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A large image of a man's arm and torso wearing a green and black plaid shirt, with his arms crossed.

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

A white outline map of Australia on a green background.

## 25 years and over





Australian Government

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Health and Welfare



# The **HEALTH** of Australia's **MALES** **25 years and over**

2013

Australian Institute of Health and Welfare, Canberra

Cat. no. PHE 169

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# ABBREVIATIONS

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ANZAC	Australian and New Zealand Army Corps
ART	assisted reproductive technologies
BBV	blood-borne virus
BMI	body mass index
DoHA	Department of Health and Ageing
DS NMDS	Disability Services National Minimum Dataset
HIV	human immunodeficiency virus
ICD	International Classification of Disease
MIC	MATES in Construction
MP	Member of Parliament
NDA	National Disability Agreement
NDSHS	National Drug Strategy Household Survey
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
NSMHW	National Survey of Mental Health and Wellbeing
OECD	Organisation for Economic Co-operation and Development
STI	sexually transmissible infection
WHO	World Health Organization

# SUMMARY

This report is the fourth in a series that builds the evidence base on the health of Australia's males. This report has a focus on males aged 25 and over, who comprise two-thirds of the Australian male population and encompasses diverse life stages that see males establish themselves in the workforce, change career paths, form long-term relationships, have children and retire.

The report focuses on topics that are age-specific (such as healthy ageing), are of particular relevance to this age group (such as suicide), and those where large sex differences are observed (such as workplace injury).

## Life, ageing and death

- Males aged 25 and over in 2011 can expect, on average, to live to 80 or over.
- Coronary heart disease was the leading cause of death in males aged 25 and over in 2010. Lung cancer was the second leading cause.
- Between 2001 and 2011, there was a gain of 1.9 years in life expectancy for males aged 65 and 0.6 years for males aged 85.

## Risky living

- Based on measured data, in 2011–12, 44% of males aged 25 and over were overweight, 31% were obese and 66% had a waist circumference that put them at increased risk of chronic disease. The proportion of males aged 25 and over who were overweight or obese increased from 69% in 1995 to 75% in 2011–12.
- One in 10 males aged 50–59 (11%) and 60–69 (10%) are at risk of injury resulting from excessive alcohol consumption, on a daily basis.

## Health status

- The prevalence rate for treated psychotic disorders is 5.8 cases per 1,000 males aged 25–64, higher than the rate among males aged 18–24 (4.0 per 1,000) and females aged 25–64 (3.7 per 1,000).
- Nearly 1 in 5 males (18%) aged 25 and over (nearly 1.3 million males) are estimated to have a core activity limitation, and need help, have difficulty with or use aids or equipment to assist with mobility, self-care or communication. More than 1 million (15%) are carers.
- Males aged 25 and over are significantly less likely to have asthma, arthritis or osteoporosis, compared with females of the same age.

## Marriage, employment and health

- Married males have lower mortality rates compared with their never married counterparts—8.1 compared with 12.8 deaths per 1,000 population.
- Employed males are less likely to rate their health as fair or poor (11%) compared with unemployed males (37%) and males not in the labour force (41%).
- There were over 73,000 workers' compensation claims related to serious injury or fatality for males aged 25–64, including 170 workplace fatalities. Males in this age group made up 55% of all claims.



# 1 INTRODUCTION

## Background

The period of life from age 25 onwards is diverse in terms of personal events, social and demographic characteristics, and health needs. Males may establish themselves in the workforce, change career paths, form long-term relationships, have children and retire. While many long-term conditions emerge with increasing age, there are also opportunities to establish health behaviours that reduce the risk of ill health in later life. The breadth of this age group means that it will also incorporate old age and death.

In 2011, two-thirds (66%) of the male population was aged 25 and over, a total of 7.4 million males (ABS 2012a). Examining the health of these males is important for the individuals concerned, the productivity of those deemed 'working age', and for understanding and predicting the health needs of the older population. The 2010 National Male Health Policy identified improved health for males at different life stages as a priority area for action (DoHA 2010).

Accordingly, this report focuses on male health in those aged 25 and over. It covers health topics that are age-specific (such as healthy ageing) or are of particular relevance to this group (such as suicide), and those where large sex differences are observed (such as workplace injury).

This report is the fourth in a series designed to build the evidence base on male health in Australia. Males aged 0–24 were the focus of the third report in this series (Box 1.1).

### Box 1.1: The story so far

In May 2010, the Australian Government launched Australia's first National Male Health Policy (DoHA 2010). This policy, and the attention given to male health in recent years, sets the scene for this series of reports. A wide range of data sources have been compiled and analysed to provide a health snapshot of males as a distinct population group. Along with a National Longitudinal Study on Male Health, these reports help build the evidence base on male health—a priority area described in the National Male Health Policy.

The first report, *The health of Australia's males*, presented a broad-brush picture of male health and described health determinants, conditions and service use among Australia's males (AIHW 2011c).

The second report, *The health of Australia's males: a focus on five population groups*, provided more detailed information for five male subpopulations with distinct and special health needs (AIHW 2012g). These subpopulations were characterised by Indigenous status, remoteness, socioeconomic disadvantage, region of birth and age.

The third report, *The health of Australia's males: from birth to young adulthood*, presented major health topics important to males aged 0–24 (AIHW 2013). These topics included perinatal health, oral health, disability, diabetes, injury, infectious disease and hospitalisations, and included comparisons with males aged 25 and over, and with females aged 0–24.

The term 'male' has been used throughout this report in preference to 'man' or 'boy', to be consistent with the terminology of the Policy and of the previous 3 reports in the series.



## 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.

A conceptual framework can help define the 'universe' of male health (Figure 1.1). This is the fourth report in this series on male health, and this conceptual framework for male health was also presented in the previous 3 reports (Box 1.1). Similar to the third report, *The health of Australia's males: from birth to young adulthood* (AIHW 2013), this report focuses on the 'individual physical and psychological makeup' component of the framework and incorporates elements from 'social roles'.

The report also highlights data and information gaps, including where data are:

- not yet available but are being developed or collected
- available but in need of updating, or where data linkage may facilitate their use and interpretation
- not available and data development or research is required.

The rationale and importance of these data gaps are discussed. Throughout the report, the scope of some data collections and the availability of data by sex and age groups limit the presentation of some data.

## Where do I go for more information?

Other publications and products about male health are available from the AIHW website <[www.aihw.gov.au/male-health](http://www.aihw.gov.au/male-health)>. These include bulletin-style reports, short report profiles, and web snapshots.

Many other AIHW reports also cover the health and welfare of adult males and females in Australia. These reports may be condition-specific, service-specific or based on population groups, and in some cases, reports may include a broad span of ages. The following reports present information specifically on the health and wellbeing of males (and females) aged 25 and over:

- *Older Australia at a glance* (AIHW 2007)
- *Australia's health 2010* (AIHW 2010a)
- *Australia's welfare 2011* (AIHW 2011b).

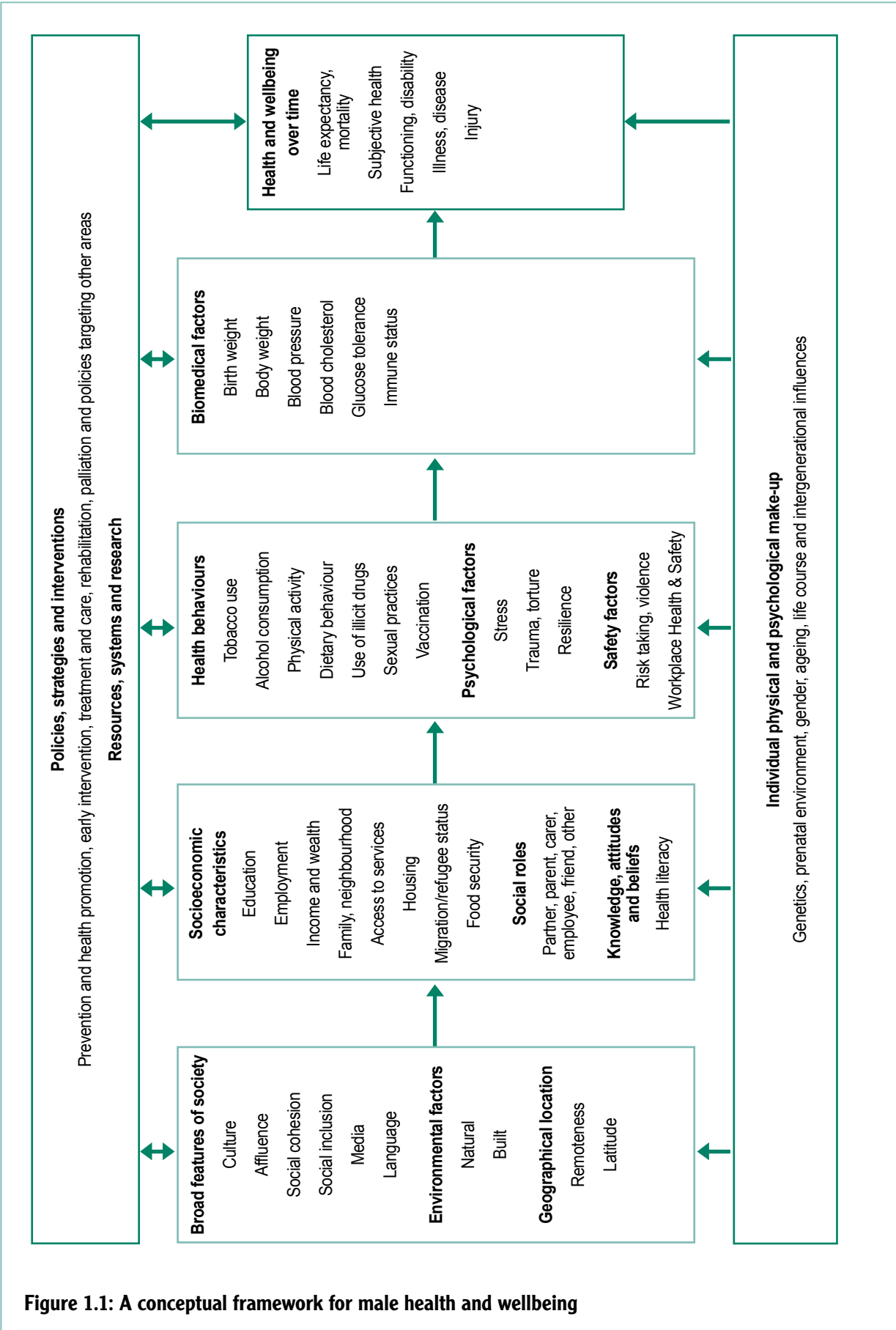


Figure 1.1: A conceptual framework for male health and wellbeing

## 2 THE STORY SO FAR: BIRTH TO YOUNG ADULTHOOD

The health of young males, from birth to age 24, is summarised below, and provides the context to further analyse the health of older males. For more information, see *The health of Australia's males: from birth to young adulthood (0–24)* (AIHW 2013).

### Life, birth and death

- Male babies born in the 3 years 2009–2011 can expect to live to the age of 79.7, nearly 5 years less than female babies born the same year (84.2). Male babies are also more likely than female babies to be born before 37 weeks gestation, have a high birthweight, or have a congenital anomaly.
- There were 52 deaths per 100,000 males aged 0–24, nearly twice that among females of the same age (30 per 100,000). Males were nearly three times as likely to die from land transport accidents, the major cause of death for males aged 1–24.

### Healthy living

- The proportion of males aged 2–24 in a healthy weight range decreases with increasing age.
- As a general trend, younger males (5–16) are more active and more likely to meet physical activity guidelines than older males (17–24).
- More than half of males aged 5–15 brush their teeth at least twice a day. By age 14, more than half of males have at least one permanent tooth affected by decay.

### Risky living

- About 6% of males aged 14–19 smoke tobacco daily and are less likely than females of the same age to do so. More than 2 in 5 (43%) males aged 14–19 were at risk of injury resulting from a single occasion of drinking alcohol.
- Males aged 0–24 were more likely to be hospitalised for injury, and more likely to die from injury, than females of the same age.
- Chlamydia is the most commonly notified infectious disease among young males. More than half (53%) of chlamydia notifications among males were for those aged 15–24.

### Health status and health service use

- Almost 1 in 4 (23%) males aged 16–24 had experienced symptoms of a mental disorder, and 4 in every 1,000 males aged 18–24 had been diagnosed with a psychotic disorder. In spite of this, rates of help seeking among young males are low (13%).
- About 193,400 males aged 0–24 (8%) have a disability, and about 78,000 accessed selected disability services.

## 3 THE TWENTIES AND BEYOND AT A GLANCE

### Key findings

- In June 2011, there were 7.4 million males aged 25 and over, making up two-thirds (66%) of the male population.
- In 2011, 1.7% of males aged 25 and over were Indigenous, 31% lived in regional and remote areas and 33% were born overseas.
- In 2011, around 9 in 10 births were to fathers aged 25 and over. The median age at which males first become fathers increased from 29.6 in 1981 to 33.0 in 2011.

This chapter presents an overview of the complex interplay of demographic and social characteristics on the health of males aged 25 and over. While some characteristics presented in this chapter have a direct influence on health status (for example, age), others have indirect implications for health status and may help define areas of risk, and opportunities for intervention.

The section on demographic characteristics is supplemented with data that in most cases is readily available by age and sex. The section on social characteristics draws largely on literature, as data are less readily available. The information in this chapter is not intended to be comprehensive or complete, but to provide context for the more detailed analyses of health status and service use in the following chapters.

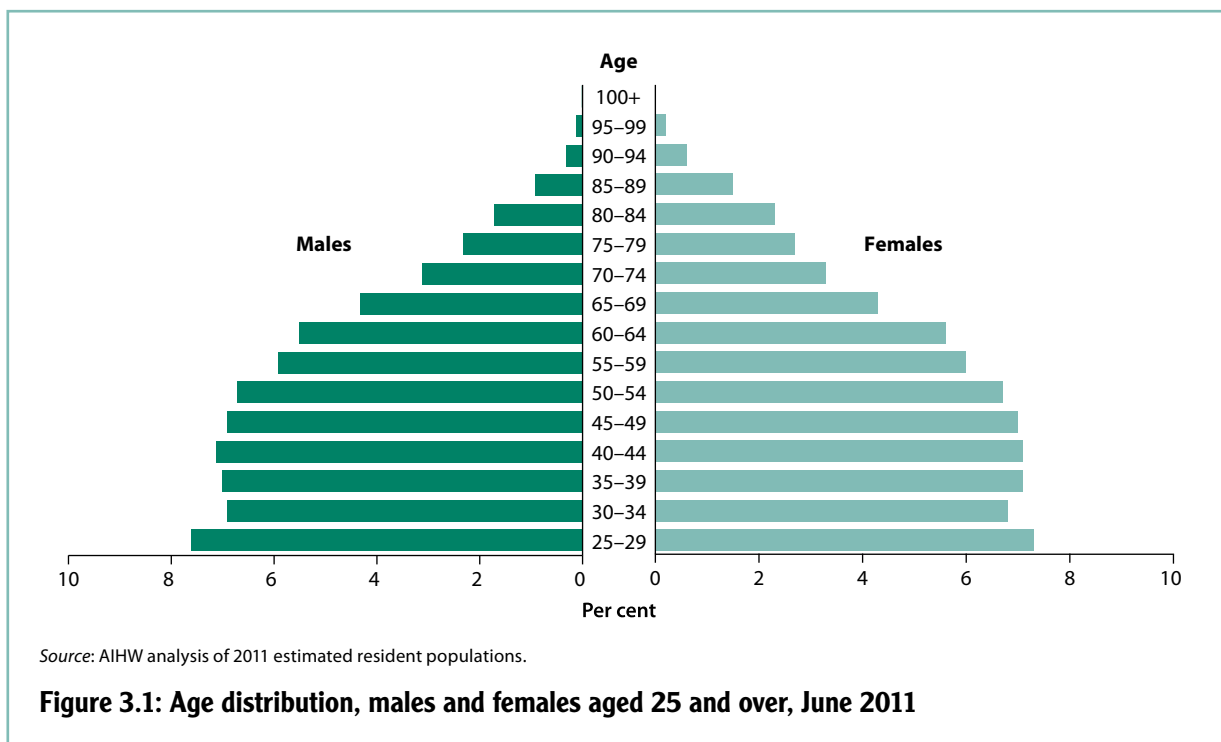
Throughout this report, the diversity of males aged 25 and over makes it necessary to break down this broad age group into smaller categories and life stages. Methods of grouping include by 5- or 10-year age groups, or as working age (25–64) and retired (65 and over) males. There are some cases where 5-year age groups are not available, and so data are presented for males aged 20 and over instead of those aged 25 and over. Multiple methods of grouping are used in this report, and are dependent on the data source and topic.

## Demographic characteristics

### Age distribution

In June 2011, two-thirds (66%) of the Australian male population were aged 25 and over, a total of nearly 7.4 million males (ABS 2012a). Of the total male population, there were:

- 14% aged 25–34
- 14% aged 35–44
- 14% aged 45–54
- 11% aged 55–64
- 7% aged 65–74
- 5% aged 75 and over (including 554 males aged 100 and over) (Figure 3.1).



