



Australian Government

Australian Institute of  
Health and Welfare

# The **HEALTH** of Australia's **MALES**

A focus on five  
population groups





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# ABBREVIATIONS

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
CACP	Community aged care packages
COAG	Council of Australian Governments
EACH	Extended Aged Care at Home
EACH D	Extended Aged Care at Home Dementia
HACC	Home and Community Care
HALE	Health adjusted life expectancy
HERB	Health Education Reaching Blokes
HIV	Human immunodeficiency virus
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
NDSHS	National Drug Strategy Household Survey
OATSIH	Office of Aboriginal and Torres Strait Islander Health
OHS	Occupational health and safety



# SUMMARY

This report is the second in a series on the health of Australia's males. It examines the distinct health profiles of five population groups, characterised by Aboriginal and Torres Strait Islander status, remoteness, socioeconomic disadvantage, region of birth, and age.

## Key findings

**Aboriginal and Torres Strait Islander males** generally experience poorer health than the overall population, highlighted by a life expectancy of 67 years (11.5 years less than that for non-Indigenous males). Factors that contribute to this poorer health status include:

- high rates of tobacco smoking, risky alcohol consumption and illicit substance usage
- higher rates of chronic diseases (such as lung cancer, diabetes and kidney disease) and health conditions (such as scabies, trachoma and acute rheumatic fever) that are uncommon in the general population
- higher rates of hospitalisation, with 45% of these for dialysis.

**Remoteness** is associated with poorer health. Males living in remote areas generally have a shorter life expectancy and poorer self-assessed health status. As remoteness increases, the following health-related factors also increase:

- rates of obesity, tobacco smoking and risky alcohol consumption
- new cases of lung cancer, and deaths from chronic obstructive pulmonary disease, diabetes and suicide
- hospitalisations for Type 2 diabetes mellitus.

**Socioeconomic disadvantage** is also associated with poorer health. Males living in more socially disadvantaged areas generally have a shorter life expectancy. As socioeconomic disadvantage increases, the following health-related factors also increase:

- rates of obesity and tobacco smoking
- new cases of lung cancer, and deaths from coronary heart disease, lung cancer, chronic obstructive pulmonary disease, diabetes and suicide
- hospitalisations for Type 2 diabetes mellitus.

**Males born overseas** generally enjoy better health than other males, with fewer risk factors and lower overall mortality and hospitalisations. There are areas where males born overseas experience poorer health, compared with males born in Australia, with:

- lower rates of physical activity and bowel cancer screening
- higher rates of lung cancer, and more deaths from diabetes and lung cancer
- higher rates of hospitalisations for Type 2 diabetes mellitus and heart attack.

**Older males** (aged 65 and over) are living longer than ever before, and generally have fewer risk factors such as overweight/obesity and tobacco smoking than younger males. As age increases, the following health-related factors also increase:

- inadequate vegetable intakes and inadequate physical activity
- new cases of bowel cancer and melanoma, and rates of dementia and of injury from falls
- all hospitalisations, including cardiac rehabilitation, cataract and melanoma of the skin.



# 1 INTRODUCTION

## Background

There is increasing evidence that males experience poorer outcomes than females in many areas of health. It is also recognised that the diversity of Australia's male population (numbering around 11 million in June 2010) extends to their health status and that some males experience poorer health outcomes than other males (ABS 2010a; DoHA 2010). Health and behaviours vary among males by characteristics such as Indigenous status, remoteness, socioeconomic disadvantage, region of birth (ethnicity) and age.

*The health of Australia's males* (AIHW 2011j) presented a broad-brush picture of male health and described:

- health determinants such as smoking, physical inactivity and violence
- health conditions such as prostate and bowel cancer, mental health conditions and workplace injury and fatalities
- health service use, such as cancer screening and checks, Medicare, and alcohol and other drug treatment services.

This report provides further information for five male subpopulations with distinct and special health needs:

- Aboriginal and Torres Strait Islander males (Indigenous)
- males living in regional and remote areas (remoteness)
- males living in low socioeconomic areas (socioeconomic disadvantage)
- males born overseas
- older males.

Achieving health equity between population groups of males was identified as a priority area for action in the National Male Health Policy (Box 1.1).

### Box 1.1: Australia's first National Male Health Policy

In May 2010, the Australian Government launched Australia's first National Male Health Policy, *National male health policy: building on the strengths of Australian males* (DoHA 2010). The policy provides a framework for improving the health of males and encourages governments, health organisations, communities and individuals to take action on multiple fronts. Following public consultation, 6 priority areas for action were developed:

- Priority area 1: optimal health outcomes for males
- Priority area 2: health equity between population groups of males
- Priority area 3: improved health for males at different life stages
- Priority area 4: a focus on preventive health for males
- Priority area 5: building a strong evidence base on male health
- Priority area 6: improved access to health care for males.

In order to build the evidence base on male health (priority area 5), the Australian Government has funded a series of statistical bulletins and a National Longitudinal Study on Male Health. This work will inform professionals, policy makers and consumers about key issues in this emerging field.



## Population groups

The five subpopulations included in this report do not necessarily have poorer health than the general male population and not all males exhibit the ‘at risk’ characteristics attributed to the subpopulations as a whole. It is therefore important not to generalise these characteristics and health outcomes as applying to individual males or to assume they apply equally across the subpopulation.

It is also important to recognise that these population groups are not mutually exclusive—that is, an individual can be a member of one or more groups. Consider, for example, a 70-year-old male who identifies as Indigenous and lives in a regional area of lower socioeconomic status. This hypothetical individual would be covered in four out of five population groups in this report. Overlaps between population groups are not specifically addressed.

This section briefly describes each subpopulation and the rationale for including them in the report as a group at risk of poorer health.

### Aboriginal and Torres Strait Islander males

Indigenous males are an important population group in Australian society. Recognised as the first Australians, Indigenous Australians are thought to have first arrived on the continent over 40,000 years ago. During the nineteenth and early twentieth centuries, following settlement of Australia by Europeans, the Indigenous population declined dramatically and traditional lifestyles and practices were disrupted.

Indigenous males, as a population group, experience disproportionate levels of educational, employment and social disadvantage, compared with non-Indigenous males. Indigenous males also typically die at much younger ages and are more likely to experience disability and reduced quality of life because of ill health, when compared with non-Indigenous males.

### Remoteness

Remoteness and health status are associated, and health status generally decreases with increasing remoteness. As a population group, males living in regional and remote areas are more likely to be socioeconomically disadvantaged, be of Aboriginal or Torres Strait Islander origin and speak a language other than English at home. These factors—combined with social and geographic barriers to accessing health services, higher cost of and difficulties in sourcing fresh food, harsher environmental conditions and relative social isolation—place males living in some regional and remote areas of Australia at greater risk of poor health than males living in other regions. The analyses in this report take a broader view of the association between male health and geographic location and highlight males in any region of Australia at greater risk of poor health.

### Socioeconomic disadvantage

Socioeconomic disadvantage and health status are closely linked: greater disadvantage is associated with higher levels of risk factors, poorer health status, higher rates of preventable deaths and lower life expectancy. Characteristics of socioeconomic disadvantage include low income, lower educational attainment, unemployment and unskilled employment. Groups of males who are more likely to be at socioeconomic disadvantage include Aboriginal and Torres Strait Islander males, males living in regional and remote areas, males from a non-English speaking background and older males. The concept of disadvantage is relative, and the analyses in this report seek to highlight those groups of males at greater risk of poor health, or experiencing poor health, across the spectrum of socioeconomic disadvantage.

### Males born overseas

Males born overseas contribute to the cultural, ethnic, linguistic and religious diversity of Australia, and their unique health profiles make this group of particular interest to health researchers and policy makers. The risk factor profile and the morbidity and mortality patterns of migrants may be influenced by their country of origin, their destination, and by the process of migration itself. In some circumstances, language skills and cultural practices may present a barrier to accessing health services.

## Older males

Older males (aged 65 and over) are a growing and diverse segment of the Australian population. Many males in this age group make valuable contributions to their families and communities through unpaid household, volunteer and community work; paid work; and through care of children and grandchildren, spouses and relatives with disability. As an age cohort, the older population also impacts upon the overall patterns of health, disability and disease in the community. Understanding the health of older males (and females) is therefore vital for the planning and provision of health and aged care services.

## A conceptual framework for male health

This report takes a holistic view of health as a state of complete physical, mental and social wellbeing. As such, the scope of male health is very broad and made even more so because it encompasses males of all ages, not just adult men (Box 1.2).

A conceptual framework for male health (as shown in Figure 1.1 on page 5) can help define the ‘universe’ of male health. This framework was initially developed and presented in the first report in this series, *The health of Australia’s males* (AIHW 2011j). The population groups in the current report draw upon determinants in this conceptual framework—for example, culture, socioeconomic characteristics, remoteness and ageing.

### Box 1.2: Male health or men’s health?

The term ‘male health’ has been used throughout this report in preference to ‘men’s health’—the term used in previous publications such as the 2010 AIHW report *A snapshot of men’s health in regional and remote Australia* (AIHW 2010e). ‘Male health’ has been used to recognise that males of all ages experience the health conditions and risk factors discussed in this report. Furthermore, the age when a boy is considered an adult (man) depends upon cultural norms around gender, roles and ageing. The data sources used in this report may also identify male adulthood as commencing at different ages.

## Aspects of the framework covered in this report

This report presents information on male health using a broad sample of data sources that cover much of the male health ‘universe’ as defined by the conceptual framework.

Each chapter in the report broadly includes the following:

- Demographic and socioeconomic characteristics—population size, age distribution, income, employment, relationships and language
- Lifestyle factors and other health determinants—fruit and vegetable intake, physical activity, excess body weight, smoking, alcohol consumption, illicit drug use, violence, sexual risk behaviours and health literacy
- Health status—life expectancy, mortality, burden of disease, self-assessed health status, long-term conditions, cancer, mental health, disability and sexual health
- Service use—preventive health, admitted patient care (hospitalisations) and specialised health services (for example, those funded by the Office of Aboriginal and Torres Strait Islander Health [OATSIH] and palliative care services).

The subject matter covered varies between population groups due to the availability of variables that identify the population group (such as a question on country of birth) and the quality and comparability of those data at a national level. Data on primary health care fall into the latter category. Given the disparate nature and absence of nationally standardised data sources for primary health care in Australia, a detailed analysis of the use of primary health-care services by males was not in the scope of this report. The Australian Institute of Health and Welfare (AIHW) is undertaking new work on primary health-care monitoring in Australia, and more data may be available for future reporting.

## Structure of this report

The health profile of each population group is presented as a separate chapter, allowing users with a specific interest in socioeconomic disadvantage and health, for example, to review all the available information in isolation. Each chapter has been consistently structured, with five key sections: an introduction, demographic and socioeconomic characteristics, lifestyle factors, health status, and health service use. This consistent structure will assist users with a specific interest in lifestyle factors, for example, to easily locate and review that information for each population group.

Definitions, analytical methods and data sources are explained in detail in the online appendixes (see below). Some concepts may also be briefly described in the footnotes to tables and figures.

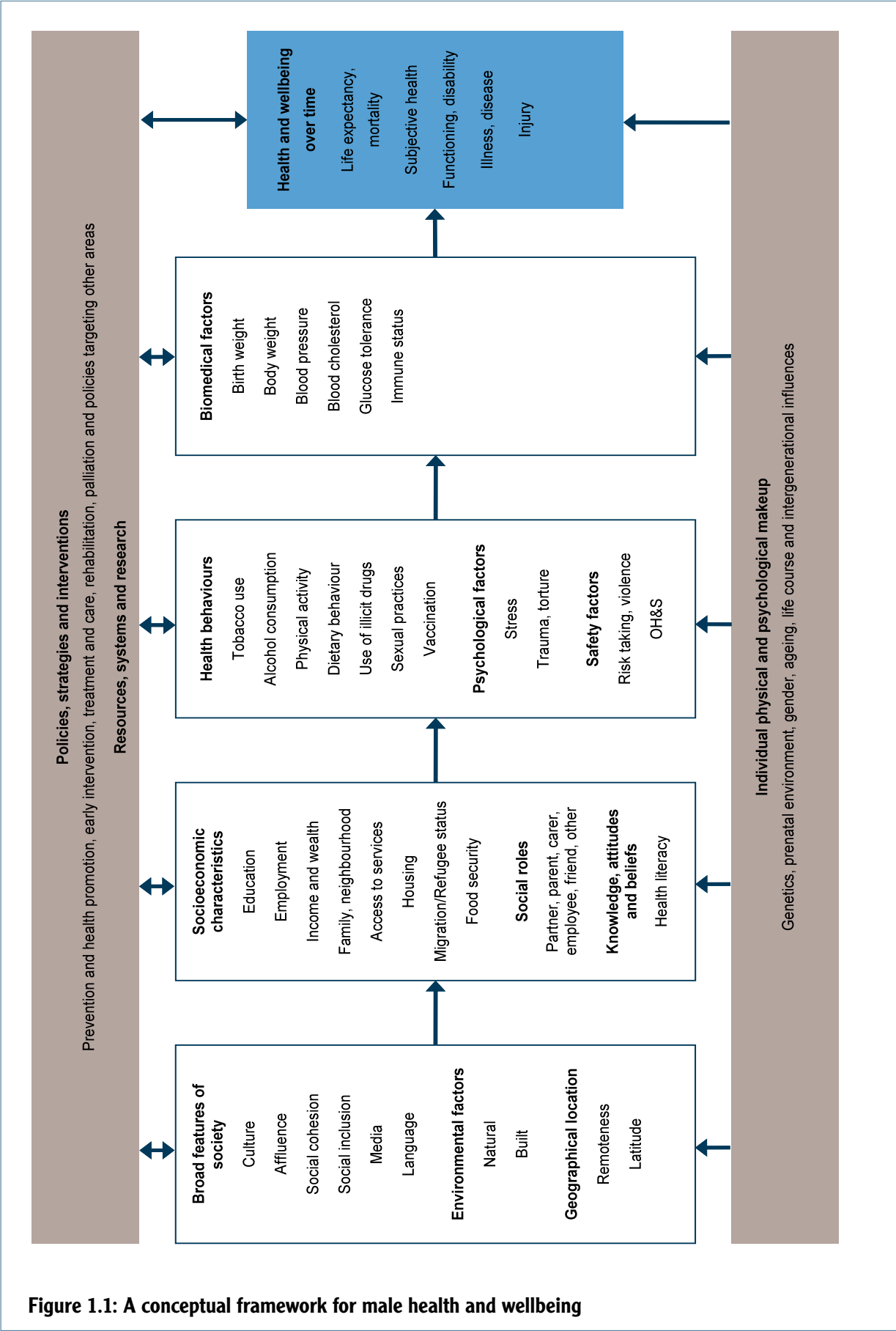
## How to access this report

This report is part of a suite of products that aims to increase the accessibility of information about the health of Australia's males. These include:

- the full report, available in hardcopy, or online from the AIHW website <[www.aihw.gov.au/publications](http://www.aihw.gov.au/publications)>
- appendix materials, including information on concepts and measures used in the report, available only online from the AIHW website
- a 4-page report profile which summarises the information in this report, available in hardcopy, or online from the AIHW website
- content on the AIHW website to supplement the existing snapshot of male health <[www.aihw.gov.au/male-health/](http://www.aihw.gov.au/male-health/)>.

## Future directions

Two more reports are planned in this series under the 2010 National Male Health Policy. These will focus on male health across the life course, drawing on the 'social roles' and 'individual and psychological make-ups' sections of the conceptual framework. The reports will also address information gaps and priorities for reporting on male health.





## 2 ABORIGINAL AND TORRES STRAIT ISLANDER MALES

Aboriginal and Torres Strait Islander people, like many indigenous populations around the world, share a disproportionate burden of poor health, lower education levels, and social disadvantage (Freemantle et al. 2007). Research has consistently shown that, on average, Indigenous people experience higher rates of illness and mortality, have shorter life expectancies, and are more likely to engage in risky lifestyle behaviours than non-Indigenous people (AIHW 2008; AIHW 2011a; AIHW 2011f). In view of the persistent poor health outcomes of Indigenous Australians, in 2008, the Council of Australian Governments

(COAG) introduced six specific targets and timelines to reduce the health gap between Indigenous and non-Indigenous Australians (Box 2.1).

A commonly used indicator of disparity is the gap in life expectancy between Indigenous and non-Indigenous Australians. This chapter will further explore the health of Indigenous males under four broad categories: demographic and socioeconomic characteristics, lifestyle factors, health status, and health service use.

This report has chosen to limit comparisons made between the Indigenous and non-Indigenous populations. The purpose of this is not to diminish the level of disadvantage experienced by some Aboriginal and Torres Strait Islander males compared with other Australian males, but to highlight their health profile as a distinct population group. For further information on the health profile of Indigenous Australians with respect to non-Indigenous Australians, see the AIHW publications *The health and welfare of Australia's Aboriginal and Torres Strait Islander people, an overview 2011* (AIHW 2011i) and *Aboriginal and Torres Strait Islander Health Performance Framework 2010: detailed analyses* (AIHW 2011a).

### Box 2.1: 'Closing the Gap'—targets to address Indigenous disadvantage

The COAG Closing the Gap targets focus on reducing Indigenous disadvantage and comprise:

- closing the gap in life expectancy within a generation (by 2030)
- halving the gap in mortality rates for Indigenous children aged under 5 within a decade (by 2018)
- ensuring that all Indigenous children aged 4 in remote communities have access to early childhood education within 5 years (by 2013)
- halving the gap for Indigenous students in reading, numeracy and literacy within a decade (by 2018)
- halving the gap for Indigenous students in year 12 equivalent attainment by 2020
- halving the gap in employment levels within a decade (by 2018).

Source: AIHW 2010b.

## Legacy of colonisation

Aboriginal and Torres Strait Islander cultures view health to include not only the health of the individual, but also the health and wellbeing of their family and community. In this context, the history of colonisation, discrimination and dispossession can be identified as a major contributor to past and continuing health disparities between Indigenous and non-Indigenous Australians (Carson et al. 2007; Freemantle et al. 2007).

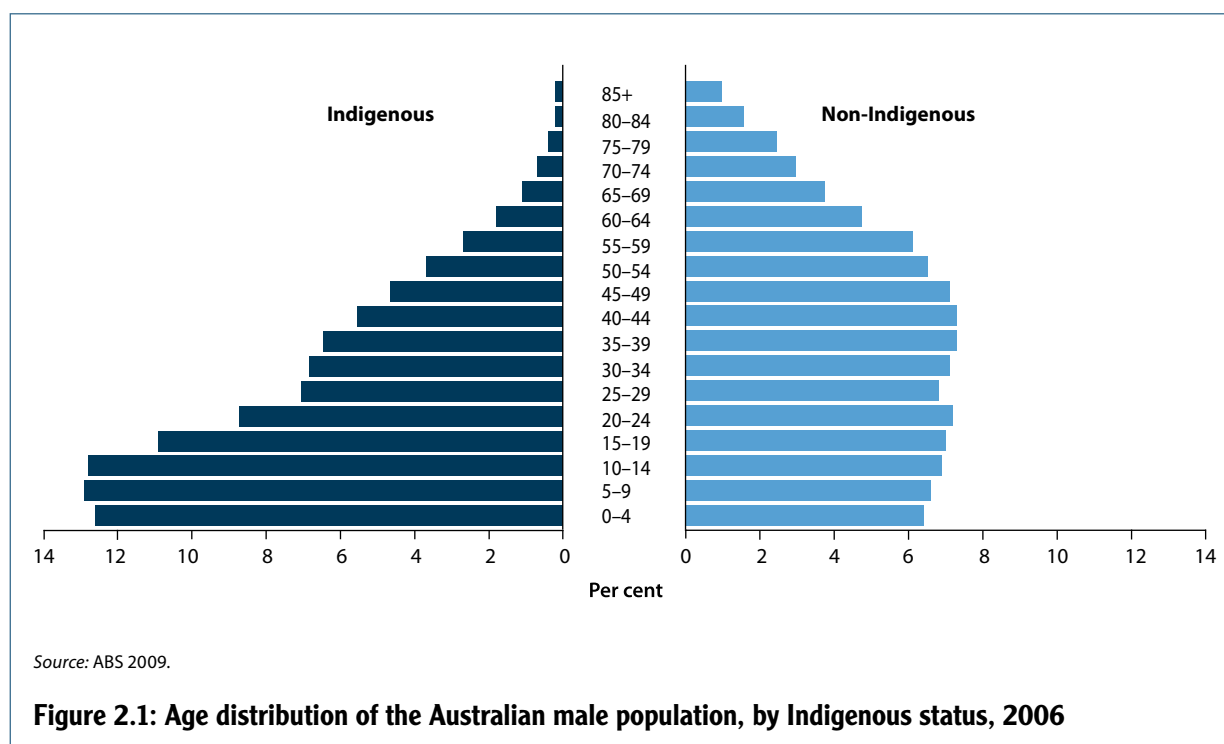
The 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) estimated that 8% of Indigenous males aged 15 and over had been removed from their natural family as a child (ABS 2010c). A further 36% had relatives who had been removed from their families. These figures include both males removed for child welfare reasons and for relocation to missions. A higher proportion of males aged 55 and over had been removed from their natural family (12%) than those aged 15–24 (5%).

In general, those who had been removed from their family rated their health more poorly and had higher levels of smoking. They were also more likely to have used illicit substances in the previous 12 months, have a disability or long-term condition, and report high or very high levels of psychological distress (ABS 2010c).

## Demographic and socioeconomic characteristics

Approximately 2.5% of the total male population identified as being of Aboriginal and/or Torres Strait Islander origin in the 2006 Census (ABS 2007a). Indigenous Australians have a very different age distribution from that of the non-Indigenous population (AIHW 2011i). In 2006, 50% of the male Indigenous population were aged less than 20, compared with 27% of the non-Indigenous population, and 3% of Indigenous males were aged 65 and over compared with 12% of non-Indigenous males (Figure 2.1).

Other demographic and socioeconomic characteristics of Indigenous males are presented in Table 2.1.





**Table 2.1: Demographic and socioeconomic characteristics of Indigenous males**

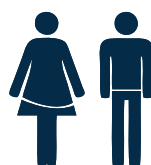
In the 2006 Census, 224,072 males identified as Indigenous, or approximately 2.5% of the Australian male population (ABS 2007a).



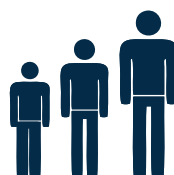
In 2008, 21% of Indigenous males aged 15 and over spoke an Indigenous language, with 12% speaking an Aboriginal or Torres Strait Islander language as their main language at home (ABS 2010c).



In 2006, 26% of Indigenous males lived in *Major cities*, 38% lived in *Inner and Outer Regional*, 18% lived in *Remote* or *Very remote* areas and 18% were classified as *Migratory* (ABS 2007a).



In 2006, there were similar numbers of males and females in the Indigenous population. However, the male to female ratio differed by age group, with 105 males for every 100 females aged 0–14 and only 62 males for every 100 females aged 75 or over (ABS 2007a).



In 2006, 39% of the Indigenous male population were aged less than 15 and 3% were aged 65 and over (ABS 2009).



In 2008, 20% of Indigenous males aged 15 or over had completed year 12 or equivalent and 37% had completed year 9 or below (ABS 2010c).



In 2010, 51% of Indigenous males aged 15–64 were classified as employed and 13% were unemployed (ABS 2011c).



In 2008–09, there were 6,200 Indigenous males accessing Supported Accommodation Assistance Program services, approximately 3% of the total male Indigenous population (AIHW 2011k).



As at 30 June 2011, there were 7,033 Indigenous males in prison, comprising 26% of the total male prisoner population (ABS 2011g).

## Lifestyle factors

Lifestyle factors are those elements of health that can be influenced by changes in behaviour. They include risk factors such as smoking and alcohol consumption, eating habits, levels of physical activity and illicit substance use, all of which are discussed in this section. These factors can influence health in different ways.

As an example, participation in sport or physical activity can promote many positive health benefits such as:

- maintaining a healthy body weight
- preventing the onset of chronic diseases (such as cardiovascular disease and high blood pressure)
- contributing to feelings of connectedness and social inclusion within a group
- providing opportunity for socialisation, developing leadership and teamwork skills, and instilling positive health behaviours that will be carried throughout life (ABS 2011h).

Many factors influence health habits and behaviours; for example, dietary preferences and environmental factors such as access and affordability may influence fruit and vegetable consumption. Often people living in remote areas experience reduced access to fresh produce, at increased prices, due to higher costs for handling, transportation and storage of goods (AIHW 2011i).

Exposure to violence is another factor that influences the health of Indigenous males. It leaves a lasting legacy such that victims may suffer injury, disability or death, as well as increased stress and trauma (NSW DoCS 2002). Exposure to and experience of community violence can also lead to feelings of fear and persecution, discouraging people from accessing services and facilities and promoting social isolation and exclusion (ABS 2007b).

Education also influences health. The higher a person's education and literacy level, the better their health is likely to be. Having higher levels of education leads to improved chances in employment, occupation and income. An example of a successful program's addressing educational attainment and improving school retention among Indigenous students is highlighted in Box 2.2. Education also enables people to have more control over their health and improves their ability to navigate health services (AIHW 2010b).

## Box 2.2: 'Strong and smart'—improving literacy and retention at school

The COAG Closing the Gap targets recognise the importance of education in reducing the gap in health levels between Indigenous and non-Indigenous Australians. Three of the six targets are related to improving education and school retention (Box 2.1).

Improving school literacy and retention have flow-on effects for health and wellbeing. Data from the 2008 NATSISS show that Indigenous people aged 15–19 who were currently studying or had completed year 12 or a higher qualification were less likely to:

- consume alcohol at risky levels
- use illicit substances in the previous 12 months
- be a current daily smoker
- experience one or more personal stressors (such as death of a family member or close friend, trouble with the police, and overcrowding)
- be unable to find a job (ABS 2010c).

To improve school retention among Indigenous children, research from the Closing the Gap Clearinghouse highlights the importance of:

- cultural factors in schooling
- developing policies and programs that take account of Indigenous cultures and history
- school-wide strategies that work to maintain student engagement and improve learning outcomes
- strategies that focus directly on the needs of students at risk of low achievement or early leaving (Closing the Gap Clearinghouse AIHW & AIFS 2011).

Chris Sarra, as principal of Cherbourg Primary School, employed many of these approaches in his 'Strong and smart' program. Sarra aimed to challenge the perceptions held by students and the wider community of Aboriginal identity and restore their pride. He did this using a range of leadership approaches, including:

- making students personally accountable for their truancy
- rewarding students for improvements in attendance
- making an Indigenous studies program integral to the curriculum in all years
- engaging the community to help build a shared vision for the school (Sarra 2005).

## Selected lifestyle factors from Indigenous population surveys

This section looks at selected lifestyle factors among Indigenous males, based largely on self-reported data from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and the 2008 NATSISS.

In 2004–05:

- more than half of Indigenous males aged 25–34 and over were classified as overweight or obese
- across all age groups, more than 34% of Indigenous males reported eating fruit daily and more than 72% reported eating vegetables daily.

In 2008:

- 56% of all Indigenous males aged 25–34 were current daily smokers
- high-risk alcohol consumption was most prevalent in the 45–54 age group
- Indigenous males aged 15–24 had the highest participation rates in sport or physical activity in the 12 months before interview (53%), and males aged 45 and over had the lowest (18%) (Table 2.2).

