Government of **Western Australia**
WA Country Health Service

Audit of 5 years of IPD notifications in SW

WA COUNTRY HEALTH SERVICE

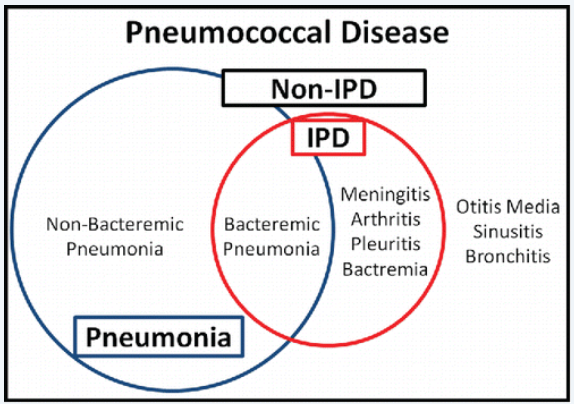
Outline

- Background on IPD
- Immunisation recommendations
- Audit – methods and outcomes
- Patient experiences
- Next steps

Photo credit: Angie Roe, RCSWA

Pneumococcal disease

- Infections caused by bacterium *Streptococcus pneumoniae* (aka pneumococcus)
  - Gram positive coccus, >90 serotypes
  - Some serotypes carried in nasopharynx asymptomatically
  - Spread by respiratory droplets
  - Can spread into sinuses (sinusitis, otitis media), into lungs (pneumonia) and also cause systemic, invasive illness (bacteraemia, meningitis, septicaemia, septic joints etc)



Namkoong, H., Ishii, M., Funatsu, Y., Kimizuka, Y., Yagi, K., Asami, T.,Hasegawa, N. (2016). Theory and strategy for Pneumococcal vaccines in the elderly. Human Vaccines & Immunotherapeutics, 12(2), 336–343. https://doi.org/10.1080/21645515.2015.1075678

Immunisation recommendations post-IPD

Infants <=12 months with a risk condition

- 4-dose schedule of 20vPCV at 2,4,6 and 12 months

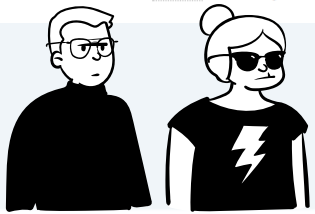
Children >12 months to <18 years) with risk condition

- Single dose of 20vPCV

Adults aged ≥18 years with a risk condition are recommended to receive pneumococcal conjugate vaccine and 23vPPV

People aged ≥18 years with a risk condition (see Table. Risk conditions for pneumococcal vaccination and eligibility for NIP funding) are recommended to receive:

- 1 dose of a pneumococcal conjugate vaccine (13vPCV, 15vPCV or 20vPCV), and
- 1 dose of 23vPPV 12 months after a pneumococcal conjugate vaccine (13vPCV, 15vPCV or 20vPCV) (2–12 months is acceptable), and
- a 2nd dose of 23vPPV at least 5 years after the 1st dose of 23vPPV



Risk of recurrent IPD

- People with a previous episode of IPD are at **27 times greater risk** of recurrence, compared to the population rate of IPD
- Previous episode of IPD = risk condition to have further pneumococcal vaccines
- Complex / frequently changing schedules may represent a barrier
- Funded under the National Immunisation Program (NIP) since July 2020

Audit project

Aim:

To determine if patients who have had IPD are receiving recommended follow up vaccines, as per the Australian Immunisation Handbook recommendations, and whether a brief intervention improves uptake

Methods

1. Notified South West IPD cases were sourced from WANIDD between 2020-2024 inclusive
2. IPD demographics and outcomes were assessed from all notification records, and deceased cases were excluded from further follow up
3. Immunisation status for IPD cases were assessed in February 2025 at the commencement of the audit and cases were categorised into three groups:
    1. No pneumococcal vaccines following IPD diagnosis
    2. Partially vaccinated (as per AIH) but not up-to-date
    3. Up-to-date with pneumococcal vaccinations following IPD
4. An intervention was applied to IPD cases with no vaccinations or not up-to-date with vaccination. The intervention included: tailored verbal advice on recommended immunisation following IPD, written correspondence sent to patient and reminders to vaccinate
5. IPD cases were re-audited in July/August 2025 to determine if the intervention was effective at increasing IPD immunisation uptake, in line with AIH recommendations

