About the Immunisation Coalition

Our mission is to protect Australians against infectious diseases by advocating for immunisation and fight the misinformation from antivax groups with science based medical facts.

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What we do:

- Create public awareness regarding the importance of immunisation by providing educational materials and communication programs.

- Co-operate with key Australian professional bodies, consumer groups and the Australian, State and Territory Governments in their educational activities focused on immunisation to bring information to Australian healthcare professionals and the public.

- Work with consumers, health professionals and organisations with an interest in immunisation, ensuring that the information provided to consumers through our website and other communication channels is current, easily understood and scientifically informed.

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Adult Pneumococcal Disease

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Reviewed and updated August 2019

Poll 1

What causes pneumococcal disease?

A. Streptococcus pneumoniae

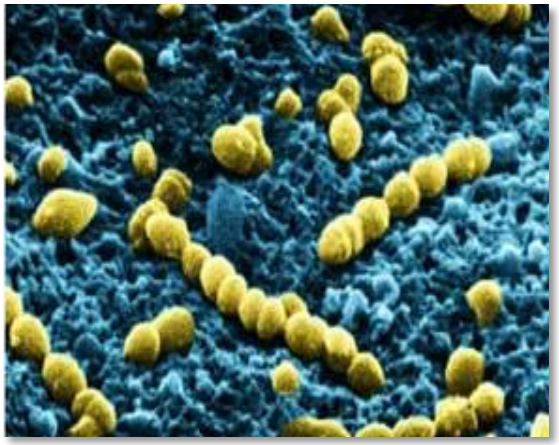
B. Staphylococcus pneumoniae

C. Staphylococcus aureus

D. Streptococcus agalactiae

S. pneumoniae and pneumococcal disease

- The bacterium *Streptococcus pneumoniae* causes pneumococcal disease
- *S. pneumoniae* is commonly found in human nasopharynx (nose and throat) of many people without disease
- Generally, the presence of *S. pneumoniae* in the nasopharynx does not cause illness. However, vulnerable individuals *(e.g: asplenic, HIV, malignancy)* may develop pneumococcal disease
- *S pneumoniae* spreads from person to person through contaminated respiratory droplets (i.e. droplets containing the bacteria)



Streptococcus pneumoniae

Ref: Dowling JN, et al. J Infect Dis 1971; 124: 9-17. Hendley JO, et al. J Infect Dis 1975; 132: 55-61. Musher DM, in Mandell "Principles and Practice of Infectious Diseases" 2005

What is pneumococcal disease?

Pneumococcal disease covers a wide spectrum of illnesses ranging from mild to life-threatening

- Sinusitis
- Otitis media
- Bacteraemia
- Pneumonia
- Meningitis
- Peritonitis
- Septic arthritis
- Osteomyelitis

Ref: Musher DM, in Mandell "Principles and Practice of Infectious Diseases" 2005

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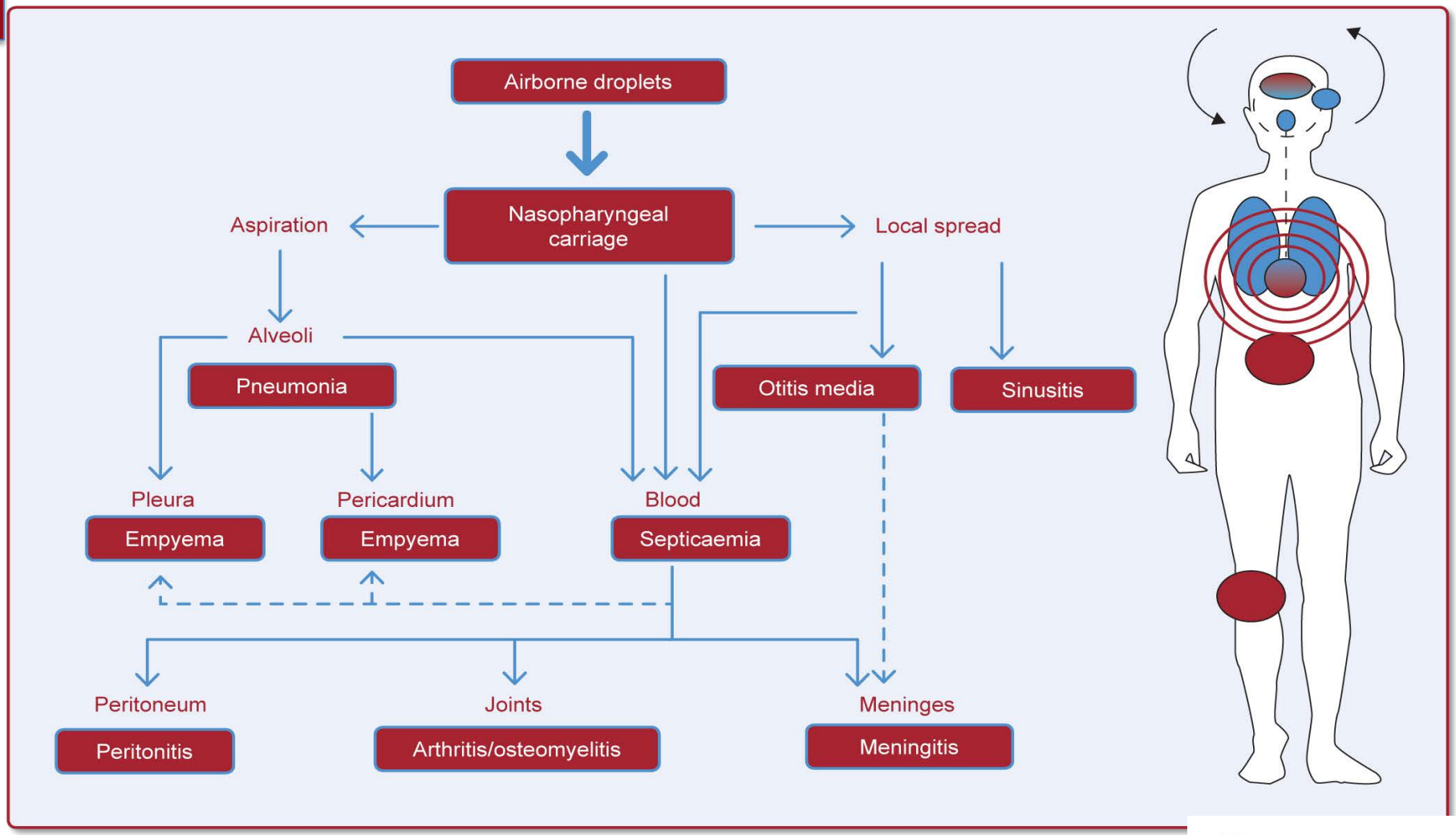
Possible progression pathway of disease



Ref: Musher DM, in Mandell "Principles and Practice of Infectious Diseases" 2005

Adapted from Musher DM, Principles and Practice of Infectious Diseases, 2005

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Treating pneumococcal disease

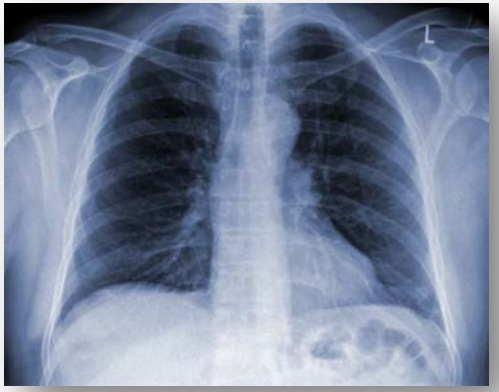
- Pneumococcal disease is treated with antibiotics
- Antibiotic-resistance has become an increasing challenge
- Therefore, prevention of pneumococcal disease, especially in vulnerable individuals, is a priority

- Ref: Ward J. Rev Infect Dis 1981; 3: 254-66.
  Schoemakers MCJ, et al Reviews in Med Microbiology 2002
  Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* , Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

What is invasive pneumococcal disease?

