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AIHW

National Strategic Framework for Chronic Conditions, reporting framework: indicator results

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The AIHW is an independent statutory Australian Government agency producing authoritative and accessible information and statistics to inform and support better policy and service delivery decisions, leading to better health and wellbeing for all Australians.

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Contents

The time period covered by the report predates the January 2020 diagnosis of the first COVID-19 cases in Australia.

PART 1:

The story behind the indicator results

Introduction

Most illness and deaths in Australia are caused by chronic conditions. Chronic conditions can place a high burden on individuals, their families and carers, and the health system. Chronic conditions are occurring earlier in life and Australians may live longer with complex care needs (AHMAC 2017a).

What are chronic conditions?

Chronic conditions—also referred to as chronic diseases, non-communicable diseases or long-term health conditions—are generally characterised by their long-lasting and persistent effects (AIHW 2021a).

Chronic conditions often have complex and multiple causes. They are not usually immediately life threatening but tend to develop gradually, becoming more common with age. Once present, they often persist throughout a person's life, so there is generally a need for long-term management by individuals and health professionals (AIHW 2020b).

Multimorbidity

Many people with chronic conditions do not have a single, predominant condition, but rather they experience multimorbidity—the presence of 2 or more chronic conditions in a person at the same time (AIHW 2020b). People living with multimorbidity often have complex health needs and report poorer overall quality of life (AIHW 2020b).

For health service providers, multimorbidity can make treatment more complex and can require ongoing management and coordination of specialised care across multiple parts of the health system (AIHW 2020b). This places a heavy demand on Australia's health-care system, and requires substantial economic investment. A key focus of the Australian health system, therefore, is the prevention and better management of chronic conditions to improve health outcomes (Department of Health 2019).

The National Strategic Framework for Chronic Conditions

The *National Strategic Framework for Chronic Conditions* (NSFCC or the Framework) was agreed by all health ministers, and publicly released in May 2017 to respond to the current and future challenges presented by chronic conditions. It is the overarching policy for the prevention and management of chronic conditions in Australia.

The NSFCC provides guidance for the development and implementation of policies, strategies, actions and services to achieve the vision that:

> ***'All Australians live healthier lives through effective prevention and management of chronic conditions' (AHMAC 2017a).***

The NSFCC is supported by 3 Objectives:

1. Focus on prevention for a healthier Australia
2. Provide efficient, effective and appropriate care to support people with chronic conditions to optimise quality of life
3. Target priority populations.

Each Objective has descriptions of success in preventing and managing chronic conditions, termed 'success statements' (Box 1).

Measuring progress

The *NSFCC: reporting framework* was developed to provide an appropriate set of indicators to allow progress towards meeting the 3 Objectives of the NSFCC to be monitored in a consistent and comparable manner. A framework of standardised indicators provides the signposts that are needed by partners to measure key aspects of chronic condition prevention and control. Such frameworks are recognised as important elements of health-care improvement (AIHW 2022).

Forty-five indicators were selected for inclusion in the *NSFCC: reporting framework*; the report includes details on the processes undertaken to develop the indicator set (AIHW 2022).

Box 1: NSFCC Objectives and Success statements

1. Focus on prevention for a healthier Australia.

- The proportion of Australians living with preventable chronic conditions or associated risk factors is reduced
- Australia meets the voluntary global targets outlined in the *WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020*
- Australians with chronic conditions, or associated risk factors, develop them later in life and receive timely interventions to achieve optimal health outcomes

2. Provide efficient, effective and appropriate care to support people with chronic conditions to optimise quality of life.

- Australians with chronic conditions receive coordinated, person-centred and appropriate care
- Australians experience fewer complications, multimorbidities or disabilities associated with chronic conditions
- Fewer Australians die prematurely due to specific chronic conditions

3. Target priority populations

- Priority populations have reduced risk of developing chronic conditions
- Priority populations experience fewer complications or multimorbidities associated with chronic conditions
- Aboriginal and Torres Strait Islander people have reduced risk of developing chronic conditions and those with chronic conditions have an improved life expectancy

Objective 1:

Focus on prevention for a healthier Australia

As described in the NSFCC, prevention is key to improving the health of all Australians, reducing health-related expenditure and ensuring a sustainable health system (AHMAC 2017a). Many chronic conditions have a preventable nature and share common modifiable risk factors that contribute to their development, and/or management. The *Australian Burden of Disease Study 2018: key findings* identified that 38% of the total burden of disease in Australia in 2018 could be prevented by reducing or avoiding exposure to risk factors such as tobacco use, overweight and obesity, dietary risks, and high blood pressure (AIHW 2021b). Once a person is diagnosed with a chronic condition, they are more likely to die prematurely and have a poorer overall quality of life; it is therefore important to reduce the number of Australians developing chronic conditions in the first place. Australians are, on average, living longer and spending more years in full health (meaning no disease or injury; also referred to as health-adjusted life expectancy) (AIHW 2021b). However, years lived in ill health are also increasing, resulting in little change in the proportion of life spent in full health (AIHW 2021b).

Success statement 1: The proportion of Australians living with preventable chronic conditions or associated risk factors is reduced

Monitoring progress

Twenty-five indicators have been selected to contribute to monitoring progress against this success statement. They cover:

- social determinants—income, education, employment
- early life stage factors—smoking during pregnancy and low birthweight
- behavioural risk factors including smoking, alcohol consumption, physical inactivity, fruit and vegetable consumption, sodium intake
- biomedical risk factors including blood pressure, blood lipid levels, blood glucose levels, overweight and obesity
- chronic conditions including cancer, cardiovascular disease, type 2 diabetes, chronic respiratory conditions, musculoskeletal conditions, and mental health
- summary health measures (as defined by burden of disease analyses) for chronic conditions—non-fatal burden (YLD) and disability-adjusted life years (DALY).

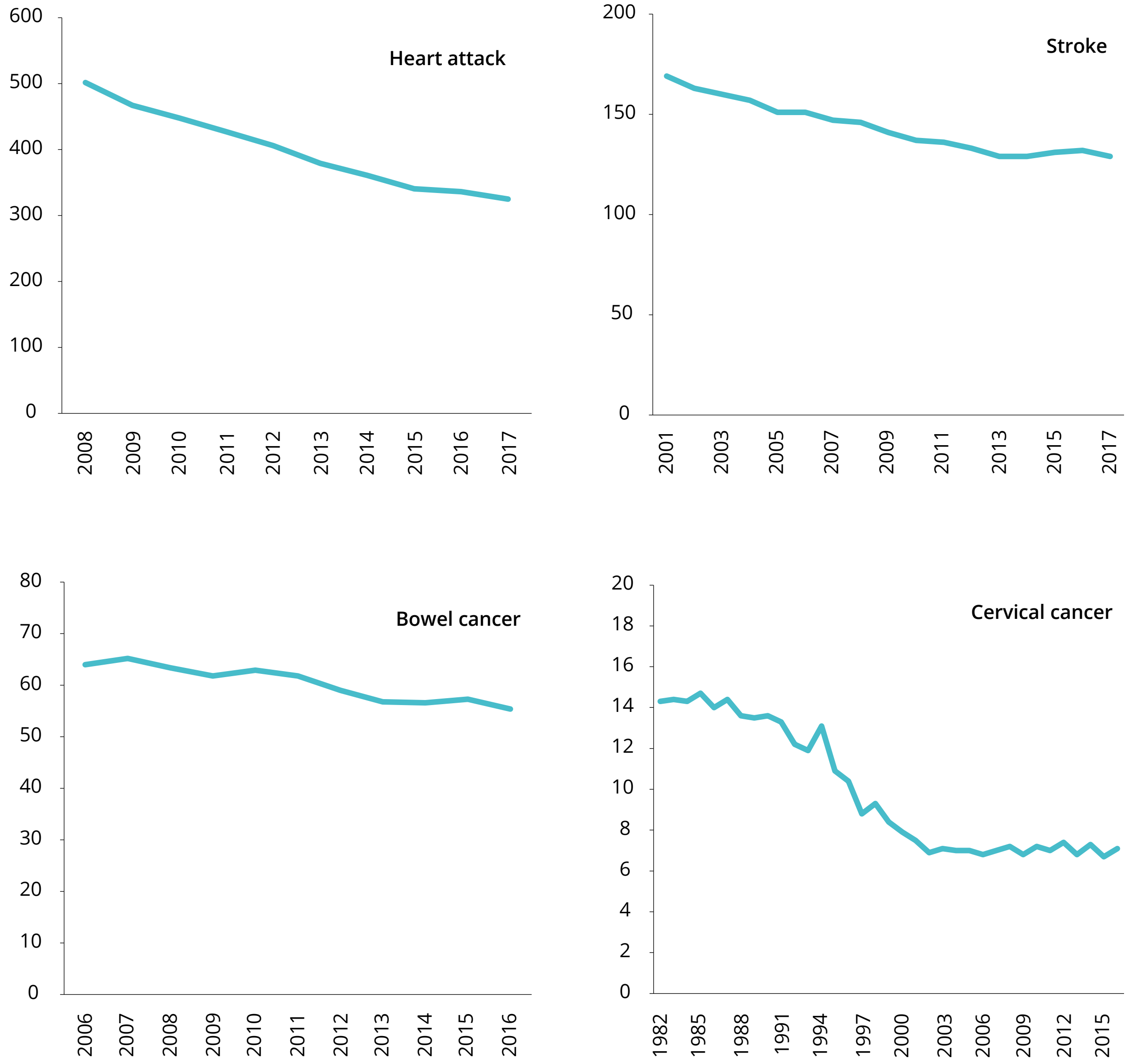
The chronic conditions included in this indicator set have been selected because they have the greatest impact in terms of prevalence, hospitalisations, mortality, and/or disease burden in Australia, and because there are quality national data available. The list is not exhaustive because it is neither practical nor feasible to report on all of the chronic conditions Australians manage daily. Some of the results presented here are complemented by the more comprehensive condition-specific monitoring already in place in Australia; for example, the *Australian National Diabetes Strategy* (AIHW 2018a) and the *Fifth National Mental Health and Suicide Prevention Plan* (Department of Health 2017) — see the *NSFCC: reporting framework* for more details (AIHW 2022).

Chronic conditions

The good news

There have been great improvements for some chronic conditions in Australia. Rates of new cases of coronary heart disease and stroke have fallen dramatically over the last 40 years ('Indicators 18 and 19'). The number of new cases of bowel cancer has fallen over the past decade, and since the early 1980s the number of new cases of cervical cancer has halved and the number of new cases of lung cancer in males has fallen substantially ('Indicator 23').

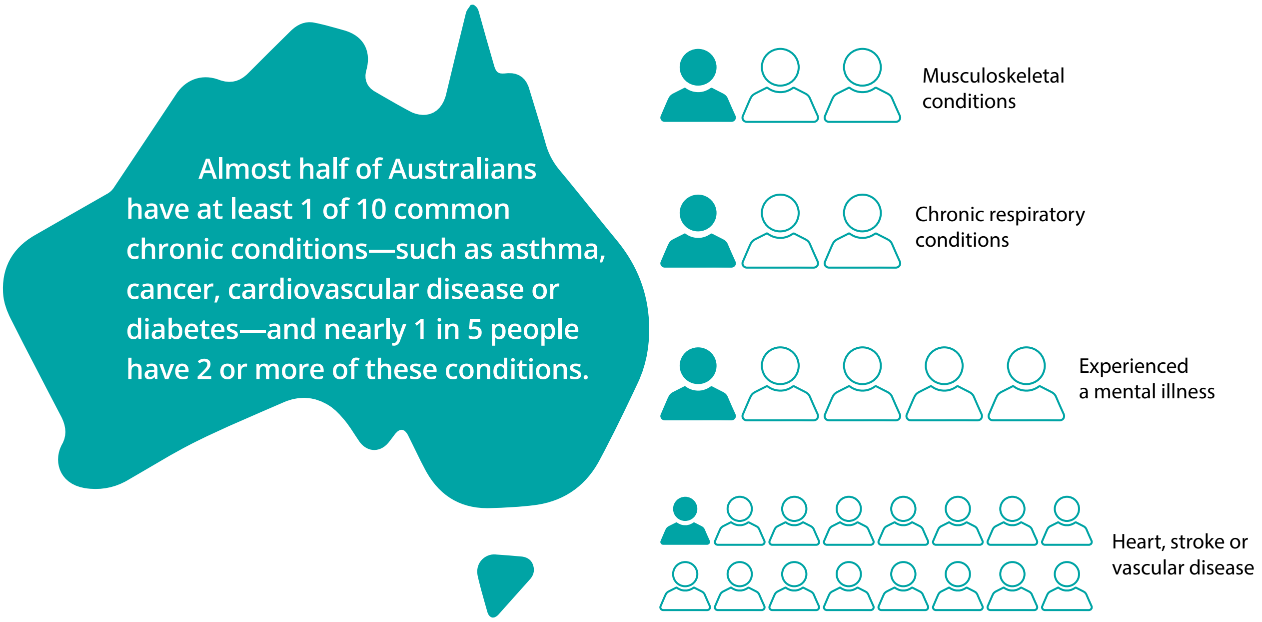
New cases of selected chronic conditions (number per 100,000)



Where can we do better?

Almost half of Australians (47%, or more than 11 million people) were estimated to have at least 1 of 10 selected chronic conditions—such as asthma, cancer, cardiovascular disease or diabetes—and 1 in 5 (20%, 4.9 million people) were estimated to have 2 or more of these conditions in 2017–18 (ABS 2018a; 'Indicator 40'—'Objective 2' for more details). Almost 1 in 3 (29%) Australians has a musculoskeletal condition, almost 1 in 3 (31%) has a chronic respiratory condition, 1 in 5 (20%) has experienced a mental illness, 1 in 16 (6.2%) has a heart, stroke or vascular disease, and almost 1 in 19 (5.4%) has type 2 diabetes ('Indicators 22, 21, 16, 17, and 20', respectively).

Further, the rates of new cases of melanoma of the skin and breast cancer have increased ('Indicator 23'). However, this must be interpreted with caution as the rates are affected by factors such as increased awareness, the introduction of national screening programs ('Indicator 28'), and improvements in technologies used to identify and diagnose cancer. The incidence of lung cancer for females has also continued to increase. The different pattern of lung cancer incidence in males and females is affected by different historical smoking trends; the prevalence of smoking in females peaked decades later than in males which may explain the continued increase in lung cancer incidence for females (AIHW & Cancer Australia 2011).



Contribution to disease burden

Burden of disease analysis is one way to measure the impact of different diseases or injuries on a population. It combines the burden of living with ill health and the burden of dying prematurely (by taking into account the severity of the disease and the age at death) into a disability-adjusted life year (DALY) measure (AIHW 2021b). Based on burden of disease analyses, in 2018, Australians lost 5.0 million years of healthy life due to premature death or living with disease or injury, more than one-third of this (37%) was due to the burden from selected chronic conditions (1.9 million DALY) ('Indicator 25'). This is similar to their share of the burden in 2011 (38%) and 2015 (37%). The chronic conditions included were coronary heart disease, back problems, chronic obstructive pulmonary disease (COPD), lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer.

Of the 1.9 million DALY (from the selected chronic conditions) in 2018, less than half (47%) of that burden was due to dying early (fatal burden; 'Indicator 45') and more than half (53%) was due to living with disability resulting from the selected chronic conditions (non-fatal burden; 'Indicator 24'). The total burden from selected chronic conditions has fallen from 81 DALY per 1,000 Australians in 2003 to 66 in 2018 ('Indicator 25') and over this time there has been a shift in the proportion of non-fatal and fatal burden. The rate of non-fatal burden (YLD) from selected chronic conditions was consistent over the 4 time points examined (37 per 1,000 population in 2018, 2015, 2011 and 2003) ('Indicator 24'); whereas the burden from premature deaths (YLL) fell over these time points—see 'Objective 2' for more information on fatal burden. That is, people are living longer with their chronic conditions.

Selected chronic conditions have consistently accounted for more than a third of the total burden of disease and injury in Australia (2003, 2011, 2015 and 2018)

Social determinants

A person's health and wellbeing is affected by the world around them, and their opportunities throughout life. Many factors including their level of social support, educational attainment, income and employment—known as 'social determinants' of health—can act to strengthen or undermine their health. Generally, the better a person's education and the higher their income, the more likely it is that they will be in better health. Overall, Australians are more educated and earn more than in the past, suggesting this also contributes to the health improvements recorded over the past 40 years. Today, more than two-thirds of working-age Australians have a post-school qualification (such as a diploma or university degree), and although more than an estimated 2 million people—10.5% of the population—live on less than half the median weekly equivalised household income ($899 in 2017–18), this is the lowest proportion for more than a decade ('Indicators 2 and 1', respectively). Further, the proportion of the Australian population aged 15–64 who are employed (employment-to-population ratio or employment rate) has, with fluctuations, generally increased over the last 20 years, from 69% in December 1999 to 75% in December 2019 ('Indicator 3').

Risk factors

The good news

Looking across the main risk factors for chronic disease, there is some good news. The reduction in the daily smoking rate (from 27.7% in 1989–90 to 14.0% in 2017–18) has been one of the greatest public health success stories in recent decades due to a range of successful public health strategies (AIHW 2018b). However, the decline in smoking rates has slowed ('Indicator 7'). Further, smoking rates during pregnancy have also fallen ('Indicator 4'). And the proportion of Australians drinking alcohol at levels that puts them at lifetime risk of harm has fallen in recent years (from 22% in 2004–05 to 16% in 2017–18) ('Indicator 6').

The reduction in the daily smoking rate (from 27.7% in 1989–90 to 14.0% in 2017–18) has been one of the greatest public health success stories in recent decades.

The proportion of Australians drinking alcohol at levels that puts them at lifetime risk of harm has fallen in recent years (from 22% in 2004–05 to 16% in 2017–18).

Where can we do better?

Despite these improvements, there are lots of areas to target preventive efforts. Eating a healthy diet and getting enough physical activity can reduce the risk of many chronic conditions and other risk factors, yet the vast majority of Australians do not meet recommended guidelines. For example, more than 9 in 10 adults do not eat enough vegetables every day ('Indicator 9'), and Australians eat 2–4 times as much sodium as they need ('Indicator 10'), and more than half of Australians do not get enough physical activity, including more than 7 in 10 (69%) children aged 12–17 ('Indicator 8').

It is more common for Australian adults to be overweight or obese (67%) than to have a healthy weight (32%) ('Indicator 14'). The proportion of overweight and obese adults has been rising over the past 2 decades, driven largely by a rise in the proportion of obese adults, which is the higher risk category—as the level of excess weight increases, so does the risk of developing conditions such as cardiovascular disease, type 2 diabetes, high blood pressure, psychological issues, some musculoskeletal conditions and some cancers (AIHW 2017a). About 1 in 4 children are overweight or obese ('Indicator 14').

Other biomedical risk factors, such as high blood pressure and abnormal blood lipids, can also have an impact on a person's risk of disease. About 1 in 3 adults have high blood pressure and 2 in 3 have abnormal lipid levels (including high cholesterol) ('Indicators 11 and 12').

Although the proportion of Australians smoking every day and drinking alcohol at levels that put them at lifetime risk of harm have fallen, there is still room for further improvement. In 2017–18, around 1 in 7 (14%) adults smoked daily and around 1 in 6 (16%) reported drinking alcohol at levels that puts them at lifetime risk of harm ('Indicators 7 and 6', respectively). Tobacco use continues to be the single risk factor causing the most disease burden in Australia, with the largest impact from tobacco use on cancer, respiratory conditions and cardiovascular disease (AIHW 2019a).

9 in 10 adults do not eat enough vegetables each day

1 in 2 Australians do not get enough physical activity

Australians eat 2–4 times as much sodium as they need

2 in 3 adults are overweight or obese

1 in 3 adults have high blood pressure

1 in 7 adults smoked daily

1 in 6 adults reported drinking alcohol at levels that puts them at lifetime risk of harm

2 in 3 adults have abnormal lipid levels

Multiple risk factors

The risk factor data presented here consider each risk factor in isolation; however, it is important to note that risk factors interact with each other, and as the number of risk factors a person has increases, so does the risk of illness. For example, to fully assess a person's absolute risk of cardiovascular disease a full assessment involves consideration of modifiable risk factors (smoking status, blood lipids, blood pressure, body weight, nutrition, physical activity, alcohol intake), non-modifiable risk factors (age, sex, family history, social history), and the presence of related conditions (for example, diabetes and chronic kidney disease). Assessing cardiovascular risk in this way for individuals is more accurate than looking at risk factors in isolation—because of the cumulative or influencing effects of multiple factors—and allows for more tailored risk factor management for each person (NVDPA 2012).

It is common for Australian adults to have more than one risk factor. For example, almost all adults (99%) have at least 1 of 6 risk factors (smoking, insufficient physical activity, inadequate fruit and vegetable consumption, overweight or obesity, high blood pressure, abnormal blood lipids) (AIHW 2015). Almost 1 in 4 (23%) had 2 risk factors; 2 in 3 (66%) had 3 or more risk factors, and 10% of adults had 5 or 6 risk factors (AIHW 2015).

Many chronic diseases share the same risk factors. For example, tobacco smoking is a risk factor for cardiovascular disease, stroke, type 2 diabetes, osteoporosis, oral health, rheumatoid arthritis, COPD, asthma, and various cancers (including colorectal, lung and cervical); while obesity is a risk factor for cardiovascular disease, stroke, type 2 diabetes, colorectal cancer, breast cancer, depression and osteoarthritis (AIHW 2016). By modifying one risk factor a person may reduce their risk of developing multiple chronic conditions.

Many risk factors are interrelated; for example, improving one's physical activity levels may have a favorable impact on body weight, blood pressure, and blood lipids thereby further reducing the individual's risk of developing chronic conditions.

Population groups

The results discussed in this section focus on national results. However, results vary for some population groups, including Aboriginal and Torres Strait Islander people, Australians living in rural and remote areas, and Australians living in the lowest socioeconomic areas. These groups (among others) are identified as priority populations in the NSFCC, and results for these 3 groups are explored in detail in Objective 3.

Success statement 2: Australia meets the voluntary global targets outlined in the WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020

In 2013, the World Health Organization (WHO) released the *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020*—referred to as the Action Plan (WHO 2013). The Global Action Plan aims to reduce the global burden of noncommunicable diseases (NCDs) by 2025.

The main focus of this Action Plan is on 4 types of NCD—cardiovascular disease, cancer, chronic respiratory conditions, and diabetes—which make the largest contribution to morbidity and mortality due to NCDs, and on 4 shared behavioural risk factors—tobacco use, unhealthy diet, physical inactivity, and harmful use of alcohol.

A global monitoring framework including 25 indicators and a set of 9 voluntary global targets were proposed to track the implementation of the Action Plan.

The NSFCC outlined that measures developed to monitor progress against its objectives should, where possible, align with Australia's international reporting requirements against the Action Plan. The WHO indicators were considered for inclusion in the NSFCC (a summary of their suitability for reporting against the Action Plan is presented in 'Appendix B' of the *NSFCC: reporting framework* (AIHW 2022)). As a result, 13 NSFCC indicators relate to the set of 9 voluntary global targets developed by WHO to track the implementation of the Action Plan.

They are: Alcohol consumption ('Indicator 6'); Smoking ('Indicator 7'); Insufficient physical activity ('Indicator 8'); Inadequate fruit and/or vegetable consumption ('Indicator 9'); Sodium intake ('Indicator 10'); High blood pressure ('Indicator 11'); Abnormal blood lipids ('Indicator 12'); Raised blood glucose levels ('Indicator 13'); Overweight and obesity ('Indicator 14'); Prevalence of type 2 diabetes ('Indicator 20'); Incidence of selected cancers ('Indicator 23'); HPV immunisation rate ('Indicator 27'); and Cervical cancer screening rates ('Indicator 30').

Results for these NSFCC indicators are summarised within their relevant success statements and in the 'Results' section.

Australia's results for the WHO 9 voluntary targets are published by the WHO, most recently in 2018 (WHO 2018).

Success statement 3: Australians with chronic conditions, or associated risk factors, develop them later in life and receive timely interventions to achieve optimal health outcomes

Individuals and health-care providers play an important role in the detection and intervention for chronic conditions and their risk factors (AHMAC 2017a).

The detection of chronic conditions can occur through a variety of settings, including general practice, pharmacies, community health clinics, and national screening programs. Interventions can be difficult to measure and monitor as they include a broad range of formal and informal programs, services and supports. These can range from health promotion activities, immunisation and disease screening, medicines, primary health care and hospital services.

Health promotion plays an important role in preventing disease and helps to build social and physical environments that support healthy behaviours (AIHW 2018b). Health promotion activities are implemented by all levels of government and non-government organisations and include direct interventions aimed at immediate change and those that aim to educate and indirectly influence behaviour over the long term. For example, *Australia's National Tobacco Strategy 2012–2018* is a national framework for all Australian governments and non-government organisations to work together to improve the health of Australians by reducing tobacco use and its associated harms (AIHW 2020c).

Medicines contribute to Australians' quality of life and improvements in life expectancy by curing or delaying the onset of diseases, relieving symptoms and preventing health complications. Providing consumers with access to affordable medicines is a key part of the Australian health-care system.

Primary health care is the frontline of Australia's health-care system and is typically the first point of contact people have with the health system. Primary health-care providers deliver a wide range of services to the community, including health promotion and prevention, early intervention, treatment of acute conditions, management of chronic conditions, and referral to specialists as required. The primary health care team may include GPs, nurses, registered allied health professionals and Aboriginal health workers.

Improving people's access to relevant health information and their capacity to use it effectively will improve individual health literacy and assist individuals to better navigate the heath system (AHMAC 2017a). Health literacy is critical to empowerment and affects a person's capacity to make good decisions about their health and health-care and take appropriate action; effective self-management is a key part of optimal care for chronic conditions (AHMAC 2017a).

Monitoring progress

There are limited national data on detection and intervention measures in those areas mentioned above.

Five indicators have been selected to monitor progress against this success statement. In addition, indicators from success statement 1 on behavioural and biomedical risk factors, chronic conditions and the summary health measures (as defined by burden of disease analyses) for chronic conditions are disaggregated by age and can be used to monitor (over time) whether Australians are developing risk factors and chronic conditions later in life.

The indicators describe timely and appropriate detection and intervention for:

- dental health
- HPV immunisation
- breast, bowel and cervical cancer.

Several of the indicators focus on cancer screening and diagnosis, both of which are underpinned by national policy and ongoing monitoring, but there are limited national data sources containing the information required to report on the screening and diagnosis of other chronic conditions, such as type 2 diabetes, COPD and dementia.

Timely intervention is also difficult to measure. For example, data on the age at which a chronic condition starts (age of onset) can be difficult to interpret as they can be influenced by an effective policy that leads to earlier detection, resulting in what appears to be earlier disease onset.

Preventive dental care

Poor oral health is a chronic condition in its own right. It is associated with other chronic conditions, including cardiovascular disease, diabetes, osteoporosis and obesity (COAG Health Council 2015), and shares many risk factors with these chronic conditions, including smoking, alcohol, poor diet and social determinants such as income.

It is important for a person to visit a dentist regularly so that they can receive preventive dental care to maintain existing oral health, and treatment for any disease or damage. Regular dental visits also increase the likelihood that disease will be detected in its early stages and can be managed before significant damage occurs to teeth and gums.

It is favourable that people visit a dentist once or more a year (usually for a check-up), and have a usual dental provider (AIHW 2021c). According to the 2018–19 Australian Bureau of Statistics (ABS) Patient Experience Survey (ABS 2019a), 1 in 2 (49%) people aged 15 and over had made a dental visit in the previous 12 months ('Indicator 26').

1 in 2 (9.7 million) people made a dental visit in the previous 12 months

1 in 5 people who needed to see a dental professional delayed seeing or did not see one due to cost

Many factors can influence whether a person accesses dental services, including cost. In 2018–19, nearly 1 in 5 people (18%) who needed to see a dental professional delayed seeing or did not see one due to cost ('Indicator 32' (also see 'Objective 2')).

There are a range of programs and services in Australia to reduce barriers to accessing dental care, including free or subsidised dental services, outreach services, and targeted or opportunistic screening and assessment clinics (COAG Health Council 2015).

HPV immunisation

Human papillomavirus (HPV) is a highly contagious virus. Certain types of HPV can lead to several types of cancer, including cervical cancer. In 2007, a National HPV Vaccination program was introduced for school-aged girls, and extended to boys in 2013; the free vaccinations are usually given when a child enters high school.

In 2017, 80% of girls, and 76% of boys, aged 15, were fully immunised against HPV—both rates have increased over time ('Indicator 27').

Vaccination against HPV is Australia's primary prevention strategy against cervical cancer. Although there has not yet been sufficient time since the introduction of HPV vaccination to see a reduction in cervical cancer incidence ('Indicator 23') in girls and women vaccinated against HPV, effects of HPV vaccination are apparent in younger women for whom, detection rates of high-grade cervical abnormalities (potential precursors to cervical cancer) have dropped since the program began (AIHW 2018c).

Cervical screening under the National Cervical Screening Program (NCSP) (see 'Indicator 30') remains a vital secondary prevention strategy against cervical cancer for both HPV-vaccinated and unvaccinated women. Cervical screening can detect abnormalities while they are in the precancerous stage, providing an opportunity for treatment before possible progression to cervical cancer.

National cancer screening

Population-based cancer screening is an organised, systematic and integrated process of testing for signs of cancer or precancerous conditions in people without obvious symptoms. In Australia, there are national screening programs for breast, cervical and bowel cancers. Screening programs are designed to detect cancer early (breast and bowel) or prevent its occurrence in the first place by detecting pre cancerous changes (bowel and cervical) (AIHW 2019b). The programs target particular populations and age groups where evidence shows screening is most effective at reducing cancer-related illness and deaths. Early detection provides an opportunity for early treatment (and more treatment options) which can reduce illness and death (AIHW 2019b). High rates of participation maximise the reductions in illness and death from cancer.

Breast cancer screening

National breast cancer screening was introduced in 1991. In 2017–2018, more than 1.8 million women aged 50–74 had a screening mammogram through BreastScreen Australia—or 55% of women in the target age group ('Indicator 28'). The participation rate has been similar since 2010–2011.

The incidence of breast cancer has increased over time (see 'Indicator 23'), however, this may be affected by increased awareness, the introduction of the screening program, and improvements in technologies and techniques used to identify and diagnose cancer.

The 5-year relative survival for women with breast cancer increased from 75% in 1987–1991 to 91% in 2012–2016 ('Indicator 43').

Bowel cancer screening

A national bowel cancer screening program was introduced in 2006; and in 2017–2018, 42% of people aged 50–74 participated ('Indicator 29').

The rate of newly diagnosed cases of bowel cancer has been slowly decreasing in recent years—falling from 66 new cases per 100,000 people in 2001 to 55 in 2016 (see 'Indicator 23'). The 5-year relative survival for bowel cancer has risen considerably over the past 3 decades. In 1987–1991, people had a 52% chance of surviving for 5 years after diagnosis—by 2012–2016, this had risen to 70% ('Indicator 43').

Cervical cancer screening

The National Cervical Screening Program (NCSP) began in 1991. Almost half (46%) of women aged 25–74 participated in the program in 2018–2019. After remaining steady at around 58% from 2009–2010 to 2013–2014, the participation rate for women aged 20–69 showed a downward trend to 56% in 2015–2016 ('Indicator 30').

The incidence of cervical cancer and number of deaths from the disease have halved since the NCSP began in 1991 and the year 2002. In 2016, there were 7.3 new cases per 100,000 females, compared with 14 per 100,000 in 1982 ('Indicator 23'). The 5-year relative survival for women with cervical cancer increased from 70% in 1987–1991 to 74% in 2012–2016 ('Indicator 43').

Further detail on cancer survival is presented under 'Objective 2'.

Objective 2:

Provide efficient, effective and appropriate care to support people with chronic conditions to optimise quality of life

As described in the *National Strategic Framework for Chronic Conditions* (NSFCC), all Australians are entitled to efficient, effective and appropriate quality health care (AHMAC 2017a). People with chronic conditions may have multimorbidities with varying levels of complexity; require increased, ongoing access to a range of services and self-management support; and are likely to be on multiple pharmacotherapies (AHMAC 2017a). Without effective support these people often experience poor health and reduced quality of life. Actively engaging people in their own health care (with appropriate involvement of carers and families) empowers people to take greater control in managing their health and optimising their quality of life (AHMAC 2017a).

Provision of clinically appropriate, evidence-based, safe and accessible health care for people with chronic conditions can:

- slow disease progression
- help to prevent and delay the onset of additional chronic conditions, complications, and associated disabilities
- improve health and wellbeing
- enhance quality of life (AHMAC 2017a).

Effective and appropriate care improves overall health and social outcomes for people with chronic conditions, and their carers and families (AHMAC 2017a).

People with chronic conditions often require joined-up and coordinated health care which can be complex and traverse a range of different health-care providers, settings and sectors (AHMAC 2017a). Establishing collaborative and trusting relationships across health sectors will: provide the foundation for improved communication; strengthen continuity of care; and facilitate information sharing (AHMAC 2017a). An adequately equipped and trained health workforce is essential to provide care that is of a high standard to those who need it, when they need it, in a way that meets individual needs (AHMAC 2017a).

Addressing risk factors and providing the right support at early onset of a chronic condition will also contribute to long-term management strategies by helping to slow disease progression and reducing the risk of developing additional chronic conditions, complications and associated disabilities (AHMAC 2017a). Objective 1 addresses these interrelated issues.

Success statement 1: Australians with chronic conditions receive coordinated, person-centred and appropriate care

Monitoring progress

Nine indicators have been included to monitor progress against this success statement. The indicators focus on:

- barriers to accessing care
- patient satisfaction
- effective management
- community follow-up
- potentially preventable hospitalisations.

Barriers to accessing care

High quality health care leads to better health outcomes, and barriers to accessing health services may impede the best possible outcome.

Cost

Access to health care may be affected by financial pressures. People with chronic conditions who postpone essential treatments for management of their condition due to cost may jeopardise their health status.

Cost is a barrier for some Australians seeking health care and was more commonly a barrier for those needing to see dental professionals and specialists than general practitioners (GPs). In 2018–19 of those who needed to see a GP in the last 12 months, 3.4% (or an estimated 564,000 people) delayed seeing or did not see a GP at least once due to cost; 7.7% (or an estimated 579,000 people) for specialists; and 18% (or an estimated 2.0 million people) for dental professionals ('Indicator 32'). Further, of all people who needed a prescription for medication, 6.7% (or an estimated 917,000 people) either delayed getting a script or did not get prescribed medication due to cost. In 2016–17, 3.0% of people who needed to have pathology or imaging tests either delayed having, or did not have these tests due to cost.

Waiting times—general practitioners

Waiting times can be a barrier to health care. GPs are widely used in Australia and are the first point of contact for health issues for many Australians. People access GPs for a variety of reasons including short-term illnesses, preventive health practices and management of long-term health conditions (ABS 2018b). It is therefore important that people are able to access a GP in a timely manner and receive care that meets their needs, both in terms of ease of access and the quality of care provided (ABS 2018b).

Long waiting times can lead patients to delay intervention for their condition. The delay in initial assessment, diagnosis and treatment can result in adverse outcomes for patients.

In 2018–19, 8.4% of people (or an estimated 1.8 million people) saw a GP for urgent medical care (ABS 2019a). Of those, 61% were seen by a GP within 4 hours of making an appointment, 11% waited 4 hours or more but were seen within 24 hours of making an appointment, and 28% waited 24 hours or more ('Indicator 34').

Waiting times—radiotherapy

Cancer is a major cause of premature death and the second most common cause of death overall in Australia. Without timely intervention, cancers may progress and patients with early-stage disease may face a reduced opportunity for effective intervention. Radiotherapy is a well-established, effective and safe way to treat cancer and a small number of other conditions. It is beneficial to about half of all patients with cancer (RANZCR 2015).

In 2017–18, 90% of non-emergency courses were started within 27 days of being assessed as ready for care ('Indicator 38'). This has been relatively stable over the last few years (fluctuating between 31 and 26 days over 2013–14 to 2018–19).

Work force

Information on the stock of health workers relative to the population can be used to monitor whether the size of the current workforce meets a given threshold that should allow the most basic levels of health-care coverage to be achieved across the country (WHO 2010).

Between 2013 and 2018 the Australian health workforce increased by over 82,000 registered health professionals (AIHW 2020d). The number of full-time equivalent (FTE) health professionals per 100,000 population (FTE rate) rose for each professional group from 2013 to 2018 ('Indicator 35'). For medical practitioners there were 415 employed medical practitioners per 100,000 people in 2018, up from 382 in 2013; nurses and midwives 1,176 in 2018, up from 1,155 in 2013; registered allied health practitioners 480 per 100,000 in 2018, up from 426 in 2013; and dental practitioners 76 per 100,000 in 2018, up from 72 in 2013 ('Indicator 35').

Patient satisfaction

Data on patient satisfaction are of value to both users of health services and those aiming to improve the health system. Good experiences are an important component of quality health-care, along with clinical effectiveness and patient safety. High quality health care leads to better health outcomes.

Taking the time to understand a patient's needs, preferences, beliefs, and attitudes, and adapting care to meet their expectations is central to an effective patient–doctor relationship (AIHW 2019c).

Australians report high levels of satisfaction with their experience with GPs. In 2018–19, of those aged 15 and over who saw a GP in the last 12 months: 92% reported their GP always or often listened carefully to them; 94% reported they showed respect; and 90% reported they spent enough time with them ('Indicator 33'). While the results for this indicator are overwhelmingly positive, it is worth highlighting that 6–10% of Australians who visited a GP reported poor patient satisfaction.

Effective management

Effective management is important for managing the impact of chronic conditions on individuals' lives in terms of day-to-day symptoms as well as long-term consequences and complications. For example, effective management of diabetes (which includes such things as management of blood pressure, lipid levels, and HbA1c levels) decreases the risk of serious complications including amputations, kidney damage, loss of eye sight and heart disease. HbA1c (glycated haemoglobin) levels, determined through a blood test, reflect average blood glucose levels over 3 months and provide an indicator of effective diabetes management.

In 2011–12, after adjusting for age, an estimated 49% of people aged 18–69 with known type 2 diabetes achieved the target level for HbA1c (≤7.0%) ('Indicator 36').

Post-discharge community mental health care

A responsive community support system for people who have experienced an acute psychiatric episode requiring hospitalisation is essential to maintain clinical and functional stability and to minimise the need for hospital readmission (NMHC 2018).

Consumers leaving hospital after a psychiatric admission with a formal discharge plan, involving linkages with community services and supports, are less likely to need early readmission (NMHC 2018). Research indicates that consumers have increased vulnerability immediately following discharge, including higher risk for suicide (NMHC 2018).

There has been an increase in the percentage of separations from state/territory public acute admitted patient mental health care service units for which a community mental health service contact occurred within 7 days—55% in 2011–12 to 75% in 2017–18 ('Indicator 39').

Potentially preventable hospitalisations

Potentially preventable hospitalisations (PPH) for chronic conditions are those that could have potentially been prevented through the provision of appropriate preventative health interventions and early disease management in primary care and community-based care settings (including by general practitioners, medical specialists, dentists, nurses and registered allied health professionals) (AIHW 2019d). PPH rates are sometimes used as indicators of the effectiveness of non-hospital care.

The chronic conditions covered in the PPH indicator (see 'Indicator 37'), are those that may be preventable through behaviour modification and lifestyle change, but can also be managed effectively through timely care (usually non-hospital) to prevent deterioration and hospitalisation (AIHW 2019d). Monitoring PPH for chronic conditions provides insights into the effectiveness of preventive health actions across all stages of wellness and disease, including population health programs to limit the onset of disease, health screening for early detection and treatment of disease, and multi-disciplinary management of established disease (AIHW 2020e).

In Australia in 2017–18, there were more than 343,400 hospitalisations for the chronic conditions for which hospitalisation is considered potentially preventable ('Indicator 37'). This represented 46% of all PPH in that year and 3.1% of all hospital admissions to a public or private hospital in Australia that year. Overall, the age-standardised rate of PPH for chronic conditions was 12.3 per 1,000 people in 2017–18. Rates of PPH for chronic conditions increased between 2012–13 and 2016–17, and remained steady in 2017–18.

Success statement 2: Australians experience fewer complications, multimorbidities or disabilities associated with chronic conditions

Monitoring progress

Three indicators have been selected to monitor progress against this success statement. The indicators focus on chronic condition multimorbidity, and on complications of chronic conditions using diabetes as an example.

Multimorbidities

People with 2 or more chronic conditions often have complex health needs that require ongoing management and coordination of specialised care provided by a number of health providers: often working in different locations, and across different parts of the health system (Department of Health 2015).

In 2017–18, 1 in 5 people (20%, an estimated 4.9 million people) had 2 or more selected chronic conditions (arthritis, asthma, back problems, cancer, cardiovascular disease, COPD, diabetes, chronic kidney disease, mental and behavioural conditions, or osteoporosis); after adjusting for age this was similar to the rate in 2014–15 ('Indicator 40').

A reduction in the prevalence of multimorbidity among Australians may take a long time to observe as substantial improvements would need to occur in the prevalence of risk factors and individual chronic conditions before changes in the result for this indicator are observed.

Complications

Many chronic conditions are associated with complications. Preventative health initiatives can be targeted at reducing the occurrence of the condition in the first place but also at reducing disease severity, associated complications and disabilities. For example, diabetes (a condition in which the body has an impaired ability to regulate blood sugar levels) may lead to a range of related complications, many of which are preventable (Department of Health 2015). They include heart disease, stroke, amputation, diabetes-related eye disease, kidney disease, vascular disease, nerve damage and foot problems (Department of Health 2015).

Indicators 41 and 42 shed some light on 2 complications associated with diabetes:

- kidney disease—end-stage kidney disease (ESKD) is the most severe stage of chronic kidney disease, where kidney function deteriorates so much that treatment by way of dialysis or kidney transplantation is required to survive. It can result in a high health and economic burden for patients, families and communities. Diabetes has a complex causal relationship with chronic kidney disease and shares many risk factors. Among Australians with self-reported diabetes, an estimated 10,400 people had treated end-stage kidney disease in 2018 ('Indicator 41'). The rate increased by 24% from 623 per 100,000 population in 2008 to 773 per 100,000 population in 2018, after adjusting for age.

- Lower-limb amputations—for people with diabetes, high blood sugar levels can damage the nerves (peripheral neuropathy) and result in poor circulation (peripheral vascular disease) in the lower limbs, potentially causing ischemia, gangrene and impaired wound healing. These complications may lead to foot ulcers and infections, and in the most severe cases, amputations of the affected toes, foot and lower leg. Diabetes is the leading cause of non-traumatic lower-limb amputation. In 2017–18, there were around 5,400 hospitalisations where a lower-limb amputation was performed with type 2 diabetes as a principal or additional diagnosis. The overall age-adjusted rate was 25 hospitalisations per 100,000 population, a slight increase from 21 in 2012–13 ('Indicator 42').

Success statement 3: Fewer Australians die prematurely due to specific chronic conditions

Monitoring progress

Three indicators have been selected to contribute to monitoring progress against this success statement. The indicators relate to the 5-year relative survival rates for selected cancers, potentially avoidable deaths, and the fatal burden of disease (YLL) measure derived from the Australian Burden of Disease Study. All 3 measures have shown favourable trends over recent decades.

Five–year relative survival for selected cancers

Cancer is the leading cause of total burden of disease in Australia, which is mainly due to premature death (AIHW 2021b). It has a substantial social and economic impact on individuals, families and the community (AIHW 2019e). For cancer, survival together with incidence is more informative than prevalence and/or incidence on its own.

Information on survival from cancer provides an indication of cancer prognosis and the effectiveness of treatments available. A range of factors influence survival from cancer, including characteristics of the patient (such as age, sex and genetics), the nature of the tumour (such as site, stage at diagnosis and histology type) and the health-care system (such as the availability of health-care services, screening, diagnostic and treatment facilities, and follow-up services).

For each of the selected cancers in this report—breast, bowel, melanoma of the skin, lung, and cervical—the 5-year relative survival increased between 1987–1991 and 2012–2016 ('Indicator 43'). However, the 5-year relative survival varied across the 5 selected cancers: it was highest for breast cancer (91%) and melanoma of the skin (92%), and lowest for lung cancer at 19%, in 2012–2016. Relative survival decreases with age but there are differences between the cancers in how rapidly the survival decreases with age.

While cancer survival rates have increased overall there are differences across population groups, see 'Objective 3' for more information. Even though cancer survival rates have increased and cancer mortality rates continue to drop, cancer accounts for around 3 of every 10 deaths in Australia (AIHW 2019e). And while cancer survival rates have improved overall, people diagnosed with cancers such as pancreatic cancer, lung cancer and mesothelioma have a less than 1 in 5 chance, on average, of surviving at least 5 years after being diagnosed (AIHW 2019e).

Potentially avoidable deaths

Potentially avoidable deaths are those that occur prematurely—before the age of 75—from conditions that might have been avoided through the provision of care and/or treatment through existing primary or hospital care (see 'Indicator 44' for more information).

Information on potentially avoidable deaths is used as an indicator of the effectiveness of the health system, including hospital, primary and community care (Falster & Jorm 2017).

In 2019 there were around 18,900 potentially avoidable deaths from selected chronic conditions in Australia, a third (33%) of all deaths for people aged less than 75 (57,990 deaths; AIHW 2021d; 'Indicator 44').

The rate of potentially avoidable deaths from selected chronic conditions more than halved over the last 20 years—it decreased from 148 deaths per 100,000 people in 1997 to 66 deaths per 100,000 in 2019 ('Indicator 44').

Fatal burden

As mentioned above, burden of disease analysis is one way to measure the impact of different diseases or injuries on a population. Fatal burden is the impact of dying prematurely from disease or injury and is measured using years of life lost (YLL) due to premature death (AIHW 2021b).

In 2018, Australians lost 2.4 million years of healthy life due to dying prematurely from diseases and injury (fatal burden); more than a third of this (37%) was due to selected chronic conditions (865,200 YLL) ('Indicator 45'). The contribution of selected chronic conditions to overall fatal burden fell over the 4 time points examined from 39% in 2003 to 37% in 2018 ('Indicator 45'). This decrease is likely driven by substantial reductions in fatal burden due to coronary heart disease (CHD) and stroke (AIHW 2021b).

The rate of fatal burden from selected chronic conditions has reduced since 2003. In 2018, there were 29 years of life lost due to premature death from selected chronic conditions for every 1,000 people in Australia; down from 44 in 2003 ('Indicator 45').

Objective 3:

Target priority populations

As described in the *National Strategic Framework for Chronic Conditions* (NSFCC), chronic conditions impact all Australians, but some populations are disproportionally affected due to a complex interaction between the physical environment, social and cultural determinants and biomedical and behavioural risk factors (AHMAC 2017a). This is demonstrated by a higher prevalence of chronic conditions and a greater burden of disease in these populations, resulting in inequitable health outcomes (AHMAC 2017a). Due to the disparity in health outcomes, equal focus is not sufficient: greater investment and sustained efforts are required to positively advantage priority populations and overcome current inequities in health outcomes (AHMAC 2017a).

The NSFCC identifies a number of populations that are disproportionally affected by chronic conditions. These include, but are not limited to:

- Aboriginal and Torres Strait Islander people
- people from culturally and linguistically diverse backgrounds
- older Australians
- carers of people with chronic conditions
- people experiencing socioeconomic disadvantage
- people living in remote, or rural and regional locations
- people with disability
- people with mental illness
- people who are, or have been incarcerated.

The AIHW has information on the health and welfare of a number of the population groups listed here, see 'Population groups'.

Monitoring progress

Ideally, each population requires a unique set of indicators to monitor their experience of chronic conditions. Indicators within existing frameworks partly meet this need.

To limit the number of indicators, and to ensure manageability of reporting, no unique indicators were selected for this Objective. Rather, data in indicators developed for Objectives 1 and 2 are disaggregated at a population level for:

- people experiencing socioeconomic disadvantage
- people living in remote, or rural and regional locations
- Aboriginal and Torres Strait Islander people.

Further data development will be needed to comprehensively report on other priority populations.

Success statements

Objective 3 has 3 success statements:

- Priority populations have reduced risk of developing chronic conditions
- Priority populations experience fewer complications or multimorbidities associated with chronic conditions
- Aboriginal and Torres Strait Islander people have reduced risk of developing chronic conditions and those with chronic conditions have an improved life expectancy.

Data for these success statements are summarised under the following sections: people experiencing socioeconomic disadvantage; people living in remote, or rural and regional locations; and Aboriginal and Torres Strait Islander people.

The influence of age

Some populations have different age structures, for example:

- each remoteness area has a different population age structure. On average, people living in *Remote* and *Very remote* areas are younger than those in *Major cities*. Children generally make up a greater proportion of the population in more remote areas than in less remote areas, whereas elderly Australians make up a smaller proportion (AIHW 2020f)
- the Indigenous Australian population has a relatively young age structure compared to non-Indigenous Australians. In 2020, a projected 33% of Indigenous Australians were aged under 15 (compared with 18% of non-Indigenous Australians), and only 5.2% of Indigenous Australians were aged 65 and over (compared with 16% of non-Indigenous Australians) (ABS 2018a, 2019a).

Given that health conditions increase with age, age-standardisation removes the influence of different age structures to allow populations to be compared on a like-with-like basis, rather than just reflecting their different age profiles. As such, the results that follow are based on age-standardised results unless stated otherwise.

People experiencing socioeconomic disadvantage

Socioeconomic factors are important determinants of health. Having access to material and social resources and being able to participate in society are important for maintaining good health and wellbeing. Social inequalities and disadvantage are the main reason for unfair and avoidable differences in health outcomes and life expectancy across groups in society (AIHW 2020g).

Generally, people in lower socioeconomic areas are at greater risk of poor health, have higher rates of illness, disability and death, and live shorter lives than people from higher socioeconomic groups (Mackenbach 2015). The higher a person's socioeconomic position, the healthier they tend to be—a phenomenon often termed the 'social gradient of health' (AIHW 2020g).

This section looks at people living in different socioeconomic areas by the range of NSFCC indicators, focusing on people living in the lowest and highest socioeconomic areas. It highlights that for many indicators, people from lower socioeconomic areas in Australia fare worse.

Measuring socioeconomic position

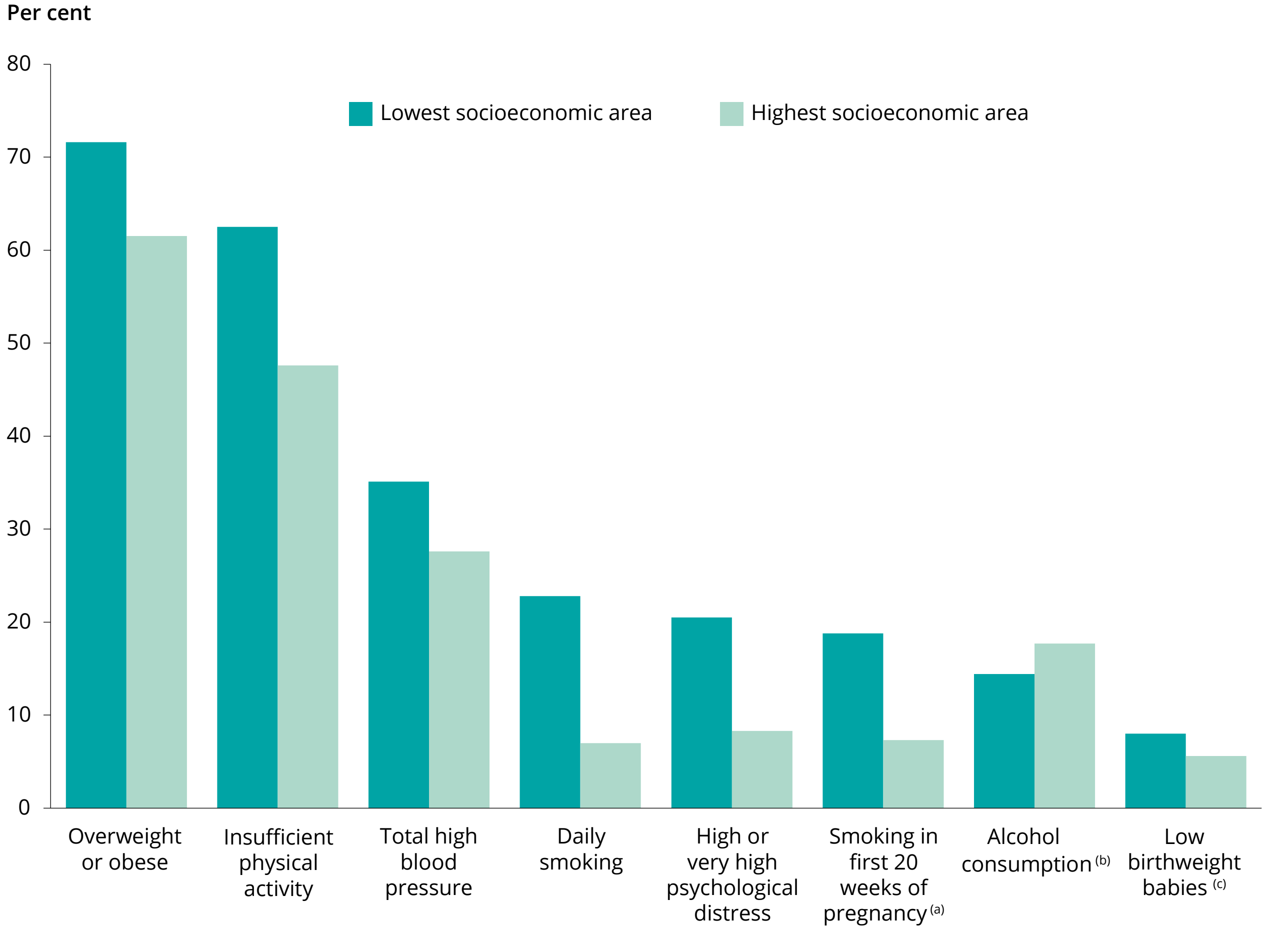
Socioeconomic position was determined using the Index of Relative Socio-Economic Disadvantage (IRSD) (ABS 2018c). The IRSD is a measure based on where people live, and reflects the overall or average level of socioeconomic disadvantage of the population of an area (see 'Glossary'). It scores each area by summarising attributes of the population, such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations (AIHW 2020g). Areas can then be ranked according to their score. The population living in the 20% of areas with the greatest overall level of disadvantage is described as the 'lowest socioeconomic areas'. The 20% at the other end of the scale—the top fifth—is described as the 'highest socioeconomic areas' (AIHW 2020g).

Health risk factors

For most health risk factors included in the *NSFCC: reporting framework*, people who lived in the lowest socioeconomic areas fared worse than people who lived in the highest socioeconomic area, including daily smoking (3.3 times as likely), smoking during pregnancy (2.6 times), high or very high levels of psychological distress (2.5), raised blood glucose levels (2.3), low birthweight babies (1.4), insufficient levels of physical activity (1.3), high blood pressure (1.3), and overweight or obesity (1.2) (Figure S1).

In contrast, alcohol consumption was more common among those living in the highest socioeconomic areas. In 2017–18, the proportion of adults who lived in lower socioeconomic areas who drank alcohol at levels that put them at lifetime risk of harm was lower than those who lived in high socioeconomic areas (14% compared with 18%; 'Indicator 6') (Figure S1).

Figure S1. Prevalence of risk factors by socioeconomic area, adults aged 18 and over, 2017–18 and 2018[a,c]



(a) Smoking in the first 20 weeks of pregnancy relates to mothers of all ages in 2018, including those aged less than 18 years.

(b) Alcohol consumption defined by the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).

(c) Percentage of liveborn babies of low birthweight less than 2,500 grams in 2018. Crude rates are shown.

Note: Age-standardised to the 2001 Australian standard population, except low birthweight babies.

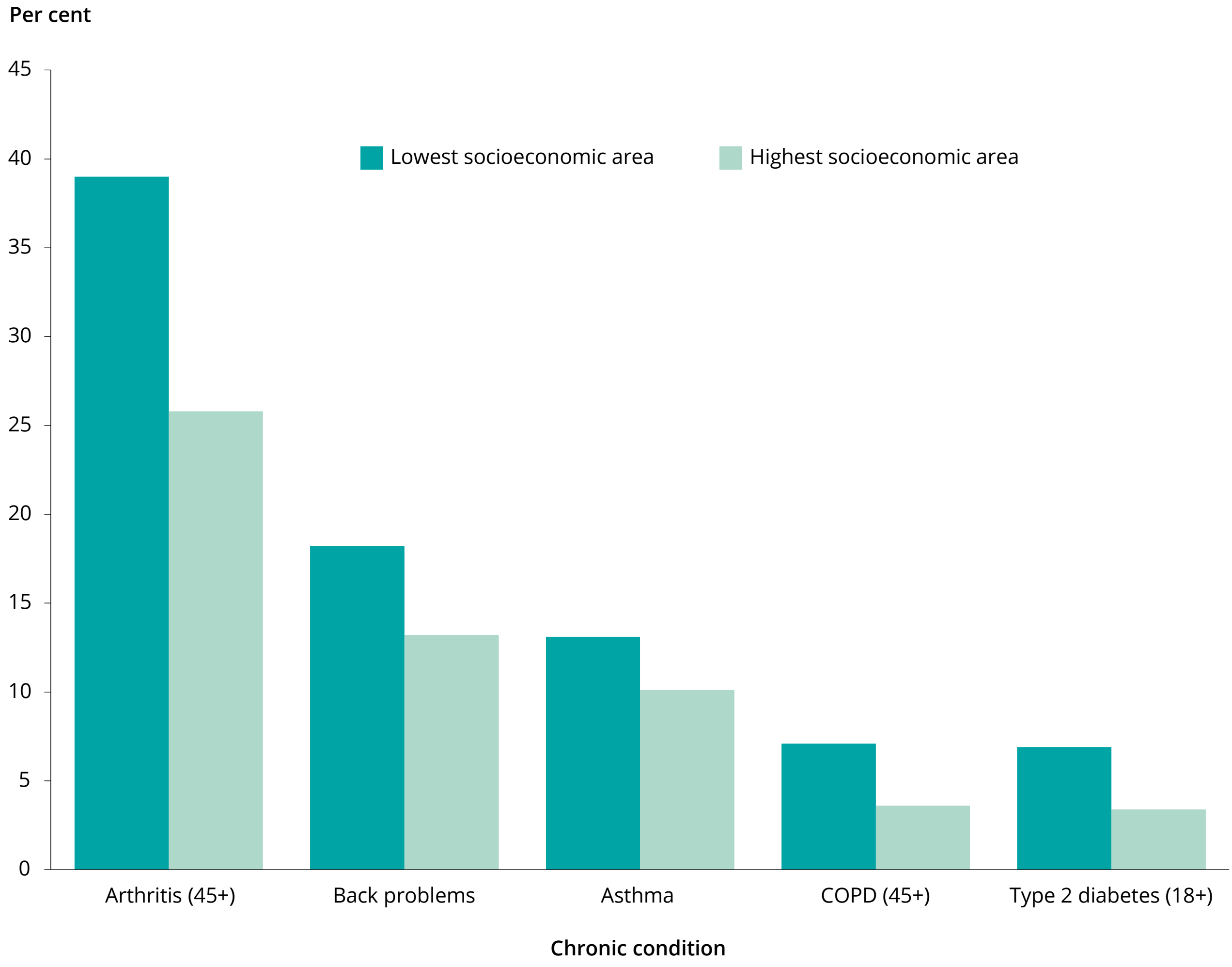
Data sources: National Health Survey 2017–18 (see 'Indicators 7, 8, 11, 13, 14 and 15' for reference details); and National Perinatal Data Collection (see 'Indicators 4 and 5' for reference details).

Chronic conditions

Rates of most of the chronic conditions looked at in the *NSFCC: reporting framework* were higher for people who lived in the lowest socioeconomic areas, compared with people who lived in the highest socioeconomic areas, including COPD (2.0 times as likely), type 2 diabetes (2.0 times), newly diagnosed lung cancer (1.7), arthritis (1.5), newly diagnosed cervical cancer (1.5), back problems (1.4), heart, stroke and vascular disease (1.3), asthma (1.3), and newly diagnosed bowel cancer (1.2) (Figure S2 and Figure S3).

Further, people living in the lowest socioeconomic areas were 1.4 times as likely to have experienced a mental illness in the previous 12 months compared to those living in the highest socioeconomic areas (22% compared with 16% (crude rates) in 2007) ('Indicator 16').

Figure S2. Prevalence of selected chronic conditions by socioeconomic area, all persons, 2017–18

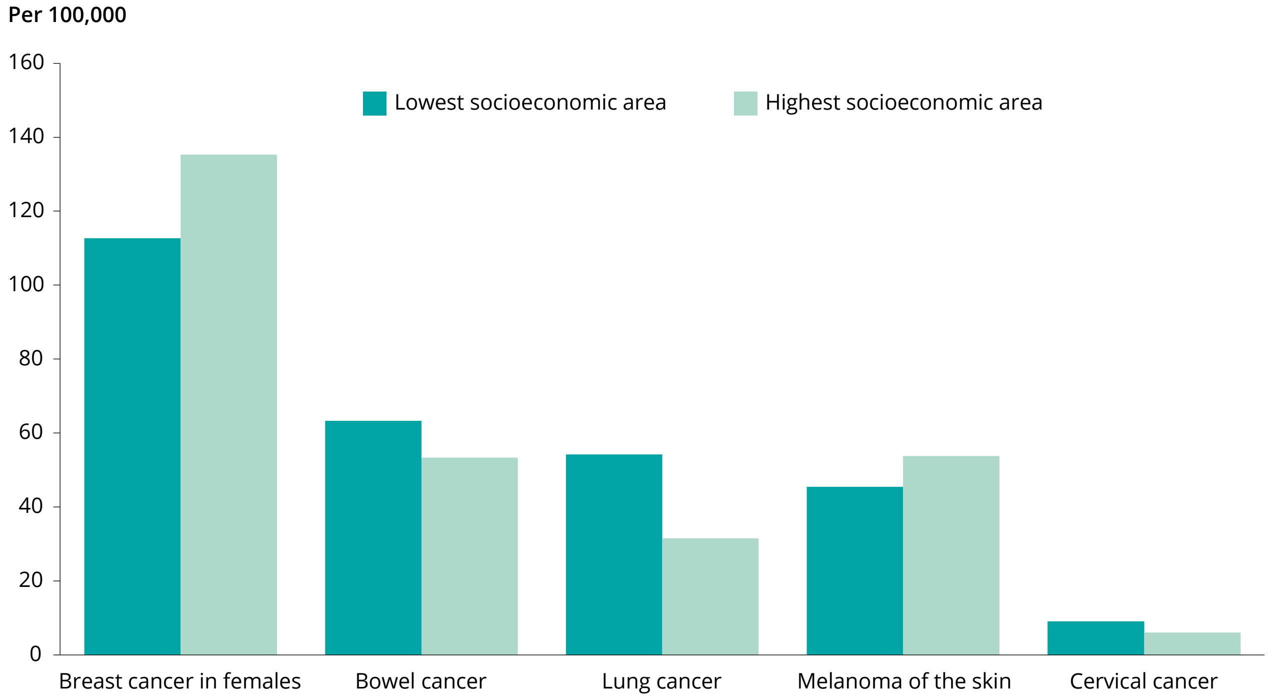


Note: Age-standardised to the 2001 Australian standard population.

Data source: National Health Survey 2017–18 (see 'Indicators 20, 21 and 22' for reference details).

In contrast, the rates of new cases of breast cancer and melanoma were lower among those living in the lowest socioeconomic areas compared with those in the highest socioeconomic areas in 2010–2014 ('Indicator 23'): 113 and 135 cases per 100,000, respectively, for breast cancer in females and 46 and 54 cases per 100,000, respectively, for melanoma of the skin (Figure S3).

Figure S3. Incidence rates for selected cancers, by socioeconomic area, all persons, 2010–2014



Note: Age-standardised to the 2001 Australian standard population.

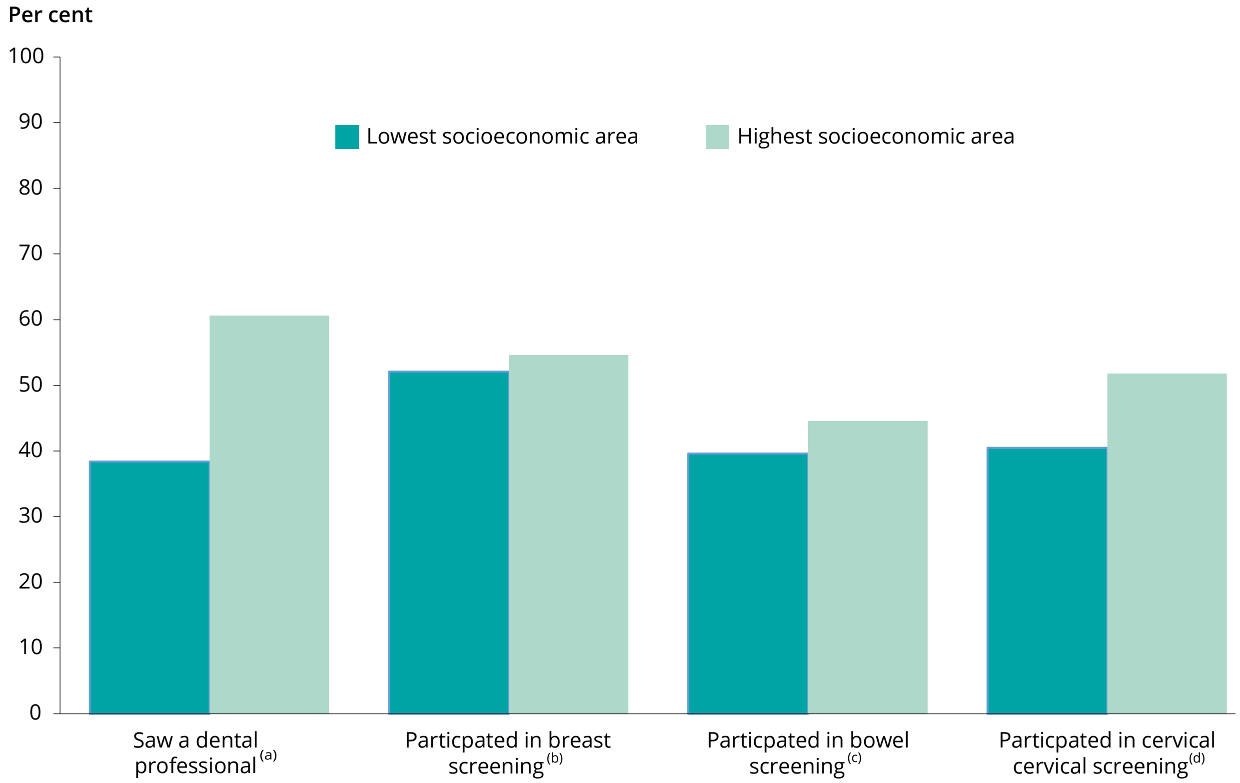
Data source: AIHW Australian Cancer Database (see 'Indicator 23' for reference details).

Prevention and detection activities

For the prevention and detection activities covered in the *NSFCC: reporting framework*, people living in the lowest socioeconomic areas were less likely than those in the highest socioeconomic areas to have had a dental check-up or to have completed bowel and cervical screening (Figure S4).

Meanwhile, the participation rate for breast screening in 2017–2018 showed little variation across people living in different socioeconomic areas, with all areas having participation rates between 52% and 55% ('Indicator 28').

Figure S4. Selected prevention and detection activities for chronic conditions, by socioeconomic area, 2017–2018(b,c) and 2018–2019(a,d)



(a) Persons aged 15 and over in 2018–19. Crude rates are shown (Data source: ABS Patient Experience Survey 2018–19; see ‘Indicator 26’ for reference details).

(b) Women aged 50–74 in 2017–2018 (Data source: State and territory BreastScreen register data; see ‘Indicator 28’ for reference details).

(c) Persons aged 50–74 in 2017–2018. Crude rates are shown (Data source: National Bowel Cancer Screening Program register; see ‘Indicator 29’ for reference details).

(d) Women aged 25–74 in 2018–2019 (Data source: National Cancer Screening Register data; see ‘Indicator 30’ for reference details).

Coordinated, person-centred, appropriate care

For indicators related to coordinated, person-centred, appropriate care covered in the *NSFCC: reporting framework*, Australians who lived in the lowest socioeconomic areas fared worse than people who lived in the highest socioeconomic areas. They were more than twice as likely to delay getting a prescription due to cost (2.4 times as likely) and to delay seeing a dental professional due to cost (2.2), and had almost twice the rate of potentially preventable hospitalisations for selected chronic conditions (1.9) (Table S1). They also experienced longer radiotherapy waiting times for non-emergency courses at the 50th percentile (12 and 8 days, respectively) but similar waiting times at the 90th percentile (Table S1).

Table S1: Coordinated, person-centred, appropriate care associated with chronic conditions, by socioeconomic area, 2017–18(b) and 2018–19(a,c)

Indicator	Rate ratio: comparing the indicator result in the lowest socioeconomic area with that in the highest socioeconomic area	Lowest socioeconomic area	Highest socioeconomic area
People delayed or deferred getting a prescription due to cost(a)	2.4	9.7%	4.1%
People delayed seeing a dental professional due to cost(a)	2.2	24%	11%
Potentially preventable hospitalisations for selected chronic conditions(b)	1.9	17 per 1,000 people	8.7 per 1,000 people
Radiotherapy waiting times(c)	1.5	12 days (50th percentile)	8 days (50th percentile)
	1.0	27 days (90th percentile)	26 days (90th percentile)

(a) People aged 15 and over in 2018–19. Crude rates are shown (Data source: ABS Patient Experience Survey 2018–19; see 'Indicator 32' for reference details).

(b) All persons in 2017–18. The selected chronic conditions are: angina, asthma, bronchiectasis, chronic obstructive pulmonary disease (COPD), congestive cardiac failure, diabetes complications, hypertension, iron deficiency anaemia, nutritional deficiencies and rheumatic heart diseases (refer to the *NSFCC: reporting framework* (AIHW 2022) for more information) (Data source: AIHW National Hospital Morbidity Database; see 'Indicator 37' for reference details).

(c) All persons in 2018–19. Crude rates are shown (Data source: AIHW Radiotherapy Waiting Times National Minimum Data Set; see 'Indicator 38' for reference details).

Meanwhile, the following indicators showed similar results across socioeconomic areas:

- In 2018–19, the proportion of people who delayed seeing, or did not see, a GP or specialist at least once due to cost (crude rates, 'Indicator 32'), waiting time for GPs (crude rates, 'Indicator 34'), and patient satisfaction with GPs (crude rates, 'Indicator 33')
- the rate of post-discharge mental health care in 2017–18 ('Indicator 39')
- the proportion of people who effectively managed their diabetes in 2011–12 (crude rates, 'Indicator 36').

Complications, multimorbidity, and disabilities associated with chronic conditions

For indicators related to complications, multimorbidity, and disabilities associated with chronic conditions covered in the *NSFCC: reporting framework*, Australians who lived in the lowest socioeconomic areas had higher rates than people who lived in the highest socioeconomic areas, for example:

- 2.7 times the rate of hospitalisations where a lower-limb amputation was performed with type 2 diabetes as a principal or additional diagnosis
- 1.7 times the prevalence of multimorbidity (that is, having 2 or more selected chronic conditions at the same time)
- 1.4 times the rate of non-fatal burden for selected chronic conditions (Table S2).

In 2018, the prevalence of treated end-stage kidney disease among people with diabetes ranged from 571 per 100,000 population to 1,104 per 100,000 population across the socioeconomic areas, however, there was not a clear gradient with increasing level of socioeconomic status ('Indicator 41').

Table S2: Complications, multimorbidity and disabilities associated with chronic conditions, by socioeconomic area, 2017–18(a,b) and 2018(c)

Indicator	Rate ratio: comparing the indicator result in the lowest socioeconomic area with that in the highest socioeconomic area	Lowest socioeconomic area	Highest socioeconomic area
Hospitalisations for lower-limb amputation with type 2 diabetes as a principal or additional diagnosis(a)	2.7	38 hospitalisations per 100,000 population	14 hospitalisations per 100,000 population
Multimorbidities(b)	1.7	24%	14%
Non-fatal burden (YLD) for selected chronic conditions(c)	1.4	42 YLD	30 YLD

(a) Hospitalisations for lower-limb amputation with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over in 2017–18 (Data source: AIHW National Hospital Morbidity Database; see 'Indicator 42' for reference details).

(b) Persons with 2 or more selected chronic conditions in 2017–18 (Data source: ABS National Health Survey 2017–18; see 'Indicator 40' for reference details).

(c) Non-fatal burden (years of healthy life lost due to the impact of living with selected chronic conditions) in 2018 (Data source: AIHW Australian Burden of Disease Database; see 'Indicator 24' for reference details).

Premature death due to specific chronic conditions

For indicators related to premature death covered in the *NSFCC: reporting framework*, for which data are available by socioeconomic area, people living in lower socioeconomic areas experienced higher rates of potentially avoidable deaths and fatal burden (YLL) than people living in higher socioeconomic areas:

- 2.3 times the rate of potentially avoidable deaths from selected chronic conditions (95 and 42 deaths per 100,000 people in 2019, respectively; 'Indicator 44')
- 2.0 times the rate for fatal burden (40 and 20 YLL per 1,000 population, respectively) (Figure S5, 'Indicator 45').

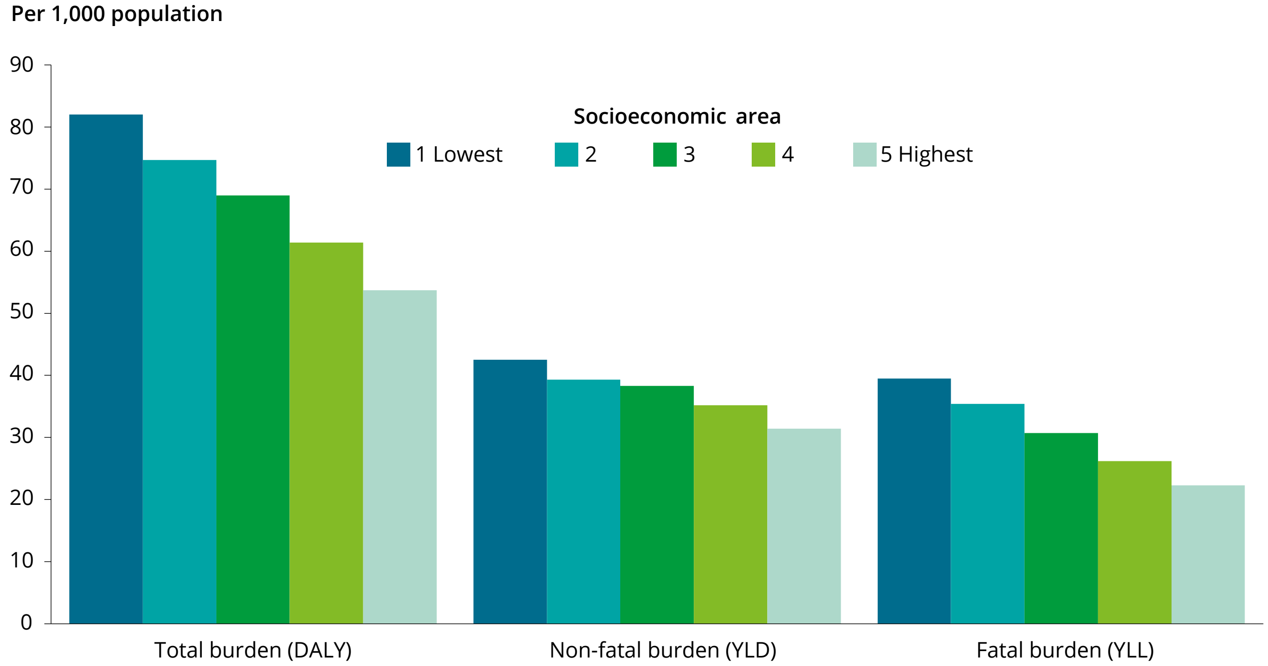
Burden of disease

Burden of disease analysis combines burden of living with ill health (non-fatal burden) and the burden of dying prematurely (fatal burden) (see above for more detail).

In 2018, the rate of burden from selected chronic conditions for people who lived in the lowest socioeconomic areas was higher than that of people who lived in the highest socioeconomic areas: 1.7 times the rate for total burden, 2.0 times the rate for fatal burden and 1.4 times the rate for non-fatal burden) (Figure S5).

In terms of population impact, if all Australians had experienced the same burden from selected chronic conditions as people in the highest socioeconomic group in 2018, the total disease burden could have been reduced by a quarter (25%).

Figure S5: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by socioeconomic area, 2018



Notes

1. Age-standardised to the 2001 Australian standard population.

2. The selected chronic conditions are: coronary heart disease, back pain and problems, chronic obstructive pulmonary disease (COPD), lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).

Data source: AIHW Australian Burden of Disease Database, 2018 (see 'Indicators 24, 25 and 45' for reference details).

People living in remote, or rural and regional locations

Around 7 million people—about 28% of the population—live in rural and remote areas which encompass many diverse locations and communities (ABS 2019b). Australians living in rural and remote areas face unique challenges due to their geographic isolation, and they often have poorer health and welfare outcomes than people living in metropolitan areas (AIHW 2020f). The proportion of adults engaging in behaviours associated with poorer health—such as tobacco smoking and excessive alcohol consumption—is higher for those living in rural and remote areas than those living in in metropolitan areas, as is (generally) the prevalence of chronic conditions. Data show that people living in rural and remote areas have higher rates of hospitalisations, deaths, and injury and also have poorer access to, and use of, primary health-care services, than people living in *Major cities* (AIHW 2020f). These poorer health outcomes may be due to factors such as disadvantage in education, employment opportunities, income and access to services.

This section looks at people living in rural and remote areas across the range of NSFCC indicators. The following results highlight the overarching health inequalities across remoteness areas and will contribute to a more informed approach to health-care planning, program development and service delivery models outside *Major cities*.

Defining and reporting by remoteness area

The term ‘rural and remote’ covers all areas outside Australia’s major cities, classified by the Australian Statistical Geography Standard as *Inner regional*, *Outer regional*, *Remote* or *Very remote* (ABS 2014). These categories are defined by an area’s relative distance to services. Due to small population sizes, data for those living in *Outer regional*, *Remote* and *Very remote* areas are sometimes combined for reporting purposes.

Social determinants

Socioeconomic factors (including education, income, and employment) are important determinants of health. On average, people living in rural and remote areas have lower rates of education and income. In 2019, people aged 25–64 living in rural and remote areas were less likely than those living in in *Major cities* to have completed a non-school qualification (at Certificate level III or higher). Just over half of the people living in *Outer regional* (54%) and *Remote and very remote* areas (55%) had a non-school qualification, compared with over two-thirds (68%) of those living in *Major cities* (crude rates, see ‘Indicator 2’).

In 2017–18, Australians living outside capital cities had, on average, 19% less household income per week compared with those living in capital cities, and 30% less mean household net worth (ABS 2019c). Almost twice as many people living in *Remote* areas lived on less than half of the median equivalised household income compared to people living in *Major cities* in 2017–18 (16% compared to 9.6%) (crude rates, see ‘Indicator 1’).

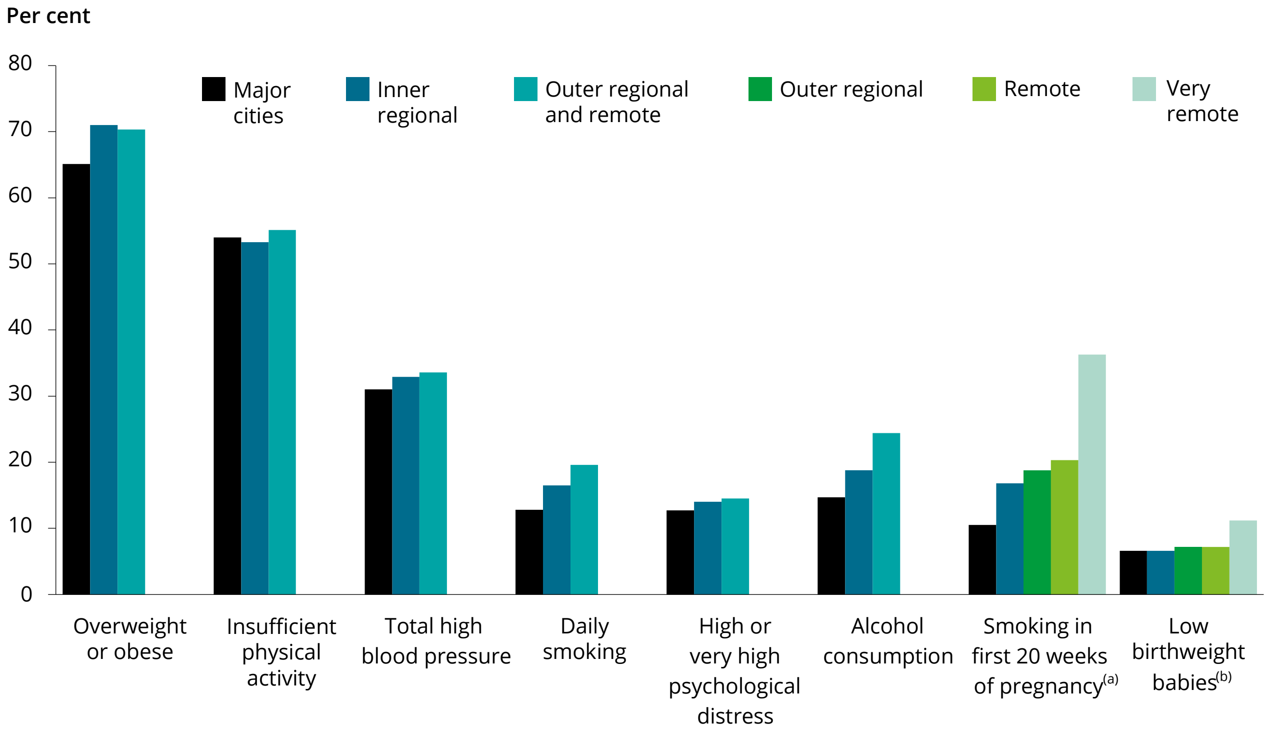
In 2019, the employment-to-population ratio was highest for persons living in *Remote and very remote areas* (80%), followed by 75% in *Major cities*, 74% in *Inner regional* areas and 73% for those living in *Outer regional* areas (crude rates, see ‘Indicator 3’).

Health risk factors

For some health risk factors included in the *NSFCC: reporting framework*, people living in regional and remote areas fared worse than people living in *Major cities*. For example, smoking during pregnancy (3.5 times as likely), exceeding alcohol risk guidelines (1.7), daily smoking (1.5), low birthweight babies (1.7), overweight or obesity (1.1) and inadequate fruit consumption (1.1) (note the remoteness categories varied across indicators, see Figure S6 for details).

Other health risk factors showed little variation across remoteness areas, such as insufficient physical activity ('Indicator 8'), inadequate vegetable consumption ('Indicator 9'), average daily intake of sodium ('Indicator 10'), total high blood pressure and uncontrolled high blood pressure ('Indicator 11'), dyslipidaemia ('Indicator 12'), raised blood glucose levels ('Indicator 13'), and high or very high levels of psychological distress ('Indicator 15').

Figure S6. Prevalence of risk factors by remoteness area, adults aged 18 and over, 2017–18 and 2018(a,b)



(a) Smoking in the first 20 weeks of pregnancy relates to mothers of all ages in 2018, including those aged less than 18 years.

(b) Percentage of liveborn babies of low birthweight less than 2,500 grams in 2018. Crude rates are shown.

Note: Age-standardised to the 2001 Australian standard population (except low birthweight babies).

Data sources: National Health Survey 2017–18 (see 'Indicators 6, 7, 8, 11, 14 and 15'); and National Perinatal Data Collection 2018 (see 'Indicators 4 and 5' for reference details).

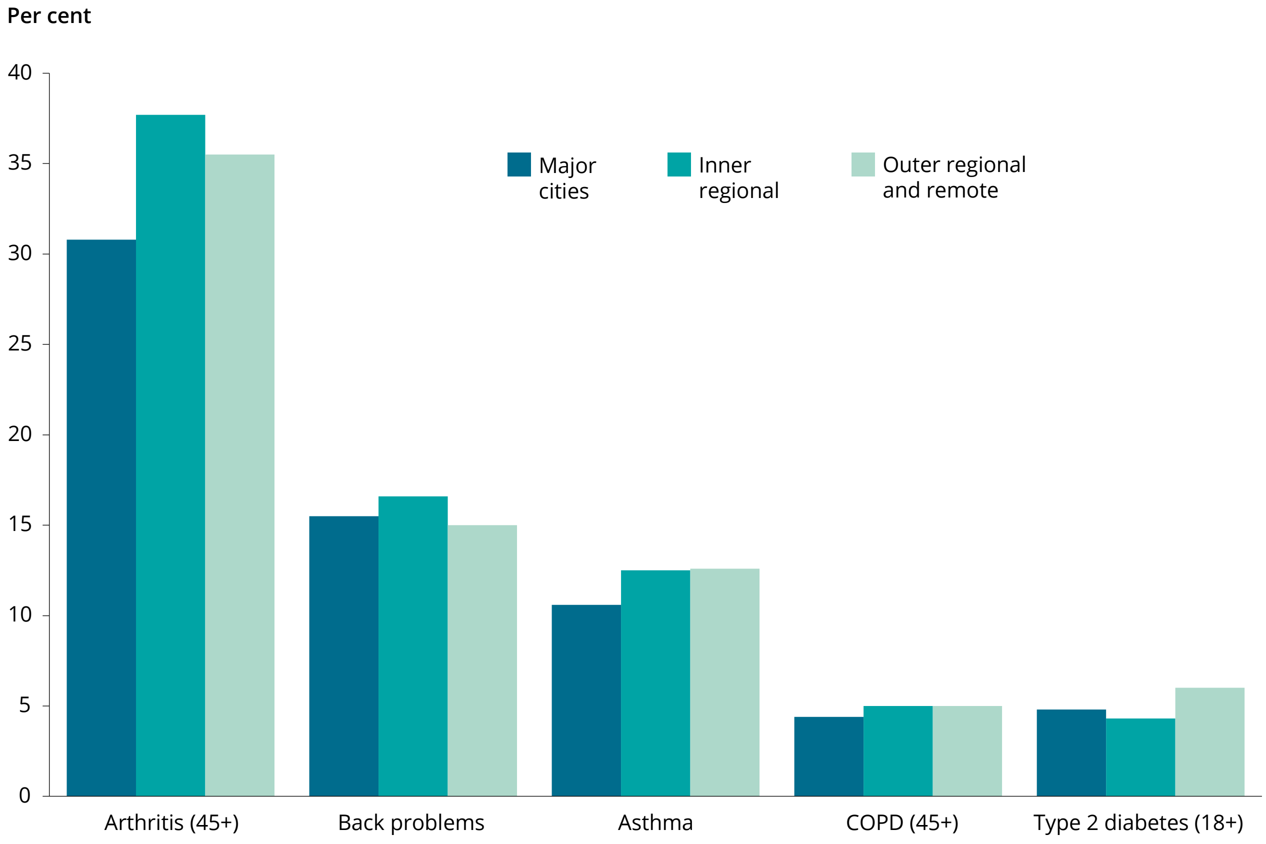
Chronic conditions

Rates of some of the chronic conditions looked at in the *NSFCC: reporting framework* were higher for people living in the *Outer regional and remote* areas, compared with people living in *Major cities* including type 2 diabetes (1.3 times as likely), asthma (1.2), arthritis (1.2) and COPD (1.1) (Figure S7). Further, rates of newly diagnosed cervical and lung cancer were also higher for those living in rural and remote areas, showing clear gradients of generally increasing incidence as remoteness increased (Figure S8).

In contrast, the rate of new cases of breast cancer showed a clear gradient in the opposite direction whereby incidence decreased as remoteness increased; and while newly diagnosed bowel cancer and melanoma varied by remoteness area there wasn't a clear gradient (Figure S8).

Meanwhile, there were no differences in the prevalence of other chronic conditions by remoteness area such as: mental illness in the previous 12 months (crude rates, 'Indicator 16'), heart, stroke and vascular diseases (HSVD) ('Indicator 17'), back problems and osteoporosis (both 'Indicator 22').

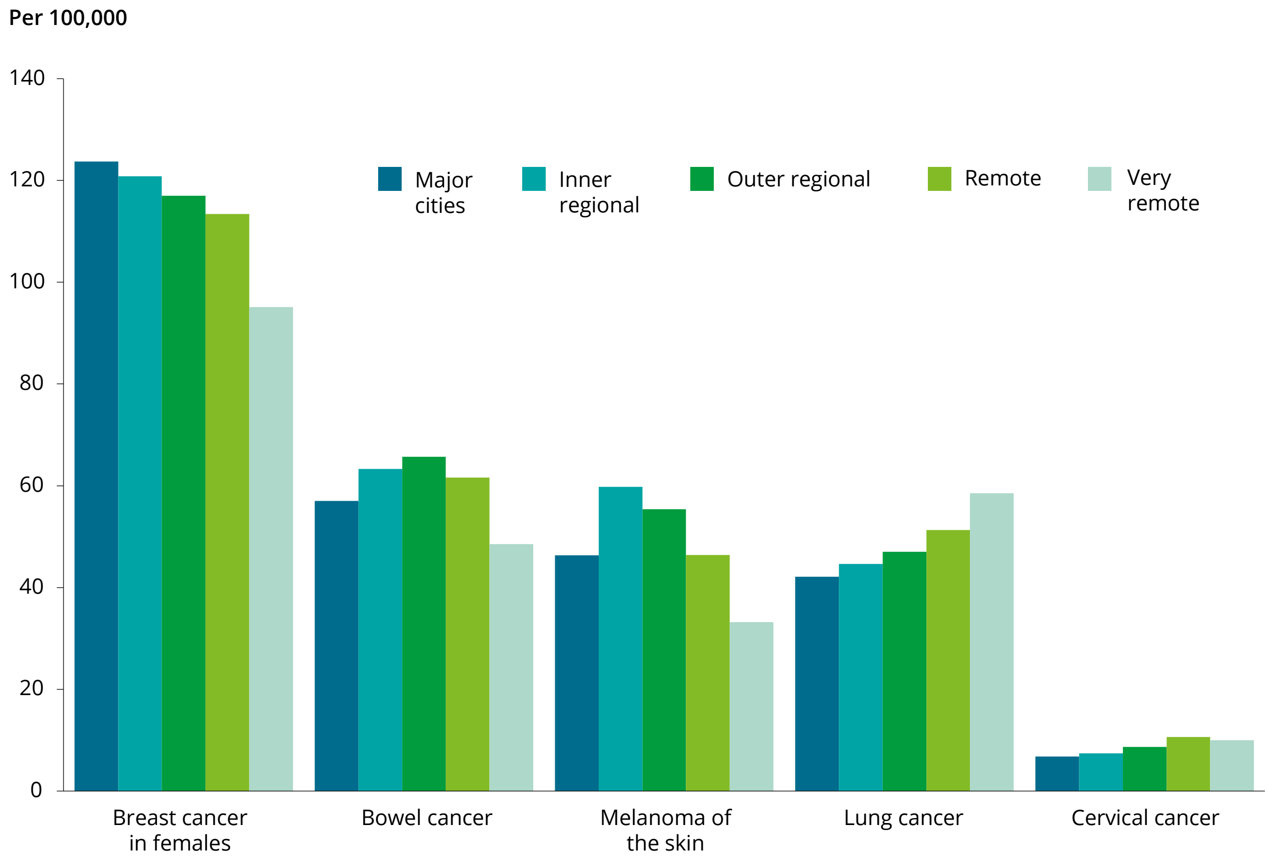
Figure S7. Prevalence of selected chronic conditions by remoteness area, all persons, 2017–18



Note: Age-standardised to the 2001 Australian standard population.

Data source: National Health Survey 2017–18 (see 'Indicators 20, 21 and 22' for reference details).

Figure S8: Incidence rates for selected cancers, by remoteness area, 2010–2014



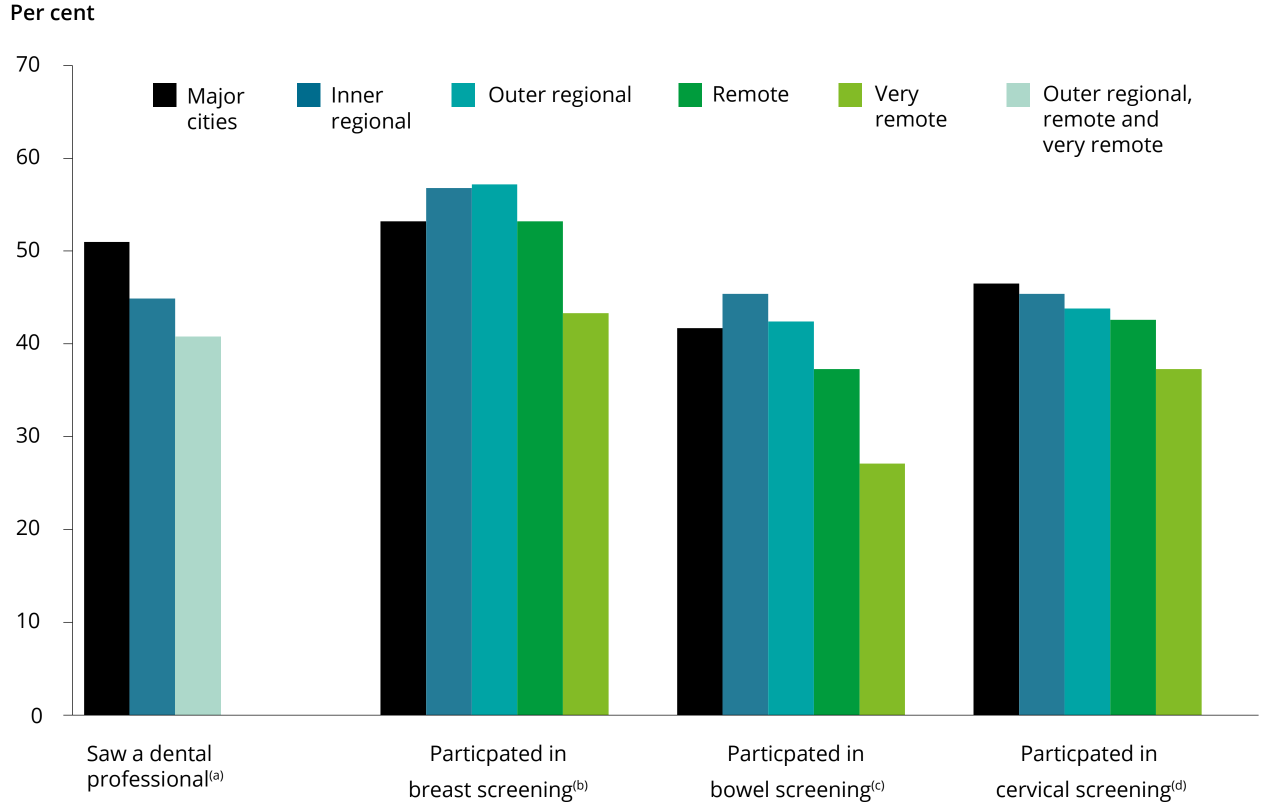
Note: Age-standardised to the 2001 Australian standard population.

Data source: Australian Cancer Database (see Indicator 23).

Prevention and detection activities

For the prevention and detection activities covered in the *NSFCC: reporting framework*, people living in rural and remote areas were less likely than those living in *Major cities* to have had a dental check up, or to have completed cervical screening (Figure S9). In contrast, women living in regional areas were more likely to have completed breast cancer screening than those living in *Major cities* or *Remote* or *Very remote* areas; and for bowel cancer screening, the participation rate was highest for people living in *Inner regional* areas, and lowest for people living in *Very remote* areas (Figure S9).

Figure S9. Selected prevention and detection activities for chronic conditions, by remoteness area, 2017–2018(b,c) and 2018–2019(a,d)



(a) Persons aged 15 and over in 2018–19. Crude rates are shown (Data source: ABS Patient Experience Survey 2018–19; see 'Indicator 26' for reference details).

(b) Women aged 50–74 in 2017–2018 (Data source: State and territory BreastScreen register data; see 'Indicator 28' for reference details).

(c) Persons aged 50–74 in 2017–2018. Crude rates are shown (Data source: National Bowel Cancer Screening Program register; see 'Indicator 29' for reference details).

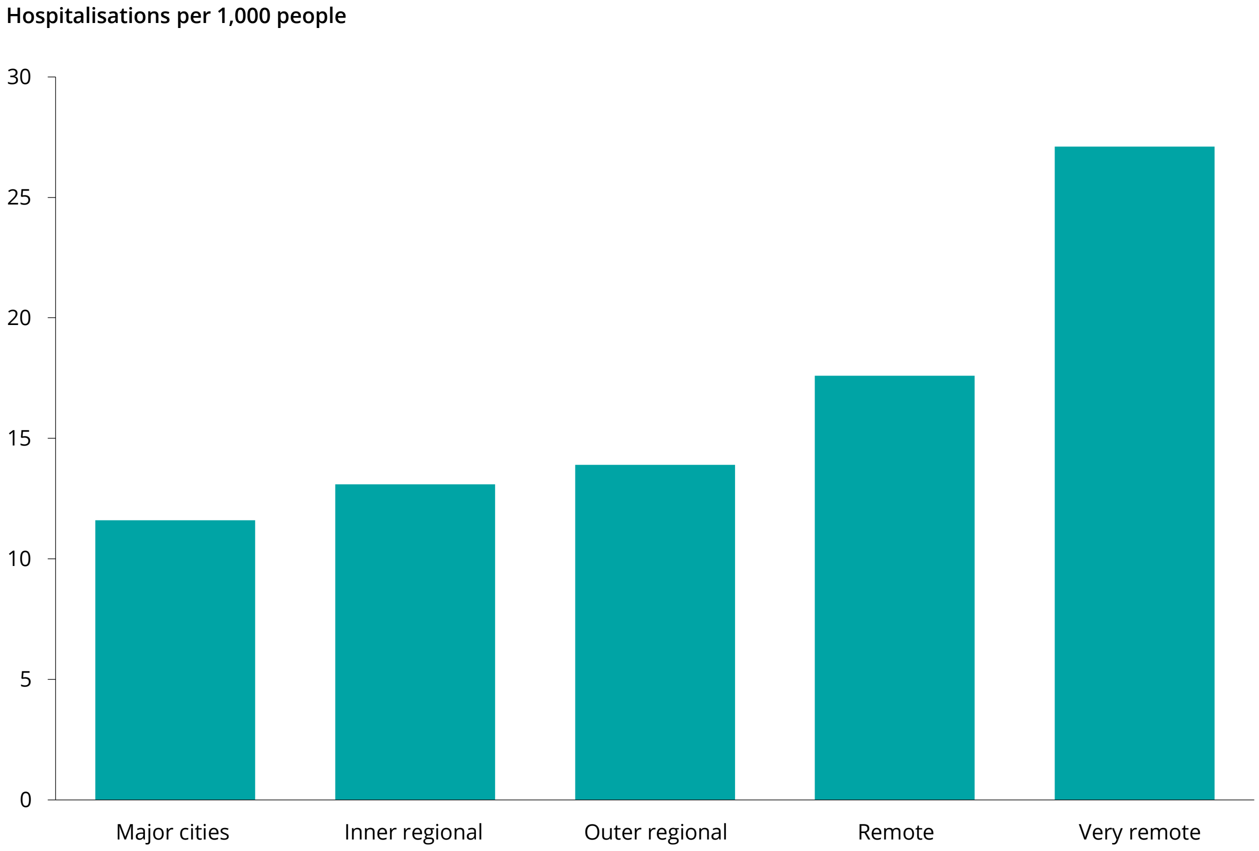
(d) Women aged 25–74 in 2018–2019 (Data source: National Cancer Screening Register data; see 'Indicator 30' for reference details).

Coordinated, person-centred, appropriate care

For indicators related to coordinated, person-centred, appropriate care covered in the *NSFCC: reporting framework*, Australians living in rural and remote areas fared worse than people living in *Major cities*. They experienced more than twice the rate of potentially preventable hospitalisations for selected chronic conditions (2.3 times as likely), and were more likely to delay seeing a dental professional (1.4) or GP (1.3) due to cost (Figure S10 and Table S3). In contrast, people living in *Outer regional, remote and very remote* areas were less likely than people living in *Major cities* to have delayed seeing a specialist due to cost (0.7) (Table S3).

In addition, people living in *Major cities* were more likely to be seen by a GP for urgent medical care within 4 hours than those living in *Inner regional* areas (64% compared with 55%, respectively); and less likely to wait 24 hours or more in 2018–19 (*Major cities*, 25%; *Inner regional*, 34%) (crude rates, 'Indicator 34').

Figure S10: Rate of potentially preventable hospitalisations for selected chronic conditions, by remoteness area, 2017–18



Note: Age-standardised to the 2001 Australian standard population.

Data source: AIHW National Hospital Morbidity Database (see 'Indicator 27' for reference details).

Table S3: Coordinated, person-centred, appropriate care associated with chronic conditions, by remoteness area, 2017–18[(a)] and 2018–19[(b)]

Indicator	Rate ratio: comparing the indicator result in rural and remote areas with *Major cities* (categories vary by indicator, see next column)	Rural and remote area	Major cities
Potentially preventable hospitalisations for chronic conditions[(a)]	2.3	27.1 (*Very remote*) hospitalisations per 1,000 people	11.6 hospitalisations per 1,000 people
People delayed seeing a dental professional due to cost[(b)]	1.4	23% (*Outer regional, remote and very remote*)	16%
People delayed seeing a GP due to cost[(b)]	1.3	4.2% (*Outer regional, remote and very remote*)	3.2%
People delayed seeing a specialist due to cost[(b)]	0.7	5.9% (*Outer regional, remote and very remote*)	8.2%

(a) All persons in 2017–18 (Data source: AIHW National Hospital Morbidity Database; see 'Indicator 37' for reference details).

(b) People aged 15 or over in 2018–19. Crude rates are shown. Categories shown are *Major cities* and *Outer regional, remote and very remote* (combined) (Data source: ABS Patient Experience Survey 2018–19; see 'Indicator 32' for reference details).

Meanwhile, results for the following indicators didn't vary by remoteness:

- the proportion of people that delayed getting, or did not get, a prescription due to cost (crude rates, 'Indicator 32')
- the proportion of people who reported GP patient satisfaction (crude rates, 'Indicator 33')
- the proportion of people in need of urgent GP care who reported waiting 4 hours or more but were seen within 24 hours of making an appointment (crude rates, 'Indicator 34')
- the proportion of people who effectively managed their diabetes (crude rates, 'Indicator 36')
- radiotherapy waiting times for non-emergency courses at the 50th and 90th percentiles ('Indicator 38')
- the rate of post-discharge mental health care; this is an improvement as people living in *Remote and very remote* areas previously had lower rates of follow-up but now have rates similar to people living in other regions (see 'Indicator 39' for details).

Complications, multimorbidity, and disabilities associated with chronic conditions

For several indicators related to complications, multimorbidity, and disabilities associated with chronic conditions covered in the *NSFCC: reporting framework*, Australians living in rural and remote areas generally had higher rates than people living in *Major cities*, for example:

- 3.0 times the rate of hospitalisations where a lower-limb amputation was performed with type 2 diabetes as a principal or additional diagnosis
- 2.2 times the rate of treated end-stage kidney disease among people with diabetes
- 1.2 times as likely to have multimorbidity, that is, 2 or more selected chronic conditions at the same time (note the remoteness categories varied across indicators, see Table S4 for details).

However, the rate of non-fatal burden (the number of years of healthy life lost due to the impact of living with selected chronic conditions (YLD)) did not vary by remoteness (Table S4).

Table S4: Complications, multimorbidity and disabilities associated with chronic conditions, by remoteness area, 2017–18[a,b,c] and 2018[d]

Indicator	Rate ratio: comparing the indicator result in rural and remote areas with *Major cities* (categories vary by indicator, see next column)	Rural and remote area	Major cities
Hospitalisations for lower-limb amputation with type 2 diabetes as a principal or additional diagnosis[a]	3.0	65 (*Remote and very remote*) hospitalisations per 100,000 population	22 hospitalisations per 100,000 population
Prevalence of treated end–stage kidney disease among people with diabetes[b]	2.2	1,543 (*Outer regional and remote*) per 100,000 population	695 per 100,000 population
Multimorbidities[c]	1.2	21% (for both *Inner regional* and *Outer regional and remote*)	18%
Non-fatal burden (YLD)[d]	1.0	36 YLD (*Remote and very remote*)	37 YLD

(a) Hospitalisations for lower-limb amputations with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over in 2017–18 (Data source: AIHW National Hospital Morbidity Database; see 'Indicator 42' for reference details).

(b) Persons with treated end-stage kidney disease among people with self-reported diabetes in 2018 (Data sources: Australian and New Zealand Dialysis and Transplant Registry; and National Health Survey, 2017–18; see 'Indicator 41' for reference details).

(c) Persons with 2 or more selected chronic conditions in 2017–18 (Data source: ABS National Health Survey; see 'Indicator 40' for reference details).

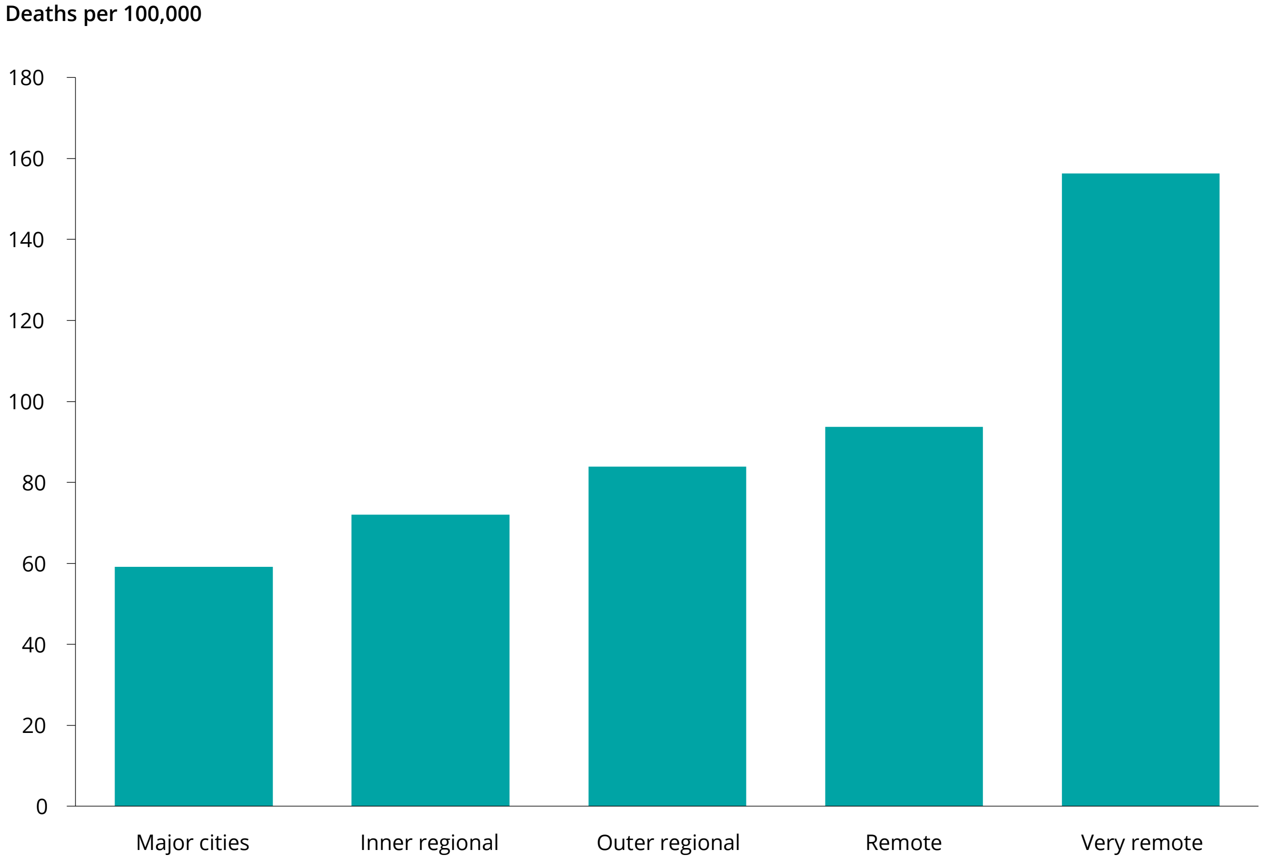
(d) Non-fatal burden (years of healthy life lost due to the impact of living with selected chronic conditions) in 2018 (Data source: AIHW Australian Burden of Disease Database; see 'Indicator 24' for reference details).

Premature death due to specific chronic conditions

For indicators related to premature death covered in the *NSFCC: reporting framework*, for which data are available by remoteness area, people living in rural and remote areas experienced higher rates of potentially avoidable deaths and fatal burden (YLL) than people living in *Major cities*; both measures showed increasing rates as remoteness increased:

- 2.6 times the rate of potentially avoidable deaths from selected chronic conditions (*Very remote* compared with *Major cities*) (Figure S11, 'Indicator 44')
- 1.7 times the rate for fatal burden (*Remote and very remote* compared with *Major cities*) (Figure S12, 'Indicator 45').

Figure S11: Age-standardised death rates (deaths per 100,000) for potentially avoidable deaths from selected chronic conditions, persons aged 0–74, by remoteness area, 2019



Note: Age-standardised to the 2001 Australian standard population.

Data source: AIHW analysis of National Mortality Database (see 'Indicator 44' for reference details).

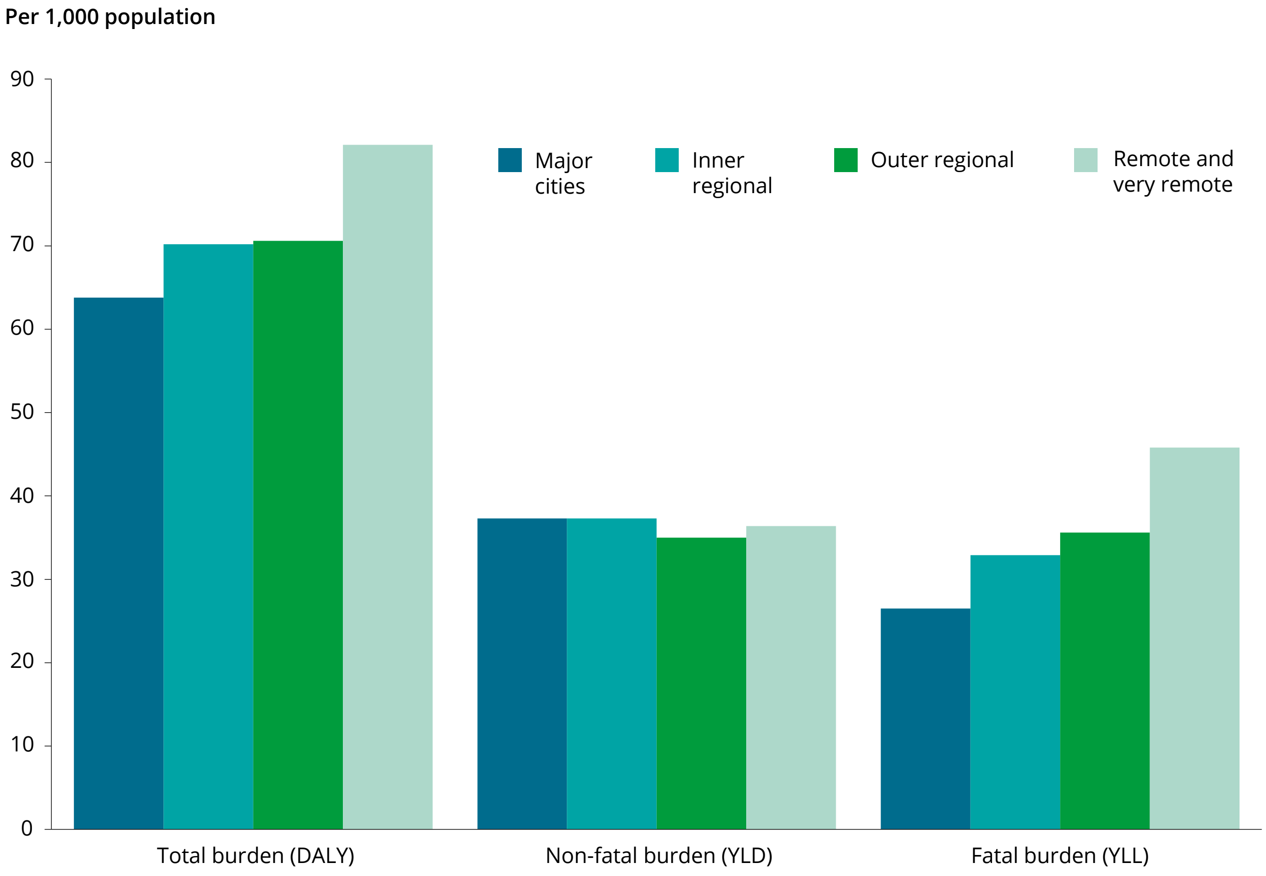
Burden of disease

Burden of disease analysis combines burden of living with ill health (non-fatal burden) and the burden of dying prematurely (fatal burden) (see above for more detail).

In 2018, the rate of burden from selected chronic conditions, for people living in rural and remote areas, was higher than that of people living in *Major cities*, for example: 1.7 times the rate for fatal burden and 1.3 times the rate for total burden when compared with people living in *Remote and very remote* areas (Figure S12).

In contrast, the rate of non-fatal burden (YLD per 1,000 population) was similar across remoteness categories in 2018 (Figure S12).

Figure S12: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by remoteness area, 2018



Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, chronic obstructive pulmonary disease (COPD), lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).

Data source: AIHW analysis of the Australian Burden of Disease Database, 2018 (see 'Indicators 24, 25 and 45' for reference details).

Aboriginal and Torres Strait Islander people

Aboriginal and Torres Strait Islander people are the Indigenous peoples of Australia. They comprise hundreds of groups, each with its own distinct language, history and cultural traditions (AIHW 2020h). Indigenous Australians live in all parts of the nation, from cities to remote tropical and desert areas. However, overall Indigenous Australians are more likely to live in urban and regional areas than remote areas (AIHW 2020h).

In 2016, an estimated 798,400 Australians identified as Indigenous (3.3% of the total Australian population) (ABS 2019d).

Social determinants

Differences in social determinants can account for a large part of the differences in health status within the Indigenous population. For instance, Indigenous Australians who are employed and those with higher levels of education in general, have better health than those who are not employed and those with lower education levels. Also, Indigenous Australians who are employed, and those with higher levels of education, are less likely to smoke which also contributes to their better health (AIHW 2020i).

There are 3 indicators related to social determinants included in the *NSFCC: reporting framework*:

- Income—in 2016, the median adjusted weekly household income among all Indigenous Australians aged 15 and over was $623, 33% lower than that of non-Indigenous Australians ($935) (AIHW 2019f); crude rates, see 'Indicator 1'.
- Education—in 2018–19, 45% (183,500) of Indigenous Australians aged 20–64 had a post-school qualification (at Certificate level III or higher), compared with 64% of non-Indigenous Australians in 2018 (ABS 2019e); crude rates, see 'Indicator 2'.
- Employment—in 2018–19, the employment-to-population ratio for Indigenous Australians was 49%—an increase from 38% in 1994 (AIHW 2017b). The employment-to-population ratio for Indigenous Australians was lower than that of non-Indigenous Australians (75%) in 2018 (ABS 2019e); crude rates, see 'Indicator 3'.

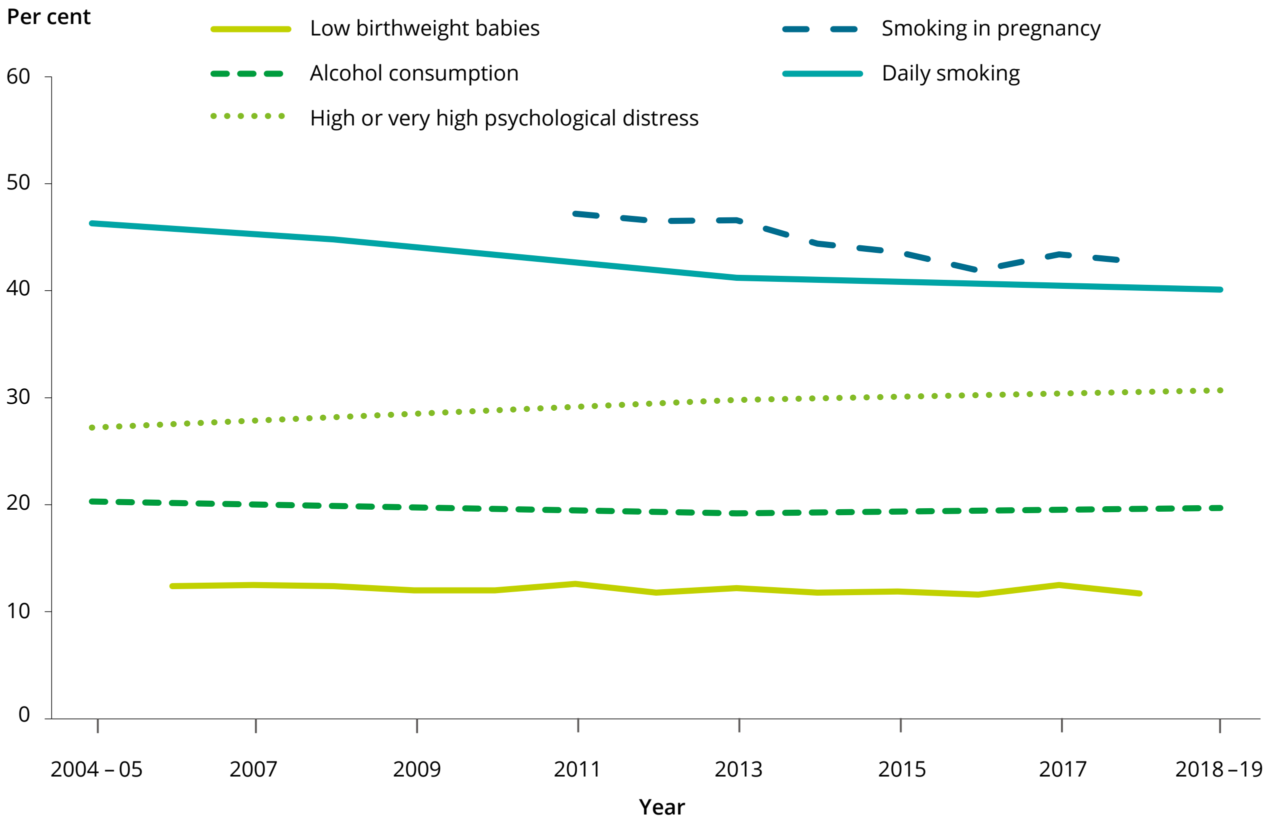
Health risk factors

For the risk factors included in the *NSFCC: reporting framework*, for which there are trend data available, there is some good news, such as: the reduction in the daily smoking rate among Indigenous Australians (from 48.8% in 2001 to 40.1% in 2018–19) and the fall in smoking rates during the first 20 weeks of pregnancy among Indigenous mothers (42% in 2018, an 11% fall since 2011) (Figure S13).

Despite these improvements, there is a need to target preventive efforts on some areas where there are no observed changes or where outcomes are worsening. For example, the prevalence of high or very high levels of psychological distress among Indigenous adults increased from 27% in 2004–05 to 31% in 2018–19; there has been little change in the proportion of low birthweight babies from 2006 to 2018; and the proportion of Indigenous Australians who exceeded the lifetime alcohol risk guidelines remained relatively stable between 2001 and 2018–19 (Figure S13).

Further (note the following results are crude rates), 97% of Indigenous Australians had inadequate fruit and/or vegetable consumption ('Indicator 9'), 74% were overweight or obese ('Indicator 14'), 65% had abnormal blood lipids ('Indicator 12'), 60% were insufficiently active ('Indicator 8'), 23% had uncontrolled high blood pressure ('Indicator 11'), and 16% had raised blood glucose levels ('Indicator 13').

Figure S13. Prevalence of risk factors in Indigenous Australians, adults aged 18 and over[(a)], 2004–05 to 2018–19



(a) Low birthweight and smoking in pregnancy rates relates to mothers of all ages in 2018, including those aged less than 18 years.

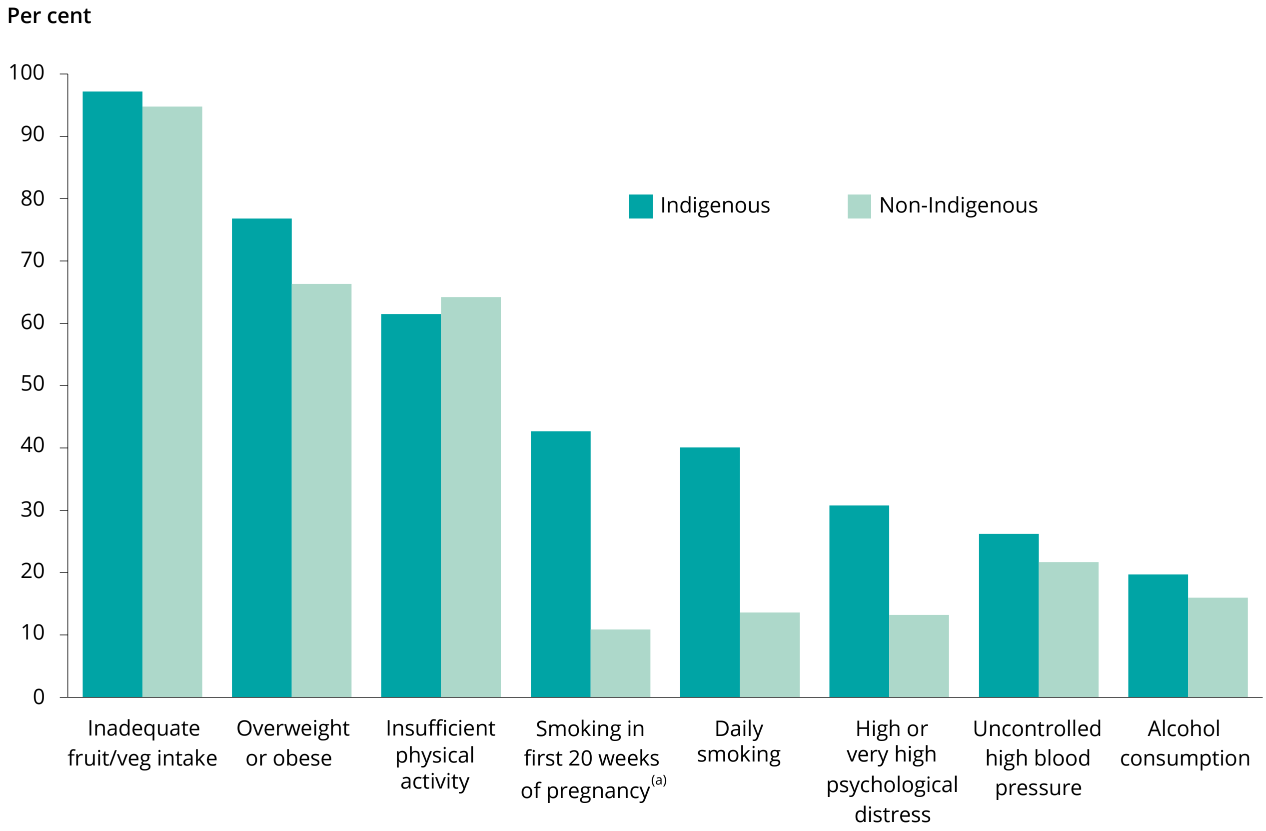
Notes

1. Alcohol consumption and daily smoking rates are age-standardised to the 2001 Australian standard population.
2. Alcohol consumption defined by the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).
3. Smoking in pregnancy rates are standardised using the 2001 Australian female Estimated Resident Population (ERP) aged 15–44 as the standard population.
4. Low birthweight and high or very high psychological distress rates are crude.