**Table 2.2: Selected health risk factors among Indigenous males, by age group, 2008 or latest year available (per cent)**

Selected risk factor (year)	Age group					
	12–14	15–24	25–34	35–44	45–54	55+
Current daily smoking (2008)	..	38.7	56.0	55.5	47.9	32.8
High-risk alcohol consumption <sup>(a)</sup> (2008)	..	7.9	7.6	11.2	12.9	6.9
Overweight/obese by body mass index <sup>(b)</sup> (2004–05)	..	31.0	56.0	61.0	63.0	63.0
Sufficient vegetable intake <sup>(c)</sup> (2004–05)	12.0	8.0	9.0	13.0	11.0	11.0
Sufficient fruit intake <sup>(d)</sup> (2004–05)	53.0	40.0	39.0	34.0	45.0	57.0
Participation in sport or physical activity <sup>(e)</sup> (2008)	..	52.8	41.3	34.4	18.0 <sup>(f)</sup>	

.. Not applicable.

(a) Based on alcohol consumption in the 12 months before the survey. High-risk alcohol consumption is defined as a usual consumption of greater than 75 mL pure alcohol, or the equivalent of 6 standard drinks, per day.

(b) Body mass index greater than or equal to 25 kg/m<sup>2</sup>.

(c) Sufficient vegetable intake is classified as 4–8 serves of vegetables each day.

(d) Sufficient fruit intake is classified as 2–4 serves of fruit each day.

(e) Based on participation in sport or physical activity in the 12 months before the survey.

(f) Due to small numbers, data for the 45–54 and 55-and-over age groups have been combined.

Sources: ABS 2006b; ABS 2010c; ABS 2011h.

## Violence

The NATSISS for 2002 and 2008 included questions on community safety. From the 2008 NATSISS it was estimated that among Indigenous males aged 15 and over:

- 24% experienced being a victim of physical or threatened violence in the 12 months before interview (a slight decrease from 26% in 2002)
- 24% reported family violence as a neighbourhood or community problem
- 8% (aged 18 and over) witnessed violence in the 12 months before interview (AIHW 2008).

Between 2006–08, assault was recorded as the principal diagnosis for hospitalisation at a rate of 11 per 1,000 among Indigenous males; a rate 7 times that among other Australians (AIHW 2011i).

## Illicit substance use

Illicit substance use is the use of substances for non-medical purposes (ABS 2010c). This includes the use of drugs whose production, sale or possession is prohibited (illicit drugs)—for example, amphetamines or cocaine—and the misuse of substances that are legally available (licit drugs)—for example, pain killers or petrol (AIHW 2011j). In addition to the negative effects associated with illicit substance use for the individual, drug use also has social and economic impacts on the wider community. Substance abuse has been linked to domestic violence, family breakdown, increased rates of crime and assault, as well as to higher rates of illness, accident and injury (AIHW 2011i; SAMHSA Office of Applied Studies 2008; Tomison 1996).

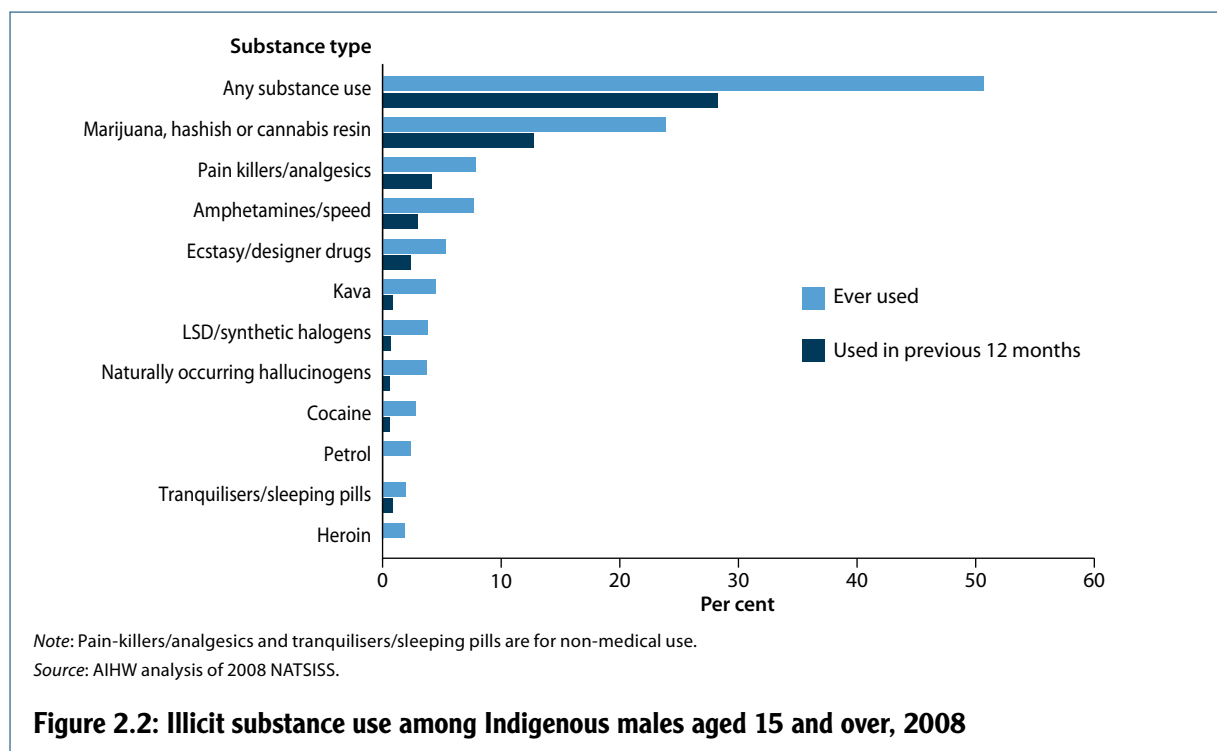
Findings from the 2008 NATSISS show that among Indigenous males aged 15 and over:

- 51% have ever used illicit substances
- 28% had used illicit substances in the 12 months before the survey.

Among those males who had ever used illicit substances, 43% had used marijuana, 14% had used amphetamines, and 10% had used ecstasy or designer drugs.

Among those males who had used illicit substances in the last 12 months, 23% had used marijuana, 5% had used pain killers or analgesics and 5% had used amphetamines (Figure 2.2).

Use of petrol as an illicit substance has been reported as a concern, particularly in remote Indigenous communities. The use of inhalants (for example, petrol sniffing) can lead to serious health consequences, including brain damage, disability or even death (AIHW 2011). In 2008, it was estimated that 4% of Indigenous males aged 15 and over had ever used petrol as an illicit substance (Figure 2.2).



## Health status

Health status provides insight into the physical, emotional and mental state of a person and their ability to function on a daily basis. Poor health can place a substantial burden not only on the individual affected, but also on their wider support base, including family and friends. This section provides an overview of the main health conditions affecting Indigenous males and those in which Indigenous males are over-represented.

### Life expectancy and healthy life expectancy

Life expectancy may be defined as the average number of years of life remaining to a person from a given point in time. Life expectancy varies both within and between population groups, reflecting the fact that different populations have different risk profiles and, hence, different mortality rates. For the period 2005–2007, male Indigenous life expectancy at birth was estimated to be 67.2 years (AIHW 2011i). For non-Indigenous males, this figure was 78.7 years, indicating a gap of 11.5 years between the two population groups.

While living longer can be a sign of improvements in health-care quality, services and access, living longer does not necessarily equate with living better. Health adjusted life expectancy (HALE) is an estimate of the average number of years a person can expect to live free from disability, disease or injury. It is calculated by subtracting the years spent living in ill health from overall life expectancy (AIHW 2011j). In 2003, HALE for Indigenous males was 56 years, and 71 years for the total Australian male population, representing a gap of 15 years. A greater proportion of shorter life expectancy was attributed to disability among Indigenous males (18%) than the total Australian male population (10%) (Vos et al. 2007).

### Mortality

Examining trends and patterns in death statistics can help to identify changes in health status and disease processes, provide insight into the success of health interventions, and highlight important differences between population groups (AIHW 2011j) (Box 2.3).

### Box 2.3: Contribution of chronic disease to the health gap between Indigenous and non-Indigenous Australians

Chronic disease contributes a major proportion of the disease burden for Indigenous Australians, contributing 80% of the gap in mortality for all those aged 35–74 (AIHW 2011h).

The mortality gap is defined as the difference between Indigenous and other Australians in potential years of life lost due to premature mortality; that is, the difference in the annual rate of potential years of life lost between Indigenous and non-Indigenous Australians. In this analysis, a premature death was any occurring before 75 years of life (AIHW 2011h).

In 2006, chronic diseases accounted for 75% of the mortality gap between Indigenous and non-Indigenous males aged 35–54. The leading causes of the mortality gap were:

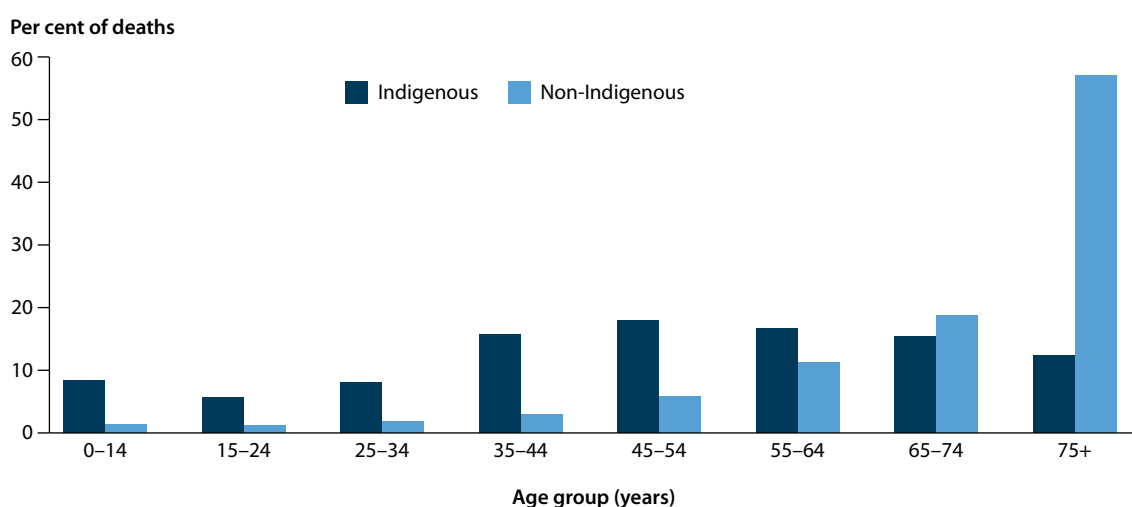
- ischaemic heart diseases (27%)
- diseases of the liver (mainly through alcoholic liver disease) (12%)
- Type 2 diabetes mellitus (8%)
- other forms of heart disease such as cardiomyopathy and heart failure (7%).

For males aged between 55–74, chronic diseases accounted for 95% of the mortality gap. Leading causes were:

- ischaemic heart diseases (22%)
- Type 2 diabetes mellitus (15%)
- cancer of the respiratory and intrathoracic organs (those found within the chest cavity) (9%)
- chronic lower respiratory diseases (8%).

Source: AIHW 2011h.

The age distribution of deaths for Indigenous males differs markedly from that for other Australians (Figure 2.3). In the period 2005–2007, 72% of deaths among Indigenous males were among those aged less than 65 years. The comparable figure among non-Indigenous males was 24%.



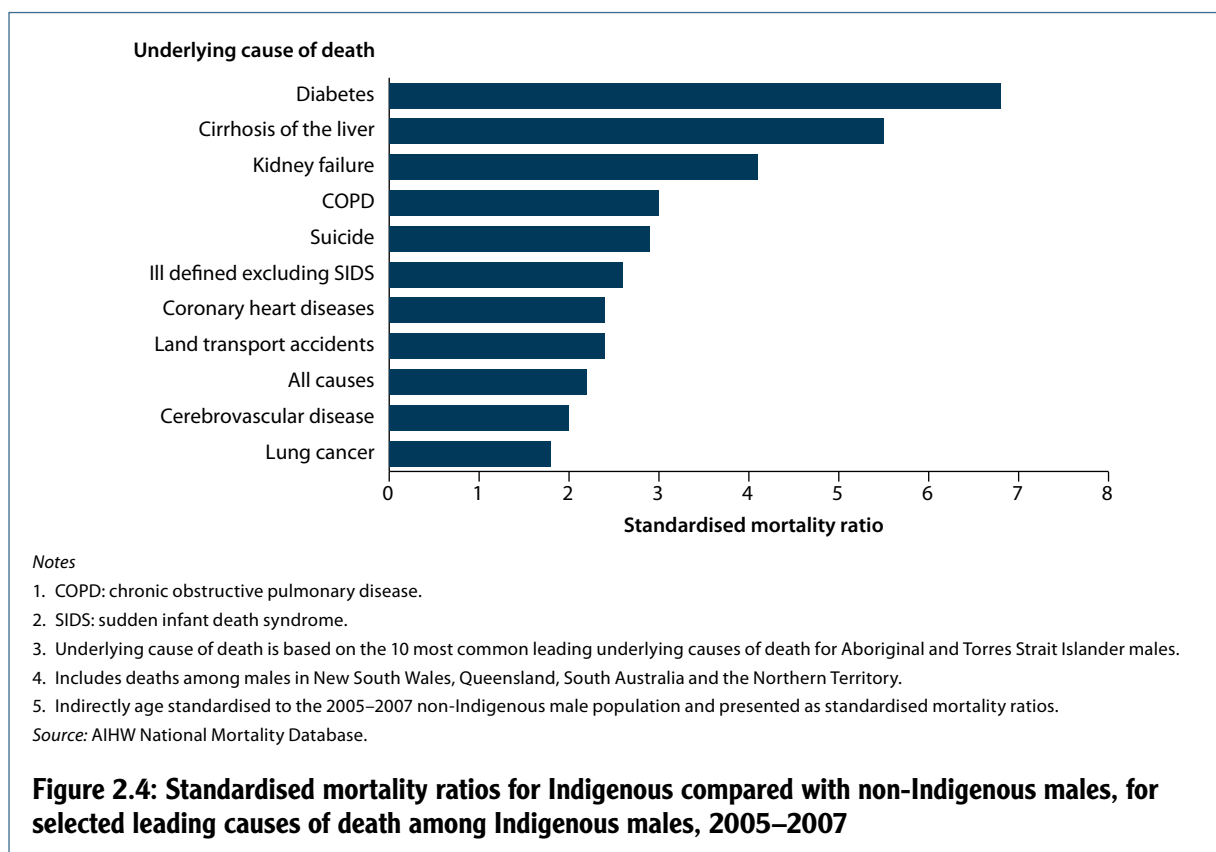
Note: Includes deaths among males in New South Wales, Queensland, South Australia and the Northern Territory.

Source: AIHW National Mortality Database.

**Figure 2.3: Age distribution of deaths among males, by Indigenous status, selected states and territories, 2005–2007**

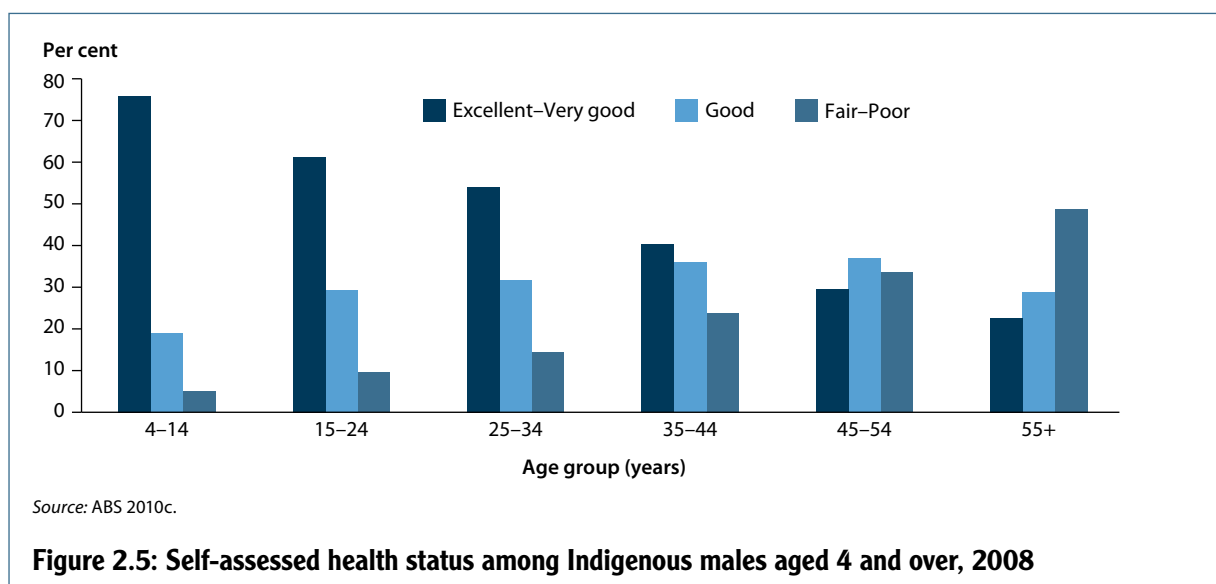


In 2005–2007, Indigenous males were twice as likely to die from ‘all causes’ compared with non-Indigenous males (Figure 2.4). Coronary heart diseases was the leading cause of death for both Indigenous and non-Indigenous males, and Indigenous males were twice as likely to die from this cause. Cerebrovascular disease, lung cancer, COPD and suicide were also in the 10 most common causes of death for both population groups. Diabetes and cirrhosis of the liver had the highest standardised mortality ratios—when compared with non-Indigenous males, Indigenous males were 7 and 5 times more likely to die from these causes, respectively.



## Self-assessed health status

Estimates from the 2008 NATSISS show that the proportion of Indigenous males who report their health as excellent or very good decreases with age. This corresponds with an increase in the proportion of males who report their health as fair/poor as age increases (Figure 2.5).



## Selected health conditions

This section provides data on a selection of health conditions that are of particular relevance, either through their contribution to the disease burden or because they are found almost exclusively within the Indigenous population. Some conditions that are known to cause significant disease burden in the Indigenous population are not included in this report as national data do not exist or are not available by sex. Two of these conditions, scabies and trachoma, are described in Box 2.4.

### Box 2.4: Other health conditions

Scabies and trachoma are two health conditions that are significant among Aboriginal and Torres Strait Islander people, but for which data are limited and not available by sex.

**Scabies** is a skin infestation caused by the *Sarcoptes scabiei* mite and is thought to be endemic among Indigenous Australian children living in Northern Australia (Andrews et al. 2009). The condition is linked to high rates of kidney disease and acute rheumatic fever in the Indigenous population (Andrews et al. 2009). The infection is preventable with good personal and household hygiene, and is treatable with over-the-counter creams (Victorian Department of Health 2007). Despite this, a 2004–2007 study found that 13% of Indigenous children aged 0–14, and living within the study area, had scabies (Andrews et al. 2009).

**Trachoma** is a bacterial infection of the eye and a leading cause of blindness worldwide. In Australia, the infection is found almost exclusively among the Indigenous population in remote areas in Australia. Left untreated and without measures to prevent reinfection, trachoma can cause scarring of the eye and lead to irreversible blindness. Australia is the only developed nation in the world to have endemic blinding trachoma (Polack et al. 2005). Despite being both preventable with good facial hygiene, and treatable with antibiotics, in 2010, active trachoma was found in 11% of Indigenous children aged 1–14 living in 150 communities screened for trachoma (Kirby Institute for Infection and Immunity in Society 2011a).

## Chronic kidney disease

Chronic kidney disease refers to conditions of the kidney that last for 3 months or more, and result in kidney damage or reduced kidney function. Chronic kidney disease is categorised into 5 stages relative to the loss of kidney function incurred. Stage 5, known as end-stage kidney disease, is the most severe form of the disease; most people with this condition require dialysis or a kidney transplant to replace or restore kidney function.

Although there is no measured information on the national incidence or prevalence of chronic kidney disease in Indigenous Australians, studies have identified high rates of the disease, and indicators of kidney damage, among Indigenous communities. These higher rates are largely attributed to lower birth weights and socioeconomic factors. There are also regional differences, with rates of chronic kidney disease highest in remote areas and lowest in urban areas (AIHW 2011g). In 2004–05, 3% of Indigenous males reported having chronic kidney disease—2% of males aged under 45 and 9% of males aged 45 and over (AIHW 2011g). In 2004–07, the rate of end-stage kidney disease among Indigenous males was almost 5 times that among non-Indigenous males (114 and 23, respectively, per 100,000 population).

## Acute rheumatic fever and rheumatic heart disease

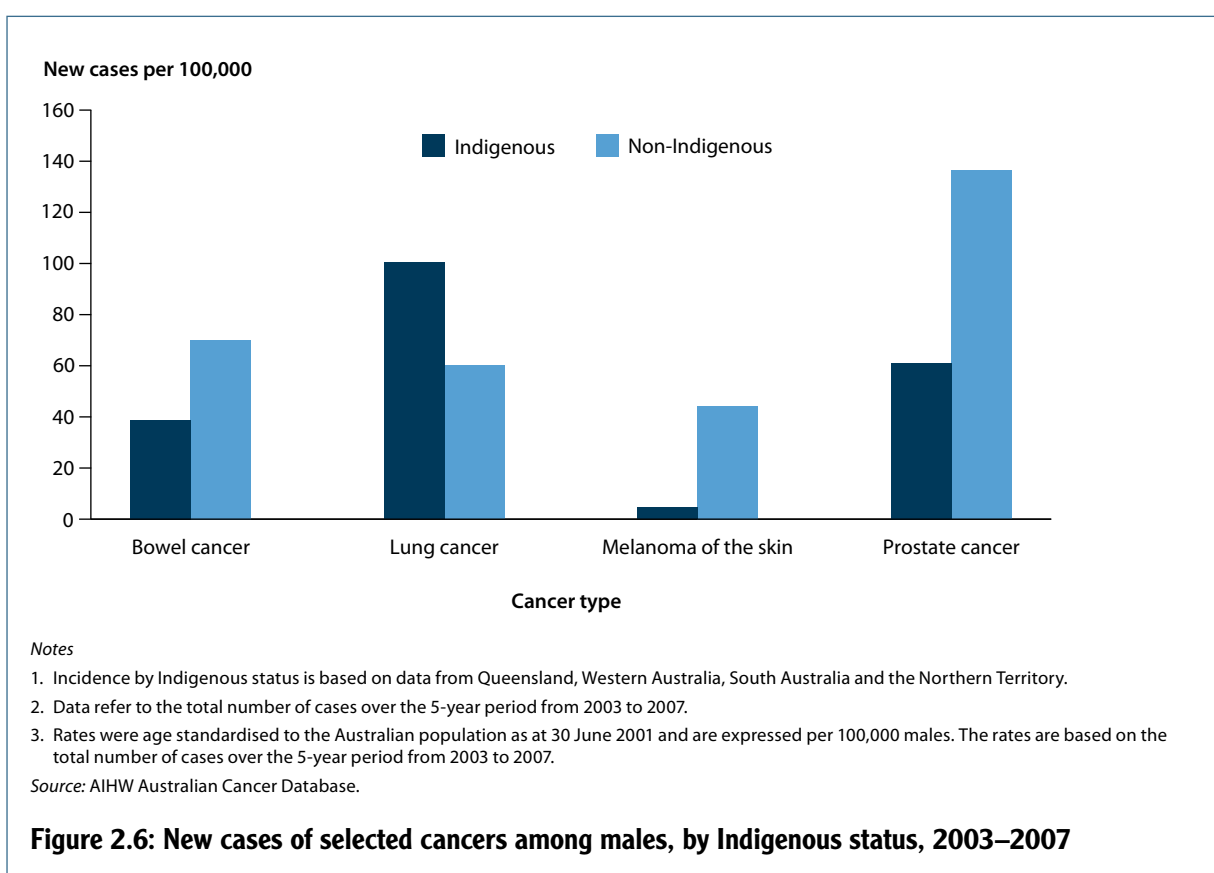
Acute rheumatic fever is a condition caused by an untreated bacterial infection with group A *streptococcus*. It can cause inflammation throughout the body and permanent damage to the heart. When permanent damage occurs, the condition is known as rheumatic heart disease (AIHW 2011f). Treating acute rheumatic fever with antibiotics can prevent the development of rheumatic heart disease; this approach has seen both conditions practically disappear from the non-Indigenous populations of developed countries during the twentieth century. Conditions such as poverty, overcrowding and poor sanitation, as well as a lack of access to medical care (which can typify some remote Aboriginal and Torres Strait Islander communities), increase both the likelihood of recurrent episodes of acute rheumatic fever and of its progressing to rheumatic heart disease.

In the period 2006–2009, male Indigenous children (aged 5–14) accounted for 39% of all new and recurrent cases of acute rheumatic fever among Indigenous children living in the Top End of the Northern Territory and Central Australia (AIHW 2011a). As at 31 December 2009, there were 476 rheumatic heart disease registrations among Indigenous males living in the Northern Territory (15 registrations per 1,000 males) (AIHW 2011a).

## Cancer

In the period 2003–2007, there were 1,095 new cases of cancer among Indigenous males. The incidence of all cancers among Indigenous males (436 cases per 100,000 males) was lower than among non-Indigenous males (522 cases per 100,000 males).

In 2003–2007, there were differences in the rates of selected cancers by Indigenous status (Figure 2.6). When compared with non-Indigenous males, Indigenous males had a lower incidence of bowel cancer, melanoma of the skin and prostate cancer. Of the selected cancers, lung cancer was the most frequently diagnosed cancer among Indigenous males (100 cases per 100,000 males). Prostate cancer was the most frequently diagnosed cancer among the non-Indigenous population (137 cases per 100,000 males).



## Diabetes

In 2004–05, 6% of all Indigenous males reported having diabetes or high sugar levels (Table 2.3). The proportion reporting having diabetes increased with age, and was highest among males aged 55 and over. After adjusting for differences in age structure between the Indigenous and non-Indigenous male populations, Indigenous males were nearly 3 times as likely to report having diabetes or high sugar levels compared with non-Indigenous males (12% compared with 4%, respectively).

**Table 2.3: Reporting diabetes/high sugar levels among males, by Indigenous status and age group, 2004–05<sup>(a)</sup>**

Age group (years)	Indigenous (per cent)	Non-Indigenous (per cent)
0–14	..	..
15–24	1.2 <sup>(b)</sup>	0.5 <sup>(b)</sup>
25–34	4.0	0.6 <sup>(b)</sup>
35–44	7.6	2.6
45–54	17.3	5.3
55 and over	34.6	13.5
<b>Total (crude)</b>	<b>5.5</b>	<b>4.3</b>
<b>Total (age-standardised)<sup>(c)</sup></b>	<b>11.9</b>	<b>4.2</b>

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

(a) Self-reported data from the NATSIHS 2004–05.

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

(c) Directly age standardised to the 30 June 2001 Australian population.

Source: AIHW analysis of 2004–05 NATSIHS.