- Invasive pneumococcal disease (IPD) is defined as the isolation of a *S. pneumoniae* from a normally sterile site (generally blood, and also pleural, joint and cerebrospinal fluid)

- Major clinical presentations of IPD include:
  - Pneumococcal pneumonia (most common in adults)
  - Bacteraemia without focus (most common in children)
  - Meningitis



- IPD is used as an overall indicator of pneumococcal disease burden

- In children + adults the morbidity associated with IPD can be substantial.

- IPD may be life-threatening
  – resulting in hospitalisations and death

Ref: Musher DM, in Mandell "Principles and Practice of Infectious Diseases" 2005
Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* ,Australian Government Department of Health, Canberra 2018. immunisationhandbook.health.gov.au.
McIntyre PB, et al. Medical Journal of Australia 2000; 173(Suppl):S22-6.
Robinson KA, et al. JAMA 2001;285:1729-35.
WHO Position paper, WER 2008 17 Oct 2008, Vol. 83, 42 (pp. 373–384).

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Invasive Pneumococcal Disease in Australia

Highest incidence is seen at extremes of age:
young children and **elderly**

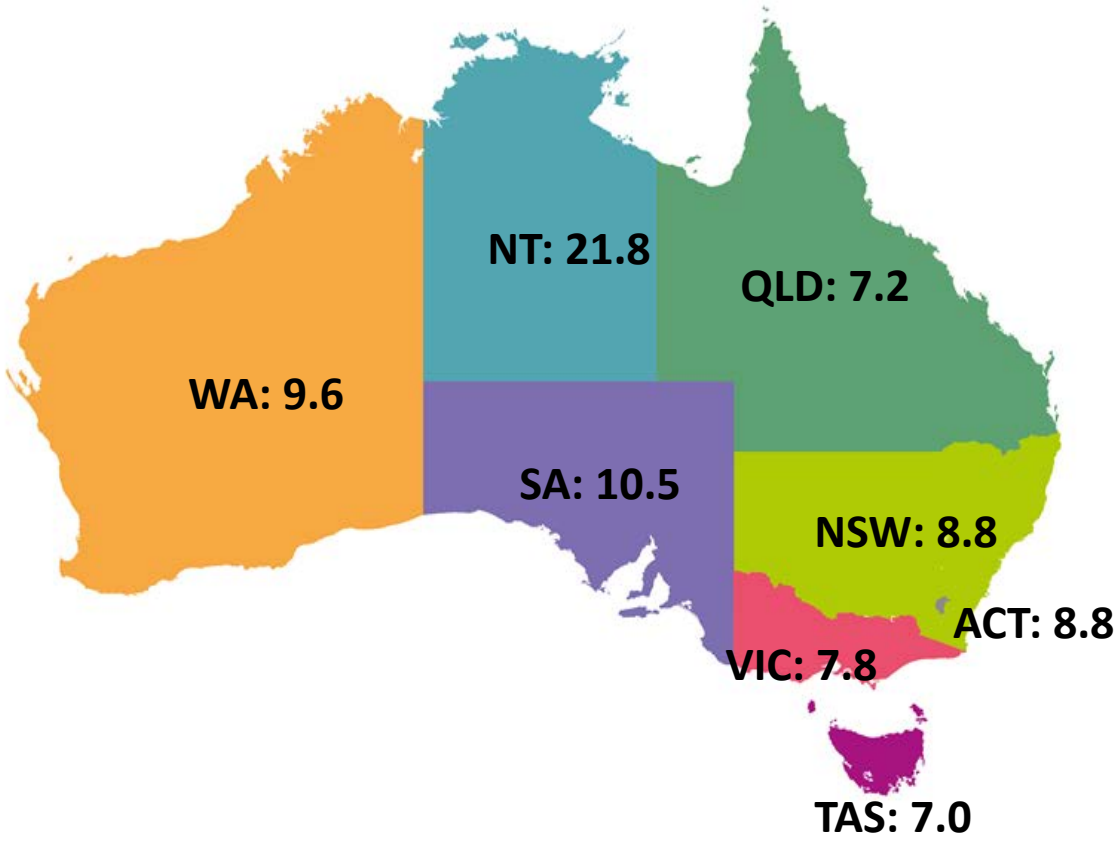
In **2019**:

- 2,129 cases of IPD were reported to the National Notifiable Diseases Surveillance System (NNDSS)
- 318 cases IPD in children under 5 and 959 cases in people ≥ 60 years of age
- Notification rate of 8.5 cases per 100,000 population
- Indigenous Australians account for around 13% of all IPD notifications, with most cases occurring in children <5 and adults ≥ 55 years of age

Dept of Health, Communicable Diseases Intelligence Report, 2020
Dept of Health, National Notifiable Diseases Surveillance System Accessed 6 July 2020

Invasive pneumococcal disease in Australia

Rates of IPD per 100,000 population reported in 2019, varied across states



Ref: Dept of Health, National Notifiable Diseases Surveillance System Accessed 6th July 2020

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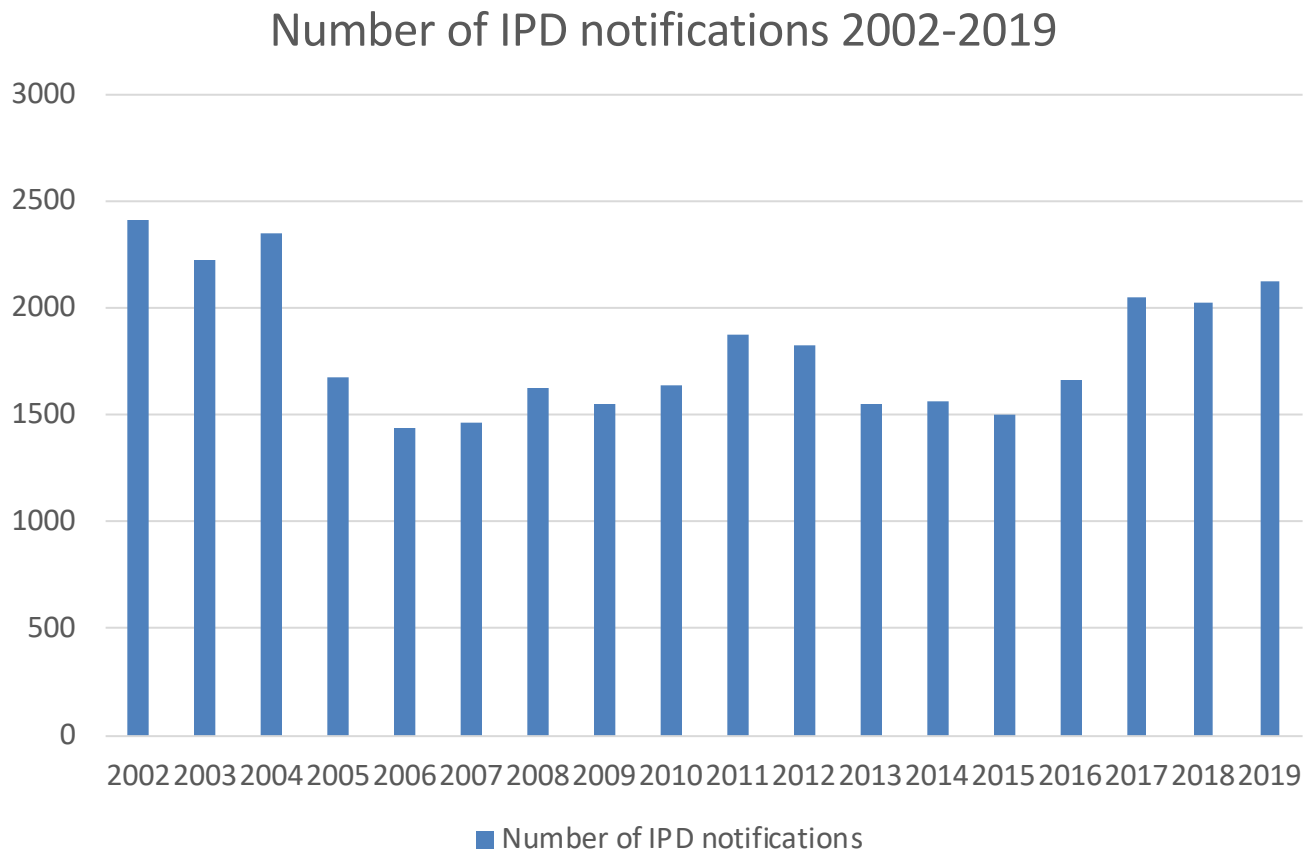
Number of notifications of Invasive Pneumococcal Disease 2002-2019