Data sources: Australian Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012–13; National Aboriginal and Torres Strait Islander Health Survey, 2018–19; and National Perinatal Collection 2018 (see 'Indicators 4, 5, 6, 7 and 15' for reference details).

For most health risk factors included in the *NSFCC: reporting framework*, Indigenous Australians experienced higher rates than non-Indigenous Australians. However, similar prevalence rates among Indigenous and non-Indigenous Australians were observed for insufficiently physical activity and inadequate consumption of fruit and/or vegetables (see Figure S14 and Table S5 for details).

Figure S14. Prevalence of risk factors by Indigenous status, adults aged 18 and over, 2017–18 and 2018[(a)]



(a) Smoking in the first 20 weeks of pregnancy relates to mothers of all ages in 2018, including those aged less than 18 years. Age-standardised using the 2001 Australian female Estimated Resident Population (ERP) aged 15–44 as the standard population.

Note: Age-standardised to the 2001 Australian standard population.

Data sources: National Health Survey 2017–18; and National Perinatal Collection 2018 (see 'Indicators 4, 6, 7, 8, 9, 11, 14 and 15' for reference details).

Chronic conditions

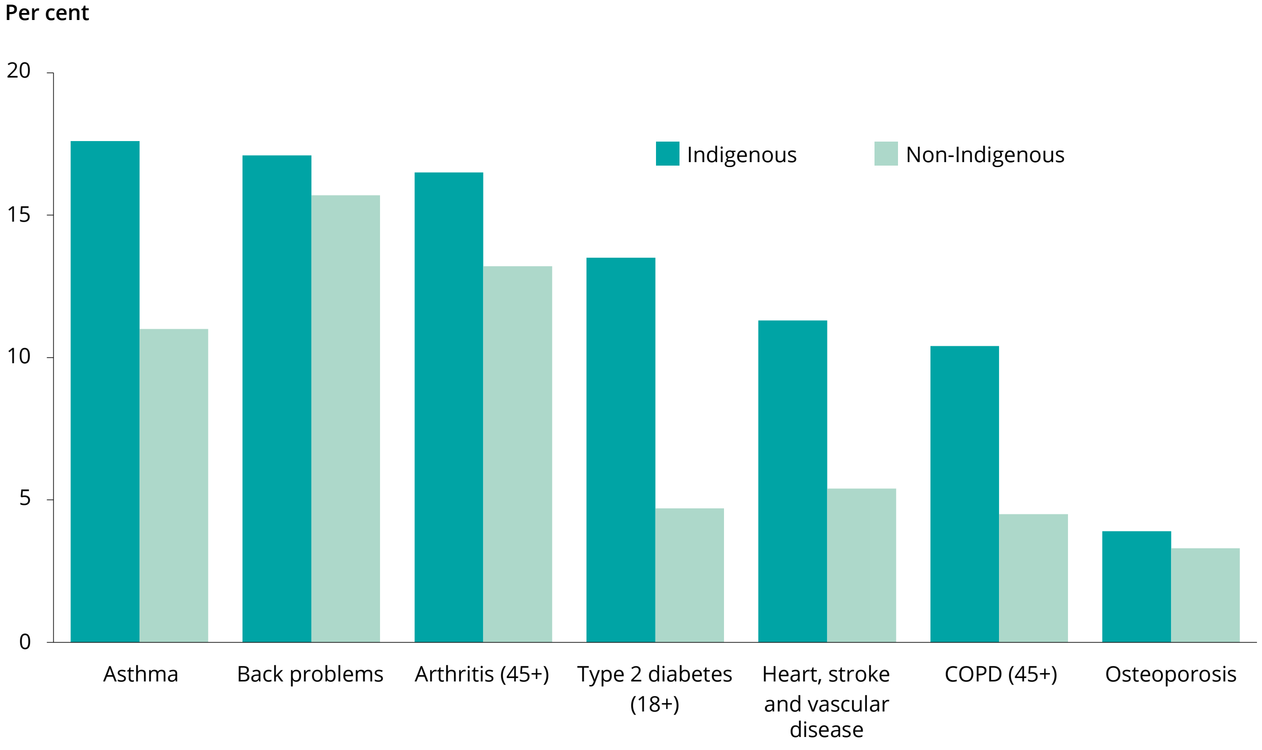
There have been some improvements for some chronic conditions among Indigenous Australians. For example, after adjusting for age, the rate of acute coronary events among Indigenous Australians (aged 25 years and over) decreased by 22% between 2007 and 2017 ('Indicator 18').

However, many chronic conditions remain prevalent among Indigenous Australians: 16% have asthma, 13% back problems, 11% arthritis, 11% type 2 diabetes, 10% COPD (those aged 45 years and over), 8.7% heart, stroke and vascular disease, and 2.3% osteoporosis in 2018–19 ('Indicators 21, 22, 20 and 17').

After adjusting for age, rates of many of the chronic conditions looked at in the *NSFCC: reporting framework* were higher for Indigenous Australians compared with non-Indigenous Australians, for example: type 2 diabetes, asthma, COPD, arthritis, osteoporosis, acute coronary events, and newly diagnosed cases of both cervical and lung cancer (see Figure S15, Figure S16 and Table S5).

In contrast, the rates of newly diagnosed breast and bowel cancer were lower among Indigenous Australians compared with non-Indigenous Australians (Figure S16 and Table S5).

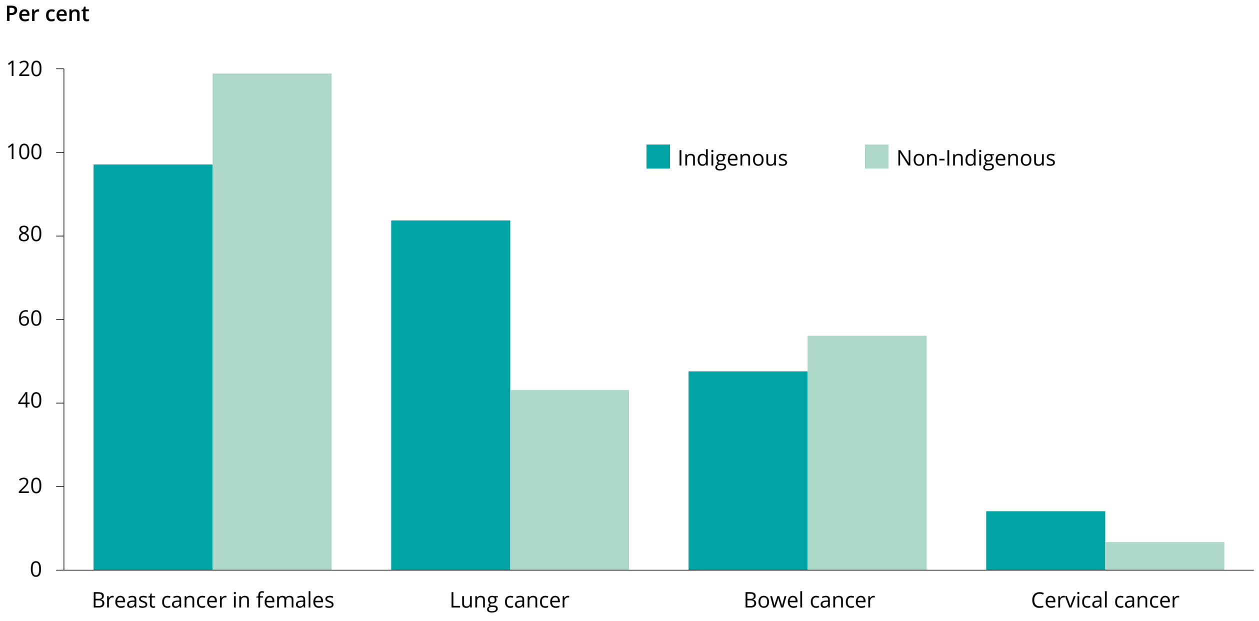
Figure S15. Prevalence of selected chronic conditions by Indigenous status, all persons, 2017–18



Note: Age-standardised to the 2001 Australian standard population.

Data source: National Health Survey 2017–18 (see 'Indicators 20, 21 and 22' for reference details).

Figure S16: Incidence rates for selected cancers, by Indigenous status, 2010–2014



Note: Age-standardised to the 2001 Australian standard population.

Data source: Australian Cancer Database (see 'Indicator 23' for reference details).

Prevention and detection activities

For the prevention and detection activities covered in the NSFCC indicators: 38% of Indigenous Australians had had a dental check-up in the previous 12 months ('Indicator 26'), and 37% of women in the target age group had a mammogram through BreastScreen Australia ('Indicator 28'). On both measures, Indigenous Australians were less likely than non-Indigenous Australians to have accessed these services (Table S5).

At the time of writing there were no data available for Indigenous Australians on several of the NSFCC indicators related to prevention and detection activities: HPV immunisation, bowel and cervical screening (see 'Indicators 27, 29 and 30' for more details).

Coordinated, person-centred, appropriate care

For indicators related to coordinated, person-centred, appropriate care covered in the *NSFCC: reporting framework*:

- Indigenous Australians reported high levels of satisfaction with their experience with GPs
- 70% of Indigenous Australians were seen by a GP within 4 hours of making an appointment for urgent medical care, 20% were seen between 4 and 24 hours, and 9.4% waited 24 hours or more ('Indicator 34')
- 36% of Indigenous Australians aged 18–69 years with known type 2 diabetes effectively managed their diabetes, as indicated by meeting the target level for HbA1c (≤7.0%), in 2012–13 (crude rates, 'Indicator 36')
- 7.4% of Indigenous Australians did not see a doctor due to cost and 42% of Indigenous Australians did not see a dentist due to cost, in 2018–19 ('Indicator 32')
- there were more than 17,500 hospitalisations among Indigenous Australians for the selected chronic conditions for which hospitalisation is considered potentially preventable in 2017–18; this is a rate of 23.0 per 1,000 and represented 39% of all potentially preventable hospitalisations (PPH) among Indigenous Australians in that year ('Indicator 37')
- 72% of separations from state/territory public acute admitted patient mental health care service units had a community mental health service contact within 7 days (the rate of post-discharge mental health care) ('Indicator 39').

In good news, the rate of post-discharge mental health care for Indigenous Australians has increased from 48% in 2011–12 to 72% in 2017–18; over this time the disparity between the rate of community mental health service follow-up for Indigenous Australians compared to non-Indigenous Australians has decreased ('Indicator 39').

In contrast, over the period from 2012–13 to 2017–18, the age-standardised rate for PPH for selected chronic conditions among Indigenous Australians increased from 33.7 per 1,000 to 38.0 per 1,000 ('Indicator 37'). The rates of PPH for selected chronic conditions for the whole Australian population increased between 2012–13 and 2016–17, and remained steady in 2017–18.

For some measures here, results were not comparable between Indigenous Australians and non-Indigenous Australians. Meanwhile, Indigenous Australians fared better than non-Indigenous Australians for the results on GP waiting times, however, for some other measures, such as PPH for selected chronic conditions, Indigenous Australians experienced more than 3 times the rate of Other Australians (see Table S5 or 'Indicator 37').

Complications, multimorbidity, and disabilities associated with chronic conditions

There are 4 indicators related to complications, multimorbidity, and disabilities associated with chronic conditions covered in the *NSFCC: reporting framework*, for these:

- an estimated 1,700 Indigenous Australians with diabetes had treated end-stage kidney disease, equating to 2,700 per 100,000 population in 2018 ('Indicator 41')
- there were 415 hospitalisations for Indigenous Australians aged 18 and over where a lower-limb amputation was performed with type 2 diabetes as principal or additional diagnosis; equating to a rate of 84 hospitalisations per 100,000 population ('Indicator 42')
- an estimated 162,600 (20%) Indigenous Australians had multimorbidity (that is, having 2 or more chronic conditions at the same time) in 2018–19 ('Indicator 40')
- there were 68 years of life lost due to the impact of living with selected chronic conditions for every 1,000 Indigenous Australians; this is slightly higher than in 2003 (64 YLD per 1,000)—this is in contrast to the burden from premature deaths (YLL) which fell between 2003 and 2011 (see 'Burden of disease' below for more details).

On all measures, after adjusting for age, Indigenous Australians experienced higher rates than non-Indigenous Australians—see Table S5 for details.

Premature death due to specific chronic conditions

Indigenous Australians have experienced improvements for both NSFCC indicators related to premature death, for which data are available:

- the age-standardised rate of potentially avoidable deaths from selected chronic conditions for Indigenous Australians decreased markedly (30%) from 2001 to 2010 and then stabilised in the last decade—ranging between 203 and 238 deaths per 100,000 people during 2011 to 2019 (in the 5 jurisdictions used for analysis; see 'Indicator 44' for more details)
- the rate of fatal burden from selected chronic conditions fell between 2003 and 2011 (see below for more details).

On both measures, after adjusting for age, Indigenous Australians experienced higher rates than non-Indigenous Australians: 3.6 times the rate of potentially avoidable deaths from selected chronic conditions in 2019 and 3.0 times the rate for fatal burden from selected chronic conditions in 2011 (see Table S5, or 'Indicators 44 and 45' for details).

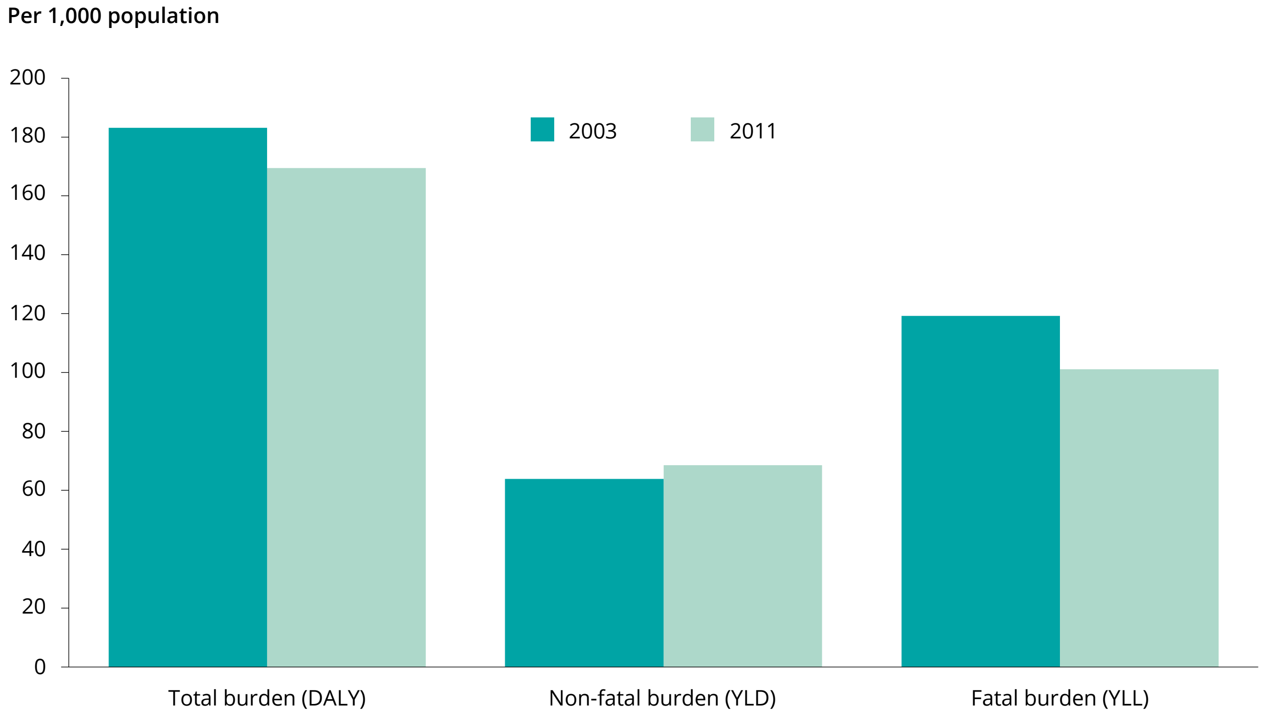
Burden of disease

Burden of disease analysis combines burden of living with ill health (non-fatal burden) and the burden of dying prematurely (fatal burden) (see above for more detail). At the time of writing, data on burden among Aboriginal and Torres Strait Islander people were only available for 2003 and 2011.

The rate of total burden (fatal and non-fatal burden) and fatal burden from selected chronic conditions among Indigenous Australians both fell between 2003 and 2011 (Figure S17). In contrast, the rate of non-fatal burden (YLD, which quantifies the impact of living with illness and injury, adjusted for disease severity) increased slightly between these 2 time points. This increase in non-fatal burden may be interpreted as a positive outcome as it reflects the fact that more Indigenous Australians are surviving health events (such as heart attack or stroke) or living longer with long-term conditions (such as cancer or diabetes).

In 2011, after adjusting for age, the rate of burden from selected chronic conditions for Indigenous Australians was higher than that of non-Indigenous Australians (Figure S18), for fatal burden (3.0 times the rate), total burden (2.5 times), and non-fatal burden (2.0) (see Table S5, or 'Indicators 45, 25 and 24', respectively, for details).

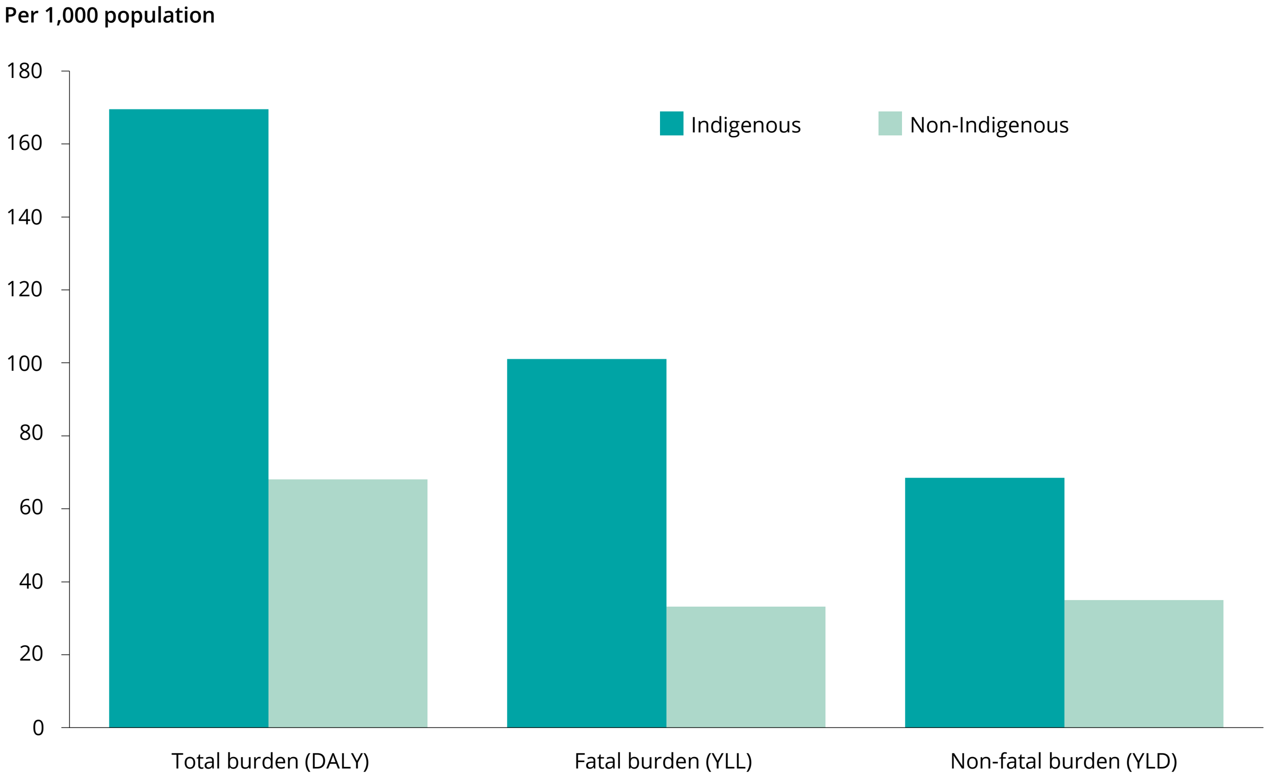
Figure S17: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions among Indigenous Australians, 2003 and 2011



Note: Age-standardised to the 2001 Australian standard population.

Data source: AIHW analysis of the Australian Burden of Disease Database, 2011 (see 'Indicators 24, 25, and 45' for reference details).

Figure S18: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by Indigenous status, 2011



Note: Age-standardised to the 2001 Australian standard population.

Data source: AIHW analysis of the Australian Burden of Disease Database, 2011 (see 'Indicators 24, 25, and 45' for reference details).

Table S5: NSFCC indicators—rate ratio of results among Indigenous Australians compared with non-Indigenous Australians[(a)]

Indicator number	Indicator	Rate ratio
42	Hospitalisations for lower-limb amputation with type 2 diabetes	4.7
4	Smoking in first 20 weeks of pregnancy	3.9
44	Potentially avoidable deaths from selected chronic conditions	3.6
37	Potentially preventable hospitalisations for selected chronic conditions	3.2
45	Fatal burden of disease (YLL) for selected chronic conditions	3.0
7	Daily smoking(b)	2.9
20	Type 2 diabetes(b)	2.9
41	End stage kidney disease among people with diabetes	2.7
18	Acute coronary events	2.5
25	Total burden of disease (DALY) for selected chronic conditions	2.5
15	High or very high psychological distress(b)	2.3
21	Chronic obstructive pulmonary disease (COPD)(b)	2.3
23	Incidence of cervical cancer	2.1
17	Heart, stroke and vascular disease(b)	2.1
24	Non-fatal burden of disease (YLD) for selected chronic conditions	2.0
23	Incidence of lung cancer	1.9
5	Low birthweight babies – Indigenous mothers(c)	1.8
5	Low birthweight babies – Indigenous babies(c)	1.8
21	Asthma(b)	1.6
14	Obese(b)	1.5
40	Multimorbidities(b)	1.5
22	Arthritis(b)	1.3
6	Alcohol consumption(b)	1.2
11	High blood pressure (uncontrolled)(b)	1.2
22	Osteoporosis(b)	1.2
14	Overweight or obese(b)	1.2
12	Abnormal blood lipids(b)	1.1
21	Chronic respiratory conditions (all)(b)	1.1
22	Chronic musculoskeletal conditions (all)(b)	1.1
22	Back problems(b)	1.1

(continued)

Table S5 (continued): NSFCC indicators—rate ratio of results among Indigenous Australians compared with non-Indigenous Australians(a)

Indicator number	Indicator	Rate ratio
34	Wait times for GP for urgent appointment (< 4hrs)(b)	n.s.
34	Wait times for GP for urgent appointment (4<24 hours)(b)	n.s.
9	Inadequate fruit/vegetable intake(b)	n.s.
8	Insufficient physical activity(b)	n.s.
39	Post-discharge community care	n.s.
23	Incidence bowel cancer	0.8
23	Incidence breast cancer	0.8
26	Dental visit last 12 months(b)	0.8
2	Non-school qualification(b)(c)	0.7
28	Breast screening	0.7
3	Employment-to-population ratio(b)	0.7
34	Wait times for GP for urgent appointment (24+ hours)(b)	0.3

Key

🟦	Indigenous rate is higher than non-indigenous rate, indicated by rate ratio significantly higher than 1 (if survey data) or rate ratio of greater than 1 (if administrative data).
🟨	Rate ratio of 1 or not significant.
🟩	Indigenous rate is lower than non-indigenous rate, indicated by rate ratio significantly lower than 1 (if survey data) or rate ratio lower than 1 (if administrative data).

n.s. Rate ratio of 1 or not statistically significant.

(a) Comparison is against non-Indigenous Australians with the exception of 'Indicators 37, and 18' (which used Other Australians), and 'Indicator 41' (which used all Australians)

(b) Sourced from survey data.

(c) Rate ratios are based on crude rates.

Note: Rate ratios are calculated using age-standardised rates unless otherwise indicated.

Data sources: The data in this table are taken from a range of data sources and time points, for details please refer to the full write up for each indicator in the 'Results' section.

What is missing?

This report brings together available data in a single publication to provide a comprehensive report on chronic conditions in Australia. These data are crucial to the planning, delivery, responsiveness and effectiveness of health-care services and the health system as a whole to respond to what is one of Australia's biggest health challenges.

Data in this report have been presented against the objectives and success statements of the *National Strategic Framework for Chronic Conditions* (NSFCC) (see Box 1 in the 'Introduction'). However, there is a lack of data to adequately monitor progress in a number of priority areas of the NSFCC and this would benefit from further indicator development. These areas include: timely intervention, complications, multimorbidities or disabilities associated with chronic conditions and some priority populations.

This section discusses data gaps and limitations as well as recent and emerging developments in health data that may contribute to more comprehensive monitoring of chronic conditions in Australia in the future.

Data gaps and limitations

There are parts of the health system, and aspects of chronic conditions in Australia, where information is not adequate for monitoring or reporting purposes. (AHIW 2020a).

Notable gaps in Australian health data and analysis—relating to health status, patient pathways, health service use, and health system activity—that impact on monitoring and responding to the burden of chronic diseases include (AIHW 2020a):

- **Incidence and prevalence data for some chronic conditions**—routine monitoring efforts in Australia do not currently cover all chronic conditions and there is a lack of information on many of the chronic conditions Australians are grappling with. Dementia is an example of a growing challenge for Australia as the population ages and life expectancy increases, but, at the time of reporting, there are no national data on how many people are affected. The AIHW are currently working to improve data on Dementia in Australia (AIHW 2021e).
- **Data on some chronic condition risk factors**—The Australian Government is making a substantial investment to improve measured biomedical risk factor data and survey data on population health and health risk factors, with a particular focus on chronic conditions. The Intergenerational Health and Mental Health Study (IHMHS) includes four national studies, covering mental health and wellbeing, general health, nutrition and physical activity, and biomedical health status. The IHMHS will include a representative sample of approximately 60,000 Australians, including Aboriginal and Torres Strait Islander people. The National Health Measures Study, which includes a voluntary biomedical study, will take place in 2022–23. The data collected will enable national, population-level monitoring of changes in health conditions and health behaviours over time, including chronic conditions, associated risk factors and biomarkers (Department of Health 2021).
- **Data on the contribution of some health determinants**—health outcomes among people with chronic conditions can vary depending on health determinants, however, many of these measures are based on where people live rather than individual socioeconomic position measures, such as employment status and income level.
- **Data for smaller geographical areas**—indicator results at the national level can mask variation in chronic conditions and care by location.

- **Environmental data**—more data are needed in order to understand the links between the natural and built environments and risk factors and chronic conditions.
- **Person-centred data**—factors that affect health and patient pathways through the health system, across jurisdictional boundaries and between sectors is vital for understanding the consumer experience and variation in health outcomes. There is an absence of disease registers or nationally linked data to examine pathways in care, in particular the associations between diagnosis, health service utilisation and health outcomes. There are limited data on timeliness of interventions and the appropriateness of care and health across the life-course.
- **National, comparable and reportable data on primary health care activity and outcomes**—primary health care is a vital component of Australia's health-care system, encompassing a broad range of professions and services. Despite this, the availability of primary health-care system data is limited. This limits the ability to assess the positive impact of this sector on the health of Australians and/or identify where improvements are needed. The AIHW is working to improve primary health care data, through the development of the National Primary Health Care Data Asset.
- **Information on some population groups**—a number of priority population groups are identified in the NSFCC as being disproportionally affected by the impact of chronic conditions, including (but not limited to) people with disability; culturally and linguistically diverse populations; older Australians; and carers of people with chronic conditions. Most data collections in Australia do not include information to measure these priority population groups, making it difficult to highlight the health and care gaps for these very important Australians.
- **Workforce data**—registered allied health professionals play a key role in managing chronic conditions, however there is a lack of nationally consistent data on the self regulated allied health workforce (for example, dietitian).

Developments in health data

Australian health data are undergoing rapid change. Statistical linkage of health and welfare data sets provide more detailed information than could be gained from each individual data set. This can fill gaps in our knowledge on specific chronic conditions, service use, specific population groups and across the health and welfare sectors.

Following a cohort of individuals from diagnosis, through interactions with the health and welfare systems, to recovery, deterioration or death improves our ability to analyse the development and trajectory of disease; the interaction of determinants and interventions; and the role and performance of the health system in managing, treating and preventing chronic conditions. Work to develop national data assets to enable this type of analysis continues to be a priority for organisations such as the AIHW. Examples of recently developed national linked data assets include the ABS' Multi-Agency Data Integration Project (MADIP) and the AIHW's National Integrated Health Service Information (NIHSI) Analysis Asset (AA). The AIHW's national centre for monitoring chronic conditions currently has a number of projects under way utilising these new data sources and is developing methods to identify people with chronic conditions. This will allow more research on treatment patterns and the trajectory of chronic disease over time.

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PART 2:

Indicator results

Indicator Summary

The technical specifications for these Indicators are contained in the *National Strategic Framework for Chronic Conditions: reporting framework* (AIHW 2022).

Indicator	Overall result (crude rate unless otherwise indicated)	Population groups (age-standardised unless otherwise indicated)			Source(s)
		Socioeconomic area	Remoteness area	Indigenous Australians	
1. Proportion of people with low income	11%	n/a	Major cities 9.6% Remote 16% (crude)	n/a	Survey of Income and Housing 2017–18
2. Proportion of people aged 25–64 with a non-school qualification in Certificate level III or above	65%	n/a	Major cities 68% Remote and very remote 55% (crude)	45% (aged 20–64) (crude)	Survey of Education & Work 2019; National Aboriginal and Torres Strait Islander Health Survey 2018–19
3. Employment-to-population ratio	75%	n/a	Major cities 75% Remote and very remote 80% (crude)	49% (crude)	Labour Force Survey December 2019; Education and Work 2019; National Aboriginal and Torres Strait Islander Health Survey 2018–19
4. Proportion of women who gave birth who smoked in the first 20 weeks of pregnancy	9.2%	Lowest 19% Highest 7.3%	Major cities 11% Very remote 36%	43%	National Perinatal Collection 2018
5. Proportion of babies born with low birthweight	6.7%	Lowest 8.0% Highest 5.6% (crude)	Major cities 6.6% Very remote 11% (crude)	12% (Indigenous mothers, crude) 11% (Indigenous babies, crude)	National Perinatal Collection 2018
6. Proportion of adults at risk of long-term harm from alcohol	16%	Lowest 14% Highest 18%	Major cities 15% Outer regional and remote 24%	20%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
7a. Proportion of adults aged 18 and over who currently smoke tobacco	13.8%	Lowest 22.8% Highest 7.0%	Major cities 12.8% Outer regional and remote 19.6%	40.1%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19

Indicator	Overall result (crude rate unless otherwise indicated)	Population groups (age-standardised unless otherwise indicated)			Source(s)
		Socioeconomic area	Remoteness area	Indigenous Australians	
7b. Proportion of secondary students aged 12–17 who currently smoke tobacco	4.9%	Lowest 4.9% Highest 4.0% (crude)	Major cities 4.8% Remote and very remote 5.4% (crude)	n/a	Australian Secondary Students' Alcohol and Drug Survey 2017
8a. Proportion of adults aged 18 and over who perform insufficient weekly physical activity	55%	Lowest 63% Highest 48%	Major cities 54% Outer regional and remote 55%	62%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
8b. Proportion of children or young people aged 2–17 who perform insufficient weekly physical activity	69%	Lowest 70% Highest 70% (crude)	Major cities 71% Outer regional and remote 64% (crude)	n/a	Australian Health Survey 2011–13; Australian Aboriginal and Torres Strait Islander Health Survey 2012–13
9a. Proportion of adults aged 18 and over with inadequate fruit and/or vegetable consumption	95%	Lowest 94% Highest 92%	Major cities 93% Outer regional and remote 92%	97% (aged 15 and over)	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
9b. Proportion of children and young people aged 2–17 with inadequate fruit and/or vegetable consumption	94%	Lowest 95% Highest 94% (crude)	Major cities 95% Outer regional and remote 96% (crude)	94%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
10. Average intake of sodium per capita (aged 2 and over) (mg/day)	2,404 mg	Lowest 2,441 Highest 2,448	Major cities 2,381 Outer regional and remote 2,468	2,379 (crude)	Australian Health Survey 2011–13 ; Australian Aboriginal and Torres Strait Islander Health Survey 2012–13
11a. Proportion of adults aged 18 and over who have total high blood pressure	34%	Lowest 35% Highest 28%	Major cities 31% Outer regional and remote 34%	n/a	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19

11b. Proportion of adults aged 18 and over who have uncontrolled high blood pressure	23%	Lowest 24% Highest 19%	Major cities 22% Outer regional and remote 24%	26%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
12. Proportion of adults aged 18 and over with abnormal blood lipids	63%	Lowest 66% Highest 60%	Major cities 62% Outer regional, remote and very remote 63%	71%	Australian Health Survey 2011–12; Australian Aboriginal and Torres Strait Islander Health Survey 2012–13
13. Proportion of adults aged 18 and over with raised blood glucose levels	8.2%	Lowest 12% Highest 5.0%	Major cities 7.5% Outer regional and remote 9.2%	16%	Australian Health Survey 2011–13; Australian Aboriginal and Torres Strait Islander Health Survey 2012–13.
14a. Proportion of adults aged 18 and over and children or young people who are overweight or obese	67%	Lowest 72% Highest 62%	Major cities 65% Outer regional and remote 70%	77%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
14b. Proportion of children or young people aged 2–17 who are overweight or obese	25%	Lowest 28% Highest 21% (crude)	Major cities 24% Outer regional and remote 27% (crude)	38% (crude)	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
15. Proportion of adults with high or very high levels of psychological distress	13%	Lowest 21% Highest 8.3%	Major cities 13% Outer regional and remote 15%	31%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
16a. Proportion of people aged 16–85, who have experienced mental illness in the preceding 12 months	20%	Lowest 22% Highest 16% (crude)	Major urban 20% Balance of state 19% (crude)	n/a	National Survey Mental Health & Wellbeing 2007
16b. Proportion of children and adolescents aged 4–17, who have experienced mental illness in the preceding 12 months	14%	Lowest 21% Highest 11% (crude)	Major cities 13% Remote and very remote 14% (crude)	n/a	Australian Child and Adolescent Survey of Mental Health & Wellbeing 2013–14

17. Proportion of people who report having heart, stroke and vascular disease	6.2%	Lowest 6.4% Highest 4.8%	Major cities 5.6% Outer regional and remote 5.1%	11%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
18. Annual rate of acute coronary events (per 100,000 people)	369	n/a	n/a	816	National Hospital Morbidity Database & National Mortality Database 2017
19. Annual rate of stroke events (per 100,000 people)	155	n/a	n/a	n/a	National Hospital Morbidity Database & National Mortality Database 2017
20. Proportion of people who report having type 2 diabetes	5.4%	Lowest 6.9% Highest 3.4%	Major cities 4.8% Outer regional and remote 6.0%	14%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
21a. Proportion of people who report having a chronic respiratory condition	31%	n/a	n/a	33%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
21b. Proportion of people who report having asthma	11%	Lowest 13% Highest 10%	Major cities 11% Outer regional ad remote 13%	18%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
21c. Proportion of people aged 45 and over who report having Chronic obstructive pulmonary disease (COPD)	4.8%	Lowest 7.1% Highest 3.6%	Major cities 4.4% Outer regional and remote 5.0%	10%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
22a. Proportion of people who report having a musculoskeletal condition	29%	n/a	n/a	30%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
22b. Proportion of people who report having arthritis	15%	Lowest 39% Highest 26%	Major cities 31% Outer regional and remote 36%	17%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19

22c. Proportion of people who report having back problems	16%	Lowest 18% Highest 13%	Major cities 16% Outer regional and remote 15%	17%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
22d. Proportion of people who report having osteoporosis	3.8%	Lowest 9.6% Highest 7.8%	Major cities 8.8% Outer regional and remote 7.9%	3.9%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
23a. Number of new cases of breast cancer (per 100,000 females)	142	Lowest 113 Highest 135	Major cities 124 Very remote 95	97	Australian Cancer Database 2016
23b. Number of new cases of bowel (colorectal) cancer (per 100,000 people)	64	Lowest 63 Highest 53	Major cities 57 Very remote 49	43	Australian Cancer Database 2016
23c. Number of new cases of melanoma of the skin (per 100,000 people)	60	Lowest 46 Highest 54	Major cities 46 Very remote 33	n/a	Australian Cancer Database 2016
23d. Number of new cases of lung cancer (per 100,000 people)	51	Lowest 54 Highest 32	Major cities 42 Very remote 59	73	Australian Cancer Database 2016
23e. Number of new cases of cervical cancer (per 100,000 females)	7.3	Lowest 9.1 Highest 6.0	Major cities 6.8 Very remote 10	14	Australian Cancer Database 2016
24. Number of years of healthy life lost due to living with illness or injury for persons with selected chronic conditions (YLD) (per 1,000 people)	37 (age-standardised)	Lowest 42 Highest 30	Major cities 37 Remote and very remote 36	69	Australian Burden of Disease Study 2018; Australian Burden of Disease 2011 (Indigenous)
25. Number of years of healthy life lost due to dying prematurely from or living with the health consequences of selected chronic conditions (DALY) (per 1,000 people)	66 (age-standardised)	Lowest 82 Highest 49	Major cities 64 Remote and very remote 82	170	Australian Burden of Disease Study 2018; Australian Burden of Disease 2011 (Indigenous)
26. Proportion of people aged 15 and over who had a dental visit in last 12 months	49%	Lowest 38% Highest 61% (crude)	Major cities 51% Outer regional, remote and very remote 41% (crude)	38%	Patient Experience Survey 2018–19; National Aboriginal and Torres Strait Islander Health Survey 2018–19

27a. Proportion of 15 year old females fully immunised against HPV	80%	n/a	n/a	n/a	Department of Health (Historical data from the National HPV Vaccination Program Register) 2021
27b. Proportion of 15 year old males fully immunised against HPV	76%	n/a	n/a	n/a	Department of Health (Historical data from the National HPV Vaccination Program Register) 2021
28. Proportion of the target population screened through BreastScreen Australia	55%	Lowest 52% Highest 55%	Major cities 53% Very remote 43%	38%	State and territory BreastScreen register data 2017–2018
29. Proportion of the target population screened through the National Bowel Cancer Screening Program	42%	Lowest 40% Highest 45% (crude)	Major cities 42% Very remote 27% (crude)	n/a	National Bowel Cancer Screening Program register 2017–2018
30. Proportion of the target population screened through the National Cervical Screening Program	46%	Lowest 41% Highest 52%	Major cities 47% Very remote 37%	n/a	National Cancer Screening Register data 2018–2019
31. Proportion of people aged 15–74 with health literacy above the minimum level	41%	n/a	n/a	n/a	Adult Literacy and Life Skills Survey 2006
32a. Proportion of people aged 15 and over deferring access to GP services due to cost	3.4%	Lowest 3.9% Highest 3.0% (crude)	Major cities 3.2% Outer regional, remote and very remote 4.2% (crude)	7.4% (2 years and over)	Patient Experience Survey 2018–19
32b. Proportion of people aged 15 and over deferring access to specialist services due to cost	7.7%	Lowest 8.3% Highest 6.7% (crude)	Major cities 8.2% Outer regional, remote and very remote 5.9% (crude)	n/a	Patient Experience Survey 2018–19
32c. Proportion of people aged 15 and over deferring access to prescriptions due to cost	6.7%	Lowest 10% Highest 4.1% (crude)	Major cities 6.5% Outer regional, remote and very remote 6.5% (crude)	n/a	Patient Experience Survey 2018–19
32d. Proportion of people aged 15 and over deferring access to dental services due to cost	18%	Lowest 24% Highest 11% (crude)	Major cities 16% Outer regional, remote and very remote 23% (crude)	42% (2 years and over)	Patient Experience Survey 2018–19

32e. Proportion of people aged 15 and over deferring access to pathology/imaging services due to cost	3.0%	n/a	n/a	n/a	Patient Experience Survey 2016–17
33a. Proportion of patients who felt their GP listened carefully to them, always or often	92%	Lowest 90% Highest 94% (crude)	Major cities 92% Outer regional, remote and very remote 90% (crude)	89%	Patient Experience Survey 2018–19; National Aboriginal and Torres Strait Islander Health Survey 2018–19
33b. Proportion of patients who felt their GP showed respect, always or often	94%	Lowest 93% Highest 96% (crude)	Major cities 95% Outer regional, remote and very remote 92% (crude)	91%	Patient Experience Survey 2018–19; National Aboriginal and Torres Strait Islander Health Survey 2018–19
33c. Proportion of patients who felt their GP spent time with them, always or often	90%	Lowest 89% Highest 92% (crude)	Major cities 89% Outer regional, remote and very remote 92% (crude)	88%	Patient Experience Survey 2018–19; National Aboriginal and Torres Strait Islander Health Survey 2018–19
34a. Wait times for GPs for an urgent appointment for <4 hours	61%	Lowest 60% Highest 60% (crude)	Major cities 64% Outer regional, remote and very remote 56% (crude)	70%	Patient Experience Survey 2018–19; National Aboriginal and Torres Strait Islander Health Survey 2018–19
34b. Wait times for GPs for an urgent appointment for 4–<24 hours:	11%	Lowest 11% Highest 15% (crude)	Major cities 12% Outer regional, remote and very remote 8.2% (crude)	20%	Patient Experience Survey 2018–19; National Aboriginal and Torres Strait Islander Health Survey 2018–19
34c. Wait times for GPs for an urgent appointment for 24 hours or more	28%	Lowest 29% Highest 24% (crude)	Major cities 25% Outer regional, remote and very remote 36% (crude)	9.4%	Patient Experience Survey 2018–19; National Aboriginal and Torres Strait Islander Health Survey 2018–19
35a. Full time equivalent medical practitioners (per 100,000 people)	415	n/a	n/a	n/a	Department of Health National Health Workforce Data Set 2018
35b. Full time equivalent nurses & midwives (per 100,000 people)	1,176	n/a	n/a	n/a	Department of Health National Health Workforce Data Set 2018

35c. Full time equivalent registered allied health practitioners (per 100,000 people)	480	n/a	n/a	n/a	Department of Health National Health Workforce Data Set 2018
35d. Full time equivalent dental practitioners (per 100,000 people)	76	n/a	n/a	n/a	Department of Health National Health Workforce Data Set 2018
36. Proportion of people aged 18–69 with known diabetes who have a HbA1c level ≤7.0%	49%	Lowest 43% Highest 47% (crude)	Major cities 51% Outer regional and remote 50% (crude)	36% (crude)	Australian Health Survey 2011–12; Aboriginal and Torres Strait Islander Health Survey 2012–13
37. Rate of selected potentially preventable hospitalisations for chronic conditions (per 1,000 people)	12.3 (age-standardised)	Lowest 16.6 Highest 8.7	Major cities 11.6 Very remote 27.1	38.0	National Hospital Morbidity Database 2017–18
38a. Median percentile waiting times for radiotherapy patients (non-emergency courses, in days)	10	Lowest 12 Highest 8	Major cities 10 Very remote 9	n/a	Radiotherapy Waiting Times National Minimum Data Set 2018–19
38b. 90th percentile waiting times for radiotherapy patients (non-emergency courses, in days)	27	Lowest 27 Highest 26	Major cities 27 Very remote 23	n/a	Radiotherapy Waiting Times National Minimum Data Set 2018–19
39. Proportion of separations from admitted patient mental health care services with a community mental health service contact within 7 days	75%	Lowest 77% Highest 76%	Major cities 75% Remote and very remote 78%	72%	State and Territory admitted health care & mental health care data 2017–18
40. Proportion of people with 2 or more selected chronic conditions	20%	Lowest 24% Highest 14%	Major cities 18% Outer regional and remote 21%	28%	National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19
41. Prevalence of treated ESKD among people with diabetes (per 100,000 people)	884	Lowest 754 Highest 700	Major cities 695 Outer regional and remote 1,543	2,062	Australia and New Zealand Dialysis and Transplant Registry 2018; National Health Survey 2017–18; National Aboriginal and Torres Strait Islander Health Survey 2018–19

42. Hospitalisations for lower-limb amputation with type 2 diabetes as a principal or additional diagnosis (per 100,000 population)	28	Lowest 38 Highest 14	Major cities 22 Remote and very remote 65	107	National Hospital Morbidity Database 2017–18
43a. 5-year relative survival - Breast cancer in females	91%	n/a	n/a	n/a	Australian Cancer Database 2012–2016
43b. 5-year relative survival - Bowel (colorectal) cancer	70%	n/a	n/a	n/a	Australian Cancer Database 2012–2016
43c. 5-year relative survival - Melanoma of the skin	92%	n/a	n/a	n/a	Australian Cancer Database 2012–2016
43d. 5-year relative survival - Lung cancer	19%	n/a	n/a	n/a	Australian Cancer Database 2012–2016
43e. 5-year relative survival - Cervical cancer	74%	n/a	n/a	n/a	Australian Cancer Database 2012–2016
44. Rate of deaths from selected chronic conditions that are potentially avoidable (per 100,000 people)	66 (age-standardised)	Lowest 95 Highest 42	Major cities 59 Very remote 156	223	National Mortality Database 1997–2019
45. Number of years of life lost due to premature death from selected chronic conditions (YLL) (per 1,000 people)	29 (age-standardised)	Lowest 40 Highest 20	Major cities 27 Remote and very remote 46	101	Australian Burden of Disease Study 2018; Australian Burden of Disease 2011 (Indigenous)

References

AIHW 2022. National Strategic Framework for Chronic Conditions (NSFCC): reporting framework. Cat. no. PHE 298. Canberra: AIHW

Results

Indicator 1: Low income

11% of people lived on less than half the median equivalised household income in 2017–18.

Why is this important?

Income, as a social determinant of health, plays a key role in influencing socioeconomic position. A higher income allows for greater access to goods and services that provide health benefits, such as better food and housing, additional health care options, and greater choice in healthy pursuits. Loss of income through illness, disability or injury can adversely affect individual socioeconomic position and health (AIHW 2016).

What does this indicator measure?

The proportion of people with low income.

This is defined as the proportion of people living in households with an equivalised disposable household income (that is, after-tax income, adjusted for the number of people in the household) that is less than 50% of the national median (also referred to as low-income households).

What do the data show?

- In 2017–18, the median equivalised disposable household income was $899 per week (Table 1.1).
- In 2017–18, an estimated 2.5 million people lived on less than half the median equivalised household income (that is, less than $450 per week), including an estimated 1.3 million people living on less than 40% of the median ($360) (ABS 2019a).
- The proportion of people living in low-income households was 11% in 2017–18 (Figure 1.1). Over the period from 2003–04 to 2017–18, the proportion of people living in low-income households ranged from a high of 14% in 2007–08 to a low of 9.3% in 2015–16 (Figure 1.1).

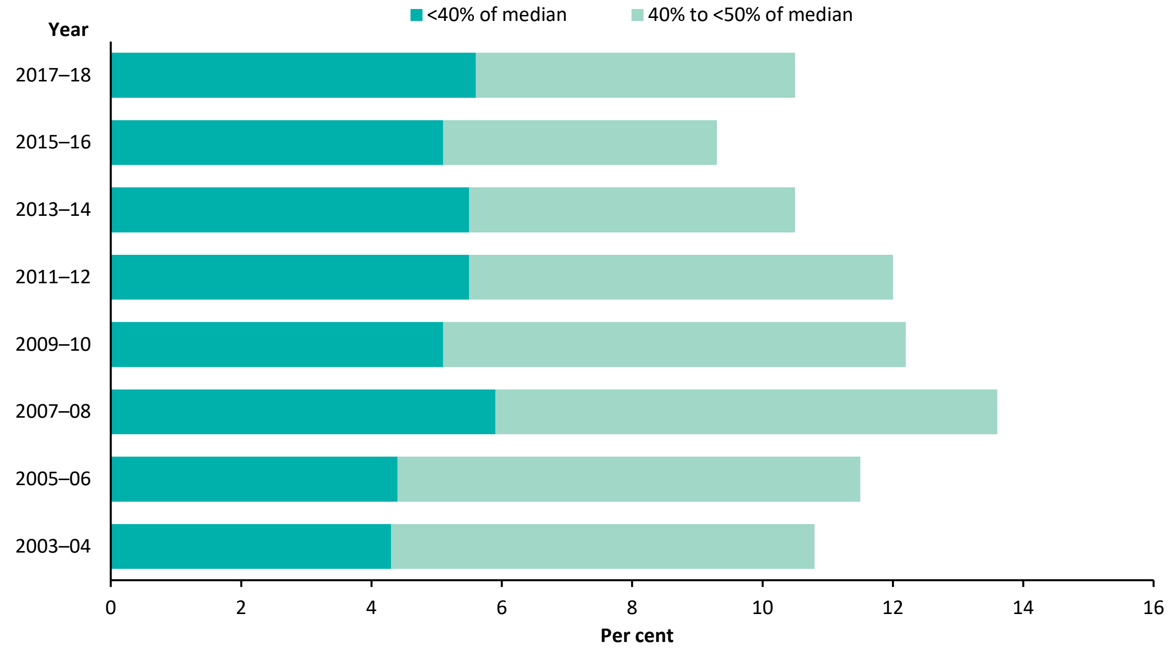
Population groups

Patterns across socioeconomic groups (from disaggregating by socioeconomic areas) have not been explored for this indicator because it is a socioeconomic variable in itself. This indicator also has the advantage of being a measure of an *individual's* socioeconomic position, rather than using the proxy of the socioeconomic characteristics of the *area* where individuals live.

In 2017–18, 9.6% of people living in *Major cities* and 16% of people living in *Remote* areas lived on less than half of the median equivalised household income (Figure 1.2).

At the time of writing, comparable data (i.e. median equivalised disposable income) was not available for Indigenous Australians, however, data are available for median equivalised gross income. In 2016, the median adjusted weekly household income among all Indigenous Australians aged 15 and over was $623 which was 33% lower than that of non-Indigenous Australians ($935) (AIHW 2019).

Figure 1.1: People living in households with an equivalised disposable household income less than 50% of the national median, by year



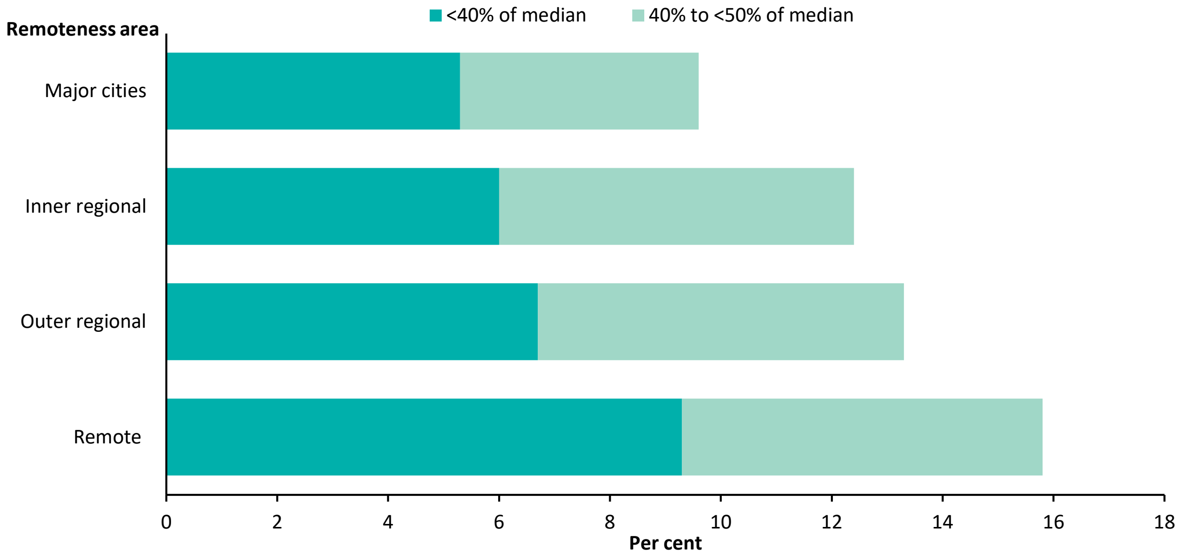
Notes

1. Equivalised disposable household income is defined as gross income less income tax, the Medicare levy and the Medicare levy surcharge, adjusted for the number of people in the household including adults and children.

2. Data and additional notes for this figure are shown in Table 1.1.

Sources: AIHW 2018; ABS 2019a.

Figure 1.2: People living in households with an equivalised disposable household income less than 50% of the national median, by remoteness area, 2017–18



Notes

1. Equivalised disposable household income is defined as gross income less income tax, the Medicare levy and the Medicare levy surcharge, adjusted for the number of people in the household including adults and children.
2. Data and additional notes for this figure are shown in Table 1.2.

Source: ABS 2019a.

Considerations

This indicator should be considered in conjunction with other social determinants of health—see 'Indicators 2 and 3'.

Data sources

ABS Survey of Income and Housing, 2017–18 (and earlier years for trends). For further details, refer to Appendix B.

References

ABS 2019a. Survey of Income and Housing 2017–18. ABS Cat. no. 6553.0. Customised report. Canberra: ABS.

ABS 2019b. Household Income and Wealth, 2017–18. ABS Cat. no. 6523.0. Canberra: ABS.

AIHW 2016. Australia's health 2016. Cat. no. AUS 199. Viewed 6 March 2019. Canberra: AIHW. https://www.aihw.gov.au/getmedia/11ada76c-0572-4d01-93f4-d96ac6008a95/ah16-4-1-social-determinants-health.pdf.aspx

AIHW 2018. Australia's health 2018. Cat. no. AUS 221. Viewed 6 March 2019. Canberra: AIHW. https://www.aihw.gov.au/reports/australias-health/australias-health-2018/contents/indicators-of-australias-health/proportion-of-people-with-low-income.

AIHW 2019. Indigenous income and finance. Viewed 20 November 2020. Canberra: AIHW.

Supplementary tables

Table 1.1: People living in households with an equivalised disposable household income less than 50% of the national median, by year

Year	Percentage of population				
	<40% of median	40% to <50% of median	<50% of median	Weekly median value[(a)]	Weekly median value (in 2017–18 dollars)
2003–04	4.3	6.5	10.8	$500	$703
2005–06	4.4	7.1	11.5	$569	$756
2007–08	5.9	7.7	13.6	$688	$860
2009–10	5.1	7.1	12.2	$714	$846
2011–12	5.5	6.5	12.0	$790	$888
2013–14	5.5	5.0	10.5	$844	$903
2015–16	5.1	4.2	9.3	$853	$885
2017–18	5.6	4.9	10.5	$899	$899

(a) The median value was derived by multiplying the median value in 2017–18 dollars by the Consumer Price Index factor.
Notes
1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Equivalised disposable household income is defined as gross income less income tax, the Medicare levy and the Medicare levy surcharge, adjusted for the number of people in the household including adults and children.
Sources: AIHW 2018; ABS 2019a; ABS 2019b.

Table 1.2: People living in households with an equivalised disposable household income less than 50% of the national median, by remoteness area, 2017–18

	<40% of median		40% to <50% of median		<50% of median		50% or more of median	
Remoteness area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Major cities	5.3	4.4–6.2	4.3	3.8–4.8	9.6	8.6–10.6	90.4	89.3–91.5
Inner regional	6.0	4.8–7.2	6.4	5.0–7.8	12.5	11.1–13.9	87.5	84.2–90.8
Outer regional	6.7	5.1–8.3	6.6	4.9–8.3	13.3	11.1–15.5	86.7	84.8–88.6
Remote	9.3	4.8–13.8	6.5	3.5–9.5	15.8	11.6–20.0	83.9	77.2–90.6
Total	**5.6**	**4.9–6.3**	**4.9**	**4.5–5.3**	**10.5**	**9.7–11.3**	**89.5**	**88.8–90.2**

Notes
1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the ABS Survey of Income and Housing.
3. Equivalised disposable household income is defined as gross income less income tax, the Medicare levy and the Medicare levy surcharge, adjusted for the number of people in the household including adults and children.
Source: ABS 2019a.

Indicator 2: Educational attainment

65% of people aged 25–64 had a non-school qualification (Certificate level III or above) in 2019.

Why is this important?

Educational attainment, as a social determinant of health, plays a key role in influencing socioeconomic position. Higher levels of educational attainment are associated with increased likelihood of being employed, being in good health, and reporting life satisfaction (ABS 2020; OECD 2016).

What does this indicator measure?

The proportion of people aged 25–64 with a non-school (that is, post-school) qualification in Certificate level III or above.

What do the data show?

In 2019:

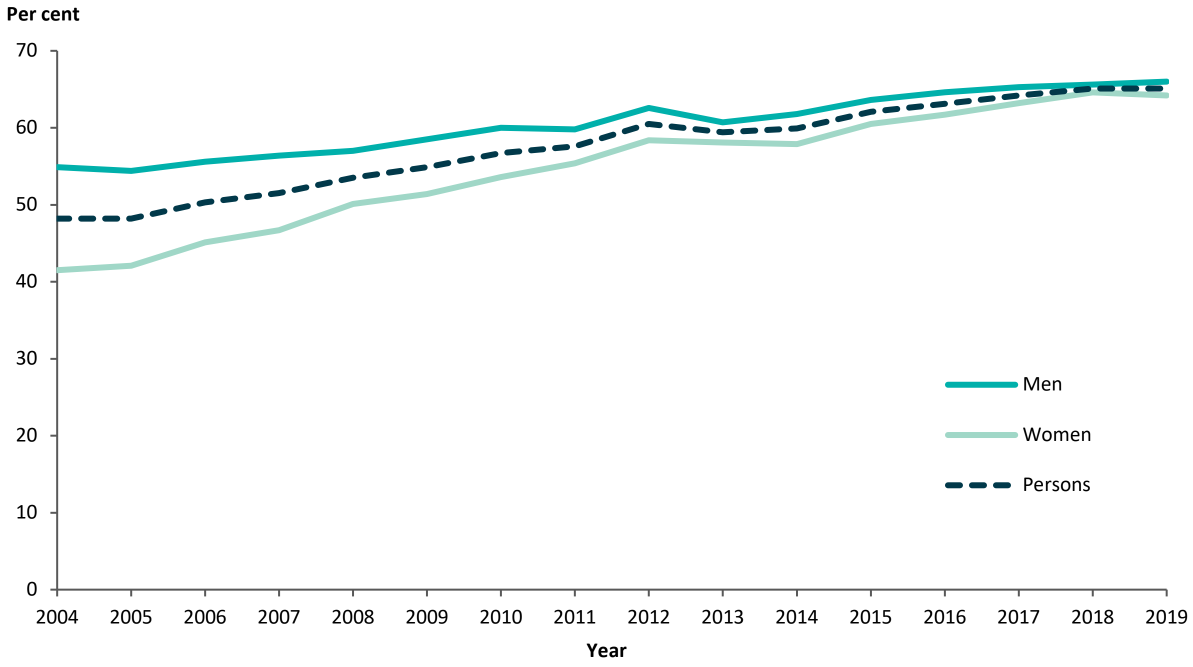
- 65% of people aged 25–64 (an estimated 8.9 million people) had a non-school qualification (at Certificate level III or higher) in 2019, an increase from 48% in 2004 (Figure 2.1).
- among those aged 25–64, a slightly higher proportion of men (66%) than women (64%) had a non-school qualification (at Certificate level III or higher); this gap has narrowed considerably over time (Figure 2.1).
- the proportion of people aged 25–64 with a non-school qualification (at Certificate level III or higher) was highest among 25–39 year olds (69–73%); the proportion then decreased with increasing age from 40 years (for example, 69% among 40–44 year olds down to 52% among 60–64 year olds (Figure 2.2).

Population groups

- Patterns across socioeconomic groups (from disaggregating by socioeconomic areas) have not been explored for this indicator because it is a socioeconomic variable in itself. This indicator also has the advantage of being a measure of an *individual's* socioeconomic position, rather than using the proxy of the socioeconomic characteristics of the *area* where individuals live.
- In 2019, the proportion of people with a non-school qualification (at Certificate level III or higher) was higher among people living in *Major cities* (68%) compared with other areas—*Inner regional* (61%), *Outer regional* (54%) *and Remote and very remote* areas (55%) (Figure 2.3).

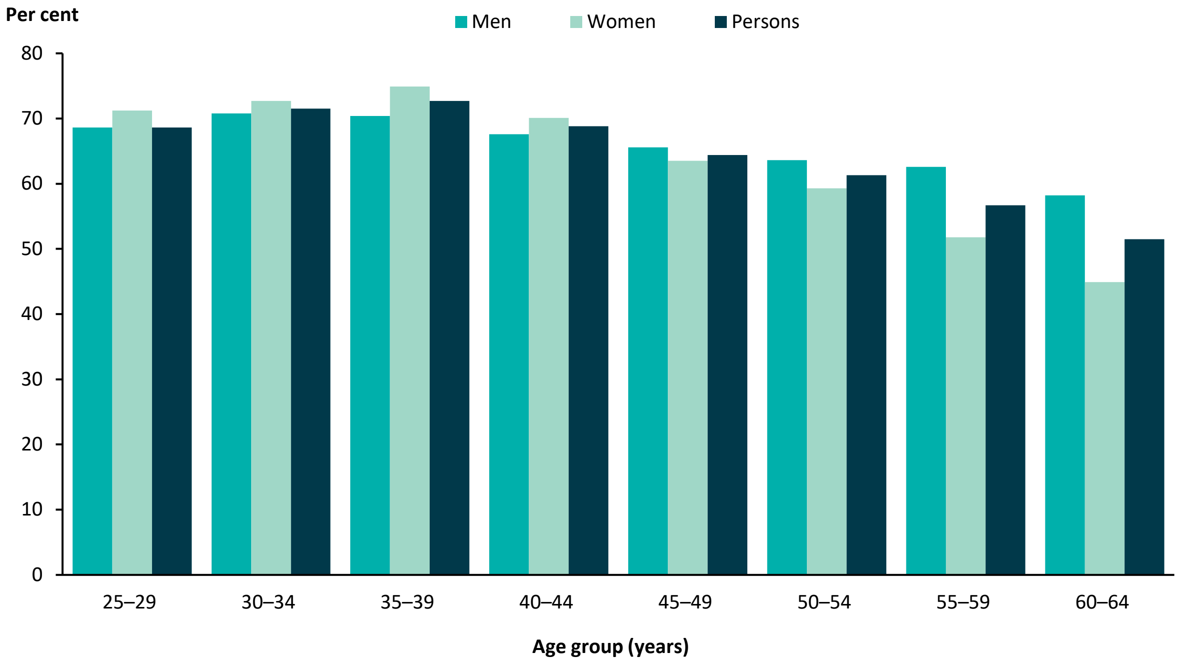
- At the time of writing, the data available for Indigenous Australians was for a different age range than specified in this indicator—in 2018–19, 45% of Indigenous Australians aged 20–64 (an estimated 183,500 people) had a non-school qualification (at Certificate level III or higher), compared with 64% of non-Indigenous Australians in 2018 (Table 2.4).

Figure 2.1: People aged 25–64 with a non-school qualification (%), by sex and year



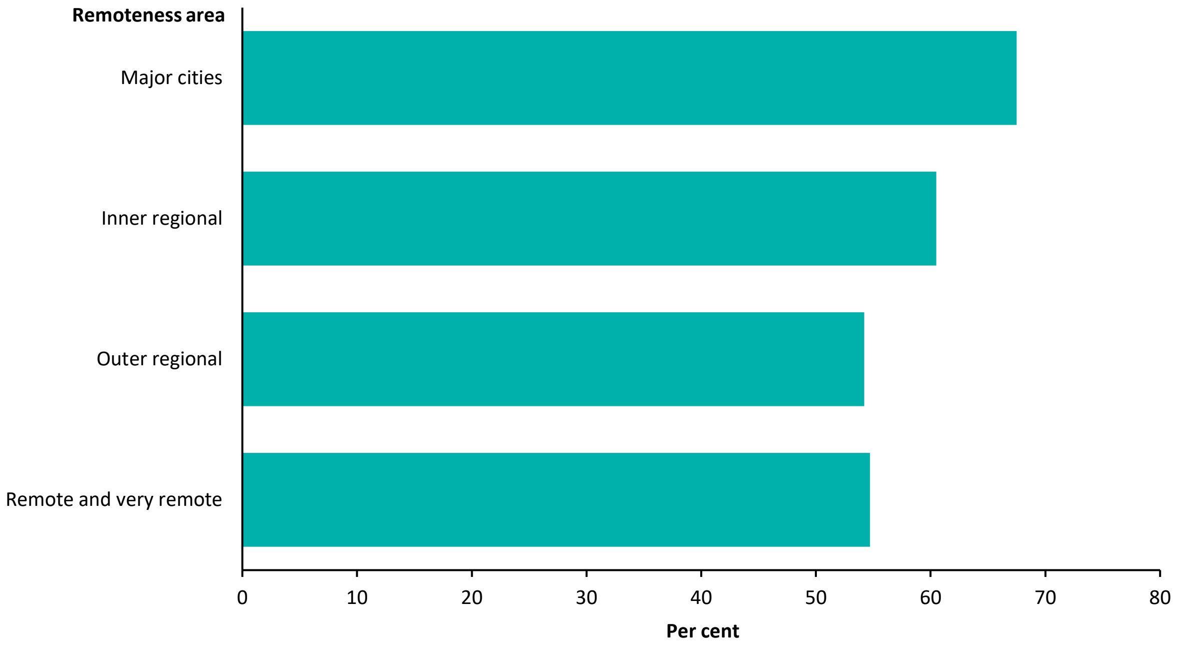
Notes
1. From 2013, persons permanently unable to work were included in the scope of the Survey of Education and Work, and re-based estimated resident population data were used from 2014. These factors may affect the comparison of data over time.
2. Data and additional notes for this figure are shown in Table 2.1.
Source: ABS 2019b.

Figure 2.2: People aged 25–64 with a non-school qualification (%), by sex and age, 2019



Note: Data and additional notes for this figure are shown in Table 2.2.
Source: ABS 2019b.

Figure 2.3: People aged 25–64 with a non-school qualification (%), by remoteness area, 2019



Note: Data and additional notes for this figure are shown in Table 2.3.
Source: ABS 2019b.

Considerations

This indicator should be considered in conjunction with other social determinants of health—see 'Indicators 1 and 3'.

Data sources

ABS Survey of Education and Work, 2019 (and earlier years for trends).

ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19.

For further details, refer to Appendix B.

References

ABS 2018. Survey of Education and Work, May 2018. ABS Cat. no. 6227. Canberra: ABS.

ABS 2019a. National Aboriginal and Torres Strait Islander Health Survey 2018–19. ABS Cat. no. 4715.0. Canberra: ABS.

ABS 2019b. Survey of Education and Work, May 2019. ABS Cat. no. 6227. Canberra: ABS.

ABS (May 2020). Education and Work, Australia, ABS Website, accessed 16 December 2020. https://www.abs.gov.au/statistics/people/education/education-and-work-australia/may-2020.

OECD (Organisation for Economic Co-operation and Development) 2016. How are health and life satisfaction related to education? Education Indicators in Focus, no. 47. Paris: OECD Publishing.

Supplementary tables

Table 2.1: People aged 25–64 with a non-school qualification (%), by sex and year

	Men		Women		Persons	
Year	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2004	54.9	54.0–55.8	41.5	40.7–42.3	48.2	47.5–48.9
2005	54.4	53.7–55.1	42.1	41.5–42.7	48.2	47.7–48.7
2006	55.6	54.4–56.8	45.1	44.2–46.0	50.3	49.4–51.2
2007	56.4	55.4–57.4	46.7	45.7–47.7	51.5	50.6–52.4
2008	57.0	56.2–57.8	50.1	49.3–50.9	53.5	53.0–54.0
2009	58.5	57.3–59.7	51.4	50.3–52.5	54.9	54.0–55.8
2010	60.0	59.2–60.8	53.6	52.8–54.4	56.7	56.1–57.3
2011	59.8	58.8–60.8	55.4	54.5–56.3	57.6	56.7–58.5
2012	62.6	61.8–63.4	58.4	57.5–59.3	60.5	59.8–61.2
2013	60.7	59.8–61.6	58.1	57.2–59.0	59.4	58.7–60.1
2014	61.8	60.9–62.7	57.9	56.9–58.9	59.9	59.1–60.7
2015	63.6	62.7–64.5	60.5	59.6–61.4	62.1	61.4–62.8
2016	64.6	63.6–65.6	61.7	60.8–62.6	63.1	62.4–63.8
2017	65.3	64.4–66.2	63.2	62.6–63.8	64.2	63.6–64.8
2018	65.6	64.8–66.4	64.6	63.8–65.4	65.1	64.6–65.6
2019	66.0	65.4–66.6	64.2	63.4–65.0	65.1	64.6–65.6

Notes

1. From 2013, persons permanently unable to work were included in the scope of the Survey of Education and Work, and re-based estimated resident population data were used from 2014. These factors may affect the comparison of data over time.
2. Non-school qualification in Certificate level III or above.

Source: ABS 2019b.

Table 2.2: People aged 25–64 with a non-school qualification (%), by sex and age, 2019

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
25–29	68.6	65.6–71.6	71.2	68.7–73.7	68.6	66.4–70.8
30–34	70.8	68.0–73.6	72.7	70.3–75.1	71.5	69.3–73.7
35–39	70.4	68.3–72.5	74.9	72.3–77.5	72.7	71.0–74.4
40–44	67.6	65.2–70.0	70.1	68.0–72.2	68.8	67.2–70.4
45–49	65.6	64.1–67.1	63.5	61.1–65.9	64.4	62.9–65.9
50–54	63.6	61.1–66.1	59.3	57.4–61.2	61.3	59.9–62.7
55–59	62.6	60.4–64.8	51.8	49.8–53.8	56.7	55.5–57.9
60–64	58.2	55.7–60.7	44.9	41.8–48.0	51.5	49.6–53.4
Total 25–64	**66.0**	**65.4–66.6**	**64.2**	**63.4–65.0**	**65.1**	**64.6–65.6**

Note: Non-school qualification in Certificate level III or above.

Source: ABS 2019b.

Table 2.3: People aged 25–64 with a non-school qualification (%), by remoteness area, 2019

Remoteness area	Per cent	95% CI
Major cities	67.5	67.1–67.9
Inner regional	60.5	59.3–61.7
Outer regional	54.2	50.7–57.7
Remote and very remote	54.7	48.8–60.6

Notes

1. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.
2. Non-school qualification in Certificate level III or above.

Source: ABS 2019b.

Table 2.4: People aged 20–64 with a non-school qualification (%), by Indigenous status, 2018 and 2018–19

Indigenous status	Per cent	95% CI
Indigenous Australians	45.4	42.4–48.4
Non-Indigenous Australians	63.8	63.2–64.4

Notes

1. Non-school qualification in certificate level III or above.
2. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2018 Survey of Education and Work.

Source: ABS 2019a.

Indicator 3: Employment-to-population ratio

The employment-to-population ratio was 75% in December 2019.

Why is this important?

Employment status, as a social determinant of health, plays a key role in influencing socioeconomic position. Unemployed people have a higher risk of death and have more illness and disability than those of similar age who are employed (Mathers & Schofield 1998). The psychosocial stress caused by unemployment has a strong impact on physical and mental health and wellbeing (Dooley et al. 1996).

For some, unemployment is caused by illness, but for many it is unemployment itself that causes health problems through its psychological consequences and the financial problems it brings (AIHW 2016).

What does this indicator measure?

The proportion of people aged 15–64 who are employed (employment-to-population ratio, also referred to as the employment rate).

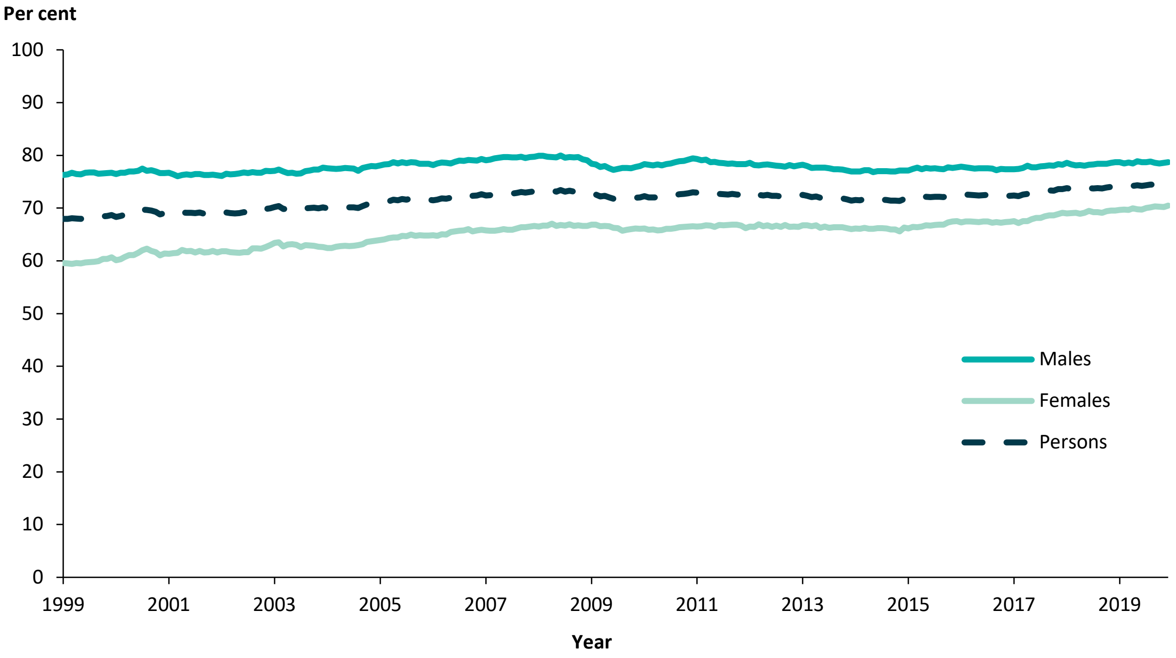
What do the data show?

- The employment-to-population ratio has fluctuated over the last 20 years, from 69% in December 1999 to 75% in December 2019 (Figure 3.1).
- The female employment rate was 70% in December 2019. This rate has typically been rising since the late 1970s and from 1985, at least half of working-age females were employed. In contrast, the male employment rate peaked at 83% in 1981 and decreased to 79% in December 2019. Male employment declined more through each economic downturn than did female employment (AIHW 2019).

Population groups

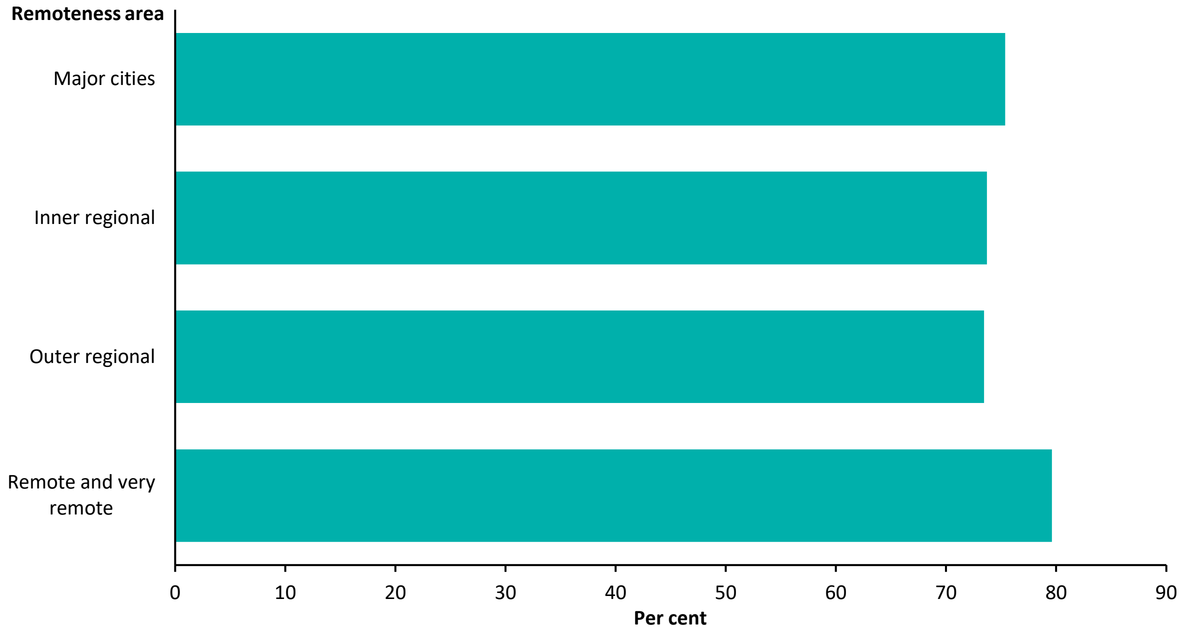
- Patterns across socioeconomic groups (from disaggregating by socioeconomic areas) have not been explored for this indicator because it is a socioeconomic variable in itself. This indicator also has the advantage of being a measure of an *individual's* socioeconomic position, rather than using the proxy of the socioeconomic characteristics of the *area* where individuals live.
- In May 2019, the employment-to-population ratio was highest for persons living in *Remote and very remote* areas (80%) and lowest for those living in *Outer regional* areas (73%) (Figure 3.2).
- In 2018–19, the employment-to-population ratio for Indigenous Australians was 49% (ABS 2019a)—an increase from 38% in 1994 (AIHW 2017). The employment-to-population ratio for Indigenous Australians was lower than that of non-Indigenous Australians (75%) in 2018 (ABS 2019a).

Figure 3.1: Employment-to-population ratio, persons aged 15–64, by sex and month



Notes
1. This figure uses ABS seasonally adjusted data.
2. Labour Force Data is collected by month, however only years are shown on axis on this figure.
3. Data and additional notes for this figure are shown in Table 3.1.
Source: ABS 2019b.

Figure 3.2: Employment-to-population ratio, persons aged 15–64, by remoteness area, May 2019



Note: Data and additional notes for this figure are shown in Table 3.2.
Source: ABS 2019c.

Considerations

This indicator should be considered in conjunction with other social determinants of health (see 'Indicators 1 and 2') as well as other labour force measures such as unemployment rate, underemployment rate, participation rate and barriers to labour force participation (see AIHW 2019 for more information).

Data sources

ABS Labour Force Survey, December 2019; ABS Education and Work, May 2019.

ABS National Aboriginal and Torres Strait Islander Health Survey 2018–19.

For further details, refer to Appendix B.

References

ABS 2019a. National Aboriginal and Torres Strait Islander Health Survey, 2018–19. ABS Cat. no. 4715.0. Canberra: ABS.

ABS 2019b. Labour Force, Australia, December 2019. ABS Cat. no. 6202.0. Canberra: ABS.

ABS 2019c. Microdata: Education and Work, May 2019. ABS Cat. no. 6227.0.30.001. Findings based on TableBuilder analysis. Canberra: ABS.

AIHW 2016. Australia's health 2016. Cat. no. AUS 199. Canberra: AIHW.

AIHW 2017. Aboriginal and Torres Strait Islander health performance framework 2017: supplementary online tables. Cat. no. WEB 170. Canberra: AIHW.

AIHW 2019. Employment trends. Canberra: AIHW. Canberra: AIHW. Viewed 16 September 2021.

Dooley D, Fielding J & Levi L 1996. Health and unemployment. Annual Review of Public Health 17:449–65.

Mathers CD & Schofield DJ 1998. The health consequences of unemployment: the evidence. Medical Journal of Australia 168(4):178–82.

Supplementary tables

Table 3.1: Employment-to-population ratio, February 1978 to December 2019 (seasonally-adjusted)

For data refer to:
https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/16BF4424D896F765CA2585130010F8A3?opendocument

Table 3.2: Employment-to-population ratio, persons aged 15–64, by remoteness area, May 2019

Remoteness area	Per cent	95% CI
Major cities	75.4	76.0–74.7
Inner regional	73.7	75.9–71.5
Outer regional	73.4	75.4–71.5
Remote and very remote	79.6	88.7–70.5
Total 15–64	**75.0**	**75.7–74.3**

Notes
1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.
Source: ABS 2019c.

Indicator 4: Smoking during pregnancy

9.2% of women who gave birth smoked in the first 20 weeks of pregnancy in 2018.

Why is this important?

Women who smoke tobacco during pregnancy are more likely to experience pre-term birth, placental complications and perinatal death (either stillbirth or neonatal death) of their baby (WHO 2013).

Babies of mothers who smoke during pregnancy are at increased risk of poor growth during pregnancy, particularly during the phase of rapid weight gain from 34 weeks gestation onwards (Širvinskienė et al. 2016). Sudden infant death syndrome, childhood diabetes and childhood obesity have been linked with exposure to tobacco during fetal development (Banderali et al. 2015; Flenady et al. 2018). Maternal smoking is associated with low birthweight, which in turn is linked with poor educational outcomes in early childhood, coronary heart disease, type 2 diabetes, and being overweight in adulthood (Guthridge et al. 2015; Lumley et al. 2009).

Smoking cessation during pregnancy is key in reducing the risk of complications during pregnancy and birth as well as reducing adverse health outcomes for the baby. Cessation at later stages of pregnancy will still improve health outcomes for the baby, including improved fetal growth (AIHW 2021; Miyazaki et al. 2015).

What does this indicator measure?

The proportion of women who gave birth who smoked in the first 20 weeks of pregnancy.

What do the data show?

In 2018:

- 9.2% of women who gave birth smoked in the first 20 weeks of pregnancy (Table 4.1). After adjusting for age, the number of women who smoked in the first 20 weeks of pregnancy has decreased from 37,700 (16%) in 2011 to 27,400 (13%) in 2018 (AIHW 2020a; Figure 4.1).
- younger mothers—aged under 20 (31%) and 20–24 years (21%)—were more likely to smoke during pregnancy than mothers in older age groups (10% or less) (Figure 4.2).

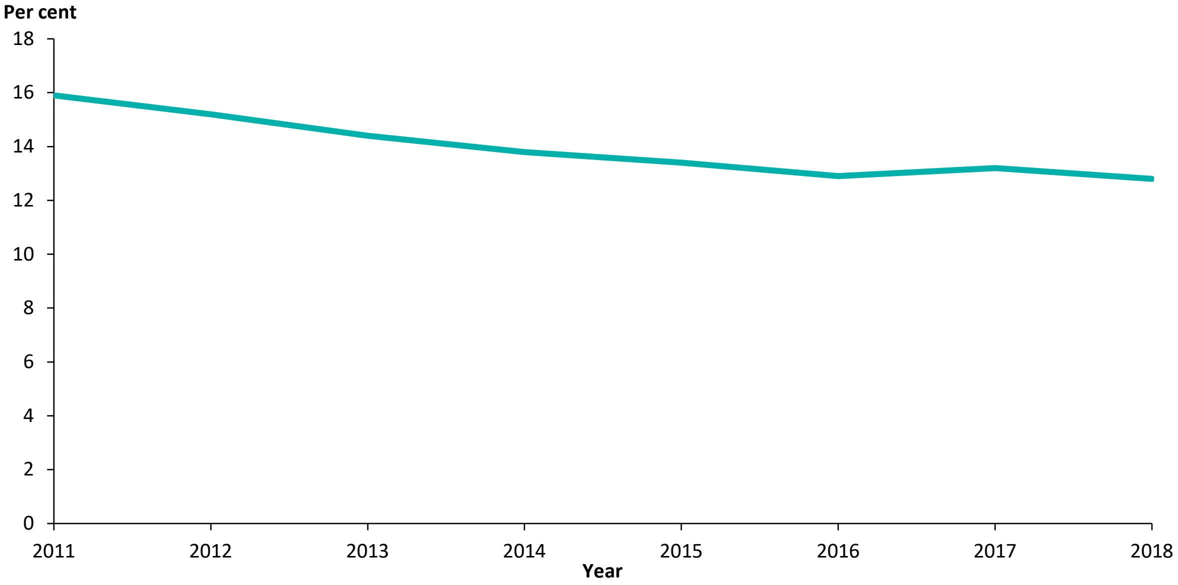
Population groups

In 2018:

- after adjusting for age, mothers in the lowest socioeconomic areas were more likely to smoke than those in the highest socioeconomic areas (19% compared with 7.3%) (Figure 4.3)

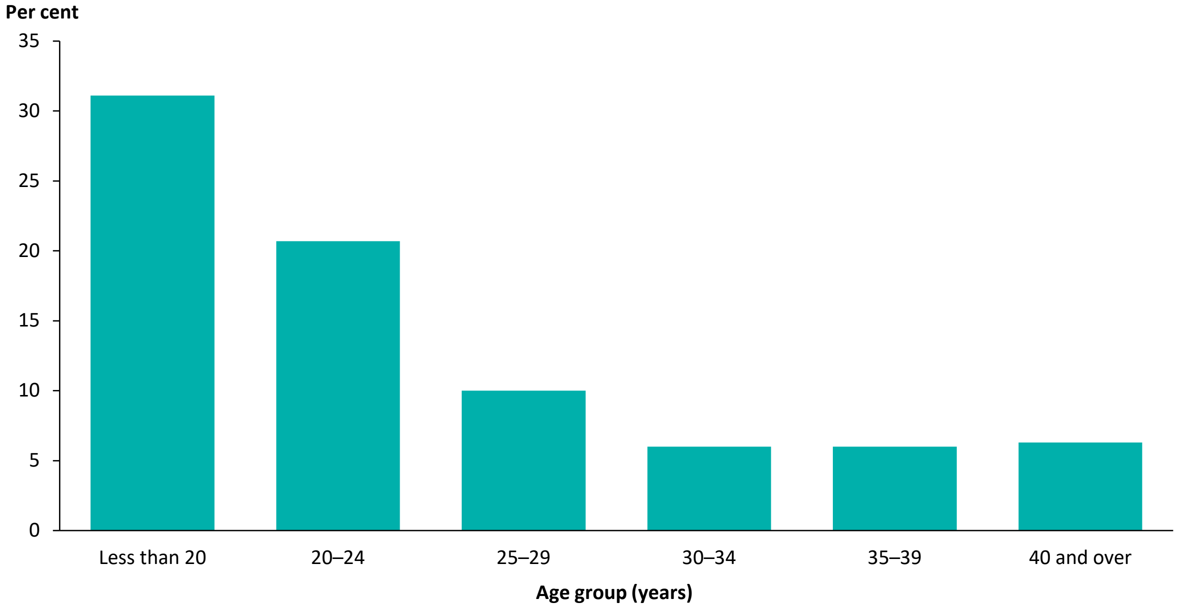
- after adjusting for age, mothers living in regional and remote areas were more likely to smoke during pregnancy (ranging from 17% in *Inner regional* areas to 36% in *Very remote* areas*)* than those living in *Major cities* (11%) (Figure 4.3)
- forty-two percent of Indigenous mothers smoked in the first 20 weeks of pregnancy (AIHW 2020a). The proportion of Indigenous mothers who smoked in the first 20 weeks of pregnancy, after adjusting for age, has fallen 11% (modelled estimate) since 2011 (Figure 4.4 and AIHW 2020b)
- Indigenous mothers were 3.9 times as likely as non-Indigenous mothers to smoke in the first 20 weeks of pregnancy, after adjusting for age (Table 4.3).

Figure 4.1: Percentage of females who smoked during the first 20 weeks of pregnancy (%), by year of birth



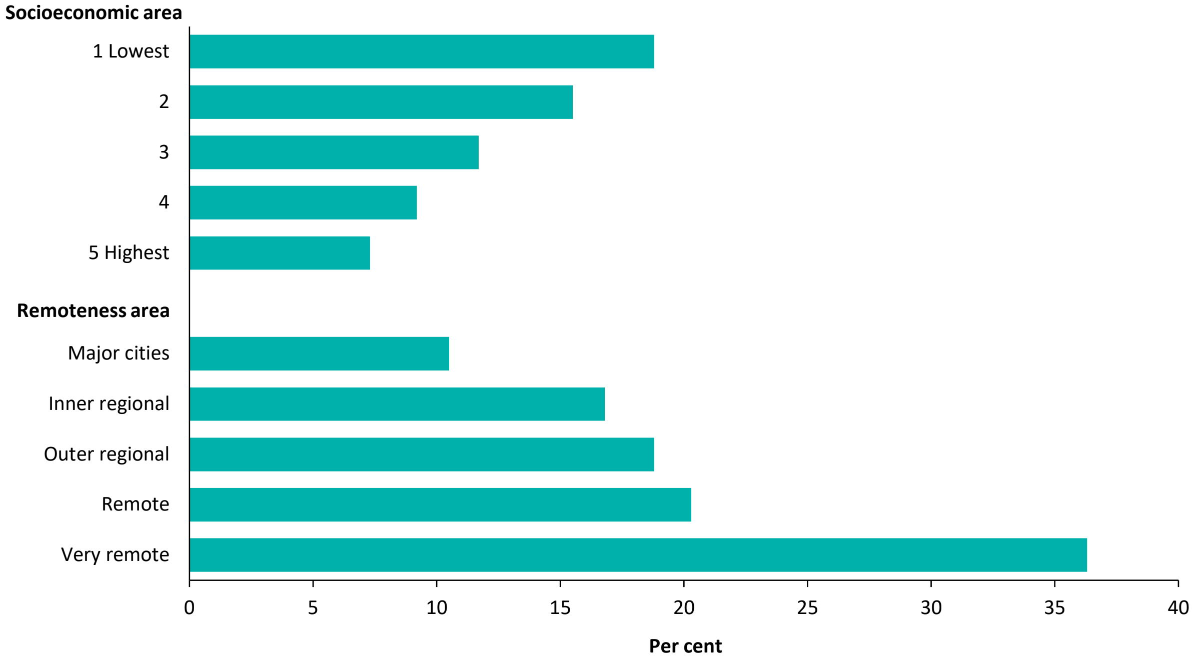
Notes
1. Age-standardised using the 2001 Australian female Estimated Resident Population (ERP) aged 15–44 as the standard population.
2. Data and additional notes for this figure are shown in Table 4.1.
Source: AIHW analysis of National Perinatal Data Collection.

Figure 4.2: Percentage of females who smoked during the first 20 weeks of pregnancy (%), by age group, 2018



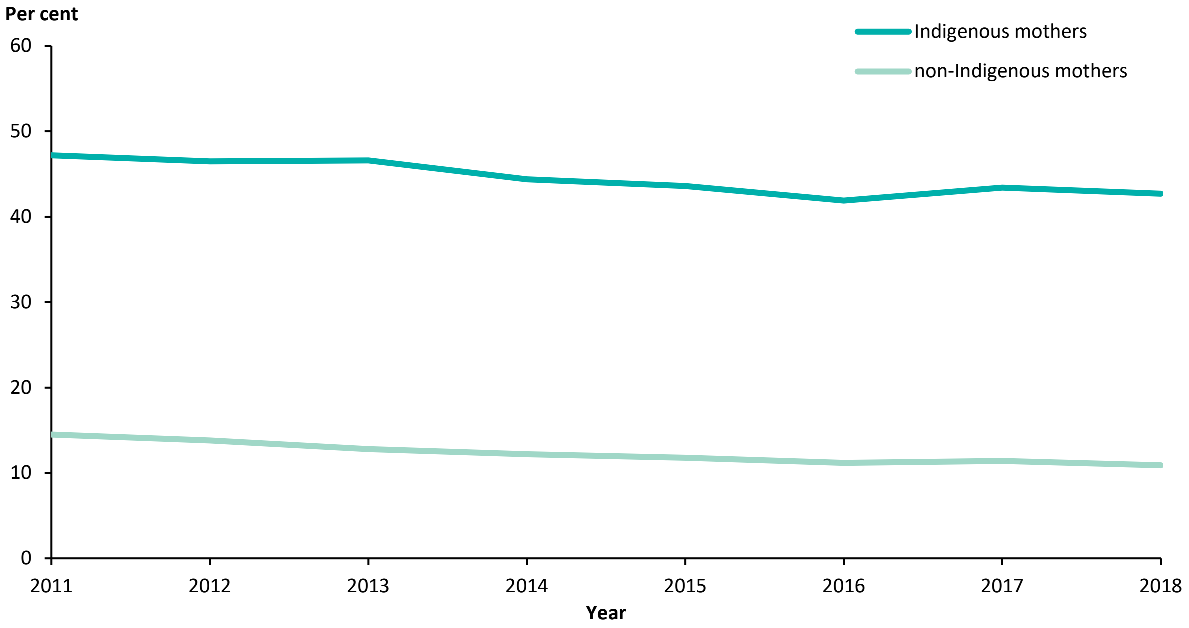
Note: Data and additional notes for this figure are shown in Table 4.2.
Source: AIHW 2020b.

Figure 4.3: Percentage of females who smoked during the first 20 weeks of pregnancy (%), by selected population characteristics, 2018



Notes
1. Age-standardised using the 2001 Australian female Estimated Resident Population (ERP) aged 15–44 as the standard population.
2. Data and additional notes for this figure are shown in Table 4.2.
Source: AIHW analysis of National Perinatal Data Collection.

Figure 4.4: Percentage of females who smoked during the first 20 weeks of pregnancy (%), by Indigenous status and year of birth



Notes

1. Age-standardised using the 2001 Australian female Estimated Resident Population (ERP) aged 15–44 as the standard population.
2. Data and additional notes for this figure are shown in Table 4.3.

Source: AIHW 2020b.

Considerations

Smoking during pregnancy is self-reported.

Women who stop smoking during pregnancy can reduce the risk of adverse outcomes for themselves and their babies. Support to stop smoking is widely available through antenatal clinics. In 2018 of women who reported smoking during the first 20 weeks of pregnancy, one-fifth (20%) did not continue to smoke after 20 weeks of pregnancy (AIHW 2020b).

Results include women who smoked before knowing they were pregnant. According to the 2016 National Drug Strategy Household Survey (NDSHS), around 1 in 6 (16%) women smoked before they knew they were pregnant, and 1 in 10 (11%) smoked after they found out they were pregnant (AIHW 2017).

Data sources

AIHW National Perinatal Data Collection. For further details, refer to Appendix B.

References

AIHW 2017. National Drug Strategy Household Survey 2016: detailed findings. Drug statistics series no. 31. Cat. no. PHE 214. Canberra: AIHW.

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AIHW 2020b. Australia's mothers and babies 2018—in brief. Cat. no. PER 108. Canberra: AIHW. Viewed 1 December 2020.

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Miyazaki Y, Hayashi K & Imazeki S 2015. Smoking cessation in pregnancy: psychosocial interventions and patient focused perspectives. International Journal of Women's Health 7:415–427.

Širvinskienė G, Žemaitienė N, Jusienė R, Šmigelskas K, Veryga A & Markūnienė E 2016. Smoking during pregnancy in association with maternal emotional well-being. Medicina 52(2):132–138.

WHO (World Health Organization) 2013. WHO recommendations for the prevention and management of tobacco use and second-hand smoke exposure in pregnancy. Viewed 14 June 2018.

Supplementary tables

Table 4.1: Percentage of females who smoked during the first 20 weeks of pregnancy (%), by year of birth

	Per cent	
Year	Crude	Age-standardised[(a)]
2011	12.9	15.9
2012	12.1	15.2
2013	11.3	14.4
2014	10.6	13.8
2015	10.1	13.4
2016	9.5	12.9
2017	9.5	13.2
2018	9.2	12.8

(continued)

Table 4.1 (continued): Percentage of females who smoked during the first 20 weeks of pregnancy (%), by year of birth

(a) Directly age-standardised using the 2001 Australian female Estimated Resident Population (ERP) aged 15–44 as the standard population. Five-year age groups are used for age-standardisation from 15–19 to 40–44 years. Data presented here are therefore not comparable with data based on different age groups.

Notes
1. Data excludes mothers whose smoking status was not stated.
2. Smoking during pregnancy is self-reported smoking of tobacco.
Source: AIHW analysis of National Perinatal Data Collection.

Table 4.2: Percentage of females who smoked during the first 20 weeks of pregnancy (%), by selected population characteristics, 2018

Population characteristic	
Age group (years)	**Per cent**
Less than 20	31.1
20–24	20.7
25–29	10.0
30–34	6.0
35–39	6.0
40 and over	6.3
Total	**9.2**
Total age-standardised[a]	**12.8**
Socioeconomic area[a][b][c]	
1 Lowest	18.8
2	15.5
3	11.7
4	9.2
5 Highest	7.3
Remoteness area[a][b][d]	
Major cities	10.5
Inner regional	16.8
Outer regional	18.8
Remote	20.3
Very remote	36.3

(a) Directly age-standardised using the 2001 Australian female Estimated Resident Population (ERP) aged 15–44 as the standard population. Five-year age groups are used for age-standardisation from 15–19 to 40–44 years. Data presented here are therefore not comparable with data based on different age groups.

(b) Data are by place of usual residence of the mother. Data excludes Australian non-residents, residents of external territories and records where geography of usual residence was not stated.

(c) Socioeconomic area derived by applying ABS 2016 Socio-Economic Indexes for Areas Index of Relative Socio-economic Disadvantage (SEIFA IRSD) to Statistical Area Level 2 of mother's usual residence.

(d) Remoteness area derived by applying ABS 2016 Australian Statistical Geography Standard (ASGS) to Statistical Area Level 2 of mother’s usual residence.

Notes
1. Data excludes mothers whose smoking status was not stated.
2. Smoking during pregnancy is self-reported smoking of tobacco.
Source: AIHW analysis of National Perinatal Data Collection.

Table 4.3: Percentage of females who smoked during the first 20 weeks of pregnancy (%), by Indigenous status and year of birth

Year	Indigenous mothers	Non-Indigenous mothers
2011	47.2	14.5
2012	46.5	13.8
2013	46.6	12.8
2014	44.4	12.2
2015	43.6	11.8
2016	41.9	11.2
2017	43.4	11.4
2018	42.7	10.9

Notes

1. Directly age-standardised using the 2001 Australian female Estimated Resident Population (ERP) aged 15–44 as the standard population. Five-year age groups are used for age-standardisation from 15–19 to 40–44 years. Data presented here are therefore not comparable with data based on different age groups.
2. Data excludes mothers whose smoking status was not stated.
3. Smoking during pregnancy is self-reported smoking of tobacco.

Source: AIHW 2020b.

Indicator 5: Low birthweight

6.7% of liveborn babies were born with low birthweight in 2018.

Why is this important?

Babies who are born with low birthweight are at greater risk of poor health, disability and death than other babies. Birthweight is a key indicator of infant health and a principal determinant of a baby's chance of survival and good health. A baby may be small due to being born early (pre-term) or may be small for gestational age (suggesting possible intrauterine growth restriction).

Low birthweight is a risk factor for neurological and physical disabilities, with the risk of adverse outcomes increasing with decreasing birthweight (Goldenberg & Culhane 2007). The health effects of low birthweight can continue into adulthood. Research has found an increased risk of being overweight in adulthood, type 2 diabetes, high blood pressure as well as metabolic and cardiovascular diseases (Phillips 2006; Verrips & Van der Pal 2014).

What does this indicator measure?

Proportion of liveborn babies born with a low birthweight—defined as less than 2,500 grams.

What do the data show?

In 2018:

- 6.7% of liveborn babies in Australia were of low birthweight (Figure 5.1). There has been little change in the percentage of low birthweight babies over the 10 years to 2018 which remained between 6.1% and 6.7% (Figure 5.1)
- baby girls were more likely to be of low birthweight than boys (7.3% compared with 6.1%) (AIHW 2020a)
- mothers aged less than 20 (9.9%) and those aged 40 and over (8.9%) had the highest proportion of liveborn babies born with a low birthweight compared with mothers aged 25–29 who had the lowest (6.1%) (Figure 5.2).

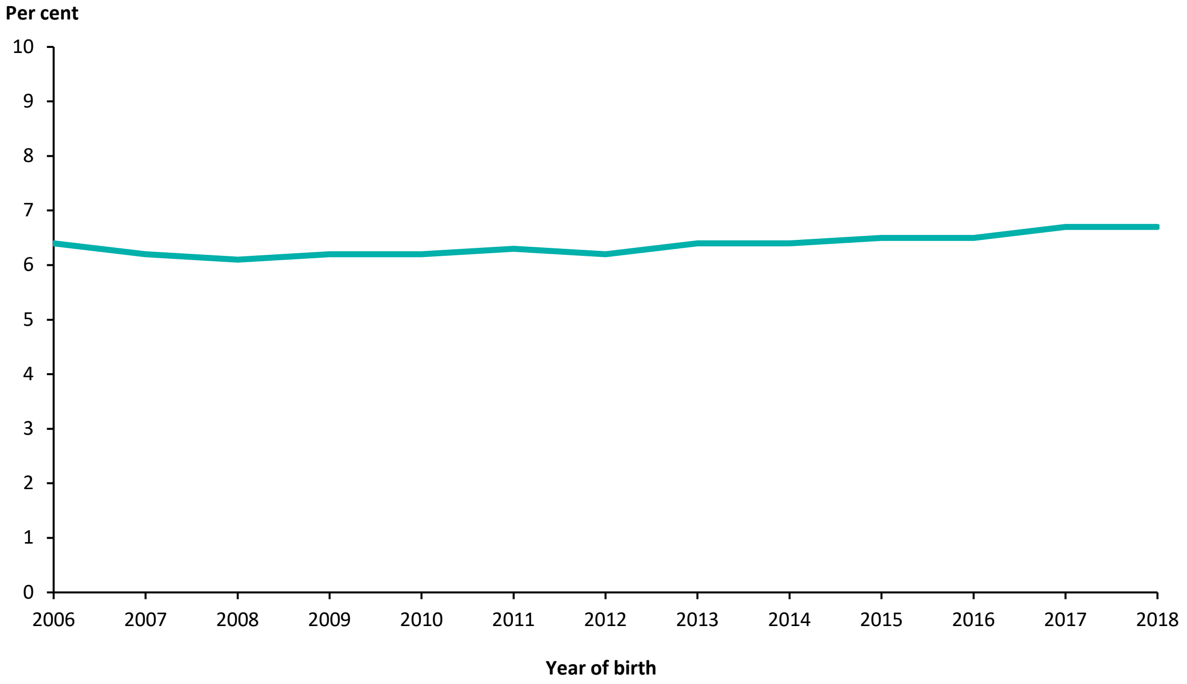
Population groups

In 2018:

- babies born to mothers in the lowest socioeconomic areas were more likely to be of low birthweight than those born to mothers in the highest socioeconomic areas (8.0% compared with 5.6%) (Figure 5.3)
- babies born to mothers living in *Very remote* areas were more likely to be of low birthweight as those born to mothers living in *Major cities* (11% compared with 6.6%) (Figure 5.3)

- babies of Indigenous mothers were more likely to be of low birthweight (12%) compared with babies born to non-Indigenous mothers (6.4%); this was observed in all years from 2006 to 2018 (Figure 5.4)
- Indigenous babies were more likely to be of low birthweight (11%) compared with non-Indigenous babies (6.3%) this was observed in all years from 2013 to 2018 (Table 5.3).

Figure 5.1: Percentage of liveborn babies of low birthweight (%), by year of birth

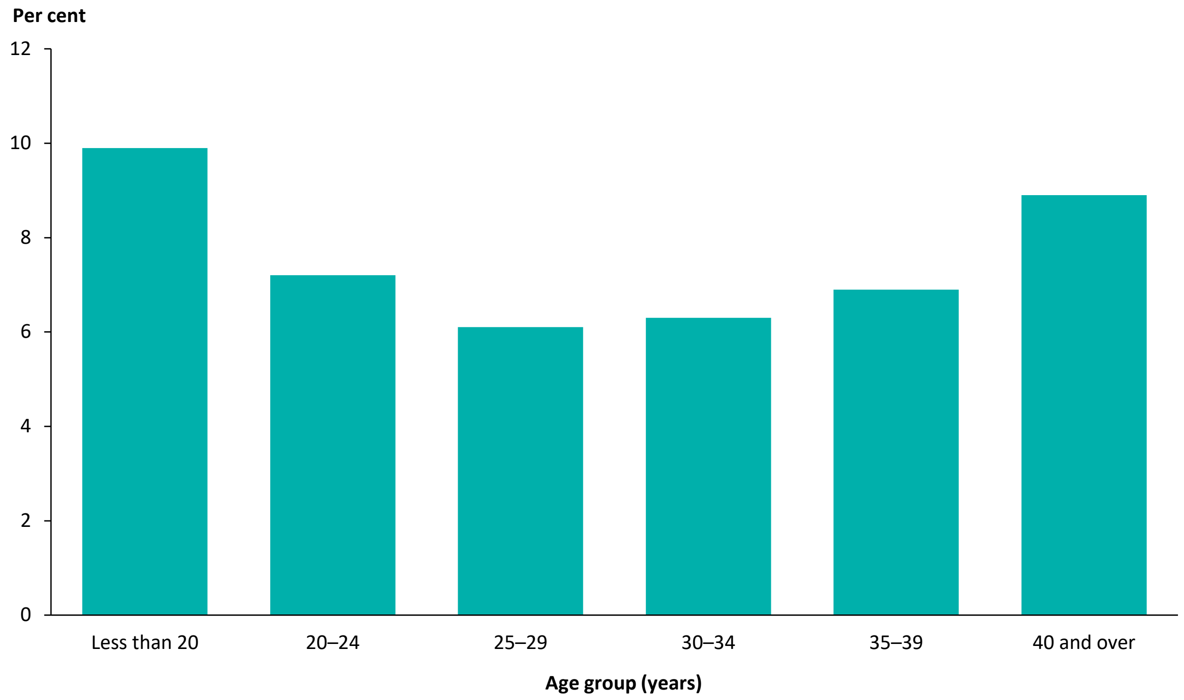


Notes

1. Low birthweight is defined as less than 2,500 grams.
2. Data and additional notes for this figure are shown in Table 5.1.

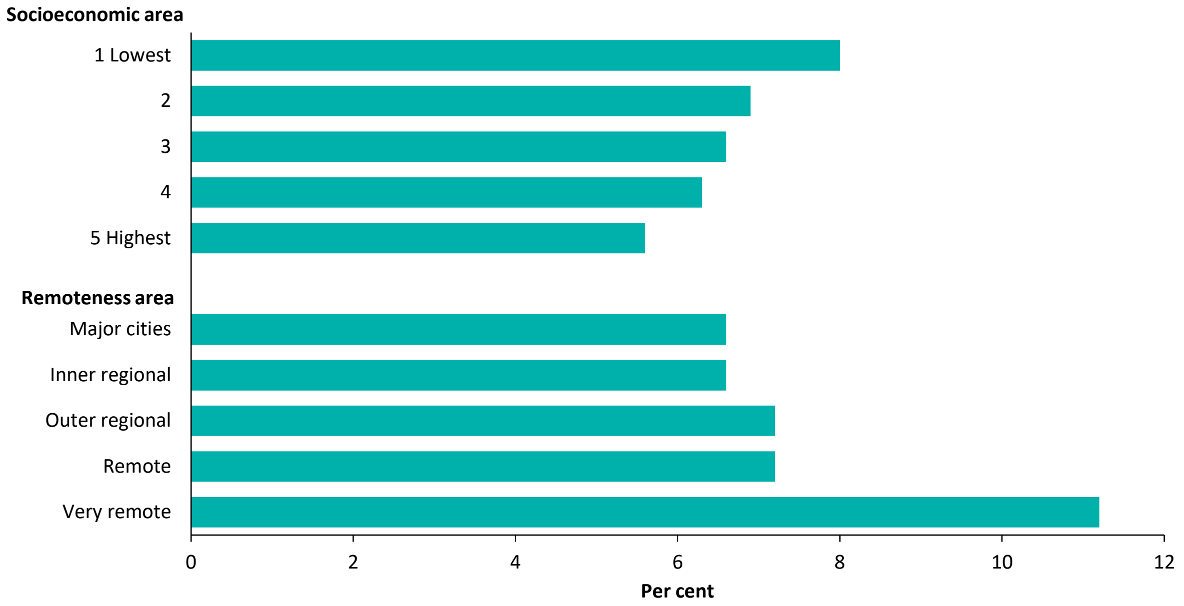
Sources: AIHW 2018; AIHW 2020a.

Figure 5.2: Percentage of liveborn babies of low birthweight (%), by maternal age, 2018



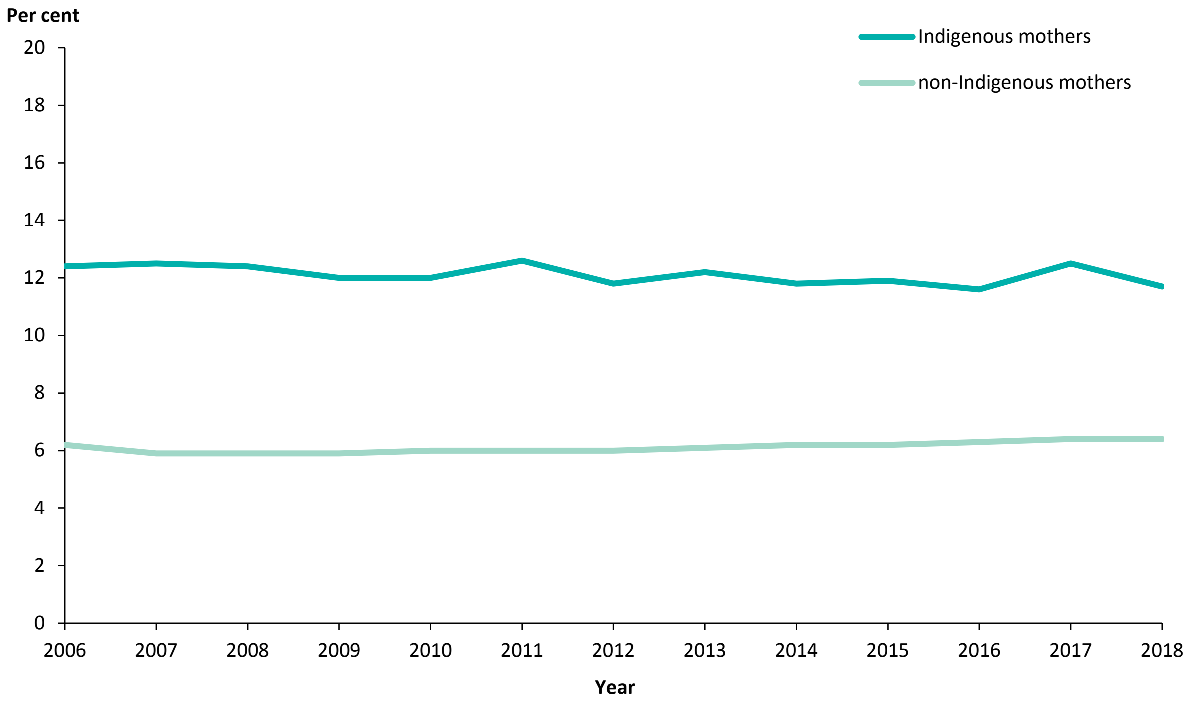
Notes
1. Low birthweight is defined as less than 2,500 grams.
2. Data and additional notes for this figure are shown in Table 5.2.
Source: AIHW 2020b.

Figure 5.3: Percentage of liveborn babies of low birthweight (%), by selected population characteristics, 2018



Notes
1. Low birthweight is defined as less than 2,500 grams.
2. Data and additional notes for this figure are shown in Table 5.2.
Source: AIHW 2020b.

Figure 5.4: Percentage of liveborn babies of low birthweight (%), by Indigenous status of the mother and year of birth



Notes
1. Low birthweight is defined as less than 2,500 grams.
2. Data and additional notes for this figure are shown in Table 5.3.
Sources: AIHW 2018; AIHW 2020a.

Considerations

Mothers who smoke during pregnancy have a higher proportion of low birthweight babies compared with mothers who did not smoke (AIHW 2019), therefore this indicator should be interpreted in conjunction with 'Indicator 4—Smoking during pregnancy'.

Data sources

AIHW National Perinatal Data Collection. For further details, refer to Appendix B.

References

AIHW 2018. Australia's mothers and babies 2016—in brief. Perinatal statistics series no. 34. Cat. no. PER 97. Canberra: AIHW.

AIHW 2020a. Australia's mothers and babies 2018—in brief. Cat. no. PER 108. Canberra: AIHW.

AIHW 2020b. Australia's mothers and babies data visualisations. Cat. no. PER 101. Canberra: AIHW.

Goldenberg RL & Culhane JF 2007. Low birthweight in the United States. American Journal of Clinical Nutrition 85:584S–90S.

Phillips D 2006. Birth weight and adulthood disease and the controversies. Fetal and Maternal Medicine Review 17(3):205–27.

Verrips GE & Van der Pal S 2014. Low birth weight babies. Encyclopedia of Quality of Life and Well-Being Research 3712-3715.

Supplementary tables

Table 5.1: Percentage of liveborn babies of low birthweight (%), by year of birth

Year of birth	Per cent
2006	6.4
2007	6.2
2008	6.1
2009	6.2
2010	6.2
2011	6.3
2012	6.2
2013	6.4
2014	6.4
2015	6.5
2016	6.5
2017	6.7
2018	6.7

Note: Low birthweight is defined as less than 2,500 grams.
Sources: AIHW 2018; AIHW 2020a.

Table 5.2: Percentage of liveborn babies of low birthweight (%), by selected population characteristics, 2018

Population characteristic	Per cent
Maternal age	
Less than 20	9.9
20–24	7.2
25–29	6.1
30–34	6.3
35–39	6.9
40 and over	8.9
Total	**6.7**
Socioeconomic area[(a)(b)]	
1 Lowest	8.0
2	6.9
3	6.6
4	6.3
5 Highest	5.6
Remoteness area[(a)(c)]	
Major cities	6.6
Inner regional	6.6
Outer regional	7.2
Remote	7.2
Very remote	11.2

(a) Data are by place of usual residence of the mother. Data excludes babies whose mothers were Australian non-residents, residents of external territories or for whom geography of usual residence was not stated.

(b) Socioeconomic area derived by applying ABS 2016 Socio-Economic Indexes for Areas Index of Relative Disadvantage (SEIFA IRSD) to area of mother's usual residence.

(c) Remoteness area derived by applying ABS 2016 Australian Statistical Geography Standard (ASGS) to area of mother's usual residence.

Note: Low birthweight is defined as less than 2,500 grams.
Source: AIHW 2020b.

Table 5.3: Percentage of liveborn babies of low birthweight (%), by Indigenous status of the mother or baby and year of birth

Year	Indigenous mothers	Non-Indigenous mothers	Indigenous babies	Non-Indigenous babies
2006	12.4	6.2	n.a.	n.a.
2007	12.5	5.9	n.a.	n.a.
2008	12.4	5.9	n.a.	n.a.
2009	12.0	5.9	n.a.	n.a.
2010	12.0	6.0	n.a.	n.a.
2011	12.6	6.0	n.a.	n.a.
2012	11.8	6.0	n.a.	n.a.
2013	12.2	6.1	11.1	6.1
2014	11.8	6.2	10.8	6.1
2015	11.9	6.2	11.1	6.2
2016	11.6	6.3	10.8	6.2
2017	12.5	6.4	11.5	6.3
2018	11.7	6.4	11.2	6.3

n.a. data not available
Note: Low birthweight is defined as less than 2,500 grams.
Sources: AIHW 2018; AIHW 2020a.

Indicator 6: Alcohol consumption

16% of adults consumed alcohol at levels that put them at lifetime risk of harm in 2017–18.

Why is this important?

Alcohol consumption increases the risk of a range of chronic diseases such as liver disease, many cancers (including bowel and breast cancer), oral health problems and can cause high blood pressure. Drinking alcohol can also cause mental health problems or make these problems worse. Further, maternal alcohol consumption can increase risk of low birth weight. Alcohol consumption can also play a part in excess energy intake, contributing to excess body weight. Reducing alcohol consumption reduces the risk of developing these conditions and other health problems (COAG 2015; NHMRC 2009; NHMRC 2020).

What does this indicator measure?

The National Health and Medical Research Council (NHMRC) guidelines for alcohol consumption provide advice on reducing the risks to health from drinking alcohol. According to the 2009 guidelines, for healthy men and women, drinking no more than 2 standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury (NHMRC 2009); for reporting this indicator this is operationalised as consuming an average of more than 2 standard drinks per day in the last week. These guidelines were revised in 2020—See 'Considerations' below for more details.

This indicator presents the proportion of the population aged 18 and over who are at risk of long-term harm from alcohol as defined by the 2009 guidelines (consuming more than 2 standard drinks per day on average).

What do the data show?

In 2017–18:

- around 1 in 6 adults (16% or an estimated 3 million adults) consumed more than 2 standard drinks per day on average, putting them at risk of long-term harm from alcohol (ABS 2018; AIHW 2019). After adjusting for age, the proportion of Australians exceeding the lifetime risk guideline decreased from 22% in 2004–05 to 16% in 2017–18 (Figure 6.1).
- men were almost 3 times as likely to drink at levels that put them at risk of long-term harm due to alcohol than women (24% and 9%, respectively) (Table 6.2).

Population groups

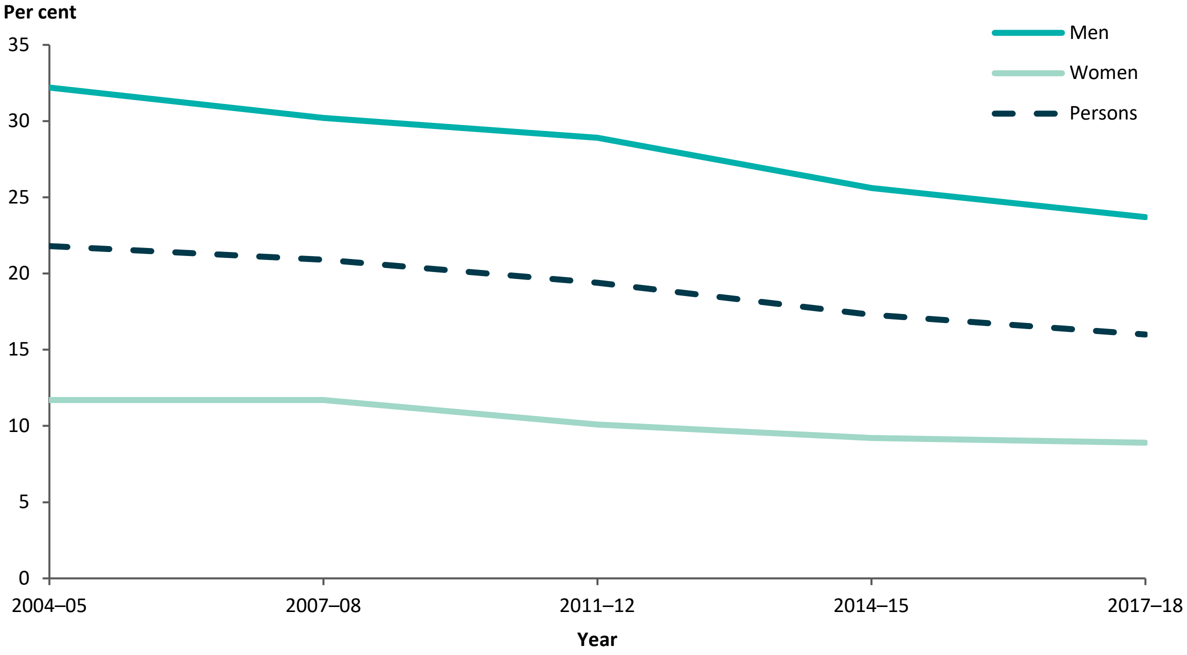
In 2017–18, after adjusting for age:

- adults living in the highest socioeconomic area were more likely to exceed the lifetime risk guidelines than those living in the lowest socioeconomic area (18% compared with 14%) (Table 6.3)
- adults living in *Outer regional and remote* areas were 1.7 times as likely to exceed the lifetime risk guidelines as those living in *Major cities* (24% and 15%, respectively) (Table 6.3).

In 2018–19, 20% of Aboriginal and Torres Strait Islander adults aged 18 and over (or an estimated 97,100 people) exceeded the lifetime risk guidelines (ABS 2019). The age-standardised rates were relatively stable between 2001 and 2018–19 (Table 6.4). Indigenous men were more likely than Indigenous women to exceed the lifetime risk guidelines at all ages—for example, four times as high among 18–24 year olds and almost three times as high among those aged 55 years and older (Table 6.5).

In 2018–19, after adjusting for age, Indigenous adults were 1.2 times as likely as non-Indigenous adults to exceed lifetime risk guidelines (Table 6.4).

Figure 6.1: Exceeding lifetime alcohol risk guidelines[(a)] in adults aged 18 and over (%), by sex and year



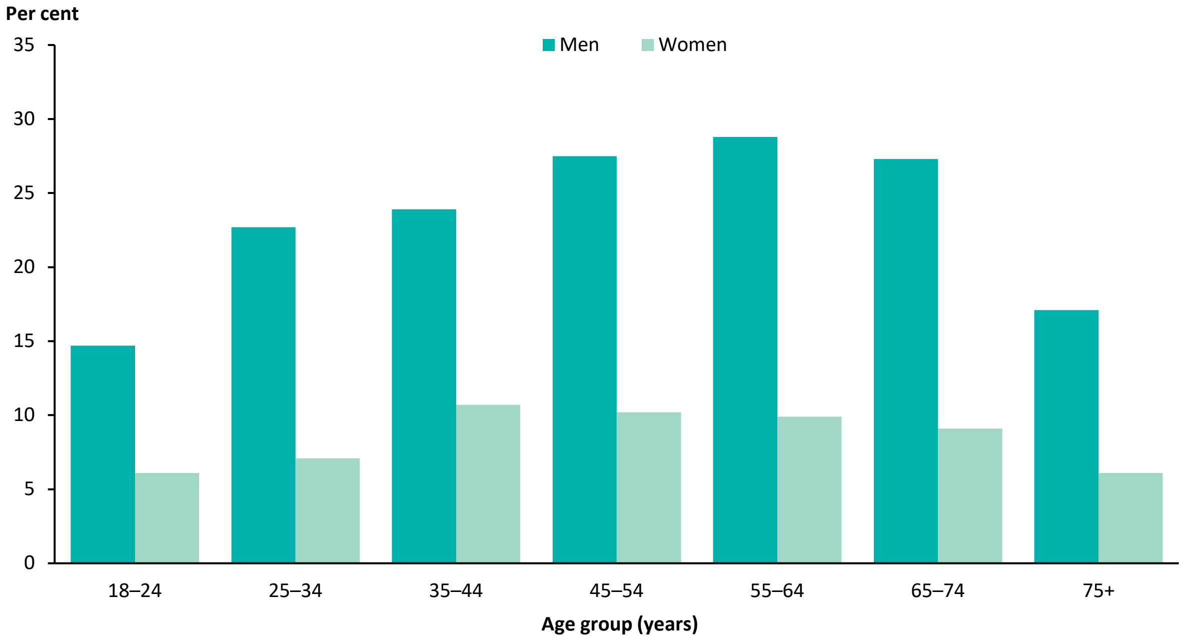
(a) According to the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).

Notes

1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 6.1.

