2024 Immunisation Update

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NSW GOVERNMENT Health
Northern Sydney Local Health District

Acknowledgement of Country

I would like to begin by acknowledging that I am presenting this webinar from the lands of the Dharug people. I also acknowledge the Traditional Custodians of the various lands on which you are all on today. I would also like to pay respects to Elders both past, present and emerging and extend that respect to other Aboriginal and Torres Strait Islander people participating in this webinar.

Session will include

1. Review of principles

2. Current Situation – Vaccine Preventable diseases and changes in recommendations

   – Q&A

3. Report Cards

4. The Future

   - Q&A

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Minimum core education requirements for Authorised Nurse Immunisers

1. NSW Immunisation Authority for Registered Nurses and Midwives
2. Vaccine Storage and management
3. Vaccine administration
4. NSW Immunisation Schedule
5. Current situation/issues update

Reading

Live

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Other required learning:

4. NSW Immunisation Schedule

- Current immunisation schedules - new vaccines/schedule changes
- NSW schedule versus National Immunisation Program Schedule
- Catch-up vaccination – minimum ages, minimum intervals
- School vaccination program schedule and accessing vaccination records
- Maternal influenza and pertussis vaccination
- Neonatal hepatitis B vaccination program
- Health care worker - requirements for staff and students

5. Current situation/issues update

- Current vaccine preventable disease of concern and epidemiology
- Any other issues/concerns
- Contacting the local public health unit
- Useful resources

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Recent Changes in Immunisation 2023-2024

- Covid primary and booster recommendations
- Response to outbreaks of JE, Mpox and Influenza
- Change in schedule and funding of shingles vaccines.
- Addition of RSV immunisations and Menquadfi, Removal of Trumenba, Merieux, Vivaxim, Zostavax
- Change in AIR reporting requirements (From 1 March 2024)

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National Immunisation Program Schedule

Australian Government
Department of Health and Aged Care

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

Childhood vaccination

(also see vaccination for people with medical risk conditions)

Age	Diseases	Vaccine Brand	Notes
Birth	Hepatitis B (usually offered in hospital)	H-B-Vax® II Paediatric or Engerix B® Paediatric	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.
2 months (can be given from 6 weeks of age)	Diphtheria, tetanus, pertussis (whooping cough), hepatitis B, polio, *Haemophilus influenzae* type b (Hib) Rotavirus Pneumococcal Meningococcal B (Aboriginal and Torres Strait Islander children)	Infanrix® hexa or Vaxelis® Rotarix® Prevenar 13® Bexsero®	Rotavirus vaccine: First dose must be given by 14 weeks of age. Meningococcal B vaccine: Prophylactic paracetamol recommended.
4 months	Diphtheria, tetanus, pertussis (whooping cough), hepatitis B, polio, *Haemophilus influenzae* type b (Hib) Rotavirus Pneumococcal Meningococcal B (Aboriginal and Torres Strait Islander children)	Infanrix® hexa or Vaxelis® Rotarix® Prevenar 13® Bexsero®	Rotavirus vaccine: The second dose must be given by 24 weeks of age. Meningococcal B vaccine: Prophylactic paracetamol recommended.
6 months	Diphtheria, tetanus, pertussis (whooping cough), hepatitis B, polio, *Haemophilus influenzae* type b (Hib) Pneumococcal (Children with specified medical risk conditions) Pneumococcal (Aboriginal and Torres Strait Islander children in WA, NT, SA, Qld) Meningococcal B (Aboriginal and Torres Strait Islander children with specified medical risk conditions)	Infanrix® hexa or Vaxelis® Prevenar 13® Prevenar 13® Bexsero®	Pneumococcal vaccine: An additional (3rd) dose of 13vPCV is required for Aboriginal and Torres Strait Islander children in WA, NT, SA, Qld, and all children with specified medical risk conditions for pneumococcal disease. Refer to the Immunisation Handbook. Meningococcal B vaccine: Prophylactic paracetamol recommended.
6 months to <5 years (annually)	Influenza	Age appropriate	Administer annually. In children aged 6 months to less than 9 years of age in the first year of administration, give 2 doses a minimum of 1 month apart. One dose annually in subsequent years. Information on age appropriate vaccines is available in the Immunisation Handbook or the annual ATAGI advice on seasonal influenza vaccines.
12 months	Meningococcal ACWY Measles, mumps, rubella Pneumococcal Meningococcal B (Aboriginal and Torres Strait Islander children)	Nimenrix® M-M-R® II or Priorix® Prevenar 13® Bexsero®	Meningococcal B vaccine: Prophylactic paracetamol recommended.
18 months	*Haemophilus influenzae* type b (Hib) Measles, mumps, rubella, varicella (chickenpox) Diphtheria, tetanus, pertussis (whooping cough) Hepatitis A (Aboriginal and Torres Strait Islander children in WA, NT, SA, Qld)	ActHIB® Priorix-Tetra® or ProQuad® Infanrix® or Tripacel® Vaqta® Paediatric	Hepatitis A vaccine: First dose of the 2-dose hepatitis A vaccination schedule if not previously received a dose.
4 years	Diphtheria, tetanus, pertussis (whooping cough), polio Pneumococcal (Children with specified medical risk conditions) Pneumococcal (Aboriginal and Torres Strait Islander children in WA, NT, SA, Qld) Hepatitis A (Aboriginal and Torres Strait Islander children in WA, NT, SA, Qld)	Infanrix® IPV or Quadracel® Pneumovax 23® Pneumovax 23® Vaqta® Paediatric	Pneumococcal vaccine: Administer first dose of 23vPPV at age 4 years, followed by second dose of 23vPPV at least 5 years later. Refer to the Immunisation Handbook for specified medical risk conditions. Hepatitis A vaccine: Not required if previously received 2 doses (first dose at age ≥12 months) at least 6 months apart.
≥ 5 years (annually)	Influenza (Children with specified medical risk conditions) Influenza (Aboriginal and Torres Strait Islander children)	Age appropriate Age appropriate	Administer annually. In children aged 6 months to less than 9 years of age in the first year of administration, give 2 doses a minimum of 1 month apart. One dose annually in subsequent years. Information on age appropriate vaccines is available in the Immunisation Handbook or the annual ATAGI advice on seasonal influenza vaccines.

Adolescent vaccination

(also see vaccination for people with medical risk conditions)

Age	Diseases	Vaccine Brand	Notes
All ages	Influenza (adolescents with specified medical risk conditions) Influenza (Aboriginal and Torres Strait Islander adolescents) Pneumococcal (adolescents with specified medical risk conditions)	Age appropriate Age appropriate Prevenar 13® and Pneumovax 23®	Influenza vaccine: Administer annually. For information on an age appropriate vaccines or specified medical risk conditions refer to the Immunisation Handbook or the annual ATAGI advice on seasonal influenza vaccines. Pneumococcal vaccine: For people with specified medical risk conditions administer a dose of 13vPCV at diagnosis followed by 2 doses of 23vPPV. Refer to the Immunisation Handbook for dose intervals.
12–13 years (Year 7 or age equivalent)	Human papillomavirus (HPV) Diphtheria, tetanus, pertussis (whooping cough)	Gardasil®9 Boostrix® or Adacel®	HPV vaccine: Single dose recommended. Not required if previously received. If dose was missed and not previously received, a catch-up is available up to and including 25 years of age.
14–16 years (Year 10 or age equivalent)	Meningococcal ACWY	MenQuadfi®	

https://www.health.gov.au/resources/publications/national-immunisation-program-schedule-for-all-non-indigenous-people

The National Immunisation Program (NIP)

Aboriginal and Torres Strait Islander Infants and children

In addition to routine childhood vaccinations Aboriginal and Torres Strait Islander infants and children receive:

Age	Disease
2 months	Meningococcal B
4 months	Meningococcal B
6 months	Meningococcal B - Additional dose for children with specified medical risk conditions Pneumococcal - Additional dose for children in WA, NT, SA, Qld and children with specified medical risk conditions
12 months	Meningococcal B
18 months	Hepatitis A - Additional vaccine for children in WA, NT, SA, Qld
4 years	Pneumococcal - Additional dose for children in WA, NT, SA, Qld and children with specified medical risk conditions. Followed by a dose 5 years later. Hepatitis A - Additional vaccine for children in WA, NT, SA, Qld

Age	Disease
50 years and over	Pneumococcal (3 doses in total) Shingles

Aboriginal and Torres Strait Islander adolescents

In addition to the vaccines recommended on the adolescent schedule Aboriginal and Torres Strait Islander adolescents are funded to receive the annual influenza vaccine.

https://www.health.gov.au/topics/immunisation/when-to-get-vaccinated/immunisation-for-aboriginal-and-torres-strait-islander-people

UPDATED

NSW Immunisation Schedule

Updated July 2024

NSW GOVERNMENT

Vaccines funded under the National Immunisation Program

Childhood vaccines				
Age		**Disease**	**Vaccine**	**Information**
Birth		Hepatitis B	H-B-VAX II (IM) **OR** ENGERIX B (IM)	Within 7 days of birth (ideally within 24 hours)
6 weeks		Diphtheria, tetanus, pertussis, hepatitis B, polio, *Haemophilus influenzae* type b	INFANRIX HEXA (IM) **OR** VAXELIS (IM)	
		Pneumococcal	PREVENAR 13 (IM)	
		Rotavirus	ROTARIX (Oral)	Rotarix: Dose 1 limited to 6-14 weeks of age
		Meningococcal B (Aboriginal* children only)	BEXSERO (IM)	Bexsero: Recommended for other children (see AIH[v]). Prophylactic paracetamol recommended
4 months		Diphtheria, tetanus, pertussis, hepatitis B, polio, *Haemophilus influenzae* type b	INFANRIX HEXA (IM) **OR** VAXELIS (IM)	
		Pneumococcal	PREVENAR 13 (IM)	
		Rotavirus	ROTARIX (Oral)	Rotarix: Dose 2 limited to 10-24 weeks
		Meningococcal B (Aboriginal* children only)	BEXSERO (IM)	Bexsero: Recommended for other children (see AIH[v]). Prophylactic paracetamol recommended
*Annual influenza vaccination	6 months	Diphtheria, tetanus, pertussis, hepatitis B, polio, *Haemophilus influenzae* type b	INFANRIX HEXA (IM) **OR** VAXELIS (IM)	Children ≥ 6 months with at risk conditions for IPD‡ are recommended to receive an additional dose of Prevenar 13 (see AIH[v]). Aboriginal* children ≥ 6 months with certain at risk conditions may require an additional dose of Bexsero (see AIH[v])
	12 months	Meningococcal ACWY	NIMENRIX (IM)	
		Pneumococcal	PREVENAR 13 (IM)	
		Measles, mumps, rubella	MMR II **OR** PRIORIX (IM or SC)	
		Meningococcal B (NIP funded for Aboriginal# children only)	BEXSERO (IM)	Bexsero: Recommended for other children (see AIH[v]). Prophylactic paracetamol recommended
	18 months	Diphtheria, tetanus, pertussis	INFANRIX **OR** TRIPACEL (IM)	
		Measles, mumps, rubella, varicella	PRIORIX TETRA (IM or SC)	
		Haemophilus influenzae type b	ACT-HIB (IM or SC)	
	4 years	Diphtheria, tetanus, pertussis, polio	INFANRIX-IPV **OR** QUADRACEL (IM)	Children with at risk conditions for IPD‡ are recommended to receive an additional dose of Pneumovax 23 (see AIH[v])

At risk groups, adolescents and adults			
Age/group	**Disease**	**Vaccine**	**Information**
All people with asplenia, hyposplenia, complement deficiency and treatment with eculizumab	Meningococcal ACWY	NIMENRIX (IM)	See AIH[v] for required doses and timing. Additional groups are recommended to receive these vaccines but these are not funded
	Meningococcal B	BEXSERO (IM)	
≥ 5 years with asplenia or hyposplenia	*Haemophilus influenzae* type b	ACT-HIB (IM or SC)	If incompletely vaccinated or not vaccinated in childhood
≥ 18 years	Zoster	SHINGRIX (IM)	Only immunocompromised people ≥ 18 years with certain medical conditions (see AIH[v])
Year 7	Diphtheria, tetanus, pertussis	BOOSTRIX **OR** ADACEL (IM)	
	Human papillomavirus	GARDASIL 9 (IM)	
Year 10	Meningococcal ACWY	NIMENRIX (IM) **OR** MenQuadfi (IM)	
Pregnant	Influenza	INFLUENZA	Influenza: Any trimester Pertussis: each pregnancy between 20-32 weeks
	Pertussis	BOOSTRIX **OR** ADACEL (IM)	
Aboriginal* people ≥ 50 years	Pneumococcal	PREVENAR 13 (IM) then PNEUMOVAX 23 (IM)	Prevenar 13: ≥ 50 years Pneumovax 23: 2-12 months later (see AIH[v]) Pneumovax 23: at least 5 years later
	Zoster	SHINGRIX (IM)	Shingrix: ≥ 50 years
≥ 65 years	Zoster	SHINGRIX (IM)	Shingrix: Funded for people ≥ 65 years
≥ 70 years	Pneumococcal	PREVENAR 13 (IM)	Pneumococcal funded for people ≥ 70 years
People with at risk conditions for IPD‡	See the online AIH[v] for conditions recommended to receive Prevenar 13 and Pneumovax 23		

The NSW Immunisation Schedule

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https://www.health.nsw.gov.au/immunisation/Publications/nsw-immunisation-schedule.pdf

Additional Commonwealth funded vaccines

Age	Funded antigens
People under 10 years	Polio, measles, mumps, rubella, varicella, hepatitis B, meningococcal ACWY, Haemophilus influenzae type b (no catch up>5), pneumococcal (no catch up >5), diphtheria, tetanus, pertussis, meningococcal B (Aboriginal and Torres Strait Islander children aged less than 2 years old)
People 10 to under 20 years	Polio, measles, mumps, rubella, varicella, hepatitis B, diphtheria, tetanus, pertussis
People 10 to 14 years	Meningococcal C
People 15 to 19 years	Meningococcal ACWY
People Under 26 years	Human papillomavirus
Refugees and humanitarian entrants aged 20 years and over	Polio, measles, mumps, rubella, varicella, hepatitis B, diphtheria, tetanus, pertussis, human papillomavirus (25 years and under)

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https://www.health.gov.au/topics/immunisation/immunisation-information-for-health-professionals/catch-up-immunisations

Additional NSW funded vaccines

- Hepatitis B

- Aboriginal people	- Men who have sex with men
- Household contacts	- Injecting drug users
- Immunocompromised	- Sex workers
- People with HIV or Hep C	- Clients of sexual health clinics

- MMR
  - Unvaccinated people born during or after 1966
  - Rubella seronegative post natal women
- Rabies/ABLV Post Exposure Prophylaxis – CONTACT PHU
- Current temporary arrangements for MPOX and JEV

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https://www.health.nsw.gov.au/immunisation/Pages/gp_catchup.aspx

NCIRS National Centre for Immunisation Research and Surveillance

Immunisation recommendations for non-Indigenous Australians without risk factors for vaccine preventable diseases

This table is a summary of Australian Immunisation Handbook vaccine recommendations for non-Indigenous Australians based on age and pregnancy status. Shaded cells represent vaccinations funded under the National Immunisation Program (NIP).[a] Parentheses indicate that these vaccines are recommended only for a particular population sub-group. Further detail is provided in the corresponding footnotes.

Disease/vaccine antigen	Abbrev.	Age									Pregnancy status	
		At birth	2 months[b]	4 months	6 months	12 months	18 months	4 years	Adolescents	Adults	During pregnancy	Post-partum
Hepatitis B	HepB	✓	✓*	✓*	✓*	(✓)[c]						
Diphtheria, tetanus, pertussis	DTPa/dTpa		✓*	✓*	✓*		✓	✓†	✓ 12–13 years[d]	✓ 65 years[d]	✓[e]	(✓)[e]
Poliomyelitis	IPV		✓*	✓*	✓*			✓†				
Haemophilus influenzae type b	Hib		✓*	✓*	✓*		✓					
Pneumococcal	13vPCV/ 15vPCV/ 20vPCV		✓	✓	Check for medical risk conditions	✓				✓ ≥70 years		
	23vPPV							Check for medical risk conditions				
Rotavirus			✓	✓								
Measles, mumps, rubella	MMR					✓	✓‡, f			(✓)[g]		(✓)[h]
Varicella	VV						✓‡	✓[h]		(✓)[h]		

http://ncirs.org.au/sites/default/files/2020-06/NCIRS%20Immunisation%20schedule%20for%20non-Indigenous%20people_1%20July%202020_Final.pdf

Disease/vaccine antigen	Abbrev.	Age								Pregnancy status	
		At birth	2 months[b]	4 months	6 months	12 months	18 months	4 years	Adolescents	Adults	During pregnancy	Post-partum
Meningococcal serogroup B	MenB		✔[l]					(Refer to footnote i)	✔ **15–19 years**[i]	(Refer to footnote i)		
Meningococcal serogroup ACWY	MenACWY		✔[l]			✔[l]		(Refer to footnote j)	✔ **15–19 years** NIP school program dose at 14–16 years[j]	(Refer to footnote j)		
Influenza (annual)	QIV				✔[k]				(Refer to footnote k)	✔ **≥65 years**[k]	✔	
Human papillomavirus	HPV								✔ **9–25 years** NIP school program dose at 14–16 years[l]			
Herpes zoster	HZ									✔ **≥65 years**[m]		

Key

DTPa = Diphtheria-tetanus-acellular pertussis vaccine (paediatric formulation)	IPV = Inactivated poliomyelitis vaccine	15vPCV = 15-valent pneumococcal conjugate vaccine
dTpa = Diphtheria-tetanus-acellular pertussis vaccine (reduced antigen formulation)	MenB = Meningococcal serogroup B vaccine	20vPCV = 20-valent pneumococcal conjugate vaccine
HepB = Hepatitis B vaccine	MenACWY = Meningococcal serogroup ACWY conjugate vaccine	23vPPV = 23-valent pneumococcal polysaccharide vaccine
Hib = *Haemophilus influenzae* type b vaccine	MMR = Measles-mumps-rubella vaccine	QIV = Quadrivalent seasonal influenza vaccine
HPV = Human papillomavirus vaccine	MMRV= Measles-mumps-rubella-varicella vaccine	VV = Varicella vaccine
HZ = Herpes zoster	13vPCV = 13-valent pneumococcal conjugate vaccine	

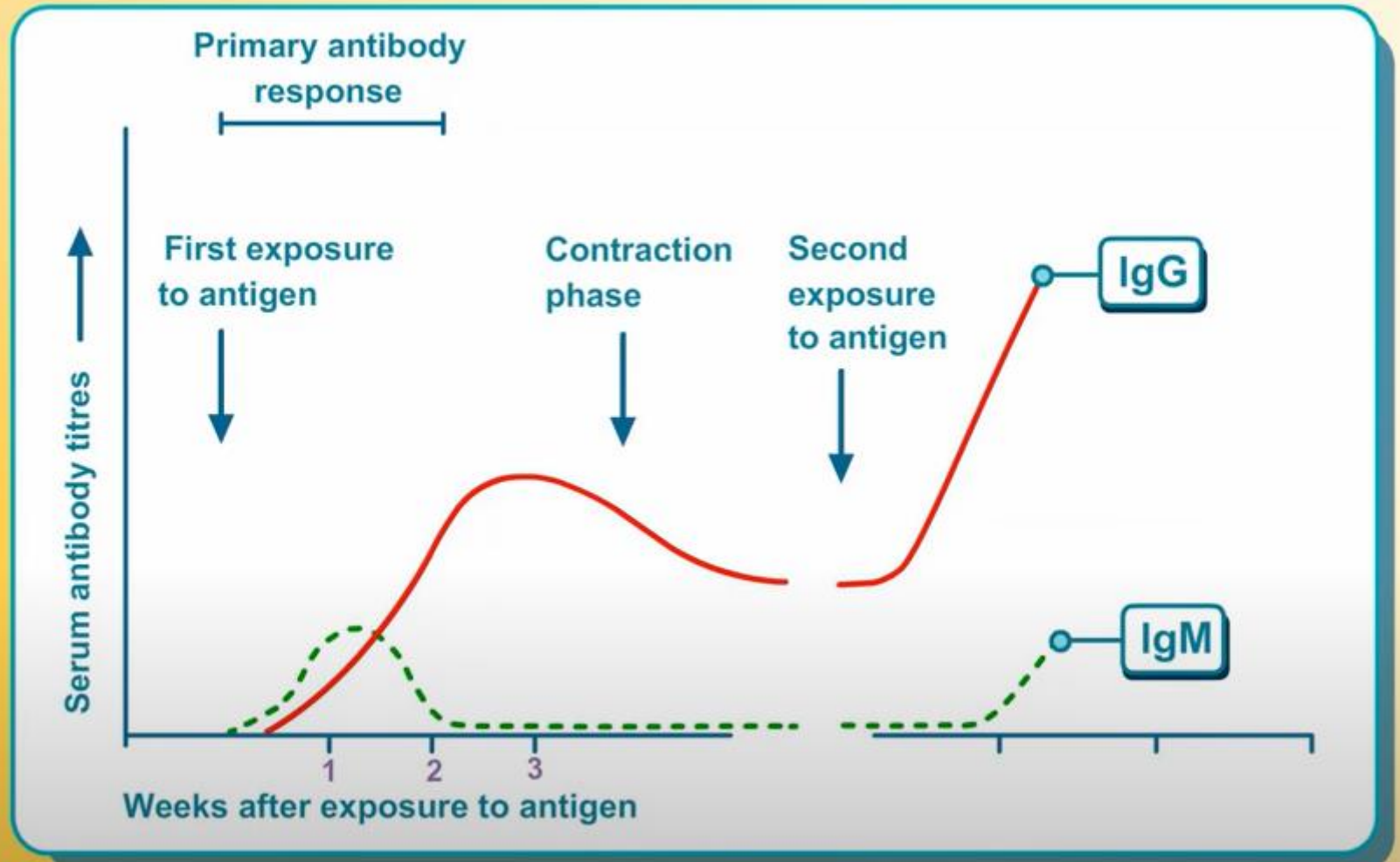
* HepB, DTPa, IPV and Hib are administered at 2, 4 and 6 months of age using a combination vaccine. The first dose can be given as early as 6 weeks of age; refer to footnote (b).

† DTPa and IPV are administered at 4 years of age using a combination vaccine.

‡ MMRV is administered at 18 months of age using a combination vaccine.

https://www.ncirs.org.au/sites/default/files/2021-08/NCIRS%20Immunisation%20schedule%20for%20Aboriginal%20and%20Torres%20Strait%20Islander%20people%20living%20in%20NSWVICACT%20TAS_1%20July%202020-Final.pdf

REVIEW OF BASIC PRINCIPLES



Herd immunity is good for our community

Disease spreads freely from contagious to susceptible people when no one is immunised.

If only some people are immunised disease will still spread although those immunised are spared.

Spread of disease is contained when most people are immunised as disease cannot spread from immunised people to susceptible people.

Contagious

Susceptible (not immunised)

Immunised

RACGP

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Q1

- Vaccines that are not funded are not necessary
  - TRUE
  - FALSE

Adults

HALO Principle

Health – medical condition/s that may put them at risk

Age – older people at higher risk of certain diseases, very young
Lifestyle – travel, aged care sexual activity

Occupation – type of employment

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Disease/ vaccine antigens	Abbrev.	Medical risk conditions														Other risks[b]		
		Asplenia/ hypo-splenia	Complement deficiency/ eculizumab treatment	People living with HIV	Haematopoietic stem cell transplant recipients	Solid organ transplant recipients	Other immuno-compromised	Severe renal impairment/ dialysis	Chronic liver disease	Diabetes, chronic cardiac, respiratory	Other Hepatitis B risk conditions	Other pneumococcal risk conditions	Trisomy 21 (Down syndrome)	Other influenza risk conditions	Developmental disability	**Behavioural**	**Occupational**	**Environmental**
Influenza (annual)	QIV/ aQIV	✓		✓	✓	✓[c]	✓[c]	✓	✓	✓[c]			✓	✓[c]		✓[c]	✓[c]	✓[c]
Pneumo-coccal	13vPCV/ 15vPCV/ 20vPCV	✓		✓	✓	✓[d]	✓[d]	✓[d]	✓	✓[d]		✓[d]	✓[d]			✓[d]		
	23vPPV	✓		✓	✓	✓[d]	✓[d]	✓[d]	✓	✓[d]		✓[d]	✓[d]			✓[d]		
Meningo-coccal	MenB	✓	✓	✓	✓											✓[e]	✓[e]	✓[e]
	MenACWY	✓	✓	✓	✓											✓[e]	✓[e]	✓[e]
Haemophilus influenzae type b	Hib	✓[f]			✓													
Hepatitis A	HepA								✓						✓	✓[g]	✓[g]	✓[g]
Hepatitis B	HepB			✓	✓	✓		✓	✓		✓[h]				✓	✓[h]	✓[h]	✓[h]
Human papilloma-virus	HPV			✓	✓	✓	✓[i]									✓[i]		
Measles, mumps, rubella	MMR																✓[j]	
Varicella (chickenpox)	VV																✓[k]	
Diphtheria, tetanus, pertussis	dTpa																✓[l]	
Japanese encephalitis	JE																✓[m]	✓[m]
Q fever																✓[n]	✓[n]	✓[n]
Rabies/ ABLV																	✓[o]	

Disease/ vaccine antigens	Abbrev.	Asplenia/ hypo-splenia	Complement deficiency/ eculizumab treatment	People living with HIV	Haematopoietic stem cell transplant recipients	Solid organ transplant recipients	Other immuno-compromised	Severe renal impairment/ dialysis	Chronic liver disease	Diabetes, chronic cardiac, respiratory	Other Hepatitis B risk conditions	Other pneumococcal risk conditions	Trisomy 21 (Down syndrome)	Other influenza risk conditions	Developmental disability	**Behavioural**	**Occupational**	**Environmental**
Zoster (shingles)				✓[p]	✓	✓	✓[p]											

https://ncirs.org.au/sites/default/files/2024-03/NCIRS_Immunisation%20schedule_People%20with%20risk%20factors%20for%20certain%20vaccine%20preventable%20diseases_January%202024.pdf

Vaccine Preventable Diseases

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Q2 Can RSV immunisation potentially decrease incidence of childhood asthma

- Yes
- No

Q: Is there an immunisation that could decrease the incidence of childhood asthma?

RSV Infection During Infancy Tied to Asthma Later

Emily Harris

JAMA. 2023;329(20):1731. doi:10.1001/jama.2023.7765

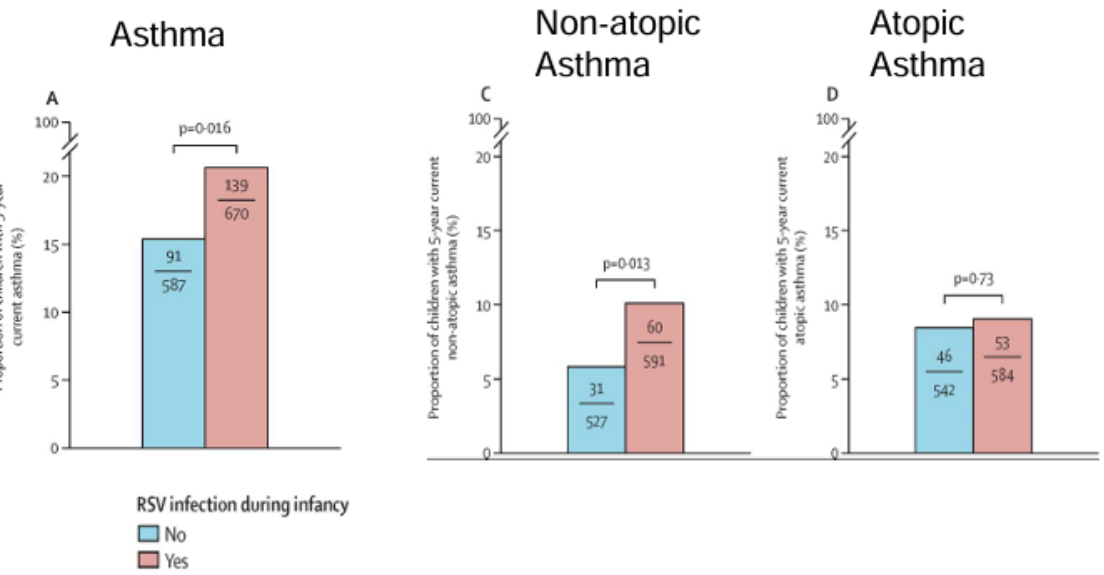
Healthy children who were not infected with respiratory syncytial virus (RSV) during their first year of life were 26% less likely to have asthma by age 5 years than those who had been infected, according to results from an observational study that included 1946 participants. The researchers calculated that preventing RSV infections during infancy could avoid 15% of asthma cases in 5-year-olds.

