self-identification in hospital records. However, because of the heightened awareness of the extent of renal disease among Indigenous Australians, and the prolonged and repeated contact with renal units in hospitals, it is believed that Indigenous identification in the ANZDATA registry is more complete than in general hospital data (Cass et al 2001). There is little information, however, on earlier chronic kidney disease, despite its importance in the Indigenous population. The main focus of this section is therefore on ESRD.

## END-STAGE RENAL DISEASE

In 2005, there were 2,654 new patients registered with ANZDATA. Of these, 207 (or 8%) identified as Aboriginal or Torres Strait Islander. This is higher than the proportion of Indigenous people in the total population (2.5%). Indigenous people commencing ESRD treatment were substantially younger, on average, than other Australians commencing ESRD treatment. This is in part because many Aboriginal and Torres Strait Islander people suffer chronic conditions such as diabetes and hypertension at younger ages than other Australians which, if left untreated, often lead to an earlier onset of ESRD (AHMAC 2006). Over half (56%) of Aboriginal and Torres Strait Islander people registered with ANZDATA were aged less than 55 years, whereas approximately one-third (31%) of other Australians registered were below this age.

The number of Indigenous patients starting ESRD treatment has more than tripled over the last decade, from 64 in 1992 to 207 in 2005 (table 7.18). Some of this increase may be due to improvements in the identification of Indigenous patients over this period. The increase in the number of Indigenous patients starting ESRD treatment, combined with a lower rate of transplantation, leads to a much higher rate of ESRD prevalence among Indigenous people (Excell & McDonald 2006).

In all states and territories, Indigenous Australians accounted for a disproportionate number of new cases of ESRD. Indigenous patients accounted for 91% of all newly registered patients in the Northern Territory, 19% in Western Australia and 10% in Queensland (Excell & McDonald 2006). Incidence rates for ESRD among Indigenous Australians were higher in remote areas of Australia than in major cities. Indigenous Australians were 26 times more likely to register for treatment of ESRD than other Australians in remote areas, 18 times more likely in outer regional areas and 12 times more likely in very remote areas. In major cities and inner regional areas, incidence rates

*Kidney disease continued*

END-STAGE RENAL DISEASE *continued*

for Indigenous Australians were four to five times those for other Australians living in these areas (AIHW 2007a).

**7.18** NEW PATIENTS STARTING END-STAGE RENAL DISEASE TREATMENT, by Indigenous status—1992–2005

| | NUMBER | | PERCENT | | INCIDENCE RATE(a) | | |
|---|---|---|---|---|---|---|---|
| | *Indigenous* | *Other* | *Indigenous* | *Other* | *Indigenous* | *Other* | *Rate ratio* |
| 1992 | 64 | 1 280 | 4.8 | 95.2 | 27.4 | 7.2 | 3.8 |
| 1993 | 90 | 1 305 | 6.5 | 93.5 | 32.5 | 7.9 | 4.1 |
| 1994 | 112 | 1 463 | 7.1 | 92.9 | 41.2 | 7.9 | 5.2 |
| 1995 | 128 | 1 538 | 7.7 | 92.3 | 53.9 | 8.7 | 6.2 |
| 1996 | 103 | 1 625 | 6.0 | 94.0 | 59.8 | 9.0 | 6.6 |
| 1997 | 152 | 1 662 | 8.4 | 91.6 | 46.4 | 9.3 | 5.0 |
| 1998 | 137 | 1 857 | 6.9 | 93.1 | 65.7 | 9.4 | 7.0 |
| 1999 | 157 | 1 979 | 7.4 | 92.6 | 64.8 | 10.3 | 6.3 |
| 2000 | 150 | 2 038 | 6.9 | 93.1 | 71.0 | 10.7 | 6.6 |
| 2001 | 175 | 2 214 | 7.3 | 92.7 | 65.3 | 10.9 | 6.0 |
| 2002 | 173 | 2 209 | 7.3 | 92.7 | 77.2 | 11.5 | 6.7 |
| 2003 | 173 | 2 291 | 7.0 | 93.0 | 75.1 | 11.3 | 6.7 |
| 2004 | 191 | 2 224 | 7.9 | 92.1 | 72.4 | 11.5 | 6.3 |
| 2005 | 207 | 2 447 | 7.8 | 92.2 | 74.1 | 10.9 | 6.8 |

(a) Rates per 100,000 population, directly age standardised using the 2001 Estimated Resident Population.

*Source: AIHW analysis of Excell & McDonald 2006 (ANZDATA)*

A number of other health conditions are associated with renal disease, including cerebrovascular disease, lung disease, peripheral vascular disease, coronary artery disease, smoking and diabetes. In 2005, most of these conditions were reported in similar proportions for Aboriginal and Torres Strait Islander and other patients beginning ESRD treatment. Diabetes, however, was much more likely to be reported for Aboriginal and Torres Strait Islander patients than for other patients (78% and 38% respectively). The greater excess of diabetes among ESRD Indigenous entrants reflects the burden of this disease in the Aboriginal and Torres Strait Islander population. In 2005, diabetes was the primary cause of more than 58% of Indigenous people using dialysis compared with 22% of all other dialysis patients (Excell & McDonald 2006).

### MANAGEMENT OF KIDNEY DISEASE

ESRD patients require either a kidney transplant or dialysis to maintain the functions normally performed by the kidneys. Patterns of treatment for ESRD differ between Indigenous and other patients. In 2005, of all ANZDATA-registered Indigenous ESRD patients, 87% were reliant on dialysis and 13% had received a kidney transplant. In comparison, just over half (55%) of other Australians living with ESRD were reliant on dialysis and 45% had received a kidney transplant (table 7.19). This difference in treatment patterns has changed relatively little over the last several years.

*Kidney disease continued*

MANAGEMENT OF KIDNEY DISEASE *continued*

**7.19** END-STAGE RENAL DISEASE PATIENTS(a), by treatment type and Indigenous status—2001–2005

| | INDIGENOUS | | | OTHER | | |
|---|---|---|---|---|---|---|
| | *Number* | *Percent* | *Rate*(b) | *Number* | *Percent* | *Rate*(b) |
| | | | DIALYSIS | | | |
| 2001 | 763 | 84.4 | 276.3 | 14 262 | 54.5 | 40.5 |
| 2002 | 832 | 85.6 | 301.3 | 15 099 | 54.9 | 42.2 |
| 2003 | 890 | 86.5 | 319.8 | 15 896 | 55.4 | 44.0 |
| 2004 | 956 | 87.0 | 338.3 | 16 524 | 55.0 | 44.4 |
| 2005 | 1 043 | 87.2 | 367.5 | 17 368 | 55.4 | 46.0 |
| | | | TRANSPLANT | | | |
| 2001 | 763 | 15.6 | 44.2 | 14 262 | 45.5 | 33.9 |
| 2002 | 832 | 14.4 | 42.2 | 15 099 | 45.1 | 35.0 |
| 2003 | 890 | 13.5 | 41.4 | 15 896 | 44.6 | 35.8 |
| 2004 | 956 | 13.0 | 42.0 | 16 524 | 45.0 | 37.0 |
| 2005 | 1 043 | 12.8 | 44.3 | 17 368 | 44.6 | 37.8 |

(a) Data exclude transplant patients lost to follow up.

