



3.3 Chronic conditions

Chronic conditions are a substantial global, national and individual health issue, contributing to both premature mortality and morbidity. Globally, they are leading causes of disease burden, responsible for around 70% of deaths worldwide (WHO 2017a). Nationally, rates of chronic conditions and their associated risk factors are increasing; this has a heavy impact on the Australian health care system. At an individual level, Australians diagnosed with one or more chronic conditions often have complex health needs, die prematurely and have poorer overall quality of life.

Chronic conditions are generally long-lasting and, given Australia's ageing population, their treatment and management are needed for longer periods of an individual's life.

The term 'chronic condition' refers to a wide range of conditions, illnesses and diseases, which are detailed in Box 3.3.1.

Box 3.3.1: Definitions for chronic conditions

Defining chronic conditions is complex as the term covers a number of broad health and disease and management concepts.

Chronic conditions are generally characterised by their long-lasting and persistent effects. 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. They are also called non-communicable diseases or long-term conditions and are referred to as such in data sources cited in this article.

The most common chronic conditions include cardiovascular disease (such as coronary heart disease and stroke), cancer (such as breast and colorectal cancer), chronic respiratory conditions (such as chronic obstructive pulmonary disease and asthma), chronic musculoskeletal conditions (such as arthritis and back pain), diabetes, and mental health conditions (such as depression). Based on self-reported survey data, almost 1 in 5 (18%) Australians had cardiovascular disease, 18% had mental health conditions and 16% had back pain and problems in 2014–15. Prevalence of chronic conditions also varied by age—mental health conditions and asthma were more common in people aged under 45, while cardiovascular disease and arthritis were more common in older age groups (ABS 2015).

In the broadest sense, chronic conditions include infectious diseases that persist in the long term (sometimes for life), such as chronic hepatitis B and human immunodeficiency virus (HIV), congenital disorders such as spina bifida, genetic disorders such as cystic fibrosis and other conditions, and disorders or disability stemming from injury such as limb amputation.

Chronic condition comorbidity (or multimorbidity) is the presence of two or more chronic conditions at the same time. Around 1 in 4 (23%) Australians had two or more chronic conditions in 2014–15 (ABS 2015). Comorbidity was the focus of a feature article in *Australia's health 2016*, based largely on data from the Australian Bureau of Statistics 2014–15 National Health Survey; it is a good baseline reference for this subject (see section 'Where do I go for more information?').





This article summarises the increasing global, Australian and individual burden of chronic conditions, describes interventions aiming to combat this trend and provides the context for condition-specific information presented elsewhere in this chapter.

Global picture and trends

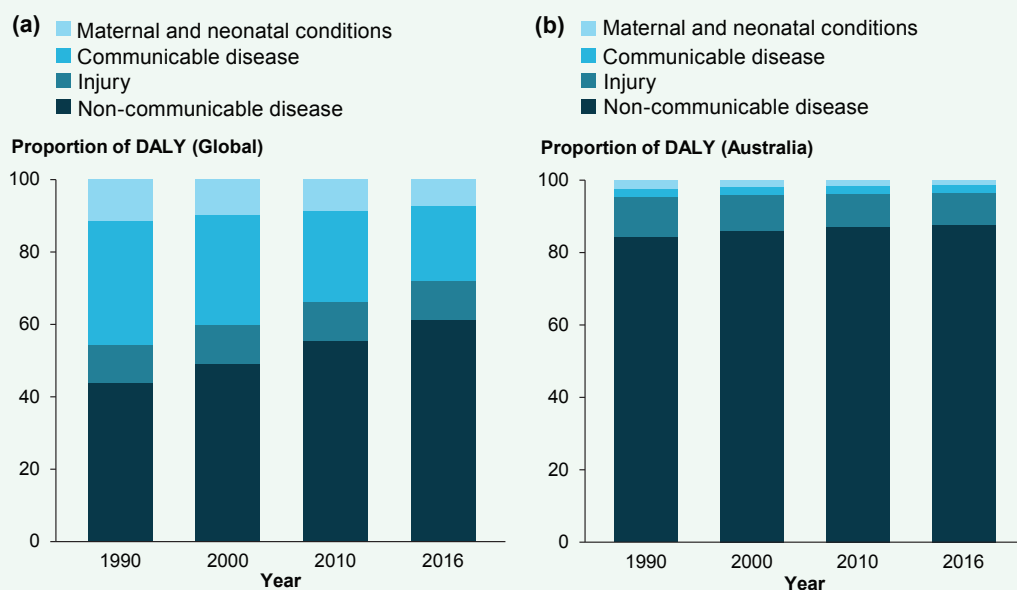
Non-communicable (chronic) disease is a global health problem. The burden of chronic disease exceeds that of communicable (infectious) disease and deaths from chronic disease disproportionately affect lower income countries and populations, threatening sustainable development (WHO 2017a, 2017b).