Ref: Dept. of Health National Notifiable Diseases Surveillance System Accessed 6th July 2020

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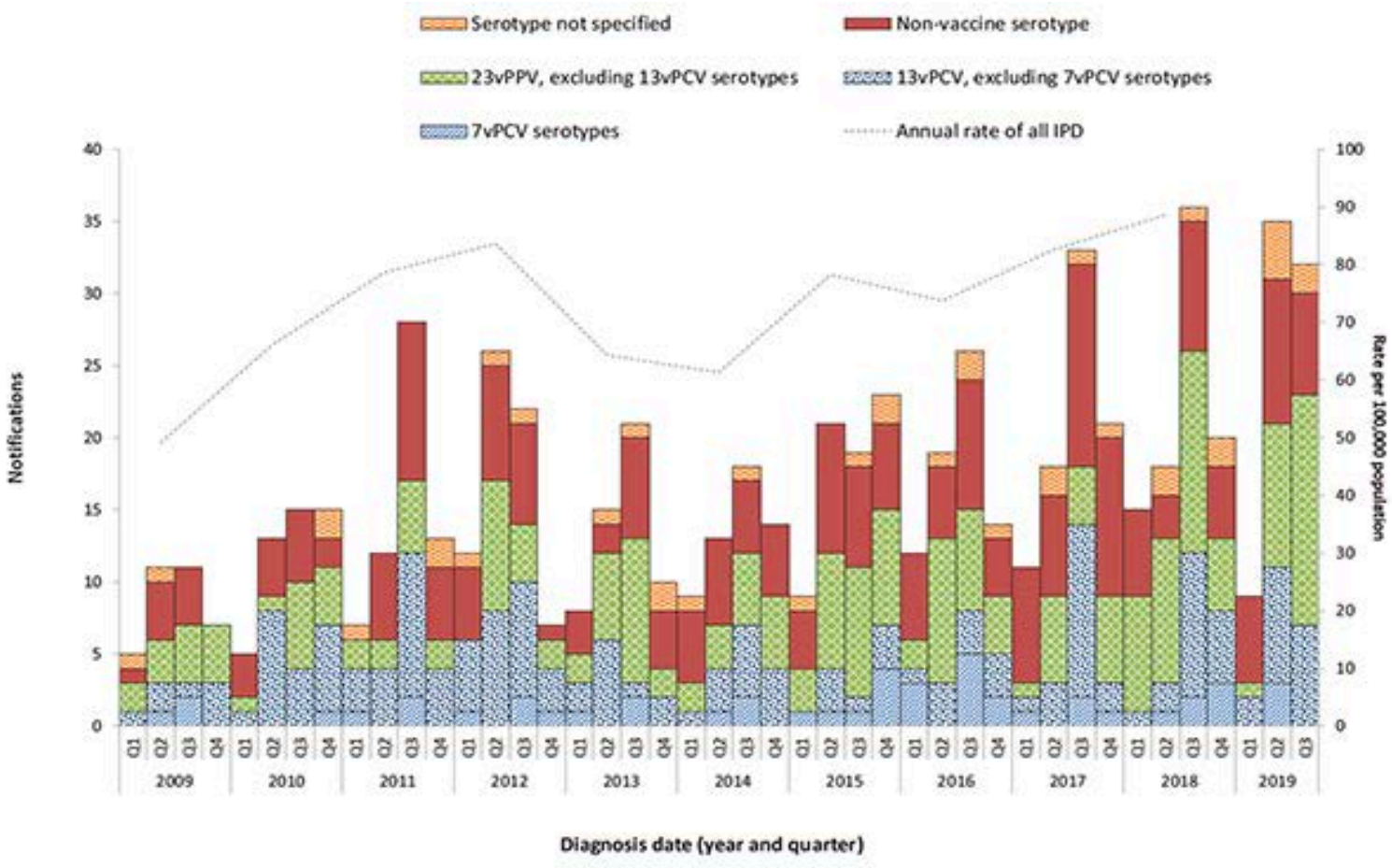
IPD in Non-Indigenous Australians ≥ 65 years (1st January 2009 to 30th September 2019)



Ref: Dept Health IPD Quarterly Report Invasive Pneumococcal Disease Surveillance 1st July to 30th September 2019

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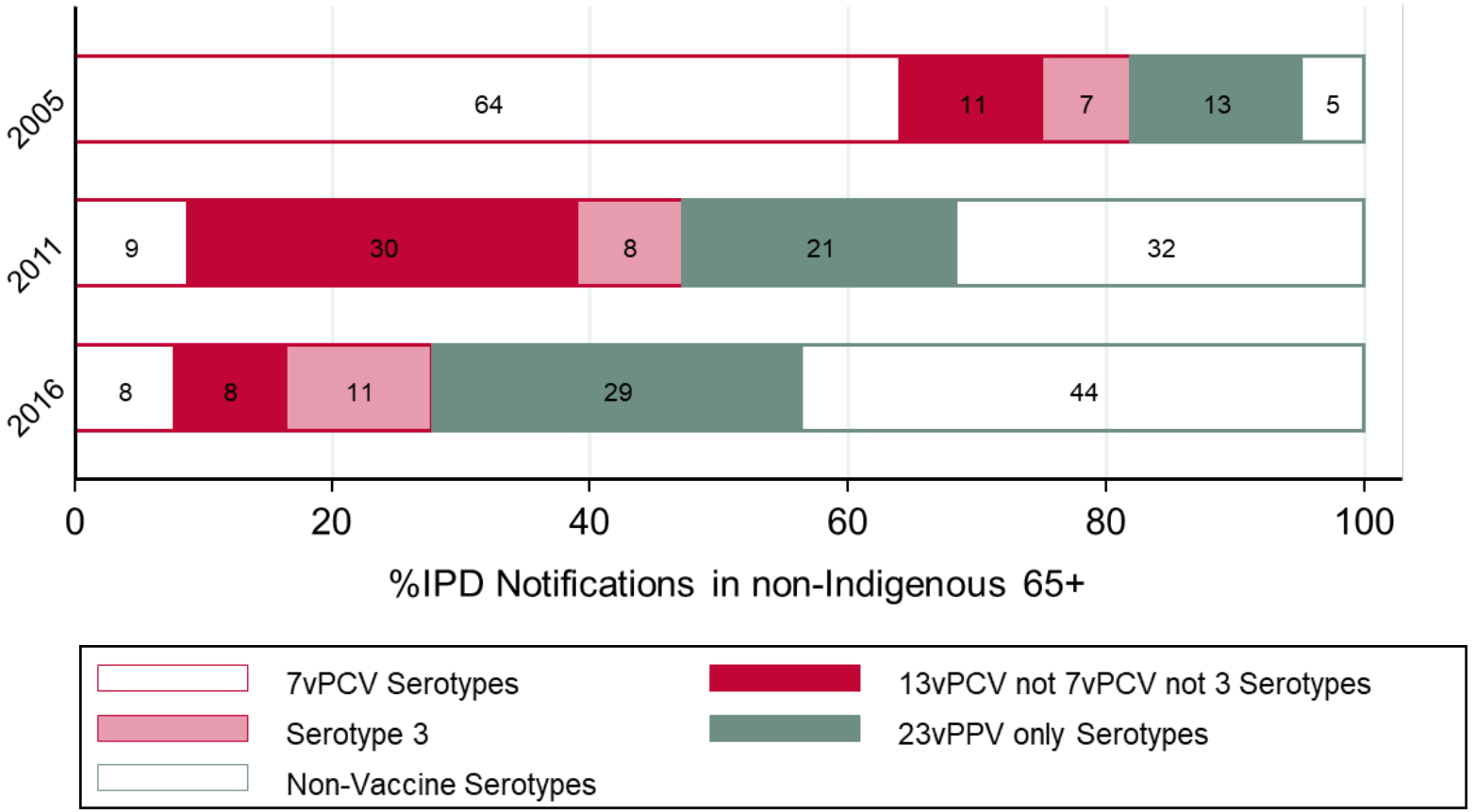
Percentage of vaccine preventable IPD is decreasing in non-Indigenous Australians ≥ 65 years