(b) Rate per 100,000 population, directly age standardised using the 2001 Estimated Resident Population.

*Source: AIHW analysis of Excell & McDonald 2006 (ANZDATA)*

### HOSPITALISATIONS DUE TO CHRONIC KIDNEY DISEASE

In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there were around 101,900 hospitalisations of Indigenous Australians for chronic kidney disease and its sequelae, 44% of which were hospitalisations of Indigenous males and 56% of Indigenous females. There were around 10 times as many hospitalisations of Indigenous males and 18 times as many hospitalisations of Indigenous females as hospitalisations of other Australian males and females respectively. For care involving dialysis, Indigenous males and females were hospitalised at 10 and 19 times the rates of other males and females respectively. Rate ratios were also high for most other types of chronic kidney disease such as diabetic nephropathy (table 7.20). Of all hospitalisations for chronic kidney disease and its sequelae, the majority (100,153 or 98%) were for care involving dialysis.

## 7.20 HOSPITALISATIONS OF INDIGENOUS PERSONS FOR CHRONIC KIDNEY DISEASE AND ITS SEQUELAE(a), by principal diagnosis—2005–06

| | MALES | | | FEMALES | | |
|---|---|---|---|---|---|---|
| | *Observed* | *Expected* | *Ratio*(b) | *Observed* | *Expected* | *Ratio*(b) |
| Diabetic nephropathy (E102, E112, E122, E132 and E142) | 253 | 19 | 13.4 | 343 | 16 | 20.8 |
| Renal tubulo-interstitial diseases (N11–N12 and N14–N16) | 63 | 20 | 3.2 | 347 | 123 | 2.8 |
| Chronic renal failure (N18–N19) | 239 | 27 | 8.7 | 107 | 22 | 4.8 |
| Glomerular diseases ((N00–N08) | 106 | 35 | 3.0 | 91 | 24 | 3.8 |
| Hypertensive renal disease (I12–I13, I150 and I151) | 14 | 4 | 3.6 | 16 | 2 | 6.6 |
| Other chronic kidney disease (N25–N28, N391, N392, Q60–Q63, T824, T861 and Z940) | 47 | 43 | 1.1 | 78 | 35 | 2.2 |
| Care involving dialysis (ESRD) (Z49) | 44 026 | 4 368 | 10.1 | 56 127 | 2 938 | 19.1 |
| **Total** | **44 748** | **4 516** | **9.9** | **57 109** | **3 162** | **18.1** |

(a) Data are for NSW, Vic., Qld, WA, SA and NT only. Data exclude private hospitals in the NT.

(b) Ratio is observed hospitalisations divided by expected hospitalisations. Expected hospitalisations are calculated based on the age, sex and cause-specific rates of other Australians.

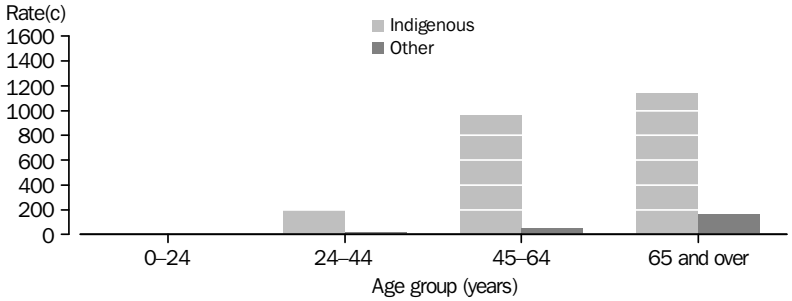
*Source: AIHW National Hospital Morbidity Database*

*Kidney disease continued*

### HOSPITALISATIONS DUE TO CHRONIC KIDNEY DISEASE *continued*

Hospitalisation rates for care involving dialysis for Indigenous Australians were markedly higher in older age groups, peaking for those aged 65 years and over (graph 7.21). The rates for other Australians also peaked at ages 65 years and over, however at much lower levels. It should be noted that the rates of hospitalisation for dialysis reflect the outcome of some individuals accessing services many times, for example an individual reliant on treatment may undergo dialysis 2–3 times a week.

## 7.21 HOSPITALISATION RATES FOR CARE INVOLVING DIALYSIS(a)(b), by Indigenous status and age—2005–06




(a) Data for NSW, Vic, Qld, WA, SA and NT combined.
(b) Based on principal diagnosis.
(c) Rates are per 1,000 population.

Note: ICD-10-AM code Z49.

*Source: AIHW National Hospital Morbidity Database*

*Cancer*

Cancer includes a range of diseases in which abnormal cells proliferate and spread out of control. Normally, cells grow and multiply in an orderly way to form organs that have a specific function in the body. Occasionally, however, cells multiply in an uncontrolled way after being affected by a carcinogen, or after developing a random genetic mutation, and form a mass which is called a tumour or neoplasm. Tumours can be benign (not a cancer) or malignant (a cancer). Benign tumours do not invade other tissues or spread to other parts of the body, although they can expand to interfere with healthy structures (AIHW 2007c).

For many cancers, the causes are unknown. Some cancers occur as a direct result of smoking (in particular, lung cancer), dietary influences (especially cancers of the digestive system), infectious agents (especially cervical cancer through exposure to the human papilloma virus) or exposure to radiation (especially melanomas through excessive sun exposure), while others may be a result of an inherited genetic predisposition (for example, prostate and breast cancer are higher for persons with a family history of these cancers) (AIHW 2007c). However, the greatest risk factor for most cancers in the general population is advancing age, with the median age of first diagnosis for all cancers being 69 years for men and 65 years for women.

### INCIDENCE OF CANCER

Cancer incidence and survival data come from state and territory cancer registries. Identification of Aboriginal and Torres Strait Islander people is not yet included on pathology forms and the extent to which Aboriginal and Torres Strait Islander cancer patients are identified in hospital inpatient statistics varies around Australia. Nevertheless Indigenous identification in the registries has been improving. All-cancer incidence rates for New South Wales and Victoria for 2000–2004 have increased to be comparable with the rates for the Northern Territory, Queensland and Western Australia, the jurisdictions previously found to have good Indigenous identification.