## Mental health

From the 2008 NATSISS, it is estimated that 98% of Indigenous males aged 18 and over suffered from some form of psychological distress: 28% at high or very high levels; 70% at low or moderate levels. Of those males who reported suffering from psychological distress, 88% had not seen a health professional about the distress in the 4 weeks before interview (AIHW 2011a).

In 2003, mental disorders represented 15% of the disease burden (disability adjusted life years or DALYs) for Indigenous males, representing 10% of the total health gap between Indigenous and non-Indigenous males (Vos et al. 2007). Anxiety and depression were the leading causes of this burden (38%), followed by alcohol dependence and harmful use (24%), heroin or polydrug dependence (10%) and schizophrenia (9%).

In 2008–09, after adjusting for differences in age and population structure, compared with non-Indigenous Australians, Indigenous Australians had:

- 2.9 times the number of contacts for community-based mental health services
- fewer ambulatory equivalent mental health separations (same day hospitalisations with no procedure recorded) but more non-ambulatory separations (spending more than 1 day within the hospital)
- lower levels of prisoners reporting mental health issues and accessing care (AIHW 2011c).

## Disability

Among Indigenous males aged 15 and over in 2008, 8% had a profound or severe core activity limitation (that is, they required help with communication, mobility and/or self-care). This proportion increased with age, from 6% (15–24 years) to 17% (55+ years). Of those with a severe or profound disability, physical disabilities made up around one-third (34%), followed by sight, hearing and speech (21%), intellectual (8%) and psychological disabilities (6%) (ABS 2010c).

In 2006, among children aged 18 or less, Indigenous males were more likely to require assistance with core activities than females (3% and 2%, respectively). Indigenous males aged 18 or less required assistance at a rate of 1.3 times that of non-Indigenous males (AIHW 2011a). The proportion of Indigenous males requiring assistance increased with age: ranging from 1% in males aged 0–4, to 33% in males aged 75 and over.

## Sexual health

Indigenous Australians have higher rates of sexually transmitted infections and blood-borne viruses than their non-Indigenous counterparts (NCHECR (National Centre in HIV Epidemiology and Clinical Research) 2010) (Table 2.4).

Factors that may contribute to these higher rates among males include:

- lower levels of access to health services, particularly culturally appropriate primary health-care services such as general practitioner clinics and community health centres, and services in *Remote* and *Very remote* areas
- a shortage of male clinical staff
- a younger and more mobile population
- higher rates of screening among remote Indigenous communities, leading to higher rates of detection and treatment
- limited reach and impact of mainstream sexual health messages via social media (NCHECR (National Centre in HIV Epidemiology and Clinical Research) 2009).

Indigenous and non-Indigenous populations have different patterns of transmission of gonorrhoea and human immunodeficiency virus (HIV). In 2010, heterosexual transmission of gonorrhoea was predominant in the Indigenous population (compared with male-to-male in the non-Indigenous population), and injecting drug use made up a higher proportion of the exposure category to HIV in the Indigenous population (Kirby Institute for Infection and Immunity in Society 2011b).

The data below refer to notification rates of sexually transmissible infections among Indigenous Australians for 2010, where Indigenous status was reported for more than 50% of diagnoses.

**Table 2.4: New cases of sexually transmissible infections among males, 2010**

Sexually transmissible infection	Number of male Indigenous diagnoses	Crude rate of diagnoses (per 100,000 Indigenous population) <sup>(a)</sup>
Chlamydia <sup>(b)</sup>	1,300	1,100
Gonorrhoea <sup>(c)</sup>	1,700	900
Infectious syphilis <sup>(d)</sup>	100	30

(a) Calculated using projected estimates of total Indigenous population in 2010, excluding states and territories where relevant.

(b) Excludes data for New South Wales, Queensland and the Australian Capital Territory.

(c) Excludes data for New South Wales.

(d) Includes data for all state and territory health jurisdictions.

Note: Due to small numbers, data and crude rates have been rounded.

Source: Kirby Institute for Infection and Immunity in Society 2011b.

## Health service use

### Aboriginal and Torres Strait Islander health services

In 2009–10, the Australian Government provided funding through the Office of Aboriginal and Torres Strait Islander Health (OATSIH) for 289 primary health-care, substance use and counselling services (AIHW 2011b). This funding was targeted to services specifically aimed at Indigenous Australians (DoHA 2007). Services are located across all states and territories in areas with large Indigenous populations (Figure 2.7).

Recognising the importance of addressing the social, emotional and cultural wellbeing of the whole community in order to improve the wellbeing of an individual, the Australian Government, through OATSIH, funds a number of Aboriginal community controlled health and specialist services.

### Primary health-care services

Primary health-care services are usually the first health service visited by a patient with a health concern. They include general practitioners, dentists, pharmacists and other health practitioners (AIHW 2010b). In 2009–10, nearly 964,000 OATSIH-funded primary health-care service episodes of care were for male clients. Of these, 84% were with Indigenous males and 13% with non-Indigenous males.

The primary health-care services offered a range of clinical and population health services, including management of diabetes (87%), diagnosis and treatment of illness and disease (82%), child immunisation (82%)

and management of cardiovascular disease (81%). Sixty-three per cent (63%) of primary health-care services offered men's health programs.

Primary health-care services can also provide substance use services. This includes services to help with the management or cessation of licit substances such as alcohol, tobacco and petrol, and of illicit substances including amphetamines, ecstasy and marijuana. In 2009–10, 20% of OATSIH-funded primary health-care services also received funding for substance use (AIHW 2011b).

### Stand-alone substance use services

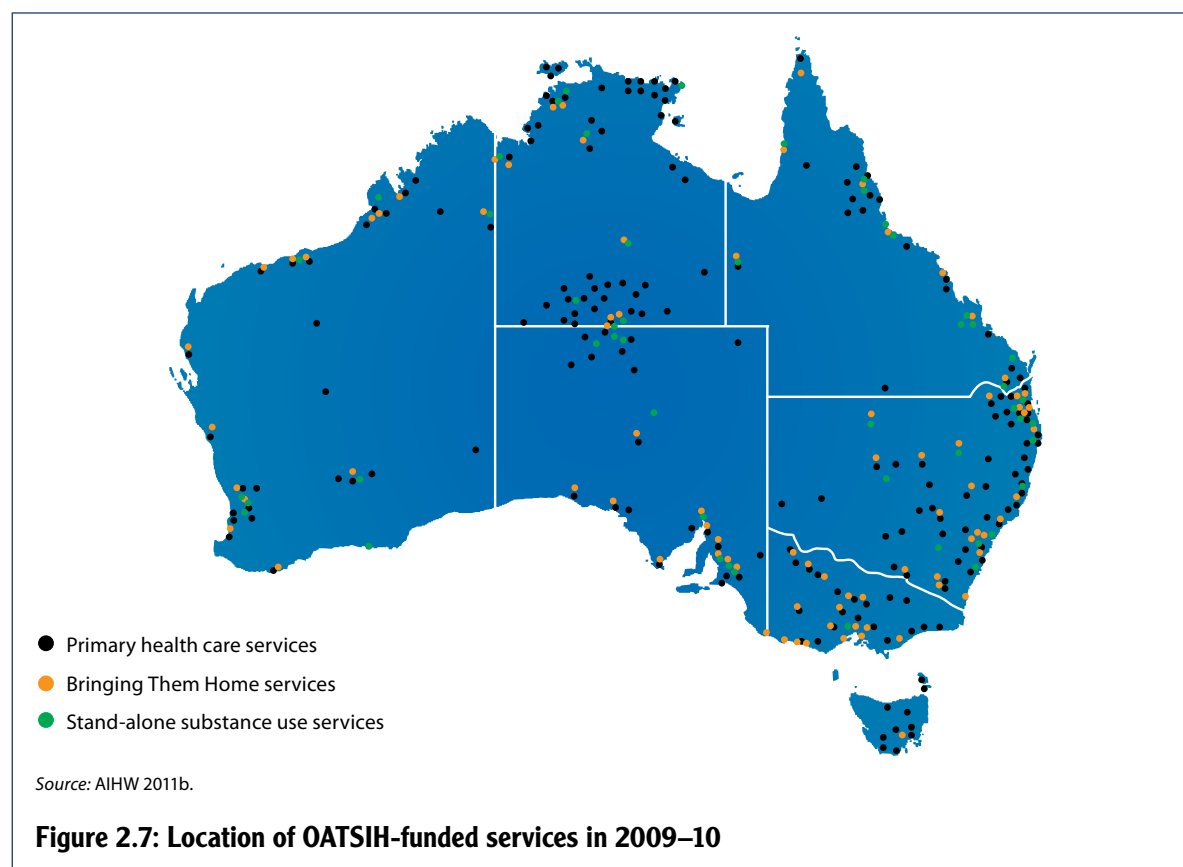
Stand-alone substance use services receive OATSIH funding for primarily providing substance use services. In 2009–10, more than 15,600 clients of OATSIH-funded substance use services were male. Of these, 74% were Indigenous and 25% were non-Indigenous. Services provided by stand-alone substance use services included individual treatment or assistance to clients for substance use issues involving alcohol (90%), cannabis and marijuana (88%), tobacco and nicotine (73%), multiple drug use (69%), benzodiazepines (58%) and petrol (50%). Ninety-eight per cent (98%) of services provided information and education about substance use through community education and activities and school-based education visits. Sixty-nine per cent (69%) of the substance use services ran men's groups (AIHW 2011b).

### Counselling services

'Bringing Them Home' and 'Link Up' counselling services assist individuals, families and communities affected by past practices of forced removal of children from Indigenous families to reunite with their families, culture and community, and restore their social and emotional wellbeing (AIHW 2011b).

In 2009–10, nearly 4,200 clients of 'Bringing Them Home' and 'Link Up' counselling services were male. Of these, 96% were Indigenous and 4% were non-Indigenous. Thirty-eight per cent (38%, 21,500) of client contacts were provided to males, and the majority of these were Indigenous males. The majority of male counsellors employed by 'Bringing Them Home' and 'Link Up' services were Indigenous (AIHW 2011b).

Seventy-six per cent (66%) of services provided group activities such as community based education and prevention groups, cultural groups and support groups; 56% ran men's groups (AIHW 2011b).





## Admitted patient care

The quality of Indigenous identification in admitted patient care data varies between states and territories (AIHW 2011e). Data on Indigenous identification for hospitals in New South Wales, Victoria, Queensland, South Australia and Western Australia and in public hospitals in the Northern Territory are considered to be at an acceptable level for analysis and reporting. Only these six jurisdictions are included in the analysis in this section.

In 2008–09 to 2009–10, there were around 260,000 separations (hospitalisations) among Indigenous males. Care involving dialysis was the leading reason for hospitalisation (principal diagnosis) among Indigenous males in 2008–09 to 2009–10, accounting for 45% of all hospitalisations. When this principal diagnosis was excluded, the most common reasons for hospitalisation among Indigenous males were mental and behavioural disorders due to the use of alcohol, pain in the throat and chest, and pneumonia (Table 2.5). Principal diagnoses such as acute bronchiolitis and cellulitis and schizophrenia were common among Indigenous males, but were not among the top 10 reasons for other Australian males.

**Table 2.5: The 10 most common reasons for hospitalisation<sup>(a)(b)(c)</sup> among males, by Indigenous status, 2008–10**

Indigenous			Other Australians <sup>(d)</sup>		
Reason for hospitalisation <sup>(e)</sup>	Number <sup>(f)</sup>	Rate <sup>(g)</sup>	Reason for hospitalisation <sup>(e)</sup>	Number <sup>(f)</sup>	Rate <sup>(g)</sup>
Mental and behavioural disorders due to use of alcohol	4,100	10.3	Care involving the use of rehabilitation procedure	195,900	9.3
Pain in throat and chest	3,500	11.4	Pain in throat and chest	111,800	5.3
Pneumonia, organism unspecified	3,400	9.4	Other cataract	109,000	5.2
Type 2 diabetes mellitus	3,100	12.8	Other malignant neoplasms of the skin	100,900	4.8
Schizophrenia	2,600	5.5	Inguinal hernia	78,600	3.7
Cutaneous abscess, furuncle or carbuncle	2,600	4.9	Angina pectoris	78,400	3.7
Acute bronchiolitis	2,600	2.6	Abdominal and pelvic pain	77,800	3.7
Cellulitis	2,200	5.1	Sleep disorders	75,200	3.6
Epilepsy	2,100	5.3	Internal derangement of knee	71,800	3.4
Acute myocardial infarction	2,100	7.9	Type 2 diabetes mellitus	69,500	3.3
<b>All hospitalisations</b>	<b>259,600</b>	<b>823.3</b>	<b>All hospitalisations</b>	<b>7,336,000</b>	<b>348.7</b>

(a) Data include hospitals in New South Wales, Victoria, Queensland, Western Australia, South Australia and public hospitals only in the Northern Territory.

(b) Separations for which the care type was reported as *Newborn with no qualified days* and records for *Hospital boarders* and *Posthumous organ procurement* have been excluded.

(c) Most common reason for hospitalisation excludes 'care involving dialysis', 'other medical care' and 'other'.

(d) Includes records where Indigenous status was 'Not stated'.

(e) Principal diagnosis based on 3-character ICD-10-AM grouping.

(f) Numbers are rounded to the nearest 100.

(g) Directly age-standardised to the 30 June 2001 Australian population.

Source: AIHW National Hospital Morbidity Database.



### 3 REMOTENESS

The health of males can be influenced by where they live. Specifically, males living in regional and remote areas were recognised in the National Male Health Policy 2010 as a group of males with poorer health outcomes compared with other males in Australia (DoHA 2010). As a population group, males living in regional and remote areas are more likely to:

- be socioeconomically disadvantaged
- be of Aboriginal and/or Torres Strait Islander origin
- have a lower level of education
- speak a language other than English at home
- work in a manual or unskilled labour occupation (AIHW 2010e; DoHA 2010 ).

These factors, combined with social and geographic barriers to accessing health services, higher cost of and difficulties in sourcing fresh food, harsh environmental conditions and relative social isolation, place some males living in many of these areas at greater risk of poorer health than males living in other regions of Australia.

While much emphasis is placed on the generally poorer health outcomes of males in regional and remote areas compared with those living in other regions of Australia, this report takes a broader view to look at the association between male health and the concept of remoteness in its entirety. The data presented in this report include males living in all regions of Australia, from *Major cities* through to *Very remote* areas, and identify those areas where males are at greater risk of poor health, experiencing poor health or underusing health services. In some instances, it is males living in *Major cities* of Australia who experience the poorer health outcome, and in others it is males living in regional areas. The measures used to define remoteness in this report are defined in Box 3.1.

#### Box 3.1: Defining remoteness in this report

In this report, the Australian Standard Geographical Classification Remoteness Areas was most commonly used to assign a remoteness category to males living in different regions of Australia. This classification system divides Australia into five categories based on distance from (accessibility of) key goods and services located in urban centres. The five categories are: *Major cities*, *Inner regional*, *Outer regional*, *Remote* and *Very remote*.

#### Australian Standard Geographical Classification remoteness areas in ABS surveys

Two Australian Bureau of Statistics (ABS) surveys (the 2007–08 National Health Survey and the 2007 Survey of Mental Health and Wellbeing) group the last three regions as ‘*Other areas*’ due to small numbers. A third survey, the 2009 Survey of Disability, Ageing and Carers, groups *Outer regional* and *Remote* and excludes *Very remote* and migratory respondents.

#### Other classifications of remoteness

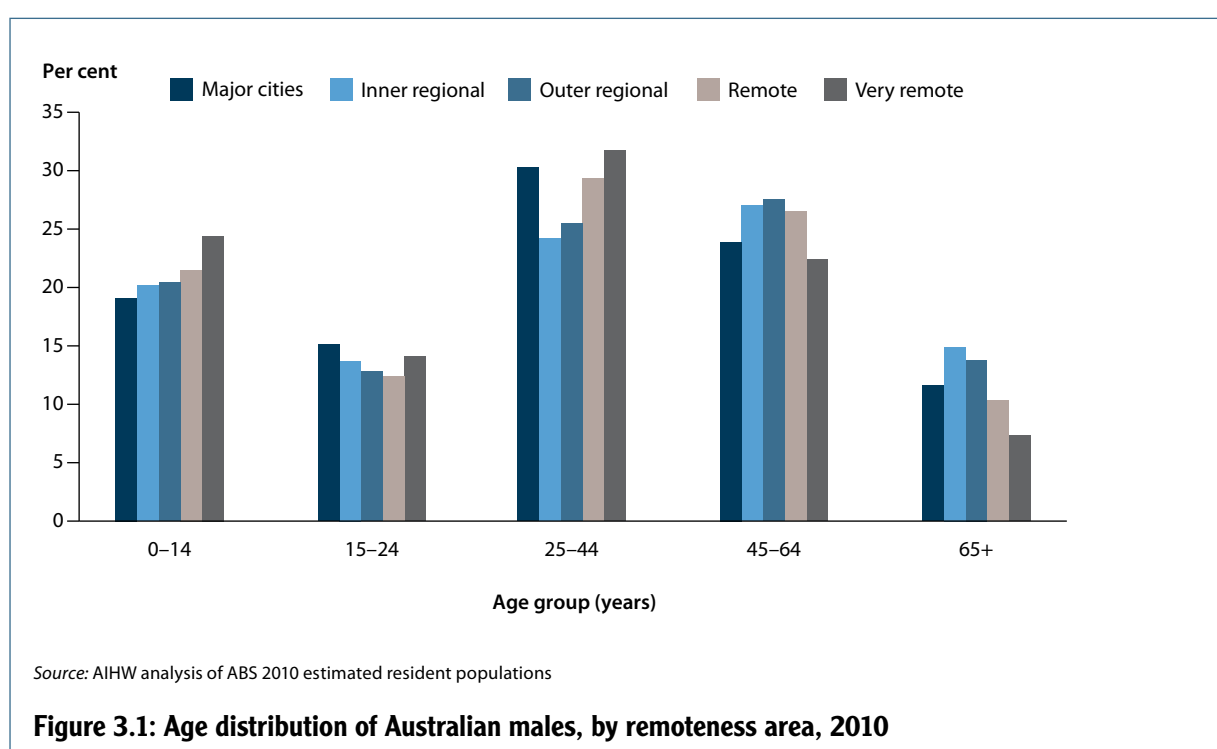
For some data sources, the Rural, Remote and Metropolitan Area classification is used instead of the Australian Standard Geographical Classification Remoteness Areas. The Rural, Remote and Metropolitan Area classification divides geographical areas into seven categories: capital cities, other metropolitan centres, large and small rural centres, other rural areas, remote centres and other remote areas. In this report, these are further grouped into ‘*Capital cities*’ and ‘*Balance of state or territory*’.

## Demographic and socioeconomic characteristics

In 2010, there were approximately 7.6 million males living in *Major cities* (68%), 2.2 million males living in *Inner regional* areas (20%), 1.1 million males living in *Outer regional* areas (10%), 0.2 million males living in *Remote* areas (2%) and 0.1 million males living in *Very remote* areas (1%).

The age distributions of these populations differ (Figure 3.1). Compared with other males:

- males living in *Major cities* were more likely to be aged 15–24 and less likely to be aged 0–14
- males living in *Inner regional* and *Outer regional* Australia were more likely to be aged 45–64 or 65 or over and less likely to be aged 25–44
- males living in *Remote* Australia were less likely to be aged 15–24
- males living in *Very remote* Australia were more likely to be aged 0–14 or 25–44 and less likely to be aged 45–64 or 65 or over.



The demographic and socioeconomic characteristics of a population are important for understanding the context in which this population lives, experiences health and accesses health services. Demographic characteristics include age and sex ratio, while socioeconomic characteristics include education, employment, volunteering and disability. Table 3.1 summarises some key demographic and socioeconomic characteristics of males according to their geographic location.

**Table 3.1: Selected demographic and socioeconomic characteristics of males by geographic location**

In 2010, there were more males than females living in *Outer regional* and in remote areas. While there were only 98 and 99 males for every 100 females in *Major cities* and *Inner regional* areas, there were 104, 112 and 113 males for every 100 females in *Outer regional*, *Remote* and *Very remote* areas, respectively.

Source: AIHW analysis of ABS 2010 estimated resident populations.



In the 2006 census, males living in *Inner regional* and *Outer regional* areas had the highest median age (38.3 and 38.1, respectively) and those living in *Very remote* areas had the lowest median age (31.0). Males living in *Remote* areas had a median age of 35.5 and those in *Major cities* had a median age of 35.1 (ABS 2008b).



In the 2006 census, more than half of males aged 15 and over living in *Major cities* reported completing their Year 12 or equivalent (53%). In comparison, around 30% of males in *Inner regional*, *Outer regional* and *Remote* areas and just 26% of males living in *Very remote* areas had completed Year 12 or equivalent (ABS 2006a).



In the 2006 census, 68% of males aged 15 and over were employed. Employment was higher among males living in *Remote* (74%) and *Very remote* (71%) areas compared with those living in *Major cities* (69%), *Outer regional* (67%) and *Inner regional* (64%) areas (ABS 2006a).



In the 2006 census, males living in *Remote* areas were most likely to volunteer (26%), followed by males living in *Outer regional* (24%), *Very remote* (22%) and *Inner regional* (21%) areas. Only 15% of males living in *Major cities* volunteered for a group or organisation (ABS 2006a).



In the 2006 census, around 5% of males living in *Inner regional* or *Outer regional* areas needed assistance with core activities, compared with 4% of males living in *Major cities*, and 3% of males living in *Remote* or *Very remote* areas (ABS 2006a).

## Lifestyle factors

The lifestyle that males lead can influence how healthy they are. The extent to which a person leads a risky lifestyle, in terms of risk factors for health, may be a personal choice (drinking and sexual behaviours), the result of an existing injury or health condition (ability to exercise or not) or the result of a broader social context (ability to access or afford fruit and vegetables).

This section looks at selected lifestyle factors and other health determinants among males in the context of geographical location.

### Selected lifestyle factors from the National Health Survey

In 2007–08, there were some similarities in the risk factor profile of males regardless of their geographic location:

- 85–90% did not eat enough fruit and vegetables each day
- 60–66% did not do enough physical activity each day
- 20–30% were overweight (but not obese).

However, in 2007–08, males living in Other areas of Australia (31%) were significantly more likely to be obese than males living in *Major cities* (20%).

### Tobacco, alcohol and other drugs

The National Drug Strategy Household Surveys (NDSHS) are national surveys providing cross-sectional data on smoking, alcohol consumption and other drug use in Australia.

In the 2010 NDSHS, the prevalence of smoking, alcohol consumption and drug use among males varied by remoteness area (Table 3.2).

The prevalence of smoking tobacco and risky alcohol consumption increased with increasing remoteness, and was higher among males living in Other areas than among those living in *Inner regional* areas or *Major cities*. The prevalence of illicit drug use was highest among males living in Other areas (18%), and lowest among males living in *Inner regional* areas (16%).

Males living in *Inner regional* areas were most likely to be ex-smokers (29%) and males living in Other areas were most likely to be ex-users of illicit drugs (28%).

**Table 3.2: Smoking, alcohol consumption and illicit drug use by remoteness area among males aged 14 and over, 2010 (per cent)**

Status	Major cities	Inner regional	Other areas
Smoking <sup>(a)</sup>			
Never smoked	57.6	51.4	47.0
Ex-smoker	24.0	29.2	28.4
Smoker	18.4	19.3	24.6
Alcohol consumption <sup>(b)</sup>			
Abstainer/ex-drinker	19.9	17.0	14.7
Low risk	54.6	51.3	46.9
Risky	25.4	31.7	38.4
Illicit drug use <sup>(c)</sup>			
Never	58.8	59.1	54.0
Ex-user	24.6	25.4	27.9
Recent user	16.6	15.6	18.0

(a) Smoking status is defined by tobacco smoking only. A male who has never smoked is defined as never having smoked 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco in their lifetime. An ex-smoker is defined as having smoked at least 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco in their lifetime, and reports no longer smoking. A smoker is defined as smoking tobacco daily, weekly or less than weekly.

(b) Alcohol consumption is presented as lifetime risky drinking behaviour and based on average daily alcohol consumption in the 12 months before the survey. An abstainer or ex-drinker did not consume alcohol. Low-risk alcohol consumption is defined as no more than 2 standard drinks per day. Risky alcohol consumption is defined as more than 2 standard drinks per day.

(c) Illicit drug use is based on use of illicit drugs and non-prescribed use of licit drugs, and includes pain-killers, tranquillisers, steroids, meth/amphetamine, marijuana/cannabis, heroin, methadone or buprenorphine, cocaine, hallucinogens, ecstasy, ketamine, GHB and inhalants. An ex-user is defined as having used illicit drugs in their lifetime, but reports no longer using illicit drugs. A recent user is defined as having used an illicit drug in the 12 months before the survey.

Source: AIHW analysis of the NDSHS 2010.

## Other lifestyle factors

Other factors that may affect health include health literacy, sexual health behaviours and exposure to violence.

Higher levels of health literacy increase an individual's ability to understand health information and use that information to make good decisions about personal health and medical care. The 2006 Adult Literacy and Life Skills Survey showed that males living in *Major cities* were more likely to have an adequate level of health literacy than males living in *Inner regional* and *Outer regional/Remote* areas (AIHW 2010e).

Some sexual behaviours may expose males and their partners to sexually transmissible infections and sexual violence. The 2001–2002 Australian Study of Sexual Health and Relationships showed that:

- males living in regional areas (1.3%) were significantly less likely to have paid for sex in the year before the survey than males living in *Major cities* (2.4%) or remote areas (2.9%) (Rissel et al. 2003b)
- males living in *Major cities* (43%) were more likely to have ever been tested for HIV than males living in regional or remote areas (39%) (Grulich et al. 2003d).

Exposure to violence may have physical or psychological health effects on those who experience violence and those who perpetrate it. The 2005 Personal Safety Survey showed that males living in capital cities were similarly likely to have experienced harassment (12%), physical assault (7%) or physical threat (5%) than males living in other areas of Australia (ABS 2006c).



## Health status

Health status, which broadly includes life expectancy and mortality, disease, disability, mental health and injury, is a holistic indicator of functioning, physical illness and mental wellbeing. This section provides an overview of selected measures of health status among males in the context of geographical location.

### Life expectancy and healthy life expectancy

Life expectancy is a summary measure of health. Longer life expectancy is associated with better health and improved access to health care. Healthy life expectancy is an estimate of how long a person can expect to live without disability or illness.

Life expectancy among Australian males born in 2003 decreased as remoteness increased (Begg et al. 2007). Males living in *Major cities* could expect to live to 78.8 years (Table 3.3). This was 1 year longer than males living in regional areas (77.5 years) and more than 3 years longer than males living in remote areas (75.4 years).

Healthy life expectancy also decreased as remoteness increased (Table 3.3). Males born in 2003 and living in *Major cities* could expect to live 71.3 years without a disability—nearly 2 years longer than males living in regional areas, and 4 years longer than males living in remote areas. The difference in healthy life expectancy by remoteness was narrower at age 60 than that at birth. Males in *Major cities* remained healthier for 1 year longer than males in regional areas and for 2 years longer than males in remote areas.

**Table 3.3: Life expectancy and healthy life expectancy of Australian males, by remoteness area, 2003**

Remoteness area	Life expectancy at birth	Healthy life expectancy	
		At birth	At 60 years
<i>Major cities</i>	78.8	71.3	17.5
Regional areas	77.5	69.6	16.5
Remote areas	75.4	67.3	15.4

Source: Begg et al. 2007.