Moreover, a child's risk of developing asthma was linked to the severity of their RSV infection. Children with milder RSV infections had a lower risk of asthma at age 5 years than did those who had more severe RSV infections.

Full Text

Long term effects of RSV illness

Courtesy: Prof Nick Wood NCIRS

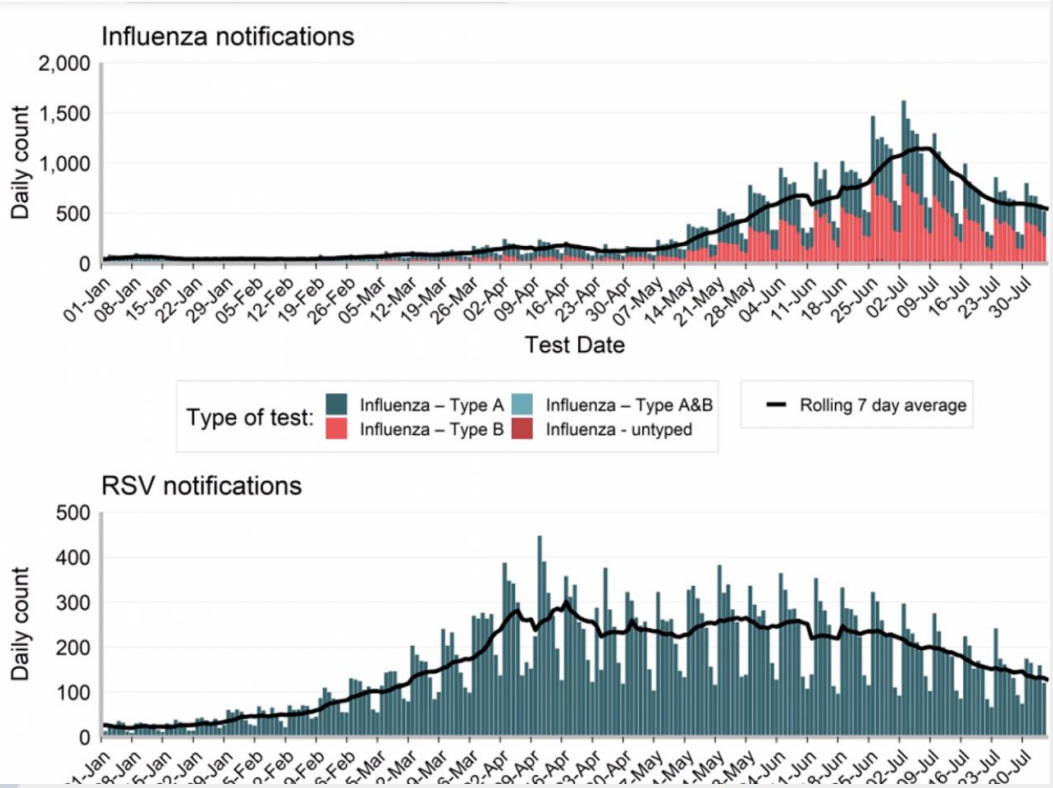


Other studies have also shown…

- Higher proportion of children requiring anti-asthma medication and higher admission rates for asthma in children who were in hospital for RSV < 2 years of age
- Less episodes of wheezing among children treated with Palivizumab.

NSW RSV data

NSW data



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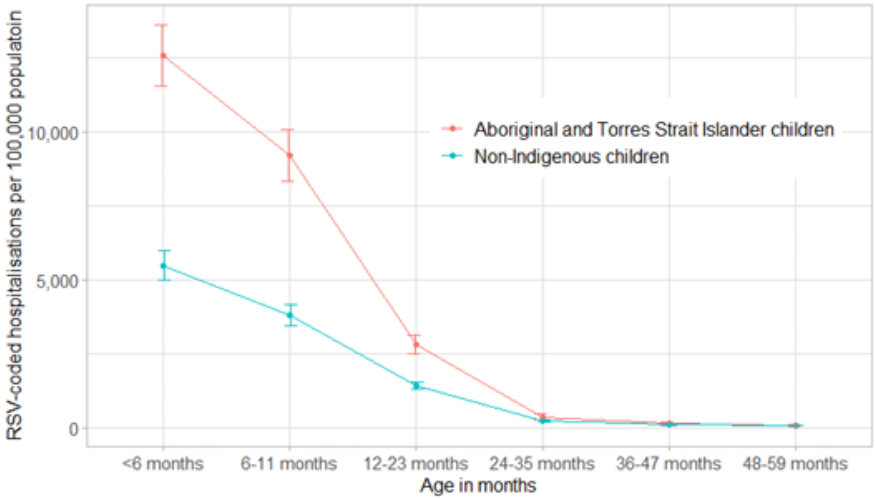
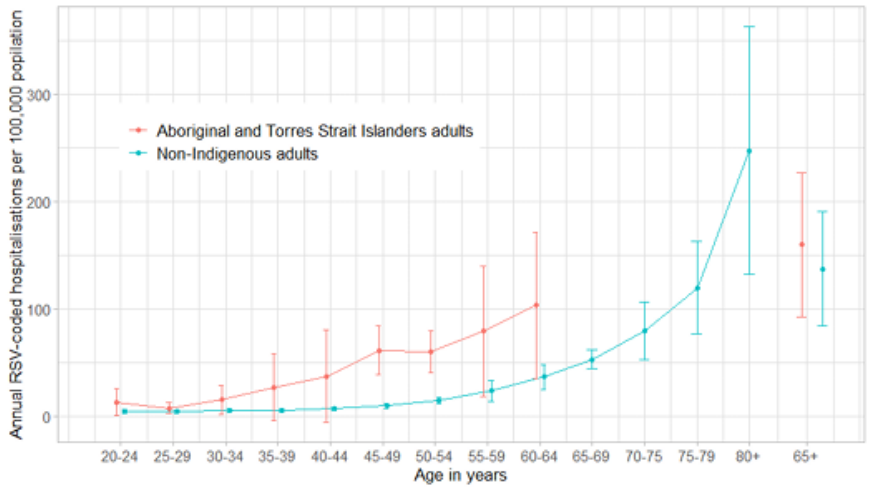
RSV Burden in Australia





- Note the difference in scale for two age groups.
- ~2% (1 in 50 children) hospitalised by 12 months of age (DOI: 10.1016/S2213-2600(22)00414-3)
- Up to 70-80% of hospitalised children < 24 months are otherwise healthy (DOI: 10.1542/peds.2013-0303)
- In older adults, those with comorbidities and First Nations have equivalent burden at younger age

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All of these immunisations are 60-80% effective in decreasing severe RSV in their target population

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- A single dose of RSV vaccine is recommended for the following groups
  - All adults aged ≥75 years
  - Aboriginal and/or Torres Strait Islander peoples aged 60 to 74 years
  - Adults aged 60 to 74 years with medical conditions that increase their risk of severe disease due to RSV
  - All other adults aged 60 to 74 years can consider RSV vaccination.

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Can we expect RSV vaccinations on the NIP?

- The application to the PBAC for **AREXVY** was for it to be added to the National Immunisation Program for patients 60 years old and above

- **Nirsevimab**, a General Schedule Restricted Benefit listing was requested for neonates and infants born during or entering their first RSV season, and children up to 24 months of age who remain vulnerable to severe RSV disease through their second RSV season.

- The Pharmaceutical Benefits Advisory Committee (PBAC) has recommended adding the RSV vaccine **ABRYSVO** to the National Immunisation Program (NIP) for pregnant women.

‘Disappointing’: PBAC rejects national RSV vaccine push

Free immunisations for infants and the elderly will not be rolled out nationwide after the committee knocked back two vaccine applications.

Zach was just 12 days old when he was rushed to the emergency department with RSV. (Image: supplied)

PBAC recommends subsidised RSV vaccine for pregnant women

The committee has backed Abrysvo being added to the NIP, but GPs have warned additional supply must be guaranteed to ensure a successful rollout.

So far this year, 99,642 cases have been reported with more than half of those in infants aged 0–4 years old.

Nirsevimab is currently offered in NSW to:

- All premature infants (less than 37 weeks gestation at birth) born after 31 October 2023
- All Aboriginal and Torres Strait Islander infants born after 31 October 2023
- Other vulnerable infants including:
  - chronic neonatal lung disease (neonates requiring home oxygen/other respiratory support at 36 weeks or older corrected age), less than 12 months of age
  - infants with haemodynamically significant congenital heart disease, less than 24 months of age
  - other**:

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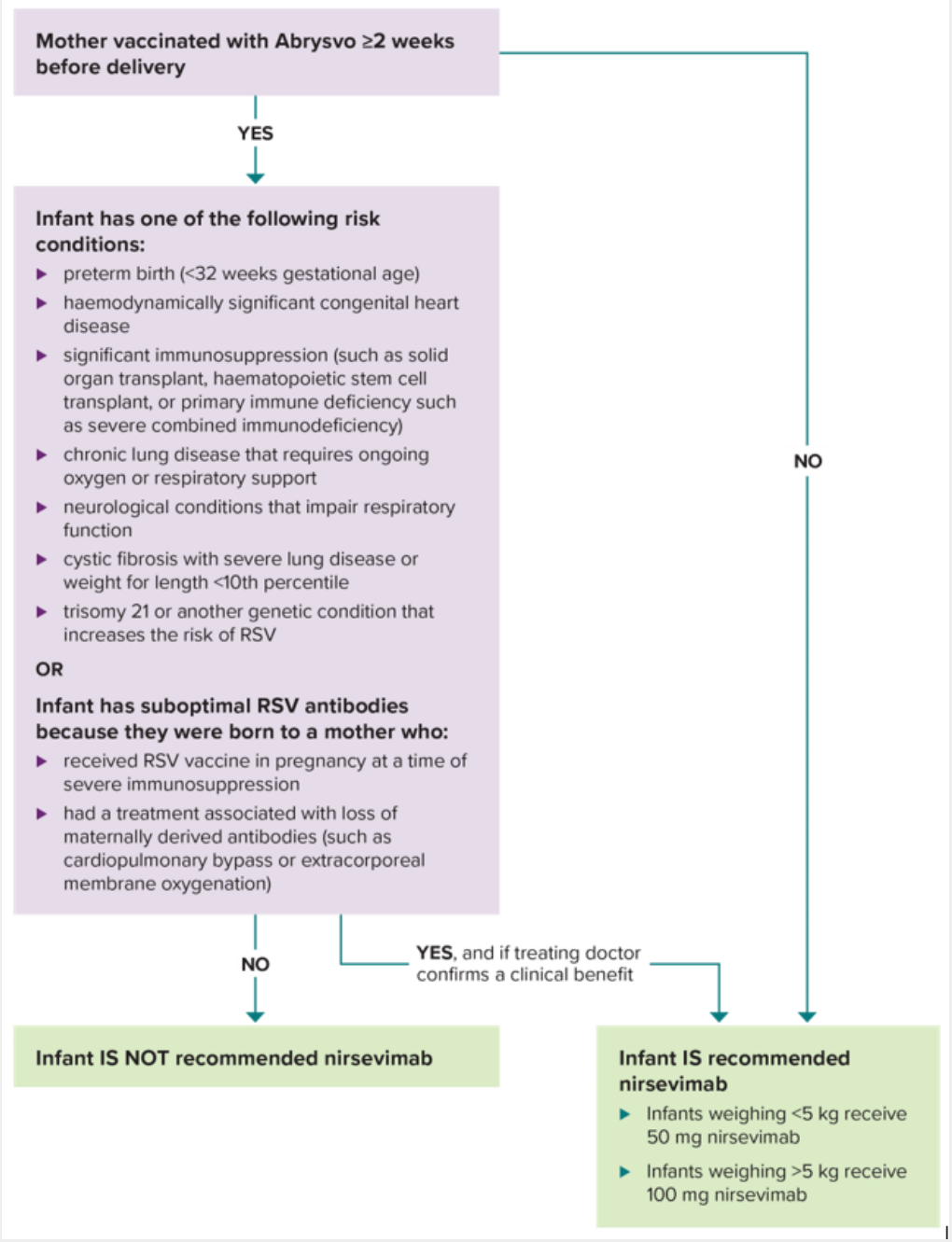
Flowchart to guide which infants should receive nirsevimab in their 1st RSV season



https://immunisationhandbook.health.gov.au/contents/vaccine-preventable-diseases/respiratory-syncytial-virus-rsv

Q3 What is subclinical immunity?

- A. Community-level protection through immunologic responses against the virus from low grade, widespread transmission of the virus by asymptomatic carriers contributing to herd immunity
- B. The occurrence of the specific vaccine-preventable disease in a person who is appropriately and fully vaccinated.

- **The majority of those who develop subclinical infection do not develop the disease.**

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COVID-19

- First case in Australia Jan 2020
- **Australia to date**:

  > 11.8 million cases

  > 25 thousand deaths

  ~ 0.21% crude case fatality rate (was ~2.2% prior to vaccines)

- **Globally to date**:

  > 775,090,000 cases

  > 7,058,000 deaths

  ~ 0.9% crude case fatality rate (was ~2.1% prior vaccines)

  (still as high as 4.9% in some countries)

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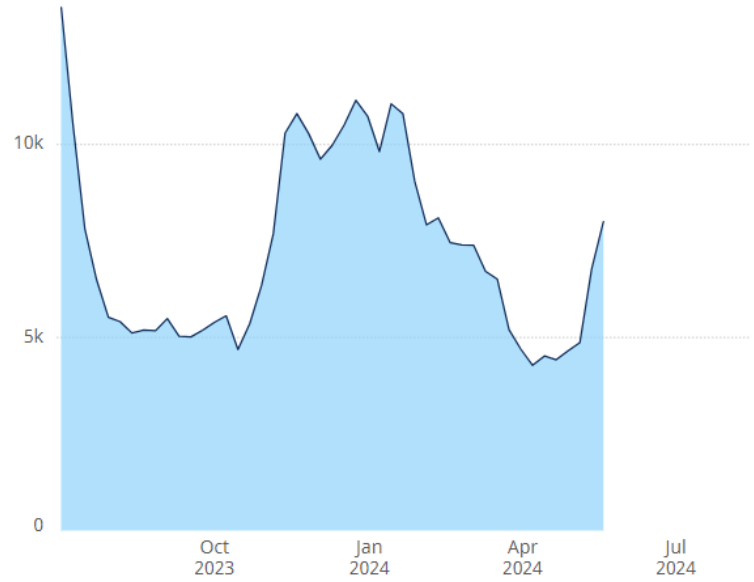
Recent COVID-19 cases reported to WHO (weekly)

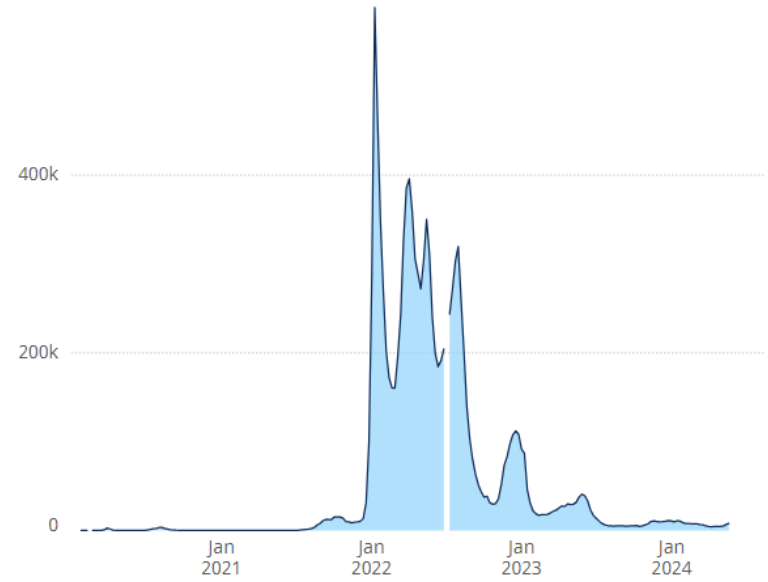
Australia, July 2023 - present



Source: World Health Organization

Total COVID-19 cases reported to WHO (weekly)

Australia, January 2020 - present



Source: World Health Organization

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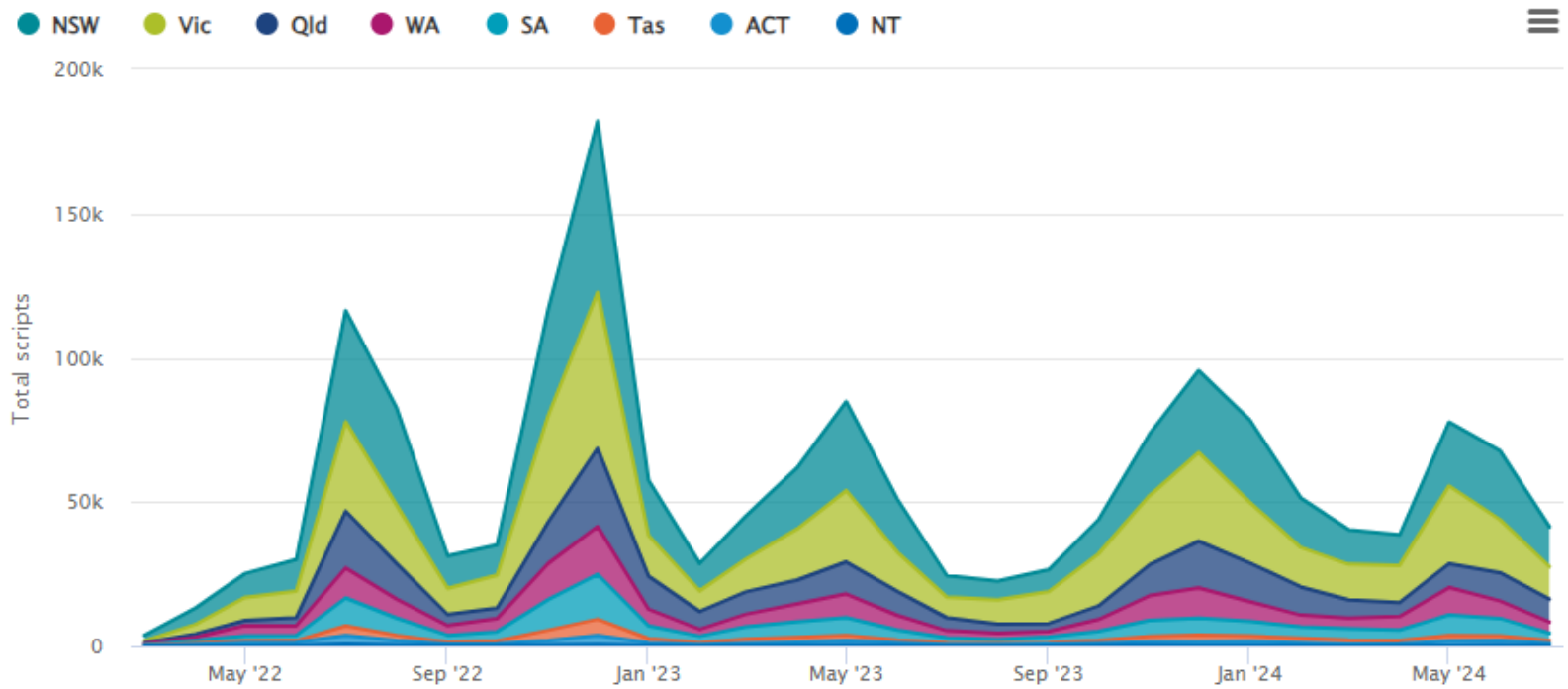
Total monthly PBS scripts for oral COVID-19 treatment, by jurisdiction



Rationale for change in vaccination recommendations?

- **Older people and people with certain medical conditions – including infants and children – are at the highest risk of severe disease or death from COVID-19.**

COVID-19 vaccine recommendations are based on age, time since last dose and presence of certain medical conditions.

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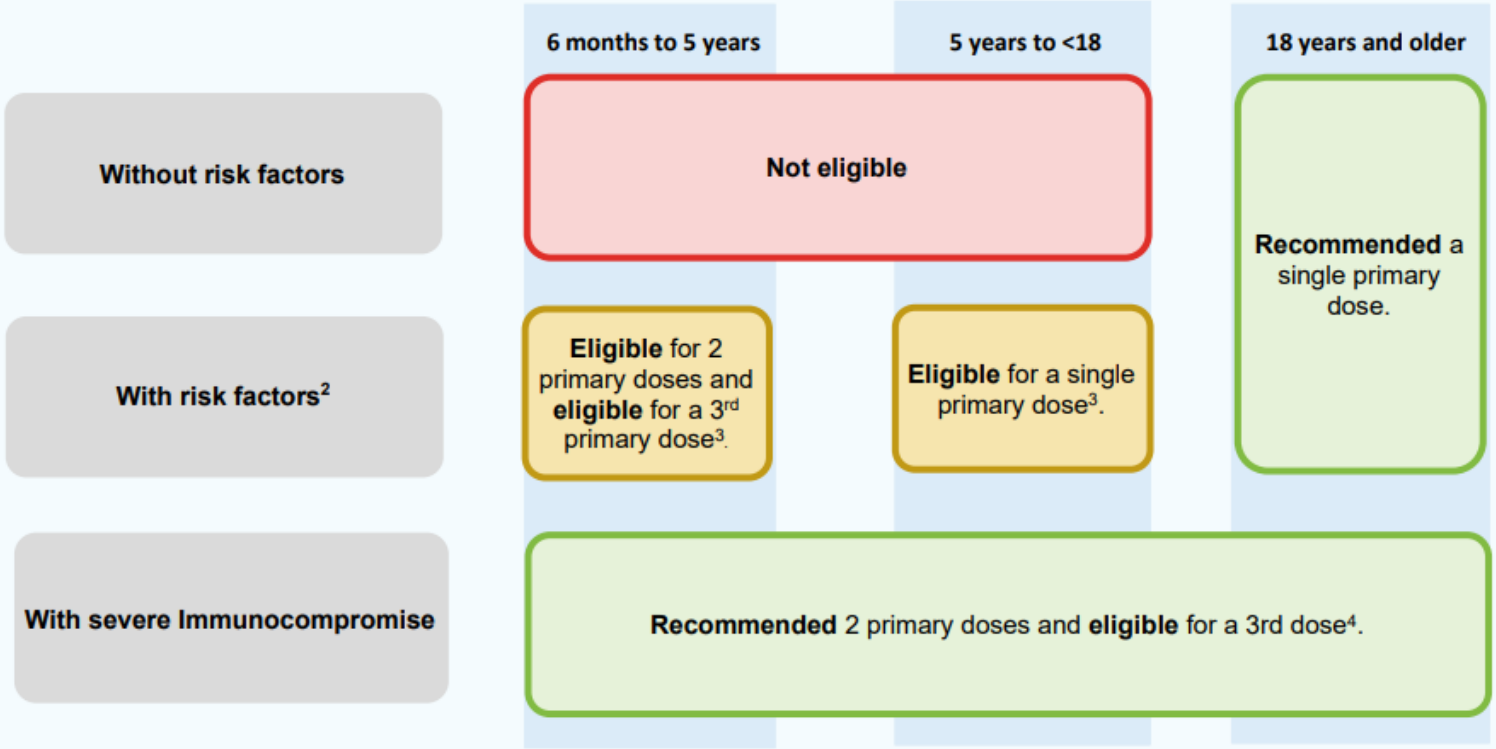
Recommended COVID-19 vaccine doses[1]

Primary course recommendations

COVID-19 VACCINATION



Notes:

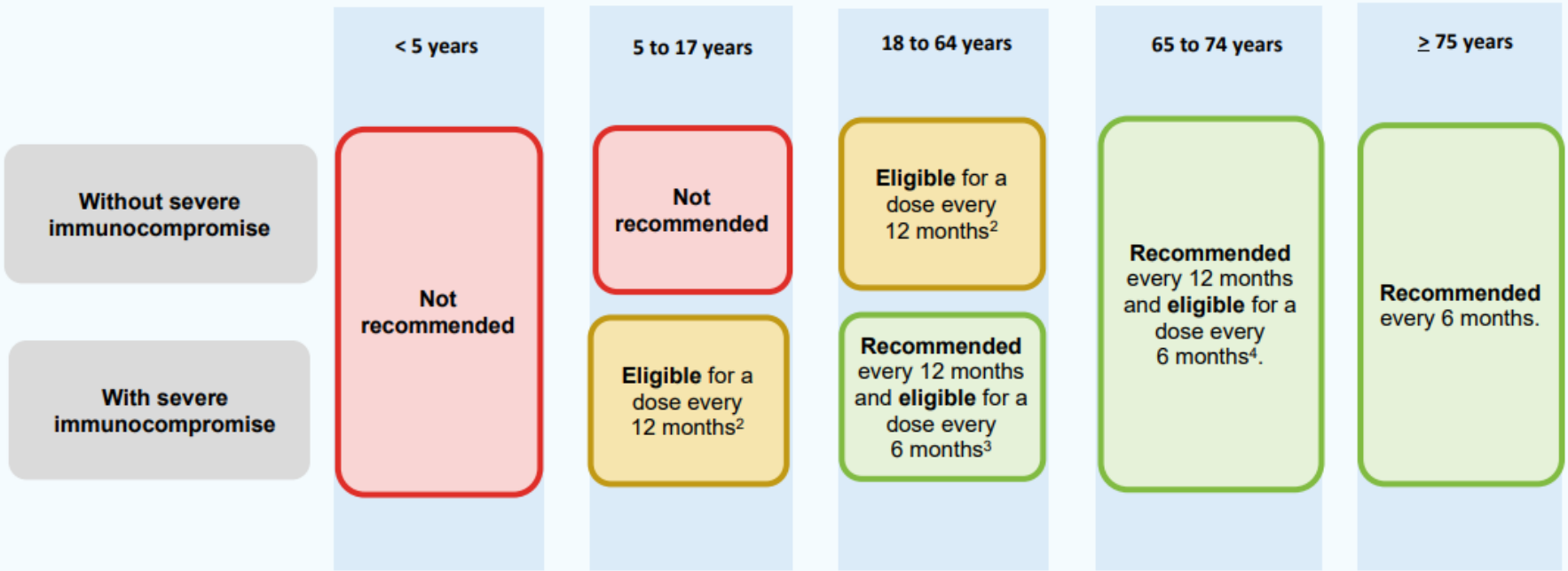
1. Monovalent Omicron XBB.1.5 vaccines are preferred; for ages in which a monovalent XBB.1.5-containing vaccine is not available, use other vaccines approved for that age group.
2. Includes those with conditions that increases the risk of severe COVID-19 illness (refer to Australian Immunisation Handbook).
3. Consider dose based on an individual risk benefit assessment with an immunisation provider.
4. People with severe immunocompromise, who are over 6 months of age, are recommended 2 primary doses and are eligible for a 3rd primary dose based on an individual risk-benefit assessment. Refer to the Australian Immunisation Handbook for further information.

Information current as of May 2024.