### MOST COMMON CANCERS

Across Australia, there were 3,083 cancers diagnosed among Aboriginal and Torres Strait Islander people in the period from 2000 to 2004. The most common cancers diagnosed among Indigenous males in the period were cancer of the lung, bronchus and trachea (19% of all male cancer cases reported), prostate cancer (10%), colorectal cancer (10%), cancer of unknown primary site (6%), and lymphomas (5%) (table 7.22). The most common cancers diagnosed among Indigenous females were breast cancer (25% of all female cancer cases reported), cancer of the lung, bronchus and trachea (12%), colorectal cancer (9%), cancer of the cervix (7%) and cancer of unknown primary site (6%) (table 7.22). In contrast to the non-Indigenous population, more new cases of cancer were reported among Indigenous females (1,598) than Indigenous males (1,485) in this period.

*Cancer continued*

MOST COMMON CANCERS *continued*

**7.22** MOST COMMON CANCERS DIAGNOSED AMONG INDIGENOUS PERSONS—2000–2004

| | NUMBER | | PERCENT | |
|---|---|---|---|---|
| *Cancer site* | *Indigenous* | *Non-Indigenous* | *Indigenous* | *Non-Indigenous* |
| | MALES | | | |
| Lung, bronchus and trachea | 288 | 27 220 | 19.4 | 10.9 |
| Prostate | 145 | 63 511 | 9.8 | 25.3 |
| Colorectal | 141 | 34 466 | 9.5 | 13.8 |
| Unknown primary site | 95 | 8 195 | 6.4 | 3.3 |
| All lymphomas | 71 | 11 129 | 4.8 | 4.4 |
| Oesophagus | 58 | 3 663 | 3.9 | 1.5 |
| All leukaemias | 55 | 7 611 | 3.7 | 3.0 |
| Liver | 52 | 3 094 | 3.5 | 1.2 |
| Stomach | 52 | 6 118 | 3.5 | 2.4 |
| Pancreas | 49 | 4 882 | 3.3 | 1.9 |
| **All cancers** | **1 485** | **250 594** | **100.0** | **100.0** |
| | FEMALES | | | |
| Breast | 392 | 58 742 | 24.5 | 28.4 |
| Lung, bronchus and trachea | 186 | 14 948 | 11.6 | 7.2 |
| Colorectal | 142 | 28 226 | 8.9 | 13.6 |
| Cervix | 110 | 3 522 | 6.9 | 1.7 |
| Unknown primary site | 102 | 7 832 | 6.4 | 3.8 |
| Uterus, body | 85 | 7 810 | 5.3 | 3.8 |
| Ovary | 61 | 5 773 | 3.8 | 2.8 |
| Thyroid | 41 | 4 742 | 2.6 | 2.3 |
| Pancreas | 38 | 4 802 | 2.4 | 2.3 |
| All leukaemias | 34 | 5 314 | 2.1 | 2.6 |
| **All cancers** | **1 598** | **207 148** | **100.0** | **100.0** |

*Source: AIHW National Cancer Statistics Clearing House*

Table 7.23 presents age standardised incidence per 100,000 population for the 12 most common cancers diagnosed among Indigenous people in 2000–2004, in order of incidence. Among the most common cancers, age standardised incidence, even with under-reporting, was higher among Indigenous males and females for lung cancer, cancers of the mouth and throat and cancer of unknown primary site. The rates for cervical cancer among Indigenous females were more than double those for non-Indigenous females. Incidence was lower among Indigenous people for colorectal cancer, prostate cancer and lymphomas. High incidence of cancers of the lung, mouth and throat are caused by high rates of smoking earlier in life, while high cervical cancer incidence is preventable by early detection in Pap test screening. High incidence of cancer of unknown primary site is likely to be associated with late diagnosis.

Among the less common cancers, age standardised incidence was also higher in the period 2000–2004 for the Indigenous population than for the non-Indigenous population for cancers of the liver and gallbladder, pancreatic cancer, cancer of the oesophagus, and, in males only, thyroid cancer.

*Cancer continued*

MOST COMMON CANCERS *continued*

**7.23** AGE STANDARDISED CANCER INCIDENCE RATES(a), by Indigenous status and sex—2000–2004

| *Cancer* | *Indigenous rate* | *Non-Indigenous rate* | *Ratio* |
|---|---|---|---|
| MALES | | | |
| Lung | 91.0 | 61.1 | 1.5 |
| Unknown primary site | 31.3 | 18.8 | 1.7 |
| Colorectal | 39.7 | 76.4 | 0.5 |
| Prostate | 55.7 | 140.6 | 0.4 |
| Lymphomas | 42.6 | 58.8 | 0.7 |
| Thyroid | 4.8 | 3.4 | 1.4 |
| Pancreas | 16.2 | 10.9 | 1.5 |
| Oesophagus | 16.5 | 8.1 | 2.0 |
| Liver and gallbladder | 20.5 | 9.7 | 2.1 |
| Mouth and throat | 25.6 | 11.4 | 2.2 |
| **All cancers** | **426.3** | **555.7** | **0.8** |
| FEMALES | | | |
| Lung | 43.6 | 28.1 | 1.6 |
| Breast | 84.7 | 115.0 | 0.7 |
| Unknown primary site | 27.0 | 14.2 | 1.9 |
| Colorectal | 36.6 | 52.4 | 0.7 |
| Cervix | 16.9 | 7.1 | 2.4 |
| Lymphomas | 22.2 | 38.7 | 0.6 |
| Thyroid | 6.4 | 9.8 | 0.7 |
| Pancreas | 11.9 | 8.8 | 1.4 |
| Oesophagus | 4.4 | 3.4 | 1.3 |
| Liver and gallbladder | 13.9 | 5.4 | 2.6 |
| Mouth and throat | 11.2 | 10.6 | 1.1 |
| **All cancers** | **351.8** | **397.7** | **0.9** |

(a) Data for NSW, Vic., Qld, WA, SA and NT combined.

*Source: AIHW National Cancer Statistics Clearing House*

### BREAST CANCER SCREENING

In the BreastScreen Australia Program in 2003–2004 there were 12,459 women aged 40 years and over who identified themselves as Indigenous. Participation in the Program in the 50–69 years target age group was estimated at 35% for Indigenous women, much lower than the 56% participation for the total Australian female population in this age group (AIHW & DoHA 2007).