Ref: Stein A et al Trends in serotype distribution of invasive pneumococcal disease in non-indigenous older Australians collected through National Notifiable Diseases Surveillance System from 2002 to 2016

Dept Health IPD Quarterly Report Invasive Pneumococcal Disease Surveillance 1st April to 30th June 2017

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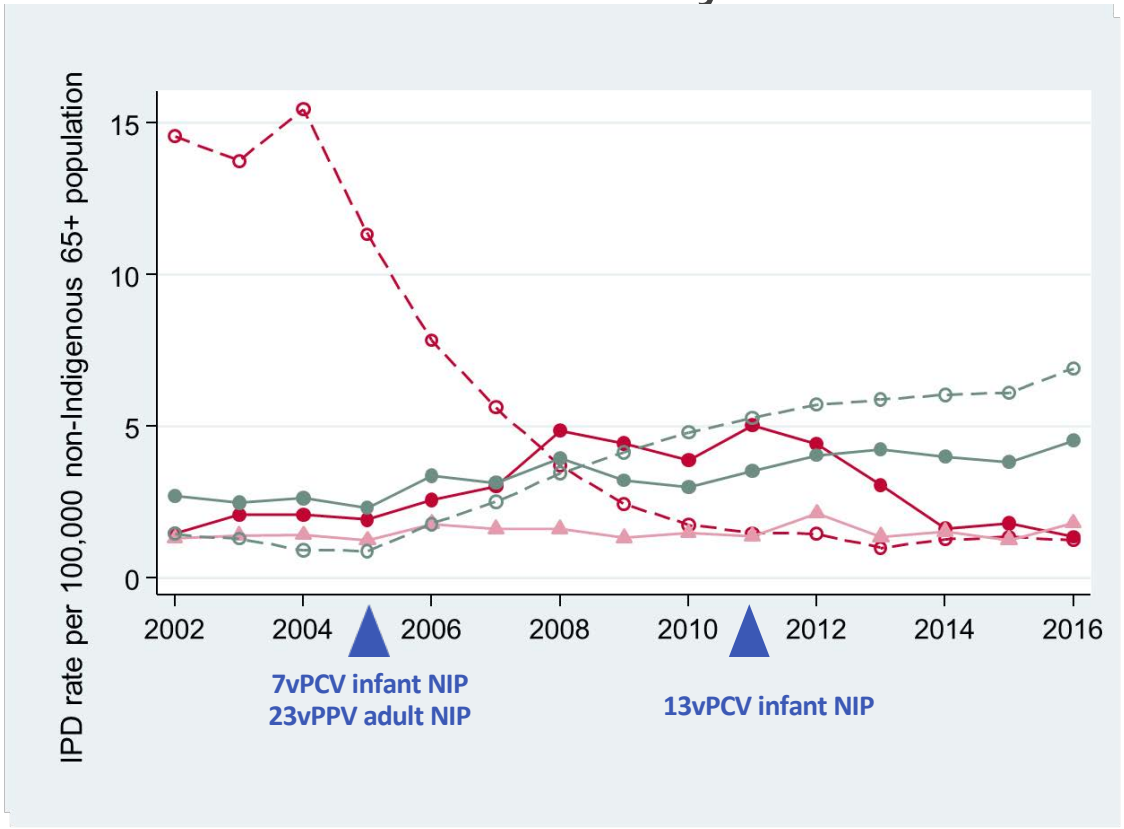
Trends in serotype specific IPD incidence reflect impact of infant and adult vaccination program in non-Indigenous Australians ≥ 65 years



Ref: Stein A et al Trends in serotype distribution of invasive pneumococcal disease in non-indigenous older Australians collected through National Notifiable Diseases Surveillance System from 2002 to 2016

Dept Health IPD Quarterly Report Invasive Pneumococcal Disease Surveillance 1st April to 30th June 2017

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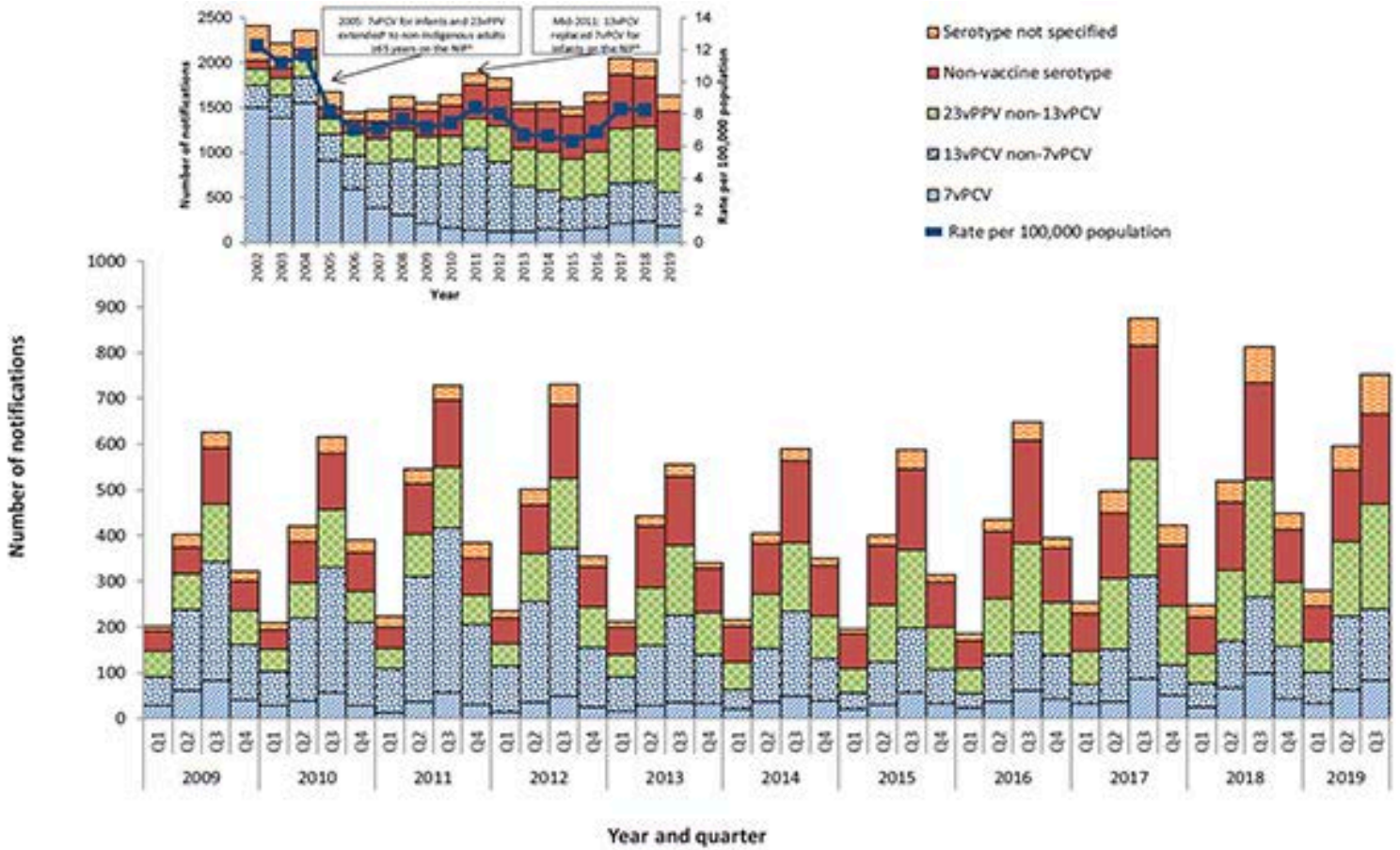
Notifications of IPD by serotype-all age groups (1st January 2009 to 30th September 2019)



