



IMMUNISATION
COALITION

Pneumococcal Disease: Implications of NIP recommendations

Dr Peter Eizenberg
GP Director 'Doctors of Ivanhoe'
Member, NCIRS AusVaxSafety AC
Member, Immunisation Coalition SAC

Conflict of Interest / Financial Disclosure

Dr Peter Eizenberg

- **Conflict of Interest:**

- Director, Doctors of Ivanhoe
- Member
 - Immunisation Coalition SAC
 - AusVaxSafety AG (NCIRS)
 - Pfizer Vaccine Education Advisory Board
 - Seqirus Flucelvax Advisory Board.
- PE has received funding from Pfizer, CSL/Seqirus, GSK, Roche, AstraZeneca and Sanofi Pasteur for the conduct of sponsored research, travel to present at conferences &/or consultancy work.

- **Financial disclosure:**

- PE has no ownership or shares in any vaccine or pharmaceutical company.

- **Views expressed in this presentation do not necessarily represent any of the above organisations**

Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

The impact of the changing pneumococcal national immunisation program among older Australians



R. Menzies^a, AN. Stein^b, R. Booy^c, PG. Van Buynder^d, J. Litt^e, AW. Cripps^{d,*}

^a*School of Public Health, Faculty of Medicine, University of New South Wales, Sydney, New South Wales 2052, Australia*

^b*Seqirus (Australia) Pty Ltd, Parkville, Victoria 3052, Australia*

^c*The University of Sydney, Faculty of Medicine and Health, School of Medicine, Sydney, New South Wales 2006, Australia*

^d*School of Medicine and Menzies Health Institute Queensland, Griffith University, Gold Coast Campus, Queensland 4222, Australia*

^e*Discipline of General Practice, Flinders University, Bedford Park, South Australia 5042, Australia*

ARTICLE INFO

Article history:

Received 20 July 2020

Received in revised form 26 November 2020

Accepted 8 December 2020

Available online 29 December 2020

Keywords:

Pneumococcal vaccination

Invasive pneumococcal disease

IPD

Indigenous

Non-Indigenous

Adult

Conjugate vaccine

Polysaccharide vaccine

Australia

ABSTRACT

Australia has a universal infant pneumococcal conjugate vaccination program and until recently a universal pneumococcal polysaccharide vaccine program for non-Indigenous adults aged ≥ 65 years and Indigenous adults aged ≥ 50 years. We documented the impacts of infant and adult vaccination programs on the epidemiology of invasive pneumococcal disease (IPD) in Indigenous and non-Indigenous adults.

IPD notifications from the National Notifiable Disease Surveillance System were analysed from 2002 to 2017, grouped by age, vaccine serotype group and Indigenous status. Since the universal funding of infant and elderly pneumococcal vaccination programs in January 2005, total IPD decreased by 19% in non-Indigenous adults aged ≥ 65 years but doubled in Indigenous adults aged ≥ 50 years. Vaccine uptake was suboptimal in both groups but lower in Indigenous adults. IPD due to the serotypes contained in the pneumococcal conjugate vaccines (PCV) except for serotype 3 declined markedly over the study period but were replaced by non-PCV serotypes. Serotype 3 is currently the most common in older adults. In the populations eligible for the adult 23-valent pneumococcal polysaccharide vaccine (23vPPV) program, IPD rates due to its exclusive serotypes increased to a lower extent than non-vaccine types. In 2017, non-vaccine serotypes accounted for most IPD in the older population eligible for the 23vPPV program, while its eleven exclusive serotypes accounted for the majority of IPD in younger adults.

Infant and adult pneumococcal vaccination programs in Australia have shaped the serotype-specific epidemiology of IPD in older adults. IPD remains a significant health burden for the Indigenous population. Herd immunity impact is clear for PCV serotypes excluding serotype 3 and serotype replacement is evident for non-PCV serotypes. The adult 23vPPV immunisation program appears to have partially curbed replacement with IPD due to its eleven exclusive serotypes, highlighting a potential benefit of increasing adult 23vPPV coverage in Australia.

© 2020 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

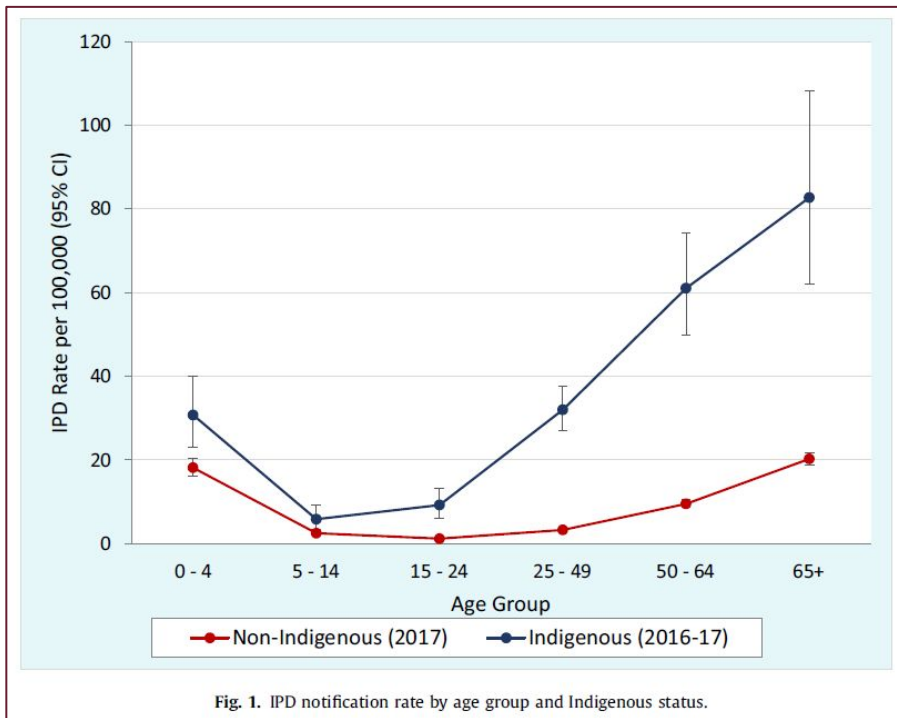


Fig. 1. IPD notification rate by age group and Indigenous status.

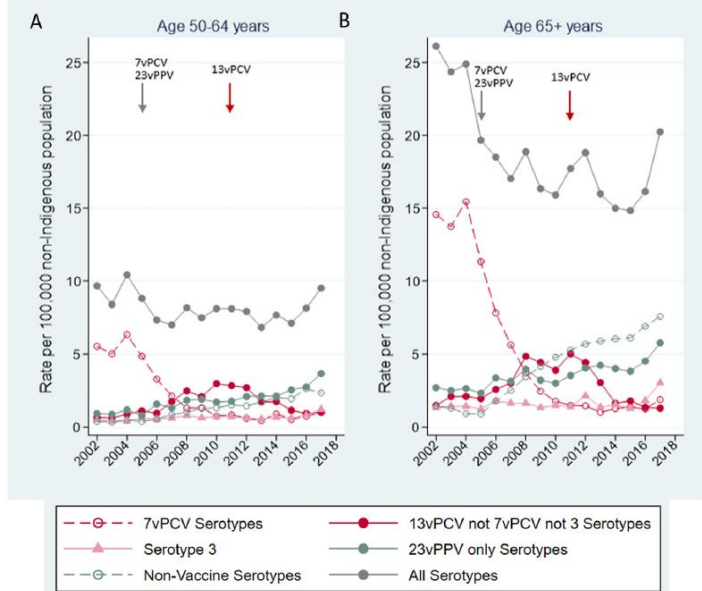


Fig. 2. IPD rates among non-Indigenous adult Australians aged 50–64 years (Panel A) or aged ≥ 65 years (Panel B) by serotype grouping, 2002–2017.

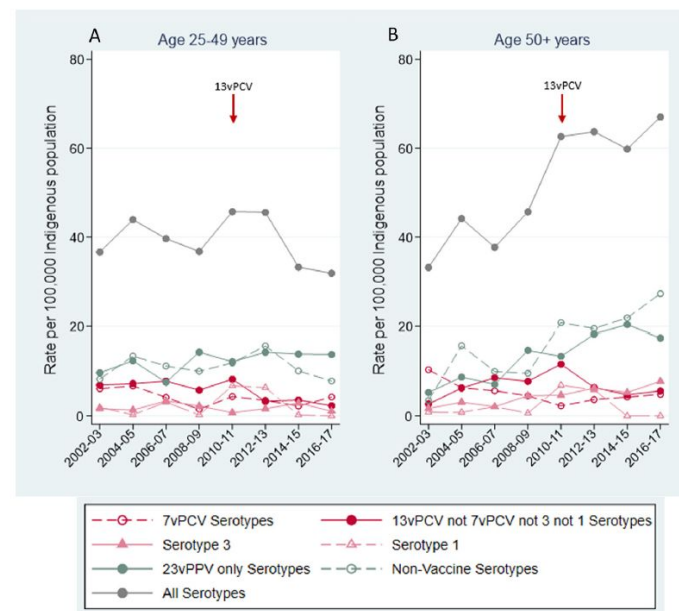


Fig. 3. IPD rates among Indigenous adult Australians aged 25–49 years (Panel A) or aged ≥ 50 years (Panel B) by serotype grouping, 2002–2017.

Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

Implications of Pneumococcal NIP - the vaccine provider perspective

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

Background to Pneumo NIP changes 1 July 2020

- Existing extremely successful universal childhood Pn vacc program using 13vPCV given at age 2, 4 & 12 months
 - additional doses of 23vPPV for children with high-risk medical conditions & Indigenous children in higher-risk geographical areas
 - High coverage rates for all children ~94% (93% Indigenous)



Table 1. Vaccination coverage estimates (%) by age assessment milestone, vaccine/antigen and Indigenous status, Australia, 2018 versus 2019

Vaccine/antigen	Milestone age	Indigenous (%)		All children (%)	
		2018	2019	2018	2019
Fully vaccinated**	12 monthst	92.4	92.9	93.9	94.3
	24 monthst	87.8	88.9	90.1	90.2
	60 months§	96.4	96.9	94.0	94.2
Diphtheria, tetanus, acellular pertussis	12 monthst (Dose 3)	92.5	93.2	94.7	95.0
	24 monthst (Dose 4)	90.6	91.5	92.8	93.1
	60 months§ (Dose 4 or 5)	96.5	97.4	94.1	94.8
Polio	12 monthst (Dose 3)	92.5	93.1	94.6	95.0
	24 monthst (Dose 3)	97.2	97.1	96.4	96.4
	60 months§ (Dose 4)	96.4	97.0	94.2	94.3
<i>Haemophilus influenzae</i> type b	12 monthst (Dose 3)	92.5	93.1	94.5	94.9
	24 monthst (Dose 4)	95.2	94.6	94.7	94.1
	60 months§ (Dose 4)	98.3	98.9	95.9	96.6
Hepatitis B	12 monthst (Dose 3)	92.6	93.1	94.3	94.8
	24 monthst (Dose 3)	97.1	97.1	95.9	95.9
	60 months§ (Dose 3)	98.5	98.7	96.4	96.4
Measles, mumps, rubella	12 months	N/A	N/A	N/A	N/A
	24 monthst (Dose 1)	96.6	96.6	95.4	95.3
	24 monthst (Dose 2)	91.8	92.7	93.0	93.3
	60 months§ (Dose 2)	98.5	98.8	96.3	96.4
Varicella	12 months	N/A	N/A	N/A	N/A
	24 monthst (Dose 1)	91.1	92.0	92.8	93.0
	60 months§ (Dose 1)	97.2	97.6	95.1	95.3
Meningococcal C	12 months	N/A	N/A	N/A	N/A
	24 monthst (Dose 1)	96.4	96.6	95.1	95.2
	60 months§ (Dose 1)	98.5	98.9	96.4	96.7
Meningococcal ACWY	12 months	N/A	N/A	N/A	N/A
	24 monthst (Dose 1)	N/A	95.0	N/A	93.6
	60 months§ (Dose 1)	N/A	N/A	N/A	N/A
13-valent pneumococcal conjugate	12 monthst (Dose 2 or 3)	95.8	97.0	95.7	96.1
	24 monthst (Dose 3)	96.8	96.0	95.7	95.2
	60 months§ (Dose 3)	96.0	96.6	93.7	94.4
Rotavirus	12 monthst (Dose 2)	86.7	87.3	90.9	91.9
	24 months	N/A	N/A	N/A	N/A
	60 months	N/A	N/A	N/A	N/A

* Refer to Appendix for details of 'fully vaccinated' assessment algorithms. Coverage estimates in this table are calculated using 12-month-wide cohorts and may differ slightly from estimates published elsewhere using rolling annualised cohorts.

† Cohort born 1 January 2017 – 31 December 2017 (2018 estimate) and 1 January 2018 – 31 December 2018 (2019 estimate).

‡ Cohort born 1 January 2016 – 31 December 2016 (2018 estimate) and 1 January 2017 – 31 December 2017 (2019 estimate).

§ Cohort born 1 January 2013 – 31 December 2013 (2018 estimate) and 1 January 2014 – 31 December 2014 (2019 estimate).

N/A - Not applicable (vaccine either not given prior to this milestone or contraindicated after previous milestone)

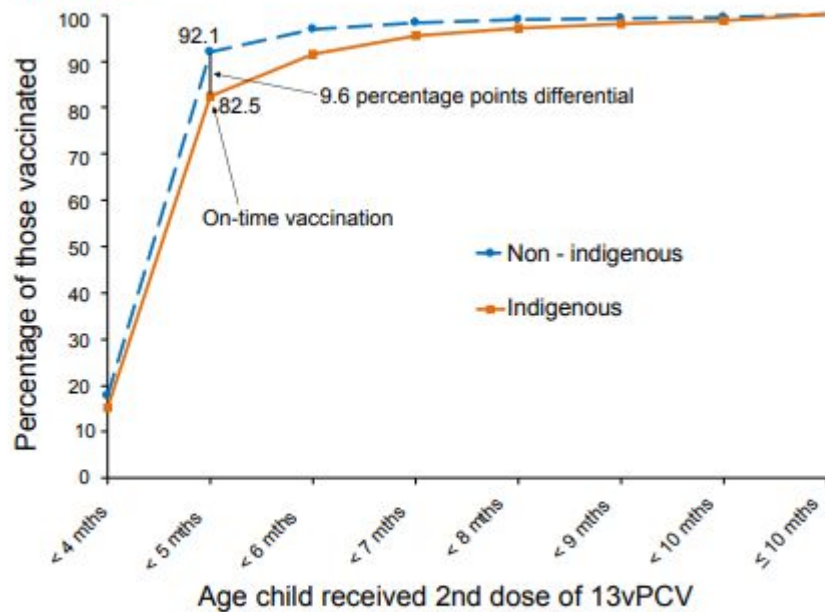
Source: Australian Immunisation Register, data as at 31 March 2019 for 2018 estimates and 31 March 2020 for 2019 estimates.

Table 1. Vaccination coverage estimates (%) by age assessment milestone, vaccine/antigen and Indigenous status, Australia, 2018 versus 2019

Vaccine/antigen	Milestone age	Indigenous (%)		All children (%)	
		2018	2019	2018	2019
'Fully vaccinated*'	12 monthst	92.4	92.9	93.9	94.3
	24 monthst	87.8	88.9	90.1	90.2
	60 months§	96.4	96.9	94.0	94.2

13-valent pneumococcal conjugate	12 monthst (Dose 2 or 3)	95.8	97.0	95.7	96.1
	24 monthst (Dose 3)	96.8	96.0	95.7	95.2
	60 months§ (Dose 3)	96.0	96.6	93.7	94.4

Figure 4. Cumulative percentage of children vaccinated with the second dose of 13vPCV* by age in months and Indigenous status, Australia, 2019



* Shown as cumulative percentage vaccinated (number of children who received vaccine dose at particular age / total number of children who received the vaccine dose, expressed as a percentage).
 PCV = pneumococcal conjugate vaccine
 13vPCV = 13-valent pneumococcal conjugate vaccine
 Cohort born in 2017.

Background to Pneumo NIP changes 1 July 2020

- Existing extremely successful universal childhood Pn vacc program using 13vPCV given at age 2, 4 & 12 months
 - additional doses of 23vPPV for children with high-risk medical conditions & Indigenous children in higher-risk geographical areas
 - High coverage rates for all children ~94% (93% Indigenous)

Background to Pneumo NIP changes 1 July 2020

- Existing extremely successful universal childhood Pn vacc program using 13vPCV given at age 2, 4 & 12 months
 - additional doses of 23vPPV for children with high-risk medical conditions & Indigenous children in higher-risk geographical areas
 - High coverage rates for all children ~94% (93% Indigenous)
- Disappointing low adult Pn vaccination coverage rates for all groups (including standard age-related cohorts for Indigenous adults ≥ 50 yrs; non-Indigenous adults ≥ 65 yrs; and all adults with high-risk medical conditions); coverage estimated around 50% for age 65+ yrs
 - wide gap between coverage rates for Indigenous & non-Indig adults