## The sex ratio

In 2011, among the population aged 25 and over, there were 96 males for every 100 females. In contrast, the sex ratio at birth is higher for males than females, with 105 male babies for every 100 female babies. As males age, this ratio changes. For every 100 females of the same age, there were:

- 103 males aged 25–29
- 98–100 males aged 30–34 to 65–69
- 94 males aged 70–74
- 44 males aged 90–94
- 22 males aged 100 or more.

## Other demographic characteristics

### Aboriginal and Torres Strait Islander status

Aboriginal and Torres Strait Islander males, as a population group, experience disproportionate levels of disadvantage and poorer health compared with other Australians (AIHW 2012g).

In 2011, there were 116,000 Aboriginal and/or Torres Strait Islander males aged 25 and over, accounting for less than half (43%) of the total Indigenous male population and only 1.7% of all males aged 25 and over (Figure 3.2). This was lower than the proportion of all males aged 0–24 (4.5%) and similar to that of females aged 25 and over (1.8%).

The proportion of Indigenous males in the population decreased with increasing age: from 2.5% of all males aged 25–34 to 0.5% of all males aged 75 and over.



Source: AIHW analysis of ABS estimated resident populations and the 2011 Census of Population and Housing.

**Figure 3.2: Distribution of males aged 25 and over, by broad population group, 2011**

### Region of birth

A person's country of birth can be used to distinguish people of different cultural backgrounds and this measure is frequently found in health-related data collections. In many cases, males born overseas enjoy health that is as good, if not better than, that of the Australian-born male population (AIHW 2012g). However, males born overseas also bring unique health profiles and challenges for Australia's health system.

In 2011, nearly 2.5 million (33%) males aged 25 and over were born overseas (Figure 3.2). Of these, 22% were born in the United Kingdom, 9% in New Zealand and 6% in India. The main country of birth differed by age group and was India among males aged 25–34, and the United Kingdom among males aged 35 and over.

### Remoteness of residence

Remoteness and health status are associated, with health status generally decreasing further away from *Major cities* (AIHW 2012g). Those living in regional and remote areas may face social and geographic barriers such as difficulty accessing health services, higher costs and less availability of fresh food, harsher environmental conditions and relative social isolation.

In 2011, nearly 7 in 10 (69%) males aged 25 and over lived in *Major cities*, 19% lived in *Inner regional* areas, 9% in *Outer regional* areas, and less than 3% in *Remote* and *Very remote* areas of Australia (Figure 3.2).

## Social, economic and environmental determinants of health

Determinants of health are those factors that influence health and wellbeing. Some are protective and promote good health, such as good nutrition, sun-safe behaviours and wearing a seatbelt. Others are deleterious and lead to poor health, such as smoking, excessive alcohol consumption and unsafe sexual practices.

There are two broad groups of determinants: individual and social.

Individual determinants include characteristics that cannot be modified, such as genetics, age and sex, and behaviours that can be modified, such as tobacco smoking and physical inactivity. Specific individual determinants are discussed in more detail elsewhere in the report and include:

- body weight (Chapter 5)
- tobacco, alcohol and drugs (Chapter 6)
- sexual and reproductive health (Chapter 8)
- healthy ageing (Chapter 14).

The social determinants of health are less widely recognised and reported on, and include social, economic, political, cultural and environmental influences on health. Put simply, these are the conditions into which people are born, grow, live, work and age (WHO 2011b). These many factors do not occur in isolation and their effects may be the result of a complex interplay between factors, including the influence of individual characteristics and behaviours.

This section introduces, at a very broad level, some of the social, economic and environmental determinants that influence the health and wellbeing of males aged 25 and over, including the effect of socioeconomic disadvantage, fathering and personal and family stressors. Other social, economic and environmental determinants of health are discussed elsewhere in the report, and include:

- marital status (Chapter 7)
- employment status (Chapter 9)
- asbestos-related deaths (Chapter 10).

Information on social determinants of health relevant to males of this age and not presented in this report, including socioeconomic disadvantage and education, are available from previous reports in this series:

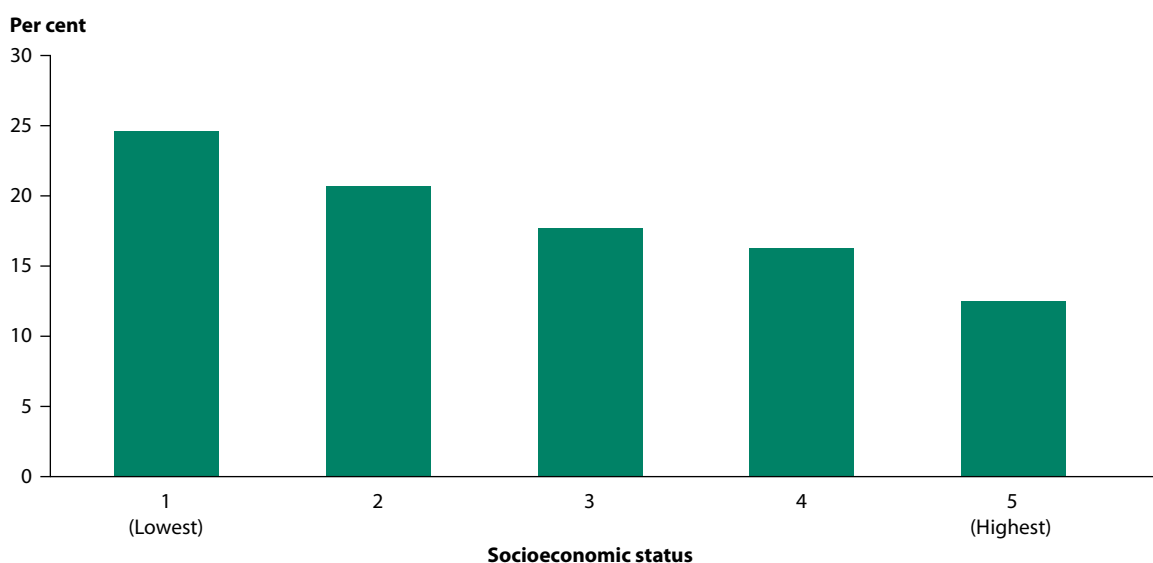
- *The health of Australia's males: a focus on five population groups* (AIHW 2012g)
- *The health of Australia's males: from birth to young adulthood (0–24 years)* (AIHW 2013).

### The effect of socioeconomic disadvantage

People who are disadvantaged tend to live shorter lives, have higher rates of illness, disability and mortality, and often have limited access to health-care services (AIHW 2010a). Health status within a population generally follows a gradient, with overall health tending to improve with each step up the socioeconomic ladder (WHO 2011b). This is commonly known as the social gradient of health. Gradients can be observed for tobacco smoking, physical inactivity, obesity, cancer survival, oral health, health literacy and self-assessed health status, among others (AIHW 2012c).

The example in Figure 3.3 presents a social gradient for tobacco smoking and socioeconomic status. It shows that as socioeconomic status increases, tobacco smoking decreases. In 2010, 25% of all males and females aged 14 and over living in the most disadvantaged areas (lowest socioeconomic status) smoked tobacco, twice the rate of people living in the least disadvantaged areas (highest socioeconomic status) (AIHW 2011a).





Source: AIHW 2011a.

**Figure 3.3: Prevalence of current tobacco smoking, people aged 14 and over, 2010**

## Fathering

In recent years, there has been more flexibility in parenting arrangements and fathers are playing a greater role in caring for their children. There is growing recognition of the importance of fathering for fathers, their children, the broader family and the community. The weight of evidence suggests that fathers who have a close relationship with their children and are committed, responsive and supportive, make unique and direct contributions to their children's wellbeing (Lees 2007). Father-inclusive practice is an institutional response to this evidence, and is described in Box 3.1.

### Box 3.1: Father-inclusive practice

Father-inclusive practice is a set of guidelines that aim to create positive environments that recognise the value of fathering and encourage and support fathers to engage in the care of their children (FaHCSIA 2009).

Father-inclusive practice helps:

- service providers to enrich their programs and outcomes for children and families, by including fathers in a holistic service delivery model
- fathers to enhance their skills and confidence as a parent; develop a peer network; feel supported by other fathers and professional staff; be a support to their partner; and, strengthen their relationship with their child (FaHCSIA 2009).

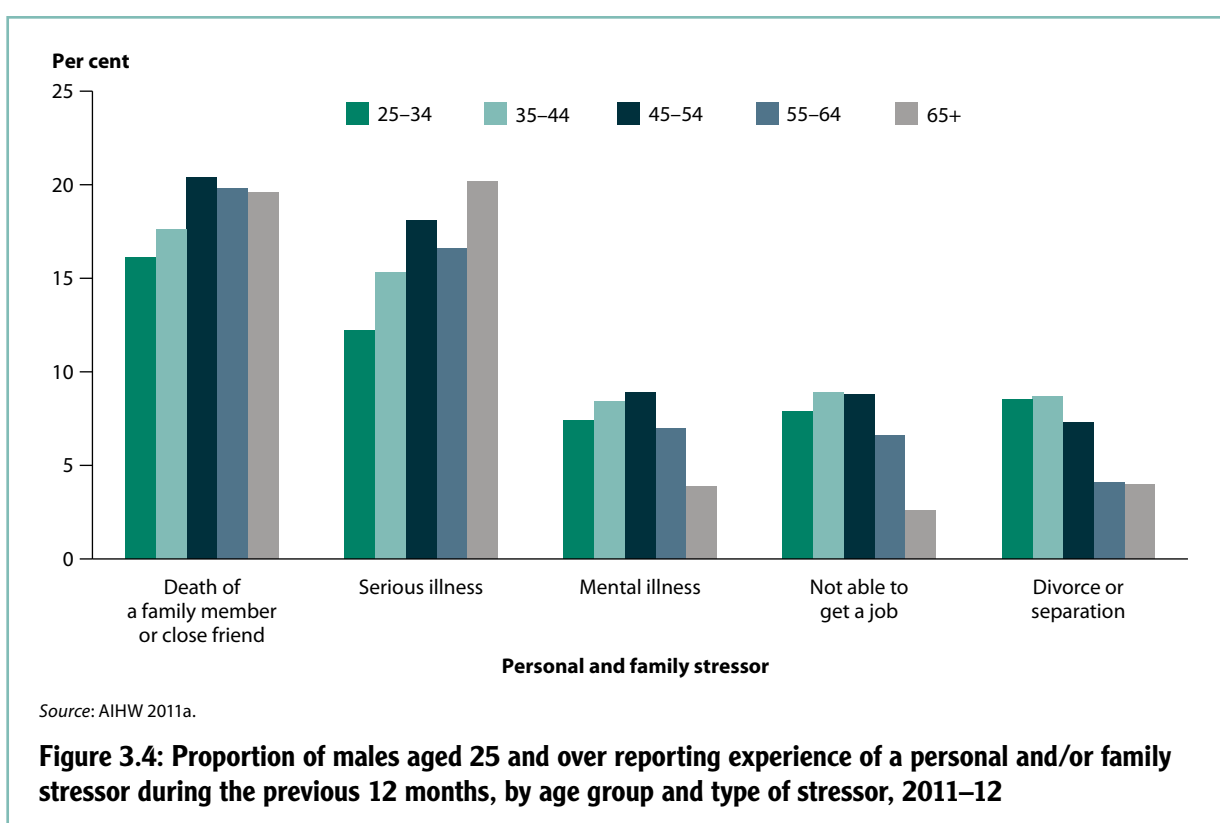
In 2011, there were close to 2.4 million fathers of all ages, in households with dependent children (ABS 2011c). In that year, there were about 291,300 births where the father's age was recorded—around 97% of all births in that year (ABS 2012c). The majority of these births (90%) were to fathers aged 25 or older. The median age at which males first become fathers has risen from 29.6 in 1981 to 33.0 in 2011 (ABS 2001; ABS 2012c). Among births to fathers aged 25 or older, almost three-quarters (73%) were within a marriage.

## Personal and family stressors

Stressors are events that adversely affect health and wellbeing. A stressor may affect an individual directly (for example, the personal experience of a serious illness) or indirectly (such as having a family member with a serious illness). In some circumstances, the effect of these stressors may be ongoing and may limit a person's ability to live a satisfying and productive life.

The ABS Australian Health Survey (AHS) 2011–12 collected information about personal and family stressors. Almost half (47%) of males aged 25 and over reported they had experienced a personal and/or family stressor in the 12 months preceding the survey interview (ABS 2012b). This was similar to males aged 15–24 (48%) and lower than females aged 25 and over (54%). The most commonly reported stressors were the death of a family member or close friend (19%), a serious illness (16%), mental illness (7%), not being able to get a job (7%) or divorce and separation (7%).

Males aged 35–44 and 45–54 were most likely to have experienced a personal and/or family stressor in the past 12 months (49%), while males aged 65 and over were least likely (44%). The likelihood of some types of stressors generally increased with age—for example, serious illness, serious disability and the death of a family member or close friend (Figure 3.4; ABS 2012b). The likelihood of other types decreased with age—divorce or separation, serious accidents, alcohol- or drug-related problems, not being able to get a job, and trouble with police.



## 4 LIFE AND DEATH

### Key findings

- Males aged 25 and over in 2011 can expect, on average, to live to 80 or over.
- Coronary heart disease was the leading cause of death in males aged 25 and over in 2010. Lung cancer was the second leading cause.
- Suicide was the leading cause of death for males aged 25–44 in 2010. The rate of suicide in males aged 25 and over was 3.6 times as high as it was for females aged 25 and over.
- The leading causes of death for males aged 45 and over were mainly chronic diseases and the top leading causes for males aged 25–44 were injury-related (including suicide).

## Life expectancy

Life expectancies provide an indication of the number of years of life remaining from a given point in time. These figures change over the course of a life, are related to mortality rates at each age, and are reflective of the fact that risk factors and protective factors change with age.

Males aged 25 in 2011 could expect to live an additional 55.6 years, to age 80.6 (Table 4.1). Males aged 65 in 2011 could expect to live to 84.1, and those aged 85 could expect to live to 91.2. While males aged 25 and over could expect, on average, to live to 80 or over, at every age males have fewer expected years of life remaining than females (Table 4.1).

**Table 4.1: Life expectancy among males, by selected year of age, 2011**

Age (years)	Male life expectancy (years of life remaining)	Average expected age at death (years)	
		Males	Females
25	55.6	80.6	84.8
45	36.6	81.6	85.3
50	32.0	82.0	85.6
65	19.1	84.1	87.0
85	6.2	91.2	92.2

Note: Expected age at death is calculated by adding age to the age specific life expectancy.

Source: ABS 2012f.

## International comparisons

Life expectancy among males in Australia compares favourably to other countries. In 2010, Australian male life expectancy at birth ranked fourth out of 24 Organisation for Economic Co-operation and Development (OECD) countries, behind Switzerland, Israel and Japan and tied with Iceland and Sweden (OECD 2012).

At age 40, Australian male life expectancy ranked third behind Switzerland and Israel, at age 60, Australia ranked second behind Switzerland and at age 80, Australia ranked ninth.

## Mortality

Analysis of mortality data—age at death and the conditions that males are dying from— provides an insight into health status. Mortality data help to measure health and disease, to understand the disease process in a population, to assess interventions, to improve disease outcomes, and to plan for future health service needs.

The data in this section come from analysis of the AIHW National Mortality Database.

In 2011, there were 73,593 deaths among males aged 25 and over, a rate of 10.0 per 1,000 males, compared with 9.2 per 1,000 females of the same age (ABS 2012f). Among males, the mortality rate increased with increasing age, from 0.7 per 1,000 males aged 25–29 to 145.8 per 1,000 males aged 85 and over. At all ages, males were more likely to die than females of the same age, and the difference in mortality rates between males and females decreased as age increased (ABS 2012f).

### Leading causes of death

In the 3 years 2008–2010, coronary heart disease was the leading cause of death among males aged 25 and over, accounting for more than 36,300 deaths, at a rate of 170 per 100,000 males (Table 4.2). Lung cancer (69 per 100,000) was the second leading cause of death in males of this age group, followed by cerebrovascular disease (stroke) (63 per 100,000). Coronary heart disease was also the leading cause of death among females aged 25 and over, although at a lower rate compared with males the same age (142 per 100,000).

In 2008–2010, the greatest difference by sex in the 10 leading causes of death for males was for suicide—males were 3.6 times as likely to die from suicide as females of the same age (Table 4.2). Males were 1.7 times as likely as females to die from lung cancer, and less likely than females to die from cerebrovascular disease (stroke) and dementia.