a In 1999, the 23vPPV was funded for all Indigenous Australians aged 50 years and over, as well as younger Indigenous Australian adults with risk factors.
b NIP - National Immunisation Program.

Ref: Dept Health IPD Quarterly Report Invasive Pneumococcal Disease Surveillance 1st January to 30th September 2019

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Invasive pneumococcal disease by serotype

Following July 2011 replacement of 7vPCV with 13vPCV

- there was a rapid decline in disease caused by six extra serotypes covered by 13vPCV across all age groups however
- more recently decline no longer evident

Ref: Dept Health IPD Quarterly Report Invasive Pneumococcal Disease Surveillance 1st January to 31st March 2019

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Who is at risk of IPD?

- **Children < 2 years and the elderly**
- **Aboriginal and Torres Strait Islanders**

- Previous episode of invasive pneumococcal disease
- Functional or anatomical asplenia, including:
  - sickle cell disease or other haemoglobinopathies
  - congenital or acquired asplenia e.g. splenectomy or hyposplenia
- Immunocompromising conditions, including:
  - congenital or acquired immune deficiency, including symptomatic IgG subclass or isolated IgA deficiency
  - haematological malignancies
  - solid organ transplant
  - haematopoietic stem cell transplant
  - HIV infection
  - immunosuppressive therapy, where sufficient immune reconstitution for vaccine response is expected; this includes those with underlying conditions requiring but not yet receiving immunosuppressive therapy
  - non-haematological malignancies receiving chemotherapy or radiotherapy (currently or anticipated)
- Proven or presumptive cerebrospinal fluid (CSF) leak, including:
  - cochlear implants
  - intracranial shunts
- Cardiac disease, including:
  - congenital heart disease
  - coronary artery disease
  - heart failure
- Chronic respiratory disease, including:
  - suppurative lung disease, bronchiectasis and cystic fibrosis
  - chronic lung disease in preterm infants
  - chronic obstructive pulmonary disease (COPD) and chronic emphysema
  - severe asthma (defined as requiring frequent hospital visits or the use of multiple medications)
  - interstitial and fibrotic lung disease
- Chronic renal disease:
  - relapsing or persistent nephrotic syndrome
  - chronic renal impairment – eGFR <30 mL/min (stage 4 or 5 disease)
- Children born less than 28 weeks gestation
- Trisomy 21
- Chronic liver disease, including:
  - chronic hepatitis
  - cirrhosis
  - biliary atresia
- Diabetes
- Smoking (current or in the immediate past)
- Harmful use of alcohol (Defined as consuming on average ≥60 g of alcohol (6 Australian standard drinks) per day for males and ≥40 g of alcohol (4 Australian standard drinks) per day for females)

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Ref: Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* 10th ed (2017 update). Canberra: Australia Government Department of Health, 2017..

Invasive pneumococcal disease risk in people with underlying chronic conditions

- Adults with diabetes, chronic heart disease, or chronic lung disease exhibit a **3 to 6-fold increased risk of IPD**, compared with healthy adults

Ref: Kyaw MH et al. J Infect Dis 2005; 192:377–86

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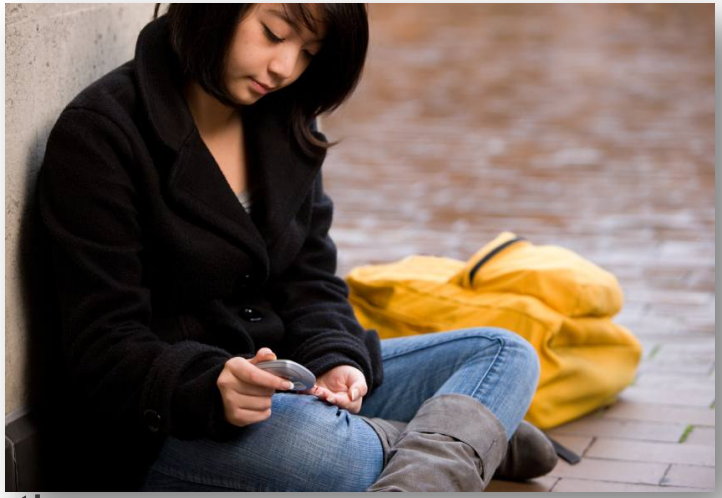
Pneumococcal disease and diabetes



- People with diabetes have impaired pulmonary host defences which may predispose to lower respiratory tract infections
- In people with diabetes, *S. pneumoniae* infections are associated with increased morbidity and mortality
- Diabetes is a risk factor for bacteraemia in patients with pneumococcal pneumonia & is associated with increased mortality
- Diabetes is often associated with cardiovascular or renal disease, which increases the risk for severe pneumococcal illness
- *S. pneumoniae* infection can impair blood glucose control

Ref: Koziel H, et al. Infect Dis Clin North Am 1995, 9(1) 65-96. Joshi N, et al. NEJM 1999, 341(25) 1906-1912. MMWR. Prevention of pneumococcal disease — recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep 1997;46(RR-8):1-24. Therapeutic Guidelines Endocrinology, version 4, 2009.

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Pneumococcal disease and diabetes

Vaccination recommendations

The following guidelines recommend vaccination against pneumococcal disease for people with diabetes:

- The Australian Immunisation Handbook , Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.
- The Diabetes Management in General Practice 2016-18 Guidelines for Type 2 Diabetes (Diabetes Australia and the RACGP)

Ref: . Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* Australian Government Department of Health, Canberra 2018. immunisationhandbook.health.gov.au.
Diabetes Management in General Practice 2016/18 18th Ed Guidelines for Type 2 Diabetes.

Pneumococcal disease and chronic cardiac disease

Chronic heart failure

- Patients with chronic heart failure are at increased risk of respiratory infections

- Respiratory infections are a major cause of acute cardiac decompensation in heart failure patients, especially in the elderly

Ref: National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand (Chronic Heart Failure Guidelines Expert Writing Panel). Guidelines for the prevention, detection and management of chronic heart failure in Australia. Updated October 2011.