Recommended COVID-19 vaccine doses[1]

COVID-19 Booster dose recommendation

COVID-19 VACCINATION



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Q4

- A 76 year old female who's last Covid vaccine was 5 months ago is requesting a booster prior to a 1 month cruise around Europe. She
  - A. Can't have the vaccine now as it is less than 6 months from her last dose.
  - B Can have the vaccine after individual risk assessment as she will be in a cruise ship which is known to have transmissions of Covid-19

Recommendations primary dose of Covid vaccines

- All adults aged 18 years and over are recommended a single primary dose.
- Children and adolescents aged under 18 years are not routinely recommended a primary dose
- People with severe immunocompromise conditions, aged 6 months of age or older are recommended 2 primary doses
  - and are eligible for a 3rd primary dose based on an individual risk-benefit assessment.
  - Recommended interval is 8 weeks between doses
  - Minimum interval of 4 weeks in exceptional circumstances

https://www.health.gov.au/resources/publications/atagi-recommendations-on-the-use-of-a-third-primary-dose-of-covid-19-vaccine-in-individuals-who-are-severely-immunocompromised

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Can COVID-19 vaccines be given to people who have had COVID-19 in the past?

- COVID-19 testing rates have dropped, and some people may not know if they have had a recent COVID-19 infection.
- There is little benefit from having a COVID-19 vaccine dose in the first few months after a confirmed infection - having a vaccine dose after a recent COVID-19 infection is not harmful.
  - It can be helpful to think of a confirmed infection as a ‘dose of protection’ – just like a vaccine dose.
- The timing of further doses following infection would be based on current recommendations for your age and your medical background.

UPDATED

COVID-19 VACCINATION

As of 1 August 2024

	Omicron XBB.1.5 vaccines – PREFERRED[1]				Original/Omicron bivalent vaccines	Original (ancestral) vaccines
	Pfizer (COMIRNATY) Omicron XBB.1.5 10 mcg/0.3 mL suspension for injection single-dose vial	**Pfizer (COMIRNATY) Omicron XBB.1.5** 30 mcg/0.3 mL suspension for injection multi-dose vial	**Moderna (SPIKEVAX) Omicron XBB.1.5** 50 mcg/0.5 mL suspension for injection pre-filled syringe	**Pfizer (COMIRNATY) Omicron XBB.1.5** 3 mcg/0.2 mL concentrated suspension for injection multi-dose vial	**Pfizer (COMIRNATY) Bivalent BA.4-5** 15/15 mcg/0.3 mL suspension for injection multi-dose vial	**Pfizer (COMIRNATY)** 3 mcg/0.2 mL concentrated suspension for injection multi-dose vial
CVAS naming convention	Pfizer (XBB.1.5) 5-11 years (Light Blue)	Pfizer (XBB.1.5) 12 years+ (Grey)	Moderna (XBB.1.5) 12 years+ (PFS)	Pfizer (XBB.1.5) 6 months-4 years (Maroon)	Pfizer Bivalent (BA.4-5) 12 years+ (Grey)	Pfizer 6 months-4 years (Maroon)
Vaccine type	mRNA (nucleic acid)	mRNA (nucleic acid)	mRNA (nucleic acid)	mRNA (nucleic acid)	mRNA (nucleic acid)	mRNA (nucleic acid)
Approved age	5 to 11 years	12 years and older	12 years and older	6 months to 4 years	12 years and older	6 months to 4 years
Dose volume	0.3 mL	0.3 mL	0.5 mL	0.2 mL	0.3 mL	0.2 mL
Doses per vial	1	6	1	10	6	10
Dilution required	No	No	No	Yes (2.2 mL)	No	Yes (2.2 mL)
ULT freezer storage time[2]	24 months (shelf life) at -90°C to -60°C	24 months (shelf life) at -90°C to -60°C	DO NOT STORE below -50°C	24 months (shelf life) at -90°C to -60°C	24 months (shelf life) at -90°C to -60°C	24 months (shelf life) at -90°C to -60°C
Freezer storage time (unopened)[2]	DO NOT STORE at -25°C to -15°C	DO NOT STORE at -25°C to -15°C	9 months (shelf life) at -50°C to -15°C	DO NOT STORE at -25°C to -15°C	DO NOT STORE at -25°C to -15°C	DO NOT STORE at -25°C to -15°C
Refrigeration storage time (unopened)[2]	70 days (+2°C to +8°C) within the 24-month shelf life	70 days (+2°C to +8°C) within the 24-month shelf life	30 days (+2°C to +8°C) within the 9-month shelf life	70 days (+2°C to +8°C) within the 24-month shelf life	70 days (+2°C to +8°C) within the 24-month shelf life	70 days (+2°C to +8°C) within the 24-month shelf life
Room temperature storage time (unopened)[2]	24 hours pre- and post-initial puncture (up to +30°C)	24 hours pre- and post-initial puncture (up to +30°C)	24 hours (up to +25°C)	24 hours pre- and post-dilution (up to +30°C)	24 hours pre- and post-initial puncture (up to +30°C)	24 hours pre- and post-dilution (up to +30°C)
Storing opened vials[2]	NA	6 hours (up to +30°C)	NA	6 hours (up to +30°C)	6 hours (up to +30°C)	6 hours (up to +30°C)
Storing pre-drawn doses[2]	1 hour (up to +30°C) or 6 hours (+2°C to +8°C)	1 hour (up to +30°C) or 6 hours (+2°C to +8°C)	NA	1 hour (up to +30°C) or 6 hours (+2°C to +8°C)	1 hour (up to +30°C) or 6 hours (+2°C to +8°C)	1 hour (up to +30°C) or 6 hours (+2°C to +8°C)
Transport limitations	80 hours thawed	80 hours thawed	Nil	80 hours thawed	80 hours thawed	80 hours thawed
TGA Product Information (PI) and Consumer Medicine Information (CMI)	PI CMI	PI CMI	PI CMI	PI CMI	PI CMI	PI CMI

https://www.health.gov.au/resources/publications/covid-19-vaccines-in-australia-a3-poster?language=en

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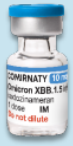
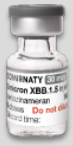
Northern Sydney Local Health District

UPDATED

COVID-19 VACCINATION

As of 1 August 2024

	Omicron XBB.1.5 vaccines – PREFERRED[1]			Original/Omicron bivalent vaccines	Original (ancestral) vaccines
	Pfizer (COMIRNATY) Omicron XBB.1.5 10 mcg/0.3 mL suspension for injection single-dose vial 	**Pfizer (COMIRNATY) Omicron XBB.1.5** 30 mcg/0.3 mL suspension for injection multi-dose vial 		**Pfizer (COMIRNATY) Omicron XBB.1.5** 3 mcg/0.2 mL concentrated suspension for injection multi-dose vial 	
CVAS naming convention	Pfizer (XBB.1.5) 5-11 years (Light Blue)	Pfizer (XBB.1.5) 12 years+ (Grey)		Pfizer (XBB.1.5) 6 months-4 years (Maroon)	
Vaccine type	mRNA (nucleic acid)	mRNA (nucleic acid)		mRNA (nucleic acid)	
Approved age	5 to 11 years	12 years and older		6 months to 4 years	
Dose volume	0.3 mL	0.3 mL		0.2 mL	
Doses per vial	1	6		10	
Dilution required	No	No		Yes (2.2 mL)	
ULT freezer storage time[2]	24 months (shelf life) at -90°C to -60°C	24 months (shelf life) at -90°C to -60°C		24 months (shelf life) at -90°C to -60°C	
Freezer storage time (unopened)[2]	DO NOT STORE at -25°C to -15°C	DO NOT STORE at -25°C to -15°C		DO NOT STORE at -25°C to -15°C	
Refrigeration storage time (unopened)[2]	70 days (+2°C to +8°C) within the 24-month shelf life	70 days (+2°C to +8°C) within the 24-month shelf life		70 days (+2°C to +8°C) within the 24-month shelf life	
Room temperature storage time (unopened)[2]	24 hours pre- and post-initial puncture (up to +30°C)	24 hours pre- and post-initial puncture (up to +30°C)		24 hours pre- and post-dilution (up to +30°C)	
Storing opened vials[2]	NA	6 hours (up to +30°C)		6 hours (up to +30°C)	
Storing pre-drawn doses[2]	1 hour (up to +30°C) or 6 hours (+2°C to +8°C)	1 hour (up to +30°C) or 6 hours (+2°C to +8°C)		1 hour (up to +30°C) or 6 hours (+2°C to +8°C)	
Transport limitations	80 hours thawed	80 hours thawed		80 hours thawed	
TGA Product Information (PI) and Consumer Medicine Information (CMI)	PI CMI	PI CMI		PI CMI	

https://www.health.gov.au/resources/publications/covid-19-vaccines-in-australia-a3-poster?language=en

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Myo/Pericarditis post Covid Vaccination

*higher risk of myocarditis after Moderna compared with Pfizer
*higher rate of myocarditis and/or pericarditis was observed in people aged 12 years and older when the interval between dose one and dose two was 30 days or less

Table 1: The range of reported rates of **myocarditis** per million doses for each dose of COVID-19 vaccines in high-risk age groups.

Vaccine Brand	Dose 1	Dose 2	Dose 3
Males aged 12 to 17 years			
Pfizer[9-12]	7	71* to 136	11-61
Moderna[11]	Not Available	237	Not Available
Females aged 12 to 17 years			
Pfizer[9,11-14]	1	2-28	0-0.7
Moderna[9,12,13,15]	0	0 to 28*	Not Available
Males aged 18 to 29 years #			
Pfizer[9,11,13,14,16-19]	1 to 26	25 to 94	4.1 to 30
Moderna[9,11,13,15-19]	10 to 57	56 to 300	8.7 to 21
Females aged 18 to 29 years #			
Pfizer[9,12-14]	0-8	4-27	0.6-2.2
Moderna[9,12,13,15]	0-1	7-69	0.6-2.2
Females and males aged 18 to 29 years			
Pfizer[20]	23	29	17
Moderna[20]	60	68	23
AstraZeneca[20]	10	16	Not available

*Some studies report separate rates for adolescents age 12-15 and 16-17 years.[10,12]

#Some studies included male adults aged 18 to 24 years only.[9,12-15,17] and some studies were combined for Pfizer and Moderna[12]

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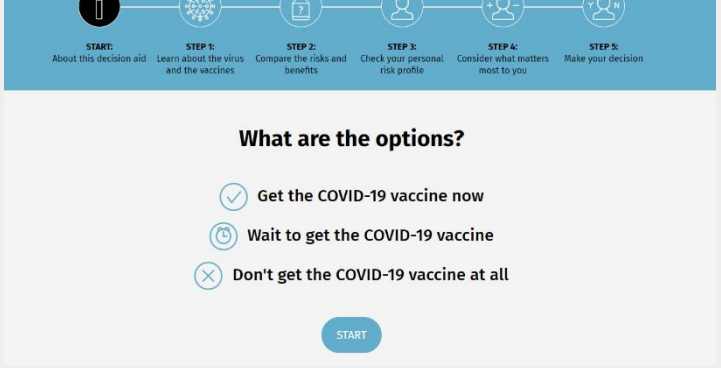
Decision aids



- **Decision aid (18+ years): Should I get the COVID-19 vaccine? (NCIRS)**
  - https://ncirs.org.au/covid-19-decision-aid-for-adults
- **Shared Decision making guide for people with immune compromise**
  - https://www.health.gov.au/sites/default/files/2024-01/atagi-covid-19-vaccination-shared-decision-making-guide-for-people-with-immunocompromise.pdf
- **Guidance on Myocarditis and Pericarditis after COVID-19 vaccines**
  - https://www.health.gov.au/sites/default/files/2024-01/covid-19-vaccination-guidance-on-myocarditis-and-pericarditis-after-covid-19-vaccines.pdf
- **Vaccination decision guide for women who are pregnant, breastfeeding or planning pregnancy**
  - **https://www.health.gov.au/sites/default/files/2024-01/covid-19-vaccination-shared-decision-making-guide-for-women-who-are-pregnant-breastfeeding-or-planning-pregnancy.pdf**

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M-pox

- Viral zoonosis (spread from animals to humans)
- Belongs to the Orthopoxvirus genus (also causes the virus responsible for smallpox)
- Transmission requires close contact with respiratory secretions, skin lesions of an infected person, or contaminated objects.
- Symptoms: fever, headache, backache, muscle aches, fatigue and lymphadenopathy.
- Household contacts at highest risk.
- Incubation period usually 7-14 days

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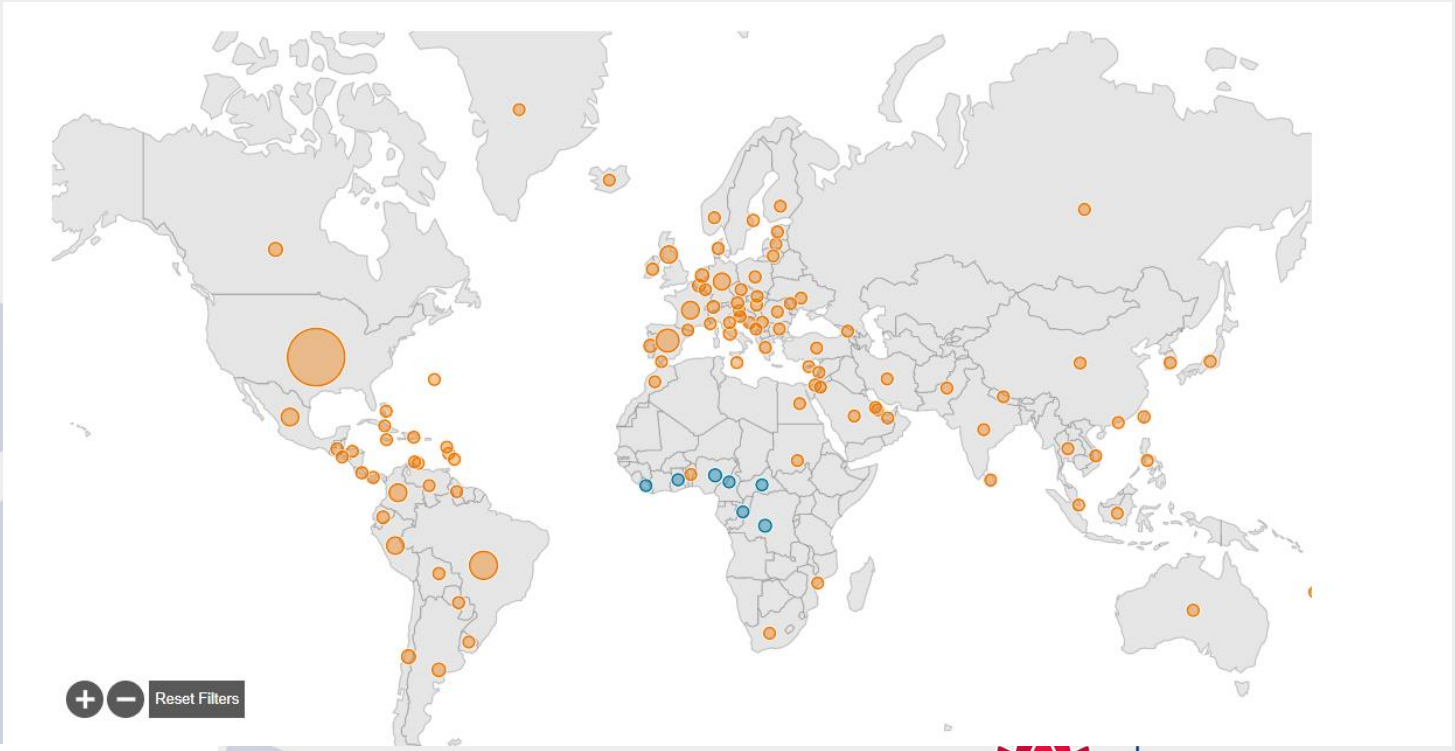
https://www.health.nsw.gov.au/Infectious/factsheets/Pages/monkeypox.aspx

MPOX

As of 27/08/2024

- 102,997 cases and 223 deaths worldwide
- Largest number of cases in the Americas



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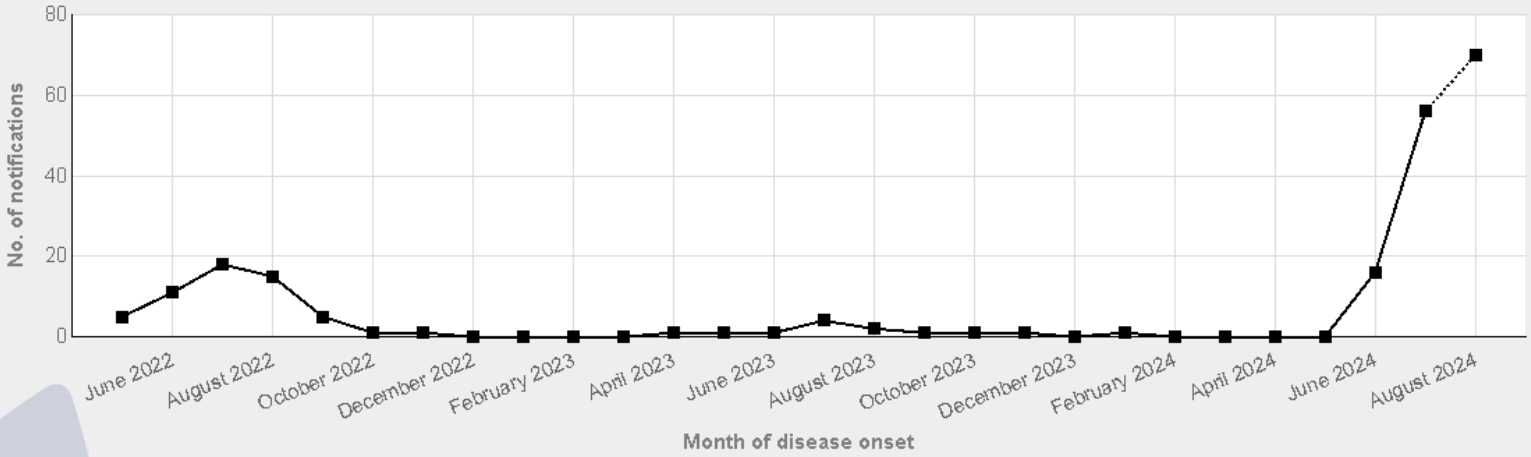
https://worldhealthorg.shinyapps.io/mpx_global/

MPOX in NSW



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2022					5	11	18	15	5	1	1	0	56
2023	0	0	0	1	1	1	4	2	1	1	1	0	12
2024	1	0	0	0	0	16	56	70					143

Note: Data is incomplete for the current period

Based on onset: the earlier of patient-reported onset, specimen, or notification date.

Became notifiable from 20 May 2022

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MPOX case profile

Case profiles

As of 31 Jul 2024

	Reported values		Unknown or Missing Value
	Yes	No	
Men who have sex with men	30,559 (85.8%)	5,039 (14.2%)	58,112
Persons living with HIV	18,648 (51.9%)	17,291 (48.1%)	57,771
Health worker	1,316 (4.1%)	31,090 (95.9%)	61,304
Travel History	4,110 (15.3%)	22,769 (84.7%)	66,831
Sexual Transmission	19,139 (83.8%)	3,704 (16.2%)	70,867
Hospitalized[1]	6,074 (11.2%)	48,283 (88.8%)	39,353
ICU	48 (0.3%)	15,157 (99.7%)	78,505
Died	145 (0.3%)	55,835 (99.7%)	37,730

[1] May be hospitalized for isolation or medical treatment

Mpox vaccine

- Two types vaccines registered for use in Australia for prevention of monkeypox:
  - ACAM2000™– live-attenuated vaccine
  - JYNNEOS® – non-replicating vaccine
- ACAM2000 can be used if deemed a suitable alternative after risk-benefit assessment.
- Not currently recommended booster doses for those who have completed a 2-dose schedule >2 years ago.
- Booster dose recommended if previous smallpox vaccine given ≥ ten years prior.

https://www.health.gov.au/sites/default/files/2022-12/atagi-clinical-guidance-on-vaccination-against-monkeypox.pdf

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- Resurgence of cases in Australia in 2024
- Most cases have been acquired in Australia and a small number have been in people who were fully vaccinated.
- Primary Preventive Vaccination (PPV) recommended for:

  • sexually active gay, bisexual or other men who have sex with men (GBMSM) and their partners

  • sex workers, and their partners

  • people living with HIV, if at risk of mpox exposure

  • laboratory personnel working with orthopoxviruses

  • healthcare workers at risk of exposure to patients with mpox

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Who is at risk?

Vaccines are currently **prioritised** to:

1. Post exposure prophylaxis (PEP) for high-risk close contacts of a known case.
2. Men who have sex with men (MSM) at increased risk of infection.
3. Sex workers, particularly those whose clients are in high-risk categories.
4. Anyone in high-risk categories who is planning travel to a country experiencing a significant outbreak (vaccination recommended 4-6 weeks prior to departure).
5. Anyone at greater risk of a poor clinical outcome from monkeypox infection, such as individuals with immunocompromise.
6. Immunisation providers who are administering the ACAM2000™ smallpox vaccine.

https://www.health.gov.au/sites/default/files/2022-12/atagi-clinical-guidance-on-vaccination-against-monkeypox.pdf

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Jynneos

- Non-replicating vaccine
- Subcutaneous or intradermal
- 2 doses, 28 days interval
- ≥18 years (off label paediatric use)
- Unestablished risk of myocarditis or pericarditis *TIMING WITH COVID VACCINES
- Is now included in Authority for Nurse Immunisers

ACAM2000

- live-attenuated vaccine
- Percutaneous (scarification)
- Single dose
- ≥18 years; cannot be used in immune-compromised

JYNNEOS® (administered via either the subcutaneous or intradermal routes) and ACAM2000™ are both suitable vaccines for a booster.

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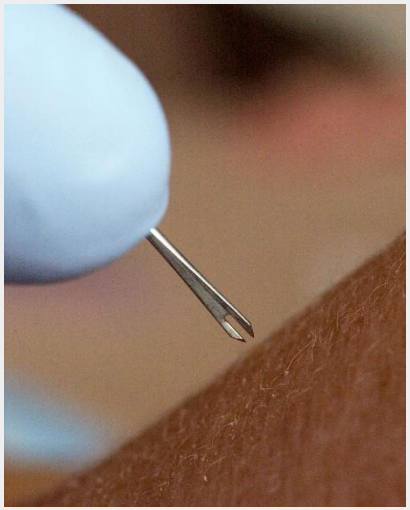
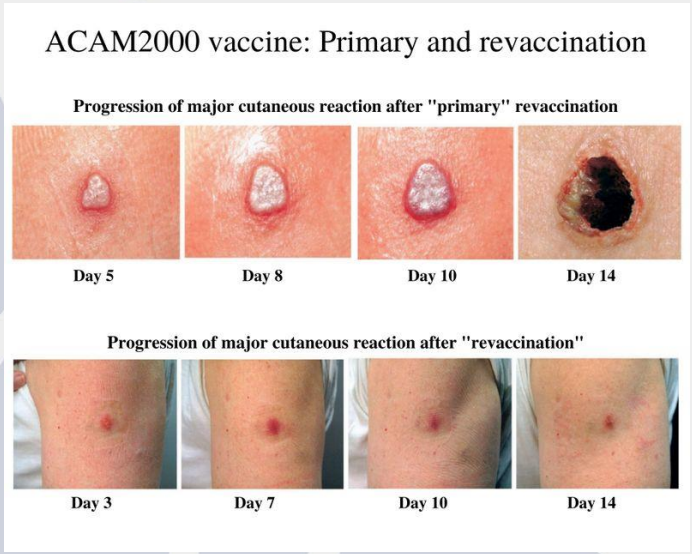
Mpox vaccine





- ACAM2000™ is a live-attenuated vaccine that is replication-competent.
- Specialised training and methods are required to administer by percutaneous scarification using a bifurcated needle, as a single dose.
- Post-vaccination wound care is required to protect vulnerable contacts and prevent self-inoculation from the vaccination site.
- Cannot be used in severely immunocompromised people, people with active atopic dermatitis, in pregnancy or in infants under 12 months of age. It is associated with rare but serious adverse events..

https://www.health.gov.au/sites/default/files/documents/2022/08/atagi-clinical-guidance-on-vaccination-against-monkeypox.pdf

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Mpox vaccines: Frequently asked questions

NCIRS fact sheets, FAQs and other resources

- Australian Immunisation Handbook
- COVID-19 vaccines
- Immunisation coverage data and reports
- Education and training

Mpox (formerly known as monkeypox) has been declared a Communicable Disease Incident of National Significance in Australia. This page provides answers to some of the frequently asked questions about mpox disease and vaccines. We will update this page as new information becomes available. **Last updated 20 December 2022.** The ATAGI clinical guidance on vaccination against Monkeypox (version 4.0, 12 December 2022) is available on the Australian Government Department of Health and Aged Care website .

For general public

The Australian Government Department of Health and Aged Care Monkeypox (MPX) vaccines page has general information on the mpox vaccines available in Australia, and how they can be accessed.