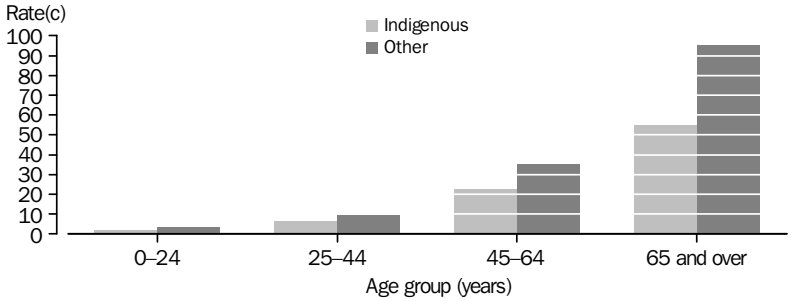
### HOSPITALISATIONS DUE TO CANCER

In 2005–06, cancer was responsible for 1,423 hospitalisations of Indigenous males and 2,109 hospitalisations of Indigenous females, both representing just over 1% of all hospitalisations in which the patient was Indigenous. This does not include most chemotherapy and radiotherapy activity procedures. Hospitalisation rates for cancer for both Indigenous and other Australians increased from age 25 years onwards but were considerably lower for Indigenous than for other Australians in each age group (graph 7.24).

*Cancer continued*

HOSPITALISATIONS DUE TO CANCER *continued*

**7.24** HOSPITALISATION RATES FOR CANCER(a)(b), by Indigenous status and age—2005–06




(a) Data for NSW, Vic., Qld, WA, SA and NT combined.
(b) Based on principal diagnosis.
(c) Rates are per 1,000 population.

Note: ICD-10-AM codes C00-D48.

*Source: AIHW National Hospital Morbidity Database*

The five most common malignant cancers for which Indigenous males were hospitalised in 2005–06 were lung cancer (140 hospitalisations), skin cancer (106 hospitalisations), prostate cancer (59 hospitalisations), secondary cancer of the respiratory and digestive organs (51 hospitalisations) and secondary malignant neoplasm of other sites (45 hospitalisations). The five most common cancers for which Indigenous females were hospitalised in 2005–06 were breast cancer (140 hospitalisations), lung cancer (112 hospitalisations), skin cancer (108 hospitalisations), cervical cancer (84 hospitalisations), and secondary cancer of other sites (60 hospitalisations).

*Injury and poisoning*

Injury and poisoning are large contributors to Indigenous morbidity, especially for younger people. A variety of factors can affect a person's risk of being injured, including age, sex, 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 Aboriginal and Torres Strait Islander people than other Australians (AHMAC 2006). Injury data can be viewed in terms of the damage sustained to the body (e.g. broken bones, head injuries), or by the external cause of the injury (e.g. falls, poisoning and drowning), both of which are recorded by hospitals on admission.

### HOSPITALISATIONS FOR INJURY AND POISONING

In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, injury or poisoning was the principal diagnosis recorded in 18,843 hospitalisations of Indigenous patients (table 7.25). Over half (57%) of these hospital episodes were for Indigenous males. Hospitalisations due to injury and poisoning represented 10% of all hospitalisations for Indigenous males and 6% of all hospitalisations for Indigenous females. Indigenous males and females were hospitalised for injury and poisoning at 1.8 times the rate of other males while for females, the corresponding rate ratio was 2.4.

**7.25** HOSPITALISATIONS OF INDIGENOUS PERSONS FOR INJURY AND POISONING(a), by principal diagnosis—2005–06

| | MALES | | | FEMALES | | |
|---|---|---|---|---|---|---|
| | *Observed* | *Expected* | *Ratio*(b) | *Observed* | *Expected* | *Ratio*(b) |
| Injuries (mechanical) (S00–T19)(c) | 8 496 | 4 788 | 1.8 | 5 979 | 2 253 | 2.7 |
| Complications of surgical and medical care, nec. (T80–T88) | 939 | 507 | 1.9 | 921 | 533 | 1.7 |
| Poisoning (T36–T50) | 427 | 238 | 1.8 | 735 | 438 | 1.7 |
| Burns and frostbite (T20–T35) | 341 | 134 | 2.5 | 203 | 71 | 2.9 |
| Other effects of external causes, early complications of trauma (T66–T79 and T89) | 264 | 119 | 2.2 | 219 | 94 | 2.3 |
| Toxic effects (T51–T65) | 191 | 101 | 1.9 | 128 | 65 | 2.0 |
| **Total** | **10 658** | **5 888** | **1.8** | **8 185** | **3 454** | **2.4** |

(a) Data are for NSW, Vic., Qld, WA, SA and NT combined, based on state/territory of usual residence. Data exclude private hospitals in the NT.
(b) Ratio is observed hospitalisations divided by expected hospitalisations. Expected hospitalisations are calculated based on the age, sex and cause-specific rates for other Australians.
(c) Includes injuries to specified body parts (ICD-10 AM S00-T19).

*Source: AIHW National Hospital Morbidity Database*

*Injury and poisoning continued*

## HOSPITALISATIONS FOR INJURY AND POISONING *continued*

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

### EXTERNAL CAUSES OF INJURY RESULTING IN HOSPITALISATIONS

In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, as in previous years, the most commonly recorded external causes of injury resulting in hospitalisation among Indigenous Australians were assault (males 22%; females 31%), accidental falls (males 17%; females 17%), exposure to inanimate mechanical forces (e.g. explosion of materials, contact with glass) (males 15%; females 9%), complications of medical or surgical care (males 9%; females 12%) and transport-related injuries (males 11%; females 7%).

Indigenous males and females were hospitalised more often than other Australians for most external causes of injury (table 7.26). Hospitalisations for injury due to assault were 6 and 33 times higher for Indigenous males and females respectively.

