

Prevention and Control of Pneumococcal Disease in Aged Care Homes

Pneumococcal disease is an infection caused by a bacteria called *Streptococcus pneumoniae*. Infection may be mild or severe invasive disease. Invasive disease includes meningitis, pneumonia and bloodstream infection. Milder infections include otitis media (or middle ear infections).

Young children and elderly people have the highest incidence of invasive pneumococcal infection. Older people are more vulnerable as their immune systems may not be able to fight infection. Disease burden is also higher in Aboriginal and Torres Strait Islander people.

Signs and Symptoms

Symptoms of pneumococcal infection vary according to the site of infection, underlying immunity and age. The incubation period is 1-3 days. Bacteria causing infection may spread from the nose and throat into other body sites to cause mild disease such as:

- sinusitis
- otitis media (middle ear infection)
- pneumonia

Invasive infections include:

- meningitis
- pneumonia
- bloodstream infection

Symptoms of pneumococcal infection	
respiratory symptoms – cough, chills and shaking	blood-stained sputum (spittle/mucus)
difficulty breathing	light sensitivity
ear pain or discharge from the ear	poor appetite
fever	confusion
nausea and vomiting	irritability
headaches	drowsiness
chest pain – breathing in and out	skin rash
shortness of breath	

How can pneumococcal disease be prevented?

1. Pneumococcal vaccination for adults

Adults with conditions that increase the risk of pneumococcal disease:

- Individuals aged >12 months with risk conditions for pneumococcal disease are recommended to receive 1 dose of 13vPCV and 2 lifetime doses of 23vPPV
- All Aboriginal and Torres Strait Islander adults ≥50 years of age are recommended to receive 13vPCV and two doses of 23vPPV
- Older Australians without risk conditions for pneumococcal disease should receive a single dose of 13vPCV at age ≥70 years

Note: In July 2020, there was a change to the age that the pneumococcal vaccination is recommended for older Australians, from ≥65 to ≥70 years. This is because pneumococcal disease is much more common in people over 70 years of age than in people aged 65–69 years. Vaccination from 70 years of age will provide better protection as people move into older age groups with increasing pneumococcal disease risk.

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2. Infection prevention and control measures

Streptococcus pneumoniae is transmitted from person to person through contact with respiratory droplets of symptomatic and asymptomatic carriers. The following measures reduce the risk of transmission:

- Antibiotic therapy - appropriate therapy makes people non-infectious within 24 hours
- Strict hand hygiene practices by staff
- Droplet transmission based precautions for 24 hours
 - Residents to remain in a single room
 - All staff and visitors to wear surgical mask when attending to the resident

Diagnosis of pneumococcal infection

- Pneumococcal disease is diagnosed on the basis of medical review and physical examination. Depending on your symptoms a variety of tests may be required including: blood, urine, and/or sputum specimens for culture
- chest x-ray
- lumbar puncture (collection of spinal fluid for testing)

Management of pneumococcal infection

- antibiotics
- pain relief
- drinking more fluids
- rest
- admission to hospital for acute cases

Further reading:

1. National Health and Medical Research Council (NHMRC), 2013, Australian Immunisation Handbook
2. Australian Technical Advisory Group on Immunisation (ATAGI). ATAGI Clinical Advice on changes to vaccine recommendations and funding for older non-indigenous adults from 1 July 2020, <https://www.health.gov.au/sites/default/files/documents/2020/06/atagi-clinical-advice-on-vaccine-recommendations-for-older-non-indigenous-adults-from-1-july-2020.pdf>
3. National Centre for Immunisation Research & Surveillance (NCIRS) 2018, Pneumococcal vaccines for Australians, <http://www.ncirs.org.au/ncirs-fact-sheets-faqs/pneumococcal-vaccines-australians>
4. Victorian Department of Health and Human Services, Invasive pneumococcal disease, <https://www2.health.vic.gov.au/public-health/infectious-diseases/disease-information-advice/pneumococcal-disease>

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