What is mpox?

https://www.health.gov.au/resources/publications/monkeypox-mpx-information-on-jynneosr-vaccine

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Eligible individuals can book for a vaccination appointment:

List of participating clinics in NSW

Sydney - Metro

City/suburb	Vaccination centre/clinic	For booking support
Camperdown	Call **RPA Sexual Health Clinic,** 16 Marsden Street, Camperdown to make a booking	(02) 9515 1200
Darlinghurst	Call **Kirketon Road Centre,** above the Darlinghurst Fire Station, Victoria Street (entrance), Darlinghurst to make a booking	(02) 9360 2766
Kogarah	Call **Short Street Centre Sexual Health Clinic,** St George Hospital Ground Floor, Prichard Wing Short Street, Kogarah to make a booking	(02) 9113 2742
Kingswood	Call **Nepean Sexual Health Clinic** to make a booking	(02) 4734 2507
Liverpool	Call **Liverpool Sexual Health Clinic,** 13 Elizabeth Street, Liverpool to make a booking	(02) 9827 8022
Parramatta	Call **Western Sydney Sexual Health Centre, Parramatta Health Service,** 162 Marsden Street, Parramatta to make a booking	(02) 9843 3124
Surry Hills	Call **The Albion Centre,** 150-154 Albion Street, Surry Hills to make a booking	(02) 9332 9600
St Leonards	Call **Clinic 16, Royal North Shore Community Health Centre**, Level 5, 2C Herbert Street to make a booking	(02) 9462 9500
Sydney CBD	Call **Sydney Sexual Health Clinic,** Level 3, Nightingale Wing, Sydney Eye Hospital, 8 Macquarie Street,	(02) 9382 7440

https://www.health.nsw.gov.au/mpox-clinics

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Q5

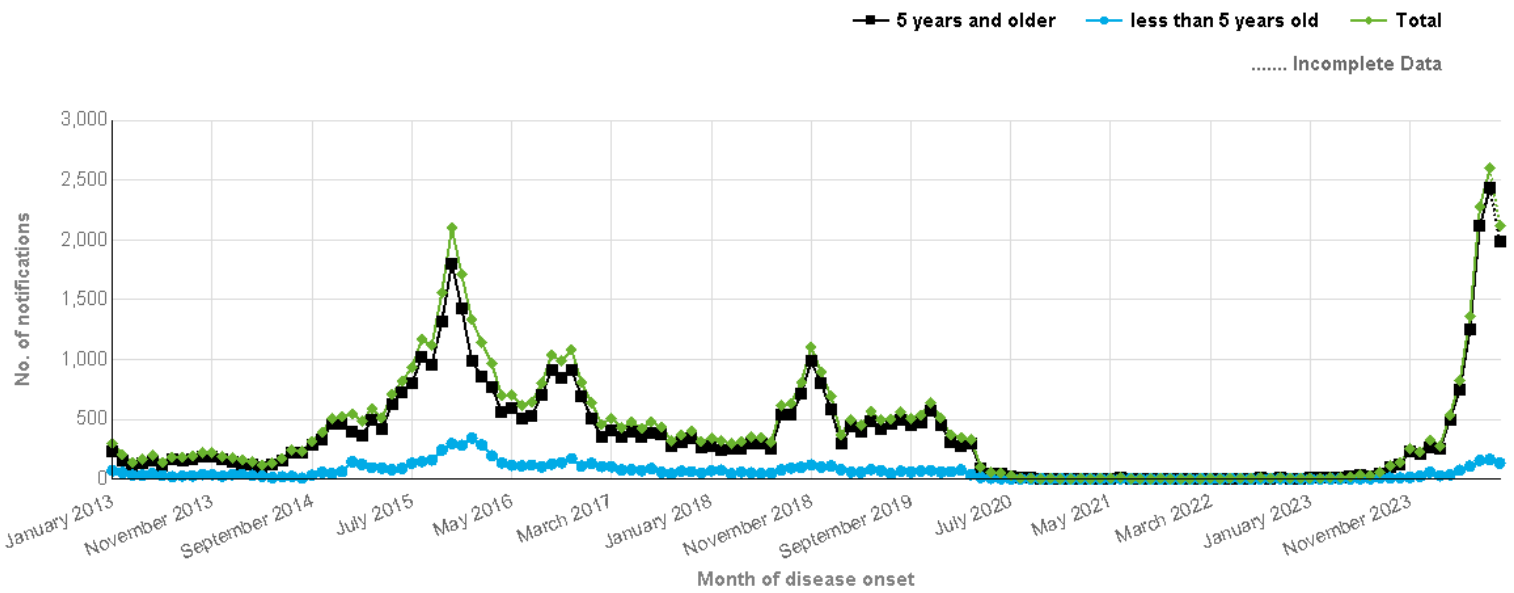
- A 35 year old male whose wife is 36 weeks pregnant is asking about the pertussis vaccine. He last had a dTpa vaccine 5 years ago when his first child was born. He should:

  A. Have the vaccine now as his immunity from his previous vaccine 5 years ago is starting to wane

  B. He is not required to have this vaccine as it has been less than 10 years.

Pertussis Notifications in NSW

Pertussis notifications in NSW residents, by month of disease onset and age group. January 2013 to August 2024.



https://www.health.nsw.gov.au/Infectious/Pages/data.aspx

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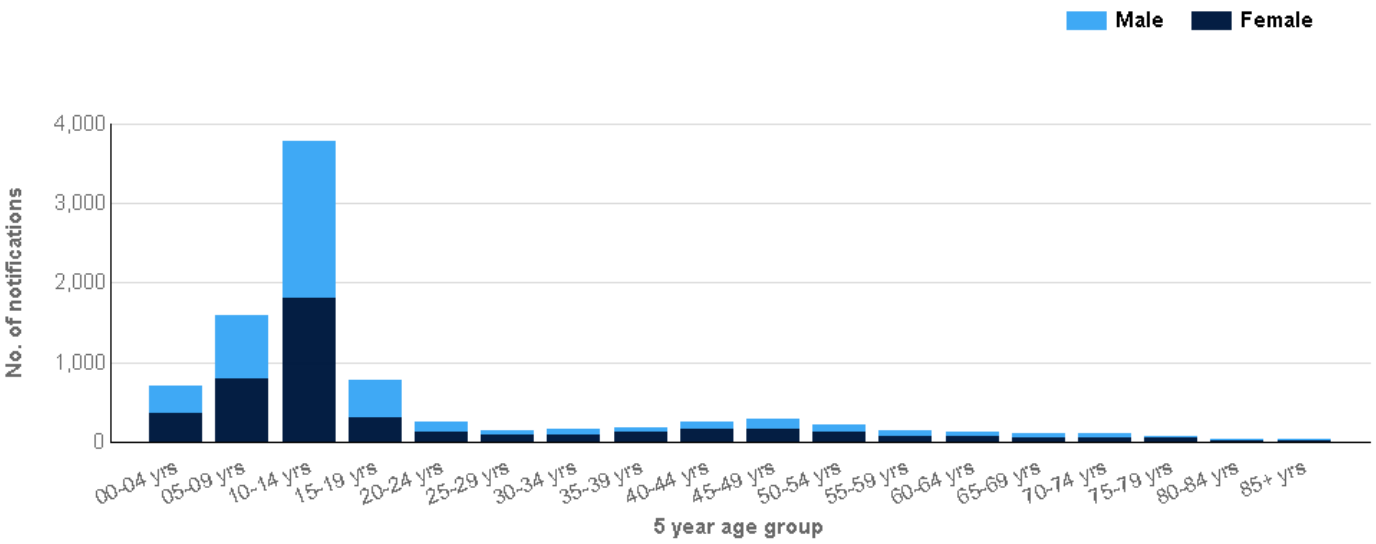
Pertussis Notifications in NSW (August 2023 to July 2024)



https://www.health.nsw.gov.au/Infectious/Pages/data.aspx

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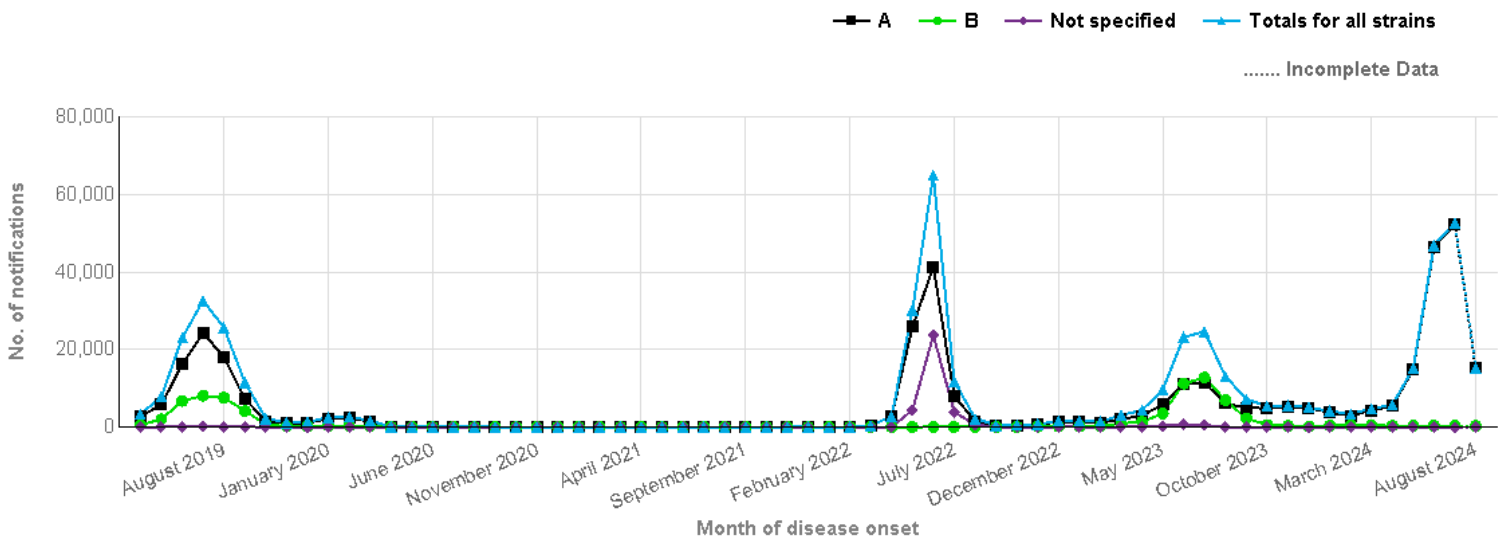
Influenza notifications

Influenza (A, B, Not specified) notifications in NSW residents, by month of disease onset. April 2019 to August 2024.



https://www.health.nsw.gov.au/Infectious/Pages/data.aspx

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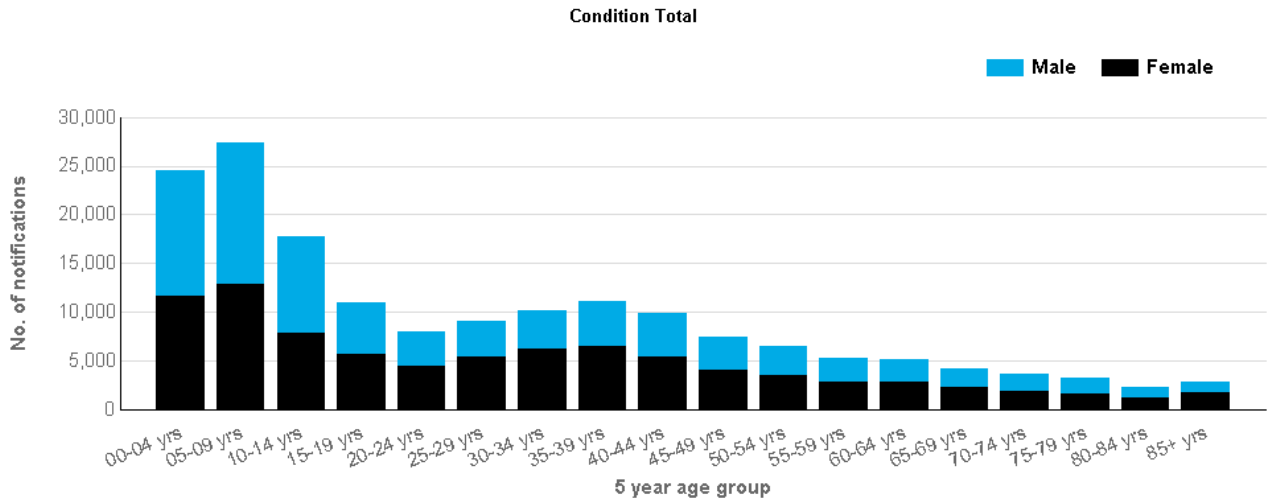
Influenza (A, B, Not specified) notifications in NSW residents, by five year age group and gender. August 2023 to July 2024



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Who should be getting the vaccine?

- **Everyone over 6 months of age**
- Especially important in the < 5 year olds and ≥ 65 years of age
- Free under the NIP for high risk groups:
  - ≥ 6 months to < 5 year olds
  - ≥ 65 years of age
  - Pregnant women at any stage of pregnancy
  - Aboriginal & Torres Strait Islanders
  - Aged ≥ 6 months with high risk conditions

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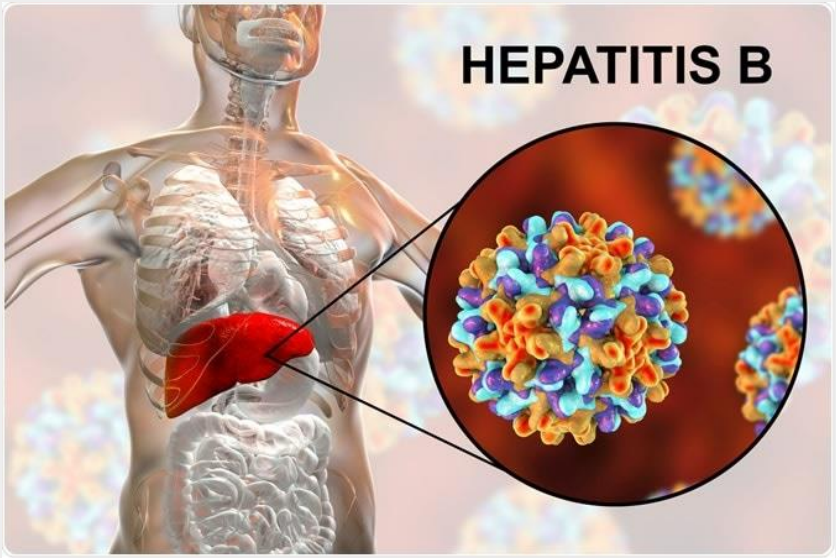
Q6

- Q: Apart from HPV vaccines, is there another vaccine that could protect against cancers?
  - A. Yes
  - B: No



- Causes significant worldwide morbidity and mortality
- > 350 million people worldwide with chronic infection
- Infected more than a third of the world's population
- More than one million deaths worldwide every year
- Over 2000 new cases annually in NSW
- ~ 230,000 with chronic infection in Au

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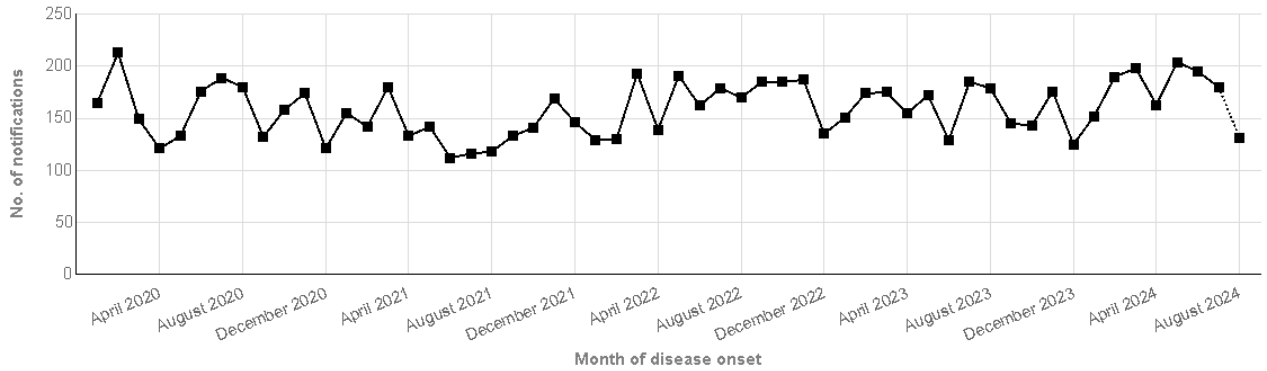
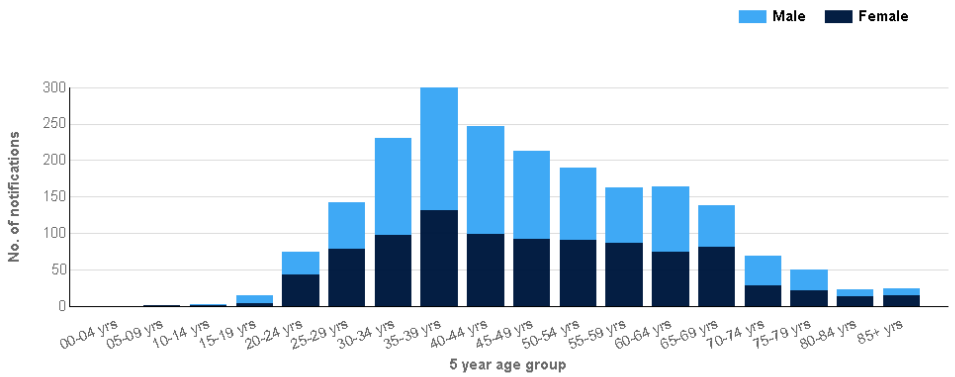
Incidence in NSW:

Hepatitis B notifications in NSW residents, by month of disease onset. January 2020 to August 2024.



Hepatitis B notifications in NSW residents, by five year age group and gender. August 2023 to July 2024



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Importance of early protection against Hep B

	Symptoms	Recovery	Likelihood of chronic infection and advanced liver disease
Infected as adults	30 - 50% symptomatic	Most recover without treatment	5 – 10%
Infected as infants	Usually asymptomatic	Usually persistent	90% in infants 30% in children

Immunisation control strategy

- Birth dose offered to all neonates.
- Given within the first seven days of life (preferably within 24 hours).
- **Cannot be caught up**
- Protects against vertical (mother to baby) and horizontal transmission (others to baby).
- Primes B cell memory in readiness for next 3 doses given at 6 weeks, 4 months & 6 months.
- 1st, 2nd and 3rd doses given at 6 weeks, 4 months and 6 months as per the schedule.

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Hepatitis B vaccination is funded in NSW for:

- Aboriginal people
- Household and sexual contacts of acute and chronic hepatitis B cases
- Immunosuppressed people
- People with HIV or hepatitis C
- Men who have sex with men
- Injecting drug users
- Sex workers
- Clients of sexual health clinics (at LHD discretion)

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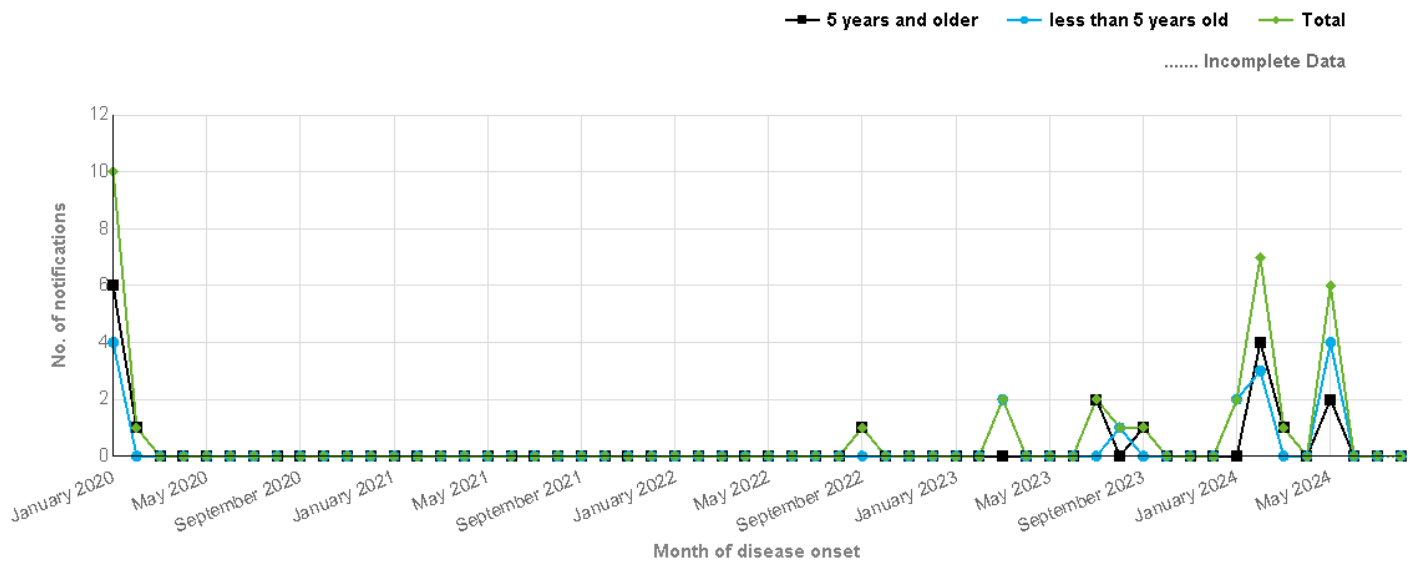
HBsAg positive mothers

- Babies given immunoglobulin within 12 hours of birth + vaccine - 100% in NSLHD.
- 1st, 2nd and 3rd doses are given as per the schedule.
- Follow-up of mothers and babies by PHU
  - timeliness of vaccination
  - HBsAg and anti-HBs checked 3 – 12 months after Hep B course is completed (not before 9/12 of age – due to birth dose of HBIG).

Measles notifications in NSW

Measles notifications in NSW residents, by month of disease onset and age group. January 2020 to August 2024.



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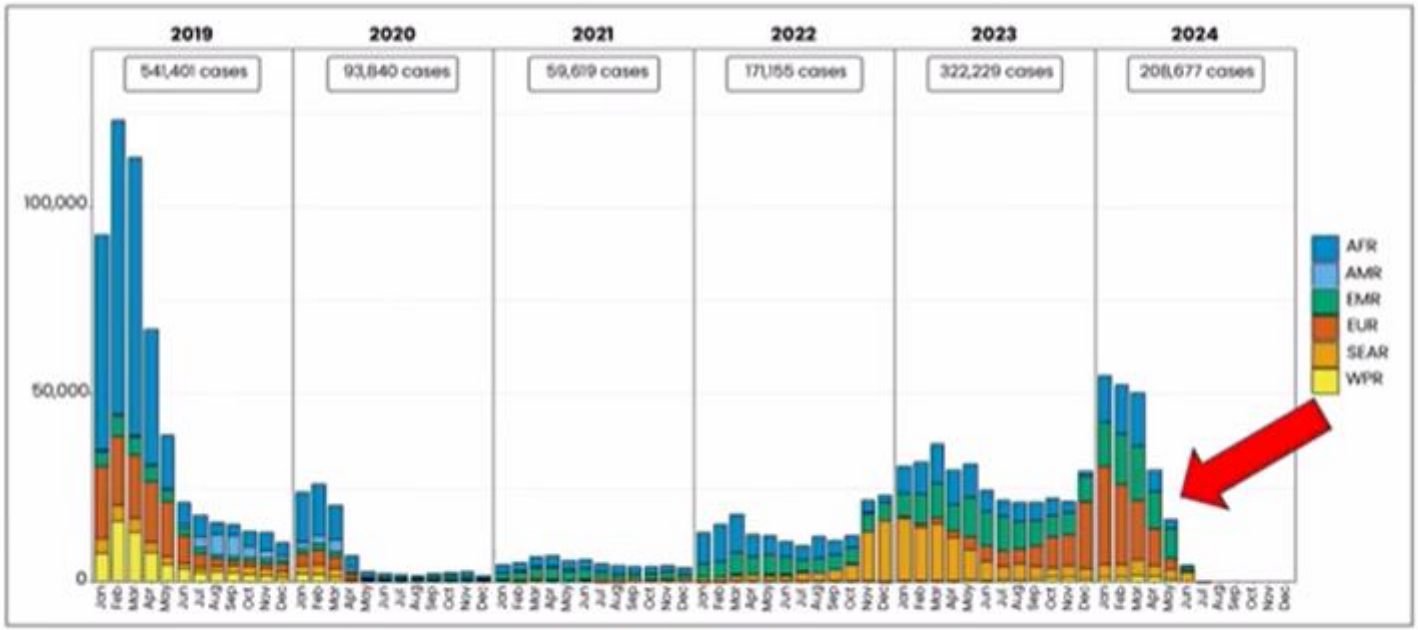
Measles case distribution by month and WHO Region (2019-2024)



Source: WHO Immunization Data portal - All Data

Adapted from HNE Public Health Unit

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- Extra vaccine can be given to infants as early as age 6 months (enter as vaccine dose 1 and 12, 18 months doses as 2 and 3).
- Discuss timing of 12 and 18 months dose as required

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NSW Health renews measles alert after second infant case this week

By Millie Roberts | Infant Health

Wed 17 Jan

Health authorities are warning measles could be in the Western Sydney community.

People need to be vigilant for fever, sore eyes, a runny nose and a cough followed thr
or four days later by a red, blotchy rash which spreads from the head to the rest of the
body, NSW Health says.

The health agency issued the alert warning early Sunday.

A woman who contracted measles after coming in contact with an infant with the highl
infectious disease sparked the alert.

It comes after a woman travelled to several Western Sydney locations while infectious with measles. NSW Health issued an alert on March 31.

She contracted the disease from an infant in mid-March and travelled to the following site while infectious:

- Baby Bunting, Blacktown Megacentre on March 24 between 3pm and 4pm
- Kmart Blacktown on March 24 between 4pm and 5pm
- Winston Hills Mall on March 28 between 12pm and 2.30pm

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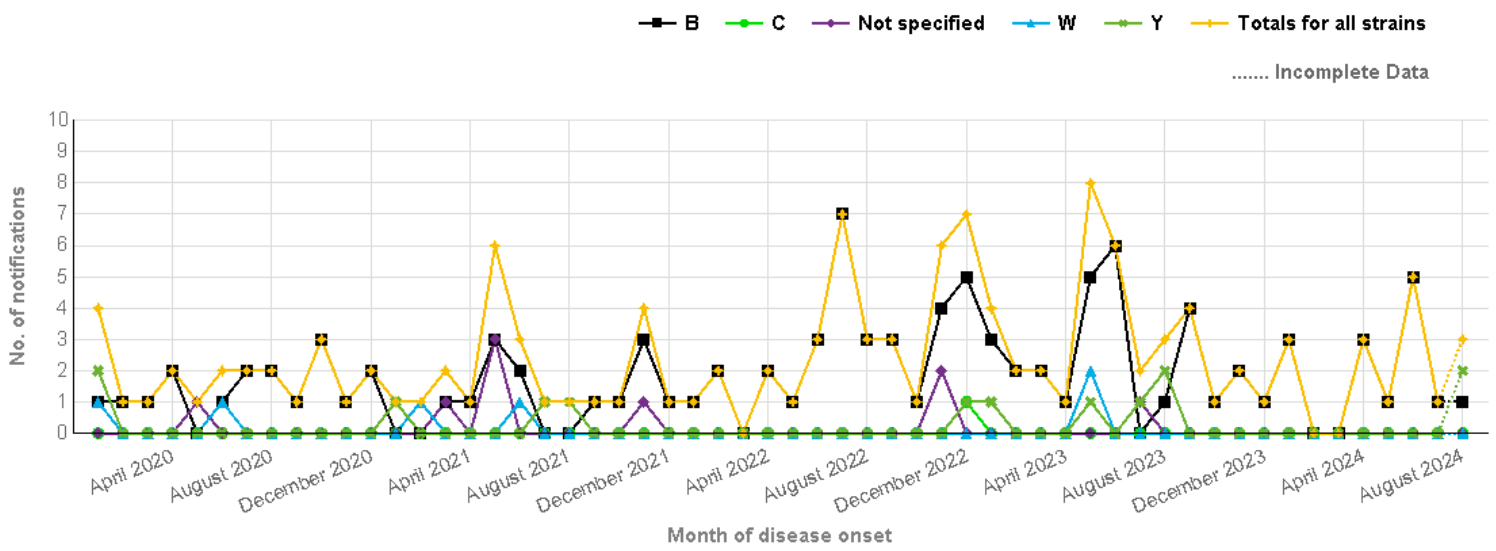
Meningococcal disease

- Serious bacterial infection caused by Neisseria meningitidis (N. meningitidis).
- The most common causative serogroups are A, B, C, W and Y.
  - serogroups B and W cause most meningococcal disease in Australia
  - serogroup B (MenB) disease remains the most common cause of IMD in children, adolescents and young adults
- Infection often causes septicaemia and/or meningitis and is most common in children aged <2 years and adolescents 15-19

Meningococcal notifications in NSW

Meningococcal disease (B, C, Not specified, W, Y) notifications in NSW residents, by month of disease onset. January 2020 to August 2024.



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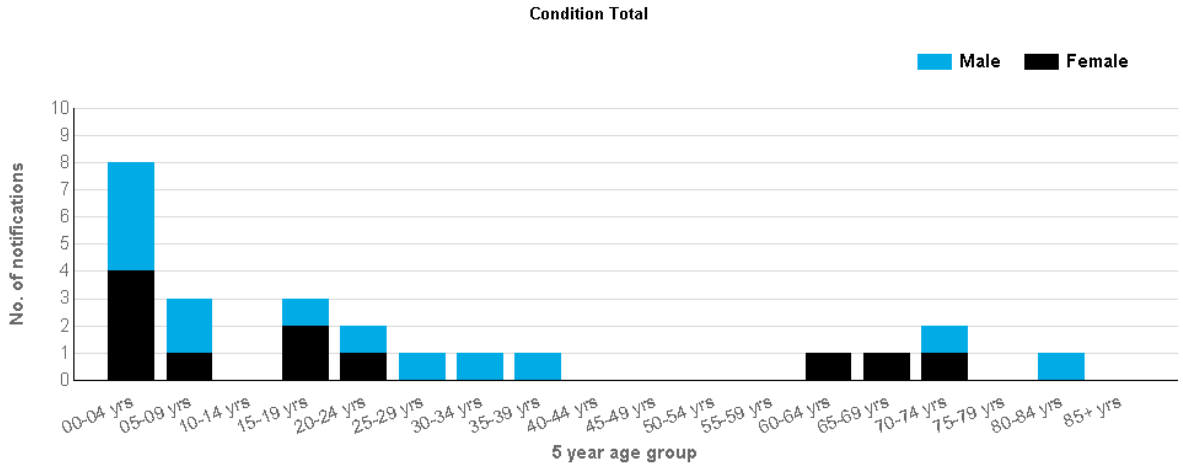
Meningococcal notifications in NSW

Meningococcal disease (B, C, Not specified, W, Y) notifications in NSW residents, by five year age group and gender. August 2023 to July 2024



•Children 0-4 years and people aged 15-25 years are at highest risk of Invasive meningococcal disease (IMD).

https://www.health.nsw.gov.au/Infectious/Pages/data.aspx

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National NSW Health

This was published 7 months ago

Brayden told his mother he had a fever. Twenty-four hours later, he was dead

Angus Thomson
December 27, 2023 — 7.30pm

Save Share A A A

Listen to this article
4 min

Stacey Chater was out for dinner when her eldest son Brayden texted her from work Christmas drinks: "I'm getting a fever again. I'm coming home."