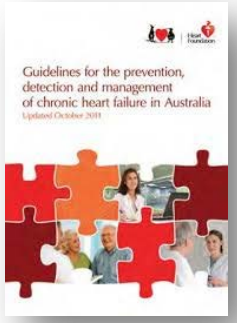
Pneumococcal disease and chronic cardiac disease

Vaccination recommendations

The following guidelines recommend vaccination against pneumococcal disease for people with chronic cardiac disease including chronic heart failure:

- The Australian Immunisation Handbook , Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

- Guidelines for the prevention, detection and management of chronic heart failure in Australia Updated 2011
  (National Heart Foundation of Australia and
  the Cardiac Society of Australia and New Zealand)



Ref: Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* ,Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.
National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand (Chronic Heart Failure Guidelines Expert Writing Panel). Guidelines for the prevention, detection and management of chronic heart failure in Australia. Updated July 2011.

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Pneumococcal disease and chronic pulmonary disease

Chronic Obstructive Pulmonary Disease (COPD)

- People with COPD are at increased risk of developing pneumococcal disease
- In patients hospitalised for acute COPD exacerbations and concomitant pneumonia
  – where infection was the cause of the exacerbation,
  S. pneumoniae is one of commonest bacteria identified in sputum

- Patients on high-dose inhaled corticosteroids may have impaired airway defense mechanisms making them susceptible

Ref: MMWR. Prevention of pneumococcal disease — recommendations of the Advisory Committee on Immunization Practices (ACIP). Ko FW, et al. Respir Med 2008; 102(8): 1109-16.

Pneumococcal disease and chronic pulmonary disease

Severe Asthma

- Asthma is an independent risk factor for IPD
- People with asthma have at least a two-fold higher risk of developing IPD

Vaccination recommendations

- For people with chronic pulmonary disease, vaccination against pneumococcal disease is recommended by the Australian Immunisation Handbook 2018

Ref: Talbot TR, et al. N Engl J Med 2005; 352:2082-90. MMWR. Updated recommendations for prevention of invasive pneumococcal disease among adults using the 23-valent pneumococcal polysaccharide vaccine (PPSV23) 3rd September 2010.
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5934a3.htm
Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* ,Australian Government Department of Health, 2018 immunisationhandbook.health.gov.au.

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Invasive pneumococcal disease and tobacco smoking

Cigarette smoking is the strongest independent risk factor for IPD among immunocompetent, non-elderly adults

- Smoking:
  - Damages the mucosal lining of the airways
  - Increases number inflammatory molecules
  - Hinders mucociliary clearance
  - Increases susceptibility to upper respiratory tract colonisation, infection and otitis media

- About half of otherwise healthy adults with IPD are **tobacco smokers**
- Vaccination against pneumococcal disease is recommended by The Australian Immunisation Handbook 2019

Ref: Nuorti JP, et al NEJM 2000; 382: 681-9. Schoemakers MCJ, et al Reviews in Med Microbiology 2002. Dye JA, Adler. KB. Thorax 1994; 49: 825-34.

Pneumococcal vaccines Background

1986	23vPPV first recommended for high risk populations
1997	23vPPV recommended for all adults > 65 years and Indigenous adults 50-64 years
1998	23vPPV funded for adults ≥ 65 years and Indigenous adults 50-64 years in Victoria
1999	23vPPV funded for all Indigenous adults >50 years and high risk Indigenous 15-50 years
2001	7vPCV NIP for high risk infants
2005	23vPPV NIP for all adults ≥ 65 years 7vPCV NIP for all infants
2011	23vPPV revaccination restricted to at-risk population 13vPCV NIP for all infants
2018	13vPCV NIP 12 months instead of 6 months
2020	13vPCV NIP (in addition to current infant schedules) for: - all individuals with certain medical conditions - Aboriginal and Torres Strait Islander people without risk factors at ≥ 50 years of age - non-Aboriginal people without risk factors at ≥ 70 years of age

Poll 2

What is the difference between Prevenar 13 and Pneumovax 23?

A. Prevenar 13 is a 13 strain polysaccharide vaccine and Pneumovax 23 is a 23 strain conjugated vaccine

B. Prevenar 13 is a 13 strain conjugate vaccine and Pneumovax 23 is a 23 strain polysaccharide vaccine

C. They are both conjugate vaccines but contain a different number of strains

D. They are both polysaccharide vaccines but contain a different number of strains

Ref: *The Australian Immunisation Handbook* ,Australian Government Department of Health, 2018. immunisationhandbook.health.gov.au.

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13-valent pneumococcal conjugate vaccine (13vPCV)

- Contains capsular polysaccharides derived from 13 types of *S. pneumoniae* - linked to a protein (non-toxic CRM_{197} protein)
- In 2007-2008, these 13 serotypes were identified as the cause of 65% of notified IPD cases in Australia across all age groups
- Indicated in adults and children from 6 weeks of age for active immunisation for the prevention of pneumococcal disease due to pneumococcal types contained in the vaccine.
- 13-valent pneumococcal conjugate vaccine has been available in Australia since 2010

Ref: Prevenar13 Product Information 2015. Barry C, et al. Commun Dis Intell 2012 36(2): E151-165. Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

13-valent pneumococcal polysaccharide vaccine (13vPCV) NIP

National Immunisation Program

A **single dose** of 13vPCV is listed on the NIP for:

- Aboriginal and Torres Strait Islander people ≥ 50 years of age with no risk conditions
- Non-Aboriginal and Torres Strait Islander people ≥ 70 years of age with no risk conditions
- All individuals with certain (not all) risk conditions

3 doses of 13vPCV is listed on the NIP for individuals who have received a haematopoietic stem cell transplant

Where the rate of disease is not sufficiently high enough to be cost-effective given the cost of vaccine purchase and delivery, people with some risk conditions will not be eligible to receive the pneumococcal vaccines funded under the NIP.

These individuals will need to purchase the vaccine on prescription.

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Ref: Australian Technical Advisory Group on Immunisation (ATAGI) Clinical Advice July 2020. *The Australian Immunisation Handbook,* Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

Poll 3

Can Prevenar 13 be given concurrently with Zostavax and influenza vaccines?

A. No the combination should be avoided

B. Prevenar 13 can be given with Zostavax but not with influenza vaccines

C. Prevenar 13 can be given with influenza vaccine but not with Zostavax vaccine

D. Prevenar 13 can be given with influenza and Zostavax vaccines

Ref: Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian Immunisation Handbook* ,Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

13-valent pneumococcal conjugate vaccine (13vPCV)

- The need for revaccination with a subsequent dose has not been established
- If sequential administration of 13vPCV and 23vPPV is considered, 13vPCV should be given first for maximal efficacy and to avoid blunting of the immune response by 23vPPV
- Most commonly reported adverse events include fever and injection site reactions, see full product information

Pharmaceutical Benefits Scheme (PBS)

13vPCV is not listed on the PBS

Ref: *The Australian Immunisation Handbook,* Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

23-valent pneumococcal polysaccharide vaccine (23vPPV)

- Contains capsular polysaccharides derived from 23 types of *S. pneumoniae*
- In 2007-2008, these 23 serotypes were identified as the cause of 74% of notified IPD cases in Australia
- Indicated for immunisation against pneumococcal disease due to pneumococcal types contained in the vaccine.
- 23-valent pneumococcal polysaccharide vaccine has been available in Australia since 1983
- **The youngest age recommended for receiving the first dose of 23vPPV after the required dose(s) of 13vPCV is 4 years**

Ref: Pneumovax®23 Approved Product Information. 2011. Barry C, et al. Commun Dis Intell 2012 36(2): E151-165. Australian Technical Advisory Group Immunisation (ATAGI). *The Australian Immunisation Handbook* ,Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

23-valent pneumococcal polysaccharide vaccine (23vPPV)

- Administered as a 0.5mL dose S/C or IM
- Most commonly reported adverse events include fever and injection site reactions
- Duration of immunity: antibody levels decline after 5-10 years. A more rapid decline may occur in some groups (e.g. the elderly)
- The number of recommended lifetime doses of 23vPPV is now **limited to 2 doses** for all people
- The minimum recommended interval between any 2 doses of 23vPPV is 5 years
  - Immune hyporesponsiveness ('blunting' of the antibody response) may occur after repeat doses
  - Not known if this has any significant negative outcome on effectiveness
- A higher rate of self-limited injection site reactions following revaccination (compared with first vaccination) has been observed and is described in the Product Information

Ref: Pneumovax®23 Approved Product Information 2011. ATAGI Statement *Updated recommendations for revaccination of adults with 23-valent pneumococcal polysaccharide vaccine (23vPPV), Pneumovax®23.* October 2013.