Disease burden or impact can be measured by the disability-adjusted life year (DALY), equivalent to a single year of 'healthy' life lost due to illness and/or death (see Chapter 4.4 'Contribution of selected risk factors to burden of disease'). Data from the Global Burden of Disease Study 2016 show that the share of the total global DALYs due to non-communicable disease has:

- increased steadily globally (from 44% in 1990 to 61% in 2016), while the proportion attributable to communicable (infectious) disease fell (from 34% to 21%)
- remained steady in Australia at around 84–88% (compared with 2.2–2.4% for communicable disease and 8.8–11% for injury) (Figure 3.3.1).

In lower income countries, the increase in the relative burden from non-communicable disease and the decrease in communicable disease burden is occurring more rapidly than in high-income countries (including Australia). While this shift in the distribution of the disease burden toward non-communicable disease is seen globally, there are some regions where communicable disease is still a major health issue.

Figure 3.3.1: Burden of communicable disease, injury, maternal and neonatal conditions and non-communicable disease, (a) globally and (b) in Australia, 1990, 2000, 2010 and 2016



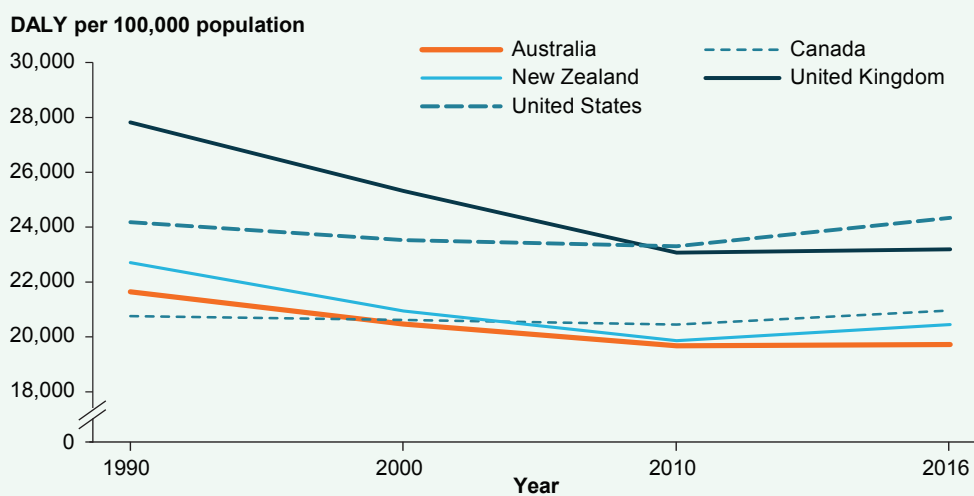
Source: GBD Collaborative Network 2017; Table S3.3.1.



Although the share of total burden due to non-communicable disease is high in Australia, the rate of that burden has fallen over time—a positive sign. Between 1990 and 2016, the rate of DALY for non-communicable disease in Australia:

- decreased from more than 21,600 to more than 19,700 DALYs per 100,000 population
- was second lowest among selected high-income countries in 1990 (after Canada), and lowest in 2016 (Figure 3.3.2).

Figure 3.3.2: Rate of non-communicable disease burden, Australia and selected high-income countries, 1990, 2000, 2010 and 2016



Source: GBD Collaborative Network 2017; Table S3.3.2.