Two hours later, Chater peered into her son's bedroom to find him convulsing on the floor, unresponsive and unable to speak. Soon she was in the car, trailing an ambulance on the way to Wollongong Hospital, where doctors pulled her into a room and told her that Brayden was brain-dead. He had just turned 23.

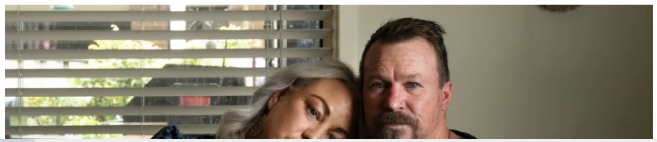

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Table 1: Who should be vaccinated

https://ncirs.org.au/sites/default/files/2024-02/Meningococcal%20vaccines%20for%20Australians%20fact%20sheet.pdf

Population Group	Recommendations for optimal protection	Vaccinations available for free under the National Immunisation Program (NIP) or state funding
Infants and young children aged <2 years (Aboriginal and Torres Strait Islander and Non-Indigenous)	MenACWY and MenB starting from 6 weeks of age	MenACWY single dose at age 12 months (NIP-funded). (Vaccination at an earlier age available by private prescription only.) MenB in South Australia and Queensland from 6 weeks to 12 months (state-funded). MenB in other states: by private prescription only.
Adolescents aged 15–19 years	MenACWY MenB	MenACWY single dose at 14–16 years of age (NIP-funded). MenB in South Australia and Queensland in Year 10 (state-funded). MenB in other states: by private prescription only.
Aboriginal and Torres Strait Islander children aged 2 months to19 years	MenACWY MenB	MenACWY: included in routine NIP program with dose at 12 months and for adolescents at age 15–19 years (NIP-funded). MenB: NIP-funded for infants aged from 6 weeks; catch-up available for children aged <2 years (up to 23 months) until June 2023.
People with medical conditions which increase their risk of IMD*	MenACWY MenB	For those with asplenia/hyposplenia, complement deficiency or eculizumab treatment: MenACWY and MenB vaccines funded by NIP. For other medical conditions: not funded
Young adults living in 'close quarters' (e.g. residential accommodation, military recruits) or who are smokers	MenACWY MenB	Not funded. Private prescription only.
Travellers	MenACWY if travelling to high-risk destinations	Not funded. Private prescription only.
People at occupational risk e.g. microbiology laboratory workers	MenACWY MenB	Not funded. Private prescription only.
Any person from 6 weeks of age wishing to reduce their risk of IMD	MenACWY MenB	Funded only if eligible in one of the above categories.

* Includes inherited defects or deficiency of properdin or complement components, current or future treatment with eculizumab, functional or anatomical asplenia, HIV infection and haematopoietic stem cell transplant.

From 1 July 2023, the meningococcal B (Bexsero®) catch-up vaccination program will be ongoing. The program, originally due to end on 30 June 2023, focuses on Aboriginal and Torres Strait Islander infants under 2 years of age.

Bexsero schedule recommendations from ATAGI have not changed

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Q7

- A healthy 78 year old has presented for Shingrix vaccination. She has previously been vaccinated with “Zostavax” in 2018. She:

  A. can receive one dose of Shingrix via private script

  B. Is contraindicated to receive further zoster vaccines.

  C: can receive two doses of funded Shingrix vaccines

Herpes Zoster (Shingles)

- Shingrix® replaced Zostavax® on the National Immunisation Program (NIP) on 1 November 2023
- Registered and recommended for use in people aged 50 years and over; and
- Immunocompromised people aged 18 years and over.

- Funded for

  age 65 years and over,

  Aboriginal and Torres Strait Islander people aged 50 years and over,

  immunocompromised people aged 18 years and over with

- haemopoietic stem cell transplant
- solid organ transplant
- haematological malignancy
- advanced or untreated HIV.

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- A recent large scale real world study by Zerbio et. al (2024) in the USA found:

  - 2 doses were 76% effective against shingles and PHN.
  - 1 dose was 64% effective.
  - Over the 4-year period, the 2-dose regimen waned little while the single dose waned more, dropping to 52% after the third year.

https://pubmed.ncbi.nlm.nih.gov/38190712/

Q8: A 25 year old male who has received a kidney transplant in 2022 and had shingles 4 months ago has requested Shingrix. “That was the worst pain ive experienced and I don’t ever want to have to go through that again”. He:

A. Not recommended to receive the vaccine as it is less than 12 months since his infection and would have high levels of immunity
B. Can receive Shingrix via private script as he is under 65 years of age
C. Can receive a course of Shingrix via funded supply

HPV recommendations

- Gardasil 9 – 9vHPV
- Age at commencement of course:
  - 11 – 25 years: Single dose
  - ≥ 26 years: 3 doses @ 0, 2 and 6 months.
- Immunocompromised: 3 doses @ 0, 2 and 6 months (funded for under 26)
- Single dose funded for healthy individuals under 26

Q9

- A 22 year old patient has presented for an HPV vaccine following changes in her cervical smear. This patient has missed out on her school vaccine dose. She is not immune compromised. She is
  - A: Recommended to have 3 doses of Gardasil 9, these are not funded
  - B: Recommended to have 1 funded dose of Gardasil 9
  - C: Not recommended to have the vaccine as she already has cervical changes.

Australian incidence rates for cervical cancer

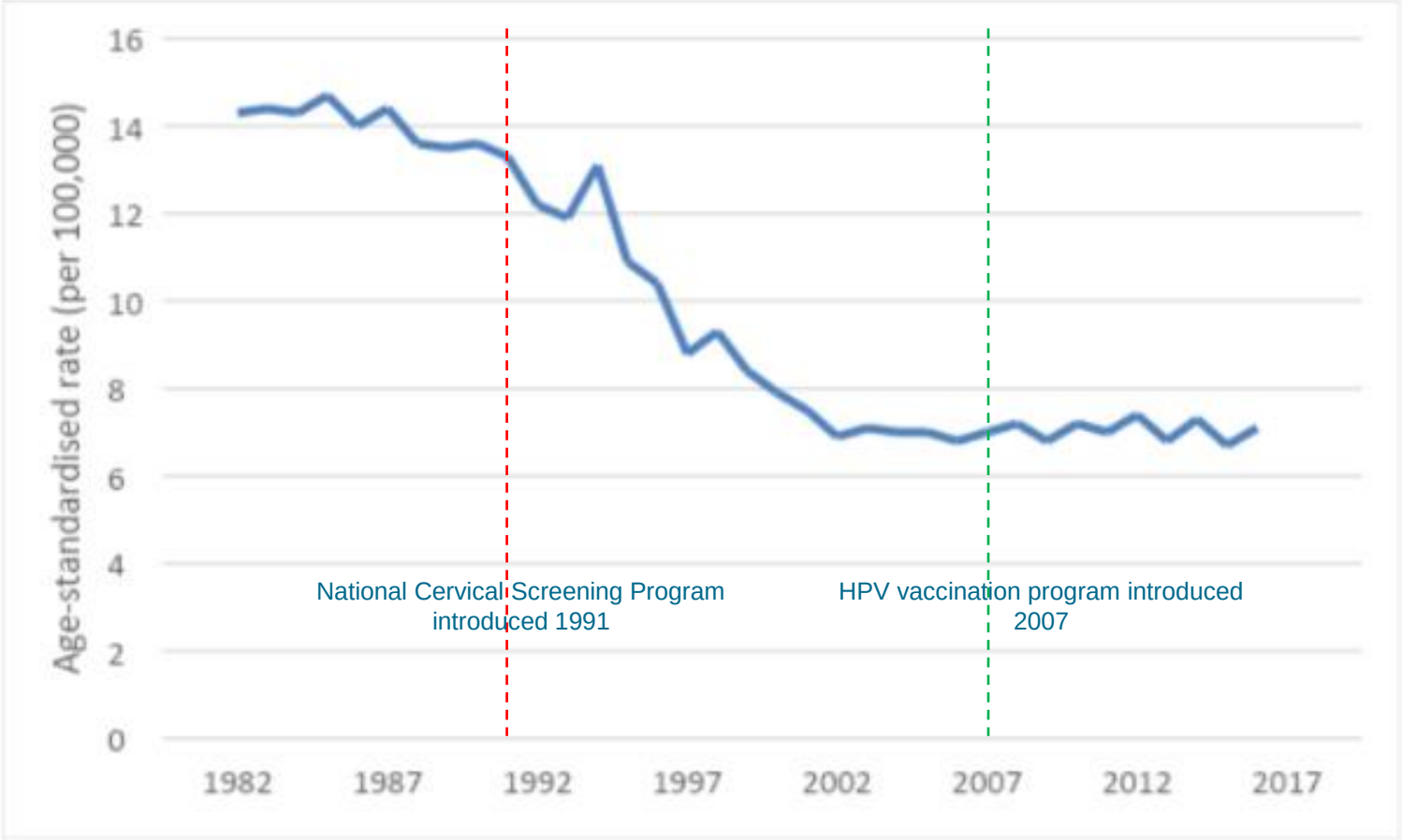

Figure 2. Age-standardised incidence rates for cervical cancer, 1982 to 2016

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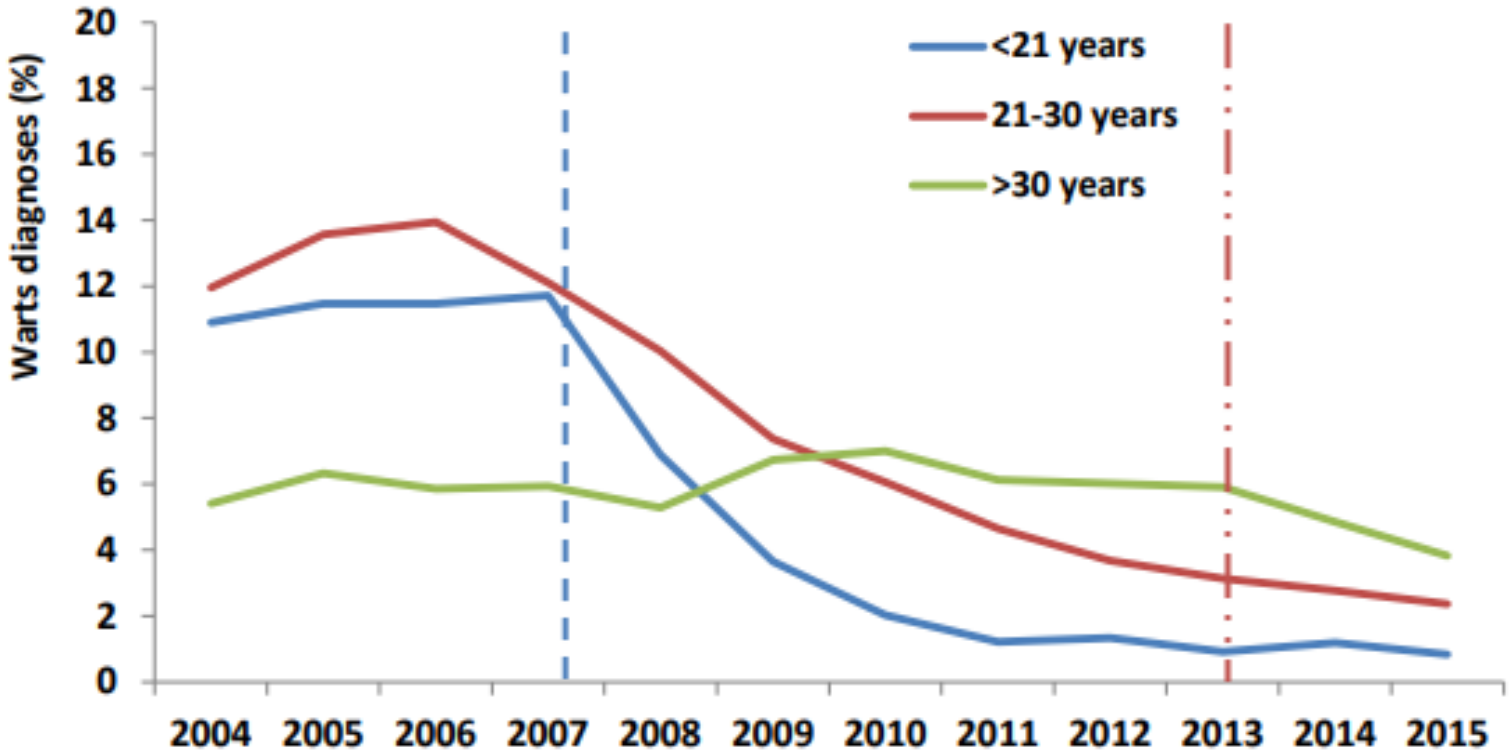
https://www.canceraustralia.gov.au/affected-cancer/cancer-types/cervical-cancer/cervical-cancer-australia-statistics

Genital Warts Surveillance Network data

Figure 1: Proportion of Australian born women diagnosed with genital warts at first visit, by age group, 2004-2015

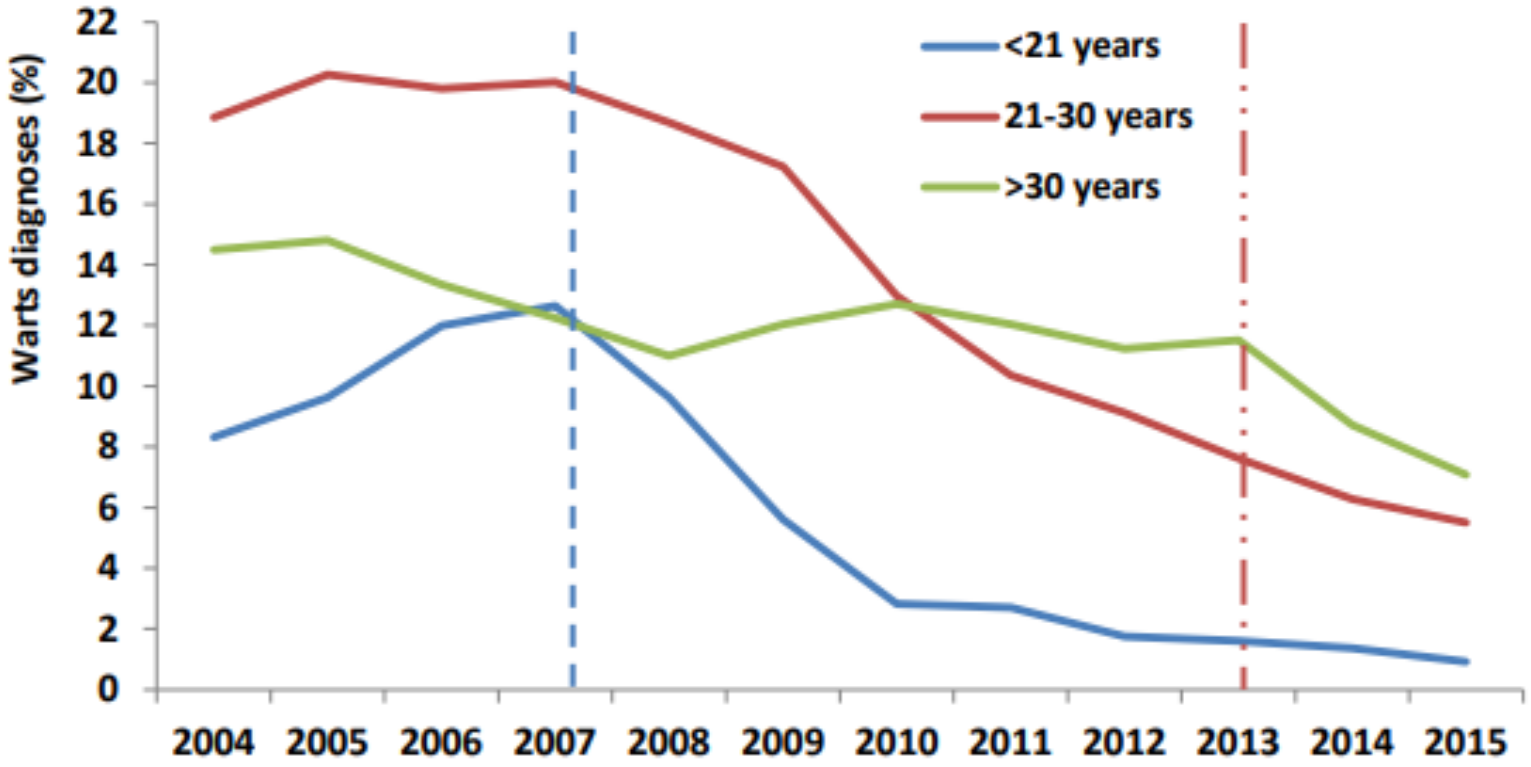


* The first dotted line represents the start of the national HPV vaccination program for women in mid-2007 and the second dotted line represents the start of the national HPV vaccination program for boys in 2013

https://kirby.unsw.edu.au/sites/default/files/kirby/report/SHP_Genital-Warts-Surveillance-Network-Report-2004-2015.pdf

Genital Warts Surveillance Network data

Figure 2: Proportion of Australian born heterosexual men diagnosed with genital warts at first visit, by age group, 2004-2015



* The first dotted line represents the start of the national HPV vaccination program for women in mid-2007 and the second dotted line represents the start of the national HPV vaccination program for boys in 2013

https://kirby.unsw.edu.au/sites/default/files/kirby/report/SHP_Genital-Warts-Surveillance-Network-Report-2004-2015.pdf

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Projected timeframe for cervical cancer

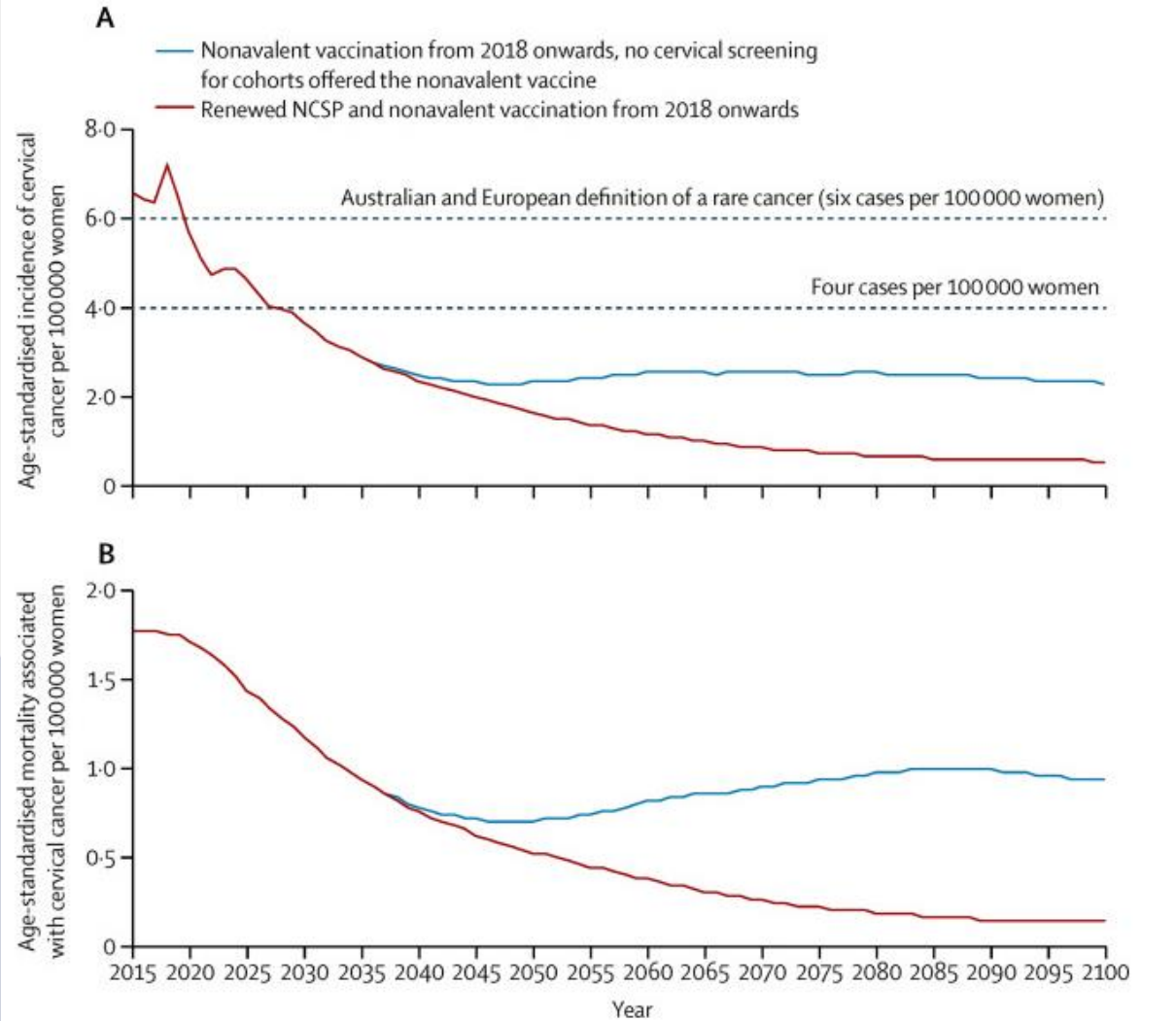

Figure 1 The (A) age-standardised annual incidence of invasive cervical cancer and (B) associated mortality

https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(18)30183-X/fulltext

EMERGING INFECTIOUS DISEASES

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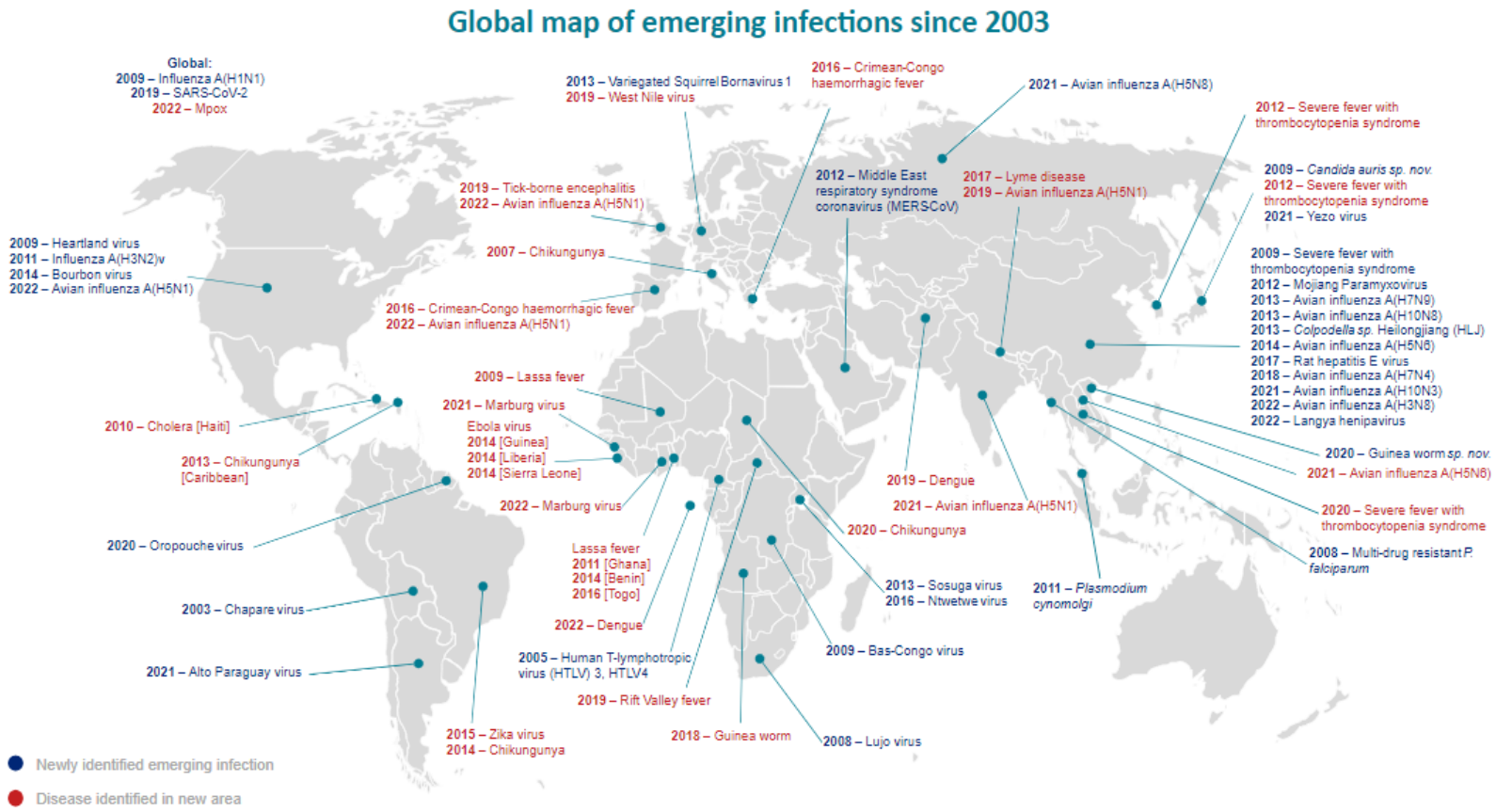
Global map of newly identified emerging infections and notable outbreaks of diseases in humans in new areas between 2003 and 2022



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Japanese Encephalitis (JEV)

- Endemic in much of Asia and parts of the Pacific. Not endemic to Australia.
- Main cause of viral encephalitis in many Asian countries.
- ~ 68,000 cases annually with approximately 13,600 to 20,400 deaths.
- Recently identified in commercial piggeries in parts of NSW, Queensland, Victoria and SA.
- NSW has had 13 cases and 2 deaths as part of the 2022 outbreak. (0 in 2023 and 2024)

https://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis

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- The forecast is a dry and hot summer.
  - This generally means lower mosquito numbers inland,
- NSW recommends people continue to avoid mosquito bites this summer:
  - spray up (use repellent),
  - cover up (wear long-sleeved shirts and long pants),
  - screen up (cover windows and doors with insect screens)
  - and clean up (remove any containers that hold water where mosquitoes may breed).