IMMUNISATION COALITION



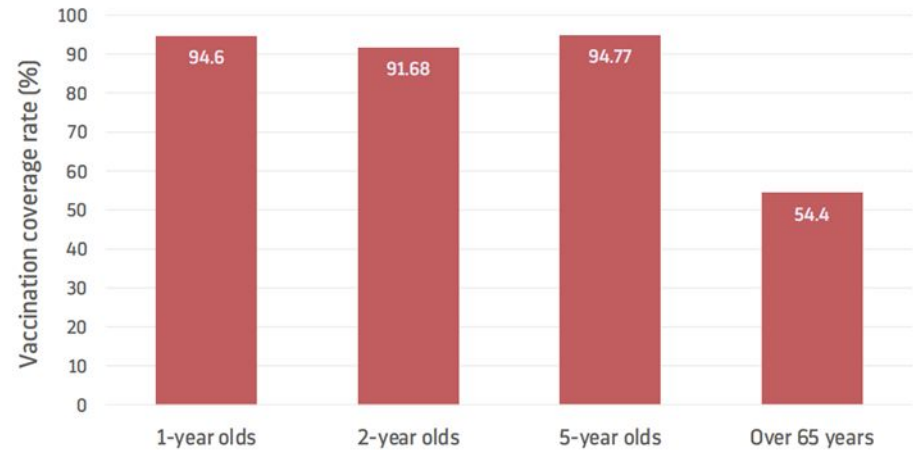
ENHANCING ADULT VACCINATION COVERAGE RATES IN AUSTRALIA

Policy white paper

28 June 2021

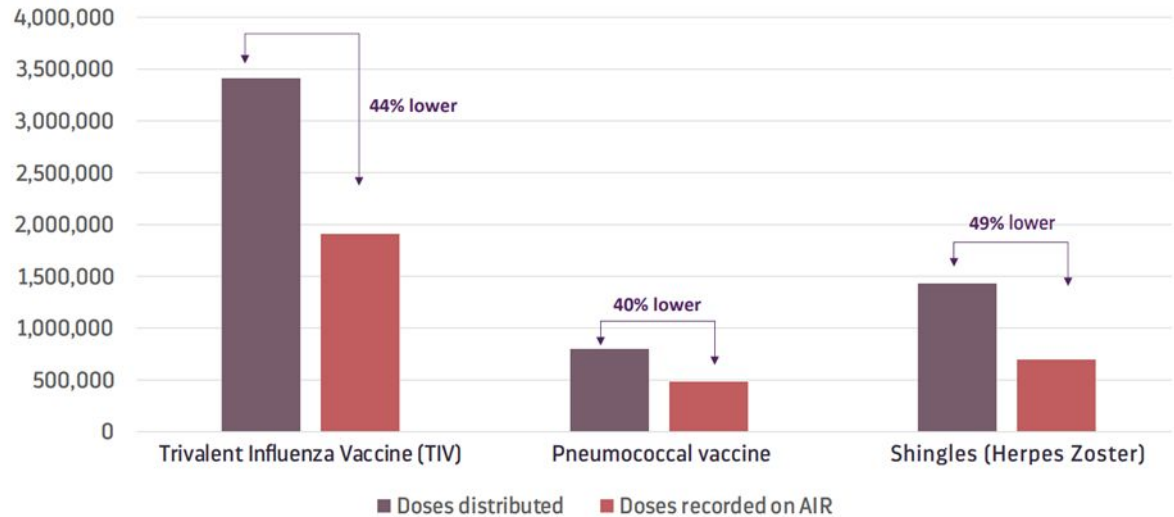
Authors: Danica Prodanovic, Katrina Lapham, Ryan Keenan, Carolyn Austin, Jennifer Herz (Biointelect); Prof Robert Booy, Prof Mary-Louise McLaws, Kim Sampson (Immunisation Coalition)

Figure 2: Pneumococcal vaccination coverage rates for adult (aged 65 and over) and children in Australia



2020 childhood vaccination data were obtained from national coverage rates published annually by the Department of Health¹⁰. National coverage rates for adult vaccination are not regularly reported. Data for adults was obtained from the 2009 Adult Immunisation Survey⁸. Note that at the time of the survey, adults aged 65 years and over were eligible for pneumococcal vaccines on the NIP; this has since been raised to 70 years. Coverage of medically at risk populations aged under 65 years are excluded.

Figure 3 NIP funded vaccines: doses distributed vs. doses recorded on AIR for adults, Australia, 2016-2018



*TIV vaccine: study period 1 January to 30 September 2018; Pneumococcal vaccine: study period 1 January 2017 – 30 September 2018; Zoster vaccine: study period 1 October 2016 – 30 September 2018

Background to Pneumo NIP changes 1 July 2020

- Existing extremely successful universal childhood Pn vacc program using 13vPCV given at age 2, 4 & 12 months
 - additional doses of 23vPPV for children with high-risk medical conditions & Indigenous children in higher-risk geographical areas
 - High coverage rates for all children ~94% (93% Indigenous)
- Disappointing low adult Pn vaccination coverage rates for all groups (including standard age-related cohorts for Indigenous adults ≥ 50 yrs; non-Indigenous adults ≥ 65 yrs; and all adults with high-risk medical conditions); coverage estimated around 50% for age 65+ yrs
 - wide gap between coverage rates for Indigenous & non-Indig adults

Background to Pneumo NIP changes 1 July 2020

- Existing extremely successful universal childhood Pn vacc program using 13vPCV given at age 2, 4 & 12 months
 - additional doses of 23vPPV for children with high-risk medical conditions & Indigenous children in higher-risk geographical areas
 - High coverage rates for all children ~94% (93% Indigenous)
- Disappointing low adult Pn vaccination coverage rates for all groups (including standard age-related cohorts for Indigenous adults ≥ 50 yrs; non-Indigenous adults ≥ 65 yrs; and all adults with high-risk medical conditions); coverage estimated around 50% for age 65+ yrs
 - wide gap between coverage rates for Indigenous & non-Indig adults
- Existing recommendations & guidelines were complicated & confusing
 - Pn chapter in AIH was convoluted & difficult to understand
 - Lack of clarity imposed significant time-burden to interpret & apply
 - Inconsistency across providers, often unable to implement
 - Various groups (including IC) developed multiple guides & tools to assist providers

Australian recommendations for pneumococcal vaccination in adults and availability under the NIP¹⁻³

PNEUMOVAX[®] 23 (pneumococcal vaccine, polyvalent) is the only pneumococcal vaccine funded on the NIP and subsidised on the PBS for eligible adults

Risk of invasive disease	Indigenous status	Age	13-valent conjugate vaccine*	NIP	PNEUMOVAX23**	NIP
Healthy	Non-indigenous	≥65 years	–	–	1 dose	Yes
	Indigenous	≥50 years	–	–	2 doses [#]	Yes
Increased risk category (B): <ul style="list-style-type: none"> • Diabetes mellitus • Chronic lung disease • Chronic cardiac disease • Chronic liver disease • Down Syndrome • Alcoholism • Tobacco smoking 	Non-indigenous	18–64 years	–	–	3 doses ^{##}	No [†] (PBS)
		≥65 years	–	–	2 doses ^{††}	Yes
	Indigenous	15–49 years	–	–	3 doses ^{##}	Yes
		≥50 years	–	–	2 doses [#]	Yes
Highest risk category (A): <ul style="list-style-type: none"> • Functional or anatomical asplenia • Immunocompromised persons (e.g. chronic renal failure) • Cerebrospinal fluid leaks • Cochlear implants • Intracranial shunts 	Non-indigenous	18–64 years	1 dose	No	3 doses ^{##}	No [†] (PBS)
		≥65 years	1 dose	No	3 doses [#]	Yes
	Indigenous	15–49 years	1 dose	No	3 doses ^{##}	Yes
		≥50 years	1 dose	No	3 doses ^{##††}	Yes

The minimum interval between any 2 doses of PNEUMOVAX23 is 5 years with a maximum of 3 lifetime adult doses¹

Please refer to the 10th Edition Australian Immunisation Handbook¹ for comprehensive listing of at risk conditions and recommendations

* Recommended for those with risk factors for invasive disease who have never received the 13-valent conjugate vaccine. This dose should precede the first dose of PNEUMOVAX23 by 2 months. For those who have had PNEUMOVAX23, the 13-valent vaccine dose should be given at least 12 months later.

** The minimum interval between any 2 doses of PNEUMOVAX23 is 5 years with a maximum of 3 lifetime adult doses.

The second dose should be given 5 years after the first dose.

The second dose should be given 5–10 years after the first. The third dose should be given at 65 years for non-indigenous people and 50 years for indigenous people, or 5 years after the second dose, whichever is later.

† Those diagnosed as being at increased risk after receiving PNEUMOVAX23 at age 65 should receive a second dose at time of diagnosis or 5 years after the previous dose, whichever is later.

†† The third dose should be given at 65 years or 5 years after the second dose, whichever is later.

‡ The 3rd dose, if given at 65 years or later for non-indigenous people and 50 years or later for indigenous people is funded on the NIP. Refer to NIP Schedule.