**Table 4.2: Leading causes of death<sup>(a)</sup> among males aged 25 and over, by sex, 2008–2010**

Leading cause of death	Males		Females		Rate ratio <sup>(c)</sup>
	Number	Rate <sup>(b)</sup>	Number	Rate <sup>(b)</sup>	
Coronary heart disease	36,320	170.0	31,750	142.5	1.2
Lung cancer	14,724	68.9	9,116	40.9	1.7
Cerebrovascular disease (stroke)	13,538	63.4	20,794	93.3	0.7
Prostate cancer	9,376	43.9	..	..	..
Chronic obstructive pulmonary disease	9,085	42.5	7,149	32.1	1.3
Dementia	8,415	39.4	17,037	76.5	0.5
Colorectal cancer	6,721	31.5	5,508	24.7	1.3
Diabetes	6,233	29.2	6,046	27.1	1.1
Unknown primary site cancers	5,931	27.8	5,545	24.9	1.1
Suicide	4,728	22.1	1,377	6.2	3.6
<b>All causes<sup>(d)</sup></b>	<b>213,535</b>	<b>999.3</b>	<b>205,550</b>	<b>922.4</b>	<b>1.1</b>
<i>Event of undetermined intent<sup>(e)</sup></i>	<i>1,040</i>	<i>4.9</i>	<i>434</i>	<i>1.9</i>	<i>2.5</i>
<i>Other ill-defined causes<sup>(e)</sup></i>	<i>1,206</i>	<i>5.6</i>	<i>1,486</i>	<i>6.7</i>	<i>0.8</i>

.. not applicable.

(a) Leading causes of death are for males aged 25 and over, 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) Rates are calculated per 100,000 population, using the 2008–2010 ABS estimated resident populations by age and sex.

(c) The rate ratio compares the male and female mortality rate for each cause. A rate of 1.0 indicates that males and females are similarly likely to die from that cause, a ratio greater than 1.0 indicates males are more likely to die from that cause compared with females, and a ratio less than 1.0 indicates males are less likely to die from that cause compared with females.

(d) Includes those causes of death not listed in the table.

(e) Deaths classified as 'event of undetermined intent' (ICD-10 codes Y10–Y34) and 'other ill-defined causes' (ICD-10 codes R00–R94, R96–R99, I46.9, I95.9, I99, J96.0, J96.9, P28.5) are records that may be affected by future revisions to mortality data.

#### Notes

1. While mortality data for 2008 are final, the data for 2009 are revised and those for 2010 are preliminary. Data for 2009 and 2010 are subject to revision.

2. These data have not been adjusted for the additional deaths arising from outstanding registrations of deaths in Queensland in 2010. For more detail please refer to Technical note 3 in *Causes of death, Australia, 2010* (ABS 2012d).

Source: AIHW analysis of AIHW National Mortality Database.

For example, the leading causes of death were:

- suicide (21% of deaths), followed by land transport accidents and accidental poisoning, among males aged 25–44
- coronary heart disease (16% of deaths), followed by lung cancer and suicide, among males aged 45–64
- coronary heart disease (16% of deaths), followed by lung cancer and cerebrovascular disease (stroke), among males aged 65–84
- coronary heart disease (21% of deaths), followed by cerebrovascular disease (stroke) and dementia, for males aged 85 and over (Figure 4.1).

Rank	25–44 years	45–64 years	65–84 years	85+ years	25+ years
1	Suicide 21%	Coronary heart disease 16%	Coronary heart disease 16%	Coronary heart disease 21%	Coronary heart disease 17%
2	Land transport accidents 11%	Lung cancer 9%	Lung cancer 9%	Cerebrovascular disease 9%	Lung cancer 7%
3	Accidental poisoning 10%	Suicide 5%	Cerebrovascular disease 6%	Dementia 8%	Cerebrovascular disease 6%
4	Coronary heart disease 7%	Colorectal cancer 4%	Prostate cancer 5%	Prostate cancer 5%	Prostate cancer 4%
5	Cirrhosis of the liver 5%	Cirrhosis of the liver 4%	Chronic obstructive pulmonary disease 5%	Chronic obstructive pulmonary disease 5%	Chronic obstructive pulmonary disease 4%
<b>Total</b>	<b>10,698</b>	<b>37,255</b>	<b>108,136</b>	<b>57,446</b>	<b>213,535</b>

## Notes

1. Total deaths are presented as the total number of deaths in each age group from 2008–2010. Numbers in the cells represent the percentage of deaths in each age group that were due to the specified leading cause.
2. The leading causes of death for males aged 25 and over, by age group, 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.
3. While mortality data for 2008 are final, the data for 2009 are revised and those for 2010 are preliminary. Data for 2009 and 2010 are subject to revision.
4. These data have not been adjusted for the additional deaths arising from outstanding registrations of deaths in Queensland in 2010. For more detail please refer to Technical note 3 in *Causes of death, Australia, 2010* (ABS 2012d).

Source: AIHW analysis of AIHW National Mortality Database.

**Figure 4.1: Leading causes of death, and percentage of total deaths, among males aged 25 and over, by age group, 2008–2010**

## 5 BODY WEIGHT

### Key findings

In 2011–12:

- Based on measured heights and weights, 75% of males aged 25 and over were overweight (44%) or obese (31%).
- The average waist circumference among males aged 25 and over was 100 cm—two-thirds (66%) of males in this age group had a waist circumference that put them at increased risk of chronic disease.
- About one-quarter (26%) of males aged 25 and over had high blood pressure, increasing from 13% of those aged 25–34 to 44% of those aged 75 and over.

Body weight can be a contributor to chronic disease. There are health problems associated with being either underweight or having excess weight. Although underweight can pose serious health risks, this chapter focuses on excess body weight among males aged 25 and over, as the scale of this problem is markedly greater than that of underweight.

There are many factors that may contribute to overweight and obesity, including the intrauterine environment, genetic factors, insufficient nutrition or excessive consumption, sedentary lifestyle, and some health conditions and medications.

Excess weight, especially obesity, is a risk factor for cardiovascular disease, Type 2 diabetes, some musculoskeletal conditions and some cancers. As the level of excess weight increases, so does the risk of developing these conditions. In addition, being overweight can hamper the ability to control or manage chronic conditions.

### Body mass index

Body mass index (BMI) is one of the main measures used for monitoring body weight. It is calculated by dividing a person's weight in kilograms by the square of their height in metres (kg/m<sup>2</sup>).

Adults aged 18 and over with a BMI of 25 or more are classified as overweight, and those with a BMI of 30 or more as obese. These classification thresholds may not be suitable for all population or age groups, where a higher or lower threshold may indicate increased risk.

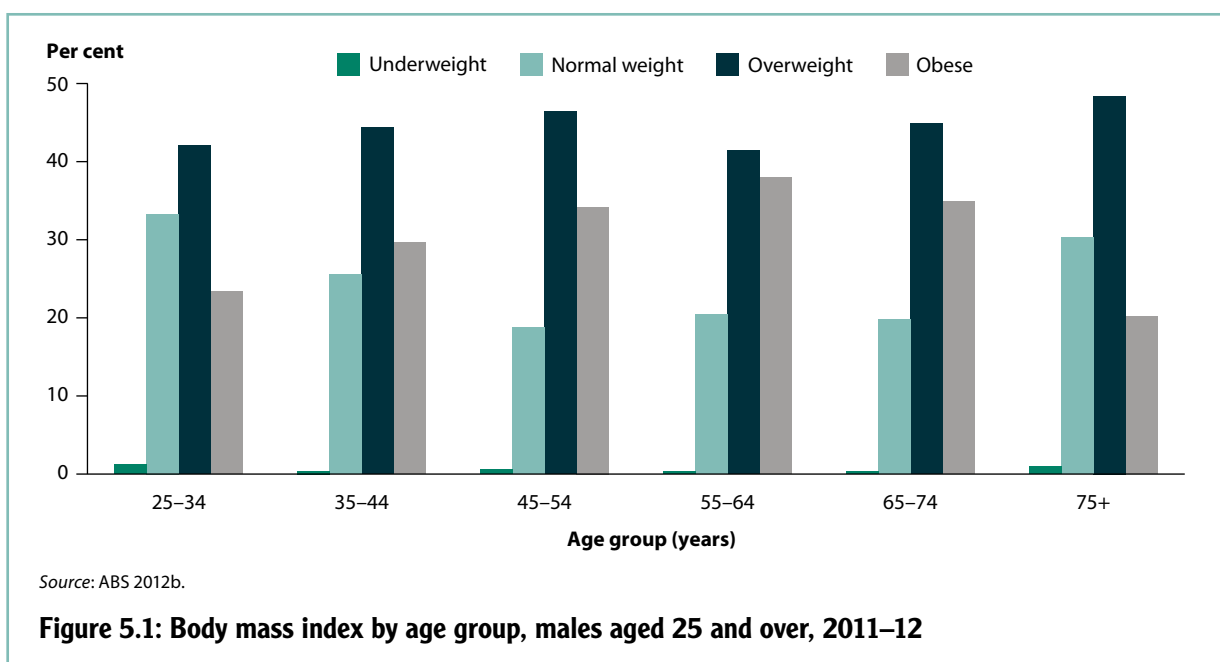
BMI can be calculated from self-reported or measured data. Measured data are particularly important for researchers in this field. In comparison, self-reported data may be less accurate. It has been shown that, on average, people underestimate their body weight and overestimate their height (ABS 2012i).

Based on measured heights and weights from the ABS AHS 2011–12, three-quarters (75%) of males aged 25 and over were overweight or obese (ABS 2012b; Figure 5.1). In this broad age group, the proportion who were overweight or obese was lower among younger males (65% of males aged 25–34) and older males (69% of males aged 75 and over). It was highest among males aged 45–54 (81%).

Similar proportions of males and females aged 25 and over were obese (31% and 30% respectively), however a larger proportion of males were classified as overweight than females (44% compared with 30%).

The proportion of males aged 25 and over carrying excess weight has increased over time, from 69% in 1995 to 72% in 2007–08 and 75% in 2011–12 (ABS 2009; ABS 2012b).

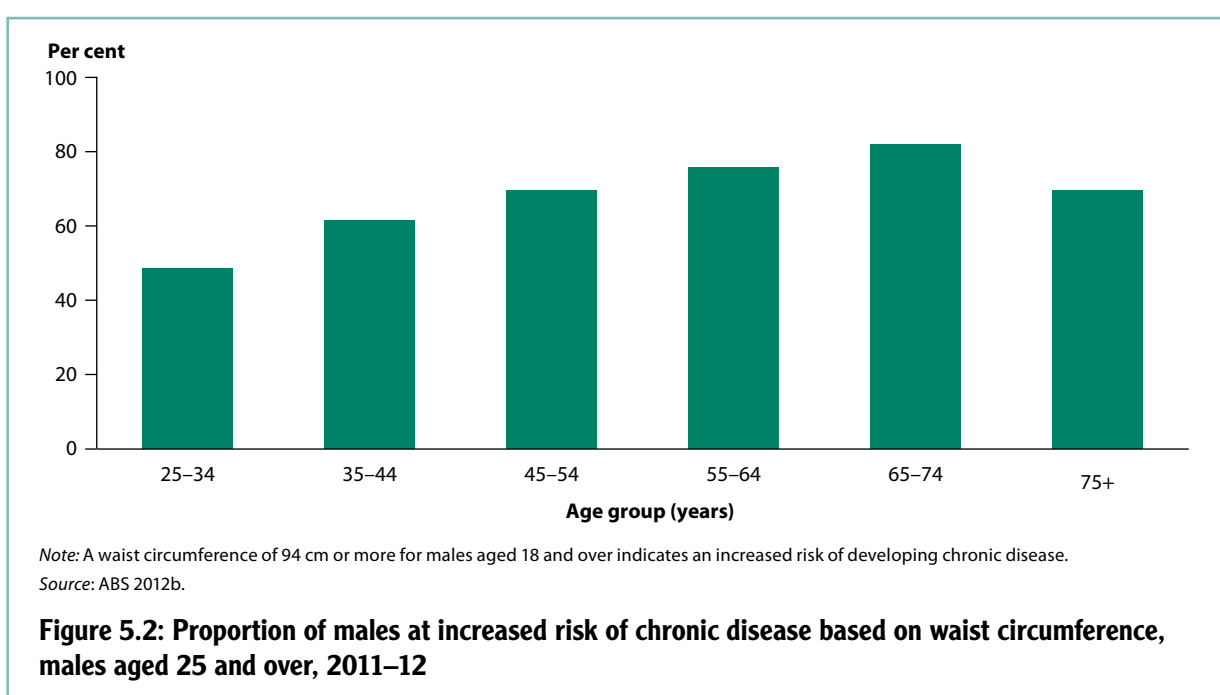




## Waist circumference

Waist circumference is a measure of central obesity and is considered a better indicator than the BMI for a range of health problems. Waist circumference is measured halfway between a person's lowest rib and the top of their hipbone. This measurement is roughly level with a person's navel. For males, a waist circumference of 94 centimetres or more indicates an increased risk of chronic disease. Similar to BMI, this waist circumference threshold may not be suitable for all population groups.

In 2011–12, the mean waist circumference among males aged 25 and over was 100 centimetres and two-thirds (66%) of males in this age group had a waist circumference that put them at increased risk of chronic disease (ABS 2012b). The proportion of males at risk of chronic disease increased to age 65–74, and declined among older males (aged 75 and over) (Figure 5.2).

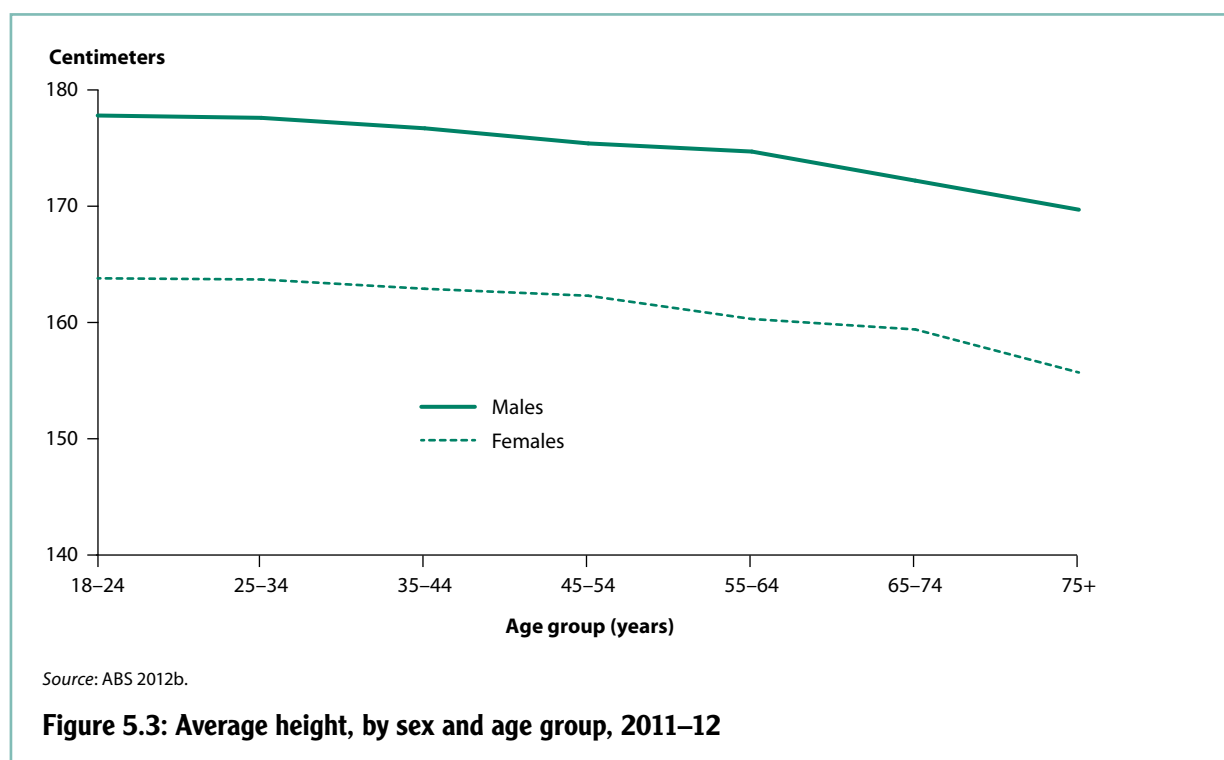


## Height

The relationship between height and health is unclear, although studies have found associations for a range of health conditions such as cancer, Alzheimer disease and heart disease.

From the ABS AHS 2011–12, it is estimated that the average height of males was 175.6 centimetres (and 161.8 centimetres for females) in 2011–12 (ABS 2012b). Older males were generally shorter than younger males (Figure 5.3). On average, males aged 75 and over were 8.1 centimetres shorter than males aged 18–24.

Between 1995 and 2011–12, the average height for males increased by 0.8 centimetres (ABS 2012h).



