



## 6.1 Prevention and health promotion

A fundamental aim of any health system is to prevent disease and reduce ill health so that people remain as healthy as possible for as long as possible. Reducing the impacts of preventable illness, disability and injury increases participation rates in the labour force and education and increases the quality of life enjoyed by individuals and society (Gruszyn et al. 2012). In Australia, health prevention activities have long played a part in improving the health of Australians—for example, early prevention measures in the 1800s included sewerage systems and water supply in Sydney to improve public sanitation (Hector 2011). Some prevention activities target all people in a given population (for example, fluoridated water), while others target particular groups based on age or other risk factors (for example, breast cancer screening).

Health promotion (for example, education, social marketing, legislation and regulation) is an important part of disease prevention and can be used to help build social and physical environments that support healthy behaviours. In the past, prevention and promotion strategies, such as sanitation, immunisation, quarantine, workplace health and safety, safe birthing practices, and better food and water supply, have helped to prevent the spread of infectious diseases, improve maternal and child health, and create safer, healthier environments in which to live and work. These strategies continue to be vital today.

In 2013–14, \$2.2 billion, or 1.4% of total health expenditure, went to public health activities, which included prevention and health promotion (AIHW 2016). This did not include spending in non-health sectors such as road safety, the environment, and schools. The proportion of health expenditure allocated to public health has been declining since it peaked in 2007–08 (2.2%) (AIHW 2016).

This snapshot highlights selected prevention and promotion activities.

### Immunisation and vaccination



Immunisation is an important public health intervention to stop the spread of diseases that can cause serious illness and death. Worldwide, immunisation programs prevent an estimated 3 million deaths every year (Department of Health 2015a).

In Australia, immunisation begins at birth and vaccinations for children cover 13 diseases, including measles, mumps, diphtheria and whooping cough (Department of Health 2015a).

For immunisation to provide the greatest benefit, a large proportion of the community must be fully immunised. In the past, target coverage rates have been around 90%, with these rates for children being largely achieved (Table 6.1.1). However, due to a higher level of vaccine coverage required to achieve community immunity for measles, a recent national aspirational immunisation target (that is, the proportion of people who are fully immunised) has been set at 95% (Department of Health 2016c).



Table 6.1.1: Children assessed as fully immunised, by age group, 2015

	Age (years) <sup>(a)</sup>		
	1	2	5
 All children	92.3%	89.3%	92.6%
 Indigenous children	88.7%	86.2%	93.9%

(a) Children aged 1, 2 and 5 refer to 12–<15 months, 24–<27 months and 60–<63 months, respectively.

Sources: Department of Health 2016a, 2016b.

A national Human Papillomavirus (HPV) vaccination program (using the quadrivalent HPV vaccine which protects against four types of HPV) was introduced for females in 2007 and extended to males in 2013. Australia was the first country to introduce such a program and there has been a fall in HPV-related infection in females, high-grade cervical abnormalities (for example, precancerous lesions of the cervix) in young women, and genital warts among females and males since it began (Department of Health 2015b; NCIRS 2014). For example, 4 years after the beginning of the program, there was a substantial decrease in vaccine-targeted HPV genotypes (the specific types of HPV covered by the vaccine) among women aged 18–24—from 29% in 2004–2007 to 6.7% in 2010–2011 (Tabrizi et al. 2012). Of children turning 15 in 2014, 73% of girls were fully immunised (having received three HPV vaccinations) and 60% of boys were fully immunised (NHPVVPR 2015).

The Australian Government also funds a range of vaccinations for eligible people under the Immunise Australia Program. For example, the flu vaccine is available, for free, to pregnant women, Aboriginal and Torres Strait Islander Australians, people aged 65 and over, and people who are medically at risk and thus more likely to experience complications from flu (Department of Health 2015a).