### Mortality

In 2005–2007, there were more than 206,000 deaths among Australian males. The death rate from all causes of death generally increased with increasing remoteness, and was lowest among males living in *Major cities* (694 deaths per 100,000 males) and highest among males living in *Very remote* areas (960 per 100,000). The exception to the trend was males living in *Remote* areas with a death rate of 768 per 100,000, which was lower than the rates for males in both *Inner regional* (772 per 100,000) and *Outer regional* (817 per 100,000) areas.

In 2005–2007, the leading causes of death among males were coronary heart diseases, followed by cerebrovascular diseases, lung cancer, prostate cancer and chronic obstructive pulmonary disease. The death rate for these leading causes of death differed by remoteness area (Table 3.4). Deaths from coronary heart diseases, the leading cause of death for all regions, were highest in *Outer regional* areas (145 per 100,000) and lowest in *Major cities* (126 per 100,000).

For some conditions—chronic obstructive pulmonary disease, diabetes and suicide—there was a clear gradient of increasing mortality with increasing remoteness. Males in *Remote* and *Very remote* areas were around twice as likely to die from these conditions than males in *Major cities*. Deaths from dementia and Alzheimer disease followed the reverse gradient, and decreased with increasing remoteness.

**Table 3.4: Selected<sup>(a)</sup> leading causes of death among males, by remoteness area, 2005–2007**

Cause of death	Age-standardised rate (deaths per 100,000 males) <sup>(b)(c)</sup>			
	Major cities	Inner regional	Outer regional	Remote/Very remote
Coronary heart diseases	126.0	141.1	145.1	128.6
Lung cancer	45.2	49.8	52.0	51.3
Cerebrovascular diseases	50.0	52.7	50.4	46.9
Prostate cancer	30.1	35.8	37.6	27.7
Chronic obstructive pulmonary disease	27.2	35.5	40.5	46.0
Colorectal cancer	22.1	24.0	24.5	16.6
Dementia and Alzheimer disease	23.3	23.1	21.7	16.9
Unknown primary site cancers	17.9	21.1	24.0	21.9
Diabetes	17.7	20.6	24.7	41.6
Suicide	13.2	16.1	19.2	27.7
<b>Total</b>	<b>694.1</b>	<b>772.2</b>	<b>817.4</b>	<b>828.5</b>

(a) Selected causes include the top 10 leading causes of death for all males, and are grouped according to AIHW leading cause of death codes. AIHW tabulations of leading causes of death are based on the classification proposed by Becker et al. 2006, and modified so that cause groups are relevant to Australia.

(b) For each cause of death, all differences by remoteness area are statistically significant at the 95% confidence level.

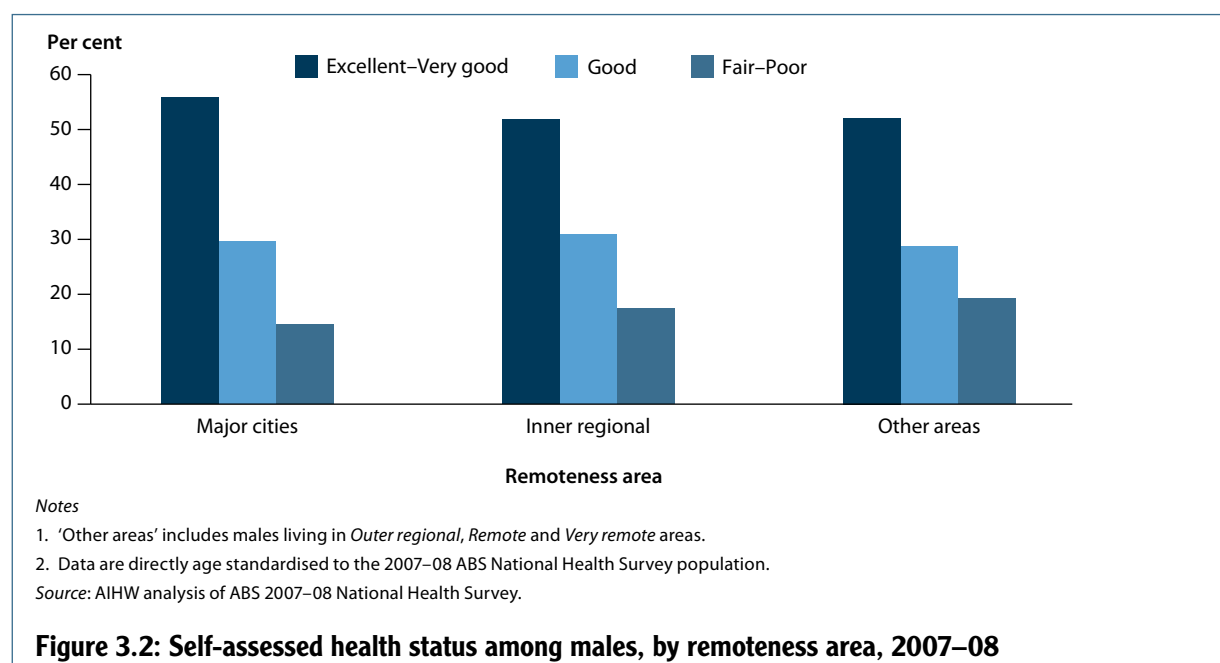
(c) Directly age standardised to the 30 June 2001 Australian population.

Source: AIHW National Mortality Database.

## Self-assessed health status

How an individual rates their own health can be a reliable indicator of health status and combines the effects of physical, social, emotional and mental health and wellbeing (McCallum et al. 1994).

As reported by respondents in the 2007–08 National Health Survey, more than 50% of males aged 15 and over rated their health as excellent or very good, and around 30% rated their health as good, regardless of remoteness area (Figure 3.2). Males living in other areas of Australia were 1.3 times as likely to rate their health as fair or poor than males living in *Major cities*.



## Cancer

Cancer is a disease that has great physical, emotional, social and financial impacts on patients and their family and carers. This impact is magnified for males (and females) with cancer who are living in regional and remote areas (Box 3.2). This section presents data by remoteness area on new cases of cancers among males. Data are presented for all cancers combined, with more detailed information on the leading male-specific cancer—prostate cancer—and three other important cancers for males—lung cancer, bowel cancer and melanoma of the skin.

### Box 3.2: Can Assist—cancer assistance network

Can Assist is a community-based charity supporting people affected by cancer (both patients and their families) who live in regional and remote areas of New South Wales. Its vision is that ‘every country, community, family and individual has equitable access to cancer care and support services’.

Hospitals with cancer treatment facilities and specialist doctors and nurses are not found in regional and remote areas. The financial cost of travelling to, and finding accommodation near, treatment centres is estimated to be up to 5 times greater for people living in regional and remote areas than for people living in the city. That cost, along with the emotional and social burden of being away from family and existing social and support networks, means that a diagnosis of cancer presents greater burden for people living outside of capital cities and major regional centres.

Can Assist has been operating for over 55 years. The charity currently has 50 branches and around 2,400 local volunteers. It eases the burden for country families affected by cancer by providing:

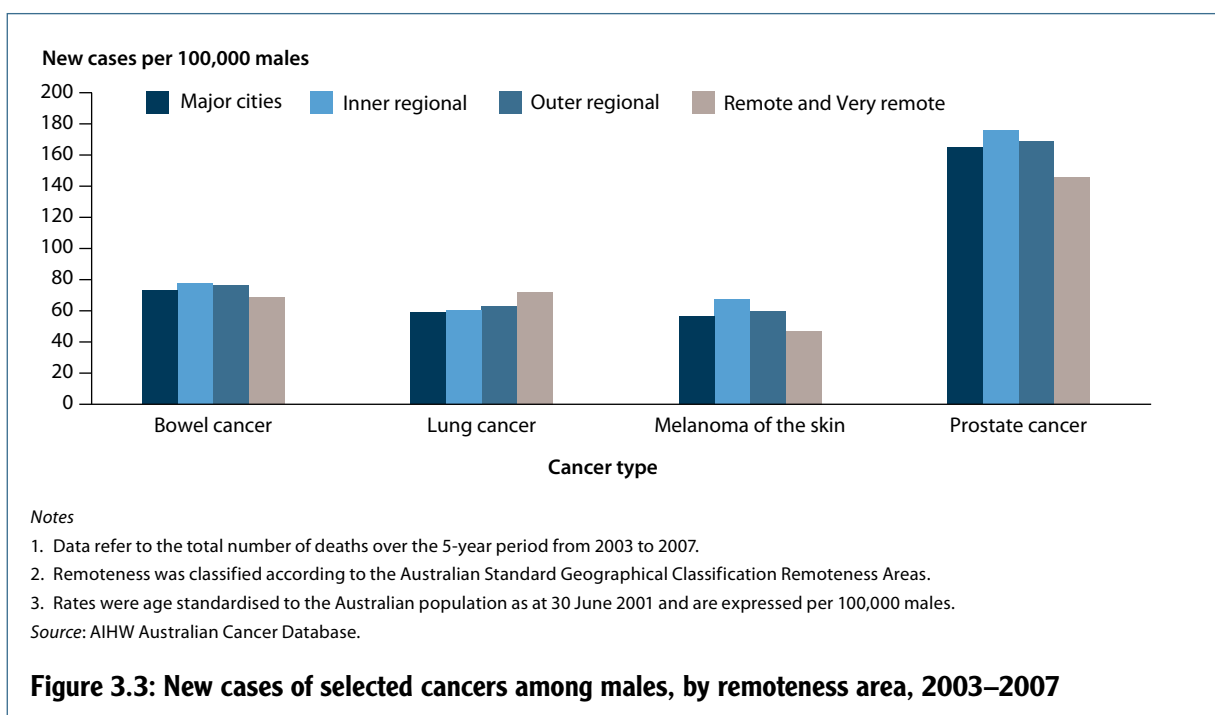
- financial assistance for medical visits, medicines, travel and some personal expenses
- supported accommodation at Jean Colvin Cancer Centre in Sydney and Lilier Lodge in Wagga Wagga
- short-term home-based support services, called ‘Can Assist Viva Packs’, which can include services such as nursing, transport, child care, domestic help and respite care.

Visit: <<http://www.canassist.com.au/>>

In 2003–2007, more than 287,000 new cases of cancer were diagnosed among Australian males. Males in *Inner regional* areas were most likely to have a new diagnosis of cancer (607 new cases per 100,000 males), followed by males in *Outer regional* areas (588 per 100,000). Males living in *Major cities* and *Remote/Very remote* areas of Australia were least likely to have a diagnosis of cancer, with rates of 576 and 558 per 100,000 males, respectively.

For selected cancers in 2003–2007, compared with males living in other regions:

- males living in *Inner regional* areas were more likely to have a diagnosis of bowel cancer, melanoma of the skin and prostate cancer
- males living in *Remote/Very remote* areas were more likely to have a diagnosis of lung cancer and were least likely to have a diagnosis of prostate cancer (Figure 3.3).



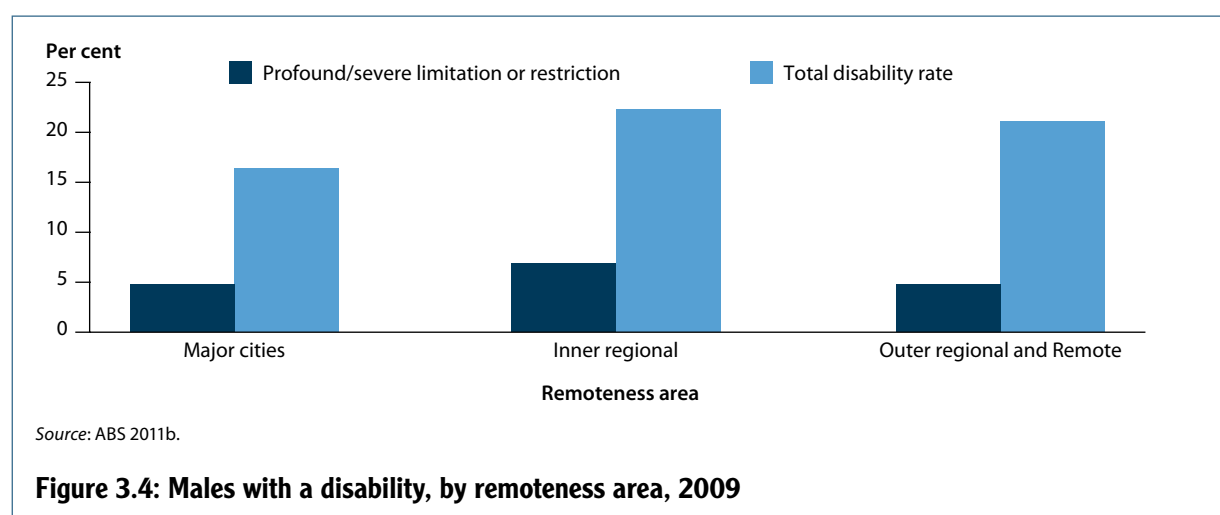
## Mental health

The 2007 Survey of Mental Health and Wellbeing showed that males living outside *Major cities* were 28% more likely to have ever had a substance use disorder than males living in *Major cities* (AIHW 2010e). The prevalence of anxiety or affective disorders, or of any mental disorder, was not significantly different between males living in *Major cities* and males living outside *Major cities*.

## Disability

Disability is broadly defined as difficulties with communication, mobility and self-care or schooling or work. According to the 2009 Survey of Disability, Ageing and Carers, males living in *Major cities* were less likely to have a disability than males living in other regions of Australia. More than 1 in 5 males living in *Inner regional* areas (22%) and *Outer regional/Remote* areas (21%) reported having a disability, compared with 16% of males living in *Major cities* (Figure 3.4).

When looking at the proportion of males with a limitation or restriction, 7% of males living in *Inner regional* areas had a profound/severe limitation or restriction compared with 5% of males living in *Major cities* or *Outer regional/Remote* areas (Figure 3.4).



## Sexual health

Sexually transmissible infections and blood-borne viruses are important health concerns. Data on these infections and viruses do not necessarily represent all cases of these diseases occurring in the community. A new diagnosis depends on males seeking health care and undergoing testing. There are no data on how many males do not seek testing or treatment for these conditions.

In 2009, the rate of new diagnoses of chlamydia, gonorrhoea, infectious syphilis and hepatitis B increased with increasing remoteness, from *Inner regional* to *Very remote* areas (Table 3.5). While *Major cities* rates were lower than those found in *Very remote* areas for all of these diseases, they were higher than regional and *Remote* rates for diseases such as hepatitis B.

The rate of new diagnoses of hepatitis C followed a reverse pattern to the other diseases and decreased with increasing remoteness, from *Inner regional* (74 per 100,000) to *Very remote* (63 per 100,000). However, the lowest rate of new diagnoses of hepatitis C was among males living in *Major cities*, with 59 new diagnoses per 100,000.

The greatest variation in new diagnoses by remoteness was for gonorrhoea. Males living in *Very remote* areas had 61 times the rate compared with males living in *Inner regional* areas.

Higher rates of new diagnoses of gonorrhoea and chlamydia in remote areas relative to *Major cities* and regional areas may be attributed to:

- more cases being detected through enhanced opportunistic and targeted screening, active contact tracing and community-wide screening programs
- higher underlying rates of infection in remote communities compared with *Major cities* and regional communities (Communicable Diseases Network Australia Jurisdictional Executive Group, 17 October 2011).

**Table 3.5: New diagnoses<sup>(a)</sup> of selected sexually transmitted diseases and blood-borne viruses among males, by remoteness area<sup>(b)</sup>, 2009**

Sexually transmitted disease/blood-borne virus	Age-standardised rate (new diagnoses per 100,000 males) <sup>(c)</sup>				
	<i>Major cities</i>	<i>Inner regional</i>	<i>Outer regional</i>	<i>Remote</i>	<i>Very remote</i>
Chlamydia	215.5	198.2	247.9	382.7	871.6
Gonorrhoea	41.6	14.2	41.3	232.0	874.2
Infectious syphilis	13.0	3.4	5.1	7.8	29.8
Hepatitis B	42.4	13.5	17.0	33.8	88.2
Hepatitis C	58.6	74.1	68.9	67.9	62.5

(a) New diagnoses of hepatitis B and hepatitis C include 'newly acquired' and 'greater than 2 years or unspecified period of infection'.

(b) Remoteness was classified according to the Australian Standard Geographical Classification Remoteness Areas.

(c) Directly age standardised to the June 2006 male population, using the 2009 Australian Standard Geographical Classification male population to calculate age-specific rates.

Source: National Notifiable Diseases Surveillance System.

## Health service use

The Australian health system provides a wide range of preventive, treatment and palliative health-care services (AIHW 2010b). Access to these services according to need is essential to prevent and manage disease and to maintain good health. In the context of geographical location, remoteness presents a barrier to accessing health services for Australian males (and females) (Box 3.3). Regional and remote areas have proportionally fewer doctors, nurses, specialists and allied health professionals per person than *Major cities*, and people living in those areas travel comparatively greater distances to access a general practitioner, health clinic or hospital facility.

### Box 3.3 HERB—Health Education Reaching Blokes

Health Education Reaching Blokes (HERB) is a mobile health service based in Longreach and operating throughout central west Queensland since April 2010. The HERB 4-wheel drive and camper trailer are equipped to travel throughout the region, bringing health care to people who may not have easy access to health services. HERB provides opportunistic health care to males wherever they are: working on remote pastoral stations, in transient road crews or attending community events such as local field days. The service aims to:

- improve access to health services for men in rural and remote locations
- strengthen relationships between the current health-care providers
- reconnect rural men with local health service providers
- improve knowledge and awareness of men's health issues
- decrease illness and the incidence of avoidable death of men in central west Queensland (NWQPHC 2011).

HERB offers individual health education and health screening on a range of conditions—diabetes, cholesterol, blood pressure, waist circumference, lung disease, sexual health, emotional wellbeing, bowel cancer, prostate cancer, testicular cancer, skin cancer, diet, smoking, alcohol use, drug use and exercise—and acts as a referral base to allied and primary health professionals (NWQPHC 2010).

In the first 12 months of operation, HERB screened 671 people, 30% of whom had not visited a general practitioner in the previous 12 months (Middleton 2011). Of those screened:

- 20% had at least 1 unsatisfactory screening result and were formally referred to other health services
- 50% were encouraged to make an appointment with their local general practitioner for further diagnostic testing.

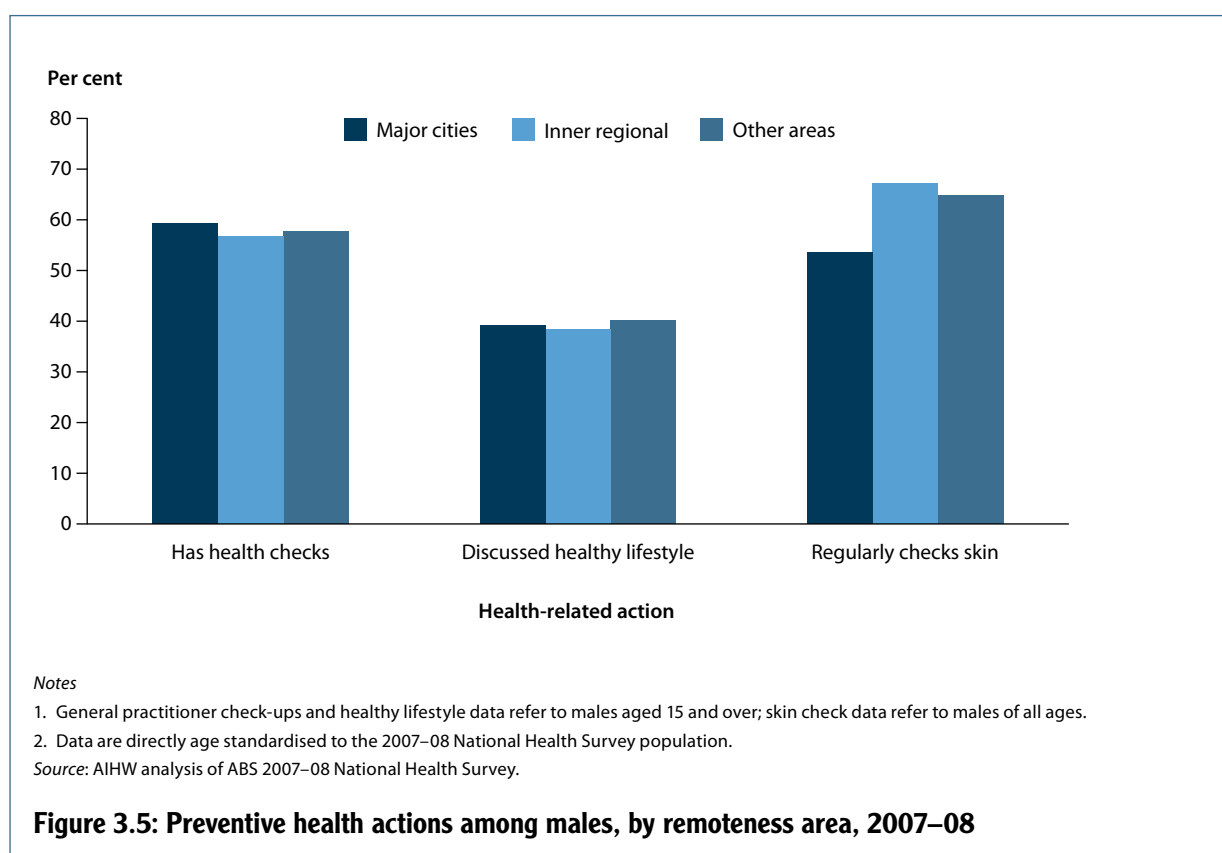
HERB also conducts health promotion activities to encourage local discussion and dispel myths and stigmas surrounding male health in regional and remote Queensland.

Further information is available from North and West Primary Health Care (Telephone 07 4652 7100).

## Preventive health

Preventive health encompasses actions to reduce or eliminate the onset, causes, complications or reoccurrence of ill health and injury. These actions include being up to date with immunisations to prevent communicable diseases, practising good workplace health and safety to minimise the risk of injury, discussing and practising ways to live a healthier lifestyle to prevent chronic disease and undergoing cancer screening and checks to identify early stages of cancer.

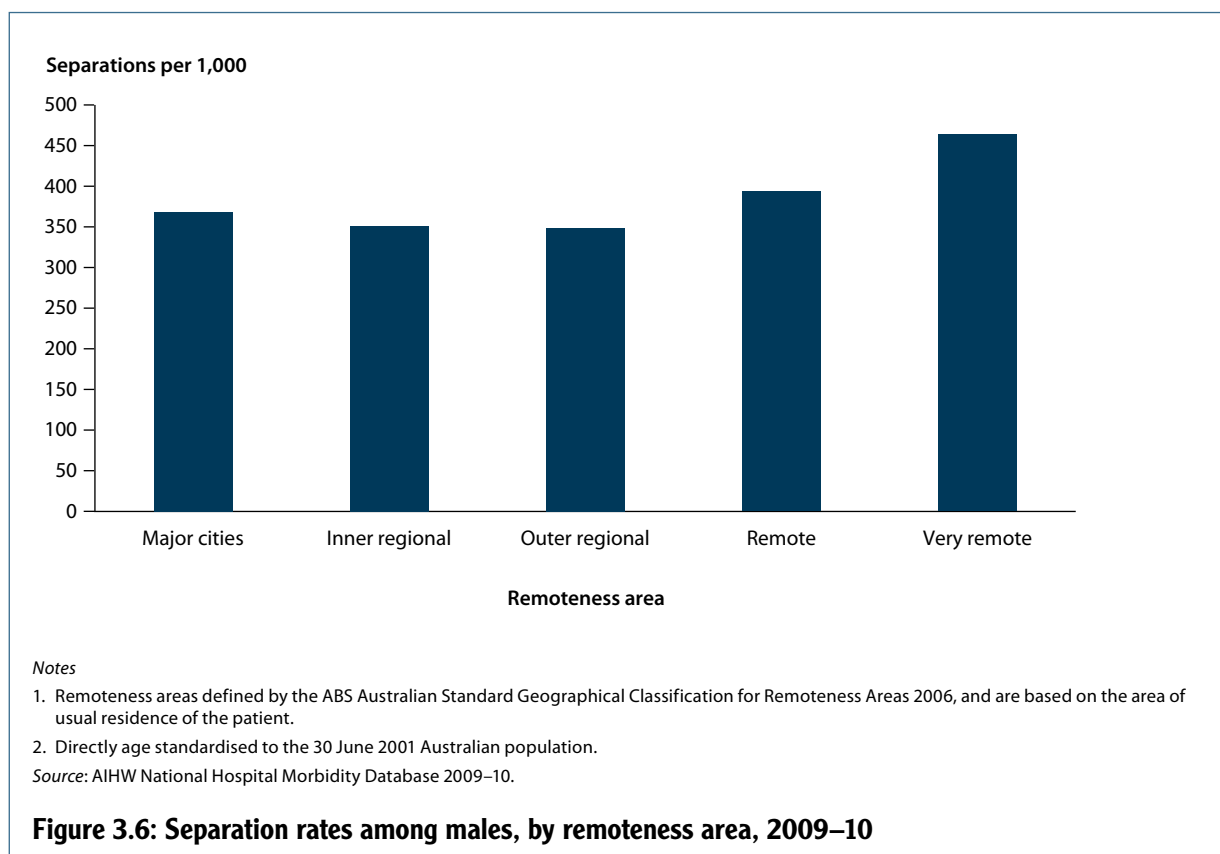
The 2007–08 National Health Survey asked respondents if they have had general practitioner check-ups, discussed a healthy lifestyle with a health professional in the last 12 months or regularly checked their skin for moles and freckles. Around 6 in 10 males aged 15 or over had been to their general practitioner for a health check and 4 in 10 had discussed healthy lifestyle with a health professional (Figure 3.5). There were no differences by remoteness area for these actions. In the same period, 54% of all males living in *Major cities* checked their skin for moles or freckles. This rate was significantly lower than among males living in *Inner regional* (67%) or *Other areas* (65%).



## Admitted patient care

In 2009–10, there were just over 4 million hospitalisations (separations) among Australian males, and the separation rate differed by remoteness area (Figure 3.6). Males living in *Outer regional* areas were least likely to be hospitalised, with a rate of 349 separations per 1,000 males. Males living in *Very remote* areas were most likely to be hospitalised, with a rate of 464 separations per 1,000 males.





## Principal diagnosis

In 2009–10, the main reason for hospitalisation (principal diagnosis) differed by remoteness area. The most common principal diagnosis, regardless of remoteness area, was care involving dialysis; it accounted for between 14% and 30% of hospitalisations (*Inner regional* and *Very remote* areas, respectively). When this diagnosis was excluded, the leading principal diagnosis was:

- care involving use of rehabilitation procedures, for males living in *Major cities* (12 per 1,000) or *Inner regional* areas (7 per 1,000)
- pain in throat and chest, for males living in *Outer regional* (4 per 1,000) or *Remote* (4 per 1,000) areas
- pneumonia (organism unspecified), for males living in *Very remote* areas (7 per 1,000) (Table 3.6).

When separation rates for selected principal diagnoses are compared across remoteness areas, there were differences in rates for the same condition.