## Other risk factors contributing to chronic disease

Excess weight is one factor that contributes to an increased risk of chronic disease. Other factors include low relative socioeconomic status, genetics, biochemical factors such as high blood pressure and modifiable (lifestyle) risks factors such as smoking, poor diet and insufficient physical activity. Data on some of the modifiable risk factors associated with chronic disease were presented in the AHS 2011–12 (ABS 2012b). The survey showed that among males aged 25 and over:

- 65% reported they undertook a level of exercise that was low or sedentary
- 64% reported that they did not usually eat sufficient serves of fruit
- 93% reported that they did not usually eat sufficient serves of vegetables
- 26% (and up to 44% of those aged 75 and over) had measured high blood pressure (ABS 2012b).

For more information about these risk factors, using the 2007–08 National Health Survey, see *The health of Australia's males* (AIHW 2011c). Tobacco smoking is addressed in 'Chapter 6—Tobacco, alcohol and drugs'.

## 6 TOBACCO, ALCOHOL AND DRUGS

### Key findings

In 2010:

- More than 1 in 4 males aged 20–29 were current smokers, compared with less than 1 in 10 males aged 70 or over.
- On a single occasion of drinking, 1 in 10 males aged 50–59 (11%) and 60–69 (10%) were at risk of injury at least daily (every day or most days).

Tobacco smoking, risky alcohol consumption and use of illicit drugs are associated with poorer health. Tobacco smoking is the single most preventable cause of poor health and death in Australia; excessive alcohol consumption contributes to some motor vehicle accidents and crime; and illicit drug use is associated with poor mental health, crime and the spread of bloodborne viruses (AIHW 2011a). The data in this section come from two sources, and are for males and females aged 20 and over only:

- The 2010 National Drug Strategy Household Survey (AIHW 2011a). For more information, see <<http://meteor.aihw.gov.au/content/index.phtml/itemId/511160>>.
- The Alcohol and other drug treatment services National Minimum Dataset 2010–11 report (AIHW 2012b). For more information, see <<http://meteor.aihw.gov.au/content/index.phtml/itemId/498552>>.

## Use of tobacco, alcohol and drugs

### Tobacco smoking

In 2010, the proportion of males aged 20 and over who were current smokers, or who had never smoked, generally decreased with age:

- males aged 20–29 were most likely to be current smokers (26%) and males aged 70 or over least likely (8%)
- males aged 20–29 were most likely to have never smoked (63%) and males aged 60–69 least likely (41%) (AIHW 2011a).

Conversely, the proportion of males aged 20 and over who were ex-smokers increased with age, from 11% among males aged 20–29 to 48% of males aged 70 and over.

When compared with females of the same age, males were more likely at each age group to be a current smoker, more likely from age 40–49 to be an ex-smoker and less likely from age 40–49 to have never smoked (AIHW 2011a).

### Alcohol consumption

In 2010, around 13% of males aged 20–29 to 60–69 and 22% of males aged 70 and over abstained from alcohol (AIHW 2011a).

For those males (and females) who consumed alcohol, there are two measures of risk: lifetime risk, associated with the cumulative risk of consuming more than two standard drinks per day (on average), and single occasion risk, associated with consuming more than four standard drinks on any one occasion of drinking alcohol.

In 2010, by both measures, the prevalence of risky drinking among males aged 20 and over decreased with increasing age, however the difference was more marked for single occasion risk:

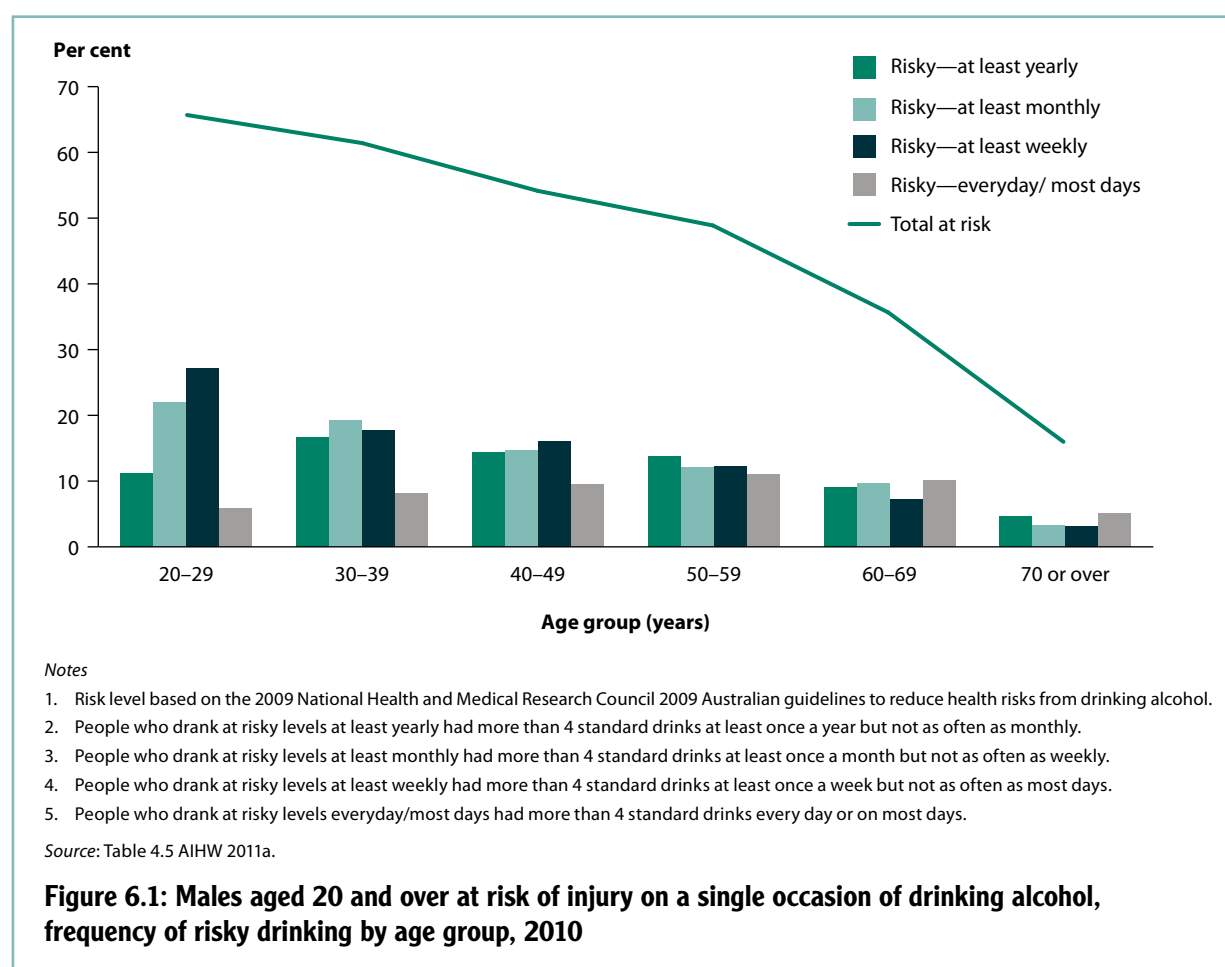
- Lifetime risk was highest among males aged 20–29 (36%) and lowest among males aged 70 and over (19%).
- Single occasion risk was highest among males aged 20–29 (66%) and lowest among males aged 70 and over (16%) (AIHW 2011a).

The following data are for single occasion risk only.

The proportion of males at risk of injury on a single occasion of drinking daily (every day or most days), was highest among males aged 50–59 (11%) and 60–69 (10%) and lowest among males aged 20–29 (6%) or 70 or over (5%) (Figure 6.1).

In contrast with males aged from 20–29 to 50–59, those aged 60 and over were substantially less likely to drink at risky levels. However, males aged 60 and over who drank at risky levels were more likely to do so daily than at other intervals (Figure 6.1).

There was a similar pattern of single occasion risky drinking among females aged 20 and over, although at lower rates compared with males the same age.



## Illicit drug use

In 2010, the proportion of males aged 20 and over who had, in the previous 12 months, used any illicit drug—including illegal drugs, pharmaceuticals used for non-medical purposes and other substances used inappropriately—was highest among males aged 20–29 (31%) and decreased with increasing age to 6% among males aged 60 and over (AIHW 2011a). There was a similar pattern of recent use among females aged 20 and over, although females were less likely than males at each age to have recently used illicit drugs.

The illicit substance that males aged 20 and over most commonly used was cannabis. Recent use decreased from 25% among males aged 20–29 to 1% among males aged 60 and over (AIHW 2011a).

## Service use

Alcohol and drug treatment services are available from public and private providers, and offer residential, day visit, counselling and support services.

In 2010–11, there were around 87,000 alcohol and other drug closed treatment episodes for male clients aged 20 and over (AIHW 2012b). These accounted for 87% of all episodes for male clients, and 66% of all episodes for that age group. Among males aged 20 and over, those aged under 50 accounted for nearly 9 in 10 treatment episodes, with 33% of clients aged 20–29, 22% aged 40–49 and 4% aged 60 and over.

## 7 MARITAL STATUS AND HEALTH

### Key findings

- In 2011, 60% of males aged 25 and over were married, 25% had never married, 12% were divorced or separated, and 3% were widowed.
- In 2010, married males had lower mortality rates compared with their never married counterparts—8.1 deaths compared with 12.8 deaths per 1,000 standard population.
- In 2007–08, 75% of males in a marriage or de facto relationship were overweight or obese, compared with 67% of males who were not married.

Relationships are important to male health and wellbeing. They can be important sources of emotional and practical support, care and resources. This section describes marriage in Australia and examines the association between marital status and health for males aged 25 and over.

### Marriage in Australia

Marital status is reported differently in different data sets and may vary within this section. A person's marital status may refer to their registered marital status (the legal status of a person regardless of their current living arrangements) or their social marital status (which includes de facto marriages) (ABS 2011a). A de facto marriage occurs when two people live together in the same household and report their relationship as de facto, partner, common law husband/wife/spouse, among other terms.

In the 2011 Census of Population and Housing, people in Australia were asked whether they were or have ever been in a registered marriage. In Australia, 60% of males aged 25 and over were married, 25% had never married, 12% were divorced or separated, and 3% were widowed (ABS 2012e).

There were 121,752 new marriages registered in 2011 (ABS 2012g). Of these:

- 71% were the first marriage for both partners, 17% were the first marriage for one partner and 12% were a second or subsequent marriage for both partners
- 78% involved cohabitation (living together) prior to marriage.

In 2011, Australia's crude marriage rate (5.4 marriages per 1,000 population) was higher than the United Kingdom (4.3), Canada (4.4) and New Zealand (4.8), but lower than the United States (6.8).

There were 48,935 divorces granted in Australia in 2011, and 48% of these involved children (ABS 2012g). The median length of time between marriage and divorce was 12.2 years. Australia's crude divorce rate (2.2 divorces per 1,000 population) was slightly higher than New Zealand (2.0), the United Kingdom (2.0) and Canada (2.1), but lower than the United States (3.4).

### The association between marital status and health

There has been longstanding interest in the association between marital status and health. Numerous studies have shown the advantages that being married has on the health of individuals including lower rates of mortality, morbidity and mental disorders, and greater life satisfaction (Lillard & Panis 1996; Fisher 2012; ABS 2011b). Some studies suggest a sex differential, showing the advantages of marriage are greater for males than females.

Among males who died in Australia during 2010, 56% were in a registered marriage at the time of death, 20% were widowed, 15% never married and 10% divorced (ABS 2011b). Married males had lower mortality rates than their never married counterparts—8.1 deaths compared with 12.8 deaths per 1,000 standard population. There was a similar pattern among females, although a lower proportion of females were married due to greater female longevity.

The exact mechanisms involved in this association are unknown and several factors have been put forward (Fisher 2012). Married people may have:

- increased economic resources
- greater social and psychological support
- greater social integration and regulation
- reduced likelihood of risk behaviours (such as smoking and substance abuse).

There may also be selective effects involved as healthier people may be more likely to get, and remain, married.

## Health characteristics by marital status

In population health surveys, respondents are often asked for demographic and socioeconomic information, such as their age, marital status and employment status. Table 7.1 summarises selected health characteristics by marital status, among males aged 25 and over, from the 2007–08 National Health Survey.

**Table 7.1: Marital status and health at a glance, males aged 25 and over, 2007–08**

<b>Personal stressors</b>	In the last 12 months, personal stressors were experienced by 50% of males in a marriage or de facto relationship and 58% of males who were not married.
<b>Excess body weight</b>	Overall, 64% of males in a marriage or de facto relationship were overweight or obese, compared with 59% of males who were not married.
<b>Long-term condition</b>	At least one long-term condition was reported by 88% of males in a marriage or de facto relationship and 90% of males who were not married.
<b>Self-assessed health status</b>	Overall, 52% of males in a marriage or de facto relationship, and 46% males who were not married, rated their health as excellent or very good.

### Notes

1. Analysis of BMI and personal stressors data excludes missing values.
2. Age-standardised percentages based on the 2007–08 NHS male population aged 25 and over.
3. Differences by marital status may not be statistically significant.

Source: AIHW analysis of ABS 2007–08 National Health Survey Confidentialised Unit Record File.

## What is missing from the picture?

Data on marital status are not available on all health-related data sets, and this limits our understanding of the association between marital status and health. There are also issues around causality—it is not possible to tell whether a person's marital status contributed to a health condition, or whether the presence of a health condition was a contributing factor in their marital status.

Further, data are not available on the physical and mental health impact on men of separation from children after the breakdown of a relationship.



## 8 SEXUAL AND REPRODUCTIVE HEALTH

### Key findings

- In 2003, one-third of males aged 40 and over reported at least one reproductive health issue. The most common issue reported was symptoms of low testosterone.
- One-quarter of males aged 40 and over reported they had undergone a vasectomy procedure as of 2003.
- In 2011, 68% of all notifications for syphilis were for males aged 25 and over.

Sexual and reproductive health issues are important concerns for males, particularly as they age. In some circumstances, there may be barriers to discussing these concerns with health professionals in a primary health care setting.

This chapter examines selected sexual and reproductive health issues, including reproductive health issues and concerns, infertility, and infectious diseases.

### Reproductive health issues and concerns

There are limited data on the reproductive health status of Australian males. The data presented here are for males aged 40 and over from the 2003 Men in Australia Telephone Survey that Andrology Australia administered (Holden et al. 2005).

In 2003, one-third of surveyed males reported they had at least one reproductive health issue and the proportions reporting these issues increased with age. The most common reproductive health issue reported was perceived symptoms of low testosterone (31%), followed by nocturia (voiding bladder two or more times during the night) (19%), moderate-severe lower urinary tract symptoms (16%) and prostate disease (14%).

Reproductive health issues are of concern to males. In 2003, 80% of males aged 40 and over with no or mild erectile dysfunction were concerned about losing erectile function, nearly 60% were concerned about developing prostate cancer and around 20% were concerned with developing symptoms of low testosterone (colloquially 'male menopause') (Holden et al. 2005).

### Infertility

Infertility is the inability to conceive after a period of 12 or more months of regular unprotected sexual intercourse. The cause of infertility in a couple may relate to known factors in either the male or female, or in both partners, or it may be unknown or unexplained. In 2003, 8% of males aged 40 and over reported they had tried unsuccessfully to have children and 9% reported they had been tested for infertility (Holden et al. 2005).

Medical advancements in fertility treatment and in assisted reproductive technologies (ARTs) in particular, mean that for many couples experiencing infertility it may be possible to achieve a successful pregnancy.

Of the 60,700 ART treatment cycles initiated in Australia and New Zealand in 2010, 22% reported male infertility factors as the only cause of infertility; 39% reported only female infertility factors; 14% reported combined male–female factors; 25% reported unexplained infertility; and 1% were not stated (Macaldowie et al. 2012). Cycles with male factors reported as the only cause of infertility had higher rates of clinical pregnancy and live birth than cycles with female factors reported as the only cause of infertility.

## Vasectomy

Infertility can be medically induced through a vasectomy procedure as a means of birth control or family planning. A vasectomy involves cutting and blocking off the tubes (vas) in the groin that carry sperm from the testicles to the penis. In 2003, 25% of males aged 40 and over reported they had undergone a vasectomy procedure (Holden et al. 2005).

Vasectomies can be performed in a variety of settings including general practices, family planning centres, and hospital outpatient clinics. The data in this section come from AIHW analysis of the AIHW National Hospital Morbidity Database, and refer to vasectomy procedures for admitted patients only (NCCH 2010). Data are not available for procedures performed outside Australian hospitals. For more information on these data, see 'Chapter 11—Hospitalisations'.

In 2010–11, there were nearly 15,300 separations (hospitalisations) in which either a unilateral or bilateral vasectomy procedure was performed. Less than 1% of these hospitalisations were for males aged under 25 and 90% were for males aged 30–49. More than 9 in 10 (93%) were same-day hospitalisations where the principal diagnosis (main reason for hospitalisation) was *contraceptive management*.

## Infectious diseases

Sexually transmissible infections (STIs) are infectious diseases that are spread from person to person through sexual contact. Males of all ages are vulnerable to contracting and transmitting these infections, and it is not only younger males that engage in unsafe sexual behaviours. Human immunodeficiency virus (HIV), syphilis, gonorrhoea and chlamydia are four prominent STIs.