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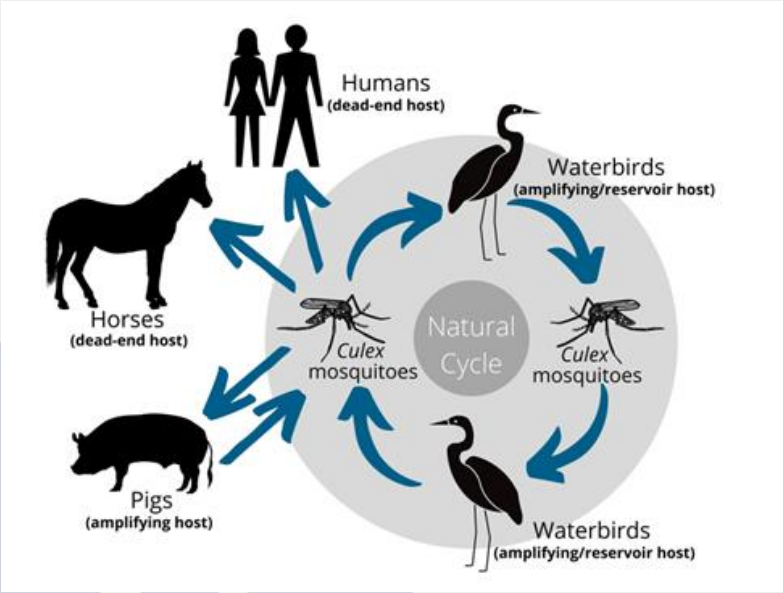
Japanese Encephalitis (JEV)



- Spread by infected mosquitoes
- Infected pigs and some waterbirds are more likely to infect mosquitoes
- Humans cannot pass JEV to other humans
- <1% of infected people have symptoms
- Of symptomatic cases, 20–30% are fatal
- Symptoms include fever and headache
- Severe infection may cause neck stiffness, disorientation, tremors, coma, seizures
- Approximately 30–50% of survivors will have ongoing neurological sequelae

https://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis

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Who is at risk?

- People working at and/or living close to piggeries which have tested positive for JEV.
- People who engage in outdoor activities near significant mosquito populations, particularly near waterways.

Who is it funded for?

- work, live in, or are visiting a:
  - piggery, pork abattoir or pork rendering plant
    - including farm workers and their families (including children aged 2 months and older)
    - pig transport workers, veterinarians (including veterinary students and nurses) and others involved in the care of pigs

https://www.health.nsw.gov.au/environment/pests/vector/Pages/japanese-encephalitis.aspx

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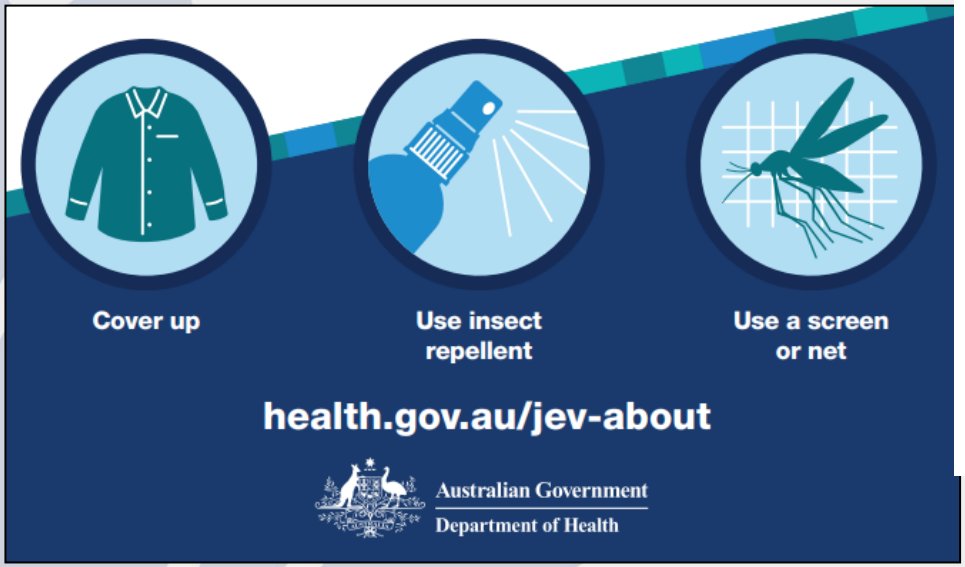

LGAs of high JEV concern

- Albury
- Balranald
- Berrigan
- Bland
- Bogan
- Bourke
- Brewarrina
- Broken Hill
- Cabonne
- Cootamundra-Gundagai
- Cowra
- Carrathool
- Central Darling
- Cobar
- Coolamon
- Coonamble
- Dubbo Regional
- Edward River
- Federation
- Forbes
- Gilgandra
- Goulburn Mulwaree
- Greater Hume
- Griffith
- Gunnedah
- Gwydir
- Hay
- Hilltops
- Inverell
- Junee
- Lachlan
- Leeton
- Liverpool Plains
- Lockhart
- Mid-Western
- Moree Plains
- Murray River
- Murrumbidgee
- Orange
- Narrabri
- Narrandera
- Narromine
- Parkes
- Tamworth
- Temora
- Tenterfield
- Unincorporated Far West Area
- Upper Hunter
- Upper Lachlan
- Wagga Wagga
- Walgett
- Warren
- Warrumbungle
- Weddin
- Wentworth

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Table. Recommended doses of Japanese encephalitis vaccines

Age at vaccination	Vaccine	Number of doses	Booster	Notes
≥2 months to <18 years	JEspect	2 doses (28 days apart)	No recommendation	Each dose of JEspect in infants and children aged ≥2 months to <3 years is 0.25 mL. There are no data to inform recommendations for booster doses in infants and children <18 years. Consider a booster if the child needs sustained protection.
≥9 months to <18 years	Imojev	1 dose	1–2 years after primary dose if ongoing risk of JE virus exposure	None
≥18 years	Imojev	1 dose	Not required	Seroprotective antibody levels persist in most adults 5 years after a single dose of Imojev.[5]
	JEspect	2 doses (28 days apart)	1–2 years after primary dose if ongoing risk of JE virus exposure	Adults can receive an accelerated primary course of JEspect (2 × 0.5 mL doses, 7 days apart) if they are at imminent risk of exposure to JE virus.

*Ixiaro was temporarily registered until 31/03/2023

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https://immunisationhandbook.health.gov.au/contents/vaccine-preventable-diseases/japanese-encephalitis

Vaccine Hesitancy

- One of WHO's 10 threats to global health
- threatens to reverse progress made in tackling vaccine-preventable diseases.
- Vaccination is one of the most cost-effective ways of avoiding disease – it currently prevents 2-3 million deaths a year, and a further 1.5 million could be avoided if global coverage of vaccinations improved.

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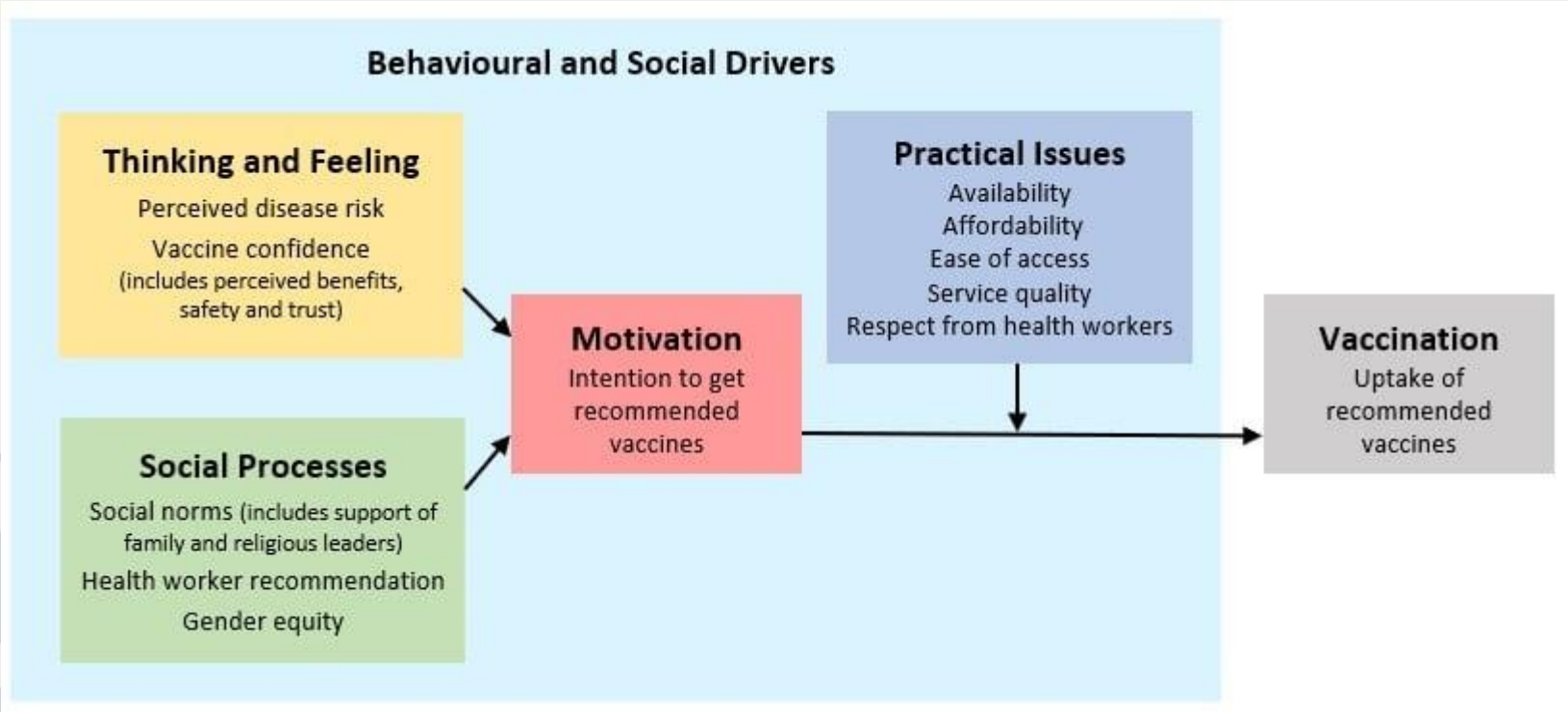
Increasing vaccination demand and uptake



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Practical Ways to Promote Immunisations

- Personal recommendations normalise the vaccination schedule
- “Walk In” Appointments
- Schedule reminders either phone call or letters
- Making next vaccine appointment at current visit
- Check AIR records of every child so you can correct the records or give correct vaccines

(ADAPTED: HNE PHU)

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BREAK + Q&A

How did we do?

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All children in NSW fully immunised at 1 year of age

Local health district	March 2024	June 2024	September 2024	December 2024
Central Coast	94.0	94.8		
Far West*	≥95	94.2		
Hunter New England	95.4	94.1		
Illawarra Shoalhaven	94.5	93.0		
Mid North Coast	91.1	90.6		
Murrumbidgee	93.3	93.2		
Nepean Blue Mountains	92.8	92.3		
Northern NSW	81.6	82.2		
Northern Sydney	95.2	94.7		
South Eastern Sydney	93.6	93.7		
South Western Sydney	90.1	89.9		
Southern NSW	94.0	92.7		
Sydney	93.7	93.5		
Western NSW	95.4	94.3		
Western Sydney	93.2	91.7		
NSW	92.9	92.3		
Australia	**92.8**	**92.2**		

https://www.health.nsw.gov.au/immunisation/Pages/coverage-by-lhd.aspx

NSW GOVERNMENT Health
Northern Sydney Local Health District

All children in NSW fully immunised at 2 years of age

Local health district	March 2024	June 2024	September 2024	December 2024
Central Coast	92.4	91.9		
Far West*	91.5	89.4		
Hunter New England	93.5	91.7		
Illawarra Shoalhaven	91.2	91.1		
Mid North Coast	91.1	89.4		
Murrumbidgee	92.0	89.5		
Nepean Blue Mountains	92.0	90.3		
Northern NSW	84.7	81.0		
Northern Sydney	91.6	92.2		
South Eastern Sydney	90.1	90.2		
South Western Sydney	88.8	88.6		
Southern NSW	92.3	92.8		
Sydney	91.9	91.2		
Western NSW	94.0	92.9		
Western Sydney	90.3	90.9		
NSW	91.0	90.4		
Australia	**91.2**	**90.4**		

https://www.health.nsw.gov.au/immunisation/Pages/coverage-by-lhd.aspx

NSW GOVERNMENT Health
Northern Sydney Local Health District

All children in NSW fully immunised at 5 years of age

Local health district	March 2024	June 2024	September 2024	December 2024
Central Coast	95.3	94.4		
Far West*	≥95	≥95		
Hunter New England	95.9	95.7		
Illawarra Shoalhaven	95.9	95.0		
Mid North Coast	93.8	93.8		
Murrumbidgee	95.1	95.4		
Nepean Blue Mountains	94.4	94.7		
Northern NSW	88.5	86.2		
Northern Sydney	93.9	93.9		
South Eastern Sydney	91.9	94.1		
South Western Sydney	94.4	92.6		
Southern NSW	94.0	93.3		
Sydney	93.4	93.8		
Western NSW	96.8	96.1		
Western Sydney	94.5	94.4		
NSW	94.2	94.0		
Australia	**94.0**	**93.6**		

*Interpret LHD data with caution as variations can arise where the LHD population is less than 100.

https://www.health.nsw.gov.au/immunisation/Pages/coverage-by-lhd.aspx

NSW GOVERNMENT Health
Northern Sydney Local Health District

COVID-19 vaccinations in the last 12 months

Australia's COVID-19 Vaccine Program

Data as at: 10 Jul 2024

1.0m (54.5%#)

individuals aged **75 years and over** have received a vaccination in the last 12 months##

865.2k (35.6%#)

individuals aged **65 to 74 years** have received a vaccination in the last 12 months##

1.1m (7.1%#)

individuals aged **18 to 64 years** have received a vaccination in the last 12 months##

3.4m

total vaccine doses administered to **all ages** (18 years and over) in the last 12 months

Number of doses administered in the last 12 months by provider state###

Provider state	Doses (18+ years)	Monthly change*
National	**3.4m**	**-3.8%**
ACT	104.4k	-3.7%
NSW	1.0m	-3.5%
NT	16.5k	-5.4%
QLD	628.6k	-4.0%
SA	267.0k	-3.2%
TAS	116.7k	-2.9%
VIC	889.3k	-4.2%
WA	338.0k	-3.6%

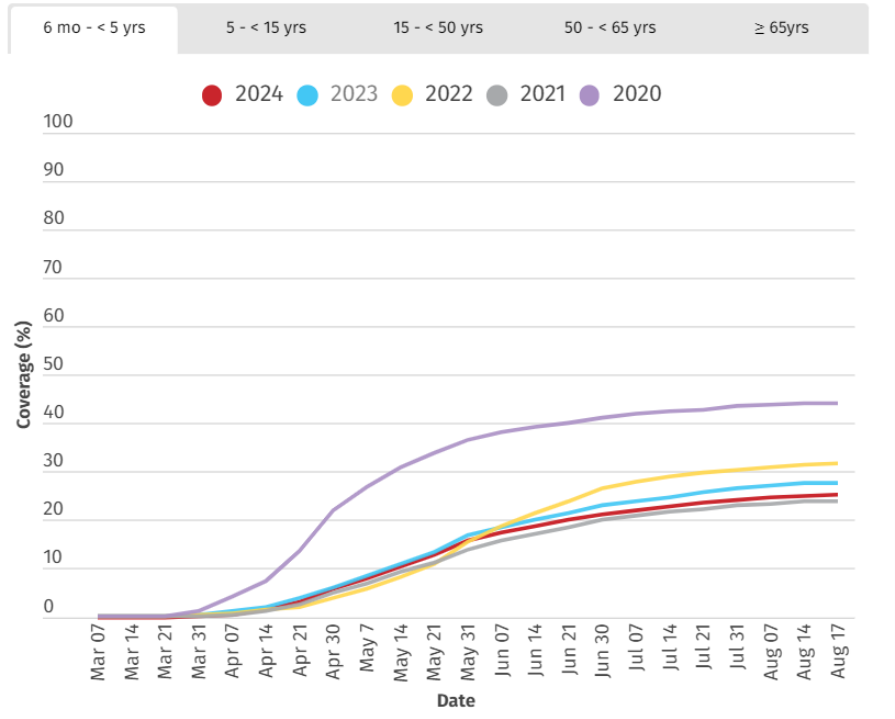
#Coverage uses the Australian Bureau of Statistics June 2021 Estimated Resident Population (ERP) as denominator.
##The number of people with a dose will not match the number of doses administered. This can occur when a person receives a valid dose but then permanently leaves Australia, when a person receives multiple doses in a short time period (such as a specific health recommendation or a vaccine administration error), or in the case of data input errors into the Australian Immunisation Register.
###State breakdown is based on the state in which a vaccine was physically administered and may differ from a person's residential address.
*Difference between the previous 12-months as per the data as at date and the previous 12-months calculated four weeks ago. Comparing rolling time periods can result in negative changes depending on the rate of vaccination.

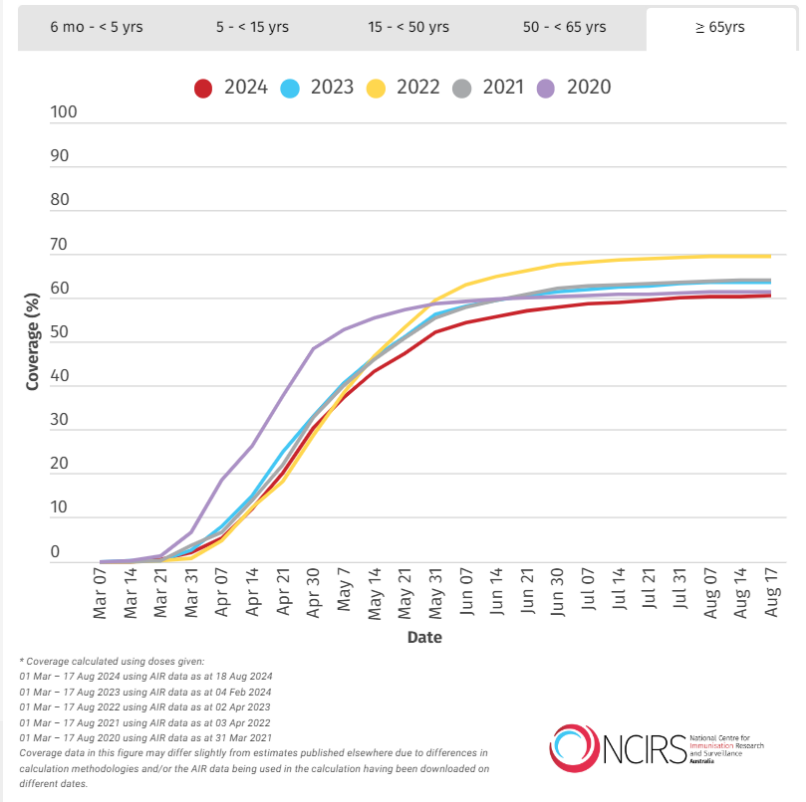
Key: m = million k = thousand

Source: Australian Immunisation Register

https://www.health.gov.au/sites/default/files/2024-07/covid-19-vaccine-rollout-update-12-july-2024.pdf

NSW Influenza vaccination coverage





https://www.ncirs.org.au/influenza-vaccination-coverage-data/influenza-vaccination-coverage-jurisdiction

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Catch-up tools for children < 10 years of age

Australian Immunisation Handbook Online Catch-up Calculator

- < 10 years and 10-19 now live
- High Risk Individuals and " Vaccinations for older adults" calculator in development
- Developed by the Australian Government Department of Health
- Part of the Australian Immunisation Handbook.

NSW GOVERNMENT Health Northern Sydney Local Health District

https://immunisationhandbook.health.gov.au/catch-up-calculator/calculator

Australian Government
Department of Health and Aged Care

Australian Immunisation Handbook

Catch-up schedule

Note: If the person does not present on the date/s recommended in this catch-up schedule, a new calculation should be undertaken at each visit to ensure that minimum intervals between antigen doses are met and the recommended schedule remains current.

This is a catch-up schedule. Once the person has caught up, they may need more recommended NIP vaccines in the future.

The catch-up schedule catch-up principles outlined in the Handbook.For further information, please see the Catch-up vaccination chapter and vaccination for special risk groups.

Catch-up vaccination
Catch-up principles
Vaccination for special risk groups

name

Date of birth: 8 August 2021
Gender: Male
Aboriginal or Torres Strait Islander: No
State: NSW
Considered medically at risk: No
At risk condition(s): N/A
Immunisation record(s) viewed: N/A
Date created: 15 August 2023
Age: 2 years, 7 days

Vaccination history

Person has not received any immunisations to date.

Vaccinations due

'$' indicates a dose might not be funded under the National Immunisation Program schedule. Depending on the person's circumstances, some doses might be funded under state and territory schedules. Please use professional judgement if the person has received vaccines overseas.

Due immediately

15 August 2023 (2 years, 7 days)

Diphtheria, Tetanus, Pertussis	(dose 1 of 5)
Hepatitis B	(dose 1 of 3)
Haemophilus Influenzae Type B	(dose 1 of 1)
Polio	(dose 1 of 3)
Meningococcal ACWY	(dose 1 of 1)
Pneumococcal (13vPCV)	(dose 1 of 1)
Measles, Mumps, Rubella	(dose 1 of 2)

Next appointment

12 September 2023 (2 years, 1 month, 4 days)

Diphtheria, Tetanus, Pertussis	(dose 2 of 5)
Polio	(dose 2 of 3)
Hepatitis B	(dose 2 of 3)
Measles, Mumps, Rubella	(dose 2 of 2)
Varicella	(dose 1 of 2)

Future appointment(s)

10 October 2023 (2 years, 2 months, 2 days)

Diphtheria, Tetanus, Pertussis	(dose 3 of 5)
Polio	(dose 3 of 3)
Varicella	$ (dose 2 of 2)

15 December 2023 (2 years, 4 months, 7 days)

Hepatitis B	(dose 3 of 3)

10 April 2024 (2 years, 8 months, 2 days)

Diphtheria, Tetanus, Pertussis	(dose 4 of 5)

NSLHD Catch-up education tool

Calculating catch-up vaccination requirements for <10 year olds.

Table 1 sets out the vaccines which are recommended for children under 10 years of age and the doses required for their current age. Use Table 1 in conjunction with *Table 2: GP/Practice Nurse catch-up vaccination plan* to calculate what vaccines are required.

Table 1: Standard Vaccination Catch-up Recommendations for children aged <10 years (adapted from The Australian Immunisation Handbook 10th edition [updated online]).

Vaccine	Current age								Minimum dose interval between dose 1 and 2	Minimum dose interval between dose 2 and 3	Minimum dose interval between dose 3 and 4	Minimum dose interval between dose 4 and 5
	6 weeks to <4 months	4 to <6 months	6 to <12 months	12 to 18 months	>18 months to <4 years		4 years to <10 years					
					Born before 1 Oct 2014	Born after[1] 1 Oct 2014	Born before 1 Oct 2014	Born after[1] 1 Oct 2014				
	Doses required											
DTPa	1	2	3	3	3	4	4[2]	5	4 weeks	4 weeks	6 months	6 months
Poliomyelitis (IPV)	1	2	3	3	3	3	4[3]	4[3]	4 weeks	4 weeks	4 weeks	Not required
Hepatitis B[4] (excl. birth dose)	1	2	3	3	3	3	3	3	1 month[5]	2 - 3 months[5]	Not required	Not required
MMR[6]	If given at <11 months of age the 1st dose should be repeated at 12 months of age.			1	2	2	2	2	4 weeks	Not required	Not required	Not required
MenCCV/4vMenCV	If given at <11 months of age a booster dose is required at 12 months of age or 8 weeks after last dose, whichever is later.			1	1	1	1	1	Not required	Not required	Not required	Not required
Varicella[6]	If given at <12 months of age, the dose should be repeated, preferably at 18 months of age.				1	1	1	1	Not required	Not required	Not required	Not required
Rotavirus	***Age limits apply - see Handbook Table***		**NO CATCH-UP**									
Meningococcal B (Aboriginal children only)	See Handbook Table Recommendations for immunisation of infants and children aged <2 years using meningococcal B vaccine.[8]								Recommended interval between primary doses is 8 weeks. Booster doses are given >12 months or 8 weeks after the 2nd dose, whichever is later.			
Haemophilus influenza type B (Hib) – No catch-up > 5 years.	See Handbook Catch-up Table: Haemophilus influenzae type b (Hib)[7]								Recommended interval between primary doses is 4 weeks. Booster doses are given >18 months or 8 weeks after the last dose, whichever is later.			
Pneumococcal (PCV) - No catch-up > 5 years for healthy kids.	See Handbook Catch-up Table: 13vPCV[7]								Recommended interval between doses is 4 weeks if aged <12 months and 8 weeks if ≥12 months.			

[1] All children born after 1 October 2014 are required to have had an 18 month booster dose of DTPa vaccine.

[2] Some children may have received 4 doses of DTPa by 18 months of age, especially if arrived from overseas. These children will require a 5th dose of DTPa after 4 years of age.

[3] A booster dose of IPV is recommended at 4 years of age. If the 4th dose was given before 3.5 years of age, it should be repeated. If 3rd dose of IPV is given after 4 years of age, a 4th dose is *not required*.

[4] Acceptable alternate overseas schedule: Monovalent Hep B vaccine at birth, 1-2 months and 6-18 months of age if given overseas.

[5] MINIMUM interval between dose 1 and 3, is 4 months. MINIMUM interval between dose 2 and 3 is 2 months (however, the optimum schedule is 0, 1 & 6 months). The MINIMUM age for dose 3 is 24 weeks.

[6] MMRV is not recommended for use as the 1st dose of MMR containing vaccine in children aged <4yrs. **ANY live vaccines can be given on the same day, if not there must be a minimum interval of 4 weeks.**

[7] Required doses vary depending on age at presentation and age when vaccine received; therefore tables must be referred to for each new catch-up.

[8] Doses required depends on age the course was commenced.

Updated March 2023

NSW GOVERNMENT | Local Health District

https://www.nslhd.health.nsw.gov.au/phu/Documents/2018%20NSLHD%20Standard%20Vaccination%20Catchup%20Recommendations%20less%20than%2010.pdf

NSPHU Catch-up recommendation info.

Northern Sydney PHU: Standard Vaccination Catch-up Recommendations for people over 10 years of age (adapted from the online Australian Immunisation Handbook).

Antigen		Doses required	Min. interval b/w dose 1 and 2	Min. interval b/w dose 2 and 3	Notes
Diptheria, tetanus, pertussis (dTpa)		3 doses	4 weeks	4 weeks	One dose should be given as dTpa (or dTpa-IPV if polio is also needed) and the course completed with dT. If dT is not available, use dTpa or dTpa-IPV for all 3 primary doses. A booster dose of dTpa is offered in Year 7. Take this into account when planning catch-up for pertussis.
Poliomyelitis (IPV)		3 doses	4 weeks	4 weeks	None.
Hepatitis B	10-19 years^	3 paediatric doses	1 month	2 – 3* months	^ The age groups overlap and this is an either/or, not both. * MINIMUM interval b/w dose 1 & 3 is 4 months (however, optimum schedule is 0, 1 & 6 months). ǂ This is not funded, unless the patient falls into the risk group for a funded vaccine (refer to: https://www.health.nsw.gov.au/immunisation/Pages/gp_catchup.aspx).
	11-15 years^	2 adult doses	4 months	Not required	
	≥20 yearsǂ	3 adult doses	1 month	2 – 3* months	
Measles, mumps, rubella (MMR)		2 doses	4 weeks	Not required	MMR vaccines are free for everyone in NSW born during or after 1966 or for vaccination of rubella seronegative post natal women.
MenCCV/ 4vMenCV	10 -14 years	1 dose of men C	Not required	Not required	Recommendations are for healthy individuals. Refer to the Australian Immunisation Handbook for recommendations for people with medical conditions that increase their risk of invasive meningococcal disease (Vaccines are not funded).
	15-19 years	1 dose of men ACWY	Not required	Not required	
Varicella	<14 years	1 dose	Not required	Not required	People aged <14 years should preferably receive 2 doses (only one dose is funded). People aged ≥14 years are recommended to receive 2 doses (two doses are funded from 14-19 years of age). MMRV is not recommended for use in people ≥14 years of age.
	≥14 years	2 doses	4 weeks	Not required	
Human papillomavirus (HPV)	9°-25 years	1 dose	Not required	Not required	° HPV vaccination is funded for individuals 9 - 25 years of age. The optimal age for HPV vaccination is around 12–13 years prior to exposure to HPV. ᵝ MINIMUM interval b/w dose 1 and dose 3 is 5 months (however, optimum schedule is 0, 2 & 6 months). People ≥26 years or with severe immunocompromise need 3 doses of HPV vaccine. Adults aged ≥26 years are not routinely recommended to receive HPV vaccine unless they are at risk of future HPV exposure and disease.
	≥26 years or immunocompromise (any age)	3 doses	4 weeks	12 - 16ᵝ weeks	

NB: Unless in the special circumstance outlined in the comments section, none of these vaccines are funded after the 20th birthday.