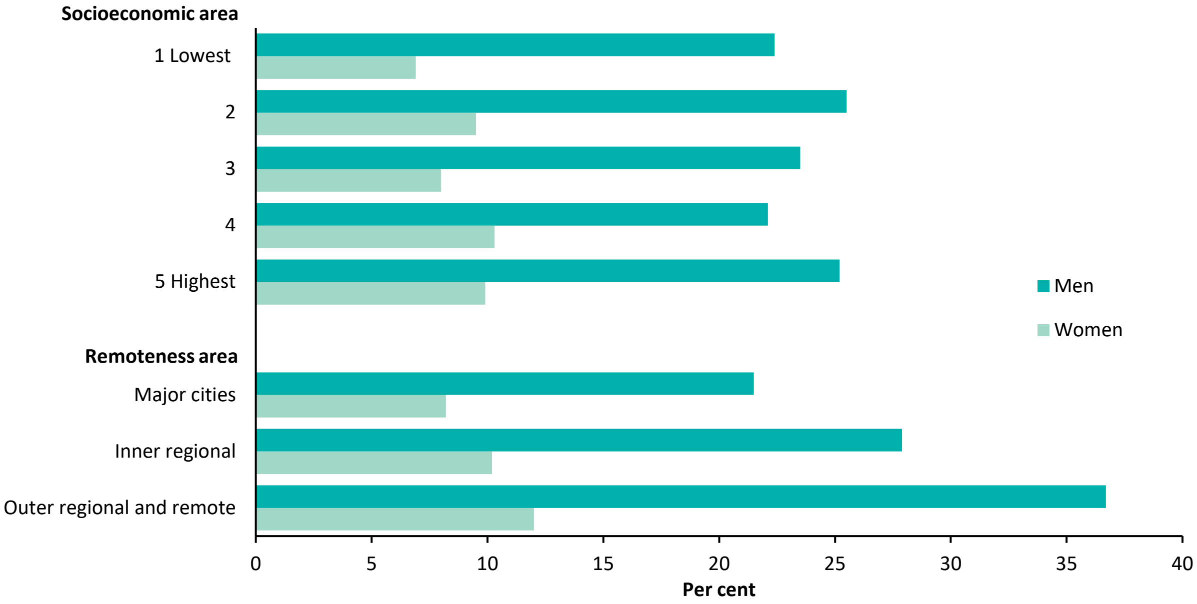
Source: AHIW 2019.

Figure 6.2: Exceeding lifetime alcohol risk guidelines[(a)] in adults aged 18 and over (%), by age and sex, 2017–18



(a) According to the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).
Note: Data and additional notes for this figure are shown in Table 6.2.
Source: AIHW 2019.

Figure 6.3: Exceeding lifetime alcohol risk guidelines[(a)] in adults aged 18 and over (%), by selected population characteristics and sex, 2017–18



(a) According to the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).
Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 6.3.
Source: AIHW 2019.

Considerations

Alcohol consumption is self-reported. Please note, in December 2020, the National Health and Medical Research Council (NHMRC) released the revised *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2020). However, this indicator was defined, and the data used here were self-reported, before the revised guidelines were released. The threshold for long-term risk from drinking has been lowered in the revised guidelines.

Data sources

ABS National Health Survey, 2017–18.

ABS Australian Aboriginal and Torres Strait Islander Health Survey, 2018–19.

For further details, refer to Appendix B.

References

ABS 2013. Australian Aboriginal and Torres Strait Islander Health Survey: First results, Australia 2012–13. ABS Cat. no. 4727.0.55.001. Canberra: ABS.

ABS 2018. National Health Survey: First results, 2017–18. ABS Cat. no. 4363.0. Canberra: ABS.

ABS 2019. National Aboriginal and Torres Strait Islander Health Survey, 2018–19. ABS Cat. no. 4715.0. Canberra: ABS.

AIHW 2019. Alcohol, tobacco & other drugs in Australia. Cat. no. PHE 221. Viewed 15 October 2019. Canberra: AIHW.

COAG (Council of Australian Governments) Health Council 2015. Healthy Mouths, Healthy Lives: Australia’s National Oral Health Plan 2015–2024. Adelaide: South Australian Dental Service.

NHMRC (National Health and Medical Research Council) 2009. Australian Guidelines to reduce health risks from drinking alcohol. Canberra: NHMRC.

NHMRC 2020. Australian guidelines to reduce health risks from drinking alcohol. Canberra: NHMRC.

Supplementary tables

Table 6.1: Exceeding lifetime alcohol risk guidelines[(a)] in adults aged 18 and over (%), by sex and year

	Men		Women		Persons	
Year	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
2004–05	32.2	31.0–33.4	11.7	11.0–12.4	21.8	21.1–22.5
2007–08	30.2	28.8–31.6	11.7	10.8–12.6	20.9	20.0–21.8
2011–12	28.9	27.5–30.3	10.1	9.1–11.1	19.4	18.5–20.3
2014–15	25.6	24.0–27.1	9.2	8.3–10.1	17.3	16.4–18.2
2017–18	23.7	22.5–25.0	8.9	8.2–9.7	16.0	15.3–16.7

(a) According to the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).
Note: Age-standardised to the 2001 Australian standard population.
Source: AIHW 2019.

Table 6.2: Exceeding lifetime alcohol risk guidelines[(a)] in adults aged 18 and over (%), by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
18–24	14.7	11.0–18.4	6.1	3.5–8.7	10.6	8.3–12.9
25–34	22.7	19.5–25.9	7.1	5.3–8.9	14.9	12.9–16.9
35–44	23.9	21.3–26.5	10.7	8.9–12.5	17.2	15.5–18.9
45–54	27.5	24.3–30.7	10.2	8.5–11.9	18.7	17.1–20.3
55–64	28.8	25.9–31.7	9.9	8.2–11.6	19.0	17.5–20.5
65–74	27.3	24.5–30.1	9.1	7.3–10.9	18.1	16.3–19.9
75+	17.1	13.6–20.6	6.1	4.2–8.0	11.2	9.1–13.3
Total 18+	**23.7**	**22.5–24.9**	**8.8**	**8.1–9.5**	**16.1**	**15.4–16.8**

(a) According to the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).
Source: AIHW 2019.

Table 6.3: Exceeding lifetime alcohol risk guidelines[(a)] in adults aged 18 and over (%), by selected population characteristics and sex, 2017–18

Population characteristic	Men		Women		Persons	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	22.4	19.8–25.1	6.9	5.2–8.5	14.4	12.8–16.1
2	25.5	22.6–28.5	9.5	7.7–11.3	17.5	15.8–19.2
3	23.5	20.9–26.1	8.0	6.4–9.7	15.5	14.0–17.1
4	22.1	19.5–24.7	10.3	8.4–12.2	16.0	14.4–17.5
5 Highest	25.2	22.2–28.3	9.9	7.9–11.8	17.7	15.8–19.6
Remoteness area						
Major cities	21.5	20.0–22.9	8.2	7.3–9.2	14.7	13.8–15.6
Inner regional	27.9	24.6–31.2	10.2	8.1–12.3	18.8	16.8–20.8
Outer regional and remote	36.7	32.5–40.9	12.0	9.1–14.8	24.4	21.7–27.1

(a) According to the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).

Notes

1. Age-standardised to the 2001 Australian standard population.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the National Health Survey (NHS).

Source: AIHW 2019.

Table 6.4: Exceeding lifetime alcohol risk guidelines[(a)] in adults aged 18 and over (%), by Indigenous status and year

Indigenous Australians			Non-Indigenous Australians		
Year	**Per cent**	**95% CI**	**Year**	**Per cent**	**95% CI**
2001	18.6	15.7–21.5	2001	18.6	17.9–19.3
2004–05	20.3	18.4–22.2	2004–05	21.9	21.2–22.6
2012–13	19.2	17.6–20.8	2011–12	19.5	18.6–20.4
2018–19	19.7	17.3–22.1	2017–18	16.0	15.3–16.7

(a) According to the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).

Note: Age-standardised to the 2001 Australian standard population.

Sources: ABS 2013; ABS 2019.

Table 6.5: Exceeding lifetime alcohol risk guidelines[(a)] in Indigenous adults aged 18 and over (%), by age and sex, 2018–19

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	33.1	23.4–42.8	8.2	4.4–12.0	20.9	15.4–26.4
25–34	31.5	24.2–38.8	9.4	6.3–12.5	20.1	16.0–24.2
35–44	28.8	20.3–37.3	9.8	6.7–12.9	18.9	14.6–23.2
45–54	30.5	22.2–38.8	16.4	10.1–22.7	23.0	17.6–28.4
55+	26.5	20.2–32.8	9.2	5.1–13.3	17.4	14.1–20.7
Total 18+	**30.4**	**26.7–34.1**	**10.3**	**8.5–12.1**	**20.0**	**17.6–22.4**

(a) According to the 2009 *Australian guidelines to reduce health risks from drinking alcohol* (NHMRC 2009).

Source: ABS 2019.

Indicator 7: Smoking

(a) 13.8% of adults smoked daily in 2017–18.

(b) 4.9% of secondary students aged 12–17 smoked at least weekly in 2017.

Why is this important?

Smoking is the single most important preventable cause of ill health and death in Australia. Tobacco smoke contains over 7,000 chemicals (of which over 70 cause cancer) including nicotine which is responsible for addiction. When tobacco smoke is inhaled, these chemicals enter the lungs and spread through the body via the lymphatic system (USDHHS 2014).

Smoking is linked to a range of conditions including various cancers, cardiovascular diseases, respiratory disease, type 2 diabetes, hip fractures and reproductive problems in women. Exposure to second-hand tobacco smoke is also a risk—it is causally linked to cancer, respiratory, and cardiovascular diseases, and to adverse health effects for infants and children (USDHHS 2014). Smoking (first or second hand) during pregnancy can affect the health of both mother and baby (see 'Indicator 4'). Adolescence is a critical time for brain development and exposure to nicotine during this period may have lasting adverse consequences for brain development (USDHHS 2014).

What does this indicator measure?

The proportion of people who currently smoke tobacco:

(a) **Adults:** Those aged 18 and over who reported smoking tobacco daily.

(b) **Secondary students:** Students aged 12–17 who reported smoking at least 1 day in the past week.

What do the data show?

(a) Adults

In 2017–18:

- about 1 in 7 adults aged 18 and over (13.8% or an estimated 2.6 million adults) smoked daily (Table 7.2; ABS 2018)
- there has been a long-term downward trend in tobacco smoking in Australia—after adjusting for age, daily smoking rates decreased from 27.7% in 1989–90 to 14.0% in 2017–18 (Figure 7.1). However, the decline has slowed, for example, the daily smoking rate remained similar between 2014–15 (14.7%) and 2017–18
- overall, smoking was more common among men (16.5%) than women (11.1%) (Table 7.2)

- in general, smoking rates varied by age group, peaking for persons aged 45–54 and decreasing with age (Figure 7.2). The greatest difference between the sexes was among 25–34 year olds with almost twice as many men smoking than women (19.0% compared with 10.6% for women) (Table 7.2).

Population groups

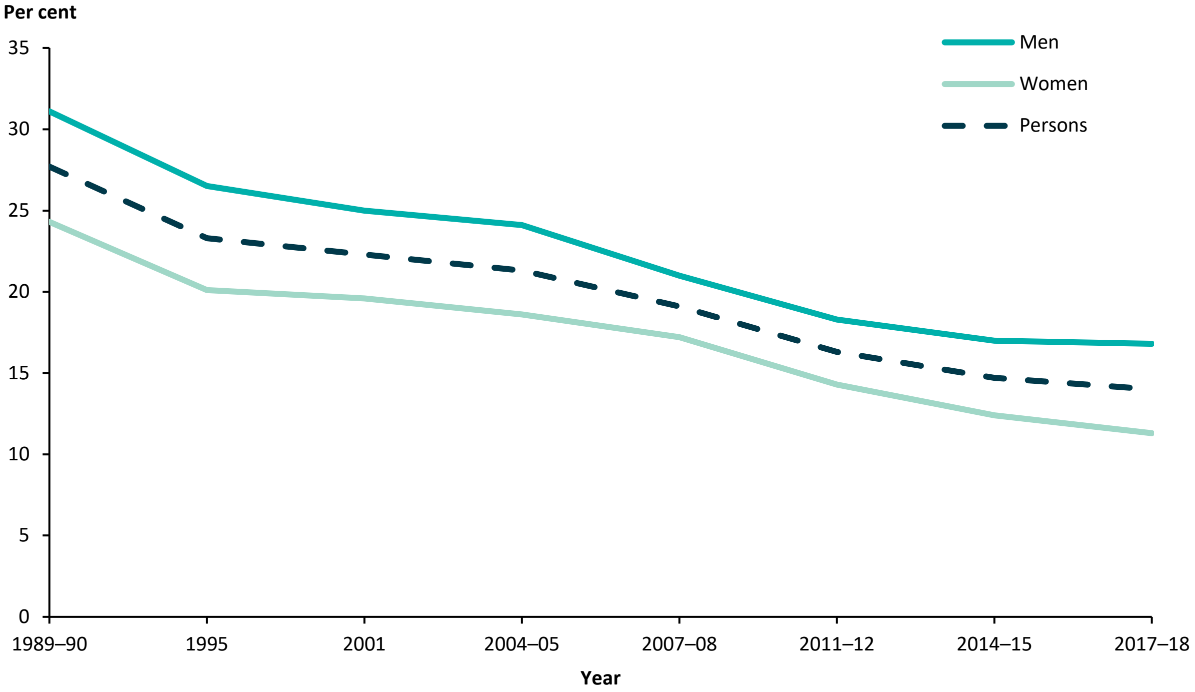
In 2017–18, after adjusting for age:

- adults living in the lowest socioeconomic areas were 3 times as likely to smoke daily as those living in the highest socioeconomic areas (22.8% compared with 7.0%) (Figure 7.3)
- adults living in *Outer regional and remote* areas were more likely to be daily smokers than those living in *Major cities* (19.6% compared with 12.8%) (Figure 7.3).

In 2018–19, an estimated 195,700 (40.2%) Aboriginal and Torres Strait Islander adults aged 18 and over smoked daily (ABS 2019).

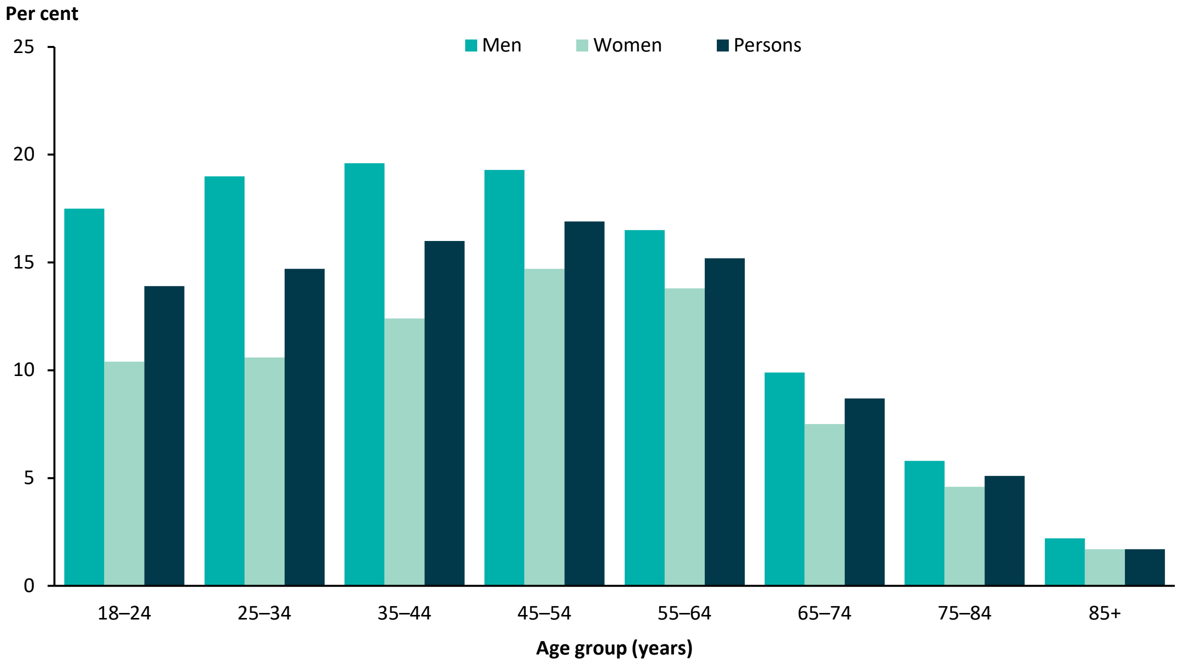
After adjusting for age, the rate of daily smoking decreased from 48.8% in 2001 to 40.1% in 2018–19 (ABS 2014, ABS 2019). After adjusting for age, Indigenous adults in 2018–19 were 3 times as likely as non-Indigenous adults in 2017–18 to smoke daily (Table 7.3).

Figure 7.1: Prevalence of daily smoking in adults aged 18 and over (%), by sex and year



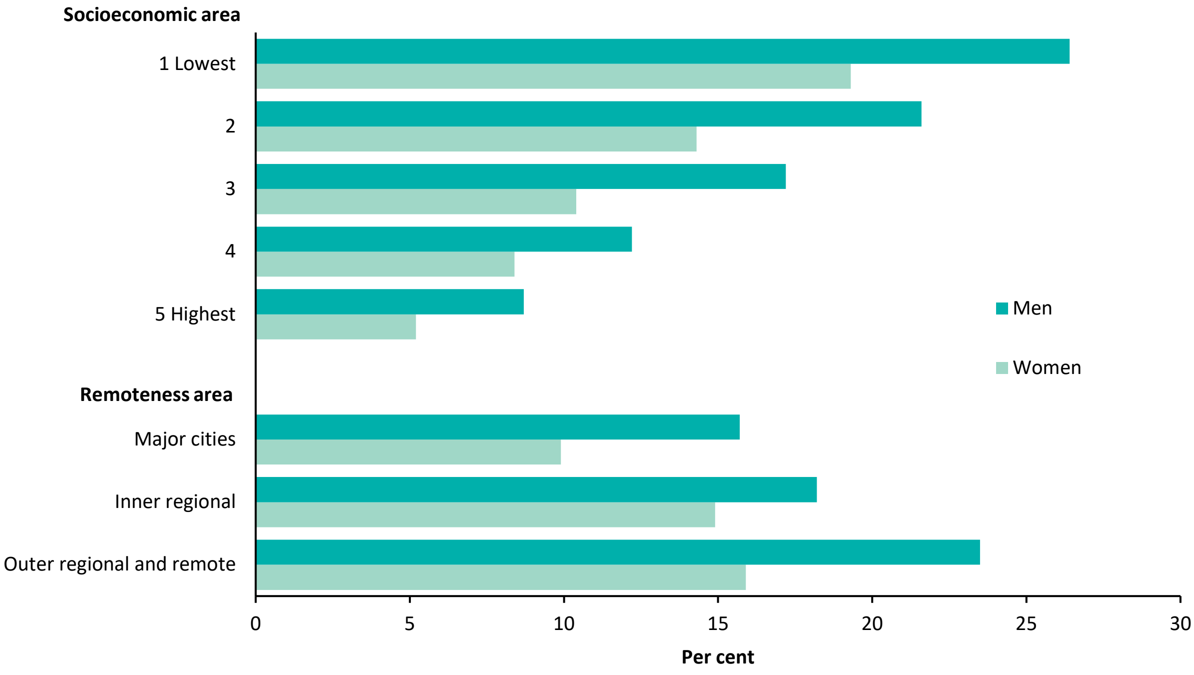
Notes
1. Age-standardised to the 2001 Australian standard population.
2. For 1989–90 and 1995, ‘current daily smoker’ has been reported using the category ‘current smoker’. For those years, the definition of ‘current smoker’—regularly smoking one or more cigarettes per day on average—aligns with the definition that has been used for the category ‘current daily smoker’ from 2001 onwards.
3. Data and additional notes for this figure are shown in Table 7.1.
Source: AIHW 2019.

Figure 7.2: Prevalence of daily smoking in adults aged 18 and over (%), by age and sex, 2017–18



Note: Data and additional notes for this figure are shown in Table 7.2.
Source: AIHW 2019.

Figure 7.3: Prevalence of daily smoking in adults aged 18 and over (%), by selected population characteristics and sex, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 7.3.
Source: AIHW 2019.

(b) Secondary students

In 2017:

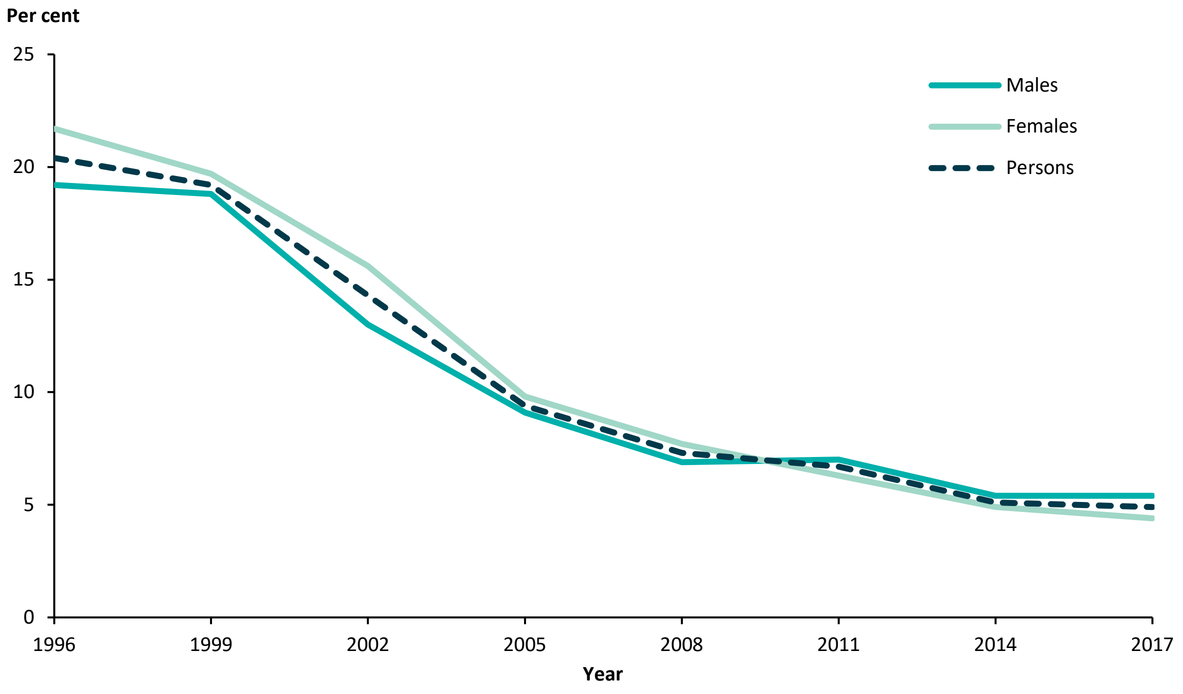
- around 79,000 (or 4.9%) students aged 12–17 were current weekly smokers, 82.5% had never smoked, and only 1.1% smoked daily (Guerin & White 2020a); the proportion of students who were current weekly smokers has decreased from 1 in 5 (20.4%) in 1996 to 1 in 20 (4.9%) in 2017 (Figure 7.4)
- the rate of current smoking among students increased with age—from 1.5% among those aged 12 to 10.7% of those aged 17 (Guerin & White 2020a)
- the rate of current smoking was higher among males (5.4%) than females (4.4%) (Figure 7.4).

Population groups

In 2017:

- students living in the highest socioeconomic areas had the lowest rate of weekly smoking (4.0%) (Table 7.5)
- rates of smoking for students were similar across remoteness areas (Table 7.5)
- Indigenous students aged 12–17 were more likely than non-Indigenous students to have used tobacco in the past month (14% and 8%, respectively) (Heris et al. 2020).

Figure 7.4: Proportion of secondary school students aged 12–17 who were weekly smokers (%), by sex and year



Note: Data and additional notes for this figure are shown in Table 7.4.
Source: Guerin & White 2020b.

Considerations

Smoking status is self-reported.

Data sources

ABS National Health Survey 2017–18.

ABS National Aboriginal and Torres Strait Islander Health Survey, 2012–13; ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19.

Australian Secondary Students' Alcohol and Drug Survey (ASSAD) 2017 (customised report).

For further details, refer to Appendix B.

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Heris C, Guerin N, Thomas D, Chamberlain C, Eades S & White V 2020. Smoking behaviours and other substance use among Indigenous and non-Indigenous Australian secondary students, 2017. Drug and Alcohol Review, 40(1) pp. 58–67.

USDHHS (U.S. Department of Health and Human Services) 2014. The Health Consequences of Smoking—50 years of progress. A report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services. Viewed 5 November 2021.

Supplementary tables

Table 7.1: Prevalence of daily smoking in adults aged 18 and over (%), by sex and year

	Men		Women		Persons	
Year	**Per cent**	**96% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1989–90	31.1	30.2–32.0	24.3	23.6–25.0	27.7	27.2–28.2
1995	26.5	25.6–27.4	20.1	19.5–20.7	23.3	22.7–23.8
2001	25.0	23.9–26.1	19.6	18.5–20.7	22.3	21.5–23.0
2004–05	24.1	22.9–25.2	18.6	17.6–19.6	21.3	20.6–22.1
2007–08	21.0	19.6–22.4	17.2	16.1–18.3	19.1	18.2–20.0
2011–12	18.3	17.4–19.3	14.3	13.5–15.1	16.3	15.7–17.0
2014–15	17.1	15.9–18.2	12.3	11.3–13.3	14.7	13.9–15.6
2017–18	16.8	16.1–17.5	11.3	10.7–11.8	14.0	13.5–14.5

Notes

1. Age-standardised to the 2001 Australian standard population.
2. For 1989–90 and 1995, 'current daily smoker' has been reported using the category 'current smoker'. For those years, the definition of 'current smoker'—regularly smoking one or more cigarettes per day on average—aligns with the definition that has been used for the category 'current daily smoker' from 2001 onwards.

Source: AIHW 2019.

Table 7.2: Prevalence of daily smoking in adults aged 18 and over (%), by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	17.5	15.3–19.7	10.4	8.9–11.9	13.9	12.5–15.3
25–34	19.0	17.1–20.9	10.6	9.2–12.0	14.7	13.5–15.9
35–44	19.6	17.9–21.3	12.4	11.2–13.6	16.0	14.8–17.2
45–54	19.3	17.4–21.2	14.7	13.2–16.2	16.9	15.7–18.1
55–64	16.5	15.0–18.0	13.8	12.4–15.2	15.2	14.1–16.3
65–74	9.9	8.8–11.0	7.5	6.4–8.6	8.7	7.9–9.5
75–84	5.8	4.4–7.2	4.6	3.5–5.7	5.1	4.3–5.9
85+	2.2*	n.p.	1.7	0.4–3.0	1.7	0.6–2.8
Total 18+	**16.5**	**15.8–17.2**	**11.1**	**10.6–11.6**	**13.8**	**13.3–14.3**

* Proportion has a margin of error of greater than 10 per cent and should be used with caution.

n.p. not publishable

Source: AIHW 2019.

Table 7.3: Prevalence of daily smoking in adults aged 18 and over (%), by selected population characteristics and sex, 2017–18 and 2018–19

Population characteristic[(a)]	Men		Women		Persons	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	41.9	38.1–45.7	38.5	35.7–41.3	40.1	37.8–42.4
Non-Indigenous Australians	16.5	15.8–17.2	10.8	10.3–11.3	13.6	13.1–14.1
Socioeconomic area						
1 Lowest	26.4	24.6–28.1	19.3	17.9–20.7	22.8	21.6–23.9
2	21.6	19.8–23.4	14.3	13.0–15.6	17.9	16.8–19.1
3	17.2	15.7–18.6	10.4	9.3–11.5	13.7	12.8–14.7
4	12.2	11.0–13.5	8.4	7.3–9.5	10.3	9.5–11.2
5 Highest	8.7	7.6–9.8	5.2	4.4–6.0	7.0	6.2–7.7
Remoteness area						
Major cities	15.7	14.9–16.5	9.9	9.3–10.5	12.8	12.3–13.3
Inner regional	18.2	16.7–19.7	14.9	13.5–16.3	16.5	15.4–17.7
Outer regional and remote	23.5	21.4–25.5	15.9	14.3–17.6	19.6	18.3–21.0

(a) Age-standardised to the 2001 Australian standard population.

Notes

1. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.

Sources: ABS 2019; AIHW 2019.

Table 7.4: Proportion of secondary school students aged 12–17 who were weekly smokers, by sex and year

	Males		Females		Persons	
Year	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1996	19.2	18.1–20.3	21.7	20.5–22.9	20.4	19.6–21.3
1999	18.8	17.4–20.2	19.7	18.3–21.2	19.2	18.1–20.4
2002	13.0	12.0–14.1	15.6	14.3–17.0	14.3	13.3–15.4
2005	9.1	8.2–10.1	9.8	8.7–10.9	9.4	8.6–10.3
2008	6.9	6.2–7.8	7.7	6.8–8.7	7.3	6.6–8.1
2011	7.0	6.1–7.9	6.3	5.5–7.3	6.7	5.9–7.5
2014	5.4	4.6–6.2	4.9	4.1–5.7	5.1	4.5–5.9
2017	5.4	4.6–6.4	4.4	3.8–5.2	4.9	4.3–5.7

Source: Guerin & White 2020b.

Table 7.5: Proportion of secondary school students aged 12–17 who were weekly smokers, by selected population characteristics, 2017

Population characteristic		
Socioeconomic area[(a)]	**Per cent**	**95% CI**
1 Lowest	4.9	4.1–5.9
2	5.8	4.9–6.8
3	4.8	4.0–5.6
4	5.5	4.7–6.5
5 Highest	4.0	3.4–4.7
Remoteness area[(b)]		
Major cities	4.8	4.4–5.3
Inner regional	5.4	4.6–6.4
Outer regional	4.8	3.9–5.9
Remote and very remote	5.4	3.4–8.5

(a) Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).

(b) Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.

Note: Socioeconomic and remoteness areas are based on student residence.

Source: Guerin & White 2020a.

Indicator 8: Insufficient physical activity

(a) 55% of adults aged 18 and over were insufficiently active in 2017–18.

(b) 69% of children and young people aged 2–17 were insufficiently active in 2011–12.

Why is this important?

Low levels of physical activity are a major risk factor for ill health and mortality from all causes. People who do not do sufficient physical activity have a greater risk of cardiovascular disease, type 2 diabetes and osteoporosis. Being physically active improves mental and musculoskeletal health and reduces other risk factors such as overweight and obesity, high blood pressure and high blood cholesterol.

Australia's Physical Activity and Sedentary Behaviour Guidelines and the *Australian 24-Hour Movement Guidelines* provide recommendations on the amount and type of physical activity required for health benefits (Department of Health 2019). In general, the physical activity guidelines set out a minimum amount of moderate or vigorous physical activity that should be accumulated over the day or week for health benefits.

There are other components of *Australia's Physical Activity and Sedentary Behaviour Guidelines* and the *Australian 24-Hour Movement Guidelines* such as the inclusion of activities that strengthen muscle and bone (children and young people), muscle strengthening activities (adults aged 18–64 years) and including strength, balance and flexibility activities (older adults aged 65 and over). However, the national surveys used for this indicator do not fully capture the different activities required to measure meeting these components.

What does this indicator measure?

The proportion of people in each age group who did not meet the physical activity component of the guidelines:

(a) Adults aged 18+

(b) Children and young people aged 2–17.

Based on the guidelines, insufficient physical activity is defined here as:

- Adults aged 18–64 who have not accumulated at least 150 minutes of moderate to vigorous physical activity (where time spent on vigorous activity is multiplied by 2) across at least 5 days in the previous week.
- Adults aged 65 and over who did not complete at least 30 minutes of physical activity per day on at least 5 days in the previous week.

- Children aged 2–4 who did not complete at least 180 minutes of physical activity per day in the last week.
- Children and young people aged 5–17 who did not complete at least 60 minutes of physical activity on each day of the previous week.

See 'Considerations' and 'Data sources' sections for further information.

What do the data show?

(a) Adults

In 2017–18:

- just over half (55%) of adults aged 18 and over were insufficiently active (Table 8.2). Women were more likely than men to be insufficiently active (59% compared with 50% respectively)
- the rate of insufficient physical activity generally increases with increasing age. Just under half (45%) of those aged 18–24 were insufficiently active compared with 72% of those aged over 65 (Figure 8.2)
- after adjusting for age, there was a slight decrease in the rate of insufficient activity between 2007–08 (69%) and 2017–18 (65%) (Figure 8.1). However, the rate has not changed significantly since 2011–12 (AIHW 2019). These results do not include physical activity in the workplace.

Population groups

- In 2017–18, adults aged 18 and over living in the lowest socioeconomic areas were more likely to be insufficiently active than those living in the highest socioeconomic areas (63% compared with 48% respectively) (Figure 8.3).
- There were no significant differences in insufficient activity between remoteness areas (Figure 8.3).
- In 2018–19, 60% of Indigenous Australians (an estimated 226,000 people) aged over 18 were insufficiently active. Indigenous women were more likely than men to be insufficiently active (65% compared with 55% respectively) (ABS 2019a).
- After adjusting for age, the proportion of Indigenous adults, who were insufficiently active was the same for both 2012–13 and 2018–19 (ABS 2019a).
- In 2018–19, after adjusting for age, Indigenous adults were as likely as non-Indigenous adults to be insufficiently active (rate ratio 1.0) (Table 8.3).

(b) Children and young people

In 2011–12:

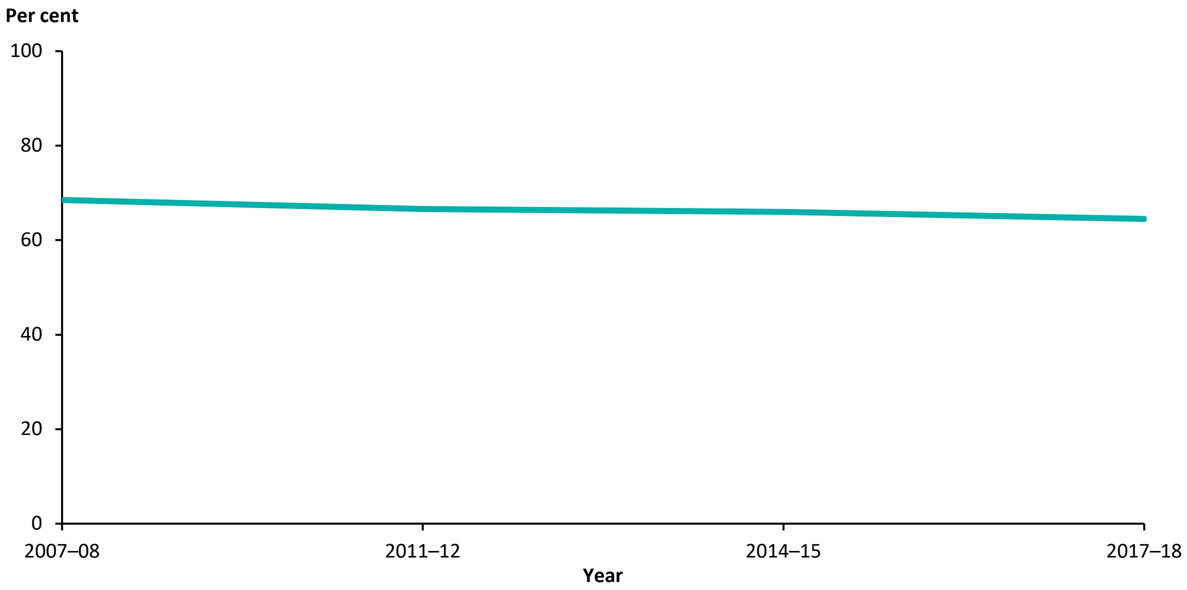
- the majority (69%) of children and young people aged 2–17 were insufficiently active (Table 8.4).

- the percentage of children and young people who were insufficiently active increased with age, from 23% of those aged 2–4 to 94% of those aged 15–17 (Table 8.4).
- A similar percentage of boys and girls were insufficiently active in all age groups (Table 8.4).

Population groups

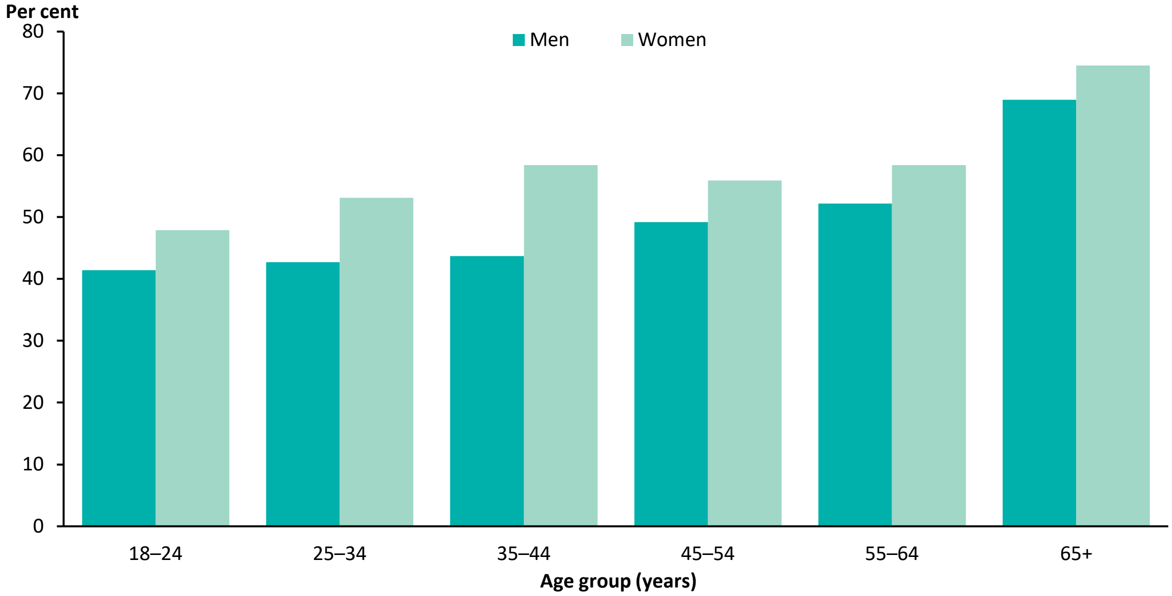
- There were no differences in insufficient physical activity for children and young people aged 2–17 by remoteness or socioeconomic areas in 2011–12 (Table 8.5).
- In 2012–13, 17% of Aboriginal and Torres Strait Islander children and young people aged 2–4 and 52% of those aged 5–17 did not meet the physical activity component of the guidelines (compared with 17% and 65% of non-Indigenous children and young people in the corresponding age groups) (ABS 2014).

Figure 8.1 Prevalence of insufficient physical activity in adults aged 18 years and over (%), by year



Notes
1. Physical Activity includes walking for fitness, recreation, or sport; walking to get to or from places; moderate exercise; and vigorous exercise recorded in the week prior to interview. Data does not include people for whom this measure was not known or not applicable.
2. Age-standardised to the 2001 Australian standard population.
3. Data and additional notes for this figure are shown in Table 8.1.
Source: AIHW 2019.

Figure 8.2: Prevalence of insufficient physical activity in adults aged 18 years and over (%) by sex and age, 2017–18

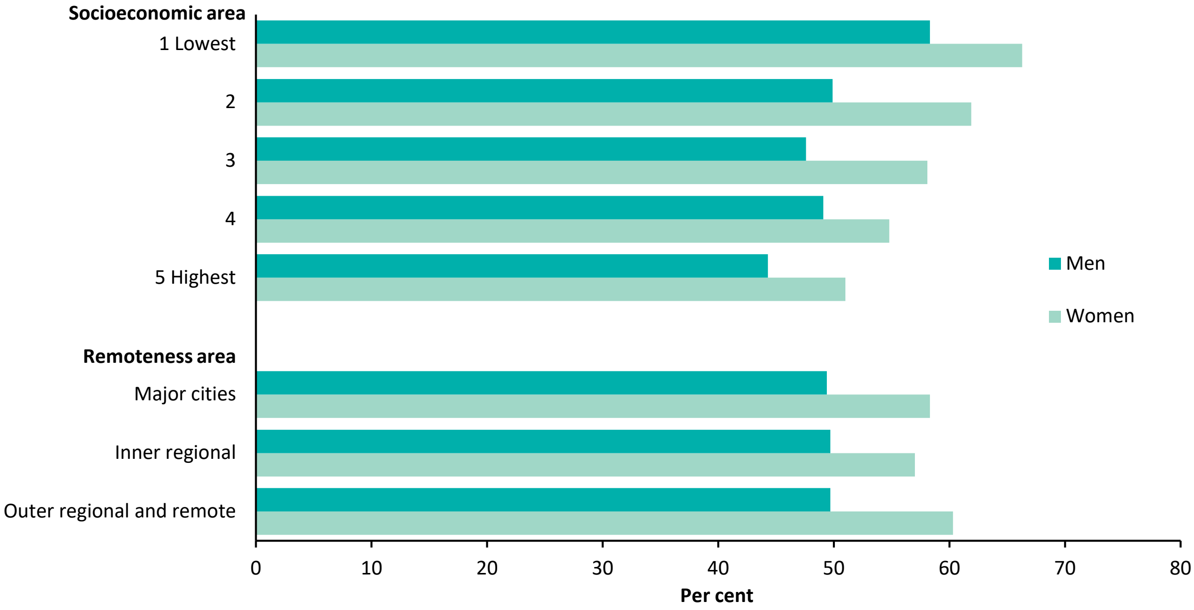


Notes

1. Physical Activity includes workplace activity, walking for fitness, recreation, or sport; walking to get to or from places; moderate exercise; and vigorous exercise recorded in the week prior to interview. Data does not include people for whom this measure was not known or not applicable.
2. Data and additional notes for this figure are shown in Table 8.2.

Source: AIHW 2019.

Figure 8.3: Prevalence of insufficient physical activity in people aged 18 years and over (%) by selected population characteristics and sex, 2017–18



Notes

1. Physical Activity includes workplace activity, walking for fitness, recreation, or sport; walking to get to or from places; moderate exercise; and vigorous exercise recorded in the week prior to interview. Data does not include people for whom this measure was not known or not applicable.
2. Age-standardised to the 2001 Australian standard population.
3. Data and additional notes for this figure are shown in Table 8.3.

Source: AIHW 2019.

Considerations

Physical activity is self-reported and relates to the 7 days prior to interview. Comparisons between Indigenous and non-Indigenous children and young people are for non-remote areas only and relate to the 3 days prior to interview (ABS 2014).

Physical activity results for young people aged 15–17 are regularly available from the NHS (latest 2017–18) and NATSIHS (latest 2018–19, available in December 2019). Results for children and young people aged 2–14 are available only from the 2011–12 AHS and 2012–13 AATSIHS.

Data sources

ABS National Health Survey, 2017–18 (and earlier years for trends).

ABS Australian Health Survey, 2011–13 (National Nutrition and Physical Activity component 2011–12).

ABS Australian Aboriginal and Torres Strait Islander Health Survey, 2012–13 (National Aboriginal and Torres Strait Islander Health Survey and Nutrition and Physical Activity Survey components).

For further details, refer to Appendix B.

References

ABS 2013. Australian Health Survey: Physical activity, 2011–12. ABS Cat. no. 4364.0.55.004. Canberra: ABS.

ABS 2014. Australian Aboriginal and Torres Strait Islander Health Survey: Physical activity, 2012–13. ABS Cat. no. 4727.0.55.004. Canberra: ABS.

ABS 2019a. National Aboriginal and Torres Strait Islander Health Survey, 2018–19. ABS Cat. no. 4715.0. Customised report. Canberra: ABS.

ABS 2019b. National Health Survey, 2018–19. ABS Cat. no. 4364.0.55.001. Customised report. Canberra: ABS.

AIHW 2019. Insufficient physical activity. Cat. no. PHE 248. Canberra: AIHW.

Department of Health 2019. Australia's Physical Activity and Sedentary Behaviour Guidelines and the Australian 24-Hour Movement Guidelines. Canberra: Department of Health. Viewed 6 March 2019, http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines.

Supplementary tables

Table 8.1: Prevalence of insufficient physical activity in adults aged 18 years and over (%), by year

	Men		Women		Persons	
Year	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2007–08	66.6	65.2–68.1	70.3	69.0–71.7	68.5	67.6–69.5
2011–12	65.1	63.6–66.6	68.0	66.7–69.4	66.6	65.6–67.7
2014–15	65.4	63.8–66.9	66.6	65.3–67.8	66.0	65.0–67.0
2017–18	64.8	63.3–66.2	64.2	62.8–65.6	64.5	63.5–65.5

Notes

1. Physical Activity includes walking for fitness, recreation, or sport; walking to get to or from places; moderate exercise; and vigorous exercise recorded in the week prior to interview. Data does not include people for whom this measure was not known or not applicable.
2. Age-standardised to the 2001 Australian standard population.
3. For 18–64 year olds, insufficient activity is captured here as not completing 150 minutes of moderate to vigorous activity (where vigorous activity is multiplied by 2) on 5 days or more in the last week. This definition is also used for adults aged 65 and over in 2007–08.
4. For adults aged 65 years and over, insufficient activity is captured here as not completing at least 30 minutes of activity on 5 days or more in the last week.

Source: AIHW 2019.

Table 8.2: Prevalence of insufficient physical activity in adults aged 18 years and over (%) by sex and age, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	41.4	35.9–46.9	47.9	42.0–53.8	44.6	41.0–48.2
25–34	42.7	38.8–46.5	53.1	49.2–57.1	47.9	45.5–50.4
35–44	43.7	40.1–47.2	58.4	55.3–61.5	51.1	48.6–53.6
45–54	49.2	45.7–52.6	55.9	52.9–58.8	52.6	50.2–55.0
55–64	52.2	48.7–55.7	58.4	54.6–62.2	55.4	52.6–58.2
65+(a)	69.0	66.2–71.7	74.5	72.3–76.6	71.9	70.0–73.7
Total 18+	**50.1**	**48.7–51.5**	**58.9**	**57.4–60.4**	**54.6**	**53.6–55.6**

(a) For adults aged 65 years and over, insufficient activity is captured here as not completing at least 30 minutes of activity on 5 days or more in the last week.

Notes

1. Physical Activity includes workplace activity, walking for fitness, recreation, or sport; walking to get to or from places; moderate exercise; and vigorous exercise recorded in the week prior to interview. Data does not include people for whom this measure was not known or not applicable.
2. For 18–64 year olds, insufficient activity is captured here as not completing 150 minutes of moderate to vigorous activity (where vigorous activity is multiplied by 2) on 5 days or more in the last week.

Source: AIHW 2019.

Table 8.3: Prevalence of insufficient physical activity in adults aged 18 years and over (%) by selected population characteristics, 2017–18 and 2018–19

Population characteristic	Men		Women		Persons	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	56.5	52.2–60.8	65.8	61.9–69.7	61.5	58.5-64.5
Non-Indigenous Australians	n.a.	n.a.	n.a.	n.a.	64.2	63.3-65.2
Socioeconomic area						
1 Lowest	58.3	54.7–62.0	66.3	63.0–69.5	62.5	60.1–64.9
2	49.9	46.6–53.2	61.9	58.6–65.2	55.8	53.6–58.1
3	47.6	44.3–50.9	58.1	55.0–61.1	53.0	50.8–55.3
4	49.1	45.7–52.6	54.8	51.9–57.7	52.2	50.0–54.4
5 Highest	44.3	40.7–47.9	51.0	47.6–54.3	47.6	45.2–50.0
Remoteness area						
Major cities	49.4	47.5–51.2	58.3	56.7–60.0	54.0	52.8–55.2
Inner regional	49.7	46.1–53.3	57.0	53.3–60.7	53.3	50.8–55.8
Outer regional and remote	49.7	45.6–53.9	60.3	56.2–64.4	55.1	52.2–58.0

n.a. not available

Notes

1. Physical Activity includes workplace activity, walking for fitness, recreation, or sport; walking to get to or from places; moderate exercise; and vigorous exercise recorded in the week prior to interview. Data does not include people for whom this measure was not known or not applicable.
2. Age–standardised to the 2001 Australian standard population.
3. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
4. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
5. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
6. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
7. For 18–64 year olds, insufficient activity is captured here as not completing 150 minutes of moderate to vigorous activity (where vigorous activity is multiplied by 2) on 5 days or more in the last week.
8. For adults aged 65 years and over, insufficient activity is captured here as not completing at least 30 minutes of activity on 5 days or more in the last week.

Sources: ABS 2019a; ABS 2019b; AIHW 2019.

Table 8.4: Prevalence of insufficient physical activity in children and young people aged 2–17 years (%) by sex and age, 2011–12

	Males		Females		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2–4	21.3	16.0–26.6	24.1	17.7–30.5	22.6	18.3–26.9
5–8	64.0	56.8–71.2	64.6	57.0–72.2	64.3	59.4–69.2
9–11	77.7	69.7–85.7	79.7	73.0–86.4	78.7	73.5–83.9
12–14	87.4	82.6–92.2	91.4	87.2–95.6	89.4	86.3–92.5
15–17	93.9	90.5–97.3	93.8	90.0–97.6	93.9	91.7–96.1
Total 2–17	**68.1**	**65.5–70.7**	**70.2**	**67.4–73.0**	**69.1**	**67.2–71.0**

Note: Did not meet the physical activity recommendation for children 2–4 years of 180 minutes or more per day, for children and young people 5-17 years 60 minutes or more per day on the 7 days prior to interview.

Source: ABS 2013.

Table 8.5: Prevalence of insufficient physical activity in children and young people aged 2–17 years (%) by selected population characteristics, 2011–12

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	69.9	64.9–74.9
2	70.9	66.9–74.9
3	69.3	64.3–74.3
4	65.4	60.0–70.8
5 Highest	70.2	65.2–75.2
Remoteness area		
Major cities	71.4	69.1–73.7
Inner regional	64.5	59.8–69.2
Outer regional and remote	64.3	56.0–72.6

Notes

1. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2011 (SEIFA 2011), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
2. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2011) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the AHS.
3. Did not meet the physical activity recommendation for children 2–4 years of 180 minutes or more per day, for children and young people 5-17 years 60 minutes or more per day on the 7 days prior to interview.

Source: ABS 2013.

Indicator 9: Inadequate fruit and/or vegetable consumption

In 2017–18:

(a) 95% of adults did not eat enough fruit and/or vegetables

(b) 94% of children and young people aged 2–17 did not eat enough fruit and/or vegetables.

Why is this important?

Diet-related chronic conditions are among the leading causes of death and disability in Australia. The food and beverages we eat and drink (our diet) play an important role in our overall health and wellbeing. Food provides energy, nutrients and other components that, if provided in insufficient or excess amounts can result in ill health (AIHW 2020). A healthy diet helps to prevent and manage health risk factors such as overweight and obesity, high blood pressure and high blood cholesterol, as well as associated chronic conditions, including type 2 diabetes, cardiovascular disease (including coronary heart disease and stroke) and some forms of cancer (NHMRC 2013). As detailed in the *Australian Dietary Guidelines* (NHMRC 2013) adequate consumption of fruit and vegetables are two important components of a healthy diet.

Ill health generally cannot be attributed to any one food component alone. Diseases associated with diet are also associated with environmental, behavioural, biological, societal and genetic factors. The complex interplay between food and other risk factors and disease make it difficult to assess the contribution of diet to ill health (AIHW 2019).

What does this indicator measure?

The proportion of people, who did not eat the recommended serves of fruit and/or vegetables:

(a) Adults (18+)

(b) Children and young people (2–17).

The Australian Dietary Guidelines recommend that adults eat 2 serves of fruit and 5–6 serves of vegetables per day. For children and young people, depending on age and sex, the recommendations are for 1–2 serves of fruit and between 2½ and 5½ serves of vegetables. There are different guidelines for pregnant and breastfeeding women (NHMRC 2013).

What do the data show?

(a) Adults

Most Australians do not eat the recommended serves of fruit and/or vegetables (as a combined measure); this was found across all socioeconomic areas, remoteness categories, and for Indigenous and non-Indigenous Australians. As separate measures, Australians are more likely to consume the recommended serves of fruit than vegetables.

In 2017–18:

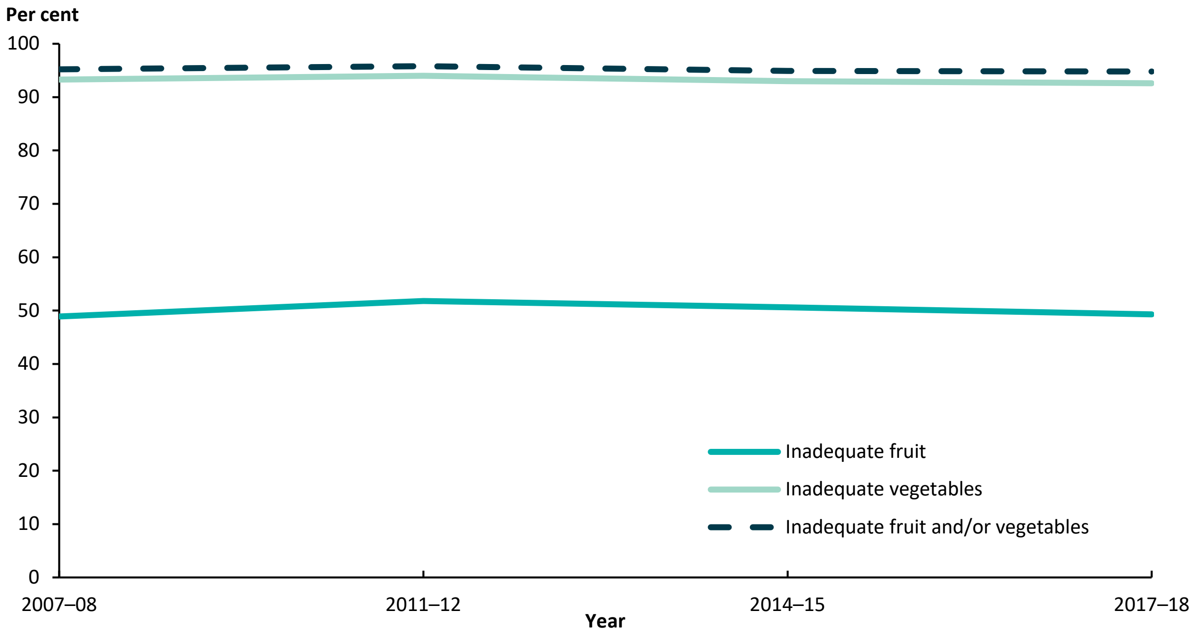
- more than 9 in 10 (95%, or an estimated 17.6 million) adults aged 18 and over did not eat enough fruit and/or vegetables (ABS 2018); between 2007–08 and 2017–18, after adjusting for age, the proportion of the population not meeting the fruit and/or vegetable guidelines remained stable at around 95–96% (Figure 9.1)
- almost half (49%) of adults aged 18 and over did not eat the recommended 2 serves of fruit, while over 9 in 10 (93%) did not eat the recommended 5-6 serves of vegetables (Table 9.1)
- inadequate fruit intake decreased with age —more than half (55%) of those aged 25–34 had inadequate fruit intake, compared with 37% of people aged 85 and over (Figure 9.2; Table 9.2)
- in general, the percentage of adults with inadequate vegetable intake also decreased with age however was high across all age groups (Figure 9.3)
- men were more likely to have inadequate fruit and vegetable intake across most age groups (Figures 9.2 and 9.3).

Population groups

- Adults living in the lowest socioeconomic areas were slightly less likely to eat the recommended amounts of fruit and/or vegetables compared with those living in the highest socioeconomic areas in 2017–18 (Figure 9.4):
    - 53% did not eat enough fruit in the lowest socioeconomic areas compared with 46% in the highest
    - 94% did not eat enough vegetables in the lowest socioeconomic areas compared with 92% in the lowest.
- In 2017–18, adults living in *Outer regional and remote* areas (53%) were less likely to eat the recommended amounts of fruit compared with those living in *Major cities* (48%). Rates were similar across remoteness areas for inadequate vegetable consumption—53% for *Outer regional and remote* areas; 53% for *Inner regional* areas; and 48% for *Major cities* (Figure 9.4).
- At the time of writing, the data available for Indigenous Australians was for a different age range than specified in this indicator. In 2018–19, more than 9 in 10 (97% or an estimated 522,100) Aboriginal and Torres Strait Islander people aged 15 and over did not eat the recommended serves of fruit and/or vegetables (ABS 2019a).

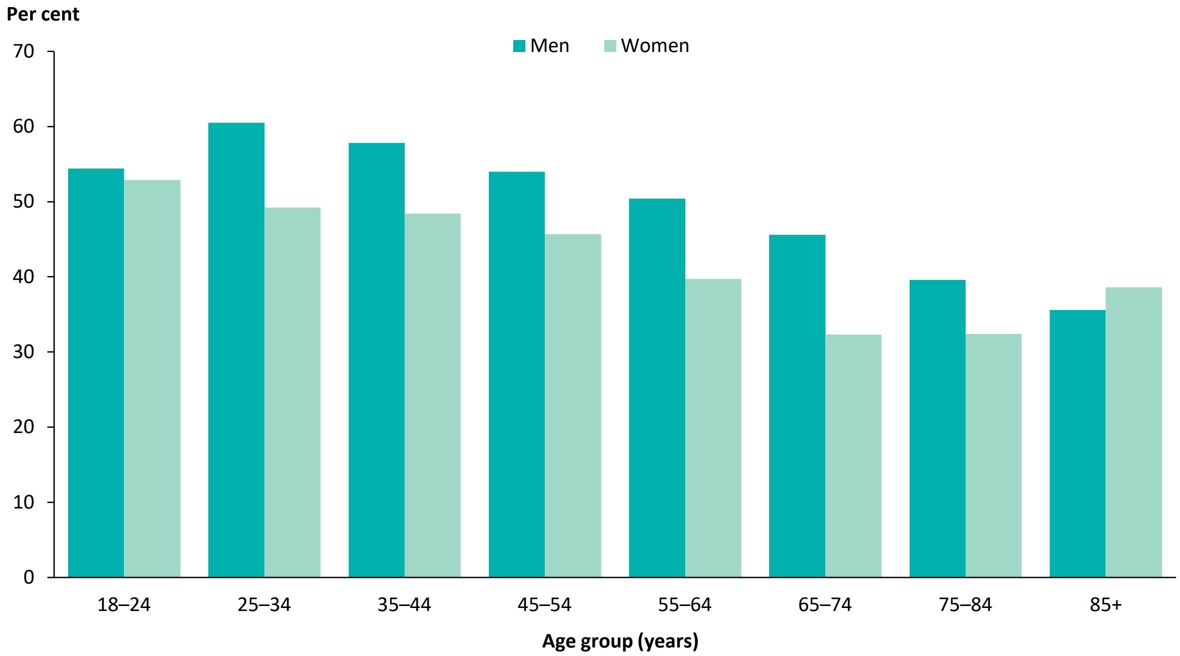
- In 2018–19, after adjusting for age, Indigenous Australians aged 15 and over were as likely as non-Indigenous adults in 2017–18 to consume enough fruit and/or vegetables (rate ratio 1.0) (Table 9.4).

Figure 9.1: Prevalence of inadequate fruit and/or vegetables intake for adults aged 18 and over (%), by year



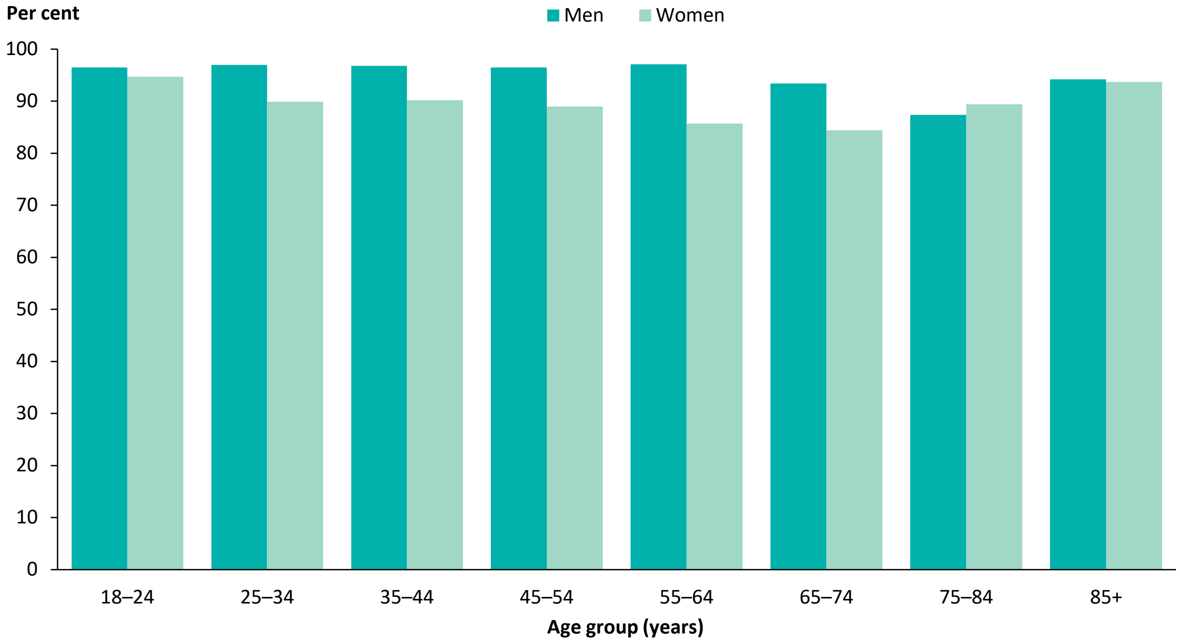
Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 9.1.
Source: ABS 2018.

Figure 9.2: Prevalence of inadequate fruit intake for adults aged 18 and over (%), by age and sex, 2017–18



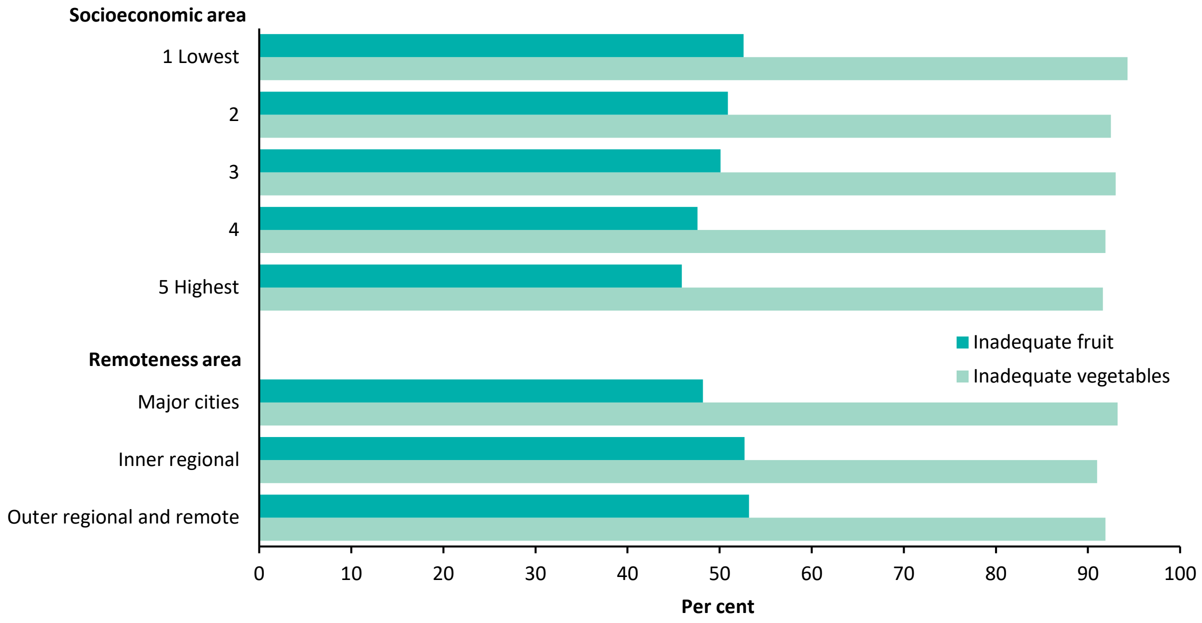
Note: Data and additional notes for this figure are shown in Table 9.2.
Source: AIHW 2019.

Figure 9.3: Prevalence of inadequate vegetable intake for adults aged 18 and over (%), by age and sex, 2017–18



Note: Data and additional notes for this figure are shown in Table 9.3.
Source: AIHW 2019.

Figure 9.4: Prevalence of inadequate fruit and/or vegetable intake for adults aged 18 and over (%), by selected population characteristics, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 9.5.
Source: AIHW 2019.

(b) Children and young people

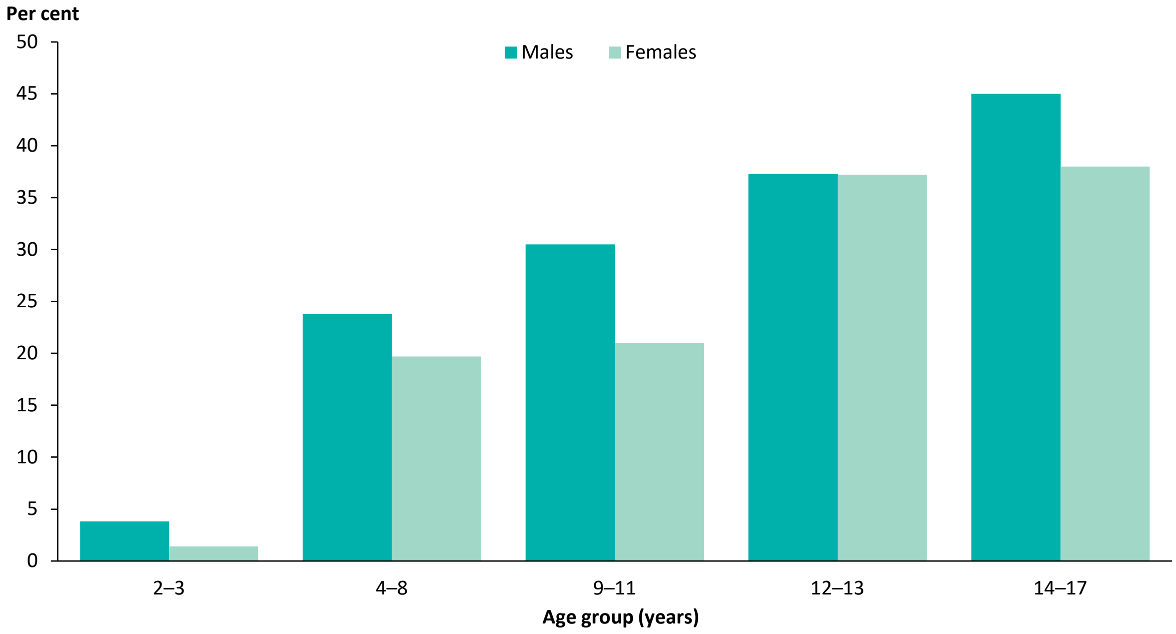
In 2017–18:

- an estimated 94% or 4.6 million children and young people aged 2–17 did not eat enough fruit and/or vegetables (ABS 2018)
- over one-quarter (27%) of children and young people did not eat the recommended servings of fruit, while almost all (94%) did not eat the recommended servings of vegetables (ABS 2018).

Population groups

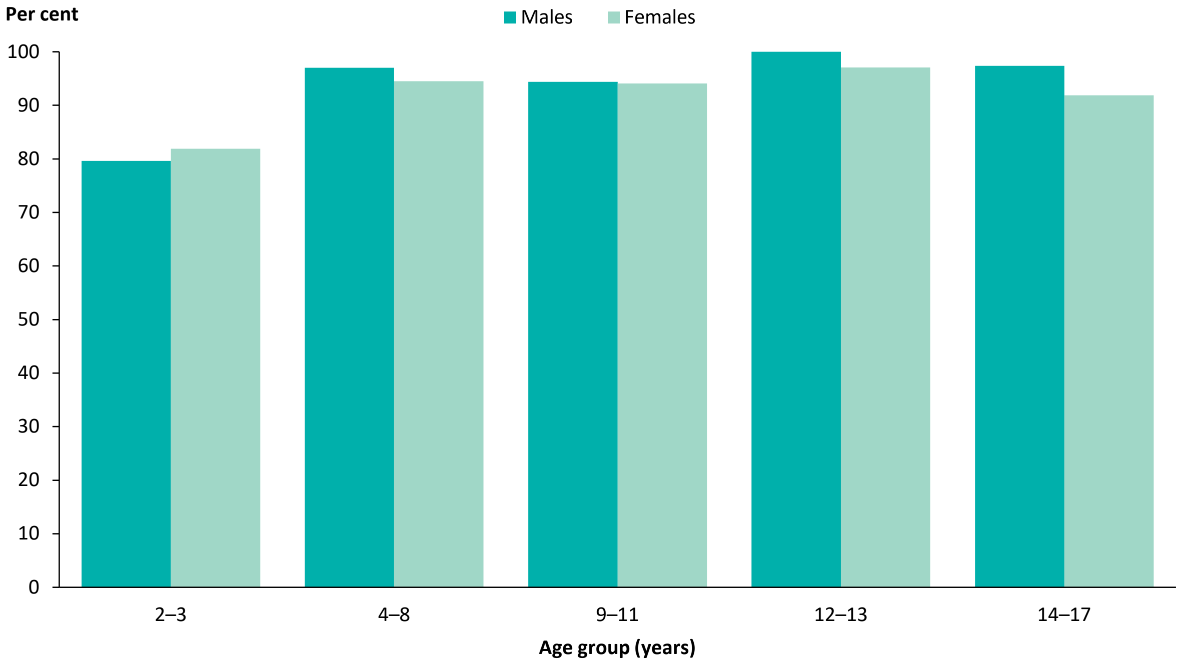
- In 2017–18, the prevalence of inadequate fruit and/or vegetable consumption for children and young people aged 2–17 was similar across socioeconomic and remoteness areas (Figure 9.7).
- In 2018–19, 94% of Aboriginal and Torres Strait Islander children and young people aged 2–17 years did not eat the recommended serves of fruit and vegetables (ABS 2019a).

Figure 9.5: Prevalence of inadequate fruit intake for children and young people aged 2–17 (%), by sex and age, 2017–18



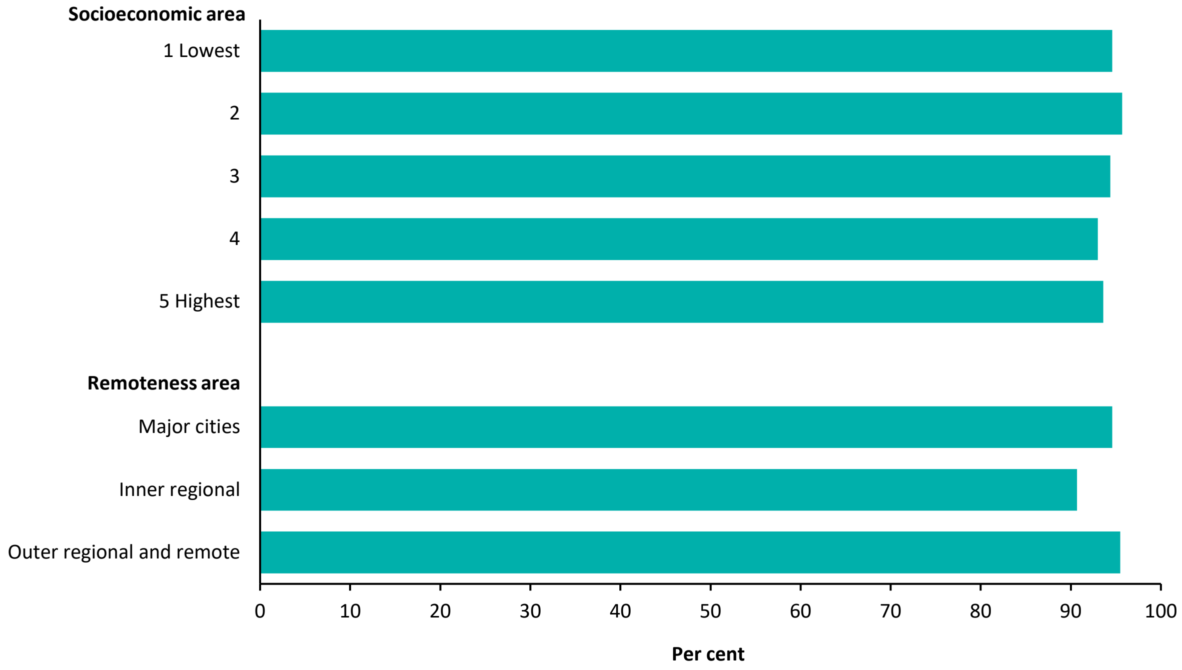
Notes
1. The proportion for females aged 2–3 has a high margin of error and should be used with caution.
2. Data and additional notes for this figure are shown in Table 9.6.
Source: ABS 2018.

Figure 9.6: Prevalence of inadequate vegetable intake for children and young people aged 2–17 (%), by sex and age, 2017–18



Notes
1. The proportion for males and females aged 12–13 has a high margin of error and should be used with caution.
2. Data and additional notes for this figure are shown in Table 9.7.
Source: ABS 2018.

Figure 9.7: Prevalence of inadequate fruit and/or vegetable intake for children and young people aged 2–17 (%), by selected population characteristics, 2017–18



Note: Data and additional notes for this figure are shown in Table 9.8.
Source: ABS 2019b.

Considerations

Fruit and vegetable consumption is self-reported.

Data sources

ABS National Health Survey 2017–18.

ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19; ABS National Aboriginal and Torres Strait Islander Social Survey, 2014–15; ABS Australian Aboriginal and Torres Strait Islander Health Survey: First results, 2012–13.

For further details, refer to Appendix B.

References

ABS 2014. Australian Aboriginal and Torres Strait Islander Health Survey: First results, 2012–13. ABS Cat. no. 4727.0.55.001. Canberra: ABS.

ABS 2015. National Health Survey: First Results, 2014–15. ABS Cat. no. 4364.0.55.001. Canberra: ABS.

ABS 2016. National Aboriginal and Torres Strait Islander Social Survey, 2014–15. ABS Cat. no. 4714.0. Canberra: ABS.

ABS 2018. National Health Survey: First Results, 2017–18. ABS Cat. no. 4364.0.55.001. Canberra: ABS.

ABS 2019a. National Aboriginal and Torres Strait Islander Health Survey, 2018–19. ABS Cat. no. 4715.0. Canberra: ABS.

ABS 2019b. National Health Survey 2017–18. ABS Cat. no. 4364.0.55.001. Customised report. Canberra: ABS.

AIHW 2019. Poor diet. Canberra: AIHW, Viewed 18 September 2020.

AIHW 2020. Diet. Canberra: AIHW. Viewed 18 September 2020.

NHMRC (National Health and Medical Research Council) 2013. Australian Dietary Guidelines. Canberra: NHMRC.

Supplementary tables

Table 9.1: Prevalence of inadequate fruit and/or vegetables intake for adults aged 18 and over (%), by year

	Inadequate fruit		Inadequate vegetables		Inadequate fruit and/or vegetables	
Year	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2007–08	48.9	47.8–50.0	93.3	92.8–93.8	95.2	94.7–95.7
2011–12	51.8	51.1–52.5	94.0	93.6–94.4	95.8	95.4–96.2
2014–15	50.6	49.5–51.7	93.0	92.4–93.6	94.9	94.4–95.4
2017–18	49.3	48.2–50.3	92.6	92.1–93.2	94.8	94.4–95.2

Notes
1. Age-standardised to the 2001 Australian standard population.
2. National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health.
Source: ABS 2018.

Table 9.2: Prevalence of inadequate fruit intake for adults aged 18 and over (%), by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	54.4	49.6–59.2	52.9	47.8–58.0	54.0	50.5–57.5
25–34	60.5	56.9–64.1	49.2	45.2–53.2	54.8	51.9–57.7
35–44	57.8	54.7–60.9	48.4	45.5–51.3	52.9	50.7–55.1
45–54	54.0	50.4–57.6	45.7	42.4–49.0	50.0	47.6–52.4
55–64	50.4	46.7–54.1	39.7	36.5–42.9	44.8	42.3–47.3
65–74	45.6	42.3–48.9	32.3	29.5–35.1	38.7	36.3–41.1
75–84	39.6	33.0–46.2	32.4	27.6–37.2	36.0	32.1–39.9
85+	35.6*	25.1–46.1	38.6	28.9–48.3	36.9	29.8–44.0
Total 18+	**53.4**	**51.7–55.1**	**44.2**	**43.0–45.4**	**48.7**	**47.7–49.7**

* Proportion has a margin of error of greater than 10 per cent and should be used with caution.
Note: National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health.
Source: AIHW 2019.

Table 9.3: Prevalence of inadequate vegetable intake for adults aged 18 and over (%), by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	96.5	94.8–98.2	94.7	92.1–97.3	95.9	94.4–97.4
25–34	97.0	95.7–98.3	89.9	87.6–92.2	93.3	91.8–94.8
35–44	96.8	95.5–98.1	90.2	88.4–92.0	93.4	92.3–94.5
45–54	96.5	95.2–97.8	89.0	86.9–91.1	92.6	91.3–93.9
55–64	97.1	95.8–98.4	85.7	83.3–88.1	91.2	89.8–92.6
65–74	93.4	92.1–94.7	84.4	82.7–86.1	88.8	87.8–89.8
75–84	87.4	82.4–92.4	89.4	85.9–92.9	88.7	85.4–92.0
85+	94.2*	87.0–100.0	93.7	89.5–97.9	93.8	90.3–97.3
Total 18+	**96.0**	**95.4–96.6**	**89.1**	**88.2–90.0**	**92.4**	**91.9–92.9**

* Proportion has a high margin of error and should be used with caution.

Note: National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health.

Source: AIHW 2019.

Table 9.4: Prevalence of inadequate fruit and/or vegetable intake for adults aged 15 and over (%), by Indigenous status, 2017–18 and 2018–19

Indigenous status	Per cent	95% CI
Indigenous Australians	97.2	96.4–98.0
Non-Indigenous Australians	94.8	94.2–95.4

Notes

1. Age-standardised to the 2001 Australian standard population.
2. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
3. National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health.

Source: ABS 2019a.

Table 9.5: Prevalence of inadequate fruit and/or vegetable intake for adults aged 18 and over (%), by selected population characteristics, 2017–18

Population characteristic	Inadequate fruit		Inadequate vegetables	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	52.6	50.3–54.9	94.3	93.2–95.3
2	50.9	48.6–53.1	92.5	91.4–93.7
3	50.1	47.9–52.2	93.0	91.9–94.1
4	47.6	45.4–49.9	91.9	90.6–93.1
5 Highest	45.9	43.5–48.4	91.6	90.1–93.1
Remoteness area				
Major cities	48.2	47.0–49.4	93.2	92.6–93.8
Inner regional	52.7	50.2–55.2	91.0	89.7–92.3
Outer regional and remote	53.2	50.3–56.2	91.9	90.2–93.6

Notes
1. Age-standardised to the 2001 Australian standard population.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
4. National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health.

Source: AIHW 2019.

Table 9.6: Prevalence of inadequate fruit intake for children and young people aged 2–17 (%), 2017–18

	Males		Females		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2–3	3.8	1.1–6.5	1.4*	n.p.	2.5	0.9–4.1
4–8	23.8	19.2–28.4	19.7	16.1–23.3	22.2	19.5–24.9
9–11	30.5	24.3–36.7	21.0	16.0–26.0	26.0	22.5–29.5
12–13	37.3	29.0–45.6	37.2	27.4–47.0	37.4	31.3–43.5
14–17	45.0	39.6–50.4	38.0	32.9–43.1	41.7	38.0–45.4
Total 2–17	**29.5**	**27.0–32.0**	**24.3**	**22.0–26.6**	**26.8**	**25.1–28.5**

n.p. not publishable

* Proportion has a high margin of error and should be used with caution.

Note: National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health.

Source: ABS 2018.

Table 9.7: Prevalence of inadequate vegetable intake for children and young people aged 2–17 (%), 2017–18

	Males		Females		Persons	
Age group (years)	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
2–3	79.6	72.4–86.8	81.9	76.0–87.8	81.7	77.1–86.3
4–8	97.0	94.9–99.1	94.5	91.5–97.5	95.9	93.6–98.2
9–11	94.4	92.9–95.9	94.1	92.4–95.8	94.5	93.6–95.4
12–13	100.0*	97.4–100.0	97.1*	93.7–100.0	97.8	96.3–99.3
14–17	97.4	95.5–99.3	91.9	89.2–94.6	94.4	92.9–95.9
Total 2–17	**95.0**	**93.9–96.1**	**92.8**	**91.2–94.4**	**93.7**	**92.6–94.8**

* Proportion has a high margin of error and should be used with caution.

Note: National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health.

Source: ABS 2018.

Table 9.8: Prevalence of inadequate fruit and/or vegetable intake for children and young people aged 2–17 (%), by selected population characteristics, 2017–18

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	94.6	93.4–95.7
2	95.7	94.2–97.3
3	94.4	91.5–97.4
4	93.0	92.2–93.8
5 Highest	93.6	91.6–95.7
Remoteness area		
Major cities	94.6	93.4–95.8
Inner regional	90.7	87.1–94.3
Outer regional and remote	95.5	91.3–99.7

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
4. National Health and Medical Research Council's (NHMRC) 2013 Australian Dietary Guidelines recommend a minimum number of serves of fruit and vegetables each day, depending on a person's age and sex, to ensure good nutrition and health.

Source: ABS 2019b.

Indicator 10: Sodium intake

In 2011–12, the average daily amount of sodium consumed from food for all people over 2 years was 2,404 mg.

Why is this important?

Sodium (often referred to as salt) is an important nutrient in the diet, however, too much sodium can increase blood pressure (see 'Indicator 11'), which increases the risk of adverse health outcomes including stroke, and heart and kidney problems. Thus, reducing sodium intake would contribute to reducing the burden of blood pressure (high blood pressure contributed 5.1% of the total burden of disease in Australia in 2018 with almost a fifth (18%) of that burden was due to a diet high in sodium) (AIHW 2020).

Sodium is found naturally in foods such as milk, cream, eggs and meat, however, the main source in the diet is from processed foods where sodium acts as a flavour enhancer and preservative.

What does this indicator measure?

The average amount of sodium consumed in milligrams (mg) by people aged 2 and over per day.

When the NSFCC indicator set was developed this indicator was defined as an average to align with the World Health Organization's *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020* (WHO 2013). However, Australia's Suggested Dietary Target (SDT) for sodium is defined as a median daily intake, not an average, see below for more information.

Background

The Australian Dietary Guidelines recommend to limit intake of foods containing added salt (sodium) (NHMRC 2013). The Nutrient Reference Values (NRVs) are reference values for Australians that can be used to assess the likelihood of inadequate or excess intake in individuals or groups of people (AIHW 2018). There are a range of NRVs including UL (Upper level of Intake) and (AI) Adequate Intake.

Until recently, an UL was available to assess the proportion of the population at risk of adverse health effects associated with high sodium intake. However, this was removed in 2017, as the data available found that sodium intake was associated with increased blood pressure at all measured levels of intake (1,200–3,300 mg) (NHMRC & NZMoH 2017, AIHW 2018).

The AI for sodium for adults was set at 460–920 mg/day to ensure that basic requirements are met and to allow for adequate intakes of other nutrients (NHMRC & NZMoH 2017); see 'Table 10.1' for the AI in younger age groups.

Australia also has a Suggested Dietary Target (SDT) for sodium; it is a target for the median daily intake of the population to help in the prevention of chronic disease risk at a population level, in this case, by addressing the relationship between sodium intake and high blood pressure (NHMRC & NZMoH 2017). The SDT for sodium is 2,000 mg/day for the generally well adult population (Expert Working Group for Sodium 2017). The 2011–12 Australian Health Survey estimated that at least 90% of the population aged 14 and over exceeded this level (ABS 2015a).

What do the data show?

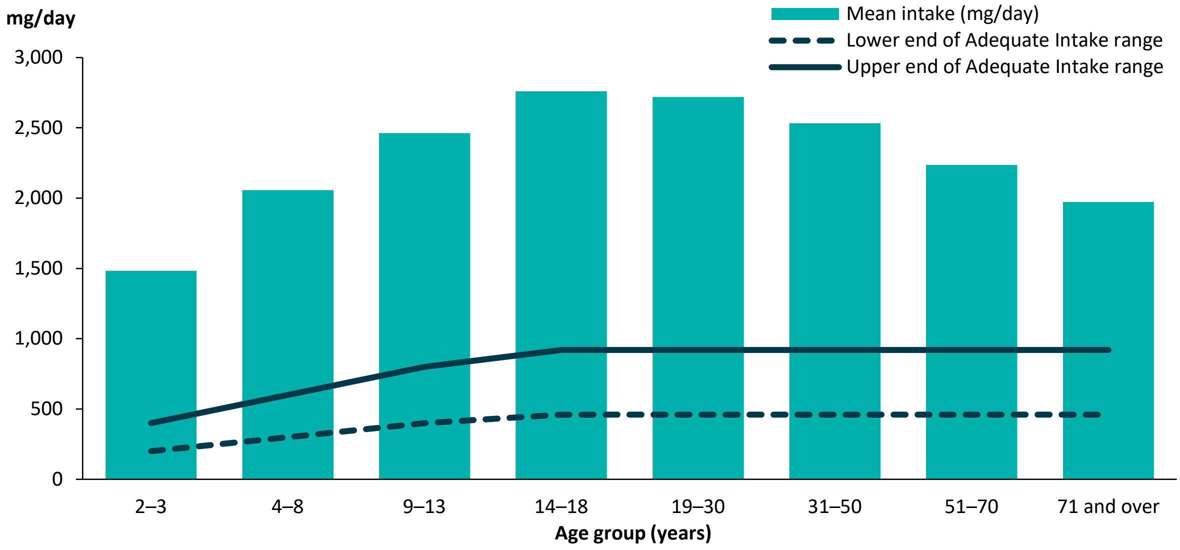
In 2011–12:

- the average daily amount of sodium consumed from food for all people over 2 years of age was 2,404 mg (ABS 2014).
- the average daily intake of sodium was higher than the level of adequate intake for all age groups (between 2.1 and 3.7 times the upper end of the AI range) (Figure 10.1).
- with the exception of children aged 2–3, the intake of sodium for males was higher than females in all age groups (AIHW 2018).

Population groups

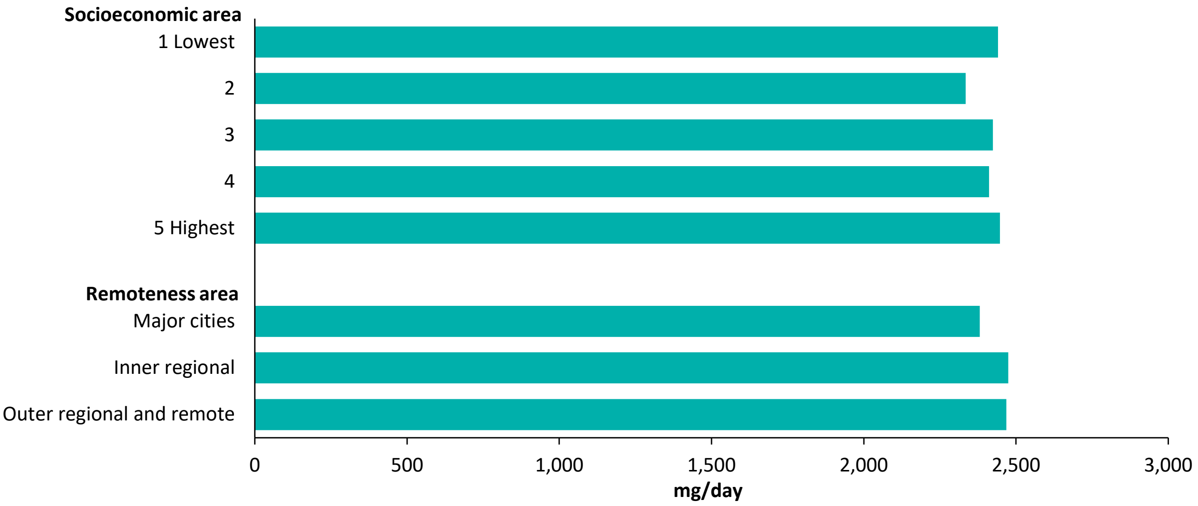
- In 2011–12, after adjusting for age, there was little difference in the average daily intake of sodium between socioeconomic and remoteness areas (Figure 10.2).
- In 2012–13, the average daily intake of sodium for Aboriginal and Torres Strait Islander people aged 2 and over years was 2,379 mg; males recorded a higher average consumption of sodium than females (Table 10.3).

Figure 10.1: Average intake of sodium in people aged 2 and over, by age, 2011–12



Notes
1. Includes sodium naturally present in foods as well sodium added during processing, but excludes the 'discretionary salt' added by consumers in home prepared foods or 'at the table'. Excludes sodium from supplements.
2. Upper end of the Adequate Intake (AI) range—see 'Table 10.1' for values.
3. Data and additional notes for this figure are shown in Table 10.1.
Source: AIHW 2018.

Figure 10.2: Average intake of sodium in people aged 2 and over, by selected population characteristics, 2011–12



Notes
1. Includes sodium naturally present in foods as well sodium added during processing, but excludes the 'discretionary salt' added by consumers in home prepared foods or 'at the table'. Excludes sodium from supplements.
2. Age-standardised to the 2001 Australian standard population.
3. Data and additional notes for this figure are shown in Tables 10.2.
Source: AIHW 2018.

Considerations

Average daily intake of sodium is estimated from 24-hour dietary recall (a self-report tool) which underestimates total sodium intake. It includes sodium naturally present in foods and sodium added during processing, but excludes the discretionary salt added by consumers in food prepared at home, or at the table.

Data are not routinely available. Regular nutrition surveys are required to report on this indicator.

Data sources

ABS Australian Health Survey 2011–13 (National Nutrition and Physical Activity Survey component 2011–12).

ABS Australian Aboriginal and Torres Strait Islander Health Survey 2012–13 (Food and Nutrients component).

For further details, refer to Appendix B.

References

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Supplementary tables

Table 10.1: Average intake of sodium in people aged 2 and over, by age, 2011–12

Age group (years)	Adequate Intake (mg/day)	Average intake (mg/day)	95% CI
2–3	200–400	1,483.8	1,395.9–1,571.8
4–8	300–600	2,058.0	1,975.9–2,140.2
9–13	400–800	2,461.7	2,344.6–2,578.8
14–18	460–920	2,760.9	2,620.8–2,901.1
19–30	460–920	2,720.1	2,631.9–2,808.3
31–50	460–920	2,532.5	2,477.0–2,587.9
51–70	460–920	2,236.6	2,184.3–2,288.9
71 and over	460–920	1,973.4	1,895.3–2,051.4
Total 2+	**n.a.**	**2,404.4**	**2,376.1–2,432.7**

n.a. not available

Note: Includes sodium naturally present in foods as well sodium added during processing but excludes the 'discretionary salt' added by consumers in home prepared foods or 'at the table'. Excludes sodium from supplements.

Sources: AIHW 2018; ABS 2014.

Table 10.2: Average intake of sodium in people aged 2 and over, by selected population characteristics, 2011–12

Population characteristic		
Socioeconomic area	**Average intake (mg/day)**	**95% CI**
1 Lowest	2,441.1	2,352.1–2,530.0
2	2,334.4	2,269.5–2,399.2
3	2,424.0	2,347.0–2,501.0
4	2,411.0	2,338.9–2,483.1
5 Highest	2,447.5	2,378.4–2,516.6
Remoteness area		
Major cities	2,381.3	2,344.0–2,418.6
Inner regional	2,474.7	2,399.8–2,549.6
Outer regional and remote	2,468.2	2,375.0–2,561.4

Notes

1. Includes sodium naturally present in foods as well sodium added during processing but excludes the 'discretionary salt' added by consumers in home prepared foods or 'at the table'. Excludes sodium from supplements.
2. Socioeconomic areas are based on Socio-Economic Indexes for Areas (SEIFA 2011), specifically the Index of Relative Disadvantage 2011 (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2011) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the AHS.
4. Age-standardised to the 2001 Australian standard population.

Source: AIHW 2018.

Table 10.3: Average intake of sodium in Indigenous Australians aged 2 and over, by sex, 2012–13

Sex	Average intake mg/day	95% CI
Males	2,638.0	2,513.9–2,762.1
Females	2,121.5	2,013.4–2,229.6
Persons	**2,378.5**	**2,294.6–2,462.4**

Note: Includes sodium naturally present in foods as well as sodium added during processing but excludes the 'discretionary salt' added by consumers in home prepared foods or 'at the table'.
Source: ABS 2015b.

Indicator 11: High blood pressure

In 2017–18:

(a) 34% of adults had high blood pressure

(b) 23% of adults had uncontrolled high blood pressure.

Why is this important?

High blood pressure—also known as hypertension—is a major risk factor for chronic conditions including stroke, coronary heart disease, heart failure and chronic kidney disease. Hypertension can also be a cardiovascular disease in its own right. Reducing the prevalence of high blood pressure would substantially reduce the burden from a range of chronic conditions among Australians. High blood pressure contributed 5.1% of the total burden of disease in Australia in 2018; it was estimated that high blood pressure contributed 63% of hypertensive heart disease burden, 42% of coronary heart disease burden, 39% of stroke burden, 37% of chronic kidney disease burden, and 31% of atrial fibrillation and flutter burden (AIHW 2020).

The risk factors for high blood pressure include poor diet (particularly a high sodium intake, 'Indicator 10'), obesity ('Indicator 14'), excessive alcohol consumption ('Indicator 6') and insufficient physical activity ('Indicator 8'). High blood pressure can be controlled with lifestyle measures and medication to reduce the risk of chronic disease.

What does this indicator measure?

Blood pressure is the force exerted by the blood on the walls of the arteries and is written as systolic/diastolic (for example, 120/80 mmHg, stated as '120 over 80').

When the NFSCC indicator set was developed, the World Health Organization defined high blood pressure as including any of the following (Whitworth 2003):

(a) systolic blood pressure greater than or equal to 140 mmHg

(b) diastolic blood pressure greater than or equal to 90 mmHg

(c) receiving medication for high blood pressure.

This indicator presents:

- total high blood pressure: Number of adults aged 18 and over with a measured high blood pressure and/or taking medication for high blood pressure
- uncontrolled high blood pressure: Number of adults aged 18 and over who had a measured high blood pressure, irrespective of the use of blood pressure medication.

What do the data show?

(a) Total high blood pressure:

In 2017–18:

- about 1 in 3 adults aged 18 and over (34%, or an estimated 6.3 million adults) had high blood pressure; this was comprised of:
    - 23% with uncontrolled high blood pressure
    - 11% whose blood pressure was controlled using medication (AIHW 2019, ABS 2019a).
- after adjusting for age, there has been no change in the prevalence of total high blood pressure since 2011–12 (Figure 11.1).
- men (36%) were more likely than women (31%) to have high blood pressure (AIHW 2019).

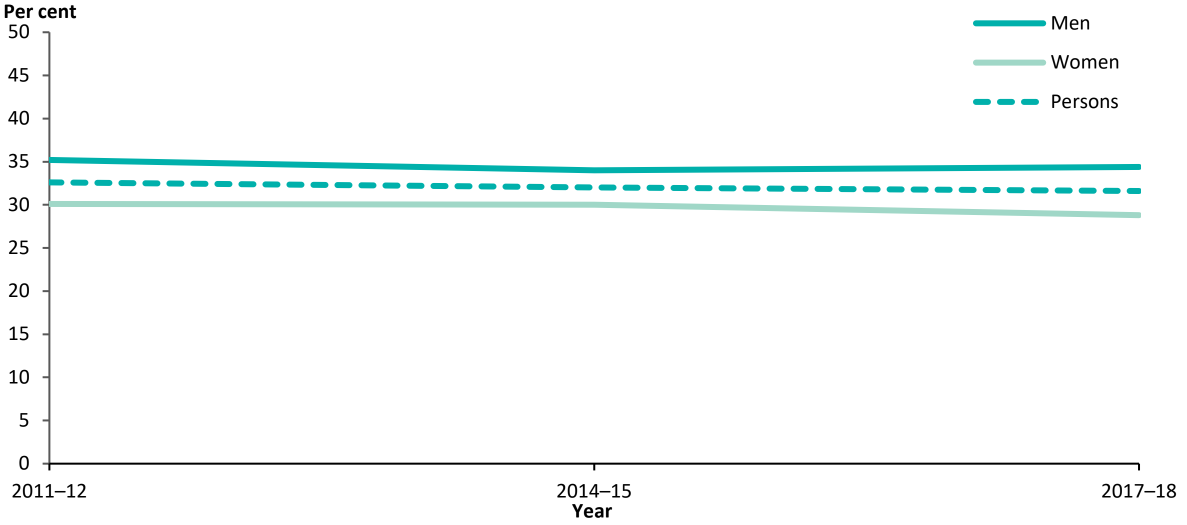
Population groups

In 2017–18, after adjusting for age:

- total high blood pressure was more common among adults living in the lowest socioeconomic areas (35%) than those living in the highest socioeconomic areas (28%)
- the prevalence of total high blood pressure was similar across remoteness areas—34% for those living in *Outer regional and remote* areas; 33% for *Inner regional* areas; and 31% for *Major cities* (Table 11.2).

At the time of writing comparable data was not available for Indigenous Australians.

Figure 11.1: Prevalence of total high blood pressure in adults aged 18 and over (%), by sex and year

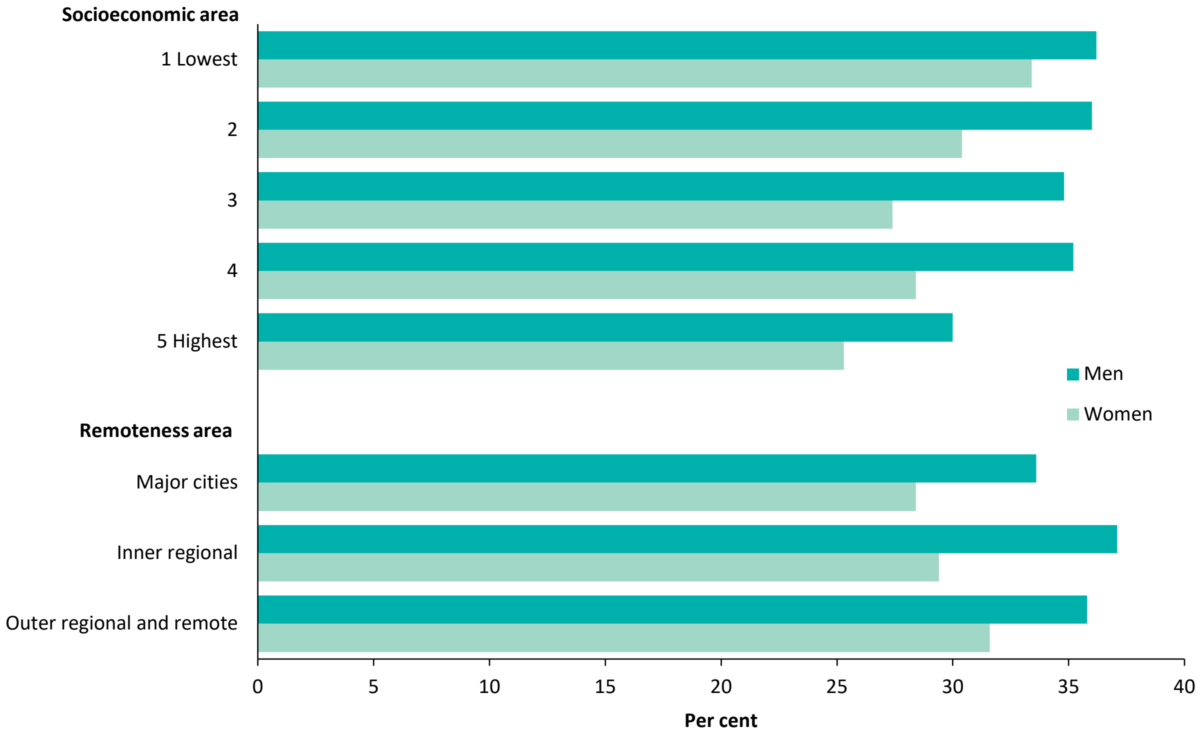


Notes

1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 11.1.

Source: ABS 2019b.

Figure 11.2: Prevalence of total high blood pressure in adults aged 18 and over (%), by selected population characteristics and sex, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 11.2.
Source: ABS 2019b.

(b) Uncontrolled blood pressure:

In 2017–18:

- almost a quarter of adults (an estimated 23%, or 4.3 million adults) had uncontrolled high blood pressure (ABS 2019c, AIHW 2019); after adjusting for age, there has been no change in the prevalence of uncontrolled high blood pressure since 2011–12 (Figure 11.3)
- men were more likely than women to have uncontrolled high blood pressure (25% compared with 20%) (AIHW 2019)
- the proportion of adults with uncontrolled high blood pressure increased with age—from 10% or less among 18–34 year-olds (10% for men and 4.9% for women) to a peak of 47% at age 85 and over (51% for men and 48% for women) (Figure 11.4).

Population groups

In 2017–18, after adjusting for age:

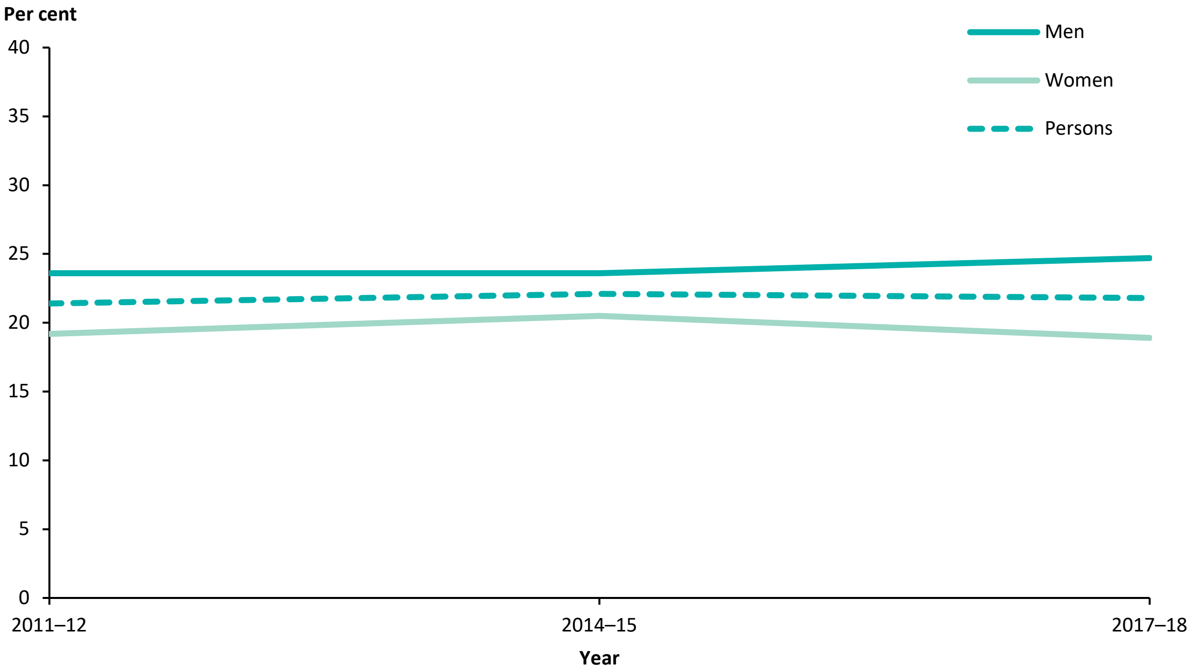
- uncontrolled high blood pressure was more common in the lowest socioeconomic areas where 1 in 4 adults (24%) have uncontrolled high blood pressure, compared with 1 in 5 (19%) adults in the highest socioeconomic areas

- the prevalence of uncontrolled high blood pressure was similar between remoteness areas—24% for *Outer regional and remote* areas; 22% for both *Inner regional* areas and *Major cities* (Table 11.5).

In 2018–19:

- almost one-quarter (23%, or 112,100) of Aboriginal and Torres Strait Islander adults had uncontrolled high blood pressure; Indigenous men had higher levels of uncontrolled high blood pressure (25%) compared to Indigenous women (21%) (ABS 2019d)
- after adjusting for age, Indigenous adults were 1.2 times as likely as non-Indigenous Australians in 2017–18 to have uncontrolled high blood pressure (Table 11.6).

Figure 11.3: Prevalence of uncontrolled high blood pressure in adults aged 18 and over (%) by sex and year

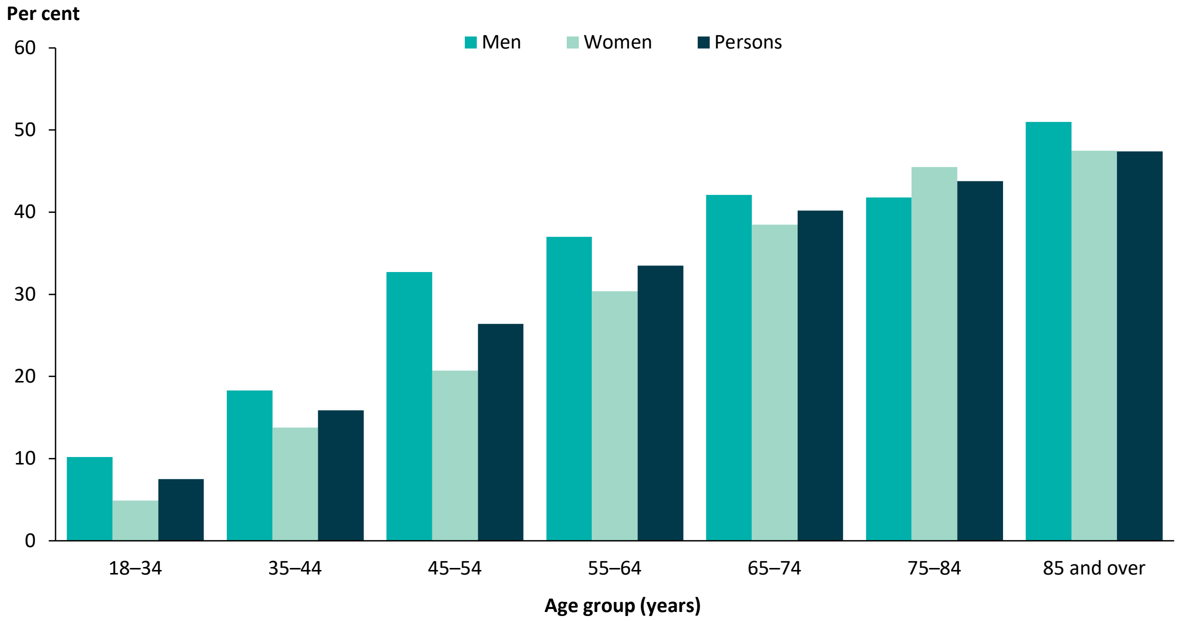


Notes

1. Age-standardised to the 2001 Australian standard population.
2. Uncontrolled high blood pressure includes all persons with measured high blood pressure (systolic ≥140 and/or diastolic ≥90) regardless of whether they were taking high blood pressure medication. Measured high blood pressure excludes self-reported hypertension prevalence rates.
3. Data and additional notes for this figure are shown in Table 11.3.

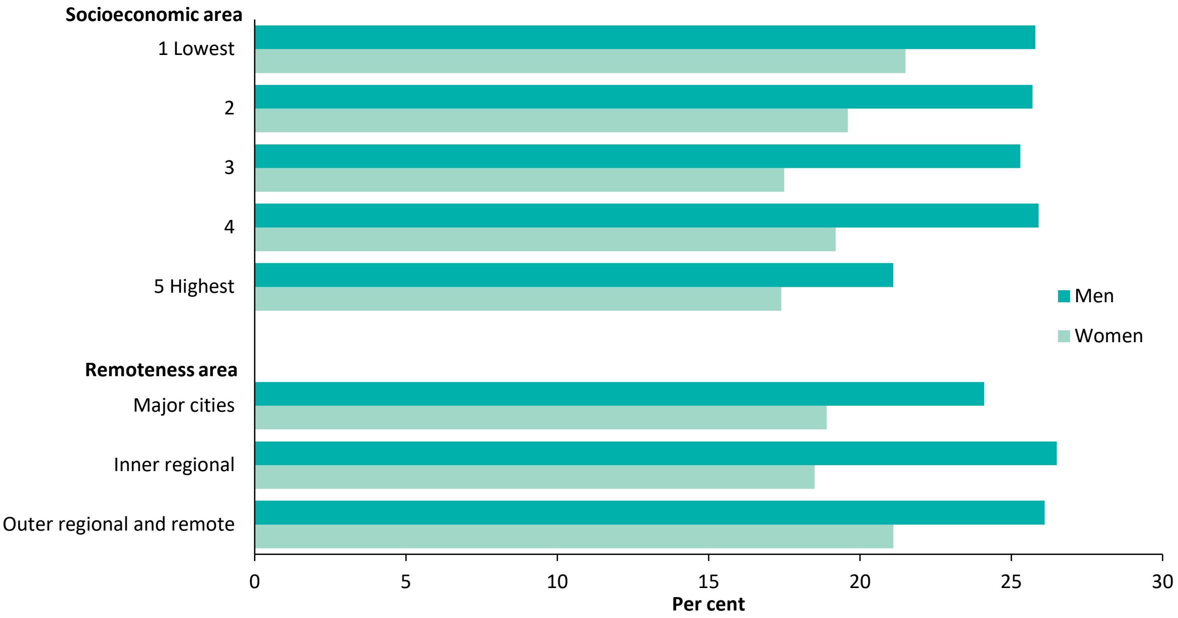
Source: ABS 2019b.

Figure 11.4: Prevalence of uncontrolled high blood pressure in adults aged 18 and over (%) by age and sex, 2017–18



Notes
1. Uncontrolled high blood pressure includes all persons with measured high blood pressure (systolic ≥140 and/or diastolic ≥90) regardless of whether they were taking high blood pressure medication. Measured high blood pressure excludes self-reported hypertension prevalence rates.
2. Data and additional notes for this figure are shown in Table 11.4.
Source: AIHW 2019.

Figure 11.5: Prevalence of uncontrolled high blood pressure in adults aged 18 and over (%) by selected population characteristics and sex, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Uncontrolled high blood pressure includes all persons with measured high blood pressure (systolic ≥140 and/or diastolic ≥90) regardless of whether they were taking high blood pressure medication. Measured high blood pressure excludes self-reported hypertension prevalence rates.
3. Data and additional notes for this figure are shown in Table 11.5.
Source: AIHW 2019.

Considerations

These results are based on measured data. In the 2017–18 NHS, 32% of respondents aged 18 years and over did not have their blood pressure measured. In the 2018–19 NATSIHS, 40% of respondents aged 18 years and over did not have their blood pressure measured. For these respondents, imputation was used to obtain blood pressure. See ABS National Health Survey Users Guide, 2017–18 for further information.

Since the NSFCC indicator set was developed, the Word Health Organization has updated the definition of high blood pressure as follows 'Hypertension is diagnosed if, when it is measured on two different days, the systolic blood pressure readings on both days is ≥140 mmHg and/or the diastolic blood pressure readings on both days is ≥90 mmHg' (WHO 2021).

Data sources

ABS National Health Survey 2017–18.

ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19.

For further details, refer to Appendix B.

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Supplementary tables

Table 11.1: Prevalence[(a)] of total high blood pressure in adults aged 18 and over (%), by sex and year

	Men		Women		Persons	
Year	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
2011–12	35.2	33.9–36.4	30.1	29.0–31.1	32.6	31.8–33.4
2014–15	34.0	32.7–35.2	30.0	28.9–31.1	32.0	31.1–32.8
2017–18	34.4	33.1–35.6	28.8	27.8–29.8	31.6	30.8–32.4

(a) Age-standardised to the 2001 Australian standard population.
Note: In 2017–18, 31.6% of respondents aged 18 years and over did not have their blood pressure measured. For these respondents, imputation was used to obtain blood pressure. See ABS National Health Survey Users Guide, 2017–18 for further information.
Sources: ABS 2019b; AIHW 2019.

Table 11.2: Prevalence of total high blood pressure in adults aged 18 and over (%), by selected population characteristics and sex, 2017–18

Population characteristic	Men		Women		Persons	
Socioeconomic area	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
1 Lowest	36.2	33.4–39.1	33.4	30.9–36.0	35.1	33.1–37.0
2	36.0	33.2–38.7	30.4	28.1–32.8	33.2	31.4–35.1
3	34.8	32.3–37.4	27.4	25.4–29.5	31.1	29.5–32.7
4	35.2	32.5–37.9	28.4	26.3–30.5	31.6	30.0–33.3
5 Highest	30.0	27.4–32.7	25.3	22.8–27.7	27.6	25.8–29.4
Remoteness area						
Major cities	33.6	32.1–35.1	28.4	27.2–29.6	31.0	30.1–32.0
Inner regional	37.1	34.2–39.9	29.4	26.9–31.8	32.9	31.1–34.8
Outer regional and remote	35.8	32.2–39.4	31.6	28.2–35.0	33.6	31.2–36.0

Notes
1. Age-standardised to the 2001 Australian standard population.
2. In 2017–18, 31.6% of respondents aged 18 years and over did not have their blood pressure measured. For these respondents, imputation was used to obtain blood pressure. See ABS National Health Survey Users Guide, 2017–18 for further information.
3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
4. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
Source: ABS 2019b.

Table 11.3: Prevalence of uncontrolled high blood pressure in adults aged 18 and over (%) by age and sex, by year

	Men		Women		Persons	
Year	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
2011–12	23.6	22.3–24.9	19.2	18.1–20.3	21.4	20.5–22.2
2014–15	23.6	22.4–24.9	20.5	19.4–21.7	22.1	21.3–22.9
2017–18	24.7	23.5–25.9	18.9	18.0–19.8	21.8	21.0–22.5

Notes
1. Age-standardised to the 2001 Australian standard population.
2. In 2017–18, 31.6% of respondents aged 18 years and over did not have their blood pressure measured. For these respondents, imputation was used to obtain blood pressure. See ABS National Health Survey Users Guide, 2017–18 for further information.
3. Persons with measured high blood pressure (systolic ≥140 and/or diastolic ≥90) regardless of whether they were taking high blood pressure medication. Measured high blood pressure excludes self-reported hypertension prevalence rates.
Source: ABS 2019b.

Table 11.4: Prevalence of uncontrolled high blood pressure in adults aged 18 and over (%) by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–34	10.2	8.4–12.0	4.9	3.9–5.9	7.5	6.5–8.6
35–44	18.3	15.6–21.0	13.8	11.9–15.7	15.9	14.2–17.6
45–54	32.7	29.4–36.0	20.7	17.9–23.5	26.4	24.2–28.6
55–64	37.0	34.7–39.3	30.4	27.3–33.5	33.5	31.4–35.6
65–74	42.1	38.6–45.6	38.5	35.1–41.9	40.2	37.8–42.6
75–84	41.8	37.0–46.6	45.5	40.1–50.9	43.8	40.5–47.1
85 and over	51.0	40.9–61.1	47.5	39.0–56.0	47.4	41.5–53.3
Total 18+	**25.4**	**24.3–26.5**	**20.3**	**19.3–21.3**	**22.8**	**22.0–23.6**

Notes

1. In 2017–18, 31.6% of respondents aged 18 years and over did not have their blood pressure measured. For these respondents, imputation was used to obtain blood pressure. See ABS National Health Survey Users Guide, 2017–18 for further information.
2. Persons with measured high blood pressure (systolic ≥140 and/or diastolic ≥90) regardless of whether they were taking high blood pressure medication. Measured high blood pressure excludes self-reported hypertension prevalence rates.

Source: AIHW 2019.

Table 11.5: Prevalence of uncontrolled high blood pressure in adults aged 18 and over (%) by selected population characteristics and sex, 2017–18

Population characteristic	Men		Women		Persons	
Socioeconomic areas	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	25.8	23.1–28.6	21.5	19.0–24.0	23.8	21.9–25.7
2	25.7	23.1–28.4	19.6	17.5–21.8	22.6	20.9–24.3
3	25.3	22.7–27.8	17.5	15.7–19.3	21.3	19.8–22.8
4	25.9	23.1–28.7	19.2	17.1–21.2	22.3	20.6–24.0
5 Highest	21.1	18.6–23.7	17.4	15.1–19.7	19.3	17.5–20.9
Remoteness area						
Major cities	24.1	22.7–25.6	18.9	17.8–20.0	21.5	20.6–22.4
Inner regional	26.5	23.9–29.2	18.5	16.3–20.7	22.1	20.4–23.9
Outer regional and remote	26.1	22.6–29.7	21.1	18.0–24.2	23.5	21.2–25.9

Notes

1. In 2017–18, 31.6% of respondents aged 18 years and over did not have their blood pressure measured. For these respondents, imputation was used to obtain blood pressure. See ABS National Health Survey Users Guide, 2017–18 for further information.
2. Age-standardised to the 2001 Australian standard population.
3. Socioeconomic areas are based on Socio-Economic Indexes for Areas (SEIFA 2016), specifically the Index of Relative Disadvantage 2016 (IRSD).
4. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
5. Uncontrolled high blood pressure includes all persons with measured high blood pressure (systolic ≥140 and/or diastolic ≥90) regardless of whether they were taking high blood pressure medication. Measured high blood pressure excludes self-reported hypertension prevalence rates.

Source: AIHW 2019.

Table 11.6: Prevalence of uncontrolled high blood pressure in adults aged 18 and over (%) by Indigenous status, 2017–18 and 2018–19

	Men		Women		Persons	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	28.8	26.0–31.6	23.8	21.3–26.3	26.2	24.3–28.1
Non-Indigenous Australians	24.5	23.4–25.6	18.9	17.9–19.9	21.7	20.9–22.5

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Age-standardised to the 2001 Australian standard population.
3. In 2017–18, 31.6% of respondents aged 18 years and over did not have their blood pressure measured. For these respondents, imputation was used to obtain blood pressure. See ABS National Health Survey Users Guide, 2017–18 for further information.
4. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
5. Uncontrolled high blood pressure includes all persons with measured high blood pressure (systolic ≥140 and/or diastolic ≥90) regardless of whether they were taking high blood pressure medication. Measured high blood pressure excludes self-reported hypertension prevalence rates.

Sources: ABS 2019d; ABS 2019e.

Indicator 12: Abnormal blood lipids

63% of adults had abnormal blood lipids in 2011–12.

Why is this important?

Blood lipids are fats in the blood and include cholesterol and triglycerides. Cholesterol is a fatty substance produced by the liver and carried by the blood to supply material for cell walls and hormones. Triglycerides play an important role in metabolism as an energy source and in helping to transfer dietary fat throughout the body. Dyslipidaemia—abnormal blood lipids—can contribute to the development of atherosclerosis, a build-up of fatty deposits in the blood vessels which may lead to the development of cardiovascular diseases. Dyslipidaemia is a risk factor for chronic diseases such as coronary heart disease, stroke and type 2 diabetes.

Blood tests are used to determine levels of the most commonly measured lipids. The standard lipid blood tests include measurements of total cholesterol, low-density lipoprotein cholesterol (LDL, or 'bad' cholesterol), high-density lipoprotein cholesterol (HDL, or 'good' cholesterol), as well as triglycerides.

What does this indicator measure?

This indicator presents the proportion of adults with abnormal blood lipids.

In the Australian Bureau of Statistics (ABS) 2011–13 Australian Health Survey (AHS), a person was classified as having abnormal blood lipids if they had one or more of the following (ABS 2013):

- total cholesterol ≥5.5 mmol/L
- LDL cholesterol ≥3.5 mmol/L
- HDL cholesterol <1.0 mmol/L for men, and <1.3 mmol/L for women
- triglycerides ≥2.0 mmol/L
- taking lipid-modifying medication.

What do the data show?

In 2011–12:

- almost 2 in 3 adults aged 18 and over (63%, or an estimated 8.6 million) had abnormal blood lipids (ABS 2013). This is comprised of:
    - 57% with uncontrolled abnormal blood lipids
    - 6.6% taking some form of lipid-modifying medication but with normal lipid levels (ABS 2013)
- one in 3 adults (33%) had high levels of LDL (bad) cholesterol; almost 1 in 4 (23%) had low levels of HDL (good) cholesterol; 1 in 7 (14%) had high levels of triglycerides; and 1 in 3 (33%) had a total cholesterol level that is considered high (AIHW 2017)

- having abnormal blood lipids was common among both men and women, with rates 50% or above for all age groups except those aged 18–24 (Figure 12.1). Rates increased from age 18–24 to 65–74. Rates tended to be higher among men than women from 25–54 but from 55 onwards, women had higher rates than men (Figure 12.1).

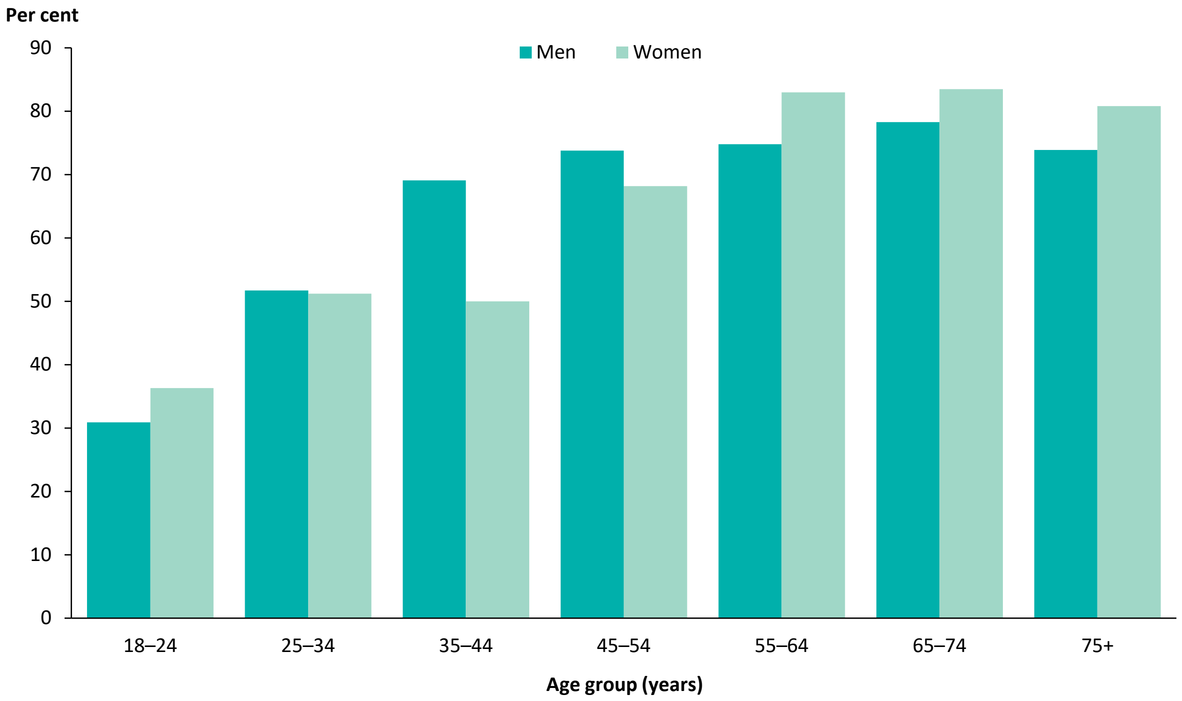
Population groups

In 2011–12, after adjusting for age, the proportion of adults with dyslipidaemia:

- was similar across remoteness areas
- generally decreased with increasing socioeconomic advantage (Figure 12.2).

