



3.11 Chronic respiratory conditions

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)—which covers emphysema and chronic bronchitis—allergic rhinitis ('hay fever') and other conditions such as chronic sinusitis, bronchiectasis, occupational lung diseases, sleep apnoea, pulmonary fibrosis and cystic fibrosis.

This snapshot focuses on asthma and hay fever (given the large numbers of people affected by these conditions) and COPD (given the poor health and wellbeing outcomes associated with this condition).

Risk factors associated with chronic respiratory conditions can be behavioural, environmental or genetic. These include tobacco smoking (particularly for COPD), exposure to viral infections and air pollutants, and inheritance of genes linked with respiratory illnesses such as cystic fibrosis.

How common are chronic respiratory conditions?

Based on self-reported data from the Australian Bureau of Statistics 2014–15 National Health Survey (ABS 2015):

- chronic respiratory conditions are estimated to affect almost one-third (31% or 7 million people) of Australians
- the 2 most common respiratory conditions are hay fever and asthma, with hay fever affecting an estimated 4.5 million Australians (19% of the population) and asthma an estimated 2.5 million (11%)
- hay fever is most common in the middle years of life, and is most prevalent in people aged between 15 and 59
- asthma rates vary by sex and age, and are more common in males at younger ages (0–14) and more common in females at older ages (15 and over)
- 69% of persons with COPD said that they currently smoked cigarettes or had smoked cigarettes in the past (see Supplementary Table 3.11.2).

COPD, which mainly affects middle aged and older people, was less prevalent than hay fever or asthma, affecting an estimated 460,400 Australians aged 45 and over (5.1%). However, a large international study (Burden of Obstructive Lung Disease—BOLD), which tested the lung function of nearly 10,000 people, estimated that the prevalence of COPD in Australia was 7.5% for people aged 40 and over and 30% for people aged 75 and over (Toelle et al. 2013).





Impact

Chronic respiratory diseases contribute substantially to the disease burden in the Australian population. The Australian Burden of Disease Study found that, in 2011, respiratory conditions contributed 8.3% of the total burden of disease and injury in Australia:

- Respiratory diseases were ranked as the sixth leading contributor to total burden, after cancer, cardiovascular diseases, mental and substance use disorders, musculoskeletal conditions, and injuries.
- COPD contributed the highest percentage of total burden of all respiratory conditions (43%), followed by asthma (29%) and upper respiratory conditions (including hay fever, 20%).
- Burden associated with respiratory diseases rose with increasing remoteness and was higher among people in lower socioeconomic areas.

COPD was the fifth leading underlying cause of death in Australia in 2016, with 7,212 deaths (4.6% of all deaths); 70% (5,056) of these deaths were of people aged 75 and over. Further:

- between 2005 and 2015, among people aged 45 and over, the age-standardised death rate for COPD slowly increased, from 64 to 70 deaths per 100,000 population, but dropped slightly in 2016 to 68 deaths per 100,000
- between 2011 and 2015, among people of all ages, the age-standardised death rates for asthma remained steady at 1.5 deaths per 100,000 population but increased to 1.6 deaths per 100,000 in 2016 (Figure 3.11.1)
- in 2016, there were 455 deaths due to asthma and 381 deaths due to bronchiectasis.

An example of the tragic impact of respiratory conditions occurred in November 2016 in Melbourne, Victoria. Nine people died and several thousands were hospitalised due to asthma associated with a thunderstorm that triggered high pollen levels in the local environment (see Chapter 4.1 'Impacts of the natural environment on health').

Treatment and management

In most cases, chronic respiratory conditions are managed in primary health care. In 2014–15, an estimated 61% of people with asthma reported visiting a general practitioner specifically for their asthma at least once in the previous year (ABS 2017). In the previous survey in 2011–12, an estimated 57% of people with asthma reported visiting a general practitioner specifically for their asthma at least once in the previous year (ABS 2013). In 2014–15, an estimated 75% of children aged 0–14 with asthma were reported to have visited a general practitioner at least once for their asthma in the last year (ABS 2017).