Adapted from Chiu *et al.* 2013³

ADULT VACCINATION RECOMMENDATIONS

RISK OF IPD		AGE		13vPCV ^{2*}	23vPPV ^{1**}
		Non-Indigenous	Indigenous		
Healthy		≥ 65yrs		-	1 dose [†]
			≥ 50yrs	-	2 doses [#]
Increased risk category (B)	<ul style="list-style-type: none"> • Diabetes mellitus • Chronic lung disease • Chronic cardiac disease • Chronic liver disease • Down syndrome • Alcoholism • Tobacco smoking 	18–64 yrs	18–49 yrs	-	3 doses [*]
		≥ 65yrs	≥ 50yrs	-	2 doses [*]
Highest risk category (A)	<ul style="list-style-type: none"> • Functional or anatomical asplenia • Immunocompromised persons (eg chronic renal failure) • Cerebrospinal fluid leaks • Cochlear implants • Intracranial shunts 	18–64 yrs	18–49 yrs	1 dose	3 doses [*]
		≥ 65yrs	≥ 50yrs	1 dose	3 doses [†]

1 23vPPV is funded under the NIP, except for non-indigenous category A & B 18–64 yrs, which is subsidised on the PBS for eligible adults.

2 13vPCV is not funded under the NIP.

* Recommended for those with risk factors for invasive disease who have never received the 13vPCV. This dose should precede the 1st dose of the recommended 23vPPV by 2 months. For those who have had 23vPPV, the 13-valent vaccine should be given at least 12 months later.

** The minimum interval between any 2 doses of Pneumovax23 is 5 years with a maximum of 3 lifetime adult doses.

† The 2nd dose should be given 5 years after the 1st dose.

The 2nd dose should be given 5–10 years after the 1st dose. The 3rd dose should be given at 50 years for indigenous people or 5 years after the 2nd dose, whichever is later.

• The 3rd dose should be given at 65 years or 5 years after the 2nd dose, whichever is later.

Ref: NHMRC Australian Immunisation Handbook, 10th Edition, 2013. Pharmaceutical Benefits Scheme Listing Pneumococcal Purified Capsular Polysaccharides. Available at <http://www.pbs.gov.au/medicine/item/1903E>



THE PNEUMOSMART VACCINATION TOOL

The PneumoSmart Vaccination Tool (herein referred to as "the tool") has been created using the pneumococcal disease vaccination recommendations in the online Australian Immunisation Handbook, and has been developed to assist GPs, medical specialists and other immunisation providers to comply with them. As pneumococcal disease vaccination recommendations change, the tool will be updated by clinical experts at the Immunisation Coalition.

The tool does not accommodate catch-up pneumococcal disease immunisations for children less than 5 years of age. Appropriate catch-up vaccines should be offered as recommended:

- in the online Australian Immunisation Handbook. ([Handbook link](#))
- as per the Immunisation Calculator ([Calculator link](#))

Important information:

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

I have read and agree to the [Terms and Conditions](#) of use for the PneumoSmart Vaccination Tool.

PROCEED

Background to Pneumo NIP changes 1 July 2020

- Existing extremely successful universal childhood Pn vacc program using 13vPCV given at age 2, 4 & 12 months
 - additional doses of 23vPPV for children with high-risk medical conditions & Indigenous children in higher-risk geographical areas
 - High coverage rates for all children ~94% (93% Indigenous)
- Disappointing low adult Pn vaccination coverage rates for all groups (including standard age-related cohorts for Indigenous adults ≥ 50 yrs; non-Indigenous adults ≥ 65 yrs; and all adults with high-risk medical conditions); coverage estimated around 50% for age 65+ yrs
 - wide gap between coverage rates for Indigenous & non-Indig adults
- Existing recommendations & guidelines were complicated & confusing
 - Pn chapter in AIH was convoluted & difficult to understand
 - Lack of clarity imposed significant time-burden to interpret & apply
 - Inconsistency across providers, often unable to implement
 - Various groups (including IC) developed multiple guides & tools to assist providers

Background to Pneumo NIP changes 1 July 2020

- Existing extremely successful universal childhood Pn vacc program using 13vPCV given at age 2, 4 & 12 months
 - additional doses of 23vPPV for children with high-risk medical conditions & Indigenous children in higher-risk geographical areas
 - High coverage rates for all children ~94% (93% Indigenous)
- Disappointing low adult Pn vaccination coverage rates for all groups (including standard age-related cohorts for Indigenous adults ≥ 50 yrs; non-Indigenous adults ≥ 65 yrs; and all adults with high-risk medical conditions); coverage estimated around 50% for age 65+ yrs
 - wide gap between coverage rates for Indigenous & non-Indig adults
- Existing recommendations & guidelines were complicated & confusing
 - Pn chapter in AIH was convoluted & difficult to understand
 - Lack of clarity imposed significant time-burden to interpret & apply
 - Inconsistency across providers, often unable to implement
 - Various groups (including IC) developed multiple guides & tools to assist providers
- 13vPCV recommended for 'highest at-risk' was unfunded via NIP or PBS
- Clear need to 'lift our game' for all adults

Clinical advice for vaccination providers

From 1 July 2020, there are changes to the pneumococcal vaccination schedule under the National Immunisation Program (NIP).

The new recommendations from 1 July 2020 are:

- Children and 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.
 - Children diagnosed with risk conditions for pneumococcal disease at ≤12 months of age who have received 4 doses of 13vPCV according to the existing recommendations do not require an additional 13vPCV dose.
- Aboriginal and Torres Strait Islander children who reside in NT, Qld, SA and WA are already recommended to receive an extra dose of 13vPCV. In addition, they should now receive two doses of 23vPPV. This is because a considerable proportion of invasive pneumococcal disease in these children is caused by serotypes that are present in 23vPPV but not in 13vPCV.
- 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. This age of receiving a dose of pneumococcal vaccination for older Australians has been moved to age ≥70 years 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.

Pneumococcal vaccination

From 1 July 2020, the NIP funded pneumococcal vaccination schedule will change to reflect the current best clinical evidence in preventing pneumococcal disease in adults and in people with conditions that increase their risk of disease.

The changes seek to simplify vaccination advice by making it easier to understand who should get vaccinated, when and which vaccine they should get.

There are no changes to the routine infant schedule for 13-valent conjugate pneumococcal vaccine (13vPCV).

All children are recommended to receive three doses of 13vPCV at ages 2, 4 and 12 months. The exception to this is Aboriginal and Torres Strait Islander children living in NT, Qld, SA and WA and children with risk conditions who are recommended to have an additional dose of 13vPCV at 6 months of age.

The NIP funded pneumococcal vaccine eligibility from 1 July 2020 is set out in more detail in [Table 1](#).

These changes are further represented in the [NIP pneumococcal vaccination schedule decision tree from 1 July 2020](#).

The revised recommendations are also published in the [Australian Immunisation Handbook](#).

Children and adults with conditions that increase the risk of pneumococcal disease

In addition to changes to the recommendations for the pneumococcal vaccine, the list of conditions that increase the risk of pneumococcal disease has also been revised and simplified to a single list of risk conditions.

The pneumococcal vaccines recommended for many of those with risk conditions are now funded under the NIP for children and adults. However, for other risk conditions, where the rate of disease is not sufficiently high enough to be cost-effective, people will not be eligible to receive the recommended pneumococcal vaccines under the NIP.

The list of risk conditions for pneumococcal disease both funded and not funded under the NIP is set out in [Table 1 of the NIP pneumococcal vaccination schedule decision tree from 1 July 2020](#).

It should be noted that individuals with functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies, and congenital or acquired asplenia, who are now eligible for NIP funded pneumococcal vaccination are now also eligible to receive meningococcal B, meningococcal ACWY and *Haemophilus influenzae* type b (Hib) vaccinations through the NIP.

Table 1. NIP funded pneumococcal vaccination schedule from 1 July 2020

Universal childhood schedule

- All non-Indigenous children to receive 1 dose of 13vPCV at ages 2, 4, and 12 months (3 doses in total).
- All Aboriginal and Torres Strait Islander children living in ACT, NSW, Tas and Vic to receive 1 dose of 13vPCV at ages 2, 4 and 12 months (3 doses in total).

People with medical risk conditions

- Children, adolescents and adults aged >12 months with identified risk conditions to receive 1 dose of 13vPCV and 2 doses of 23vPPV.
- Children diagnosed with certain risk conditions at ≤12 months of age to receive 1 dose of 13vPCV at ages 2, 4, 6 and 12 months (4 doses in total) and 23vPPV first dose at age 4 years and another dose at least 5 years later (2 doses in total). These children do not require any further doses of 13vPCV and 23vPPV.