The separation rate for pain in throat and chest and Type 2 diabetes mellitus increased as remoteness increased. Males living in *Very remote* areas were nearly twice as likely to be hospitalised for Type 2 diabetes mellitus than males living in *Major cities*.

The separation rate for care involving use of rehabilitation procedures, sleep disorders and other malignant neoplasms of skin increased as remoteness decreased. Males living in *Major cities* were more than 4 times as likely to be hospitalised for care involving use of rehabilitation procedures than males living in *Very remote* areas.

For other selected principal diagnoses—other cataract, abdominal and pelvic pain, inguinal hernia, angina pectoris and internal derangement of the knee—there was no clear association between remoteness area and separation rate.

**Table 3.6: The 10 most common reasons for hospitalisation<sup>(a)(b)</sup> among males, by remoteness area<sup>(c)</sup>, 2009–10**

Reason for hospitalisation <sup>(d)</sup>	Age-standardised rate (per 1,000) <sup>(e)</sup>				
	Major cities	Inner regional	Outer regional	Remote	Very remote
Care involving use of rehabilitation procedures	12.3	6.5	4.1	3.8	2.9
Pain in throat and chest	5.5	5.4	5.9	6.5	6.9
Other cataract	5.2	5.7	5.8	5.3	4.5
Other malignant neoplasms of skin	5.0	4.9	4.5	4.3	3.3
Sleep disorders	3.8	3.1	3.1	2.3	1.7
Abdominal and pelvic pain	3.8	3.7	3.8	4.0	3.9
Inguinal hernia	3.7	3.8	3.7	3.3	2.7
Angina pectoris	3.5	4.0	3.8	3.9	4.0
Internal derangement of knee	3.3	3.7	3.6	3.2	2.2
Type 2 diabetes mellitus	3.4	3.2	3.8	4.6	6.6
<b>Total</b>	<b>368.3</b>	<b>351.0</b>	<b>348.7</b>	<b>393.5</b>	<b>463.8</b>

(a) Separations for which the care type was reported as *Newborn with no qualified days* and records for *Hospital boarders and Posthumous organ procurement* have been excluded.

(b) Most common reason for hospitalisation excludes 'care involving dialysis', 'other medical care' and 'other'.

(c) Remoteness areas defined by the ABS Australian Standard Geographical Classification for Remoteness Areas 2006, and are based on the area of usual residence of the patient.

(d) Reasons for hospitalisation determined by the top 10 principal diagnoses for all males in 2009–10, and based on 3-character ICD-10-AM grouping.

(e) Directly age standardised to the 30 June 2001 Australian population. Standardised rate based on the total separations in each remoteness area.

Source: AIHW National Hospital Morbidity Database 2009–10.



## 4 SOCIOECONOMIC DISADVANTAGE

Socioeconomic disadvantage and health status are closely linked. Greater socioeconomic disadvantage is associated with higher levels of risk factors, poor health status, higher rates of preventable deaths and lower life expectancy (AIHW 2010b; DoHA 2010). Characteristics of socioeconomic disadvantage include:

- low income
- lower educational attainment
- unemployment
- unskilled employment.

Groups of males who are more likely to live in areas of greater socioeconomic disadvantage include Aboriginal and Torres Strait Islander males, males living in regional and remote areas, males from a non-English speaking background and older males.

While the poorer health outcomes of males from the most socioeconomically disadvantaged areas are often emphasised, the concept of disadvantage is relative and is incomplete without examining the health status of males in the least socioeconomically disadvantaged areas. Therefore, the data presented in this report include males living in all areas of Australia and identify those areas associated with greater risk of poor health, experience of poor health or underuse of health services. In some instances, it is males living in areas of moderate socioeconomic disadvantage that have the poorer health outcomes; in others, it is males living in areas of low socioeconomic disadvantage. The definition and use of socioeconomic disadvantage in this report is described in Box 4.1.

### Box 4.1: Defining socioeconomic disadvantage in this report

The socioeconomic status of males in this report is most commonly based on the ABS Index of Relative Socioeconomic Disadvantage. This classification is a composite measure of 17 different social and economic characteristics of households from the 2006 Census of Population and Housing and includes low income, lower educational attainment, unemployment, unskilled employment, Indigenous status and housing stress.

The Index scores for each census area are derived from these measures, and the areas are then ranked and divided into equal fifths (quintiles, 20% of the population) based on their score. The first quintile contains the areas with the lowest 20% of scores and is considered more disadvantaged than the fifth quintile, which contains the areas with the highest 20% of scores. It is important to remember that this measure is an average measure of the relative disadvantage of an *area*, and not of individuals. Therefore, in this report we refer to 'males living in the most socioeconomically disadvantaged areas' rather than 'the most socioeconomically disadvantaged males'.

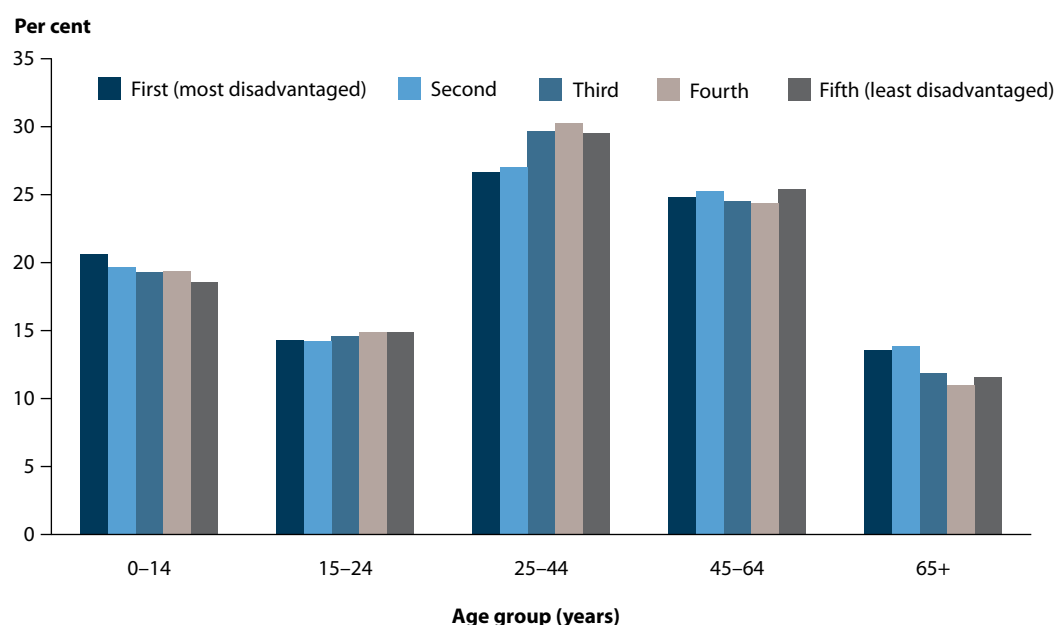
In some instances—for example, the experience of violence—the Index of Relative Socioeconomic Disadvantage was not available and so individual components such as educational attainment and employment were used as proxy measures of socioeconomic status.

## Demographic and socioeconomic characteristics

In 2010, there were approximately 2.2 million males living in each of the five quintiles of socioeconomic disadvantage. There was variation in the age distribution of males within each of these quintiles (Figure 4.1). Compared with other males:

- males living in the most disadvantaged areas (first and second quintiles) were more likely to be aged 65 or over, and less likely to be aged 25–44
- males living in less disadvantaged areas (third, fourth and fifth quintiles) were more likely to be aged 25–44, and less likely to be aged 65 and over
- males living in the first quintile areas were more likely—and males living in the fifth quintile areas were less likely—to be aged 0–14.

The proportion of males aged 15–24 and 45–64 was similar across the quintiles.



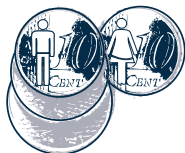
Source: AIHW analysis of ABS 2010 estimated resident populations.

**Figure 4.1: Age distribution of males, by quintile of socioeconomic disadvantage, 2010**

Socioeconomic disadvantage comprises a number of components, including educational attainment, income and employment. Some characteristics contributing to the socioeconomic status of Australia's males are described in Table 4.1. These are not presented by quintiles of socioeconomic disadvantage, as many of these characteristics are used to derive socioeconomic status (Box 4.1).

**Table 4.1: Selected socioeconomic characteristics of males**

In the 2006 census, 46% of males reported they had completed Year 12 or equivalent. More than half of all males aged 15 or over had a non-school qualification (ABS 2007a).



In 2006, 6% of males earned \$2,000 or more each week and 12% earned less than \$150 (including negative or no income) each week (ABS 2006a).



In 2010, over half of all males (55%) aged 15 and over were employed full time or part time; 3% were unemployed and looking for work and 42% were not in the labour force (ABS 2011d).



In 2006, there were about 58,000 homeless males, making up less than 1% of the total male population but accounting for 56% of all homeless people (ABS 2008a).

## Lifestyle factors

The lifestyles males (and females) lead can influence how healthy they are. The extent to which a person leads a risky lifestyle, in terms of risk factors for health, may be a personal choice, the result of an existing injury or healthy condition or the result of a broader social context. In the context of socioeconomic disadvantage:

- lower levels of education are associated with inadequate health literacy, which may affect an individual male's ability to read and understand dietary, exercise or alcohol consumption guidelines, or to seek help to quit smoking
- lower income level may prevent an individual from purchasing fresh fruit and vegetables, instead choosing cheaper pre-packaged foods with low fibre, high fat, high sugar and/or high salt content
- higher psychological distress, resulting from social isolation, financial pressures and unemployment, may be associated with risky alcohol consumption, smoking and poor nutrition (Shankar et al. 2011, Shelton et al. 2011, Shuaib et al. 2011).

This section looks at selected risk factors and other health determinants among males in the context of socioeconomic disadvantage.

## Selected lifestyle factors from the National Health Survey

In 2007–08, there were some significant differences in risk factors between males living in areas with differing levels of socioeconomic disadvantage:

- The prevalence of obese males increased with increasing disadvantage, and was nearly twice as high among males living in the first quintile areas (31%) than among males living in the fifth quintile areas (17%).
- In contrast, the prevalence of overweight (but not obese) males decreased with increasing disadvantage, and was highest among males living in the fourth and fifth quintile areas (39%) compared with males living in the first quintile areas (30%) (Table 4.2).

**Table 4.2: Selected risk factors among males aged 5 and over, by quintile of socioeconomic disadvantage, 2007–08**

Risk factor	First (most disadvantaged)	Second	Third	Fourth	Fifth (least disadvantaged)
Number <sup>(a)</sup>					
Overweight	361,300	471,900	564,100	554,600	653,000
Obese	362,300	314,600	312,500	282,100	297,600
Age-standardised rate (%) <sup>(b)</sup>					
Overweight	30.0	35.0	37.7	38.9	38.7
Obese	30.7	22.9	20.7	19.8	17.2

(a) Rounded to nearest 100.

(b) Directly age standardised to the 2007–08 National Health Survey male population.

Source: AIHW analysis of ABS 2007–08 National Health Survey.

## Tobacco, alcohol and other drugs

The NDSHS is a national survey providing cross-sectional data on smoking, alcohol consumption and other drug use in Australia.

In the 2010 NDSHS, the prevalence of smoking, alcohol consumption and drug use among males varied by quintile of socioeconomic disadvantage (Table 4.3).

The prevalence of smoking tobacco increased with increasing socioeconomic disadvantage, and was higher among males living in the most disadvantaged areas (26%) than among males living in the least disadvantaged areas (13%). Risky alcohol consumption and recent illicit drug use did not follow a clear socioeconomic gradient.

Compared with other males, males living in the most disadvantaged areas were most likely to be an abstainer/ex-drinker (23%) and to have never used illicit drugs (62%), but were least likely to have never smoked (49%).

**Table 4.3: Smoking, alcohol consumption and illicit drug use among males aged 14 and over, by quintile of socioeconomic disadvantage, 2010 (per cent)**

Status	First (most disadvantaged)	Second	Third	Fourth	Fifth (least disadvantaged)
<b>Smoking<sup>(a)</sup></b>					
Never smoked	48.6	52.7	53.3	56.6	63.1
Ex-smoker	25.5	25.6	28.0	24.9	24.0
Smoker	25.9	21.7	18.6	18.5	12.9
<b>Alcohol consumption<sup>(b)</sup></b>					
Abstainer/ex-drinker	23.2	20.0	16.9	18.3	16.1
Low risk	49.9	51.0	54.0	54.0	55.8
Risky	26.9	28.9	29.1	27.7	28.1
<b>Illicit drug use<sup>(c)</sup></b>					
Never	61.9	60.2	58.0	57.1	55.3
Ex-user	21.4	22.7	27.2	27.0	26.5
Recent user	16.7	17.1	14.7	15.9	18.2

(a) Smoking status is defined by tobacco smoking only. A male who has never smoked is defined as never having smoked 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco in their lifetime. An ex-smoker is defined as having smoked at least 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco in their lifetime, and reports no longer smoking. A smoker is defined as smoking tobacco daily, weekly or less than weekly.

(b) Alcohol consumption is presented as lifetime risky drinking behaviour and based on average daily alcohol consumption in the 12 months before the survey. An abstainer or ex-drinker did not consume alcohol. Low-risk alcohol consumption is defined as no more than 2 standard drinks per day. Risky alcohol consumption is defined as more than 2 standard drinks per day.

(c) Illicit drug use is based on use of illicit drugs and non-prescribed use of licit drugs, and includes pain-killers, tranquillisers, steroids, meth/amphetamine, marijuana/cannabis, heroin, methadone or buprenorphine, cocaine, hallucinogens, ecstasy, ketamine, GHB and inhalants. An ex-user is defined as having used illicit drugs in their lifetime, but reports no longer using illicit drugs. A recent user is defined as having used an illicit drug in the 12 months before the survey.

Source: AIHW analysis of the NDSHS 2010.

## Health literacy

Higher levels of health literacy increase an individual's ability to understand health information and to use this information to make decisions about personal health and medical care. The 2006 Adult Literacy and Life Skills Survey showed that males who were employed were nearly twice as likely as males who were unemployed to have an adequate level of health literacy (a score of 3 or more) (ABS 2008c).

## Sexual risk behaviours

Risky sexual behaviours include those that increase the likelihood of sexually transmissible infections and expose males (and females) to sexual violence. In 2001–02, the Australian Study of Health and Relationships showed that males with lower education, income and occupational category were more likely to participate in or experience risky sexual behaviour than males with higher education, income and occupational category.

Among males:

- multiple heterosexual partners and a history of injecting drugs (both risks factors for contracting sexually transmissible infections) were associated with lower education, lower household income and blue- or white-collar occupation (de Visser et al. 2003b; Grulich et al. 2003b)
- sexual coercion was associated with lower household income (de Visser et al. 2003a)
- higher scores for knowledge of sexually transmissible infections and blood-borne viruses were associated with higher education and higher occupation level (Grulich et al. 2003c)



- consistent condom use was more likely among managerial/professional occupations (de Visser et al. 2003c)
- HIV testing was associated with higher education and managerial/professional occupations (Grulich et al. 2003d).

## Violence

Exposure to violence, including harassment, physical threat and physical assault, may have physical or psychological health effects on those who experience violence and those who perpetrate it. The 2005 ABS Personal Safety Survey showed that there were differences in the proportion of males who experienced violence according to socioeconomic factors such as education and employment. In the 12 months before the survey:

- around 12% of males had experienced harassment and around 6% had experienced physical assault regardless of highest non-school qualification
- males with an 'other' qualification had experienced twice the rate of physical threat compared with males with a degree/diploma or higher qualification (13% compared with 7%, respectively)
- unemployed males experienced harassment at nearly 2.5 times the rate of employed males and more than 4 times the rate of males who were not in the labour force
- males who were employed were more than twice as likely to experience physical assault and 30 times as likely to experience physical threat compared with males not in the labour force (ABS 2006c).

## Health status

Health status broadly includes life expectancy and mortality, disease, disability, mental health and injury. These measures provide an indication of an individual's level of functioning, physical illness and mental wellbeing. This section provides an overview of selected measures of health status among males in the context of socioeconomic disadvantage.

### Life expectancy and healthy life expectancy

Life expectancy is a summary measure of health, and healthy life expectancy is an estimate of how long a person can expect to live without disability or illness. Longer life expectancy and healthy life expectancy are associated with better health and improved access to health care.

Life expectancy among Australian males born in 2003 decreased as the level of socioeconomic disadvantage of the area in which they lived increased (Begg et al. 2007). Males born in 2003 and living in high socioeconomic areas could expect to live to 80.9 years of age (Table 4.4). This was nearly 2 years longer than males living in moderately high socioeconomic areas and more up to 4 years longer than males living in lower socioeconomic areas.

The relationship between healthy life expectancy and socioeconomic status is the same as for life expectancy and socioeconomic status; that is, it decreases as the level of socioeconomic disadvantage of the area increases (Table 4.4). Males born in 2003 and living in high socioeconomic areas could expect to live 73.8 years without a disability—more than 2 years longer than males living in moderately high socioeconomic areas, around 4 years longer than males living in average and moderately low socioeconomic areas and more than 5 years longer than males living in low socioeconomic areas. The difference in healthy life expectancy by socioeconomic disadvantage was narrower among males aged 60. There was a nearly 2-year difference in healthy life expectancy between 60-year-old males living in high and moderately high socioeconomic areas, and around 3 years difference between 60-year-old males living in high socioeconomic areas and those living in average, moderately low and low socioeconomic areas.

**Table 4.4: Life expectancy and healthy life expectancy of males, by socioeconomic disadvantage, 2003**

Quintile	Life expectancy at birth	Healthy life expectancy (years)	
		At birth	At 60 years
Low (1)	76.9	68.7	16.1
Moderately low (2)	77.4	69.5	16.4
Average (3)	77.7	69.9	16.6
Moderately high (4)	79.0	71.4	17.6
High (5)	80.9	73.8	19.2

Source: Begg et al. 2007.

## Mortality

In 2007, there were more than 70,000 deaths among Australian males. The death rate from all causes of death increased with increasing socioeconomic disadvantage: males living in the most socioeconomically disadvantaged areas were more likely to die from all causes than those living in the least socioeconomically disadvantaged areas, with mortality rates of 814 per 100,000 and 588 per 100,000, respectively.

In 2007, the leading cause of death for all Australian males was coronary heart diseases followed by lung cancer and cerebrovascular diseases (Table 4.5). There was a strong association between socioeconomic disadvantage and leading cause of mortality: mortality rates for coronary heart diseases, lung cancer, chronic obstructive pulmonary disease, unknown primary site cancers, diabetes mellitus and suicide increased as socioeconomic disadvantage increased.

**Table 4.5: Selected<sup>(a)</sup> leading causes of death among males, by quintile of socioeconomic disadvantage, 2007**

Cause of death	Age-standardised rate (deaths per 100,000 males) <sup>(b)(c)</sup>				
	First (most disadvantaged)	Second	Third	Fourth	Fifth (least disadvantaged)
Coronary heart diseases	143.5	131.6	127.8	118.5	101.2
Lung cancer	54.2	51.1	47.3	42.8	32.4
Cerebrovascular diseases	51.2	51.2	45.6	47.9	44.1
Prostate cancer	30.5	32.2	31.2	32.9	27.6
Chronic obstructive pulmonary disease	38.5	34.6	31.4	27.4	20.9
Colorectal cancer	22.1	22.4	23.5	21.9	19.5
Dementia and Alzheimer disease	25.1	27.3	26.4	30.4	25.0
Unknown primary site cancers	20.6	19.6	18.9	16.7	15.2
Diabetes	25.6	22.8	18.8	17.5	12.1
Suicide	17.6	15.4	14.7	12.5	9.6
<b>Total</b>	<b>814.0</b>	<b>763.1</b>	<b>722.5</b>	<b>694.5</b>	<b>587.9</b>

(a) Selected causes include the top 10 leading causes of death for all males, and are grouped according to AIHW leading cause of death codes. AIHW tabulations of leading causes of death are based on the classification proposed by Becker et al. 2006, and modified so that cause groups are relevant to Australia.

(b) For each cause of death, all differences by socioeconomic quintile of disadvantage are statistically significant at the 95% confidence level.

(c) Directly age standardised to the 30 June 2001 Australian population.

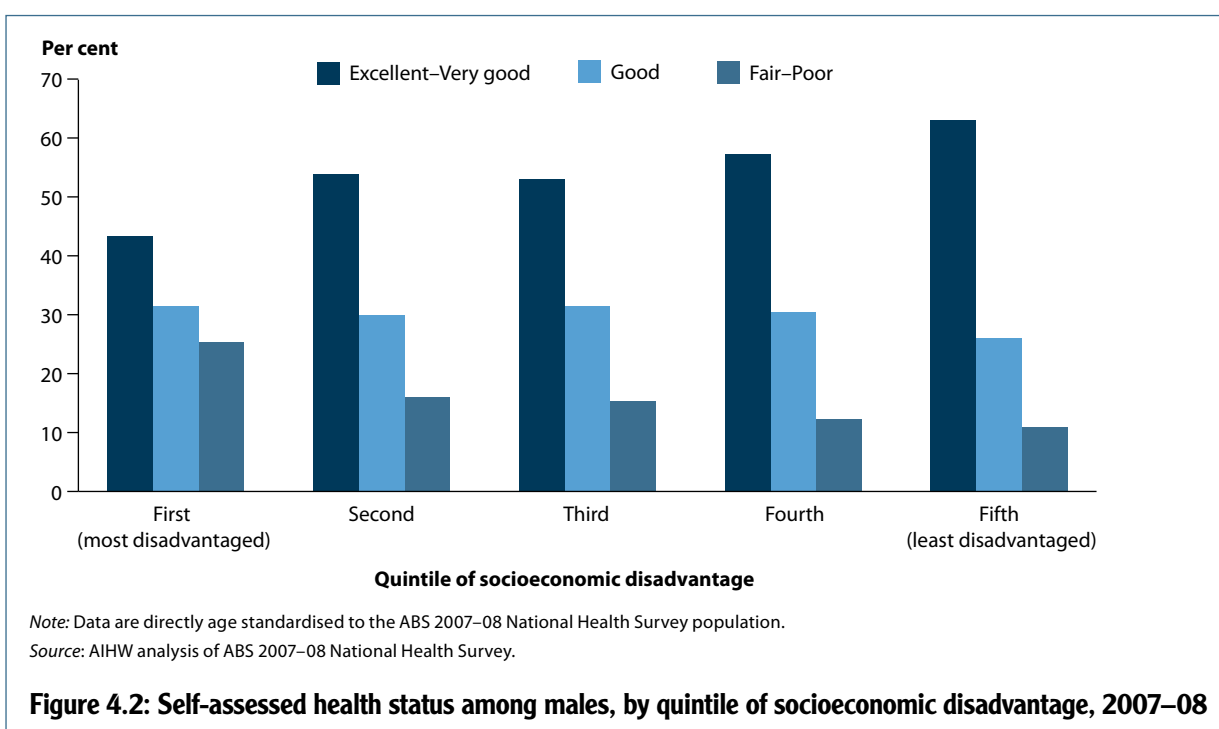
Source: AIHW National Mortality Database.

## Self-assessed health status

How an individual rates their own health can be a reliable indicator of health status and combines the effects of physical, social, emotional and mental health and wellbeing (McCallum et al. 1994).

In 2007–08, around 3 in 10 males reported that they had ‘good’ health, regardless of the level of socioeconomic disadvantage (Figure 4.2). There were significant differences by quintile of socioeconomic disadvantage in the prevalence of ‘excellent–very good’ and ‘fair–poor’ health:

- males living in the most disadvantaged areas (first quintile) were more likely to rate their health as fair or poor and less likely to rate their health as excellent or very good, than other males
- males living in the least disadvantaged areas (fifth quintile) were more likely to rate their health as excellent or very good, than males living in less disadvantaged areas (first, second and third quintiles).



## Cancer

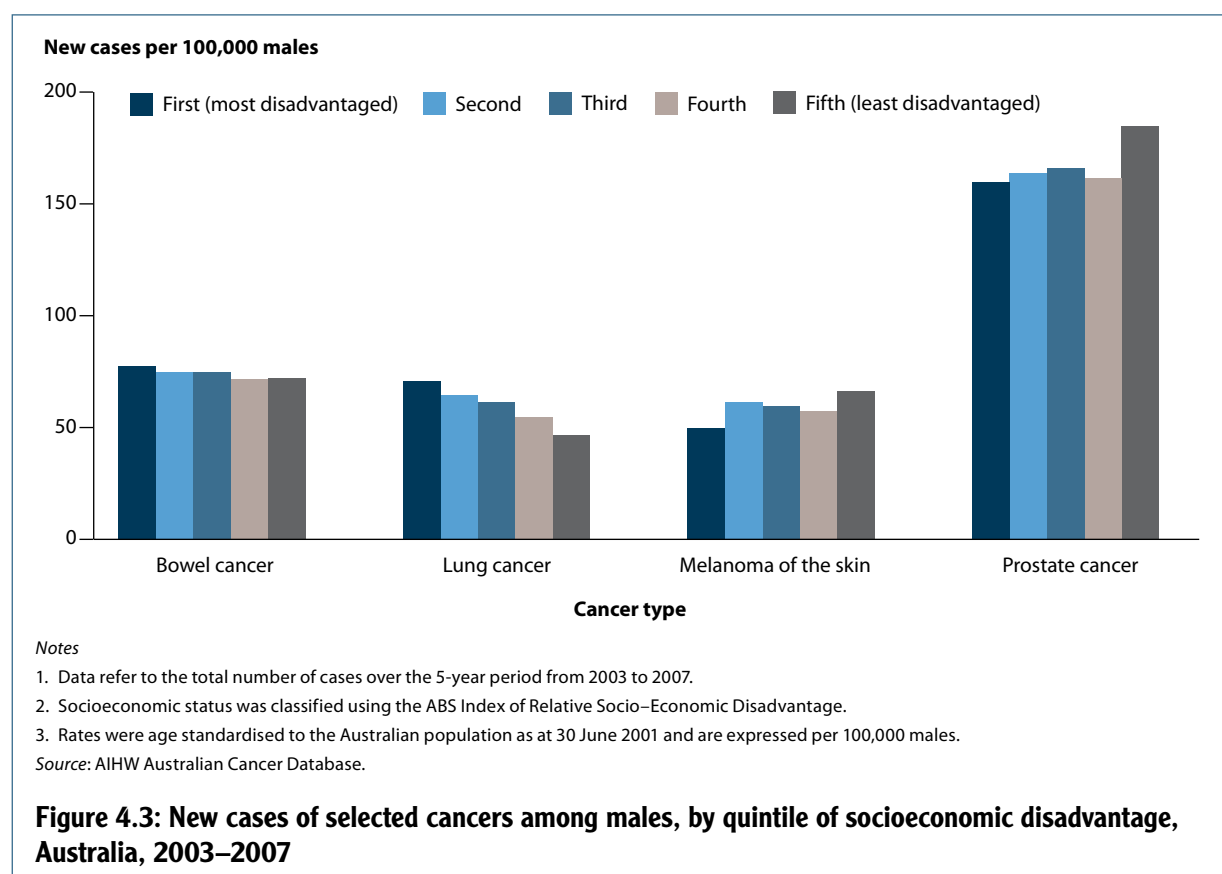
This section presents data by socioeconomic quintile on new cases of all cancers, and more detailed data on the leading male-specific cancer—prostate cancer—and three other important cancers for males—lung cancer, bowel cancer and melanoma of the skin.