Unvaccinated adults should have their vaccines provided on private script.

March 2023

https://www.nslhd.health.nsw.gov.au/phu/Documents/2019%20NSLHD%20Standard%20Vaccination%20Catchup%20Recommendations%20for%20over%2010%20years.pdf

Catch-up Worksheet

Table 2: GP/Practice Nurse catch-up vaccination plan

Practice Name: _____

Contact Person: _____

Ph: _____ **Fax:** _____

Instructions: Use this form in conjunction with Table 1. Complete all sections below, working from left to right columns.

If you would like your calculations checked either fax or email this form to:
Fax: 9482 1650 Email: NSLHD-PHUHornsby@health.nsw.gov.au

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Northern Sydney Local Health District

PATIENT'S NAME: _____ **DOB:** __/__/____ **Current age:** _____ (years) _____ (months) _____ (weeks) **MEDICARE NO:** _____ (__)

Today's Date: _____

Vaccine Antigens	Date(s) all doses given *(complete all relevant dates)*	Age when dose was given**	No. VALID** doses given (circle one)	No. doses required at current age (see Table 1)	No. further doses required (circle one)
Diphtheria Tetanus Pertussis (DT only vaccines are not valid for the purposes of determining catch-up)			None One Two Three Four Five	One Two Three Four Five	None One Two Three Four Five
Poliomyelitis (IPV or OPV) Booster dose recommended at 4 years of age. If the 4th dose was given before 3.5 years of age, it should be repeated.			None One Two Three Four Five	One Two Three Four	None One Two Three Four
Hepatitis B **Administered overseas?*:** yes / no	Birth:	*N/A*	*(exl. birth dose)* None One Two Three	One Two Three	None One Two Three
MMR (NOT including measles only vaccine)			None One Two	None One Two	None One Two
Meningococcal C (MenCCV/4vMenCV) Conjugate only. Polysaccharide (4vMenPV) vaccine is not counted as a valid dose.			None One Two Three	None One	None One
Varicella			None One Two	None One	None One
Haemophilus Influenzae (Hib) (Only required if < 5 years old)			None One Two Three Four	**See Handbook Table 2.1.8**	None One Two Three
Pneumococcal (PCV) (Only required if < 5 years old – unless underlying medical risks)			None One Two Three Four	**See Handbook Table 2.1.9 and 2.1.11**	None One Two Three

Australian NIP vaccine formulations for catch-up in children <10 years of age

Choose the vaccine with the least amount of additional antigens.

DTPa containing vaccines
- Infanrix Hexa (DTPa + Polio + Hib + HepB)
- Infanrix/Tripacel (DTPa only)
- Infanrix IPV (DTPa + Polio)
- Quadracel (DTPa + Polio)

NB: Boostrix and Adacel brands are not registered for use ≤10 yrs of age.

MMR combination vaccines
- MMRII or Priorix (MMR only)
- Priorix Tetra or Proquad (MMRV) - **not for dose 1 MMR**

NB: MMRV brands are not registered for use ≥14 yrs of age.

Meningococcal vaccines
- Nimenrix* (4cMenCV)
- Menitorix (MenCCV+Hib) - for Hib catch-up only if Act-HIB unavailable

NB: * This is the only funded 4vMenCV for catch-up in <10 yrs of age.

Monovalent vaccines
- Engerix-B or H-B-Vaxll paediatric formulations (Hep B only)
- Varivax or Varilrix (varicella only)
- IPOL (Polio only)
- Prevenar 13 (PCV only)
- Act-HIB (Hib only)

CATCH-UP PLAN
Check minimum dose intervals between each dose as per Table 1.

Give all the vaccines that are due now – do not defer.

Visit 1 give now:

Visit 2 (Min___months later) give:

Visit 3 (Min____months later) give:

Visit 4 (Min____months later) give:

* Monovalent Hep B vaccine at birth, 1-2 months and 6-18 months of age is an acceptable alternative overseas Hep B schedule.

**Ensure minimum intervals have been observed as per Table 1.

Updated September 2018

OFFICE USE ONLY: Checked by _____ **(NSPHU Immunisation Team) Date:** __/__/____

https://www.nslhd.health.nsw.gov.au/phu/Documents/2018%20NSLHD%20Catch-up%20plan.pdf

Adolescents

2024 High School Program

- **Year 7**
  - dTpa
  - HPV x 1 dose
- **Year 8** – Catch-up
- **Year 10** – Men ACWY
- **IECs** - as above +
  - Polio
  - HBV
  - MMR
  - Varicella

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Vaccination of High Risk Individuals

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Vaccination of pregnant women

Maternal pertussis vaccination

- Recommended at 20 – 32 weeks (ideally 28 weeks) each pregnancy, including those that are closely spaced.
- If the vaccine has not been given by 32 weeks gestation, give any time up to delivery.
- If vaccination does not occur prior to delivery, antenatal administration is recommended.

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Why we do antenatal pertussis vaccination

- Direct passive protection of the newborn by transplacental transfer of high levels of pertussis antibodies.
- High levels of maternal antibodies give temporary protection to the baby until they complete their vaccinations.
- Reduces significant pertussis associated morbidity in infants, particularly < 3 months of age.
- Less effective at preventing mild disease.

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https://www.researchgate.net/publication/323476368_Effectiveness_of_maternal_pertussis_vaccination_in_preventing_infection_and_disease_in_infants_The_NSW_Public_Health_Network_case-control_study

How successful has it been?

- More effective in reducing the risk of pertussis in young infants than any previous strategies.
- Prior to the introduction in NSW ~ 1 death/year in infants aged < 2 months.
- Since the introduction of the vaccine in 2015:
  - ✓ there has been a decrease in cases in children < 6 months
  - ✓ there have been no deaths in infants in NSW.

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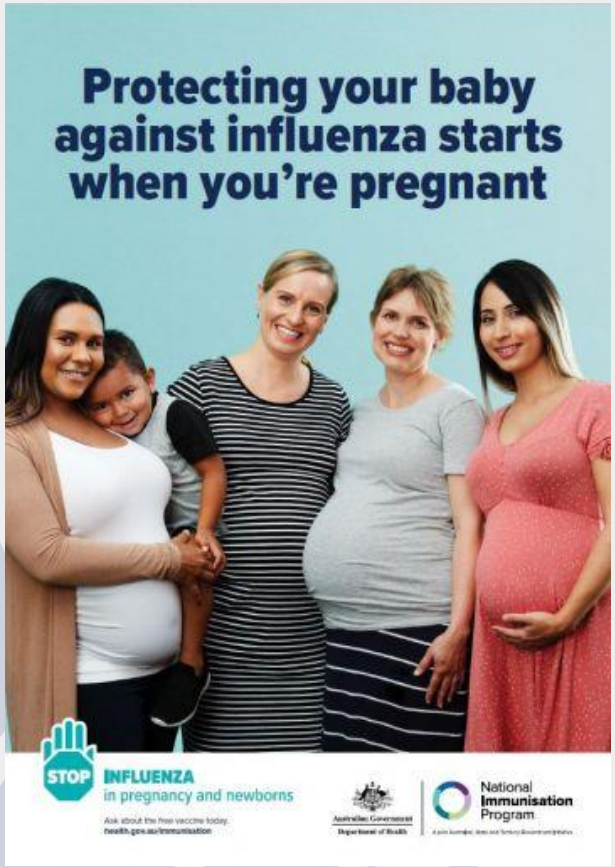
https://www.health.nsw.gov.au/Infectious/Reports/Publications/cdwr/2019/cdwr-week10-2019.pdf

Influenza in pregnancy



- Give any time during pregnancy (as early as possible).
- Can be given twice during pregnancy if spanning two seasons.
- Can be given at the same time as the antenatal pertussis vaccine (but don't wait).

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https://immunisationhandbook.health.gov.au/contents/vaccine-preventable-diseases/influenza-flu

Why we do antenatal influenza vaccination

- Protects the mother against influenza and complications resulting from it.
- Protects newborns and babies aged < 6 months - more likely to be hospitalised with influenza than any other age group.
- Estimated to reduce the risk of influenza in this age group by approximately 50%.

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https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5791002/

Healthcare worker vaccination

- Diptheria, Tetanus & Pertussis
- Hepatitis B
- Measles, Mumps & Rubella
- Varicella
- Influenza
- Tuberculosis*
- Covid 19*

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Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases

Summary This Policy Directive provides a framework for the assessment, screening and vaccination of all workers and students to reduce the risk associated with vaccine-preventable diseases in accordance with the risk category of their position.

Document type Policy Directive

Document number PD2024_015

Publication date 16 May 2024

Author branch Communicable Diseases

Branch contact (02) 9391 9195

Replaces PD2023_022

Review date 16 May 2029

Policy manual Not applicable

File number HA-2024-0001458

Status Active

Functional group Personnel/Workforce - Employment Screening, Industrial and Employee Relations, Occupational Health and Safety
Population Health - Communicable Diseases, Health Promotion, Infection Control

Applies to Ministry of Health, Public Health Units, Local Health Districts, Board Governed Statutory Health Corporations, Chief Executive Governed Statutory Health Corporations, Specialty Network Governed Statutory Health Corporations, Affiliated Health Organisations, NSW Health Pathology, Public Health System Support Division, Cancer Institute, Government Medical Officers, Community Health Centres, NSW Ambulance Service, Dental Schools and Clinics, Public Hospitals

Distributed to Ministry of Health, Public Health System, Government Medical Officers, NSW Ambulance Service, Health Associations Unions, Tertiary Education Institutes

Audience All NSW Health workers and students

11. APPENDIX LIST

11.1 Appendix 1: Evidence of Protection

11.1.1. Evidence for Diphtheria, Tetanus and Pertussis

Vaccination Evidence	One adult dose of diphtheria, tetanus and pertussis (dTpa) vaccine within the last 10 years.
Serology Evidence	N/A. Serology will not be accepted.
Other Acceptable Evidence	Nil.
Notes	dTpa booster is required 10-yearly. **DO NOT use ADT vaccine**.

11.1.2. Evidence for Hepatitis B

Vaccination Evidence	History of age-appropriate hepatitis B vaccination course in accordance with the Australian Immunisation Handbook.
Serology Evidence	AND Anti-HBs ≥ 10mIU/mL.
Other Acceptable Evidence	OR Documented evidence of anti-HBc, indicating past hepatitis B infection, and/or HBsAg+.
Notes	A completed Hepatitis B Vaccination Declaration are acceptable if all attempts fail to obtain the vaccination record. The assessor must be satisfied that a reliable history has been provided and the risks of providing a false declaration or providing a verbal vaccination history based on recall must be explained. All workers who are fully vaccinated according to the appropriate schedule, but who have no evidence of adequate hepatitis B immunity as indicated by their serology tests (non-responders to a primary hepatitis B course) are required to provide documented evidence of their hepatitis B vaccinations and serology results. A verbal history or hepatitis B vaccination declaration must not be accepted. Positive HBcAb and/or HBsAg result indicate compliance with this policy A further specialist assessment is required for HBsAg+ workers who perform Exposure Prone Procedures.

11.1.3. Evidence for Measles, Mumps and Rubella

Vaccination Evidence	Two doses of measles, mumps and rubella (MMR) vaccine at least one month apart.
Serology Evidence	OR Positive IgG for measles, mumps and rubella (Rubella immunity is provided as a numerical value with immunity status as per lab report).
Other Acceptable Evidence	OR Birth date before 1966.

NSW Health
Occupational Assessment Screening and Vaccination Against Specified Infectious Diseases

Notes	Do not compare the numeric levels reported from different laboratories. The interpretation of the result given in the laboratory's report must be followed, i.e., the report may include additional clinical advice, e.g., consideration of a booster vaccination for low levels of rubella IgG detected. **DO NOT use** measles, mumps, rubella and varicella **(MMRV) vaccine (not licensed for use in persons ≥ 14 years).** If a dose of MMRV vaccine is inadvertently given to an older person, this dose does not need to be repeated. Serology is not required following completion of a documented two dose MMR course. Those born before 1966 do not require serology.

11.1.4. Evidence for Varicella

Vaccination Evidence	Two doses of varicella vaccine at least one month apart (or evidence of 1 dose if the person was vaccinated before 14 years of age).
Serology Evidence	OR Positive IgG for varicella.
Other Acceptable Evidence	Australian Immunisation Register (AIR) History Statement that records natural immunity to chickenpox.
Notes	DO NOT use MMRV vaccine (not licensed for use in persons ≥ 14 years). If a dose of MMRV vaccine is inadvertently given to an older person, this dose does not need to be repeated. Evidence of one dose of Zostavax in persons vaccinated aged 50 years and over is acceptable.

11.1.5. Evidence for Influenza

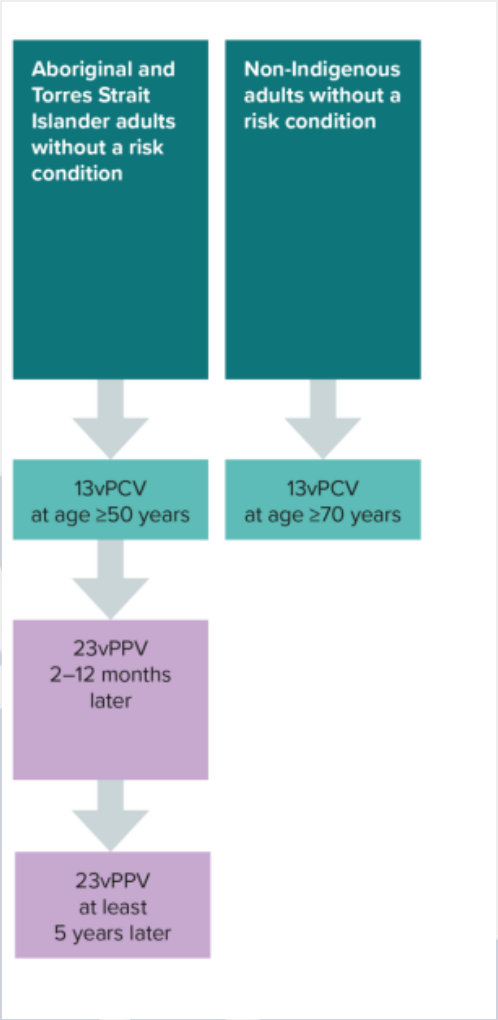
Vaccination Evidence	One dose of current southern hemisphere influenza vaccine registered for use by the Therapeutic Goods Administration (TGA), administered since 1 March 2022 or within eight weeks of the date of issue of this Policy Directive and by 1 June annually thereafter.
Serology Evidence	N/A. Serology will not be accepted.
Other Acceptable Evidence	Nil.
Notes	Influenza vaccination is required annually for all workers in Category A positions and is strongly recommended for all workers in Category B positions.

11.1.6. Evidence for COVID-19

Vaccination Evidence	All Category A and Category B Workers are required to provide an Australian Immunisation Register – Immunisation History Statement with: Category A: three doses of a TGA approved or recognised COVID-19 vaccine. Category B two doses of a TGA approved or recognised COVID-19 vaccine (in accordance with Australian Technical Advisory Group on Immunisation (ATAGI) minimum intervals). A third dose three months after completion of the primary course (generally two doses) is strongly recommended.

https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2022_030.pdf

Elderly Adults



- Changes took effect in 01/07/2020
- Less than 30 percent of population over 70 has had their 13 PCV dose recorded

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New Pneumococcal Vaccines

- The optimal pneumococcal vaccination program for Australia is currently under review.
- Prevenar 13 (13vPCV) and Pneumovax 23 (23vPPV) are the pneumococcal vaccines funded under the National Immunisation Program (NIP) for eligible individuals.
- Interim recommendations for use of extended valency vaccines (Vaxneuvance [15vPCV] and Prevenar 20 [20vPCV]) to be submitted to PBAC.

AIR DATA QUALITY

- AIR 10A Report
  - Identify individuals overdue for vaccinations
  - Data Cleaning
  - Correct Immunisation Data
  - Duplicate Records

PHN ARE EXPERTS!

AIR DATA QUALITY

- Ensure latest version of practice software
  - Recorded correctly in the immunisation section, not just notes
  - Check transmission of administered vaccines submitted to AIR and failed transmissions (daily).
- AIR overdue vaccines are not an accurate reflection of what is overdue!
- Ensure correct entry in vaccination series (i.e Polio under age 3.5)

AIR DATA QUALITY – Overseas records

tisnational.gov.au/Free-Interpreting-Service

suomi (Suomi) | Listen to this page

Australian Government Department of Home Affairs | TIS National

Interpreting for TIS National | Our services | Free Interpreting Service | Non-English speakers | Who we are | News and updates | Contact us | Policies

Free Interpreting Service

The Free Interpreting Service aims to provide equitable access to key services for people with limited or no English proficiency. TIS National delivers the Free Interpreting Service on behalf of the Australian Government.

Home / **Free Interpreting Service**

- **Eligibility**
- Services available
- Does TIS National provide document translation services?
- Register for the Free Interpreting Service

Eligibility

The following groups can access the Free Interpreting Service:

- **Medical practitioners**: when delivering Medicare-rebatable services in private practice. Nurses, reception and other practice support staff can also access the service when working with the registered medical practitioner.
- **Pharmacies**: to provide community pharmacy services.
- **Non-government organisations (NGOs)**: when providing casework and emergency services, where the organisation does not receive substantial government funding to provide these services.
- **Real estate agencies**: to discuss any private residential property matter.
- **Local government authorities**: to communicate about most local government services.
- **Trade unions**: to assist workers to access support and advice.
- **Parliamentarians**: for constituency purposes.
- **Eligible allied health professionals**: when delivering Medicare-rebatable services in private practice within a specific local

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What Else Is NEW?

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Digital Baby Blue Book

- Currently under development
- Replaces Save The Day App
- Continue using paper Blue Book
- Ensure that Immunisation page has childs full name and DOB (legal document)

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NSW pharmacists vaccination standards

NSW Pharmacist vaccination standards provide detailed outline on requirements:

- Must undertake training by an accredited provider.
- Must annually review best practice.
- Must record encounter on the AIR.
- Must undertake annual CPR training.
- Must administer and store vaccines as per National Guidelines.

https://www.health.nsw.gov.au/immunisation/Documents/pharmacist-new-standard.pdf

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Changes to the pharmacists vaccination standards

Name	Abbreviated/ alternate name	Limitations of use	Patient age
SARS-COV-2 (COVID-19) vaccine†			5 years and over
Diphtheria toxoid†			5 years and over*
Tetanus toxoid†			5 years and over*
Pertussis antigen†			5 years and over*
Hepatitis A vaccine†	Hep A		5 years and over*
Hepatitis B vaccine†	Hep B		5 years and over*
Human papillomavirus vaccine†	HPV		9 years and over*
Influenza and coryza vaccine 'Influenza vaccine'†			5 years and over*
Japanese encephalitis vaccine†	JE	Mandatory completion of the additional training module: *Japanese encephalitis - A learning resource for immunisation providers* hosted by the Pharmaceutical Society of Australia or the Pharmacy Guild of Australia	5 years and over*
Measles vaccine†			5 years and over*
Mumps vaccine†			5 years and over*
Rubella vaccine†			5 years and over*
Meningococcal vaccine†	MenACWY (quadrivalent) conjugate vaccine; or MenC – monovalent meningococcal serogroup C – tetanus toxoid conjugate		5 years and over*
Meningococcal B vaccine†	MenB		5 years and over*
Poliomyelitis vaccine†	Polio		5 years and over
Typhoid vaccine†		Intramuscular injection (IMI) formulation only	5 years and over
Recombinant varicella zoster virus glycoprotein e antigen vaccine†	Zoster vaccine	Shringrix vaccine brand only	18 years and over*
Varicella vaccine†	VZV		5 years and over*
Haemophilus influenzae vaccine†	Haemophilus influenzae type b (Hib) vaccine		5 years and over*
Pneumococcal vaccine†		Pneumococcal conjugate vaccine only	Aboriginal people aged 50 years and over and non-Aboriginal people aged 70 years and over
Recombinant Respiratory Syncytial Virus pre-fusion F protein vaccine§	RSV vaccine	Arexvy and Abrysvo brands only In accordance with Therapeutic Goods Administration (TGA) approved Product Information and Australian Technical Advisory Group on Immunisation (ATAGI) recommendations #	People aged 60 years and over
Rabies vaccine† β	Rabies and other lyssaviruses	Intramuscular injection (IMI) pre-exposure prophylaxis treatment only for people who are not immunocompromised‡	5 years and over*

§ ATAGI advice in regard to medical contraindications, precautions, and vaccine administration recommendations must be adhered to. A person with any precaution or contra-indication to a vaccine must be referred to a medical practitioner.
# Where the TGA approved Product Information and ATAGI recommendations differ, the advice of ATAGI must be followed.
†Vaccination recommendations for individuals and administration processes must be in accordance with the digital edition of the Australian Immunisation Handbook.
* Refer to the NSW Immunisation webpage for advice on eligibility for State funded and National Immunisation Program vaccines.
‡Refer to the Australian Immunisation Handbook for general guidance regarding identifying and assessing people who are immunocompromised.
β patients **MUST** be educated about first aid and the need to seek medical assessment for any potential exposure to rabies or Australian Bat Lyssavirus regardless of having been vaccinated.

https://www.health.nsw.gov.au/immunisation/Documents/pharmacist-new-standard.pdf

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Whats on The Horizon?

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- Intranasal and intradermal influenza vaccines
- JN.1 Covid vaccines
- Local manufacturing of vaccines
- Trivalent flu vaccines for 2025?

Moderna appoints new manufacturing site head of Melbourne mRNA vaccine facility

PHILLIP HAZELL
January 12, 2024, 12:38 pm

Image: Moderna

Moderna, Inc. today announced the appointment of Emma Harrington as the inaugural manufacturing site head for the company's new mRNA vaccine manufacturing site in

A QUICK TOUCH-UP

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Adverse Events Following Immunisation (AEFI) reporting

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NSW Vaccine Safety Surveillance Systems

Detect rare, late-onset or unexpected adverse events that may not be detected in pre-licensure vaccine trials.

Passive surveillance

- AEFI are a **notifiable condition** under the *NSW Public Health Act (2010)* and must be reported to the Public Health Unit.

Active surveillance

- **AusVaxSafety** will send an automated SMS or email (via Vaxtracker or SmartVax) to a person who received the vaccine to monitor for AEFIs.
- **Public Health Rapid, Emergency, Disease and Syndromic Surveillance (PHREDSS)** will provide real-time public health syndromic surveillance to identify changes in trends of ED presentations of specific AEFIs.
- **Establishing baseline rate of Adverse Events of Special Interest (AESI)** to support active surveillance

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AEFI surveillance for GP practices

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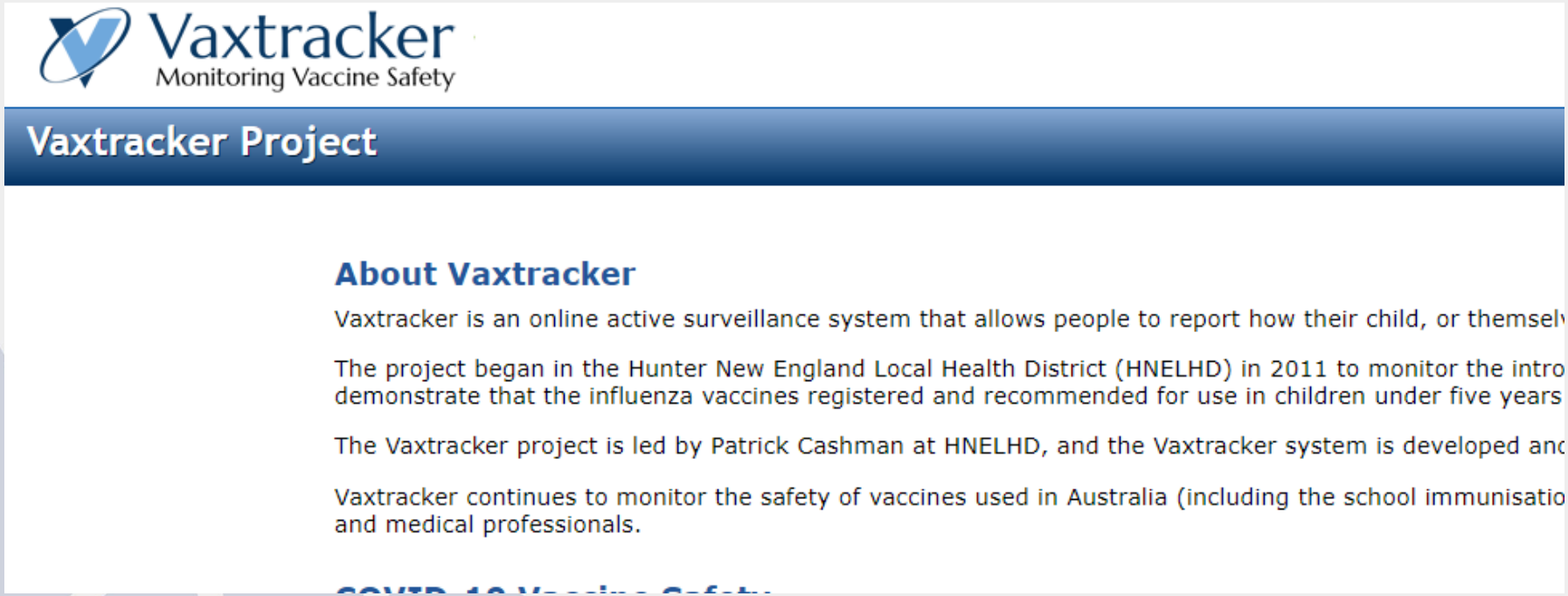
https://www.smartvax.com.au/

AEFI surveillance for NSW Health sites



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FluTracking
Tracking COVID-19

Join Now!

Voluntary Participation

It takes less than 30 seconds each week to participate and track flu and COVID-19 in your area.

Crowdsourced Data

Over 140,000 FluTrackers report each week.

View Maps

Weekly reports are mapped so that you can track flu and COVID-19 in your area.