Aboriginal and Torres Strait Islander people

- Aboriginal and Torres Strait Islander children living in NT, Qld, SA and WA to receive 1 dose of 13vPCV at ages 2, 4, 6 and 12 months (4 doses in total) and 23vPPV first dose at age 4 years and another dose at least 5 years later (2 doses in total).
- Aboriginal and Torres Strait Islander adults aged ≥50 years without conditions associated with an increased risk of pneumococcal disease to receive 1 dose of 13vPCV and 2 doses of 23vPPV.

Non-Indigenous older adults with no risk conditions

- All non-Indigenous adults who do not have conditions associated with an increased risk of pneumococcal disease turning 70 years of age on or after 1 July 2020 to receive 1 dose of 13vPCV regardless of whether the person has previously received a NIP-funded dose of 23vPPV.
- Those who are already 70 years of age or older on 1 July 2020 are also eligible for a single NIP-funded dose of 13vPCV, which can be given opportunistically at a suitable clinical encounter.

Dose intervals

The recommended interval between the dose of 13vPCV and the first dose of 23vPPV is 12 months (although an interval of at least 2 months is acceptable), and the youngest age recommended for receiving the first dose of 23vPPV after the required dose(s) of 13vPCV is 4 years.

The recommended interval between the two 23vPPV doses is at least 5 years.

The number of lifetime doses of 23vPPV is now limited to 2 doses for all people who are recommended to receive 23vPPV.

The doses of 23vPPV received in the past are also counted when deciding how many more are required.

If a person has already received at least two doses based on previous recommendations, no further doses of 23vPPV are to be given. (Refer to the [Australian Immunisation Handbook](#) for further details).

Pneumococcal disease

Pneumococcal disease is caused by the bacterium *Streptococcus pneumoniae*. It can cause **severe** or **invasive disease**, including pneumonia, meningitis and bacteraemia.

Invasive pneumococcal disease (IPD) is when the bacteria are found in the blood, spinal fluid or another part of the body that would normally be sterile. IPD mainly affects young children, older people, Aboriginal and Torres Strait Islander people, people with certain long-term diseases and people with weakened immune systems.

All information in this fact sheet is correct as at June 2020. REPORT all vaccinations to the Australian Immunisation Register (AIR).

State and territory health department contact numbers:

ACT	02 5124 9800	SA	1300 232 272
NSW	1300 066 055	TAS	1800 671 738
NT	08 8922 8044	VIC	1300 882 008
WA	08 9321 1312	QLD	Contact your local Public Health Unit

Australian Immunisation Register

The Australian Immunisation Register (AIR) accepts data on vaccines administered to people of all ages. Providers are required to submit data to the AIR on all vaccines administered.

Further information

Advice on the 1 July 2020 NIP schedule changes can be found in:

- The [ATAGI clinical advice on changes to recommendations for the use and funding of pneumococcal vaccines from 1 July 2020](#).
- The [ATAGI clinical advice on changes to vaccine recommendations and funding for people with risk conditions from 1 July 2020](#).
- The [ATAGI clinical advice on the changes to vaccine recommendations and funding for Aboriginal and Torres Strait Islander people from 1 July 2020](#).
- The [ATAGI clinical advice on changes to vaccine recommendations and funding for older non-Indigenous adults from 1 July 2020](#).
- The [ATAGI clinical advice on changes to recommendations for the use and funding of meningococcal vaccines from 1 July 2020](#).
- The [Australian Immunisation Handbook](#).



**National
Immunisation
Program**

A joint Australian, State and Territory Government Initiative

National Immunisation Program Pneumococcal vaccination schedule from 1 July 2020

Clinical advice for vaccination providers

From 1 July 2020, there are changes to the pneumococcal vaccination schedule under the National Immunisation Program (NIP).

Pneumococcal vaccination

From 1 July 2020, the NIP funded pneumococcal vaccination schedule will change to reflect the current best clinical evidence in preventing pneumococcal disease in adults and in people with conditions that increase their risk of disease.

The changes seek to simplify vaccination advice by making it easier to understand who should get vaccinated, when and which vaccine they should get.

There are no changes to the routine infant schedule for 13-valent conjugate pneumococcal vaccine (13vPCV).



**National
Immunisation
Program**

A joint Australian, State and Territory Government Initiative

National Immunisation Program Pneumococcal vaccination schedule from 1 July 2020

Clinical advice for vaccination providers

From 1 July 2020, there are changes to the pneumococcal vaccination schedule under the National Immunisation Program (NIP).

Pneumococcal vaccination

From 1 July 2020, the NIP funded pneumococcal vaccination schedule will change to reflect the current best clinical evidence in preventing pneumococcal disease in adults and in people with conditions that increase their risk of disease.

The changes seek to simplify vaccination advice by making it easier to understand who should get vaccinated, when and which vaccine they should get.

There are no changes to the routine infant schedule for 13-valent conjugate pneumococcal vaccine (13vPCV).



**National
Immunisation
Program**

A joint Australian, State and Territory Government Initiative

National Immunisation Program Pneumococcal vaccination schedule from 1 July 2020

Clinical advice for vaccination providers

From 1 July 2020, there are changes to the pneumococcal vaccination schedule under the National Immunisation Program (NIP).

Pneumococcal vaccination

From 1 July 2020, the NIP funded pneumococcal vaccination schedule will change to reflect the current best clinical evidence in preventing pneumococcal disease in adults and in people with conditions that increase their risk of disease.

The changes seek to simplify vaccination advice by making it easier to understand who should get vaccinated, when and which vaccine they should get.

There are no changes to the routine infant schedule for 13-valent conjugate pneumococcal vaccine (13vPCV).

Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

Clinical decision tree for vaccination providers

From 1 July 2020, there are changes to the National Immunisation Program (NIP) pneumococcal vaccination schedule.

This decision tree should be read in conjunction with the *NIP pneumococcal vaccination schedule from 1 July 2020 clinical advice for vaccination providers* and the **Australian Immunisation Handbook**.

Figure 1. NIP funded pneumococcal vaccine schedule from 1 July 2020

The list of risk conditions is set out in **Table 1** over the page. Some of these conditions are eligible for NIP funded doses of pneumococcal vaccine.

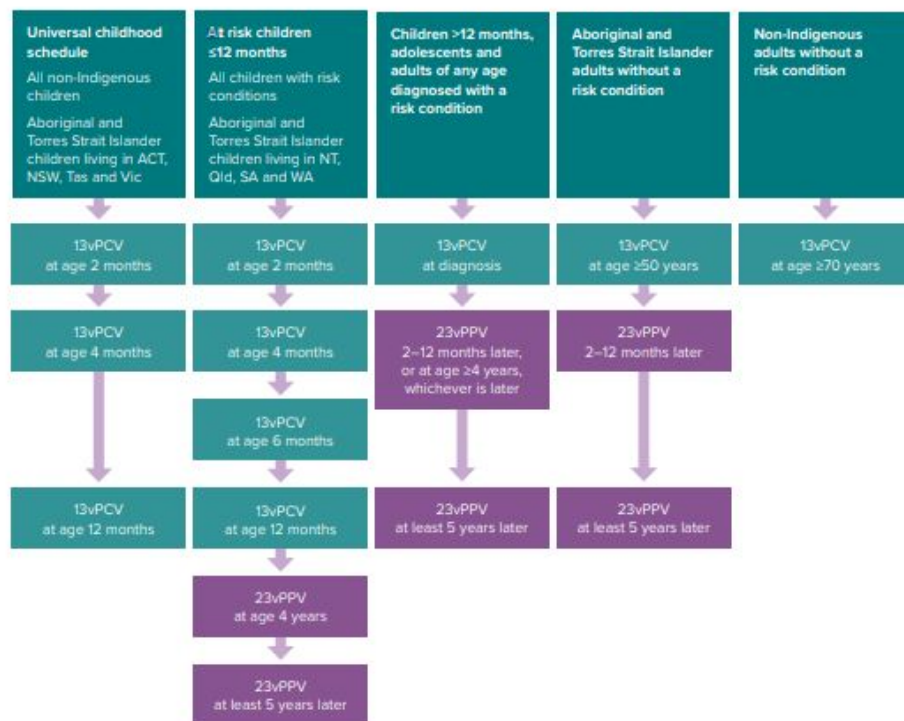


Table 1. Updated list of risk conditions for pneumococcal vaccine recommendations and their eligibility for funding under the National Immunisation Program (NIP)

Risk condition	Eligibility for NIP funding	
	<5 years of age	≥5 years of age
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 or 5 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 (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)		

* Funded under the NIP for eGFR <15 mL/min only (including patients on dialysis). Individual conditions listed beneath or those that are similar based on clinical judgment.

Note: All children and adults with above conditions are recommended to receive additional pneumococcal vaccine doses however, they are only funded under the NIP for those with the shaded conditions.

All information in this fact sheet is correct as at June 2020. REPORT all vaccinations to the Australian Immunisation Register (AIR).

