NCIRS National Centre for Immunisation Research and Surveillance

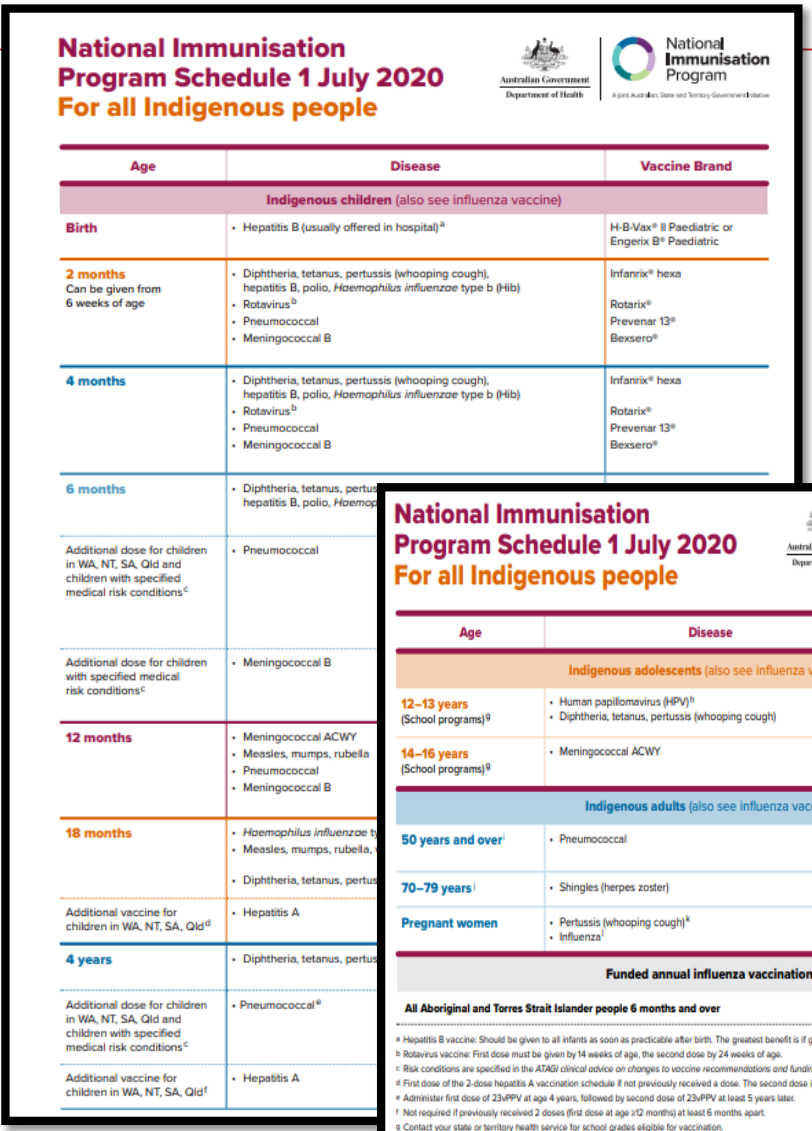
2020 National Immunisation Schedule Update

Deidre Brogan CNC
Immunisation

Objectives

- NIP overview
- Summary of changes
- Meningococcal
- Pneumococcal
- HIB
- Case studies

What has changed?



National Immunisation Program Schedule 1 July 2020
For all Indigenous people

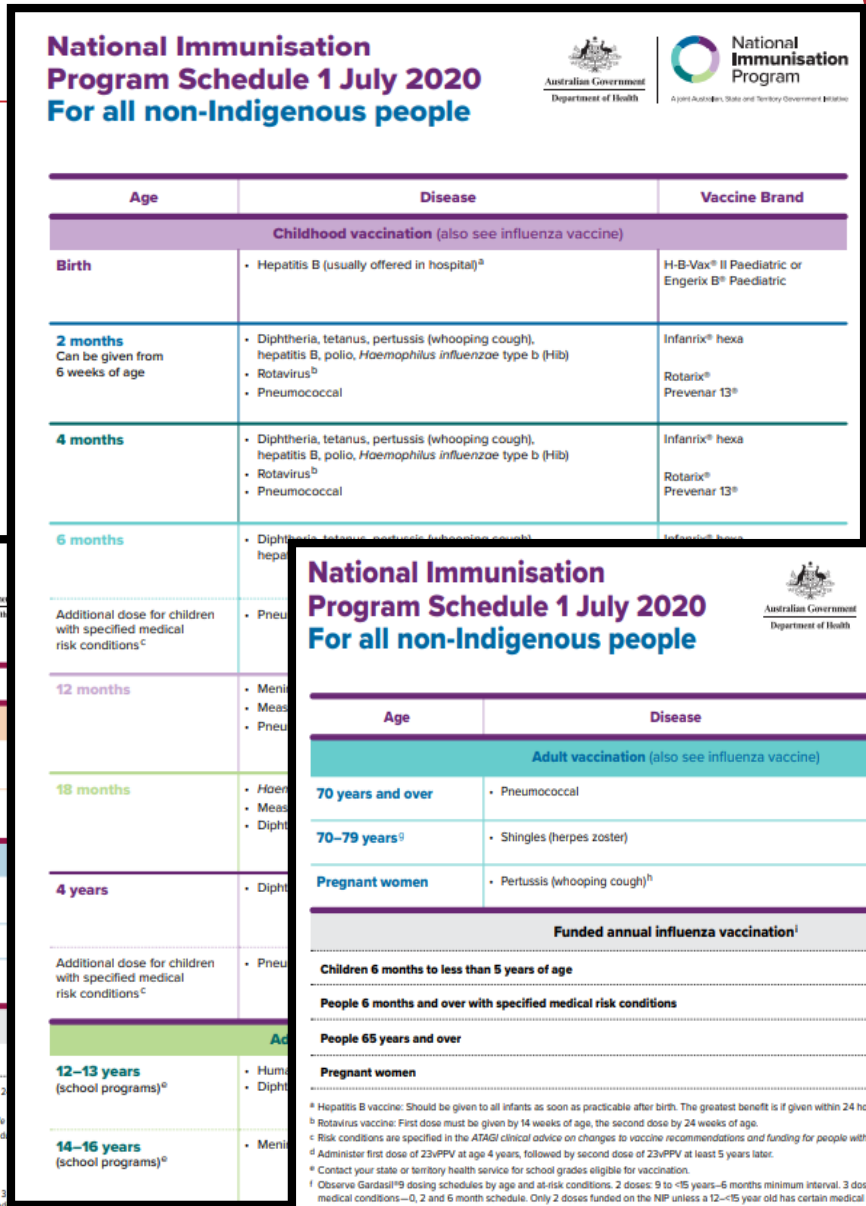
Australian Government Department of Health | National Immunisation Program