In 2003–2007, more than 287,000 new cases of cancer were diagnosed among Australian males. Males living in the fourth quintile areas had the lowest rate of cancer incidence (557 new cases per 100,000 males) although there were no significant differences in the rates of cancer incidence among males in the first, second, third and fifth quintiles.

During 2003–2007, there was a clear association between increasing incidence of lung cancer and increasing socioeconomic disadvantage: males in the worst-off areas had the highest incidence of lung cancer, 1.5 times the rate among males living in the best-off areas (Figure 4.3).

For other cancers, there was a less distinct relationship between socioeconomic disadvantage and cancer incidence; however, the difference between the first and fifth quintiles was significant in all cases:

- males in the worst-off areas had 1.1 times the rate of bowel cancer compared with males in the best-off areas
- males in the best-off areas had 1.3 times the rate of melanoma of the skin and 1.2 times the rate of prostate cancer compared with males in the worst-off areas (Figure 4.3).

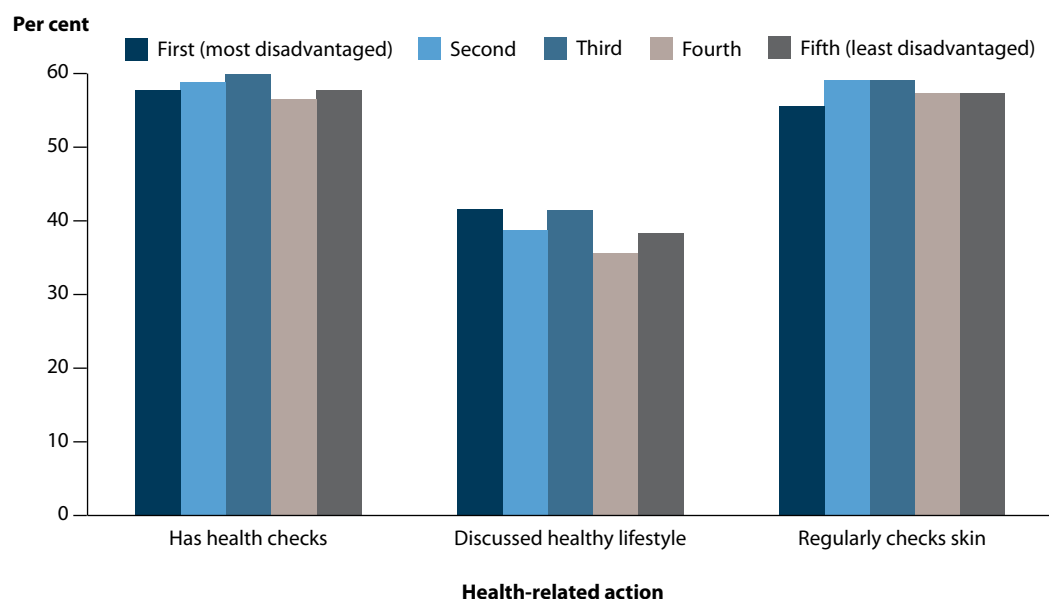


## Health service use

Access to health services is essential to prevent and manage disease and to maintain good health. This section presents a snapshot of preventive health and admitted patient care (hospitalisations) among males by socioeconomic disadvantage. These data provide insights into inequalities in access to and use of health services among males living in highly disadvantaged or less disadvantaged areas.

### Preventive health

The 2007–08 National Health Survey asked respondents if they have general practitioner check-ups, discussed healthy lifestyle with a health professional in the last 12 months and regularly checked their skin for moles and freckles. Around 6 in 10 males (aged 15 or over) had been to their general practitioner for a health check and 4 in 10 had discussed healthy lifestyle with a health professional. Around 6 in 10 males (all ages) had their skin checked for cancers (Figure 4.4). There were no differences in these actions by level of socioeconomic disadvantage.



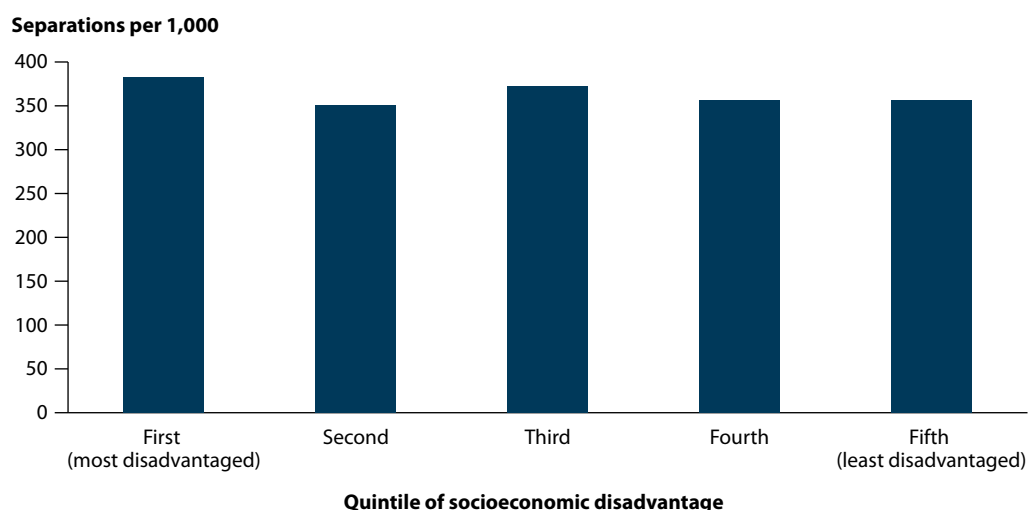
**Notes**

1. Data with missing values excluded from the analysis.
  2. General practitioner check-ups and healthy lifestyle data refer to males aged 15 and over; skin check data refer to males of all ages.
  3. Data are directly age standardised to the 2007–08 National Health Survey population.
- Source: AIHW analysis of ABS 2007–08 National Health Survey.

**Figure 4.4: Preventive health actions among males, by quintile of socioeconomic disadvantage, 2007–08**

## Admitted patient care

In 2009–10, there were just over 4 million hospitalisations (separations) among Australian males, and the separation rate differed by socioeconomic quintile. Males in the most disadvantaged (first) quintile were most likely to be hospitalised (382 separations per 1,000 males) and males in the second quintile were least likely to be hospitalised (351 separations per 1,000 males) (Figure 4.5).



**Notes**

1. Socioeconomic status is based on the ABS Index of Relative Socio-Economic Disadvantage, and calculated using the area of usual residence of the patient.
  2. Directly age standardised to the 30 June 2001 Australian population.
- Source: AIHW National Hospital Morbidity Database 2009–10.

**Figure 4.5: Separation rates among males, by quintile of socioeconomic disadvantage, 2009–10**

## Principal diagnosis

In 2009–10, the main reason for hospitalisation (principal diagnosis), regardless of socioeconomic disadvantage, was care involving dialysis, which accounted for 14% of hospitalisations among males in the least disadvantaged areas and 20% among males in the most disadvantaged areas. When this diagnosis was excluded, the leading principal diagnosis was care involving the use of rehabilitation procedures for all quintiles of socioeconomic disadvantage, and was twice as high among males living in the least disadvantaged areas (16 per 1,000) as for males living in the most disadvantaged areas (8 per 1,000).

When separation rates for selected principal diagnoses are compared across the spectrum of socioeconomic disadvantage, there were differences in rates for the same condition (Table 4.6).

The separation rate for pain in throat and chest, angina pectoris and Type 2 diabetes mellitus increased as socioeconomic disadvantage increased. Males in the most disadvantaged areas were 1.5 times as likely to be hospitalised for Type 2 diabetes mellitus as males living in the least disadvantaged areas.

The separation rate for other malignant neoplasms of skin, sleep disorders and internal derangement of the knee increased as socioeconomic disadvantage decreased. Males living in the least disadvantaged areas were more than 1.5 times as likely to be hospitalised for sleep disorders as males living in the most disadvantaged areas.

There was no clear association between socioeconomic disadvantage and separation rates for other cataract, abdominal and pelvic pain or inguinal hernia.

**Table 4.6: The 10 most common reasons for hospitalisation<sup>(a)(b)</sup> among males, by quintile of socioeconomic disadvantage<sup>(c)</sup>, 2009–10**

Reason for hospitalisation <sup>(d)</sup>	Age-standardised rate (per 1,000) <sup>(e)</sup>				
	First (most disadvantaged)	Second	Third	Fourth	Fifth (least disadvantaged)
Care involving use of rehabilitation procedures	7.7	7.6	9.8	9.9	15.5
Pain in throat and chest	6.5	5.7	5.6	5.5	4.3
Other cataract	5.2	5.5	5.7	5.2	5.4
Other malignant neoplasms of skin	4.3	4.2	4.9	5.3	6.1
Sleep disorders	3.1	3.0	3.4	3.8	4.8
Abdominal and pelvic pain	4.1	3.6	3.9	3.8	3.5
Inguinal hernia	3.7	3.5	3.8	3.8	3.8
Angina pectoris	4.1	4.0	3.8	3.4	3.0
Internal derangement of knee	3.0	3.1	3.5	3.5	3.9
Type 2 diabetes mellitus	4.2	3.4	3.7	3.0	2.8
<b>Total</b>	<b>382.4</b>	<b>351.0</b>	<b>371.8</b>	<b>356.0</b>	<b>356.5</b>

(a) Separations for which the care type was reported as *Newborn with no qualified days* and records for *Hospital boarders and Posthumous organ procurement* have been excluded.

(b) Most common principal diagnosis excludes 'care involving dialysis', 'other medical care' and 'other'.

(c) Socioeconomic status is based on the ABS Index of Relative Socio-Economic Disadvantage, and calculated using the area of usual residence of the patient.

(d) Reasons for hospitalisation determined by the top 10 principal diagnoses for all males in 2009–10 and based on 3-character ICD-10-AM grouping.

(e) Directly age standardised to the 30 June 2001 Australian population. Standardised rate based on the total separations in each quintile of socioeconomic disadvantage.

Source: AIHW National Hospital Morbidity Database 2009–10.



## 5 MALES BORN OVERSEAS

Australia is a diverse nation made up of people from a variety of cultural, ethnic, linguistic and religious backgrounds. Throughout Australia's long history of immigration, the size and composition of the overseas-born population have dramatically changed. Migrants now come from over 200 different countries, although people born in the United Kingdom continue to be the largest group of residents born overseas (AIHW 2010b).

Males born overseas bring a unique health profile and set of challenges to Australia and its health system. This chapter examines the health of males born overseas and, where possible, presents analyses by country grouping. Distinguishing males born in different countries and regions is particularly important given the size and diversity of this population group (Box 5.1).

The data analyses presented in this chapter, particularly the section on health status, are less comprehensive than for other chapters. This is due to limitations on the availability and quality of data for this population group. Some data sets do not include cultural or linguistic characteristics, such as country of birth, language spoken at home or year of arrival in Australia; in others, the data associated with these characteristics are incomplete.

### Box 5.1: Measuring cultural and linguistic diversity

There are many ways to think about a person's background—for example, where they were born, their religion or the language they usually speak at home. In this report, country of birth is used to distinguish between people of different cultural backgrounds as this measure is frequently found in administrative and survey data collections. Other measures such as language spoken at home are used where country of birth is not available and provide valuable insights into the association between cultural and linguistic diversity and health.

The term 'overseas-born' may gloss over differences between people from different countries. However, small sample sizes for some countries mean that a full breakdown of countries is not always possible. As such, groupings used in this report will depend on the data collection. Examples of different country of birth groupings include:

- Australia/overseas
- Australia/other mainly English-speaking countries/other countries
- Australia/southern and eastern Europe/South-East Asia/other broad regions.

Country of birth does not cover all aspects of cultural and linguistic diversity. Some Australian-born people with overseas-born parents may have lifestyles that reflect overseas-born cultural backgrounds. Similarly, the health of a person born overseas to Australian parents living abroad may not reflect their recorded country of birth.



## Healthy migrant effect

Although migrants come from diverse regions of the world, research has found that most migrants enjoy health that is as good as, if not better than, that of the Australian-born population. This better health is reflected in longer life expectancy, lower death and hospitalisation rates, and a lower prevalence of some lifestyle-related risk factors (AIHW: Singh M & de Looper M 2002). The health advantage of migrants has been shown to diminish over time as their stay in Australia increases (Anikeeva et al. 2010; Young 1992).

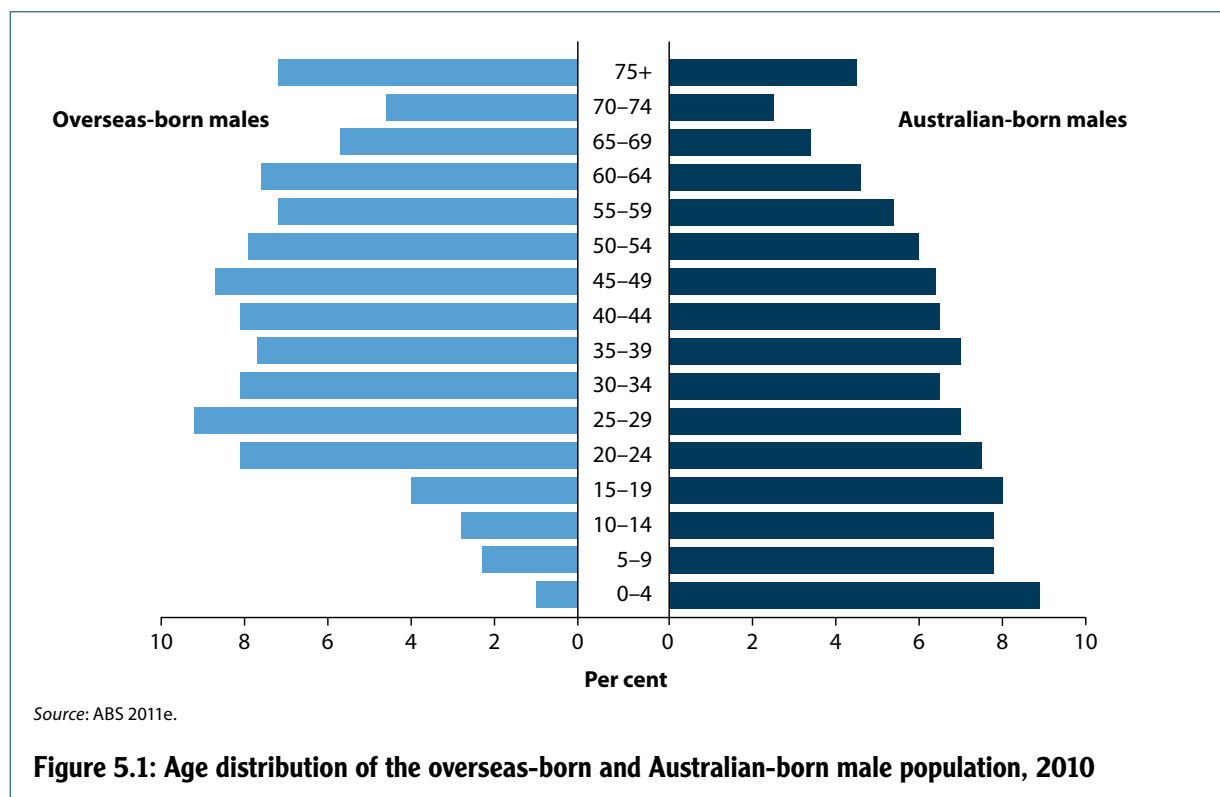
This phenomenon is known as the 'healthy migrant effect'. Health requirements and eligibility criteria ensure that generally only those in good health migrate to Australia. They may also be less exposed to risk factors for cardiovascular and other non-communicable diseases before their relocation (Razum 2006). This is not the case for all migrants—vulnerable new arrivals such as refugees are hidden within these trends due to small sample sizes and difficulty in collecting adequate data about their health status (AIHW 2010b).

## Demographic and socioeconomic characteristics

In June 2010, there were 3 million males born overseas in the Australian population, 27% of all males (ABS 2011e).

The age distribution of males who were born overseas was slightly older than that of their Australian-born counterparts (Figure 5.1). Seventeen per cent (17%) of males born overseas were aged 65 and over compared with 11% of Australian-born males. In contrast, there were proportionally fewer boys aged 0–14 years—6% of overseas-born males compared with 24% of Australian-born males. This is because most people migrate as adults, particularly in the working ages, and children born in Australia to migrants are classified as Australian born.

Other demographic and socioeconomic characteristics of overseas-born males are presented in Table 5.1.



**Table 5.1: Demographic and socioeconomic characteristics of males born overseas**

As at 30 June 2010, there were 3 million males born overseas currently living in Australia (26.8% of the total male population) (ABS 2011e).



Migrants in Australia come from over 200 different countries. The United Kingdom is the largest contributor followed by New Zealand, China, India and Italy (ABS 2011e).



The sex ratio (males per 100 females) was similar for the overseas-born population (98.8) and Australian-born population (99.3). The highest was for the population born in Nepal (171) and lowest for the Philippines (59) (ABS 2011e).



The median age of males born overseas in 2010 was 44.3, compared with 32.4 for males born in Australia (ABS 2011e).



In 2010, 76% of all overseas-born males were of working age (15–64 years). The overseas-born population from Asia, America and Africa had proportionally larger young (0–14 years) and working age (15–64 years) populations compared with those from Europe (ABS 2011e).



In 2009–10, 7,962 humanitarian visas were granted to males, comprising 57% of all humanitarian visas granted that year (DIAC 2011).



In November 2010, the labour force participation rate was 70% for overseas-born males (aged 15 and over) compared with 75% for Australian-born males of the same age. Rates were higher for overseas-born males who were Australian citizens or permanent residents (with the exception of those on humanitarian visas) (ABS 2011a).

## Lifestyle factors

Migration may lead individuals to live in a physical and social environment that is different from the environment from which they have come. This makes examining lifestyle factors particularly important to understanding the level of risk for chronic disease, injury, and other measures of poor health within this population. Some migrants retain the customs and habits of their native home, and these variably fall below, align with or exceed healthy living guidelines for Australia. Others may see their customs and habits converge to the host population and may adopt some or all of the customs and habits of Australian society or see Australian society adopt aspects of their culture. Immigration has strongly influenced Australia's eating patterns, for example, with the introduction of new foods and styles of cooking driven by migrants from across Asia, the Middle East, Europe and Africa (Australian Government 2008).

### Selected lifestyle factors from the National Health Survey

The ABS National Health Survey 2007–08 collected information on country of birth and other demographics in addition to health-related behaviours. This section examines several health risk factors from the National Health Survey—inadequate fruit and vegetable intake, inadequate physical activity and excess body weight.

The prevalence of health risk factors varies by broad country of birth (Table 5.2).

Compared with males born in Australia, males born overseas in mainly English-speaking countries:

- were significantly more likely to undertake adequate physical activity
- had similar levels of fruit and vegetable intake, and overweight and obesity.

Compared with males born in Australia, males who were born overseas in other (non-English-speaking) countries were significantly:

- more likely to eat adequate fruit
- less likely to eat adequate vegetables
- less likely to be overweight or obese.

**Table 5.2: Selected health risk factors among males aged 15 and over, by country of birth group, 2007–08 (per cent)**

Selected risk factor	Australia	Mainly English-speaking countries	Other countries
Inadequate fruit intake	56.2	55.7	*41.6
Inadequate vegetable intake	91.6	91.1	*96.2
Inadequate physical activity <sup>(a)</sup>	57.7	*48.3	59.4
Overweight/obese <sup>(b)</sup>	70.0	69.6	*57.5

\* Significantly different from Australian-born males ( $p < 0.05$ ).

(a) Data refer to males who were not sufficiently active to confer a health benefit. Adequate physical activity is interpreted here as 30 minutes of moderate or vigorous physical activity on at least 5 days of the week—a total of 150 minutes per week.

(b) Body mass index cut off-points for being overweight and obese may not be appropriate for all ethnic groups due to differences in body type, size and composition.

Note: Data are age standardised to the 2001 Australian population.

Source: AIHW analysis of the ABS National Health Survey 2007–08.

## Tobacco, alcohol and other drugs

The NDSHS is a national survey providing cross-sectional data on smoking, alcohol consumption and other drug use in Australia.

In the 2010 NDSHS, the prevalence of smoking, alcohol consumption and drug use varied by broad country of birth (Table 5.3). Compared with males born in Australia, other males were:

- less likely to be a smoker, to drink at risky levels, or to be a recent or ex-user of illicit drugs
- more likely to have never smoked, to be an abstainer or ex-drinker, or to have never used illicit drugs.

**Table 5.3: Smoking, alcohol consumption and other drug use among males aged 14 and over, by broad country of birth group, 2010 (per cent)**

Status	Other males	Males born in Australia
Smoking status <sup>(a)</sup>		
Never smoked	55.8	54.7
Ex-smoker	26.1	26.0
Smoker	18.1	19.2
Alcohol lifetime risk <sup>(b)</sup>		
Abstainer/ex-drinker	25.1	15.9
Low risk	55.1	52.6
Risky	19.8	31.5
Recent use of illicit drugs <sup>(c)</sup>		
Never	66.6	55.3
Ex-user	22.8	26.3
Recent user	10.6	18.4

(a) Smoking status is defined by tobacco smoking only. A male who has never smoked is defined as never having smoked 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco in their lifetime. An ex-smoker is defined as having smoked at least 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco in their lifetime, and reports no longer smoking. A smoker is defined as smoking tobacco daily, weekly or less than weekly.

(b) Alcohol consumption is presented as lifetime risky drinking behaviour and based on average daily alcohol consumption in the 12 months before the survey. An abstainer or ex-drinker did not consume alcohol. Low-risk alcohol consumption is defined as no more than 2 standard drinks per day. Risky alcohol consumption is defined as more than 2 standard drinks per day.

(c) Illicit drug use is based on use of illicit drugs and non-prescribed use of licit drugs and includes pain-killers, tranquillisers, steroids, meth/amphetamine, marijuana/cannabis, heroin, methadone or buprenorphine, cocaine, hallucinogens, ecstasy, ketamine, GHB and inhalants. An ex-user is defined as having used illicit drugs in their lifetime, but reports no longer using illicit drugs. A recent user is defined as having used an illicit drug in the 12 months before the survey.

Source: AIHW analysis of the NDSHS 2010.

## Participation in sport and physical recreation

Sport and other forms of physical activity can improve male (and female) psychological wellbeing and may foster social networks that provide support and opportunities for development (Box 5.2). Regular sufficient physical activity is also associated with a healthy body weight and a reduced risk of many chronic conditions and injuries (AIHW 2010b).

Estimates from the ABS Multi-Purpose Household Survey 2009–10 show participation in sport or physical recreation in the previous 12 months (ABS 2010d). Males born in Australia (67%) or overseas in a mainly English-speaking country (67%) were more likely to participate in any sport and physical recreation than males born overseas in a non-English speaking country (54%).

### Box 5.2: Football United (University of New South Wales)

Football United is a not-for-profit organisation that assists recently arrived refugee children, youth and their families in their transition into Australian society (Football United UNSW 2009). As a popular and well known sport, football is used to foster social cohesion and improve the skills of people living in disadvantaged parts of south-western Sydney and other areas. Focusing on communities with high proportions of refugees and disadvantaged groups (such as Indigenous youth), the organisation:

- delivers weekly football activities, holiday camps and Futsal competitions for children, which include coaching and playing activities for participants
- trains refugee youth and adults as volunteer coaches and referees, enhancing their leadership, personal development and role model capabilities
- builds partnerships with local schools, intensive English centres, migrant resource centres, football clubs, councils, businesses and community groups.

Football United, as part of the University of New South Wales, secured a grant in 2009 to conduct a world-first longitudinal study on the impact of football and sport on social inclusion and community participation among refugee populations in urban areas.

Visit: <[www.footballunited.org.au](http://www.footballunited.org.au)>

## Violence

Experience of crime among overseas-born males in Australia can be difficult to collect and analyse (ABS 2008e). Many ethnic groups comprise a small proportion of the total Australian population and, similar to other population groups, reluctance to provide information may lead to under-reporting.

The proportion of the population who have experienced different types of violence is higher among Australian-born males than overseas-born males (Table 5.4). While caution is required due to small sample sizes, it is estimated that 7% of Australian-born males, 4% of males born in mainly English-speaking countries and 3% of males born in other countries had experienced physical assault in the previous 12 months. The numbers were higher for harassment, which includes obscene phone calls, indecent exposure, inappropriate comments about a person's body or sex life or unwanted sexual touching. Overall, 12% of Australian-born males, 8% of males born in mainly English-speaking countries and 11% of males born in other countries had experienced harassment, as defined by these terms, in the previous 12 months.

**Table 5.4: Experience of violence during the last 12 months among males aged 15 and over, by country of birth of victim, 2005 (per cent)**

Type of violence	Country of birth of victim		
	Australia	Mainly English-speaking countries	Other countries
Physical assault	7.5	*4.4	3.4
Physical threat	6.0	*4.1	*2.6
Harassment	12.1	8.2	11.4
Stalking	1.4	*1.9	*1.5

\* Estimate should be used with caution (25–50% relative standard error).

Source: ABS 2006c.

## Sexual risk behaviours

The Australian Study of Health and Relationships—a national study of people aged 16–59—collected data on language spoken at home, rather than on country of birth. The study found that for males, a non-English-speaking background was associated with:

- lower levels of knowledge about sexually transmissible diseases and blood-borne viruses (Grulich et al. 2003c)
- more conservative attitudes towards sex (Rissel et al. 2003a)
- lower likelihood of having had a homosexual experience (Grulich et al. 2003a)
- higher levels of condom use for heterosexual activity in the past year (de Visser et al. 2003a).

## Health status

The health status of overseas-born males can be shaped by where they have migrated from and the amount of time spent in Australia. It is important to consider that the overseas-born population is strongly influenced by the eligibility criteria for migration. This selection mechanism ensures that generally only those in good health can migrate.

## Mortality

Australia's overseas-born male population accounted for 32% of male deaths registered in the period 2005–2007 (65,500 deaths), despite making up around one-quarter of the resident population. This reflects the older age structure of the overseas-born population compared with the Australian-born population (ABS 2010a). When this older age structure is taken into account, most groups of overseas-born males have lower death rates than the Australian-born population (Table 5.5).

In the 3-year period 2005–2007, the all-cause death rate for males born overseas was 11% lower than for males born in Australia (Table 5.5). However, it was not the same for all migrant groups. Compared with Australian-born males, this rate was:

- 41 and 43% lower for males born in China and Vietnam, respectively
- 38% lower for males born in India
- 21% higher for males born in Poland.

For most of the selected causes of death, the death rates for overseas-born males were significantly lower than for Australian-born males. Some notable exceptions were:

- lung cancer deaths among males born in Germany, Malta, the Netherlands, Poland, and the United Kingdom and Ireland
- diabetes deaths among males born in Hungary, India, Italy, Malta and Poland
- coronary heart diseases deaths among males born in Hungary and Poland.