## 7.26 HOSPITALISATIONS OF INDIGENOUS PERSONS FOR INJURY AND POISONING DUE TO EXTERNAL CAUSES(a)(b)—2005–06

| | MALES | | | FEMALES | | |
|---|---|---|---|---|---|---|
| | *Observed* | *Expected* | *Ratio*(c) | *Observed* | *Expected* | *Ratio*(c) |
| Assault (X85–Y09) | 2 352 | 382 | 6.2 | 2 572 | 78 | 33.0 |
| Accidents | | | | | | |
| Accidental falls (W00–W19) | 1 809 | 1 275 | 1.4 | 1 352 | 948 | 1.4 |
| Exposure to inanimate mechanical forces (W20–W49) | 1 579 | 1 064 | 1.5 | 752 | 366 | 2.1 |
| Transport accidents (V01–V99) | 1 212 | 997 | 1.2 | 547 | 422 | 1.3 |
| Exposure to animate mechanical forces (W50–W64) | 528 | 289 | 1.8 | 248 | 100 | 2.5 |
| Exposure to electric current/smoke/fire/animals/nature (W85–X39)(d) | 423 | 185 | 2.3 | 236 | 99 | 2.4 |
| Accidental poisoning (X40–X49) | 219 | 138 | 1.6 | 234 | 136 | 1.7 |
| Other causes of accidental injury (W65–W84, X50–X59)(e) | 835 | 785 | 1.1 | 465 | 335 | 1.4 |
| Complications of medical and surgical care ((Y40–Y84) | 964 | 521 | 1.8 | 943 | 550 | 1.7 |
| Intentional self-harm (X60–X84) | 563 | 193 | 2.9 | 687 | 361 | 1.9 |
| Other external causes (Y10–Y36, Y85–Y98)(f) | 146 | 53 | 2.7 | 131 | 58 | 2.2 |
| **Total**(g) | **10 658** | **5 888** | **1.8** | **8 185** | **3 454** | **2.4** |

(a) Cause of injury is based on the first reported cause where the principal diagnosis was 'Injury, poisoning and certain other consequences of external causes' (S00-T98).

(b) Data are for NSW, Vic., Qld, WA, SA and NT combined, based on state/territory of usual residence. Data exclude private hospitals in the NT.

(c) Ratio is observed hospitalisations divided by expected hospitalisations. Expected hospitalisations are calculated based on the age, sex and cause-specific rates of other Australians.

(d) Includes exposure to electric current, radiation, extreme ambient air temperature and pressure, smoke, fire, flames, forces of nature, contact with heat and hot substances, and contact with venomous animals and plants.

(e) Includes accidental drowning and submersion; other accidental threats to breathing; overexertion, travel and privation; accidental exposure to other unspecified factors.

(f) Includes event of undetermined intent; legal interventions and operations of war; sequelae of external causes of morbidity and mortality; supplementary factors related to causes of morbidity and mortality classified elsewhere.

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

*Source: AIHW National Hospital Morbidity Database*

### *Respiratory diseases*

Respiratory diseases are leading causes of illness, disability and mortality around the world. Common respiratory diseases include asthma, chronic obstructive pulmonary disease ((COPD), comprising both chronic bronchitis and emphysema), influenza and pneumonia. While all these respiratory diseases are also leading causes of illness resulting in a high use of health services, pneumonia and COPD are leading underlying causes of death (see Chapter 9 for more information).

#### PREVALENCE OF RESPIRATORY DISEASES

In the 2004–05 NATSIHS, the proportion of Aboriginal and Torres Strait Islander people who reported some form of respiratory disease was 27%. This represents a small decrease from 29% in 2001. The most common form of respiratory disease reported by Indigenous people in 2004–05 was asthma (15%) (table 7.5).

After adjusting for age differences between the Indigenous and non-Indigenous populations, Indigenous people were nearly twice as likely as non-Indigenous people to report having bronchitis, and one-and-a-half times as likely to report having asthma (ABS 2006c). The prevalence of respiratory diseases in the Indigenous population was highest among people aged 55 years and over (38%), whereas in the non-Indigenous population those in age groups 25–34 years and 35–44 years had the highest proportions of people with respiratory diseases (both 33%).

*Respiratory diseases continued*

## HOSPITALISATIONS FOR RESPIRATORY DISEASES

About 15,700 hospitalisations of Indigenous people with a principal diagnosis of respiratory disease occurred in 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, representing about 6% of all hospitalisations of Indigenous people in these jurisdictions. Hospitalisation rates for respiratory diseases in the Indigenous population were more than twice those in the non-Indigenous population.

For both Indigenous people and other Australians, hospitalisations for respiratory disease were most common among the very young and the old (graph 7.27). In 2005–06, the hospitalisation rates for respiratory diseases among Indigenous children aged 0–4 years were twice the rate for other Australian children. Almost half of hospitalisations among children aged 0–4 years were for infants (aged less than one year). Hospitalisation rates for Indigenous infants were more than twice the rate for other Australian infants. Indigenous Australians aged 25 years and over were hospitalised for respiratory disease at three to five times the rates of other Australians.

**7.27** HOSPITALISATION RATES, RESPIRATORY DISEASES(a)(b), by Indigenous status and age—2005–06


(a) Data for NSW, Vic., Qld, WA, SA and NT combined.
(b) Based on principal diagnosis.
(c) Rates are per 1,000 population.

Note: ICD-10-AM codes J00-J99.

*Source: AIHW National Hospital Morbidity Database*

Indigenous Australians were hospitalised at higher rates for most types of respiratory diseases than other Australians (table 7.28). In 2005–06, Indigenous males and females were hospitalised for influenza and pneumonia (combined) at around five times the rate, for COPD at around six to eight times the rate and for asthma at up to twice the rate of other Australians.

**7.28** HOSPITALISATIONS OF INDIGENOUS PERSONS FOR RESPIRATORY DISEASES(a), by principal diagnosis—2005–06

| | MALES | | | FEMALES | | |
|---|---|---|---|---|---|---|
| | *Observed* | *Expected* | *Ratio*(b) | *Observed* | *Expected* | *Ratio*(b) |
| Chronic lower respiratory diseases (J40–J47) | 2 060 | 861 | 2.4 | 2 515 | 718 | 3.5 |
| Asthma (J45–J46) | 906 | 686 | 1.3 | 1 188 | 533 | 2.2 |
| Chronic obstructive pulmonary disease (J41–J44) | 942 | 155 | 6.1 | 1 098 | 146 | 7.5 |
| Influenza and pneumonia (J10–J18) | 2 132 | 463 | 4.6 | 1 996 | 425 | 4.7 |
| Other acute lower respiratory infections (J20–J22) | 1 779 | 447 | 4.0 | 1 675 | 334 | 5.0 |
| Acute upper respiratory infections (J00–J06) | 995 | 647 | 1.5 | 990 | 506 | 2.0 |
| Other respiratory diseases (J30–J40, J47–J99) | 813 | 1 290 | 0.6 | 767 | 1 179 | 0.7 |
| **Total** | **7 779** | **3 708** | **2.1** | **7 943** | **3 162** | **2.5** |

(a) Data are for NSW, Vic., Qld, WA, SA and NT combined, based on state/territory of usual residence. Data exclude private hospitals in the NT.

(b) Ratio is observed hospitalisations divided by expected hospitalisations. Expected hospitalisations are calculated based on the age, sex and cause-specific rates of other Australians.