Age	Disease	Vaccine Brand
Indigenous children (also see influenza vaccine)		
Birth	• Hepatitis B (usually offered in hospital)[a]	H-B-Vax® II Paediatric or Engerix B® Paediatric
2 months Can be given from 6 weeks of age	• Diphtheria, tetanus, pertussis (whooping cough), hepatitis B, polio, *Haemophilus influenzae* type b (Hib) • Rotavirus[b] • Pneumococcal • Meningococcal B	Infanrix® hexa Rotarix® Prevenar 13® Bexsero®
4 months	• Diphtheria, tetanus, pertussis (whooping cough), hepatitis B, polio, *Haemophilus influenzae* type b (Hib) • Rotavirus[b] • Pneumococcal • Meningococcal B	Infanrix® hexa Rotarix® Prevenar 13® Bexsero®
6 months	• Diphtheria, tetanus, pertus… hepatitis B, polio, *Haemop*	
Additional dose for children in WA, NT, SA, Qld and children with specified medical risk conditions[c]	• Pneumococcal	
Additional dose for children with specified medical risk conditions[c]	• Meningococcal B	
12 months	• Meningococcal ACWY • Measles, mumps, rubella • Pneumococcal • Meningococcal B	
18 months	• *Haemophilus influenzae* t… • Measles, mumps, rubella, … • Diphtheria, tetanus, pertus…	
Additional vaccine for children in WA, NT, SA, Qld[d]	• Hepatitis A	
4 years	• Diphtheria, tetanus, pertus…	
Additional dose for children in WA, NT, SA, Qld and children with specified medical risk conditions[c]	• Pneumococcal[e]	
Additional vaccine for children in WA, NT, SA, Qld[f]	• Hepatitis A	

National Immunisation Program Schedule 1 July 2020
For all Indigenous people

Age	Disease
Indigenous adolescents (also see influenza vaccine)	
12–13 years (School programs)[g]	• Human papillomavirus (HPV)[h] • Diphtheria, tetanus, pertussis (whooping cough)
14–16 years (School programs)[g]	• Meningococcal ACWY
Indigenous adults (also see influenza vaccine)	
50 years and over[i]	• Pneumococcal
70–79 years[j]	• Shingles (herpes zoster)
Pregnant women	• Pertussis (whooping cough)[k] • Influenza[l]
Funded annual influenza vaccination[l]	
All Aboriginal and Torres Strait Islander people 6 months and over	

[a] Hepatitis B vaccine: Should be given to all infants as soon as practicable after birth. The greatest benefit is if given within 2…
[b] Rotavirus vaccine: First dose must be given by 14 weeks of age, the second dose by 24 weeks of age.
[c] Risk conditions are specified in the *ATAGI clinical advice on changes to vaccine recommendations and funding for people*…
[d] First dose of the 2-dose hepatitis A vaccination schedule if not previously received a dose. The second dose is now sched…
[e] Administer first dose of 23vPPV at age 4 years, followed by second dose of 23vPPV at least 5 years later.
[f] Not required if previously received 2 doses (first dose at age ≥12 months) at least 6 months apart.
[g] Contact your state or territory health service for school grades eligible for vaccination.
[h] Observe Gardasil®9 dosing schedules by age and at-risk conditions. 2 doses: 9 to <15 years–6 months minimum interval. 3… medical conditions—0, 2 and 6 month schedule. Only 2 doses funded on the NIP unless a 12–<15 year old has certain med…
[i] Administer a dose of 13vPCV, followed by first dose of 23vPPV 12 months later (2–12 months acceptable), then second dose of 23vPPV at least 5 years later.
[j] All people aged 70 years old with a five year catch-up program for people aged 71–79 years old until 31 October 2021.
[k] Single dose recommended each pregnancy, ideally between 20–32 weeks, but may be given up until delivery.
[l] Refer to annual ATAGI advice on seasonal influenza vaccines.