23-valent pneumococcal polysaccharide vaccine (23vPPV) NIP and PBS information

National Immunisation Program

Two doses of 23vPPV is listed on the NIP for:

- Aboriginal and Torres Strait Islanders ≥ 50 years of age
- All individuals with certain medical conditions
- Children aged 4 years with a condition(s) associated increased risk of IPD

Pharmaceutical Benefits Scheme (PBS)

23vPPV is no longer listed on the PBS

Individuals with risk conditions that do not meet the criteria to receive NIP funded vaccine, will need to purchase the vaccine on prescription.

Ref: Australian Technical Advisory Group on Immunisation (ATAGI) Clinical Advice July 2020. *The Australian Immunisation Handbook,* Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

Poll 4

Your patient is 45 years of age and diagnosed with a Haematological Malignancy.

What is the recommended pneumococcal vaccination schedule for this patient?

A. Prevenar 13 first followed by 2 doses of Pneumovax 23

B. Prevenar 13 first, followed by 1 dose of Pneumovax 23 dose

C. Pneumovax 23 first, followed by 1 dose of Prevenar 13

D. Pneumovax 23 first, followed by 2 doses of Prevenar 13

Ref: Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* ,Australian Government Department of Health, 2018. immunisationhandbook.health.gov.au.
Pneumococcal-FAQs/NCIRS Fact sheet: August 2018

13-valent pneumococcal conjugate vaccine (13vPCV) for routine infant vaccination

- NIP funded as part of the infant program
  - Given 2, 4 and 12 months (can be as early as 6 weeks)
  - Additional dose at 6 months on NIP funded for:
    - Indigenous children in QLD, SA, NT, WA
    - Children with certain medical conditions

Ref: Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian Immunisation Handbook* Australian Government Department of Health,, Canberra 2018 immunisationhandbook.health.gov.au.
Prevenar13 Product Information Reviewed 29th January 2018

Vaccination coverage

A study undertaken to explore pneumococcal vaccination uptake in older patients attending 550 Australian general practices from 2010–2017 found:

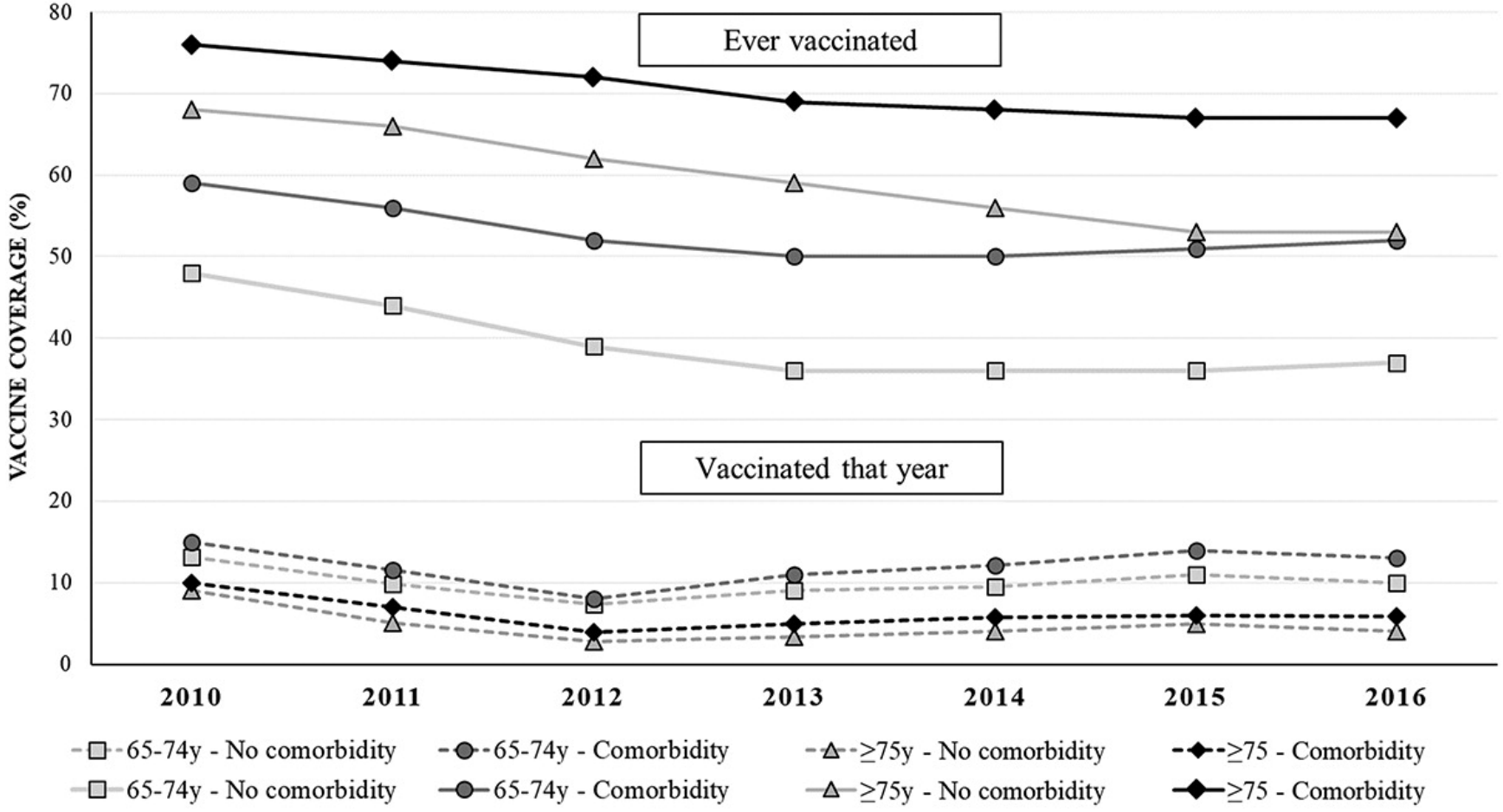
- Vaccination uptake varied between 36% to 76%, depending on the patient's age and presence of comorbidities, and in general decreased over time in all groups.

- The lowest rate was observed among those aged 65–74 years without comorbidity, and the highest among those aged ≥75 years with comorbidities.

- Whilst vaccination uptake was adequate among 'every year' patients, interventions are needed to improve pneumococcal vaccination for all older Australians.