*Source: AIHW National Hospital Morbidity Database*

### *Communicable diseases and HIV/AIDS*

While much of the burden of communicable diseases comes from respiratory infections such as influenza, data presented here include notification and hospitalisation as the result of other serious communicable diseases such as sexually transmissible infections (STIs), viral hepatitis and viral infections such as mumps, measles and rubella. The evidence from these analyses reinforces the fact that the burden of communicable diseases for Indigenous Australians is far greater than for other Australians.

#### NOTIFICATIONS

In Australia, communicable diseases of particular health importance are 'notifiable', and under legislation each case must be notified to state and territory health authorities. Notifications are received from hospitals, general practitioners and diagnostic laboratories. While each Australian state and territory has its own set of notifiable diseases, a set of 56 diseases and conditions are nationally notifiable. Data on all these cases are forwarded to the National Notifiable Diseases Surveillance System (NNDSS), managed by the Australian Government Department of Health and Ageing. The numbers of notifications, however, represent a variable proportion of all the actual cases of any disease. This is because for some diseases, many cases may go undetected for a long period of time and infections that are diagnosed in a laboratory test are more likely to be notified than those that are not (Menzies, McIntyre & Beard 2004).

Only data from Western Australia, South Australia and the Northern Territory on the notification rates of infectious diseases have been reported in this section. This is because the recording of Indigenous status in these jurisdictions was assessed by the NNDSS in 2004 as being adequate (more than 60% coverage) (AIHW & ABS 2005). However, recording of Indigenous status for Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) data is considered reliable by the National Centre for HIV Epidemiology and Clinical Research (NCHECR) for all states and territories, with the exception of the ACT, from 2004 onwards. Over the period 2004–2006, notification rates for Indigenous Australians were higher than for other Australians for many notifiable diseases (table 7.29).

*Communicable diseases and HIV/AIDS continued*

*Sexually transmitted infections*

Rates of STIs were much higher in the Indigenous population than among other Australians, with the rates for syphilis and gonococcal infection among Indigenous people 61 and 86 times the rates among other Australians. Rates of Hepatitis A, B and C were also higher among Indigenous Australians (ratios of between 5 and 12) (table 7.29). The substantially higher levels of chlamydia, gonorrhoea and syphilis infection among Indigenous people compared with other persons may also facilitate HIV transmission in the Indigenous population (Grosskurth et al 1995).

*Pneumonia*

Pneumococcal disease is caused by the bacterium Streptococcus pneumoniae and can cause infection in parts of the respiratory tract (otitis media, sinusitis, pneumonia) or enter the bloodstream. For the period 2004–2006, there were 403 notifications of invasive pneumococcal disease among Indigenous people in Western Australia, South Australia and the Northern Territory combined. The notification rate for Indigenous Australians was almost 13 times the rate for other Australians.

**7.29** NOTIFICATIONS FOR SELECTED DISEASES(a), by Indigenous status—2004–2006

| | INDIGENOUS | | OTHER(b) | |
|---|---|---|---|---|
| | *Observed* | *Expected* | *Observed* | *Ratio*(c) |
| | no. | no. | no. | quotient |
| Gonococcal infection | 8 777 | 102 | 2 328 | 85.9 |
| Chlamydial infection (n.e.c.) | 7 527 | 953 | 21 718 | 7.9 |
| Syphilis(d) | 1 065 | 18 | 399 | 60.8 |
| Salmonellosis (n.e.c.) | 809 | 189 | 4 306 | 4.3 |
| Pneumococcal disease | 403 | 30 | 771 | 13.5 |
| Hepatitis A | 107 | 9 | 209 | 11.7 |
| Hepatitis C (incident) | 120 | 18 | 410 | 6.7 |
| Ross River virus infection | 101 | 151 | 3 451 | 0.7 |
| Tuberculosis | 41 | 25 | 570 | 1.6 |
| Meningococcal infection | 50 | 6 | 146 | 7.8 |
| Pertussis | 198 | 319 | 7 270 | 0.6 |
| Donovanosis(e) | 14 | — | — | — |
| Hepatitis B (incident) | 31 | 6 | 132 | 5.4 |
| Haemophilus influenzae type b | 5 | — | np | 28.5 |
| Mumps | np | np | 95 | 0.5 |
| Measles | 13 | 26 | 587 | 0.5 |
| Rubella | — | np | 15 | — |
| Leprosy | 6 | — | 5 | 22.8 |

— nil or rounded to zero (including null cells)

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Data are for WA, SA and NT combined. Adequate levels of completeness of Indigenous status identification are defined as at least 60 per cent for a substantial majority of the diseases analysed.

(b) Comprises notifications for non-Indigenous people, and those for whom Indigenous status was not stated.

(c) Ratio is observed Indigenous notifications divided by expected Indigenous notifications. Expected notifications are calculated based on the age, sex and disease-specific rates of other Australians.

(d) Includes syphilis, syphilis infectious and syphilis more than two years.

(e) Donovanosis not notifiable in South Australia.

*Source: AIHW analysis of National Notifiable Diseases Surveillance System, Department of Health and Ageing*

*Communicable diseases and HIV/AIDS continued*

*HIV/AIDS*

Notifications of HIV and AIDS infections are forwarded to NCHECR and are recorded in the National AIDS Registry and the National HIV Database. Between 2004 and 2006, 58 notifications of HIV infection and 22 notifications of AIDS infection were recorded in the Indigenous population (table 7.30). The majority (80%) of these notifications were for Indigenous males. The notification rate for AIDS and HIV was similar for Indigenous males and other males however the notification rate for AIDS and HIV for Indigenous females was 60% more than that for other females.

**7.30** NOTIFICATION RATES FOR HIV AND AIDS, by Indigenous status and sex—2004–2006(a)

| | INDIGENOUS | | OTHER(b) | | |
|---|---|---|---|---|---|
| | *Number* | *Rate*(d) | *Number* | *Rate*(d) | *Ratio*(c) |
| Males | 64 | 10.8 | 2 955 | 10.1 | 1.1 |
| Females | 16 | 2.2 | 408 | 1.4 | 1.6 |
| **Persons** | **80** | **6.3** | **3 371** | **5.7** | **1.1** |

(a) Calendar year reporting. Excludes data from the ACT as data were not available from this jurisdiction in 2004.
(b) Comprises notifications for non-Indigenous people and those for whom Indigenous status was not stated.
(c) Ratio is observed Indigenous notifications divided by expected Indigenous notifications. Expected notifications are based on the age and disease-specific rates for other Australians.
(d) Indirectly age standardised rates per 100,000 population.