National Immunisation Program Schedule 1 July 2020
For all non-Indigenous people

Australian Government Department of Health | National Immunisation Program

Age	Disease	Vaccine Brand
Childhood vaccination (also see influenza vaccine)		
Birth	• Hepatitis B (usually offered in hospital)[a]	H-B-Vax® II Paediatric or Engerix B® Paediatric
2 months Can be given from 6 weeks of age	• Diphtheria, tetanus, pertussis (whooping cough), hepatitis B, polio, *Haemophilus influenzae* type b (Hib) • Rotavirus[b] • Pneumococcal	Infanrix® hexa Rotarix® Prevenar 13®
4 months	• Diphtheria, tetanus, pertussis (whooping cough), hepatitis B, polio, *Haemophilus influenzae* type b (Hib) • Rotavirus[b] • Pneumococcal	Infanrix® hexa Rotarix® Prevenar 13®
6 months	• Diphtheria, tetanus, pertussis (whooping cough), hepa…	Infanrix® hexa
Additional dose for children with specified medical risk conditions[c]	• Pneu…	
12 months	• Menin… • Meas… • Pneu…	
18 months	• *Haem…* • Meas… • Diphth…	
4 years	• Diphth…	
Additional dose for children with specified medical risk conditions[c]	• Pneu…	
Ad…		
12–13 years (school programs)[e]	• Huma… • Diphth…	
14–16 years (school programs)[e]	• Menin…	

National Immunisation Program Schedule 1 July 2020
For all non-Indigenous people

Australian Government Department of Health | National Immunisation Program

Age	Disease	Vaccine brand
Adult vaccination (also see influenza vaccine)		
70 years and over	• Pneumococcal	Prevenar 13®
70–79 years[g]	• Shingles (herpes zoster)	Zostavax®
Pregnant women	• Pertussis (whooping cough)[h]	Boostrix® or Adacel®
Funded annual influenza vaccination[i]		
Children 6 months to less than 5 years of age		
People 6 months and over with specified medical risk conditions		
People 65 years and over		
Pregnant women		

[a] Hepatitis B vaccine: Should be given to all infants as soon as practicable after birth. The greatest benefit is if given within 24 hours, and must be given within 7 days.
[b] Rotavirus vaccine: First dose must be given by 14 weeks of age, the second dose by 24 weeks of age.
[c] Risk conditions are specified in the *ATAGI clinical advice on changes to vaccine recommendations and funding for people with risk conditions from 1 July 2020.*
[d] Administer first dose of 23vPPV at age 4 years, followed by second dose of 23vPPV at least 5 years later.
[e] Contact your state or territory health service for school grades eligible for vaccination.
[f] Observe Gardasil®9 dosing schedules by age and at-risk conditions. 2 doses: 9 to <15 years–6 months minimum interval. 3 doses: ≥15 years and/or have certain medical conditions—0, 2 and 6 month schedule. Only 2 doses funded on the NIP unless a 12–<15 year old has certain medical risk factors.
[g] All people aged 70 years old with a five year catch-up program for people aged 71–79 years old until 31 October 2021.
[h] Single dose recommended each pregnancy, ideally between 20–32 weeks, but may be given up until delivery.
[i] Refer to annual ATAGI advice on seasonal influenza vaccines.

Overview of changes in vaccine recommendations and NIP-funded doses from July 2020

Disease	Specific vaccine	Non-Indigenous older adults without pneumococcal risk conditions	People with some medical at risk conditions			Aboriginal and Torres Strait Islander people		
			Complement deficiency/ eculizumab treatment	Functional or anatomical asplenia	Pneumococcal at risk medical conditions	Infants (with catch-up for age <2 years)	Young children in NT, Qld, SA, WA	Age ≥50 years
Pneumococcal	13vPCV	New recommendation NIP-funded		New recommendation NIP-funded	**New single list** New recommendation NIP-funded for some conditions		New recommendation NIP-funded	New recommendation NIP-funded
	23vPPV	No longer recommended						
Meningococcal	MenB		Newly NIP-funded	Newly NIP-funded		Newly NIP-funded		
	MenACWY							
Hib (if required)	Hib vaccine (if required)			Newly NIP-funded				
Hepatitis A	HepA vaccine						Schedule point change	

Slide courtesy of Dr Ket Sharma

ATAGI recommendations for people with risk conditions

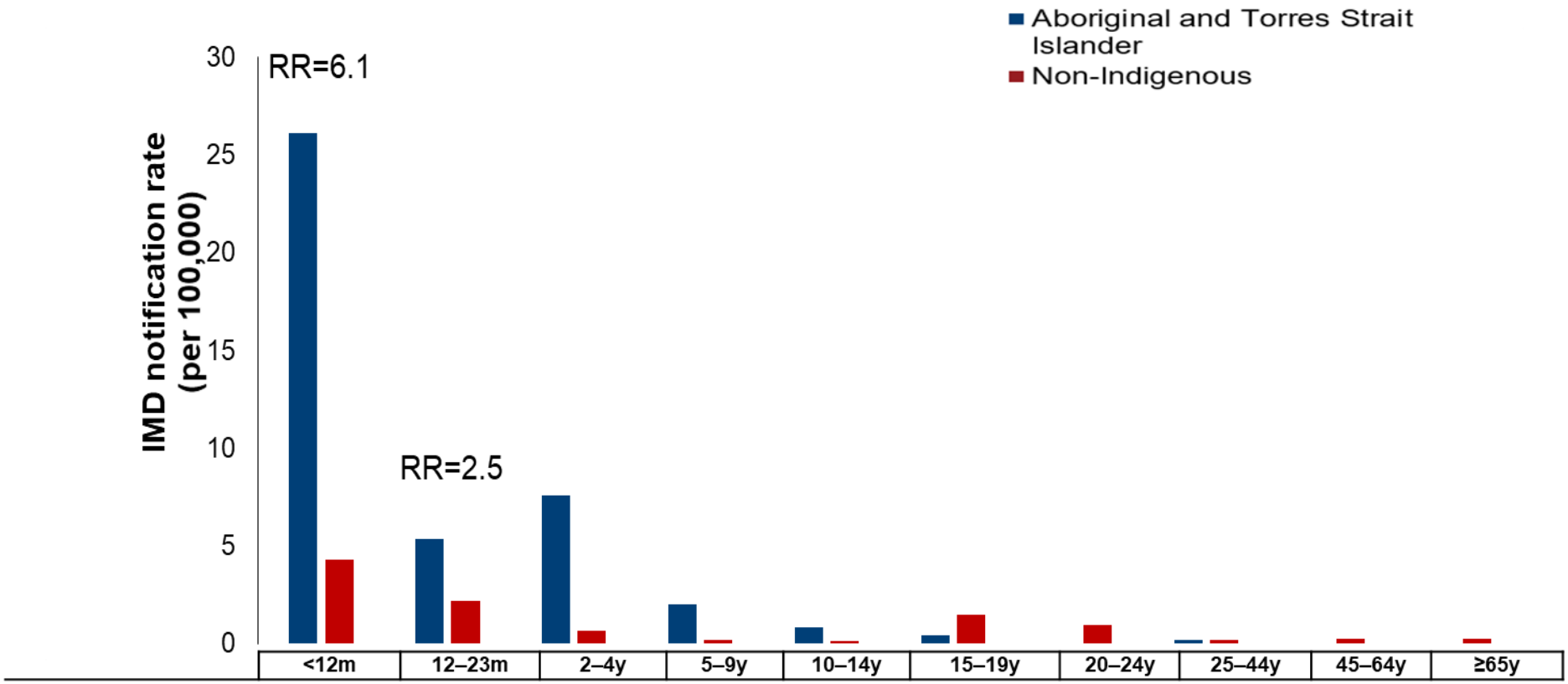
Appendix. Risk conditions for which meningococcal, pneumococcal and *Haemophilus influenzae* type b vaccines are recommended