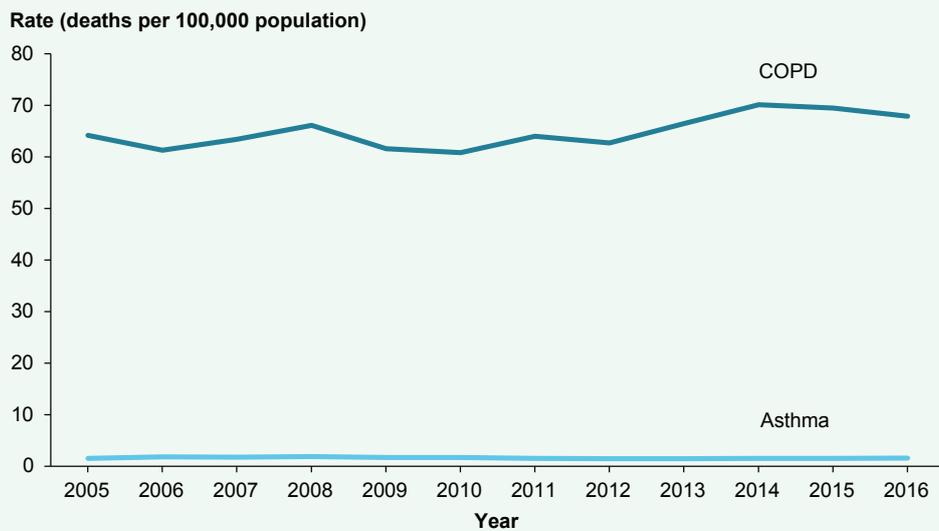
Asthma guidelines recommend that all people with asthma should have a written asthma action plan. However, in 2014–15, based on self-reported survey data, only an estimated 28% of people with asthma as a long-term condition had a written asthma action plan (with 24% reported to have one in 2011–12; ABS 2013). In 2014–15, an estimated 57% of children aged 0–14 with asthma were reported to have an asthma action plan (ABS 2017).





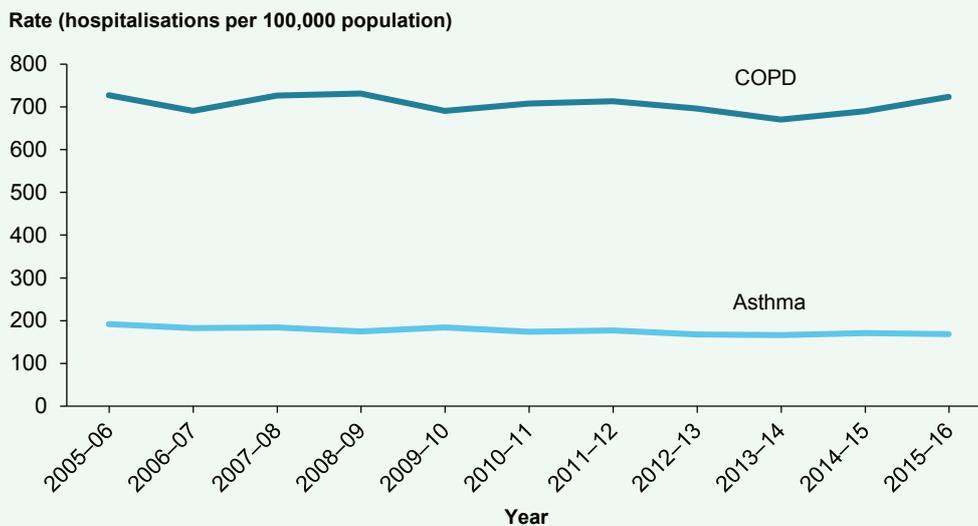
Between 2005–06 and 2015–16, the age-standardised hospitalisation rates for asthma fell 12% (from 192 to 169 hospitalisations per 100,000 population). Over the same period, rates for COPD fluctuated (from a low of 670 to a high of 731 hospitalisations per 100,000 population aged 45 and over) (Figure 3.11.2).

Figure 3.11.1: Age-standardised death rates for asthma (all ages) and COPD (aged 45 and over), 2005–2016



Note: Rates have been age standardised to the 2001 Australian population.
Source: National Mortality Database; Table S3.11.1.

Figure 3.11.2: Age-standardised hospitalisation rates for asthma (all ages) and COPD (aged 45 and over), 2005–06 to 2015–16



Note: Rates have been age standardised to the 2001 Australian population.
Source: National Hospitals Morbidity Database; Table S3.11.1.





What is missing from the picture?

The prevention, management and treatment of chronic respiratory conditions beyond hospital settings (including the appropriateness of care relating to clinical guidelines) cannot be examined in detail because of a lack of data on primary health care. Data linkage can improve the understanding of pathways through the health system.

Many adults have features of both asthma and COPD, known as asthma–COPD overlap; further work is needed to better measure this overlap. It is important to identify and measure people with asthma–COPD overlap as they are at higher risk than patients with asthma or COPD alone; they have more symptoms, more flare-ups, greater need to use health care, and a higher mortality (National Asthma Council Australia and Lung Foundation Australia 2017).

Where do I go for more information?

More information on chronic respiratory conditions in Australia is available at <www.aihw.gov.au/reports-statistics/health-conditions-disability-deaths/asthma-other-chronic-respiratory-conditions/overview>. The report *The burden of chronic respiratory conditions in Australia: a detailed analysis of the Australian Burden of Disease Study 2011* and other recent publications can be downloaded from the AIHW website.

References

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Toelle BG, Xuan W, Bird TE, Abramson MJ, Atkinson DN, Burton DL et al. 2013. Respiratory symptoms and illness in older Australians: the Burden of Obstructive Lung Disease (BOLD) study. *Medical Journal of Australia* 198:144–8.