In 2011, there were 978 new diagnoses of HIV infection among males aged 20 and over, accounting for 98% of new diagnoses among males of all ages, at a rate of 12 per 100,000 males (The Kirby Institute 2012). Males aged 20 and over were six times as likely as females of the same age to have a new diagnosis of HIV infection.

In 2011, 68% of all notifications for syphilis, 43% of notifications for gonorrhoea, and 19% of notifications for chlamydia were for males aged 25 and over (DoHA 2012). The notification rate of these three selected sexually transmissible infections generally decreased with age (Table 8.1). Notification rates for males were higher than for females of the same age. Males aged 25 and over had nearly four times the notification rate for syphilis or gonorrhoea compared with females of the same age.

Bloodborne viruses (BBVs) are viruses that are transmitted from the blood of one person to the blood of another person. Hepatitis B and hepatitis C are two prominent BBVs. In 2011, 47% of notifications for hepatitis B and 58% of notifications for hepatitis C were for males aged 25 and over (DoHA 2012). The notification rate of these viruses generally decreased with age, and was higher among males than females of the same age (Table 8.1). Males aged 25 and over had more than twice the notification rate for hepatitis C compared with females of the same age.

**Table 8.1: Notifications of selected sexually transmissible infections and bloodborne viruses among males aged 25 and over, by age group, 2011 (notifications per 100,000)**

Age group (years)	Sexually transmissible infections			Bloodborne viruses	
	Chlamydia	Gonorrhoea	Syphilis <sup>(a)</sup>	Hepatitis B <sup>(b)</sup>	Hepatitis C <sup>(b)</sup>
25–34	635.5	164.7	28.7	61.2	116.5
35–44	204.5	87.9	32.1	48.8	109.2
45–54	99.3	54.4	25.8	35.9	82.0
55–64	39.3	22.4	14.1	19.3	17.7
65 and over	11.7	5.1	13.3	6.0	7.2
<b>Males 25 and over</b>	<b>211.6</b>	<b>70.6</b>	<b>23.4</b>	<b>35.5</b>	<b>69.9</b>
<b>Females 25 and over</b>	<b>168.4</b>	<b>19.1</b>	<b>6.0</b>	<b>24.8</b>	<b>33.9</b>

(a) Includes all syphilis categories.

(b) Includes newly acquired and unspecified cases.

Source: DoHA 2012.

## 9 EMPLOYMENT STATUS AND HEALTH

### Key findings

- Employment is an important contributor to male health and wellbeing. Participation in work has direct financial and social effects, and can be a valuable source of self-esteem and identity.
- Among males generally considered to be working age (25–64 years) in the 2011 Census of Population and Housing, 82% were employed, 4% were unemployed and 14% were not in the labour force. The majority (86%) of those employed were working full time.
- In 2007–08, 11% of employed males aged 25 and over rated their health as fair or poor, compared with 37% of unemployed males and 41% of males not in the labour force.

Workforce participation and income, along with educational attainment, are important and interrelated contributors to health and wellbeing for males and their families. This section examines the value of workforce participation for males, summarises key work-related statistics from the 2011 Census of Population and Housing, and examines selected health characteristics by employment status.

### Employment in Australia

In the 2011 Census of Population and Housing, people in Australia were asked about their employment. Among males generally considered to be of working age (25–64):

- 82% were employed, 4% were unemployed and 14% were not in the workforce
- 86% of those employed were working full time
- 82% of those employed worked in the private sector and 14% in the public sector
- 13% of those employed were in construction and 13% in manufacturing—the most common industries for employment
- 74% drove a car to get to work (ABS 2012e).

Males also make unpaid contributions to their families and communities. In 2011, 17% were participating in voluntary work for an organisation or group and 10% were providing unpaid assistance to a person with a disability.

### The value of work

There are important links between workforce participation and health and wellbeing. Untangling these associations is often difficult as the direction of the effect can be unclear. For example, poor physical and mental health may cause unemployment, and vice versa. Despite these difficulties, there has been a longstanding awareness of the personal, social and economic importance of work.

Income from work (and accumulated wealth) can determine a person's access to goods and services that provide health benefits, for example, food, housing and health care. This can substantially affect males, their partners and families. Further, work can be a valuable source of self-esteem and identity for males, and provide opportunities for social interaction and/or health promotion. Males (and females) who value themselves are more likely to look after their health (Waddell & Burton 2006).

There are risks associated with certain types of employment. Males, particularly those in regional and remote areas, are more likely to work in industries with higher health risk such as mining and construction (AIHW 2010b). There is also increasing awareness of the health risks associated with sitting for long periods in workplace settings. For more information on work-related injury and ill health, see 'Chapter 10—Workplace health'.

Loss of employment can be a source of stress with mental health implications for some males (APS 2011). Research has shown that unemployed males have:

- higher rates of medical consultations, medicine use, and hospitalisation
- poorer general and mental health
- higher rates of chronic disease and psychiatric morbidity
- higher mortality, including from suicide (Blakely et al. 2003; Waddell & Burton 2006).

## Health characteristics by employment status

In population health surveys, respondents are often asked for demographic and socioeconomic information, such as their age, marital status and employment status. Table 9.1 summarises selected health characteristics by employment status among males aged 25–64, from the ABS 2007–08 National Health Survey.

**Table 9.1: Employment status and health at a glance, males aged 25–64, 2007–08**

<b>Personal stressors</b>	In the 12 months to 2007–08, 53% of employed males, 74% of unemployed males and 70% of males not in the labour force experienced personal stressors.
<b>Excess body weight</b>	Overall, 72% of employed males, 62% of unemployed males, and 68% of males not in the labour force were overweight or obese.
<b>Long-term condition</b>	At least one long-term condition was reported by 87% of employed males, 88% of unemployed males and 92% of males not in the labour force.
<b>Self-assessed health status</b>	Overall, 11% of employed males, 37% of unemployed males and 41% of males not in the labour force rated their health as fair or poor.

### Notes

1. Analysis of BMI and personal stressors data excludes missing values.
2. Age-standardised percentages based on the 2007–08 NHS male population aged 25–64.
3. Differences by marital status may not be statistically significant.

Source: AIHW analysis of ABS 2007–08 National Health Survey Confidentialised Unit Record File.

## What is missing from the picture?

Data on employment status are not available on all health-related data sets, and this limits our understanding of the association between employment status (including job security) and health. There are also issues around causality—it is not possible to tell whether a person's employment status resulted from a health condition, or whether the presence of a health condition determined their employment (or unemployment).

## 10 WORKPLACE HEALTH

### Key findings

- In 2009–10, there were nearly 72,600 workers compensation claims for serious injury and diseases resulting in fatality, permanent incapacity or temporary incapacity among males aged 25–64. This group made up more than half of all serious claims that year.
- In 2009–10, there were 170 workplace fatalities among males aged 25–64.
- In 2007–08, 46% of employed males aged 25 and over reported that their employment involved ‘mostly sitting’. This proportion increases with age, while work that involves mostly walking or standing or is physically demanding decreases with age.

Having a healthy working population is essential to the Australian economy because illness and injury affect a person’s ability to work, leading to productivity losses. Just as importantly, the workforce itself plays a role in whether people are healthy or not. It can be a source of occupational risks and exposures, health promotion opportunities, and peer groups that influence dietary and health behaviours.

This chapter explores work-related injuries, illness and deaths. For some sections, the analysis is limited to males aged 25–64—referred to as ‘working age’.

### Workplace injuries and deaths

In 2009–10, among males aged 25–64, there were nearly 72,600 workers compensation claims relating to occupational injuries and diseases that have resulted in a fatality, permanent incapacity or temporary incapacity with an absence from work of one or more working weeks (serious claims) (unpublished data from Safe Work Australia 2012). Males aged 25–64 made up:

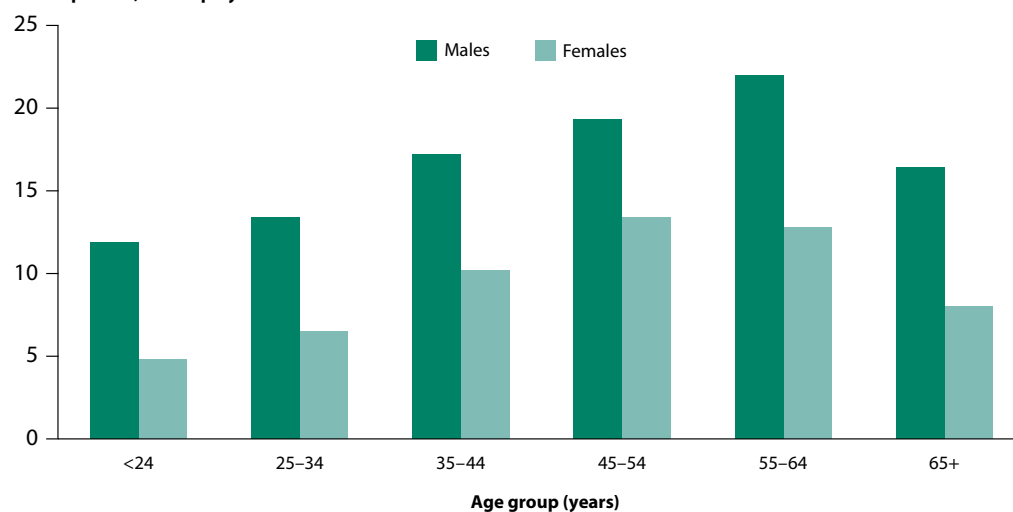
- 55% of all serious claims for males and females
- 84% of all serious claims among males
- 65% of serious claims among males and females aged 25–64.

The rate of serious claims increased with age from 12 claims per 1,000 male employees aged 25–34 to 22 per 1,000 male employees aged 55–64 (Figure 10.1). The rate of claims then decreased to 16 per 1,000 for males aged 65 and over. The rate of serious claims was consistently higher among males than females of the same age.

The most common mechanism for injuries among working age males was ‘body stressing’ through repetitive movement or handling objects (41% of all claims); falls, trips and slips (20%) and being hit by moving objects (14%). The most common bodily locations of injuries were the back (21%), hand (12%) and knee (10%). The industries with the highest numbers of serious claims were those of manufacturing (21%), construction (14%) and transport and storage (12%).

Although most males aged 25–64 are employed, they suffer relatively few work-related deaths each year compared with deaths from other causes. In 2009–10, there were 209 work-related traumatic injury fatalities among males, with 77% (170 claims) for males aged 25–64. The number of work-related fatalities in this age group was the lowest since 2003–04 (190 fatalities).

Claims per 100,000 employees



Note: Data refer to serious claims—all accepted workers compensation claims (excluding journey claims) that resulted in a fatality, permanent incapacity or temporary incapacity with an absence from work of one working week or more.

Source: Unpublished data from Safe Work Australia 2012.

**Figure 10.1: Workers compensation claims by sex and age group, 2009–10**

## Asbestos-related deaths

Asbestos is a naturally occurring fibrous mineral widely used in Australia in construction and other industries prior to the mid-1980s. Some of the 3,000 asbestos-based products include cement sheet, roofing sheet, plastics, vinyl floor tiles, pipe lagging and fire-resistant material (SafeWork SA 2002). While all forms of asbestos are now banned from use in Australia, these products remain in thousands of private and commercial buildings.

Diseases caused by exposure to asbestos fibres include two types of cancers (mesothelioma and lung cancer) and asbestosis (a progressive, fibrotic lung disease causing increasing breathlessness) (Environment Australia 2001). These diseases are often associated with a long latency period—it may take up to 40 years between the initial exposure and the onset of disease.

In the 3 years 2008–2010, there were 302 deaths from asbestosis and 1,492 deaths from mesothelioma among males aged 25 and over (AIHW analysis of the AIHW National Mortality Database). Males accounted for almost all asbestosis deaths (98%) and the majority of mesothelioma deaths (81%) in this period. The majority of asbestosis and mesothelioma deaths among males occurred among those aged 65 and over.

Male deaths due to asbestosis are increasing over time: from 0.4 deaths per 100,000 males in 1997 to 1.1 per 100,000 in 2010. In contrast, deaths from mesothelioma have remained stable over the same period, at around 5 deaths per 100,000 males. Due to the long latency periods of these diseases, many more deaths are expected into the 21st century.



## Activity levels at work

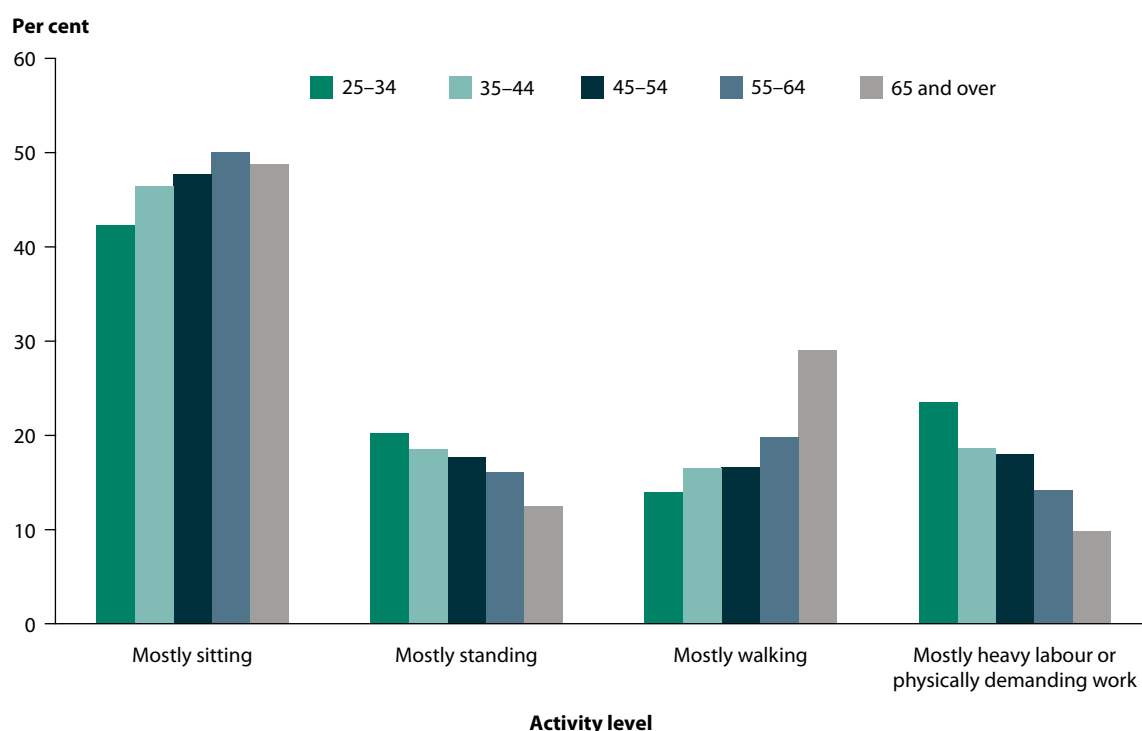
Males (and females) can spend a considerable proportion of their day in the workplace, and this makes it one of the most useful settings for health promotion (Box 10.1). The workplace can also be a source of health risks, as described previously and below.

### Box 10.1: Health checks in the workplace

Health checks in the workplace are an important tool to raise awareness about chronic disease and risk factors, and can reduce barriers to access by bringing health checks to males (DoHA 2010). There are many programs that aim to improve health in the workplace.

- **WorkHealth checks** run by Safe Work Victoria offer Victorian workers a free and confidential health check to help them understand their risk of heart disease and diabetes <[www.workhealth.vic.gov.au/workhealth-checks](http://www.workhealth.vic.gov.au/workhealth-checks)>.
- **The Tradies Tune Up** run by the OzHelp Foundation provides males working in the building and construction industry in the ACT and regional NSW with a 20-minute health tune up and information about male health issues <<https://ozhelp.org.au>>.
- **Decades of Life** program run by Foundation49 takes health care to Australian male workers by offering health assessments using an online tool and face-to-face appointments <[www.49.com.au](http://www.49.com.au)>.

The amount of time spent sitting during a day (in both work and leisure time) can affect a person's health, regardless of how much physical activity they do (Brown et al. 2009). In 2007–08, 46% of employed males aged 25 and over reported that their employment involved 'mostly sitting'—a lower proportion than their female counterparts (50%) (AIHW analysis of the 2007–08 National Health Survey). The proportion of males that were mostly sitting or mostly walking at work generally increased with age, while the proportion of those mostly standing, or mostly doing physically demanding work decreased (Figure 10.2).



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

**Figure 10.2: Activity level at work, employed males aged 15–64, 2007–08**

### What is missing from the picture?

Regular information is available about injuries sustained in the workplace that are subject to a workers compensation claim (Safe Work Australia 2013). Data are more limited about other workplace injuries that may reduce a person's health and wellbeing. There are also limited data on the association between commuting distance and mode of transport, and health.

More recent data on long-term conditions resulting from an injury at work, along with data on prolonged sitting and work-related activity levels, will be available when more results from the ABS AHS 2011–12 are released in 2013.