Condition	Recommended vaccine		
	Pneumococcal vaccines – 13vPCV and 23vPPV	Meningococcal vaccines – MenB and Men ACWY	Hib vaccine
Previous episode of invasive pneumococcal disease	✓		
Functional or anatomical asplenia, including			
– sickle cell disease or other haemoglobinopathies	✓	✓	✓$
– congenital or acquired asplenia (for example, 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	✓		
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 disease)	✓*		
Cardiac disease, including			
– congenital heart disease	✓†		
– coronary artery disease	✓†		
– heart failure	✓†		
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‡	✓		
Defects in, or deficiency of, complement components, including factor H, factor D or properdin deficiency		✓	
Current or future treatment with eculizumab (a monoclonal antibody directed against complement component C5)		✓	

Note: ✓ Recommended; shaded boxes indicate eligibility for NIP funding.
¶ Individual conditions listed beneath or those that are similar based on clinical judgment
* Funded under the NIP for eGFR <15 mL/min only (including patients on dialysis)
† Funded under the NIP only for children aged <5 years at diagnosis of the condition

Meningococcal vaccine schedule changes and funding update

MenB invasive meningococcal disease (IMD) notification rates by age group, Aboriginal and Torres Strait Islander vs non-Indigenous people, 2016–2018



Tran C, et al. PHAA Communicable Disease Control Conference 2019

Meningococcal vaccination NIP changes

- Australian Immunisation Handbook recommendations

- All children from 6 weeks of age
- Adolescents 15- 19 years
- People with at risk conditions
- Lab workers
- Travellers
- Young adults close living conditions
- Smokers 15-24 year olds

- NIP funding

- Men ACWY :
- Children at 12 months of age
- Adolescents 14-16 years
- At risk conditions

- Men B:
- Aboriginal and Torres Strait Islander infants
- Catch up for < 2 years of age (until 30/06/2023)
- At risk conditions – complement deficiency, functional or anatomical asplenia, eculizumab therapy

Tools to assist with Meningococcal changes

Australian Government Department of Health | Australian Immunisation Handbook

Meningococcal vaccination for people in a special risk group

Meningococcal disease is a rare but serious disease that can cause significant illness, dis
and death. Some people are at increased risk of meningococcal disease. Vaccination is st
recommended for these people.

No single vaccine protects against all serogroups

- **3** vaccines protect against serogroups A, C, W and Y → **MenACWY** va
- **2** vaccines protect against serogroup B only → **MenB** va
- **2** vaccines protect against serogroup C only → **MenC** vaccine and **Hib-MenC**

Risk group	Recommendation	Booster dose MenACWY?
People with medical conditions that increase their risk of invasive meningococcal disease include those: ▸ with a complement deficiency ☑ ▸ being treated with eculizumab ☑ ▸ with functional or anatomical asplenia ☑ ▸ with HIV ▸ who have had a haematopoietic stem cell transplant	▸ MenB and MenACWY Number of doses depends on the vaccine brand and the person's age when they start the vaccination course.	✓ Yes, if th is ongoi
Laboratory workers who work with *Neisseria meningitidis*	▸ MenB (2 doses) ▸ MenACWY (1 dose)	✓ Yes, if th is ongoi
Travellers to areas where meningococcal disease is more common	▸ MenACWY Number of doses depends on the vaccine brand and the person's age when they start the vaccination course.	✓ Yes, if th is ongoi
Young adults living in close quarters (such as military recruits and people in student residences)	▸ MenB (2 doses) ▸ MenACWY (1 dose)	✗ No, unle other ris factors
Young adults who smoke	▸ MenB (2 doses) ▸ MenACWY (1 dose)	✗ No, unle other ris factors

Australian Government Department of Health | Australian Immunisation Handbook

Meningococcal vaccination for children and adolescents without risk factors

Meningococcal disease is a rare but serious disease that can cause significant illness, disability and death. Meningococcal vaccination for certain groups of people is funded under the National Immunisation Program and by states and territories.