CONFIDENTIAL

10 November 2025

Pt Name
Address
Address

Dear <>
RE: Recent diagnosis of invasive pneumococcal disease

The South West Public Health Unit of the Department of Health has been notified of your recent diagnosis of invasive pneumococcal disease, a severe form of pneumococcal disease caused by the *Streptococcus pneumonia* bacterium. People who have had invasive pneumococcal disease are at risk of getting the infection again.

Free pneumococcal vaccines
You are receiving this letter because you are recommended to receive the pneumococcal vaccines, to protect you against having the infection again. The vaccine is provided **free of charge** under the National Immunisation Program.

The immunisation course usually includes three doses of the vaccine:

Visit 1: Prevenar 13	(given at diagnosis)
Visit 2: Pneumovax 23	(given 2-12 months after visit 1)
Visit 3: Pneumovax 23	(given 5 years after visit 2)

A tailored immunisation plan is overleaf and the vaccines can be obtained at your GP; show your GP this letter.

Risk of pneumococcal disease
Everyone is at risk of pneumococcal infections, but the risk of severe and invasive pneumococcal disease is the highest in certain groups of people, including:

- young children
- elderly people
- people who smoke
- people with weakened immune systems (including people with impaired spleen functions or no spleens)
- people with certain co-morbidities, including previously having had invasive pneumococcal disease
- Aboriginal people.

Vaccination is recommended for people at risk to protect against invasive pneumococcal disease.

More information
You can get in touch with us to discuss this letter by calling us on 08 9781 2355 during business hours (Monday – Friday 8:30am – 4:30pm, excluding Public Holidays). We are also available to provide advice to GPs and patients.
See HealthyWA for more information on pneumococcal disease:
https://www.healthywa.wa.gov.au/Articles/N_R/Pneumococcal-disease

Yours sincerely,

Pt Name and DOB
Advice given by <> on <>

Relevant immunisation history: *Date and list any vaccines*

Visit	Time Interval	Vaccines required	Dose
Visit 1	Now	Prevenar 13 (if not given previously)	Single dose Pneumococcal conjugate
Visit 2	2-12 months after Visit 1 if giving Prevenar 13 Give now as Visit 1 if Prevenar already given	Pneumovax 23	1st Pneumococcal polysaccharide
Visit 3	5 years after Visit 2	Pneumovax 23	2nd Pneumococcal polysaccharide

Notes:

Influenza	One dose at the start of each influenza season - annually.
Prevenar 13 *13vPCV* *and* Pneumovax 23 *23vPPV*	Pneumococcal vaccine recommendations for people with the identified risk factor are 1 dose of 13vPCV followed by 2 doses of 23vPPV. The recommended interval between the single dose of 13vPCV and the first dose of 23vPPV is 2-12 months. When administering 13vPCV for people who have previously received 23vPPV, the interval should be a minimum of 12 months. The number of recommended lifetime doses of 23vPPV is now limited to 2 doses for all persons.

Reference: Online Australian Immunisation Handbook 10th Edition:
Recommendations | Pneumococcal disease | The Australian Immunisation Handbook (health.gov.au)

Results

IPD cases demographics

Age range – 1-98 years old

Child IPD cases – 14 (26%)

Adult IPD cases – 40 (74%)