A big problem for Australia

Chronic conditions have a substantial impact in Australia—for the population, the health system and individuals. Self-reported survey data from 2014–15 reveals that 1 in 2 (50%) Australians had at least 1 of 8 selected common chronic conditions: arthritis, asthma, back pain and problems, cancer, cardiovascular disease, chronic obstructive pulmonary disease (COPD), diabetes, and mental health conditions (ABS 2015). These conditions:

- were involved in 37% of hospitalisations (based on principal or additional diagnosis) in 2015–16
- contributed to 87% of deaths (based on underlying or associated causes of death) in 2015
- accounted for 61% of the total burden of disease in Australia in 2011, based on the Australian Burden of Disease Study 2011 (Figure 3.3.3). (Note that estimates from this study are not directly comparable with those from the Global Burden of Disease Study due to differences in methods and data sources used for Australia.)

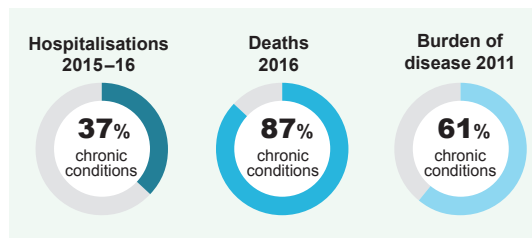
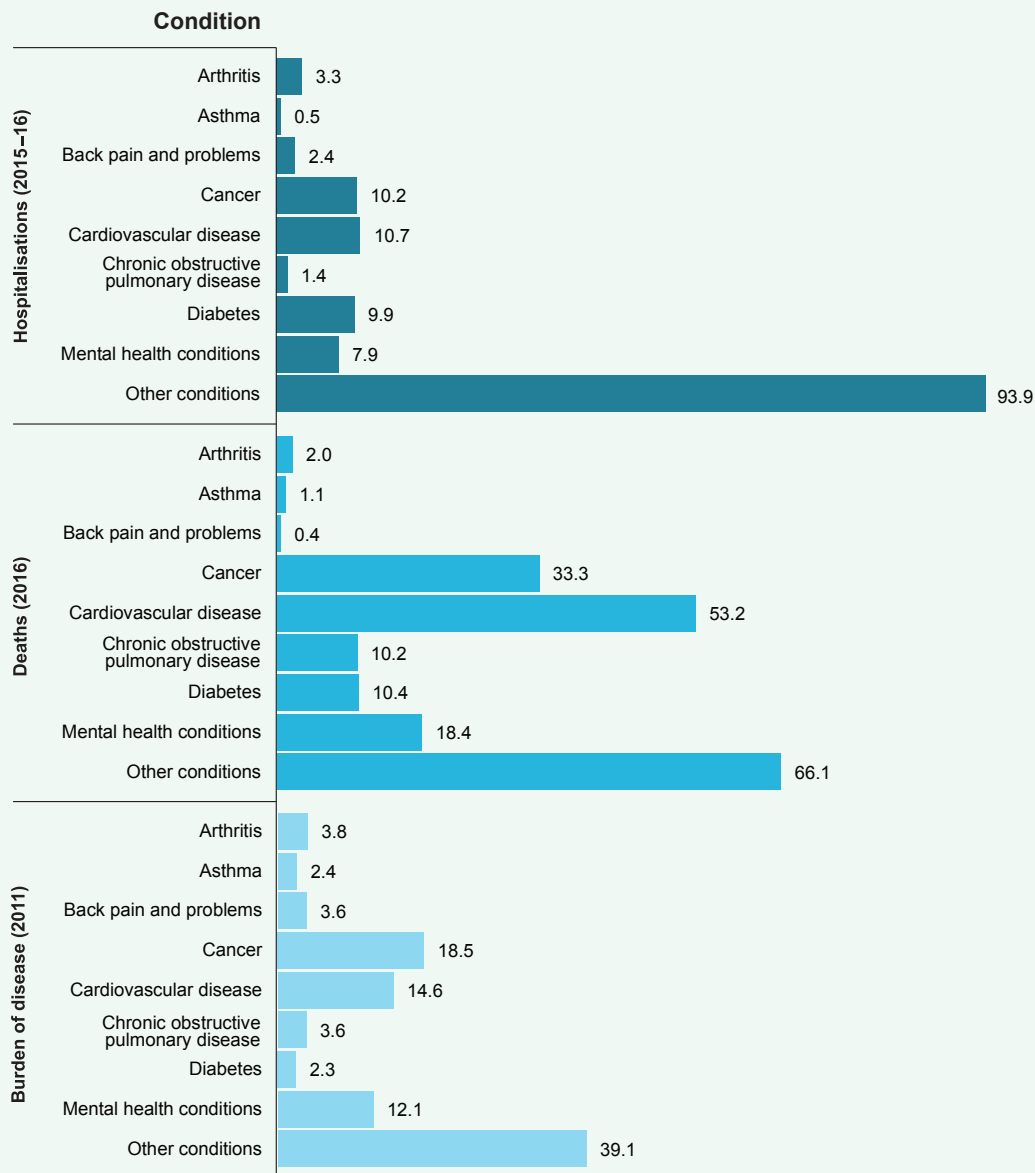