# 11 HOSPITALISATIONS

## Key findings

In 2010–11:

- There were more than 3.6 million hospitalisations for males aged 25 and over. Around 3 in 5 (62%) of these were same-day hospitalisations, and around 2 in 5 (38%) were for overnight care.
- Males were less likely than females to be hospitalised at age 25–54, and more likely at age 55 and over.
- Rates of hospitalisation for males aged 25 and over increased substantially with age.
- The leading principal diagnosis (reason) for same-day hospitalisation for males aged 25 and over was *care involving dialysis*, followed by *other medical care* (consisting mainly of chemotherapy), and *care involving use of rehabilitation procedures*.
- The leading reason for overnight hospitalisation for males aged 25 and over was *care involving use of rehabilitation procedures*, followed by *pain in throat and chest*.

Hospitals are an important part of the Australian health system, and provide admitted patient care, emergency department services and outpatient services for non-admitted patients. Some of the services that hospitals provided include emergency and planned (elective) care, maternity services, medical services and surgical services for admitted patients (AIHW 2012d). Hospital services can be provided on the same day, or may require an overnight stay or longer.

The data in this section come from the AIHW National Hospital Morbidity Database, and refer to admitted patients only. For more information, see <<http://meteor.aihw.gov.au/content/index.phtml/itemId/511338>>.

In 2010–11, there were more than 3.6 million hospital separations (hospitalisations) for males aged 25 and over, accounting for 87% of all male hospitalisations. The majority (2.3 million) of these hospitalisations were same-day hospitalisations, the remainder (1.4 million) were for overnight care. Males aged 25 and over were hospitalised at a rate of 501 per 1,000 males, and were more likely to be hospitalised than males aged 0–24 (148 per 1,000). When hospitalisations for pregnancy and childbirth were excluded:

- Males aged 25 and over were more likely to be hospitalised than females of the same age (481 per 1,000).
- The proportion of same-day and overnight hospitalisations were similar for males and females aged 25 and over.

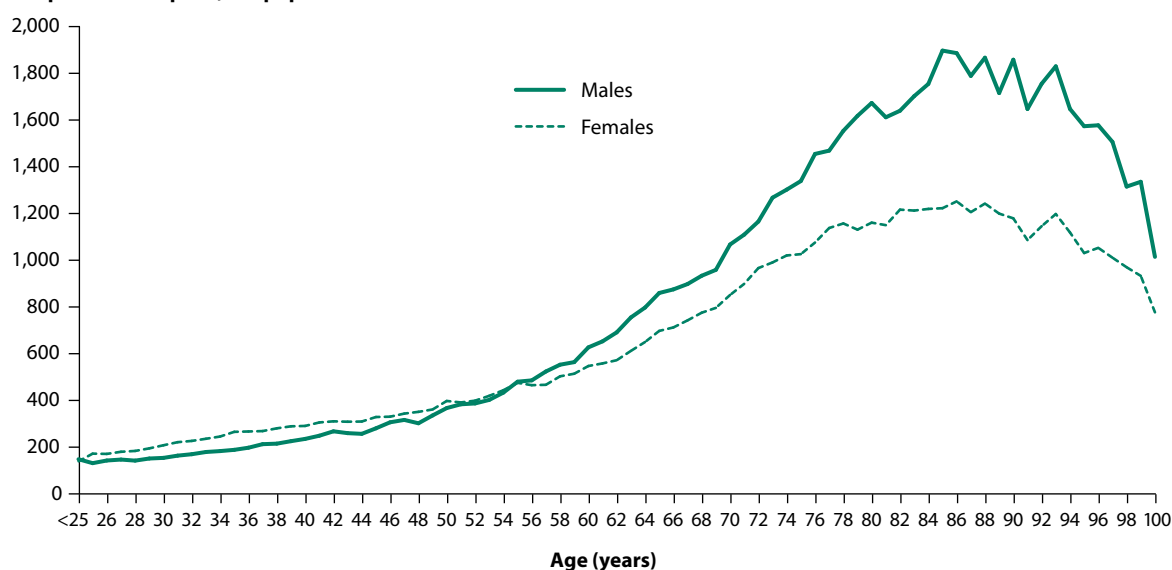
All subsequent analyses in this section comparing males and females exclude hospitalisation for pregnancy and childbirth.

The hospitalisation rate among males increased with age:

- males aged 25–29 were least likely to be hospitalised (143 per 1,000)
- males aged 85 and over were most likely to be hospitalised (1,808 per 1,000), although hospitalisations decreased again by single year of age from 85 (Figure 11.1 and Table 11.1).

The pattern of hospitalisations by age was similar for males and females, however there were differences in the rates. Males were:

- less likely to be hospitalised than females at younger ages (25–54), with 244 and 289 hospitalisations per 1,000 population, respectively
- more likely to be hospitalised than females at older ages (55 and over), with 955 and 790 hospitalisations per 1,000 population, respectively (Figure 11.1).

**Hospitalisations per 1,000 population****Notes**

1. Hospital 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.
2. Hospital separations with a principal diagnosis of 'pregnancy, childbirth and the puerperium' (ICD-10-AM codes O00–O99) have been excluded.
3. Hospitalisations per 1,000 are based on 31 December 2010 population by sex and age.

Source: Analysis of AIHW National Hospital Morbidity Database 2010–11.

**Figure 11.1: Hospital separations among males and females aged 25 and over, 2010–11**

## Reason for hospitalisation

### Same-day hospitalisation

In 2010–11, the leading principal diagnosis (reason) for same day hospitalisation among males aged 25 and over was care involving dialysis, accounting for 31% of same-day hospitalisations. Care involving dialysis was also the leading reason for males in all age groups, and ranged from 21 per 1,000 for males aged 25–44, to more than 13 times as high (291 per 1,000) for males aged 85 and over (Table 11.1). Other leading reasons for hospitalisation among males aged 25 and over were:

- *other medical care* (consisting mainly of chemotherapy)
- *care involving the use of rehabilitation procedures*
- *other cataract*
- *malignant neoplasm of skin*.

There were some differences in the top five reasons for same-day hospitalisation among males, by age. Males aged 65–84 and 85 and over had the same top five reasons as males aged 25 and over, but in different rank orders, and the second most common reason for same-day hospitalisation among males aged 25–44 was *contraceptive management* (Table 11.1).

While males and females aged 25 and over shared the same top five leading reasons for same-day hospitalisations, males had higher rates than females for *care involving dialysis*, and lower rates for *other medical care*, *care involving use of rehabilitation procedures* and *other cataract*.

**Table 11.1: Top five leading reasons<sup>(a)(b)</sup> and rate<sup>(c)</sup> for same-day hospitalisation among males aged 25 and over, by age group, 2010–11**

25–44	45–64	65–84	85 and over	25 and over
Care involving dialysis	Care involving dialysis	Care involving dialysis	Care involving dialysis	Care involving dialysis
21.5	87.0	278.9	290.7	95.3
Contraceptive management	Other medical care	Other medical care	Care involving use of rehabilitation procedures	Other medical care
3.8	22.3	65.0	53.9	21.5
Other medical care	Care involving use of rehabilitation procedures	Other cataract	Other cataract	Care involving use of rehabilitation procedures
3.1	8.1	40.3	44.8	9.7
Internal derangement of knee	Benign neoplasm of colon, rectum, anus and anal canal	Care involving use of rehabilitation procedures	Other malignant neoplasms of skin	Other cataract
2.9	5.7	28.8	40.7	9.7
Embedded and impacted teeth	Special screening examination for neoplasms	Other malignant neoplasms of skin	Other medical care	Other malignant neoplasms of skin
2.8	5.5	20.1	32.9	6.5
<b>Total</b> <b>110.9</b> <b>(349,890</b> <b>hospitalisations)</b>	<b>Total</b> <b>305.3</b> <b>(844,652</b> <b>hospitalisations)</b>	<b>Total</b> <b>764.2</b> <b>(956,074</b> <b>hospitalisations)</b>	<b>Total</b> <b>815.9</b> <b>(110,167</b> <b>hospitalisations)</b>	<b>Total</b> <b>309.4</b> <b>(2,260,783</b> <b>hospitalisations)</b>

(a) Based on International statistical classification of diseases and related health problems, 10th revision, Australian modification, 3-digit code grouping (NCCH 2010).

(b) Hospital 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) Rate per 1,000 population, based on population of males, 31 December 2010.

Source: Analysis of AIHW National Hospital Morbidity Database 2010–11.

## Overnight hospitalisation

In 2010–11, the leading reason for overnight hospitalisation among males aged 25 and over was *care involving use of rehabilitation procedures*, accounting for 4% of hospitalisations. In contrast to the same-day hospitalisations, the reasons (and rates) for overnight hospitalisation for males varied by age. Among males aged 25 and over:

- *schizophrenia* was the leading reason for overnight hospitalisation for males aged 25–44, followed by *sleep disorders*
- *pain in the throat and chest* was the leading reason for overnight hospitalisation for males age 45–64, followed by *sleep disorders*
- *care involving use of rehabilitation procedures* was the leading reason for overnight hospitalisation for males aged 65–84, followed by *other chronic obstructive pulmonary disease*
- *care involving use of rehabilitation procedures* was the leading reason for overnight hospitalisation for males aged 85 and over, followed by *heart failure* (Table 11.2).

Where the leading reason for hospitalisation was common between age groups, the rate increased with increasing age, for example, *care involving use of rehabilitation procedures* was more than three times as high among males aged 85 and over (71 per 1,000) as among males aged 65–84 (21 per 1,000) (Table 11.2).

Males and females aged 25 and over had the same top two reasons for overnight hospitalisation, *care involving the use of rehabilitation procedures* and *pain in throat and chest*. Males had a lower rate than females for *care involving use of rehabilitation procedures*, and a similar rate for *pain in throat and chest*.

**Table 11.2: Top five leading reasons<sup>(a)(b)</sup> and rate<sup>(c)</sup> for overnight hospitalisation among males aged 25 and over, by age group, 2010–11**

25–44	45–64	65–84	85 and over	25 and over
Schizophrenia	Pain in throat and chest	Care involving use of rehabilitation procedures	Care involving use of rehabilitation procedures	Care involving use of rehabilitation procedures
3.1	6.1	21.3	70.6	6.8
Sleep disorders	Sleep disorders	Other chronic obstructive pulmonary diseases	Heart failure	Pain in throat and chest
2.4	5.9	15.3	48.0	5.1
Pain in throat and chest	Inguinal hernia	Angina pectoris	Pneumonia, organism unspecified	Sleep disorders
2.1	4.5	11.8	41.4	4.4
Mental and behavioural disorders due to use of alcohol	Acute myocardial infarction	Heart failure	Other chronic obstructive pulmonary disease	Acute myocardial infarction
2.0	4.5	11.2	32.2	4.3
Inguinal hernia	Angina pectoris	Acute myocardial infarction	Acute myocardial infarction	Inguinal hernia
1.8	4.0	11.1	23.9	4.2
<b>Total</b> <b>81.9</b> <b>(258,414</b> <b>hospitalisations)</b>	<b>Total</b> <b>162.9</b> <b>(450,576</b> <b>hospitalisations)</b>	<b>Total</b> <b>447.3</b> <b>(559,574</b> <b>hospitalisations)</b>	<b>Total</b> <b>992.5</b> <b>(134,024</b> <b>hospitalisations)</b>	<b>Total</b> <b>191.9</b> <b>(1,402,588</b> <b>hospitalisations)</b>

(a) Based on International statistical classification of diseases and related health problems, 10th revision, Australian modification, 3-digit code grouping (NCCCH 2010).

(b) Hospital 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) Rate per 1,000 population, based on population of males, 31 December 2010.

Source: Analysis of AIHW National Hospital Morbidity Database 2010–11.

## 12 MENTAL HEALTH AND RELATED SERVICES

### Key findings

- In 2007, an estimated 1.1 million (17%) males aged 25–85 experienced a mental disorder in the previous 12 months.
- In 2010, the treated prevalence rate for psychotic disorders was 5.8 cases per 1,000 males aged 25–64, higher than the rate among males aged 18–24 (4.0 per 1,000) and females aged 25–64 (3.7 per 1,000).
- In the 3 years 2008–2010, 1 in 4 (25%) deaths among males aged 25–29 was attributed to suicide.
- In 2009–10, the rate of community mental health care service contacts was highest for males aged 25–34 (556 per 1,000), and decreased with age to 181 per 1,000 males aged 65 and over.

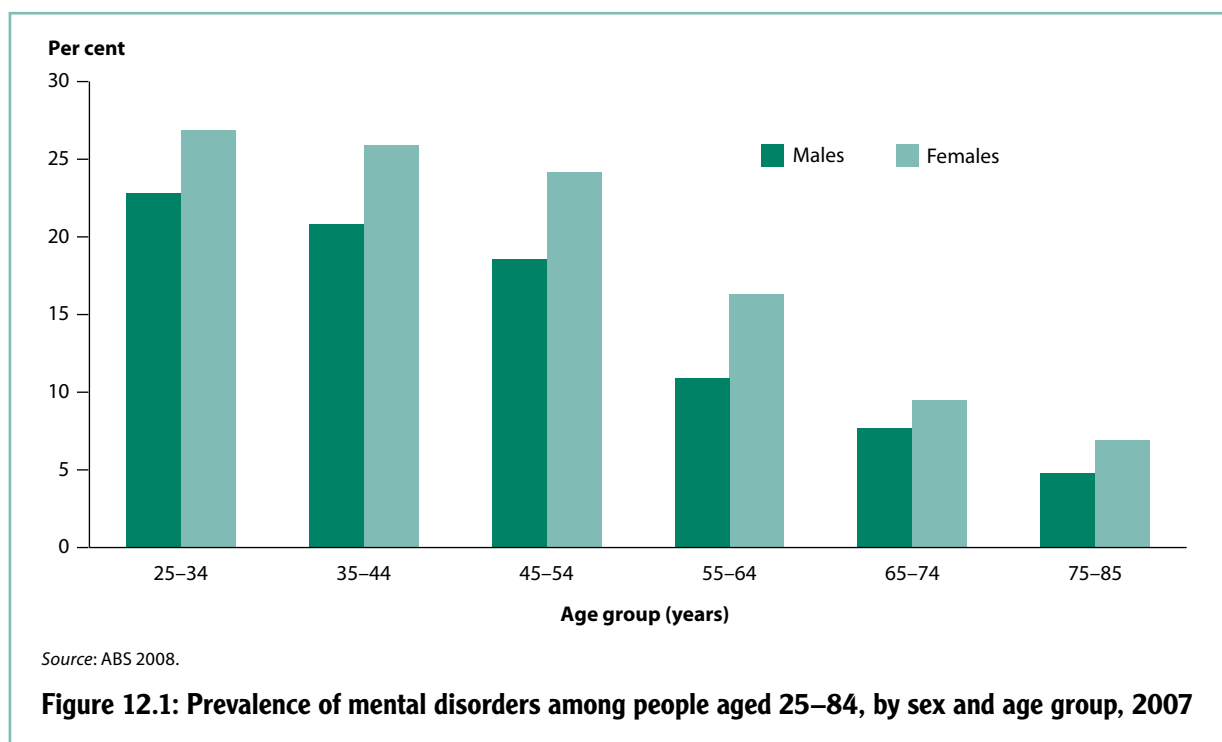
Mental health is an important component of holistic health and wellbeing. Good mental health is characterised by a person's ability to recognise their strengths and values, cope with daily stressors, work productively and contribute to their community (WHO 2011a). Poor mental health comprises a spectrum of symptoms and disorders with varying degrees of severity and can affect individuals, their family and society.

### The prevalence of mental health disorders

Data on the prevalence of mental health disorders come from two sources, providing a comprehensive picture of mental disorders among Australian males aged 25 and over. The 2007 ABS National Survey of Mental Health and Wellbeing (NSMHW) provides information on the prevalence of anxiety disorders, affective disorders and substance use disorders. The 2010 Australian National Survey of Psychotic Illness provides specific information on diagnosed and treated psychotic disorders, which are not represented in the NSMHW.

Mental disorders are more common in females and younger males than in males aged 25 and over. In 2007, an estimated 1.1 million males (17%) aged 25–85 had experienced symptoms of a mental disorder in the previous 12 months (ABS 2008). This was lower than for males aged 16–24 (23%) and for females aged 25–85 (21%).

Among males aged 25–85, the prevalence of a mental disorder decreased with age, from 23% among males aged 25–34 to 5% among males aged 75–85 (Figure 12.1). There was a similar pattern among females aged 25–85, although with higher rates at each age.



## Psychotic disorders

In 2010, it was estimated that more than 34,200 males aged 25–64 had a diagnosed psychotic disorder, and had received treatment for that disorder in the previous 12 months (Morgan et al. 2011). This corresponds to a treated prevalence rate of 5.8 cases per 1,000 males aged 25–64. It was higher than the rate for males aged 18–24 (4.0 per 1,000) and for females aged 25–64 (3.7 per 1,000).