*Source: AIHW analysis of the National AIDS registry and National HIV database*

## HOSPITALISATIONS DUE TO CERTAIN INFECTIOUS AND PARASITIC DISEASES

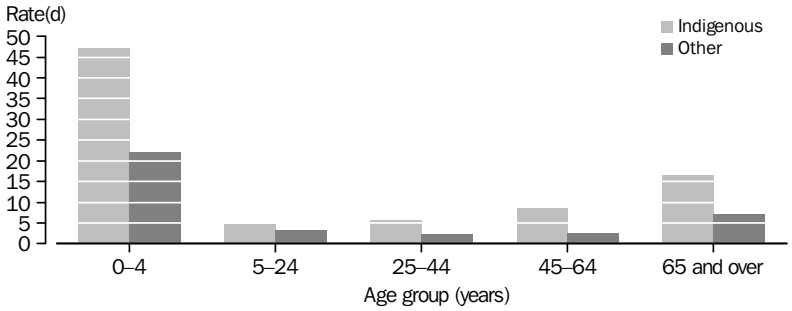
In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, infectious and parasitic diseases, which include illnesses such as intestinal infectious diseases, septicaemia, viral infections and fevers, sexually transmitted infections, tuberculosis and mycoses, were responsible for 2,666 hospitalisations of Indigenous males, representing 3% of all hospitalisations of Indigenous males. For Indigenous females, the comparative figure was 2,583 hospitalisations, representing 2% of all hospitalisations of Indigenous females (table 7.32).

Indigenous males and females were hospitalised for infectious and parasitic diseases at twice the rate of other males and females. The highest rates of hospitalisation for infectious and parasitic diseases occurred among Indigenous children aged 0–4 years. Over 40% of the hospitalisations in this age group were for Indigenous infants (less than one year old) who were hospitalised at a rate of 98 per 1,000 population. Indigenous infants were hospitalised at twice the rate of other infants. The greatest difference in rates occurred among those aged 25–44 years and 45–64 years where Indigenous Australians were hospitalised at around three times the rate of other Australians (graph 7.31).

*Communicable diseases and HIV/AIDS continued*

HOSPITALISATIONS DUE TO CERTAIN INFECTIOUS AND PARASITIC DISEASES *continued*

**7.31** HOSPITALISATION RATES FOR INFECTIOUS AND PARASITIC DISEASES(a)(b)(c), by Indigenous status and age—2005–06




(a) Data for NSW, Vic., Qld, WA, SA and NT combined.
(b) Based on principal diagnosis.
(c) ICD-10-AM codes A00–B99).
(d) Rates are per 1,000 population.

*Source: AIHW National Hospital Morbidity database*

Indigenous males and females were hospitalised for intestinal infectious diseases at twice the rate of other males and females (table 7.32).

**7.32** HOSPITALISATIONS OF INDIGENOUS PERSONS FOR INFECTIOUS AND PARASITIC DISEASES(a), by principal diagnosis—2005–06

| | MALES | | | FEMALES | | |
|---|---|---|---|---|---|---|
| | *Observed* | *Expected* | *Ratio*(b) | *Observed* | *Expected* | *Ratio*(b) |
| | no. | no. | quotient | no. | no. | quotient |
| Intestinal infectious diseases (A00–A09) | 1 367 | 668 | 2.0 | 1 263 | 672 | 1.9 |
| Other bacterial diseases (A30–A49) | 369 | 108 | 3.4 | 408 | 91 | 4.5 |
| Septicaemia (A40–A41) | 294 | 71 | 4.1 | 351 | 62 | 5.6 |
| Pneumococcal septicaemia (A40.3) | 17 | 2 | 8.3 | 18 | 2 | 9.1 |
| Viral infections (A80–B19) | 186 | 142 | 1.3 | 158 | 129 | 1.2 |
| Viral hepatitis (B15–B19) | 50 | 35 | 1.4 | 33 | 21 | 1.6 |
| Infections, sexual transmission (A50–A64) | 37 | 7 | 5.5 | 139 | 13 | 10.6 |
| Mycoses (B35–B49) | 46 | 17 | 2.7 | 62 | 21 | 3.0 |
| Tuberculosis (A15–A19) | 20 | 7 | 2.7 | 12 | 7 | 1.8 |
| Other and unspecified infectious and parasitic diseases (A20–A28, A65–A79, B20–B34, B50–B99) | 641 | 358 | 1.8 | 541 | 320 | 1.7 |
| **Total** | **2 666** | **1 307** | **2.0** | **2 583** | **1 254** | **2.1** |

(a) Data are for NSW, Vic., Qld, WA, SA and NT combined, based on state/territory of usual residence. Data exclude private hospitals in the NT.

(b) Ratio is observed hospitalisations divided by expected hospitalisations. Expected hospitalisations are calculated based on the age, sex and cause-specific rates of other Australians.

*Source: AIHW National Hospital Morbidity Database*

*Musculoskeletal conditions*

Musculoskeletal conditions, including arthritis, are a major cause of pain and disability, especially among the elderly. Arthritis is a heterogenous group of disorders in which there may be inflammation of the joints, causing chronic pain, stiffness, functional limitations and deformity. Its two most common forms are osteoarthritis and rheumatoid arthritis (AIHW 2005a).

*Musculoskeletal conditions continued*

Diseases of the musculoskeletal system and connective tissue were reported by 22% of Indigenous people in 2004–05. In particular, 13% reported back pain/disc disorders and 9% reported arthritis (table 7.5). The proportion of Aboriginal and Torres Strait Islander people reporting musculoskeletal diseases was higher in older age groups. Higher prevalence was reported for Indigenous Australians than other Australians among people aged 25–54 years (ABS 2006c).

### HOSPITALISATIONS FOR MUSCULOSKELETAL DISEASES

In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, diseases of the musculoskeletal system and connective tissue were the principal diagnosis for 4,205 hospitalisations of Aboriginal and Torres Strait Islander people, representing around 2% of all hospitalisations of Indigenous people. Hospitalisation rates for musculoskeletal diseases ranged from about 2 per 1,000 for Indigenous children aged 0–4 years to 31 per 1,000 population for Indigenous people aged 65 years and over. Hospitalisation rates for musculoskeletal diseases for Indigenous Australians were similar to, or lower than, rates for other Australians across all age groups.

Of all musculoskeletal diseases, arthritis was the most common cause of hospitalisation for Indigenous Australians. Indigenous Australians were hospitalised for rheumatoid arthritis and osteoarthritis at lower rates than other Australians.

