Australian Government
Australian Institute of Health and Welfare

Pneumococcal disease in Australia

Quick facts

Invasive pneumococcal disease (IPD) rates have dropped across all age groups since vaccination was introduced for infants.

The very young, the very old, and people with other medical conditions are at most risk from severe outcomes from pneumococcal disease.

IPD rates are still relatively high among Aboriginal and Torres Strait Islander people.

What is pneumococcal disease?

Pneumococcal disease is caused by *Streptococcus pneumoniae* bacteria (also known as pneumococcus). These bacteria are commonly found in the nose and throat of some people, most of whom remain healthy.

Pneumococcus bacteria can cause infections of the inner ear, sinus, lungs (pneumonia) and elsewhere. The most severe infections occur in places usually free of bacteria (for example the blood stream or membranes around the brain), and are known as invasive pneumococcal disease (IPD).

Young children, older adults, Aboriginal and Torres Strait Islander Australians, and people with underlying illnesses are at a higher risk of IPD than others.

Vaccination against invasive pneumococcal disease

A large number of different types of pneumococcus bacteria cause IPD. Vaccines are designed to protect against the most common types that cause serious disease.

Pneumococcal vaccination is available in the Australian National Immunisation Program (NIP) for infants and young children. Vaccination is also available under the NIP for adults at the age of 65 years, and for Aboriginal and Torres Strait Islander adults at the age of 50 years.

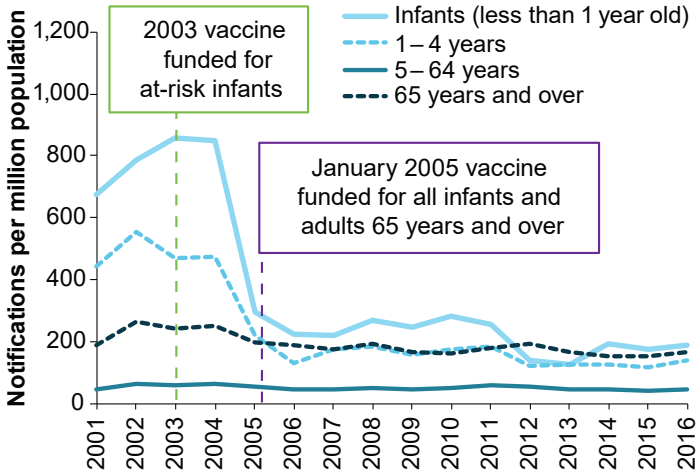
Having a large percentage of vaccinated children in the community also leads to fewer IPD cases in people of other ages. This is due to 'herd immunity', where diseases have less opportunity to spread, and people who are susceptible to infection are less likely to be exposed.

In 2017, 94% of Australian 1 year olds were fully vaccinated against pneumococcal disease; however, vaccination rates vary by where a child lives.

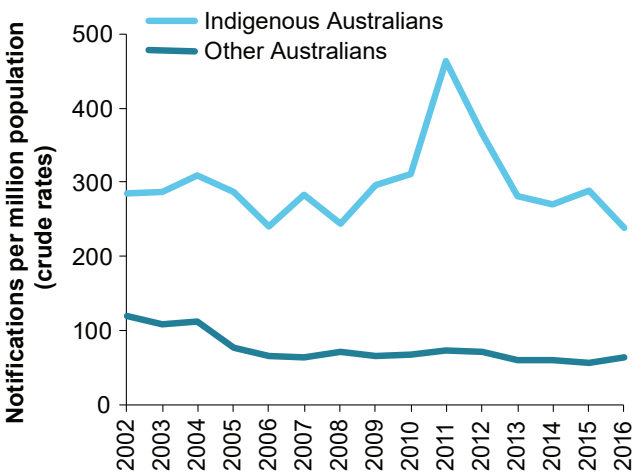
Invasive pneumococcal disease notifications

Since 2001, IPD has been a notifiable disease in Australia, which means that diagnosed cases are reported to state or territory health departments.

The number of notifications fell dramatically after vaccines were introduced for infants; however, IPD rates remain higher among the youngest and oldest Australians. In 2016, there were 1,666 IPD notifications, 234 (14%) of which were for children under 5 and 613 (37%) for people aged 65 years or older. The notification rate has remained consistently higher among Indigenous Australians than for other Australians.



Source: AIHW analysis of NNDSS data extracted on 16 January 2018.

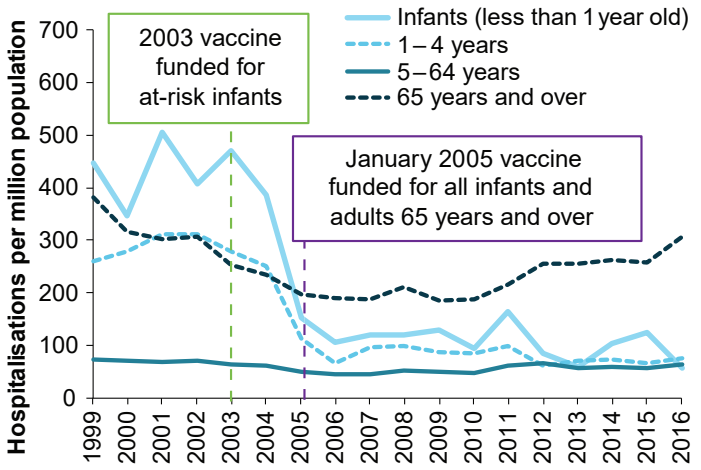


Source: AIHW analysis of NNDSS data extracted on 16 January 2018.

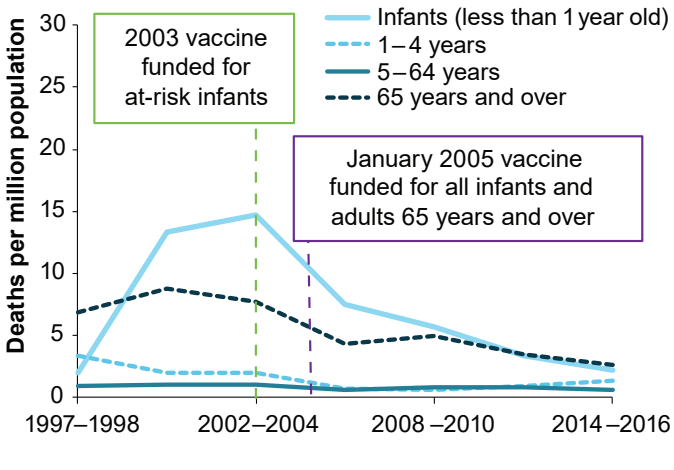
Hospitalisations and deaths due to pneumococcal disease

In 2016, there were 2,434 hospital admissions in Australia for pneumonia, meningitis or blood stream infections caused by pneumococcus bacteria. Almost 5% (113) of these were for children aged under 5. Hospitalisation rates for children under 5 have fallen since funding of the pneumococcal vaccine for all infants (left figure).

Between 1997 and 2016, 622 people in Australia died from pneumonia, meningitis or blood stream infection caused by pneumococcus bacteria. The death rate has fallen since vaccination was introduced for all infants in the mid-2000s (right figure).



Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Mortality Database.

This fact sheet is part of the *Vaccine-preventable diseases* release. For more information see *Immunisation* on the AIHW website.