Among males aged 25–64, the treated prevalence rate of psychotic disorders decreased with increasing age, and was highest among males aged 25–34 (7.4 per 1,000) and lowest among those aged 55–64 (2.6 per 1,000).

## Psychological distress

The ABS AHS 2011–12 provides the most recent population-level data on non-specific psychological distress.

In 2011–12, it was estimated 617,300 (8%) males aged 25 and over had high or very high levels of psychological distress (ABS 2012b). This was lower than among males aged 18–24 (11%) and females aged 25 and over (13%). There was little variation by age in the prevalence of high or very high psychological distress among males aged 25 and over.

## Comorbidity

Comorbidity is the occurrence of more than one condition or disorder at the same time. It is common among those with a mental disorder, and can contribute to greater disability and higher use of health resources. The data presented in this section come from AIHW analysis of the ABS 2007 NSMHW.

In 2007, among males aged 25–85, the comorbidity of any mental condition and any physical condition was highest for those aged 35–44 (11%) and lowest for those aged 65–85 (6%).

Females were more likely than males in all age groups (25–85) to have comorbid mental and physical conditions. The greatest difference was at age 45–54, with females twice as likely as males to have comorbid mental and physical conditions (19% and 9% respectively).



## Suicide

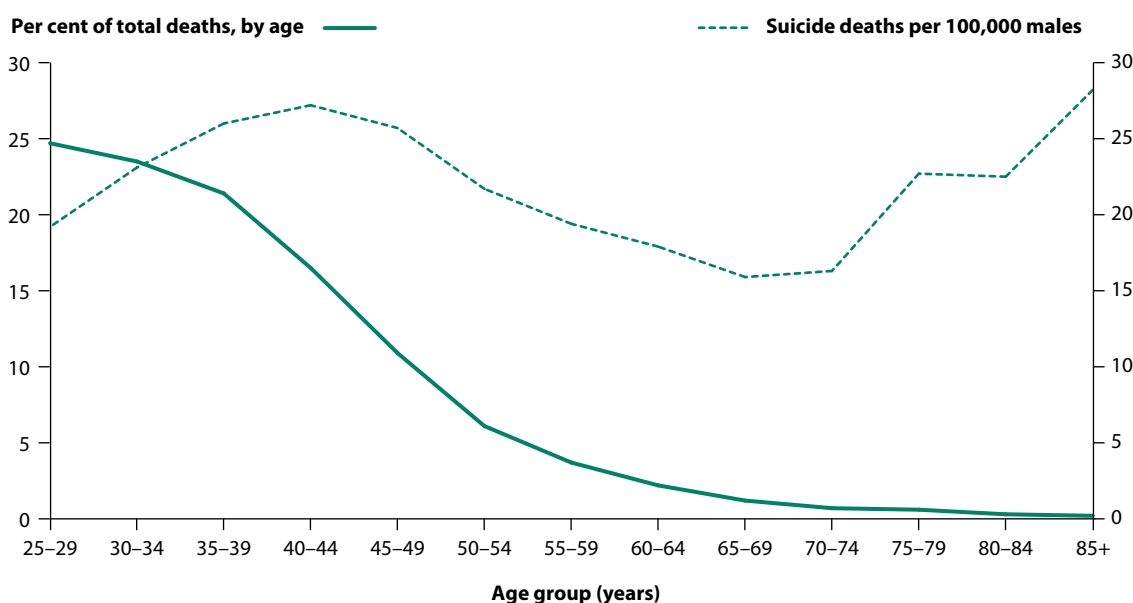
Suicide is a devastating occurrence with substantial costs for individuals, families and communities. The information in this section comes from the AIHW National Mortality Database, for the three years from 2008 to 2010.

In 2008–2010, there were more than 4,700 suicide deaths among males aged 25 and over, at a rate of 22 deaths per 100,000 males. This was higher than for males aged 0–24 (6 per 100,000) and females aged 25 and over (6 per 100,000).

The proportion of suicide deaths among males aged 25 and over decreased with increasing age (Figure 12.2). One in four (25%) deaths among males aged 25–29 was attributed to suicide, decreasing to 24% among males aged 30–34 and 21% among males aged 35–39. At age 70 and over, suicide accounted for less than 1% of male deaths.

The pattern was similar among females, although at a lower proportion in each age group: from 17% at age 25–29 to less than 1% from age 60–64.

Although suicide deaths, as a proportion of all deaths, decrease with increasing age, the rate of suicide deaths varied from 16 deaths per 100,000 males aged 65–69 to 27 and 28 deaths per 100,000 males aged 40–44 and 85 and over, respectively (Figure 12.2).



### Notes

1. Suicide classified as ICD-10 X60–X84.
2. Proportion of all deaths among males in 2008–2010, by age group.
3. Age specific death rate calculated as deaths per 100,000 male population in 2008–2010, by age group.
4. While mortality data for 2008 are final, the data for 2009 are revised and those for 2010 are preliminary. Data for 2009 and 2010 are subject to revision.
5. These data have not been adjusted for the additional deaths arising from outstanding registrations of deaths in Queensland in 2010. For more detail please refer to Technical note 3 in *Causes of death, Australia, 2010* (ABS 2012d).

Source: AIHW analysis of AIHW National Mortality Database.

**Figure 12.2: Suicide deaths among males aged 25 and over, as a proportion of total deaths and per 100,000 population, by age group, 2008–2010**

Given the prevalence of suicide among males aged in their twenties and thirties, a number of organisations provide targeted suicide prevention programs to these age groups. An example, MATES in Construction, is presented in Box 12.1.

### Box 12.1: Workplace mental health—MATES in Construction

The Building Employees Redundancy Trust (BERT) Fund established MATES in Construction (MIC) in 2008 in response to the high incidence of suicide in the male-dominated building and construction industries. The program uses a community development model to create self-sustaining suicide prevention structures on-site, and to de-stigmatise mental health and wellbeing issues while encouraging help-seeking for a range of issues.

State-based MIC organisations have been established in New South Wales, Queensland, Western Australia and South Australia. MIC will complement existing services to males in the building and construction industry delivered by OzHelp in the Australian Capital Territory, Northern Territory and Tasmania, and by Incolink in Victoria, to achieve national coverage for this at-risk group.

To become a MIC accredited site at least 1 in 20 workers must be trained as gatekeepers or Connectors, to keep workmates in a crisis safe while connecting them to help. Many sites will also have Applied Suicide Intervention Skills Training (ASIST) workers, capable of performing suicide interventions when required. Small and medium sites will have access to first aid through MIC Field Workers who can be contacted in cases of emergency.

MIC also operates the 1300 MIC 111 help line, providing suicide intervention and referrals for workers and their families.

For more information, visit <[www.matesinconstruction.com.au](http://www.matesinconstruction.com.au)>.

## Mental health-related services

Some, but not all, males with a mental health disorder will seek help from mental health services (AIHW 2013). A range of public and private providers operate mental health services in Australia, and these include general practice, hospital emergency departments, community care and supported accommodation services. The information below on community mental health care service use comes from the AIHW mental health data cubes (AIHW 2012h).

In 2010–11, there were more than 2.8 million community mental health care service contacts among males aged 25 and over, at a rate of 387 contacts per 1,000 males in that age group. This was higher than among males aged 0–24 (230 per 1,000) and higher than females aged 25 and over (311 per 1,000). Among males aged 25 and over, the highest rate of contacts was 564 per 1,000 males aged 25–34, and steadily decreased with age to 179 per 1,000 males aged 65 and over.

### What is missing from the picture?

The *National Mental Health Commission's Report Card on Mental Health and Suicide Prevention* highlighted several areas where more evidence is needed (National Mental Health Commission 2012). These include:

- developing national, standardised data on the nature of care that support people provide to those living with a mental health problem
- providing more accurate estimates of the number of people with psychotic illness, particularly those who do not seek help, or do so within the private sector
- exploring the relationship between lack of access to primary care interventions and increased suicide rates
- understanding the extent of exits to homelessness from human services or government mental health and drug and alcohol services and centres
- improving opportunities for social inclusion among people who miss out on participating in the community or in employment
- determining how many services deliver evidence-based practice and the steps they are taking to improve the delivery of best practice care.

## 13 DISABILITY, CARING AND RELATED SERVICES

### Key findings

- In 2009, nearly 1 in 4 (23%) males aged 25 and over (almost 1.7 million males) were estimated to have a disability. More than 1 million (15%) were carers.
- In 2009, around 12% males aged 25 and over had a mild or moderate core activity limitation and another 6% had a severe or profound core activity limitation.
- In 2010–11, nearly 108,400 males aged 25 and over accessed services funded under the National Disability Agreement (NDA), and more than half (54%) of these accessed employment services.

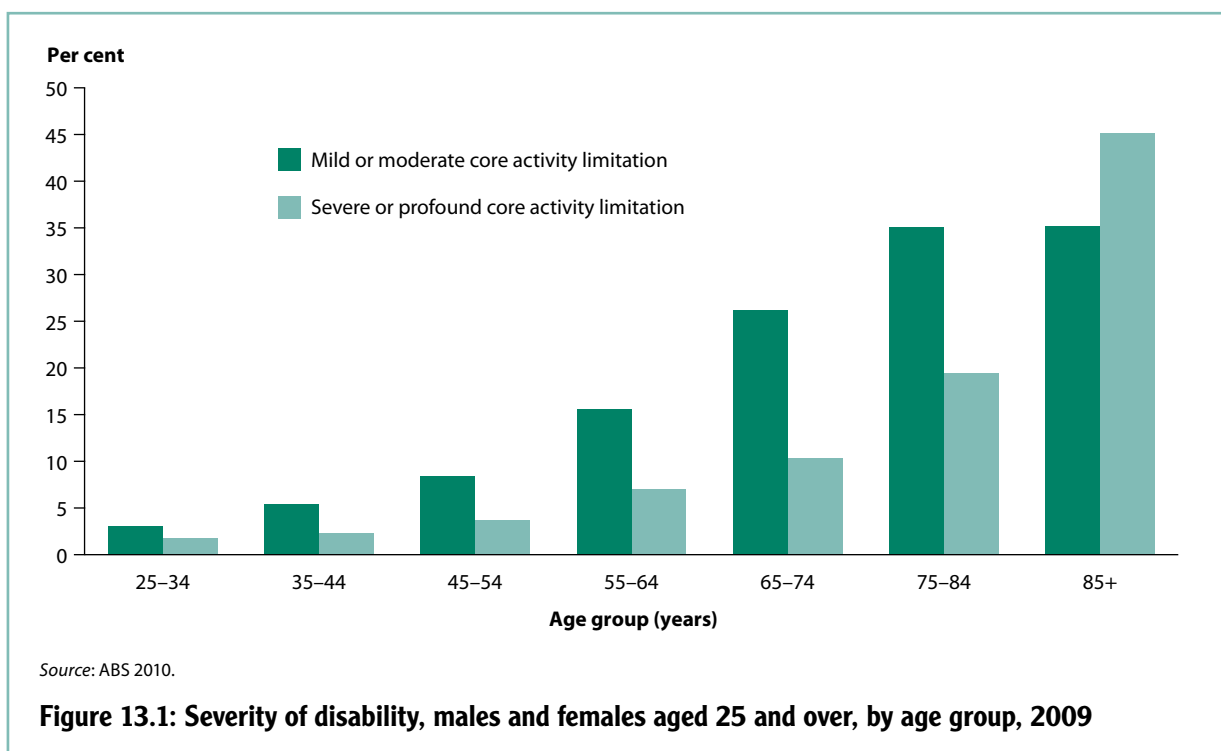
Disability refers to the impairments, activity limitations or participation restrictions resulting from a dynamic interaction between an individual's health conditions and environmental and personal factors (AIHW 2013). It is not restricted to people in old age. Increasingly, disability is recognised as something that can affect people across the life course, and that is best understood as a continuum from having no impairment or limitation to the complete loss of functioning or ability to complete a task.

### The prevalence of disability

In 2009, nearly 1.7 million (23%) males aged 25 and over were estimated to have a reported disability (ABS 2010). This was higher than among males aged 0–24 (8%) and lower than among females aged 25 and over (25%). The proportion of males aged 25 and over with a disability increased with age: from 9% of males aged 25–34 to 83% of males aged 85 and over. The pattern was similar among females aged 25 and over, who were slightly more likely than males to have a disability at ages 45–54 and 55–64.

In 2009, around 1.3 million (18%) of males aged 25 and over had a core activity limitation—that is they needed help, had difficulty, or used aids or equipment to assist with any of the core activities of daily living (mobility, self-care or communication) as a result of their disability. This was higher compared with males aged 0–24 (6%) and lower compared with females aged 25 and over (21%).

Around 844,500 (12%) males aged 25 and over had a mild or moderate core activity limitation—that is, they had difficulty or used aids or equipment to assist with core activities of daily living (Figure 13.1). Another 421,300 (6%) had a severe or profound core activity limitation—that is, they sometimes or always needed help with one or more core activities of daily living.



## Caring

In 2009, more than 1 million (15%) males aged 25 and over were carers of someone who was ageing or had a disability, and 3% were the main carer (primary carer) for that person (ABS 2010). This was much higher than males aged 0–24, of whom 4% were carers (less than 1% primary carers), and lower than females aged 25 and over, of whom 18% were carers (7% primary carers).

The proportion of males aged 25 and over who were carers (including primary carers) was highest among those aged 45–54 (23%), and lowest among those aged 25–34 (11%). Males aged 25 and over with primary caring responsibilities were most likely to care for a partner (69%), followed by a child (20%) or a parent (5%) (ABS 2010).

There was a different pattern of caring among female primary carers aged 25 and over, with 35% caring for a partner, 22% for a child and 31% for a parent.

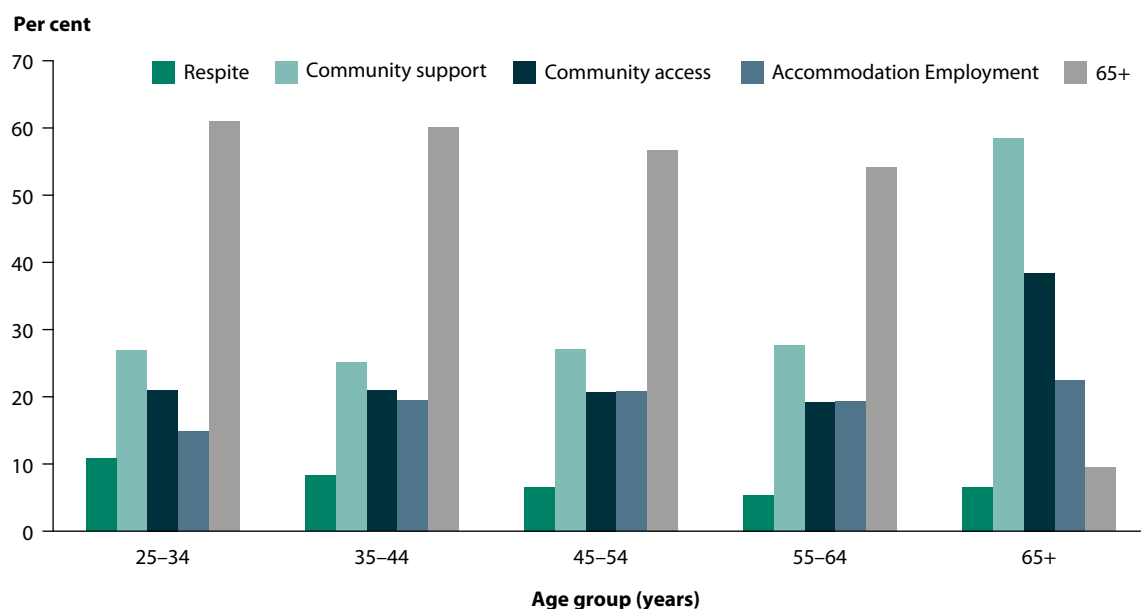
## Disability services

Disability services assist males (and females) to carry out everyday activities and participate in education, employment and community activities. Services are available to improve physical functioning; support independent living; prevent or reduce reliance on institutional care; and to promote engagement with learning and employment. These services may be provided in mainstream or specialist settings.

The following data relate to people with a disability who accessed services funded under the NDA and reporting in the Disability Services National Minimum Dataset (DS NMDS) in 2010–11 (AIHW 2012a).

In 2010–11, nearly 108,400 males aged 25 and over accessed NDA-funded services, comprising 58% of all male service users. Over half (55%) of service users aged 25 and over were male. More than half (54%) of male service users aged 25 and over accessed employment services, followed by community support services (29%). Only 8% used respite services.

Compared with males aged 25 and over, females of the same age had similar use of accommodation support, community access and respite services, higher use of community support (34%) and lower use of employment services (46%). The most commonly used service among male service users aged 0–24 was community support (67%).



Note: Percentages add up to more than 100% in each age group because individuals may have accessed more than one service group over the 12-month period.

Source: AIHW Disability Services National Minimum Data Set 2010–11 (AIHW 2012a).