No single vaccine protects against all serogroups

- **3** vaccines protect against serogroups A, C, W and Y → **MenACWY** vaccines
- **2** vaccines protect against serogroup B only → **MenB** vaccines
- **2** vaccines protect against serogroup C only → **MenC** vaccine and **Hib-MenC** vaccine

Recommended vaccines

The number of doses depends on the vaccine brand and the person's age when they start the vaccination course.

	6 weeks – 23 months	2–4 years	5–14 years	15–19 years
Aboriginal and Torres Strait Islander people	▸ MenB ☑ ▸ MenACWY (single dose at age 12 months ☑)	▸ MenB ▸ MenACWY	▸ MenB ▸ MenACWY	▸ MenB ▸ MenACWY ☑
Non-Indigenous people	▸ MenB ▸ MenACWY (single dose at age 12 months ☑)			▸ MenB ▸ MenACWY ☑

See the Australian Immunisation Handbook for more details

Healthy children and adolescents do not need booster doses unless they are in certain special risk groups.

☑ = vaccine funded under the National Immunisation Program

See the Australian Immunisation Handbook for more details.

Meningococcal B schedule

Age at start of vaccination	Presence of at-risk medical conditions	Number of doses required for primary series	Schedule
6 weeks to 5 months	Yes	4	'3+1'
6 weeks to 5 months	No	3	'2+1'
6–11 months	regardless	3	'2+1'
≥12 months	regardless	2	2 doses (8 weeks apart)

- Healthy infants receive: 2,4, and 12 months of age
- Infants with at risk conditions: 2, 4, 6 and 12 months of age

- Points to remember: check AIR if previously been vaccinated

https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/meningococcal-disease

Men ACWY schedule

Age at start of vaccination	Number of doses required for primary series	Schedule
6 weeks to 5 months (<6 months)	4	'3+1'
6–11 months	3	'2+1'
≥12 months	2	2 doses (8 weeks apart)

- For children with at risk conditions
- Funded booster recommended every 5 years

Points to remember

- Bexsero can be safely co-administered with other NIP vaccines
- All scheduled vaccines should be administered in one visit, if possible
- Both **Bexsero and Prevenar 13** vaccines cause a higher frequency of injection site reaction so avoid giving these two vaccines in the same limb.
- Ensure a 2.5 cm distance between any co-administered vaccines on the same limb
- For age 12 months, the upper limb is preferred to the lower limb for administration of Bexsero or
  Prevenar 13. The site option will depend on the child's deltoid muscle mass
- Refer to the Immunisation Handbook Vaccine Administration section for more detailed general information regarding vaccination sites and administering multiple vaccines.
- Document limb and site at which each of the doses was given

Prophylactic paracetamol with each dose of Meningococcal B Vaccination for children aged <2 years

Hib vaccine additional NIP funding

New NIP funding for Haemophilus Influenzae B (Hib) vaccine

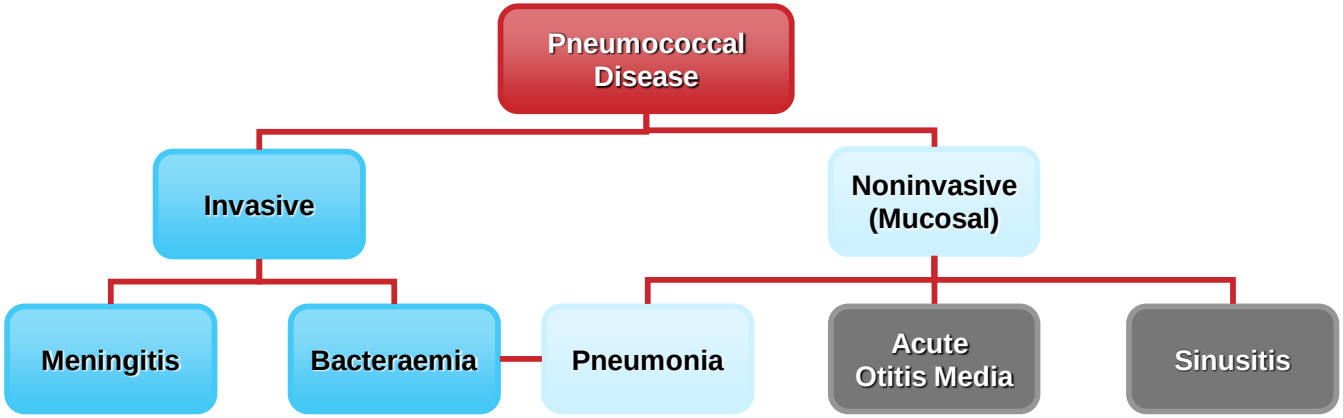
- Haemophilus Influenzae type b (ActHIB®) vaccine NIP-funded for:
  - People of all ages with functional or anatomical asplenia, including:
    - sickle cell disease or other haemoglobinopathies
    - congenital or acquired asplenia (for example, splenectomy) or hyposplenia
- A single dose of Hib (ActHIB®) vaccine is required if the person was not vaccinated in infancy or was incompletely vaccinated.
- Booster doses of Hib (ActHIB®) vaccine are **not** required.