**Table 5.5: Standardised mortality ratios<sup>(a)</sup> for males, by selected cause of death and country of birth, 2005–2007**

Country of birth	Colorectal cancer	Lung cancer	Prostate cancer	Diabetes	Coronary heart diseases	Influenza and pneumonia	All causes of death
China	*0.75	0.88	*0.33	*0.56	*0.41	*0.50	*0.59
Croatia	1.10	1.00	*0.63	1.25	*0.76	*0.56	*0.82
Egypt	*0.60	0.90	*0.67	1.40	1.15	0.84	*0.90
Germany	*0.75	*1.15	*0.73	1.13	0.94	*0.49	*0.89
Greece	*0.70	*0.86	*0.37	0.89	*0.62	*0.50	*0.65
Hungary	0.96	*0.74	1.09	*1.48	*1.24	0.96	1.05
India	*0.43	*0.61	*0.36	*1.52	0.89	*0.50	*0.62
Italy	0.95	1.05	*0.55	*1.34	*0.74	*0.67	*0.81
Malta	0.84	*1.39	*0.61	*2.07	0.98	0.91	*0.87
Netherlands	0.90	*1.26	*0.75	*0.76	*0.86	1.03	*0.88
New Zealand	*0.82	*0.85	1.01	0.81	0.98	0.80	*0.92
Poland	1.18	*1.27	*0.81	*1.85	*1.42	*1.36	*1.21
United Kingdom and Ireland	*0.85	*1.16	*0.86	*0.87	*0.96	1.07	*0.98
Vietnam	*0.46	*0.77	*0.33	0.69	*0.30	*0.10	*0.57
All overseas	*0.86	*1.05	*0.72	*1.10	*0.91	*0.85	*0.89

\* Statistically significant difference from Australian-born male population.

(a) Indirectly age standardised to the 2005–2007 Australian-born male population and presented as standardised mortality ratios. The standardised mortality ratio is a measure of death from a specific condition in the overseas-born male population relative to the Australian-born male population. If the ratio is 1.00 this means overseas-born males would have the same mortality rate as Australian-born males. Ratios greater than 1.00 indicate a greater mortality rate in the overseas-born male population, and those below 1.00 indicate a lower mortality rate.

Source: AIHW National Mortality Database.



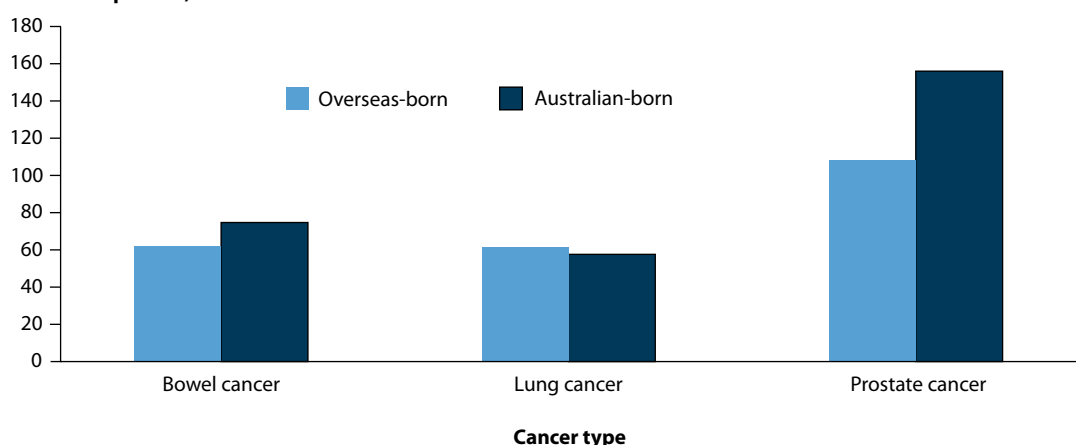
## Cancer

In the period 2003–2007, there were around 76,500 new cases of cancer diagnosed in overseas-born males. Overall, cancer incidence was significantly lower among overseas-born males (443 cases per 100,000) than among Australian-born males (545 cases per 100,000). However, this was not the same for all cancers. Males born overseas were:

- significantly less likely to be diagnosed with bowel and prostate cancer
- significantly more likely to be diagnosed with lung cancer (Figure 5.2).

In the period 2003–2007, there were around 36,000 deaths from cancer among overseas-born males. Similar to cancer incidence, mortality was significantly lower among overseas-born males than among Australian-born males, and there were differences by cancer. (See *Mortality* in this chapter for mortality data on selected cancers [and other causes] by country of birth.)

New cases per 100,000 males



### Notes

1. Country of birth is classified according to the Standard Australian Classification of Countries, 2nd edition (ABS 2008g).
2. Rates were directly age standardised to the Australian population as at 30 June 2001 and are expressed per males. The rates are based on the total number of cases over the 5-year period from 2003 to 2007.

Source: AIHW Australian Cancer Database.

**Figure 5.2: New cases of selected cancers among males, by country of birth group, Australia, 2003–2007**

## Mental health

Estimates from the 2007 ABS National Survey of Mental Health and Wellbeing show that males born overseas in other countries (non-English-speaking) were less likely than males born in Australia to ever report having a mental disorder (lifetime mental disorder) (Table 5.6). Overall, 53% of males born in Australia met the criteria for having a lifetime mental disorder, compared with 26% of males born in other countries.

Males born in other countries were also significantly less likely to report having a substance use disorder or an anxiety disorder and, similarly, likely to report having an affective disorder, compared with males born in Australia.

There were no significant differences in the rate of lifetime mental disorders among males born in mainly English-speaking countries compared with males born in Australia.

Regardless of country of birth, the most common lifetime mental disorder reported were substance use disorders, followed by anxiety disorders and affective disorders.

**Table 5.6: Lifetime mental disorders<sup>(a)</sup> among males aged 16–85, by country of birth group, 2007**

Country of birth	Anxiety disorder	Affective disorder	Substance use disorder	Any lifetime mental disorder <sup>(b)</sup>
Australia	21.8	13.0	34.5	51.6
Mainly English-speaking countries	21.8	13.1	31.1	50.5
Other countries	*10.5	8.5	*13.5	*26.0

\* Significantly different from Australian-born males ( $p < 0.05$ ).

(a) Persons who met the criteria for diagnosis of a lifetime mental disorder.

(b) A person may have more than 1 lifetime disorder.

Note: Data were directly age standardised to the Australian population as at 30 June 2001.

Source: AIHW analysis of the 2007 ABS National Survey of Mental Health and Wellbeing.

## Health service use

Access to services in the Australian health system by people from all backgrounds is essential to prevent and manage disease and to maintain good health.

There are some barriers to accessing health care that may affect migrants more than other males in Australia—for example, cost, language, religious beliefs and cultural practices.

Three groups of migrants have access to Medicare benefits when using health services—permanent residents, those waiting on the processing of their permanent residency claims, and citizens of countries (such as New Zealand) with mutual care agreements. For migrants who do not fit into these categories, the unsubsidised cost of mainstream medical services may be prohibitive.

Language is one of the strongest barriers to health and other services. Studies have shown that some people from non-English-speaking backgrounds are not as informed about risky health behaviours as their English-speaking counterparts (Perusco et al. 2007). Hospitals, Medicare and other services will often provide translation to ensure non-English-speaking population groups receive and understand health information.

Specific beliefs about health and social interactions may also limit a migrant's ability to navigate the health system effectively, and culturally-specific care or translation services are not always available.

### Bowel cancer screening

Through self-identification to Medicare, the National Bowel Cancer Screening Program (the Program) collects data on language spoken at home. These data (rather than the country of birth) are used to convey important information about participation in the Program and broader health messages.

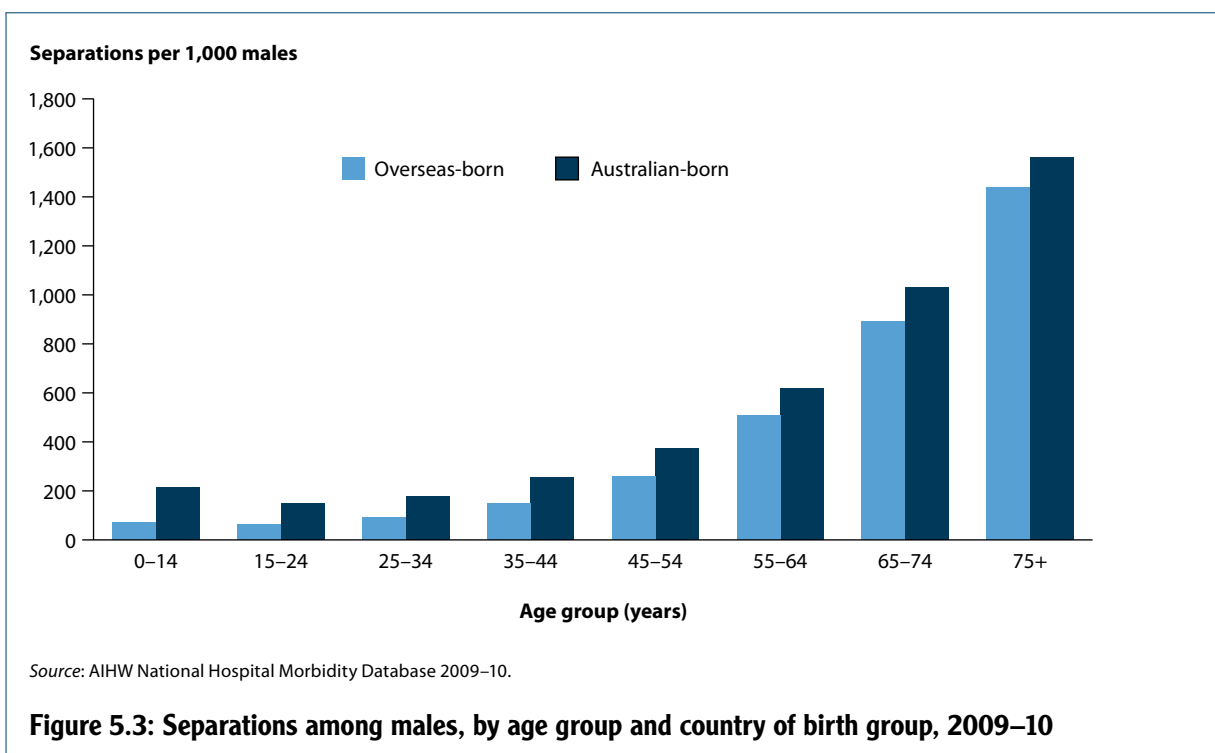
Around 55,000 males who were aged 50, 55 or 65 and spoke a language other than English at home were invited to participate in the Program in 2008 (AIHW & DoHA 2009). Of these, 7,300 males completed the faecal occult blood test, resulting in a participation rate of 13%. This was lower than the participation rate for males of the same ages who spoke English at home (37%).

Among invited males who spoke a language other than English and completed the faecal occult blood test, the positivity rate was 8%—a similar rate to that for males who spoke English at home. Males who spoke a language other than English at home were more likely than other males to receive a colonoscopy following a positive faecal occult blood test (61% and 52%, respectively).

## Admitted patient care

In 2009–10, there were around 1.1 million separations (hospitalisations) recorded in Australian hospitals for males born overseas (26% of all hospitalisations for males).

At all ages, overseas-born males were less likely than Australian-born males to be hospitalised (Figure 5.3). For both groups, separation rates (per 1,000 males) increased with age (with the exception of young children) and the highest rates were found among males aged 75 and over.



The most common causes of hospitalisation (principal diagnosis) were similar for both overseas-born and Australian-born males (Table 5.7). The leading principal diagnosis was care involving dialysis, accounting for 14% of hospitalisations among males born in Australia and 24% among males born overseas. When this principal diagnosis was excluded, the most common reasons for hospitalisation among males born overseas were care involving rehabilitation procedures, pain in the throat and chest and other cataract. Several causes appeared in the top 10 for overseas-born males but not for Australian-born males: for example, Type 2 diabetes mellitus and heart attack. Similarly, there were causes that appeared in the top 10 for Australian-born males but not for overseas-born males: for example, sleep disorders and internal derangement of the knee.

**Table 5.7: The 10 most common reasons for hospitalisation<sup>(a)(b)</sup> among males, by country of birth group, 2009–10 (age-standardised rate per 1,000 males)**

Overseas-born			Australian-born		
Reason for hospitalisation <sup>(c)</sup>	Number <sup>(d)</sup>	Rate <sup>(e)</sup>	Reason for hospitalisation <sup>(c)</sup>	Number <sup>(d)</sup>	Rate <sup>(e)</sup>
Care involving use of rehabilitation procedures	27,500	7.0	Care involving use of rehabilitation procedures	80,200	11.4
Pain in throat and chest	18,200	4.7	Other malignant neoplasms of skin	45,400	6.4
Other cataract	17,600	4.4	Pain in throat and chest	42,740	5.8
Type 2 diabetes mellitus	13,000	3.2	Other cataract	39,300	5.8
Angina pectoris	12,800	3.1	Sleep disorders	32,000	4.0
Inguinal hernia	11,800	3.2	Abdominal and pelvic pain	29,800	3.8
Abdominal and pelvic pain	11,600	3.2	Internal derangement of knee	29,600	3.8
Follow-up examination after treatment for malignant neoplasms	11,500	2.9	Inguinal hernia	29,000	3.8
Acute myocardial infarction	11,100	2.8	Angina pectoris	27,900	3.9
Malignant neoplasm of prostate	9,800	2.3	Embedded and impacted teeth	26,800	3.2
<b>All hospitalisations<sup>(f)</sup></b>	<b>1,065,500</b>	<b>288.5</b>	<b>All hospitalisations<sup>(f)</sup></b>	<b>2,904,400</b>	<b>397.7</b>

(a) Separations for which the care type was reported as *Newborn with no qualified days* and records for *Hospital boarders* and *Posthumous organ procurement* have been excluded.

(b) Most common reason for hospitalisation excludes 'care involving dialysis' and 'other medical care'.

(c) Principal diagnosis based on 3-character ICD-10-AM grouping.

(d) Rounded to nearest 100.

(e) Directly age standardised to the 30 June 2001 Australian population.

(f) Excludes hospitalisations where country of birth could not be derived.

Source: AIHW National Hospital Morbidity Database 2009–10.



## 6 OLDER MALES

Due to dramatic improvements in life expectancy for both males and females, Australians are now living longer than ever before. As such, older males are a rapidly growing and diverse segment of the Australian population. As at June 2010, the median age for males was 36.0 years and around 12% were aged 65 and over (ABS 2010a). This trend is predicted to continue. By the year 2026, it is projected that the median age for males will be between 38.7 and 40.7 years and those aged 65 and over will comprise 17–18% of the total male population (ABS 2008f).

This chapter examines the lifestyle, health status and health service use of older males. For the purposes of this report, 'older' refers to those aged 65 and over, although, where possible, this category has been broken down into smaller age groups (Box 6.1).

### Box 6.1: How old is older?

It is difficult to ascribe a particular chronological age to define 'older people'. Given the size of the population group, there are dramatic variations in health status, participation and levels of independence. The experience of ageing for one individual or group will not be the same as for another.

This report uses the age group 65 and over to describe 'older' males. This may be different from the approach taken in other reports; for example, the World Health Organization's *Active ageing framework* uses 60 years and over (WHO 2002). Furthermore, some data sources used in this report rely on different age groupings; for example, the ABS Personal Safety Survey groups those aged 55 and over as their upper age category.

There is also substantial cross-over between this population group and others in this report. Ageing increases the risk of many conditions for Indigenous males, males in regional and remote areas, males in low socioeconomic areas and males born overseas.

Some of the data analyses presented in this chapter are less comprehensive than for other chapters in this report. Much of the information on lifestyle factors and health status comes from health surveys such as the ABS National Health Survey and National Survey of Mental Health and Wellbeing. These surveys are limited to respondents living in private dwellings and exclude those living in institutions (such as nursing homes) whose health may be poorer. This limitation of the key data sources may lead to under-reporting of many risk factors and conditions, and affect the quality of the data available for males aged 65 or over.

### Active Ageing Framework

Over a lifetime, males (and females) accumulate life experiences that shape their health and wellbeing. Nonetheless, a healthy lifestyle in later life is also vital in determining quality of life, overall health and longevity. Good health among the older population is important not only for the individuals concerned but also for reducing demand for health and aged care services.

The concept of active ageing emerged from the World Health Organization's Active ageing framework in 2002. The active ageing approach aims to extend healthy life expectancy and quality of life for all people as they age (WHO 2002). It recognises the importance of continuing participation in social, economic, cultural, spiritual and civic affairs, and not just the ability to be physically active or to participate in the labour force. The approach highlights that ageing takes place within the context of friends, work colleagues, neighbours and family, in addition to many other determinants of health. One aspect of this active ageing framework is providing lifelong learning and literacy programs. Information on the importance of education and lifelong learning in the context of ageing is presented in Box 6.2.

### Box 6.2: University of the Third Age

At the 2006 Census, around 411,000 older males held a tertiary (non-school) qualification (ABS 2007a). However, relatively small numbers of older people participate in mainstream formal education. In 2009, 6,280 people aged 60 and over were enrolled in higher education courses around Australia—less than 1% of all enrolments (DEEWR 2010).

The University of the Third Age is an international organisation that encourages retired members of the community (those in the 'third age of life') to take part in lifelong learning activities for pleasure. It began in France in 1973 and was introduced to Australia in 1984. Since this time, the movement has spread rapidly throughout Australia and, in 2005, there were 178 University of the Third Age groups providing courses and allied social activities for more than 54,000 older Australians (Swindell 2005).

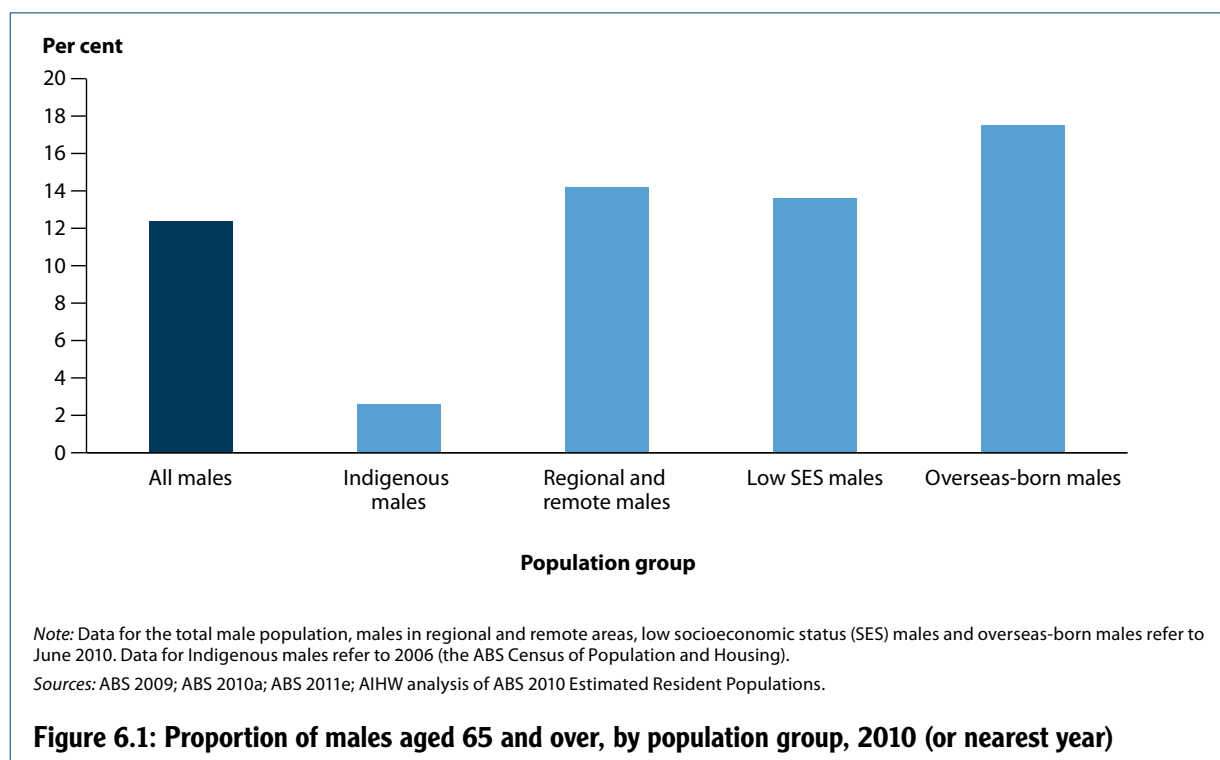
The University of the Third Age is not a formal university, and it does not offer formal qualifications or set academic qualifications as a prerequisite for entry. Tutors are usually volunteers and the classes are held in a relaxed environment in public institutions and private homes. In 2005, the University of the Third Age Online was launched to deliver online learning via the Internet for older Australians.

Visit: <[www3.griffith.edu.au/03/u3a/](http://www3.griffith.edu.au/03/u3a/)>

## Demographic and socioeconomic characteristics

In June 2010, there were 1.4 million males aged 65 and over in the Australian population, around 12% of all males (ABS 2010a). This proportion is not the same across all population groups in this report (Figure 6.1). There are proportionally more males aged 65 and over among the overseas-born population group (17%) and in regional and remote areas (14%) compared with the population average (12%). There are proportionally fewer Indigenous males (3%) in this older age group.

Other demographic and socioeconomic characteristics are presented in Table 6.1.



**Table 6.1: Demographic and socioeconomic characteristics of males aged 65 and over**

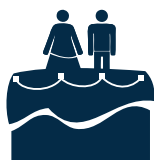
As at 30 June 2010, there were 1.4 million males aged 65 and over currently living in Australia (12% of the total male population) (ABS 2010a).



There were 84.4 males aged 65 and over for every 100 females of the same age group (ABS 2010a).



There were an estimated 825 male centenarians (aged 100 or over) in June 2010 (ABS 2010a).



In 2006, 71% of older males were in a registered marriage, and 12% were widowed (ABS 2007a).



In 2006, 14% of males aged 65 and over stated they were employed (either full time or part time) although this decreased with age, from 20% aged 65–74, to 5% aged 75–84 and 4% aged 85 and over (ABS 2007a).



In 2009, 22% of males aged 65 and over provided informal unpaid assistance to a person with a disability (compared with 9% of males under 65 years) (ABS 2010b).



In 2009, 19% of older males performed unpaid voluntary work for an organisation or group (compared with 17% of males aged 15–64) (ABS 2010b).

## Lifestyle factors

Lifestyle is a prominent theme when discussing older age. A number of factors influence the health of older males, including experiences in early and younger life, and current behaviours. Chronic diseases and risk of injury increase with age, as does the importance of maintaining good health and wellbeing for independent living.

### Selected lifestyle factors from the National Health Survey

The ABS National Health Survey 2007–08 collected information on age and other demographics, in addition to health-related behaviours. This section examines several health risk factors from the National Health Survey— inadequate fruit and vegetable intake, inadequate physical activity and excess body weight.

The prevalence of health risk factors varies by age group (Table 6.2). Compared with males aged less than 65, older males were:

- more likely to eat adequate amounts of fruit and vegetables
- more likely to be overweight or obese, and to report inadequate physical activity.

While small in numbers, males aged 85 and over reported different behaviours to those aged 65–84. For example, they were much more likely to report inadequate physical activity or inadequate vegetable intake, and less likely to report inadequate fruit intake or to be overweight or obese.

**Table 6.2: Selected health risk factors for males, by age group, 2007–08 (per cent)**

Selected risk factor	Age group (years)				
	65–74	75–84	85+	Total 65+	Total 15–64
Inadequate fruit intake	37.5	37.4	30.9	37.0	56.8
Inadequate vegetable intake	86.0	86.1	96.8	86.7	93.6
Inadequate physical activity <sup>(a)</sup>	55.7	69.5	74.5	61.7	56.5
Overweight/obese	78.9	76.8	58.9	77.0	65.9

(a) Data refer to males who were not sufficiently active to confer a health benefit. Adequate physical activity is generally interpreted as 30 minutes of moderate or vigorous physical activity on at least 5 days of the week—a total of 150 minutes per week.

Note: Includes people in private households only.

Source: AIHW analysis of the ABS 2007–08 National Health Survey.

### Tobacco, alcohol and other drugs

The NDSHS is a national survey providing cross-sectional data on smoking, alcohol consumption and other drug use in Australia.

In the 2010 NDSHS, the prevalence of smoking, alcohol consumption and drug use varied by broad age group (Table 6.3). Compared with males aged 14–64, older males were:

- less likely to be a (current) smoker but also less likely to have never smoked
- less likely to drink at risky levels and more likely to be an abstainer or ex-drinker
- much less likely to be a recent or ex-user of illicit drugs and more likely to have never used illicit drugs.



**Table 6.3: Smoking, alcohol consumption and other drug use among males aged 14 and over, by broad age group, 2010 (per cent)**

Status	Older males (aged 65 and over)	Younger males (aged 14–64)
Smoking status <sup>(a)</sup>		
Never smoked	42.6	55.6
Ex-smoker	47.5	22.7
Smoker	9.9	21.6
Alcohol lifetime risk <sup>(b)</sup>		
Abstainer/ex-drinker	19.2	15.9
Low risk	59.7	53.7
Risky	21.1	30.4
Recent use of illicit drugs <sup>(c)</sup>		
Never	87.5	51.8
Ex-user	7.0	29.2
Recent user	5.5	19.0

(a) Smoking status is defined by tobacco smoking only. A male who has never smoked is defined as never having smoked 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco in their lifetime. An ex-smoker is defined as having smoked at least 100 cigarettes (manufactured and/or roll-your-own) or the equivalent amount of tobacco in their lifetime, and reports no longer smoking. A smoker is defined as smoking tobacco daily, weekly or less than weekly.

(b) Alcohol consumption is presented as lifetime risky drinking behaviour and based on average daily alcohol consumption in the 12 months before the survey. An abstainer or ex-drinker did not consume alcohol. Low-risk alcohol consumption is defined as no more than 2 standard drinks per day. Risky alcohol consumption is defined as more than 2 standard drinks per day.

(c) Illicit drug use is based on use of illicit drugs and non-prescribed use of licit drugs and includes pain-killers, tranquillisers, steroids, meth/amphetamine, marijuana/cannabis, heroin, methadone or buprenorphine, cocaine, hallucinogens, ecstasy, ketamine, GHB and inhalants. An ex-user is defined as having used illicit drugs in their lifetime, but reports no longer using illicit drugs. A recent user is defined as having used an illicit drug in the 12 months before the survey.

Source: AIHW analysis of the NDSHS 2010.

## Participation in sport and physical activity

Estimates from the ABS Multi-purpose Household Survey 2009–10 show that half (50%) of males aged 65 and over had participated in some form of sport or physical activity in the previous 12 months (ABS 2010d). Overall, 20% of older males had participated in an organised activity arranged by a recreation club, or sporting or non-sporting organisation, while 30% had participated in a non-organised activity.

Older Australians have separate guidelines for physical activity that accommodate abilities and health problems common at older ages. However, the *Recommendations on physical activity for health for older Australians* (DoHA 2009b) suggests that older people should do some form of physical activity, no matter what their age, weight, health problems or abilities.

From the 2007–08 National Health Survey, it is estimated that 62% of males aged 65 and over participate in sufficient physical activity to confer a health benefit. This proportion decreases with advancing age.

## Health status

Health status broadly includes measures of functioning, physical illness and mental wellbeing. It also includes deaths—an event which is more common among this age category. These measures provide a holistic picture of how healthy an individual or population is, in terms of functioning, physical illness and mental wellbeing. This section presents an overview of the health status of older males in Australia.