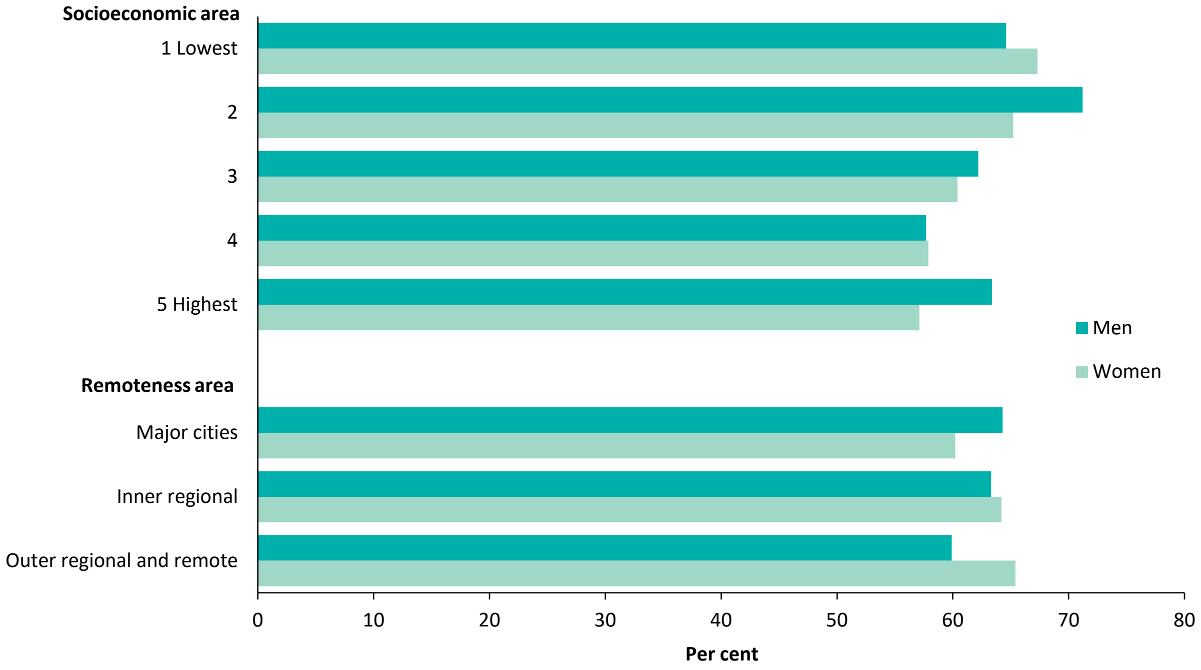
In 2012–13, nearly two-thirds of Aboriginal and Torres Strait Islander adults (65% or an estimated 185,400) had abnormal blood lipids (ABS 2014a); after adjusting for age, Indigenous adults were 1.1 times as likely to have abnormal blood lipids as non-Indigenous Australians (Table 12.3).

Figure 12.1: Prevalence of abnormal blood lipids in adults aged 18 and over (%), by age and sex, 2011–12



Notes
1. Excludes people who did not fast for 8 hours or more prior to their blood test.
2. Data and additional notes for this figure are shown in Table 12.1.
Source: AIHW 2015.

Figure 12.2: Prevalence of abnormal blood lipids in adults aged 18 and over (%), by selected population characteristics and sex, 2011–12



Notes

1. Age-standardised to the 2001 Australian standard population.
2. Excludes people who did not fast for 8 hours or more prior to their blood test.
3. Data and additional notes for this figure are shown in Table 12.2.

Source: ABS 2014b.

Considerations

These results are partly based on measured data. As biomedical health surveys are not regularly conducted in Australia there is no routine data collection for reporting against this indicator (and trend data are unavailable).

A fasting blood sample was provided by only 30% of participants aged 12 and over in the ABS National Health Measures Survey.

Data sources

ABS Australian Health Survey 2011–12 (Biomedical Results for Chronic Diseases).

ABS Australian Aboriginal and Torres Strait Islander Health Survey 2012–13 (National Aboriginal and Torres Strait Islander Health Measures Survey component).

For further details, refer to Appendix B.

References

ABS 2013. Australian Health Survey – Australian Health Survey: Biomedical Results for Chronic Diseases, 2011–12. ABS Cat. no. 4364.0.55.005. Canberra: ABS.

ABS 2014a. Australian Aboriginal and Torres Strait Islander Health Survey: Biomedical results, 2012–13. ABS Cat. no. 4727.0.55.003. Canberra: ABS.

ABS 2014b. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS Cat. no. 4324.0.55.001. Findings based on Microdata analysis. Canberra: ABS.

AIHW 2015. Cardiovascular disease, diabetes and chronic kidney disease—Australian facts: risk factors. Cat. no: CDK 004. Canberra: ABS.

AIHW 2017. Risk factors to health (web report). Viewed 6 March 2019, https://www.aihw.gov.au/reports/risk-factors/risk-factors-to-health/contents/risk-factors-and-disease-burden.

Supplementary tables

Table 12.1: Prevalence of abnormal blood lipids in adults aged 18 and over (%), by age group and sex, 2011–12

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	30.9	21.6–40.2	36.3	27.0–45.6	33.6	26.7–40.5
25–34	51.7	45.8–57.6	51.2	45.8–56.6	51.5	47.8–55.2
35–44	69.1	64.5–73.7	50.0	44.1–55.9	59.2	55.1–63.3
45–54	73.8	67.8–79.8	68.2	63.6–72.8	70.9	67.1–74.7
55–64	74.8	70.6–79.0	83.0	79.6–86.4	78.9	76.1–81.7
65–74	78.3	73.6–83.0	83.5	79.7–87.3	81.0	77.8–84.2
75+	73.9	67.8–80.0	80.8	73.4–88.2	77.7	72.9–82.5
Total 18+	**63.7**	**61.4–66.0**	**62.8**	**60.1–65.5**	**63.2**	**61.3–65.1**

Note: Excludes people who did not fast for 8 hours or more prior to their blood test.
Source: AIHW 2015.

Table 12.2: Prevalence of abnormal blood lipids in adults aged 18 and over (%), by selected population characteristics and sex, 2011–12

Population characteristic	**Men**		**Women**		**Persons**	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	64.6	58.6–70.6	67.3	61.4–73.2	66.0	62.0–70.1
2	71.2	66.4–76.0	65.2	60.9–69.6	68.0	64.7–71.3
3	62.2	57.0–67.5	60.4	55.2–65.6	61.2	57.3–65.0
4	57.7	52.2–63.2	57.9	52.6–63.2	57.7	53.9–61.5
5 Highest	63.4	58.2–68.6	57.1	52.3–61.9	60.1	56.3–63.8
Remoteness area						
Major cities	64.3	61.7–66.9	60.2	57.6–62.9	62.2	60.3–64.1
Inner regional	63.3	57.6–69.0	64.2	58.8–69.6	63.9	60.2–67.7
Outer regional and remote	59.9	48.5–71.3	65.4	59.6–71.2	62.5	56.4–68.6

(continued)

Table 12.2 (continued): Prevalence of abnormal blood lipids in adults aged 18 and over (%), by selected population characteristics and sex, 2011–12

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Age-standardised to the 2001 Australian standard population.
3. Excludes people who did not fast for 8 hours or more prior to their blood test.
4. Socioeconomic areas are based on Socio-Economic Indexes for Areas (SEIFA 2011), specifically the Index of Relative Disadvantage 2011 (IRSD).
5. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2011) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the AHS.

Source: ABS 2014b.

Table 12.3: Prevalence of abnormal blood lipids in adults aged 18 and over (%), by Indigenous status, 2012–13

Indigenous status	Per cent	95% CI
Indigenous Australians	70.5	67.2–73.8
Non-Indigenous Australians	62.4	60.5–64.3

Note: Age-standardised to the 2001 Australian standard population.
Source: ABS 2014a.

Indicator 13: Raised blood glucose levels

8.2% of adults had raised blood glucose levels in 2011–12.

Why is this important?

Raised blood glucose is a risk factor for a number of chronic diseases, including cardiovascular disease, type 2 diabetes and chronic kidney disease. The initial stages of type 2 diabetes, also known as pre-diabetes, are characterised by impaired glucose regulation. This includes both impaired fasting glucose (IFG) and impaired glucose tolerance (IGT). People who have IFG or IGT are at risk for future development of diabetes and cardiovascular disease. IFG is identified by a fasting plasma glucose test and IGT is identified by an oral glucose tolerance test. This indicator is based on fasting plasma glucose test results.

What does this indicator measure?

The proportion of adults with raised blood glucose levels.

In the Australian Bureau of Statistics (ABS) 2011–13 Australian Health Survey (AHS), a person was classified as having raised blood glucose levels if they had:

- a fasting plasma glucose level of 6.1 mmol/L and above, or
- they had been diagnosed with diabetes and were taking diabetes medication (either insulin or tablets), irrespective of their fasting plasma glucose level (ABS 2013).

People with impaired fasting glucose are those with fasting plasma glucose levels in the range of 6.1 to 6.9 mmol/L; this indicates a person is at high risk of diabetes.

People with diabetes are those who have been diagnosed with diabetes and were taking diabetes medication (either insulin or tablets), irrespective of their fasting plasma glucose level, plus those with a fasting plasma glucose greater than or equal to 7.0 mmol/L (who may or may not already be diagnosed with the condition) (ABS 2013).

What do the data show?

In 2011–12:

- an estimated 1.1 million adults (or 8.2%), aged 18 and over, had raised blood glucose levels; comprised of 5.1% who had diabetes and 3.1% who had impaired fasting plasma glucose (AIHW 2020; Table 13.1)
- after adjusting for age, men were more likely to have raised blood glucose levels than women (10% compared with 5.6%, respectively) (Table 13.1)
- the percentage of adults with raised blood glucose levels increased with age between the ages of 18 and 74 years (Figure 13.1); so that among those aged 65 to 74 more than one in five (22%) adults had raised blood glucose levels (including diabetes) (Table 13.1).

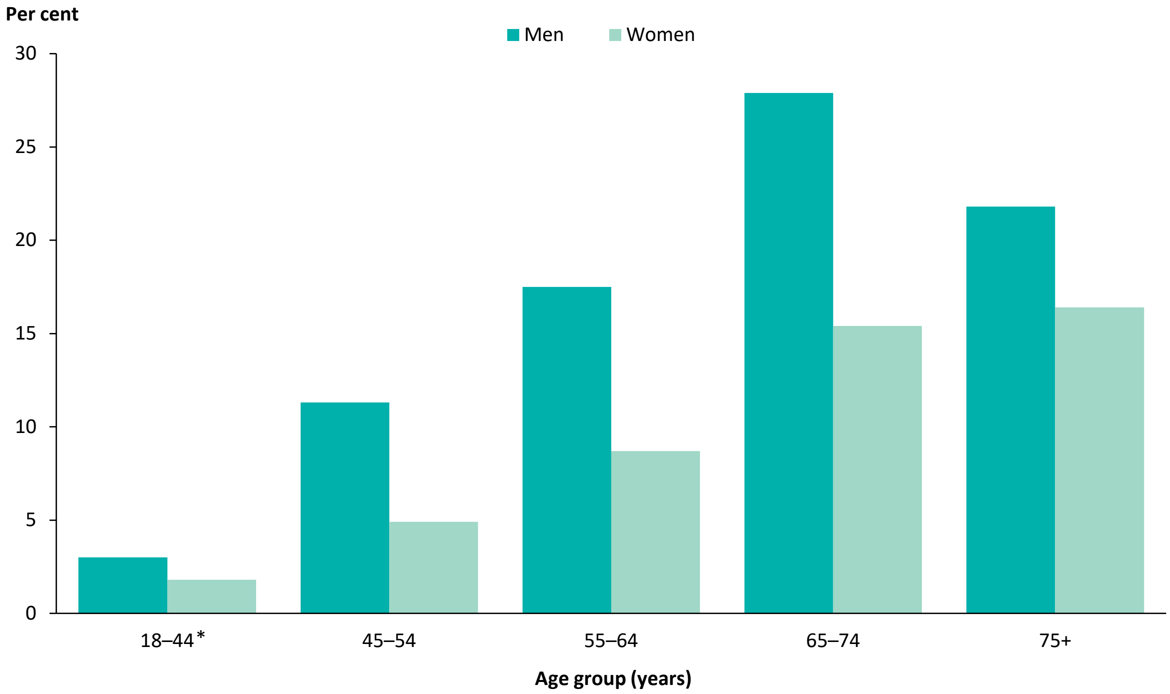
Population groups

In 2011–12, after adjusting for age:

- adults living in the lowest socioeconomic areas had a higher prevalence of raised blood glucose levels than those living in the highest socioeconomic areas (12% compared with 5.0%, respectively)
- the prevalence of raised blood glucose levels was similar across remoteness areas (Figure 13.2).

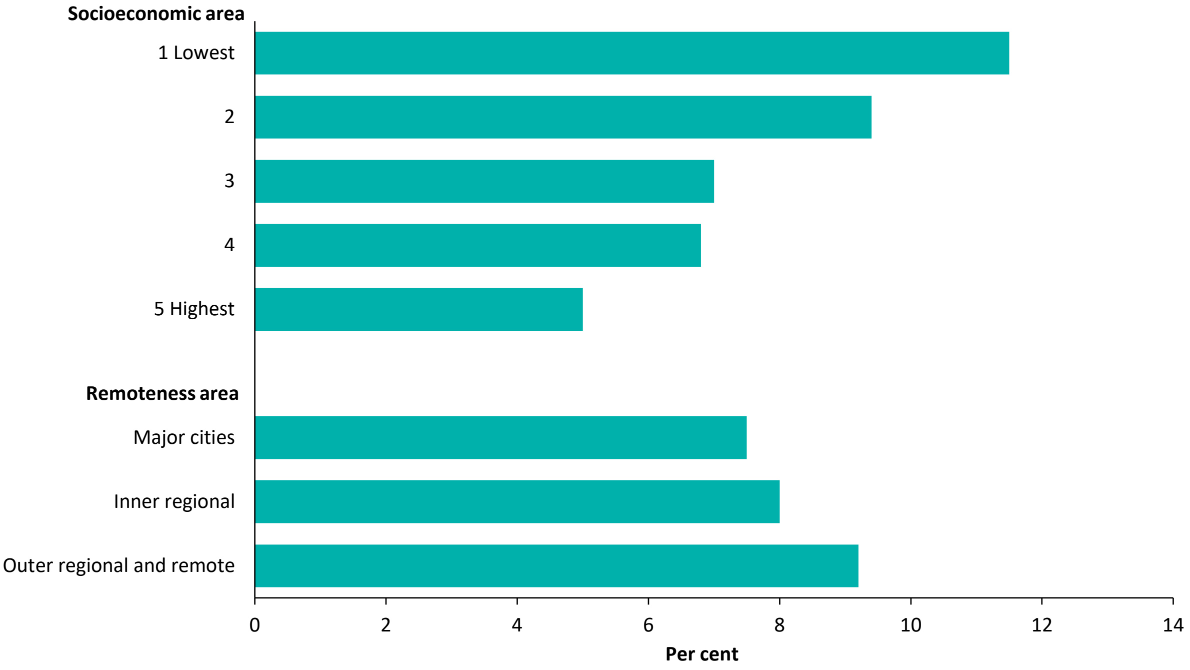
Nearly 1 in 6 (16%) Aboriginal and Torres Strait Islander adults had raised blood glucose levels in 2012–13 (AIHW 2020). There was no significant difference between the age-standardised proportion of Indigenous men and women with raised blood glucose levels (AIHW 2020).

Figure 13.1: Prevalence of raised blood glucose (including diabetes) in persons aged 18 and over (%), by age and sex, 2011–12



* The proportion for women was based on an estimate which had a RSE between 25% and 50% and should be used with caution.
Note: Data and additional notes for this figure are shown in Table 13.1.
Source: AIHW 2020.

Figure 13.2: Prevalence of raised blood glucose (including diabetes) in persons aged 18 and over (%), by selected population characteristics, 2011–12



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 13.2.
Source: AIHW 2020.

Considerations

These results are based on measured data. As biomedical health surveys are not regularly conducted in Australia there is no routine data collection for reporting against this indicator (and trend data are unavailable).

A fasting blood sample was provided by only 30% of participants aged 12 and over in the ABS National Health Measures Survey.

Also see 'Indicator 20' (Prevalence of type 2 diabetes).

Data sources

ABS Australian Health Survey 2011–13 (National Health Measures Survey component 2011–12).

ABS Australian Aboriginal and Torres Strait Islander Health Survey 2012–13 (National Aboriginal and Torres Strait Islander Health Measures Survey component).

For further details, refer to Appendix B.

References

ABS 2013. Australian Health Survey: Users' Guide, 2011-13. ABS Cat. no. 4363.0.55.001. Canberra: ABS. Viewed 3 September 2020, https://www.abs.gov.au/AUSSTATS/Abs@.Nsf/Latestproducts/4E3E32BE5981C674CA257C3D000D87DF?opendocument.

AIHW 2020. Indicators for the Australian National Diabetes Strategy 2016–2020: data update. Cat. no. CVD 81. Canberra: AIHW.

Supplementary tables

Table 13.1: Prevalence of raised blood glucose (including diabetes) in persons aged 18 and over (%), by age and sex, 2011–12

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–44	3.0	1.7–4.3	1.8*	0.9–2.8	2.4	1.6–3.2
45–54	11.3	7.7–15.0	4.9	3.2–6.5	8.0	6.1–9.9
55–64	17.5	14.3–20.7	8.7	6.3–11.2	13.1	11.0–15.1
65–74	27.9	23.2–32.6	15.4	12.1–18.6	21.5	18.5–24.4
75+	21.8	15.7–28.0	16.4	11.0–21.7	18.8	14.5–23.2
Total 18+	**10.4**	**9.2–11.7**	**6.0**	**5.1–6.8**	**8.2**	**7.4–8.9**
Total 18+ age-standardised[(a)]	**10.0**	**8.8–11.2**	**5.6**	**4.8–6.4**	**7.7**	**7.0–8.5**

* The proportion was based on an estimate which had a RSE between 25% and 50% and should be used with caution.
(a) Age-standardised to the 2001 Australian standard population (age groups 18–44, 45–54, 55–64, 65–74 and 75+).
Source: AIHW 2020.

Table 13.2: Prevalence of raised blood glucose (including diabetes) in persons aged 18 and over (%), by selected population characteristics, 2011–12

Population characteristic	Per cent	95% CI
Socioeconomic area		
1 Lowest	11.5	9.4–13.6
2	9.4	7.4–11.4
3	7.0	5.4–8.6
4	6.8	5.4–8.1
5 Highest	5.0	3.7–6.2
Remoteness area		
Major cities	7.5	6.6–8.3
Inner regional	8.0	6.4–9.6
Outer regional and remote	9.2	6.6–11.8

Notes
1. Age-standardised to the 2001 Australian standard population (age groups 18–44, 45–54, 55–64, 65–74 and 75+).
2. Socioeconomic areas are based on Socio-Economic Indexes for Areas (SEIFA 2011), specifically the Index of Relative Disadvantage 2011 (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2011) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the AHS.
Source: AIHW 2020.

Indicator 14: Overweight and obesity

In 2017–18:

(a) 67% of adults were overweight or obese

(b) 25% of children and young people aged 2–17 were overweight or obese.

Why is this important?

Overweight and obesity refers to excess body weight. Excess weight, especially obesity, is a major risk factor for cardiovascular disease, type 2 diabetes, high blood pressure, sleep apnoea, psychological issues, some musculoskeletal conditions and some cancers (AIHW 2019). The risk is continuous—that is, as the level of excess weight increases, so does the risk of developing these conditions (AIHW 2017). In addition, being overweight can hamper the ability to control or manage chronic disorders. People who are overweight or obese also have higher rates of death.

What does this indicator measure?

The proportion of people who are overweight or obese:

(a) **Adults:** Number of adults aged 18 and over who are overweight or obese.

The Body Mass Index (BMI) is an internationally recognised standard for classifying overweight and obesity in adults. BMI is calculated by dividing the weight in kilograms by the square of the height in metres. BMI does not necessarily reflect body fat distribution or describe the same degree of fatness in different individuals. At a population level however, BMI is a practical and useful measure for identifying overweight and obesity. To fully understand changes in the distribution of BMI over time, all BMI categories should be considered when assessing this indicator.

Box 14.1: Classification of adults according to BMI

BMI (kg/m2)	Classification	Risk of comorbidities
Less than 18.5	Underweight	Low (but risk of other clinical problems increased)
18.5 to less than 25	Normal weight range	Average
25 to less than 30	Overweight but not obese	Increased
30 to less than 35 35 to less than 40 40 or more	Obese Class I Obese Class II Obese Class III	Moderate Severe Very severe

Note: BMI categories are for adults aged 18 years and over.
Source: Based on WHO 2000.

(b) **Children and young people**: Number of people aged 2–17 who are overweight or obese.

Height and body composition are continually changing for children and young people so a separate classification is used based on their age and sex (Cole et al. 2000).

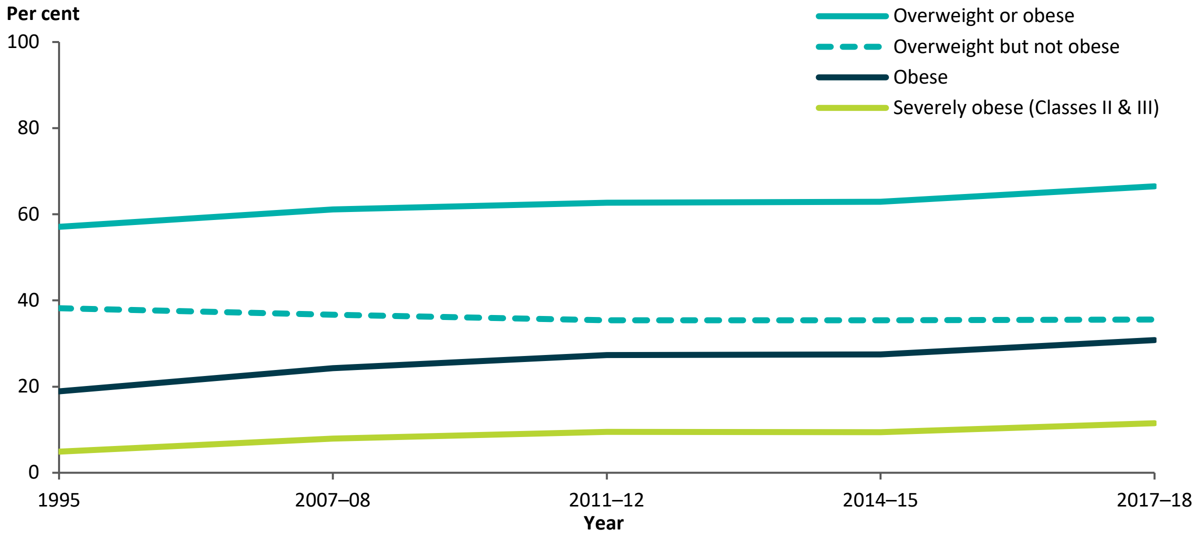
What do the data show?

(a) Adults

In 2017–18:

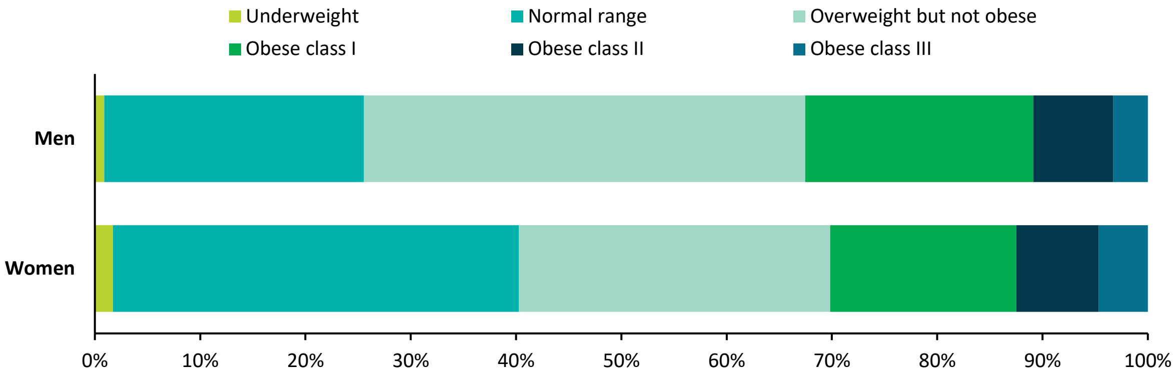
- over two-thirds (67%) of adults were overweight or obese; this is an estimated 12.5 million adults (AIHW 2019). About 1 in 3 (36%) adults were overweight but not obese and about 1 in 3 (31%) were obese (Figure 14.1).
- after adjusting for age, the proportion of people who were overweight or obese increased from 57% in 1995 to 67% in 2017–18 (Figure 14.1). The increase has been largely driven by a rise in the level of obesity from 19% to 31% (age-standardised) between 1995 and 2017–18; and the increase in the level of severely obese (from 5% to 12%) (Figure 14.1).
- overweight and obesity is more common in men (75%) than in women (60%) (derived from Figure 14.2). While more men than women were overweight but not obese (42% compared with 30%), similar proportions of men and women were obese (33% of men and 30% of women) (Figure 14.2). The distribution of BMI is different between men and women, showing that overweight and obesity is differently distributed among men and women (Figure 14.2).
- the proportion of adults who were overweight or obese generally increased with age peaking among those aged 65–74 (78%) (Table 14.3). Among Australia's youngest adults (those aged 18–24 years) almost half (46%) were overweight or obese (Table 14.3). By age 35–44 years, this had increased to 69% and by the age of 65–74 years, the proportion had increased to almost four out of five (78%).

Figure 14.1: Proportion of adults aged 18 and over, by BMI category, by year



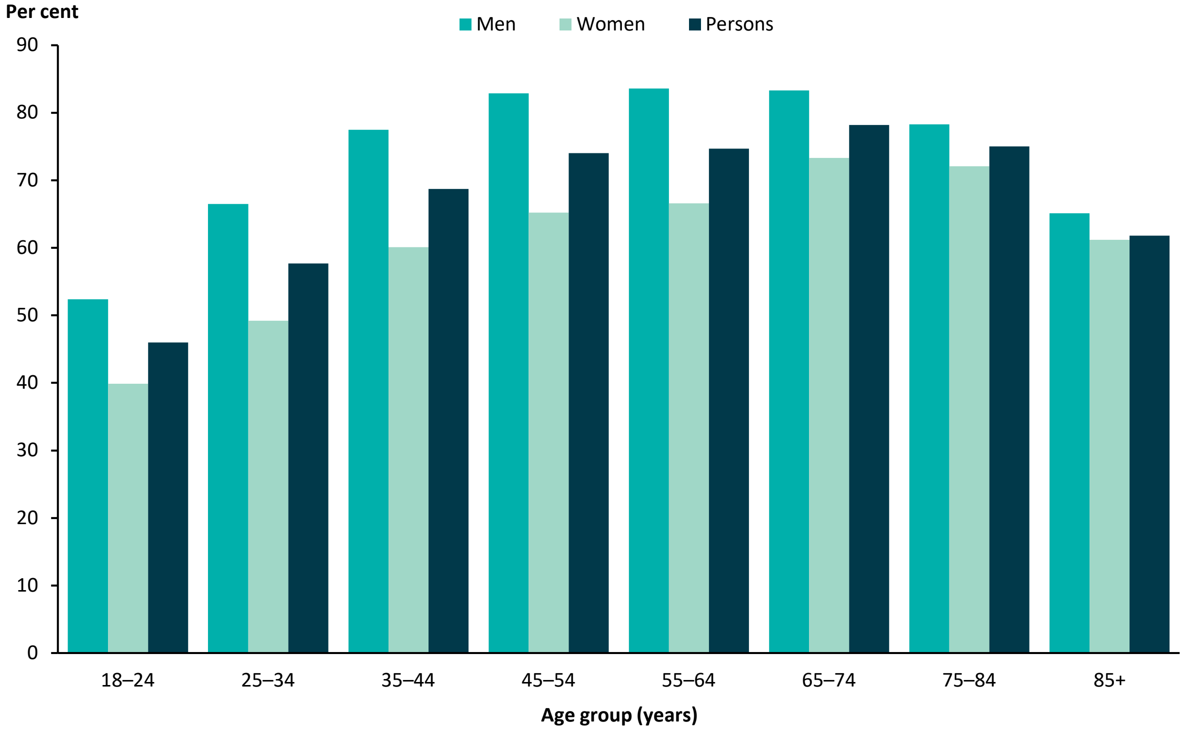
Notes
1. Age-standardised to the 2001 Australian standard population.
2. Overweight and obesity classification is based on measured height and weight.
3. Severely obese consists of Obese Class II and II categories combined.
4. Data and additional notes for this figure are shown in Table 14.1.
Source: AIHW 2019.

Figure 14.2: Distribution of BMI, adults aged 18 and over, by sex, 2017–18



Notes
1. Overweight and obesity classification is based on measured height and weight.
2. Data and additional notes for this figure are shown in Table 14.2.
Source: AIHW 2019.

Figure 14.3: Proportion of overweight and obese adults aged 18 and over (%), by age and sex, 2017–18



Notes

1. Overweight and obesity classification is based on measured height and weight.
2. Data and additional notes for this figure are shown in Table 14.3.

Source: AIHW 2019.

Population groups

In 2017–18, after adjusting for age:

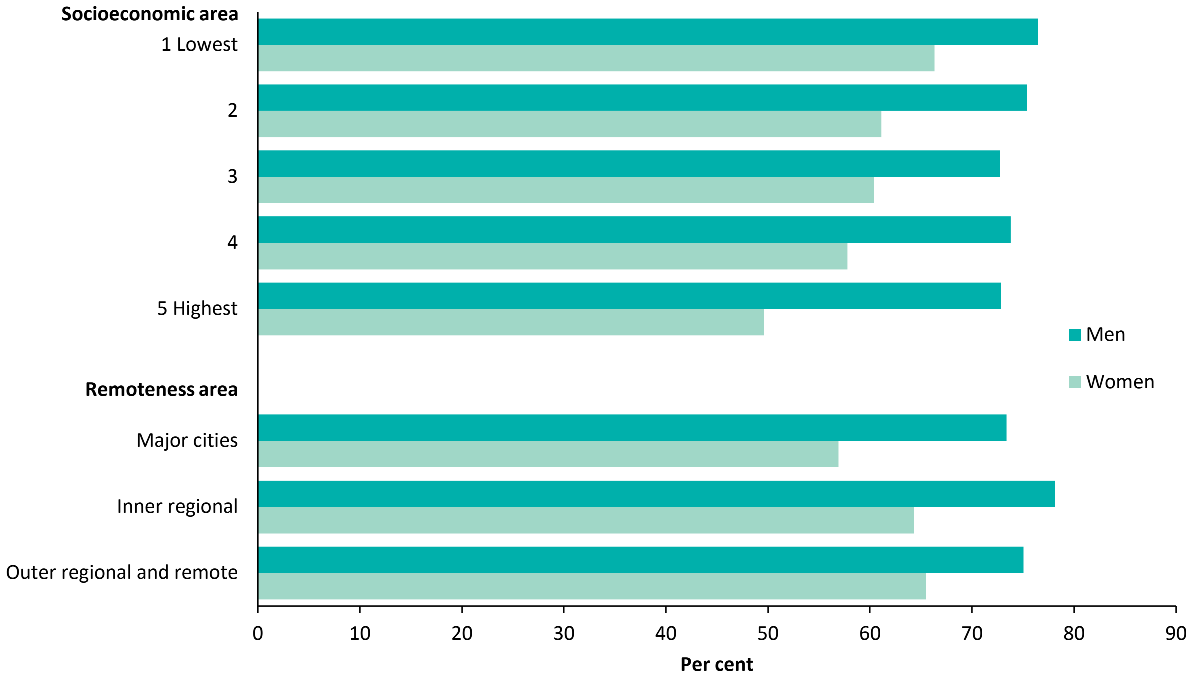
- adults living in the lowest socioeconomic areas were more likely to be overweight or obese than those living in the highest socioeconomic areas—72% compared with 62% (Table 14.4). The difference between those living in the lowest and highest socioeconomic areas was greater for women (66% and 50%, respectively) than men (77% and 73%, respectively) (AIHW 2019)
- the proportion of overweight or obese people was higher for those living outside of *Major cities*—after adjusting for age, almost three-quarters of those living in *Inner regional* (71%) and *Outer regional and remote* (70%) areas were overweight or obese compared with 65% of those living in *Major cities* (Table 14.4).

In 2018–19:

- almost three-quarters (74%) of Aboriginal and Torres Strait Islander people aged 18 and over were overweight or obese—this equates to an estimated 361,000 Indigenous adults (ABS 2019a). Almost 1 in 3 (29%) Indigenous adults were overweight but not obese and 45% were obese (ABS 2019a)

- after adjusting for age, Indigenous adults were 1.2 times as likely as non-Indigenous adults in 2017–18 to be overweight or obese, and 1.5 times as likely as non-Indigenous adults in 2017–18 to be obese (Table 14.5).

Figure 14.4: Prevalence of overweight and obesity in adults aged 18 and over (%), by selected population characteristics and sex, 2017–18



Notes

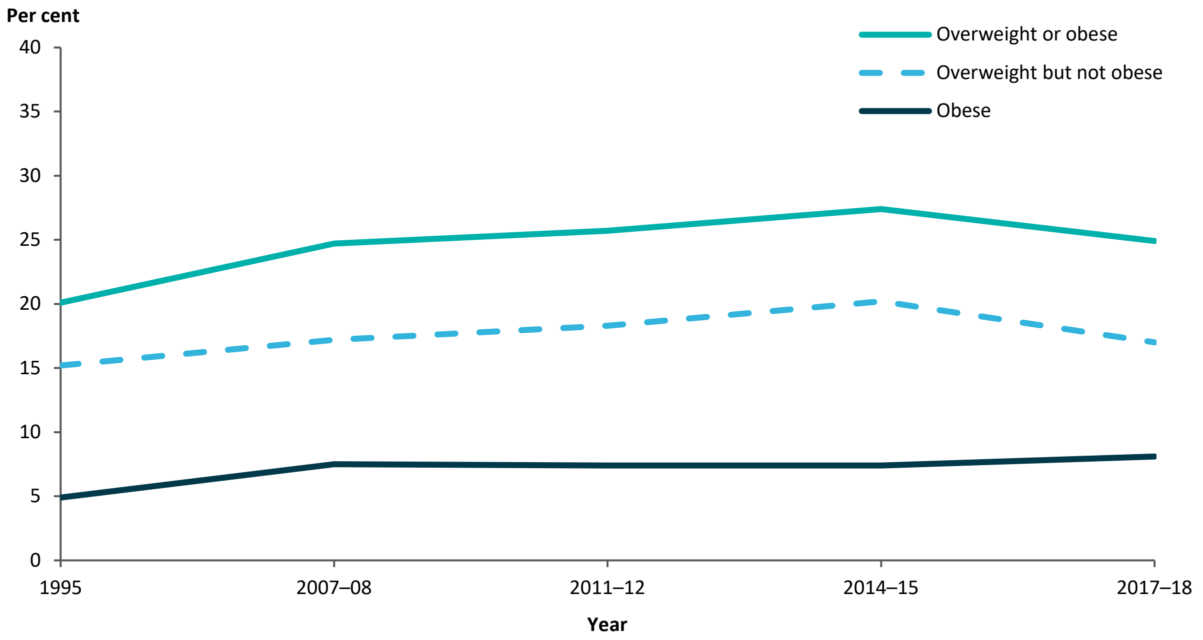
1. Age-standardised to the 2001 Australian standard population.
2. Overweight and obesity classification is based on measured height and weight.
3. Data and additional notes for this figure are shown in Table 14.4.

Source: AIHW 2019.

(b) Children and young people

- In 2017–18, one in four (25%, or an estimated 1.2 million) children and young people aged 2–17 were overweight or obese (Table 14.7; ABS 2018). About 1 in 6 (17%) of children and young people aged 2–17 were overweight but not obese while 1 in 12 (8.1%) were obese (Table 14.7). Rates were similar for boys and girls aged 2–17 in 2017–18 (Table 14.7).
- Information on children and young people dating back to 1995 is available for those aged 5–17, it shows that the prevalence of overweight and obesity rose from 20% in 1995 to 25% in 2007–08 (Figure 14.5). Then, from 2007–08 to 2017–18, the prevalence of overweight and obesity remained relatively stable, with no significant increase or decrease (Table 14.6).

Figure 14.5 Proportion of overweight and obese children and young people aged 5–17, by year



Notes
1. Overweight and obesity classification is based on measured height and weight.
2. Data and additional notes for this figure are shown in Table 14.6.
Source: AIHW 2019.

Population groups

In 2017–18, for children and young people aged 2–17:

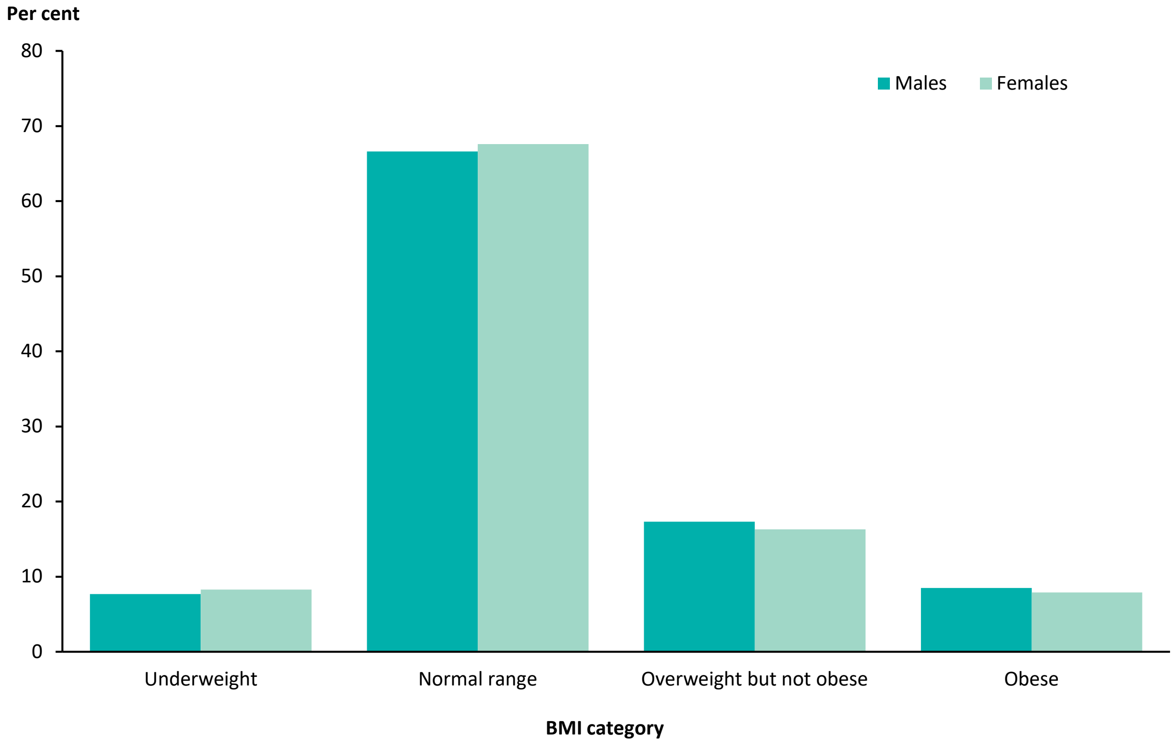
- those living in the lowest socioeconomic areas were more likely to be overweight or obese (28%) than those in the highest socioeconomic areas (21%) (Figure 14.7)
- rates for overweight but not obese were similar across socioeconomic areas, while rates of obesity were 2.4 times as high among those living in the lowest socioeconomic areas (11%) compared with those living the highest (4.4%) (AIHW 2020)
- a higher proportion of those living in *Inner regional* areas were overweight or obese compared with those living in *Major cities* (29% and 23%, respectively) (Figure 14.7). For children and young people living in *Outer regional and remote* areas, the proportion was 27%.

In 2018–19:

- 38% of Indigenous children and young people aged 2–17 were overweight or obese (24% were overweight and 14% obese) (Table 14.9); an increase from 31% in 2012–13 (AIHW 2020)
- rates of overweight and obesity were similar between Indigenous boys and Indigenous girls (36% and 40%, respectively) (Table 14.9)

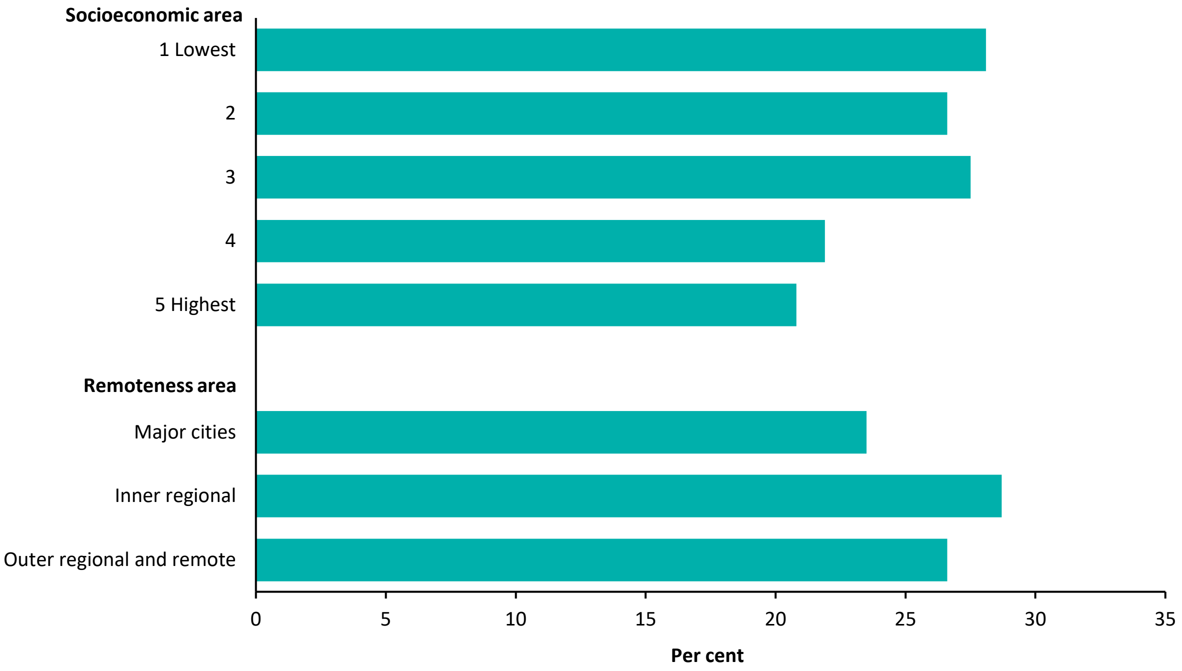
- Indigenous children and young people (38%) were more likely to be overweight or obese than non-Indigenous children and young people (24%) (Table 14.9). For example, for those aged 10–14, the prevalence of overweight and obesity was almost twice as high for Indigenous children and young people (44%) as for non-Indigenous children and young people (23%) (Table 14.10).

Figure 14.6: BMI category in children and young people aged 2–17, by sex, 2017–18



Notes
1. Overweight and obesity classification is based on measured height and weight.
2. Data and additional notes for this figure are shown in Table 14.7.
Source: AIHW 2020.

Figure 14.7 Proportion of overweight and obese children and young people aged 2–17, by selected population characteristics, 2017–18



Notes

1. Overweight and obesity classification is based on measured height and weight.
2. Data and additional notes for this figure are shown in Table 14.8.

Source: AIHW 2020.

Considerations

BMI was based on measured data. Imputation was used for those who did not have their measurements taken in the 2014–15 NHS, the 2017–18 NHS, and the 2018–19 NATSIHS. See the National Health Survey: Users' guide, 2017–18 and the National Aboriginal and Torres Strait Islander Health Survey Methodology, 2018–19 for more information on body mass and physical measurements (ABS 2019b, ABS 2019c).

Data sources

ABS National Health Survey 2017–18.

ABS Australian Aboriginal and Torres Strait Islander Health Survey 2012–13 (National Aboriginal and Torres Strait Islander Health Survey component); ABS Australian Aboriginal and Torres Strait Islander Health Survey, 2018–19.

For further details, refer to Appendix B.

References

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Supplementary tables

Table 14.1: Proportion of adults aged 18 and over (%), by BMI category, by year

	1995		2007–08		2011–12		2014–15		2017–18	
BMI category	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Overweight but not obese	38.2	36.5–38.6	36.7	35.5–37.9	35.4	34.6–36.0	35.4	34.6–36.5	35.6	34.6–36.6
Obese	18.9	17.5–19.6	24.3	23.4–25.7	27.3	26.7–28.3	27.5	26.9–28.8	30.8	30.4–32.3
Overweight or obese	57.1	54.9–57.4	61.1	60.0–62.5	62.7	61.9–63.7	62.9	62.4–64.4	66.5	66.1–67.8
Severely obese (Classes II & III)	4.9	4.4–5.4	7.9	7.2–8.6	9.5	8.9–10.0	9.4	8.7–10.0	11.5	11.1–12.3

Notes

1. Overweight and obesity classification is based on measured height and weight. See 'Box 14.1' for more information.
2. In 2014–15 and 2017–18, imputation was used to obtain BMI for respondents aged 18 years and over did not have a measured Body Mass Index (BMI) (26.8% of respondents for 2014–15 and 33.8% for 2017–18). See ABS National Health Survey Users Guide, 2017–18 for further information.
3. Age-standardised to the 2001 Australian standard population. Totals are age-standardised (10 year age groups up to age group 75+ years).

Source: AIHW 2019.

Table 14.2: Distribution of BMI, adults aged 18 and over, by sex, 2017–18

	Men		Women		Persons	
BMI category	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Underweight	0.9	0.6–1.2	1.7	1.3–2.1	1.3	1.1–1.5
Normal range	24.7	23.3–26.1	38.6	37.4–39.8	31.7	30.9–32.5
Overweight but not obese	42.0	40.5–43.5	29.6	28.3–30.9	35.6	34.6–36.6
Obese class I	21.7	20.6–22.8	17.7	16.7–18.7	19.7	18.9–20.5
Obese class II	7.6	7.0–8.2	7.8	7.0–8.6	7.7	7.2–8.2
Obese class III	3.3	2.8–3.8	4.7	4.2–5.2	4.0	3.6–4.4

Notes

1. Overweight and obesity classification is based on measured height and weight. See 'Box 14.1' for more information.
2. In 2017–18, 33.8% of respondents aged 18 years and over did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Health Survey Users Guide, 2017–18 for further information.

Source: AIHW 2019.

Table 14.3: Proportion of overweight and obese adults aged 18 and over (%), by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	52.4	47.0–57.8	39.9	34.9–44.9	46.0	42.1–49.9
25–34	66.5	63.0–70.0	49.2	45.9–52.5	57.7	55.4–60.0
35–44	77.5	75.1–79.9	60.1	57.5–62.7	68.7	66.7–70.7
45–54	82.9	80.5–85.3	65.2	61.6–68.8	74.0	71.8–76.2
55–64	83.6	81.3–85.9	66.6	63.5–69.7	74.7	72.7–76.7
65–74	83.3	80.7–85.9	73.3	70.6–76.0	78.2	76.2–80.2
75–84	78.3	72.5–84.1	72.1	68.7–75.5	75.0	71.9–78.1
85+	65.1	56.9–73.3	61.2	53.2–69.2	61.8	55.3–68.3
Total 18+	**74.5**	**73.2–75.8**	**59.7**	**58.4–61.0**	**67.0**	**66.2–67.8**

Notes
1. Overweight and obesity classification is based on measured height and weight. See ‘Box 14.1’ for more information.
2. In 2017–18, 33.8% of respondents aged 18 years and over did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Health Survey Users Guide, 2017–18 for further information.
Source: AIHW 2019.

Table 14.4: Proportion of overweight and obesity in adults aged 18 and over (%), by selected population characteristics and sex, 2017–18

Population characteristics	Men		Women		Persons	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	76.5	75.5–78.0	66.3	63.7–69.5	71.6	70.1–73.5
2	75.4	71.9–78.5	61.1	60.8–64.3	68.2	67.2–70.4
3	72.7	71.7–73.6	60.4	57.9–62.8	66.4	64.8–67.7
4	73.8	74.3–75.4	57.8	55.7–60.3	65.6	65.4–66.9
5 Highest	72.8	70.9–75.3	49.6	49.2–54.2	61.5	61.3–63.9
Remoteness area						
Major cities	73.4	71.4–74.8	56.9	55.5–58.7	65.1	63.9–66.0
Inner regional	78.1	76.8–81.9	64.3	62.9–68.9	71.0	70.5–74.2
Outer regional and remote	75.0	71.8–81.2	65.5	63.3–72.2	70.3	69.6–74.8

Notes
1. Age-standardised to the 2001 Australian population. Totals are age-standardised (10 year age groups up to age group 75+ years).
2. Overweight and obesity classification is based on measured height and weight. See ‘Box 14.1’ for more information.
3. In 2017–18, 33.8% of respondents aged 18 years and over did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Health Survey Users Guide, 2017–18 for further information.
4. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
5. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
Source: AIHW 2019.

Table 14.5: Proportion of overweight and obese in adults aged 18 and over (%), by Indigenous status, by BMI category and sex, 2017–18 and 2018–19

		Men		Women		Persons	
Indigenous status	**BMI category**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	Overweight but not obese	31.8	28.3–35.3	27.6	24.8–30.4	29.6	27.3–31.9
	Obese	45.0	41.1–48.9	49.1	46.1–52.1	47.2	44.7–49.7
	Overweight or obese	**76.8**	**73.2–80.4**	**76.8**	**74.0–79.6**	**76.8**	**74.5–79.1**
Non-Indigenous Australians	Overweight but not obese	42.0	40.5–43.5	29.5	28.2–30.8	35.6	34.6–36.6
	Obese	32.1	30.6–33.6	29.2	28.0–30.4	30.6	29.7–31.5
	Overweight or obese	**74.1**	**72.8–75.4**	**58.7**	**57.5–59.9**	**66.3**	**65.4–67.2**

Notes

1. Age-standardised to the 2001 Australian Standard Population.
2. Overweight and obesity classification is based on measured height and weight. See 'Box 14.1' for more information.
3. In 2017–18, 33.8% of respondents aged 18 years and over did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Health Survey Users Guide, 2017–18 for further information.
4. In 2018–19, 39.9% of respondents aged 18 years and over did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19 for further information.
5. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.

Source: ABS 2019a.

Table 14.6: Proportion of overweight and obese children and young people aged 5–17 (%), by year

	1995		2007–08		2011–12		2014–15		2017–18	
BMI category	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Overweight but not obese	15.2	13.2–17.2	17.2	15.1–19.3	18.3	16.9–19.7	20.2	18.2–22.2	17.0	15.4–18.6
Obese	4.9	3.9–6.0	7.5	5.8–9.2	7.4	6.4–8.4	7.4	6.1–8.7	8.1	6.7–9.5
Overweight or obese	**20.1**	**18.0–22.3**	**24.7**	**22.0–27.4**	**25.7**	**24.1–27.3**	**27.4**	**25.2–29.6**	**24.9**	**23.3–26.5**

Notes

1. Overweight and obesity classification is based on measured height and weight. See 'Box 14.1' for more information.
2. In 2014–15 and 2017–18, imputation was used to obtain BMI for respondents aged 2-17 years who did not have a measured Body Mass Index (BMI) (37.7% of respondents for 2014–15 and 43.9% for 2017–18). See ABS National Health Survey Users Guide, 2017–18 for further information.
3. Estimates for 2014–15 and 2017–18 use published ABS data which has been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.

Source: AIHW 2020.

Table 14.7: BMI category in children and young people aged 2–17 (%), by sex, 2017–18

	Boys		Girls		Persons	
BMI category	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Underweight	7.7	6.3–9.1	8.3	6.7–9.9	8.2	7.1–9.3
Normal range	66.6	64.4–68.8	67.6	65.0–70.2	66.9	65.2–68.6
Overweight but not obese	17.3	15.4–19.2	16.3	14.4–18.2	16.7	15.4–18.0
Obese	8.5	7.0–10.0	7.9	6.0–9.8	8.2	6.9–9.5
Overweight or obese	**25.4**	**23.4–27.4**	**24.3**	**21.9–26.7**	**24.9**	**23.4–26.4**

Notes

1. Overweight and obesity classification is based on measured height and weight. See ‘Box 14.1’ for more information.
2. In 2017–18, 43.9% of respondents aged 2-17 years did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Health Survey Users Guide, 2017–18 for further information.

Source: ABS 2018.

Table 14.8: Proportion of overweight and obese children and young people aged 2–17 (%), by selected population characteristics, 2017–18

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	28.1	24.0–32.1
2	26.6	22.1–31.0
3	27.5	23.6–31.5
4	21.9	18.4–25.3
5 Highest	20.8	17.4–24.2
Remoteness area		
Major cities	23.5	21.7–25.2
Inner regional	28.7	24.0–33.4
Outer regional and remote	26.6	20.9–32.2

Notes

1. Overweight and obesity classification is based on measured height and weight. See ‘Box 14.1’ for more information.
2. In 2017–18, 43.9% of respondents aged 2–17 years did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Health Survey Users Guide, 2017–18 for further information.
3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
4. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.

Source: AIHW 2020.

Table 14.9: Proportion of overweight and obese children and young people aged 2–17 (%), by Indigenous status and sex, 2017–18 and 2018–19

	Boys		Girls		Persons	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians						
Overweight but not obese	23.1	19.6–26.5	25.5	21.9–29.1	24.3	21.7–26.9
Obese	13.0	10.3–15.8	14.1	11.0–17.3	13.6	11.4–15.8
Overweight or obese	36.1	32.3–39.9	39.6	35.5–43.8	37.8	34.9–40.8
Non-Indigenous Australians						
Overweight but not obese	17.0	15.2–18.8	15.7	13.8–17.5	16.4	15.1–17.6
Obese	8.2	6.7–9.7	7.7	6.0–9.5	8.0	6.8–9.2
Overweight or obese	25.2	23.2–27.2	23.4	21.0–25.9	24.3	22.8–25.9

Notes
1. Overweight and obesity classification is based on measured height and weight. See 'Box 14.1' for more information.
2. In 2017–18, 43.9% of respondents aged 2–17 years did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Health Survey Users Guide, 2017–18 for further information.
3. In 2018–19, 53.6% of Aboriginal and Torres Strait Islander respondents aged 2-17 years did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19 for further information.
4. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
Source: AIHW 2020.

Table 14.10: Proportion of overweight or obese children and young people aged 2–17 (%), by Indigenous status and age, 2017–18 and 2018–19

	Indigenous Australians		Non-Indigenous Australians	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2–4	28.5	23.1–34.0	24.0	19.6–28.4
5–9	36.0	30.8–41.2	24.6	21.6–27.6
10–14	43.6	38.2–48.9	23.3	20.6–26.0
15–17	41.4	34.0–48.9	25.9	21.4–30.4
Total 2–17	**37.8**	**34.9–40.8**	**24.3**	**22.8–25.9**

Notes
1. Overweight and obesity classification is based on measured height and weight. See 'Box 14.1' for more information.
2. In 2017–18, 43.9% of respondents aged 2–17 years did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Health Survey Users Guide, 2017–18 for further information.
3. In 2018–19, 53.6% of Aboriginal and Torres Strait Islander respondents aged 2-17 years did not have a measured Body Mass Index (BMI). For these respondents, imputation was used to obtain BMI. See ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19 for further information.
4. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
Source: AIHW 2020.

Indicator 15: High or very high levels of psychological distress

13% of people experienced high or very high psychological distress in 2017–18.

Why is this important?

Psychological distress refers to unpleasant feelings or emotions that affect a person's level of functioning and interfere with the activities of daily living. This distress can result in having negative views of the environment, others and oneself, and manifest as symptoms of mental illness, including anxiety and depression.

The relationship between psychological distress and chronic conditions is complex. Compared with the total Australian population, people with chronic conditions have higher rates of high or very high psychological distress (AIHW 2018); and psychological distress has been found to increase the risk of a range of chronic conditions (Byles J et al. 2014; McLachlan KJ & Gale CR 2018). Having a chronic condition affects other aspects of life that may influence psychological distress.

Psychological distress provides a proxy measure of the overall mental health and wellbeing of the population. Very high levels of psychological distress may signify a need for professional help and provide an estimate of the need for mental health services (Department of Health 2017; NMHC 2018).

What does this indicator measure?

The proportion of adults aged 18 and over, with high or very high levels of psychological distress, derived from the Kessler Psychological Distress Scale. Higher scores on this scale indicate a higher level of distress; lower scores indicate a lower level of distress.

A ten-item scale is currently employed by the Australian Bureau of Statistics (ABS) in general population collections (i.e. K10), while a modified five item scale is included in the Aboriginal and Torres Strait Islander population collections (K5).

Total scores from the K10 scale are grouped as follows:

- 10–15 Low / 16–21 Moderate / 22–29 High / 30–50 Very high.

Total scores from the K5 scale will be grouped as follows:

- 5–11 Low or moderate / 12–25 High or very high.

What do the data show?

In 2017–18:

- 13% (an estimated 2.4 million) of adults experienced high or very high psychological distress (Figure 15.1). After adjusting for age, the proportion of adults with high or very high psychological distress remained relatively stable between 2001 and 2017–18 (ranging between 11%–13%) (Figure 15.1).
- women were more likely than men to have high or very high levels of psychological distress (15% compared with 11%, respectively) (Table 15.2).

Population groups

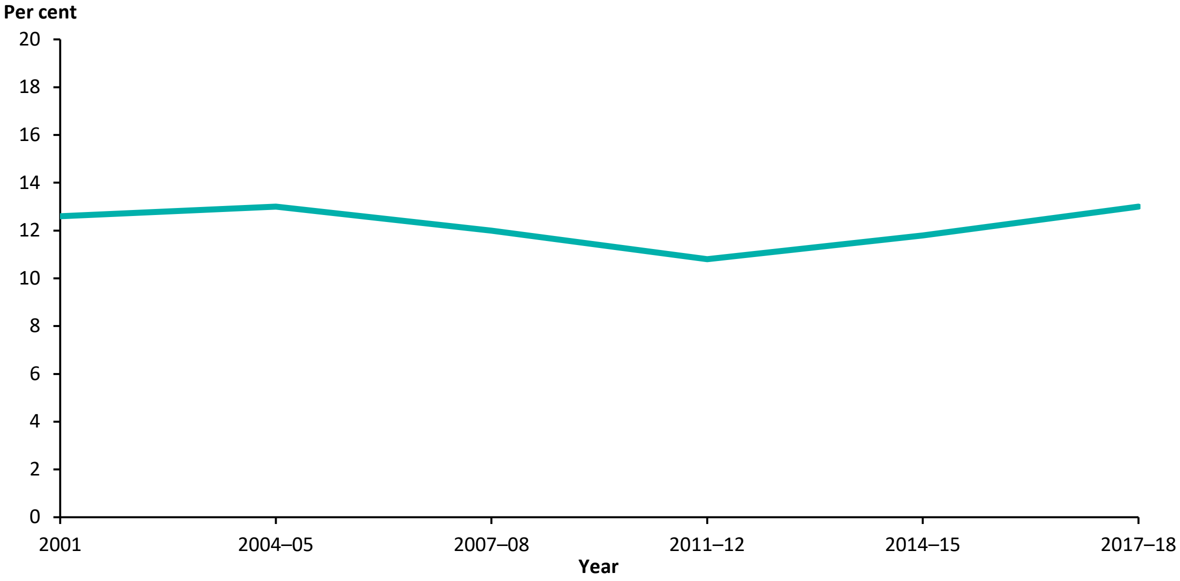
In 2017–18, after adjusting for age:

- adults living in the lowest socioeconomic areas were 2.5 times as likely to report high or very high levels of psychological stress as those living in the highest socioeconomic areas (21% and 8.3%, respectively)
- the proportion of adults reporting high or very high psychological distress was similar across remoteness categories (Figure 15.3).

In 2018–19, almost one-third (31%) of Indigenous adults reported high or very high levels of psychological distress (an estimated 149,400 people) (ABS 2019); this has increased from 27% in 2004–05 (ABS 2019).

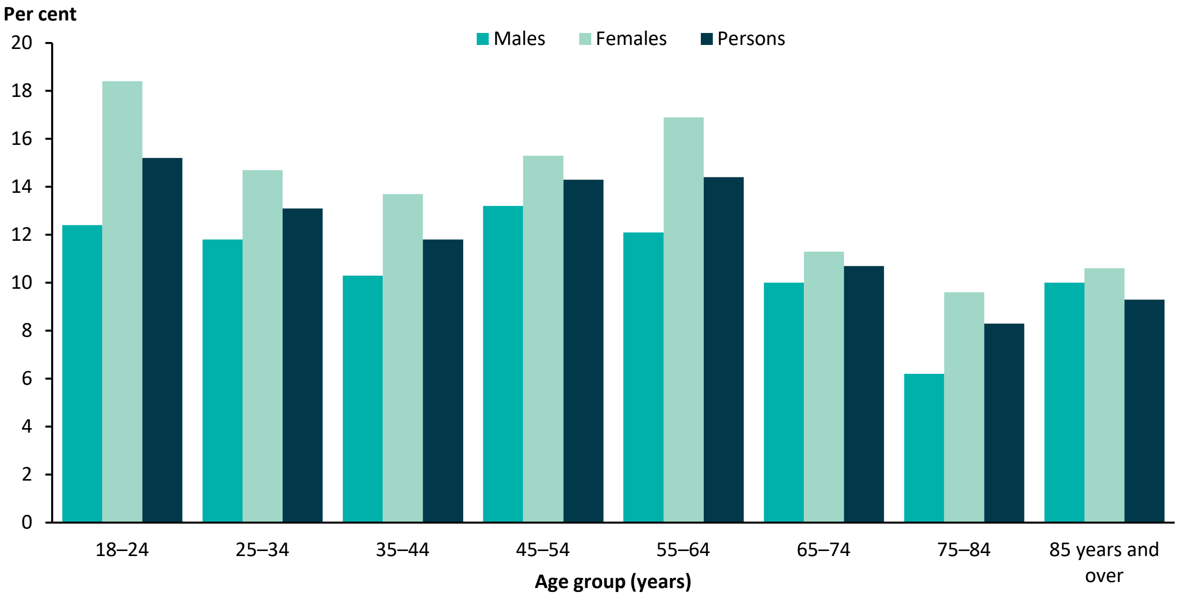
After adjusting for age, Indigenous adults were 2.3 times as likely as non-Indigenous adults to report high or very high levels of psychological stress (Table 15.5).

Figure 15.1: Percentage of adults aged 18 and over with high or very high levels of psychological distress, by year



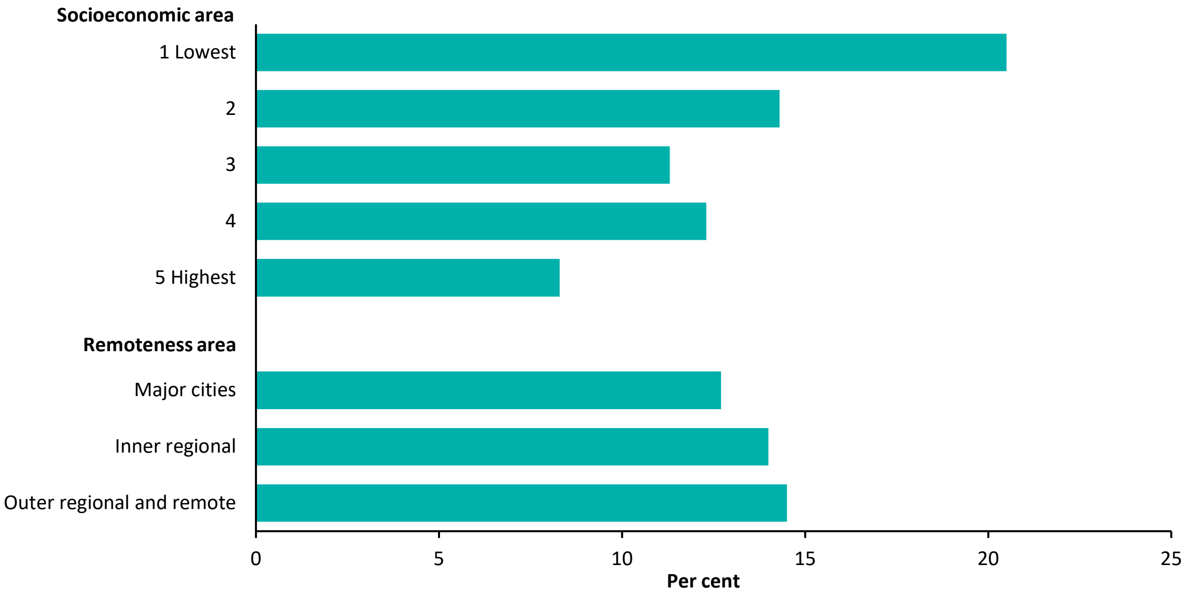
Notes
1. Measured by the Kessler 10 score.
2. Age-standardised to the 2001 Australian standard population.
3. Data and additional notes for this figure are shown in Table 15.1.
Source: ABS 2018.

Figure 15.2: Percentage of adults aged 18 and over with high or very high levels of psychological distress, by sex and age, 2017–18



Notes
1. Measured by the Kessler 10 score.
2. Data and additional notes for this figure are shown in Table 15.2.
Source: ABS 2018.

Figure 15.3: Percentage of adults aged 18 and over with high or very high levels of psychological distress, by selected population characteristics, 2017–18



Notes
1. Measured by the Kessler 10 score.
2. Age-standardised to the 2001 Australian standard population.
3. Data and additional notes for this figure are shown in Table 15.3.
Source: AIHW 2020.

Considerations

Data are self-reported.

Data sources

ABS National Health Survey 2017–18.

ABS National Aboriginal and Torres Strait Islander Health Survey 2018–19.

For further details, refer to Appendix B.

References

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Supplementary tables

Table 15.1: Percentage of adults aged 18 and over with high or very high levels of psychological distress, by year

Year	Per cent	95% CI
2001	12.6	12.1–13.1
2004–05	13.0	12.5–13.5
2007–08	12.0	11.3–12.7
2011–12	10.8	10.1–11.5
2014–15	11.8	11.2–12.4
2017–18	13.0	12.3–13.7

Notes

1. Measured by the Kessler 10 score.
2. Age-standardised to the 2001 Australian population.

Source: ABS 2018.

Table 15.2: Percentage of adults aged 18 and over with high or very high levels of psychological distress, by sex and age, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	12.4	8.5–16.3	18.4	14.7–22.1	15.2	12.6–17.8
25–34	11.8	9.6–14.0	14.7	12.1–17.3	13.1	11.4–14.8
35–44	10.3	8.4–12.2	13.7	11.7–15.7	11.8	10.5–13.1
45–54	13.2	10.7–15.7	15.3	13.4–17.2	14.3	12.8–15.8
55–64	12.1	9.8–14.4	16.9	14.8–19.0	14.4	12.8–16.0
65–74	10.0	7.8–12.2	11.3	9.2–13.4	10.7	9.3–12.1
75–84	6.2	3.9–8.5	9.6	6.7–12.5	8.3	6.5–10.1
85+	10.0	4.8–15.2	10.6	5.4–15.8	9.3	5.6–13.0
Total 18+	**11.3**	**10.3–12.3**	**14.5**	**13.6–15.4**	**13.0**	**12.3–13.7**

Note: Measured by the Kessler 10 score.

Source: ABS 2018.

Table 15.3: Percentage of adults aged 18 and over with high or very high levels of psychological distress, by selected population characteristics, 2017–18

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	20.5	18.9–22.1
2	14.3	12.7–15.9
3	11.3	9.9–12.7
4	12.3	11.0–13.6
5 Highest	8.3	6.9–9.7
Remoteness area		
Major cities	12.7	12.0–13.4
Inner regional	14.0	12.3–15.7
Outer regional and remote	14.5	12.2–16.8

Notes

1. Measured by the Kessler 10 score.
2. Age-standardised to the 2001 Australian standard population.
3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
4. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.

Source: AIHW 2020.

Table 15.4: Percentage of adults with high or very high levels of psychological distress in Indigenous Australians aged 18 and over, by year

Year	**Per cent**	**95% CI**
2004–05	27.2	25.2–29.2
2012–13	29.8	27.8–31.8
2018–19	30.7	28.3–33.1

Note: Measured by the Kessler 10 score.
Source: ABS 2019.

Table 15.5: Percentage of adults with high or very high levels of psychological distress in people aged 18 and over, by Indigenous status, 2017–18 and 2018–19

	Indigenous Australians		**Non-Indigenous Australians**	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–24	29.7	23.8–35.6	n.a.	n.a.
25–34	30.6	26.0–35.2	n.a.	n.a.
35–44	30.8	26.1–35.5	n.a.	n.a.
45–54	33.3	28.5–38.1	n.a.	n.a.
55+	29.6	25.1–34.1	n.a.	n.a.
Total 18+	**30.7**	**28.3–33.1**	n.a.	n.a.
Total 18+ age-standardised[(a)]	**30.8**	**28.4–33.2**	**13.2**	**12.6–13.8**

(continued)

Table 15.5 (continued): Percentage of adults with high or very high levels of psychological distress in people aged 18 and over, by Indigenous status, 2017–18 and 2018–19

n.a. not available

(a) Age-standardised to the 2001 Australian standard population.

Notes

1. Measured by the Kessler 10 score.
2. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.

Source: ABS 2019.

Indicator 16: Prevalence of mental illness

(a) 20% of people aged 16–85 experienced a mental illness in the 12 months prior to 2007.

(b) 14% of children and young people aged 4–17 experienced a mental disorder in the 12 months prior to 2013–14.

Why is this important?

The terms 'mental illness' and 'mental disorder' are often used interchangeably and describe a wide range of mental health and behavioural disorders which vary in duration and/or severity. The effect of mental illness on the individuals, families and/or carers concerned can be severe and its influence on society as a whole is far reaching.

Social problems often associated with mental illness include poverty, unemployment or reduced productivity, and homelessness. People with mental illness may also experience isolation, discrimination and stigma.

Many mental disorders, such as depression, are chronic conditions and cause significant ill health and disability in the population (AIHW 2016). Further, people with mental illness have poorer physical health than other Australians and a substantially reduced life expectancy (Department of Health 2017). People with mental illness are much more likely than the general population to have a range of chronic conditions (including diabetes, respiratory disease, cardiovascular disease, cancer and osteoporosis) and risk factors (such as smoking) (Department of Health 2017).

What does this indicator measure?

The proportion of people who experienced mental illness in the previous 12 months.

The ABS National Survey of Mental Health and Wellbeing provided information on lifetime mental disorders and mental disorders in the previous 12 months, by three high prevalence disorder groups: anxiety disorders (for example, social phobia), affective disorders (for example, depression), and substance use disorders (for example, alcohol harmful use).

The Australian Child and Adolescent Survey of Mental Health and Wellbeing provides information on the proportion of children and young people meeting the criteria for a diagnosis of common mental disorders in the 12 months prior to the survey. These include anxiety disorders, major depressive disorder, attention-deficit/hyperactivity disorder (ADHD) and conduct disorder.

The reporting of this indicator will focus on:

(a) People aged 16–85

(b) Children and young people aged 4–17.

What do the data show?

(a) People aged 16–85

In 2007:

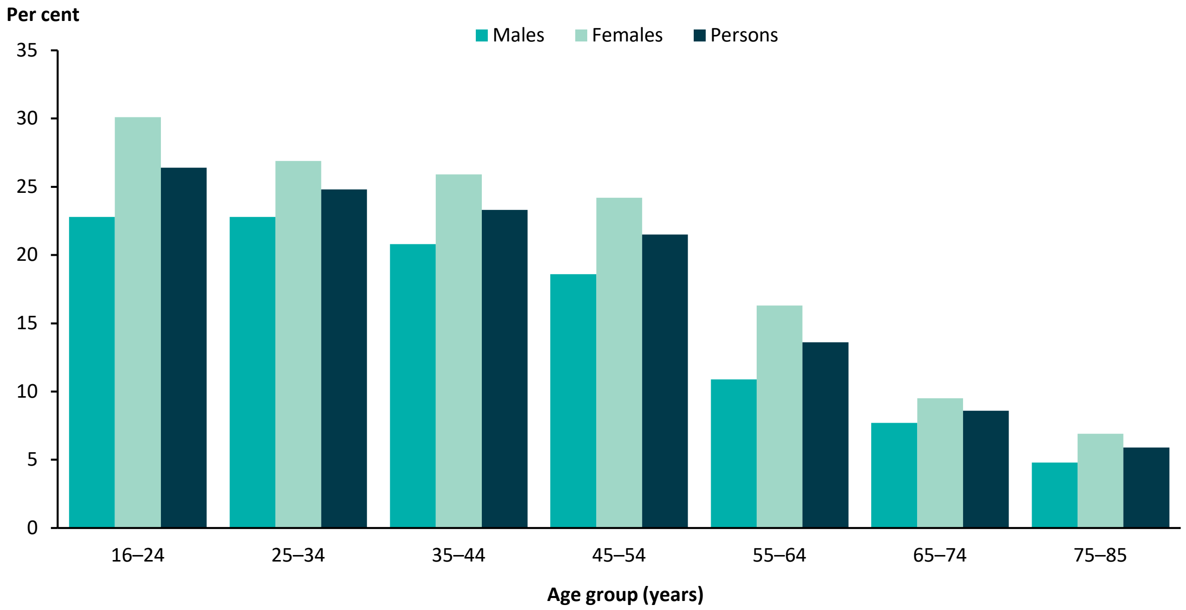
- 20% of people aged 16–85 had experienced a mental illness in the previous 12 months (an estimated 3.2 million people) (ABS 2008)
- mental illness was more common among younger people than older people—around a quarter of people aged 16–24 (26%) and 25–34 (25%) had experienced a mental illness in the previous 12 months compared with 5.9% of those aged 75–85 (Figure 16.1)
- females (22%) were more likely than males (18%) to have experienced a mental illness in the previous 12 months and this was consistent across age groups (Table 16.1 and Figure 16.1). Females and males also differed in the types of mental illness they experienced. A larger percentage of females than males experienced anxiety disorders (18% compared with 11%) and affective disorders (7.1% compared with 5.3%), while a larger percentage of males experienced substance use disorders (7.0% compared with 3.3% for females) (NMHC 2018).

Population groups

In 2007:

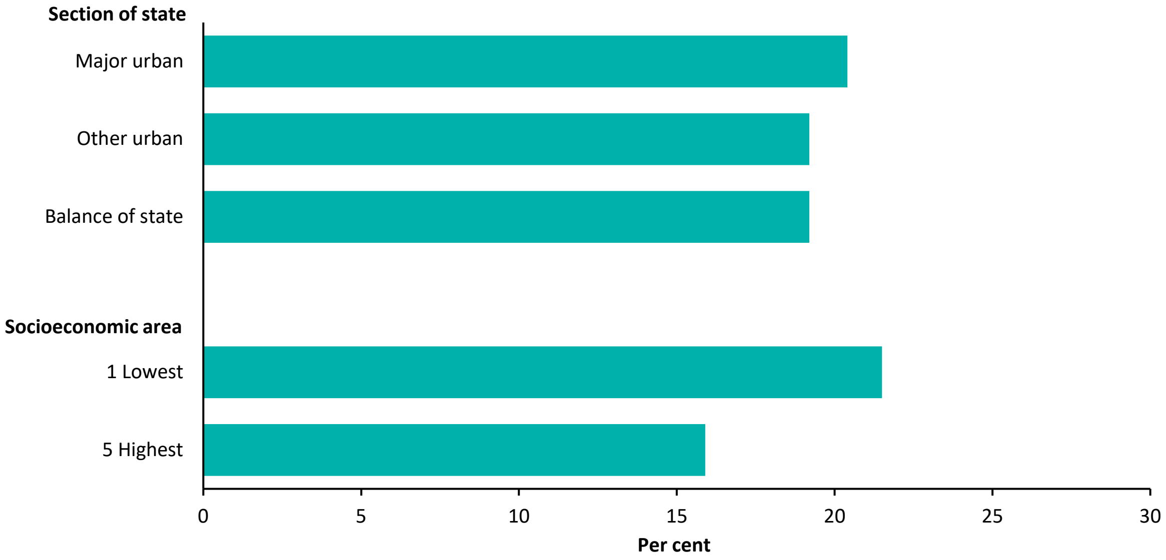
- persons aged 16–85 living in the lowest socioeconomic areas were more likely to have experienced a mental illness in the previous 12 months compared to those living in the highest socioeconomic areas (22% compared with 16%) (Figure 16.2)
- there was little variation in the proportion of people who have experienced a mental illness in the previous 12 months according to geographical location (*Balance of state* 19%, *Other urban* 19%, *Major urban* 20%) (Figure 16.2).

Figure 16.1: Prevalence of mental illness (%) in people aged 16–85, by age and sex, 2007



Notes
1. Includes persons who met criteria for diagnosis of a lifetime mental disorder (with hierarchy) and had symptoms in the 12 months prior to interview.
2. Persons who had a mental disorder in the previous 12 months as a proportion of all persons in that same age group.
3. Data and additional notes for this figure are shown in Table 16.1.
Source: ABS 2008.

Figure 16.2: Prevalence of mental illness (%) in people aged 16–85, by selected population characteristics, 2007



Notes
1. Includes persons who met criteria for diagnosis of a lifetime mental disorder (with hierarchy) and had symptoms in the 12 months prior to interview.
2. Data and additional notes for this figure are shown in Table 16.2.
Source: ABS 2008.

(b) Children and young people aged 4–17 who attended school

In 2013–14:

- 1 in 7 children and young people (14% or an estimated 560,000) aged 4–17 had experienced a mental illness in the previous 12 months (Goodsell et al. 2017; Table 16.3)
- the most common mental disorders were Attention Deficit Hyperactivity Disorder (ADHD) (7.4%) and anxiety disorders (6.9%) (Lawrence et al. 2015)
- in contrast to those aged 16–85, among 4–17 year olds a larger percentage of males than females had experienced a mental illness in the last 12 months (16% compared with 12%, respectively). This was largely due to the higher prevalence of ADHD among males (10% compared with 4.3% of females) (Lawrence et al. 2015)
- overall, the prevalence of having experienced a mental illness in the previous 12 months was similar for 4–11 year olds and 12–17 year olds—17% and 16%, respectively, for males; 11% and 13%, respectively, for females (Figure 16.3). However, young people were almost three times more likely to experience a severe mental disorder—23% of 12–17 year-olds with a mental disorder had a severe disorder compared with 8.2% of 4–11 year-olds with a mental disorder (Lawrence et al. 2015)

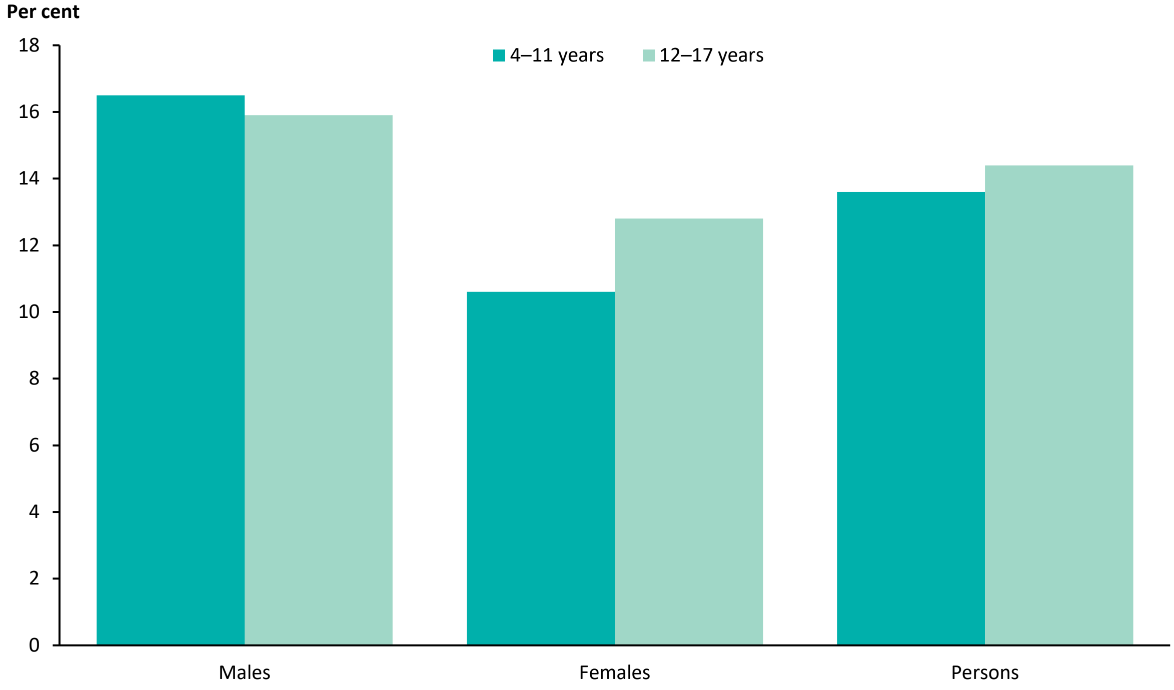
- the patterns of prevalence differed between age groups for both males and females. The prevalence of ADHD between 4–11 year olds and 12–17 year olds remained stable for males (10.9% and 9.8% respectively) but decreased for girls (5.4% and 2.7% respectively) (Lawrence et al. 2015). Likewise, the prevalence of anxiety disorders increased slightly for females (6.1% and 7.7% respectively) and decreased slightly for males (7.6% and 6.3% respectively). The prevalence of major depressive disorders increased for males (1.1% to 4.3%) and females (1.2% to 5.8%) (Lawrence et al. 2015).

Population groups

In 2013–14:

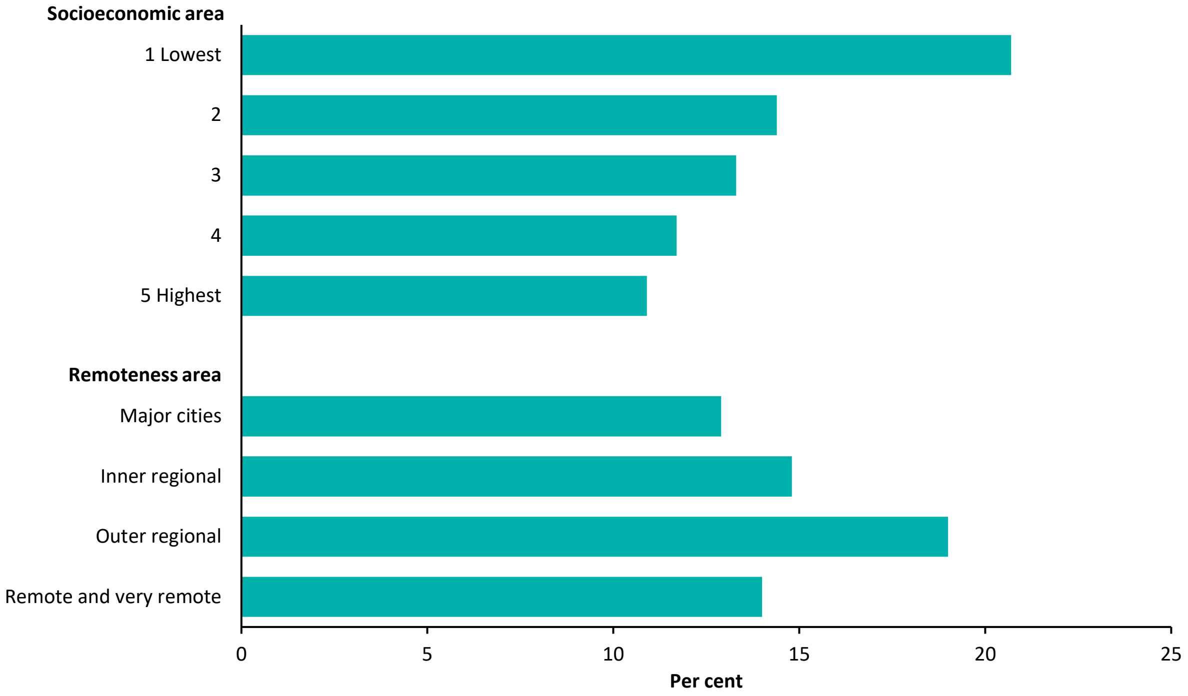
- children and young people aged 4–17 years living in the lowest socioeconomic areas were almost twice as likely to have experienced a mental illness in the previous 12 months compared to those living in the highest socioeconomic areas (21% compared with 11%) (Figure 16.4)
- the prevalence of mental illness in the previous 12 months also varied by geographical location—19% of children and young people in *Outer regional areas* experienced mental illness in the previous 12 months compared with 13% in *Major cities* (Figure 16.4).

Figure 16.3: Prevalence of mental disorders (%) in children and young people aged 4–17 who attended school, by age and sex, 2013–14



Note: Data and additional notes for this figure are shown in Table 16.3.
Source: Hafekost et al. 2016.

Figure 16.4: Prevalence of mental disorders (%) in children and young people aged 4–17 who attended school, by selected population characteristics, 2013–14



Notes
1. Results for those living in Remote Australia should be treated with caution due to the small sample sizes for those areas (Goodsell et al. 2017).
2. Data and additional notes for this figure are shown in Table 16.4.
Source: Hafekost et al. 2016.

Considerations

Includes high prevalence mental disorders only. While severe and persistent mental illness, such as psychosis, has a relatively low prevalence (so are not included here), it also contributes substantially to the impact of mental illness on society.

Data for different components of this indicator are sourced from different surveys. A comparable survey of Aboriginal and Torres Strait Islander people's mental health is not currently available. The most recent data available for this indicator was 2007, however, the National Study of Mental Health and Wellbeing, part of the Intergenerational Health and Mental Health Study (IGMHS) is currently in progress. Also, the Australian Government has committed to conducting a longitudinal child and youth mental health and wellbeing study, as well as, for the first time, measuring the prevalence of mental health in the Aboriginal and Torres Strait Islander population.

Data sources

ABS National Survey of Mental Health and Wellbeing 2007.

Young minds matter: the second Child and Adolescent Survey of Mental Health and Wellbeing, 2013–14.

For more details, refer to Appendix B.

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NMHC (National Mental Health Commission) 2018: Monitoring mental health and suicide prevention reform: Fifth National Mental Health and Suicide Prevention Plan, 2018. Sydney: National Mental Health Commission.

Supplementary tables

Table 16.1: Prevalence of mental illness (%) in people aged 16–85, by age and sex, 2007

Age group (years)	Males	Females	Persons
16–24	22.8	30.1	26.4
25–34	22.8	26.9	24.8
35–44	20.8	25.9	23.3
45–54	18.6	24.2	21.5
55–64	10.9	16.3	13.6
65–74	7.7	9.5	8.6
75–85	4.8	6.9	5.9
Total 16–85	**17.6**	**22.3**	**20.0**

Source: ABS 2008.

Table 16.2: Prevalence of mental illness (%) in people aged 16–85, by selected population characteristics, 2007

Population characteristic	
Socioeconomic area[(a)]	**Per cent**
1 Lowest	21.5
5 Highest	15.9
Section of state[(b)]	
Major urban	20.4
Other urban	19.2
Balance of state[(c)]	19.2

(a) Socioeconomic areas classified according to the Index of Relative Socio-economic Disadvantage (IRSD) from the socio-economic indexes for areas (SEIFA 2006).

(b) The Australian Standard Geographical Classification ASGC 2007 uses population counts to define Collection Districts (CDs) as urban or rural. Population counts are used to define a geographical area as a major urban area (population of 100,000 or more), other urban area (population of 1,000–9,999), bounded locality (population of 200–999) and rural balance (the remainder of the state/territory). For more information refer to ABS 2007.

(c) Bounded locality and Rural balance; see note above for more information.

Source: ABS 2008.

Table 16.3: Prevalence of mental disorders (%) in children and young people aged 4–17 who attended school, by age and sex, 2013–14

	Males		Females		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
4–11	16.5	14.5–18.5	10.6	9.0–12.2	13.6	12.3–14.9
12–17	15.9	13.8–18.1	12.8	10.8–14.7	14.4	12.9–15.9
Total 4–17	**16.3**	**14.7–17.8**	**11.5**	**10.3–12.7**	**13.9**	**12.9–15.0**

Source: Hafekost et al. 2016.

Table 16.4: Prevalence of mental disorders (%) in children and young people aged 4–17 who attended school, by selected population characteristics, 2013–14

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	20.7	17.6–23.8
2	14.4	12.1–16.7
3	13.3	11.0–15.5
4	11.7	9.7–13.7
5 Highest	10.9	9.3–12.6
Remoteness area		
Major cities	12.9	11.7–14.1
Inner regional	14.8	12.4–17.1
Outer regional	19.0	15.1–22.9
Remote and very remote	14.0	7.8–20.3

Notes

1. The index of relative socio-economic disadvantage is produced by the Australian Bureau of Statistics from the 2011 Census of Population and Housing and gives a summary measure of the relative socio-economic disadvantage of the Statistical Area 1 (SA1) that the household is located in.

2. Remoteness areas are based on the Australian Bureau of Statistics Remoteness Area classification for the Statistical Area 1 (SA1) the household is located in. The ABS Remoteness Area classification is based on the Accessibility/Remoteness Index of Australia (ARIA+) produced by the National Centre for Social Application of Geographic Information Systems (GISCA) at the University of Adelaide.

Source: Hafekost et al. 2016.

Indicator 17: Prevalence of heart, stroke and vascular disease

6.2% of adults aged 18 and over had heart, stroke and vascular disease in 2017–18.

Why is this important?

Heart, stroke and vascular disease includes a range of conditions that affect the heart or blood vessels. The most common and serious types include coronary heart disease, stroke and heart failure. Heart, stroke and vascular diseases are a leading cause of disease burden in Australia, and remain a major health problem, despite declining mortality and hospitalisation rates.

Many risk factors for heart, stroke and vascular disease are modifiable, including smoking ('Indicator 7'), physical inactivity ('Indicator 8'), excessive alcohol consumption ('Indicator 6'), obesity ('Indicator 14'), dietary factors, high blood pressure ('Indicator 11') and abnormal lipids ('Indicator 12') (AIHW 2018). Prevention activities may help reduce the heart, stroke and vascular disease burden.

What does this indicator measure?

The proportion of adults aged 18 and over who report having a heart, stroke or vascular disease.

The conditions comprise:

- Ischaemic heart diseases (also known as coronary heart disease)—angina, heart attack and other ischaemic heart diseases
- Cerebrovascular diseases—stroke and other cerebrovascular diseases
- Oedema
- Heart failure
- Diseases of the arteries, arterioles and capillaries.

What do the data show?

In 2017–18:

- an estimated 1.2 million (6.2%) adults aged 18 and over had heart, stroke and vascular disease; 5.6% after adjusting for age (AIHW 2019, Figure 17.1).
- the prevalence of heart, stroke and vascular disease among adults, after adjusting for age, was higher for men than women (6.5% compared with 4.8%).
- rates increased with age—more than 1 in 4 (26%) of those aged 75 and over had heart, stoke and vascular disease (Figure 17.1).

Note: changes in derivation methodology and relatively wide margins of error mean that reliable trend data on heart, stroke and vascular disease prevalence are not currently available.

Population groups

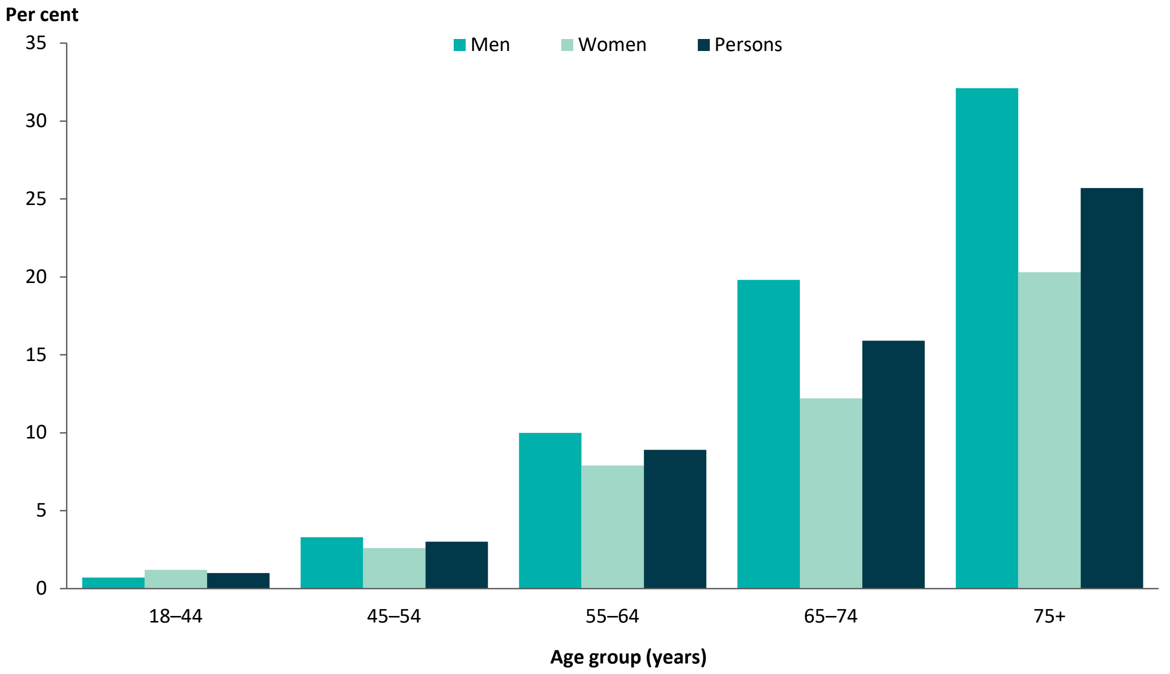
In 2017–18, after adjusting for age:

- adults living in the lowest socioeconomic areas had a slightly higher prevalence of heart, stroke and vascular diseases compared with those living in the highest socioeconomic areas (6.4% and 4.8%, respectively) (Figure 17.2)
- the prevalence of heart, stroke and vascular disease did not vary significantly by remoteness area (Figure 17.2).

In 2018–19:

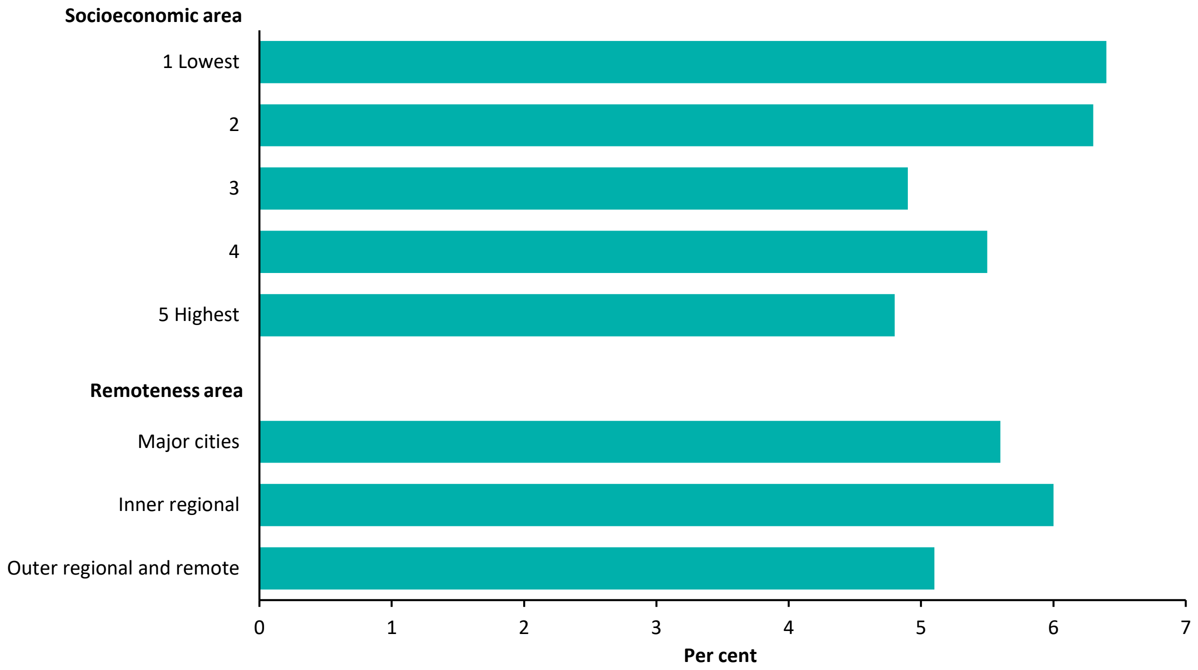
- an estimated 42,200 (8.7%) Indigenous Australian adults aged 18 and over had heart, stroke and vascular disease (ABS 2019b)
- after adjusting for age, the prevalence of heart, stroke and vascular diseases among Indigenous Australian adults aged 18 and over was 2.1 times the rate among non-Indigenous Australian adults in 2017–18 (Table 17.3).

Figure 17.1: Prevalence of heart, stroke and vascular disease (%) for adults aged 18 and over, by age and sex, 2017–18



Note: Data and additional notes for this figure are shown in Table 17.1.
Source: AIHW 2019.

Figure 17.2: Prevalence of heart, stroke and vascular disease (%) for adults aged 18 and over, by selected population characteristics, 2017–18



Notes

1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 17.2.

Source: AIHW 2019.

Considerations

The prevalence of heart, stroke and vascular diseases is based on self-reported data. Also see 'Indicator 18' (annual rate of acute coronary events) and 'Indicator 19' (annual rate of stroke events).

Data sources

ABS National Health Survey 2017–18.

ABS Australian Aboriginal and Torres Strait Islander Health Survey 2012–13 (National Aboriginal and Torres Strait Islander Health Survey component). ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19.

For further details, refer to Appendix B.

References

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Supplementary tables

Table 17.1: Prevalence of heart, stroke and vascular disease (%) for adults aged 18 and over, by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–44	0.7	0.3–1.1	1.2	0.7–1.8	1.0	0.7–1.3
45–54	3.3	2.4–4.2	2.6	1.7–3.5	3.0	2.4–3.6
55–64	10.0	7.6–12.4	7.9	6.0–9.9	8.9	7.4–10.5
65–74	19.8	17.2–22.4	12.2	10.0–14.4	15.9	14.3–17.5
75+	32.1	27.1–37.0	20.3	17.5–23.1	25.7	23.1–28.2
Total 18+	**7.0**	**6.3–7.7**	**5.4**	**5.0–5.8**	**6.2**	**5.8–6.6**
Total 18+ age-standardised rate[a]	**6.5**	**5.9–7.0**	**4.8**	**4.3–5.3**	**5.6**	**5.2–5.9**

(a) Age-standardised to the 2001 Australian standard population.
Sources: ABS 2018; AIHW 2019.

Table 17.2: Prevalence of heart, stroke and vascular disease (%) for adults aged 18 and over, by selected population characteristics, 2017–18

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	6.4	5.5–7.3
2	6.3	5.4–7.2
3	4.9	4.1–5.7
4	5.5	4.7–6.3
5 Highest	4.8	3.9–5.6
Remoteness area		
Major cities	5.6	5.1–6.0
Inner regional	6.0	5.1–6.8
Outer regional and remote	5.1	4.0–6.1

Notes
1. Age-standardised to the 2001 Australian standard population.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
Source: AIHW 2019.

Table 17.3: Prevalence of heart, stroke and vascular disease (%) for adults aged 18 and over, by Indigenous status, 2017–18 and 2018–19

	Males		Females		Persons	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	12.5	10.6–14.4	10.2	8.8–11.5	11.3	10.1–12.4
Non-Indigenous Australians	6.2	5.5–6.9	4.7	4.2–5.1	5.4	5.0–5.8

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Age-standardised to the 2001 Australian population. Totals are age-standardised (18–24 years then 10-year age groups up to age group 55+ years).
3. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.

Sources: ABS 2019a; ABS 2019b.

Indicator 18: Incidence of heart attacks (acute coronary events)

The heart attack (acute coronary events) rate for people aged 25 and over was 369 per 100,000 people in 2017.

Why is this important?

Coronary heart disease is the leading single cause of disease burden and death in Australia (AIHW 2021a; AIHW 2021b). It occurs when there is a blockage in the blood vessels that supply blood to the heart muscle.

Heart attack (also known as acute myocardial infarction) and unstable angina are the two major clinical forms of coronary heart disease. Both are acute coronary events.

Coronary heart disease is largely preventable, as many of its risk factors are modifiable. These include tobacco smoking ('Indicator 7'), high blood pressure ('Indicator 11'), high blood cholesterol, physical inactivity ('Indicator 8'), poor nutrition, and overweight and obesity ('Indicator 14') (AIHW 2020a).

What does this indicator measure?

The annual rate of heart attacks (acute coronary events).

The rate of acute coronary events is estimated from a proxy measure that combines hospital and mortality data. It sums the number of deaths for people aged 25 and over, with an underlying cause of acute coronary heart disease for each calendar year (based on the year of registration of death); plus, the number of non-fatal hospitalisations with a principal diagnosis of acute myocardial infarction or unstable angina that do not end in a transfer to another acute hospital for each calendar year (based on discharge date from hospital).

What do the data show?

In 2017:

- an estimated 61,800 people aged 25 and over had an acute coronary event—around 169 events every day (AIHW 2020b). This corresponds to a rate of 369 per 100,000 people. After adjusting for age, the rate of acute coronary events for people aged 25 and over was 325 per 100,000 people—a 35% decline since 2008 (502 per 100,000 people) (Figure 18.1).
- the rate of acute coronary events for men was more than two times as high as for women in 2017—451 per 100,000 compared with 209 per 100,000, respectively, after adjusting for age (Figure 18.1).

- the incidence of acute coronary events increases with age; the rate of events in those aged 85 and over was 2,756 per 100,000 for males and 2,046 per 100,000 for females (Figure 18.2).

Population groups

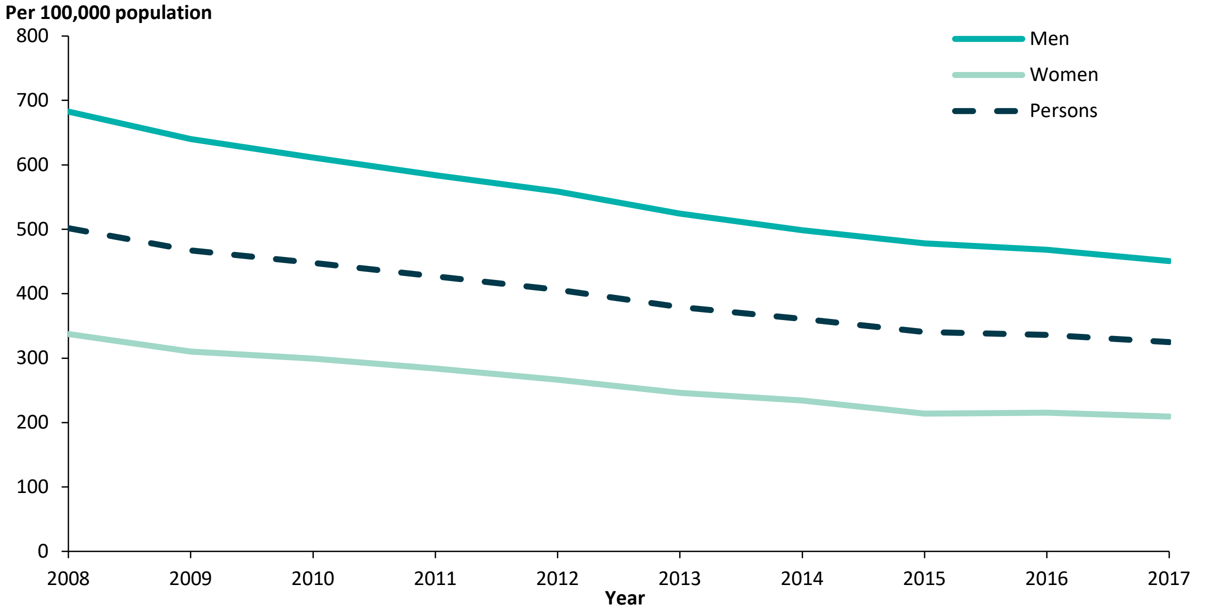
Reliable heart attack incidence data are not currently available by socioeconomic area or remoteness categories.

In 2017:

- an estimated 2,100 Indigenous Australians aged 25 and over had an acute coronary event; a rate of 640 per 100,000 population or around 6 events every day. After adjusting for age, the rate of acute coronary events among Indigenous Australians decreased over the last ten years, from 1,048 per 100,000 in 2007 to 816 per 100,000 in 2017 (Table 18.3).
- after adjusting for age, the rate of acute coronary events among Indigenous Australians aged 25 years and over was 2.5 times the rate of Other Australians (Table 18.3).

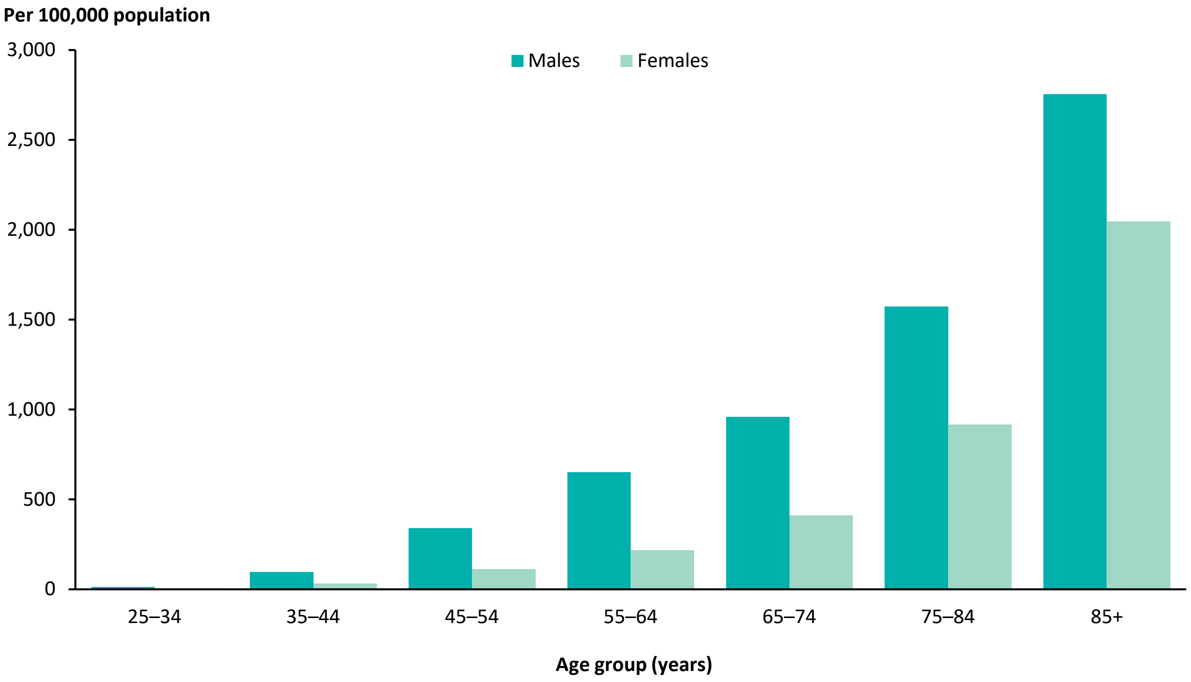
Note: These estimates for Indigenous and Other Australians are derived using data from only five jurisdictions (New South Wales, Queensland, Western Australia, South Australia and Northern Territory) where the quality of Indigenous identification is considered adequate in both the National Hospital Morbidity Database (NHMD) and National Mortality Database (NMD). Therefore, the rate is likely to underrepresent the actual rate of acute coronary events in Indigenous Australians.

Figure 18.1: Heart attack incidence rate in people aged 25 and over, by sex and year



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Acute coronary events include heart attack (acute myocardial infarction) and unstable angina.
3. Data and additional notes for this figure are shown in Table 18.1.
Source: Productivity Commission 2020.

Figure 18.2: Heart attack incidence rate in people aged 25 and over, by age and sex, 2017

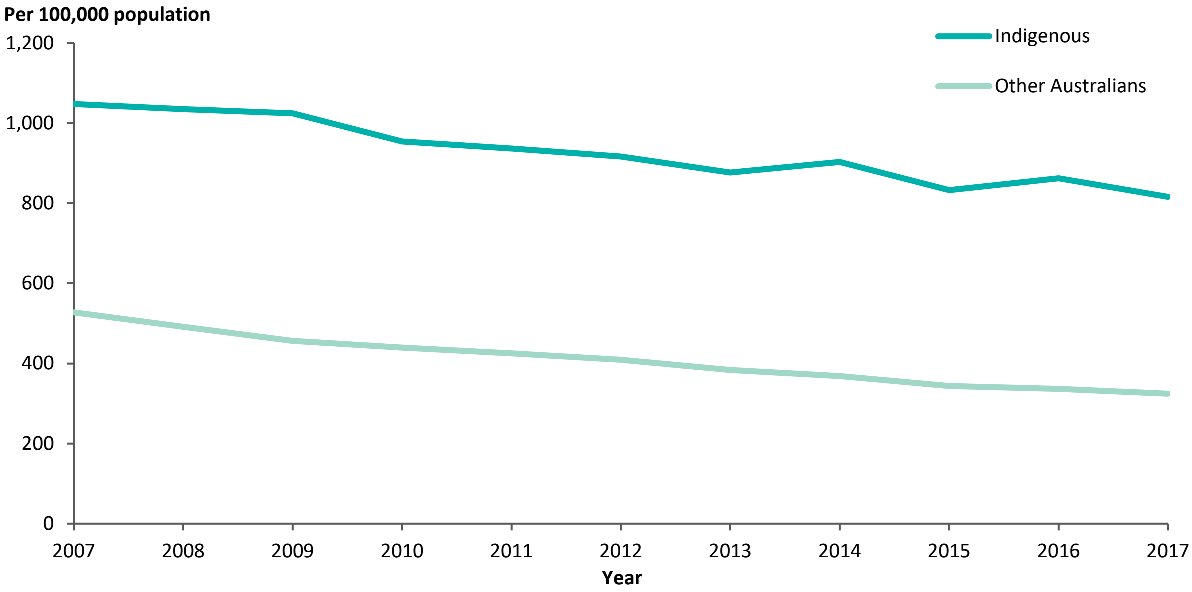


Notes

1. Acute coronary events include heart attack (acute myocardial infarction) and unstable angina.
2. Incidence is not reported for people under 25 years of age as the numbers of heart attacks in this age group is very small.
3. Data and additional notes for this figure are shown in Table 18.2.

Sources: AIHW analysis of the National Hospital Morbidity Database and AIHW National Mortality Database.

Figure 18.3: Heart attack incidence rate in people aged 25 and over, by Indigenous status and year



Notes

1. Age-standardised to the 2001 Australian standard population.
2. Acute coronary events include heart attack (acute myocardial infarction) and unstable angina.
3. Data and additional notes for this figure are shown in Table 18.3.

Sources: AIHW analysis of the National Hospital Morbidity Database and AIHW National Mortality Database.

Considerations

An individual may have more than one acute coronary event during a year.

The number of acute coronary events is estimated from proxy measures that combine hospital and mortality data and apply counting rules to reduce double counting of events. These methods do not count events that do not result in hospitalisation or death.

Data sources

AIHW National Hospital Morbidity Database.

AIHW National Mortality Database.

For further details, refer to Appendix B.

References

AIHW 2020a. Coronary heart disease. Canberra: AIHW. Viewed 31 August 2020.

AIHW 2020b. Australia's Health Performance Framework. Canberra: AIHW. Viewed 13 March 2020, https://www.aihw.gov.au/reports-data/australias-health-performance/australias-health-performance-framework.

AIHW 2021a. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2018. Australian Burden of Disease series no. 30. Cat. no. BOD 22. Canberra: AIHW.

AIHW 2021b. Heart, stroke and vascular disease—Australian facts. Cat. no. CVD 92. Canberra: AIHW. Viewed 23 September 2021.

Productivity Commission 2020. Report on Government Services. Viewed 15 October 2020, https://www.pc.gov.au/research/ongoing/report-on-government-services.

Supplementary tables

Table 18.1: Heart attack incidence rate in people aged 25 and over, by sex and year

	Number per 100,000 population		
Year	Men	Women	Persons
2008	682.7	337.4	501.7
2009	639.9	310.2	467.2
2010	611.3	299.2	447.8
2011	584.0	283.9	427.1
2012	558.4	266.4	405.9
2013	524.6	246.0	379.2
2014	498.7	234.3	360.8
2015	478.3	214.0	340.4
2016	468.3	215.3	336.3
2017	450.7	209.3	324.9

Notes

1. Acute coronary events include heart attack (acute myocardial infarction) and unstable angina.
2. Incidence is defined as the number of new cases in the reported year and is expressed as a rate of the relevant population.
3. Incidence is not reported for people under 25 years of age as the numbers of heart attacks in this age group is very small.
4. Directly age-standardised to the 2001 Australian standard population.
5. Causes of death data are subject to a revisions process. Causes of Death, Australia, 2018, includes preliminary data for 2017, revised data for 2016 and final data for 2015 and prior years. See Cat. no. 3303.0 for more information.
6. Rates are based on Estimated Resident Population at 30 June for the reference year.

Source: Productivity Commission 2020.

Table 18.2: Heart attack incidence rate in people aged 25 and over, by age, 2017

	Number per 100,000 population		
Age group (years)	Men	Women	Persons
25–34	12.4	5.1	8.7
35–44	96.6	32.2	64.3
45–54	340.1	111.9	223.8
55–64	651.7	217.5	429.9
65–74	960.0	412.0	681.2
75–84	1,573.0	917.7	1,221.6
85+	2,755.6	2,046.4	2,313.6

Notes

1. Acute coronary events include heart attack (acute myocardial infarction) and unstable angina.
2. Incidence is defined as the number of new cases in the reported year and is expressed as a rate of the relevant population.
3. Incidence is not reported for people under 25 years of age as the numbers of heart attacks in this age group is very small.
4. Causes of death data are subject to a revisions process. Causes of Death, Australia, 2018, includes preliminary data for 2017, revised data for 2016 and final data for 2015 and prior years. See Cat. no. 3303.0 for more information.
5. Rates are based on Estimated Resident Population at 30 June for the reference year.

Sources: AIHW analysis of the National Hospital Morbidity Database and AIHW National Mortality Database.

Table 18.3: Heart attack incidence rate in people aged 25 and over, by Indigenous status and year

	Number per 100,000 population	
Year	Indigenous Australians	Other Australians
2007	1,048.0	527.6
2008	1,034.8	491.5
2009	1,024.8	456.1
2010	954.7	440.0
2011	936.6	425.1
2012	917.2	409.0
2013	876.9	383.5
2014	903.7	368.7
2015	832.8	343.9
2016	862.6	336.9
2017	816.2	324.5

Notes

1. Acute coronary events include heart attack (acute myocardial infarction) and unstable angina.
2. Incidence is defined as the number of new cases in the reported year and is expressed as a rate of the relevant population.
3. Incidence is not reported for people under 25 years of age as the numbers of heart attacks in this age group is very small.
4. Directly age-standardised to the 2001 Australian standard population.
5. Causes of death data are subject to a revisions process. Causes of Death, Australia, 2018, includes preliminary data for 2017, revised data for 2016 and final data for 2015 and prior years. See Cat. no. 3303.0 for more information.
6. Rates are based on Estimated Resident Population at 30 June for the reference year.
7. National Mortality Data (NMD) from 5 jurisdictions (NSW, Qld, WA, SA and NT) have been assessed by the AIHW as having adequate Indigenous identification from 1998 onwards. The estimates shown in this table for Indigenous and Other Australians are derived using only data from these five jurisdictions because the quality of identification is considered reasonable in both the National Hospital Morbidity Database (NHMD) and the NMD.
8. Since 2012, recording of Indigenous status in private hospitals in the Northern Territory (NT) has improved, resulting in the incidence of heart attacks being captured for both Indigenous and Other Australians. Prior to 2012, private hospitals in the NT did not record information on Indigenous status, and as such all non-fatal heart attack events treated in the private hospital in the NT were included in the incidence counts for Other Australians.
9. Other Australians includes non-Indigenous people and cases where Indigenous status was not stated or inadequately described. For the NT, all non-fatal events treated in the private hospital are included in the incidence counts for other Australians.

Sources: AIHW analysis of the National Hospital Morbidity Database and AIHW National Mortality Database.

Indicator 19: Incidence of stroke

There were 155 stroke events per 100,000 people in 2017.

Why is this important?

Stroke is a leading cause of disease burden in Australia (AIHW 2019); it contributes to premature death, disability, and preventable hospitalisations (AIHW 2020a). Stroke is often preventable because many of its risk factors are modifiable. These include smoking ('Indicator 7'), insufficient physical inactivity ('Indicator 8'), obesity ('Indicator 14'), high blood pressure ('Indicator 11') and abnormal lipids ('Indicator 12') (AIHW 2020a).

Stroke occurs when a blood vessel supplying blood to the brain either suddenly becomes blocked (known as an ischaemic stroke) or ruptures and begins to bleed (known as a haemorrhagic stroke). Either may result in part of the brain dying, leading to sudden impairment that can affect a number of functions. Stroke often causes paralysis of parts of the body normally controlled by the area of the brain affected by the stroke, or speech problems and other symptoms, such as difficulties with swallowing, vision and thinking.

What does this indicator measure?

The annual rate of stroke events.

This is estimated by the number of deaths where stroke is the underlying cause of death plus the number of acute and non-fatal stroke hospitalisations (first and recurrent stroke events), per 100,000 population.

What do the data show?

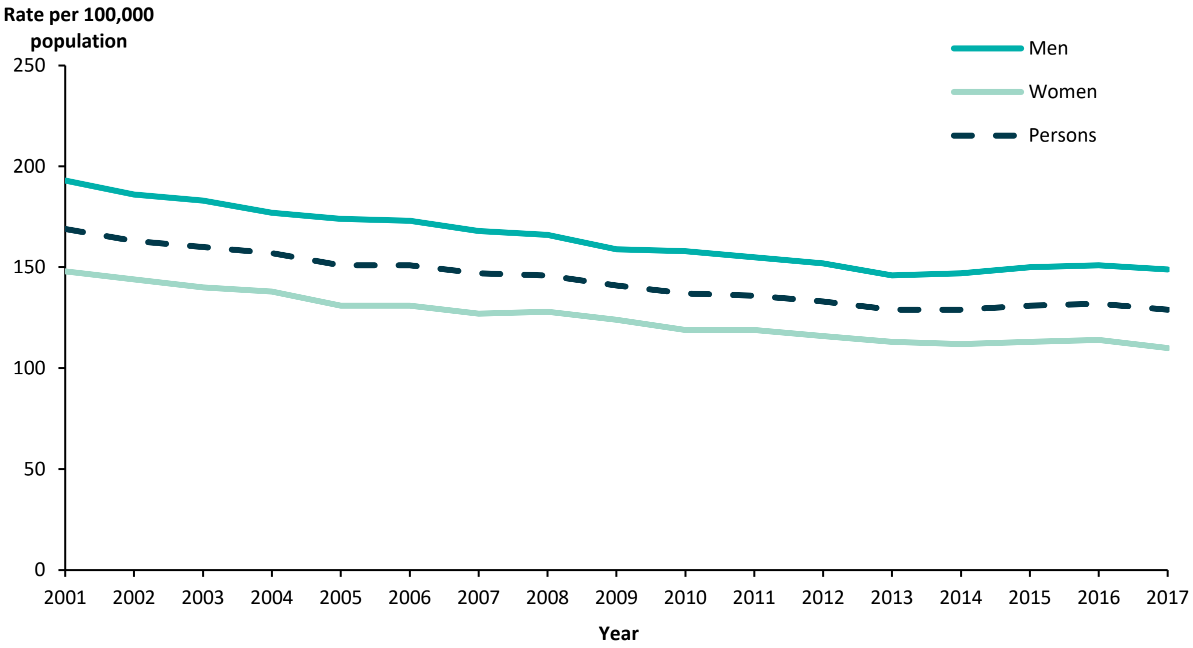
In 2017:

- there were around 38,000 stroke events in Australia (AIHW 2020a)—a rate of 155 per 100,000 population or more than 100 every day. After adjusting for age, the rate of stroke events fell by 24% between 2001 and 2017, from 169 to 129 events per 100,000 (Figure 19.1). The rate of decline was greater among those aged 75 and over, when compared to those aged 55–74 (AIHW 2020a).
- males were more likely to have had a stroke event than females (149 and 110 per 100,000 in 2017, respectively, after adjusting for age) (Figure 19.1).
- the rate of stroke events increases with age; for example, the rate of these events among those aged 85 and over was 2,141 per 100,000 for men and 2,165 per 100,000 for women (Figure 19.2).

Population groups

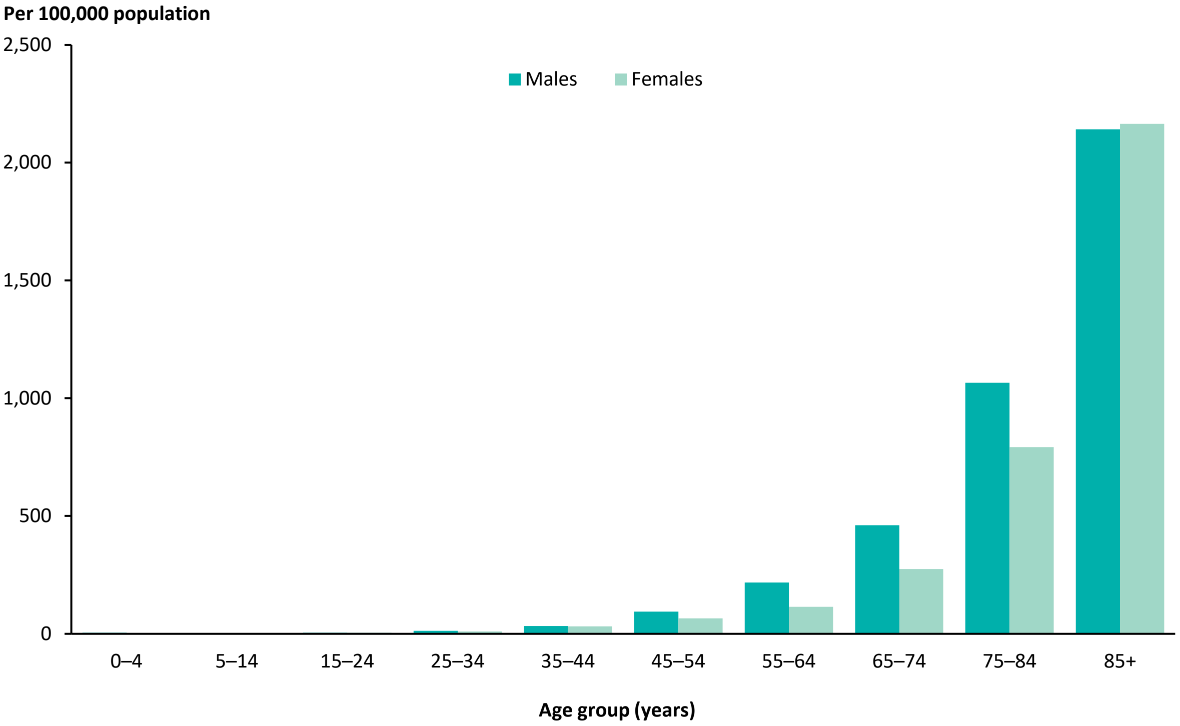
Reliable stroke incidence data are not currently available by socioeconomic area, remoteness categories, nor Indigenous status.

Figure 19.1: Stroke incidence, by sex and year



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 19.1.
Sources: AIHW 2020a; AIHW 2020b.

Figure 19.2: Stroke incidence, by age and sex, 2017



Note: Data and additional notes for this figure are shown in Table 19.2.
Sources: AIHW analysis of the National Hospital Morbidity Database and AIHW National Mortality Database.

Considerations

An individual may have more than one stroke event during a year.

The number of stroke events are estimated from combined hospital and mortality data and apply counting rules to reduce double counting of events.

These methods do not count stroke events that do not result in hospitalisation or death.

Data sources

AIHW National Hospital Morbidity Database.

AIHW National Mortality Database.

For further details, refer to Appendix B.

References

AIHW 2019. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015. Cat. no. BOD 22. Canberra: AIHW.

AIHW 2020a. Stroke. Canberra: AIHW. Canberra: AIHW. Viewed 28 August 2020.