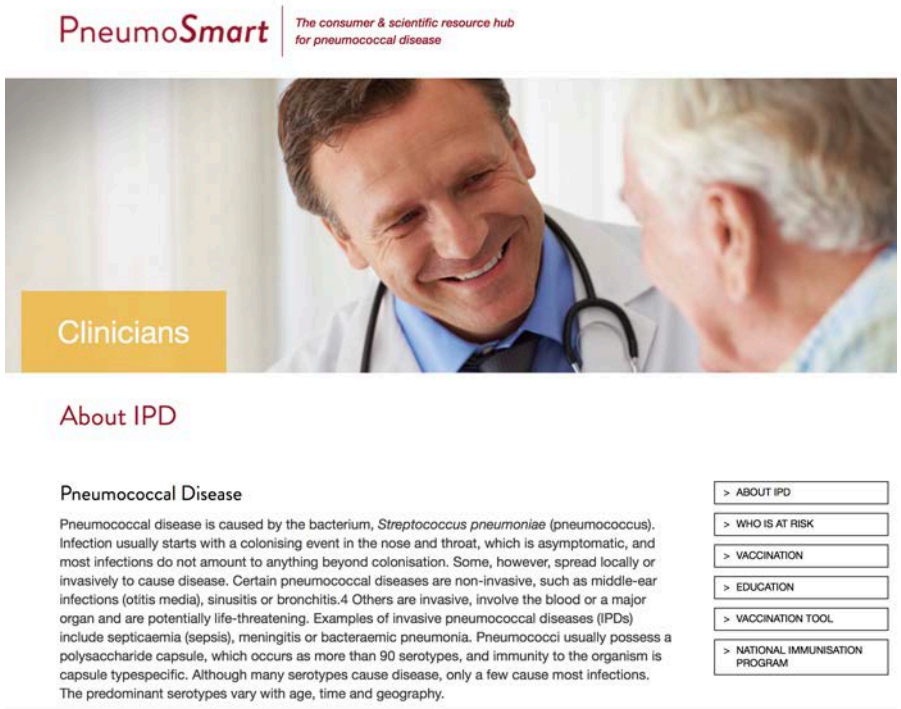
Ref: Pneumococcal vaccination uptake among patients aged 65 years or over in Australian general practice: Frank. O et al
https://www.tandfonline.com/doi/full/10.1080/21645515.2019.1682844

Figure 1. Pneumococcal vaccine uptake in each year among 'active' patients aged ≥ 65 years that year. Results from the time series analysis (Study 1). Australia, 2010–2016.



Pneumosmart Vaccination Tool (PVT)

- Created to assist GPs, medical specialists, and other immunisation providers to comply the Australian Immunisation Handbook recommendations



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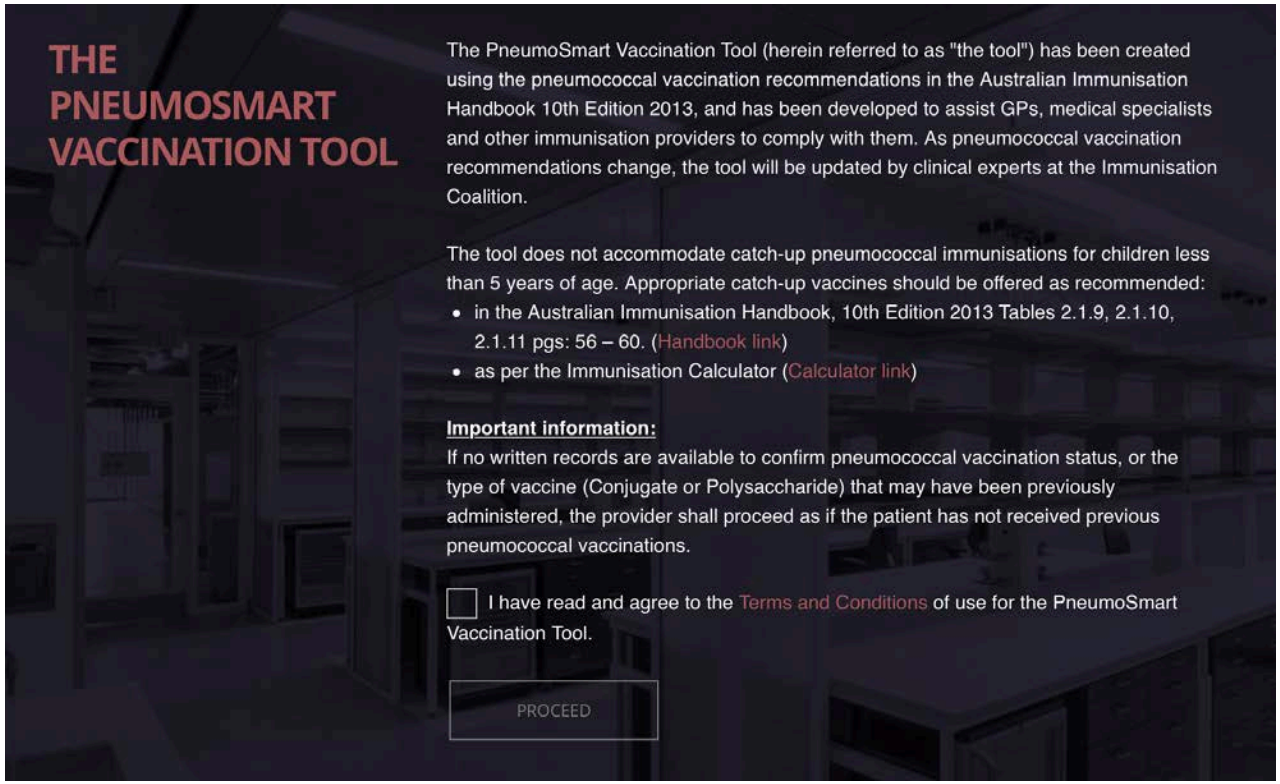
The PVT

- The tool provides guidance on:
  - catch-up pneumococcal immunisations for children less than 5 years of age (refer to handbook). Providers can also refer to either:
    - Online Australian Immunisation Handbook
    - Immunisation Calculator
  - NIP or self-funded pneumococcal vaccine

- If no written records are available to confirm pneumococcal vaccination status, or the type of vaccine (Conjugate or Polysaccharide) that may have been previously administered, the provider should proceed as if the patient has not received previous pneumococcal vaccinations.

Where to find the PVT

- Both of these links will take you to the tool:
  - http://www.pneumosmart.org.au/clinicians/vaccination-tool/
  - http://www.immunisationcoalition.org.au/resources/pneumococcal-tool/



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Conclusions

- Pneumococcal disease can cause considerable morbidity and mortality in those most at risk of pneumococcal infection

- Those most at-risk include very young children, the elderly, Aboriginal and Torres Strait Islander individuals, and those with certain risk factors or medical condition(s) placing them at risk of invasive pneumococcal disease

- For those at-risk, Australian guidelines recommended:
  - Vaccination with pneumococcal vaccine*

    *Refer to ATAGI Clinical Advice 1 July 2020 and the online Australian Immunisation Handbook Canberra for official recommendations

- New recommendations for pneumococcal vaccines for certain risk conditions and for older non-Indigenous Australians

- Potentially 'at-risk' individuals should have their pneumococcal vaccination status checked
  - Search your Practice Management Software for eligible patients
  - Use the PneumoSmart Tool to determine vaccination recommendations

- Use the resources available to you – ATAGI advice, NCIRS fact sheets, online Australian Immunisation Handbook

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Ref :Australian Technical Advisory Group on Immunisation (ATAGI). *The Australian immunisation handbook* ,Australian Government Department of Health, Canberra 2018 immunisationhandbook.health.gov.au.

Please review full Product Information before prescribing.

Pneumovax23 PBS Information: This product is listed on the National Immunisation Program (NIP) Schedule and the PBS. Refer to the NIP and PBS Schedule.

Product Information is available from bioCSL (Australia) Pty Limited ABN 66 120 398 067, 63 Poplar Road, Parkville, 3052. ® Pneumovax 23 is a registered trademark of Merck & Co. Inc. Whitehouse Station, NJ, USA Date of preparation: March 2014.

Prevenar 13 PBS Information: This product is listed on the National Immunisation Program (NIP) for children only and is not listed on the PBS. Refer to the NIP Schedule.

Prevenar 13 Product Information is available from Pfizer Australia on request on 1800 675 229 or at www.pfizer.com.au ® Registered trademark. Pfizer Australia Pty Limited 38-42 Wharf Road, West Ryde, NSW 2114.

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