*Eye and vision problems*

In 2004–05, 30% of the Indigenous population reported diseases of the eye and adnexa (appendages of the eyeball which include the eyelids, muscles and soft tissue) (table 7.5). One in six (16%) reported hyperopia (long-sightedness) and 10% reported myopia (short-sightedness). Within the Indigenous population, those living in non-remote areas were more likely to report eye and sight problems (32%) than those living in remote areas (25%).

While the overall age standardised prevalence of eye and vision problems was slightly lower among Indigenous Australians than among other Australians (47% compared with 51%), Indigenous people reported having cataracts and either complete or partial blindness at higher rates than non-Indigenous people. The prevalence of eye and vision problems was higher in older age groups in both the Indigenous and non-Indigenous populations (ABS 2006c).

### HOSPITALISATIONS FOR EYE AND VISION PROBLEMS

In 2005–06, there were a total of 1,170 hospitalisations of Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, with a principal diagnosis of diseases of the eye and adnexa, representing about 0.5% of all Indigenous hospitalisations. The overall rates of hospitalisations for diseases of the eye and adnexa among Indigenous Australians were slightly less than those for other Australians. Rates of hospitalisation due to diseases of the eye were highest among those aged 65 years and over, reaching around 30 per 1,000 for Indigenous Australians and 56 per 1,000 for other Australians in this age group.

*Ear and hearing problems*

In 2004–05, a higher proportion of Indigenous people than non-Indigenous people reported ear and hearing problems across all age groups, except for those aged 55 years and over, among whom prevalence rates were similar.

Otitis media, a common childhood disease, is often the result of a pneumococcal invasion of the nasopharynx. Recurrence of chronic otitis media is often characterised by a perforated tympanic membrane, which can lead to hearing loss, deafness and further complications such as learning difficulties. In 2004–05, rates of otitis media were three times as high among Indigenous children aged 0–14 years as non-Indigenous children in this age group (ABS 2006c).

HOSPITALISATIONS FOR EAR AND HEARING PROBLEMS

In 2005–06 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there were 1,714 hospitalisations of Indigenous people for diseases of the ear and mastoid process (temporal bone behind the ear), representing 0.7% of all hospitalisations of Indigenous people.

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 2005–06, 61% of all hospitalisations of Indigenous people for ear and hearing problems were due to otitis media. Chronic ear and hearing problems are greater among Indigenous children than among other children. According to Coates (2002), Indigenous children and young adults between the ages of 2 and 20 years experience an average of 32 weeks of middle ear disease compared with 2 weeks for other children.

*Oral health*

Oral health refers to the health of a number of tissues in the mouth, including mucous membrane, connective tissue, muscles, bone, teeth and periodontal structures or gums. It may also refer to immunological, physiological, sensory and digestive system functioning, but is most often used to refer to two specialised tissues of the mouth: the teeth and the gums. Oral health outcomes are usually measured in terms of the number of decayed, missing or filled baby (deciduous) and adult (permanent) teeth (dmft and DMFT scores) (AIHW 2007k).

The latest available data on DMFT scores for Indigenous adults come from adults seeking dental care in Australia in 2004–06. Indigenous adults had a greater average number of decayed and missing teeth and a lower average number of filled teeth than non-Indigenous adults across most age groups (table 7.33).

*Oral health continued*

**7.33** AVERAGE NUMBER OF DECAYED, MISSING OR FILLED TEETH, by Indigenous status and age—2004–2006

| | AGE GROUP (YEARS) | | | | |
|---|---|---|---|---|---|
| | *15–34* | *35–54* | *55–74* | *75 and over* | *15 and over*(a) |
| **Mean number of decayed teeth** | | | | | |
| Indigenous | 1.7 | 4.1 | 1.4 | np | 2.7 |
| Non-Indigenous | 0.9 | 0.8 | 0.5 | 0.6 | 0.8 |
| **Mean number of missing teeth** | | | | | |
| Indigenous | 4.0 | 7.4 | 13.1 | np | 7.4 |
| Non-Indigenous | 3.5 | 5.3 | 10.2 | 14.2 | 6.1 |
| **Mean number of filled teeth** | | | | | |
| Indigenous | 1.3 | 4.3 | 8.8 | np | 4.7 |
| Non-Indigenous | 0.1 | 8.2 | 11.5 | 9.6 | 5.9 |
| **Mean number of decayed, missing or filled teeth** | | | | | |
| Indigenous | 7.0 | 15.8 | 23.3 | np | 14.8 |
| Non-Indigenous | 4.5 | 14.3 | 22.2 | 24.4 | 12.8 |

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Excludes those with no natural teeth.

*Source: 2004–2006 Adult Dental Health Survey (Roberts-Thompson & Do 2007)*

### HOSPITALISATIONS RELATED TO ORAL HEALTH PROBLEMS

In 2005–06 there were 2,395 hospitalisations of Indigenous people in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, for diseases of the oral cavity, salivary glands and jaw. The majority of these hospitalisations were for dental caries (54%), followed by diseases of the pulp and periapical tissues (14%). Indigenous Australians were less likely to be hospitalised for diseases of the oral cavity, salivary glands and jaw than other Australians.

## SUMMARY

Indigenous Australians have poorer self-assessed health than non-Indigenous Australians. In 2004–05, Indigenous Australians were twice as likely to report their health as fair or poor compared with other Australians (age standardised rates of 29% and 15% respectively).

Indigenous Australians also have higher rates of hospitalisation and higher prevalence rates for many diseases. Analyses of data from a number of different sources indicate the long-term health conditions responsible for much of the ill-health among Indigenous Australians. These conditions include circulatory diseases, diabetes, respiratory diseases, musculoskeletal conditions, kidney disease, and eye and ear problems. Indigenous Australians experience an earlier onset of disease than other Australians for most of these conditions.

Indigenous Australians suffer a burden of disease that is two-and-a-half times greater than the burden of disease in the total Australian population. Chronic illnesses are responsible for 70% of the difference in the burden of disease observed between the Indigenous and non-Indigenous populations.

Aboriginal and Torres Strait Islander people suffer higher rates of mental illness than non-Indigenous people. Indigenous adults were twice as likely as non-Indigenous Australians to report high to very high levels of psychological distress in 2004–05 (age

SUMMARY *continued*

standardised rates of 27% and 13% respectively). However, data on social and emotional wellbeing also reveal that there is a strong sense of positive wellbeing among many Aboriginal and Torres Strait Islander people.

While data on general practitioner encounters reveal that the rates at which Indigenous people visit general practitioners are similar to those for non-Indigenous people for many conditions, Indigenous people are somewhat underestimated in this dataset and thus the true GP encounter rates for Indigenous people are likely to be much higher than those reported.