AIHW 2020b. Cardiovascular Disease Snapshot. Cat. no. CVD 83. Viewed 28 August 2020, https://www.aihw.gov.au/reports/heart-stroke-vascular-diseases/hsvd-facts/archived-content.

Supplementary tables

Table 19.1: Stroke incidence, by sex and year

	Rate per 100,000 population		
Year	**Males**	**Females**	**Persons**
2001	193	148	169
2002	186	144	163
2003	183	140	160
2004	177	138	157
2005	174	131	151
2006	173	131	151
2007	168	127	147
2008	166	128	146
2009	159	124	141
2010	158	119	137
2011	155	119	136
2012	152	116	133
2013	146	113	129
2014	147	112	129
2015	150	113	131
2016	151	114	132
2017	149	110	129

Note: Age-standardised to the 2001 Australian standard population.
Source: AIHW 2020b.

Table 19.2: Stroke incidence, by age and sex, 2017

	Rate per 100,000 population		
Age group (years)	**Males**	**Females**	**Persons**
0–4	4.3	2.3	3.4
5–14	2.2	2.2	2.2
15–24	4.5	5.2	4.9
25–34	12.5	10.1	11.3
35–44	33.5	32.0	32.7
45–54	94.8	65.4	79.8
55–64	217.9	114.9	165.2
65–74	461.8	275.0	366.8
75–84	1,066.2	792.9	919.6
85+	2,141.4	2,165.0	2,156.1
Total	**n.a.**	**n.a.**	**154.7**

n.a. not available.
Sources: AIHW analysis of the National Hospital Morbidity Database and AIHW National Mortality Database.

Indicator 20: Prevalence of type 2 diabetes

5.4% of people aged 18 years and over had type 2 diabetes in 2017–18.

Why is this important?

Type 2 diabetes is the most common form of diabetes. It is a progressive condition in which the body becomes resistant to the normal effects of insulin and insulin production by the pancreas becomes progressively slower. Type 2 diabetes is associated with modifiable lifestyle factors. Risk is also associated with genetic and family-related factors. Diabetes may lead to short- and long-term complications, such as heart disease, kidney disease, blindness and lower-limb amputation. In the past, type 2 diabetes was typically diagnosed after age 50, but diagnosis in younger adults, adolescents and even children is increasingly common.

What does this indicator measure?

The proportion of people aged 18 years and over with self-reported type 2 diabetes.

A respondent to the National Health Survey (NHS) is considered to have type 2 diabetes if they reported having been told by a doctor or nurse that they had type 2 diabetes, irrespective of whether they considered their diabetes to be current or long-term.

What do the data show?

In 2017–18:

- an estimated 1 million (or 5.4%) Australian adults had type 2 diabetes (4.8% after adjusting for age) (AIHW 2020). After adjusting for age, the self-reported prevalence of type 2 diabetes increased from 3.5% in 2001 to 4.8% in 2007–08. Between 2011–12 and 2017–18, the prevalence of type 2 diabetes showed a stable pattern — 4.7% of people had type 2 diabetes in 2011–12, 5.2% in 2014–15 and 4.8% in 2017–18 (Figure 20.1)
- the prevalence of type 2 diabetes increased with age, reaching a peak of 17% (or around 1 in 6 people) in those aged 75 and over (Figure 20.2)
- after adjusting for age, men were 1.3 times as likely as women to have type 2 diabetes (5.5% compared with 4.1%, respectively) (Figure 20.2).

Population groups

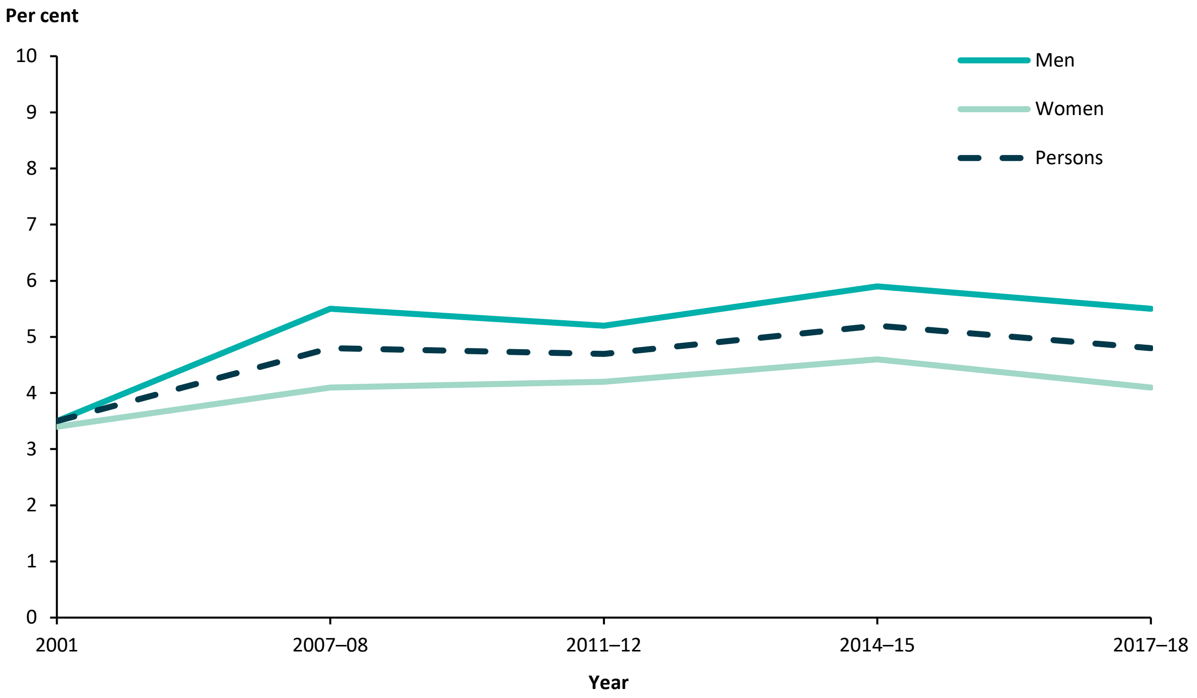
In 2017–18, after adjusting for age, the prevalence of type 2 diabetes was:

- around twice as high among adults living in the lowest socioeconomic areas when compared with adults living in the highest socioeconomic areas (6.9% and 3.4%, respectively) (Figure 20.3)
- higher among adults living in *Outer regional and remote* areas (6.0%) than those living *Major cities* (4.8%) and *Inner regional* areas (4.3%) (Figure 20.3).

In 2018–19:

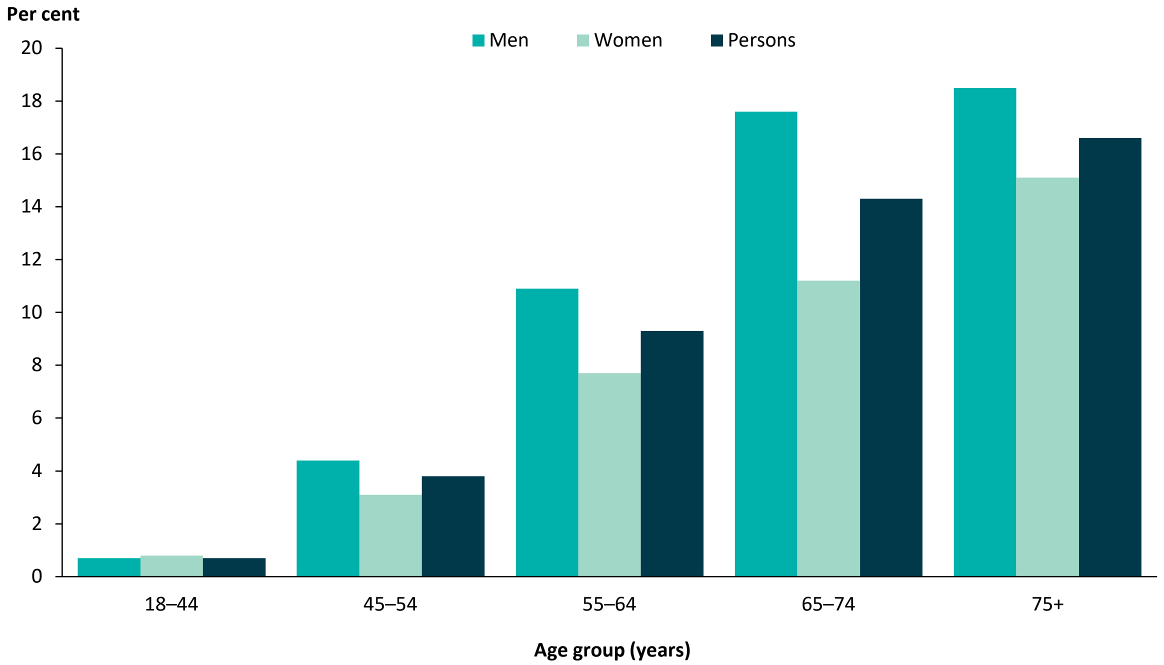
- around 1 in 10 Indigenous Australian adults (11% or an estimated 51,900) had type 2 diabetes (AIHW 2020)
- after adjusting for age, the rate was similar for men and women (Table 20.4)
- after adjusting for age, Indigenous Australians were 2.9 times as likely to have type 2 diabetes as non-Indigenous Australians in 2017–18 (Table 20.4).

Figure 20.1: Prevalence of self-reported type 2 diabetes, adults 18 and over, by sex and year



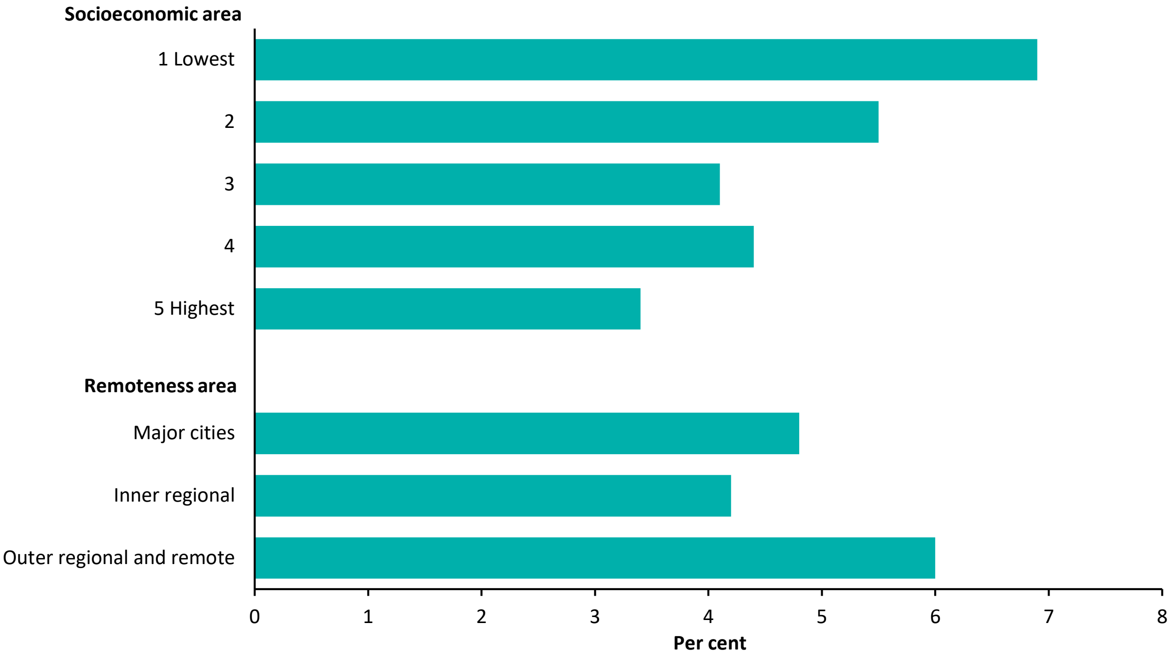
Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 20.1.
Source: AIHW 2020.

Figure 20.2: Prevalence of self-reported type 2 diabetes, adults 18 and over, by age and sex, 2017–18



Note: Data and additional notes for this figure are shown in Table 20.2.
Source: AIHW 2020.

Figure 20.3: Prevalence of self-reported type 2 diabetes, adults 18 and over, by selected population characteristics, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 20.3.
Source: AIHW 2020.

Considerations

This indicator is based on self-reported survey results as biomedical data is not routinely collected. The self-reported prevalence is likely to underestimate the true prevalence as it does not include people with undiagnosed diabetes. The proportion of people with undiagnosed diabetes has changed over time and this would have impacted on the prevalence of type 2 diabetes in Australia over time. The 2011–12 Australian Health Survey, which included both measured and self-report data, showed that for every 4 adults with diagnosed diabetes, there was 1 who was undiagnosed. Therefore, based on these estimates, one in five people with diabetes would not be identified in self-report data (ABS 2013). The 1999–2000 Australian Diabetes, Obesity and Lifestyle Study, based on measured blood sugar levels, found that for every known case of diabetes, there was one undiagnosed case (Dunstan et al. 2002).

Regular biomedical health surveys are required to accurately report on the prevalence of diabetes.

Also see 'Indicator 13' (Raised blood glucose levels).

Data sources

ABS National Health Survey 2017–18.

ABS Australian Aboriginal and Torres Strait Islander Health Survey 2018–19.

For further details, refer to Appendix B.

References

ABS 2013. Australian Health Survey: Biomedical results for chronic diseases, 2011–12. ABS Cat. no. 4364.0.55.005. Canberra: ABS.

AIHW 2020. Indicators for the Australian National Diabetes Strategy 2016–2020: data update. Cat. no. CVD 81. Canberra: AIHW.

Dunstan D, Zimmet P, Welborn T, Courten Md, Cameron A, Sicree R et al. 2002. The rising prevalence of diabetes and impaired glucose tolerance: the Australian Diabetes, Obesity and Lifestyle Study. Diabetes Care 25:829–34.

Supplementary tables

Table 20.1: Prevalence of self-reported type 2 diabetes, adults 18 and over, by sex and year

	Men		Women		Persons	
Year	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
2001	3.5	3.1–4.0	3.4	2.9–3.8	3.5	3.1–3.8
2007–08	5.5	4.9–6.2	4.1	3.5–4.6	4.8	4.3–5.2
2011–12	5.2	4.6–5.7	4.2	3.7–4.7	4.7	4.3–5.1
2014–15	5.9	5.2–6.5	4.6	4.0–5.1	5.2	4.7–5.6
2017–18	5.5	5.0–6.1	4.1	3.7–4.6	4.8	4.4–5.1

Notes

1. A respondent is considered to have type 2 diabetes if they reported having been told by a doctor or nurse that they had type 2 diabetes, irrespective of whether they considered their diabetes to be current or long-term.
2. Age-standardised to the 2001 Australian Standard Population (age groups: 18–44, 45–54, 55–64, 65–74 and 75+).

Source: AIHW 2020.

Table 20.2: Prevalence of self-reported type 2 diabetes, adults 18 and over, by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
18–44	0.7	0.3–1.1	0.8	0.4–1.2	0.7	0.5–1.0
45–54	4.4	3.1–5.7	3.1	2.1–4.2	3.8	2.9–4.6
55–64	10.9	8.6–13.2	7.7	5.9–9.6	9.3	8.0–10.6
65–74	17.6	15.2–20.0	11.2	9.1–13.2	14.3	12.6–15.9
75+	18.5	14.4–22.5	15.1	12.1–18.1	16.6	14.2–19.0
Total 18+	**6.1**	**5.5–6.7**	**4.6**	**4.2–5.1**	**5.4**	**5.0–5.7**
Total 18+ age-standardised[(a)]	**5.5**	**5.0–6.1**	**4.1**	**3.7–4.6**	**4.8**	**4.4–5.1**

(a) Age-standardised to the 2001 Australian Standard Population (age groups: 18–44, 45-54, 55-64, 65–74 and 75+).

Note: A respondent is considered to have type 2 diabetes if they reported having been told by a doctor or nurse that they had type 2 diabetes, irrespective of whether they considered their diabetes to be current or long-term.

Source: AIHW 2020.

Table 20.3: Prevalence of self-reported type 2 diabetes, adults 18 and over, by selected population characteristics, 2017–18

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	6.9	6.0–7.8
2	5.5	4.6–6.3
3	4.1	3.4–4.8
4	4.4	3.6–5.2
5 Highest	3.4	2.6–4.1
Remoteness area		
Major cities	4.8	4.3–5.2
Inner regional	4.3	3.5–5.0
Outer regional and remote	6.0	5.0–7.0

Notes

1. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
2. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
3. A respondent is considered to have type 2 diabetes if they reported having been told by a doctor or nurse that they had type 2 diabetes, irrespective of whether they considered their diabetes to be current or long-term.
4. Age-standardised to the 2001 Australian Standard Population (age groups: 18–44, 45–54, 55–64, 65–74 and 75+).

Source: AIHW 2020.

Table 20.4: Prevalence of self-reported type 2 diabetes, adults 18 and over, by Indigenous status, by sex, 2017–18 and 2018–19

	Men		Women		Persons	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	14.2	12.0–16.4	13.0	11.2–14.7	13.5	12.1–14.9
Non-Indigenous Australians	5.5	4.9–6.0	4.1	3.6–4.5	4.7	4.4–5.1

Notes

1. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
2. A respondent is considered to have type 2 diabetes if they reported having been told by a doctor or nurse that they had type 2 diabetes, irrespective of whether they considered their diabetes to be current or long-term.
3. Age-standardised to the 2001 Australian Standard Population (age groups: 18–44, 45–54, 55–64 and 65+).

Source: AIHW 2020.

Indicator 21: Prevalence of chronic respiratory conditions

In 2017–18, the proportion of people who had:

(a) chronic respiratory conditions was 31% (all ages)

(b) asthma was 11% (all ages)

(c) COPD was 4.8% (people aged 45 and over only).

Why is this important?

Respiratory conditions contributed 7.5% of the total burden of disease in Australia in 2015 (AIHW 2019a). Chronic respiratory conditions affect the airways, including the lungs, as well as passages that transfer air from the mouth and nose into the lungs. These conditions are characterised by symptoms such as wheezing, shortness of breath, chest tightness and cough. Conditions include asthma, chronic obstructive pulmonary disease (COPD), allergic rhinitis ('hay fever') and other conditions such as chronic sinusitis, bronchiectasis, occupational lung diseases, sleep apnoea, pulmonary fibrosis and cystic fibrosis.

What does this indicator measure?

The proportion of people who report having chronic respiratory conditions.

Chronic respiratory conditions include:

- Asthma
- COPD (includes emphysema and chronic bronchitis)
- Allergic rhinitis ('hay fever')
- Chronic sinusitis
- Other diseases of the respiratory system
- Symptoms and signs involving the respiratory system.

The reporting of this indicator will focus on:

(a) Total chronic respiratory conditions (as listed above).

(b) Asthma.

(c) COPD (people aged 45 and over only).

Note: COPD occurs mostly in people aged 45 and over. While it is occasionally reported in younger age groups, in those aged 45 and over there is more certainty that the condition is COPD and not another respiratory condition.

What do the data show?

(a) Chronic respiratory conditions

- In 2017–18, chronic respiratory conditions were estimated to affect almost one-third of the population (31% or an estimated 7.4 million people) (ABS 2018).
- In 2018–19, chronic respiratory conditions were estimated to affect 238,000 Indigenous Australians (29%); after adjusting for age, Indigenous Australians were as likely as non-Indigenous Australians, in 2017–18, to have a chronic respiratory condition (rate ratio of 1.1) (ABS 2019a).

(b) Asthma

In 2017–18:

- an estimated 2.7 million people (11%) were estimated to have asthma (ABS 2018). After adjusting for age, the prevalence of asthma has fluctuated over time, decreasing from 12% in 2001 to 10% in 2007–08, then increasing to 11% in 2017–18. (Figure 21.1).
- unlike many chronic conditions, the prevalence of asthma doesn't increase noticeably with age—ranging from 10% to 13% across age groups (Table 21.2).
- asthma was more common in males at younger ages (0–14), equally as common among males and females aged 15–24 and more common in females at older ages (25 and over) (Figure 21.2).

Population groups

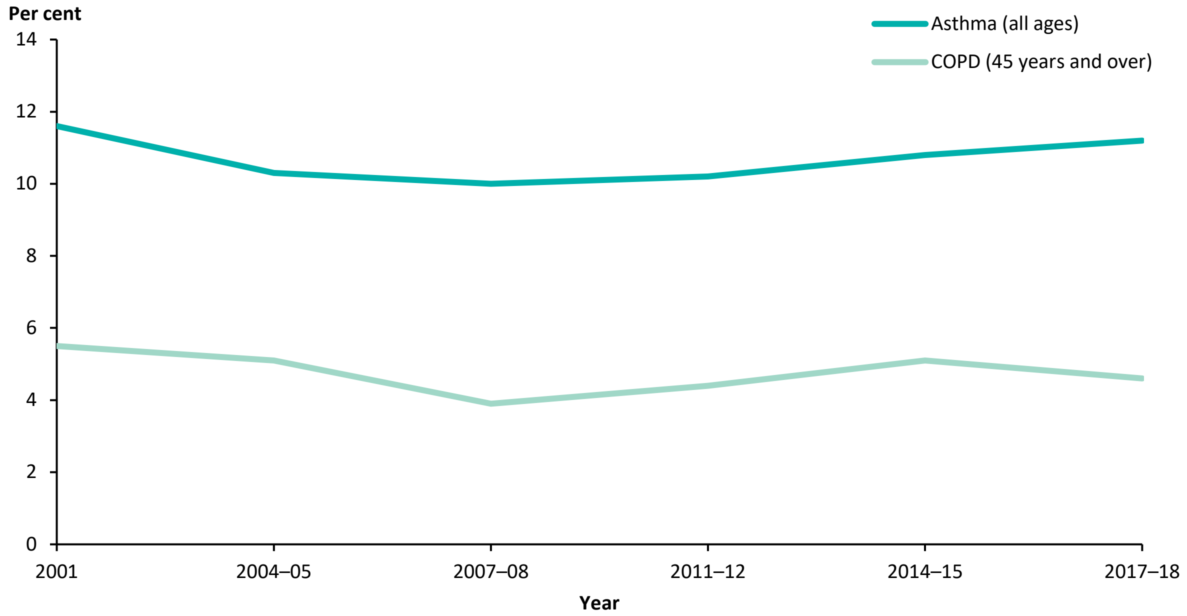
In 2017–18, after adjusting for age, the prevalence of asthma was:

- higher for those living in the lowest socioeconomic areas (13%) compared with those living in the highest socioeconomic areas (10%)
- higher for those living in *Inner regional* and *Outer regional and remote* areas (13% each), compared with those living in *Major cities* (11%) (Table 21.3).

In 2018–19:

- 16% of Aboriginal and Torres Strait Islander people had asthma (an estimated 128,000 people), with prevalence higher among females than males (21% compared with 14%) (ABS 2019a)
- after adjusting for age, the prevalence of asthma among Indigenous Australians was 1.6 times the rate among non-Indigenous Australians in 2017–18 (Table 21.6).

Figure 21.1: Prevalence of asthma and COPD (45 and over), by year

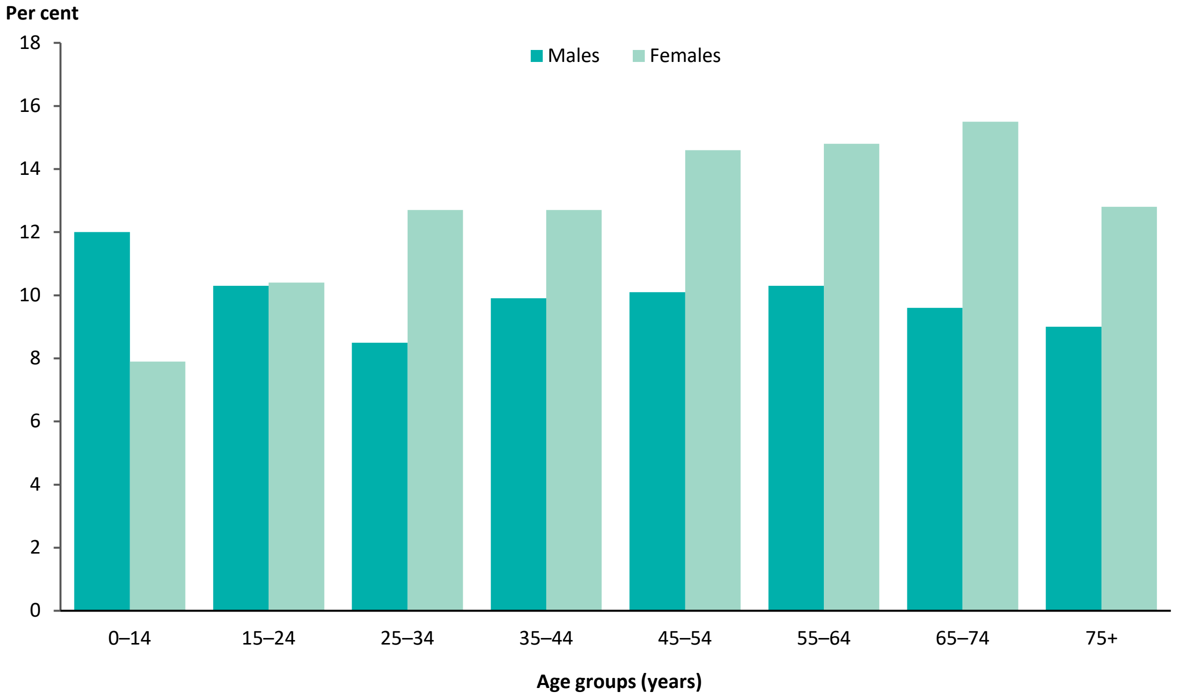


Notes

1. Age-standardised to the 2001 Australian standard population.
2. COPD occurs mostly in people aged 45 and over. While it is occasionally reported in younger age groups, in those aged 45 and over there is more certainty that the condition is COPD and not another respiratory condition. For this reason only people aged 45 and over are included in this graph.
3. Data and additional notes for this figure are shown in Table 21.1.

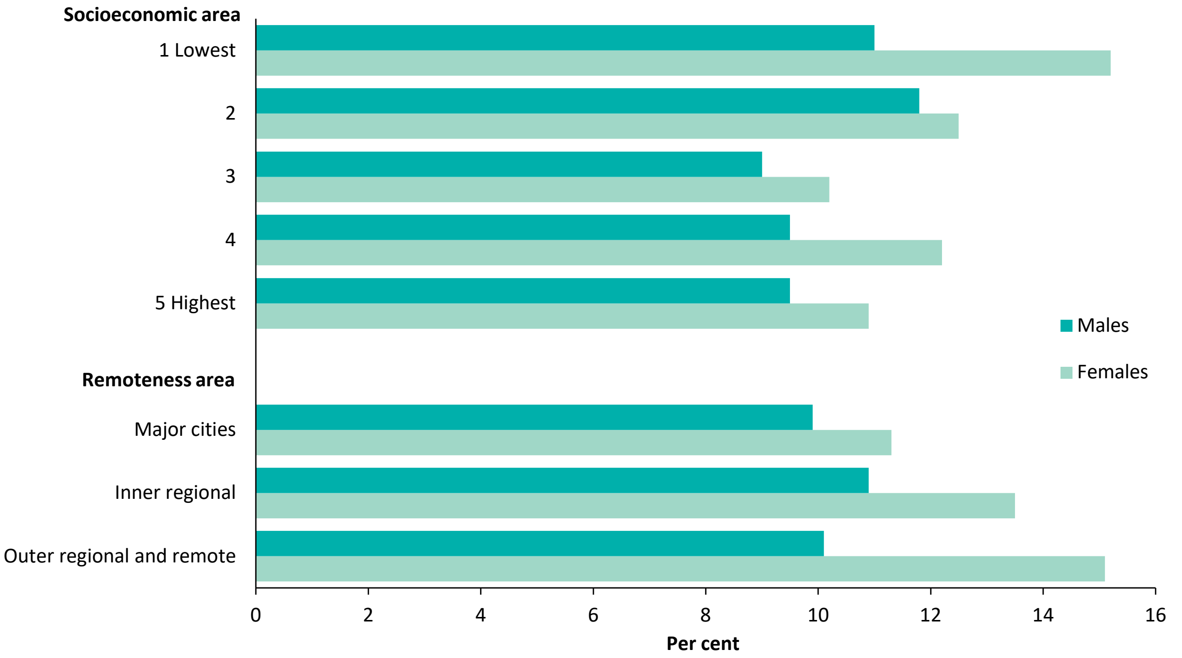
Sources: ABS 2002; ABS 2006; ABS 2010; ABS 2013; ABS 2016; ABS 2019b.

Figure 21.2: Prevalence of asthma (%), by age and sex, 2017–18



Note: Data and additional notes for this figure are shown in Table 21.2.
Source: AIHW 2019b.

Figure 21.3: Prevalence of asthma (%), by selected population characteristics and sex, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 21.3.
Source: AIHW 2019b; ABS 2019b.

(c) COPD

In 2017–18:

- an estimated 464,000 people (4.8%) aged 45 and over had COPD (ABS 2019b). After adjusting for age, the prevalence of COPD has increased from 3.9% in 2001 to 5.5% in 2007–08 and then has remained relatively stable up until 2017–18 (4.6%) (Figure 21.1).
- the prevalence of COPD tends to increase with age—the rate among 65–74 year olds (7.1%) was more than three times higher than that among 45–54 year olds (2.2%) (Table 21.4).
- the overall prevalence was similar for males and females (4.3% and 4.8%, respectively, after adjusting for age) (Table 21.4); however, for those aged 55–64, COPD was more prevalent in women compared with men (6.2% and 3.6%, respectively) (Figure 21.4).

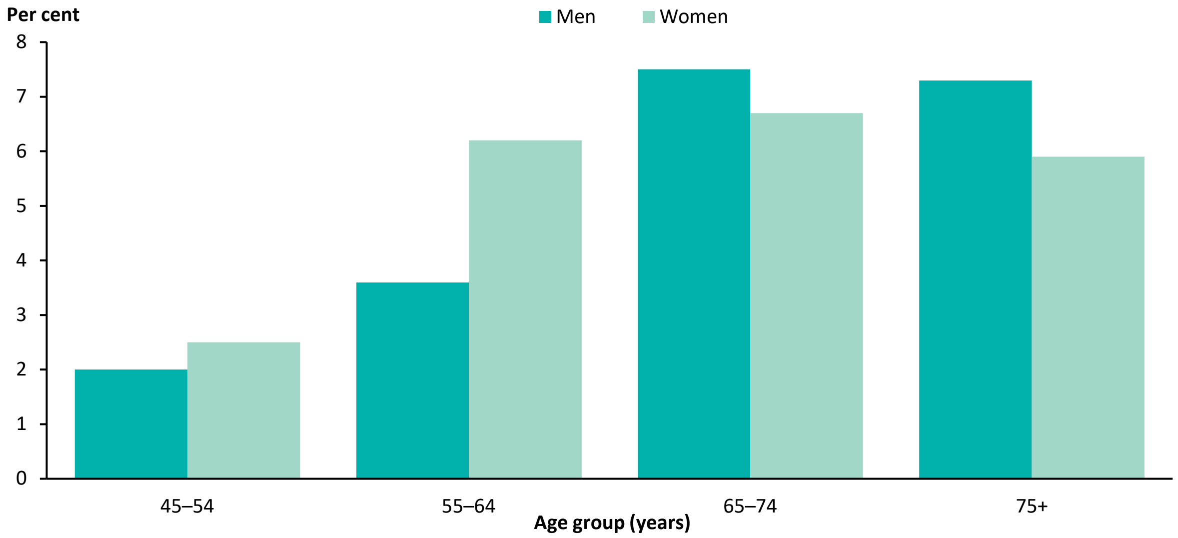
Population groups

In 2017–18, after adjusting for age, the prevalence of COPD among those aged 45 and over:

- was almost twice as high among those living in the lowest socioeconomic areas (7.1%) than those living in the highest socioeconomic areas (3.6%)
- was similar across remoteness categories (Table 21.5).

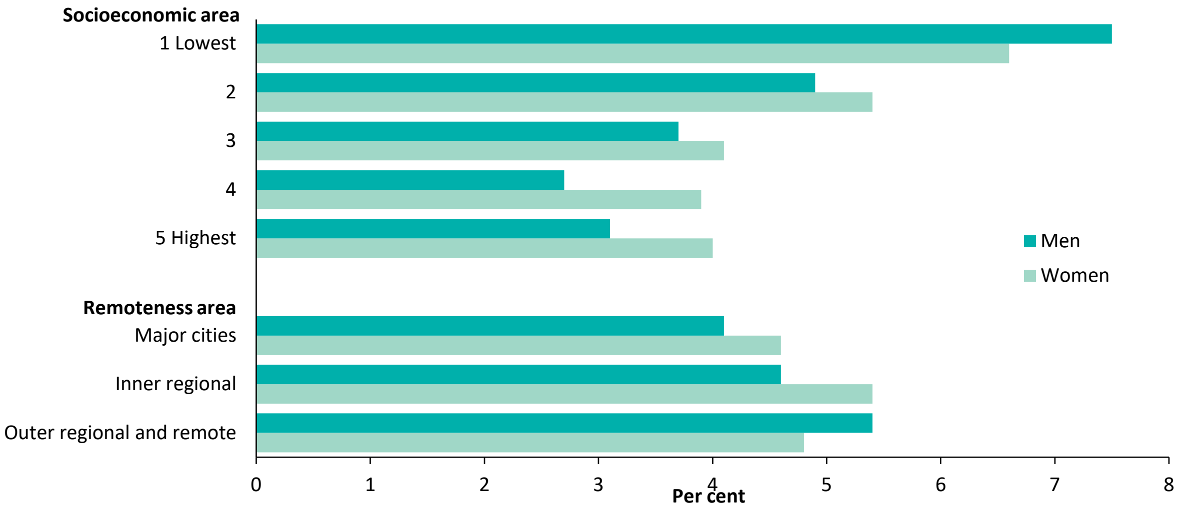
In 2018–19, COPD affected an estimated 17,800 (10%) of Indigenous Australians aged 45 and over (Table 21.6; ABS 2019c). After adjusting for age, among those aged 45 and over, the prevalence of COPD among Indigenous Australians was 2.3 times the rate among non-Indigenous Australians in 2017–18 (Table 21.6).

Figure 21.4: Prevalence of COPD (%) for persons aged 45 and over, by age and sex, 2017–18



Notes
1. COPD occurs mostly in people aged 45 and over. While it is occasionally reported in younger age groups, in those aged 45 and over there is more certainty that the condition is COPD and not another respiratory condition. For this reason only people aged 45 and over are included in this graph.
2. Data and additional notes for this figure are shown in Table 21.4.
Source: AIHW 2019c.

Figure 21.5: Prevalence of COPD (%) for persons aged 45 and over, by selected population characteristics and sex, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. COPD occurs mostly in people aged 45 and over. While it is occasionally reported in younger age groups, in those aged 45 and over there is more certainty that the condition is COPD and not another respiratory condition. For this reason only people aged 45 and over are included in this graph.
3. Data and additional notes for this figure are shown in Table 21.5.
Source: AIHW 2019c.

Considerations

The prevalence of chronic respiratory conditions is based on self-reported data, and are subject to recall bias and sampling errors. The prevalence (the number of cases present in the population at a given time) of COPD is difficult to determine from routine health surveys. Since COPD is formally defined in terms of an abnormality of lung function, accurately estimating the prevalence of the disease requires clinical testing.

Data sources

ABS National Health Survey 2017–18.

ABS Australian Aboriginal and Torres Strait Islander Health Survey, 2012–13 (National Aboriginal and Torres Strait Islander Health Survey component); ABS National Aboriginal and Torres Strait Islander Health Survey, 2018–19.

For further details, refer to Appendix B.

References

ABS 2002. Microdata: National Health Survey, 2001. ABS Cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2006. Microdata: National Health Survey, 2004–05. ABS Cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2010. Microdata: National Health Survey, 2007–08. ABS Cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013. Microdata: National Health Survey, 2011–12. ABS Cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS Cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

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ABS 2019a. National Aboriginal and Torres Strait Islander Health Survey, 2018–19. ABS Cat. no. 4715.0. Canberra: ABS.

ABS 2019b. Microdata: National Health Survey, 2017–18. ABS Cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019c. National Aboriginal and Torres Strait Islander Health Survey, 2018–19. ABS Cat. no. 4715.0. Customised report. Canberra: ABS.

AIHW 2019a. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015. Cat. no. BOD 22. Canberra: AIHW.

AIHW 2019b. Asthma webpages. Cat. no. ACM 33. Viewed 10 September 2019, https://www.aihw.gov.au/reports/chronic-respiratory-conditions/asthma/contents/asthma

AIHW 2019c. Chronic obstructive pulmonary disease (COPD) webpages. Cat. no. ACM 35. Viewed 10 September 2019, https://www.aihw.gov.au/reports/chronic-respiratory-conditions/copd/contents/copd.

Supplementary tables

Table 21.1: Prevalence of asthma and COPD, by year

	Asthma (all ages)		COPD (45 years and over)	
Year	Per cent	95% CI	Per cent	95% CI
2001	11.6	11.1–12.1	5.5	4.8–6.1
2004–05	10.3	9.8–10.8	5.1	4.6–5.6
2007–08	10.0	9.4–10.6	3.9	3.4–4.5
2011–12	10.2	9.6–10.8	4.4	3.9–5.0
2014–15	10.8	10.2–11.4	5.1	4.5–5.7
2017–18	11.2	10.7–11.7	4.6	4.1–5.1

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Asthma refers to people who self-reported that they were diagnosed by a doctor or nurse as having asthma (current and long-term).
3. COPD refers to self-reported current and long-term bronchitis and/or emphysema.
4. Age-standardised to the 2001 Australian standard population.

Sources: ABS 2002; ABS 2006; ABS 2010; ABS 2013; ABS 2016; ABS 2019b.

Table 21.2: Prevalence of asthma (%), by age and sex, 2017–18

	Males		Females		Persons	
Age group (years)	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
0–14	12.0	10.1–13.9	7.9	6.5–9.3	10.0	8.8–11.1
15–24	10.3	7.6–13.0	10.4	8.0–12.9	10.4	8.5–12.2
25–34	8.5	6.3–10.6	12.7	10.5–15.0	10.6	9.2–12.1
35–44	9.9	7.5–12.3	12.7	10.9–14.5	11.3	10.0–12.6
45–54	10.1	7.9–12.2	14.6	12.6–16.6	12.4	10.9–13.9
55–64	10.3	8.2–12.3	14.8	12.4–17.1	12.6	10.9–14.3
65–74	9.6	7.3–11.8	15.5	12.6–18.4	12.6	10.7–14.5
75+	9.0	6.4–11.6	12.8	10.4–15.1	11.0	9.4–12.7
Total age-standardised[(a)]	**10.2**	**9.4–11.0**	**12.1**	**11.3–12.8**	**11.2**	**10.6–11.7**

(a) Age-standardised to the 2001 Australian standard population.

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Asthma refers to people who self-reported that they were diagnosed by a doctor or nurse as having asthma (current and long-term).

Source: AIHW 2019b.

Table 21.3: Prevalence of asthma (%), by selected population characteristics and sex, 2017–18

Population characteristic	Males		Females		Persons	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	11.0	9.2–12.8	15.2	13.2–17.2	13.1	11.7–14.6
2	11.8	9.8–13.8	12.5	10.7–14.4	12.2	10.8–13.6
3	9.0	7.4–10.5	10.2	8.6–11.8	9.7	8.5–10.8
4	9.5	7.9–11.2	12.2	10.4–14.0	11.0	9.7–12.2
5 Highest	9.5	7.5–11.5	10.9	9.2–12.5	10.1	8.8–11.5
Remoteness area						
Major cities	9.9	9.0–10.9	11.3	10.4–12.2	10.6	10.0–11.3
Inner regional	10.9	8.9–12.9	13.5	11.5–15.4	12.5	11.1–13.9
Outer regional and remote	10.1	7.8–12.5	15.1	12.2–17.9	12.6	10.8–14.4

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Age-standardised to the 2001 Australian standard population.
3. Asthma refers to people who self-reported that they were diagnosed by a doctor or nurse as having asthma (current and long-term).
4. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
5. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.

Sources: AIHW 2019b; ABS 2019b.

Table 21.4: Prevalence of COPD (%) for persons aged 45 and over, by age and sex, 2017–18

	Men		Women		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
45–54	2.0	0.8–3.1	2.5	1.5–3.5	2.2	1.5–3.0
55–64	3.6	2.1–5.1	6.2	4.6–7.8	4.9	3.8–6.0
65–74	7.5	5.9–9.2	6.7	5.1–8.4	7.1	5.9–8.4
75+	7.3	4.8–9.9	5.9	3.9–7.9	6.6	5.1–8.0
Total 45+ age-standardised[(a)]	**4.3**	**3.6–5.1**	**4.8**	**4.1–5.5**	**4.6**	**4.1–5.1**

(a) Age-standardised to the 2001 Australian standard population.

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. COPD refers to self-reported current and long-term bronchitis and/or emphysema.

Source: AIHW 2019c.

Table 21.5: Prevalence of COPD (%) for persons aged 45 and over, by selected population characteristics and sex, 2017–18

Population characteristic	Men		Women		Persons	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	7.5	5.0–10.1	6.6	4.9–8.3	7.1	5.5–8.8
2	4.9	3.4–6.5	5.4	3.8–7.0	5.2	4.1–6.3
3	3.7	2.2–5.1	4.1	2.6–5.6	3.9	2.8–5.0
4	2.7	1.6–3.8	3.9	2.4–5.3	3.4	2.4–4.3
5 Highest	3.1	1.6–4.7	4.0	2.4–5.7	3.6	2.5–4.7
Remoteness area						
Major cities	4.1	3.2–5.0	4.6	3.8–5.4	4.4	3.8–5.0
Inner regional	4.6	3.1–6.2	5.4	3.6–7.2	5.0	3.8–6.2
Outer regional and remote	5.4	3.2–7.6	4.8	2.8–6.7	5.0	3.5–6.5

Notes
1. Age-standardised to the 2001 Australian standard population.
2. COPD refers to self-reported current and long-term bronchitis and/or emphysema.
3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
4. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
Source: AIHW 2019c.

Table 21.6: Prevalence of asthma and COPD (%), by Indigenous status and sex, 2017–18 and 2018–19

	Males		Females		Persons	
Respiratory condition	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Asthma						
Indigenous Australians	13.6	11.6–15.6	21.1	19.4–22.8	17.6	16.2–19.0
Non-Indigenous Australians	10.1	9.4–10.8	11.9	11.0–12.8	11.0	10.5–11.5
COPD (45+)						
Indigenous Australians	7.0	4.9–9.1	13.2	10.0–16.4	10.4	8.5–12.3
Non-Indigenous Australians	4.2	3.4–5.0	4.7	3.9–5.5	4.5	4.0–5.0

Notes
1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Asthma refers to people who self-reported that they were diagnosed by a doctor or nurse as having asthma (current and long-term).
3. COPD refers to self-reported current and long-term bronchitis and/or emphysema.
4. Age-standardised to the 2001 Australian standard population.
5. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
Sources: ABS 2019b; ABS 2019c.

Indicator 22: Prevalence of musculoskeletal conditions

In 2017–18, the proportion of people who had:

(a) chronic musculoskeletal conditions was 29%

(b) arthritis was 15%

(c) back problems was 16%

(d) osteoporosis was 3.8%.

Why is this important?

Arthritis and other musculoskeletal conditions are a group of conditions affecting the bones, muscles and joints. These conditions include osteoarthritis, rheumatoid arthritis, juvenile arthritis, back pain and problems, gout, and osteoporosis or osteopenia (low bone density).

Arthritis and other musculoskeletal conditions are large contributors to illness, pain and disability. Individuals with these conditions have higher rates of poor health, psychological distress and reduced participation in work and education (AIHW 2019a, AIHW 2019b, AIHW 2019c). Overall, musculoskeletal conditions contribute to the total burden of disease in Australia and are the largest contributor to non-fatal burden (AIHW 2019d).

What does this indicator measure?

The proportion of people who report having chronic musculoskeletal conditions.

Diseases of the musculoskeletal system and connective tissue in the National Health Survey include:

- Arthritis – Rheumatoid, Osteoarthritis, Other and type unknown
- Other arthropathies
- Rheumatism(s)
- Back problems (dorsopathies)
- Osteoporosis
- Gout
- Other diseases of the musculoskeletal system and connective tissue
- Symptoms and signs involving the musculoskeletal system and connective tissue.

The reporting of this indicator will focus on:

(a) Total chronic musculoskeletal conditions (as listed above)

(b) Arthritis

(c) Back problems

(d) Osteoporosis.

What do the data show?

(a) Chronic musculoskeletal conditions

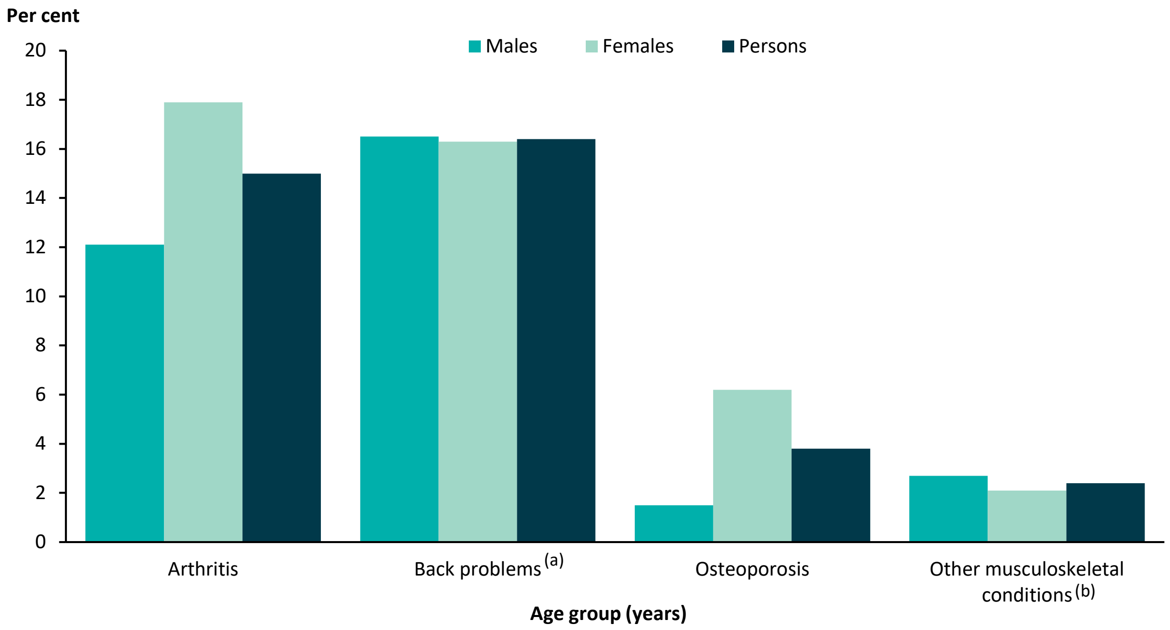
Chronic musculoskeletal conditions affected an estimated 7 million people (29%) in 2017–18. More than half (54%) were female; and those aged 55 and over made up over half (55%) of all people with musculoskeletal conditions (ABS 2018a).

In 2018–19, after adjusting for age, Indigenous Australians were as likely as non-Indigenous Australians in 2017–18 to have a chronic musculoskeletal condition (rate ratio of 1.1) (ABS 2019).

In 2017–18, the most common chronic musculoskeletal conditions were:

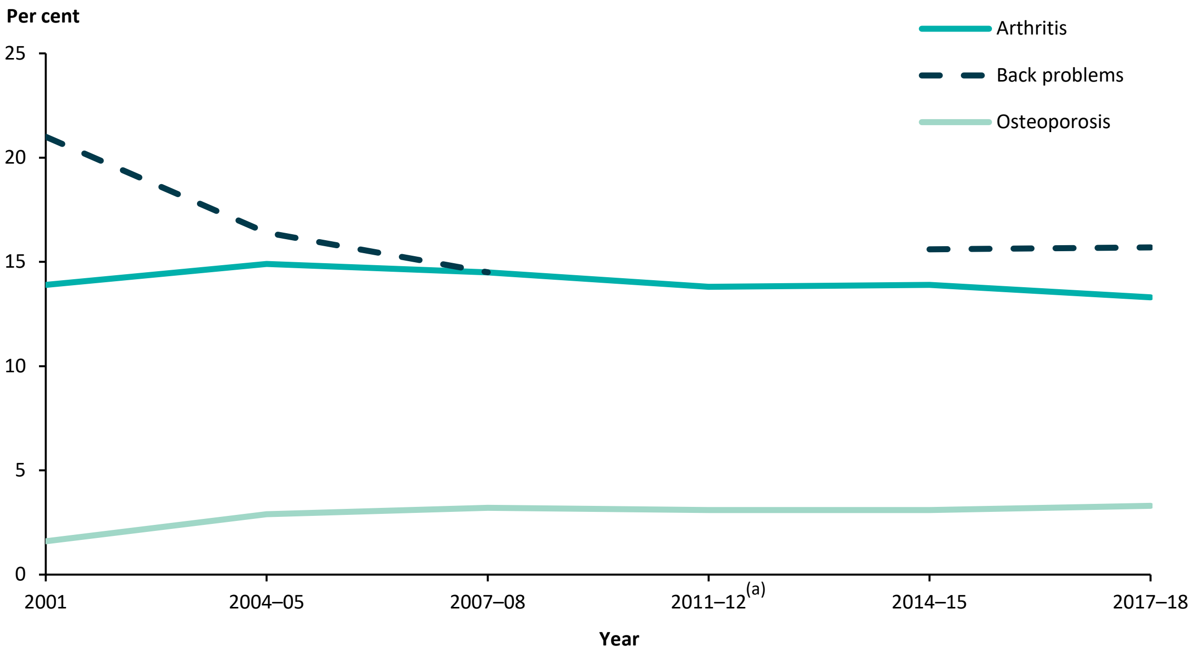
- arthritis—including osteoarthritis, rheumatoid arthritis and 'other type and unknown' —which affected an estimated 3.6 million people (15%)
- back problems—including sciatica, disc disorders, back pain/problems not elsewhere classified and curvature of the spine —which affected an estimated 4.0 million people (16%)
- osteoporosis which affected an estimated 924,000 people (3.8%)
- other chronic musculoskeletal conditions—including gout and 'other soft tissue disorders'—which affected an estimated 570,000 people (2.4%) (Figure 22.1; ABS 2018a).

Figure 22.1: Prevalence of selected musculoskeletal conditions (%), all persons, by sex, 2017–18



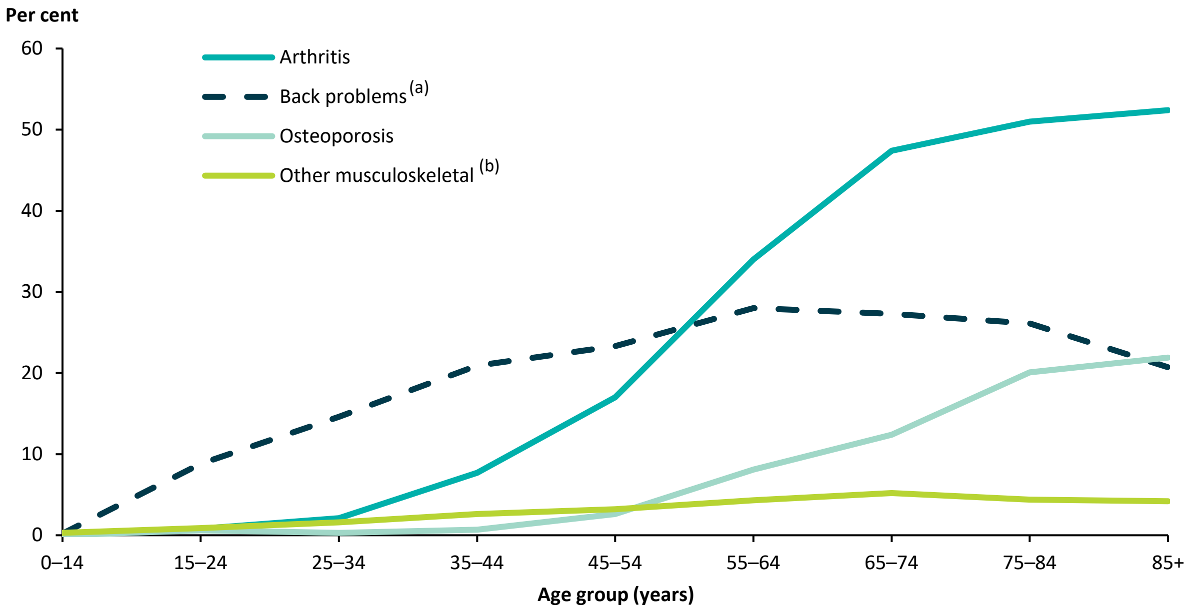
(a) Includes sciatica, disc disorders, back pain/problems not elsewhere classified and curvature of the spine.
(b) Includes gout and other soft tissue disorders.
Note: Data and additional notes for this figure are shown in Table 22.1.
Source: ABS 2018a.

Figure 22.2: Prevalence of selected musculoskeletal conditions (%), all persons, by year



(a) Data for back pain and problems in 2011–12 is not comparable to other years and has been excluded.
Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 22.2.
Source: ABS 2018a.

Figure 22.3: Prevalence of selected musculoskeletal conditions (%), by age, 2017–18



(a) Includes sciatica, disc disorders, back pain/problems not elsewhere classified and curvature of the spine.
(b) Includes gout and other soft tissue disorders.
Note: Data and additional notes for this figure are shown in Table 22.3.
Source: ABS 2018a.

(b) Arthritis

In 2017–18:

- an estimated 3.6 million people (15%) reported having arthritis (ABS 2018a). After adjusting for age, the prevalence of arthritis remained steady over the period from 2001 to 2017–18 (Figure 22.2)
- the prevalence of arthritis increased with increasing age, less than 10% of people aged 35–44 reported having arthritis compared to more than 50% of people aged 75 and over (Figure 22.3).

Population groups

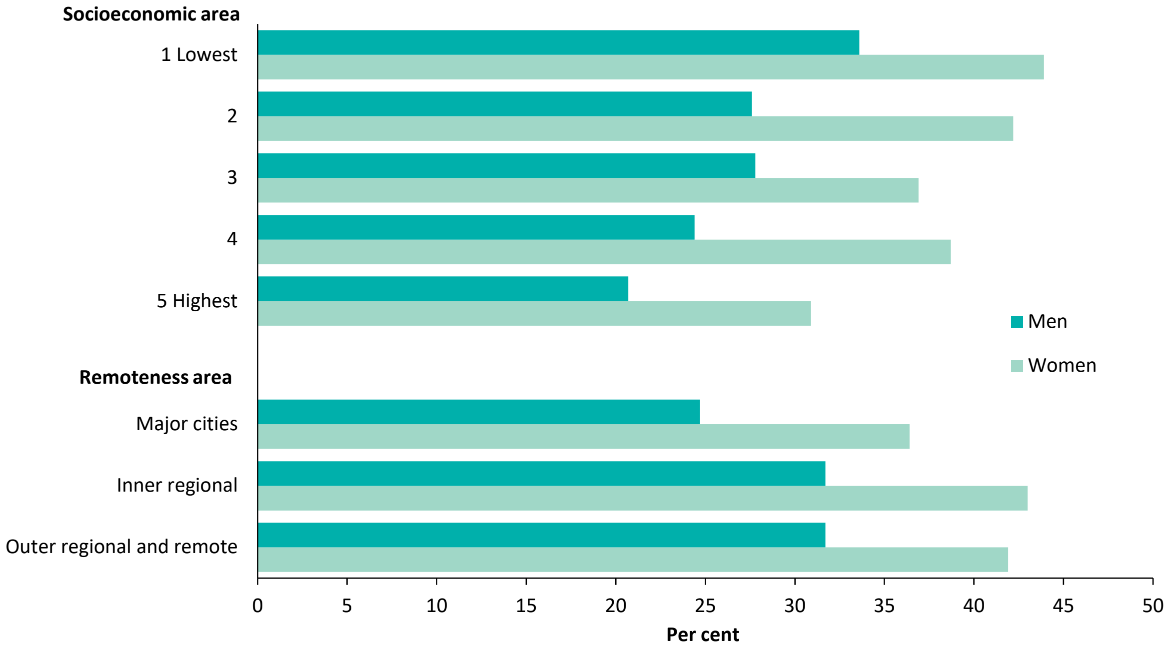
The prevalence of arthritis increases with age (AIHW 2020). This means that, due to the limited sample size of younger Australians with arthritis in the National Health Survey, detailed age-standardised breakdowns (for example, prevalence by socioeconomic status and remoteness categories) are only reliable for those aged 45 and older—33% of people aged 45 and over had arthritis in 2017–18 (AIHW 2019a).

In 2017–18, among those aged 45 and older, after adjusting for age:

- people living in the lowest socioeconomic areas had a higher prevalence of arthritis (39%) compared with those living in the highest socioeconomic areas (26%) (Table 22.4)
- arthritis was more prevalent for those living in *Inner regional* (38%) and *Outer regional and Remote* (36%) areas, compared with those living in *Major cities* (31%) (Table 22.4).

In 2018–19, an estimated 85,600 (11%) Indigenous Australians reported having arthritis (ABS 2019); after adjusting for age, Indigenous Australians were 1.3 times as likely as non-Indigenous Australians to have arthritis (Table 22.7).

Figure 22.4: Prevalence of arthritis for people aged 45 and over (%), by selected population characteristics and sex, 2017–18



Notes

1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 22.4.

Source: ABS 2018b.

(c) Back problems

In 2017–18, an estimated 4 million people (16%) reported having back problems with over one-quarter (28%) of people aged 55–64 reporting the condition (ABS 2018a).

Population groups

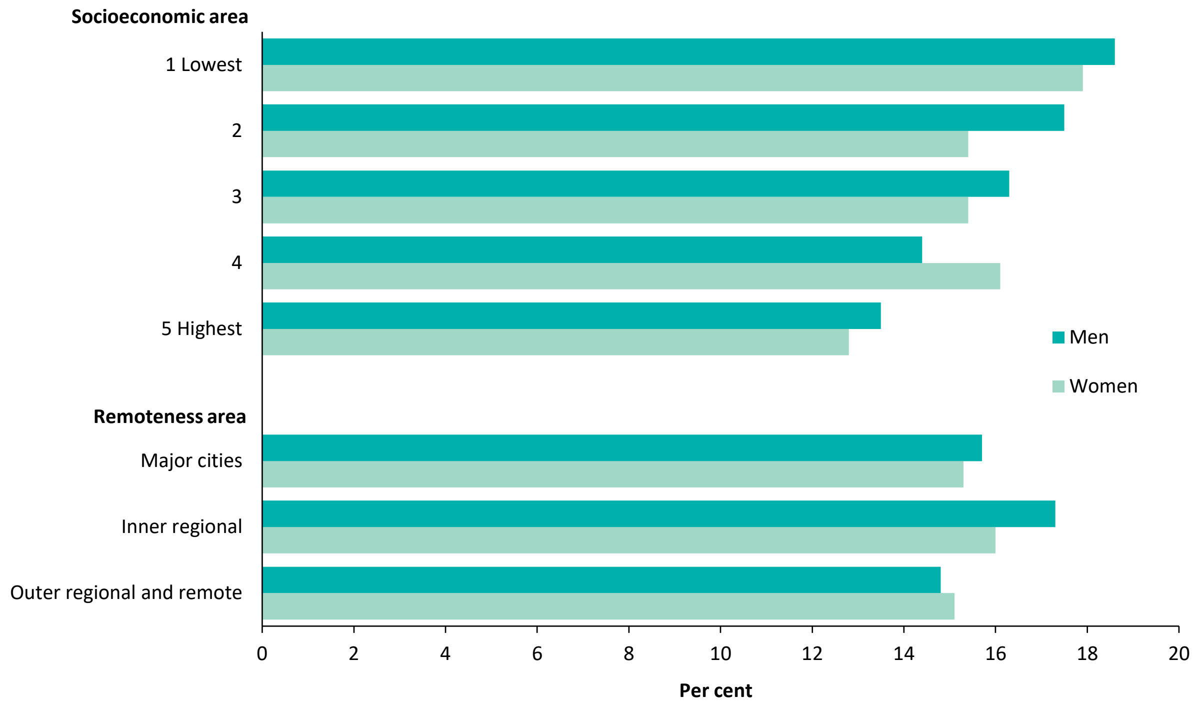
In 2017–18, after adjusting for age:

- back problems were more common among people living in the lowest socioeconomic areas (18%) compared with those living in the highest socioeconomic areas (13%) (Figure 22.5)
- the prevalence of back problems was similar across remoteness categories (Figure 22.5).

In 2018–19, an estimated 102,200 (13%) Indigenous Australians reported having back problems (ABS 2019).

After adjusting for age, Indigenous Australians had a similar prevalence of back problems to non-Indigenous Australians in 2017–18 (rate ratio of 1.1) (Table 22.7).

Figure 22.5: Prevalence of back problems (%), by selected population characteristics and sex, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 22.5.
Source: AIHW 2019b.

(d) Osteoporosis

In 2017–18:

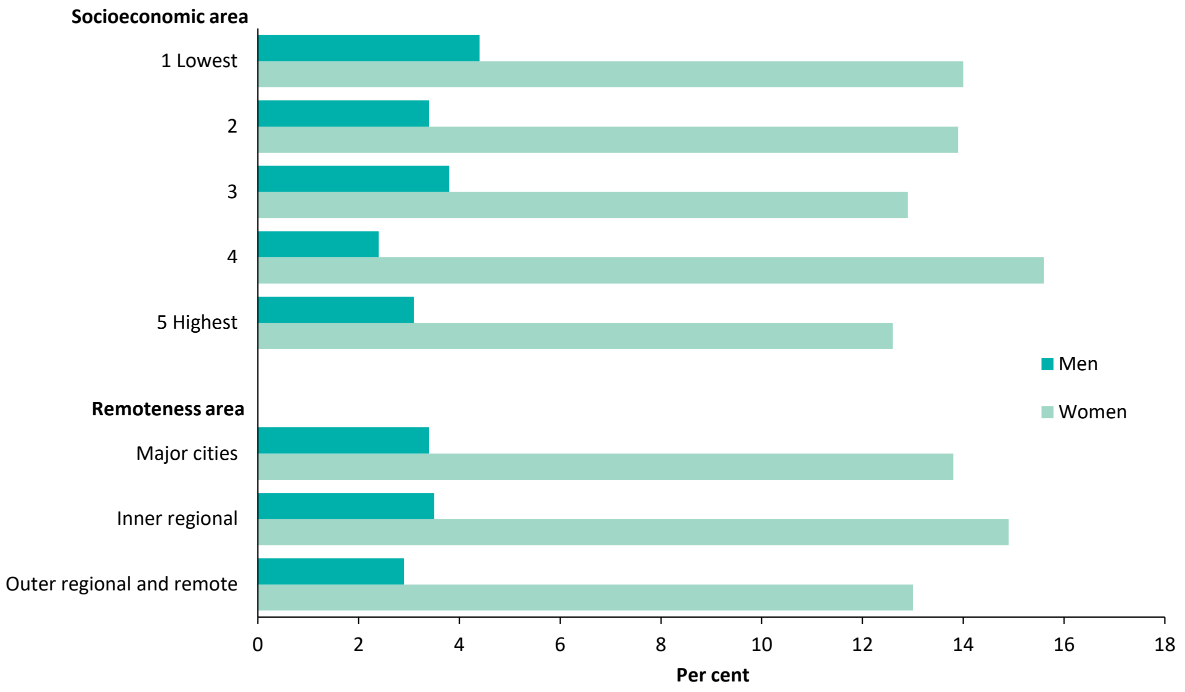
- osteoporosis affected an estimated 924,000 people (3.8%) (ABS 2018a). After adjusting for age, the prevalence of osteoporosis increased over the period from 2001 to 2017–18 (1.6% compared to 3.3%) (Figure 22.2)
- the prevalence of osteoporosis for females was over 4 times that for males (6.2% compared with 1.5%, respectively) (Figure 22.1)
- osteoporosis was uncommon among those aged under 55 years and increased from 8.1% among those aged 55–64 to a peak of 22% among those aged 85 years and older (Figure 22.3).

Population groups

Because osteoporosis is uncommon in younger people, detailed age-standardised breakdowns (for example, prevalence by socioeconomic status and remoteness categories) are only reliable for those aged 45 and older—8.9% of people aged 45 and over had osteoporosis (AIHW 2019c). Among people aged 45 and over, after adjusting for age, the prevalence of osteoporosis did not vary by socioeconomic area nor remoteness category (Figure 22.6).

In 2018–19, an estimated 18,900 (2.3%) Indigenous Australians reported having osteoporosis (ABS 2019); after adjusting for age, the prevalence of osteoporosis was higher among Indigenous Australians than non-Indigenous Australians in 2017–18 (rate ratio of 1.2) (Table 22.7).

Figure 22.6: Prevalence of osteoporosis for people aged 45 and over (%), by selected population characteristics and sex, 2017–18



Notes

1. Age-standardised to the 2001 Australian standard population.

2. Data and additional notes for this figure are shown in Table 22.6.

Source: AIHW 2019c.

Considerations

The prevalence of musculoskeletal conditions is based on self-reported data and are subject to recall bias and sampling errors.

Generally, osteoporosis is under-diagnosed. Because osteoporosis has no overt symptoms, it is often not diagnosed until a fracture occurs. It is therefore difficult to determine the true prevalence of the condition.

Data sources

ABS National Health Survey 2017–18.

ABS Australian Aboriginal and Torres Strait Islander Health Survey, 2012–13, 2018–19.

For further details, refer to Appendix B.

References

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Supplementary tables

Table 22.1: Prevalence of musculoskeletal conditions (%), all persons, by sex, 2017–18

	Males		Females		Persons	
Musculoskeletal condition	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Arthritis[(a)]	12.1	11.3–12.9	17.9	17.3–18.5	15.0	14.5–15.5
Back problems[(b)]	16.5	15.7–17.3	16.3	15.4–17.2	16.4	15.8–17.0
Osteoporosis	1.5	1.2–1.8	6.2	5.8–6.6	3.8	3.6–4.0
Other musculoskeletal conditions[(c)]	2.7	2.3–3.1	2.1	1.8–2.4	2.4	2.2–2.6
Total	**26.9**	**25.8–28.0**	**31.0**	**30.1–31.9**	**29.0**	**28.3–29.7**

(a) Includes osteoarthritis, rheumatoid arthritis and 'other and type unknown'.
(b) Includes sciatica, disc disorders, back pain/problems not elsewhere classified and curvature of the spine.
(c) Includes gout and other soft tissue disorders.
Source: ABS 2018a.

Table 22.2: Prevalence of musculoskeletal conditions (%), all persons, by year

	Arthritis		Back problems		Osteoporosis	
Year	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
2001	13.9	13.3–14.5	21.0	20.4–21.6	1.6	1.4–1.8
2004–05	14.9	14.4–15.4	16.4	15.8–17.0	2.9	2.7–3.1
2007–08	14.5	13.9–15.1	14.5	13.7–15.3	3.2	2.9–3.5
2011–12	13.8	13.3–14.3	n.a.	n.a.	3.1	2.8–3.4
2014–15	13.9	13.4–14.4	15.6	15.0–16.2	3.1	2.8–3.4
2017–18	13.3	12.8–13.8	15.7	15.1–16.3	3.3	3.1–3.5

n.a. Data for back pain and problems in 2011–12 is not comparable to other years and has been excluded.
Note: Age-standardised to the 2001 Australian standard population.
Source: ABS 2018a.

Table 22.3: Prevalence of musculoskeletal conditions (%), by age, 2017–18

	Arthritis		Back problems		Osteoporosis		Other musculoskeletal conditions	
Age group (years)	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI	Per cent	95% CI
0–14	. .	—	0.2	0.1–0.3	0.0	0.0–0.0	0.3	0.1–0.5
15–24	0.8	0.3–1.3	8.8	7.0–10.6	0.6	0.1–1.1	0.9	0.4–1.4
25–34	2.1	1.3–2.9	14.6	12.9–16.3	0.3	0.0–0.6	1.6	1.0–2.2
35–44	7.7	6.5–8.9	20.9	19.0–22.8	0.7	0.4–1.0	2.6	1.9–3.3
45–54	17.0	15.2–18.8	23.3	21.4–25.2	2.6	1.9–3.3	3.2	2.5–3.9
55–64	34.0	31.7–36.3	28.0	25.7–30.3	8.1	7.2–9.0	4.3	3.2–5.4
65–74	47.4	45.5–49.3	27.3	25.2–29.4	12.4	10.9–13.9	5.2	4.1–6.3
75–84	51.0	46.9–55.1	26.1	22.5–29.7	20.1	17.5–22.7	4.4	3.0–5.8
85+	52.4	47.2–57.6	20.7	16.1–25.3	21.9	17.7–26.1	4.2	1.8–6.6

. . not applicable
— rounded to zero
Source: ABS 2018a.

Table 22.4: Prevalence of arthritis for people aged 45 and over (%), by selected population characteristics and sex, 2017–18

Population characteristic	Men		Women		Persons	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	33.6	29.7–37.4	43.9	40.1–47.8	39.0	36.3–41.8
2	27.6	24.4–30.8	42.2	38.5–45.9	35.4	32.9–37.9
3	27.8	23.7–31.8	36.9	33.4–40.4	32.6	30.1–35.2
4	24.4	21.0–27.8	38.7	35.1–42.3	31.8	29.2–34.4
5 Highest	20.7	17.3–24.2	30.9	27.7–34.2	25.8	23.2–28.3
Remoteness area						
Major cities	24.7	22.8–26.6	36.4	34.5–38.3	30.8	29.5–32.2
Inner regional	31.7	28.1–35.4	43.0	39.4–46.6	37.7	35.0–40.3
Outer regional and remote	31.7	25.0–34.1	41.9	37.4–46.4	35.5	32.3–38.8

Notes
1. Age-standardised to the 2001 Australian standard population.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
Source: ABS 2018b.

Table 22.5: Prevalence of back problems (%), by selected population characteristics and sex, 2017–18

Population characteristic	Males		Females		Persons	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	18.6	16.5–20.8	17.9	15.9–19.9	18.2	16.7–19.7
2	17.5	15.5–19.5	15.4	13.6–17.3	16.4	15.0–17.8
3	16.3	14.2–18.4	15.4	13.7–17.2	15.9	14.5–17.3
4	14.4	12.5–16.2	16.1	14.4–17.9	15.3	14.0–16.6
5 Highest	13.5	11.4–15.6	12.8	10.8–14.9	13.2	11.7–14.6
Remoteness area						
Major cities	15.7	14.6–16.8	15.3	14.3–16.3	15.5	14.8–16.3
Inner regional	17.3	15.2–19.4	16.0	14.1–17.9	16.6	15.1–18.0
Outer regional and remote	14.8	12.5–17.1	15.1	12.7–17.5	15.0	13.3–16.7

Notes
1. Age-standardised to the 2001 Australian standard population.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
Source: AIHW 2019b.

Table 22.6: Prevalence of osteoporosis for people aged 45 and over (%), by selected population characteristics and sex, 2017–18

Population characteristic	Men		Women		Persons	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	4.4	2.9–5.9	14.0	11.5–16.4	9.6	8.1–11.0
2	3.4	2.1–4.8	13.9	11.6–16.1	9.0	7.6–10.3
3	3.8	2.3–5.4	12.9	10.6–15.3	8.7	7.3–10.1
4	2.4	1.2–3.5	15.6	12.9–18.2	9.1	7.7–10.6
5 Highest	3.1	1.5–4.6	12.6	10.3–14.9	7.8	6.4–9.3
Remoteness area						
Major cities	3.4	2.6–4.2	13.8	12.5–15.0	8.8	8.1–9.6
Inner regional	3.5	2.3–4.8	14.9	12.3–17.4	9.5	8.0–11.0
Outer regional and remote	2.9	1.3–4.5	13.0	9.4–16.7	7.9	5.9–9.9

Notes

1. Age-standardised to the 2001 Australian standard population.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.

Source: AIHW 2019c.

Table 22.7: Prevalence of musculoskeletal conditions (%), by Indigenous status and sex, 2017–18 and 2018–19

	Males		Females		Persons	
Musculoskeletal condition	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Arthritis						
Indigenous Australians	13.4	12.1–14.7	19.2	17.7–20.7	16.5	15.6–17.4
Non-Indigenous Australians	10.9	10.1–11.7	15.4	14.8–16	13.2	12.7–13.7
Back problems						
Indigenous Australians	17.0	15.5–18.5	17.3	15.8–18.8	17.1	16.1–18.1
Non-Indigenous Australians	16.0	15.1–16.9	15.3	14.4–16.2	15.7	15.1–16.3
Osteoporosis						
Indigenous Australians	2.5	1.7–3.3	5.1	4.4–5.8	3.9	3.4–4.4
Non-Indigenous Australians	1.3	1.0–1.6	5.1	4.7–5.5	3.3	3.0–3.6

Notes

1. Age-standardised to the 2001 Australian standard population.
2. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.

Source: ABS 2019.

Indicator 23: Incidence of selected cancers

Incidence rates of selected cancers in 2016:

(a) Breast cancer in females	*142 cases per 100,000 females*
(b) Bowel (colorectal) cancer	*64 cases per 100,000 people*
(c) Melanoma of the skin	*60 cases per 100,000 people*
(d) Lung cancer	*51 cases per 100,000 people*
(e) Cervical cancer	*7.3 cases per 100,000 females.*

Why is this important?

Cancer is the leading cause of total burden of disease in Australia; the burden from cancer is mainly due to premature death (AIHW 2021). These cancers—breast, bowel, melanoma of the skin, lung and cervical—have been selected because they are associated with known modifiable risk factors and/or national screening programs. Modifiable risk factors for the cancers listed here include smoking ('Indicator 7'), excessive alcohol consumption ('Indicator 6'), dietary risks, obesity ('Indicator 14') and sun exposure. Human papillomavirus (HPV) infection is the biggest risk factor for cervical cancer.

What does this indicator measure?

The number of new cases of:

(a) Breast cancer in females

(b) Bowel cancer (also called colorectal cancer)

(c) Melanoma of the skin

(d) Lung cancer

(e) Cervical cancer.

Refer to the *NSFCC: reporting framework* (AIHW 2022) for more information.

What do the data show?

Due to data availability, different time points are used for the incidence results presented here for the whole population (2016), socioeconomic and remoteness areas (2010–2014), and Indigenous Australians (2011–2015).

(a) Breast cancer in females

- The age-standardised incidence rate of breast cancer steadily increased from 81 new cases per 100,000 females in 1982 to 126 cases per 100,000 females in 2016 (Figure 23.1). The increase in the incidence rate of breast cancer must be interpreted with caution as it is affected by factors such as increased awareness, the introduction of a national screening program in 1991 (see 'Indicator 28' for more information), and improvements in technologies and techniques used to identify and diagnose cancer.
- The age specific incidence rate in 2016 was highest for women aged 70–74 (428 new cases per 100,000 females) (AIHW 2020a).

Population groups

- During the period 2010–2014, the age-standardised incidence rate of breast cancer among females showed a clear socioeconomic gradient, the incidence was higher as advantage increased—113 cases per 100,000 among those living in the lowest socioeconomic areas compared with 135 per 100,000 for those living in the highest socioeconomic areas (Figure 23.2). The direction of the gradient for breast cancer differs to that of bowel, lung and cervical cancer (Figure 23.2).
- During the period 2010–2014, the age-standardised incidence rate of breast cancer showed a clear gradient by remoteness, incidence decreased as remoteness increased—it was higher in for those living in *Major cities* (124 cases per 100,000 females) compared with those living in in *Very remote* areas (95 cases per 100,000 females) (Figure 23.3).
- During the period 2011–2015, the age-standardised incidence rate of breast cancer among Indigenous females was lower than in non-Indigenous females (a rate ratio of 0.8), in the four jurisdictions used for analysis (New South Wales, Queensland, Western Australia and the Northern Territory) (Table 23.4).

(b) Bowel (colorectal) cancer

- In 2016, the age-standardised incidence rate of bowel cancer was 55 new cases per 100,000 people—a similar incidence rate to 1982 (58 new cases per 100,000 people). However, after slowly increasing to a high of 66 new cases per 100,000 people in 2001, the rate has been slowly decreasing in recent years (Figure 23.1). Note, a national bowel cancer screening program was introduced in 2006 (see 'Indicator 29' for more information).
- The age-standardised incidence rate of bowel cancer in 2016 was higher for males than females (64 and 48 new cases per 100,000, respectively) (AIHW 2020a).
- The age specific incidence rate in 2016 was highest for persons aged 85–89 (461 new cases per 100,000 males, and 360 new cases per 100,000 females) (AIHW 2020a).

Population groups

- During the period 2010–2014, the age-standardised incidence rate of bowel cancer showed a clear socioeconomic gradient, the incidence was higher as disadvantage increased—53 cases per 100,000 for those living in highest socioeconomic areas compared with 63 per 100,000 people for those living in the lowest socioeconomic areas (Figure 23.2). The direction of the gradient was the same as lung and cervical cancer but differs to that of breast cancer and melanoma of the skin (Figure 23.2).
- During the period 2010–2014, the age-standardised incidence rate of bowel cancer was highest for those living in *Outer regional* areas (66 cases per 100,000 people) and lowest for those living in *Very remote* areas (49 cases per 100,000 people) (Figure 23.3).
- During the period 2011–2015, the age-standardised incidence rate of bowel cancer for Indigenous Australians was similar to the incidence rate among non-Indigenous Australians (a rate ratio of 0.9), in the four jurisdictions used for analysis (New South Wales, Queensland, Western Australia and the Northern Territory) (Table 23.4).

(c) Melanoma of the skin

- The age-standardised incidence rate of melanoma of the skin steadily increased from 27 new cases per 100,000 people in 1982 to 54 new cases per 100,000 people in 2016 (Figure 23.1). The increase in incidence must be interpreted with caution as it could be affected by factors such as increased awareness from long-running public education campaigns on the effects of sun exposure, and improvements in technologies and techniques used to identify and diagnose cancer (Figure 23.1).
- The age-standardised incidence rate of melanoma of the skin was higher for males than females (65 and 44 new cases per 100,000 people, respectively) (AIHW 2020a).
- The age specific incidence rate in 2016 was highest for persons aged 85–89 (391 new cases per 100,000 males, and 190 new cases per 100,000 females) (AIHW 2020a).

Population groups

- During the period 2010–2014, the age-standardised incidence rate of melanoma of the skin showed variation by socioeconomic group—but there was not a consistent gradient. The incidence was generally higher as advantage increased—46 cases per 100,000 people for those living in the lowest socioeconomic areas compared with 54 per 100,000 among those living in the highest socioeconomic areas (Figure 23.2).
- During the period 2010–2014, the age-standardised incidence rate of melanoma of the skin was highest for those living in *Inner regional* areas (60 cases per 100,000 people) and lowest for those living in *Very remote* areas (33 cases per 100,000 people) (Figure 23.3).
- At the time of writing, 2011–2015 data on the rate of melanoma of the skin among Indigenous Australians was unavailable.

(d) Lung cancer

- In 2016, the age-standardised incidence rate of lung cancer was 43 new cases per 100,000 people, a decrease from 47 new cases per 100,000 people in 1982; however, the rate has remained steady between 42 and 45 since 1998 (Figure 23.1).
- The age-standardised incidence rate was higher for males compared with females and has decreased substantially for males since 1982 (from 85 to 53 new cases per 100,000), but increased for females (from 18 to 36 new cases per 100,000) (AIHW 2020a). The continued increase for females, in part, likely reflects a lag in smoking reduction compared with males (AIHW & Cancer Australia 2011).
- The age specific incidence rate in 2016 was highest for males aged 85–89 (466 new cases per 100,000 males), and females aged 75–79 (247 new cases per 100,000 females) (AIHW 2020a).

Population groups

- During the period 2010–2014, the age-standardised incidence rate of lung cancer showed a clear socioeconomic gradient, the incidence was higher as disadvantage increased—32 cases per 100,000 people among those living in the highest socioeconomic areas compared with 54 per 100,000 for those living in the lowest socioeconomic areas (Figure 23.2). The direction of the gradient was the same as bowel and cervical cancer but differs to that of breast cancer and melanoma of the skin (Figure 23.2).
- During the period 2010–2014, the age-standardised incidence rate of lung cancer showed a clear gradient by remoteness, incidence increased as remoteness increased—it was highest for those living in *Very remote* areas (59 cases per 100,000 people) and lowest for those living in *Major cities* (42 cases per 100,000 people) (Figure 23.3).
- During the period 2011–2015, the age-standardised incidence rate of lung cancer for Indigenous Australians was almost twice that of non-Indigenous Australians (a rate ratio of 1.9), in the four jurisdictions used for analysis (New South Wales, Queensland, Western Australia and the Northern Territory) (Table 23.4).

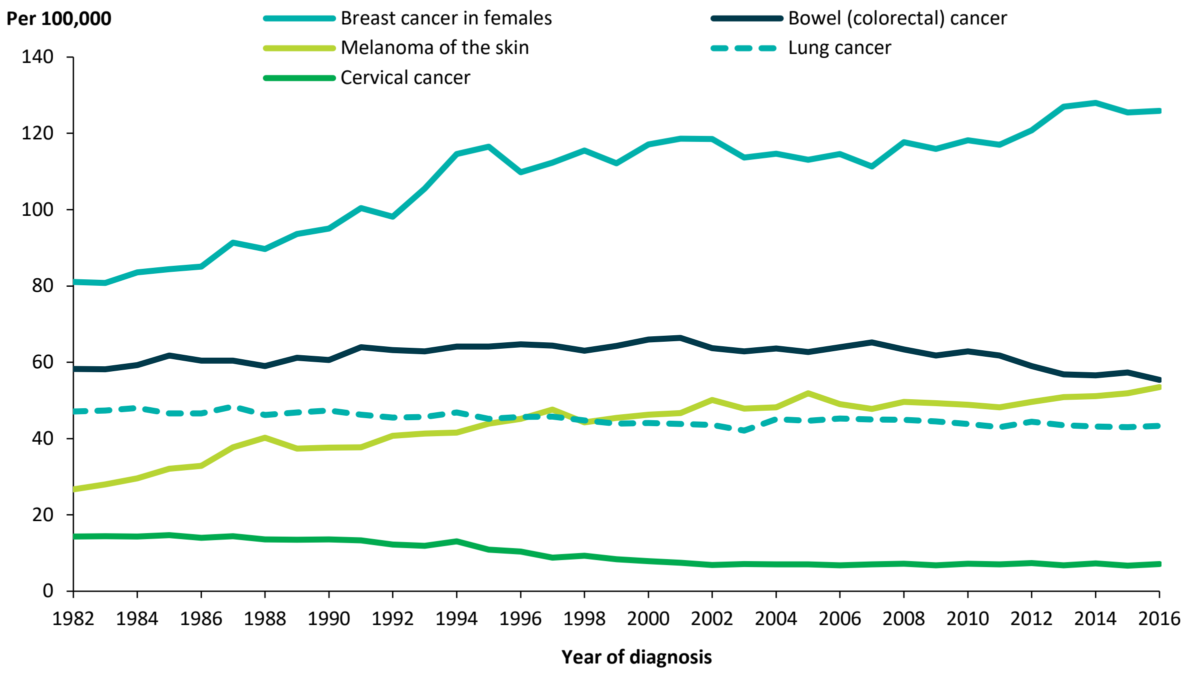
(e) Cervical cancer

- In 2016, the age-standardised incidence rate of cervical cancer was 7.1 new cases per 100,000 females, a decrease from 14 new cases per 100,000 females in 1982. The incidence (and mortality) almost halved between the introduction of the National Cervical Screening Program (NCSP) in 1991 and the year 2002 (see ‘Indicator 30’ for more information) (Figure 23.1).
- The age specific incidence rate in 2016 was highest for women aged 35–39 (15 new cases per 100,000 females) (AIHW 2020a).

Population groups

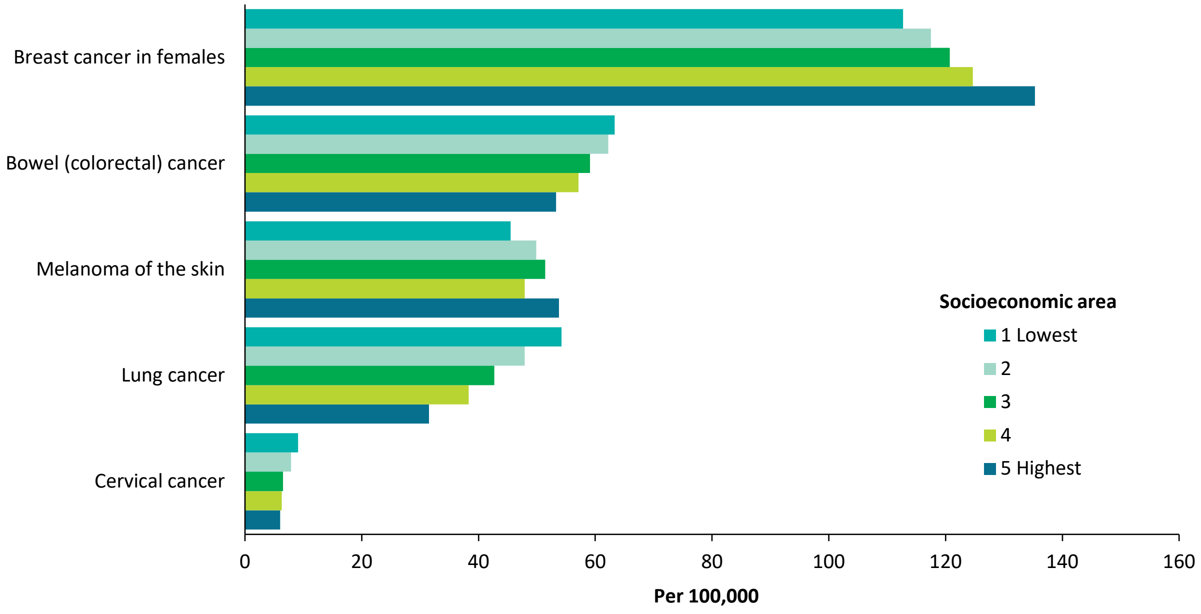
- During the period 2010–2014, the age-standardised incidence rate of cervical cancer showed a socioeconomic gradient, the incidence was higher as disadvantage increased—6 per 100,000 for females living in the highest socioeconomic areas compared with 9 per 100,000 for those living in the lowest socioeconomic (Figure 23.2). The direction of the gradient was the same as bowel and lung cancer but differs to that of breast cancer and melanoma of the skin (Figure 23.2).
- During the period 2010–2014, the age-standardised incidence rate of cervical cancer showed a gradient by remoteness, incidence generally increased as remoteness increased—it was highest for those living in *Remote* areas (11 cases per 100,000 females) and lowest for those living in *Major cities* (7 cases per 100,000 females) (Figure 23.3).
- During the period 2011–2015, the age-standardised incidence rate of cervical cancer for Indigenous females was twice the rate for non-Indigenous females (a rate ratio of 2.1), in the four jurisdictions used for analysis (New South Wales, Queensland, Western Australia and the Northern Territory) (Table 23.4).

Figure 23.1: Incidence rates for selected cancers, by year



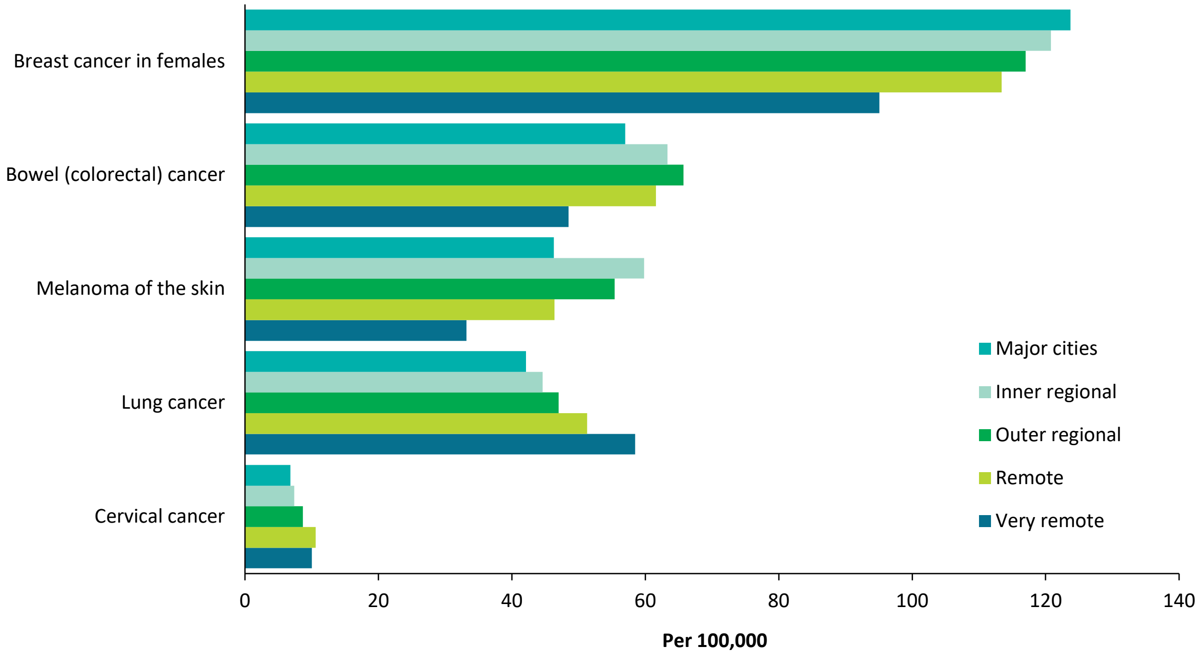
Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 23.1
Source: AIHW 2020a.

Figure 23.2: Incidence rates for selected cancers, by socioeconomic area, 2010–2014



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 23.2.
Source: AIHW 2019b.

Figure 23.3: Incidence rates for selected cancers, by remoteness area, 2010–2014



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 23.3
Source: AIHW 2019b.

Considerations

In general, a lower rate for this indicator is interpreted as a positive result although early detection via screening and/or improvements in detection methods could lead to higher rates but would not be viewed as negative.

This indicator should be interpreted in conjunction with 'Indicator 43' (5-year relative survival for selected cancers) and 'Indicators 28, 29, and 30' (breast, bowel and cervical screening rates).

Note that the Northern Territory (NT) was unable to supply 2016 incidence data in time for inclusion in the 2016 Australian Cancer Database, which is the source of the 2016 data presented for this indicator. The AIHW made estimates of 2016 NT incidence in order to enable reporting of national incidence for 2016.

The data presented here for Indigenous Australians are based on only four jurisdictions (New South Wales, Queensland, Western Australia and the NT); see the notes to Table 23.4 for more information.

Data sources

For 2016 and 2011–2015 data: AIHW Australian Cancer Database 2016.

For 2010–2014 data: AIHW Australian Cancer Database 2015.

For further details, refer to Appendix B.

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Supplementary tables

Table 23.1: Incidence rates[(a)] for selected cancers, by year

Year of diagnosis	Breast cancer in females	Bowel cancer	Melanoma of the skin	Lung cancer	Cervical cancer
1982	81.1	58.3	26.7	47.1	14.3
1983	80.8	58.2	28.0	47.4	14.4
1984	83.6	59.3	29.6	48.0	14.3
1985	84.4	61.8	32.1	46.6	14.7
1986	85.1	60.4	32.9	46.6	14.0
1987	91.4	60.4	37.7	48.4	14.4
1988	89.7	59.0	40.2	46.2	13.6
1989	93.6	61.2	37.4	46.9	13.5
1990	95.1	60.6	37.6	47.4	13.6
1991	100.4	64.0	37.7	46.3	13.3
1992	98.2	63.2	40.7	45.5	12.2
1993	105.5	62.9	41.3	45.7	11.9
1994	114.6	64.1	41.6	46.9	13.1
1995	116.5	64.1	43.9	45.2	10.9
1996	109.8	64.7	45.2	45.7	10.4
1997	112.3	64.4	47.6	45.8	8.8
1998	115.5	63.0	44.3	44.8	9.3
1999	112.2	64.3	45.4	43.9	8.4
2000	117.1	66.0	46.3	44.1	7.9
2001	118.6	66.4	46.7	43.8	7.5
2002	118.5	63.7	50.1	43.6	6.9
2003	113.7	62.9	47.9	42.1	7.1
2004	114.7	63.6	48.2	45.1	7.0
2005	113.1	62.7	51.9	44.7	7.0
2006	114.6	64.0	49.0	45.3	6.8
2007	111.3	65.2	47.8	45.0	7.0
2008	117.7	63.4	49.6	44.9	7.2
2009	115.9	61.8	49.3	44.5	6.8
2010	118.2	62.9	48.9	43.8	7.2
2011	117.0	61.8	48.2	43.0	7.0
2012	120.8	59.0	49.6	44.4	7.4
2013	127.0	56.8	50.9	43.5	6.8
2014	128.0	56.6	51.1	43.2	7.3
2015	125.5	57.3	51.9	43.0	6.7
2016	125.9	55.4	53.5	43.3	7.1
2016[(b)]	142.4	63.5	59.9	50.5	7.3

(continued)

Table 23.1 (continued): Incidence rates[(a)] for selected cancers, by year

(a) Age-standardised to the 2001 Australian standard population and expressed per 100,000 persons/females.
(b) Crude rates.
Source: AIHW 2020a.

Table 23.2: Incidence rates for selected cancers, by socioeconomic area, 2010–2014

Socioeconomic area	Breast cancer in females	Bowel cancer	Melanoma of the skin	Lung cancer	Cervical cancer
1 Lowest	112.7	63.3	45.5	54.2	9.1
2	117.5	62.2	49.9	47.9	7.9
3	120.7	59.1	51.4	42.7	6.5
4	124.7	57.1	47.9	38.3	6.3
5 Highest	135.3	53.3	53.8	31.5	6.0

Notes
1. Socioeconomic area was classified using the ABS Index of Relative Socio-economic Disadvantage. Socioeconomic disadvantage quintiles were assigned to cancer cases according to the IRSD of the SA2 of usual residence at the time of diagnosis.
2. Age-standardised to the 2001 Australian standard population and expressed per 100,000 persons/females.
Source: AIHW 2019b.

Table 23.3: Incidence rates for selected cancers, by remoteness area, 2010–2014

Remoteness area	Breast cancer in females	Bowel cancer	Melanoma of the skin	Lung cancer	Cervical cancer
Major cities	123.7	57.0	46.3	42.1	6.8
Inner regional	120.8	63.3	59.8	44.6	7.4
Outer regional	117.0	65.7	55.4	47.0	8.7
Remote	113.4	61.6	46.4	51.3	10.6
Very remote	95.1	48.5	33.2	58.5	10.0

Notes
1. Geography is based on area of usual residence (Statistical Local Area, Level 2) at time of diagnosis/death. The area of usual residence was then classified according to Remoteness Area 2011.
2. Age-standardised to the 2001 Australian standard population and expressed per 100,000 persons/females.
Source: AIHW 2019b.

Table 23.4: Incidence of selected cancers by Indigenous status and sex, 2011–2015

Cancer type	Males	Females	Persons
	Per 100,000 population		
Breast cancer in females			
Indigenous Australians	. .	97.1	. .
Non-Indigenous Australians	. .	118.9	. .
Bowel cancer			
Indigenous Australians	53.6	42.7	47.6
Non-Indigenous Australians	65.4	47.8	56.1
Melanoma of the skin			
Indigenous Australians	n.a.	n.a.	n.a.
Non-Indigenous Australians	n.a.	n.a.	n.a.
Lung cancer			
Indigenous Australians	98.2	73.0	83.7
Non-Indigenous Australians	54.5	33.5	43.1
Cervical cancer			
Indigenous Australians	. .	14.1	. .
Non-Indigenous Australians	. .	6.7	. .

n.a. not available.
. . not applicable.
Notes
1. Data are only presented for NSW, Qld, WA and NT. Victorian data have not been presented because of discrepancies in cancer incidence rates compared to these four jurisdictions. This may reflect differences in the number of data sources used to determine Indigenous status. Work is planned on validation of Indigenous status in Victorian cancer data. Data are not presented for SA, Tas or ACT because the Indigenous status variable is not of sufficient quality in these jurisdictions.
2. Data are presented for a 5-year period instead of 1 year because of small annual numbers for Indigenous Australians.
3. Directly age-standardised incidence rate per 100,000, using the 2001 Australian Standard Population, by 5-year age group to 75+.
4. The incidence rates for Indigenous and non-Indigenous Australians presented in this table are under-estimates due to the relatively large proportion of people whose Indigenous status is not stated. Also, it is likely that some Indigenous Australians are currently misclassified as non-Indigenous.
Source: AIHW 2020b.

Indicator 24: Non-fatal Burden of Disease (YLD) for selected chronic conditions

There were 37 years of healthy life lost due to the impact of living with selected chronic conditions for every 1,000 people in Australia (YLD) in 2018.

Why is this important?

Non-fatal burden of disease (years lived with disability, or YLD) quantifies the impact of living with illness and injury, adjusted for disease severity. It is a summary measure of years spent living in states of less than full health in the population. It is useful for comparisons across conditions, population groups, and/or over time (AIHW 2021).

What does this indicator measure?

YLD, which represents non-fatal burden, for selected chronic conditions:

- Coronary heart disease
- Back pain and problems
- COPD
- Lung cancer
- Dementia
- Anxiety disorders
- Stroke
- Depressive disorders
- Asthma
- Diabetes
- Bowel cancer.

This list is based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information. It measures the number of healthy years of life lost due to living with selected chronic conditions in a year at the population level.

Presented as an age-standardised rate (YLD per 1,000 population).

What do the data show?

- In 2018, Australians lost 2.6 million years of healthy life due to the impact of living with diseases and injury, more than a third of this (38%) was due to selected chronic conditions (990,200 YLD) (Table 24.1).
- In 2018, there were 37 years of healthy life lost due to the impact of living with selected chronic conditions for every 1,000 people in Australia (YLD); similar to the rates in previous years (Figure 24.1). This was in contrast to the burden from premature deaths (YLL) which fell over these time points (see 'Indicator 45' for more information).
- In 2018, the rate of non-fatal burden (YLD) from selected chronic conditions was higher for females than males (39 and 35 per 1,000 population, respectively) (Table 24.2). Rates of non-fatal burden from selected chronic conditions generally increased with increasing age (Figure 24.2).

Population groups

In 2018, the rate of non-fatal burden (YLD per 1,000 population), after adjusting for age, for selected chronic conditions:

- varied by socioeconomic area—people living in the lowest socioeconomic areas experienced the highest rates of YLD; this was true for both males and females (Figure 24.3). The rate of YLD decreased with increasing socioeconomic position.
- was similar across remoteness categories (Figure 24.4). This is in contrast to fatal burden (YLL) which was notably higher in those living in *Remote and very remote* areas than those living in *Major cities* (see 'Indicator 45' for more information).

Data on burden among Aboriginal and Torres Strait Islander people was only available for 2003 and 2011 at the time of writing.

Among Indigenous Australians, in 2011, after adjusting for age:

- there were 68 years of life lost due to the impact of living with selected chronic conditions for every 1,000 Indigenous Australians; this is slightly higher than in 2003 (64 YLD per 1,000) (Figure 24.5)—this is in contrast to the burden from premature deaths (YLL) which fell between 2003 and 2011 (see 'Indicator 45')
- males experienced a lower rate of non-fatal burden (61 YLD per 1,000 population) than females (75 YLD per 1,000) (Figure 24.5), this is in contrast to fatal burden where males experienced a higher rate than females—see 'Indicator 45' for more information
- for Indigenous Australians, the non-fatal burden (YLD) rate was 2 times as high as for non-Indigenous Australians (Table 24.7).

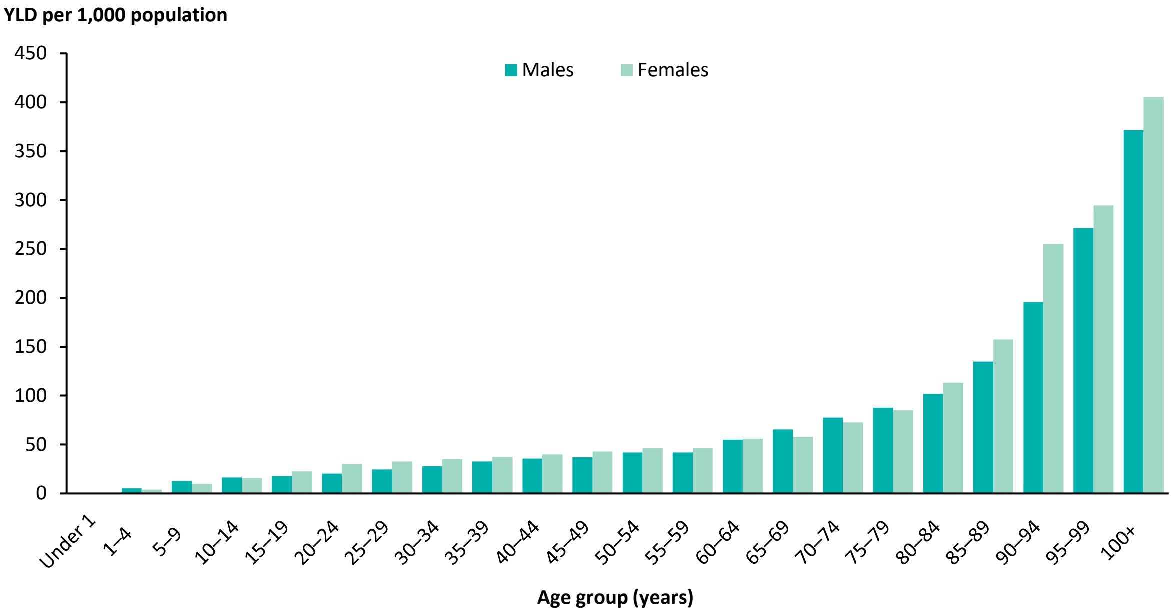
Figure 24.1: Age-standardised YLD rates (per 1,000 population), for selected chronic conditions, by sex and year

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 24.2.

Source: AIHW Australian Burden of Disease Database, 2018.

Figure 24.2: YLD rates (per 1,000 population), for selected chronic conditions, by sex and age, 2018

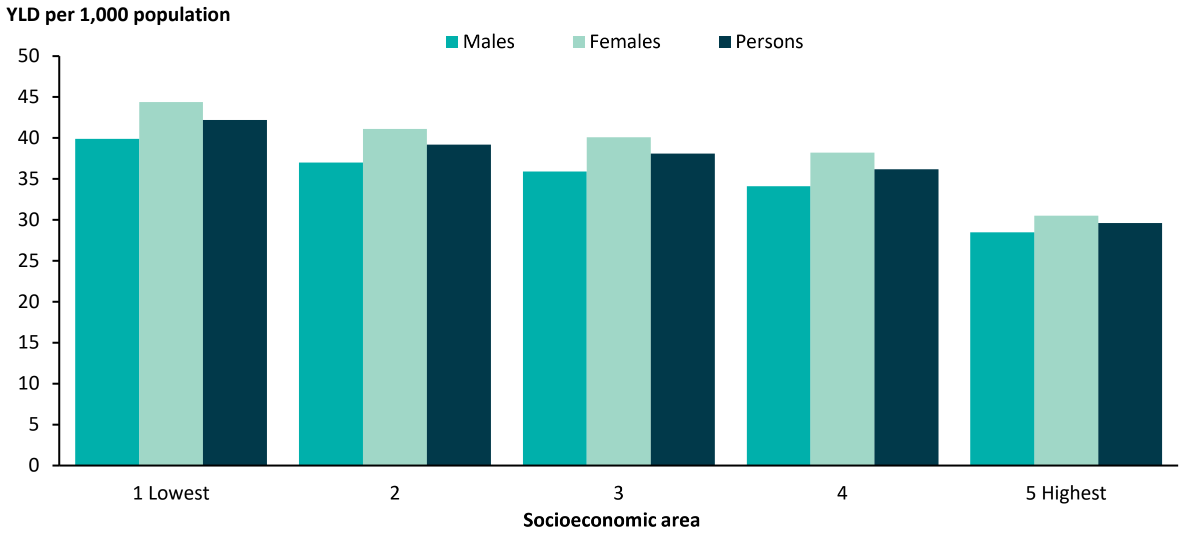


Notes

1. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
2. Data and additional notes for this figure are shown in Table 24.3.

Source: AIHW Australian Burden of Disease Database, 2018.

Figure 24.3: Aged standardised YLD rates (per 1,000 population) for selected chronic conditions, by sex and socioeconomic area, 2018

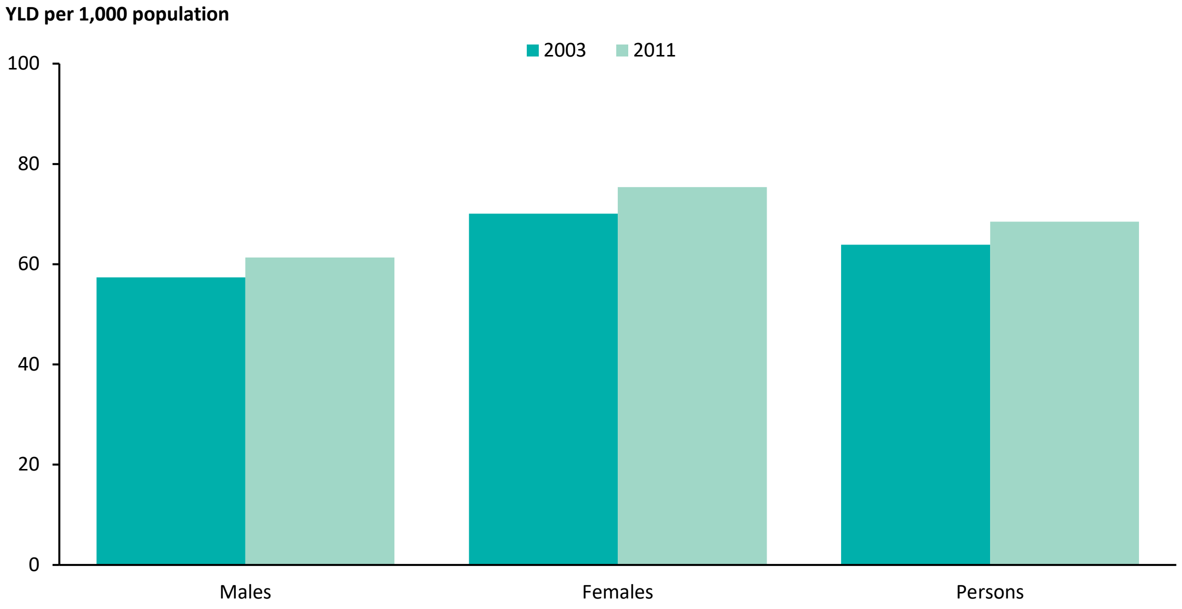


Notes
1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 24.4.
Source: AIHW Australian Burden of Disease Database, 2018.

Figure 24.4: Age-standardised rates (YLD per 1,000 population) for selected chronic conditions, by sex and remoteness area, 2018

Notes
1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 24.5.
Source: AIHW Australian Burden of Disease Database, 2018.

Figure 24.5: Age-standardised YLD rates (per 1,000 population), for selected chronic conditions for Indigenous Australians, by sex and year



Notes
1. Rates calculated using Indigenous population estimates based on the 2011 Census.
2. Non-Indigenous population estimates were calculated by subtracting the Indigenous population estimates from the total Australian population estimates for the same years.
3. Age-standardised to the 2001 Australian standard population.
4. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
5. Data and additional notes for this figure are shown in Table 24.7.
Source: AIHW Australian Burden of Disease Database, 2011.

Considerations

Burden of Disease metrics such as YLD are not routinely collected measures, they are sourced from the latest Australian Burden of Disease Study undertaken, which are produced intermittently (as subject to funding), require a major analytical process and complex modelling, and the disease-specific methods, evidence and underlying assumptions are constantly evolving

There are multiple Australian Burden of Disease studies conducted in 1996, 2003, 2011, 2015 and 2018. The latest study (Australian Burden of Disease Study 2018) comprises comparable estimates for 4 time points: 2003, 2011, 2015 and 2018. Estimates from the Australian Burden of Disease Study 2018 cannot be directly compared with other Burden of Disease studies. Therefore, due to method revisions applied to historical estimates in the Australian Burden of Disease Database 2018, the sum of Indigenous and non-Indigenous YLD estimates will not equal the national estimates for 2003 and 2011. Results from the Aboriginal and Torres Strait Islander component of ABDS 2018 were not available in time for inclusion in this report (AIHW 2022b).

This indicator should be considered in conjunction with 'Indicator 25' (Disability-adjusted life years (DALY) for selected chronic conditions) and 'Indicator 45' (Fatal Burden of Disease (YLL) for selected chronic conditions).

Data sources

AIHW Australian Burden of Disease Database 2018.

AIHW Australian Burden of Disease Database 2011.

For further details, refer to Appendix B.

References

AIHW 2021. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2018—Summary. Cat. no. BOD 30. Canberra: AIHW.

AIHW 2022a. National Strategic Framework for Chronic Conditions: reporting framework. Cat. no. PHE 298. Canberra: AIHW.

AIHW 2022b. Australian Burden of Disease Study: impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2018. Cat. no. BOD 32. Canberra: AIHW.

Supplementary tables

Table 24.1: Number of DALY, YLD and YLL by year

		2003	2011	2015	2018
DALY	Selected chronic conditions[(a)]	1,623,642	1,720,395	1,786,668	1,855,401
	Total (all diseases)	4,167,640	4,529,106	4,816,797	4,983,519
YLD	Selected chronic conditions[(a)]	742,552	860,623	924,698	990,226
	Total (all diseases)	1,948,054	2,256,358	2,453,111	2,613,178
YLL	Selected chronic conditions[(a)]	881,090	859,772	861,970	865,175
	Total (all diseases)	2,219,586	2,272,748	2,363,686	2,370,341

(a) The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
Source: AIHW Australian Burden of Disease Database, 2018.

Table 24.2: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and year

	DALY				YLD				YLL			
Sex	**2003**	**2011**	**2015**	**2018**	**2003**	**2011**	**2015**	**2018**	**2003**	**2011**	**2015**	**2018**
Males	92.8	78.9	73.4	70.9	36	35.4	34.7	35.1	56.8	43.5	38.7	35.8
Females	70.5	64.5	62.6	61.2	38.5	38.3	38.5	38.6	32.1	26.2	24.2	22.6
Persons	80.8	71.3	67.8	65.8	37.3	36.9	36.6	36.9	43.6	34.4	31.1	28.9

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

Source: AIHW Australian Burden of Disease Database, 2018.

Table 24.3: Age-specific DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, 2018

	DALY		YLD		YLL	
Age group (years)	**Males**	**Females**	**Males**	**Females**	**Males**	**Females**
Under 1	1.7	1.8	0.6	0.4	1.1	1.4
1–4	5.6	4.1	5.3	3.8	0.3	0.3
5–9	13.1	10.2	12.7	9.8	0.4	0.4
10–14	16.7	16.0	16.5	15.7	0.2	0.3
15–19	18.5	23.2	17.8	22.7	0.8	0.5
20–24	21.2	30.4	20.2	30.0	1.0	0.4
25–29	26.8	34.7	24.5	32.9	2.3	1.8
30–34	32.2	37.4	27.9	34.9	4.3	2.5
35–39	39.6	41.3	32.6	37.4	7.0	3.9
40–44	48.1	46.8	35.6	40.0	12.5	6.8
45–49	61.8	56.0	37.1	42.9	24.7	13.1
50–54	79.3	66.1	42.0	46.1	37.2	20.0
55–59	100.6	77.7	41.8	46.2	58.8	31.5
60–64	135.3	98.7	55.1	55.9	80.2	42.8
65–69	172.8	115.6	65.5	57.9	107.2	57.7
70–74	215.8	155.8	77.6	72.6	138.2	83.2
75–79	278.7	211.2	87.8	85.0	191.0	126.2
80–84	362.3	299.6	101.8	113.4	260.5	186.1
85–89	483.9	432.9	134.8	157.4	349.1	275.5
90–94	621.2	630.3	195.7	254.9	425.5	375.4
95–99	690.9	729.9	271.2	294.4	419.8	435.6
100+	697.7	934.1	371.5	405.3	326.2	528.8

Note: The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

Source: AIHW Australian Burden of Disease Database, 2018.

Table 24.4: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and socioeconomic area, 2018

Sex	Socioeconomic area	DALY	YLD	YLL
Males	1 Lowest	90.5	39.9	50.6
	2	76.5	37.0	39.5
	3	70.4	35.9	34.5
	4	64.0	34.1	29.9
	5 Highest	52.0	28.5	23.4
Females	1 Lowest	74.2	44.4	29.8
	2	67.0	41.1	25.9
	3	61.5	40.1	21.4
	4	57.9	38.2	19.8
	5 Highest	46.8	30.5	16.3
Persons	1 Lowest	82.0	42.2	39.9
	2	71.6	39.2	32.4
	3	65.7	38.1	27.6
	4	60.8	36.2	24.6
	5 Highest	49.3	29.6	19.7

Notes

1. Age-standardised to the 2001 Australian standard population.

2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).

Source: AIHW analysis of the Australian Burden of Disease Database, 2018.

Table 24.5: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and remoteness area, 2018

Sex	Remoteness area	DALY	YLD	YLL
Males	Major cities	68.1	35.3	32.8
	Inner regional	75.4	35.5	39.9
	Outer regional	77.2	33.4	43.8
	Remote and very remote	91.2	34.2	57.0
Females	Major cities	59.9	39.1	20.8
	Inner regional	65.3	38.9	26.4
	Outer regional	63.8	36.5	27.4
	Remote and very remote	71.7	38.6	33.1
Persons	Major cities	63.8	37.3	26.5
	Inner regional	70.2	37.3	32.9
	Outer regional	70.6	35.0	35.6
	Remote and very remote	82.1	36.4	45.8

Notes

1. Age-standardised to the 2001 Australian standard population.

2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.

Source: AIHW Australian Burden of Disease Database, 2018.

Table 24.6: Number of DALY, YLD and YLL for selected chronic conditions, by Indigenous status, by sex and year

	Indigenous Australians					
	DALY		YLD		YLL	
	2003	2011	2003	2011	2003	2011
Males	25,968	30,982	9,906	13,534	16,062	17,448
Females	24,055	31,382	13,297	18,571	10,759	12,811
Persons	**50,024**	**62,363**	**23,203**	**32,105**	**26,821**	**30,258**
	Non-Indigenous Australians					
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	827,371	845,830	331,588	374,383	495,782	471,448
Females	709,487	775,577	358,093	425,090	351,395	350,487
Persons	**1,536,858**	**1,621,407**	**689,681**	**799,472**	**847,177**	**821,935**

Notes

1. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
2. Due to method revisions applied to historical estimates in the Australian Burden of Disease Database 2018, the sum of Indigenous and non-Indigenous YLD and DALY estimates will not equal the national estimates for 2003 and 2011.

Source: AIHW analysis of the Australian Burden of Disease Database, 2011.

Table 24.7: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by Indigenous status, by sex and year

	Indigenous Australians					
	DALY		YLD		YLL	
	2003	2011	2003	2011	2003	2011
Males	200.4	182.6	57.4	61.3	142.9	121.3
Females	168.6	159.0	70.1	75.4	98.5	83.6
Persons	183.1	169.5	63.9	68.5	119.2	101.1
	Non-Indigenous Australians					
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	90.6	76.0	35.5	34.0	55.2	42.0
Females	66.0	61.1	35.0	35.9	31.0	25.2
Persons	77.5	68.1	35.3	35.0	42.2	33.2

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Rates calculated using Indigenous population estimates based on the 2011 Census.
4. Non-Indigenous population estimates were calculated by subtracting the Indigenous population estimates from the total Australian population estimates for the same years.

Source: AIHW Australian Burden of Disease Database, 2011.

Indicator 25: Disability-adjusted life years (DALY) for selected chronic conditions

There were 66 years of healthy life lost due to premature death or the impact of living with selected chronic conditions for every 1,000 people in Australia (DALY) in 2018.

Why is this important?

Burden of disease analysis quantifies the fatal and non-fatal impact of a disease or injury on a population, using the disability-adjusted life year (DALY) measure. More than merely counting deaths or disease prevalence, it takes into account age at death and severity of disease. Burden of disease analysis provides summary information on the level and distribution of health in the population, which can be used to compare population health over time and between population groups (AIHW 2021).

What does this indicator measure?

DALY, which represents total burden, for selected chronic conditions:

- Coronary heart disease
- Back pain and problems
- COPD
- Lung cancer
- Dementia
- Anxiety disorders
- Stroke
- Depressive disorders
- Asthma
- Diabetes
- Bowel cancer.

This list is based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information.

DALY is a measure (in years) of healthy life lost, either through premature death defined as dying before an ideal life span (referred to as years of life lost or YLL) or, equivalently, through living with ill health due to selected chronic conditions (referred to as years lived with disability or YLD).

DALY = YLL + YLD.

Presented as an age-standardised rate (DALY per 1,000 population).

What do the data show?

- In 2018, Australians lost 5.0 million years of healthy life due to dying or living with diseases and injury; more than a third of this (37%) was due to selected chronic conditions (1.9 million DALY) (Table 25.1). This is similar to their share of the burden in 2011 (38%) and 2015 (37%).
- Among the selected conditions some are more likely to cause fatal burden and some are more likely to cause non-fatal burden. Of the burden from selected chronic conditions, there has been a shift in the proportion of non-fatal and fatal burden, with the fatal burden component dropping from 54% in 2003 to 47% in 2018. That is, in 2018, less than half the burden was due to dying early (47%) and more than half (53%) was due to living with selected chronic conditions (Table 25.1).
- In 2018, there were 66 years of life lost due to premature death or living with selected chronic conditions for every 1,000 people in Australia; this has fallen since 2003 (81 DALY) (Figure 25.1).
- In 2018, the rate of total burden (DALY) from selected chronic conditions was higher for males than females (71 and 61 per 1,000 population, respectively) (Table 25.2); and increased with increasing age (Figure 25.2).

Population groups

In 2018, the rate of total burden (DALY per 1,000 population), after adjusting for age, for selected chronic conditions:

- varied by socioeconomic area—those living in the lowest socioeconomic areas experienced the highest rates of DALY for both males and females. The rate of DALY decreased with increasing socioeconomic position (Figure 25.3)
- generally increased with increasing remoteness, rates were lowest for those living in *Major cities* and highest in *Remote and very remote* areas for both males and females (for example, for males the DALY was 91 per 1,000 people in *Remote and very remote* areas compared with 68 in *Major cities*) (Figure 25.4).

Data on burden among Aboriginal and Torres Strait Islander people was only available for 2003 and 2011 at the time of writing.

Among Indigenous Australians, in 2011, after adjusting for age:

- there were 170 years of life lost due to premature death or living with selected chronic conditions for every 1,000 Indigenous Australians in Australia; this has fallen since 2003 (183 DALY per 1,000) (Figure 25.5)
- the rate of burden (DALY) from selected chronic conditions was higher among males than females (183 and 159 per 1,000 population, respectively) (Figure 25.5)
- for Indigenous Australians, the rate of burden (YLD) for selected chronic conditions was 2.5 times as high as for non-Indigenous Australians (Table 25.7).

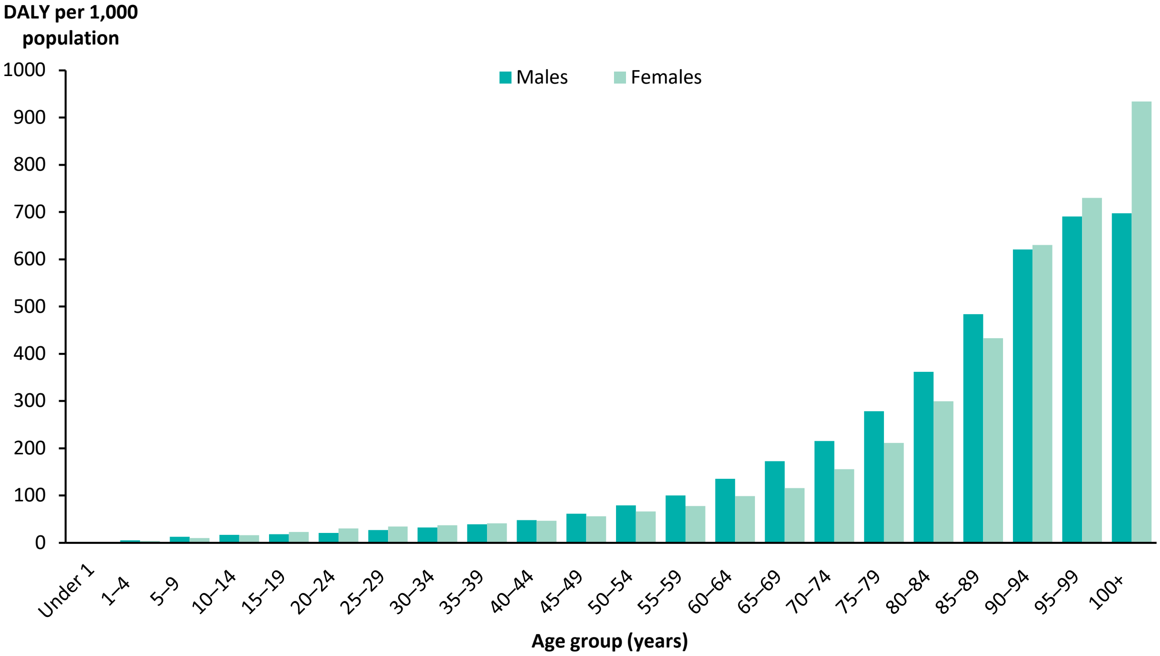
Figure 25.1: Age-standardised DALY rates (per 1,000 population), for selected chronic conditions, by sex and year

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 25.2.

Source: AIHW Australian Burden of Disease Database, 2018.

Figure 25.2: DALY per 1,000 population, for selected chronic conditions, by sex and age, 2018

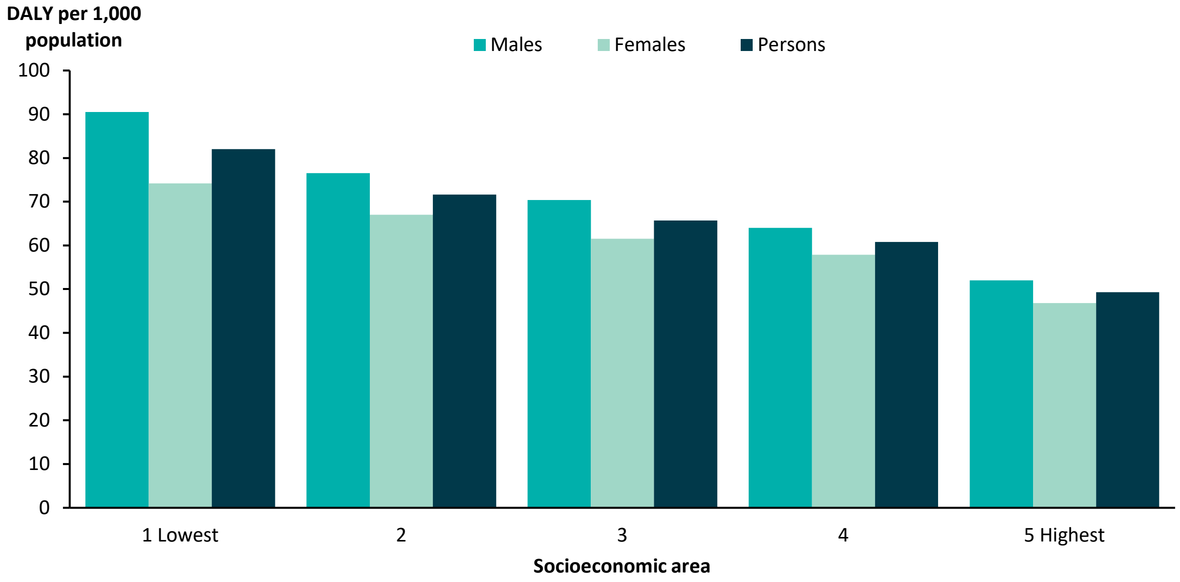


Notes

1. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
2. Data and additional notes for this figure are shown in Table 25.3.