Hib vaccine is recommended but **not** NIP funded for haematopoietic stem cell transplant recipients

https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/haemophilus-influenzae-type-b-hib

Pneumococcal vaccination: Changes to recommendations & NIP funding

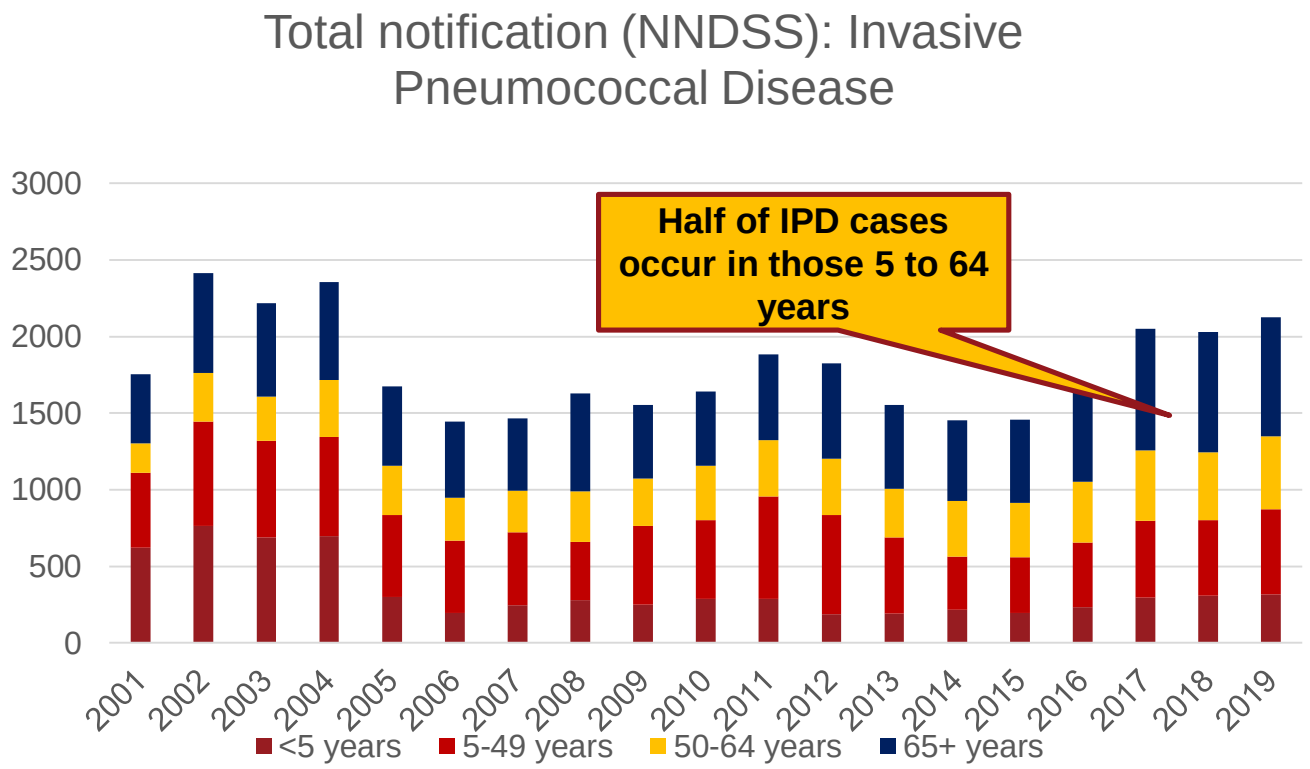
Clinical Forms of Pneumococcal Disease



- **Pneumococcal disease can be broadly grouped into categories of invasive disease and non-invasive (also termed *mucosal*) disease**
- **Non-invasive forms of disease may become invasive (e.g. pneumonia when accompanied by bacteraemia)**

WHO. Acute Respiratory Infections (Update September 2009). www.who.int/vaccine_research/diseases/ari/en/print.html. Accessed December 20, 2010.
CDC. *Epidemiology and prevention of vaccine-preventable diseases.* 11th ed. 2009;217-230.
Jansen AG et al. *Clin Infect Dis.* 2009;49:e23-e29.

Pneumococcal disease notifications



Dr Ket Sharma

Pneumococcal Schedule for older Australians

- Previous schedule:
  - Non-Indigenous: PPV23 at 65 years
  - Indigenous: PPV23 at 50 years
  - Coverage ~55% (2009)

  - VE against vaccine-type IPD: 61% (95% CI: 55-68)
  - VE against vaccine-type pneumonia more difficult to estimate:

  - This is in contrast to 13vPCV – demonstrated VE against vaccine-type pneumonia

Menzies R et al MJA 2014; AIHW 2009 Adult vaccination survey;

FEATURE PEER REVIEWED

Pneumococcal disease and vaccination recommendations

The state of play

SANJAY JAYASINGHE MB BS, MSc, PhD

Overall large reductions in cases of the severe form of pneumococcal disease have been achieved with the pneumococcal vaccination program targeting all infants and older adults and individuals with risk conditions. However, uptake of vaccination recommendations targeting groups with risk conditions and Indigenous adults is suboptimal, and currently a disproportionate burden of pneumococcal disease is borne by these people. Ensuring these individuals receive the full schedule of recommended vaccine doses on time is crucial.

Pneumococcal disease is a collection of clinical manifestations caused by *Streptococcus pneumoniae* (also called pneumococcus). In studies of the global disease burden of pneumococcal disease in children published in both 2009 and 2018, about 11% of all deaths among children under 5 years of age were reported to be attributable to pneumococcal infection.[1,2] Invasive pneumococcal disease (IPD) is the severe end of the pneumococcal disease spectrum. In IPD, *S. pneumoniae* is detected in normally sterile sites such as blood and cerebrospinal, pleural, pericardial, peritoneal or joint fluid.[3] IPD causes significant mortality and morbidity in children, particularly among young infants. In developed countries, IPD commonly (about 70% of cases) presents in children as bacteraemia with no identifiable specific focus of infection.[4,5] Among adults, the most common presentation of IPD is bacteraemic pneumonia.[6,7] Noninvasive pneumococcal disease, which is localised mucosal infections of *S. pneumoniae*, is generally less serious and more common than IPD. Among pneumococcal disease manifestations that are noninvasive, acute otitis media is the most common in children.[8] Also, most cases of community-acquired pneumonia (CAP) caused by pneumococci among adults are noninvasive.[9]

RESPIRATORY MEDICINE TODAY 2019; 4(2): 16-22

Dr Jayasinghe is a Medical Epidemiologist and Research Fellow at the National Centre for Immunisation Research and Surveillance, Sydney, NSW.