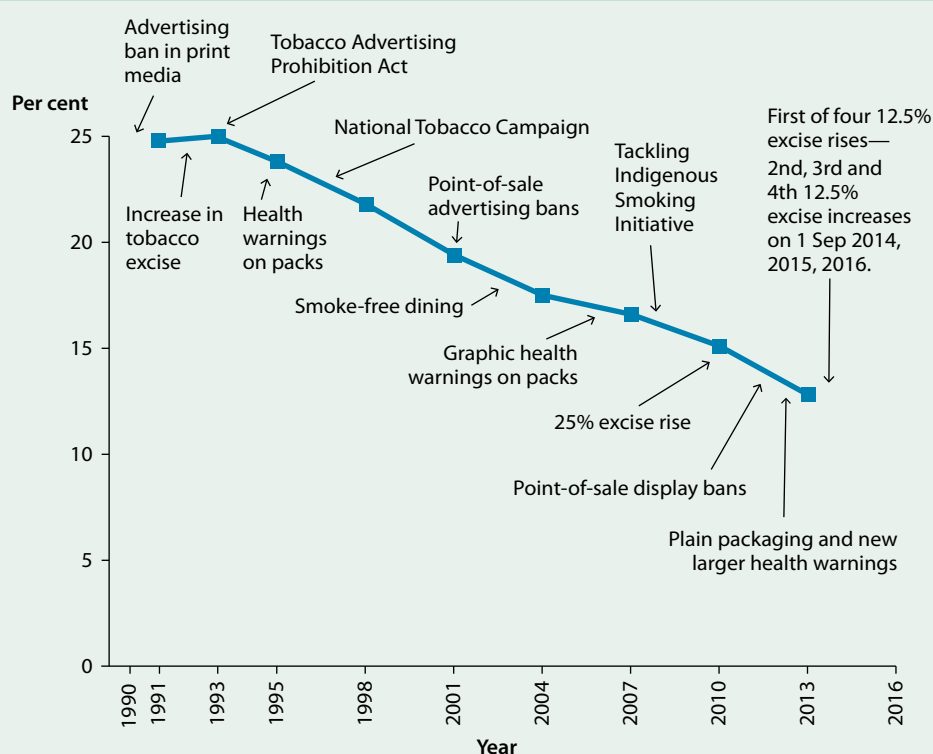
## Success stories

Two of the biggest prevention success stories in Australia have been reductions in road deaths and tobacco smoking rates. Even though the number of registered vehicles continues to increase over time, road deaths have fallen—from nearly 3,800 in 1970 to fewer than 1,200 in 2014 (BITRE 2010, 2015). During that time, a number of national road safety initiatives were introduced, including the compulsory wearing of seat belts, random breath testing and 50 km/h residential street speed limits.



Similarly, comprehensive public health policy approaches, including promotion, regulation and increased taxation on tobacco products, have contributed to the steady reduction in the daily tobacco smoking rate from 24% in 1991 to 13% in 2013 for people aged 14 and over (Figure 6.1.1). This reduction has been particularly marked for younger people, with the fall in daily smoking rates over the past decade occurring predominantly among people aged 18–49. The average age at which young people aged 14–24 smoked their first cigarette has risen steadily since 2001 (15.9 years in 2013 compared with 14.3 in 2001) and the proportions of secondary school students aged 12–17 who reported smoking in their lifetime, in the past 4 weeks, past week or on 3 days of the last 7, continues to decline (White & Williams 2015) (see 'Chapter 4.7 Tobacco smoking').

**Figure 6.1.1: Daily smokers aged 14 and over and key tobacco control measures, Australia, 1990–2016**



Source: Department of Health 2015c.

## Preventing chronic disease

Chronic diseases, such as coronary heart disease, cancer and diabetes, are the leading causes of illness, disability and death in Australia, and accounted for 17 of the 20 top causes of death in 2013 (see 'Chapter 3.3 Chronic disease and comorbidities'). Strategies to help reduce the impact of chronic disease and associated risk factors are a focus for all Australian governments.



Key risk factors associated with chronic disease include poor diet, physical inactivity, tobacco smoking, excessive alcohol consumption, high body mass and high blood pressure (see 'Chapter 3.1 Burden of disease and injury in Australia' and 'Chapter 4 Determinants of health'). These risk factors are largely preventable and can be reduced or eliminated through behavioural changes or managed with medical treatments (for example, medication for high blood pressure). Population health strategies targeting risk factors are wide-ranging, from guidelines and legislation to health programs and media campaigns (see Box 6.1.1 for examples in relation to diet).

#### Box 6.1.1: Population health approaches targeting diet and nutrition

- Australian Dietary Guidelines
- Mandatory fortification, for example folate fortification of bread
- Legislative instruments (for example Australia New Zealand Food Standards Code; mandatory food labelling)
- Policy and programs for healthy eating and good nutrition in schools
- National campaigns such as the Swap It, Don't Stop It campaign (2008) and the Go for 2&5 campaign (2005)
- Initiatives such as the National Heart Foundation 'Tick' endorsement program and other food labelling (beginning 1989) and the Health Star Rating System (2014)

#### What is missing from the picture?

Evaluating the impact and cost of community and nationwide initiatives can be difficult. Directly attributing outcomes to a specific initiative can also be a challenge, especially when multiple strategies are being applied at once (for example, legislation, taxation and promotion campaigns). Adding to this challenge is the fact that the impact of an intervention will often be delayed, meaning evidence to support the effectiveness of prevention activities may not be available for many years.