Source: AIHW Australian Burden of Disease Database, 2018.

Figure 25.3: Age-standardised rates (DALY per 1,000 population), for selected chronic conditions, by sex and socioeconomic area, 2018

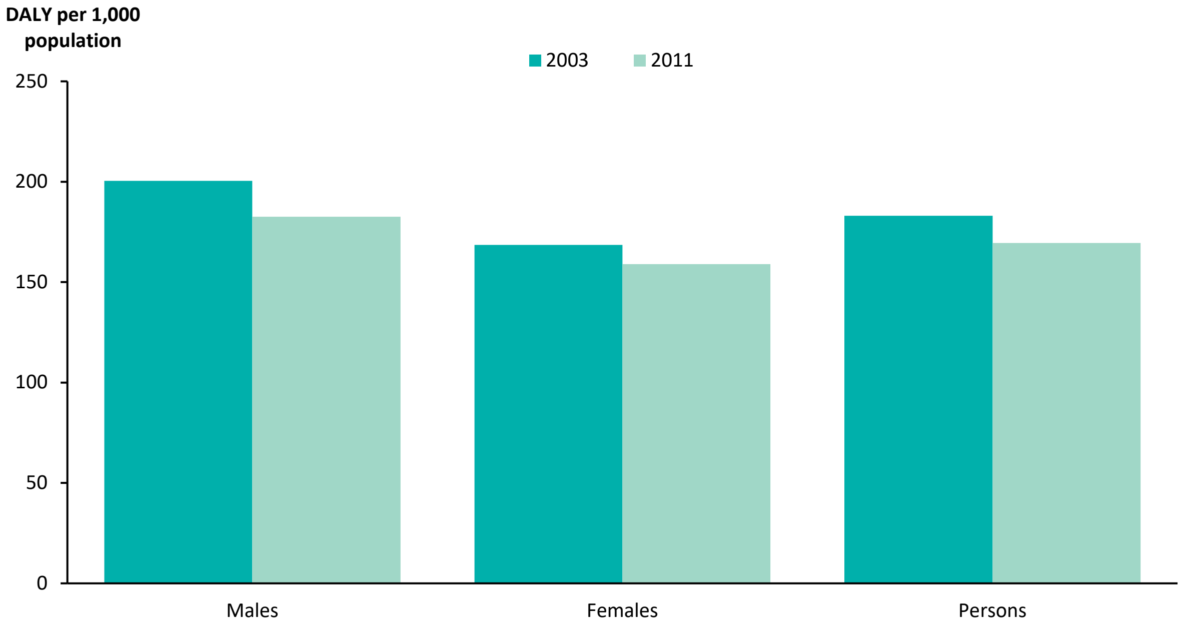


Notes
1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 25.4.
Source: AIHW Australian Burden of Disease Database, 2018.

Figure 25.4: Age-standardised rates (DALY per 1,000 population), for selected chronic conditions, by sex and remoteness area, 2018

Notes
1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 25.5.
Source: AIHW Australian Burden of Disease Database, 2018.

Figure 25.5: Age-standardised burden rates (DALY per 1,000 population), for selected chronic conditions for Indigenous Australians, by sex and year



Notes

1. Rates calculated using Indigenous population estimates based on the 2011 Census.
2. Non-Indigenous population estimates were calculated by subtracting the Indigenous population estimates from the total Australian population estimates for the same years.
3. Age-standardised to the 2001 Australian standard population.
4. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
5. Data and additional notes for this figure are shown in Table 25.7.

Source: AIHW Australian Burden of Disease Database, 2011.

Considerations

Burden of Disease metrics such as DALY are not routinely collected measures, they are sourced from the latest Australian Burden of Disease Study undertaken, which are produced intermittently (as subject to funding), require a major analytical process and complex modelling, and the disease-specific methods, evidence and underlying assumptions are constantly evolving.

There are multiple Australian Burden of Disease studies conducted in 1996, 2003, 2011, 2015 and 2018. The latest study (Australian Burden of Disease Study 2018) comprises comparable estimates for four time points: 2003, 2011, 2015 and 2018. Estimates from the Australian Burden of Disease Study 2018 cannot be directly compared with other Burden of Disease studies. Therefore, due to method revisions applied to historical estimates in the Australian Burden of Disease Database 2018, the sum of Indigenous and non-Indigenous DALY estimates will not equal the national estimates for 2003 and 2011. Results from the Aboriginal and Torres Strait Islander component of ABDS 2018 were not available in time for inclusion in this report (AIHW 2022b).

This indicator should be considered in conjunction with 'Indicator 24' (Non-fatal Burden of Disease (YLD) for selected chronic conditions) and 'Indicator 45' (Fatal Burden of Disease (YLL) for selected chronic conditions).

Data sources

AIHW Australian Burden of Disease Database 2018.

AIHW Australian Burden of Disease Database 2011.

For further details, refer to Appendix B.

References

AIHW 2021. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2018—Summary. Cat. no. BOD 30. Canberra: AIHW.

AIHW 2022a. National Strategic Framework for Chronic Conditions: reporting framework. Cat. no. PHE 298. Canberra: AIHW.

AIHW 2022b. Australian Burden of Disease Study: impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2018. Cat. no. BOD 32. Canberra: AIHW.

Supplementary tables

Table 25.1: Number of DALY, YLD and YLL, by year

		2003	2011	2015	2018
DALY	Selected chronic conditions[(a)]	1,623,642	1,720,395	1,786,668	1,855,401
	Total (all diseases)	4,167,640	4,529,106	4,816,797	4,983,519
YLD	Selected chronic conditions[(a)]	742,552	860,623	924,698	990,226
	Total (all diseases)	1,948,054	2,256,358	2,453,111	2,613,178
YLL	Selected chronic conditions[(a)]	881,090	859,772	861,970	865,175
	Total (all diseases)	2,219,586	2,272,748	2,363,686	2,370,341

(a) The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

Source: AIHW Australian Burden of Disease Database, 2018.

Table 25.2: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and year

	DALY				YLD				YLL			
Sex	**2003**	**2011**	**2015**	**2018**	**2003**	**2011**	**2015**	**2018**	**2003**	**2011**	**2015**	**2018**
Males	92.8	78.9	73.4	70.9	36	35.4	34.7	35.1	56.8	43.5	38.7	35.8
Females	70.5	64.5	62.6	61.2	38.5	38.3	38.5	38.6	32.1	26.2	24.2	22.6
Persons	80.8	71.3	67.8	65.8	37.3	36.9	36.6	36.9	43.6	34.4	31.1	28.9

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

Source: AIHW Australian Burden of Disease Database, 2018.

Table 25.3: Age-specific DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, 2018

	DALY		YLD		YLL	
Age group (years)	**Males**	**Females**	**Males**	**Females**	**Males**	**Females**
Under 1	1.7	1.8	0.6	0.4	1.1	1.4
1–4	5.6	4.1	5.3	3.8	0.3	0.3
5–9	13.1	10.2	12.7	9.8	0.4	0.4
10–14	16.7	16.0	16.5	15.7	0.2	0.3
15–19	18.5	23.2	17.8	22.7	0.8	0.5
20–24	21.2	30.4	20.2	30.0	1.0	0.4
25–29	26.8	34.7	24.5	32.9	2.3	1.8
30–34	32.2	37.4	27.9	34.9	4.3	2.5
35–39	39.6	41.3	32.6	37.4	7.0	3.9
40–44	48.1	46.8	35.6	40.0	12.5	6.8
45–49	61.8	56.0	37.1	42.9	24.7	13.1
50–54	79.3	66.1	42.0	46.1	37.2	20.0
55–59	100.6	77.7	41.8	46.2	58.8	31.5
60–64	135.3	98.7	55.1	55.9	80.2	42.8
65–69	172.8	115.6	65.5	57.9	107.2	57.7
70–74	215.8	155.8	77.6	72.6	138.2	83.2
75–79	278.7	211.2	87.8	85.0	191.0	126.2
80–84	362.3	299.6	101.8	113.4	260.5	186.1
85–89	483.9	432.9	134.8	157.4	349.1	275.5
90–94	621.2	630.3	195.7	254.9	425.5	375.4
95–99	690.9	729.9	271.2	294.4	419.8	435.6
100+	697.7	934.1	371.5	405.3	326.2	528.8

Note: The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

Source: AIHW Australian Burden of Disease Database, 2018.

Table 25.4: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and socioeconomic area, 2018

Sex	Socioeconomic area	DALY	YLD	YLL
Males	1 Lowest	90.5	39.9	50.6
	2	76.5	37.0	39.5
	3	70.4	35.9	34.5
	4	64.0	34.1	29.9
	5 Highest	52.0	28.5	23.4
Females	1 Lowest	74.2	44.4	29.8
	2	67.0	41.1	25.9
	3	61.5	40.1	21.4
	4	57.9	38.2	19.8
	5 Highest	46.8	30.5	16.3
Persons	1 Lowest	82.0	42.2	39.9
	2	71.6	39.2	32.4
	3	65.7	38.1	27.6
	4	60.8	36.2	24.6
	5 Highest	49.3	29.6	19.7

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2011 (SEIFA 2011), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).

Source: AIHW Australian Burden of Disease Database, 2018.

Table 25.5: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and remoteness area, 2018

Sex	Remoteness area	DALY	YLD	YLL
Males	Major cities	68.1	35.3	32.8
	Inner regional	75.4	35.5	39.9
	Outer regional	77.2	33.4	43.8
	Remote and very remote	91.2	34.2	57.0
Females	Major cities	59.9	39.1	20.8
	Inner regional	65.3	38.9	26.4
	Outer regional	63.8	36.5	27.4
	Remote and very remote	71.7	38.6	33.1
Persons	Major cities	63.8	37.3	26.5
	Inner regional	70.2	37.3	32.9
	Outer regional	70.6	35.0	35.6
	Remote and very remote	82.1	36.4	45.8

(continued)

Table 25.5 (continued): Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and remoteness area, 2018

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.

Source: AIHW Australian Burden of Disease Database, 2018.

Table 25.6: Number of DALY, YLD and YLL for selected chronic conditions, by Indigenous status, by sex and year

	Indigenous Australians					
	DALY		**YLD**		**YLL**	
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	25,968	30,982	9,906	13,534	16,062	17,448
Females	24,055	31,382	13,297	18,571	10,759	12,811
Persons	**50,024**	**62,363**	**23,203**	**32,105**	**26,821**	**30,258**
	Non-Indigenous Australians					
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	827,371	845,830	331,588	374,383	495,782	471,448
Females	709,487	775,577	358,093	425,090	351,395	350,487
Persons	**1,536,858**	**1,621,407**	**689,681**	**799,472**	**847,177**	**821,935**

Notes

1. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
2. Due to method revisions applied to historical estimates in the Australian Burden of Disease Database 2018, the sum of Indigenous and non-Indigenous YLD and DALY estimates will not equal the national estimates for 2003 and 2011.

Source: AIHW Australian Burden of Disease Database, 2011.

Table 25.7: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by Indigenous status, by sex and year

	Indigenous Australians					
	DALY		YLD		YLL	
	2003	2011	2003	2011	2003	2011
Males	200.4	182.6	57.4	61.3	142.9	121.3
Females	168.6	159.0	70.1	75.4	98.5	83.6
Persons	183.1	169.5	63.9	68.5	119.2	101.1
	Non-Indigenous Australians					
	DALY		**YLD**		**YLL**	
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	90.6	76.0	35.5	34.0	55.2	42.0
Females	66.0	61.1	35.0	35.9	31.0	25.2
Persons	77.5	68.1	35.3	35.0	42.2	33.2

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Rates calculated using Indigenous population estimates based on the 2011 Census.
4. Non-Indigenous population estimates were calculated by subtracting the Indigenous population estimates from the total Australian population estimates for the same years.

Source: AIHW Australian Burden of Disease Database, 2011.

Indicator 26: Dental visit in last 12 months

In 2018–19, 49% of people aged 15 and over had visited a dental professional in the last 12 months.

Why is this important?

Poor oral health, a chronic condition in its own right, is associated with other chronic conditions including cardiovascular disease, diabetes, osteoporosis and obesity (COAG 2015). Poor oral health and other chronic conditions share many risk factors including social determinants, smoking ('Indicator 7'), alcohol ('Indicator 6') and diet.

A dental visit can provide preventive dental care to maintain existing oral health, as well as treatment services that may reverse disease or rehabilitate the teeth and gums after damage occurs. Preventive care is most likely to happen in the presence of regular dental visiting for a check-up. Regular dental visits also increase the likelihood that disease will be detected in its early stages and can be managed before significant damage occurs to teeth and gums. People have different oral health needs and risk levels which should be reflected in their frequency of check-ups—*Australia's National Oral Health Plan 2015–2024* recommends individuals should talk with an oral health professional about their risk level and how frequently they need to visit (COAG 2015).

What does this indicator measure?

The proportion of people aged 15 and over who visited a dental professional in the last 12 months. Includes dentist, dental hygienist and dental specialists.

What do the data show?

In 2018–19, for those aged 15 and over:

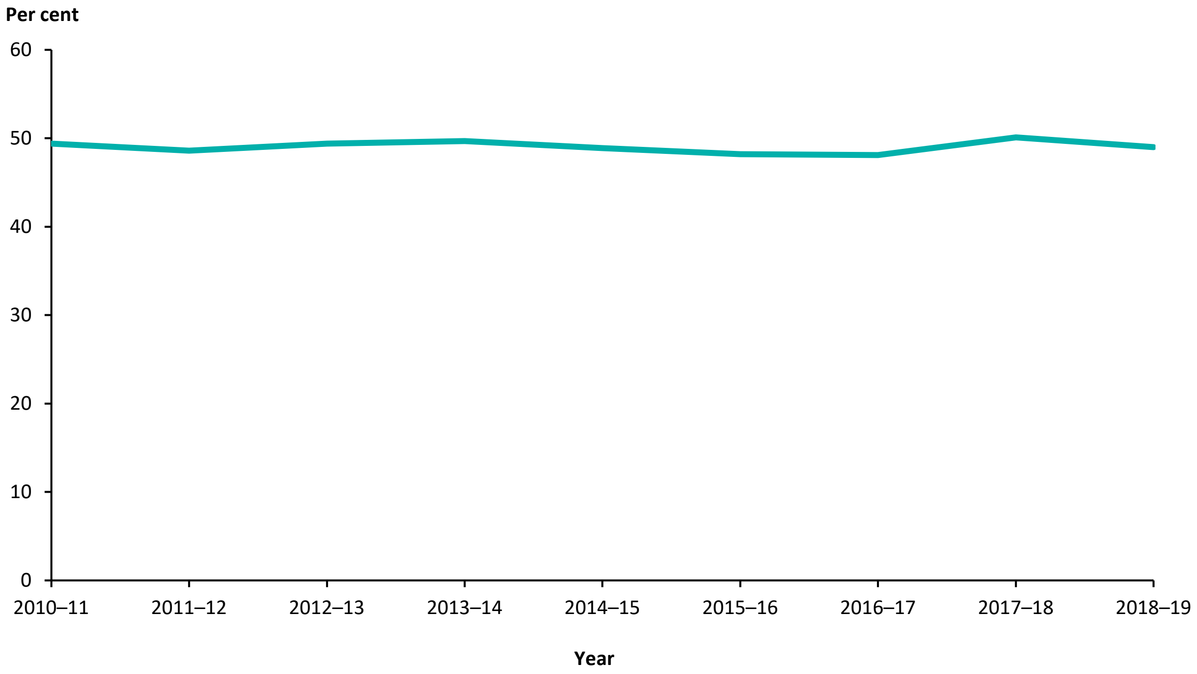
- almost one in two people (49%), or an estimated 9.7 million people saw a dental professional in the last 12 months (ABS 2019a). This has remained relatively stable since 2010–11 (Figure 26.1)
- females were more likely than males to have seen a dental professional in the last 12 months (53% compared with 45%) (Figure 26.2)
- people aged 15–24 (50%) were more likely to have seen a dental professional in the last 12 months than those aged 25–34 years (41%); rates then ranged between 48% and 56% for those aged 35 through to 84 years (Table 26.2).

Population groups

In 2018–19, for those aged 15 and over:

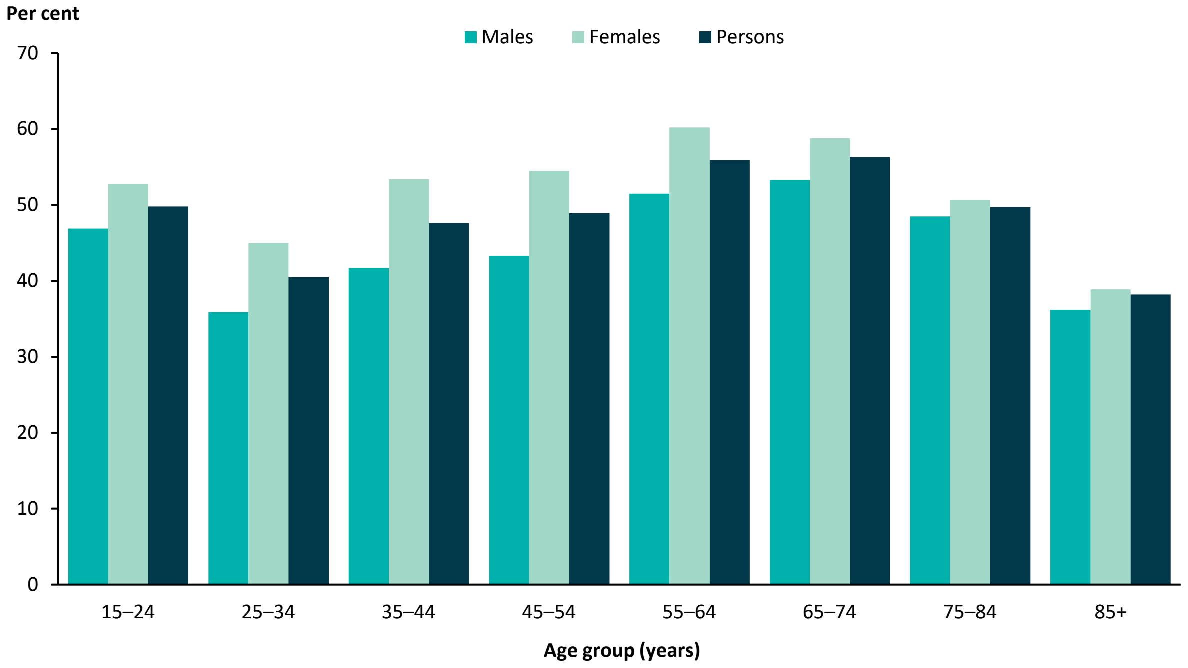
- people living in the highest socioeconomic areas were more likely to have seen a dental professional than those living in the lowest socioeconomic areas (61% compared with 38%) (Figure 26.3)
- people living in *Major cities* (51%) were more likely to have seen a dental professional in the last 12 months than those living in *Inner regional* areas (45%) and *Outer regional, remote and very remote* areas (41%) (Figure 26.3)
- 38% (an estimated 199,800) of Indigenous Australians saw a dental professional in the previous 12 months. Indigenous females were more likely than Indigenous males to have seen a dental professional in the last 12 months (42% compared with 34%) (ABS 2019b)
- after adjusting for age, Indigenous Australians were less likely than non-Indigenous Australians to have seen a dental professional in the previous 12 months (a rate ratio of 0.8) (Table 26.4).

Figure 26.1: Percentage of persons aged 15 and over who saw a dental professional in the last 12 months (%), by year



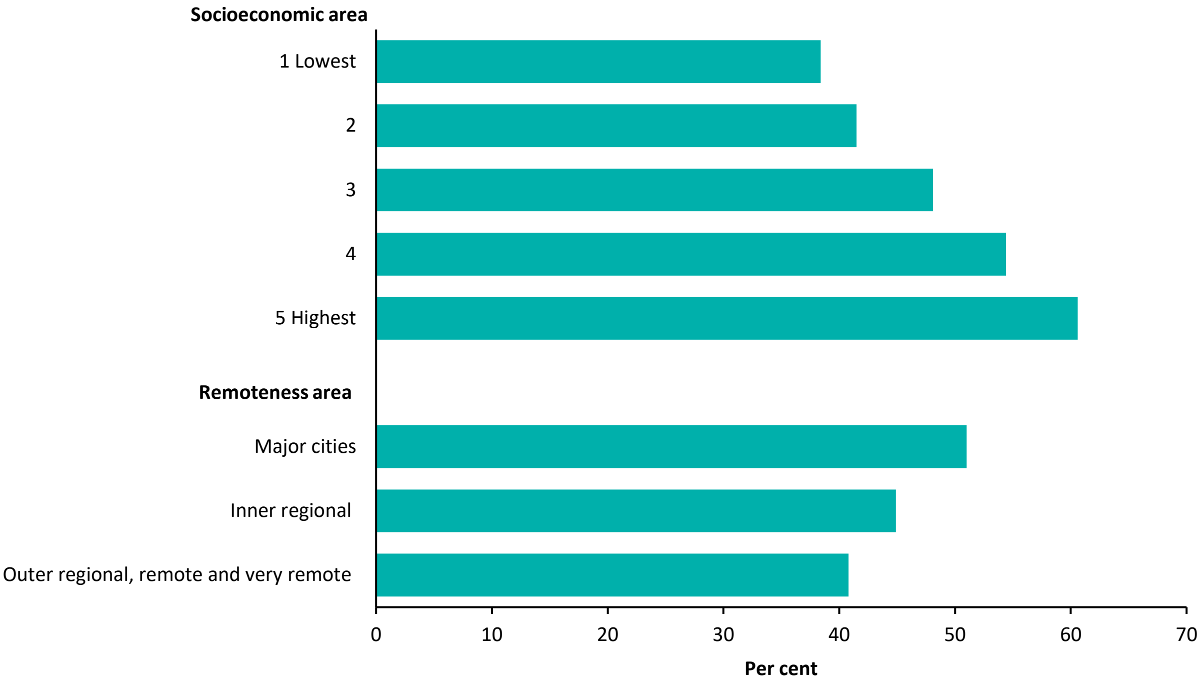
Note: Data and additional notes for this figure are shown in Table 26.1.
Source: ABS 2019a.

Figure 26.2: Percentage of persons aged 15 and over who saw a dental professional in the last 12 months (%), by age and sex, 2018–19



Note: Data and additional notes for this figure are shown in Table 26.2.
Source: ABS 2019a.

Figure 26.3: Percentage of persons aged 15 and over who saw a dental professional in the last 12 months (%), by selected population characteristics, 2018–19



Note: Data and additional notes for this figure are shown in Table 26.3.
Source: ABS 2019a.

Considerations

The Patient Experience survey does not distinguish whether the dental visits were for a check-up or for an existing dental problem—the latter is associated with poorer oral health, that is, an unfavourable visiting pattern.

Data sources

ABS Patient Experience Survey 2018–19.

ABS National Aboriginal and Torres Strait Islander Health Survey 2018–19.

For further details, refer to Appendix B.

References

ABS 2019a. ABS Patient Experiences in Australia 2018–19. ABS Cat. no. 4839.0. Canberra: ABS.

ABS 2019b. National Aboriginal and Torres Strait Islander Health Survey, 2018–19. ABS Cat. no. 4715.0. Customised report. Canberra: ABS.

ABS 2019c. ABS Patient Experiences in Australia, 2018–19. ABS Cat. no. 4839.0. Customised report. Canberra: ABS.

AIHW 2018. Aboriginal and Torres Strait Islander Health Performance Framework (HPF) report 2017. Cat. no. IHW 194. Canberra: AIHW. https://www.indigenoushpf.gov.au/resources/data-resources/updates

COAG (Council of Australian Governments) Health Council 2015. Healthy Mouths, Healthy Lives: Australia’s National Oral Health Plan 2015–2024. Adelaide: South Australian Dental Service.

Supplementary tables

Table 26.1: Percentage of persons aged 15 and over who saw a dental professional in the last 12 months (%), by year

Year	Per cent	95% CI
2010–11	49.4	48.5–50.3
2011–12	48.6	47.8–49.4
2012–13	49.4	48.7–50.1
2013–14	49.7	48.7–50.7
2014–15	48.9	48.0–49.8
2015–16	48.2	47.5–48.9
2016–17	48.1	47.3–48.9
2017–18	50.1	49.4–50.8
2018–19	49.0	48.2–49.8

Source: ABS 2019a.

Table 26.2: Percentage of persons aged 15 and over who saw a dental professional in the last 12 months (%), by age group and sex, 2018–19

	Males		Females		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
15–24	46.9	44.2–49.6	52.8	49.6–56.0	49.8	47.8–51.8
25–34	35.9	33.3–38.5	45.0	42.2–47.8	40.5	38.7–42.3
35–44	41.7	39.2–44.2	53.4	50.8–56.0	47.6	45.8–49.4
45–54	43.3	40.9–45.7	54.5	52.1–56.9	48.9	47.5–50.3
55–64	51.5	48.1–54.9	60.2	57.7–62.7	55.9	53.8–58.0
65–74	53.3	50.1–56.5	58.8	56.5–61.1	56.3	54.4–58.2
75–84	48.5	45.0–52.0	50.7	48.1–53.3	49.7	47.4–52.0
85+	36.2	28.6–43.8	38.9	33.0–44.8	38.2	33.2–43.2
Total 15+	**44.7**	**43.6–45.8**	**53.0**	**51.9–54.1**	**49.0**	**48.2–49.8**

Source: ABS 2019a.

Table 26.3: Percentage of persons aged 15 and over who saw a dental professional in the last 12 months (%), by selected population characteristics, 2018–19

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	38.4	36.5–40.3
2	41.5	38.8–44.2
3	48.1	46.1–50.1
4	54.4	50.9–57.9
5 Highest	60.6	59.3–61.9
Remoteness area		
Major cities	51.0	50.2–51.8
Inner regional	44.9	42.8–47.0
Outer regional, remote and very remote	40.8	38.6–43.0

Notes

1. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
2. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.

Source: ABS 2019a.

Table 26.4: Percentage of persons aged 15 and over who saw a dental professional in the last 12 months (%), by Indigenous status, 2018–19

	Males		Females		Persons	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	33.5	30.2–36.8	41.0	37.7–44.3	37.5	35.0–40.1
Non-Indigenous Australians	44.6	43.5–45.7	53.2	52.1–54.3	48.9	48.2–49.6

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Age-standardised to the 2001 Australian standard population.
3. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2018–19 Patient Experience Survey.

Sources: ABS 2019b; ABS 2019c.

Indicator 27: HPV immunisation rate

80% of girls and 76% of boys aged 15 were fully immunised against HPV in 2017.

Why is this important?

Human papillomavirus (HPV) is a highly contagious virus. Certain types of HPV can lead to several types of cancer (including cervical cancer) or genital warts. Immunisation against HPV can prevent cervical and other cancers, and other HPV-related diseases. The National HPV Vaccination Program has been immunising adolescent girls since 2007 and was extended to boys in 2013.

Vaccination against HPV is now Australia's primary prevention strategy against cervical cancer, but cervical screening remains a vital secondary prevention strategy for both HPV-vaccinated and unvaccinated women (see 'Indicator 30' for more information).

What does this indicator measure?

The proportion of 15 year olds immunised for human papillomavirus (HPV).

The data include records for girls and boys who had completed the three-dose course of the HPV vaccination in accordance with the Chief Medical Officer guidelines. Under these guidelines, valid HPV vaccination is considered to have occurred where there is a total interval of 111 or more days between the first and third doses, or, for those aged 15 and under, a gap between the first and third doses of 74 or more days (Department of Health and Ageing 2009).

HPV immunisation status is assessed at age 15 to allow for completion of the immunisation schedule by all eligible recipients. Reporting by this age group accommodates the varying ages of vaccination around Australia (usually in the first year of high school, around ages 12–13).

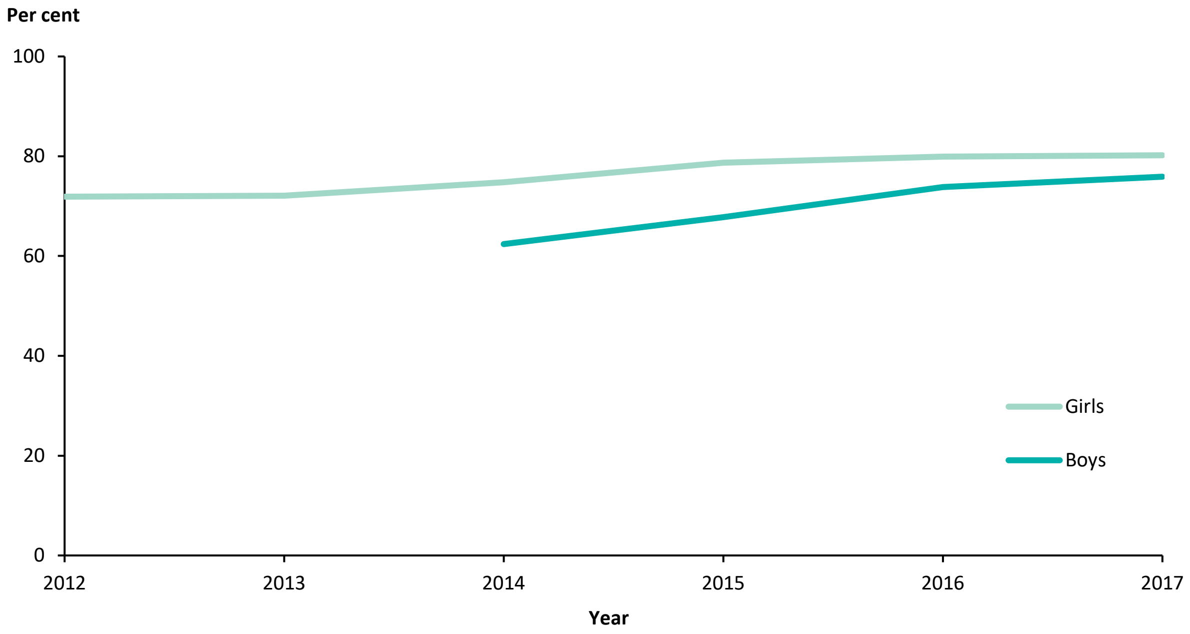
What do the data show?

- 80% of girls aged 15 had received three doses of HPV vaccine in 2017. This is an increase from 72% in 2012 (Figure 27.1).
- 76% of boys aged 15 had received three doses of HPV vaccine in 2017. This is an increase from 62% in 2014 (Figure 27.1).

Population groups

HPV vaccination coverage for 15 year olds in 2017 by socioeconomic and remoteness areas was unavailable at the time of writing.

Figure 27.1: Percentage of girls and boys (%) aged 15 who were fully immunised against HPV, by year



Notes
1. These data include girls aged 15 who had received three doses of HPV vaccine by 30 June 2012, 2013, 2014, 2015, 2016 and 2017.
2. Coverage data for males is only available from 2013 when they were included in the NHVPR program routinely at age 12-13, with a catch-up program for males aged 14-15 years delivered in 2013 and 2014.
3. Only vaccinations reported to the National HPV Vaccination Program Register (HPV Register) are included.
4. Data and additional notes for this figure are shown in Table 27.1.
Source: Department of Health 2021.

Considerations

The HPV register closed in 2018 and all historical episodes were transferred to the Australian Immunisation Register (AIR) in 2019. HPV immunisation coverage data for Aboriginal and Torres Strait Islander people is not currently available.

This indicator should be interpreted in conjunction with 'Indicator 30' (cervical screening rates) and 'Indicator 43' (5-year relative survival for selected cancers).

Data sources

National HPV Vaccination Program Register (closed on 31 December 2018).

Australian Immunisation Register (in June 2018, states and territories entered new HPV immunisation episodes directly to the AIR and all historical episodes from the HPV register have been transferred).

For further details, refer to Appendix B.

References

Department of Health 2021. Historical data from the National HPV Vaccination Program Register. Viewed 27 January 2021.

https://www.health.gov.au/resources/collections/historical-data-from-the-national-hpv-vaccination-program-register.

Department of Health and Ageing 2009. Chief Medical Officer Guidance on revaccination where HPV vaccine doses have been given at less than recommended minimum intervals January 2009. Canberra: Department of Health and Ageing. Viewed 29 May 2019, https://www1.health.gov.au/internet/main/publishing.nsf/Content/cda-cdi3502k.htm

Supplementary tables

Table 27.1: Percentage of girls and boys (%) aged 15 fully immunised against HPV, by year

Year	Girls	Boys
2012	71.9	n.a.
2013	72.1	n.a.
2014	74.8	62.4
2015	78.7	67.8
2016	79.7	73.8
2017	80.2	75.9

n.a. not available

Notes

1. These data include girls aged 15 who had received three doses of HPV vaccine by 30 June 2012, 2013, 2014, 2015, 2016 and 2017.
2. Coverage data for males is only available from 2013 when they were included in the NHVPR program routinely at age 12-13, with a catch up program for males aged 14-15 years delivered in 2013 and 2014.
3. Only vaccinations reported to the National HPV Vaccination Program Register (HPV Register) are included.

Source: Department of Health 2021.

Indicator 28: Breast cancer screening rates

55% of women aged 50–74 participated in BreastScreen Australia in 2017–2018.

Why is this important?

National breast cancer screening aims to reduce illness and death from breast cancer through an organised approach to the early detection of breast cancer, using screening mammography to detect unsuspected breast cancer in women. Early detection provides an opportunity for early treatment, which can reduce illness and death (AIHW 2020a).

What does this indicator measure?

The proportion of the target population screened through BreastScreen Australia.

Participation is a major indicator of the performance of BreastScreen Australia, because high attendance for screening by women in the target age group maximises the reductions in illness and death from breast cancer. Participation is measured as the percentage of women in the population in the target age group screened by BreastScreen Australia over 2 calendar years. The target age group was 50–69 years until being expanded to 50–74 years from 1 July 2013. Participation is measured over 2 years to align with the 2-year recommended screening interval, because most women will screen only once within a 2-year period (AIHW 2020a).

What do the data show?

- More than 1.8 million women aged 50–74 had a screening mammogram through BreastScreen Australia in 2017–2018; this was 55% of women in the target age group (AIHW 2020b). After adjusting for age, participation has stayed between 54% and 55% since 2010–2011; note this trend is for 50–69 year olds as the target age group only increased to 50–74 from 1 July 2013 (Figure 28.1).
- In 2017–2018, participation rates were higher among women aged 65–69 (60%) and 60–64 (58%) than among women aged 50–54 years (50%), 55–59 years (53%), and 70–74 years (56%) (Figure 28.2).

Population groups

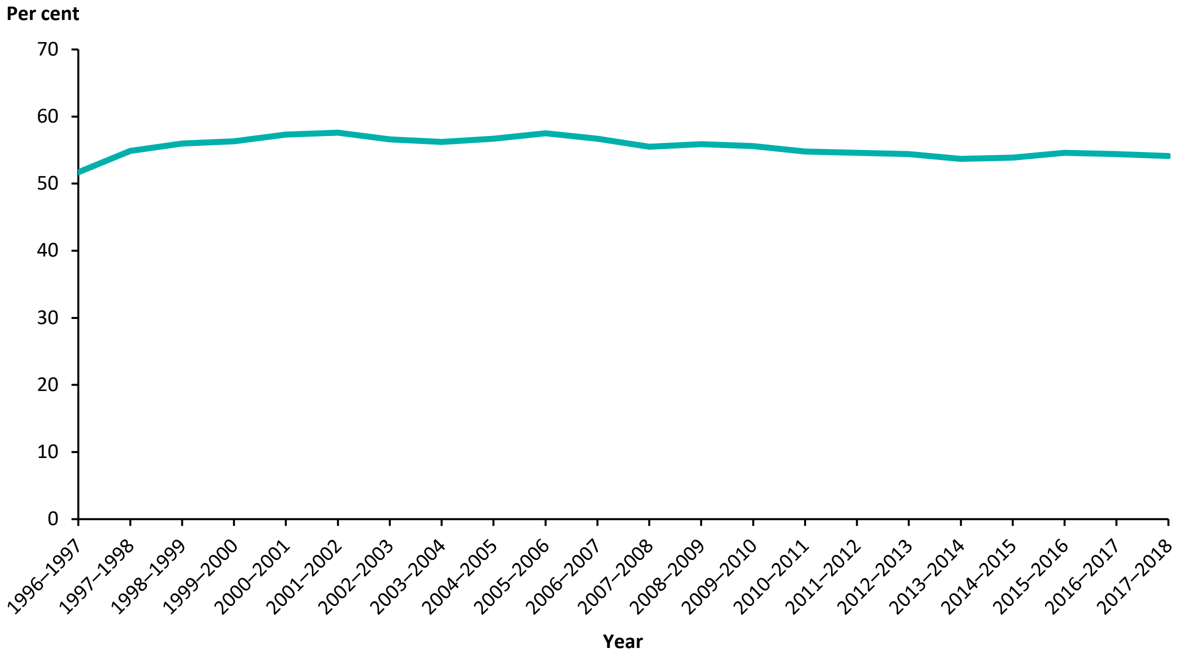
In 2017–2018, after adjusting for age:

- there was little variation in participation across people living in different socioeconomic areas, with all areas having participation rates between 52% and 55% (Figure 28.3)
- participation for women aged 50–74 was highest for those living in *Outer regional* areas at 57%, compared with those living in 53% in *Major cities* and 43% in *Very remote areas* (Figure 28.3).

In 2017–2018, 24,000 Indigenous women aged 50–74 had a screening mammogram, 37% of women in the target age group (AIHW 2020b). After adjusting for age, participation for Indigenous women was similar from 2014–2015 (37%) to 2017–2018 (38%) (Figure 28.4).

In 2017–2018, the age-standardised participation rate for Indigenous women aged 50–74 was lower than for non-Indigenous women of the same age group (a rate ratio of 0.7) (Figure 28.4).

Figure 28.1: Participation in BreastScreen Australia (%) for women aged 50–69, by year

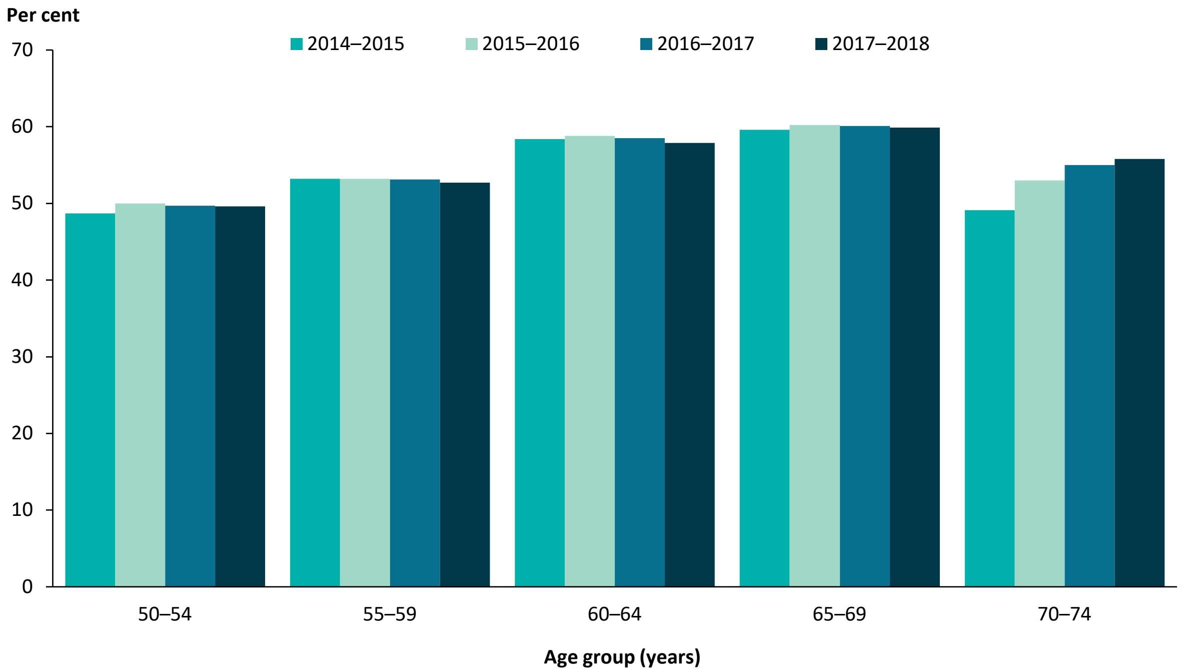


Notes

1. Age-standardised to the 2001 Australian standard population.
2. The reporting periods cover 1 January of the initial year to 31 December of the latter year indicated.
3. The age group of 50–69 years is used in this time series because the target age group only increased to 50–74 from 1 July 2013.
4. Data and additional notes for this figure are shown in Table 28.1.

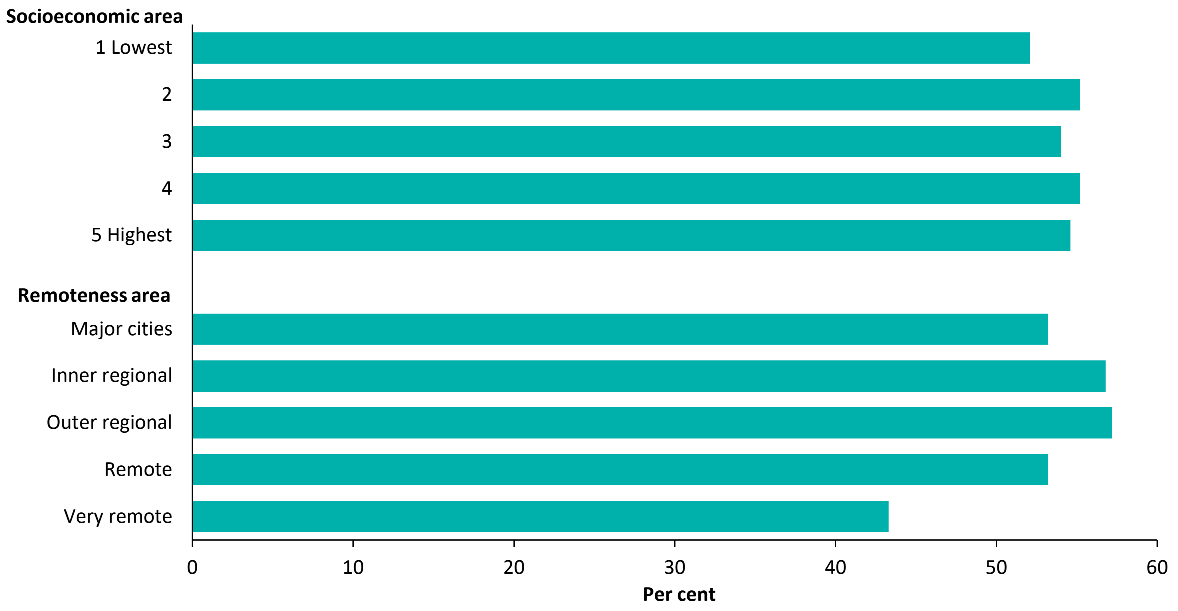
Sources: AIHW 2020a; AIHW 2020b.

Figure 28.2: Participation in BreastScreen Australia (%) for women aged 50–74, by age and year



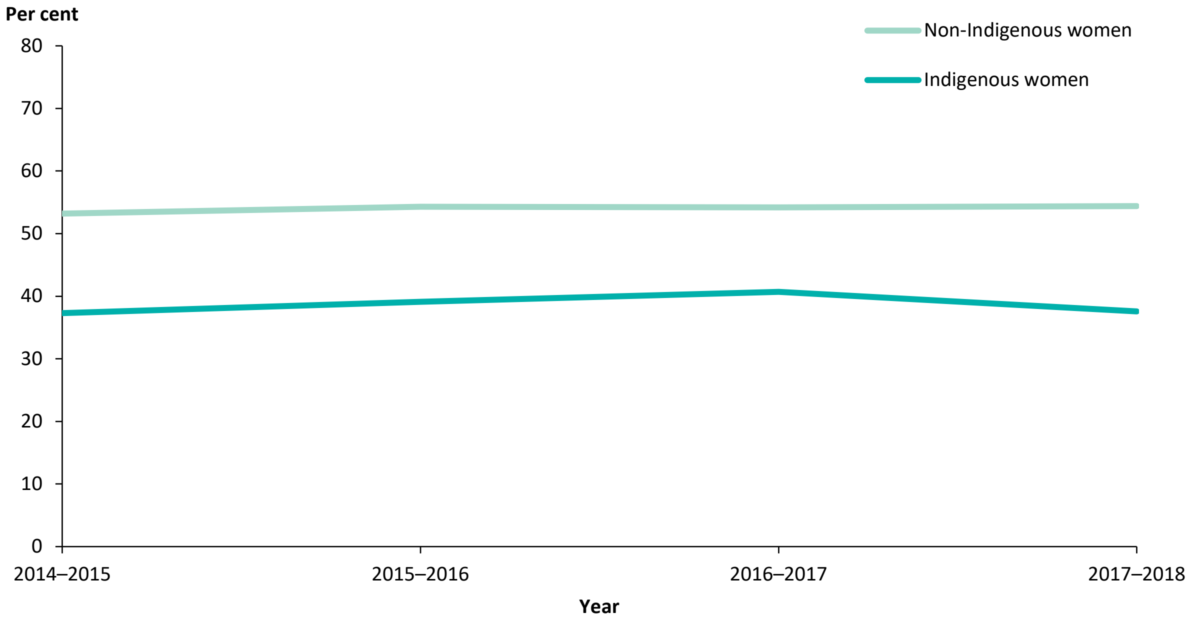
Notes
1. The reporting periods cover 1 January of the initial year to 31 December of the latter year indicated.
2. Data and additional notes for this figure are shown in Table 28.2.
Source: AIHW 2020a.

Figure 28.3: Participation in BreastScreen Australia (%) for women aged 50–74, by selected population characteristics, 2017–2018



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Period covers 1 January 2016 to 31 December 2017.
3. Data and additional notes for this figure are shown in Table 28.3.
Source: AIHW 2020b.

Figure 28.4 Participation in BreastScreen Australia (%) for women aged 50–74, by Indigenous status and year



Notes
1. Age-standardised to the 2001 Australian standard population.
2. The reporting periods cover 1 January of the initial year to 31 December of the latter year indicated.
3. Indigenous status is self-reported; therefore, accuracy of Indigenous participation rates will be affected if women choose not to identify as Indigenous at the time of screening.
4. Data and additional notes for this figure are shown in Table 28.4.
Sources: AIHW 2017; AIHW 2018; AIHW 2019; AIHW 2020b.

Considerations

This indicator should be interpreted in conjunction with 'Indicator 23' (Incidence of selected cancers) and 'Indicator 43' (5-year relative survival for selected cancers).

Data sources

State and territory BreastScreen register data. For further details, refer to Appendix B.

References

AIHW 2017. BreastScreen Australia monitoring report 2014–15. Cat. no. CAN 105. Canberra: AIHW.

AIHW 2018. BreastScreen Australia monitoring report 2018. Cat. no. CAN 116. Canberra: AIHW. Viewed 09 October 2020, https://www.aihw.gov.au/reports/cancer/breastscreen-australia-monitoring-report-2018.

AIHW 2019. BreastScreen Australia monitoring report 2019. Cat. no. CAN 128. Canberra: AIHW.

AIHW 2020a. National Cancer screening programs participation data. Viewed 25 September 2020, https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation/contents/summary

AIHW 2020b. BreastScreen Australia monitoring report 2020. Cat. no. CAN 135. Canberra: AIHW. doi:10.25816/0hv9-5e46.

Supplementary tables

Table 28.1: Participation in BreastScreen Australia (%) for women aged 50–69, by year

Year	Per cent
1996–1997	51.7
1997–1998	54.9
1998–1999	56.0
1999–2000	56.3
2000–2001	57.3
2001–2002	57.6
2002–2003	56.6
2003–2004	56.2
2004–2005	56.7
2005–2006	57.5
2006–2007	56.7
2007–2008	55.5
2008–2009	55.9
2009–2010	55.6
2010–2011	54.8
2011–2012	54.6
2012–2013	54.4
2013–2014	53.7
2014–2015	53.9
2015–2016	54.6
2016–2017	54.4
2017–2018	54.1

Notes
1. Age-standardised to the 2001 Australian standard population.
2. The reporting periods cover 1 January of the initial year to 31 December of the latter year indicated.
Sources: AIHW 2020a; AIHW 2020b.

Table 28.2: Participation in BreastScreen Australia (%) for women aged 50–74, by age and year

Age group (years)	2014–2015	2015–2016	2016–2017	2017–2018
50–54	48.7	50.0	49.7	49.6
55–59	53.2	53.2	53.1	52.7
60–64	58.4	58.8	58.5	57.9
65–69	59.6	60.2	60.1	59.9
70–74	49.1	53.0	55.0	55.8
Total 50–74	**53.7**	**54.8**	**55.0**	**54.8**

Note: The reporting periods cover 1 January of the initial year to 31 December of the latter year indicated.
Sources: AIHW 2020a; AIHW 2020b.

Table 28.3: Participation in BreastScreen Australia (%) for women aged 50–74, by selected population characteristics, 2017–2018

Population characteristic	
Socioeconomic area	**Per cent**
1 Lowest	52.1
2	55.2
3	54.0
4	55.2
5 Highest	54.6
Remoteness area	
Major cities	53.2
Inner regional	56.8
Outer regional	57.2
Remote	53.2
Very remote	43.3

Notes
1. Age-standardised to the 2001 Australian standard population.
2. Period covers 1 January 2017 to 31 December 2018.
3. Women were allocated to a socioeconomic area using their residential postcode according to the Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-economic Disadvantage for 2016 (IRSD). Not all postcodes can be assigned to a socioeconomic area, therefore categories do not add exactly to the total for Australia.
4. Remoteness areas were assigned using the woman's residential postcode according to the Australian Statistical Geography Standard (ASGS) for 2016.

Source: AIHW 2020b.

Table 28.4: Participation in BreastScreen Australia (%) for women aged 50–74, by Indigenous status and year

Indigenous status	2014–2015	2015–2016	2016–2017	2017–2018
Indigenous women	37.3	39.1	40.7	37.6
Non-Indigenous women	53.2	54.3	54.2	54.4

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The reporting periods cover 1 January of the initial year to 31 December of the latter year indicated.
3. Indigenous status is self-reported; therefore, accuracy of Indigenous participation rates will be affected if women choose not to identify as Indigenous at the time of screening.

Sources: AIHW 2017; AIHW 2018; AIHW 2019; AIHW 2020b.

Indicator 29: Bowel cancer screening rates

42% of people aged 50–74 participated in the National Bowel Cancer Screening Program in 2017–2018.

Why is this important?

Bowel cancer may be present for many years before showing symptoms like visible rectal bleeding, change in bowel habit, bowel obstruction, or anaemia. Often, symptoms like these are not seen until the cancer has reached a relatively advanced stage. However, non-visible bleeding of the bowel might have been occurring in the pre-cancerous stages for some time.

The relatively slow development of bowel cancer means that pre-cancerous and early-stage cancers can potentially be screened for and treated. Early detection is associated with more treatment options and improved survival. This makes bowel cancer a valid candidate for population screening (Standing Committee on Screening 2016).

What does this indicator measure?

The proportion of the target population screened through the National Bowel Cancer Screening Program.

Participation is measured over 2 years to align with the 2-year recommended screening interval. A consequence of this is that there are 'rolling' participation rates, in which there is an overlap of 1 calendar year between any 2 consecutively reported participation rates. The number of individuals who were sent a screening invitation excludes those who deferred or opted out without completing their screening test (AIHW 2020).

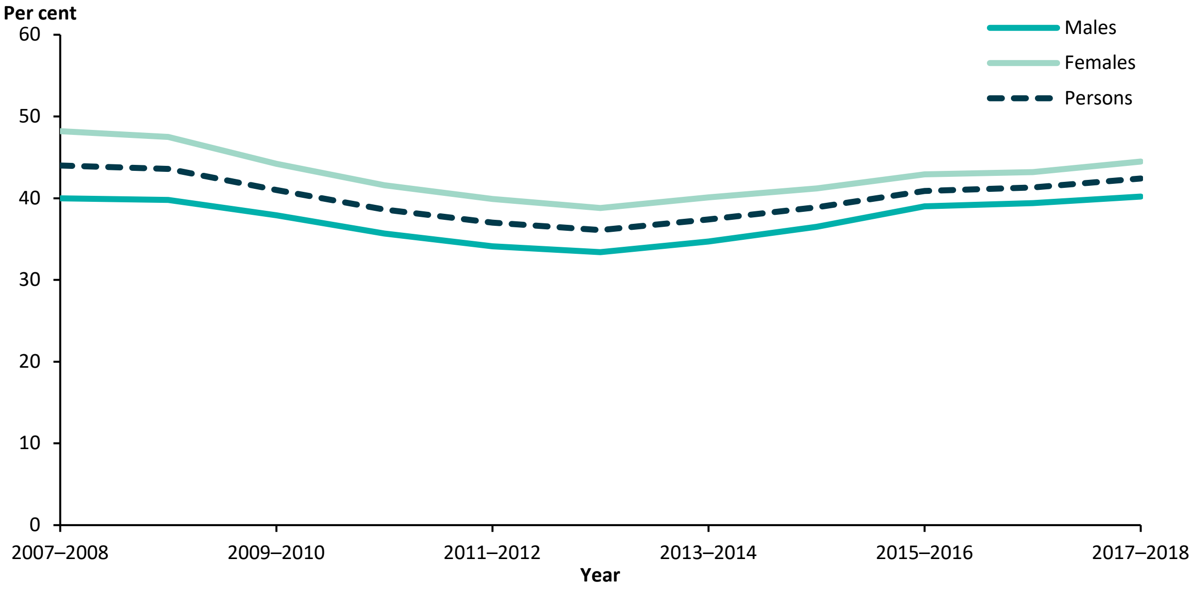
What do the data show?

- The participation rate fell from 44% in 2007–2008 to 36% in 2012–2013, then rose to 42% in 2017–2018 (Figure 29.1).
- In 2017–2018, females (45%) had a higher screening rate than males (40%) (Figure 29.1).
- The participation rate increased with each invitation age group, from 32% for people aged 50–54 to 53% for people aged 70–74 (Figure 29.2).

Population groups

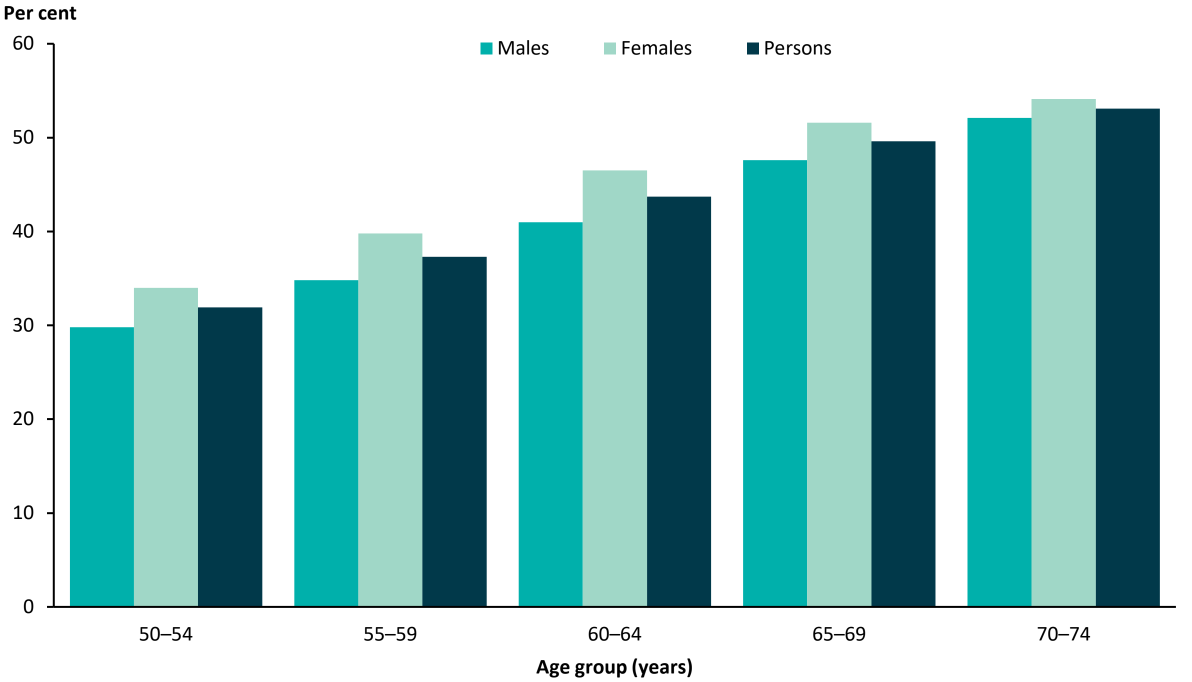
- In 2017–2018, the participation rate was highest for people living in the highest socioeconomic areas (45%), and lowest for people living in the lowest socioeconomic areas (40%) (Figure 29.3).
- In 2017–2018, the participation rate was highest for people living in *Inner regional* areas (45%), and lowest for people living in *Very remote* areas (27%) (Figure 29.3).

Figure 29.1: Participation in the National Bowel Cancer Screening Program (%) of people aged 50–74, by sex and year



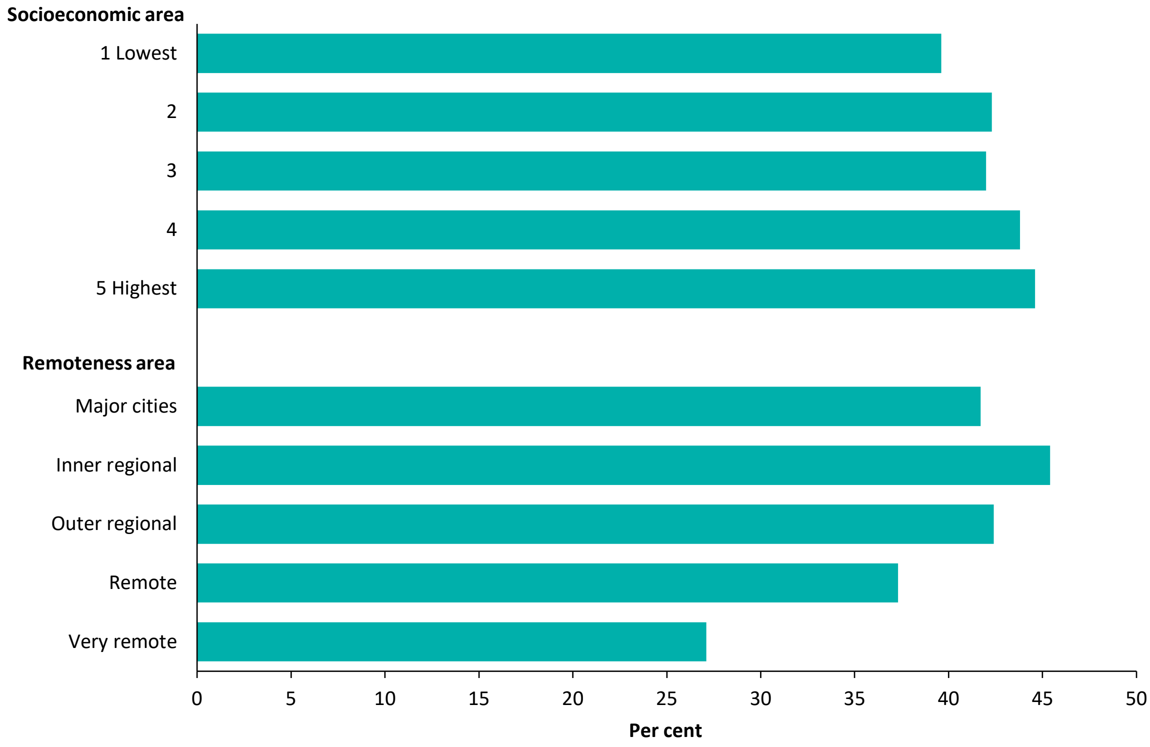
Notes
1. Biennial screening was only fully rolled out from 1 January, 2019. For earlier periods, the specific ages invited within the 50–74 age range included 55 and 65 in 2007; 50, 55, 65 in 2008–2012; 50, 55, 60 and 65 in 2013–2014; 50, 55, 60, 65, 70 and 74 in 2015; 50, 55, 60, 64, 65, 70, 72 and 74 in 2016; and 50, 54, 55, 58, 60, 64, 68, 70, 72 and 74 in 2017.
2. Data presented are for rolling 2-year participation periods.
3. Data and additional notes for this figure are shown in Table 29.1.
Source: AIHW 2020.

Figure 29.2: Participation in the National Bowel Cancer Screening Program (%), by age and sex, 2017–2018



Note: Data and additional notes for this figure are shown in Table 29.2.
Source: AIHW 2020.

Figure 29.3: Participation in the National Bowel Cancer Screening Program (%) of people aged 50–74, by selected population characteristics, 2017–2018



Note: Data and additional notes for this figure are shown in Table 29.3.
Source: AIHW 2020.

Considerations

The National Bowel Cancer Screening Program (NBCSP) offers free 2-yearly screening for all eligible Australians enrolled in Medicare or with a DVA gold card aged 50–74. A phased roll-out was used with different age groups being invited to screen across different years, and from 1 January 2019 all Australian's aged 50–74 will be invited to screen every 2 years, see *National cancer screening programs participation data* for details (AIHW 2019).

Population-based screening should be focused on asymptomatic members of the target population. The current invitation arrangements for the NBCSP mean all people in the target population are invited, regardless of other recent screening or diagnostic tests for bowel cancer they might have had (for example, they have had a colonoscopy in the past two years that was negative). These people are currently invited into the NBCSP but are unlikely to participate (as they are up to date with screening through other tests) meaning the participation rate is lower than it should be. When implemented, the National Cancer Screening Register will be able to exclude target-age invitees who are up to date with screening through private (MBS-claimed) colonoscopies, and as a result the program will be more focused on the asymptomatic target age population — and the participation rate more accurate.

Reliable participation data are not currently available by Indigenous status.

This indicator should be interpreted in conjunction with 'Indicator 23' (Incidence of selected cancers) and 'Indicator 43' (5-year relative survival for selected cancers).

Data sources

National Bowel Cancer Screening Program register. For further details, refer to Appendix B.

References

AIHW 2019. National cancer screening programs participation data. Canberra: AIHW. Viewed 11 November 2019, https://www.aihw.gov.au/reports/cancer-screening/national-cancer-screening-programs-participation/contents/summary.

AIHW 2020. National Bowel Cancer Screening Program: monitoring report. Canberra: AIHW. Viewed 6 August 2020, https://www.aihw.gov.au/reports/cancer-screening/national-bowel-cancer-screening-monitoring-2020/data.

Standing Committee on Screening 2016. Population Based Screening Framework. Report prepared for the Community Care and Population Health Principal Committee of the Australian Health Ministers' Advisory Council. Canberra: Department of Health. Viewed 7 August 2020, https://www.health.gov.au/sites/default/files/documents/2019/09/population-based-screening-framework_0.pdf

Supplementary tables

Table 29.1: Participation in the National Bowel Cancer Screening Program (%) of people aged 50–74, by sex and year

Year	Males	Females	Persons
2007–2008	40.0	48.2	44.0
2008–2009	39.8	47.5	43.6
2009–2010	37.9	44.2	41.0
2010–2011	35.7	41.6	38.6
2011–2012	34.1	39.9	37.0
2012–2013	33.4	38.7	36.1
2013–2014	34.7	40.1	37.4
2014–2015	36.5	41.3	38.9
2015–2016	39.0	42.9	40.9
2016–2017	39.4	43.2	41.3
2017–2018	40.3	44.5	42.4

Note: Data presented are for rolling 2-year participation periods.
Source: AIHW 2020.

Table 29.2: Participation in the National Bowel Cancer Screening Program (%), by age and sex, 2017–2018

Age group (years)	Males	Females	Persons
50–54	29.8	34.0	31.9
55–59	34.8	39.9	37.3
60–64	41.0	46.5	43.8
65–69	47.6	51.6	49.6
70–74	52.2	54.1	53.1
Total 50–74	**40.3**	**44.5**	**42.4**

Source: AIHW 2020.

Table 29.3: Participation in the National Bowel Cancer Screening Program (%) of people aged 50–74, by selected population characteristics, 2017–2018

Population characteristic	
Socioeconomic area	**Per cent**
1 Lowest	39.6
2	42.3
3	42.0
4	43.8
5 Highest	44.6
Remoteness area	
Major cities	41.7
Inner regional	45.4
Outer regional	42.4
Remote	37.3
Very remote	27.1

Notes

1. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
2. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.

Source: AIHW 2020.

Indicator 30: Cervical cancer screening rates

An estimated 46% of women aged 25–74 participated in the National Cervical Screening Program in 2018–2019.

Why is this important?

Cervical screening, through the National Cervical Screening Program (NCSP), aims to detect and treat abnormalities while they are in the precancerous stage, before possible progression to cervical cancer. This is possible because cervical cancer is one of the few cancers that has a precancerous stage that lasts for many years prior to the development of invasive disease, which provides an opportunity for detection and treatment (WHO 2014). Early detection is associated with more treatment options and improved survival.

In 2007, Australia introduced primary prevention of cervical cancer in the form of HPV vaccination (that aims to prevent women being infected with oncogenic HPV types that cause the majority of cervical cancer), complementing the existing cervical screening program. However, cervical screening remains a vital secondary prevention strategy for both HPV-vaccinated and unvaccinated women.

What does this indicator measure?

The proportion of the target population screened through the National Cervical Screening Program (over a 5-year period). The National Cervical Screening Program screens women aged 25–74.

The National Cervical Screening Program (NCSP) began in 1991. A renewed National Cervical Screening Program commenced on 1 December 2017, replacing 2-yearly Pap tests for women aged 20–69 with 5-yearly human papillomavirus (HPV) tests with partial genotyping and reflex liquid-based cytology for women aged 25–74.

As 5 years need to have passed to allow participation to be measured as per the definition, an interim estimate of participation has been used. For 2018–2019, participation is defined as the number of women who had a screening HPV test (primary screening or 12-month repeat HPV test) in the reporting period, as a percentage of the eligible population. Note that this is not comparable to participation rates previously reported for the renewed NCSP that included all HPV tests performed for any reason. This definition restricts participation to screening tests only, which aligns with the definition of participation for Australia's 2 other population-based cancer screening programs.

What do the data show?

Prior to the commencement of the renewed program, the last complete data reported for the NCSP (which are the proportion of women aged 20–69 who participated in cervical screening in 2015–2016) showed that:

- After remaining steady at around 58% from 2009–2010 to 2013–2014, the participation rate for women aged 20–69 showed a downward trend to 56% in 2015–2016 (Figure 30.1).

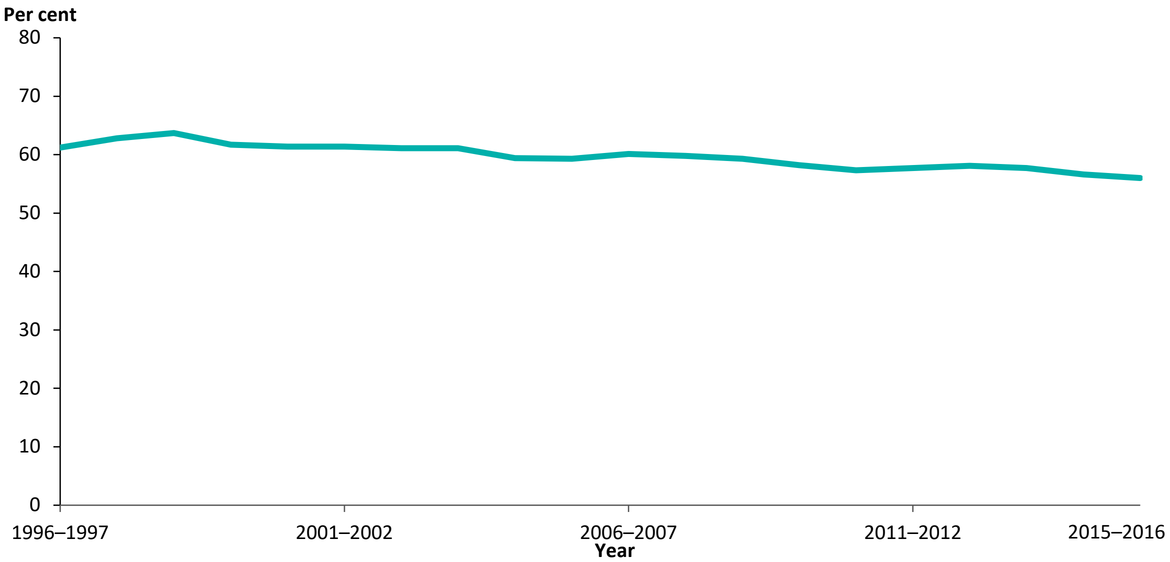
After the commencement of the renewed program:

- An estimated 46% of women aged 25–74 participated in cervical screening in 2018–2019.
- Participation increased with age from 41% for women aged 25–29 to 52% for women aged 50–54, 55–59 and 60–64, thereafter decreasing to 23% for women aged 70–74 (Figure 30.2).

Population groups

- There was also a clear association between participation and socioeconomic area, with participation rising from 41% for women living in the lowest socioeconomic areas to 52% for those living in the highest socioeconomic areas (Figure 30.3).
- Participation decreased with increasing remoteness, being highest for women living in *Major cities* and *Inner regional* areas at 47%, and lowest for women living in in *Very remote* areas at 37% (Figure 30.3).

Figure 30.1: Participation in the previous National Cervical Screening Program (%), in overlapping 2-year periods, women aged 20–69, by year

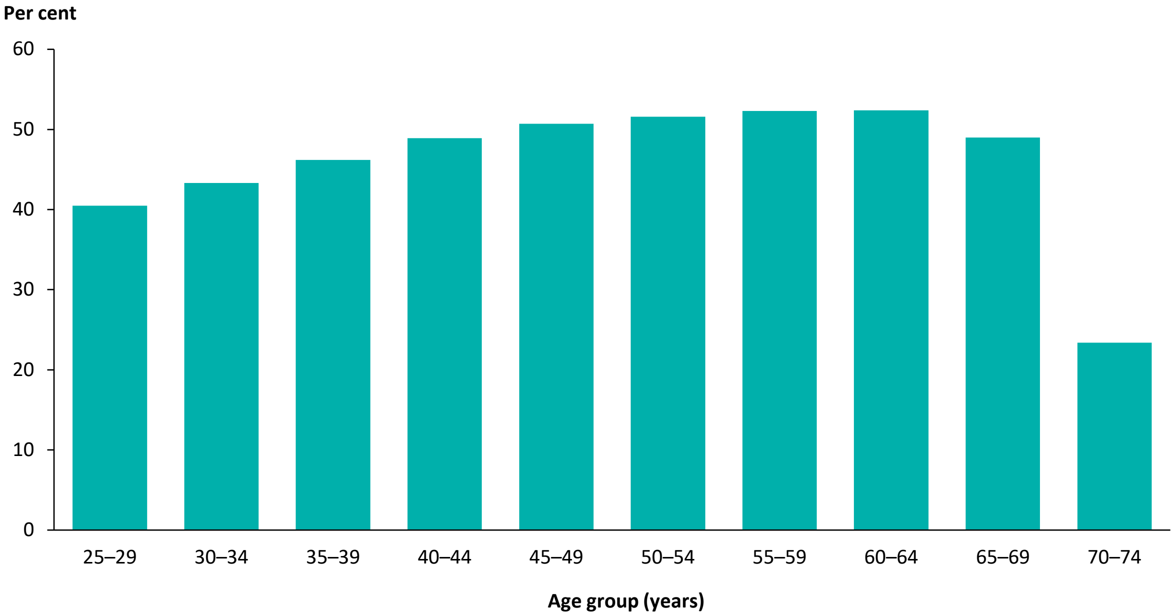


Notes

1. Age-standardised to the 2001 Australian standard population.
2. The reporting periods cover 1 January of the initial year to 31 December of the latter year indicated.
3. Data and additional notes for this figure are shown in Table 30.1.

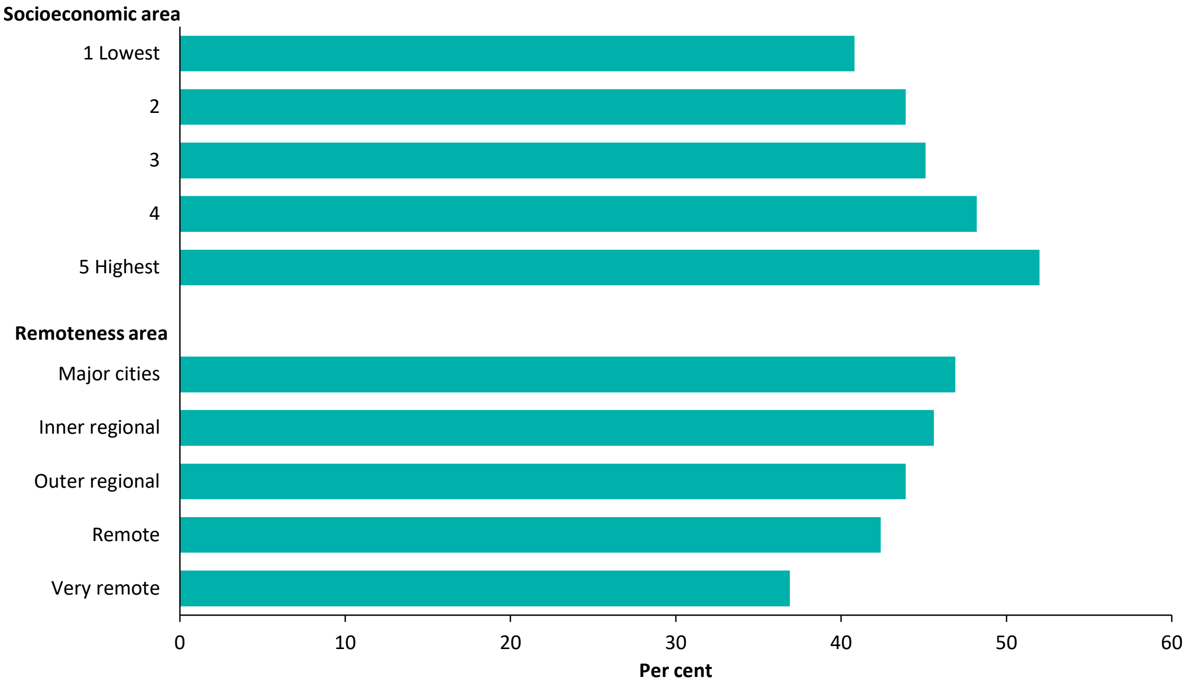
Source: AIHW 2019a.

Figure 30.2: Participation in the National Cervical Screening Program (%), women aged 25–74, by age, 2018–2019



Note: Data and additional notes for this figure are shown in Table 30.2.
Source: AIHW 2020.

Figure 30.3: Participation in the National Cervical Screening Program (%), women aged 20–69, by selected population characteristics, 2018–2019



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 30.3.
Source: AIHW 2020.

Considerations

This indicator should be interpreted in conjunction with 'Indicator 23' (Incidence of selected cancers), 'Indicator 27' (HPV immunisation rate) and 'Indicator 43' (5-year relative survival for selected cancers). Participation by Indigenous status has not been presented here because the methodology to reliably estimate cervical cancer screening participation by Indigenous status is currently under development.

Data sources

National Cancer Screening Register data for 2018–2019 and State and territory cervical screening register data for earlier years. For further details, refer to Appendix B.

References

AIHW 2019a. Cervical screening in Australia 2019. Cancer series no. 123. Cat. no. CAN 124. Canberra: AIHW.

AIHW 2020. National Cervical Screening Program monitoring report 2020. Cat. no. CAN 138. Canberra: AIHW.

WHO 2014. Comprehensive cervical cancer control: a guide to essential best practice. 2nd ed. Geneva: WHO.

Supplementary tables

Table 30.1: Participation in the previous National Cervical Screening Program (%), women aged 20–69, by year

Year	Per cent
1996–1997	61.2
1997–1998	62.8
1998–1999	63.7
1999–2000	61.7
2000–2001	61.4
2001–2002	61.4
2002–2003	61.1
2003–2004	61.1
2004–2005	59.4
2005–2006	59.3
2006–2007	60.1
2007–2008	59.8
2008–2009	59.3
2009–2010	58.2
2010–2011	57.3
2011–2012	57.7
2012–2013	58.1
2013–2014	57.7
2014–2015	56.6
2015–2016	56.0

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The reporting periods cover 1 January of the initial year to 31 December of the latter year indicated.
3. The population is adjusted to include only women with an intact cervix using hysterectomy fractions. As these hysterectomy fractions changed between 2003–2004 and 2004–2005, data from 2004–2005 onwards are not directly comparable with data prior to 2004–2005.

Source: AIHW 2019a.

Table 30.2: Participation in the National Cervical Screening Program (%), women aged 25–74, by age, 2018–2019

Age group (years)	Per cent
25–29	40.5
30–34	43.3
35–39	46.2
40–44	48.9
45–49	50.7
50–54	51.6
55–59	52.3
60–64	52.4
65–69	49.0
70–74	23.4
Total 25–74	46.3

Note: Cervical screening participation is defined as the number of people who had a screening HPV test (primary screening or 12-month repeat HPV tests) in the two years 2018 and 2019. As the formal definition of participation is measured over 5 years, until such time as 5 years of data are available, participation rates are considered to be estimates of what the true participation rate may be. It is possible that these estimates will differ from the true participation when further data are available for use in producing estimates.
Source: AIHW 2020.

Table 30.3: Participation in the National Cervical Screening Program (%), women aged 20–69, by selected population characteristics, 2018–2019

Population characteristic	
Socioeconomic area	**Per cent**
1 Lowest	40.8
2	43.9
3	45.1
4	48.2
5 Highest	52.0
Remoteness area	
Major cities	46.9
Inner regional	45.6
Outer regional	43.9
Remote	42.4
Very remote	36.9

Notes
1. Age-standardised to the 2001 Australian standard population.
2. Cervical screening participation is defined as the number of people who had a screening HPV test (primary screening or 12-month repeat HPV tests) in the two years 2018 and 2019. As the formal definition of participation is measured over 5 years, until such time as 5 years of data are available, participation rates are considered to be estimates of what the true participation rate may be. It is possible that these estimates will differ from the true participation when further data are available for use in producing estimates.
3. People were allocated to a socioeconomic area using their postcode at the time of their screen, according to the Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Disadvantage for 2016 (IRSD). Caution is required when examining differences across socioeconomic areas as postcodes used to allocate people may not represent their location of residence.
4. People were allocated to a remoteness area using their postcode at the time of their screen, according to the Australian Statistical Geography Standard (ASGS) for 2016. Caution is required when examining differences across remoteness areas as postcodes used to allocate people may not represent their location of residence.
Source: AIHW 2020.

Indicator 31: Health literacy

41% of people aged 15–74 were assessed as having adequate or more than adequate health literacy skills in 2006.

Why is this important?

Health literacy relates to how people access, understand and use health information in ways that benefit their health (AIHW 2020).

Health literacy plays a part in the safety and quality of health care and is an important determinant in an individual's ability to self-manage chronic disease. People with low health literacy are at higher risk of worse health outcomes and poorer health behaviours (AIHW 2020). It can influence: ability to self-manage care, medication use, engagement with health services (including preventative programs), and hospital re-admission (AIHW 2020).

At the population level, low health literacy may be a contributing factor to health inequalities among certain groups; targeting health literacy programs at these groups has the potential to reduce health inequalities (AIHW 2020).

What does this indicator measure?

Proportion of people aged 15–74 with health literacy above the minimum level regarded as necessary for understanding and using information relating to health issues.

New health literacy indicator needs to be developed

Note, this health literacy indicator, as specified in the *National Strategic Framework for Chronic Conditions: reporting framework* (AIHW 2022), is based on data from the ABS Adult Literacy and Life Skills Survey (ALLS), last conducted in 2006. The ALLS 2006 covered four domains: prose literacy, document literacy, numeracy and problem solving, with one overall measure of health literacy.

Subsequently, the ALLS was replaced by the ABS Health Literacy Survey (HLS) in 2018, as a result of developments in the field of health literacy measurement that acknowledge the impact of the health literacy environment as well as the skills of the individual on health literacy. However, unlike the ALLS, the HLS does not produce a single measure of 'health literacy', nor does it state whether health literacy levels are 'high' or 'low' (see AIHW 2020 for more information), making interpretation somewhat more complicated. Further, health literacy has currently been deemed out of scope for National Health Surveys.

Further reporting on health literacy requires indicator development.

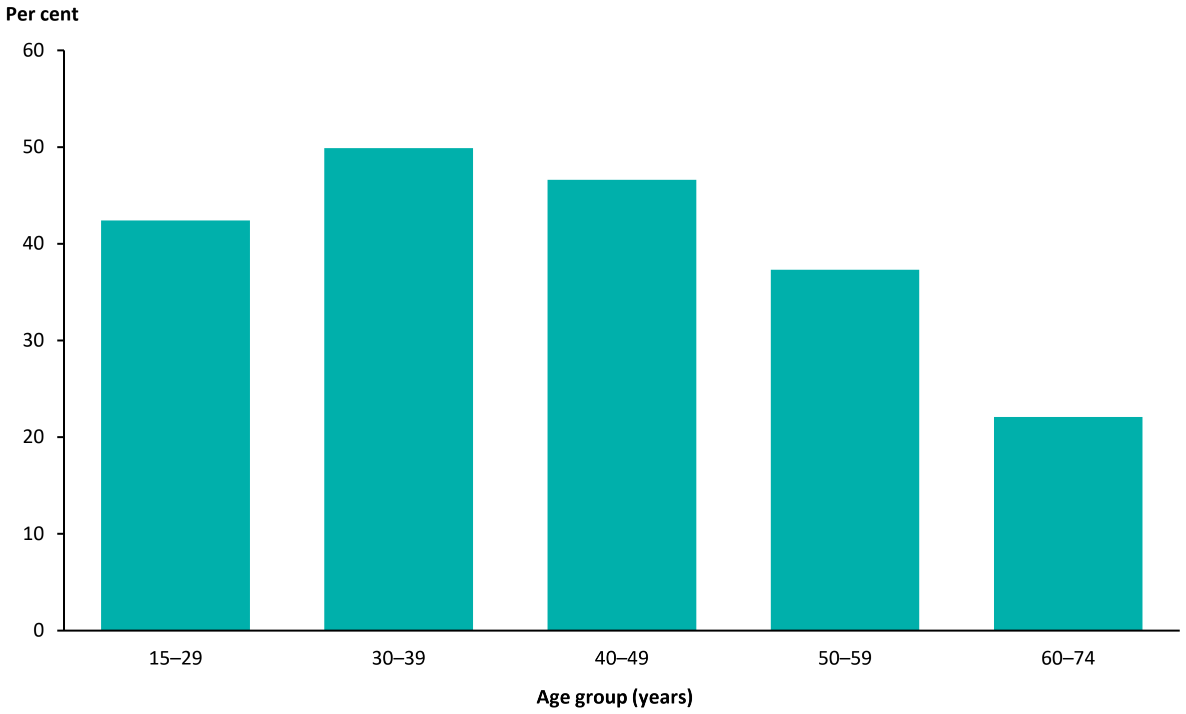
What do the data show?

In 2006:

- 41% of Australians aged 15–74 were assessed as having adequate or more than adequate health literacy skills (AIHW 2018).
- half (50%) of all people aged 30–39 had health literacy skills that were adequate or more than adequate. After which the proportion decreased with age—less than one-quarter (22%) of people aged 60–74 had health literacy skills that were adequate or more than adequate (Figure 31.1).
- levels of health literacy skills were similar for males and females—40% of males and 41% of females had adequate or better health literacy skills (AIHW 2018).

Data for population groups have not been presented as this indicator requires development.

Figure 31.1: Proportion of 15–74-year-olds with health literacy above the minimum level regarded as necessary for understanding and using information relating to health issues, by age, 2006



Note: Data and additional notes for this figure are shown in Table 31.1.
Source: AIHW 2018.

Considerations

The ABS Adult Literacy and Life Skills Survey (ALLS) survey is restricted to people aged 15–74 and therefore does not capture the health literacy level of people aged 75 years and over (that is, the age group where chronic conditions are more common).

There is no routine data collection for reporting against this indicator. As described above, a new indicator for health literacy needs to be agreed upon for regular and consistent measurement at the population level. However, the ability to measure health literacy is hampered by the broad range of definitions of health literacy, lack of consensus on what to measure, and the multiple approaches to measuring it (AIHW 2020, Poureslami et al. 2017, Osborne et al. 2013).

Data sources

ABS Adult Literacy and Life Skills Survey 2006.

For further details, refer to Appendix B.

References

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AIHW 2018. Australia's health 2018. Cat. no. AUS 221. Canberra: AIHW. Viewed 17 May 2019, https://www.aihw.gov.au/reports/australias-health/australias-health-2018/contents/indicators-of-australias-health/health-literacy.

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Osborne RH, Batterham RW, Elsworth GR, Hawkins M & Buchbinder R 2013. The grounded psychometric development and initial validation of the Health Literacy Questionnaire (HLQ). BMC Public Health 13, 658 (2013). doi: 10.1186/1471-2458-13-658.

Poureslami I, Nimmon L, Rootman I & Fitgerald MJ 2017. Health literacy and chronic disease management: drawing from expert knowledge to set an agenda. Health Promot Int. 2017 Aug 1;32(4):743-754. doi: 10.1093/heapro/daw003.

Supplementary tables

Table 31.1: Health literacy of adequate or more than adequate (combined), by age, 2006

Age group (years)	Per cent
15–29	42.4
30–39	49.9
40–49	46.6
50–59	37.3
60–74	22.1

Note: The ABS Adult Literacy and Life Skills Survey (ALLS) 2006 covered four domains: prose literacy, document literacy, numeracy and problem solving, with one overall measure of health literacy.
Source: AIHW 2018.

Indicator 32: People deferring selected health care due to cost

The proportion of people aged 15 and over who reported delaying or not seeking treatment or tests in the last 12 months because of cost in 2018–19 was:

(a) General practitioner (GP) 3.4%

(b) Specialist 7.7%

(c) Prescriptions 6.7%

(d) Dentist 18%

(e) Pathology/imaging 3.0% (2016–17).

Why is this important?

High quality health care leads to better health outcomes, and barriers to accessing health services may impede the best possible outcome. Access to health care may be affected by financial pressures. People with chronic conditions who postpone essential treatments for management of their condition due to cost may jeopardise their health status.

What does this indicator measure?

Proportion of people aged 15 and over who reported delaying or not seeking treatment or tests in the last 12 months because of cost for:

(a) GP

(b) Specialist

(c) Prescriptions

(d) Dental

(e) Pathology/imaging.

What do the data show?

(a) GP

In 2018–19, of those aged 15 and over who needed to see a GP in the last 12 months:

- 1 in 29 (3.4% or an estimated 564,000 people) delayed seeing or did not see a GP at least once due to cost (Figure 32.2; ABS 2019a). This proportion has fallen since 2013–14 (4.9%) (Figure 32.1).

- females were more likely to delay seeing or not see a GP due to cost than males (4.0% compared with 2.7%) as were people aged under 65 (around 3–5%) compared with those aged 65 to 84 (around 1%) (Figures 32.2 and 32.3).

Population groups

In 2018–19:

- of those aged 15 and over who needed to see a GP in the last 12 months, the proportion that delayed seeing or did not see a GP at least once due to cost did not vary by socioeconomic or remoteness areas (Figure 32.4 and 32.5)
- 7.4% of Indigenous Australians aged 2 years and over did not see a doctor due to cost (note the data available for Indigenous Australians was for 2 years and over rather than 15 years and over as specified in this indicator) (ABS 2019b).

(b) Specialist

In 2018–19, of those aged 15 and over:

- 1 in 13 people (7.7% or an estimated 579,000 people) who needed to see a medical specialist delayed or did not see a medical specialist due to cost (Figure 32.2). This proportion has remained steady since 2013–14 (Figure 32.1)
- females were more likely than males to delay seeing or not see a medical specialist due to cost (9.1% compared with 6.0%) (Figure 32.2)
- younger adults were more likely than older adults to delay seeing or not see a medical specialist due to cost, for example 15% of people aged 25–34 compared with 2.4% for those aged 65–74 (Figure 32.3).

Population groups

In 2018–19, of those aged 15 and over who needed to see a specialist in the last 12 months, the proportion that delayed seeing or did not see a specialist at least once due to cost:

- did not vary by socioeconomic area (Figure 32.4)
- was higher for those living in *Major cities* (8.2%) than those living in *Outer regional, remote and very remote* areas (5.9%) (Figure 32.5)

Comparable data on Indigenous Australians were unavailable.

(c) Prescriptions

In 2018–19, of those aged 15 and over who needed a prescription for medication:

- 6.7%, or an estimated 917,000 people, delayed getting or did not get a prescribed medication due to cost (ABS 2019a). This proportion has decreased slightly since 2013–14 (7.6%) (Figure 32.1)
- females were more likely than males to delay getting or did not get a prescription due to cost (8.1% compared with 5.0%) (Figure 32.2)

- people aged 25–34 were more likely (11%) than those in older age groups to delay getting or to not get a prescription due to cost; this fell to less than 3% among those aged 65 or more (Figure 32.3).

Population groups

- In 2018–19, of those aged 15 and over, people living in low socioeconomic areas were more likely to delay getting or did not get a prescription due to cost than those living in high socioeconomic areas (9.7% compared with 4.1%) (Figure 32.4). There was no difference by remoteness categories (Figure 32.5).
- Comparable data on Indigenous Australians were unavailable.

(d) Dental

In 2018–19, of those aged 15 and over:

- nearly 1 in 5 people (18% or an estimated 2.0 million people) who needed to see a dental professional delayed seeing or did not see one due to cost. This proportion has decreased slightly since 2014–15 (20%) (Figure 32.1)
- females were more likely than males to delay seeing or not see a dental professional due to cost (19% compared with 16%) (Figure 32.2)
- people aged 25–34 were the most likely to delay seeing or not see a dental professional due to cost, with more than one quarter (26%) of this age group reporting this barrier (Figure 32.3).

Population groups

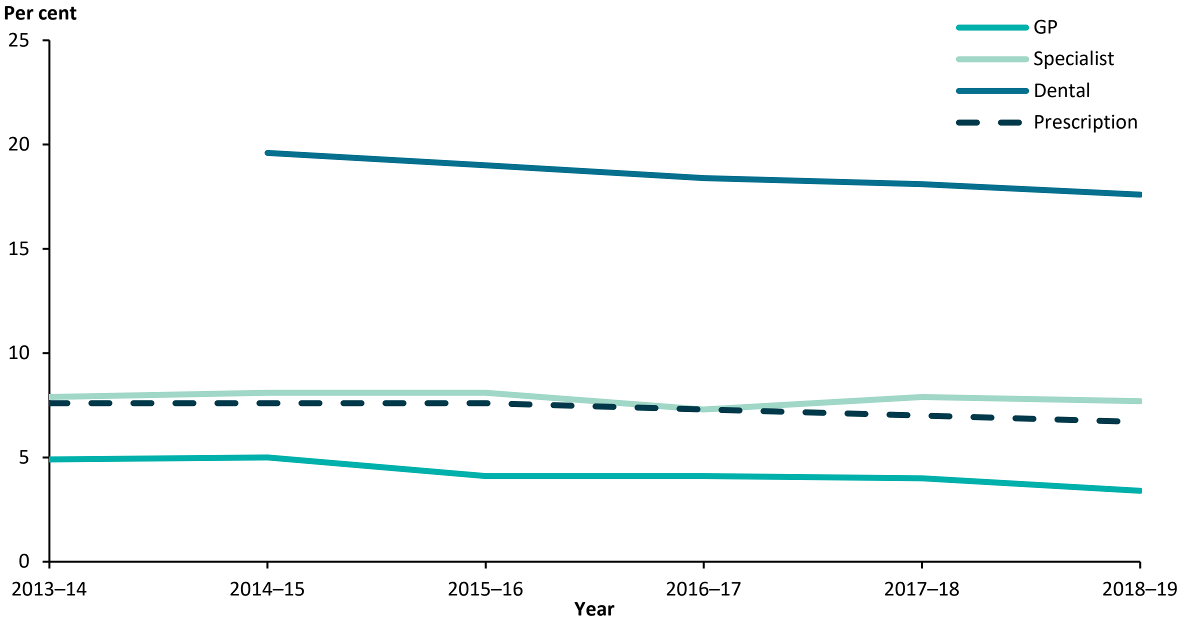
In 2018–19:

- people aged 15 and over living in the lowest socioeconomic areas were more than twice as likely to delay seeing or not see a dental professional due to cost than those living in the highest socioeconomic areas (24% compared with 11%) (Figure 32.4)
- people aged 15 and over living in *Outer regional, remote and very remote* areas (23%) and *Inner regional* areas (20%) were more likely to delay seeing or not see a dental professional due to cost than those living in *Major cities* (16%) (Figure 32.5)
- 42% of Indigenous Australians aged 2 years and over did not see a dentist due to cost (note the data available for Indigenous Australians was for a different age range than specified in this indicator) (ABS 2019b).

(e) Pathology/imaging

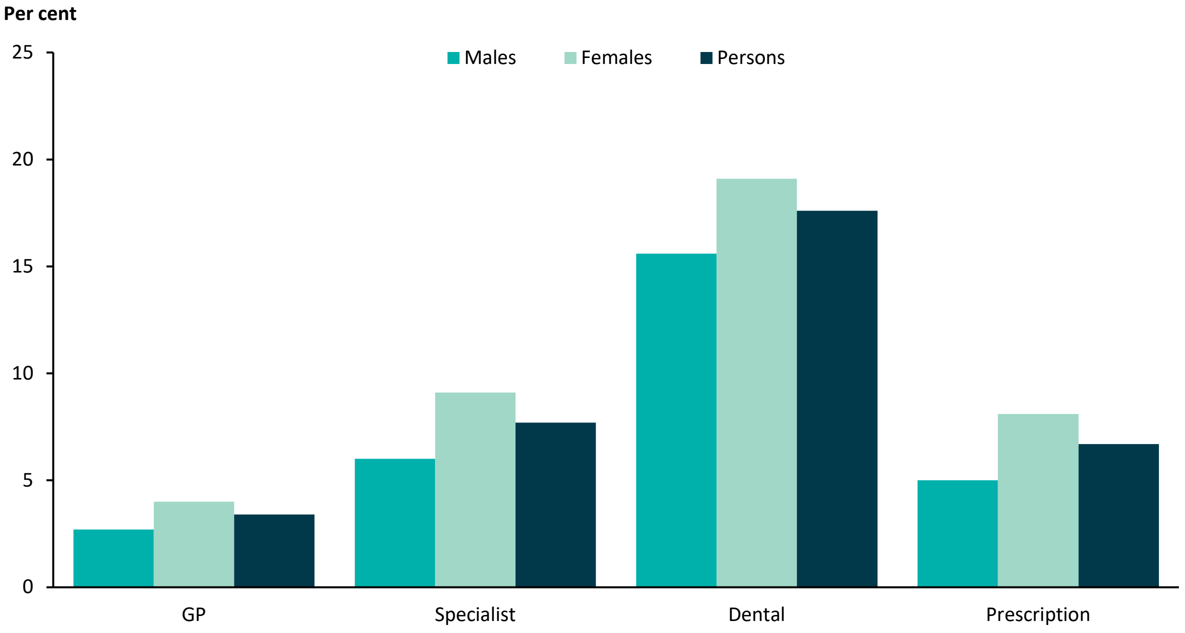
- In 2016–17, 3.0% of people aged 15 and over who needed to have pathology or imaging tests either delayed having, or did not have these tests due to cost (ABS 2017b).
- Data for pathology/imaging were not available by population group.

Figure 32.1: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by year



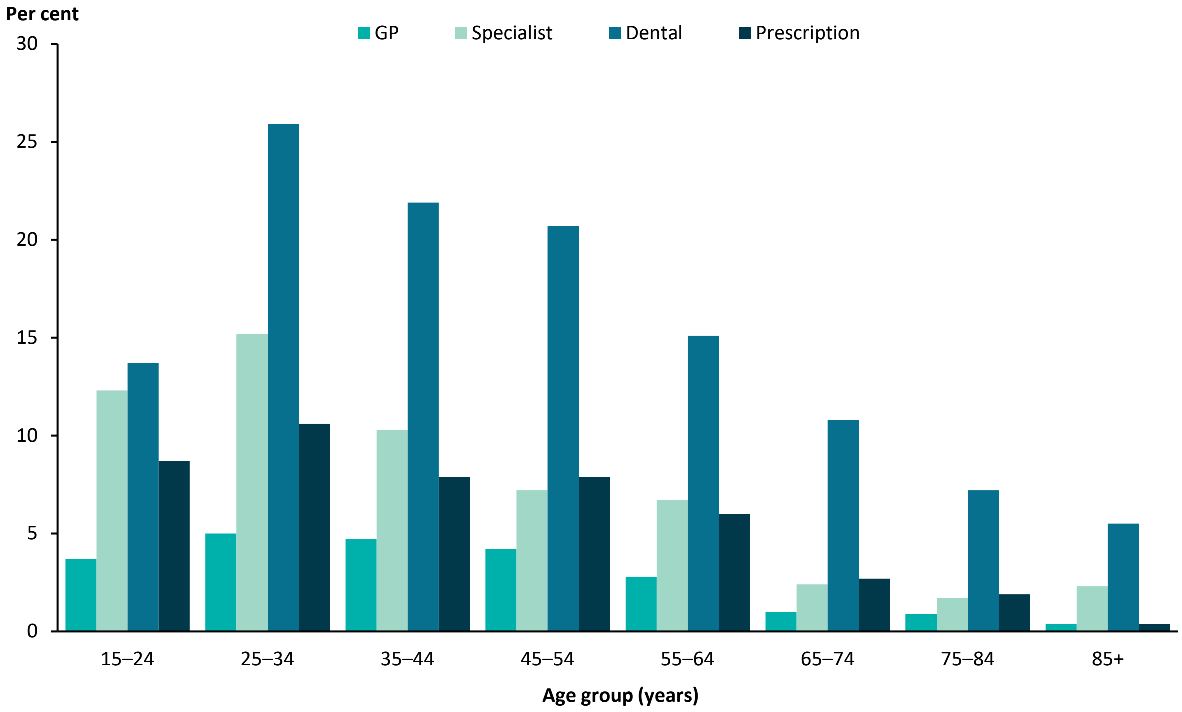
Notes
1. Pathology/imaging is not available over these time periods.
2. Data and additional notes for this figure are shown in Table 32.1.
Sources: ABS 2015; ABS 2016; ABS 2017a; ABS 2018; ABS 2019a.

Figure 32.2: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by sex, 2018–19



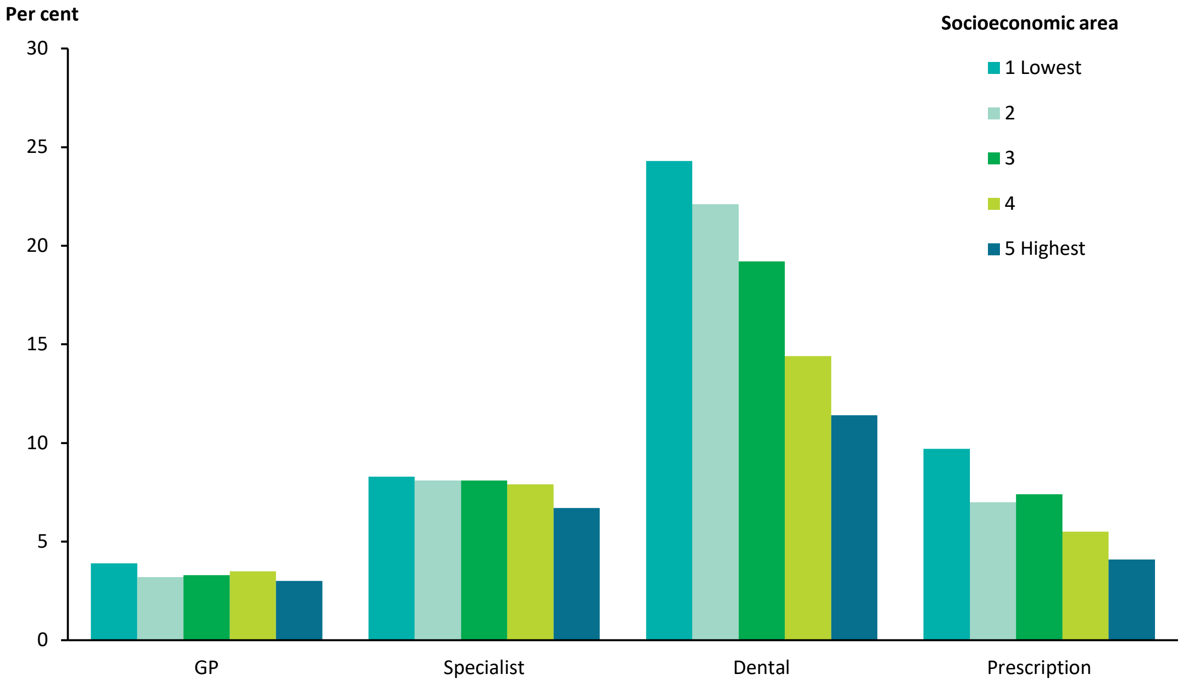
Note: Data and additional notes for this figure are shown in Table 32.2.
Source: ABS 2019a.

Figure 32.3: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by age, 2018–19



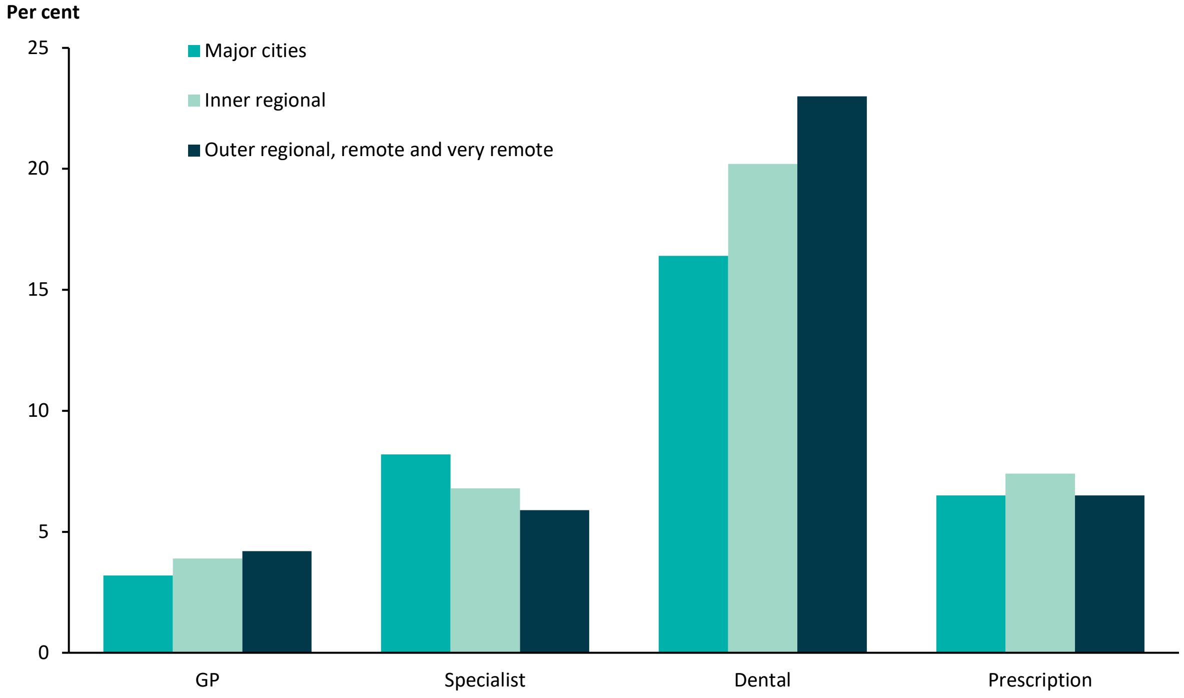
Note: Data and additional notes for this figure are shown in Table 32.3.
Source: ABS 2019a.

Figure 32.4: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by socioeconomic area, 2018–19



Note: Data and additional notes for this figure are shown in Table 32.4.
Source: ABS 2019a.

Figure 32.5: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by remoteness area, 2018–19



Note: Data and additional notes for this figure are shown in Table 32.4.
Source: ABS 2019a.

Considerations

Patient Experience Survey excludes people living in discrete Indigenous communities and those in non-private dwellings. Data from the Patient Experience Survey may not be directly comparable with data for Indigenous Australians from the NATSIHS.

Pathology and imaging tests exclude those had while in hospital. Imaging tests also exclude those done for dental work. Some people may report pathology and imaging as a referral to a medical specialist.

Data sources

ABS Patient Experience Survey, 2018–19 (and earlier years for trends). For further details, refer to Appendix B.

References

ABS 2015. Patient Experiences in Australia 2014–15. ABS Cat. no. 4839.0. Canberra: ABS.

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ABS 2019a. Patient Experiences in Australia 2018–19. ABS Cat. no. 4839.0. Canberra: ABS.

ABS 2019b. National Aboriginal and Torres Strait Islander Health Survey. ABS Cat. no. 4715.0. Customised report. Canberra: ABS.

Supplementary tables

Table 32.1: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by year

	GP		Specialist		Dental		Prescription	
Year	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2013–14	4.9	4.6–5.2	7.9	7.3–8.5	n.a.	n.a.	7.6	7.2–8.0
2014–15	5.0	4.7–5.3	8.1	7.5–8.7	19.6	18.9–20.3	7.6	7.1–8.1
2015–16	4.1	3.7–4.5	8.1	7.4–8.8	19.0	18.3–19.7	7.6	7.1–8.1
2016–17	4.1	3.8–4.4	7.3	6.5–8.1	18.4	17.7–19.1	7.3	6.8–7.8
2017–18	4.0	3.7–4.3	7.9	7.2–8.6	18.1	17.4–18.8	7.0	6.5–7.5
2018–19	3.4	3.1–3.7	7.7	7.0–8.4	17.6	16.8–18.4	6.7	6.2–7.2

n.a. not available
Sources: ABS 2015; ABS 2016; ABS 2017a; ABS 2018; ABS 2019a.

Table 32.2: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by sex, 2018–19

	Males		Females		Persons	
	Per cent	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
GP	2.7	2.2–3.2	4.0	3.6–4.4	3.4	3.1–3.7
Specialist	6.0	5.2–6.8	9.1	8.1–10.1	7.7	7.0–8.4
Dental	15.6	14.6–16.6	19.1	17.9–20.3	17.6	16.8–18.4
Prescription	5.0	4.5–5.5	8.1	7.2–9.0	6.7	6.2–7.2

Source: ABS 2019a.

Table 32.3: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by age, 2018–19

	GP		Specialist		Dental		Prescription	
Age groups (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
15–24	3.7	2.7–4.7	12.3	9.2–15.4	13.7	11.0–16.4	8.7	7.2–10.2
25–34	5.0	4.3–5.7	15.2	12.3–18.1	25.9	23.8–28.0	10.6	9.4–11.8
35–44	4.7	4.0–5.4	10.3	8.7–11.9	21.9	20.2–23.6	7.9	6.9–8.9
45–54	4.2	3.5–4.9	7.2	5.5–8.9	20.7	18.9–22.5	7.9	6.6–9.2
55–64	2.8	2.2–3.4	6.7	5.5–7.9	15.1	13.6–16.6	6.0	5.1–6.9
65–74	1.0	0.6–1.4	2.4	1.6–3.2	10.8	9.1–12.5	2.7	2.2–3.2
75–84	0.9	0.3–1.5	1.7	0.7–2.7	7.2	5.6–8.8	1.9	0.9–2.9
85+	0.4*	n.p.	2.3	0.8–3.8	5.5	3.1–7.9	0.4*	n.p.
Total 15+	**3.4**	**3.1–3.7**	**7.7**	**7.0–8.4**	**17.6**	**16.8–18.4**	**6.7**	**6.2–7.2**

n.p. not publishable.
* Estimate has a RSE between 25% and 50% and should be used with caution.
Source: ABS 2019a.

Table 32.4: Proportion of people (%) deferring selected health care due to cost, persons aged 15 and over, by selected population characteristics, 2018–19

Population characteristics	**GP**		**Specialist**		**Dental**		**Prescription**	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	3.9	3.3–4.5	8.3	6.6–10.0	24.3	22.3–26.3	9.7	8.7–10.7
2	3.2	2.5–3.9	8.1	6.1–10.1	22.1	20.1–24.1	7.0	5.9–8.1
3	3.3	2.8–3.8	8.1	6.4–9.8	19.2	17.3–21.1	7.4	6.1–8.7
4	3.5	2.8–4.2	7.9	6.3–9.5	14.4	12.9–15.9	5.5	4.5–6.5
5 Highest	3.0	2.3–3.7	6.7	5.3–8.1	11.4	10.1–12.7	4.1	3.3–4.9
Remoteness area								
Major cities	3.2	2.8–3.6	8.2	7.4–9.0	16.4	15.4–17.4	6.5	5.9–7.1
Inner regional	3.9	3.3–4.5	6.8	5.6–8.0	20.2	18.3–22.1	7.4	6.3–8.5
Outer regional, remote and very remote	4.2	3.4–5.0	5.9	4.2–7.6	23.0	19.6–26.4	6.5	5.5–7.5

Notes
1. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
2. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.
Source: ABS 2019a.

Indicator 33: Patient satisfaction/experience with GPs

In 2018–19, of those who saw a GP in the last 12 months, the proportion of people aged 15 and over who reported their GP always or often:

(a) listened carefully to them was 92%

(b) showed them respect was 94%

(c) spent enough time with them was 90%.

Why is this important?

Patient experience information is useful to obtain a picture of how patients view their experiences in accessing key health care services, and their satisfaction with aspects of the clinical interaction in general (AIHW 2018).

Data on patient experience is of value to both users of health services and those aiming to improve the health system. Good experiences are an important component of quality healthcare, along with clinical effectiveness and patient safety. High quality health care leads to better health outcomes, and barriers to accessing health services may impede the best possible outcome (ABS 2018). Taking the time to understand a patient's needs, preferences, beliefs, and attitudes, and adapting care to meet their expectations is central to an effective patient-doctor relationship (AIHW 2019).

What does this indicator measure?

Of those who saw a GP in the last 12 months, the proportion of people aged 15 and over who reported their GP always or often:

(a) listened carefully to them

(b) showed them respect

(c) spent enough time with them.

What do the data show?

(a) GP always or often listened carefully to them

In 2018–19, of those aged 15 and over:

- of those who saw a GP in the last 12 months, 92% reported that the GP always or often listened carefully to them. This has increased slightly over time from 90% in 2012–13 to 92% in 2018–19 (Figure 33.1)

- of those who saw a GP in the last 12 months, the proportion that reported that the GP always or often listened carefully to them was similar across socioeconomic and remoteness areas (Figures 33.2 and 33.3)
- 89% of Indigenous Australians reported that the GP always or usually listened carefully to them (Table 33.3). Note, due to differences in data collection the data for Indigenous Australians refers to 'always or usually' which is different to the indicator specification of 'always or often'.

(b) GP always or often showed respect

In 2018–19, of those aged 15 and over:

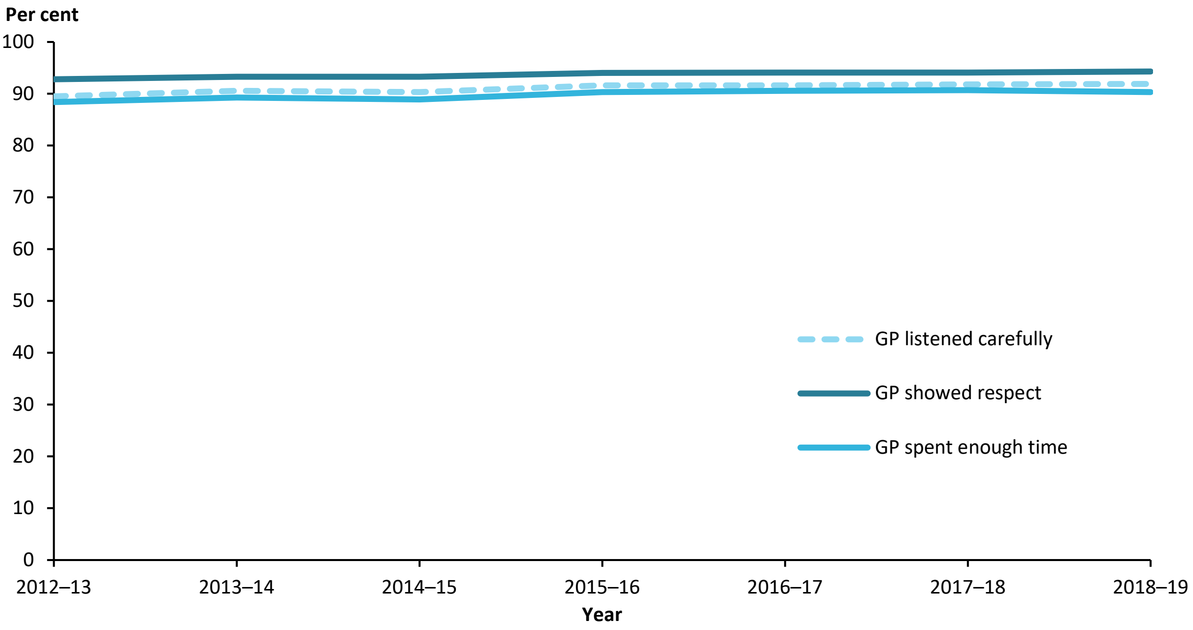
- of those who saw a GP in the last 12 months, 94% reported that they always or often showed them respect. This has remained steady over time (Figure 33.1)
- of those who saw a GP in the last 12 months, the proportion that reported that the GP always or often showed them respect was similar across socioeconomic and remoteness areas (Figures 33.2 and 33.3)
- 91% of Indigenous Australians reported that the GP always or usually showed them respect (Table 33.3). Note, due to differences in data collection the data for Indigenous Australians refers to 'always or usually' which is different to the indicator specification of 'always or often'.

(c) GP always or often spent enough time with them

In 2018–19, of those aged 15 and over:

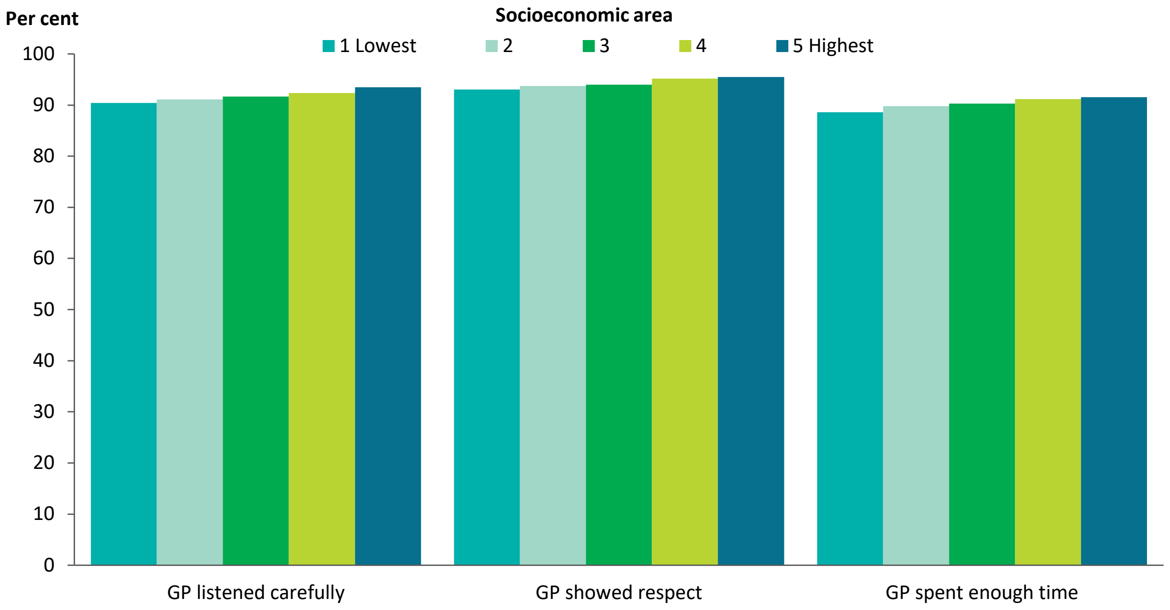
- of those who saw a GP in the last 12 months, 90% reported that they always or often spent enough time with them. This has remained steady over time (Figure 33.1)
- of those who saw a GP in the last 12 months, the proportion that reported that the GP always or often spent enough time with them was similar across socioeconomic and remoteness areas (Figures 33.2 and 33.3)
- 88% of Indigenous Australians reported that the GP always or usually spent enough time with them (Table 33.3). Note, due to differences in data collection the data for Indigenous Australians refers to 'always or usually' which is different to the indicator specification of 'always or often'.

Figure 33.1: Experience of GP services in the last 12 months (%), persons aged 15 and over, by year



Notes
1. Persons aged 15 years and over who saw a GP in the last 12 months.
2. For 2013–14 and subsequent years, cells have been randomly adjusted to avoid the release of confidential data.
3. Data and additional notes for this figure are shown in Table 33.1.
Source: Productivity Commission 2019 & ABS 2019b.

Figure 33.2: Experience of GP services in the last 12 months (%), persons aged 15 and over, by socioeconomic area, 2018–19



Notes
1. Persons aged 15 years and over who saw a GP in the last 12 months.
2. Data and additional notes for this figure are shown in Table 33.2.
Source: ABS 2019b.

Figure 33.3: Experience of GP services in the last 12 months (%), persons aged 15 and over, by remoteness area, 2018–19

Notes

1. Persons aged 15 years and over who saw a GP in the last 12 months.
2. Data and additional notes for this figure are shown in Table 33.2.

Source: ABS 2019b.

Considerations

Nil.

Data sources

ABS Patient Experience Survey 2018–19 (and earlier years for trends).

ABS National Aboriginal and Torres Strait Islander Health Survey 2018–19.

For further details, refer to Appendix B.

References

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Supplementary tables

Table 33.1: Experience of GP services in the last 12 months (%), persons aged 15 and over, by year

	GP always or often listened carefully		GP always or often showed respect		GP always or often spent enough time	
Year	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2012–13	89.5	89.1–89.9	92.8	92.4–93.2	88.4	87.9–88.9
2013–14	90.6	90.0–91.2	93.3	92.9–93.7	89.3	88.6–90.0
2014–15	90.3	90.2–90.4	93.3	92.8–93.8	88.9	88.6–89.2
2015–16	91.6	91.2–92.0	94.0	93.7–94.3	90.3	89.8–90.8
2016–17	91.6	91.1–92.1	94.1	–	90.6	90.1–91.1
2017–18	91.8	91.3–92.3	94.1	–	90.7	–
2018–19	91.9	91.6–92.1	94.3	93.9–94.8	90.3	89.8–90.9

– Nil or rounded to zero.

Notes

1. Persons aged 15 years and over who saw a GP in the last 12 months.
2. For 2013–14 to 2017–18, cells containing data have been randomly adjusted to avoid the release of confidential data.

Sources: Productivity Commission 2019; ABS 2019b.

Table 33.2: Experience of GP services in the last 12 months (%), persons aged 15 and over, by selected population characteristics, 2018–19

Population characteristic	GP always or often listened carefully		GP always or often showed respect		GP always or often spent enough time	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	90.4	89.8–91.0	93.1	91.1–95.1	88.6	86.4–90.8
2	91.1	89.8–92.5	93.8	93.0–94.6	89.8	88.9–90.7
3	91.7	88.9–94.4	94.0	91.5–96.5	90.3	89.2–91.5
4	92.4	91.0–93.7	95.2	93.4–97.0	91.2	89.7–92.6
5 Highest	93.5	92.5–94.4	95.5	94.3–96.7	91.5	90.2–92.9
Remoteness area						
Major cities	92.2	91.6–92.8	94.7	94.1–95.3	90.5	89.8–91.1
Inner regional	91.6	90.5–92.6	94.0	93.8–94.2	90.5	89.6–91.3
Outer regional, remote and very remote	89.9	87.9–91.9	92.3	82.7–100.0	89.3	86.4–92.2

(continued)

Table 33.2 (continued): Experience of GP services in the last 12 months (%), persons aged 15 and over, by selected population characteristics, 2018–19

Notes

1. Persons aged 15 years and over who saw a GP in the last 12 months.
2. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
4. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.

Source: ABS 2019b.

Table 33.3: Experience of GP services in the last 12 months (%), Indigenous Australians aged 15 and over, 2018–19

GP experience	Per cent	95% CI
GP always or often listened carefully	88.8	87.9–89.7
GP always or often showed respect	91.0	90.1–91.9
GP always or often spent enough time	87.5	86.4–88.6

Notes

1. Persons aged 15 years and over who saw a GP in the last 12 months.
2. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.

Source: ABS 2019a.

Indicator 34: Waiting times for GPs

Proportion of people aged 15 and over who reported seeing a GP for urgent medical care (for their own health), by waiting time categories in 2018–19:

(a) 61% waited less than 4 hours

(b) 11% waited 4 hours or more to less than 24 hours

(c) 28% waited 24 hours or more.

Why is this important?

General practitioners (GPs) are widely used in Australia and are the first point of contact for health issues for many Australians. People access GPs for a variety of reasons including short term illnesses, preventive health practices and management of long-term health conditions (ABS 2019a). It is therefore important that people are able to access a GP in a timely manner and receive care that meets their needs, both in terms of ease of access and the quality of care provided (ABS 2019a).

While this indicator measures waiting times for seeing a GP for urgent medical care, a longer wait time for patients with chronic conditions can delay intervention resulting in more serious presentations as their condition worsens. This delay in initial assessment, diagnosis and treatment can result in adverse outcomes for patients and the potentially preventable use of other services such as emergency departments and hospital admissions.

What does this indicator measure?

Proportion of people aged 15 and over who reported seeing a GP for urgent medical care (for their own health), by waiting time categories:

(a) less than 4 hours

(b) 4 hours or more to less than 24 hours

(c) 24 hours or more.

What do the data show?

In 2018–19, of those aged 15 and over:

- 8.4% of people (or an estimated 1.8 million people) saw a GP for urgent medical care (ABS 2019a). Of those persons who saw a GP for urgent medical care, 61% were seen by a GP within 4 hours of making an appointment, 11% waited four hours or more but were seen within 24 hours of making an appointment, and 28% waited 24 hours or more (Figure 34.1). Trends in the amount of time patients waited after making an appointment for urgent GP care have remained stable over the period from 2014–15 to 2018–19 (Figure 34.1).