Bacteriology of pneumococcal disease

S. pneumoniae is an encapsulated Gram-positive coccus. The polysaccharide capsule is the important virulence factor.[3,10,11] Currently, about 97 pneumococcal serotypes belonging to about 40 serogroups have been identified.[12,13] Serotypes differ in the chemical composition of their polysaccharide capsules and are therefore immunologically distinct.[14,15] In most cases, *S. pneumoniae* resides in the nasopharynx leading to stable asymptomatic colonisation (carriage), which is a precursor to disease and plays an important role in horizontal transmission between individuals.[16] High pneumococcal carriage seen in young children acts as the main reservoir for disease in older adults.[16,17] Pneumococcal serotypes vary in their tendency to cause asymptomatic carriage or disease, and a limited number of serotypes are responsible for pneumococcal disease.[14,16,18-20] Vaccines target the serotypes that commonly cause disease.

Pneumococcal vaccines available in Australia

Two types of pneumococcal vaccines have been developed and used against pneumococcal disease: pneumococcal

- Greater disease burden in Indigenous adults and people with at risk conditions
- Vaccine uptake in these groups is likely to be sub optimal

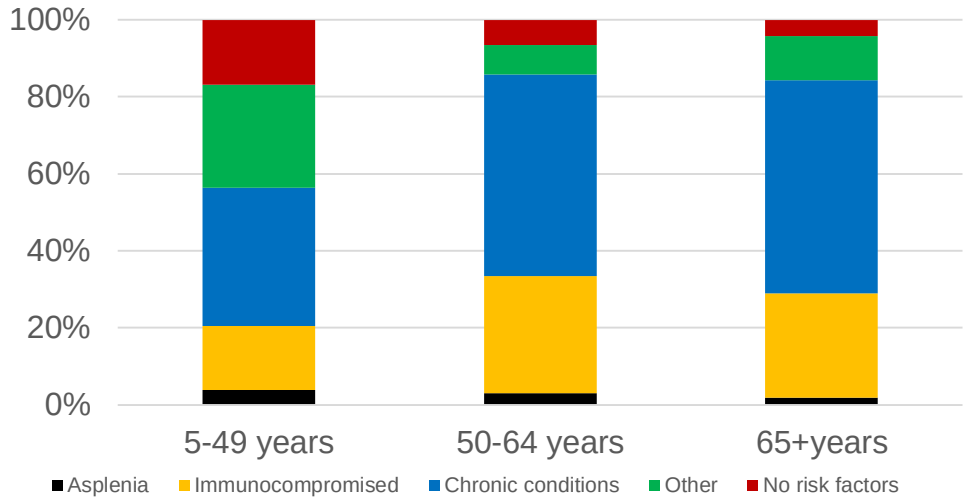
Jayasinghe, S. Respiratory medicine today 06/2019 vol 4,no2

Medically at-risk

- Complex recommendations & funding arrangements

- Previous medically at-risk program:
  - Category A and B recommendations
  - Funded on PBS not NIP

IPD in non-indigenous populations by comorbid condition and age (2011 to 2014):