## Life expectancy

There have been improvements in life expectancy for males and females at older ages. Life expectancy has improved for males and females at older ages, particularly in the latter 3 decades of the twentieth century. The increase in life expectancy has been attributed to a decline in deaths from cardiovascular diseases (notably heart disease and stroke) (AIHW 2007).

Based on mortality data from the period 2008–2010:

- a male aged 65 could expect to live another 18.9 years (around 18 years longer than a male of the same age in 1901–1910)
- a male aged 85 could expect to live another 6.0 years (around 2 years longer than a male of the same age in 1901–1910).

However, a considerable proportion of additional years of life gained in this period are years of life spent with a disability. (See *Disability* in this chapter for further information.)

## Mortality

Table 6.4 shows the 10 leading causes of death among males aged 0–64 and 65 and over. In 2007, coronary heart diseases was the leading cause of death among both older males (aged 65 and over) and younger males (aged 0–64). Causes such as suicide and land transport accidents and ill-defined causes appear in the 10 most common causes for younger males. At the older end of the age spectrum, causes of death are more likely to relate to chronic conditions such as cerebrovascular diseases (stroke), and cancer of the lung, prostate and bowel.

**Table 6.4: The 10 most common underlying causes of death among males, by age group, 2007**

Under 65 years			65 years and over		
Underlying cause of death	Number	Rate <sup>(a)</sup>	Underlying cause of death	Number	Rate <sup>(a)</sup>
Coronary heart diseases	794	8.6	Coronary heart diseases	2,186	174.8
Suicide	325	3.5	Cerebrovascular diseases	1,266	101.2
Lung cancer	282	3.1	Lung cancer	1,190	95.2
Land transport accidents	218	2.4	Chronic obstructive pulmonary disease	819	65.5
Event of undetermined intent	217	2.4	Prostate cancer	633	50.6
Ill-defined excluding sudden infant death syndrome	190	2.1	Dementia and Alzheimer disease	624	49.9
Colorectal cancer	131	1.4	Colorectal cancer	586	46.9
Cirrhosis of the liver	128	1.4	Diabetes	585	46.8
Cerebrovascular diseases	113	1.2	Unknown primary site cancers	457	36.5
Unknown primary site cancers	97	1.1	Heart failure and complications and ill-defined heart diseases	413	33.0
<b>All causes</b>	<b>17,588</b>	<b>190.7</b>	<b>All causes</b>	<b>52,972</b>	<b>4,236.2</b>

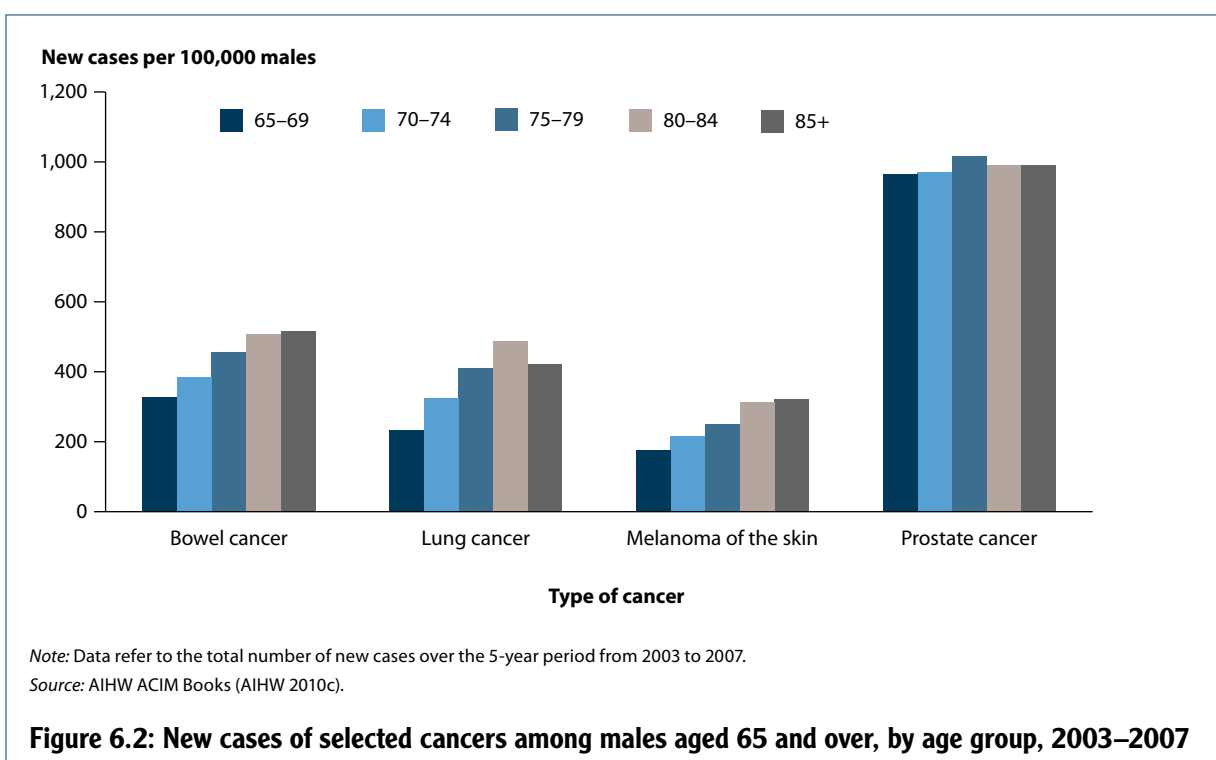
(a) Rates are calculated using the Australian estimated resident population for 30 June 2007 and are presented per 100,000 males of that age group.

Source: AIHW National Mortality Database.

## Cancer

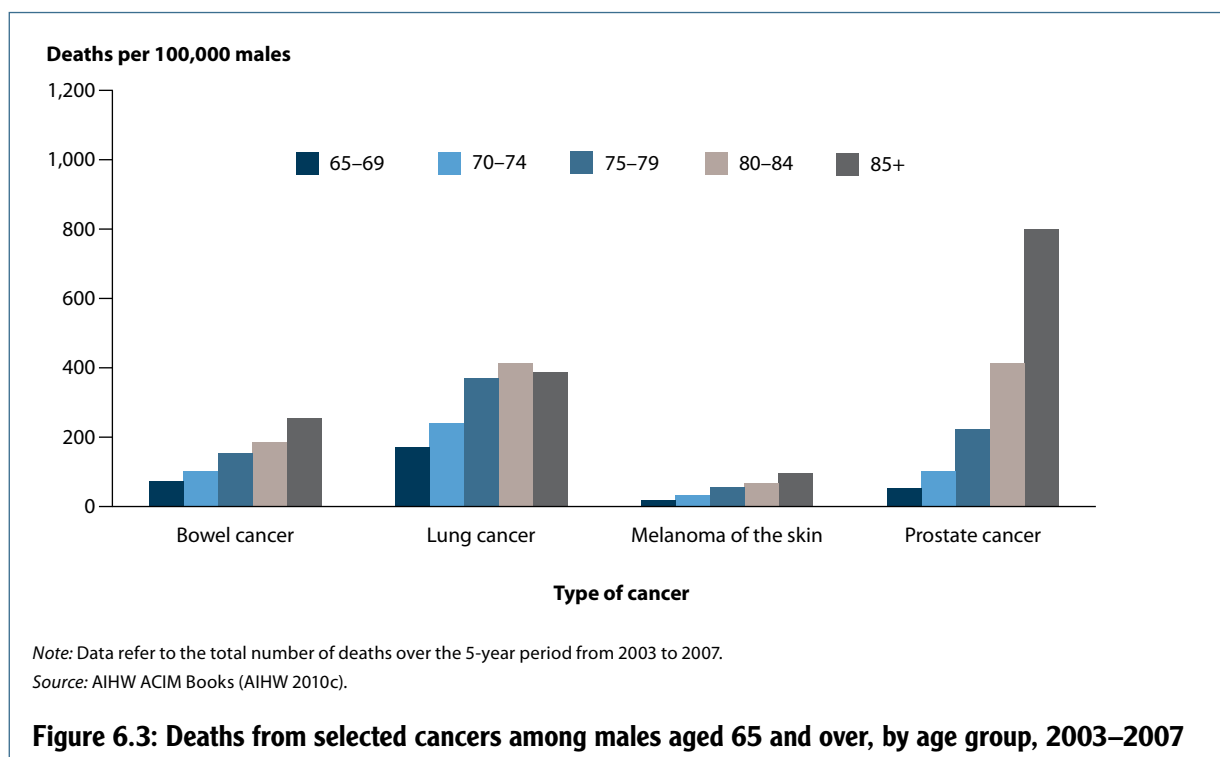
In 2007, 60% of new cases of cancer diagnosed in males were among those aged 65 and over (AIHW 2010c). For selected cancers, 72% of lung cancers, 66% of bowel cancers, 63% of prostate cancers and 49% of melanomas of the skin were diagnosed in males aged 65 and older.

There were differences by age in the incidence rate (new cases per 100,000) of selected cancers (Figure 6.2). Prostate cancer was the most common cancer among males aged 65 and over (and males overall), contributing 31% of all new cases of cancer in 2007. The incidence rate for this cancer remained relatively stable across the older age groups shown in Figure 6.2. The incidence rate for other selected cancers (bowel and lung cancer, and melanoma of the skin) increased with age among older males, with the exception of lung cancer which showed a slight decrease between males aged 80–84 and those aged 85 and over.



In 2007, 74% of cancer deaths among males were among those aged 65 and over (AIHW 2010c). For the selected cancers, 75% of deaths from lung cancer, 74% of deaths from bowel cancer, 92% of deaths from prostate cancer and 63% of deaths from melanoma of the skin occurred in males over the age of 65.

There were differences by age in the mortality rate (deaths per 100,000) of selected cancers (Figure 6.3). Of the selected cancers, lung cancer contributed the highest proportion of cancer deaths among older males (21%). Mortality from the four cancers shown in Figure 6.3 increased with age, with the exception of lung cancer, which decreased between the 80–84 and 85 and over age categories. In contrast, the mortality rate for prostate cancer steeply increased between ages of 80–84 and 85 and over.



## Dementia

Dementia is a progressive condition where the impact on the individual's functioning increases with the growing severity of the underlying disease. It may result in loss of higher brain function such as language, memory, perception, personality and cognitive skills. The most common cause of dementia is Alzheimer disease although several other diseases can also lead to dementia.

The condition has a much greater effect on years of healthy life lost due to disability than years of life lost because of premature death (Begg et al. 2007). In 2003, dementia ranked as the fifth leading cause of non-fatal burden for males and the eleventh leading cause of fatal and non-fatal burden overall.

It was projected that 75,400 (6%) males aged 65 and over, including 25,700 (18%) males aged 85 and over, would have dementia in 2011 (AIHW 2007). The number of males and females with dementia is expected to increase dramatically as the population ages. By 2031, it is projected that there will be around 174,400 males aged 65 and over with dementia (an increase of 131% from 2011).

There are fewer males with dementia than females—around 64% of older people with dementia are female. This pattern is partially explained by the longer life spans of females.

## Mental health

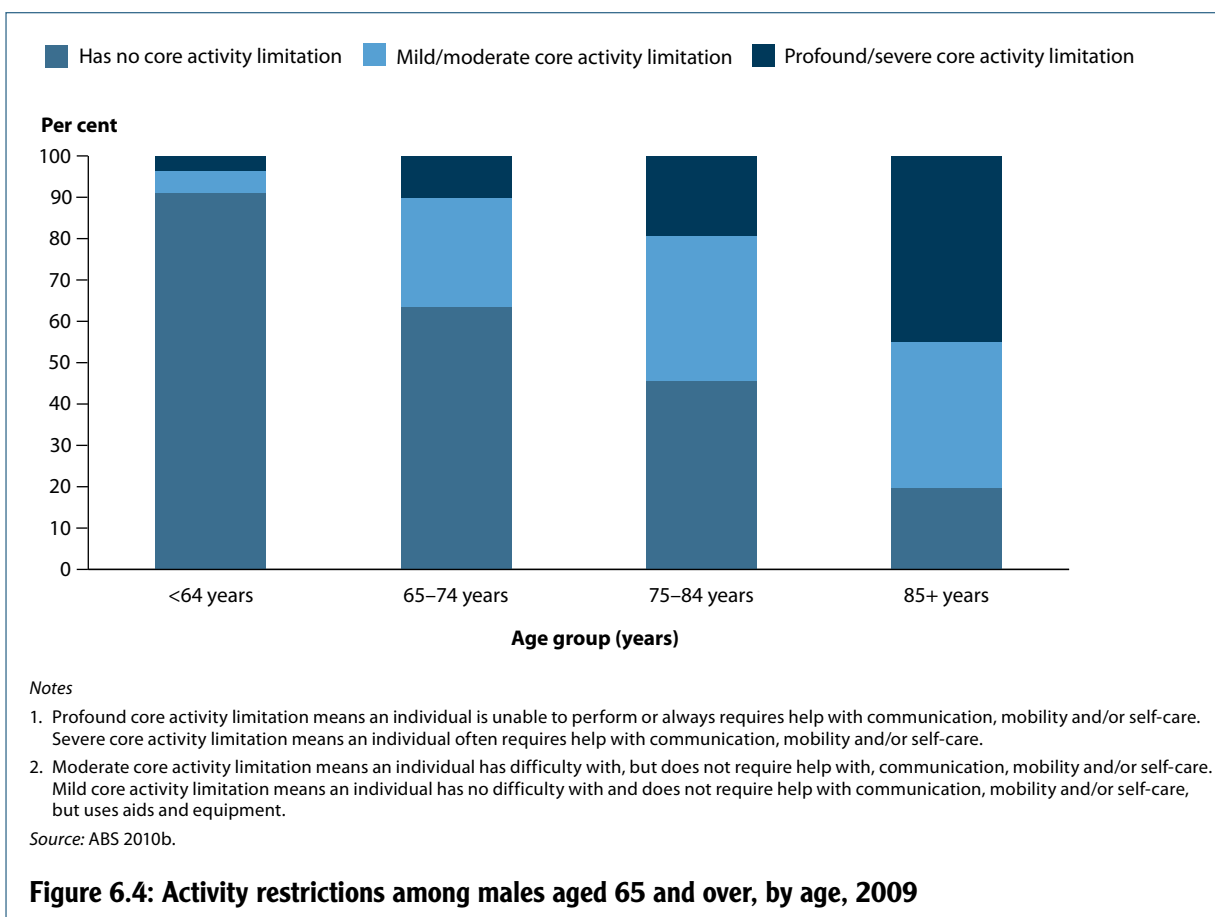
The literature on mental health among older people tends to focus on dementia. However, functional mental health disorders (such as depression and anxiety) also cause considerable suffering, reduced quality of life and social isolation.

The 2007 ABS National Survey of Mental Health and Wellbeing covers only those aged up to 85 and excludes individuals living in cared accommodation. From this survey, it is estimated that 7% of males aged 65–85 report a mental disorder with symptoms in the previous 12 months, compared with 19% of males aged 16–64 (ABS 2008d).

The 2007–08 National Health Survey includes questions about negative emotional states in the month before the survey interview. These questions are used to form the Kessler 10 Scale, which groups results into four categories: low, moderate, high and very high levels of psychological distress. In 2007–08, 3% of males aged 65 and over reported very high levels of psychological distress and a further 5% reported high levels of distress. These proportions were similar to those for younger males.

## Disability

While disability is not an inevitable part of ageing, the proportion of males who have a limitation on their activity does increase with age (Figure 6.4). In 2009, around 4% of males aged under 65 had a profound or severe limitation that restricted them in their core activities (that is, self-care, mobility or communication), compared with 10% of males aged 65–74, 19% of males aged 75–84 and 45% of males aged 85 and over. The rates of mild and moderate core activity limitations were also higher among males aged 65 and over than among their younger counterparts.



## Falls

Falls commonly occur among older people and they often result in fractures and other serious injuries. The incidence of injury events resulting in hospitalisation has been estimated using National Hospital Morbidity data (Bradley & Pointer 2008).

In 2005–06, there were nearly 20,000 cases of hospitalised injury due to falls for males aged 65 and over (1.5% of all hospitalisations for this age–sex group). Males accounted for only 29% of hospitalised fall injury cases for people aged 65 and older. Overall case counts for males increased by 16% between 2003–04 and 2005–06.

Around half (49%) of all fall injury cases among males aged 65 and over occurred in the home, most commonly from slipping, tripping or stumbling on the same level. A further 18% occurred in a residential institution.

The largest proportion of fall injury cases for males resulted in injuries to the hip and thigh (29%) and injuries to the head (23%). Overall, 56% of males hospitalised due to a fall injury in 2005–06 sustained fractures. For fall injury cases among males in this age group, the average length of stay in hospital was 7.6 days.

## Health service use

Health services play a substantial role in the lives of many older people. Older males (and females) may use primary and acute care services and a range of specialised services related to preventive health, ill health and ageing.

### Patient experience of health services

The Patient Experience Survey is conducted annually and collects national data on access and barriers to a range of health-care services, including general practitioners, medical specialists and dental professionals, imaging and pathology tests, and hospital/emergency visits. Data are also collected on aspects of communication between patients and health professionals. In 2010–11, compared with males aged 15–64, those males aged 65 and over were more likely to:

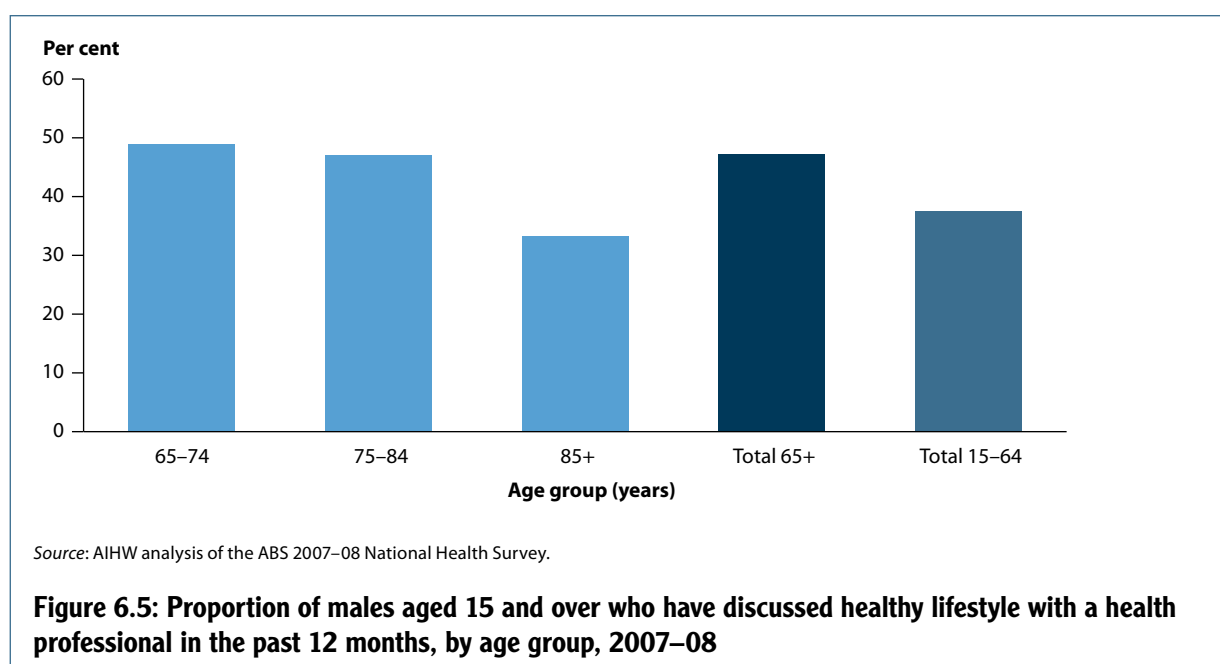
- visit a general practitioner, medical specialist or hospital emergency department
- be admitted to hospital
- receive a prescription for a medication
- receive a pathology or imaging test (ABS 2011f).

Increased frequency of access to and use of services by older Australians has obvious implications for the health system as the population ages, leading to an increased demand for health professionals and their services.

### Healthy lifestyle discussions

The 2007–08 National Health Survey asked whether a person had discussed healthy lifestyle issues with a general practitioner or other health professional in the 12 months before the survey interview. Healthy lifestyle issues included reducing or quitting smoking, drinking alcohol in moderation, increasing physical activity and improving dietary intake. These factors all contribute to preventing chronic disease and improving general health and wellbeing. Research shows that discussing smoking behaviour with a general practitioner or other health professional can improve the success of quit programs (Stead et al. 2008).

In 2007–08, 47% of males aged 65 and over had discussed a healthy lifestyle with a health professional, compared with 38% of males aged less than 65 (Figure 6.5). However, within the older age bracket, this proportion decreased with age from 49% of males aged 65–74 to 47% of those aged 75–84 and 33% of those aged 85 and over (Figure 6.5).



## Admitted patient care

In 2009–10, older males were hospitalised for a variety of reasons (Table 6.5). The most common reason for hospitalisation (principal diagnosis) was care involving dialysis, accounting for 12% of hospitalisations among males aged 0–64, and 23% among males aged 65 and over. When this principal diagnosis was excluded, the most common reasons for hospitalisation for males aged 65 and over were cardiac rehabilitation, other cataract, and melanoma and other malignancies of the skin. Many causes appeared in the top 10 for older males but not for younger males: for example, angina and chronic obstructive pulmonary disease. Similarly, there were causes that appeared in the top 10 for younger males but not for older males: for example, internal derangement of knee and embedded and impacted teeth.

**Table 6.5: The 10 most common reasons for hospitalisation<sup>(a)(b)</sup> among males, by age group, 2009–10**

Under 65 years			65 years and over		
Reason for hospitalisation <sup>(c)</sup>	Number <sup>(d)</sup>	Rate <sup>(e)</sup>	Reason for hospitalisation <sup>(c)</sup>	Number <sup>(d)</sup>	Rate <sup>(e)</sup>
Pain in throat and chest	34,900	3.6	Cardiac rehabilitation	32,700	24.2
Internal derangement of knee	30,700	3.2	Other cataract	20,000	14.8
Embedded and impacted teeth	30,400	3.1	Melanoma and other malignancies of the skin	18,700	13.8
Cardiac rehabilitation	28,000	2.9	Type 2 diabetes mellitus	18,600	13.7
Abdominal and pelvic pain	27,900	2.9	Angina pectoris	29,800	22.0
Sleep disorders	27,800	2.9	Malignant neoplasm of the prostate	15,300	11.3
Mental and behavioural disorders due to use of alcohol	22,700	2.3	Pain in throat and chest	18,900	14.0
Inguinal hernia	22,600	2.3	Follow-up exam after treatment for malignant neoplasm	31,600	23.4
Gastroesophageal reflux disease	19,500	2.0	Other chronic obstructive pulmonary disease	16,200	12.0
Other diseases of the digestive system	100	1.1	Benign neoplasm of the colon, rectum, anus or anal canal	400	33.0
<b>All hospitalisations</b>	<b>1,979,400</b>	<b>20.5</b>	<b>All hospitalisations</b>	<b>1,842,900</b>	<b>1,363.1</b>

(a) Separations for which the care type was reported as *Newborn with no qualified days* and records for *Hospital boarders* and *Posthumous organ procurement* have been excluded.

(b) Most common reason for hospitalisation excludes 'care involving dialysis', 'other medical care' and 'other'.

(c) Principal diagnosis based on 3-character ICD-10-AM grouping.

(d) Number has been rounded to the nearest hundred.

(e) Rates calculated using the Australian estimated resident population for December 2009 and are presented per 1,000 males.

Source: AIHW National Hospital Morbidity Database 2009–10.

## Aged care services

There is a wide range of services available to provide assistance to older persons as they age. Services provided by government and non-government organisations may include:

- permanent or respite care provided in a residential facility, where the person lives in the facility (also known as residential aged care)
- care and support for people who want to stay independent and living at home (also known as community care).

## Residential aged care

As at June 2009, there were around 47,700 males of all ages in residential aged care—fewer than half the number of females in this type of care (AIHW 2010d). The majority of male residents were aged 75 and over (78%); 42% were aged 85 and over, and 4% were aged 95 and over. Among male residents in permanent and respite care:

- 68% were in *Major cities* and 23% were in *Inner regional areas*
- 43% of permanent residents and 56% of respite residents were married or in a de facto relationship
- around 1% identified as Indigenous
- about 70–72% were born in Australia.

## Community care

Home and Community Care (HACC) is the largest of the community care programs in Australia, delivering a range of basic in-home maintenance and support services for frail aged people, people with a disability, and their carers. In 2009–10, 34% of people aged 65 and over receiving HACC services were male. Of those males:

- 9% were aged 65–74
- 16% were aged 75–84
- 9% were aged 85 years and over (AIHW 2011d).

Community aged care is a subset of HACC, and provides support and assistance specifically to older Australians who have complex care needs and are living at home. There are three common types of package—Community Aged Care Packages (CACP), Extended Aged Care at Home (EACH), and Extended Aged Care at Home Dementia (EACH D).

As at 30 June 2009, there were 11,100 male clients for CACP, 500 male clients for EACH and 700 male clients for EACH D (AIHW 2010a). Females outnumbered males for each of these programs. Over 90% of male clients in each of these programs were aged 65 and over.



## Palliative care

Palliative care is specialised end-of-life care of people of all ages who have a progressive condition with little or no prospect of a cure (a life-limiting or 'terminal' illness). The aim of this care is to achieve the best possible quality of life for the patient by preventing and relieving suffering and by assisting with emotional, spiritual and social needs (Box 6.3). Palliative care can also be a support for the patient's carers, family and friends.

Palliative care can be provided in the home, in hospital, in a residential aged care facility or in a hospice.

In 2009–10, there were around 17,200 separations recorded with a care type of palliative care for males in Australian hospitals (including specialised facilities). Of these:

- 73% were for patients aged 65 and over, and 27% were for patients aged less than 65
- 84% were in public hospitals, and 16% were in private hospitals
- 66% were in *Major cities*, and 34% were in regional and remote areas.

### Box 6.3: National Palliative Care Program

When an illness cannot be cured, the focus of care changes to giving patients the best quality of life possible while managing their symptoms (CareSearch 2009). Palliative care services can be provided in the home, community-based settings like nursing homes, palliative care units, and hospitals.

The Australian Government provides support for people with a life-limiting illness through the National Palliative Care Program (DoHA 2009a). The program funds initiatives that:

- support patients, families and carers
- improve access to palliative care medicines
- provide education, training and support for the workforce
- promote research and quality improvements in services.

Initiatives have included the Indigenous Palliative Care Project to provide culturally appropriate care for Indigenous Australians, and the Rural Palliative Care Project to increase access to services across a broader expanse of regional and remote Australia (CareSearch 2010).

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This report is the second in a series on the health of Australia's males. It examines the distinct health profiles of five population groups, characterised by Aboriginal and Torres Strait Islander status, remoteness, socioeconomic disadvantage, region of birth, and age.

Findings include:

- Aboriginal and Torres Strait Islander males generally experience poorer health than the overall population, with higher rates of chronic diseases such as lung cancer, diabetes and kidney disease.
  - Socioeconomic disadvantage is frequently related to poorer health status among males, with rates of obesity and tobacco smoking higher among males from more disadvantaged areas.
- 