Male 54%, Female 46%

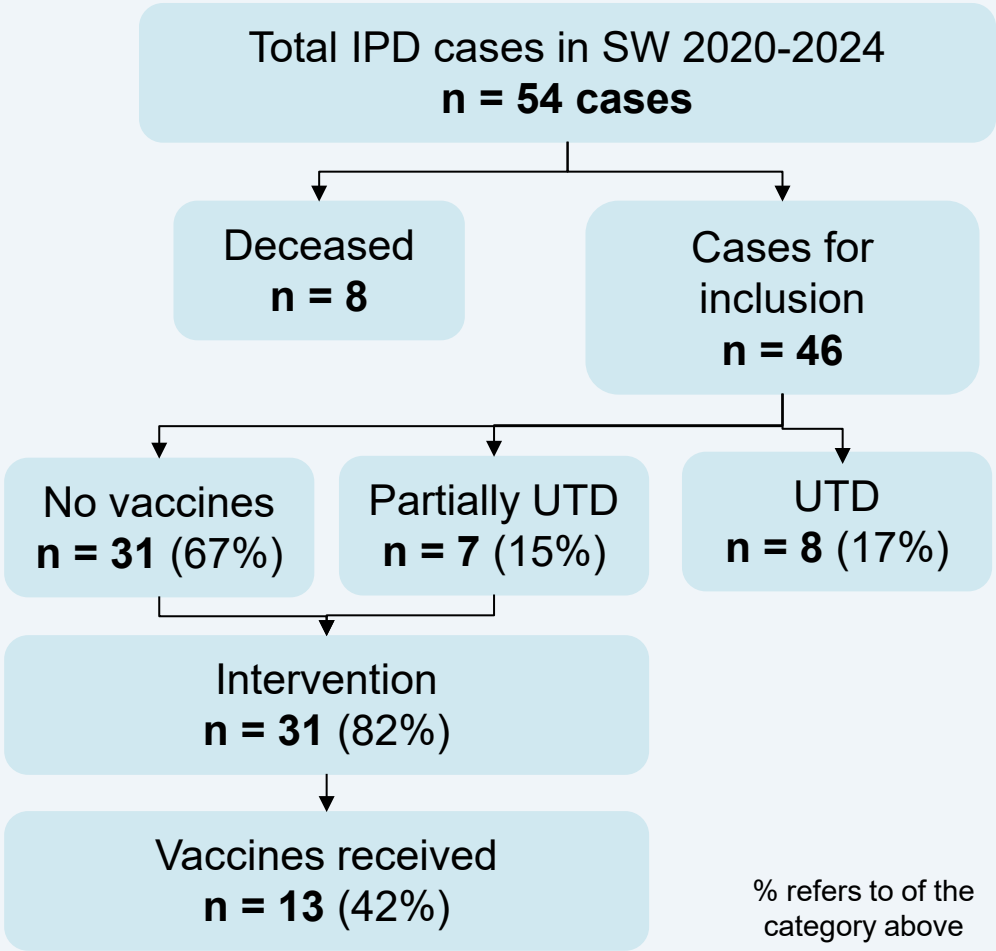
19 serotypes

- Phage type 3 most common

Clinically

Most IPD cases had

- Sepsis/pneumonia



% refers to of the category above

Outcome / findings

- Most IPD cases are not up to date with pneumococcal vaccines following diagnosis
  - Most have not had any recommended pneumococcal vaccines post-diagnosis
- At 6 months post-intervention, 42% (n=13) of cases who received the intervention got a pneumococcal vaccine
- An intervention providing tailored written advice improves uptake of pneumococcal vaccines

Patient experiences

- IPD case in an adult spoke of "*seeing death approaching like a candle getting duller and duller*"
- Parents of critically sick children were told by medical staff to prepare for the possibility of their child dying overnight
- Prolonged hospitalisations to correct and overcome acute lung damage, or in other cases acute/chronic pain due to infected joints

Audit findings

- Public Health has a role in following up IPD cases from a disease control perspective
  - An intervention can be implemented to improve IPD immunisation rates in people who are at greater risk of recurrent IPD
- Public Health can be a link between the acute episode and post-discharge after-care, to *'close the loop'*
- PHU staff are uniquely placed to follow up on immunisation recommendations post-diagnosis

Thank you to Nancy Birch for her advocacy and work on this audit

Thank you

The artwork in this publication is the work of Leeann Kelly-Pedersen