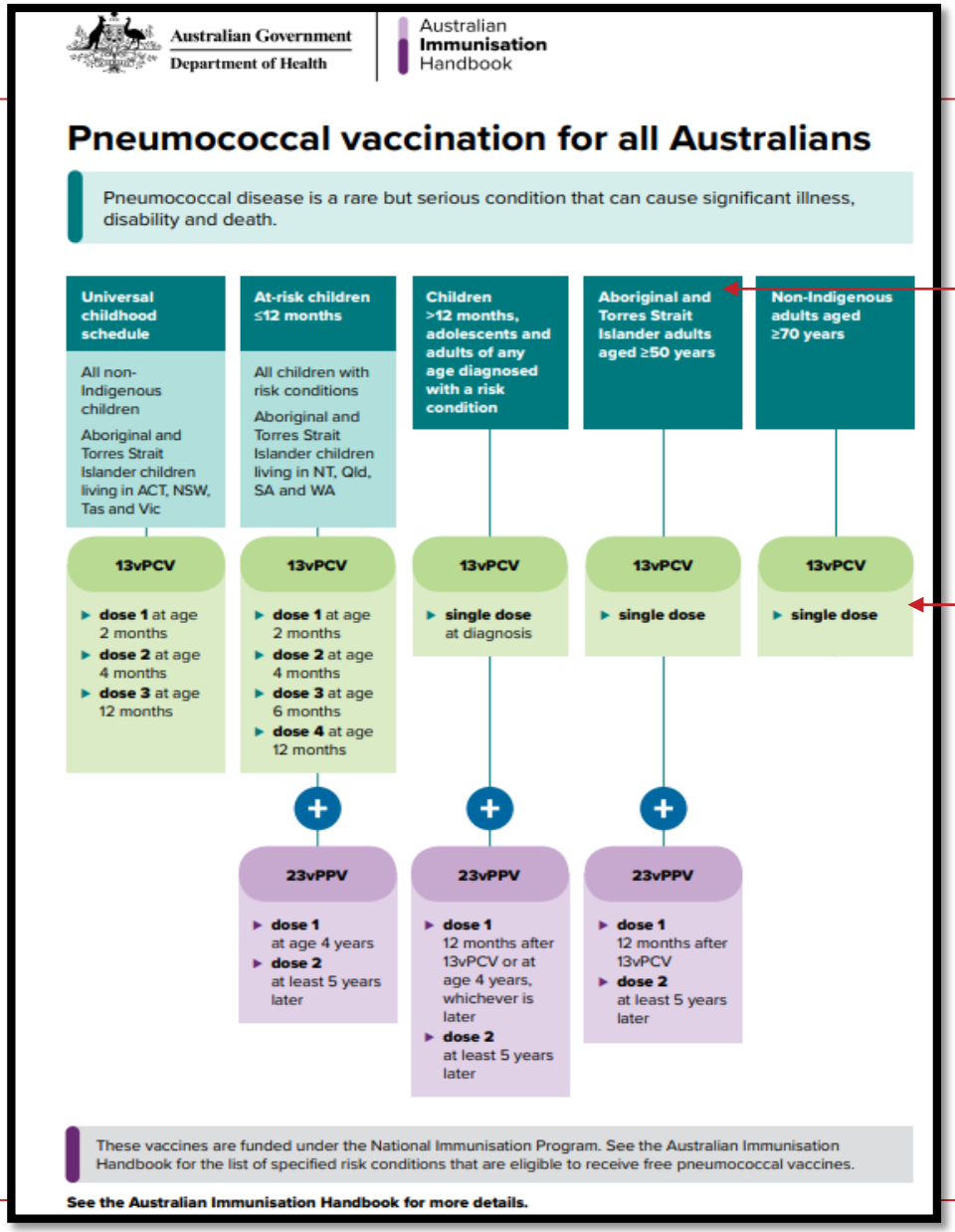


Rationale for schedule changes

- Lower than expected reductions in adult cases
- Rising gap between Indigenous and non-Indigenous adults
- Many of those at highest risk cannot access NIP funded doses
- Inadequate coverage in those at greatest risk
- Complex recommendations

- 2016 ATAGI sought a comprehensive review of pneumococcal vaccination to inform NIP and Handbook

Tools to assist with pneumococcal changes



Australian Government
Department of Health

Australian Immunisation Handbook

Pneumococcal vaccination for all Australians

Pneumococcal disease is a rare but serious condition that can cause significant illness, disability and death.

Universal childhood schedule	At-risk children ≤12 months	Children >12 months, adolescents and adults of any age diagnosed with a risk condition	Aboriginal and Torres Strait Islander adults aged ≥50 years	Non-Indigenous adults aged ≥70 years
All non-Indigenous children Aboriginal and Torres Strait Islander children living in ACT, NSW, Tas and Vic	All children with risk conditions Aboriginal and Torres Strait Islander children living in NT, Qld, SA and WA			
13vPCV ▸ **dose 1** at age 2 months ▸ **dose 2** at age 4 months ▸ **dose 3** at age 12 months	**13vPCV** ▸ **dose 1** at age 2 months ▸ **dose 2** at age 4 months ▸ **dose 3** at age 6 months ▸ **dose 4** at age 12 months	**13vPCV** ▸ **single dose** at diagnosis	**13vPCV** ▸ **single dose**	**13vPCV** ▸ **single dose**
	23vPPV ▸ **dose 1** at age 4 years ▸ **dose 2** at least 5 years later	**23vPPV** ▸ **dose 1** 12 months after 13vPCV or at age 4 years, whichever is later ▸ **dose 2** at least 5 years later	**23vPPV** ▸ **dose 1** 12 months after 13vPCV ▸ **dose 2** at least 5 years later	

These vaccines are funded under the National Immunisation Program. See the Australian Immunisation Handbook for the list of specified risk conditions that are eligible to receive free pneumococcal vaccines.

See the Australian Immunisation Handbook for more details.

At risk groups may not have received 13vPCV

Aligns with zostavax

Take home messages

- **Meningococcal B** is funded for:
- Sickle cell disease
- Asplenia (functional or anatomical)
- Complement deficiencies (factor H and D)
- Eculizimab treatment (specific monocloncal antibody)
- Aboriginal and Torres Strait Islander children

- **Pneumococcal** is funded for:
- h/o invasive disease
- Asplenia
- Acquired immune deficiency
- Solid or stem cell tx
- HIV
- Cochlear implant
- Intracranial shunt
- Certain lung disease (CF, emphysema)
- Nephrotic syndrome
- < 5 year olds: congenital heart disease, heart failure

Case study 1

- 50 year old male
- Previously well
- Traumatic splenectomy

VACCINE	RECOMMENDED	FUNDED
Prevenar 13	✓	✓
Pneumovax 23	✓	✓
Nimenrix	✓	✓
Bexsero	✓	✓
HIB	✓	✓

Case study 2

- 73 year old male
- Smoker
- Alcohol induced liver cirrhosis
- No previous pneumococcal vaccines

VACCINE	RECOMMENDED	FUNDED
Prevenar 13	✓	✓
Pneumovax 23	✓	
Nimenrix		
Bexsero		
Zostavax	✓	✓

Case study 3

- 20 month old Aboriginal child
- Ex 27 week premie
- h/o recurrent non specific pneumonia

VACCINE	RECOMMENDED	FUNDED
Prevenar 13	✓2, 4, 6, 12 months	✓
Pneumovax 23	✓4 years of age +booster 5 years later	✓
Bexsero	✓	✓
Hep B	✓	✓
Influenza	✓	✓

Acknowledgements

- Dr Ketaki Sharma
  Staff Specialist, NCIRS

- Dr Archana Koirala
  Staff Specialist, NCIRS


ANY
QUESTIONS
?

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National Centre for
Immunisation Research
and Surveillance