Figure 3.3.3: Selected common chronic conditions: hospitalisations (2015–16), deaths (2016) and burden of disease (DALY; 2011)



Notes

1. Each hospitalisation and death can involve more than one chronic condition; therefore, the sum of individual conditions is greater than the chronic condition total.
2. The category 'Other conditions' encompasses all conditions not listed as selected common chronic conditions and represents the proportion of hospitalisations or deaths that involve at least one of these 'Other conditions'. It is possible for a single hospitalisation or death to involve both chronic and 'Other conditions'; hence, the sum of 'Other conditions' and the chronic condition total exceeds 100.
3. Includes hospitalisations with the selected conditions recorded as either the principal or an additional diagnosis, and deaths with the selected conditions recorded as either the underlying or an associated cause of death.

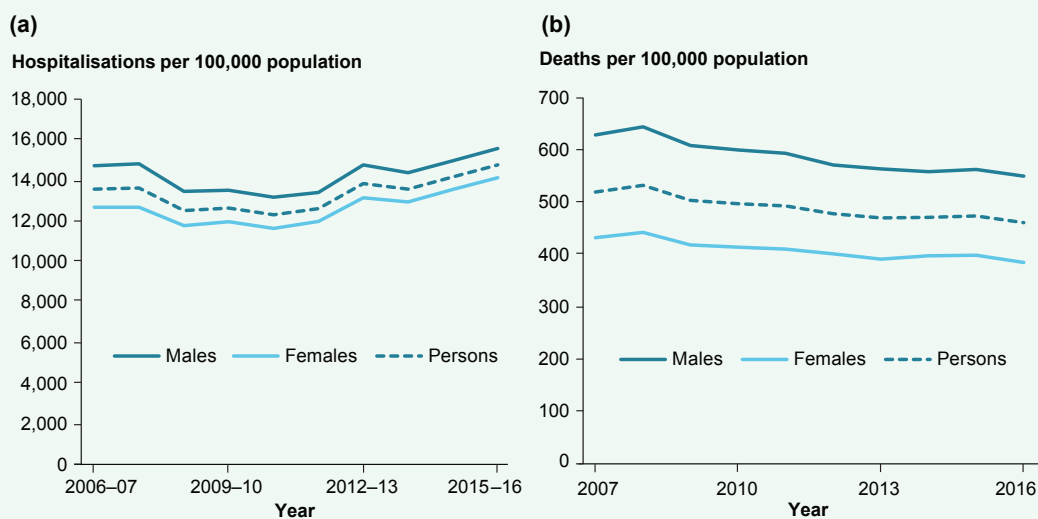
Sources: National Hospital Morbidity Database 2015–16; National Mortality Database 2016; Australian Burden of Disease Study 2011; Table S3.3.3.



The burden of these conditions rests disproportionately with males and older Australians. Males were slightly more likely than females to be hospitalised with 1 of the selected 8 chronic conditions; at least 1 of those conditions was recorded in 39% of all male hospitalisations compared with 35% of all female hospitalisations. There was no substantial sex difference in the proportion of deaths involving chronic conditions in 2016, accounting for 87% of male and 86% of female deaths in that year.