Vaccinations are recorded in Australia for children up to the age of 7, but there is no register for adults. The national system for recording childhood vaccinations is the Australian Childhood Immunisation Register (ACIR). A 'whole-of-life' Australian Immunisation Register will be introduced during the second half of 2016, starting with expansion of the ACIR to record vaccines delivered during adolescence (NCIRS 2015).

#### Where do I go for more information?

More information on the Immunise Australia Program is available at <http://www.immunise.health.gov.au/>. The reports *National Drug Strategy Household Survey detailed report: 2013* and *Australia's food and nutrition 2012* are also available for free download.



## References

AIHW (Australian Institute of Health and Welfare) 2016. National health expenditure, current and constant prices, 1985–86 to 2013–14, data cube. Canberra: AIHW. Viewed 21 April 2016, <<http://www.aihw.gov.au/expenditure-data/>>.

BITRE (Bureau of Infrastructure, Transport and Regional Economics) 2010. Road deaths in Australia 1925–2008. Canberra: BITRE.

BITRE 2015. Road trauma Australia, 2014 statistical summary. Canberra: BITRE.

Department of Health 2015a. Immunise Australia Program. Canberra: Department of Health. Viewed 15 October 2015, <<http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Home>>.

Department of Health 2015b. Immunise Australia Program. Human Papillomavirus (HPV). Canberra: Department of Health. Viewed 31 March 2016, <<http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/immunise-hpv>>.

Department of Health 2015c. Tobacco key facts and figures. Canberra: Department of Health. Viewed 23 October 2015, <<http://www.health.gov.au/internet/main/publishing.nsf/content/tobacco-kff#footnotes>>.

Department of Health 2016a. Immunise Australia Program. ACIR current data. Canberra: Department of Health. Viewed 23 February 2016, <<http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/acir-curr-data.htm>>.

Department of Health 2016b. Immunise Australia Program. ACIR current data: Aboriginal and Torres Strait Islander children. Canberra: Department of Health. Viewed 23 February 2016, <<http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/acir-curr-data-atsi-child.htm>>.

Department of Health 2016c. Immunise Australia Program. Immunisation coverage targets. Canberra: Department of Health. Viewed 23 February 2016, <<http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/news-20160216>>.

Gruszyn S, Hetzel D & Glover J 2012. Advocacy and action in public health: lessons from Australia over the 20th century. Canberra: Australian National Preventive Health Agency.

Hector D 2011. Sydney's water sewerage and drainage system. *Journal and Proceedings of the Royal Society of New South Wales* 144:3–25.

NCIRS (National Centre for Immunisation Research and Surveillance) 2014. Evaluation of the National Human Papillomavirus Vaccination Program: final report. Viewed 31 March 2016, <[http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/87C904B208B22554CA257E38001A5FBB/\\$File/Evaluation%20of%20the%20National%20Human%20Papillomavirus%20Vaccination%20Program.pdf](http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/87C904B208B22554CA257E38001A5FBB/$File/Evaluation%20of%20the%20National%20Human%20Papillomavirus%20Vaccination%20Program.pdf)>.

NCIRS 2015. Adult vaccination: fact sheet. Vaccines for Australian adults: information for immunisation providers, August 2015. Sydney: NCIRS. Viewed 3 October 2015, <[http://www.ncirs.edu.au/assets/provider\\_resources/fact-sheets/adult-vaccination-fact-sheet.pdf](http://www.ncirs.edu.au/assets/provider_resources/fact-sheets/adult-vaccination-fact-sheet.pdf)>.

NHPVPR (National HPV Vaccination Program Register) 2015. Coverage data. Melbourne: NHPVPR. Viewed 23 October 2015, <<http://www.hpvregister.org.au/research/coverage-data>>.

Tabrizi SN, Brotherton JM, Kaldor JM, Skinner SR, Cummins E, Liu B et al. 2012. Fall in human papillomavirus prevalence following a national vaccination program. *Journal of Infectious Diseases* 206(11):1645–51.

White V & Williams T 2015. Australian secondary school students' use of tobacco in 2014: report. Report prepared for the Tobacco Control Taskforce and the Australian Government Department of Health. Melbourne: Cancer Council of Victoria.