State and territory health department contact numbers:

ACT	02 5124 9800	SA	1300 232 272
NSW	1300 068 065	TAS	1800 671 738
NT	08 8922 8044	VIC	1300 882 008
WA	08 9321 1312	QLD	Contact your local Public Health Unit

Figure 1. NIP funded pneumococcal vaccine schedule from 1 July 2020

The list of risk conditions is set out in **Table 1** over the page. Some of these conditions are eligible for NIP funded doses of pneumococcal vaccine.

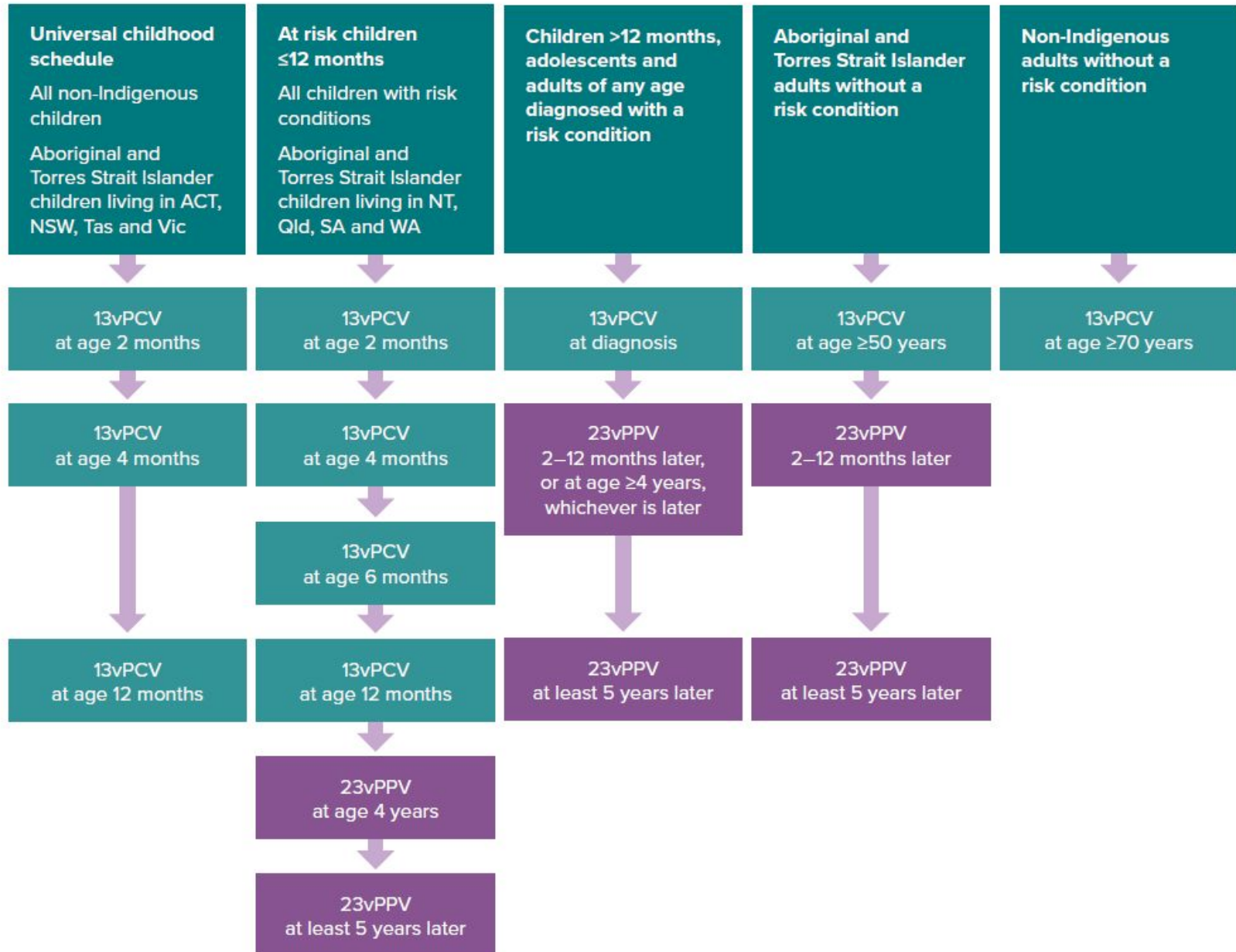


Table 1. Updated list of risk conditions for pneumococcal vaccine recommendations and their eligibility for funding under the National Immunisation Program (NIP)

Risk condition	Eligibility for NIP funding	
	<5 years of age	≥5 years of age
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 or 5 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 (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)		

* Funded under the NIP for eGFR <15 mL/min only (including patients on dialysis). Individual conditions listed beneath or those that are similar based on clinical judgment.

Note: All children and adults with above conditions are recommended to receive additional pneumococcal vaccine doses however, they are only funded under the NIP for those with the shaded conditions.

Overview of Pneumo NIP recommendations

- Revised eligibility criteria for NIP-funded Pn vaccine/s
 - Critical distinction between 'NIP-recommended' and 'NIP-funded' medical conditions
- Removal of PBS listing for 23vPPV

Overview of Pneumo NIP recommendations

- Revised eligibility criteria for NIP-funded Pn vaccine/s
 - Critical distinction between 'NIP-recommended' and 'NIP-funded' medical conditions
- Removal of PBS listing for 23vPPV
- Groups of adults who were formally eligible <1/7/20 for PBS script for 23vPPV and now not eligible for NIP-funded vaccines >1/7/20, include:
 - Smokers
 - Diabetes
 - Asthma (all severity), COAD, non-suppurative chronic lung disease, interstitial or fibrotic lung disease
 - immuno-suppressive therapy
 - non-haematol malignancies receiving chemo or radio therapy
 - cardiac, liver or renal disease (unless eGFR <15m/min, Stg 4-5)

Overview of Pneumo NIP recommendations

- Revised eligibility criteria for NIP-funded Pn vaccine/s
 - Critical distinction between 'NIP-recommended' and 'NIP-funded' medical conditions
- Removal of PBS listing for 23vPPV
- Groups of adults who were formally eligible <1/7/20 for PBS script for 23vPPV and now not eligible for NIP-funded vaccines >1/7/20, include:
 - Smokers
 - Diabetes
 - Asthma (all severity), COAD, non-suppurative chronic lung disease, interstitial or fibrotic lung disease
 - immuno-suppressive therapy
 - non-haematol malignancies receiving chemo or radio therapy
 - cardiac, liver or renal disease (unless eGFR <15m/min, Stg 4-5)
- (exception of age-eligible NIP-funded dose of 13vPCV for non-Indig adults ≥70 yrs; 1x 13vPCV + 2x 23vPPV for Indig adults ≥50 yrs)



National Immunisation Program
A joint Australian, State and Territory Government Initiative

National Immunisation Program
Meningococcal vaccination
schedule from 1 July 2020

Clinical advice for vaccination providers

From 1 July 2020, there are changes to the meningococcal vaccination schedule under the National Immunisation Program (NIP).



Australian Government
Department of Health

AUSTRALIAN TECHNICAL ADVISORY GROUP
ON IMMUNISATION (ATAGI) | **CLINICAL ADVICE**

Issue date: 1 July 2020

ATAGI CLINICAL ADVICE ON CHANGES TO RECOMMENDATIONS FOR THE USE AND FUNDING OF **MENINGOCOCCAL V**ACCINES FROM 1 JULY 2020



National Immunisation Program
A joint Australian, State and Territory Government Initiative

National Immunisation Program
Pneumococcal vaccination
schedule from 1 July 2020

Clinical advice for vaccination providers

From 1 July 2020, there are changes to the pneumococcal vaccination schedule under the National Immunisation Program (NIP).