When the influence of age is considered, the rate of hospitalisation and death from these conditions was consistently higher among males over time; however, the difference in rates between the sexes fell slightly (Figure 3.3.4). The rate of hospitalisations for chronic conditions gradually fell from being 16% higher among males than females in 2006–07 to 10% higher in 2015–16. There was a smaller general decrease in the difference in mortality rates between the sexes over time: males were 45% more likely than females to die from chronic conditions in 2007 and 43% more likely in 2016.

Figure 3.3.4: Trends in selected chronic conditions: (a) hospitalisations (2006–07 to 2015–16) and (b) mortality (2007 to 2016), by sex



Notes

1. Includes hospitalisations with the selected conditions recorded as either the principal or an additional diagnosis, and deaths with the selected conditions recorded as either the underlying or an associated cause of death.
2. 'Selected' chronic conditions include the 8 common conditions defined in Box 3.3.1.

Source: National Hospital Morbidity Database 2015–16; National Mortality Database 2016; Table S3.3.4.

The proportion of hospitalisations and deaths that involved at least 1 of the selected 8 chronic conditions generally rose as age increased: from less than 10% of hospitalisations and deaths among children aged 0–4, to 56% of hospitalisations and 87% of deaths among people aged 85 and over.

While older Australians experience the greatest burden of these chronic conditions, younger Australians are also affected. Around 3 in 4 (70%) hospitalisations for chronic conditions and 1 in 3 deaths (33%) occurred among people aged under 75. The proportion of deaths from chronic conditions of people aged under 75 (known as 'premature' deaths) was higher for males (39%) than for females (26%). There was no change in the proportion of premature deaths, or the difference between sexes, over time.



What could this mean for an individual?

Chronic conditions are so common that most people are affected in some way, either by having a condition themselves or knowing someone who does.

Many chronic conditions share common risk factors that are largely preventable or treatable; for example, tobacco smoking, physical inactivity, overweight and obesity, unhealthy diets and high blood pressure. Preventing or modifying these risk factors can reduce the risk of developing a chronic condition and result in large population and individual health gains by reducing illness and rates of death (see Chapter 4).

Many of these risk factors are common to several chronic conditions, and this can mean an increase in the proportion of people who have more than one of these conditions. These people are generally more frequent users of the health care system and require more complex interventions and treatment to manage their conditions.

Beyond the population impact in terms of economic and disease burden, chronic conditions have a major impact on the individual and their social and support networks in terms of quality of life, disability, productivity and participation. Based on unadjusted self-reported data from the 2014–15 National Health Survey—and compared with the total Australian population—people with at least 1 of the 8 selected long-term conditions had generally lower labour force participation (24–49%, compared with 52%) and generally higher rates of:

- disability, restriction or limitation (32–63% compared with 19%)
- high or very high psychological distress (17–40% compared with 12%)
- bodily pain experienced in the previous 4 weeks (78–89% compared with 68%)
- fair or poor health (24–46% compared with 15%) (ABS 2015).

Due to these impacts on the individual, it is important that people with chronic conditions receive high-quality and coordinated care (taking into account risk factors and comorbidities) and are actively engaged with their treatment and management plan, leading to better health outcomes (AHMAC 2017).

What is Australia doing to combat chronic conditions?

Global initiatives

Australia contributes to several global initiatives for the prevention and management of chronic conditions. The *Global Action Plan for the Prevention and Control of NCDs, 2013–2020* provides countries with a selection of policy options and related goals to work towards in achieving nine voluntary global targets relating to non-communicable diseases; these targets include a 25% reduction in premature mortality from cardiovascular disease, cancer, diabetes or chronic respiratory conditions by the year 2025 (WHO 2013). At a broader level, the United Nations' Sustainable Development Goals include those to ensure good health and wellbeing by reducing premature mortality from non-communicable disease by one-third by 2030 (UN 2015).





National initiatives

The growing prevalence of chronic conditions among Australia's population, coupled with a reduction in the death rate from these diseases, is increasing the pressure on the health care system. As people are living longer, often with more than 1 chronic condition, they require treatment and management for longer periods of time. This increases the need for emergency department visits, admitted patient hospital admissions, out-of-hospital services, medicines and palliative care.