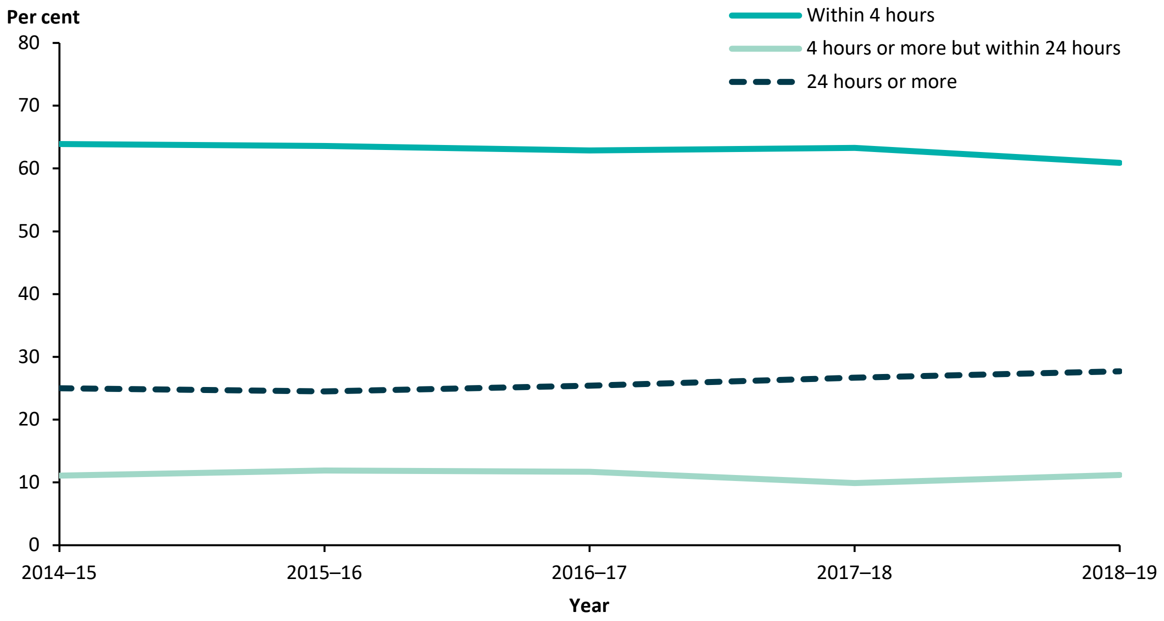
- waiting times for urgent GP care was similar across both sexes (Table 34.3); there were some differences between age groups, see 'Figure 43.2' for details.

Population groups

In 2018–19, of those aged 15 and over:

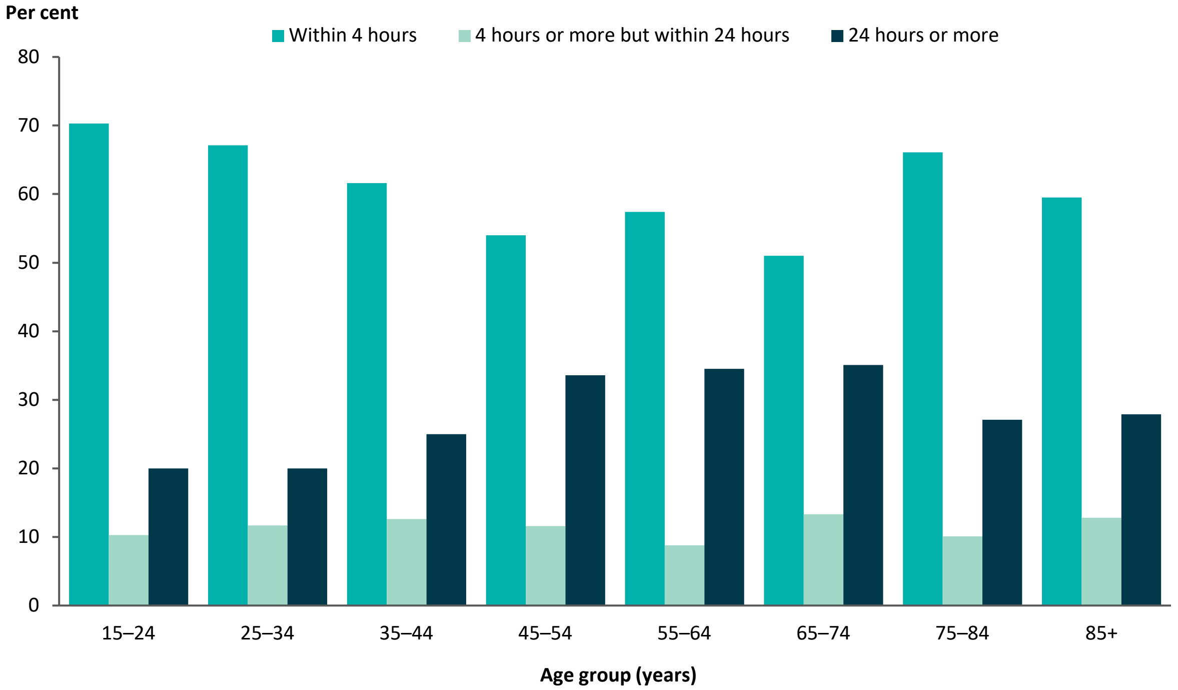
- for the 3 waiting time categories assessed, waiting times were generally similar across socioeconomic areas (Figure 34.3)
- waiting times for urgent GP care differed between those living in *Major cities* and *Inner regional* areas—people living in *Major cities* were more likely to be seen within 4 hours than those living in *Inner regional* areas (64% compared with 55%); and less likely to wait 24 hours or more (*Major cities,* 25%; *Inner regional,* 34%) (Figure 34.3). For those that reported waiting 4 hours or more but were seen within 24 hours of making an appointment, there was no difference across remoteness categories (Figure 34.4)
- 71% of Indigenous Australians (an estimated 24,600) were seen by a GP within 4 hours of making and appointment, 19% were seen between 4 and 24 hours, and; 9.3% waited 24 hours or more (ABS 2019b)
- there were no differences between Indigenous males and Indigenous females in the time taken to see a GP for urgent medical care (ABS 2019b)
- after adjusting for age, Indigenous Australians were less likely to have waited 24 hours or more for urgent GP medical care compared with non-Indigenous Australians. However, there were no differences for urgent GP medical care within 24 hours (Table 34.5).

Figure 34.1: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by year



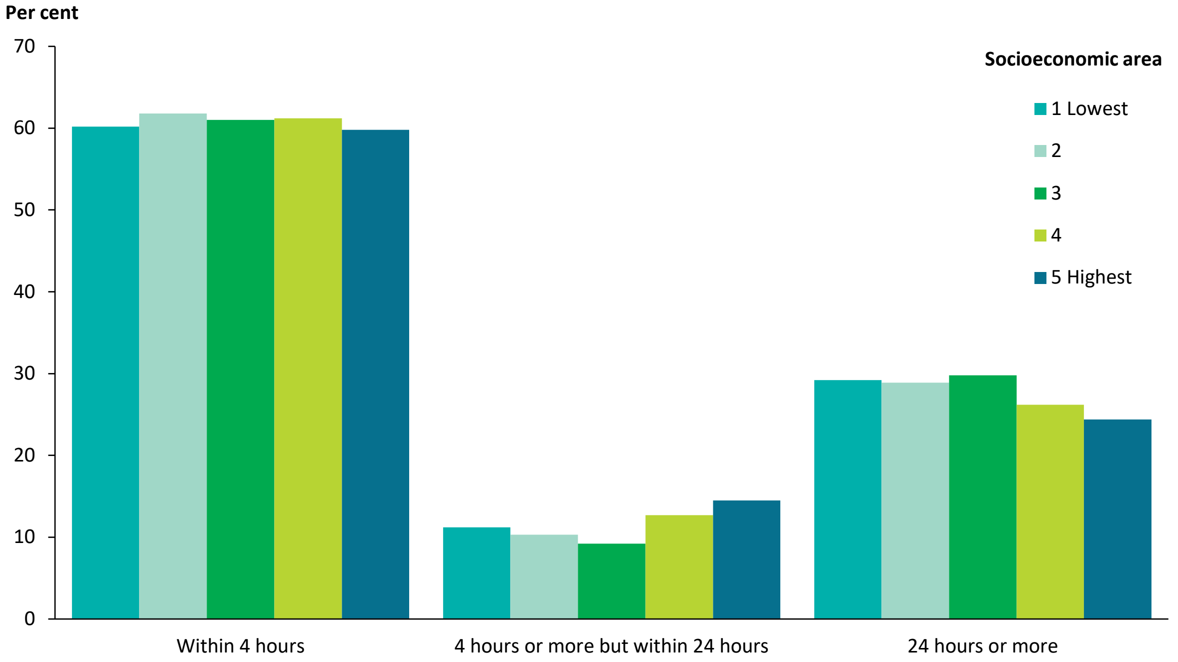
Note: Data and additional notes for this figure are shown in Table 34.1.
Sources: ABS 2015; ABS 2016; ABS 2017; ABS 2018; ABS 2019a.

Figure 34.2: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by age, 2018–19



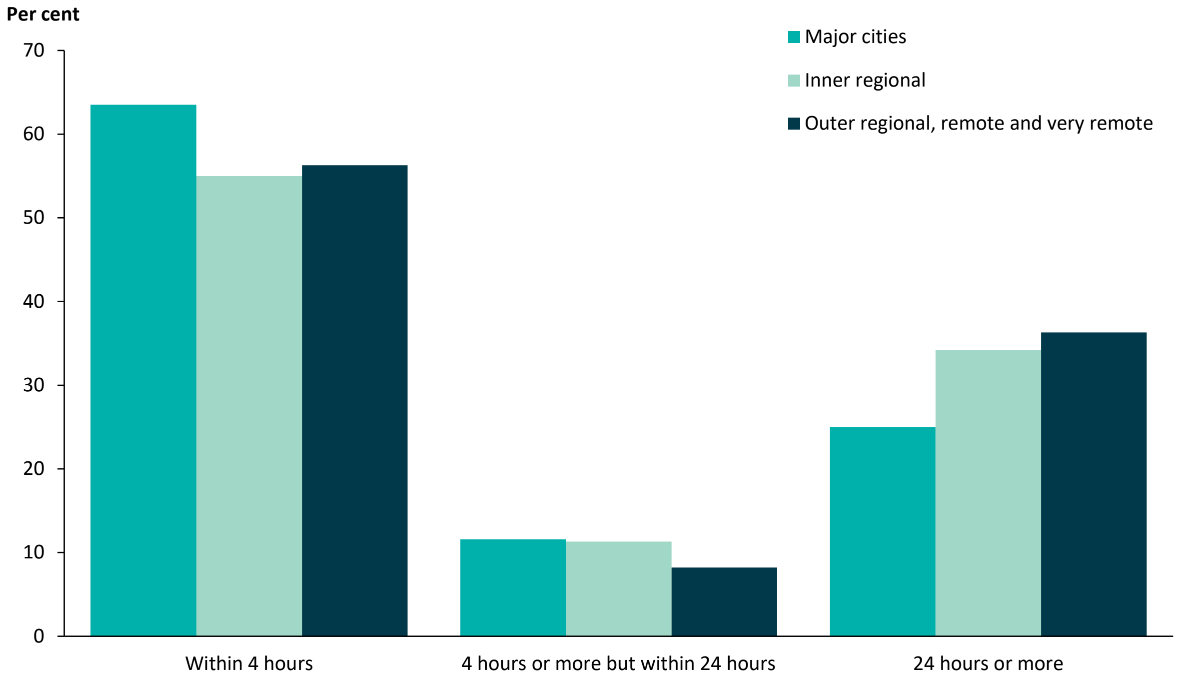
Note: Data and additional notes for this figure are shown in Table 34.2.
Source: ABS 2019a.

Figure 34.3: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by socioeconomic area, 2018–19



Note: Data and additional notes for this figure are shown in Table 34.4.
Source: ABS 2019a.

Figure 34.4: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by remoteness area, 2018–19



Note: Data and additional notes for this figure are shown in Table 34.4.
Source: ABS 2019a.

Considerations

Interpretation of 'urgent care' was left to the respondent, however interviewer advice was to include health issues that arose suddenly and were serious (e.g. fever, headache, vomiting, unexplained rash).

Data from the Patient Experience Survey may not be directly comparable with data for Indigenous Australians from the NATSIHS.

Data sources

ABS Patient Experience Survey, 2018–19 (and earlier years for trends).

National Aboriginal and Torres Strait Islander Health Survey, 2018–19.

For further details, refer to Appendix B.

References

ABS 2015. Patient Experiences in Australia 2014–15. ABS Cat. no. 4839.0. Canberra: ABS. https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4839.02014-15?OpenDocument.

ABS 2016. Patient Experiences in Australia 2015–16. ABS Cat. no. 4839.0. Canberra: ABS. https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F55FE82671AE2F73CA2581D7007968EF?opendocument.

ABS 2017. Patient Experiences in Australia 2016–17. ABS Cat. no. 4839.0. Canberra: ABS. https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/72DD898E88DE12F6CA25834300106C8E?opendocument.

ABS 2018. Patient Experiences in Australia 2017–18. ABS Cat. no. 4839.0. Canberra: ABS. https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4839.0Main+Features12017-18?OpenDocument.

ABS 2019a. Patient Experiences in Australia 2018–19. ABS Cat. no. 4839.0. Canberra: ABS. https://www.abs.gov.au/statistics/health/health-services/patient-experiences-australia-summary-findings/2018-19

ABS 2019b. National Aboriginal and Torres Strait Islander Health Survey, 2018–19. ABS Cat. no. 4715.0. Customised report. Canberra: ABS.

ABS 2019c. Patient Experiences in Australia 2018–19. ABS Cat. no. 4839.0. Customised report. Canberra: ABS.

Supplementary tables

Table 34.1: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by year

	Within 4 hours		4 hours or more but within 24 hours		24 hours or more	
Year	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
2014–15	63.9	61.5–66.3	11.1	9.9–12.3	25.0	21.2–28.8
2015–16	63.6	60.2–67.0	11.9	10.7–13.1	24.5	21.2–27.8
2016–17	62.9	58.0–67.8	11.7	11.2–12.2	25.4	23.1–27.7
2017–18	63.3	61.8–64.8	9.9	8.5–11.3	26.7	24.7–28.7
2018–19	60.9	57.9–63.9	11.2	9.6–12.8	27.7	25.1–30.3

Sources: ABS 2015; ABS 2016; ABS 2017; ABS 2018; ABS 2019a.

Table 34.2: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by age, 2018–19

	Within 4 hours		4 hours or more but within 24 hours		24 hours or more	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
15–24	70.3	61.1–79.5	10.3	6.0–14.6	20.0	13.7–26.3
25–34	67.1	63.5–70.7	11.7	8.4–15.0	20.0	14.8–25.2
35–44	61.6	56.6–66.6	12.6	8.1–17.1	25.0	19.1–30.9
45–54	54.0	46.9–61.1	11.6	7.6–15.6	33.6	24.7–42.5
55–64	57.4	53.1–61.7	8.8	5.9–11.7	34.5	30.2–38.8
65–74	51.0	45.3–56.7	13.3	9.0–17.6	35.1	29.3–40.9
75–84	66.1	57.7–74.5	10.1	6.2–14.0	27.1	21.4–32.8
85+	59.5*	40.8–78.2	12.8	4.4–21.2	27.9*	16.5–39.3
Total 15+	**60.9**	**57.9–63.9**	**11.2**	**9.6–12.8**	**27.7**	**25.1–30.3**

* Estimate has a RSE between 25% and 50% and should be used with caution.
Source: ABS 2019a.

Table 34.3: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by sex, 2018–19

	Within 4 hours		4 hours or more but within 24 hours		24 hours or more	
Sex	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Males	62.0	59.2–64.8	9.5	7.4–11.6	28.7	24.6–32.8
Females	60.3	56.0–64.6	12.7	10.5–14.9	26.8	23.8–29.8
Persons	**60.9**	**57.9–63.9**	**11.2**	**9.6–12.8**	**27.7**	**25.1–30.3**

Source: ABS 2019a.

Table 34.4: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by selected population characteristics, 2018–19

Population characteristic	Within 4 hours		4 hours or more but within 24 hours		24 hours or more	
Socioeconomic area	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
1 Lowest	60.2	53.6–66.8	11.2	7.8–14.6	29.2	23.5–34.9
2	61.8	57.0–66.6	10.3	8.0–12.6	28.9	24.4–33.4
3	61.0	54.4–67.6	9.2	5.9–12.5	29.8	24.0–35.6
4	61.2	56.9–65.5	12.7	8.9–16.5	26.2	21.2–31.2
5 Highest	59.8	53.7–65.9	14.5	9.5–19.5	24.4	20.3–28.5
Remoteness area						
Major cities	63.5	60.9–66.1	11.6	9.4–13.8	25.0	21.8–28.2
Inner regional	55.0	48.9–61.1	11.3	9.0–13.6	34.2	29.8–38.6
Outer regional, remote and very remote	56.3	48.1–64.5	8.2	4.8–11.6	36.3	27.5–45.1

Notes
1. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
2. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.
Source: ABS 2019a.

Table 34.5: Waiting times for GP services in the last 12 months (%), persons aged 15 and over, by Indigenous status, 2018–19

	Within 4 hours		4 hours or more but within 24 hours		24 hours or more	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	70.1	61.7–78.4	19.5	11.2–27.8	9.4	3.5–15.3
Non-Indigenous Australians	61.7	58.8–64.6	11.3	9.7–12.9	26.9	24.2–29.6

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.

2. Age-standardised to the 2001 Australian standard population.

3. Indigenous data is from the ABS National Aboriginal and Torres Strait Islander Health Survey 2018–19; non-Indigenous data is from the Patient Experience Survey 2018–19.

Sources: ABS 2019b; ABS 2019c.

Indicator 35: Full time equivalent health workforce

Number of full-time equivalent (FTE) employed health practitioners per 100,000 population in 2018:

(a) Medical practitioners 415

(b) Nurses and midwives 1,176

(c) Registered allied health practitioners 480

(d) Dental practitioners 76.

Why is this important?

This indicator provides information on the stock of health workers relative to the population. It can be used to monitor whether the size of the current workforce meets a given threshold that should allow the most basic levels of health-care coverage to be achieved across the country (WHO 2010).

What does this indicator measure?

Full-time equivalent (FTE) employed health practitioners per 100,000 population for:

(a) Medical practitioners

(b) Nurses and midwives

(c) Registered allied health practitioners

(d) Dental practitioners.

What do the data show?

There were more than 586,000 registered health practitioners in Australia in 2018, which includes 98,400 medical practitioners; 334,000 nurses and midwives; 133,400 registered allied health professionals; and 20,600 dental practitioners (AIHW 2020).

Between 2013 and 2018 the Australian registered health workforce increased by more than 82,000 professionals (AIHW 2020). Over this period the number of full-time equivalent (FTE) health professionals per 100,000 population (FTE rate) rose steadily for each profession group—registered allied health workers and medical practitioners showed the greatest growth in FTE rate (an increase of 54 and 33 FTE per 100,000 people, respectively) (AIHW 2020).

(a) Medical practitioners

In FTE terms, there were 415 employed medical practitioners per 100,000 people in 2018; an increase from 382 per 100,000 people in 2013 (Figure 35.1).

The proportion of FTE medical practitioners that are women increased 20% from 2013 to 2018 (133 to 160 FTE per 100,000 people, respectively) (AIHW 2020).

(b) Nurses and midwives

Nurses and midwives are the largest group in the registered health workforce (AIHW 2020). The rate of FTE employed nurses and midwives was 1,176 in 2018; an increase from 1,155 per 100,000 people in 2013 (Figure 35.1).

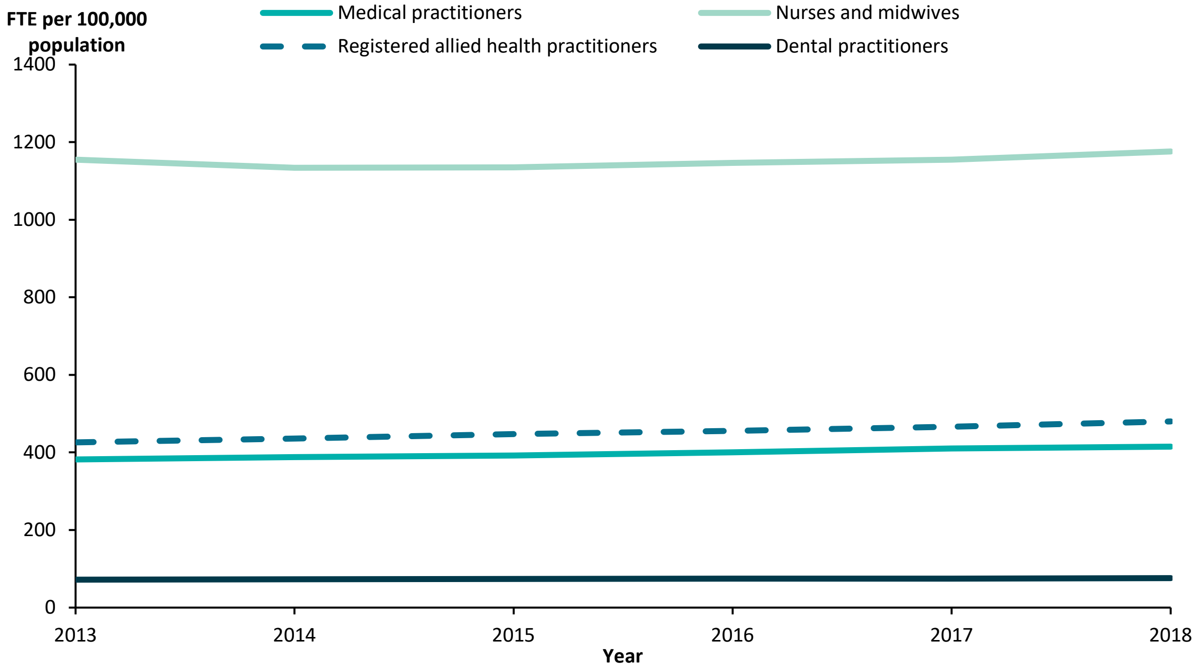
(c) Registered allied health practitioners

The rate of FTE employed registered allied health practitioners was 480 per 100,000 in 2018, an increase from 426 in 2013 (Figure 35.1).

(d) Dental practitioners

The rate of FTE employed dental practitioners was 76 per 100,000 in 2018; an increase from 72 in 2013 (Figure 35.1).

Figure 35.1: Full-time equivalent rates (FTE per 100,000 people) for employed selected health practitioners, by year



Note: Data and additional notes for this figure are shown in Table 35.1.
Source: Department of Health 2020.

Population groups

At the time of writing, data for this indicator is currently unavailable by socioeconomic area, remoteness and Indigenous status.

Considerations

FTE for medical practitioners is based on a 40-hour week, whereas nurses and midwives, dental practitioners and registered allied health practitioners are based on a 38-hour week.

Data sources

Department of Health National Health Workforce Data Set. For further details, refer to Appendix B.

References

AIHW 2018. Australia's Health 2018. Australia's health series no. 16. AUS 221. Canberra: AIHW.

AIHW 2020. Health workforce. Canberra: AIHW. Canberra: AIHW. Viewed 24 November 2020.

Department of Health 2020. Health Workforce Data Tool. Viewed 20 February 2020, Canberra: Department of Health. https://hwd.health.gov.au/datatool/

WHO 2010. Health Workforce. Geneva: WHO. Viewed 8 April 2019, https://www.who.int/health-topics/health-workforce#tab=tab_1

Supplementary tables

Table 35.1: Full-time equivalent rates for employed selected health practitioners (FTE per 100,000 population), by year

Year	Medical practitioners	Nurses and midwives	Registered allied health practitioners	Dental practitioners
2013	382	1155	426	72
2014	388	1134	436	73
2015	392	1135	447	74
2016	400	1147	456	75
2017	410	1155	466	75
2018	415	1176	480	76

Notes

1. In this dataset, registered allied health professions include Aboriginal and Torres Strait Islander health practitioners, chiropractors, Chinese medicine practitioners, medical radiation practitioners, occupational therapists, optometrists, osteopaths, pharmacists, physiotherapists, podiatrists and psychologists.
2. Medical practitioners includes the following registered and employed practitioners: specialists, general practitioners, specialists-in-training, hospital non-specialists, other clinicians, and non-clinicians.
3. Dental practitioners registered with Australian Health Practitioner Regulation Agency include oral health therapists, dental hygienists, dental therapists, dental prosthetists, and dentists.
4. FTE for medical practitioners is based on 40-hour week, whereas nurses and midwives, dental practitioners and registered allied health practitioners are based on a 38-hour week.

Source: Department of Health 2020.

Indicator 36: Effective management of diabetes

49% of people aged 18–69 with known diabetes achieved the target level for HbA1c (≤7.0%) in 2011–12.

Why is this important?

Diabetes was responsible for 2.3% of the total burden of disease in Australia in 2015 (AIHW 2019). Effective management of diabetes decreases the risk of serious complications of continuing high blood glucose levels including amputations, kidney damage, loss of eye sight and heart disease. HbA1c (glycated haemoglobin) levels, determined through a blood test, reflect the average blood glucose levels over the preceding 6–8 weeks and provide an indicator of effective diabetes management. Note that effective management of diabetes is broader than HbA1c levels and also includes such things as management of diet, body weight, physical activity ('Indicator 8'), smoking ('Indicator 7'), alcohol intake ('Indicator 6'), blood glucose levels ('Indicator 13'), blood pressure, and lipid levels ('Indicators 11 & 12') (RACGP 2020).

Targets for HbA1c in people with diabetes should be individualised, but a general target of less than or equal to 7.0% is recommended for people with type 2 diabetes (RACGP 2020)—see 'Considerations' for more information.

What does this indicator measure?

The proportion of people aged 18–69 with known diabetes who have an HbA1c level ≤7.0%.

Known diabetes

In the ABS 2011–13 Australian Health Survey, known diabetes is defined as persons self-reporting that they have ever been told by a doctor or nurse that they have diabetes and:

- they are taking diabetes medication (insulin or tablets), or
- their blood test result for HbA1c was greater than or equal to 6.5%.

What do the data show?

In 2011–12:

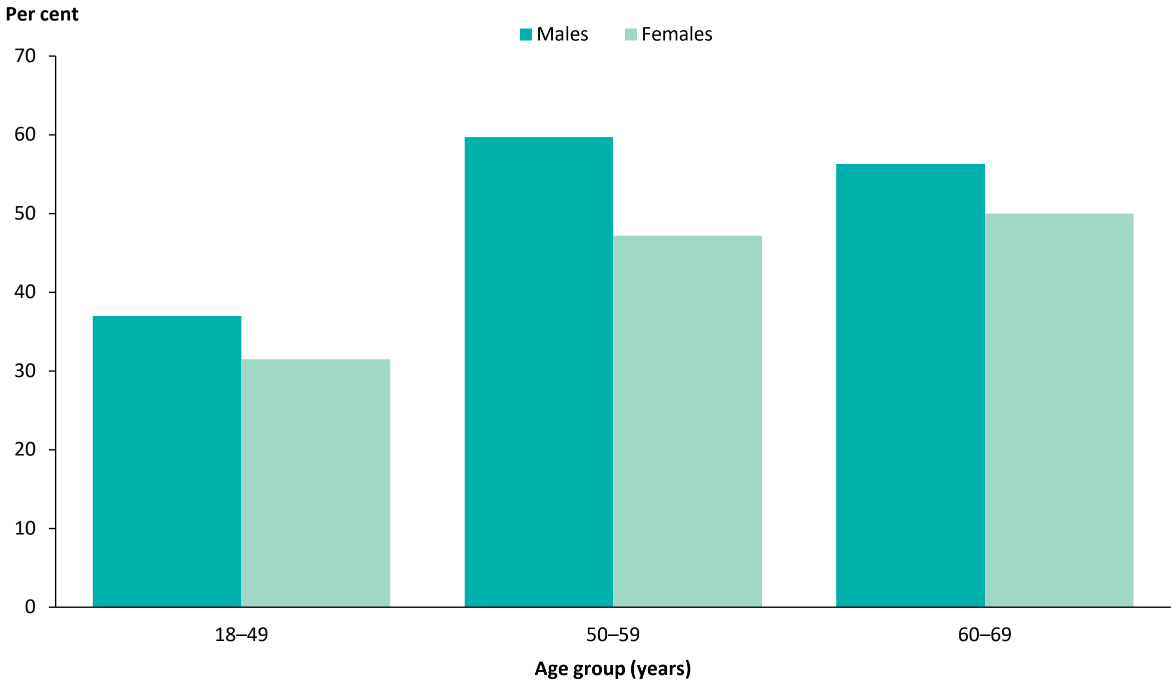
- 49% of people (or an estimated 234,500 people) aged 18–69 years with known diabetes achieved the target level for HbA1c (≤7.0%); 41% after adjusting for age (Table 36.1). While the age-standardised proportion of men (43%) who met the HbA1c target was higher than that for women (37%), the difference was not statistically significant (Figure 36.1).

- overall, 35% of adults aged 18–49, with known diabetes, effectively managed their diabetes and this proportion rose to 55% among those aged 50–59 and 54% among those aged 60–69 (Table 36.1).

Population groups

- In 2011–12, the proportion of people aged 18–69 who effectively managed their diabetes did not vary significantly by remoteness area or socioeconomic group (Figure 36.2).
- In 2012–13, 36% of Indigenous Australians aged 18–69 years met the target level for HbA1c (Table 36.3).

Figure 36.1: People, aged 18–69 years, with known diabetes who achieve the target level for HbA1c (HbA1c ≤7.0%), by sex and age, 2011–12

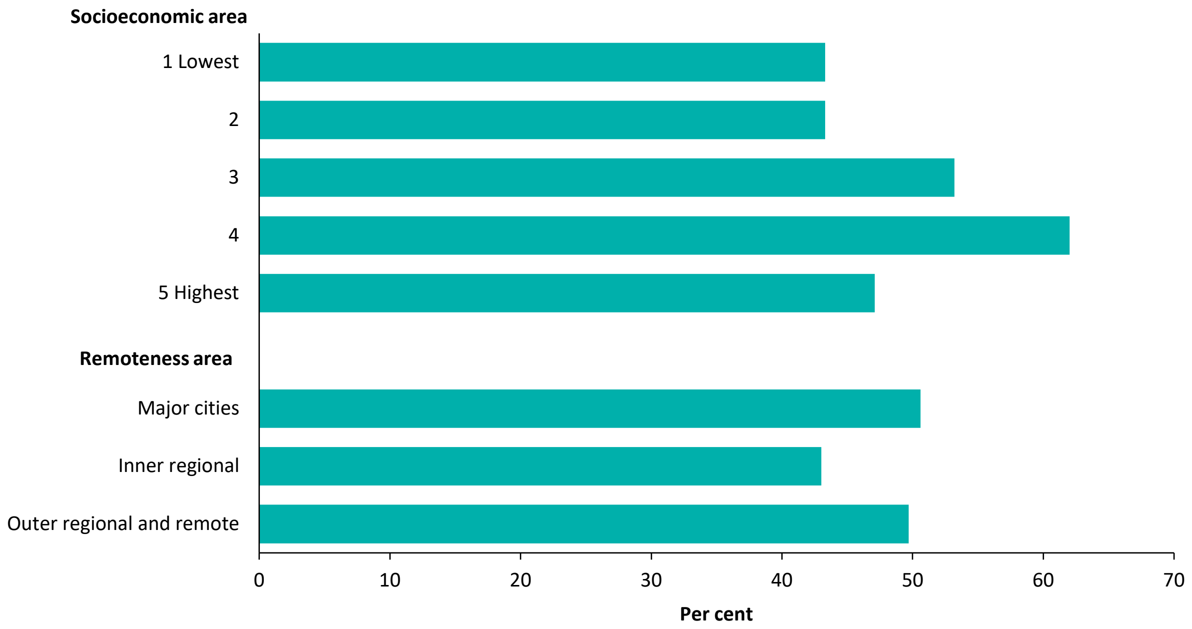


Notes

1. A person was considered to have known diabetes if they had ever been told by a doctor or nurse that they have diabetes and they were taking diabetes medication (either insulin or tablets); or they had ever been told by a doctor or nurse that they have diabetes and their blood test result for HbA1c was greater than or equal to the cut off point for diabetes (that is, 6.5%).
2. Data and additional notes for this figure are shown in Table 36.1.

Source: AIHW 2020.

Figure 36.2: People, aged 18–69 years, with known diabetes who achieve the target level for HbA1c (HbA1c ≤ 7.0%), by selected population characteristics, 2011–12



Notes

1. A person was considered to have known diabetes if they had ever been told by a doctor or nurse that they have diabetes and they were taking diabetes medication (either insulin or tablets); or they had ever been told by a doctor or nurse that they have diabetes and their blood test result for HbA1c was greater than or equal to the cut off point for diabetes (that is, 6.5%).
2. Crude per cent as RSE's for numerators are too large to age-standardise for socioeconomic area and remoteness.
3. Data and additional notes for this figure are shown in Table 36.2.

Source: AIHW 2020.

Considerations

These results are based on measured data. As biomedical health surveys are not regularly conducted in Australia there is no routine data collection for reporting against this indicator (and trend data are unavailable).

This indicator is for people aged 18–69 years and does not measure people aged 70 years and over who have achieved the target level for HbA1c of less than or equal to 7.0%. The age group 18–69 years was selected as targets for older people with diabetes are individualised and less strict (RACGP 2020).

While the data for this indicator relate to people with all types of known diabetes (excluding gestational diabetes) the target HbA1c of ≤7.0% is not considered appropriate for people with type 1 diabetes. While the type of diabetes cannot be determined from biomedical estimates from the Australian Health Survey, it is assumed that the majority of known diabetes would be type 2 diabetes.

Data sources

ABS Australian Health Survey 2011–12.

ABS Aboriginal and Torres Strait Islander Health Survey, 2012–13.

For further details, refer to Appendix B.

References

AIHW 2019. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015. Cat. no. BOD 22. Canberra: AIHW.

AIHW 2020. Indicators for the Australian National Diabetes Strategy 2016–2020: data update. Cat. no. CVD 81. Canberra: AIHW.

RACGP (The Royal Australian College of General Practitioners) 2020. Management of type 2 diabetes: A handbook for general practice. East Melbourne: RACGP. Viewed 4 August 2020, https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/diabetes/introduction.

Supplementary tables

Table 36.1: People, aged 18–69 years, with known diabetes who achieve the target level for HbA1c (HbA1c ≤ 7.0%), by sex and age, 2011–12

	Males		Females		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
18–49	37.0*	14.3–59.7	31.5*	11.0–52.0	34.7	19.2–50.3
50–59	59.7	40.9–78.5	47.2	28.4–66.1	55.0	41.3–68.8
60–69	56.3	43.8–68.9	50.0	29.5–70.4	54.1	44.0–64.2
Total 18–69	**52.1**	**42.4–61.9**	**43.5**	**31.7–55.2**	**48.9**	**41.6–56.2**
Total 18–69 age-standardised(a)	**43.3**	**27.3–59.4**	**36.5**	**21.8–51.2**	**40.7**	**29.6–51.7**

* Estimate has a RSE between 25% and 50% and should be used with caution.

(a) Age-standardised to the 2001 Australian standard population (age groups: 18–49, 50–59 and 60–69).

Notes

1. A person was considered to have known diabetes if they had ever been told by a doctor or nurse that they have diabetes and they were taking diabetes medication (either insulin or tablets); or they had ever been told by a doctor or nurse that they have diabetes and their blood test result for HbA1c was greater than or equal to the cut off point for diabetes (that is, 6.5%).
2. HbA1c based on biomedical data.

Source: AIHW 2020.

Table 36.2: People, aged 18–69 years, with known diabetes who achieve the target level for HbA1c (HbA1c ≤ 7.0%), by selected population characteristics, 2011–12

Population characteristics	Per cent[(a)]	95% CI
Socioeconomic area[(b)]		
1 Lowest	43.3	32.1–54.4
2	43.3	25.8–60.8
3	53.2	34.7–71.6
4	62.0	43.3–80.7
5 Highest	47.1	21.4–72.8
Remoteness area[(c)]		
Major cities	50.6	41.0–60.3
Inner regional	43.0	27.8–58.2
Outer regional and remote	49.7	31.4–68.0

(a) Crude per cent as RSE's for numerators are too large to age-standardise for socioeconomic area and remoteness.

(b) Socioeconomic areas are classified according to Socio-Economic Indexes for Areas 2011 (SEIFA 2011), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).

(c) Remoteness is classified according to the Australian Statistical Geography Standard (ASGS 2011). Remoteness Areas structure based on postcode of current residence. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the AHS.

Notes

1. A person was considered to have known diabetes if they had ever been told by a doctor or nurse that they have diabetes and they were taking diabetes medication (either insulin or tablets); or they had ever been told by a doctor or nurse that they have diabetes and their blood test result for HbA1c was greater than or equal to the cut off point for diabetes (that is, 6.5%).
2. HbA1c based on biomedical data.

Source: AIHW 2020.

Table 36.3: Indigenous adults, aged 18–69 years, with known diabetes who achieve the target level for HbA1c (HbA1c ≤ 7.0%), 2012–13

	Per cent[(a)]	95% CI
Males	32.7*	20.9–44.5
Females	38.4	28.4–48.5
Persons	36.0	28.3–43.6

* Proportion has a high margin of error (greater than 10%) and should be used with caution.

(a) Crude per cent.

Notes

1. A person was considered to have known diabetes if they had ever been told by a doctor or nurse that they have diabetes and they were taking diabetes medication (either insulin or tablets); or they had ever been told by a doctor or nurse that they have diabetes and their blood test result for HbA1c was greater than or equal to the cut off point for diabetes (that is, 6.5%).
2. HbA1c based on biomedical data.

Source: AIHW 2020.

Indicator 37: Potentially preventable hospitalisations for chronic conditions

The age-standardised rate of potentially preventable hospitalisations for selected chronic conditions was 12.3 per 1,000 people in 2017–18.

Why is this important?

Potentially preventable hospitalisations (PPH) for chronic conditions are those that could have potentially been prevented through the provision of appropriate preventative health interventions and early disease management in primary care and community-based care settings (including by general practitioners, medical specialists, dentists, nurses and allied health professionals) (AIHW 2019).

The chronic conditions covered in this indicator, see below, are those that may be preventable through behaviour modification and lifestyle change, but can also be managed effectively through timely care (usually non-hospital) to prevent deterioration and hospitalisation (AIHW 2019). PPH rates are sometimes used as indicators of the effectiveness of non-hospital care including elements of accessibility and affordability (AIHW 2019, Productivity Commission 2013). Monitoring PPH for chronic conditions provides insights into the effectiveness of preventive health actions across all stages of wellness and disease, including population health programs to limit the onset of disease, health screening for early detection and treatment of disease, and multi-disciplinary management of established disease (AIHW 2020a).

What does this indicator measure?

The rate of potentially preventable hospitalisations for chronic conditions.

The chronic conditions for which hospitalisation is considered potentially preventable are:

- Angina
- Asthma
- Bronchiectasis
- Chronic obstructive pulmonary disease (COPD)
- Congestive cardiac failure
- Diabetes complications
- Hypertension
- Iron deficiency anaemia
- Nutritional deficiencies
- Rheumatic heart diseases.

Refer to the *NSFCC: reporting framework* (AIHW 2022) for more information.

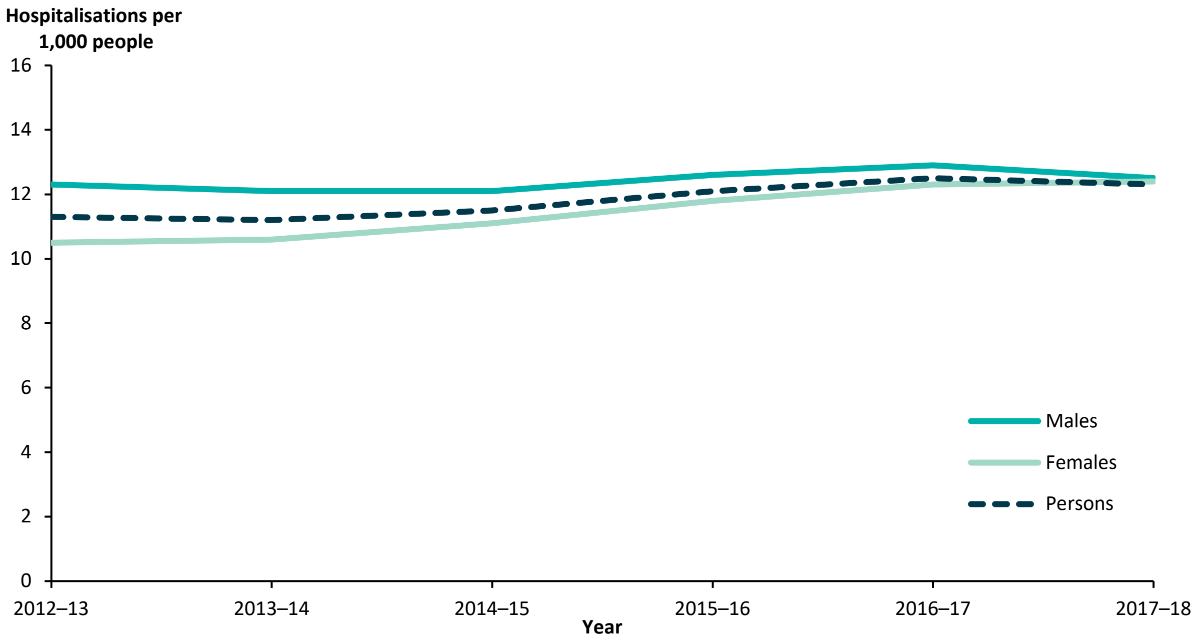
What do the data show?

- In 2017–18, there were more than 343,400 hospitalisations for the chronic conditions for which hospitalisation is considered potentially preventable (Table 37.1). This represented 46% of all PPH in that year and 3.1% of all hospital admissions to a public or private hospital in Australia that year (AIHW 2019). Overall, the age-standardised rate of PPH for chronic conditions was 12.3 per 1,000 people in 2017–18 (Figure 37.1).
- Age-standardised rates of PPH for chronic conditions increased between 2012–13 and 2016–17, and remained steady in 2017–18 (Figure 37.1). Changes in coding for rehabilitation care in July 2015 accounted for some, but not all, of the observed changes in PPH for chronic conditions: see 'Considerations' for more details (AIHW 2020a).
- In 2017–18, older age was associated with higher rates of PPH for chronic conditions (Figure 37.2). Women had higher rates than men of PPH for chronic conditions in the younger years 15–19 to 50–54; men had higher rates than women in older age groups.

Population groups

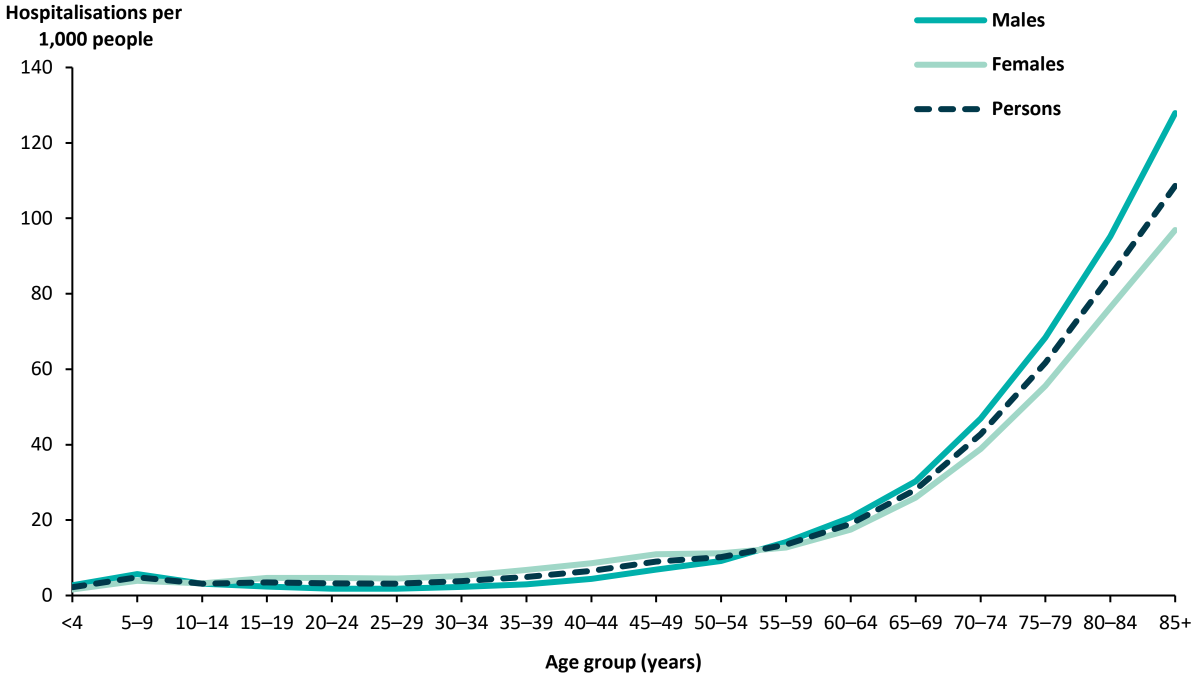
- In 2017–18, the age-standardised rate of PPH for chronic conditions:
    - increased with increasing overall level of disadvantage—from 8.7 per 1,000 people living in the highest socioeconomic areas to 16.6 among people living in the lowest socioeconomic areas
    - increased with increasing remoteness, from 11.6 (per 1,000 people) among those living in Major cities to 27.1 among those living in Very remote areas (Figure 37.4).
- In 2017–18, there were more than 17,500 hospitalisations among Indigenous Australians for the chronic conditions for which hospitalisation is considered potentially preventable (Table 37.3). This is a rate of 23.0 per 1,000 and represented 39% of all PPH among Indigenous Australians in that year and 3.2% of all Indigenous hospital admissions to a public or private hospital in Australia that year (AIHW 2019).
- Overall, the age-standardised rate of PPH for chronic conditions among Indigenous Australians was 38.0 per 1,000 people in 2017–18 (Figure 37.3).
- Over the period from 2012–13 to 2017–18, the age-standardised rate for PPH for chronic conditions among Indigenous Australians increased from 33.7 per 1,000 to 38.0 per 1,000 (Figure 37.3). This rate was over 3 times that for Other Australians (Figure 37.3).

Figure 37.1: Rate of potentially preventable hospitalisations for selected chronic conditions, by sex and year



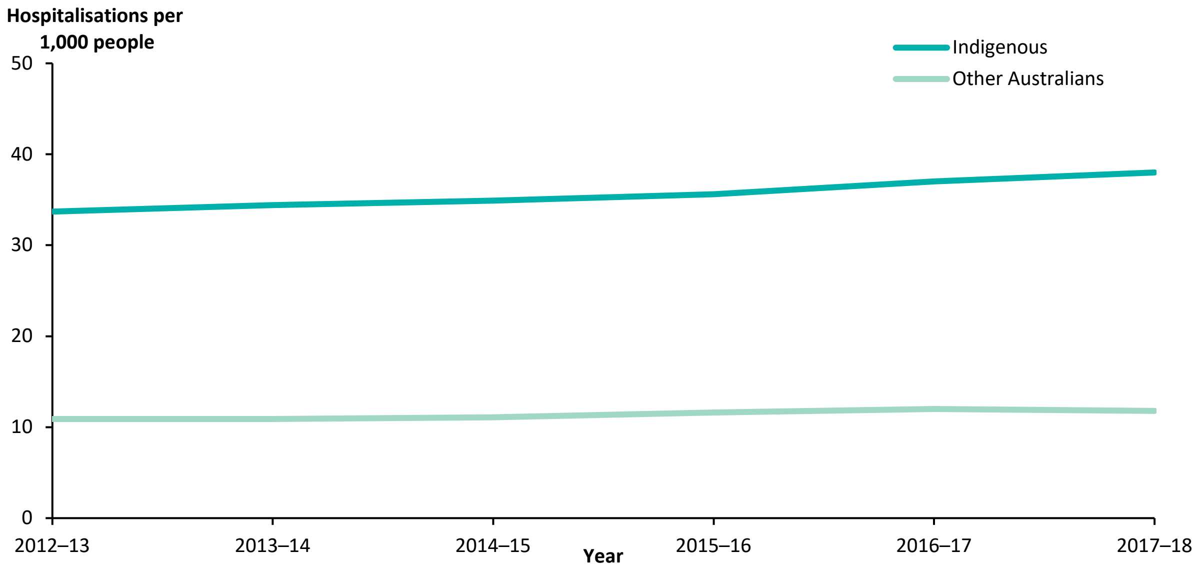
Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 37.1.
Source: AIHW 2020a.

Figure 37.2: Rate of potentially preventable hospitalisations for selected chronic conditions, by age and sex, 2017–18



Note: Data and additional notes for this figure are shown in Table 37.2.
Source: AIHW 2020a.

Figure 37.3: Rate of potentially preventable hospitalisations for selected chronic conditions, by Indigenous status and year

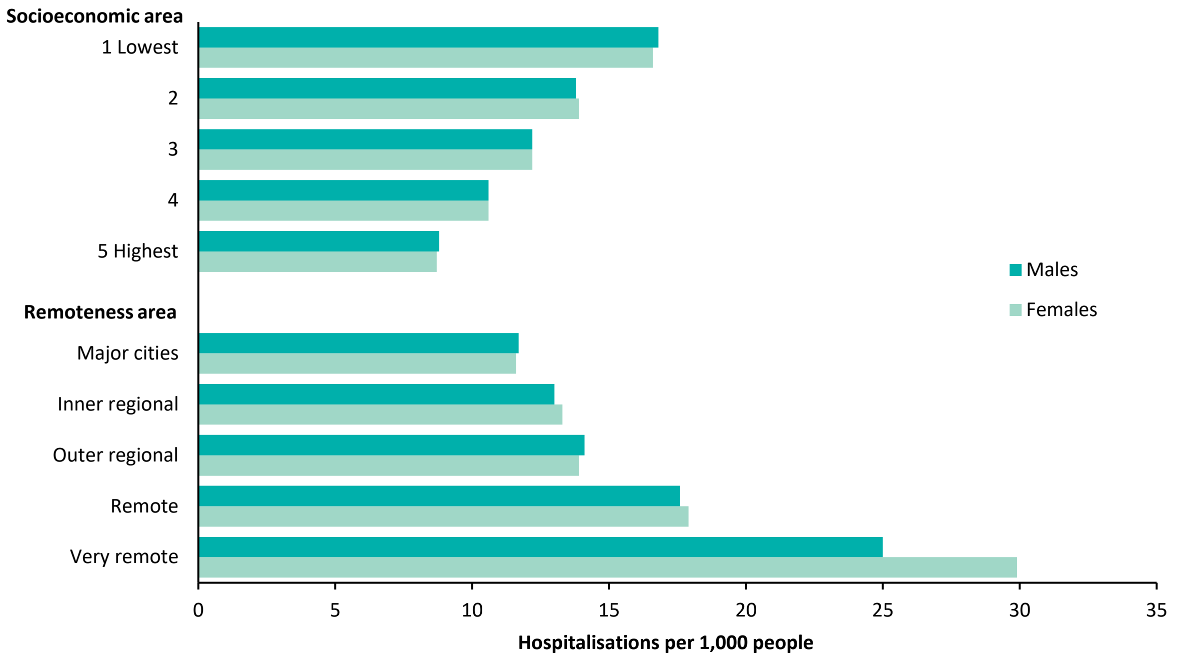


Notes

1. Age-standardised to the 2001 Australian standard population.
2. 'Other Australians' includes hospitalisations of non-Indigenous Australians and those for whom Indigenous status was not stated.
3. Data and additional notes for this figure are shown in Table 37.3.

Source: AIHW 2020a.

Figure 37.4: Rate of potentially preventable hospitalisations for selected chronic conditions, by selected population characteristics and sex, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 37.4.
Source: AIHW 2020a.

Considerations

This indicator focusses only on the chronic condition component of PPH. Caution is required in comparing data across reporting periods due to changes in ICD-10-AM coding standards. Separations do not include episodes of non-admitted care provided in outpatient clinics or emergency departments. A change to the coding standard was made from 1 July 2015 to record the underlying condition requiring rehabilitation as the principal diagnosis, rather than the code Z50. Care involving the use of rehabilitation procedures. Between 2015–16 and 2017–18, rehabilitation care accounted for 2.9% to 3.1% of chronic condition PPH admissions (AIHW 2020a).

Having a 'potentially preventable hospitalisation' does not mean that the patient did not require hospitalisation at the time, but rather the hospitalisation may have been avoided through improved prevention programs; better care in the primary health care or community setting; and/or better coordination of care between health services. Some PPH may not be avoidable, such as those for patients with complex illnesses (AIHW 2020b).

Data sources

AIHW National Hospital Morbidity Database. For further details, refer to Appendix B.

References

AIHW 2019. Potentially preventable hospitalisations in Australia by age groups and small geographic areas, 2017–18. Cat. no. HPF 36. Canberra: AIHW. https://www.aihw.gov.au/reports/primary-health-care/potentially-preventable-hospitalisations/contents/about

AIHW 2020a. Disparities in potentially preventable hospitalisations across Australia, 2012–13 to 2017–18. Cat. no. HPF 50. Canberra: AIHW. Viewed 17 March 2020, https://www.aihw.gov.au/reports/primary-health-care/disparities-in-potentially-preventable-hospitalisations-australia/data.

AIHW 2020b. Australia's health 2020: data insights. Australia's health series no. 17. Cat. no. AUS 231. Canberra: AIHW.

AIHW 2022. National Strategic Framework for Chronic Conditions: reporting framework. Cat. no. PHE 298. Canberra: AIHW.

Productivity Commission 2013. National Healthcare Agreement - National Agreement Performance Information 2012-13 (online). Viewed 15 October 2021, https://www.pc.gov.au/research/supporting/national-agreements/healthcare/healthcare-agreement-2012-13.pdf.

Supplementary tables

Table 37.1: Number and rate of potentially preventable hospitalisations for selected chronic conditions, by sex and year

	Males		Females		Persons	
Year	Number	Hospitalisations per 1,000 people	Number	Hospitalisations per 1,000 people	Number	Hospitalisations per 1,000 people
2012–13	141,375	12.3	138,627	10.5	280,002	11.3
2013–14	143,013	12.1	142,848	10.6	285,863	11.2
2014–15	147,042	12.1	151,455	11.1	298,498	11.5
2015–16	157,358	12.6	163,980	11.8	321,340	12.1
2016–17	164,332	12.9	175,275	12.3	339,607	12.5
2017–18	164,274	12.5	179,163	12.4	343,439[(a)]	12.3

(a) These PPH for chronic conditions make up 46% of the total PPH (747,742) in 2017–18.

Notes

1. Age-standardised to the 2001 Australian standard population.

2. The selected chronic conditions are: angina, asthma, bronchiectasis, chronic obstructive pulmonary disease (COPD), congestive cardiac failure, diabetes complications, hypertension, iron deficiency anaemia, nutritional deficiencies and rheumatic heart diseases (refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).

Source: AIHW 2020.

Table 37.2: Number and rate of potentially preventable hospitalisations for selected chronic conditions, by age and sex, 2017–18

	Males		Females		Persons	
Age group (years)	Number	Hospitalisations per 1,000 people	Number	Hospitalisations per 1,000 people	Number	Hospitalisations per 1,000 people
<4	2,170	2.7	1,241	1.6	3,411	2.2
5–9	4,634	5.7	2,984	3.9	7,618	4.8
10–14	2,342	3.1	2,278	3.2	4,620	3.1
15–19	1,824	2.4	3,371	4.7	5,196	3.5
20–24	1,600	1.8	3,928	4.7	5,528	3.2
25–29	1,668	1.8	4,131	4.5	5,800	3.1
30–34	2,069	2.3	4,804	5.2	6,873	3.8
35–39	2,485	3.0	5,631	6.8	8,116	4.9
40–44	3,516	4.4	6,948	8.6	10,464	6.5
45–49	5,569	6.9	9,204	10.9	14,773	9.0
50–54	6,932	9.2	8,782	11.2	15,714	10.2
55–59	10,488	14.2	9,776	12.7	20,264	13.5
60–64	13,425	20.7	11,938	17.5	25,363	19.0
65–69	17,737	30.3	15,778	26.0	33,515	28.1
70–74	22,060	46.9	18,998	38.9	41,058	42.8
75–79	22,002	68.4	19,755	55.6	41,757	61.7
80–84	19,968	95.2	19,803	76.4	39,771	84.8
85+	23,785	127.9	29,812	96.9	53,597	108.6
Total	**164,274**	**13.5**	**179,163**	**14.5**	**343,439**	**14.0**

(continued)

Table 37.2 (continued): Number and rate of potentially preventable hospitalisations for selected chronic conditions, by age and sex, 2017–18

Note: The selected chronic conditions are: angina, asthma, bronchiectasis, chronic obstructive pulmonary disease (COPD), congestive cardiac failure, diabetes complications, hypertension, iron deficiency anaemia, nutritional deficiencies and rheumatic heart diseases (refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).
Source: AIHW 2020.

Table 37.3: Number and rate of potentially preventable hospitalisations for selected chronic conditions, by Indigenous status and year

	Indigenous		Other Australians	
Year	Number	Hospitalisations per 1,000 people	Number	Hospitalisations per 1,000 people
2012–13	13,001	33.7	267,001	10.9
2013–14	13,546	34.4	272,317	10.9
2014–15	14,328	34.9	284,170	11.1
2015–16	15,344	35.6	305,996	11.6
2016–17	16,507	37.0	323,100	12.0
2017–18	17,532[(a)]	38.0	325,907	11.8

(a) These PPH for chronic conditions make up 39% of the total PPH (44,932) among Indigenous Australians in 2017–18.

Notes
1. Age-standardised to the 2001 Australian standard population.
2. 'Other Australians' includes hospitalisations of non-Indigenous Australians and those for whom Indigenous status was not stated.
3. The selected chronic conditions are: angina, asthma, bronchiectasis, chronic obstructive pulmonary disease (COPD), congestive cardiac failure, diabetes complications, hypertension, iron deficiency anaemia, nutritional deficiencies and rheumatic heart diseases (refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).
Source: AIHW 2020.

Table 37.4: Number and rate of potentially preventable hospitalisations for selected chronic conditions, by selected population characteristics and sex, 2017–18

Population characteristic	Males		Females		Persons	
Socioeconomic area	**Number**	**Hospitalisations per 1,000 people**	**Number**	**Hospitalisations per 1,000 people**	**Number**	**Hospitalisations per 1,000 people**
1 Lowest	42,114	16.8	44,010	16.6	86,124	16.6
2	38,537	13.8	41,420	13.9	79,957	13.7
3	33,645	12.2	36,710	12.2	70,355	12.1
4	26,174	10.6	30,069	10.6	56,244	10.5
5 Highest	22,827	8.8	25,967	8.7	48,795	8.7
Remoteness area						
Major cities	104,116	11.7	117,907	11.6	222,025	11.6
Inner regional	36,480	13.0	38,132	13.3	74,613	13.1
Outer regional	17,816	14.1	17,130	13.9	34,946	13.9
Remote	2,666	17.6	2,573	17.9	5,239	17.6
Very remote	2,243	25.0	2,456	29.9	4,699	27.1

Notes
1. Age-standardised to the 2001 Australian standard population.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.
4. The selected chronic conditions are: angina, asthma, bronchiectasis, chronic obstructive pulmonary disease (COPD), congestive cardiac failure, diabetes complications, hypertension, iron deficiency anaemia, nutritional deficiencies and rheumatic heart diseases (refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).
Source: AIHW 2020.

Indicator 38: Radiotherapy waiting times

In 2018–19, of non-emergency patients:

(a) 50% received radiotherapy treatment within 10 days of being assessed as ready for care

(b) 90% received radiotherapy treatment within 27 days of being assessed as ready for care.

Why is this important?

Cancer is a major cause of premature death and the second most common cause of death overall in Australia. Without timely intervention, cancers may progress and patients with early-stage disease may face a reduced opportunity for effective intervention. Radiotherapy is a well-established, effective and safe way to treat cancer and a small number of other conditions. It uses radiation directed at a localised area to kill or damage cancer cells. Radiotherapy (of which there are several types) may be used on its own or in conjunction with other treatments such as surgery or chemotherapy. About half of all patients with cancer would benefit from radiotherapy (RANZCR 2015).

What does this indicator measure?

The length of time patients wait for radiotherapy treatment once they are ready-for-care (i.e. waiting times), for patients whose care is not an emergency as recorded by the clinical emergency indicator.

Waiting times for all patients are presented as the number of days (rounded to the nearest number of whole days) a patient waited at the:

(a) 50th (median) percentile

(b) 90th percentile.

The 50th percentile (the median waiting time, or the middle value in a group of data arranged from lowest to highest for the number of days waited) represents the number of days within which 50% of patients began radiotherapy treatment. The 90th percentile represents the number of days within which 90% of patients began treatment (AIHW 2020).

What do the data show?

(a) 50th (median) percentile

In 2018–19:

- 50% of non-emergency courses started treatment within 10 days of being assessed as ready for care. This has remained relatively stable over the last 5 years ranging from 12 to 9 days (Figure 38.1).

- at the 50th percentile, waiting times for people ranged from 5 to 11 days across age groups (Figure 38.2).
- at the 50th percentile, there were little differences between males and females in waiting times, with the exception of the younger age groups who receive fewer courses making the results volatile (Figure 38.2).

Population groups

In 2018–19:

- 50% of non-emergency courses started treatment within 12 days for people living in the lowest socioeconomic areas compared with 8 days for those living in the highest socioeconomic areas (Figure 38.4).
- at the 50th percentile, waiting times were similar across remoteness categories, ranging from 9 to 11 days (Figure 38.4).

Waiting time data have not been presented here by Indigenous status due to the relatively high number of cases where Indigenous status was not stated (34% in 2018–19) (AIHW 2020).

(b) 90th percentile

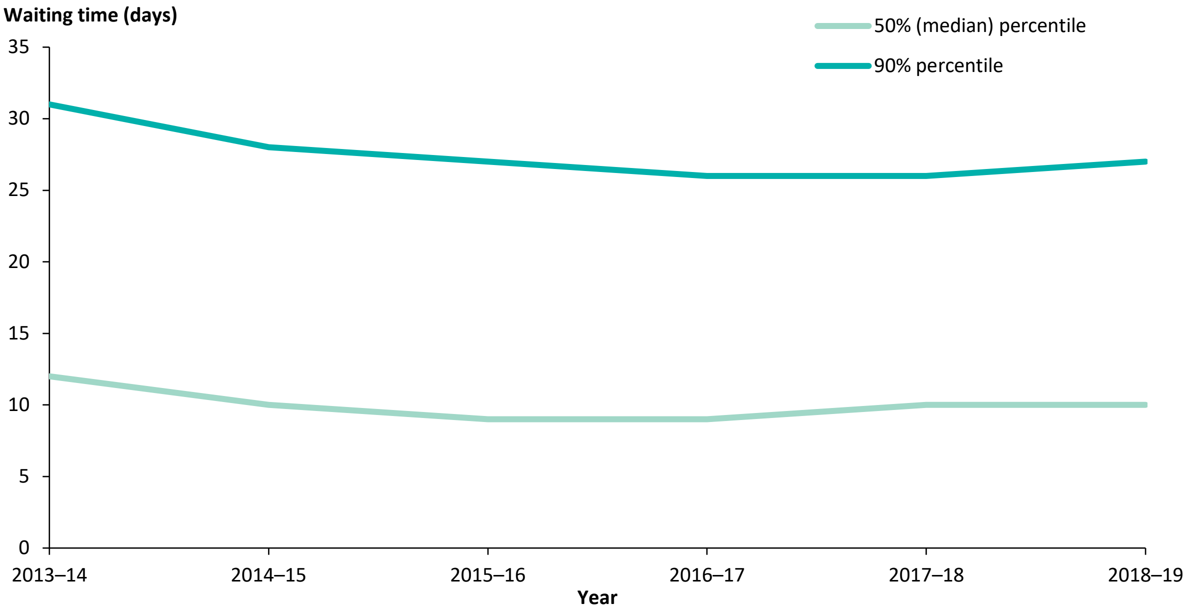
In 2018–19:

- 90% of non-emergency courses were started within 27 days of being assessed as ready for care. This has been relatively stable over the last few years (ranging from 31 to 26 days) (Figure 38.1).
- at the 90th percentile, waiting times ranged from 19 to 21 days in those aged under 30 years and 24 to 28 days in those aged 30 and above (Figure 38.3).
- at the 90th percentile, there was generally little difference between males and females in waiting times, with the exception of the younger age groups who receive fewer courses making the results volatile (Figure 38.3).

Population groups

- In 2018–19, at the 90th percentile, waiting times were similar across both socioeconomic areas and remoteness categories (Figure 38.5).
- Waiting time data have not been presented here by Indigenous status due to the relatively high number of cases where Indigenous status was not stated (34% in 2018–19) (AIHW 2020).

Figure 38.1: Radiotherapy waiting times, non-emergency courses, 50th and 90th percentile who started treatment within (days), by year

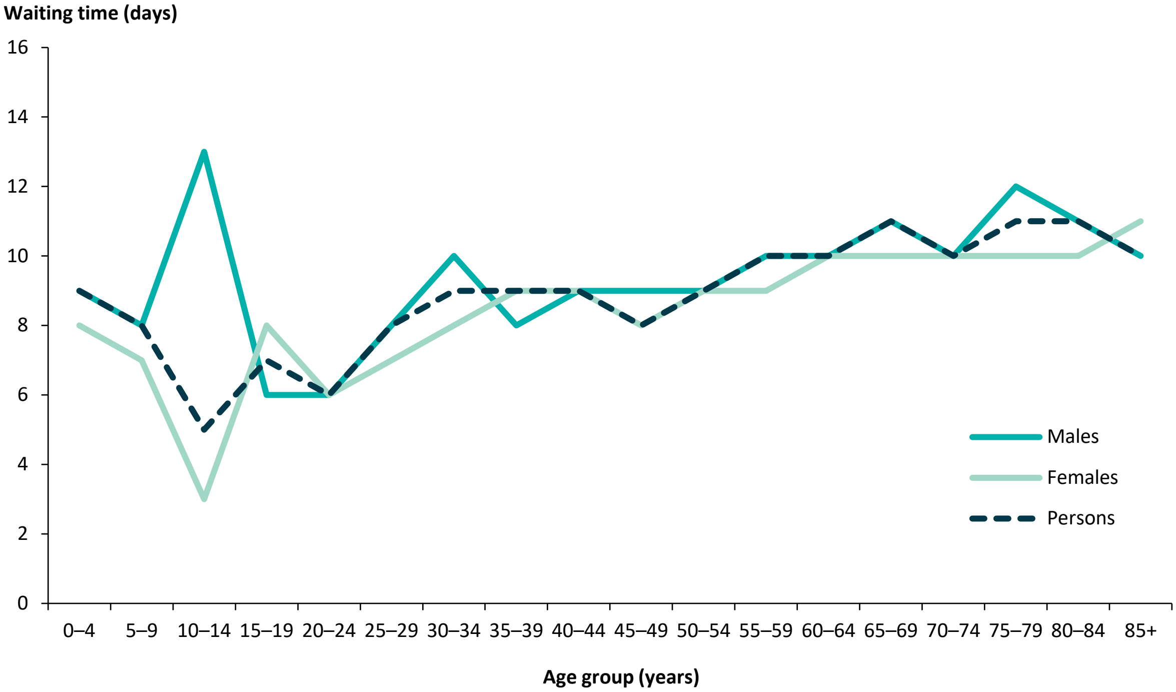


Notes

1. All negative or missing waiting times have been excluded from all waiting times calculations.
2. Data and additional notes for this figure are shown in Table 38.1.

Source: AIHW 2020.

Figure 38.2: Radiotherapy waiting times, non-emergency courses, 50th percentile who started treatment within (days), by age and sex, 2018–19

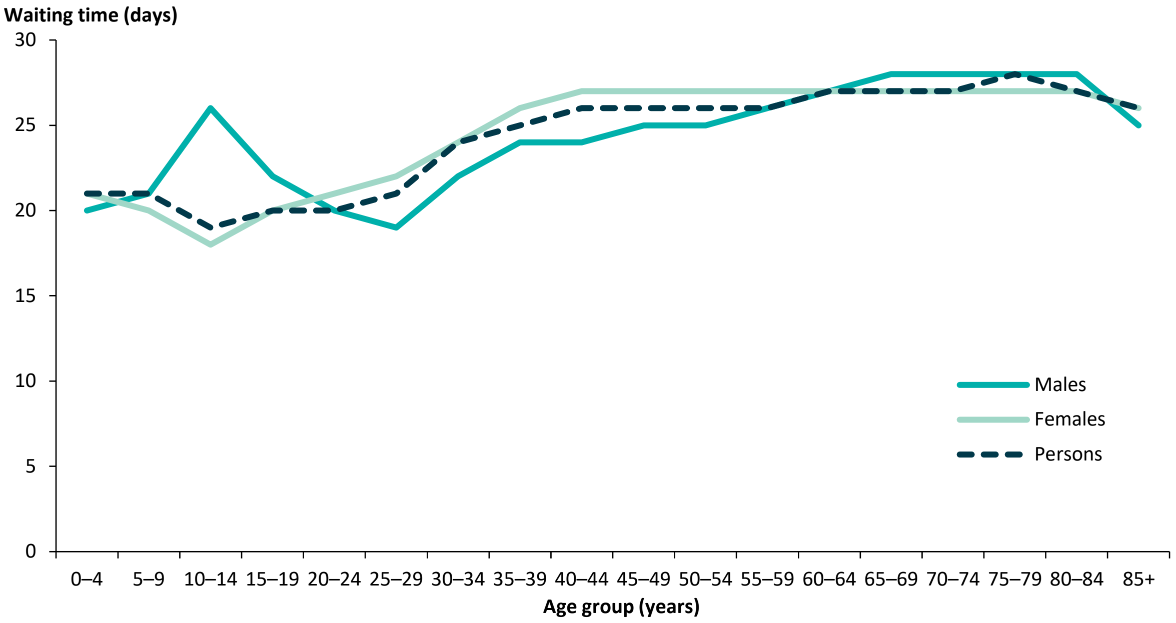


Notes

1. All negative or missing waiting times have been excluded from all waiting times calculations.
2. Data and additional notes for this figure are shown in Table 38.2.

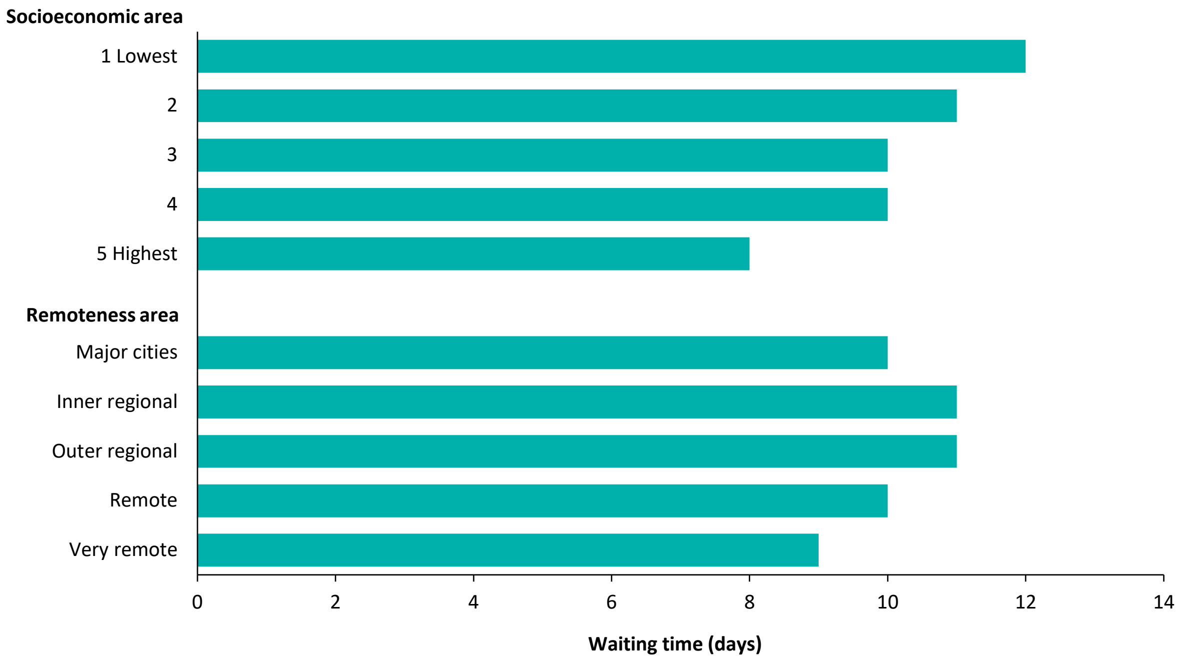
Source: AIHW 2020.

Figure 38.3: Radiotherapy waiting times, non-emergency courses, 90th percentile who started treatment within (days), by age and sex, 2018–19



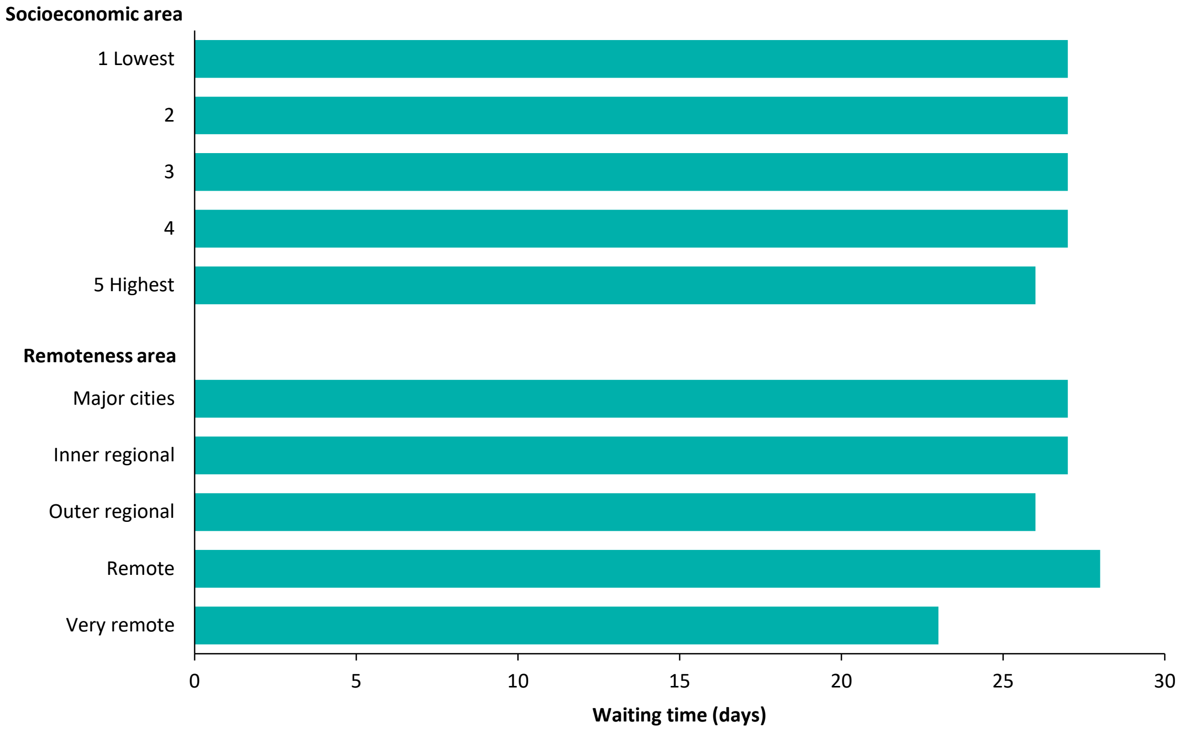
Notes
1. All negative or missing waiting times have been excluded from all waiting times calculations.
2. Data and additional notes for this figure are shown in Table 38.3.
Source: AIHW 2020.

Figure 38.4: Radiotherapy waiting times, non-emergency courses, 50th percentile who started treatment within (days), by selected population characteristics, 2018–19



Notes
1. All negative or missing waiting times have been excluded from all waiting times calculations.
2. Data and additional notes for this figure are shown in Table 38.4.
Source: AIHW 2020.

Figure 38.5: Radiotherapy waiting times, non-emergency courses, 90th percentile who started treatment within (days), by selected population characteristics, 2018–19



Notes
1. All negative or missing waiting times have been excluded from all waiting times calculations.
2. Data and additional notes for this figure are shown in Table 38.4.
Source: AIHW 2020.

Considerations

Agreement on appropriate benchmark waiting periods for non-emergency patients (for example, those based on relevant clinical characteristics) would allow better reporting of the appropriateness of waiting times for radiotherapy (AIHW 2018).

Comparison of waiting times between 2013–14 or 2014–15 with subsequent years should be treated with caution due to differences in participation rates by private radiotherapy providers which generally report shorter waiting times (AIHW 2020).

Waiting times are suppressed for all calculations where the number of contributing courses of radiotherapy was less than 20—that is, for the 50th and 90th percentile, and the proportion of emergency patients' calculations. This is because the waiting times reported are likely to be highly volatile when the number of courses of radiotherapy is small (AIHW 2020).

This indicator does not include emergency courses. In 2018–19 this was 1.5% of courses. These courses are typically delivered on the same or next day.

Related indicators include: 'Indicator 23' (Incidence of selected cancers), 'Indicators 28–30' (Breast, bowel and cervical screening rates) and 'Indicator 43' (5-year relative survival for selected cancers).

Data sources

AIHW Radiotherapy Waiting Times National Minimum Data Set. For further details, refer to Appendix B.

References

AIHW 2018. Australia's health 2018. Cat. no. AUS 221. Canberra: AIHW.

AIHW 2020. Radiotherapy in Australia 2018–19. Cat. no. HSE 248. Canberra: AIHW.

RANZCR (The Royal Australian and New Zealand College of Radiologists) 2015. What is radiation therapy? Sydney: RANZCR. Viewed 7 November 2019, https://www.targetingcancer.com.au/what-is-radiation-therapy/.

Supplementary tables

Table 38.1: Radiotherapy waiting times, non-emergency courses, 50th and 90th percentile who started treatment within (days), by year

Year	50% (median) percentile	90% percentile
2013–14	12	31
2014–15	10	28
2015–16	9	27
2016–17	9	26
2017–18	10	26
2018–19	10	27

Note: All negative or missing waiting times have been excluded from all waiting times calculations.
Source: AIHW 2020.

Table 38.2: Radiotherapy waiting times, non-emergency courses, 50th percentile who started treatment within (days), by age and sex, 2018–19

Age group (years)	Males	Females	Persons
0–4	9	8	9
5–9	8	7	8
10–14	13	3	5
15–19	6	8	7
20–24	6	6	6
25–29	8	7	8
30–34	10	8	9
35–39	8	9	9
40–44	9	9	9
45–49	9	8	8
50–54	9	9	9
55–59	10	9	10
60–64	10	10	10
65–69	11	10	11
70–74	10	10	10
75–79	12	10	11
80–84	11	10	11
85+	10	11	10

Note: All negative or missing waiting times have been excluded from all waiting times calculations.
Source: AIHW 2020.

Table 38.3: Radiotherapy waiting times, non-emergency courses, 90th percentile who started treatment within (days), by age and sex, 2018–19

Age group (years)	Males	Females	Persons
0–4	20	21	21
5–9	21	20	21
10–14	26	18	19
15–19	22	20	20
20–24	20	21	20
25–29	19	22	21
30–34	22	24	24
35–39	24	26	25
40–44	24	27	26
45–49	25	27	26
50–54	25	27	26
55–59	26	27	26
60–64	27	27	27
65–69	28	27	27
70–74	28	27	27
75–79	28	27	28
80–84	28	27	27
85+	25	26	26

Note: All negative or missing waiting times have been excluded from all waiting times calculations.
Source: AIHW 2020.

Table 38.4: Radiotherapy waiting times, non-emergency courses, 50th and 90th percentile who started treatment within (days), by selected population characteristics, 2018–19

Population characteristic		
Socioeconomic area	**50% (median) percentile**	**90% percentile**
1 Lowest	12	27
2	11	27
3	10	27
4	10	27
5 Highest	8	26
Remoteness area		
Major cities	10	27
Inner regional	11	27
Outer regional	11	26
Remote	10	28
Very remote	9	23

Notes
1. All negative or missing waiting times have been excluded from all waiting times calculations.
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.
Source: AIHW 2020.

Indicator 39: Post–discharge community mental health care

75% of separations from state/territory public acute admitted patient mental health care service units had a community mental health service contact within 7 days in 2017–18.

Why is this important?

A responsive community support system for people who have experienced an acute psychiatric episode requiring hospitalisation is essential to maintain clinical and functional stability and to minimise the need for hospital readmission (NMHC 2018).

Consumers leaving hospital after a psychiatric admission with a formal discharge plan, involving linkages with community services and supports, are less likely to need early readmission (NMHC 2018). Research indicates that consumers have increased vulnerability immediately following discharge, including higher risk for suicide (NMHC 2018).

What does this indicator measure?

The proportion of separations from state/territory public acute admitted patient mental health care service units for which a community mental health service contact, in which the consumer participated, was recorded in the seven days following that separation.

What do the data show?

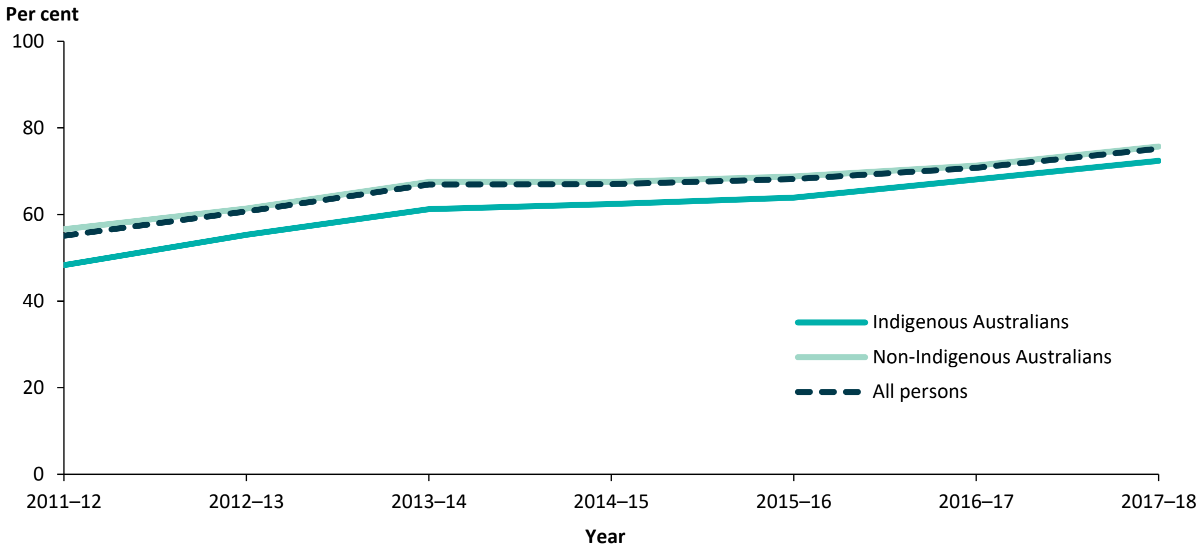
- In 2017–18, the percentage of separations from state/territory public acute admitted patient mental health care service units for which a community mental health service contact occurred within 7 days was:
    - higher for females (77%) than males (73%)
    - lowest for those aged under 15 (73%) and highest for those aged 55–64 (79%) (AIHW 2020).
- The percentage of separations from state/territory public acute admitted patient mental health care service units for which a community mental health service contact occurred within 7 days increased from 55% in 2011–12 to 75% in 2017–18 (Figure 39.1).

Population groups

In 2017–18, the percentage of separations from state/territory public acute admitted patient mental health care service units, for which a community mental health service contact occurred within 7 days:

- was similar across socioeconomic areas (Figure 39.2)
- ranged from 75% for those living in *Major cities* to 78% for those living in *Outer regional* and *Remote and very remote* areas (Figure 39.2). People living in *Remote and very remote* areas previously had lower rates of follow-up (for example, 39% in 2011–12) (AIHW 2020) but are now similar to people living in other regions
- was 72% for Indigenous Australians, an increase from 48% in 2011–12; over this time the disparity between the rate of community mental health service follow-up for Indigenous Australians compared to non-Indigenous Australians has decreased (Figure 39.1).

Figure 39.1: Post-discharge community mental health care, by Indigenous status and year

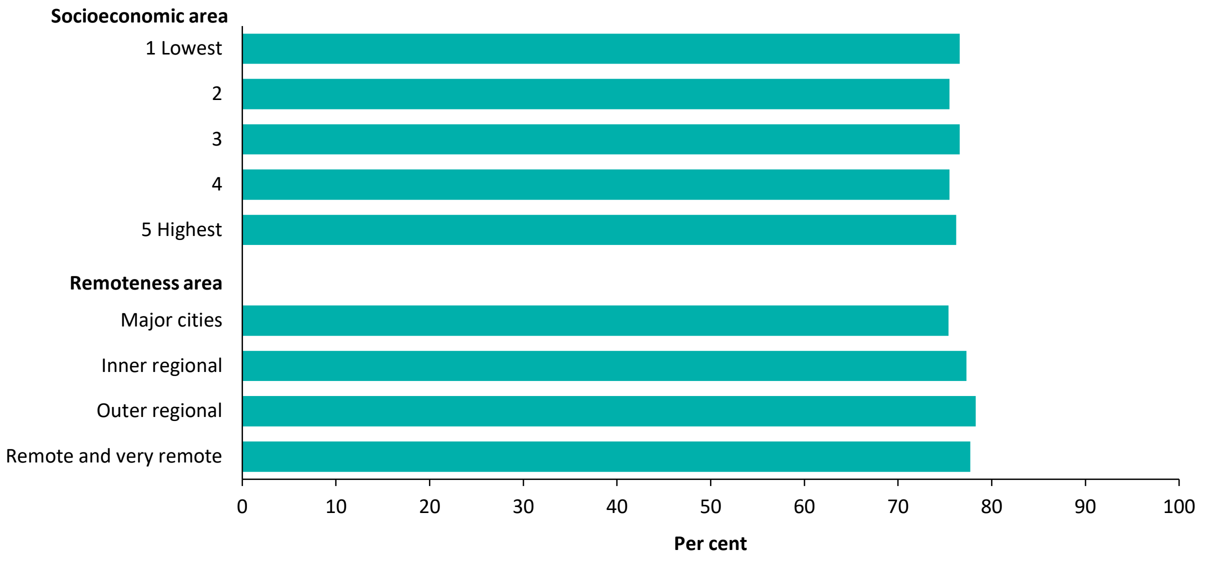


Notes

1. National totals are affected by data collection issues in States and territories, including: industrial action in Tasmania in 2011–12 and 2012–13 which affected the quality and quantity of data; and Victorian data are unavailable in 2011–12 and 2012-13 due to service level collection gaps resulting from protected industrial action.
2. The Indigenous status rates should be interpreted with caution due to the varying and, in some instances, unknown quality of Indigenous identification across jurisdictions. Excludes people for whom Indigenous status was missing or not reported.
3. The proportion of separations from state/territory public acute admitted patient mental health care service units for which a community mental health service contact, in which the consumer participated, was recorded in the seven days following that separation.
4. Data and additional notes for this figure are shown in Table 39.1.

Source: AIHW 2020.

Figure 39.2: Post-discharge community mental health care, by selected population characteristics, 2017–18



Notes
1. National totals are affected by data collection issues in States and territories; see AIHW 2020 for details.
2. Remoteness area is based on a person's usual residence, not the location of the service provider, except for the NT with the majority of the data based on the location of the service.
3. The proportion of separations from state/territory public acute admitted patient mental health care service units for which a community mental health service contact, in which the consumer participated, was recorded in the seven days following that separation.
4. Data and additional notes for this figure are shown in Table 39.2.
Source: AIHW 2020.

Considerations

For this indicator, only direct contact with the consumer constitutes a 'post-discharge follow-up'. A growing body of evidence suggests that for some cohorts (e.g. children and adolescents), follow-up with carers represents best practice (accordingly a new measure on contact with consumers and/or carers was developed was added to the *Key Performance Indicators for Australian Public Mental Health Services* (AIHW 2020). This measure does not consider variations in intensity or frequency of service contacts following separation from hospital (NMHC 2018); nor follow-up outside the public system (for example, by a General Practitioner) or admissions to private hospitals.

Data sources

State and Territory admitted health care & mental health care data.

For further details, refer to Appendix B.

References

AIHW 2020. Mental health services in Australia: Key Performance Indicators for Australian Public Mental Health Services tables (see KPI 12.2). Canberra: AIHW. Viewed 5 August 2020, https://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/report-contents/mental-health-indicators/key-performance-indicators-for-australian-public-mental-health-services.

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Supplementary tables

Table 39.1: Post-discharge community mental health care (%), by Indigenous status and year

Year	Indigenous Australians	Non-Indigenous Australians	All persons
2011–12	48.3	56.6	55.1
2012–13	55.3	61.4	60.7
2013–14	61.2	67.5	66.9
2014–15	62.4	67.5	67.0
2015–16	63.9	68.8	68.2
2016–17	68.1	71.3	70.8
2017–18	72.4	75.7	75.2

Notes

1. National totals are affected by data collection issues in States and territories, including: industrial action in Tasmania in 2011–12 and 2012–13 which affected the quality and quantity of data; and Victorian data are unavailable in 2011–12 and 2012-13 due to service level collection gaps resulting from protected industrial action.
2. The Indigenous rates should be interpreted with caution due to the varying and, in some instances, unknown quality of Indigenous identification across jurisdictions. Excludes people for whom Indigenous status was missing or not reported.
3. The proportion of separations from state/territory public acute admitted patient mental health care service units for which a community mental health service contact, in which the consumer participated, was recorded in the seven days following that separation.

Source: AIHW 2020.

Table 39.2: Post-discharge community mental health care (%), by selected population characteristics, 2017–18

Population characteristic	
Sex	**Per cent**
Males	73.1
Females	77.3
Socioeconomic area	
1 Lowest	76.6
2	75.5
3	76.6
4	75.5
5 Highest	76.2
Remoteness area	
Major cities	75.4
Inner regional	77.3
Outer regional	78.3
Remote and very remote	77.7

(continued)

Table 39.2 (continued): Post-discharge community mental health care (%), by selected population characteristics, 2017–18

Notes

1. National totals are affected by data collection issues in States and territories.
2. The proportion of separations from state/territory public acute admitted patient mental health care service units for which a community mental health service contact, in which the consumer participated, was recorded in the seven days following that separation.
3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
4. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. Remoteness area is based on a person’s usual residence, not the location of the service provider, except for the NT with the majority of the data based on the location of the service.

Source: AIHW 2020.

Indicator 40: Multimorbidities

20% of people had 2 or more selected chronic conditions in 2017–18.

Why is this important?

Many people with chronic conditions do not have a single, predominant condition, but rather they experience multimorbidity—the presence of 2 or more chronic conditions in a person at the same time. People living with multimorbidity report poorer overall quality of life (AIHW 2020).

Multimorbidity can make treatment more complex (Harrison & Siriwardena 2018) and requires ongoing management and coordination of specialised care across multiple parts of the health system (Department of Health 2020a). This places a heavy demand on Australia's health care system.

Understanding the prevalence of multimorbidity across population groups can provide insight into groups most at risk of multimorbidity and in need of well-coordinated care. A key focus of the Australian health system, therefore, is the prevention and better management of chronic conditions to improve health outcomes (Department of Health 2020b).

What does this indicator measure?

The proportion of the population with multimorbidities.

For the purpose of this indicator, multimorbidity refers to the occurrence of 2 or more of the following chronic conditions in a person at the same time:

- Arthritis
- Asthma
- Back problems (dorsopathies)
- Cancer (malignant neoplasms)
- Selected cardiovascular diseases (heart, stroke and vascular disease)
- Chronic obstructive pulmonary disease (COPD)
- Diabetes mellitus
- Chronic kidney disease
- Mental and behavioural conditions
- Osteoporosis.

These conditions were selected because they are common, pose significant health problems, and have been the focus of ongoing national surveillance efforts (ABS 2018). In many instances, action can be taken to prevent these conditions, making them an important focus for preventative health initiatives (Department of Health 2020b).

What do the data show?

In 2017–18:

- almost half of Australians (47%, or an estimated 11 million people) had at least 1 of 10 selected chronic conditions (ABS 2018); and one in five people (20%, an estimated 4.9 million people) had 2 or more of these selected chronic conditions (Table 40.1).
- after adjusting for age, the proportion of people with 2 or more selected chronic conditions was similar to 2014–15 (19% and 18%, respectively) (ABS 2019a, ABS 2016).
- females were more likely to have 2 or more of the selected chronic conditions compared with males (23% compared with 18%) (Table 40.1); while relatively small, this difference remained after adjusting for differences in the age structure between females and males (21% compared with 17%) (Table 40.1). This difference was found across those aged 15–44, 45–64 and 65 and over (Figure 40.1).
- older people were more likely to have 2 or more chronic conditions: 51% of people aged 65 and over were estimated to have 2 or more chronic conditions, compared with 30% of people aged 45–64 and 12% of people aged 15–44 (Figure 40.1).

Population groups

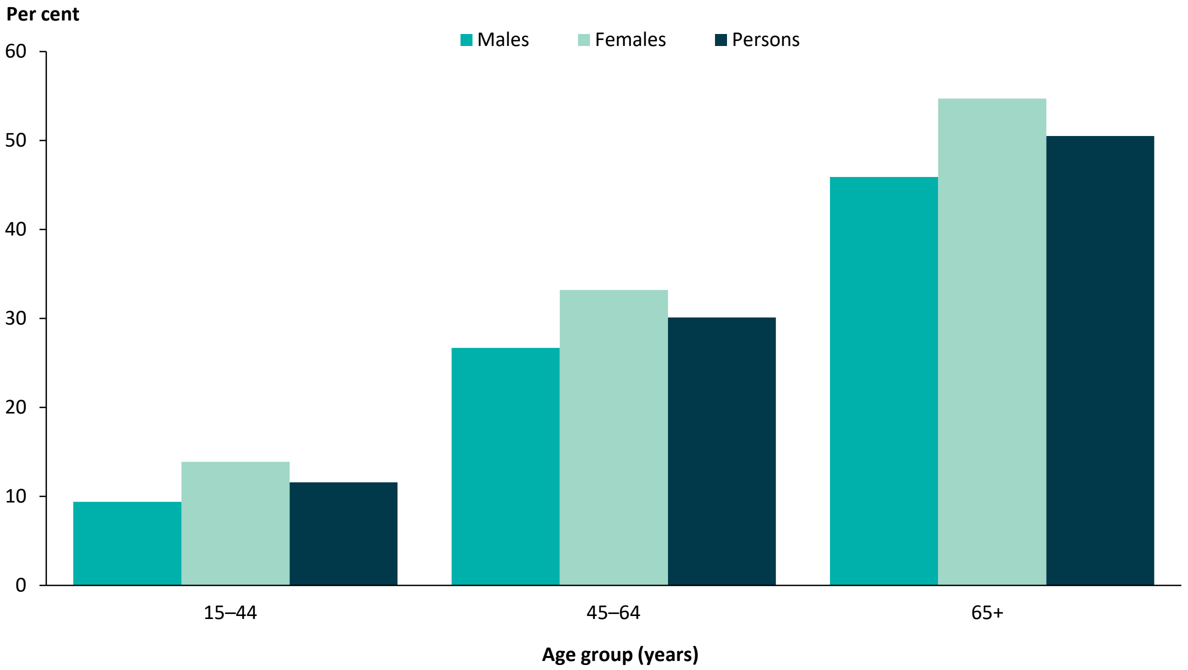
In 2017–18, after adjusting for age:

- people living in the lowest socioeconomic areas were more likely to have 2 or more selected chronic conditions than those living in the highest socioeconomic areas (24% compared with 14%) (Figure 40.2)
- the proportion of people with 2 or more selected chronic conditions was lower for those living in *Major cities* (18%) than those living in other areas (21% for both *Inner regional* areas and *Outer regional and remote* areas (Figure 40.2).

In 2018–19:

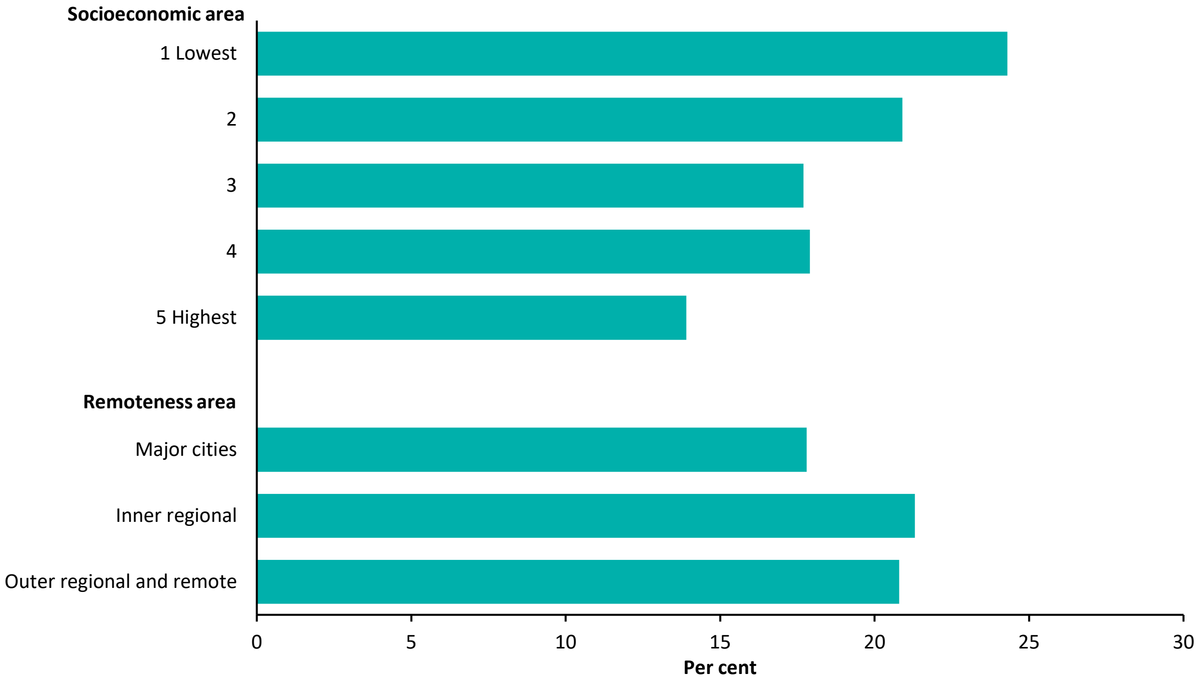
- an estimated 162,600 (20%) Indigenous Australians had 2 or more chronic conditions; Indigenous females (23%) were more likely to have 2 or more chronic conditions than Indigenous males (17%) (ABS 2019b)
- after adjusting for age, Indigenous Australians were 1.5 times as likely have had 2 or more chronic conditions than non-Indigenous Australians in 2017–18 (Table 40.3).

Figure 40.1: Proportion of persons (%) with 2 or more selected chronic conditions, by age and sex, 2017–18



Note: Data and additional notes for this figure are shown in Table 40.1.
Source: ABS 2019a.

Figure 40.2: Proportion of persons (%) with 2 or more selected chronic conditions, by selected population characteristics, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 40.2.
Source: ABS 2019a.

Considerations

The earliest data reported for this indicator are 2014–15 as NHS data for 2014–15 are not comparable to earlier years due to changes in collection methodology—See Using the ABS National Health Surveys data for details.

When considering this indicator over time it is important to note that an increase in the proportion of people with multimorbidity could result from medical advancements or improvements in care that translate into increases in life expectancy for people living with multimorbidity. Further, a reduction in the prevalence of multimorbidity among Australians may take a long time to observe as substantial improvements would need to occur in the prevalence of risk factors and individual chronic conditions before changes in the result for this indicator are observed.

The study of multimorbidity is continually evolving. As such, changes to this indicator due to conceptual and methodological developments may be considered in future updates.

Data sources

ABS National Health Survey 2017–18.

National Aboriginal and Torres Strait Islander Health Survey, 2018–19.

For further details, refer to Appendix B.

References

ABS 2016. National Health Survey, 2014–15. ABS Cat. no. 4364.0.55.001. Customised report. Canberra: ABS.

ABS 2018. National Health Survey: First Results, 2017–18. ABS Cat. no. 4364.0.55.001. Canberra: ABS.

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Department of Health 2020b. National Preventive Health Strategy. Canberra: Department of Health. Viewed 18 November 2020.

Harrison C & Siriwardena AN 2018. Multimorbidity: editorial. Australian Journal of General Practice 47: 1–2.

Supplementary tables

Table 40.1: Proportion of persons (%) with 2 or more selected chronic conditions, by age and sex, 2017–18

	Males		Females		Persons	
Age group (years)	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
0–14	3.3	2.5–4.2	1.2	0.5–2.0	2.4	1.8–2.9
15–44	9.4	8.0–10.9	13.9	12.8–14.9	11.6	10.7–12.5
45–64	26.7	25.0–28.3	33.2	31.0–35.3	30.1	28.8–31.4
65+	45.9	42.8–49.0	54.7	52.5–57.0	50.5	48.6–52.4
Total	**17.7**	**16.8–18.5**	**22.8**	**21.9–23.6**	**20.2**	**19.6–20.9**
Total age-standardised[(a)]	**16.7**	**15.8–17.5**	**20.6**	**19.8–21.5**	**18.7**	**18.1–19.3**

(a) Age-standardised to the 2001 Australian standard population (age groups: 0-17 years, 18-24 years then 5 year age groups up to age group 75+ years) .

Note: The selected chronic conditions are: arthritis, asthma, back problems (dorsopathies), cancer (malignant neoplasms), selected cardiovascular diseases (heart, stroke and vascular disease), chronic obstructive pulmonary disease (COPD), diabetes mellitus, chronic kidney disease, mental and behavioural conditions and osteoporosis (refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).

Source: ABS 2019a.

Table 40.2: Proportion of persons (%) with 2 or more selected chronic conditions, by selected population characteristics, 2017–18

Population characteristic		
Socioeconomic area	**Per cent**	**95% CI**
1 Lowest	24.3	22.9–25.7
2	20.9	19.9–21.9
3	17.7	16.2–19.1
4	17.9	16.5–19.2
5 Highest	13.9	12.7–15.1
Remoteness area		
Major cities	17.8	17.1–18.5
Inner regional	21.3	19.6–23.1
Outer regional and remote	20.8	18.5–23.0

Notes

1. Age-standardised to the 2001 Australian standard population (age groups: 0-17 years, 18-24 years then 5 year age groups up to age group 75+ years).
2. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2016 (SEIFA 2016), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure. *Very remote* areas are not included in remoteness area analysis as they are outside the scope of the NHS.
4. The selected chronic conditions are: arthritis, asthma, back problems (dorsopathies), cancer (malignant neoplasms), selected cardiovascular diseases (heart, stroke and vascular disease), chronic obstructive pulmonary disease (COPD), diabetes mellitus, chronic kidney disease, mental and behavioural conditions and osteoporosis (refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).

Source: ABS 2019a.

Table 40.3: Proportion of persons (%) with 2 or more selected chronic conditions, by Indigenous status and sex, 2017–18 and 2018–19

	Males		Females		Persons	
Indigenous status	**Per cent**	**95% CI**	**Per cent**	**95% CI**	**Per cent**	**95% CI**
Indigenous Australians	23.7	21.8–25.5	31.5	29.7–33.3	27.8	26.5–29.1
Non-Indigenous Australians	16.5	15.6–17.4	20.4	19.5–21.3	18.5	17.8–19.1

Notes

1. Cells in this table containing data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of the component items and totals.
2. Age-standardised to the 2001 Australian standard population (age groups: 0-14, 15-24, 25-34, 35-44, 45-54, 55+ years).
3. Indigenous data is from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey; non-Indigenous data is from the 2017–18 National Health Survey.
4. The selected chronic conditions are: arthritis, asthma, back problems (dorsopathies), cancer (malignant neoplasms), selected cardiovascular diseases (heart, stroke and vascular disease), chronic obstructive pulmonary disease (COPD), diabetes mellitus, chronic kidney disease, mental and behavioural conditions and osteoporosis (refer to the *NSFCC: reporting framework* (AIHW 2022) for more information).

Sources: ABS 2019a; ABS 2019b.

Indicator 41: Prevalence of treated end–stage kidney disease among people with diabetes

Among people with diabetes, an estimated 884 people per 100,000 population had treated end-stage kidney disease in 2018.

Why is this important?

Diabetes has a complex causal relationship with chronic kidney disease (CKD) and shares many risk factors. Both type 2 diabetes and CKD are considered to be largely preventable because many of their risk factors—such as insufficient physical activity ('Indicator 8'), high blood pressure ('Indicator 11'), tobacco smoking ('Indicator 7'), overweight and obesity ('Indicator 14'), and impaired glucose regulation—are modifiable (AIHW 2020a). Risk is also associated with genetic and family-related factors.

Early detection of CKD by simple blood or urine tests enables treatment to prevent or slow down its progression (AIHW 2020a); while early identification and optimal management of people with type 2 diabetes can significantly reduce the risk of kidney failure (RACGP 2020). End-stage kidney disease (ESKD) is the most severe stage of CKD, where kidney function deteriorates so much that treatment by way of dialysis or kidney transplantation is required to survive. It can result in a high health and economic burden for patients, families and communities (AIHW 2014).

What does this indicator measure?

Proportion of people with treated end-stage kidney disease among people with self-reported diabetes.

What do the data show?

In 2018:

- an estimated 10,400 people with diabetes had treated end-stage kidney disease—884 per 100,000 population (Table 41.1).
- after adjusting for age, the estimated prevalence of treated end-stage kidney disease among people with diabetes increased from 623 per 100,000 population in 2008 to 773 per 100,000 population in 2018 (Figure 41.1).
- males had a higher age-standardised prevalence rate than females (804 and 733 per 100,000 population, respectively) (Figure 41.1); and by age, the rate was highest among those aged 45–54 (1,167 per 100,000 population) (Figure 41.2).

Population groups

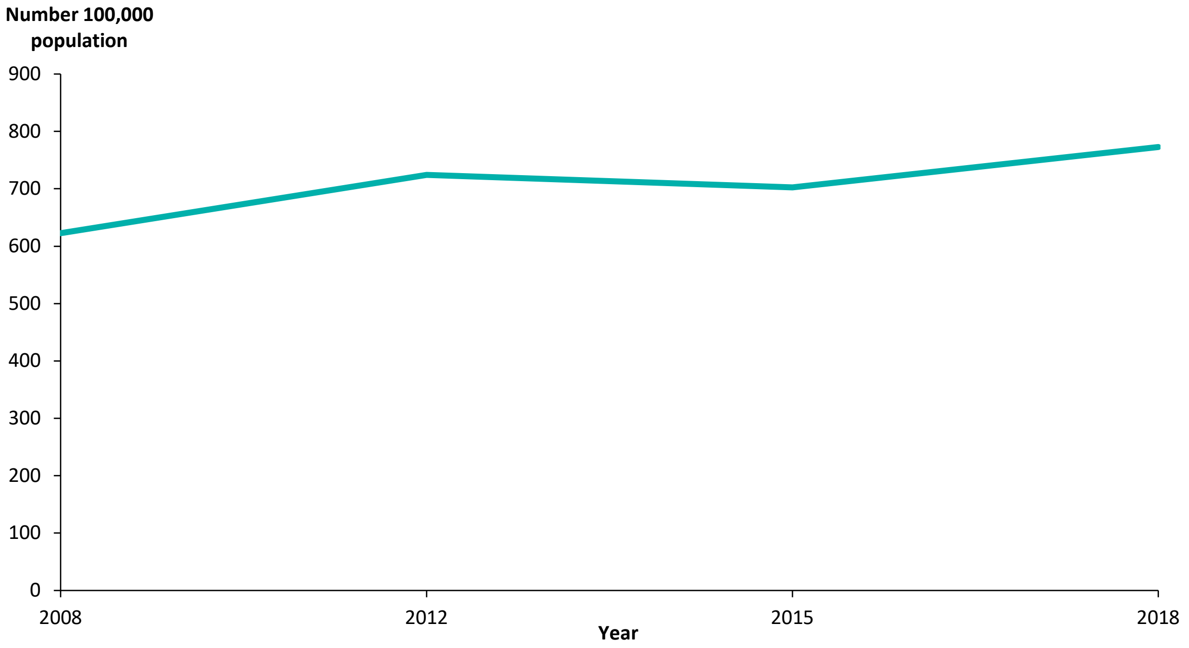
In 2018, after adjusting for age:

- the prevalence of treated end-stage kidney disease among people with diabetes ranged from 571 per 100,000 population to 1,104 per 100,000 population across the socioeconomic areas (Figure 41.3)
- the prevalence was lowest for those living in *Major cities* and *Inner regional* areas (695 and 733 per 100,000 population, respectively) and highest for those living in *Outer regional and Remote* areas (1,543 per 100,000 population) (Figure 41.3).

In 2018:

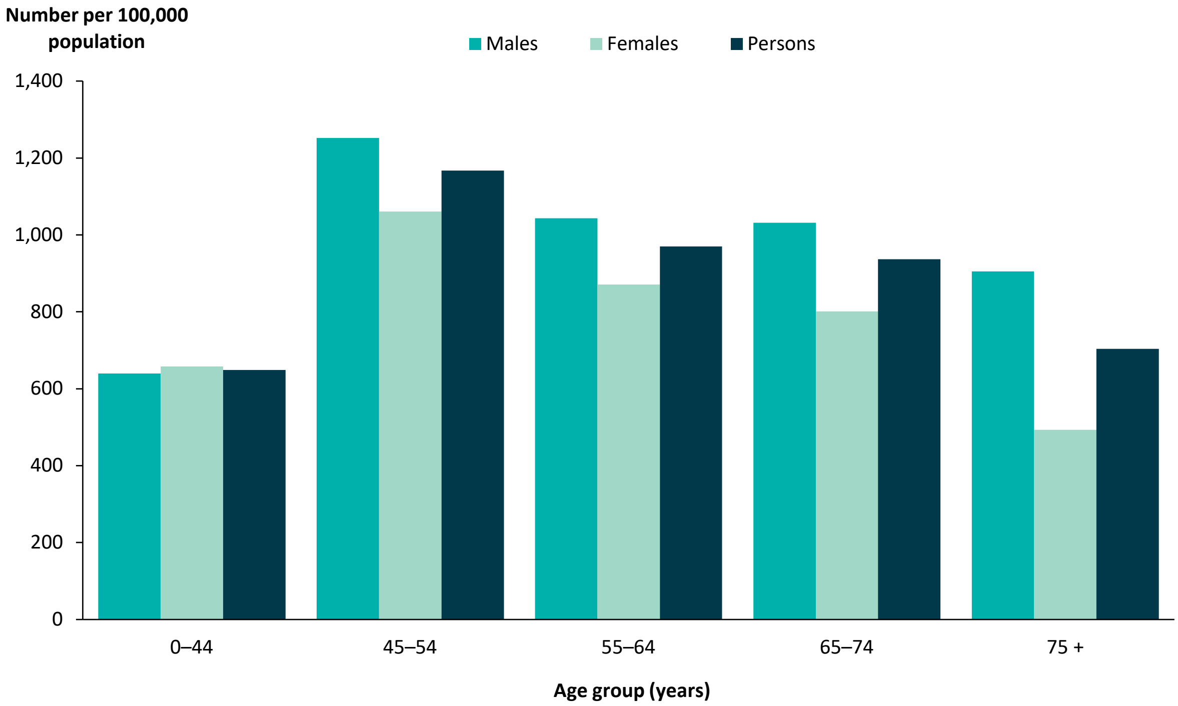
- an estimated 1,700 Indigenous Australians with diabetes had treated end-stage kidney disease, equating to 2,700 per 100,000 population (AIHW 2020b).
- after adjusting for age, the prevalence rate of treated end-stage kidney disease among Indigenous Australians with diabetes was 2.7 times as high as that in all Australians (AIHW 2020b).

Figure 41.1: Estimated prevalence of treated end-stage kidney disease among all people with diabetes, by year



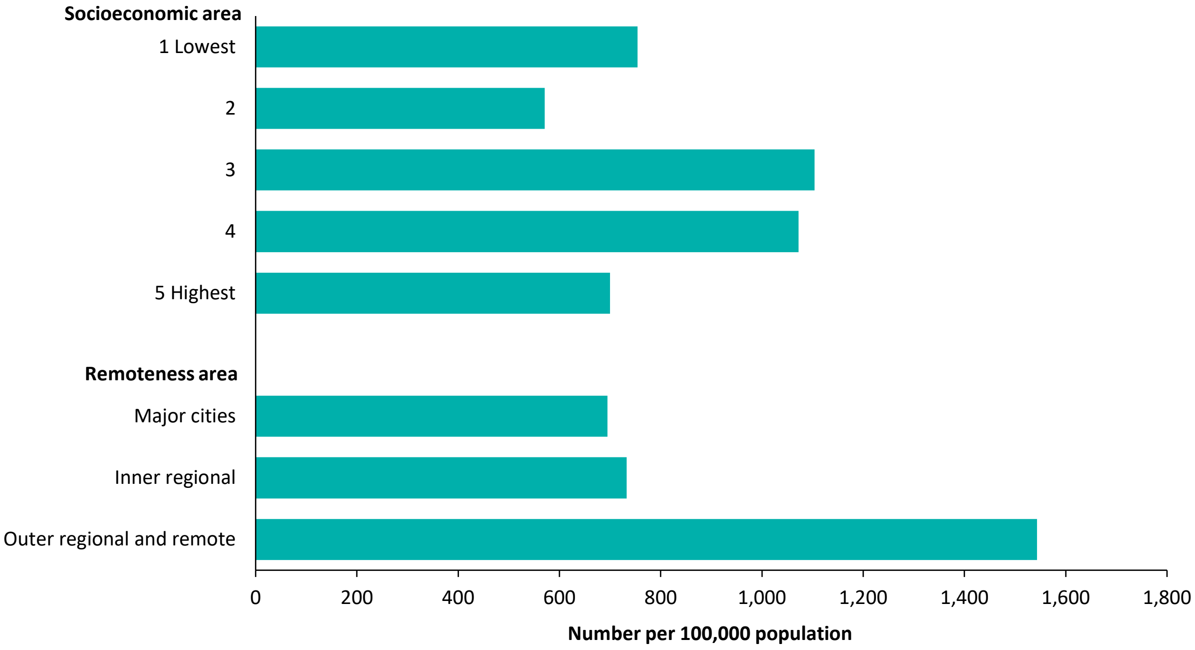
Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 41.1.
Source: AIHW 2020b.

Figure 41.2: Estimated prevalence of treated end-stage kidney disease among all people with diabetes, by sex and age, 2018



Note: Data and additional notes for this figure are shown in Table 41.2.
Source: AIHW 2020b.

Figure 41.3: Estimated prevalence of treated end-stage kidney disease among all people with diabetes, by population characteristics, 2018



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 41.3.
Source: AIHW 2020b.

Considerations

This is a proxy measure based on the prevalence of treated end-stage kidney disease from the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA) and the total population of people with self-reported diabetes from ABS National Health Survey.

This method is likely to underestimate the total population of people with diabetes as some people are unaware they have the condition. In 2011–12 the ABS found that, based on biomedical data, around 1 in 5 people with diabetes were unaware that they had the condition (ABS 2013). In addition, the prevalence of ESKD is likely underestimated, with approximately 50% of people with ESKD remaining untreated (Lim et al. 2019).

Data sources

Australian and New Zealand Dialysis and Transplant Registry (ANZDATA).

ABS National Health Surveys: 2007–08, 2011–12, 2014–15, 2017–18.

ABS National Aboriginal and Torres Strait Islander Health Survey: 2018–19.

For further details, refer to Appendix B.

References

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Supplementary tables

Table 41.1: Estimated prevalence of treated end-stage kidney disease among all people with diabetes, by sex and year

	Number			Number per 100,000 population			Number per 100,000 population[(a)]		
Year	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
2008	3,507	2,256	5,763	700	568	641	713	545	623
2012	4,570	3,015	7,585	665	665	770	677	846	724
2015	5,520	3,524	9,045	853	662	767	779	626	703
2018	6,495	3,938	10,433	990	752	884	804	733	773

(a) Age-standardised to the 2001 Australian standard population.

Note: Prevalence of diabetes is based on self-report from the Australian Bureau of Statistics (ABS) 2017–18 National Health Survey (NHS) and includes people ever told by a doctor or nurse that they had diabetes (type 1, type 2 or type unknown) and the condition is still current and long-term; or still current but not long-term; or not current. The 2017–18 NHS only included people living in private dwellings across Australia and excluded *Very Remote* areas of Australia and discrete Aboriginal and Torres Strait Islander communities. The number of people with treated end-stage kidney disease and diabetes excludes those living in *Very remote* areas too for consistency with the NHS data.

Source: AIHW 2020b.

Table 41.2: Estimated prevalence of treated end-stage kidney disease among all people with diabetes, by age, 2018

	Number per 100,000 population		
Age-group (years)	Males	Females	Persons
0–44	640	658	649
45–54	1,252	1,061	1,167
55–64	1,043	871	970
65–74	1,032	801	937
75 +	905	493	704
Total	**990**	**752**	**884**
Total age-standardised[(a)]	**804**	**733**	**773**

(a) Age-standardised to the 2001 Australian standard population.

Note: Prevalence of diabetes is based on self-report from the Australian Bureau of Statistics (ABS) 2017–18 National Health Survey (NHS) and includes people ever told by a doctor or nurse that they had diabetes (type 1, type 2 or type unknown) and the condition is still current and long-term; or still current but not long-term; or not current. The 2017–18 NHS only included people living in private dwellings across Australia and excluded *Very Remote* areas of Australia and discrete Aboriginal and Torres Strait Islander communities. The number of people with treated end-stage kidney disease and diabetes excludes those living in *Very remote* areas too for consistency with the NHS data.

Source: AIHW 2020b.

Table 41.3: Estimated prevalence of treated end-stage kidney disease among all people with diabetes, by selected population characteristics, 2018

Population characteristic	
Socioeconomic area	**Number per 100,000 population**
1 Lowest	754
2	571
3	1,104
4	1,072
5 Highest	700
Remoteness area	
Major cities	695
Inner regional	733
Outer regional and remote	1,543

Notes

1. Prevalence of diabetes is based on self-report from the Australian Bureau of Statistics (ABS) 2017–18 National Health Survey (NHS) and includes people ever told by a doctor or nurse that they had diabetes (type 1, type 2 or type unknown) and the condition is still current and long-term; or still current but not long-term; or not current. The 2017–18 NHS only included people living in private dwellings across Australia and excluded Very Remote areas of Australia and discrete Aboriginal and Torres Strait Islander communities. The number of people with treated end-stage kidney disease and diabetes excludes those living in Very remote areas too for consistency with the NHS data.
2. Age-standardised to the 2001 Australian standard population.
3. Socioeconomic areas are classified according to area-based quintiles using the Index of Relative Socio-Economic Disadvantage 2016 (IRSD) based on usual residence.
4. Remoteness is classified according to the Australian Statistical Geography Standard 2016 Remoteness Areas structure based on usual residence. Using data from the ABS 2017–18 NHS to examine differences in disease prevalence by remoteness categories does not present a complete picture because the NHS excludes those living in Very remote areas. Further, aggregation of Outer regional with Remote areas may mask important differences in remote areas, given the population in Outer regional areas is much larger than in Remote areas.

Source: AIHW 2020b.

Indicator 42: Hospitalisations for lower-limb amputation with type 2 diabetes as a principal or additional diagnosis

In 2017–18, the hospitalisation rate for adults aged 18 and over where a lower-limb amputation was performed with type 2 diabetes as a principal or additional diagnosis was 28 hospitalisations per 100,000 population.

Why is this important?

For people with diabetes, high blood sugar levels can damage the nerves (peripheral neuropathy) and result in poor circulation (peripheral vascular disease) in the lower limbs, potentially causing ischemia, gangrene and impaired wound healing. These complications may lead to foot ulcers and infections, and in the most severe cases, amputations of the affected toes, foot and lower leg. Diabetes is the leading cause of non-traumatic lower-limb amputation (AIHW 2018).

What does this indicator measure?

Number of hospitalisations (per 100,000 population) for adults aged 18 and over, where a lower-limb amputation was performed with type 2 diabetes as a principal or additional diagnosis.

What do the data show?

In 2017–18:

- there were around 5,400 hospitalisations for adults aged 18 and over where a lower-limb amputation was performed with type 2 diabetes as a principal or additional diagnosis (Table 42.1). This equates to a rate of 28 hospitalisations per 100,000 population (Table 42.2). Age-standardised hospitalisation rates increased slightly between 2012–13 and 2017–18 (21 and 25 per 100,000 population, respectively) (Figure 42.1).
- the age-adjusted rate was 3.6 times as high in men as women (40 and 11 hospitalisations per 100,000 population, respectively) (Figure 42.1). Men had a higher rate than women across all age groups (Figure 42.2).
- the age-adjusted rate increased with increasing age (Figure 42.2).

Population groups

In 2017–18, after adjusting for age:

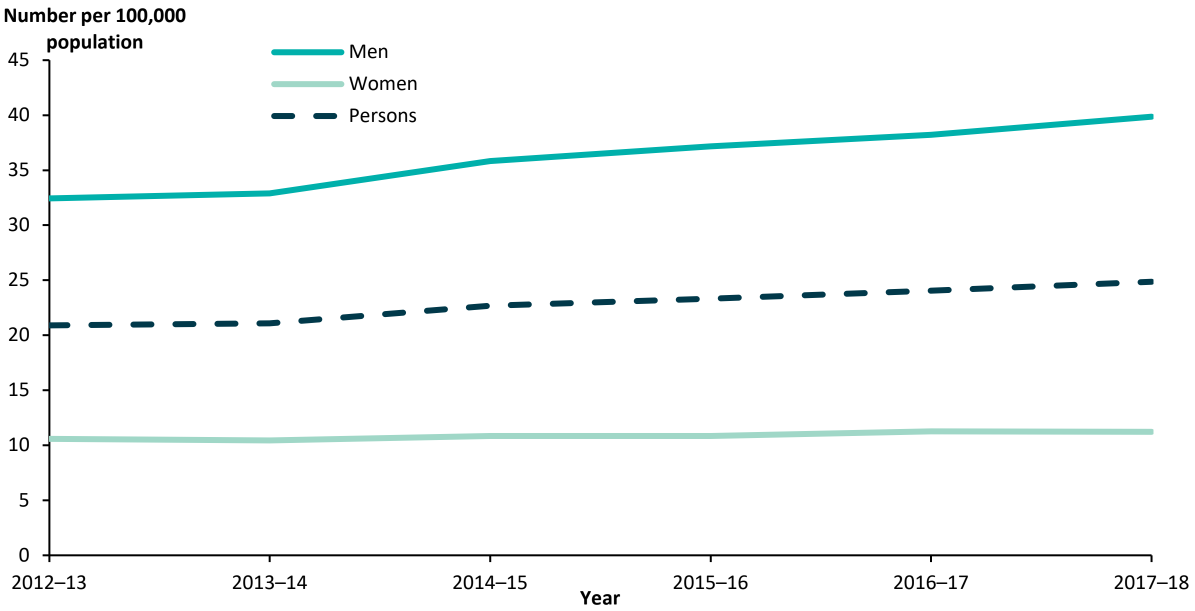
- hospitalisation rates also increased with increasing level of socioeconomic disadvantage—the rate was 2.7 times as high among those living in the lowest socioeconomic area compared with those living in the highest socioeconomic area (38 compared with 14 hospitalisations per 100,000 population) (Figure 42.3)
- the rate increased with increasing remoteness and was 3 times as high among those living in *Remote and very remote* areas compared to those living in *Major cities* (65 and 22 hospitalisations per 100,000 population, respectively) (Figure 42.3).

In 2017–18, there were 415 hospitalisations for Indigenous Australians aged 18 and over where a lower-limb amputation was performed with type 2 diabetes as a principal or additional diagnosis; equating to a rate of 84 hospitalisations per 100,000 population (Table 42.4).

In 2017–18, after adjusting for age:

- Indigenous Australian men aged 18 and over had a higher rate of hospitalisations for lower-limb amputation with type 2 diabetes as a principal or additional diagnosis compared with Indigenous women aged 18 and over (134 and 82 hospitalisations per 100,000, respectively) (Table 42.4)
- the rate was 4.7 times as high among Indigenous Australians than non-Indigenous Australians (Table 42.4).