Australian Government
Department of Health

AUSTRALIAN TECHNICAL ADVISORY GROUP
ON IMMUNISATION (ATAGI) | **CLINICAL ADVICE**

Issue date: 1 July 2020

ATAGI CLINICAL ADVICE ON CHANGES TO RECOMMENDATIONS FOR THE USE AND FUNDING OF **PNEUMOCOCCAL V**ACCINES FROM 1 JULY 2020



Australian Government
Department of Health

AUSTRALIAN TECHNICAL ADVISORY GROUP
ON IMMUNISATION (ATAGI) | **CLINICAL ADVICE**

Issue date: 1 July 2020

ATAGI CLINICAL ADVICE ON TRANSITIONING TO THE **NEW HEPATITIS A** VACCINATION SCHEDULE ON THE NATIONAL IMMUNISATION PROGRAM FROM 1 JULY 2020



Australian Government
Department of Health

AUSTRALIAN TECHNICAL ADVISORY GROUP
ON IMMUNISATION (ATAGI) | **CLINICAL ADVICE**

Issue date: 1 July 2020

ATAGI CLINICAL ADVICE ON CHANGES TO VACCINE RECOMMENDATIONS AND FUNDING FOR OLDER NON-INDIGENOUS ADULTS FROM 1 JULY 2020



Australian Government
Department of Health

AUSTRALIAN TECHNICAL ADVISORY GROUP
ON IMMUNISATION (ATAGI) | **CLINICAL ADVICE**

Issue date: 1 July 2020

ATAGI CLINICAL ADVICE ON CHANGES TO VACCINE RECOMMENDATIONS AND FUNDING FOR PEOPLE WITH RISK CONDITIONS FROM 1 JULY 2020



Australian Government
Department of Health

AUSTRALIAN TECHNICAL ADVISORY GROUP
ON IMMUNISATION (ATAGI) | **CLINICAL ADVICE**

Issue date: 1 July 2020

ATAGI CLINICAL ADVICE ON CHANGES TO VACCINE RECOMMENDATIONS AND FUNDING FOR ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE FROM 1 JULY 2020

Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

Impact of NIP recommendations

- Expected impacts
 - Improved protection from the addition of 13vPCV where not previously included
 - Small delay of routine Pn vacc protection from age 65yrs to age 70yrs
 - NIP is not a cost burden for healthy Indigenous ≥ 50 yrs; healthy non-Indigenous ≥ 70 yrs; & cohort with highest 'at-risk' conditions
 - Individuals with underlying medical conditions who need Pn vacc the most are eligible under NIP at no out-of-pocket cost
 - Prior to 1/7/20 cost on PBS ~\$21 (for 3 x 23vPPV) + \$180 (if given 13vPCV)

Impact of NIP recommendations

- Expected impacts
 - Improved protection from the addition of 13vPCV where not previously included
 - Small delay of routine Pn vacc protection from age 65yrs to age 70yrs
 - NIP is not a cost burden for healthy Indigenous ≥ 50 yrs; healthy non-Indigenous ≥ 70 yrs; & cohort with highest 'at-risk' conditions
 - Individuals with underlying medical conditions who need Pn vacc the most are eligible under NIP at no out-of-pocket cost
 - Prior to 1/7/20 cost on PBS ~\$21 (for 3 x 23vPPV) + \$180 (if given 13vPCV)
- Unexpected impacts
 - Burden for vaccine providers to implement adult Pn NIP
 - Complexity remains a very significant barrier to implementation
 - Pn NIP recommendations not any simpler nor easier to implement
 - Removal of PBS listing for 23vPPV

Impact of NIP recommendations

- Expected impacts
 - Improved protection from the addition of 13vPCV where not previously included
 - Small delay of routine Pn vacc protection from age 65yrs to age 70yrs
 - NIP is not a cost burden for healthy Indigenous ≥ 50 yrs; healthy non-Indigenous ≥ 70 yrs; & cohort with highest 'at-risk' conditions
 - Individuals with underlying medical conditions who need Pn vacc the most are eligible under NIP at no out-of-pocket cost
 - Prior to 1/7/20 cost on PBS ~\$21 (for 3 x 23vPPV) + \$180 (if given 13vPCV)
- Unexpected impacts
 - Burden for vaccine providers to implement adult Pn NIP
 - Complexity remains a very significant barrier to implementation
 - Pn NIP recommendations not any simpler nor easier to implement
 - Removal of PBS listing for 23vPPV
 - Cost is a significant burden for most of the 'at-risk' adults who have underlying medical conditions that do not meet criteria for 'highest at-risk' group
 - Most individuals with underlying medical conditions who need Pn vacc according to NIP have out-of-pocket cost around \$300 (for 1x 13vPCV + 2x 23vPPV)
 - Includes smokers, Diabetes, Asthma (all severity), COAD, immuno-suppressive Rx, non-haematol malignancies receiving chemo/radio therapy, cardiac, liver or renal disease (unless eGFR < 15 m/min, Stg 4-5)
 - Prior to 1/7/20 cost on PBS \$14 or \$21 (2 or 3 doses 23vPPV required)

Case studies: Pneumococcal

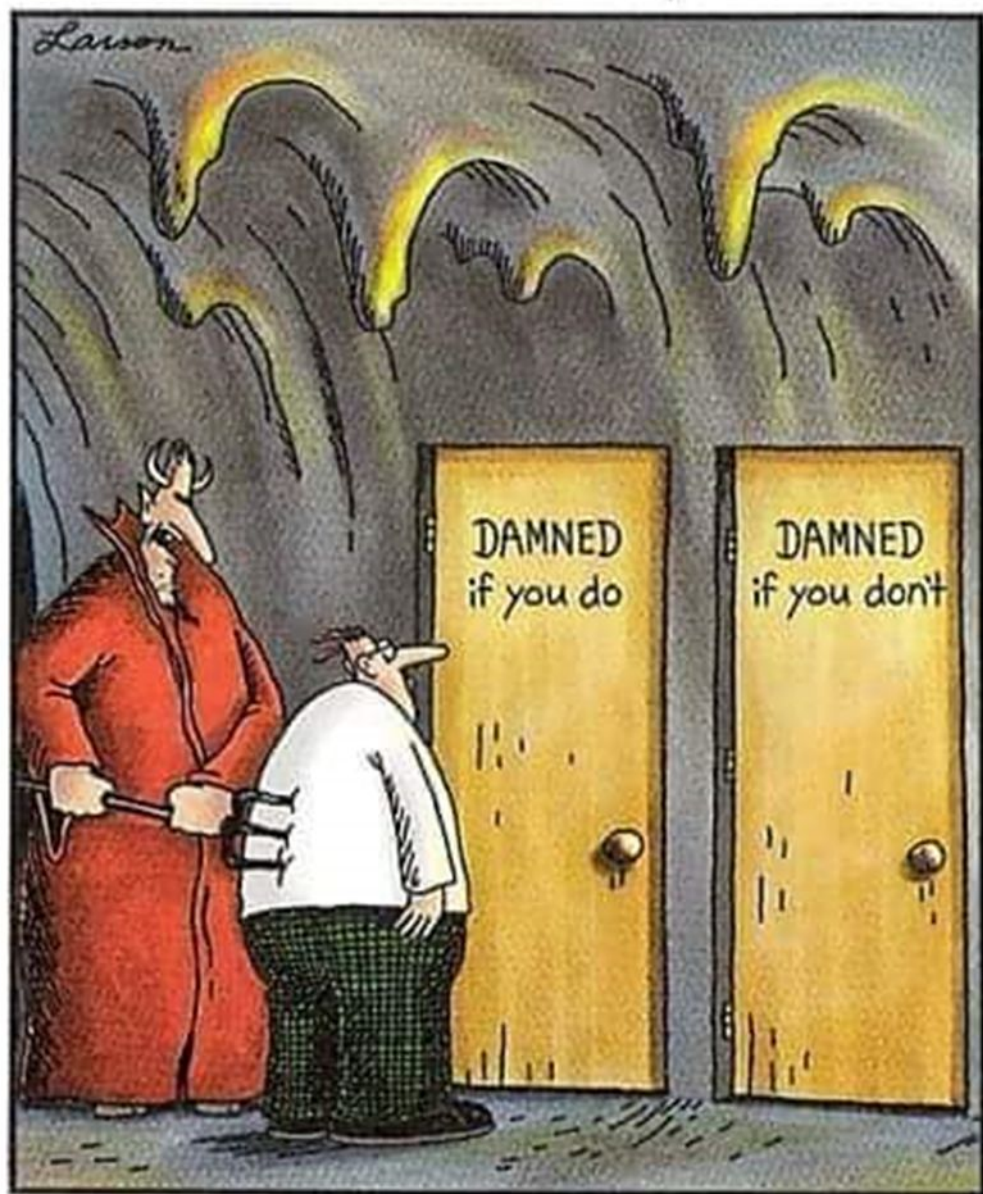
- Age 68 yrs, female, non-Indigenous, no previous Pneumococcal vaccination, multiple medical risk conditions, including: Diabetes, HT, AF, CAD with 2 stents, CF, CRF (stage 3, eGFR 35), RA on long-term oral steroids, severe Asthma, Bowel cancer (requiring surgery, chemo & radiotherapy),and she smokes.
 - **Q1 What NIP Pneumococcal vaccination schedule is recommended?**
 - **Q2 Are the recommended vaccine/s NIP-funded?**

Case studies: Pneumococcal

- Age 68 yrs, female, non-Indigenous, no previous Pneumococcal vaccination, multiple medical risk conditions, including: Diabetes, HT, AF, CAD with 2 stents, CF, CRF (stage 3, eGFR 35), RA on long-term oral steroids, severe Asthma, Bowel cancer (requiring surgery, chemo & radiotherapy),and she smokes.
 - **Q1 What NIP Pneumococcal vaccination schedule is recommended?**
 - 13vPCV 'Prevenar' x1 dose, due now, followed by 23vPPV x2 doses.
 - 23vPPV 'Pneumovax' dose 1 due after interval of 2 months following 13vPPV.
 - 23v PPV 'Pneumovax' dose 2 due after interval of 5 yrs following 23vPPV dose 1.
 - **Q2 Are the recommended vaccine/s NIP-funded?**