**Figure 13.2: Male users of disability support services aged 25 and over, by service group and age group, 2010–11**

The types of services used by males with a disability, aged 25 and over, varied with age (Figure 13.2):

- Males aged 25–34, 35–44, 45–54 and 55–64 most commonly used employment services, followed by community support services.
- Males aged 65 and over most commonly used community support services, followed by community access services.

Respite services were the least commonly used services across all age groups.

## 14 HEALTHY AGEING

### Key findings

- Life expectancy continues to increase for older Australians. Between 2001 and 2011, there was a gain of 1.9 years in life expectancy for males aged 65 and 0.6 years for males aged 85.
- Many of the additional years of life expectancy are lived in good health. In 2009, males aged 65 could expect to live another 18.7 years, including 15.2 years without a severe or profound core activity limitation affecting communication, mobility or self-care.
- In 2007–08, almost half (47%) of males aged 65 and over had discussed a healthy lifestyle with a health professional.

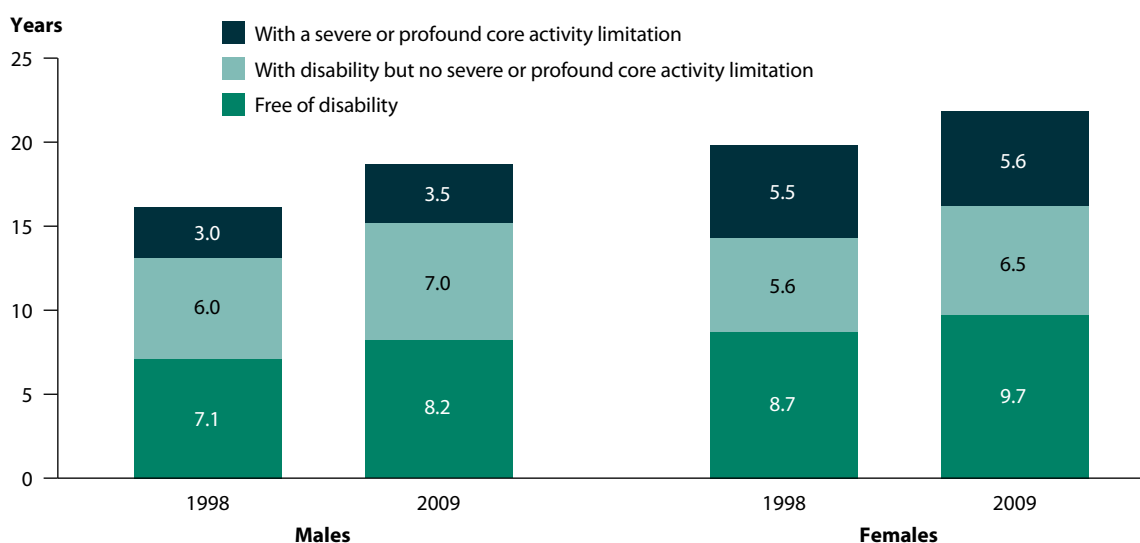
### Living longer, living healthier

Older Australians continue to live longer and healthier lives than at any time in history. Over the decade from 2001 to 2011, there was a gain of 1.9 years in life expectancy for males aged 65 and 0.6 years for males aged 85. The gain was slightly less for females at ages 65 (1.3) and 85 (0.4) (ABS 2012f).

Increasing life expectancy among older males (and females) has led to a growing focus on the extent to which these additional years are lived in good health.

In 2009, males aged 65 could expect to live another 18.7 years—8.2 of those free from disability, 7.0 with a disability and 3.5 with a severe or profound core activity limitation (AIHW 2012c). Females of the same age could expect to live more years (21.8)—9.7 free from disability, 6.5 with a disability and 5.6 with a severe or profound core activity limitation.

A comparison with 1998 indicates that while years lived with a disability or severe or profound core activity limitation has increased, older Australians have also gained more years of life free from disability (Figure 14.1).



Note: People with a severe or profound core activity limitation are unable to perform or always/often require help with communication, mobility and/or self-care.

Source: AIHW 2012c.

**Figure 14.1: Expected years of life with disability and with severe or profound core activity limitation at age 65, by sex, 1998 and 2009**

## Older males at a glance

As an age cohort, the older population has a substantial impact upon overall patterns of health, disability and service use in the community. Table 14.1 shows selected statistics about older males. For more information on these and other topics, see 'Chapter 6 Older males' in *The health of Australia's males: a focus on five population groups* (AIHW 2012g).

**Table 14.1: Key statistics on older males**

<b>Life expectancy</b>	In 2009, males aged 65 could expect to live another 18.7 years—including 3.5 years with a severe or profound core activity limitation.
<b>Healthy lifestyle discussions</b>	In 2007–08, 47% of males aged 65 and over had discussed a healthy lifestyle with a health professional.
<b>Injury hospitalisation</b>	In 2009–10, there were 25,600 cases of hospitalised injury due to falls for males aged 65 and over.
<b>Dementia</b>	In 2011, an estimated 100,700 males aged 65 and over had dementia—34% of all males and females with dementia.
<b>Residential care</b>	As at June 2011, there were around 47,100 males aged 65 and over in residential care—the majority (97%) were permanent residents.

Source: AIHW 2012c; AIHW 2012f, 2012i; Tovell et al. 2012.

### What is missing from the picture?

The process of healthy ageing is not well understood and its measurement is still under development. Further, most health surveys do not collect data from people living in residential care, and this population subgroup is likely to have poorer health than people living in the community.

Longitudinal studies can contribute to our understanding of healthy ageing among males. The first Australian Longitudinal Study on Male Health, funded by the Department of Health and Ageing, is currently in development. The Melbourne School of Population Health at the University of Melbourne will conduct this study from mid-2013.

## 15 CHRONIC CONDITIONS

### Key findings

- In 2007–08, an estimated 2.8 million (41%) males aged 25 and over had a chronic condition.
- Males aged 25 and over were significantly less likely to have asthma, arthritis or osteoporosis, compared with females of the same age.
- In 2009, prostate cancer was the leading cancer diagnosed among males aged 25 and over, with more than 19,400 new cases at a rate of 273 per 100,000 males. Testicular cancer was ranked twentieth, at a rate of 9 per 100,000 males.

Chronic conditions are a subset of long-term conditions (those that have lasted, or are expected to last six months or more) that impose a significant burden on the health and wellbeing of an individual, their family and community. Chronic conditions include arthritis, asthma, cancer, diabetes, and heart and circulatory conditions. This chapter presents an overview of some chronic conditions affecting males in Australia, with a more detailed analysis of male-specific cancers.

## Prevalence

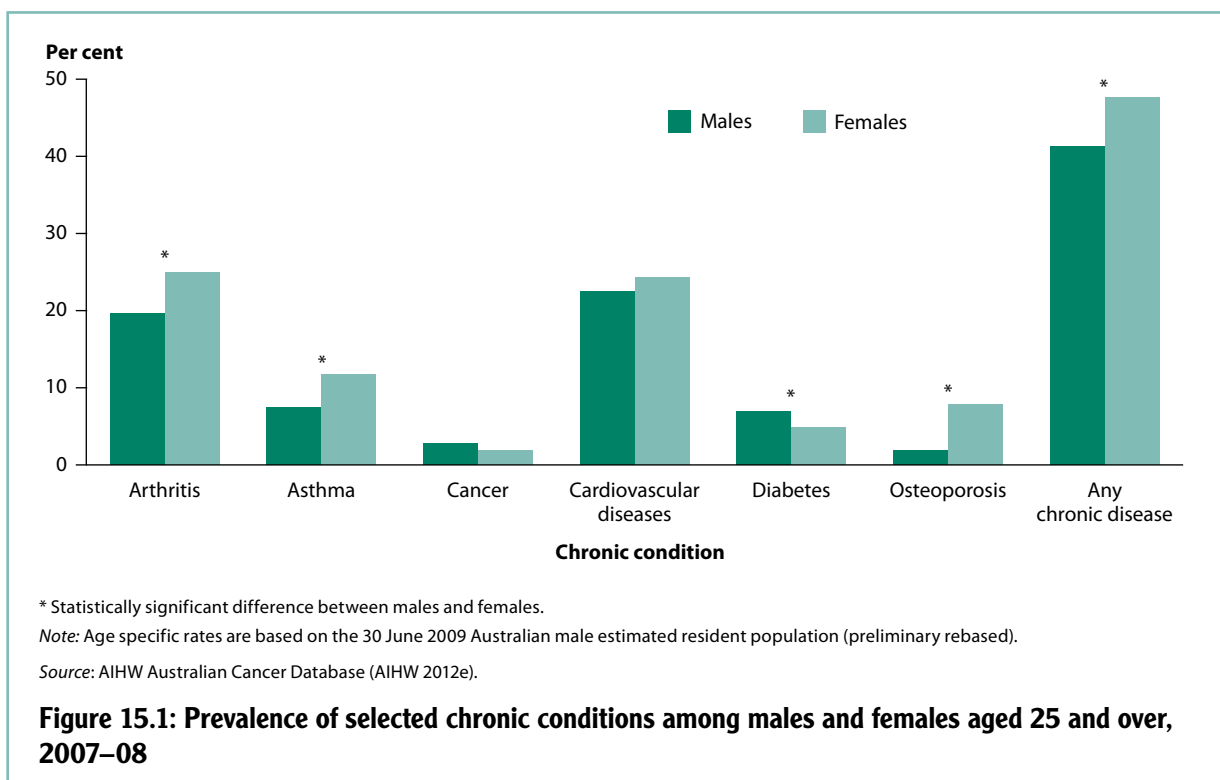
In 2007–08, an estimated 5.9 million males aged 25 and over had a long-term condition, and 2.8 million had at least one chronic condition (41%). The prevalence of chronic conditions was higher among males aged 25 and over than younger males (14%), and lower than among females aged 25 and over (48%).

In 2007–08, the prevalence of chronic disease among males aged 25 and over increased with age and was lowest among males aged 25–29 (12%) and highest among males aged 80–84 (88%). More than 9 in 10 males aged 45 and over had at least one long-term condition.

The most common chronic disease among males aged 25 and over was cardiovascular diseases (22%) and arthritis (19%) (Figure 15.1). Compared with females of the same age, males aged 25 and over were:

- significantly less likely to have asthma, arthritis and osteoporosis
- similarly likely to have cardiovascular diseases or cancer
- significantly more likely to have diabetes.





## Male-specific cancers

Cancer is the general term for a condition where defective cells in the body multiply uncontrolled. Cancers are named by the type of cell involved or the location in the body where the condition begins. Some are easily diagnosed and treated, and most can be fatal.

In 2009, there were nearly 63,500 new cancer diagnoses among males aged 25 and over, at a rate of 890 per 100,000 males (AIHW 2012e). Males aged 25 and over were more likely than younger males (0–24) and females of the same age to be diagnosed with cancer.

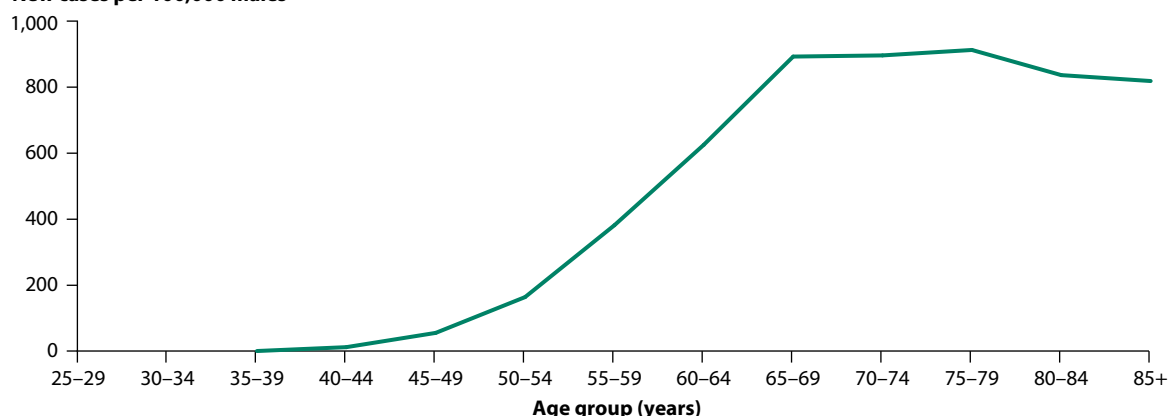
This section presents data on two male-specific cancers, prostate and testicular cancer, from two sources:

- Cancer incidence data come from the AIHWs Australian Cancer Database (ACD) 2009. For more information, see <<http://meteor.aihw.gov.au/content/index.phtml/itemId/500417>>.
- Cancer mortality data come from analysis of the AIHWs National Mortality Database.

### Cancer incidence

In 2009, when non-melanoma skin cancers were excluded, prostate cancer was the leading cancer diagnosed among males aged 25 and over, with more than 19,400 new cases at a rate of 273 per 100,000 males. Testicular cancer was ranked twentieth, with more than 600 cases at a rate of 9 per 100,000 males. While prostate cancer is rarely diagnosed among males aged under 25, 17% of newly diagnosed testicular cancers were among males of this age.

Among males aged 25 and over, the incidence of prostate cancer generally increased with age, and was lowest among males aged under 45 (less than 1 case per 100,000 males) and highest among males aged 75–79 (913 per 100,000) (Figure 15.2).

**New cases per 100,000 males**

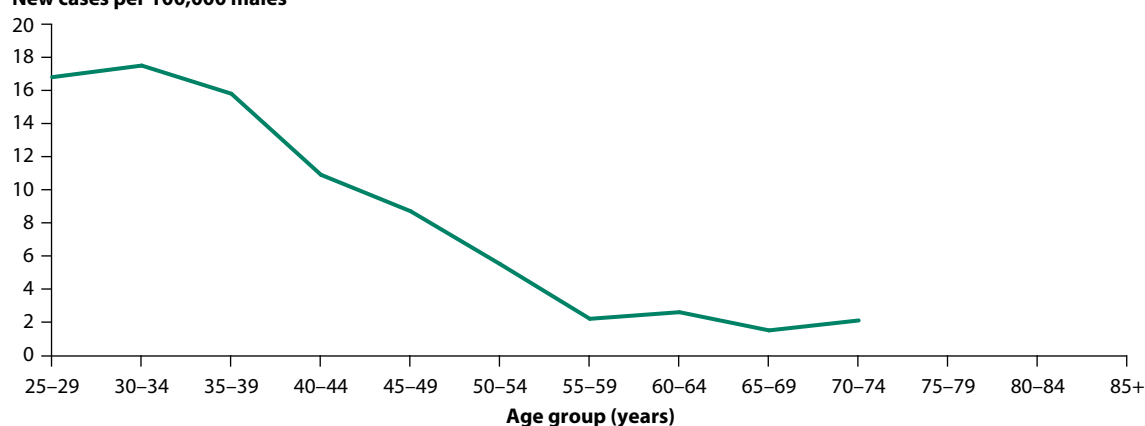
Note: Age specific rates are based on the 30 June 2009 Australian male estimated resident population (preliminary rebased).

Source: AIHW Australian Cancer Database (AIHW 2012e).

**Figure 15.2: Incidence of prostate cancer among males aged 25 and over, by age group, 2009**

Conversely, the incidence of testicular cancer generally decreased with age, and was highest among males aged 25–29 (17 per 100,000) and lowest among males aged 75 and over (less than 1 per 100,000) (Figure 15.3).

Note that the incidence of prostate cancer among males aged 25–34, and the incidence of testicular cancer among males aged 75 and over, are too small for publication.

**New cases per 100,000 males**

Note: Age specific rates are based on the 30 June 2009 Australian male estimated resident population (preliminary rebased).

Source: AIHW Australian Cancer Database (AIHW 2012e).

**Figure 15.3: Incidence of testicular cancer among males aged 25 and over, by age group, 2009**

## Cancer mortality

In 2010, there were more than 24,400 deaths with a leading cause of cancer among males aged 25 and over, at a rate of 337 deaths per 100,000 males. Cancer deaths accounted for one-third (33%) of deaths among males this age. Males aged 25 and over were more likely than younger males and females of the same age to die from cancer.

In 2010, there were more than 3,200 deaths from prostate cancer among males aged 25 and over, at a rate of 45 deaths per 100,000 males. Prostate cancer was the fourth leading cause of death among males this age, accounting for 5% of all deaths and 13% of cancer deaths. There were around 20 deaths from testicular cancer in this age group.

In the 5 years 2006–2010, the 5-year relative survival rate for males of all ages diagnosed with prostate cancer was 92%. For males diagnosed with testicular cancer it was 97% (AIHW & AACR 2012).

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This report is the fourth and final in a series on the health of Australia's males and focuses on males aged 25 and over. Findings include:

- Males aged 25 and over in 2011 can expect, on average, to live to 80 or over.
- One in 10 males aged 50–59 (11%) and 60–69 (10%) are at risk of injury resulting from excessive alcohol consumption on a daily basis.
- Employed males are less likely to rate their health as fair or poor (11%) than unemployed males (37%) and males not in the labour force (41%).