Figure 42.1: Hospitalisations for lower-limb amputations with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over, by sex and year

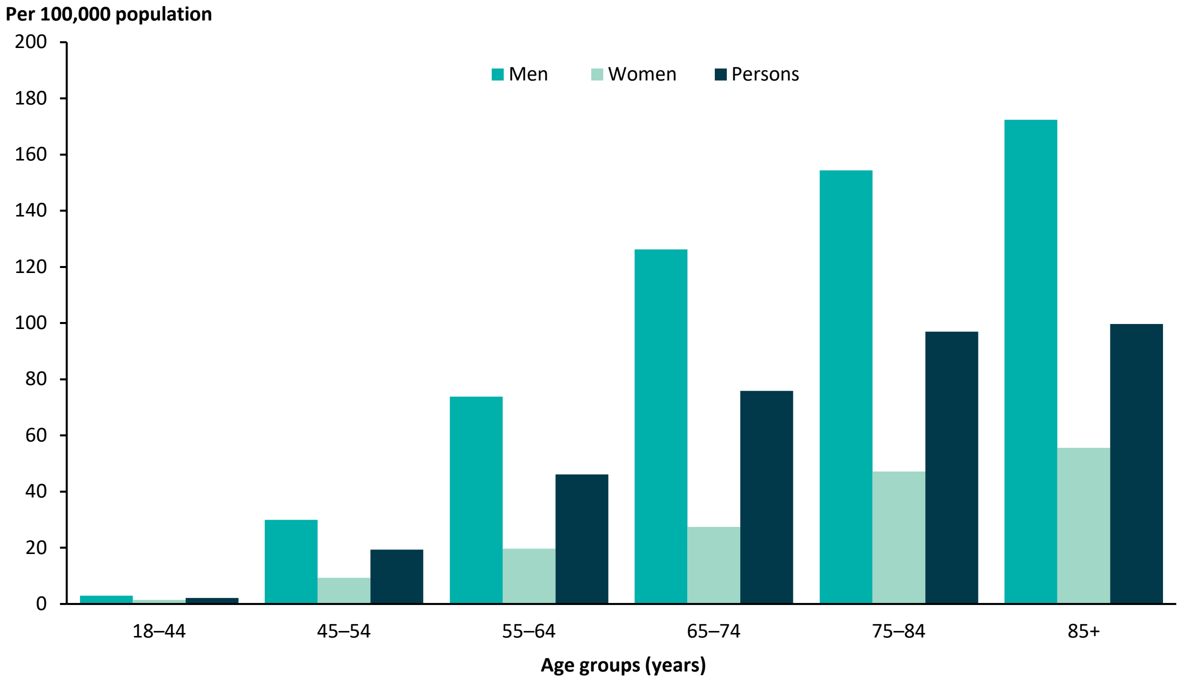


Notes

1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 42.1.

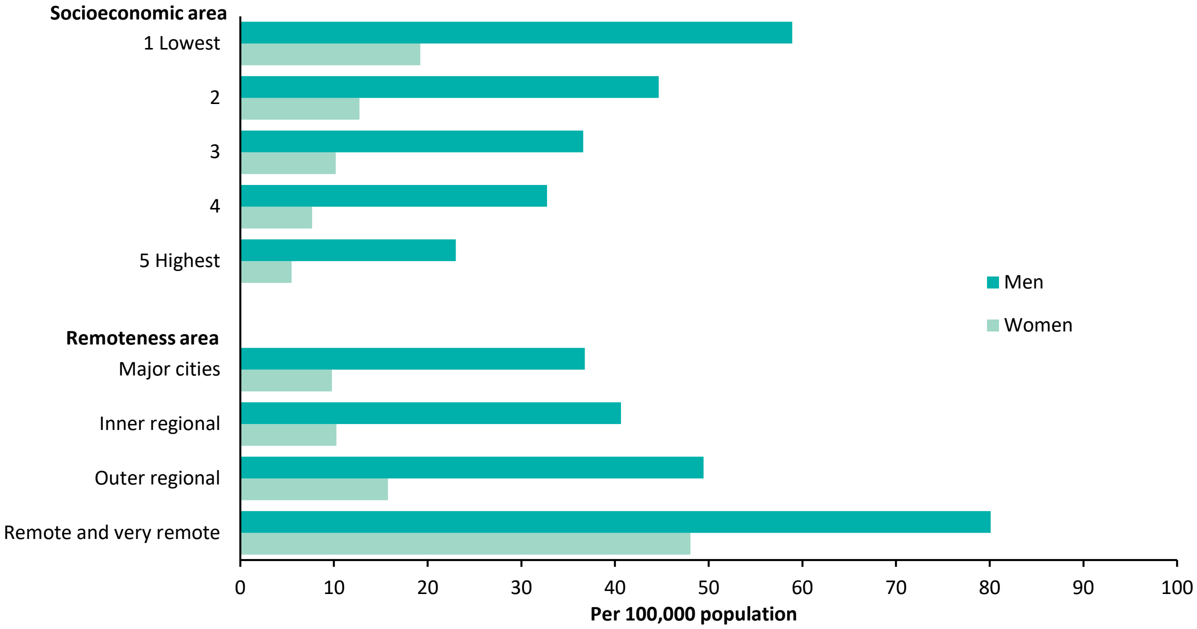
Source: AIHW National Hospital Morbidity Database.

Figure 42.2: Hospitalisations for lower-limb amputations with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over, by age and sex, 2017–18



Note: Data and additional notes for this figure are shown in Table 42.2.
Source: AIHW National Hospital Morbidity Database.

Figure 42.3: Hospitalisations for lower-limb amputations with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over, by selected population characteristics and sex, 2017–18



Notes
1. Age-standardised to the 2001 Australian standard population.
2. Data and additional notes for this figure are shown in Table 42.3.
Source: AIHW National Hospital Morbidity Database.

Considerations

Changes to the Australian Coding Standards between ICD-10-AM editions have resulted in fluctuations in the reporting of diagnoses for diabetes over time. Therefore, caution should be used in comparing current estimates with those for earlier years.

Current national hospitalisation data, based on episodes of care, does not allow major, minor, initial or recurrent amputations to be identified. Patients may undergo repeat amputation of the same limb if the disease progresses along the limb or if the first amputation fails to heal. Hospitalisation data is based on episodes of care and it is not possible to link records of multiple hospitalisations in the database to individuals; however data linkage could be used in future analysis to address this.

Data sources

AIHW National Hospital Morbidity Database. For further details, refer to Appendix B.

References

AIHW 2018. Diabetes indicators for the Australian National Diabetes Strategy 2016–2020. Cat. no. CVD 81. Canberra: AIHW. Viewed 17 May 2019, https://www.aihw.gov.au/reports/diabetes/diabetes-indicators-strategy-2016-2020/data.

AIHW 2020. Indicators for the Australian National Diabetes Strategy 2016–2020: data update. Cat. no. CVD 81. Canberra: AIHW.

Supplementary tables

Table 42.1: Hospitalisations for lower-limb amputations with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over, by sex and year

	Number			Number per 100,000 population[(a)]		
Year	**Men**	**Women**	**Persons**	**Men**	**Women**	**Persons**
2012–13	2,960	1,078	4,038	32	11	21
2013–14	3,089	1,083	4,172	33	10	21
2014–15	3,432	1,146	4,578	36	11	23
2015–16	3,646	1,166	4,812	37	11	23
2016–17	3,857	1,251	5,108	38	11	24
2017–18	4,152	1,279	5,431	40	11	25

(a) Age-standardised to the 2001 Australian standard population.

Notes

1. Lower-limb amputation (ACHI Procedure codes: 44338-00, 44358-00, 44361-00, 44361-01, 44364-00, 44364-01, 44370-00, 44373-00, 44367-00, 44367-01, 44367-02, 90557-00).
2. Type 2 diabetes (ICD-10-AM codes: E11).

Source: AIHW 2020.

Table 42.2: Hospitalisations for lower-limb amputations with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over, by age and sex, 2017–18

	Number			Number 100,000 population		
Age group (years)	**Men**	**Women**	**Persons**	**Men**	**Women**	**Persons**
18–44	136	68	204	3	1	2
45–54	468	151	619	30	9	19
55–64	1,033	288	1,321	74	20	46
65–74	1,355	306	1,661	126	27	76
75–84	836	294	1,130	154	47	97
85+	324	172	496	172	56	100
Total 18+	. .	. .	. .	**44**	**13**	**28**
Total 18+ age-standardised[(a)]	**4,152**	**1,279**	**5,431**	**40**	**11**	**25**

. . not applicable.

(a) Age-standardised to the 2001 Australian standard population.

Notes

1. Lower-limb amputation (ACHI Procedure codes: 44338-00, 44358-00, 44361-00, 44361-01, 44364-00, 44364-01, 44370-00, 44373-00, 44367-00, 44367-01, 44367-02, 90557-00).
2. Type 2 diabetes (ICD-10-AM codes: E11).

Source: AIHW 2020.

Table 42.3: Hospitalisations for lower-limb amputations with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over, by selected population characteristics, 2017–18

	Number			Number per 100,000 population[(a)]		
Socioeconomic area	**Men**	**Women**	**Persons**	**Men**	**Women**	**Persons**
1 Lowest	1,296	443	1,739	59	19	38
2	1,000	304	1,304	45	13	28
3	751	232	983	37	10	23
4	614	164	778	33	8	20
5 Highest	463	123	586	23	5	14
Remoteness area						
Major cities	2,544	775	3,319	37	10	22
Inner regional	913	249	1,162	41	10	25
Outer regional	504	160	664	49	16	33
Remote and very remote	164	85	249	80	48	65

(a) Age-standardised to the 2001 Australian standard population.

Notes

1. Socioeconomic groups are classified according to population-based quintiles using the Index of Relative Socio-Economic Disadvantage 2016 based on Statistical Area Level 2 (SA2) of usual residence.
2. Remoteness is classified according to the Australian Statistical Geography Standard 2016 Remoteness Areas structure based on Statistical Area Level 2 (SA2) of usual residence.
3. Lower-limb amputation (ACHI Procedure codes: 44338-00, 44358-00, 44361-00, 44361-01, 44364-00, 44364-01, 44370-00, 44373-00, 44367-00, 44367-01, 44367-02, 90557-00).
4. Type 2 diabetes (ICD-10-AM codes: E11).

Source: AIHW 2020.

Table 42.4: Hospitalisations for lower-limb amputations with type 2 diabetes as a principal or additional diagnosis, adults aged 18 and over, by Indigenous status and sex, 2017–18

Indigenous status	Men	Women	Persons
	Number		
Indigenous Australians	252	163	415
Non-Indigenous Australians	3,870	1,108	4,978
	Number per 100,000 population		
Indigenous Australians	104	65	84
Non-Indigenous Australians	42	12	27
	Number per 100,000 population(a)		
Indigenous Australians	134	82	107
Non-Indigenous Australians	38	10	23

(a) Age-standardised to the 2001 Australian standard population.

Notes

1. Lower-limb amputation (ACHI Procedure codes: 44338-00, 44358-00, 44361-00, 44361-01, 44364-00, 44364-01, 44370-00, 44373-00, 44367-00, 44367-01, 44367-02, 90557-00).
2. Type 2 diabetes (ICD-10-AM codes: E11).

Source: AIHW 2020.

Indicator 43: Five–year relative survival for selected cancers

Five-year relative survival for selected cancers (2012–2016):

(a) Breast cancer in females 91%

(b) Bowel (colorectal) cancer 70%

(c) Melanoma of the skin 92%

(d) Lung cancer 19%

(e) Cervical cancer 74%.

Why is this important?

Cancer is the leading cause of total burden of disease in Australia; the burden from cancer is mainly due to premature death (AIHW 2021). It has a substantial social and economic impact on individuals, families and the community (AIHW 2020). For cancer, survival together with incidence is more informative than prevalence and/or incidence on its own.

Information on survival from cancer provides an indication of cancer prognosis and the effectiveness of treatments available. A range of factors influence survival from cancer, including characteristics of the patient (such as age, sex and genetics), the nature of the tumour (such as site, stage at diagnosis and histology type) and the health-care system (such as the availability of health-care services, screening, diagnostic and treatment facilities, and follow-up services) (Black et al. 1998; WCRF & AICR 2007).

What does this indicator measure?

Relative survival refers to the probability of being alive for a given amount of time after diagnosis relative to people of the same age and sex in the general population. A 5-year relative survival figure of 100% means that the cancer has no impact on the person's chance of still being alive 5 years after diagnosis, whereas a figure of 50% means that the cancer has halved that chance (AIHW 2020).

The selected cancers are:

(a) Breast cancer in females

(b) Bowel cancer (also called colorectal cancer)

(c) Melanoma of the skin

(d) Lung cancer

(e) Cervical cancer.

Refer to the *NSFCC: reporting framework* (AIHW 2022) for more information.

What do the data show?

The 5-year relative survival varied by cancer site. In 2012–2016, of the selected cancers, it was highest for breast cancer (91%) and melanoma of the skin (92%), and lowest for lung cancer at 19% (Figure 43.1 and 43.2).

For each of the selected cancers, the 5-year relative survival increased between 1987–1991 and 2012–2016 (Figure 43.1).

Relative survival decreases with age but there are differences between the cancers in how rapidly the survival decreases with age (Figure 43.3).

(a) Breast cancer in females

- There was an increase in 5-year relative survival for women with breast cancer from 75% in 1987–1991 to 91% in 2012–2016 (Figure 43.1).
- During the period 2012–2016:
    - the 5-year relative survival for women with breast cancer is high across age groups compared to most other cancers shown here (Figure 43.3).
    - the 5-year relative survival for breast cancer in females was similar across all age groups but lower in those aged 75 or over at diagnosis (Figure 43.3).

(b) Bowel (colorectal) cancer

- The 5-year relative survival for bowel cancer increased considerably from 52% in 1987–1991 to 70% in 2012–2016 (Figure 43.1).
- During the period 2012–2016:
    - the 5-year relative survival for bowel cancer was similar for men and women (Figure 43.2).
    - between the ages of 25 and 74, 5-year relative survival ranged between 78% and 71% but declined to 68% or lower for those aged 75 and above (Figure 43.3).

(c) Melanoma of the skin

- There was a slight increase in 5-year relative survival for people with melanoma of the skin from 88% in 1987–1991 to 92% in 2012–2016 (Figure 43.1). The 5-year relative survival for people with melanoma of the skin was high across all age groups compared to most of the other cancers shown here (Figure 43.3).
- During the period 2012–2016:
    - females had a higher 5-year relative survival compared to males for melanoma of the skin (94% compared with 90%) (Figure 43.2).
    - five-year relative survival for people with melanoma of the skin gradually decreases with age but declined more sharply in those aged 80 and above (Figure 43.3).

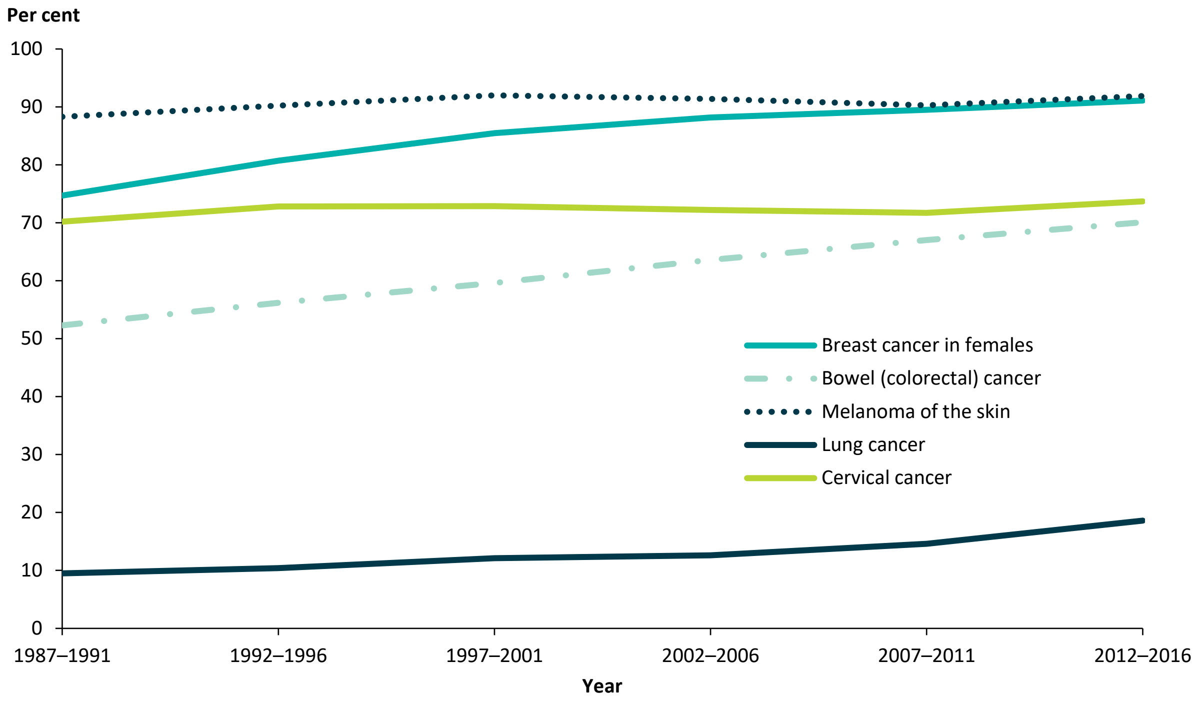
(d) Lung cancer

- There was a considerable increase in 5-year relative survival for people with lung cancer from 9.5% in 1987–1991 to 19% in 2012–2016 (Figure 43.1). However, the 5-year relative survival for people diagnosed with lung cancer in 2012–2016 is low across age groups compared to the other cancers shown here (Figure 43.3).
- During the period 2012–2016:
    - females had a higher 5-year relative survival compared to males for lung cancer (22% compared with 16%) (Figure 43.2).
    - the 5-year relative survival for lung cancer declined considerably with age from 71% for people aged 25–29 to 5.4% for those aged 85 and over (Figure 43.3).

(e) Cervical cancer

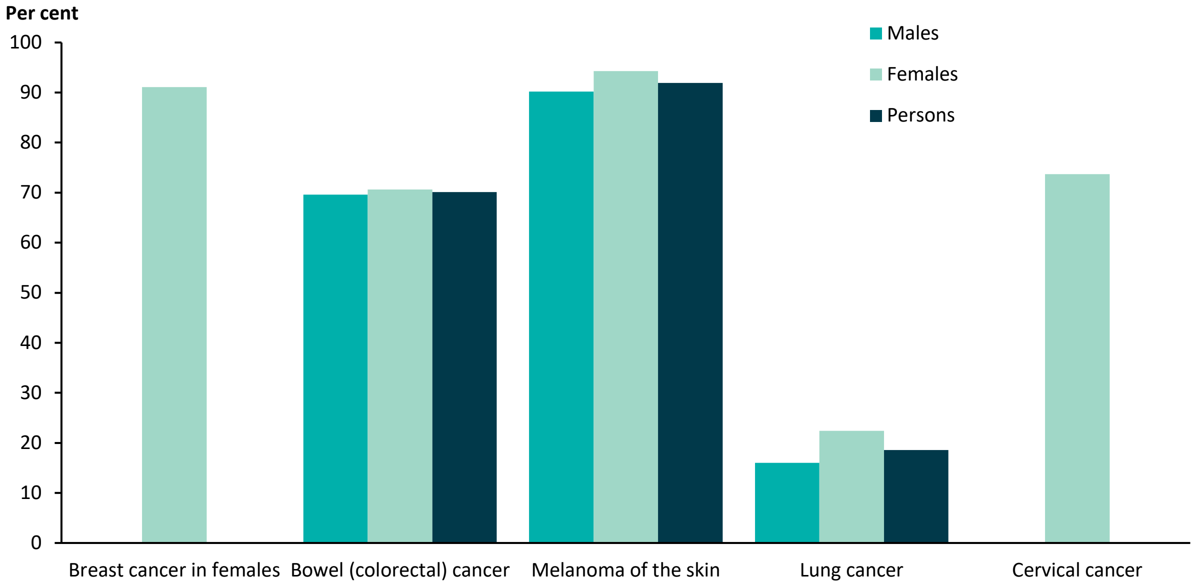
- There was an increase in 5-year relative survival for women with cervical cancer from 70% in 1987–1991 to 74% in 2012–2016 (Figure 43.1).
- During the period 2012–2016, the 5-year relative survival for cervical cancer declined with increasing age from around 90% for women in the youngest age groups to 28% for those aged 80–84 (Figure 43.3).

Figure 43.1: 5-year relative survival for selected cancers, by year



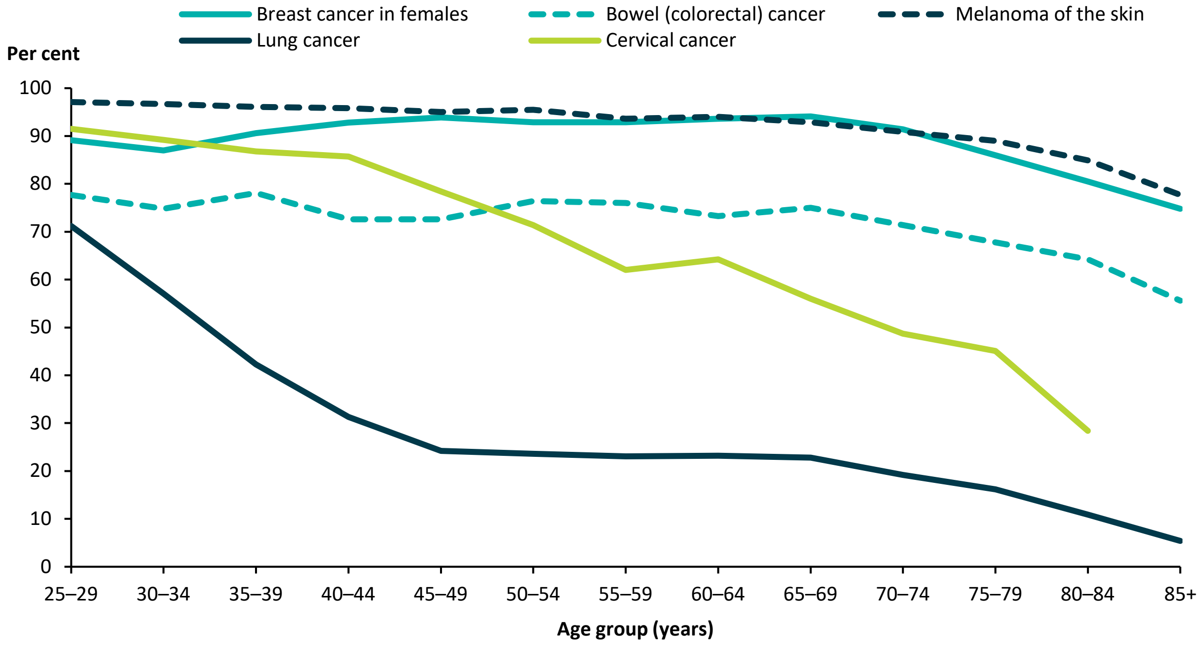
Notes
1. Survival was calculated by the period method using the period 2012–2016.
2. Note that the 2012–2016 period does not include 2016 diagnoses for NT as the data were not available.
3. Data and additional notes for this figure are shown in Table 43.1.
Source: AIHW 2020.

Figure 43.2: 5-year relative survival for selected cancers, by sex, 2012–2016



Notes
1. Survival was calculated by the period method using the period 2012–2016.
2. Note that the 2012–2016 period does not include 2016 diagnoses for NT as the data were not available.
3. Data and additional notes for this figure are shown in Table 43.2.
Source: AIHW 2020.

Figure 43.3: 5-year relative survival for selected cancers, by age, 2012–2016



Notes
1. Data for those aged under 25 years are shown in Table 43.3 but are not included in the graph because for most cancers there are not enough cases to produce stable estimates of 5-year relative survival.
2. Survival was calculated by the period method using the period 2012–2016.
3. Note that the 2012–2016 period does not include 2016 diagnoses for NT as the data were not available.
4. Data and additional notes for this figure are shown in Table 43.3.
Source: AIHW 2020.

Considerations

Complete life tables from age 0 to 100+, which are required to calculate relative survival, are not currently produced by Indigenous status, remoteness or socioeconomic area and hence it is not possible to disaggregate by these population groups.

Data sources

AIHW Australian Cancer Database 2016. For further details, refer to Appendix B.

References

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Supplementary tables

Table 43.1: 5-year relative survival for selected cancers, by year

	Breast cancer in females		Bowel cancer		Melanoma of the skin		Lung cancer		Cervical cancer	
Year	**Survival (%)**	**95% CI**	**Survival (%)**	**95% CI**	**Survival (%)**	**95% CI**	**Survival (%)**	**95% CI**	**Survival (%)**	**95% CI**
1987–1991	74.7	74.1–75.3	52.3	51.7–52.9	88.3	87.8–88.8	9.5	9.2–9.9	70.2	68.9–71.6
1992–1996	80.7	80.3–81.2	56.2	55.7–56.8	90.2	89.7–90.7	10.4	10.1–10.7	72.8	71.4–74.1
1997–2001	85.5	85.1–85.9	59.6	59.1–60.1	92.0	91.6–92.4	12.1	11.8–12.5	72.9	71.4–74.3
2002–2006	88.2	87.8–88.5	63.6	63.1–64.0	91.4	91.0–91.7	12.6	12.2–12.9	72.2	70.6–73.7
2007–2011	89.5	89.2–89.8	67.0	66.6–67.5	90.3	90.0–90.7	14.6	14.2–14.9	71.7	70.1–73.2
2012–2016	91.1	90.8–91.4	70.1	69.7–70.5	91.9	91.6–92.3	18.6	18.3–19.0	73.7	72.3–75.1

Note: Note that the 2012–2016 period does not include 2016 diagnoses for NT as the data were not available.
Source: AIHW 2020.

Table 43.2: 5-year relative survival for selected cancers, by sex, 2012–2016

	Males		Females		Persons	
Selected cancer	Survival (%)	95% CI	Survival (%)	95% CI	Survival (%)	95% CI
Breast cancer in females	. .	. .	91.1	90.8–91.4	. .	. .
Bowel cancer	69.6	69.1–70.2	70.6	70.0–71.2	70.1	69.7–70.5
Melanoma of the skin	90.2	89.8–90.7	94.3	93.8–94.8	91.9	91.6–92.3
Lung cancer	16.0	15.5–16.4	22.4	21.8–23.0	18.6	18.3–19.0
Cervical cancer	. .	. .	73.7	72.3–75.1	. .	. .

. . not applicable

Notes

1. Survival was calculated by the period method using the period 2012–2016.
2. Note that the 2012–2016 period does not include 2016 diagnoses for NT as the data were not available.

Source: AIHW 2020.

Table 43.3: 5-year relative survival for selected cancers, by age, 2012–2016

	Breast cancer in females		Bowel cancer		Melanoma of the skin		Lung cancer		Cervical cancer	
Age group (years)	Survival (%)	95% CI	Survival (%)	95% CI	Survival (%)	95% CI	Survival (%)	95% CI	Survival (%)	95% CI
0–04	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
05–09	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
10–14	n.p.	n.p.	100.1	95.9–100.1	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
15–19	n.p.	n.p.	97.4	92.9–99.1	97.9	94.2–99.3	n.p.	n.p.	n.p.	n.p.
20–24	89.5	74.3–96.0	89.2	84.4–92.6	96.9	95.0–98.1	n.p.	n.p.	89.1	79.2–94.4
25–29	89.1	85.4–91.9	77.7	73.5–81.3	97.1	95.9–98.0	71.2	55.8–82.1	91.5	88.0–94.0
30–34	87.0	84.8–88.9	74.8	71.2–78.1	96.7	95.7–97.5	57.1	46.4–66.5	89.2	86.0–91.7
35–39	90.6	89.3–91.7	78.1	75.1–80.7	96.1	95.1–96.8	42.3	35.7–48.7	86.8	83.5–89.4
40–44	92.8	92.0–93.5	72.6	70.2–74.8	95.8	94.9–96.5	31.3	27.2–35.5	85.7	82.3–88.5
45–49	93.9	93.3–94.4	72.6	70.8–74.4	95.0	94.2–95.7	24.2	21.7–26.7	78.4	74.1–82.0
50–54	92.9	92.3–93.4	76.4	75.0–77.7	95.5	94.8–96.1	23.6	22.0–25.3	71.4	66.3–75.8
55–59	92.9	92.3–93.5	76.0	74.8–77.1	93.6	92.8–94.3	23.1	21.8–24.5	62.0	56.3–67.2
60–64	93.6	93.0–94.1	73.3	72.2–74.3	94.0	93.3–94.7	23.2	22.1–24.3	64.2	57.7–70.1
65–69	94.1	93.4–94.7	75.0	74.1–76.0	92.9	92.1–93.7	22.8	21.9–23.8	56.0	49.0–62.5
70–74	91.4	90.4–92.3	71.4	70.4–72.4	90.9	89.8–91.9	19.2	18.3–20.1	48.7	41.0–56.0
75–79	86.0	84.5–87.3	67.8	66.7–69.0	89.0	87.5–90.4	16.2	15.3–17.2	45.1	35.7–54.3
80–84	80.5	78.4–82.5	64.2	62.7–65.6	84.9	82.8–86.9	10.9	10.0–11.9	28.4	20.1–37.7
85+	74.8	71.7–77.9	55.6	53.6–57.6	77.7	74.6–80.8	5.4	4.6–6.3	n.p.	n.p.
All ages	**91.1**	**90.8–91.4**	**70.1**	**69.7–70.5**	**91.9**	**91.6–92.3**	**18.6**	**18.3–19.0**	**73.7**	**72.3–75.1**

n.p. not published because of small numbers, confidentiality or other concerns about the quality of the data.

Notes

1. Survival was calculated by the period method using the period 2012–2016.
2. Note that the 2012–2016 period does not include 2016 diagnoses for NT as the data were not available.

Source: AIHW 2020.

Indicator 44: Potentially avoidable deaths for selected chronic conditions

After adjusting for age, an estimated 66 per 100,000 people aged less than 75 died from selected chronic conditions that are potentially avoidable in 2019.

Why is this important?

Deaths from certain causes are potentially avoidable in the presence of timely and effective health care, including prevention. Potentially avoidable deaths are those that occur prematurely—before the age of 75—from conditions that might have been avoided through the provision of care and/or treatment through existing primary or hospital care. Potentially avoidable deaths include both preventable and treatable deaths:

- Potentially preventable deaths are those that are responsive to preventive health activities such as screening, good nutrition and healthy habits such as physical activity
- Potentially treatable deaths are those that are responsive to medical services and therapeutic interventions such as surgery or medication.

These two categories are not mutually exclusive.

Information on potentially avoidable deaths serve to focus attention on a portion of population health attainment that can potentially be influenced by the health system. It is used as an indicator of the effectiveness of the health system, including hospital, primary and community care (Falster & Jorm 2017).

What does this indicator measure?

The rate (per 100,000 people) of deaths each year of people aged less than 75 years from selected chronic conditions that are potentially preventable through individualised care and/or treatable through existing primary or hospital care.

The included chronic conditions are:

- Selected cancers
- Diabetes
- Selected cardiovascular diseases
- Renal failure
- Chronic obstructive pulmonary disease (COPD)
- Asthma
- Peptic ulcer disease.

Refer to the *NSFCC: reporting framework* (AIHW 2022) for more information.

What do the data show?

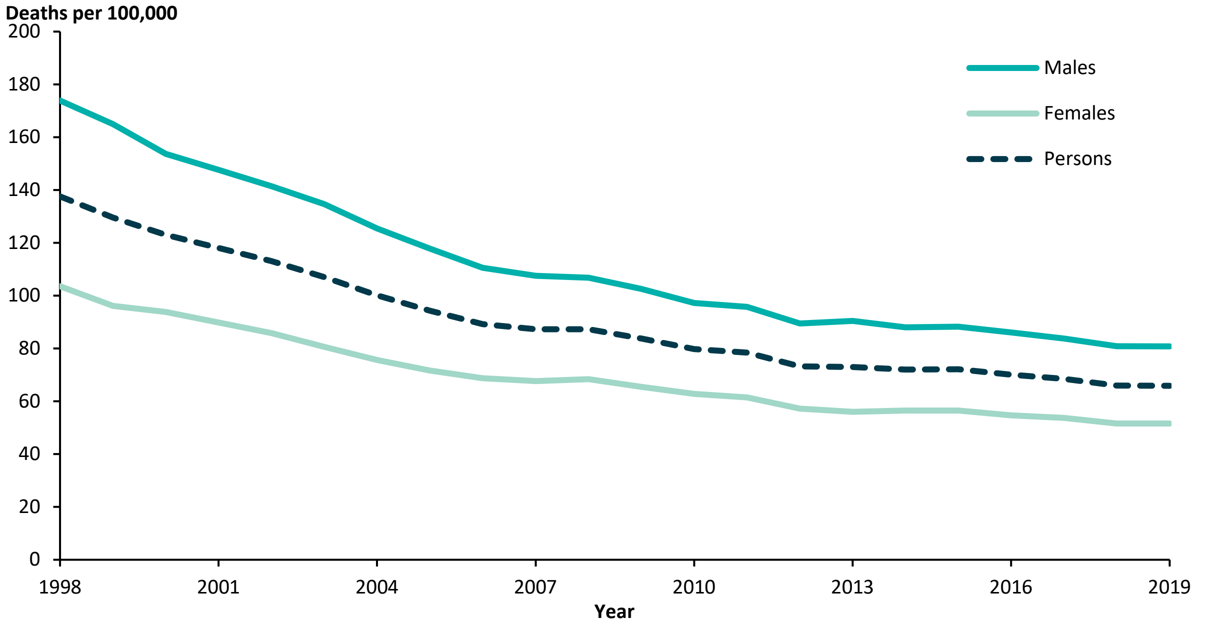
In 2019:

- there were around 18,900 potentially avoidable deaths from selected chronic conditions in Australia (Table 44.1); a third (33%) of all deaths for people aged less than 75 (AIHW 2021). The age-standardised rate of potentially avoidable deaths from selected chronic conditions more than halved over the last 20 years—it decreased from 148 deaths per 100,000 people in 1997 to 66 deaths per 100,000 in 2019 (Figure 44.1).
- the rate of potentially avoidable deaths for selected chronic conditions was higher for males (81 deaths per 100,000 males) than females (52 deaths per 100,000 females) (Figure 44.1).

Population groups

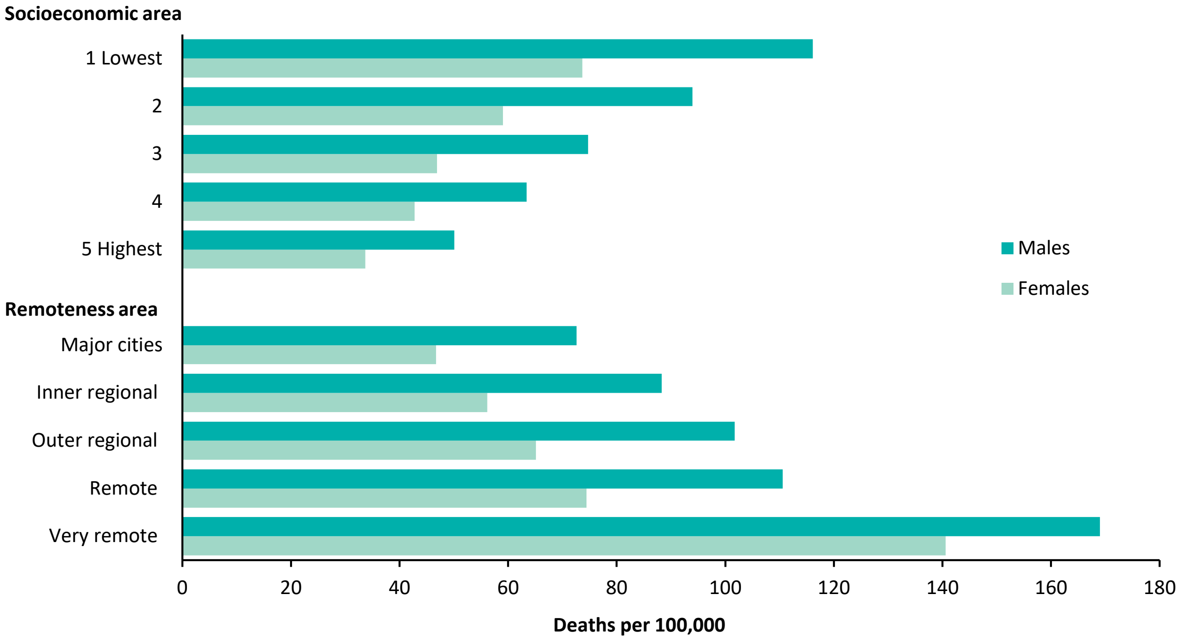
- There was a clear gradient of decreasing mortality from selected potentially avoidable chronic conditions with increasing level of socioeconomic status. In 2019, after adjusting for age, people living in the lowest socioeconomic areas had 2.3 times the rate of potentially avoidable deaths from selected chronic conditions as those living in the highest socioeconomic areas (95 and 42 deaths per 100,000 people, respectively) (Figure 44.2).
- Similarly, potentially avoidable deaths from selected chronic conditions increased with increasing remoteness. In 2019, after adjusting for age, people living in *Very remote* areas had an age-standardised rate 2.6 times that of people living in *Major cities* (156 and 59 per 100,000 people, respectively) (Figure 44.2).
- The age-standardised rate of potentially avoidable deaths from selected chronic conditions for Indigenous Australians decreased (by 34%) from 340 deaths per 100,000 people in 2001 to 223 deaths per 100,000 people in 2019, in the 5 jurisdictions used for analysis (New South Wales, Queensland, Western Australia, South Australia and the Northern Territory) (Figure 44.3).
- For Indigenous Australians, the age-standardised rate of potentially avoidable deaths from selected chronic conditions was 3.6 times as high as for non-Indigenous Australians in 2019, in the 5 jurisdictions used for analysis (New South Wales, Queensland, Western Australia, South Australia and the Northern Territory) (Figure 44.3).

Figure 44.1: Age-standardised death rates (deaths per 100,000) for potentially avoidable deaths from selected chronic conditions, people aged 0–74, by sex and year



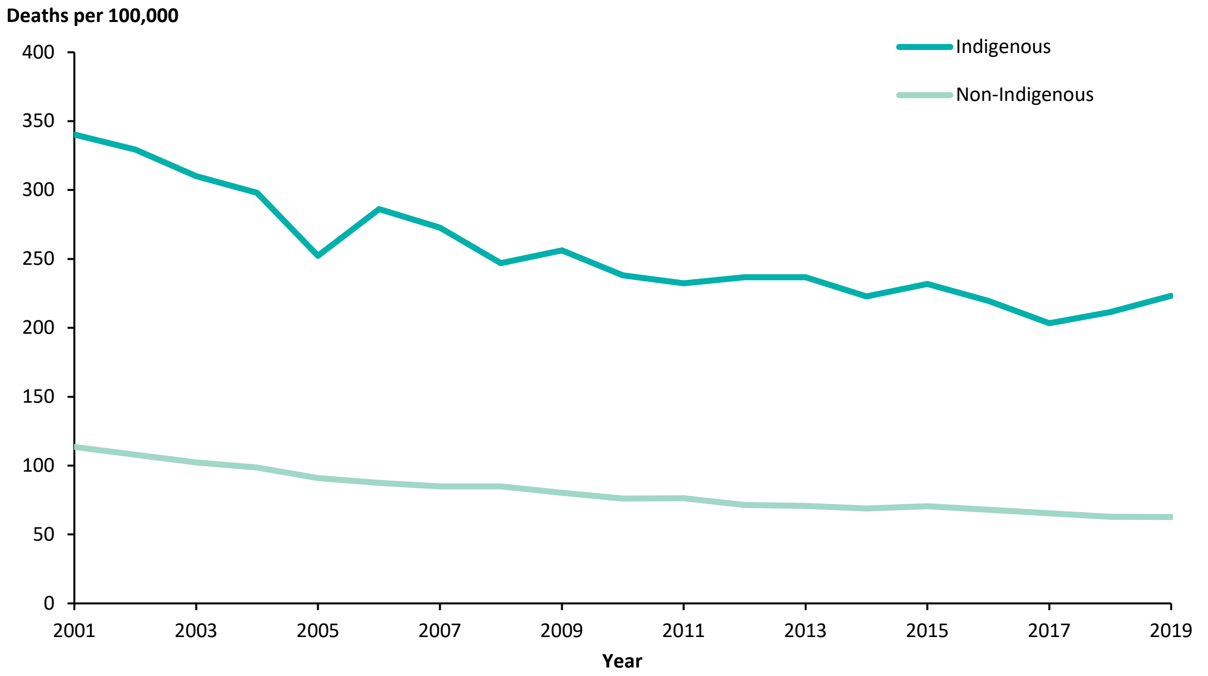
Notes
1. Age-standardised to the 2001 Australian standard population and are expressed per 100,000 population.
2. Data and additional notes for this figure are shown in Table 44.1.
Source: AIHW analysis of National Mortality Database.

Figure 44.2: Age-standardised death rates (deaths per 100,000) for potentially avoidable deaths from selected chronic conditions, people aged 0–74, by selected population characteristics and sex, 2019



Notes
1. Age-standardised to the 2001 Australian standard population and are expressed per 100,000 population.
2. Data and additional notes for this figure are shown in Table 44.2.
Source: AIHW analysis of National Mortality Database.

Figure 44.3: Age-standardised death rates (deaths per 100,000) for potentially avoidable deaths from selected chronic conditions, people aged 0–74, by Indigenous status and year



Notes
1. Age-standardised to the 2001 Australian standard population and are expressed per 100,000 population.
2. Data and additional notes for this figure are shown in Table 44.3.
Source: AIHW analysis of National Mortality Database.

Considerations

This indicator should be assessed with knowledge of the prevalence of the selected conditions to determine if a lower rate is due to people living longer with the chronic condition or if the prevalence of the conditions has reduced.

Data sources

AIHW National Mortality Database, 1997–2019. For further details, refer to Appendix B.

References

AIHW 2021. General Record of Incidence of Mortality (GRIM) books (web report). Viewed 15 October 2021, https://www.aihw.gov.au/reports/life-expectancy-deaths/grim-books/contents/data-visualisation.

AIHW 2022. National Strategic Framework for Chronic Conditions: reporting framework. Cat. no. PHE 298. Canberra: AIHW.

Falster M & Jorm L 2017. A guide to the potentially avoidable deaths indicator in Australia. Centre for Big Data Research in Health, University of New South Wales in consultation with Australian Commission on Safety and Quality in Health Care and Australian Institute of Health and Welfare: Sydney.

https://www.safetyandquality.gov.au/publications-and-resources/resource-library/guide-potentially-avoidable-deaths-indicator-australia.

Supplementary tables

Table 44.1: Age-standardised death rates (deaths per 100,000) for potentially avoidable deaths from selected chronic conditions, people aged 0–74, by sex and year

	Number of deaths			Age-standardised rate (per 100,000)		
Year	Males	Females	Persons	Males	Females	Persons
1997	15,477	9,718	25,195	186.9	110.9	147.6
1998	14,656	9,196	23,852	173.9	103.6	137.6
1999	14,168	8,644	22,812	165.0	96.2	129.6
2000	13,436	8,554	21,990	153.7	93.9	123.0
2001	13,163	8,305	21,468	147.7	89.8	118.1
2002	12,832	8,051	20,883	141.5	85.9	113.1
2003	12,402	7,660	20,062	134.7	80.6	107.1
2004	11,736	7,321	19,057	125.4	75.7	100.1
2005	11,247	7,046	18,293	117.8	71.7	94.3
2006	10,777	6,888	17,665	110.5	68.8	89.3
2007	10,831	6,991	17,822	107.6	67.7	87.3
2008	11,053	7,268	18,321	106.8	68.4	87.3
2009	10,971	7,145	18,116	102.6	65.4	83.7
2010	10,752	7,062	17,814	97.2	62.9	79.8
2011	10,952	7,089	18,041	95.8	61.5	78.4
2012	10,533	6,825	17,358	89.5	57.3	73.2
2013	10,959	6,872	17,831	90.4	56.0	72.9
2014	10,949	7,135	18,084	88.0	56.5	72.0
2015	11,255	7,321	18,576	88.3	56.5	72.1
2016	11,239	7,274	18,513	86.1	54.7	70.1
2017	11,273	7,384	18,657	83.8	53.7	68.5
2018	11,201	7,281	18,482	80.9	51.6	65.9
2019	11,394	7,466	18,860	80.8	51.6	65.9

Notes

1. Age-standardised to the 2001 Australian standard population and are expressed per 100,000 population.
2. Data have been adjusted for Victorian additional death registrations in 2019. A time series adjustment has been applied to causes of death to enable a more accurate comparison of mortality over time. When the time series adjustment is applied, deaths are presented in the year in which they were registered (i.e. removed from 2019 and added to 2017 or 2018). For more detail please refer to Technical note: Victorian additional registrations and time series adjustments in Causes of death, Australia, 2019 (ABS Cat. no. 3303.0).
3. See indicator specifications in the *NSFCC: reporting framework* (AIHW 2022) for a list of codes used for this analysis.

Source: AIHW analysis of National Mortality Database.

Table 44.2: Age-standardised death rates (deaths per 100,000) for potentially avoidable deaths from selected chronic conditions, people aged 0–74, by selected population characteristics and sex, 2019

Population characteristic	Age-standardised rate (per 100,000)		
Socioeconomic area	**Males**	**Females**	**Persons**
1 Lowest	116.1	73.6	94.6
2	94.0	59.0	76.2
3	74.7	46.9	60.5
4	63.4	42.8	52.8
5 Highest	50.1	33.7	41.7
Remoteness area			
Major cities	72.6	46.7	59.2
Inner regional	88.3	56.2	72.0
Outer regional	101.7	65.1	83.9
Remote	110.5	74.4	93.7
Very remote	169.0	140.6	156.3

Notes

1. Age-standardised to the 2001 Australian Standard Population and are expressed per 100,000 population.
2. In the 2019, 198 deaths from selected chronic conditions had unknown/missing area of usual residence, this includes deaths where place of usual residence was overseas, no fixed abode, offshore and migratory, and undefined. These deaths were excluded in the results.
3. For data by SEIFA, geography is based on area of usual residence—Statistical Local Area Level 2 (SA2)—classified according to into population-based quintiles according to the Socio-Economic Indexes for Areas (SEIFA) 2016 Index of Relative Socio-Economic Disadvantage (IRSD). Correspondence files are sourced from Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 (ABS cat. no. 2033.0.55.001).
4. For data by remoteness area, geography is based on area of usual residence. Deaths registered in 2019 have been aligned to geography based on 2016 Australian Statistical Geography Standard (ASGS) Remoteness Area structure. Correspondence files are sourced from Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016 (ABS cat. no. 1270.0.55.001).
5. Data have been adjusted for Victorian additional death registrations in 2019. A time series adjustment has been applied to causes of death to enable a more accurate comparison of mortality over time. When the time series adjustment is applied, deaths are presented in the year in which they were registered (i.e. removed from 2019 and added to 2017 or 2018). For more detail please refer to Technical note: Victorian additional registrations and time series adjustments in Causes of death, Australia, 2019.
6. See indicator specifications in the *NSFCC: reporting framework* (AIHW 2022) for a list of codes used for this analysis.

Source: AIHW analysis of National Mortality Database.

Table 44.3: Age-standardised death rates (deaths per 100,000) for potentially avoidable deaths from selected chronic conditions, people aged 0–74, by Indigenous status and year

	Age-standardised rate (per 100,000)	
Year	Indigenous Australians	Non-Indigenous Australians
2001	340.3	113.5
2002	329.3	107.9
2003	310.1	102.4
2004	298.1	98.7
2005	252.2	90.9
2006	286.2	87.4
2007	272.7	85.0
2008	247.0	84.8
2009	256.1	80.3
2010	238.0	76.1
2011	232.4	76.4
2012	236.7	71.4
2013	236.8	70.8
2014	222.9	68.8
2015	231.9	70.4
2016	219.6	68.0
2017	203.3	65.4
2018	211.5	62.9
2019	223.3	62.7

Notes

1. Age-standardised to the 2001 Australian standard population and are expressed per 100,000 population.
2. See indicator specifications in the *NSFCC: reporting framework* (AIHW 2022) for a list of codes used for this analysis.
3. Data are reported for 5 jurisdictions combined—New South Wales, Queensland, Western Australia, South Australia and the Northern Territory. These jurisdictions are considered to have adequate levels of Indigenous identification in mortality data.
4. Data have been adjusted for Victorian additional death registrations in 2019. A time series adjustment has been applied to causes of death to enable a more accurate comparison of mortality over time. When the time series adjustment is applied, deaths are presented in the year in which they were registered (i.e. removed from 2019 and added to 2017 or 2018). For more detail please refer to Technical note: Victorian additional registrations and time series adjustments in Causes of death, Australia, 2019 (ABS Cat. no. 3303.0).

Source: AIHW analysis of National Mortality Database.

Indicator 45: Fatal Burden of Disease (YLL) rate for selected chronic conditions

There were 29 years of life lost due to premature death from selected chronic conditions for every 1,000 people in Australia in 2018.

Why is this important?

Fatal burden is the impact of dying prematurely from disease or injury and makes up the fatal component of burden of disease analysis which measures the impact of different diseases or injuries on a population. It is measured using years of life lost (YLL) due to premature death (AIHW 2021). It is useful for comparisons across conditions, population groups, and/or over time.

What does this indicator measure?

YLL, which represents years of life lost, for selected chronic conditions:

- Coronary heart disease
- Back pain and problems
- Chronic obstructive pulmonary disease (COPD)
- Lung cancer
- Dementia
- Anxiety disorders
- Stroke
- Depressive disorders
- Asthma
- Diabetes
- Bowel cancer.

This list is based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information. YLL measures the years of life lost due to premature death, defined as dying before the global ideal life span at the age of death. YLL represent fatal burden.

What do the data show?

- In 2018, Australians lost 2.4 million years of healthy life due to dying prematurely from diseases and injury; more than a third of this (37%) was due to selected chronic conditions (865,200 YLL) (derived from Table 45.1). The contribution of selected chronic conditions to fatal burden has fallen over the 4 time points examined from 40% in 2003, 38% in 2011, and 37% in 2015 and 37% in 2018.

- The rate of fatal burden from selected chronic conditions has reduced since 2003. In 2018, there were29 years of life lost due to premature death from selected chronic conditions for every 1,000 people in Australia; down from 44 in 2003 (Figure 45.1).
- Males experienced a higher rate of fatal burden (36 YLL per 1,000 population) than females (23) (Table 45.2). Overall, rates of fatal burden from selected chronic conditions increased with increasing age (Figure 45.2).

Population groups

In 2018, the rate of fatal burden (YLL per 1,000 population) for selected chronic conditions:

- varied by socioeconomic area—those living in the lowest socioeconomic areas experienced the highest rates of fatal burden; this was true for both males and females (Figure 45.3). The rate of fatal burden (YLL) decreased with increasing socioeconomic position
- generally increased with increasing remoteness, rates were lowest for those living in *Major cities* and highest for those living in *Remote and very remote* areas for both males and females (overall the YLL was 46 per 1,000 people in *Remote and very remote* areas compared with 27 in *Major cities*) (Figure 45.4).

Data on burden among Aboriginal and Torres Strait Islander people was only available for 2003 and 2011 at the time of writing.

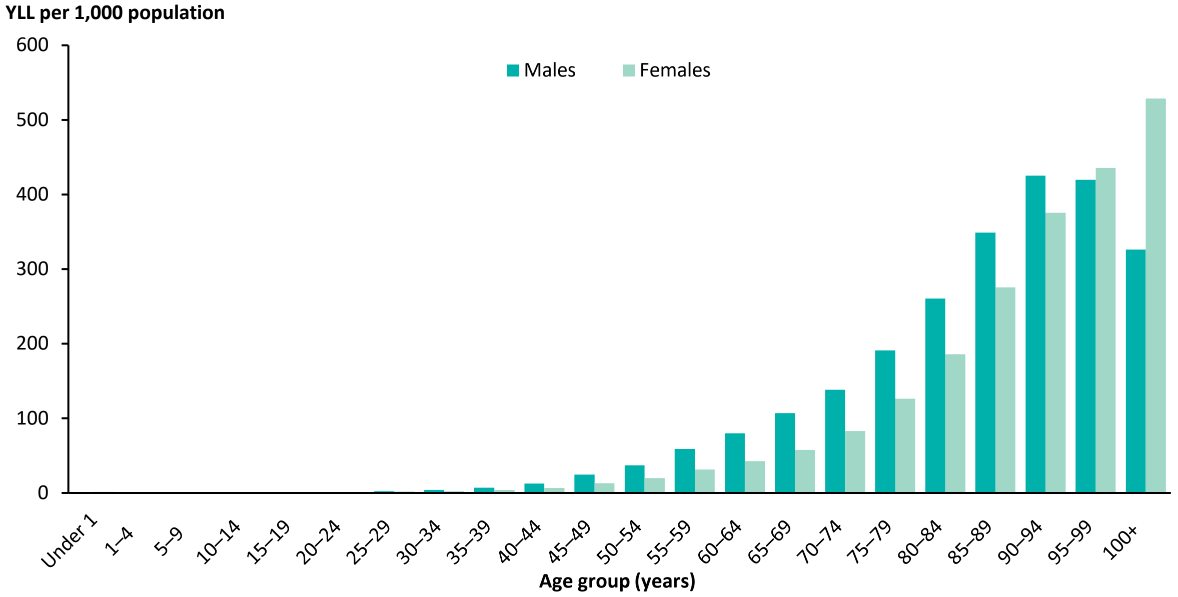
Among Indigenous Australians, in 2011, after adjusting for age:

- there were 101 years of life lost due to premature death from selected chronic conditions for every 1,000 Indigenous Australians in Australia; this has fallen since 2003 (119 YLL per 1,000) (Figure 45.5)
- males experienced a higher rate of fatal burden (121 YLL per 1,000 population) than females (84 per 1,000) (Figure 45.5), this is in contrast to non-fatal burden where males experienced a lower rate than females—see 'Indicator 24' for more information
- for Indigenous Australians, the rate of fatal burden for selected chronic conditions was 3.0 times as high as for non-Indigenous Australians (Table 45.7).

Figure 45.1: Age-standardised YLL rates (per 1,000 population), for selected chronic conditions, by sex and year

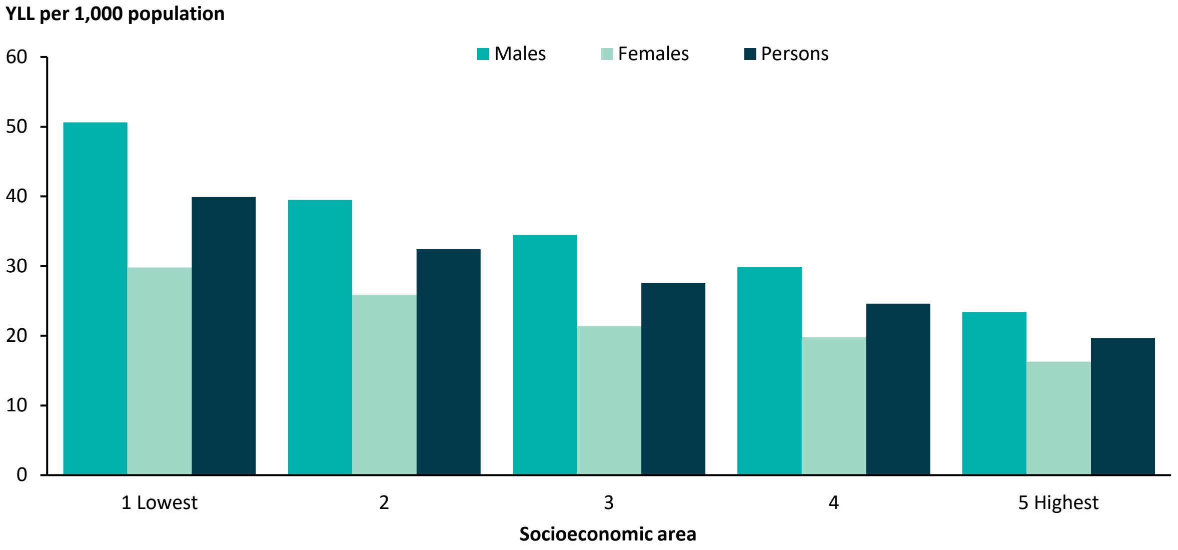
Notes
1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 45.2.
Source: AIHW analysis of the Australian Burden of Disease database, 2018.

Figure 45.2: YLL per 1,000 population, for selected chronic conditions, by sex and age, 2018



Notes
1. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
2. Data and additional notes for this figure are shown in Table 45.3.
Source: AIHW analysis of the Australian Burden of Disease database, 2018.

Figure 45.3: Age-standardised YLL rates (per 1,000 population), for selected chronic conditions, by socioeconomic area and sex, 2018

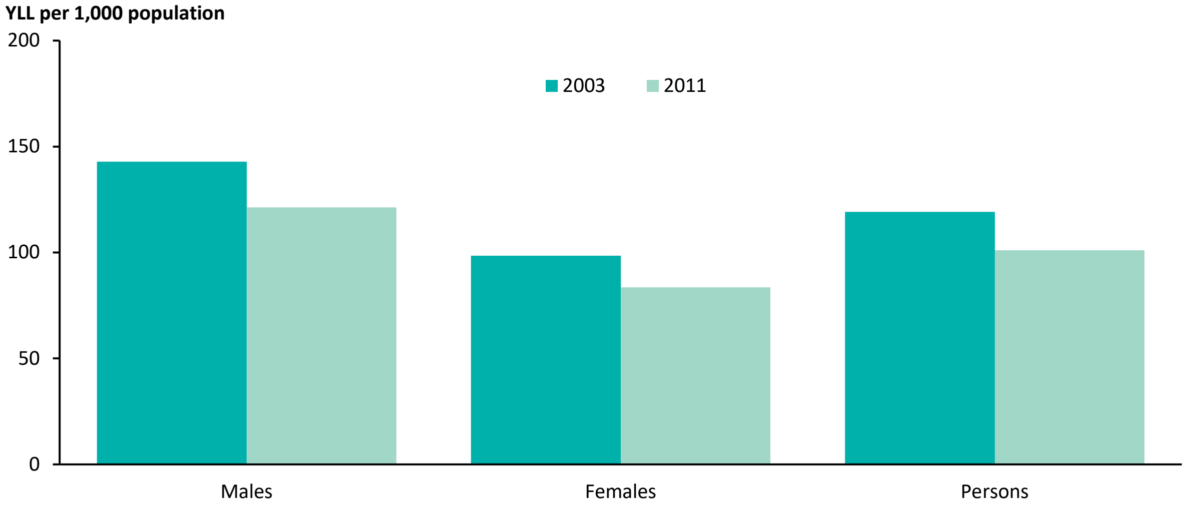


Notes
1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 45.4.
Source: AIHW analysis of the Australian Burden of Disease database, 2018.

Figure 45.4: Age-standardised YLL rates (per 1,000 population), for selected chronic conditions, by remoteness area and sex, 2018

Notes
1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Data and additional notes for this figure are shown in Table 45.5.
Source: AIHW analysis of the Australian Burden of Disease database, 2018.

Figure 45.5: Age-standardised YLL rates (per 1,000 population), for selected chronic conditions for Indigenous Australians, by sex and year



Notes
1. Rates calculated using Indigenous population estimates based on the 2011 Census.
2. Non-Indigenous population estimates were calculated by subtracting the Indigenous population estimates from the total Australian population estimates for the same years.
3. Age-standardised to the 2001 Australian standard population.
4. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the most chronic conditions responsible for the burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
5. Data and additional notes for this figure are shown in Table 45.7.
Source: AIHW analysis of the Australian Burden of Disease database, 2011.

Considerations

Burden of Disease metrics such as YLL are not routinely collected measures, they are sourced from the latest Australian Burden of Disease Study undertaken, which are produced intermittently (as subject to funding), require a major analytical process and complex modelling, and the disease-specific methods, evidence and underlying assumptions are constantly evolving.

There are multiple Australian Burden of Disease studies conducted in 1996, 2003, 2011, 2015 and 2018. The latest study (Australian Burden of Disease Study 2018) comprises comparable estimates for four time points: 2003, 2011, 2015 and 2018. Estimates from the Australian Burden of Disease Study 2018 cannot be directly compared with other Burden of Disease studies. Therefore, due to method revisions applied to historical estimates in the Australian Burden of Disease Database 2018, the sum of Indigenous and non-Indigenous YLL estimates will not equal the national estimates for 2003 and 2011. Results from the Aboriginal and Torres Strait Islander component of the ABDS 2018 were not available in time for inclusion in this report (AIHW 2022b).

This indicator should be considered in conjunction with 'Indicator 24' (Non-fatal Burden of Disease (YLD) for selected chronic conditions) and 'Indicator 25' (Disability-adjusted life years (DALY) for selected chronic conditions).

Data sources

AIHW Australian Burden of Disease Database 2018.

AIHW Australian Burden of Disease Database 2011.

For further details, refer to Appendix B.

References

AIHW 2021. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2018. Cat. no. 29. Canberra: AIHW.

https://www.aihw.gov.au/reports/burden-of-disease/abds-impact-and-causes-of-illness-and-death-in-aus/summary

AIHW 2022a. National Strategic Framework for Chronic Conditions: reporting framework. Cat. no. PHE 298. Canberra: AIHW.

AIHW 2022b. Australian Burden of Disease Study: impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2018. Cat. no. BOD 32. Canberra: AIHW

Supplementary tables

Table 45.1: Number of DALY, YLD and YLL, by year

		2003	2011	2015	2018
DALY	Selected chronic conditions[(a)]	1,623,642	1,720,395	1,786,668	1,855,401
	Total (all diseases)	4,167,640	4,529,106	4,816,797	4,983,519
YLD	Selected chronic conditions[(a)]	742,552	860,623	924,698	990,226
	Total (all diseases)	1,948,054	2,256,358	2,453,111	2,613,178
YLL	Selected chronic conditions[(a)]	881,090	859,772	861,970	865,175
	Total (all diseases)	2,219,586	2,272,748	2,363,686	2,370,341

(a) The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

Source: AIHW analysis of the Australian Burden of Disease Database, 2018.

Table 45.2: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and year

	DALY				YLD				YLL			
Sex	**2003**	**2011**	**2015**	**2018**	**2003**	**2011**	**2015**	**2018**	**2003**	**2011**	**2015**	**2018**
Males	92.8	78.9	73.4	70.9	36	35.4	34.7	35.1	56.8	43.5	38.7	35.8
Females	70.5	64.5	62.6	61.2	38.5	38.3	38.5	38.6	32.1	26.2	24.2	22.6
Persons	80.8	71.3	67.8	65.8	37.3	36.9	36.6	36.9	43.6	34.4	31.1	28.9

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

Source: AIHW analysis of the Australian Burden of Disease Database, 2018.

Table 45.3: Age-specific DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, 2018

	DALY		YLD		YLL	
Age group (years)	**Males**	**Females**	**Males**	**Females**	**Males**	**Females**
Under 1	1.7	1.8	0.6	0.4	1.1	1.4
1–4	5.6	4.1	5.3	3.8	0.3	0.3
5–9	13.1	10.2	12.7	9.8	0.4	0.4
10–14	16.7	16.0	16.5	15.7	0.2	0.3
15–19	18.5	23.2	17.8	22.7	0.8	0.5
20–24	21.2	30.4	20.2	30.0	1.0	0.4
25–29	26.8	34.7	24.5	32.9	2.3	1.8
30–34	32.2	37.4	27.9	34.9	4.3	2.5
35–39	39.6	41.3	32.6	37.4	7.0	3.9
40–44	48.1	46.8	35.6	40.0	12.5	6.8
45–49	61.8	56.0	37.1	42.9	24.7	13.1
50–54	79.3	66.1	42.0	46.1	37.2	20.0
55–59	100.6	77.7	41.8	46.2	58.8	31.5
60–64	135.3	98.7	55.1	55.9	80.2	42.8
65–69	172.8	115.6	65.5	57.9	107.2	57.7
70–74	215.8	155.8	77.6	72.6	138.2	83.2
75–79	278.7	211.2	87.8	85.0	191.0	126.2
80–84	362.3	299.6	101.8	113.4	260.5	186.1
85–89	483.9	432.9	134.8	157.4	349.1	275.5
90–94	621.2	630.3	195.7	254.9	425.5	375.4
95–99	690.9	729.9	271.2	294.4	419.8	435.6
100+	697.7	934.1	371.5	405.3	326.2	528.8

Note: The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).

Source: AIHW analysis of the Australian Burden of Disease Database, 2018.

Table 45.4: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and socioeconomic area, 2018

Sex	Socioeconomic area	DALY	YLD	YLL
Males	1 Lowest	90.5	39.9	50.6
	2	76.5	37.0	39.5
	3	70.4	35.9	34.5
	4	64.0	34.1	29.9
	5 Highest	52.0	28.5	23.4
Females	1 Lowest	74.2	44.4	29.8
	2	67.0	41.1	25.9
	3	61.5	40.1	21.4
	4	57.9	38.2	19.8
	5 Highest	46.8	30.5	16.3
Persons	1 Lowest	82.0	42.2	39.9
	2	71.6	39.2	32.4
	3	65.7	38.1	27.6
	4	60.8	36.2	24.6
	5 Highest	49.3	29.6	19.7

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Socioeconomic areas are quintiles of Socio-Economic Indexes for Areas 2011 (SEIFA 2011), specifically the Index of Relative Socio-Economic Disadvantage (IRSD).

Source: AIHW analysis of the Australian Burden of Disease Database, 2018.

Table 45.5: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by sex and remoteness area, 2018

Sex	Remoteness area	DALY	YLD	YLL
Males	Major cities	68.1	35.3	32.8
	Inner regional	75.4	35.5	39.9
	Outer regional	77.2	33.4	43.8
	Remote and very remote	91.2	34.2	57.0
Females	Major cities	59.9	39.1	20.8
	Inner regional	65.3	38.9	26.4
	Outer regional	63.8	36.5	27.4
	Remote and very remote	71.7	38.6	33.1
Persons	Major cities	63.8	37.3	26.5
	Inner regional	70.2	37.3	32.9
	Outer regional	70.6	35.0	35.6
	Remote and very remote	82.1	36.4	45.8

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Remoteness area uses Australian Statistical Geography Standard Remoteness (ASGS 2016) Structure.

Source: AIHW analysis of the Australian Burden of Disease Database, 2018.

Table 45.6: Number of DALY, YLD and YLL for selected chronic conditions, by Indigenous status, by sex and year

	Indigenous Australians					
	DALY		YLD		YLL	
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	25,968	30,982	9,906	13,534	16,062	17,448
Females	24,055	31,382	13,297	18,571	10,759	12,811
Persons	**50,024**	**62,363**	**23,203**	**32,105**	**26,821**	**30,258**
	Non-Indigenous Australians					
	DALY		**YLD**		**YLL**	
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	827,371	845,830	331,588	374,383	495,782	471,448
Females	709,487	775,577	358,093	425,090	351,395	350,487
Persons	**1,536,858**	**1,621,407**	**689,681**	**799,472**	**847,177**	**821,935**

Notes

1. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
2. Due to method revisions applied to historical estimates in the Australian Burden of Disease Database 2018, the sum of Indigenous and non-Indigenous YLD and DALY estimates will not equal the national estimates for 2003 and 2011.

Source: AIHW analysis of the Australian Burden of Disease Database, 2011.

Table 45.7: Age-standardised DALY, YLD and YLL rates (per 1,000 population) for selected chronic conditions, by Indigenous status, by sex and year

	Indigenous Australians					
	DALY		YLD		YLL	
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	200.4	182.6	57.4	61.3	142.9	121.3
Females	168.6	159.0	70.1	75.4	98.5	83.6
Persons	183.1	169.5	63.9	68.5	119.2	101.1
	Non-Indigenous Australians					
	DALY		**YLD**		**YLL**	
	2003	**2011**	**2003**	**2011**	**2003**	**2011**
Males	90.6	76.0	35.5	34.0	55.2	42.0
Females	66.0	61.1	35.0	35.9	31.0	25.2
Persons	77.5	68.1	35.3	35.0	42.2	33.2

Notes

1. Age-standardised to the 2001 Australian standard population.
2. The selected chronic conditions are: coronary heart disease, back pain and problems, COPD, lung cancer, dementia, anxiety disorders, stroke, depressive disorders, asthma, diabetes, and bowel cancer (based on the chronic conditions responsible for the most burden in Australia in 2011; refer to the *NSFCC: reporting framework* (AIHW 2022a) for more information).
3. Rates calculated using Indigenous population estimates based on the 2011 Census.
4. Non-Indigenous population estimates were calculated by subtracting the Indigenous population estimates from the total Australian population estimates for the same years.

Source: AIHW analysis of the Australian Burden of Disease Database, 2011.

Appendix A: Methods and conventions

Age-standardisation

This is a method of removing the influence of age when comparing populations with different age structures—either for different populations at the same time, or for the same population at different times. It is based on the use of standard population, which in this report is the Australian estimated resident population as at 30 June 2001. This report uses direct age standardisation, which is generally used when there are large populations under study and the age-specific rates are reliable. Direct age-standardised rates are presented for most incidence, prevalence, hospitalisations and deaths data.

Age groups used to standardise the data are in 5-year age groupings except for where specified in supplementary tables.

Classifications used

Remoteness

Each state and territory is divided into several regions based on their relative accessibility to goods and services (such as to general practitioners, hospitals and specialist care) as measured by road distance. These regions are based on the Accessibility/Remoteness Index of Australia and defined as Remoteness Areas by either the Australian Standard Geographical Classification (ASGC) (before 2011) or the Australian Statistical Geographical Standard (ASGS) (from 2011 onwards) in each Census year. The five Remoteness Areas are *Major cities, Inner regional, Outer regional, Remote* and *Very remote*.

See notes under supplementary tables included in each indicator for information about the ASGS used for the analysis of each indicator.

Index of Relative Socio-economic Disadvantage (IRSD)

The IRSD is one of four Socio-Economic Indexes for Areas developed by the ABS. This index is based on factors such as average household income, education levels and unemployment rates. The IRSD is not a person-based measure; rather, it is an area-based measure of socioeconomic disadvantage in which small areas of Australia are classified on a continuum from disadvantaged to affluent. This information is used as a proxy for the socioeconomic disadvantage of people living in those areas and may not be correct for each person in that area.

See notes under supplementary tables included in each indicator section for information about the socioeconomic classifications used for the analysis of each indicator.

Data subject to revision

This report draws data from a range of administrative and survey data sets, all of which are subject to change.

The latest version of a data set has been used wherever possible. In cases where the data change frequently, the date of the release is noted. Revisions and changes in coverage should be considered when interpreting changes over time.

Use of icons

Icons and infographics are visual representations of data that are intended to present complex information quickly and clearly. Generally, these graphics simplify information so it can be easily understood and, as such, carry a risk of generalising or stereotyping. This is not the intention of the AIHW, which endeavours to use icons only to improve the clarity and accessibility of information.

Terms

The data in this report come from a range of sources including surveys and administrative collections, which may include a mix of sex and gender. This report uses the terms ‘men and women’ when referring to people aged 18 and over and ‘males and females’ when referring to people of all ages. Please note that some participants may not identify with these terms.

Appendix B: Data sources

Australian Bureau of Statistics (ABS)

ABS Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS) 2012–13, (includes the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), National Aboriginal and Torres Strait Islander Nutrition and Physical Activity Survey & National Aboriginal and Torres Strait Islander Health Measures Survey components)

The AHS includes a nationally representative sample of around 13,000 Aboriginal and Torres Strait Islander people. As part of the AHS, the AATSIHS which commenced in April 2012 collected information from the Aboriginal and Torres Strait Islander population in non-remote areas and remote areas, including discrete communities. It combines the existing NATSIHS together with two new elements - a National Aboriginal and Torres Strait Islander Nutrition and Physical Activity Survey (NATSINPAS) and a National Aboriginal and Torres Strait Islander Health Measures Survey (NATSIHMS).

Further information on the AATSIHS 2012–13 can be found at the ABS website: http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4727.0.55.002Main+Features12012-13?OpenDocument

ABS Australian Demographic Statistics

A quarterly release that contains the most recent estimates of the resident populations (ERP) of Australia. It is based on the most recent Census, with various adjustments for births, deaths and overseas and interstate migration.

Further information on ERPs can be found at the ABS website: http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3101.0Explanatory%20Notes1Sep%202018?OpenDocument

ABS Australian Health Survey (AHS) 2011–13, (includes the National Health Survey, Health Measures Survey & National Nutrition and Physical Activity Survey components 2011–12)

The AHS 2011–13 is the largest and most comprehensive household health survey ever conducted in Australia, with a sample of around 20,500 people. The AHS collected new information on nutrition and physical activity, as well as the first national biomedical information collection. This survey was designed to collect a range of information from Australians about health related issues, including health status, risk factors, actions, and socioeconomic circumstances; health-related aspects of people's lifestyles, such as smoking, measured height, weight and blood pressure, diet, exercise and physical activity and alcohol consumption; use of health services such as consultations with health practitioners and actions people have recently taken for their health; and demographic and socioeconomic characteristics. The AHS does not include *Very remote* areas of Australia so gaps exist in the availability and coverage of health data in very remote areas, and in information available at local level.

Further information on the AHS 2011–13 can be found at the ABS website: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4363.0.55.001Chapter2002011-13

ABS Labour Force Survey (LFS) (including labour force supplementary surveys) 2019

The LFS is monthly survey based on a multi-stage area sample of private dwellings (currently approximately 26,000 houses, flats, etc.), a list sample of non-private dwellings and covers approximately 0.32% of the civilian population of Australia aged 15 years and over. Data is available by labour force status (i.e. employed, unemployed and not in the labour force) and age, sex, social marital status, state or territory of residence, full-time educational attendance, plus a range of other variables related to the employed/unemployed.

Further information on the LFS 2019 can be found at the ABS website: http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6102.0.55.001Main+Features53Feb%202018?OpenDocument

ABS National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) 2018–19

The NATSIHS was last conducted in 2018–19 with a sample of approximately 10,500 Aboriginal and Torres Strait Islander people living in private dwellings across Australia. It is conducted in remote and non-remote areas throughout Australia, including discrete communities, and is designed to collect a range of information from Indigenous Australians about health-related issues, including health status, risk factors and actions, and socioeconomic circumstances.

Further information on the NATSIHS 2018–19 can be found at the ABS website: https://www.abs.gov.au/methodologies/national-aboriginal-and-torres-strait-islander-health-survey-methodology/2018-19#explanatory-notes

ABS National Aboriginal and Torres Strait Islander Social Survey (NATSISS) 2014–15

The NATSISS was last conducted in 2014–15 with a sample of 11,178 Aboriginal and Torres Strait Islander people living in private dwellings across Australia. The NATSISS is a six-yearly multidimensional social survey which provides broad, self-reported information across key areas of social interest for Aboriginal and Torres Strait Islander people, primarily at the national level and by remoteness. The survey collected information from the Aboriginal and Torres Strait Islander population in non-remote areas and remote areas, including discrete communities.

Further information on the NATSISS 2014–15 can be found at the ABS website: http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4714.0Explanatory%20Notes12014-15?OpenDocument

ABS National Health Survey (NHS) 2017–18

This NHS is a household survey that is a key source of information on the health of Australians, with a sample size of around 21,300 people. The survey provides data such as prevalence long-term health conditions; health risk factors such as smoking, measured height weight and blood pressure, diet, exercise and alcohol consumption; and demographic and socioeconomic characteristics. Surveys are usually conducted every 3 years with the latest survey used in this report being 2017–18. Previous surveys were conducted in 1989–90, 1995, 2001, 2004–05, 2007–08, 2011–12 (as part of the Australian Health Survey) and 2014–15. Health surveys conducted by the ABS in 1977–78 and 1983, while not part of the NHS series, also collected similar information. The NHS does not include *Very remote* areas of Australia, so gaps exist in the availability and coverage of health data in very remote areas, and in information available at local level. It also excludes non-private dwellings such as hotels, motels, hospitals, nursing homes and short-stay caravan parks so may impact estimates for older people and those with long-term conditions that require periods of hospitalisation or long-term care.

Further information on the NHS 2017–18 can be found at the ABS website: http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4364.0.55.001Explanatory%20Notes12017-18?OpenDocument

ABS National Survey of Mental Health and Wellbeing 2007

The survey provides information on the prevalence of selected lifetime and 12-month mental disorders by three major disorder groups: anxiety disorders (e.g. Social Phobia), Affective disorders (e.g. Depression) and Substance Use disorders (e.g. Alcohol Harmful Use). It also provides information on the level of impairment, the health services used for mental health problems, physical conditions, social networks and caregiving, as well as demographic and socio-economic characteristics. The survey is conducted from approximately 8,800 Australians aged 16-85 years.

Further information on the National Survey of Mental Health and Wellbeing 2007 can be found at the ABS website: http://www.abs.gov.au/ausstats/abs@.nsf/mf/4326.0

ABS Survey of Education and Work (SEW) 2019

The SEW is an annual collection, which was most recently conducted throughout Australia as a supplement to the monthly Labour Force Survey. The survey provides annual information on a range of key indicators of educational participation and attainment of persons aged 15–74 years, along with data on people's transition between education and work. The annual time series allows for ongoing monitoring of the level of education of Australia's population including participation in current and previous study; type of educational institution attended; highest year of school completed; level and field of highest non-school qualification; characteristics of people's transition between education and work; and selected characteristics of apprentices and trainees.

Further information on the SEW can be found at the ABS website: https://www.abs.gov.au/ausstats/abs@.nsf/mf/6227.0

ABS Survey of Income and Housing (SIH) 2017–18

The SIH provides detailed estimates of household income, wealth and expenditure collected from individual households. These estimates are used to analyse the distribution of economic resources and expenditure across the population, and to compare the financial resources available to various population subgroups. The SIH is conducted biennially and enumerated over a 12-month period - Estimates for 2003–04, 2005–06, 2007–08, 2009–10, 2011–12, 2013–14 and 2015–16 (SIH years) relates to 'current' financial year income which is based on estimates of usual income being received at the time the data were collected from respondents.

Further information on the SIH can be found at the ABS website:
https://www.abs.gov.au/ausstats/abs@.nsf/mf/6523.0

ABS Patient Experience Survey (PEx) 2018–19

The Patient Experience Survey (PEx) is conducted annually by the Australian Bureau of Statistics (ABS) and collects national data on access and barriers to a range of health care services, including general practitioners, medical specialists and dental professionals, imaging and pathology tests, and hospital/emergency visits. Data is also collected on aspects of communication between patients and health professionals.

Further information on the PEx can be found at the ABS website:
https://www.abs.gov.au/ausstats/abs@.nsf/mf/4839.0

ABS Adult Literacy and Life Skills Survey (ALLS) 2006

This Adult Literacy and Life Skills Survey (ALLS) analyses the relationship between health literacy skills and a range of socio-demographic factors The ALLS is the second survey of its type to be conducted in Australia.

Further information on the ALLS 2006 can be found at the ABS website:
https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4228.0Main+Features12006%20(Reissue)?OpenDocument

ABS Health Literacy Survey (HLS) 2018

The Health Literacy Survey (HLS) was conducted by the ABS in 2018. The sample for the HLS was respondents aged 18 years and over who had already participated in the National Health Survey (NHS 2017–18). These respondents agreed to be contacted for further ABS surveys and had provided their contact details. The HLS was conducted from January 2018 to August 2018 with 5,790 fully responding adults.

Further information on the HLS can be found at the ABS website:
https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4364.0.55.014Main+Features12018?OpenDocument.

Australian Institute of Health and Welfare (AIHW)

AIHW Australian Burden of Disease Study (ABDS)

The latest ABDS 2018 provides Australian-specific burden of disease estimates for the Australian population for 2003, 2011, 2015 and 2018. The study aims to measure the combined impact of dying prematurely, as well as living with disease. More than merely counting deaths or disease incidence and prevalence, burden of disease analysis takes into account age at death and severity of disease for all diseases, conditions and injuries, in a consistent and comparable way. The ABDS uses and adapts the methods of global studies to produce estimates that are more relevant to the Australian health policy context.

Burden of disease estimates for the Aboriginal and Torres Strait Islander population are currently available for 2011 and 2003 from the ABDS 2011 study. Detailed estimates for 2018 for Indigenous and non-Indigenous Australians are planned for release in early 2022. Note that results cannot be compared across studies due to changes in methodology and data sources.

Further information on the ABDS can be found at the AIHW website: https://www.aihw.gov.au/about-our-data/our-data-collections/australian-burden-of-disease

AIHW Australian Cancer Database (ACD)

The ACD contains data about all new cases of cancer diagnosed in Australia since 1982, excluding basal and squamous cell carcinomas of the skin. Cancer is a notifiable disease in all Australian states and territories. Relevant legislation requires certain individuals and organisations to notify all new cases of cancer to the jurisdiction's central cancer registry. These registries supply data annually to the AIHW, which cleans and standardises it and notifies the registries of inter-state duplicates.

Further information on the ACD can be found at the AIHW website: https://www.aihw.gov.au/about-our-data/our-data-collections/australian-cancer-database

AIHW National Hospital Morbidity Database (NHMD)

The NHMD a compilation of episode-level records from admitted patient morbidity data collection systems in Australian public and private hospitals. The scope of the NHMD is episodes of care for admitted patients in all public and private acute and psychiatric hospitals, free-standing day hospital facilities and alcohol and drug treatment centres in Australia. Hospitals operated by the Australian Defence Force, correctional authorities and in Australia’s offshore territories may also be included. The hospital separations data do not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments. Patients in these settings may be admitted subsequently, with the care provided to them as admitted patients being included in the NHMD.

Further information on the NHMD can be found at the AIHW website:
https://www.aihw.gov.au/about-our-data/our-data-collections/national-hospitals

AIHW National Mortality Database (NMD)

The AIHW NMD contains cause of death information provided by the registries of births, deaths and marriages and the National Coronial Information System, and coded by the ABS, for deaths since 1964. Registration of deaths is the responsibility of each state and territory's Registry of Births, Deaths and Marriages. These data are then collated and coded by the ABS and are maintained at the AIHW in the NMD.

The AIHW use these data in various reporting activities to monitor the health of Australians and to inform policy and planning. Summaries of causes of death, including trends and deaths among different population groups, can be derived from this long-term dataset.

Further information on the NMD can be found at the AIHW website:
https://www.aihw.gov.au/about-our-data/our-data-collections/national-mortality-database

AIHW National Perinatal Data Collection (NPDC)

The NPDC is a national population-based cross-sectional collection of data on pregnancy and childbirth. The data are based on births reported to the perinatal data collection in each state and territory in Australia. Midwives and other birth attendants, using information obtained from mothers and from hospital or other records, complete notification forms for each birth. A standard de-identified extract is provided to the Australian Institute of Health and Welfare (AIHW) on an annual basis to form the NPDC.

Further information on the NPDC can be found at the AIHW website:
https://www.aihw.gov.au/about-our-data/our-data-collections/national-perinatal-data-collection

Radiotherapy Waiting Times National Minimum Data Set (RWT NMDS)

The RWT NMDS is a collation of records related to courses of radiotherapy that began in a reference period. The data collected includes administrative details, patient demographic characteristics and some clinical information. The database was primarily designed to enable reporting of waiting times for radiotherapy services which are calculated as the time between the patient's ready-for-care date and the date of the first megavoltage external beam radiotherapy treatment.

Further information on the RWT NMDS can be found at the AIHW website:
https://www.aihw.gov.au/about-our-data/our-data-collections/national-radiotherapy-waiting-times-2015-16

Other data sources

Australian Child and Adolescent Survey of Mental Health and Wellbeing 2013–14

The Australian Child and Adolescent Survey of Mental Health and Wellbeing provides information on the prevalence of mental disorders in children and adolescents in Australia. The first national survey of the mental health of children and adolescents was conducted between 1998 and 2000. The second survey, conducted between 2013 and 2014, involved interviews with more than 6,000 Australian families, and examined the emotional and behavioural development of children and adolescents aged between 4 and 17 years.

Further information can be found at the Australian Government Department of Health website: https://www.health.gov.au/resources/publications/the-mental-health-of-children-and-adolescents

Australian Immunisation Register (AIR)

The Australian Immunisation Register (AIR) is a national register that records all vaccines given to all people in Australia. The AIR includes vaccines given under the National Immunisation Program; through school programs; and privately, such as for flu or travel. In June 2018, states and territories entered new HPV immunisation episodes directly to the AIR and all historical episodes have been transferred from the HPV Register.

Further information can be found at the Australian Government Department of Human Services website:
https://www.humanservices.gov.au/individuals/services/medicare/australian-immunisation-register/what-register

Australian Secondary Students’ Alcohol and Drug Survey (ASSAD) 2017

The ASSAD is a triennial national survey of students’ use of licit and illicit substances. The ASSAD study was designed to provide estimates of the current prevalence of use of tobacco, alcohol and other substances among Australian school students aged 12–17 years, and to examine trends in their use of these substances. The sample for ASSAD is based on secondary schools throughout Australia so teenagers who are not at school are not included in the survey. The survey has been conducted in 1984, 1987, 1990 and 1993 (alcohol and tobacco only), and 1996, 1999, 2002, 2005, 2008, 2011, 2014 and 2017 (including over the counter and illicit substances).

Further information can be found at the Australian Government Department of Health website: https://beta.health.gov.au/resources/publications/secondary-school-students-use-of-tobacco-alcohol-and-other-drugs-in-2017

Australia & New Zealand Dialysis and Transport Registry (ANZDATA)

The Australia and New Zealand Dialysis and Transplant Registry (ANZDATA) collects data on the incidence, prevalence and outcome of dialysis and transplant treatment for patients with end-stage renal failure. ANZDATA is funded by the Australian Organ and Tissue Donation and Transplantation Authority, New Zealand Ministry of Health and Kidney Health Australia. Operations of the Registry are based at the South Australian Health and Medical Research Institute (SAHMRI).

Further information on the ANZDATA Registry can be found at the ANZDATA website: https://www.anzdata.org.au/anzdata/

National HPV Vaccination Program

The National HPV Vaccination Program Register (HPV Register) supported the National HPV Vaccination Program from 2008 to 2018 by collecting information about HPV vaccine doses given across Australia. The National HPV Vaccination Program Register closed on 31 December 2018 and all records have been transferred to the Australian Immunisation Register (AIR).

Further information on the National HPV Vaccination Program can be found at the HPV Register website: https://www.hpvvaccine.org.au/the-hpv-vaccine/hpv-register.aspx

National Bowel Cancer Screening Program (NBCSP)

The NBCSP aims to reduce illness and death from bowel cancer through early detection or prevention of the disease and is managed by the Department of Health in partnership with state and territory governments, the Department of Human Services (2006 to November 2019), and the National Cancer Screening Register (NCSR, November 2019 to present).

Further information on the NBCSP can be found at the Department of Health website: http://www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/bowel-screening-1

National Cancer Screening Register data (NCSR)

The National Cancer Screening Register (NCSR) is the source of National Cervical Screening Program (NCSP) data in Australia, following the migration and consolidation of state and territory cervical screening register data. This change may impact comparisons with previous NCSP reporting, particularly for people who screen in a different state or territory to which they reside.

The NCSR is intended to be a near-complete record of all cervical tests, including HPV, cytology, colposcopy and histology. Pathology labs and colposcopists are required under the NCSR Rules 2017 to notify all cervical test data to the NCSR within 14 days. Any tests data not notified to the NCSR will not be included in the NCSR or in the data included in this report. Cervical tests for COMPASS participants are not included in the NCSR because, as a clinical trial, notification of COMPASS data is an exemption under the NCSR Rules 2017. This means that any cervical tests conducted as part of the COMPASS trial are not included in the NCSR, or in the data in this report. This affects Victoria more than other jurisdictions.

The Data Quality Statement for National Cancer Screening Program data can be found on the AIHW website at https://meteor.aihw.gov.au/content/index.phtml/itemId/729622.

Department of Health National Health Workforce Data Set (NHWDS)

The NHWDS is a combination of registration and survey data collected through the registration renewal process for registered health practitioners.

Further information on the NHWDS can be found at: https://www1.health.gov.au/internet/main/publishing.nsf/Content/Health%20Workforce-2

State and Territory admitted health care & mental health care data 2015–16

The provision of mental health care services is the responsibility of the health authorities in each of the states and territories.

The state/territory health authorities receive mental health care data from public sector community health services. Data are supplied by state/territory health departments to the AIHW on an annual basis, in the form of a bespoke data request.

See link for further information:

https://meteor.aihw.gov.au/content/index.phtml/itemId/402135

State and territory BreastScreen register data

Data were provided from the BreastScreen register in each state and territory, according to definitions and data specifications in the BreastScreen Australia data dictionary version 1.2. These data are compiled into national figures by the AIHW to allow national monitoring of BreastScreen Australia.

The Data Quality Statement for BreastScreen Australia data can be found on the AIHW website at https://meteor.aihw.gov.au/content/index.phtml/itemId/710033.

State and territory cervical screening register data

Data were provided from the cervical screening register that existed in each state and territory, according to definitions and data specifications in the National cervical cancer prevention data dictionary version 1: working paper. These data were compiled into national figures by the AIHW to allow national monitoring of the National Cervical Screening Program.

The Data Quality Statement for cervical screening data can be found on the AIHW website at http://meteor.aihw.gov.au/content/index.phtml/itemId/699940.

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Abbreviations

AATSIHS	Australian Aboriginal and Torres Strait Islander Health Survey
ABDS	Australian Burden of Disease Study
ABS	Australian Bureau of Statistics
ACD	Australian Cancer Database
ACT	Australian Capital Territory
ACHI	Australian Classification of Health Interventions
ADHD	attention-deficit/hyperactivity disorder
AHMAC	Australian Health Ministers’ Advisory Council
AHS	Australian Health Survey
AI	Adequate intake
AIR	Australian Immunisation Register
AIHW	Australian Institute of Health and Welfare
ALLS	Adult Literacy and Life Skills Survey
ANZDATA	Australia and New Zealand Dialysis and Transplant Registry
ARIA+	Accessibility/Remoteness Index of Australia
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
ASSAD	Australian Secondary Students’ Alcohol and Drug Survey
BMI	body mass index
BOD	burden of disease
CDs	Collection Districts
CHD	coronary heart disease
CI	confidence interval
CKD	chronic kidney disease
COAG	Council of Australian Governments
COPD	chronic obstructive pulmonary disease
DALY	disability-adjusted life year
ERP	estimated resident population
ESKD	end-stage kidney disease
FTE	full-time equivalent
FTE rate	full-time equivalent per 100,000 population
GISCA	National Centre for Social Application of Geographic Information Systems

GP	general practitioner
HbA1c	A1c or glycated haemoglobin test
HDL	high-density lipoproteins
HLS	Health Literacy Survey
HPV	human papillomavirus
HSVD	heart, stroke and vascular disease
ICD	International Classification of Diseases
ICD-10	International Statistical Classification of Diseases and Related Health Problems, Tenth revision
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, Tenth revision, Australian Modification
IFG	impaired fasting glucose
IGT	impaired glucose tolerance
IHMHS	Intergenerational Health and Mental Health Study
IRSD	Index of Relative Socio-Economic Disadvantage
K10	Kessler Psychological Distress Scale
LDL	low-density lipoproteins
LFS	Labour Force Survey
MADIP	Multi-Agency Data Integration Project
MBS	Medicare Benefits Schedule
NATSIHMS	National Aboriginal and Torres Strait Islander Health Measures Survey
NATSINPAS	National Aboriginal and Torres Strait Islander Nutrition and Physical Activity Survey
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
NBCSP	National Bowel Cancer Screening Program
NCD	noncommunicable disease
NCSP	National Cervical Screening Program
NCSR	National Cancer Screening Register
NDSHS	National Drug Strategy Household Survey
NHMD	National Hospital Morbidity Database
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
NHWDS	National Health Workforce Data Set

NIHSI	National Integrated Health Service Information
NIHSI AA	National Integrated Health Service Information Analysis Asset
NMD	National Mortality Database
NPDC	National Perinatal Data Collection
NRV	Nutrient Reference Values
NSFCC	National Strategic Framework for Chronic Conditions
NSW	New South Wales
NT	Northern Territory
OECD	Organisation for Economic Cooperation and Development
PEx	Patient Experience Survey
PPH	potentially preventable hospitalisation
PTSD	post-traumatic stress disorder
RWT NMDS	Radiotherapy Waiting Times National Minimum Data Set
Qld	Queensland
SA	South Australia
SA1	Statistical Area level 1
SA2	Statistical Area level 2
SA3	Statistical Area level 3
SDT	Suggested Dietary Target
SEIFA	Socio-Economic Indexes for Areas
SEIFA IRSD	Socio-Economic Indexes for Areas Index of Relative Socio-economic Disadvantage
SEW	Survey of Education and Work
SIH	Survey of Income and Housing
UL	Upper level of intake
WA	Western Australia
WHO	World Health Organization
YLD	years lived with disability
YLL	years of life lost

Symbols

—	nil or rounded to zero
. .	not applicable
n.a.	data not available
n.p.	not publishable because of small numbers, confidentiality or other concerns about the quality of the data
n.y.a.	not yet available

Glossary

abnormal blood lipid levels: Abnormal levels of fats in the blood, such as cholesterol or **triglycerides**. Here it has been defined as total cholesterol ≥5.5 mmol/L, LDL cholesterol ≥3.5 mmol/L, HDL cholesterol <1.0 mmol/L in men or <1.3 mmol/L in women, triglycerides ≥2mmol/L, or use of lipid-modifying medication.

Aboriginal or Torres Strait Islander: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also **Indigenous.**

absolute cardiovascular disease risk: A measure of the overall risk of cardiovascular disease rather than considering individual risk factors, such as cholesterol or blood pressure, in isolation.

Accessibility/Remoteness Index of Australia: Classifies the level of accessibility to goods and services (such as to general practitioners, hospitals and specialist care) based on proximity to these services (measured by road distance).

acute: A term used to describe something that comes on sharply and is often brief, intense and severe.

Adequate intake (AI): The average daily nutrient intake level based on observed or experimentally determined approximations or estimates of nutrient intake by a group (or groups) of apparently healthy people that are assumed to be adequate.

age-specific rate: A rate for a specific age group. The numerator and denominator relate to the same age group.

age standardisation: A way to remove the influence of age when comparing populations with different **age structures**. This is usually necessary because the rates of many diseases vary strongly (usually increasing) with age. The age structures of the different populations are converted to the same 'standard' structure, and then the disease rates that would have occurred with that structure are calculated and compared.

age structure: The relative number of people in each age group in a population.

allergic rhinitis: A bodily response triggered by an allergic reaction. The symptoms may include a runny or blocked nose and/or sneezing and watery eyes. Also known as 'hay fever'.

anaemia: A condition in which the body lacks healthy red blood cells that carry oxygen to the body's tissues.

angina: Temporary chest pain or discomfort when the heart's own blood supply is inadequate to meet extra needs, as in physical activity.

antenatal: The period covering conception up to the time of birth. Synonymous with prenatal.

antenatal care: A planned visit between a pregnant woman and a midwife or doctor to assess and improve the wellbeing of the mother and baby throughout pregnancy. It does not include visits where the sole purpose is to confirm the pregnancy. Also known as an antenatal visit.

anxiety disorders: A group of mental disorders marked by excessive feelings of apprehension, worry, nervousness and stress. Includes generalised anxiety disorder, obsessive-compulsive disorder, panic disorder, **post-traumatic stress disorder** and various phobias.

arthritis: A group of disorders for which there is **inflammation** of the joints—which can then become stiff, painful, swollen or deformed. The two main types of arthritis are **osteoarthritis** and **rheumatoid arthritis.**

associated cause(s) of death: A cause(s) listed on the Medical Certificate of Cause of Death, other than the **underlying cause of death**. They include the immediate cause, any intervening causes, and conditions that contributed to the death but were not related to the disease or condition causing death. See also **cause of death.**

asthma: A common, chronic inflammatory disease of the air passages that presents as episodes of wheezing, breathlessness and chest tightness due to widespread narrowing of the airways and obstruction of airflow.

asthma–COPD overlap: A condition where adults have features of both asthma and **chronic obstructive pulmonary disease (COPD).**

atrial fibrillation: An uneven and fast heartbeat.

Attention deficit hyperactivity disorder (ADHD): A disorder that affects children and teens and can continue into adulthood.

attributable burden: The amount of burden that could be avoided if the risk factor were removed.

Australian Classification of Health Intervention (ACHI): The Australian Classification of Health Interventions (ACHI) is the Australian national standard for procedure and intervention coding in Australian hospitals, based around the Medicare Benefits Schedule (MBS).

avoidable deaths: See **potentially avoidable deaths.**

back pain and problems: A range of conditions related to the bones, joints, connective tissue, muscles and nerves of the back. Back problems are a substantial cause of disability and lost productivity.

birthweight: The first weight of a baby (stillborn or liveborn) obtained after birth (usually measured to the nearest 5 grams and obtained within 1 hour).

blood cholesterol: Fatty substance produced by the liver and carried by the blood to supply the rest of the body. Its natural function is to supply material for cell walls and for steroid hormones, but if levels in the blood become too high this can lead to atherosclerosis (a disease in which plaque builds up inside the arteries) and heart disease.

blood pressure: The force exerted by the blood on the walls of the arteries as it is pumped around the body by the heart. It is written, for example, as 134/70 mmHg, where the upper number is the systolic pressure (the maximum force against the arteries as the heart muscle contracts to pump the blood out) and the lower number is the diastolic pressure (the minimum force against the arteries as the heart relaxes and fills again with blood). Levels of blood pressure can vary greatly from person to person and from moment to moment in the same person.

body mass index (**BMI**)**:** The most commonly used method of assessing whether a person is normal weight, underweight, overweight or obese (see **obesity**). It is calculated by dividing the person's weight (in kilograms) by their height (in metres) squared—that is, kg ÷ m2. For both men and women, underweight is a BMI below 18.5, acceptable weight is from 18.5 to less than 25, overweight but not obese is from 25 to less than 30, and obese is 30 and over. Sometimes overweight and obese are combined—defined as a BMI of 25 and over.

bowel (colorectal) cancer: This disease comprises cancer of the colon, cancer of the rectosigmoid junction and cancer of the rectum (ICD-10 codes C18–C20).

bronchiectasis: An abnormal widening of the lungs' air passages (bronchi). This allows infections to develop and leads to coughing with pus and sometimes blood. It has several causes, including **cystic fibrosis;** reduced immune functioning; and infections such as tuberculosis, **whooping cough (pertussis)** and **measles**.

bronchitis: Inflammation of the main air passages (bronchi). May be **acute** or **chronic**.

burden of disease and injury: A term referring to the quantified impact of a disease or injury on an individual or population, using the **disability-adjusted life year (DALY)** measure.

cancer (**malignant neoplasm**)**:** A large range of diseases where some of the body's cells become defective, begin to multiply out of control, invade and damage the area around them, and can then spread to other parts of the body to cause further damage.

cancer incidence: The number or rate of new cases of cancer diagnosed in a population during a given time period.

cardiovascular disease/condition: Any disease of the circulatory system, namely the heart (cardio) or blood vessels (vascular). Includes **angina, heart attack, stroke** and peripheral vascular disease. Also known as **circulatory disease**.

cause(s) of death: All diseases, morbid conditions or injuries that either resulted in or contributed to death—and the circumstances of the accident or violence that produced any such injuries—that are entered on the Medical Certificate of Cause of Death. Causes of death are commonly reported by the underlying cause of death. See also **associated cause(s) of death** and **multiple causes of death.**

cerebrovascular disease: Any disorder of the blood vessels supplying the brain or its covering membranes. A notable and major form of cerebrovascular disease is **stroke**.

cholesterol: See **blood cholesterol.**

chronic: A term describing something that is persistent and long lasting.

chronic diseases/conditions: A diverse group of diseases/conditions, such as heart disease, cancer and arthritis, which tend to be long lasting and persistent in their symptoms or development. Although these features also apply to some communicable diseases (infectious diseases), the term is usually confined to non-communicable diseases.

chronic kidney disease (**CKD**)**:** A term that refers to all conditions of the kidney, lasting at least 3 months, where a person has had evidence of kidney damage and/or reduced kidney function, regardless of the specific cause.

chronic obstructive pulmonary disease (**COPD**)**:** Serious, progressive and disabling long-term lung disease where damage to the lungs (usually because of both emphysema and chronic bronchitis) obstructs oxygen intake and causes increasing shortness of breath. By far the greatest cause of COPD is cigarette smoking.

chronic sinusitis: The inflammation of the lining of one or more sinuses (large air cavities inside the face bones). It occurs when normal draining of the sinuses is obstructed by swelling, excessive mucus or an abnormality in the structure of the sinuses.

coronary heart disease: A disease due to blockages in the heart's own (coronary) arteries, expressed as **angina** or a **heart attack**. Also known as **ischaemic heart disease.**

communicable disease: Disease or illness caused by infectious organisms or their toxic products. The disease may be passed directly or indirectly to humans through contact with other humans, animals or other environments where the organism is found.

comorbidity: A situation where a person has two or more health problems at the same time. Also known as **multimorbidity**.

condition (**health condition**)**:** A broad term that can be applied to any health problem, including symptoms, diseases and various risk factors (such as high blood cholesterol, and obesity). Often used synonymously with **disorder**.

confidence interval: A range determined by variability in data, within which there is a specified (usually 95%) chance that the true value of a calculated parameter lies.

congestive cardiac failure (heart failure): A condition that occurs when the heart functions less effectively in pumping blood around the body.

Consumer Price Index: Is a measure of the average change over time in the prices paid by households for a fixed basket of goods and services.

course of radiotherapy: A series of one or more external beam radiotherapy treatments prescribed by a radiation oncologist. A patient can receive more than one course of radiotherapy at the same time (courses that are simultaneous or overlap). One course of radiotherapy may cover multiple phases and multiple treatment plans.

cystic fibrosis: A progressive, genetic disease that causes persistent lung infections and limits the ability to breathe over time.

DALY: See disability-adjusted life year**.**

dementia: A general term for disorders characterised by worsening mental processes (such as Alzheimer disease or vascular dementia). Symptoms include impaired memory, understanding, reasoning and physical functioning.

dental condition: Any issue with the teeth or gums that can affect a person’s oral health.

dental services: Services provided by registered dental practitioners. These include cleft lip and palate services; dental assessment; oral and maxillofacial surgery items; orthodontic, pedodontic and periodontic services; and other dental items listed in the Medical Benefits Schedule. The term covers dental services funded by health funds, state and territory governments and by individuals’ out-of-pocket payments.

depression: A mood disorder with prolonged feelings of being sad, hopeless, low and inadequate, with a loss of interest or pleasure in activities and often with suicidal thoughts or self-blame.

depressive disorders: A group of mood disorders with prolonged feelings of being sad, hopeless, low and inadequate, with a loss of interest or pleasure in activities and often with suicidal thoughts or self-blame.

determinant: Any factor that can increase the chances of ill health (risk factors) or good health (protective factors) in a population or individual. By convention, services or other programs that aim to improve health are usually not included in this definition.

diabetes (**diabetes mellitus**)**:** A chronic condition where the body cannot properly use its main energy source—the sugar glucose. This is due to a relative or absolute deficiency in insulin, a hormone produced by the pancreas that helps glucose enter the body’s cells from the bloodstream and be processed by them. Diabetes is marked by an abnormal build-up of glucose in the blood; it can have serious short- and long-term effects. For the three main types of diabetes, see **type 1 diabetes**, **type 2 diabetes** and **gestational diabetes**.

direct burden: The burden calculated in burden of disease analysis to capture the main disabling consequences of the disease. For example, the direct diabetes burden includes diabetic nephropathy, neuropathy and retinopathy.

disability: An umbrella term for any or all of the following: an impairment of body structure or function, a limitation in activities, or a restriction in participation. Disability is a multidimensional concept and is considered as an interaction between health conditions and personal and environmental factors.

disability-adjusted life year (**DALY**)**:** A year (1 year) of healthy life lost, either through premature death or equivalently through living with disability due to illness or injury. It is the basic unit used in burden of disease and injury estimates.

disease: A physical or mental disturbance involving symptoms (such as pain or feeling unwell), dysfunction or tissue damage, especially if these symptoms and signs form a recognisable clinical pattern.

dyslipidaemia: Abnormal levels of fats, such as cholesterol or triglycerides, in the blood.

equivalised disposable household income: Disposable household income adjusted using an equivalence scale. For a lone person household, it is equal to disposable household income. For a household comprising more than one person, it is an indicator of the disposable household income that would need to be received by a lone person household to enjoy the same level of economic wellbeing as the household in question.

Emphysema: A type of lung disease that causes breathlessness.

end-stage kidney disease (ESKD): The most severe form of chronic kidney disease (CKD), also known as Stage 5 CKD or kidney failure.

fatal burden: Quantified impact on a population of premature death due to disease or injury. Measured as years of life lost (YLL).

fetal death (stillbirth): Death, before the complete expulsion or extraction from its mother, of a product of conception of 20 or more completed weeks of gestation, or of 400g or more birthweight. Death is evidenced by the fact that, after such separation, the fetus does not breathe or show any other signs of life, such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles.

full-time equivalent (FTE) workforce or workload: A standard measure of the size of a workforce that takes into account both the number of workers and the hours that each works. For example, if a workforce comprises 2 people working full time 38 hours a week and 2 working half time, this is the same as 3 working full time—that is, an FTE of 3.

gangrene: A type of tissue death caused by a lack of blood supply.

general practitioner (GP): A medical practitioner who provides primary comprehensive and continuing care to patients and their families in the community.

gestational age: Duration of pregnancy in completed weeks, calculated either from the date of the first day of a woman's last menstrual period to her baby's date of birth, or via ultrasound, or from clinical assessment during pregnancy, or from examination of the baby after birth.

gestational diabetes: A form of diabetes that is first diagnosed during pregnancy (gestation). It may disappear after pregnancy but signals a high risk of diabetes occurring later on in life. See **diabetes (diabetes mellitus).**

gout: Gout is a form of inflammatory arthritis. It occurs when excess uric acid in the blood leads to deposits of uric acid crystals in one or more joints.

HbA1c (A1c or glycated haemoglobin test): A blood test that is used to help diagnose and monitor people with diabetes.

health: Term relating to whether the body (including the mind) is in a well or ill state. With good health, the state of the body and mind are such that a person feels and functions well and can continue to do so for as long as possible.

health literacy: The ability of people to access, understand and apply information about health and the health care system so as to make decisions that relate to their health.

heart attack: Life-threatening emergency that occurs when a vessel supplying blood to the heart muscle is suddenly blocked completely by a blood clot. The medical term commonly used for a heart attack is myocardial infarction. See also cardiovascular disease.

heart failure: A condition that occurs when the heart functions less effectively in pumping blood around the body. It can result from a wide variety of diseases and conditions that can impair or overload the heart, such as heart attack, other conditions that damage the heart muscle directly (see cardiomyopathy), high blood pressure, or a damaged heart valve.

haemorrhagic stroke: Is due to bleeding in or around the brain.

high blood cholesterol: Total cholesterol levels above 5.5 mmol/L.

high blood pressure/hypertension: Definitions can vary but a well-accepted definition is from the World Health Organization: a systolic blood pressure of 140 mmHg or more or a diastolic blood pressure of 90 mmHg or more, or if [the person is] receiving medication for high blood pressure. Also see **blood pressure.**

household: A group of two or more related or unrelated people who usually live in the same dwelling, and who make common provision for food or other essentials for living; or a single person living in a dwelling who makes provision for his or her own food and other essentials for living, without combining with any other person.

hypertension: See high blood pressure

illness: A state of feeling unwell, although the term is also often used synonymously with disease.

immunisation: A procedure designed to induce immunity against infection by using an antigen to stimulate the body to produce its own antibodies. See **vaccination.**

impaired fasting blood glucose: Blood glucose levels between 6.1 to 6.9 mmol/L, which is above normal but less than diabetes levels.

Imputation: The process of replacing missing data with substituted values.

incidence: The number of new cases (of an illness or event, and so on) occurring during a given period. Compare with **prevalence**.

incidence relative risk (cancer): The ratio of the observed cancer incidence rate in the study population to the estimated (weighted) rate in the comparison population(s).

Index of Relative Socio-Economic Disadvantage (IRSD): One of the set of Socio-Economic Indexes for Areas for ranking the average socioeconomic conditions of the population in an area. It summarises attributes of the population such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations.

indicator: A key statistical measure selected to help describe (indicate) a situation concisely so as to track change, progress and performance; and to act as a guide for decision making. It may have an indirect meaning as well as a direct one; for example, Australia’s overall death rate is a direct measure of mortality but is often used as a major indicator of population health. Taking this point further, time spent watching television may be used as one indicator of physical inactivity.

Indigenous: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also **Aboriginal or Torres Strait Islander.**

indirect burden: In burden of disease analysis (where the disease of interest is considered to be a risk factor (that is, disease-as-risk) for associated or 'linked' diseases), it is the burden from these linked diseases due to the disease-as-risk. For example, diabetes is considered to be a risk factor for coronary heart disease, stroke, dementia and other diseases, so the indirect burden is the burden attributable to diabetes for these linked diseases.

inflammation: Local response to injury or infection, marked by local redness, heat, swelling and pain. Can also occur when there is no clear external cause and the body reacts against itself, as in auto-immune diseases.

insulin: Hormone produced by the pancreas which regulates the body's energy sources, most notably the sugar glucose. It is an injectable agent that helps lower blood glucose levels by moving glucose into cells to be used as energy.

International Statistical Classification of Diseases and Related Health Problems (**ICD**)**:** The World Health Organization's internationally accepted classification of death and disease. The Tenth Revision (ICD-10) is currently in use. The ICD-10-AM is the Australian Modification of the ICD-10; it is used for diagnoses and procedures recorded for patients admitted to hospitals**.**

Intrauterine growth restriction (IUGR): is a common diagnosis in obstetrics and carries an increased risk of perinatal mortality and morbidity.

iron deficiency anaemia: occurs when a lack of iron in the body results in the blood being unable to produce enough haemoglobin to carry oxygen to meet the body's needs. Not all people who are low in iron have iron deficiency anaemia—severe and prolonged iron deficiency is needed to cause anaemia.

ischemia: A reduced or blocked blood supply. See also **ischaemic heart disease**.

ischaemic heart disease: See also **heart attack** and **angina** (chest pain). Also known as **coronary heart disease**. See also **ischaemia**.

ischaemic stroke: A type of **stroke** due to a reduced or blocked supply of blood in the brain. Also known as cerebral infarction.

juvenile arthritis: Inflammatory arthritis in children and adolescents that begins before their 16th birthday and lasts at least 6 weeks. Also known as juvenile idiopathic arthritis.

Kessler Psychological Distress Scale—10 items (**Kessler-10**; **K10**)**:** A survey device that is used to measure non-specific psychological distress in people. It uses 10 questions about negative emotional states that participants in the survey may have had in the 4 weeks leading up to their interview. The designers recommend using only for adults aged 18 and over.

lifetime risk (alcohol): The accumulated risk from drinking either on many drinking occasions, or on a regular (for example, daily) basis over a lifetime. The lifetime risk of harm from alcohol-related disease or injury increases with the amount consumed. For healthy men and women, drinking no more than 2 standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.

lifetime risk (alcohol): The accumulated risk from drinking either on many drinking occasions, or on a regular (for example, daily) basis over a lifetime. The lifetime risk of harm from alcohol-related disease or injury increases with the amount consumed. For healthy men and women, drinking no more than 2 standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.

lipids: Fatty substances, including cholesterol and triglycerides, that are in blood and body tissues.

live birth (**liveborn**)**:** The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life (such as the beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles), whether or not the umbilical cord has been cut or the placenta is attached; each product of such birth is considered liveborn (WHO definition).

long-term condition: A term used in the Australian Bureau of Statistics National Health Surveys to describe a health condition that has lasted, or is expected to last, at least 6 months. See also **chronic diseases/conditions**.

low birthweight: Weight of a baby at birth that is less than 2,500 grams.

mammography: A radiographic depiction of the breast.

maternal age: Mother’s age in completed years at the birth of her baby.

median: The midpoint of a list of observations that have been ranked from the smallest to the largest.

medical specialist: A doctor who has completed advanced education and clinical training in a specific area of medicine.

melanoma: A cancer of the body's cells that contain pigment (melanin), mainly affecting the skin. Survival rates are very high for those whose melanoma is detected and removed early, but low if not.

mental illness (or **mental disorders**)**:** Disturbances of mood or thought that can affect behaviour and distress the person or those around them, so that the person has trouble functioning normally. They include **anxiety disorders**, **depression** and schizophrenia.

midwife: A person, typically a woman, who is trained to help women in childbirth.

morbidity: The ill health of an individual and levels of ill health in a population or group.

mortality: Number or rate of deaths in a population during a given time period.

multimorbidity: A situation that occurs when a person has two or more health problems at the same time. Also known as **comorbidity**.

musculoskeletal: A term that relates to the muscles, joints and bones.

musculoskeletal condition: One of a group of conditions, along with arthritis and other conditions, that affects the bones, muscles and joints. These other conditions include **back pain and problems**, **juvenile arthritis**, **osteoarthritis**, **osteopenia**, **osteoporosis** (low bone density) and **rheumatoid arthritis**.

neonatal death: The death of a liveborn baby within 28 days of birth.

non-fatal burden: The quantified impact on a population of ill health due to disease or injury. Measured as years lived with disability (YLD), which is also sometimes referred to as years of healthy life lost due to disability (YLL).

non-Indigenous Australians: People who have declared that they are not of Aboriginal or Torres Strait Islander descent. Compare with Other Australians.

non-school qualification: An educational qualification other than that of pre-primary, primary or secondary education. Non-school qualifications comprise a Bachelor degree; a Master degree; a Doctorate; a Diploma; a Graduate Diploma; an Advanced Diploma; a Certificate I, II, III and IV (trade certificates); and a Graduate Certificate.

obesity: Marked degree of overweight, defined for population studies as a body mass index of 30 or over. See also **overweight**.

Oedema: Swelling caused by the accumulation of fluid in a part of the body.

osteoarthritis: A chronic and common form of **arthritis**, affecting mostly the spine, hips, knees and hands. It first appears from the age of about 30 and is more common and severe with increasing age.

osteopenia: A condition when bone mineral density is lower than normal but not low enough to be classified as osteoporosis.

osteoporosis: A condition that causes bones to become thin, weak and fragile, such that even a minor bump or accident can break a bone.

Other Australians: People who have declared that they are not of Aboriginal or Torres Strait Islander descent, and people whose Indigenous status is unknown. Compare with **non-Indigenous Australians.**

overweight: Defined for the purpose of population studies as a body mass index of 25 or over. See also **obesity**.

overweight but not obese: Defined for the purpose of population studies as a body mass index between 25 and less than 30.

perinatal death: A fetal or neonatal death of at least 20 weeks' gestation or at least 400 grams' birthweight.

post-traumatic stress disorder (PTSD): The development of a set of reactions in people who have experienced a traumatic event that might have threatened their life or safety, or others around them. Examples of traumatic events can include war or torture, serious accidents, physical or sexual assault, or disasters. A person who has PTSD can experience feelings of helplessness, horror or intense fear.

potentially avoidable deaths: Deaths among people younger than age 75 that are avoidable in the context of the present health care system. They include deaths from conditions that are potentially preventable through individualised care and/or treatable through existing primary or hospital care. They are a subset of **premature deaths.** The rate of potentially avoidable deaths in Australia is used as an indicator of the health system's effectiveness. Potentially avoidable deaths are classified using nationally agreed definitions. (A revised definition was adopted in the National Healthcare Agreement 2015 leading to differences in the counts and rates of potentially avoidable deaths published previously).

potentially preventable hospitalisations (**PPHs**)**:** Hospital separations for a specified range of conditions where hospitalisation is considered to be largely preventable if timely and adequate care had been provided through population health services, primary care and outpatient services. The PPH conditions are classified as vaccine preventable, chronic and acute. Respective examples include **influenza** and **pneumonia, diabetes** complications and **COPD**, and dental and kidney conditions. The rate of PPHs is currently being used as an indicator of the effectiveness of a large part of the health system, other than hospital inpatient treatment.

premature deaths (or premature mortality): Deaths that occur at a younger age than a selected cut-off. The age below which deaths are considered premature can vary depending on the purpose of the analysis and the population under investigation. In this report, deaths among people aged under 75 are considered premature.

prescription pharmaceuticals: Pharmaceutical drugs available only on the prescription of a registered medical or dental practitioner and available only from pharmacies.
pre-term birth: Birth before 37 completed weeks of gestation.

prevalence: The number or proportion (of cases, instances, and so forth) in a population at a given time. For example, in relation to cancer, refers to the number of people alive who had been diagnosed with cancer in a prescribed period (usually 1, 5, 10 or 26 years). Compare with **incidence**.

psychological distress: Unpleasant feelings or emotions that affect a person's level of functioning and interfere with the activities of daily living. This distress can result in having negative views of the environment, others and oneself, and manifest as symptoms of mental illness, including anxiety and depression (see also **Kessler Psychological Distress Scale**).

psychosocial stress: Social processes and social structures which can have an interaction with individual thought, behaviour and/or health outcomes.

quintile: A group derived by ranking the population or area according to specified criteria and dividing it into five equal parts. The term can also mean the cut-points that make these divisions—that is, the 20th, 40th, 60th and 80th percentiles—but the first use is the more common one. Commonly used to describe socioeconomic areas based on socioeconomic position.

rate: A rate is one number (the numerator) divided by another number (the denominator). The numerator is commonly the number of events in a specified time. The denominator is the population 'at risk' of the event. Rates (crude, age-specific and age-standardised) are generally multiplied by a number such as 100,000 to create whole numbers.

relative survival (cancer): A measure of the average survival experience of a population of people diagnosed with cancer, relative to the 'average' Australian of the same sex and age, at a specified interval after diagnosis.

remoteness classification: Each state and territory is divided into several regions based on their relative accessibility to goods and services (such as to general practitioners, hospitals and specialist care) as measured by road distance. These regions are based on the **Accessibility/Remoteness Index of Australia** and defined as Remoteness Areas by either the **Australian Standard Geographical Classification** (**ASGC**) (before 2011) or the **Australian Statistical Geographical Standard** (**ASGS**) (from 2011 onwards) in each Census year. The five Remoteness Areas are *Major cities*, *Inner regional*, *Outer regional*, *Remote* and *Very remote.* See also rural.

respiratory condition: A chronic respiratory condition affecting the airways and characterised by symptoms such as wheezing, shortness of breath, chest tightness and cough. Conditions include asthma and chronic obstructive pulmonary disease (COPD)—which includes emphysema and chronic bronchitis.

rheumatic heart disease: A disease commonly caused by damage to heart valves as a result of a single or many acute rheumatic fever episodes.

rheumatoid arthritis: A chronic, multisystem disease whose most prominent feature is joint inflammation and resulting damage, most often affecting the hand joints in symmetrical fashion. It can occur in all age groups but most commonly appears between ages 20–40. Its causes are not certain but involve auto-immune processes.

risk: The probability of an event's occurring during a specified period of time.

risk factor: Any factor that represents a greater risk of a health disorder or other unwanted condition or event. Some risk factors are regarded as causes of disease; others are not necessarily so. Along with their opposites (protective factors), risk factors are known as **determinants**.

rural: Geographic areas outside urban areas such as towns and cities. In this report, rural and remote encompasses all areas outside Australia's *Major cities* according to the **remoteness classification** of the **Australian Statistical Geographic Standard**. In many instances, the term 'rural and remote' is used interchangeably with the classification terms 'regional and remote'.

seasonally adjusted series: A time series of estimates with the estimated effects of normal seasonal variation removed.

screening (for health): A systematic method of detecting **risk factors** or suspicious abnormalities among people who are symptom free, so that health problems can be either prevented or followed up, diagnosed and treated as early as possible. Screening is usually done through special programs aimed at higher risk groups in the population. A variant of screening, often known as case-finding, is where clinicians opportunistically look for risk factors or abnormalities in people when seeing them for other reasons; for example, when many doctors routinely measure blood pressure in all patients consulting them.

separation (from hospital): The formal process where a hospital records the completion of an episode of treatment and/or care for an admitted patient—in this report, described by the term hospitalisation.

Severely obese: Consists of obese classes II and III (i.e. Body Mass Index 35 and over). See also obesity and Body Mass Index (BMI).

sleep apnoea: is a condition that affects breathing while asleep. It reduces airflow which causes intermittent dips in the amount of oxygen in the blood and disturbs sleep. The individual with sleep apnoea is often unaware of the night-time breathing difficulties.

social determinants of health: The circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies and politics.

socioeconomic area: An indication of how 'well off' a person or group is. In this report, socioeconomic areas are mostly reported using the Socio-Economic Indexes for Areas, typically for five groups (quintiles)—from the lowest socioeconomic area to the highest socioeconomic area.

Socio-Economic Indexes for Areas (**SEIFA**)**:** A set of indexes, created from Census data that aim to represent the **socioeconomic position** of Australian communities and identify areas of advantage and disadvantage. The index value reflects the overall or average level of disadvantage of the population of an area; it does not show how individuals living in the same area differ from each other in their socioeconomic group. This report uses the Index of Relative Socio-Economic Disadvantage**.**

specialist services: Services that support people with specific or complex health conditions and issues, who are generally referred by primary health care providers. They are often described as 'secondary' health care services. In many cases, a formal referral is required for an individual to be able to access the recommended specialist service.

standard drink (alcohol): A serve that contains 10 grams of alcohol (equivalent to 12.5 millilitres of alcohol). It is also referred to as a full serve.

stroke: An event that occurs when an artery supplying blood to the brain suddenly becomes blocked or bleeds. A stroke often causes paralysis of parts of the body normally controlled by that area of the brain, or speech problems and other symptoms. It is a major form of cerebrovascular disease.

triglyceride: A compound made up of a single molecule of glycerol and three molecules of fatty acid. Triglycerides are the main constituents of natural fats and oils.

type 1 diabetes: A form of **diabetes** mostly arising among children and adolescents and marked by a complete lack of insulin. Insulin replacement is needed for survival. See **diabetes** (**diabetes mellitus**).

type 2 diabetes: The most common form of **diabetes**, occurring mostly in people aged 40 and over, and marked by reduced or less effective insulin. See **diabetes (diabetes mellitus).**

underlying cause of death: The disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence that produced the fatal injury. See also cause of death and associated cause(s) of death.

Upper level of intake (UL): The highest average daily nutrient intake level likely to pose no adverse health effects to almost all individuals in the general population. As intake increases above the UL, the potential risk of adverse effects increases.

vaccination: The process of administering a vaccine to a person to produce immunity against infection. See **immunisation**.

workforce: People who are employed or unemployed (not employed but actively looking for work). Also known as the labour force.

years lived with disability (**YLD**)**:** A measure calculated as the prevalence of a condition, multiplied by a disability weight for that condition. Sometimes referred to as **years of healthy life lost due to disability** (**YLD**).

years of healthy life lost due to disability: See **years lived with disability** (**YLD**).

years of life lost (**YLL**)**:** For each new case, years of life lost equals the number of years between premature death and the standard life expectancy for the individual.

List of tables

Part 2: Indicator results. 56

List of figures

Part 1: The story behind the indicator results. 1

Part 2: Indicator results. 56

The *National Strategic Framework for Chronic Conditions, reporting framework: indicator results* report was prepared to accompany the *National Strategic Framework for Chronic Conditions: reporting framework*. This report presents results for the 45 indicators selected for inclusion in the reporting framework, which was developed to monitor progress against the 3 Objectives of the *National Strategic Framework for Chronic Conditions*.

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better decisions,
improved health and welfare