Nationally, there are various programs to promote healthy lifestyles. These include a range of tobacco control measures, strategies to reduce harmful levels of alcohol consumption, and actions for the early detection of cancer and other chronic conditions (see Chapter 7.1 'Health promotion').

Community management of care for chronic conditions is primarily provided by general practitioners. Around 1 in 3 (35%) health problems managed by general practitioners was chronic in 2015–16 (Britt et al. 2016). With the aim of improving coordination of care for people with chronic conditions, the Australian Government has implemented a range of approaches including:

- access to care plans and assessments through the Medicare Benefits Schedule for the planning and management of chronic conditions
- subsidies through the Pharmaceutical Benefits Scheme for a range of medicines used in the treatment of chronic conditions
- introduction of Health Care Homes where patients are enrolled with a specific general practice or Aboriginal Community Controlled Health Service to coordinate their care and to facilitate services by a care team, which can include a range of health professionals (for example, general practitioner, specialists, allied health professionals, practice nurses) (Department of Health 2017).

See chapters 7.5 'Primary health care', 7.18 'Coordination of health care' for information about how patients use general practitioner services in Australia.

Recognising how chronic conditions and the increasing impact of multimorbidity are interrelated, in 2017, all Australian health ministers endorsed the National Strategic Framework for Chronic Conditions (the Framework). The Framework provides guidance for the development and implementation of policies, strategies, actions and services to tackle chronic conditions. The Framework addresses primary, secondary and tertiary prevention of chronic conditions, recognising that there are often similar underlying principles for the prevention and management of many chronic conditions. It moves away from a disease-specific approach and better caters for shared health determinants, risk factors and multimorbidities across a broad range of chronic conditions.

The Framework outlines three objectives that focus on preventing chronic conditions, providing efficient, effective and appropriate care to manage them and targeting priority populations (AHMAC 2017).





What is the AIHW doing?

The AIHW has a long history of monitoring and reporting on chronic conditions, risk factors and health outcomes among the Australian population. In 2016, the National Centre for Monitoring Chronic Conditions (NCMCC) was formed in response to the need for a more streamlined, integrated and prioritised approach for reporting on chronic conditions. The NCMCC integrates holistic reporting on chronic conditions comorbidity and risk factors with disease-specific monitoring to provide a 'bigger picture' of chronic conditions in Australia. In so doing, it brings together work programs on:

- cardiovascular diseases, diabetes and chronic kidney disease
- chronic respiratory conditions
- chronic musculoskeletal conditions.

This work is complemented by ongoing work to update and extend the Australian Burden of Disease Study (see Chapter 3.1 'Burden of disease across the life stages'; Chapter 4.4 'Contribution of selected risk factors to burden of disease') and reporting on:

- the use of health services among people with chronic conditions (for example, potentially preventable hospital admissions and mental health services)
- disparities in specific population groups (for example, prisoners and Aboriginal and Torres Strait Islander Australians)
- disease expenditure.

What is missing from the picture?

Better information on the number of people newly diagnosed and currently living with chronic conditions, such as dementia, osteoporosis and degenerative eye diseases, could benefit future health services planning.

Additional data on the treatment, management and impact of chronic conditions—including in respect to primary care, proper use of medicines, quality of life, and participation in work and education—will contribute to a more complete picture of the individual impact of chronic conditions in Australia and the effectiveness of current strategies to prevent and manage these conditions.

A number of national data sets contain information on chronic conditions. Data linkage can improve the understanding of patient outcomes, disease interactions and pathways through the health system.

Where do I go for more information?

More information on chronic conditions is available on the AIHW website at <www.aihw.gov.au/reports-statistics/health-conditions-disability-deaths/chronic-disease/overview>.

More information on burden of disease in Australia is available on the AIHW website at <www.aihw.gov.au/reports-statistics/health-conditions-disability-deaths/burden-of-disease/overview>.

Summary information on chronic condition comorbidity can be found in Chapter 3.3 of *Australia's health 2016*, available on the AIHW website at <www.aihw.gov.au/reports/australias-health/australias-health-2016/contents/chapter-3-leading-causes-of-ill-health>.





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