Case studies: Pneumococcal

- Age 68 yrs, female, non-Indigenous, no previous Pneumococcal vaccination, multiple medical risk conditions, including: Diabetes, HT, AF, CAD with 2 stents, CF, CRF (stage 3, eGFR 35), RA on long-term oral steroids, severe Asthma, Bowel cancer (requiring surgery, chemo & radiotherapy),and she smokes.
 - **Q1 What NIP Pneumococcal vaccination schedule is recommended?**
 - 13vPCV 'Prevenar' x1 dose, due now, followed by 23vPPV x2 doses.
 - 23vPPV 'Pneumovax' dose 1 due after interval of 2 months following 13vPPV.
 - 23v PPV 'Pneumovax' dose 2 due after interval of 5 yrs following 23vPPV dose 1.
 - **Q2 Are the recommended vaccine/s NIP-funded?**
 - No, not under the current NIP guidelines that commenced 1 July 2020.
 - Whilst Pneumococcal vaccination with 13vPCV (x1 dose) & 23vPPV (x2 doses) is recommended for people with any 1 of the above medical risk conditions, none of her listed conditions are eligible for NIP-funded vaccines.



"C'mon, c'mon—it's either one or the other."



THE PNEUMOSMART VACCINATION TOOL

The PneumoSmart Vaccination Tool (herein referred to as "the tool") has been created using the pneumococcal disease vaccination recommendations in the online Australian Immunisation Handbook, and has been developed to assist GPs, medical specialists and other immunisation providers to comply with them. As pneumococcal disease vaccination recommendations change, the tool will be updated by clinical experts at the Immunisation Coalition.

The tool does not accommodate catch-up pneumococcal disease immunisations for children less than 5 years of age. Appropriate catch-up vaccines should be offered as recommended:

- in the online Australian Immunisation Handbook. ([Handbook link](#))
- as per the Immunisation Calculator ([Calculator link](#))

Important information:

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

I have read and agree to the [Terms and Conditions](#) of use for the PneumoSmart Vaccination Tool.

PROCEED

PneumoSmart

The *PneumoSmart Vaccination Tool* (herein referred to as "the tool") has been created using the pneumococcal disease vaccination recommendations in the online Australian Immunisation Handbook, and has been developed to assist GPs, medical specialists and other immunisation providers to comply with them. As pneumococcal disease vaccination recommendations change, the tool will be updated by clinical experts at the Immunisation Coalition.

Catch-up pneumococcal immunisations for children less than 5 years of age are complex. Appropriate catch-up vaccines should be offered as recommended:

- in the online [Australian Immunisation Handbook](#)
- as per the [Immunisation Calculator](#)
- [catch-up schedule for 13vPCV for Aboriginal and Torres Strait Islander children](#) living in New South Wales, Victoria, Tasmania or the ACT, and all children who do not have risk condition(s) for pneumococcal disease, aged less than 5 years.
- [catch-up schedule for 13vPCV for Aboriginal and Torres Strait Islander children](#) living in Northern Territory, South Australia or Western Australia **only**, and all children with risk condition(s) for pneumococcal disease, aged less than 5 years

Important information:

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

I have read and agree to the [Terms and Conditions](#) of use for the PneumoSmart Vaccination Tool.

Proceed



Patient's Details

Details below are for Clinician reference only and will not be kept in our database records

Mary Test

07/01/1955|

Next

Review Details

Patient Name:

Mary Test

Patient Age:

07/01/1955

Does the patient identify as an Aboriginal and/or Torres Strait Islander Person: **No**

Conditions:

Coronary Artery Disease

Heart Failure

Diabetes

Smoking (current or in the immediate past)

Non-haematological malignancies receiving chemotherapy or radiotherapy (currently or anticipated)

Immunosuppressive therapy – where sufficient vaccine response is expected

Chronic obstructive pulmonary disease (COPD and chronic emphysema)

Was risk condition diagnosed on or before 12 months of age:

No

Previously Vaccinated:

No

[Submit Details](#)

[Start Over](#)

Vaccination Report

Patient Name: **Mary Test** Date of Birth: **07/01/1955**

Does the patient identify as an Aboriginal and/or Torres Strait Islander person:
No

Conditions:

- Coronary Artery Disease
- Heart Failure
- Diabetes
- Smoking (current or in the immediate past)
- Non-haematological malignancies receiving chemotherapy or radiotherapy
- Immunosuppressive therapy – where sufficient vaccine response is expected
- Chronic obstructive pulmonary disease (COPD and chronic emphysema)

Was risk condition diagnosed at aged 12 months or younger:
No

Has the patient received the pneumococcal vaccine before:
No

Vaccination Summary

If the patient has **no** written record of receiving 13vPCV or 23vPPV they are recommended to receive:

When Due	Give	Comment	Funding
Now	13vPCV		Self-funded
12 months later	23vPPV (Dose 1)	Recommended interval of 12 months (although 2-month interval is acceptable) after the last dose of 13vPCV.	Self-funded
5 years later	23vPPV (Dose 2)	Minimum interval of 5 years since last 23vPPV dose	Self-funded

Vaccination Summary

If the patient has **no** written record of receiving 13vPCV or 23vPPV they are recommended to receive:

When Due	Give	Comment	Funding
Now	13vPCV		Self-funded
12 months later	23vPPV (Dose 1)	Recommended interval of 12 months (although 2-month interval is acceptable) after the last dose of 13vPCV.	Self-funded
5 years later	23vPPV (Dose 2)	Minimum interval of 5 years since last 23vPPV dose	Self-funded

Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community

Implications for at-risk individuals, vaccine providers & the community

Implications for at-risk individuals, vaccine providers & the community

- At-risk individuals
 - Under-protected OR significant out-of-pocket cost
 - Special neglected cohort of those with multiple at-risk conditions

Implications for at-risk individuals, vaccine providers & the community

- At-risk individuals
 - Under-protected OR significant out-of-pocket cost
 - Special neglected cohort of those with multiple at-risk conditions
- Providers
 - Are expected to implement the Pn NIP
 - Confused, overwhelmed, unable to implement effectively
 - Contributes to provider 'emotional exhaustion'

Implications for at-risk individuals, vaccine providers & the community

- At-risk individuals
 - Under-protected OR significant out-of-pocket cost
 - Special neglected cohort of those with multiple at-risk conditions
- Providers
 - Are expected to implement the Pn NIP
 - Confused, overwhelmed, unable to implement effectively
 - Contributes to provider 'emotional exhaustion'
- Community
 - Disappointing low Pn vacc coverage rates
 - Especially for neglected cohorts of at-risk adults

Implications for at-risk individuals, vaccine providers & the community

Implications for at-risk individuals, vaccine providers & the community

- NIP Pn Scorecard

Implications for at-risk individuals, vaccine providers & the community

- NIP Pn Scorecard
 - Reflecting current best clinical evidence ✓✓

Implications for at-risk individuals, vaccine providers & the community

- NIP Pn Scorecard
 - Reflecting current best clinical evidence ✓✓
 - Simplified & easier to understand ✗

Implications for at-risk individuals, vaccine providers & the community

- NIP Pn Scorecard
 - Reflecting current best clinical evidence ✓✓
 - Simplified & easier to understand X
 - Cost to consumers
 - For those at 'highest-most risk' ✓✓
 - For most of those 'at-risk' XXX

Implications for at-risk individuals, vaccine providers & the community

- NIP Pn Scorecard
 - Reflecting current best clinical evidence ✓✓
 - Simplified & easier to understand X
 - Cost to consumers
 - For those at 'highest-most risk' ✓✓
 - For most of those 'at-risk' XXX
 - Provider perspective
 - Compliance with NIP guidelines X
 - Contribution to provider burn-out XX

Implications for at-risk individuals, vaccine providers & the community

- NIP Pn Scorecard
 - Reflecting current best clinical evidence ✓✓
 - Simplified & easier to understand X
 - Cost to consumers
 - For those at 'highest-most risk' ✓✓
 - For most of those 'at-risk' XXX
 - Provider perspective
 - Compliance with NIP guidelines X
 - Contribution to provider burn-out XX
 - NIP Pn vaccine coverage rates
 - Age-based cohorts X
 - Highest 'at-risk' (i.e. NIP funded) XX
 - Most adults 'at-risk' (i.e. unfunded) XXX



Implications of Pneumococcal NIP

- Background to Pneumo NIP changes 1 July 2020
- Overview of Pneumo NIP recommendations
- Impact of NIP recommendations
- Implications for at-risk individuals, vaccine providers & the community