Australian Government
Department of Health and Aged Care

MINISTRY OF HEALTH
MANATŪ HAUORA

NSW GOVERNMENT Health
Hunter New England
Local Health District

HMRI
Hunter Medical Research Institute

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

E/S/R
Science for Communities
He Pūtaiao, He Tāngata

https://info.flutracking.net

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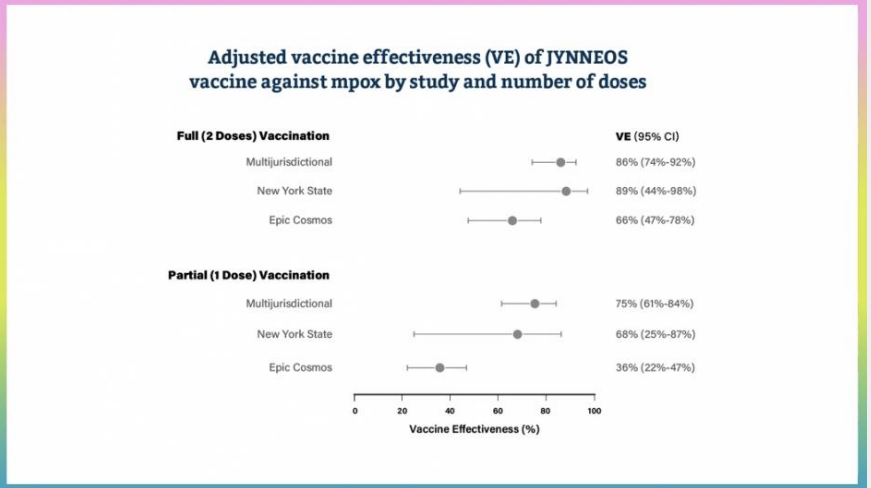
Vaccine efficacy

TRAX
TRACKING OUR COMMUNITIES' RESPONSES TO THE MPOX OUTBREAK

- Initially no significant clinical data on mpox
- UK study showed up to 78% effectiveness with 1 dose[1]
- Subsequent cohort studies varied 36-75% 1 dose and 66-86% 2 dose efficacy[2]
- Some breakthrough infections after PEP and PrEP[3]



1- Bertran et el 2023 Lancet ID 2- https://www.cdc.gov/poxvirus/mpox/cases-data/JYNNEOS-vaccine-effectiveness.html
3- Berens-Riha et al 2022 Eurosurveillance 27(48)

NSW Health South Eastern Sydney

Courtesy: Dr Phillip Reid

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Australia's active vaccine safety system

NCIRS | AusVaxSafety | PAEDS

AusVaxSafety
An NCIRS led collaboration

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About us | Our work | Safety data | News & events | Resources

Monkeypox vaccine safety surveillance

Find out more

COVID-19 vaccine safety data

Monkeypox vaccine safety surveillance

Influenza vaccine safety data

Adverse event long term follow-up

News & events

All news & events >

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https://ausvaxsafety.org.au/

Reporting an Adverse event following immunisation (AEFI)

- Report all **uncommon, serious or unexpected AEFI** or **any event felt to be significant following vaccination**.
- An AEFI is considered serious if it:
  - results in death
  - is life threatening
  - requires hospitalisation
  - results in persistent or significant disability or incapacity
  - results in a congenital anomaly/birth defect
  - does not fit in with the common reactions for that vaccine outlined in the product information.
- Any **medical event** that requires **intervention to prevent one of the outcomes above** may also be **considered serious**

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Australian Government
Department of Health
Therapeutic Goods Administration

TGA use only
Date report received:
Notification ID:

This form, when completed, will be classified as '**For official use only**'.
For guidance on how your information will be treated by the TGA see: Treatment of information provided to the TGA at <https://www.tga.gov.au/treatment-information-provided-tga>.

National Adverse Events Following Immunisation (AEFI) reporting form

Vaccinated person's details					
Personal details					
Surname:		First name:			
Sex:	Unknown	Date of Birth:	**or** Age: Years	Months	
Street address:					
Suburb:		State: NT	Postcode:		
Phone:		Email:			
Name of parent/guardian: (if relevant)					
Indigenous status: Is the person of Aboriginal or Torres Strait Islander origin?	Yes, Both Aboriginal and Torres Stra				
What is the Ethnicity of the person?					
Vaccination provider details					
Surname:		First name:			
Street address:					
Suburb:		State: NT	Postcode:		
Phone:		Email/Fax:			
Profession:	Other, Please Specify				
Clinical Setting:	Aged Care Facility				

PO Box 100 Woden ACT 2606 ABN 40 939 406 804
Phone: 1800 020 653 Fax: 02 6203 1605 Email: info@tga.gov.au https://www.tga.gov.au

TGA Health Safety Regulation

https://www.tga.gov.au/sites/default/files/national-adverse-events-following-immunisation-aefi-reporting-form-feb-2021.pdf

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Obtaining clinical advice

- **Public Health Unit**
  - Guidance can be sought through the local Public Health Unit on **1300 066 055**
  - during business hours on whether an event is notifiable and for general immunisation advice
  - **Email for less urgent queries**
    - **NSLHD-PHUImmunisation@health.nsw.gov.au**

- **NSW Immunisation Specialist Service**
  - Clinicians can contact the **Immunisation Advice Line** for specialist immunisation advice during business hours on **1800 679 477**
  - Referrals - individuals can be referred to the appropriate services in consultation with the NSW Immunisation Specialist Service if further immunisation specialist consultation or assessment be required

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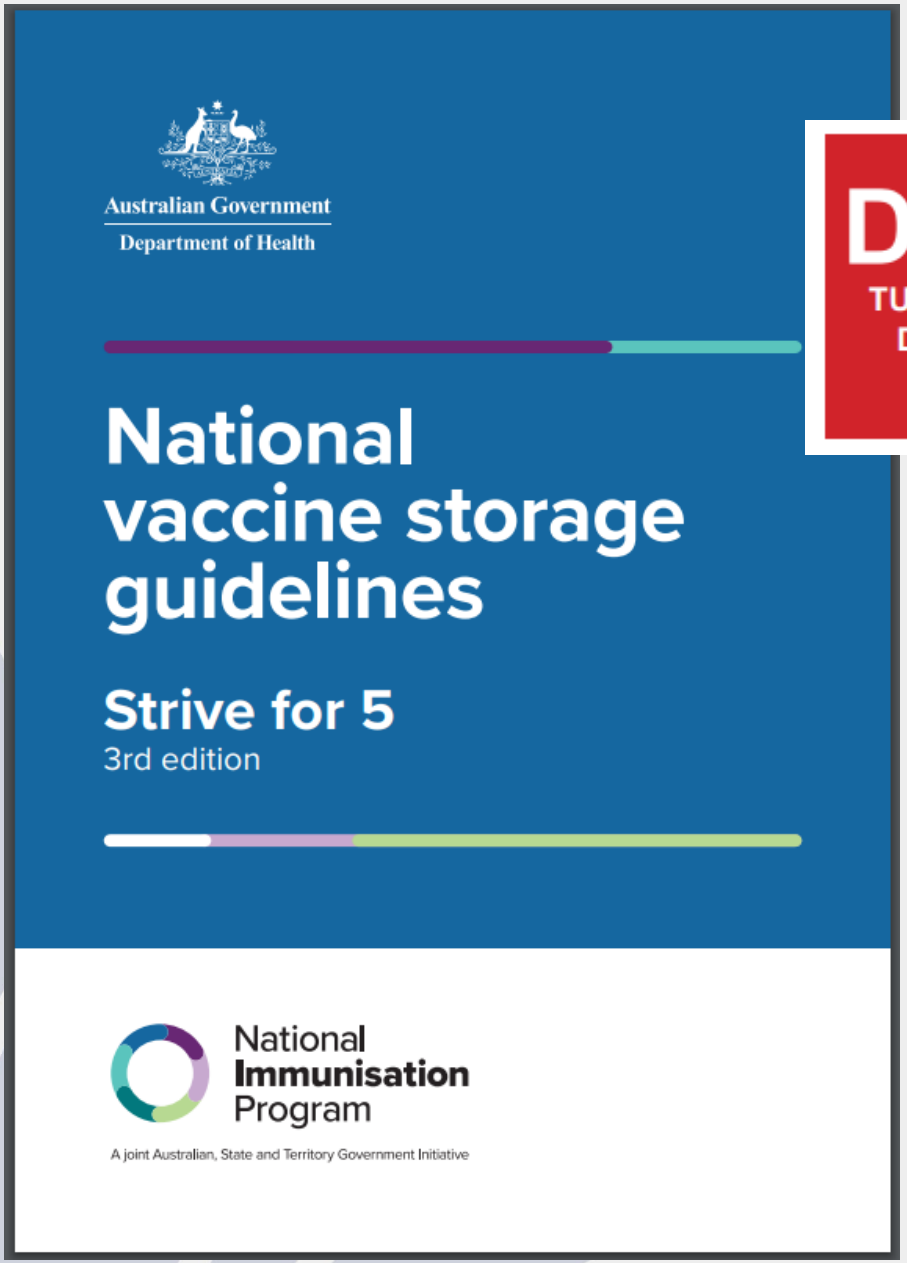
Reporting vaccination errors

- All drug administration errors need to be reported to the TGA.
- Administration errors include:
    - Incorrect vaccine/route/dose
    - Expired vaccine
    - Given outside recommended age
    - Given before recommended interval
    - Vaccine contraindicated
- Report by completing the TGA AEFI form and returning by fax or email.

Cold chain



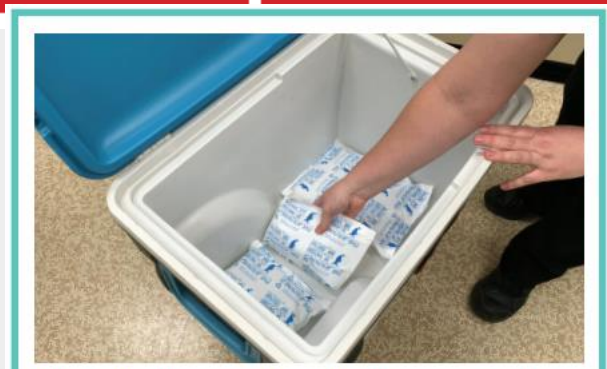


Figure 2: Ice packs/gel packs placed in bottom of cooler to chill cooler

Figure 3: Insulating material placed in bottom of cooler

National Vaccine Storage Guidelines **3rd edition June 2019**

Strive for 5

Minimum/maximum vaccine refrigerator temperature chart

Australian Government Department of Health

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

Location of refrigerator		Month		Year	

Day of month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM
Record max. temp																															
+12																															
+11																															
+10																															
+9																															
+8																															
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−2																															
Record min. temp																															
Record current temp																															
Initials																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

TOO WARM. TAKE IMMEDIATE ACTION

STRIVE FOR 5

TOO COLD. TAKE IMMEDIATE ACTION

+12 +11 +10 +9 +8 +7 +6 +5 +4 +3 +2 +1 0 −1 −2

Instructions for use

- **CHECK** temperatures twice a day in the morning and afternoon
- **RECORD** and plot maximum, minimum and current temperatures on chart
- **RESET** temperature monitoring device after recording temperatures
- **ACT** if temperature out of range as per cold chain breach steps

Date	
Audited by	
Cleaning date	

Take immediate corrective action and record on the other side of this chart

COLD CHAIN BREACH STEPS (refer to Appendix 3 in *Strive for 5*)

1. Immediately isolate the vaccines and prepare to transfer them into temporary monitored vaccine storage, if necessary. Start conditioning ice packs/gel packs.
2. Keep vaccines refrigerated between +2°C and +8°C for as long as possible, and label them 'Do not use' while preparing to transfer them.
3. Contact your state or territory health department as soon as possible (during business hours).
4. Do not discard any vaccine until advised to do so by your state or territory health department.
5. Take steps to correct the problem and to prevent it from recurring.
6. For privately purchased vaccines, contact the manufacturer for advice.
7. Record fridge temperature issues and actions on the flipside of this chart.
8. Determine if anyone has received compromised vaccine. Discuss your revaccination requirements with your state or territory health department.

- Temperatures above 8°C are **too warm**.
- **Correct range** temperature 2°C to 8°C
- Temperatures below 2°C are **too cold**.

Copies of this chart can be ordered or downloaded from the Australian Government Department of Health website: www.health.gov.au/immunisation.

https://www.health.gov.au/resources/publications/national-vaccine-storage-guidelines-strive-for-5-vaccine-fridge-temperature-chart-poster

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If you've had a cold chain breach…

Call the PHU as soon as possible

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Min/max thermometers

- Required for any facility storing vaccines
- Must have sensor cable
- Use as backup for fridge in case of power failure
- Use to monitor vaccines in esky
- Batteries should be changed annually
- Needs annual calibration (refer to Strive for 5)

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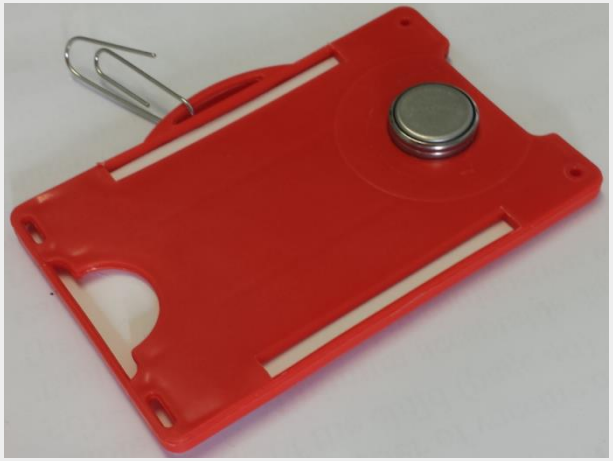
Data Loggers



CLOUD BASED LOGGERS SHOULD BE MANUALLY CHECKED

- Required for all providers storing vaccines
- Continually monitor fridge temperature - battery operated (change according to manufacturer's recommendation)
- Can be free standing or built in – proper placement is important
- Readings should be set to every 5 minutes
- Weekly download
- Does not replace the twice daily manual temp readings

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NSW Health My Health Learning module

https://nswhealth.seertechsolutions.com.au/public_content/HETICP/HETI/CCMWebv3/story_html5.html

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RESOURCES
TARGET
LEARN
STRATEGY
TEACH
PLANNING
COMMUNICATION
COLLEGE
EDUCATION
INTELLIGENCE
TRAINING
EDUCATIONAL
SKILL
DISCOVER
STRATEGY
COACHING
TEACHER
INSTRUCTION
MEDIA
INFORMATION
SCHOOLING
STUDY
STUDENT
UNIVERSITY
PLAN
SUCCESS
RESOURCES
IMPORTANT
SUCCESSFUL
SCHOOL
TRAINING
TEACH
SKILL
PLANNING
STRATEGY
MEDIA
GOAL
EDGE

Additional HESA approved immunisation courses

- South Australian Department of Health - Understanding Vaccines and the National Immunisation Program: up to 70 hours of online learning, $350.

- Australian College of Nursing - 347 National Immunisation Program for Healthcare Practitioners: 80 hours of online learning, $500.

- Cunningham Centre Immunisation Course: 130 hours of online learning, plus optional clinical placement and evidence gathering. Cost for those external to Queensland Health, $700.

- The Benchmarque Group - Immunisation Endorsement Pathway (Nurse Immuniser): 112 hours of active learning predominantly online and includes a one day face-to-face workshop, $790.

- University of Melbourne - Immunisation (Nurse Immuniser): 100-150 hours of online learning, plus an optional clinical placement (Additional cost), $825.

- Australian Catholic University National Immunisation Education Program for Health Professionals: 150 hours of online learning and self-assessment, $995.

- La Trobe University – Nurse Immuniser Program : 150 hours of online learning with an on-campus clinical simulation at a Melbourne campus, $1500 for early bird registration and $2000 standard.

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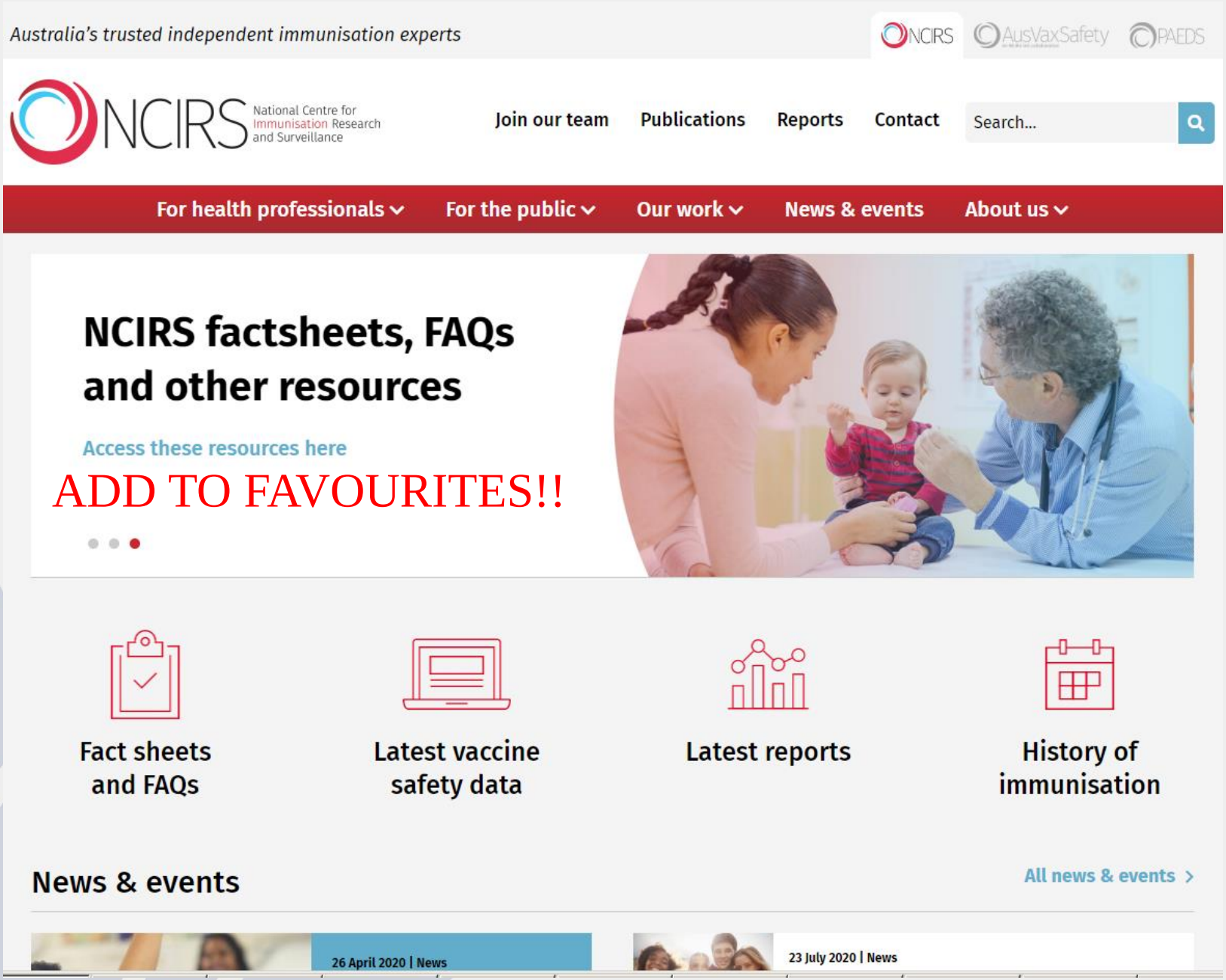


http://www.ncirs.org.au/

NCIRS specialist immunisation services

New South Wales

Advice line	Health professionals are encouraged to contact their local PHU as their first point of contact. **Tel:** 1300 066 055 **Further support:** NSW Immunisation Specialist Service (NSWISS) **Tel:** 1800 NSWISS (1800 679 477) 9 am - 5 pm (Mon-Fri)
Clinics	**The Children's Hospital at Westmead:** • Specialist Immunisation Clinic • Telehealth consultations • 1800 679 477 **Sydney Children's Hospital Randwick:** • Specialist Immunisation Clinic - (02) 9382 1470 **John Hunter Hospital** • Children's Specialist Clinics (Paediatric Immunologist accepts referrals) - (02) 4921 3670
Adverse events reporting	A suspected AEFI in NSW should be reported by contacting your local Public Health Unit (PHU). Your PHU will complete the National Adverse Events Following Immunisation (AEFI) Reporting Form and forward it to the NSW Health Immunisation Unit for forwarding to the Therapeutic Goods Administration (TGA). **Tel:** 1300 066 055

http://www.ncirs.org.au/health-professionals/specialist-immunisation-services

The Australian Immunisation Handbook provides clinical advice for health professionals on the safest and most effective use of vaccines in their practice.

These recommendations are developed by the Australian Technical Advisory Group on Immunisation (ATAGI) and approved by the National Health and Medical Research Council (NHMRC).

About the Handbook →

Handbook quicklinks

COVID-19 on health.gov.au

Vaccine preventable diseases

Vaccination for special risk groups

Catch-up vaccination

https://immunisationhandbook.health.gov.au

Planned catch up for overdue vaccines	Only **one** catch up schedule can ever be recorded per individual. A follow up is required to make sure individuals return for the planned vaccination. This question may be used to support serological testing for natural immunity or if additional vaccines need to be ordered. A follow up is **not** required if: • you have vaccinated the individual and they are no longer overdue for any vaccines, or • you feel the parent/guardian does not intend to vaccinate the individual. If you have organised to commence the individual on a catch up schedule for any overdue vaccines you were unable to administer today, tick this box. ☐

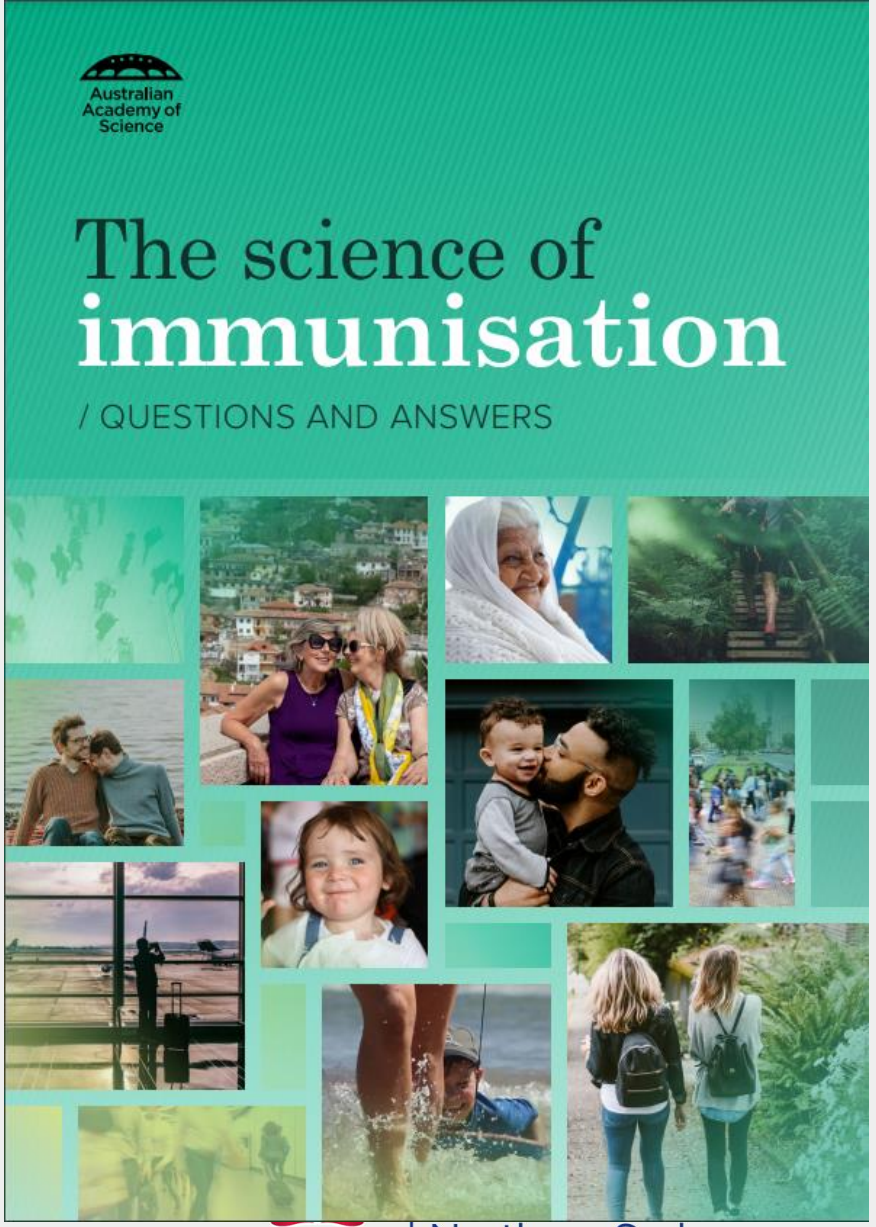
Questions about vaccination

National Immunisation Program

A joint Australian, State and Territory Government Initiative

Download or order hard copy from:

https://www.health.gov.au/resources/publications/questions-about-vaccination



https://www.science.org.au/files/userfiles/learning/documents/immunisation/2021/science-of-immunisation-QA-without-references-2021.pdf

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Immunisation

Immunisation is a simple, safe and effective way of protecting people against harmful diseases before they come into contact with them. Immunisation not only protects individuals, but also others in the community, by reducing the spread of preventable diseases.

Health professionals >
Find information that will help you deliver your service to your patients

Learn about immunisation

Find out all about immunisation, how it protects you and your family and how to get started.

Check the National Immunisation Schedule

The National Immunisation Program (NIP) Schedule sets out free vaccinations for children, school programs, Aboriginal and Torres Strait Islander peoples and other

Check immunisation history

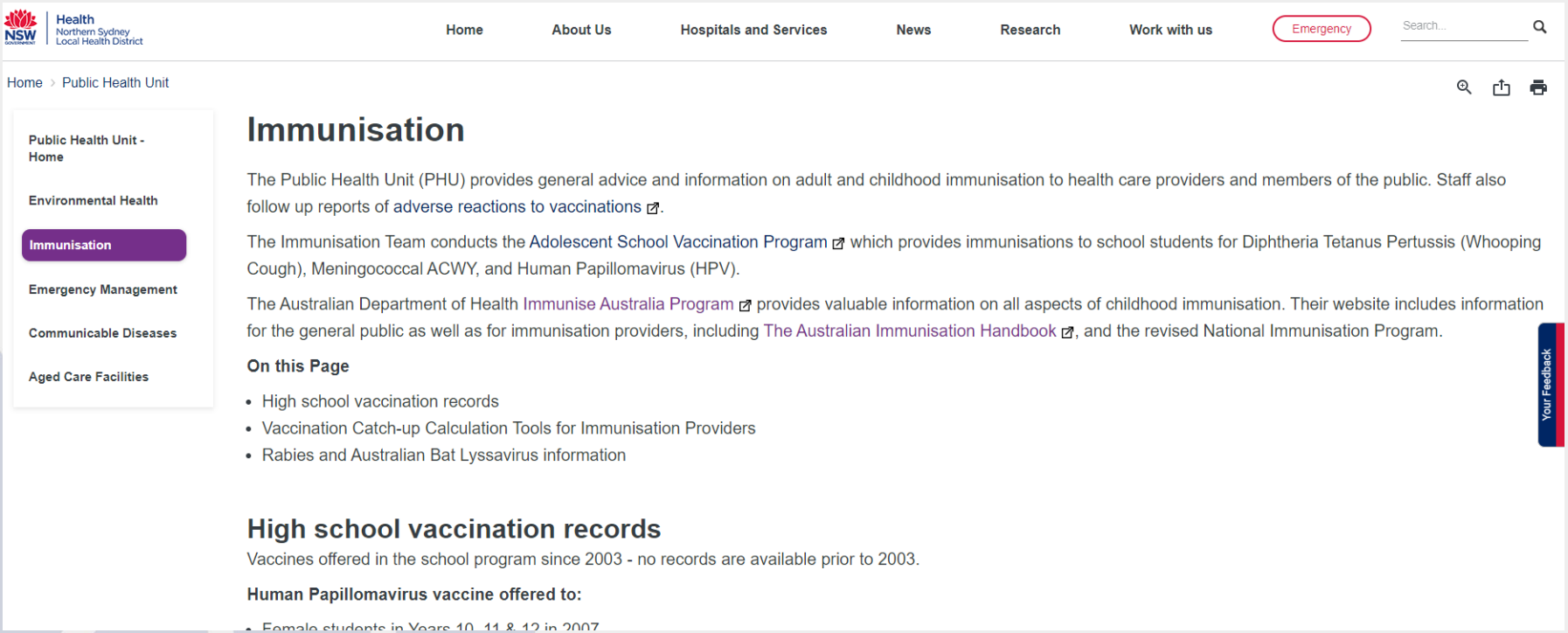
Find out what vaccines you or your child has received and request an immunisation history statement.

Get vaccinated

Find out how to get vaccinated, what to expect and how to set immunisation reminders.

https://www.health.gov.au/health-topics/immunisation

NSLHD PHU Website



https://www.nslhd.health.nsw.gov.au/phu/Pages/default.aspx#

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