Immunisation Update 2022

Nepean Blue Mountains PHN with

NCIRS & NSW Health

Wednesday 6 April 2022

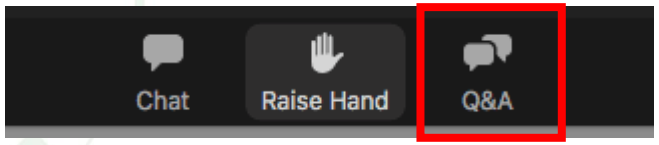
7.00pm – 8.30pm

Acknowledgement of Country

I would like to acknowledge the traditional owners of the land in which we all meet today and to pay my respects to Aboriginal elders past, present and emerging.

I would also like to extend my respect to all Aboriginal people present today.

Housekeeping



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Blue Mountains | Hawkesbury | Lithgow | Penrith

Introductions

The Panel

- **Dr Archana Koirala –** Staff Specialist/Clinical Associate Lecturer, NCIRS
- **George Truman –** Epidemiologist, Public Health Unit, Nepean Blue Mountains LHD
- **Lisa Allchin –** Immunisation Coordinator, Public Health Unit, Nepean Blue Mountains LHD
- **Nick Rosser –** HealthPathways Program Manager, Wentworth Healthcare
- **Lauren Crisell –** Program Development Officer - Clinical Services Development, Wentworth Healthcare

Supported by:

- **Kirrilee Barlow –** Program Development Officer - Primary Care Initiatives, Wentworth Healthcare

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Agenda

1. **NBMLHD & PHN Immunisation Update –** *Dr Archana Koirala*
2. **Immunisation Report Card for our region –** *George Truman*
3. **Public Health Unit Update –** *Lisa Allchin*
4. **HealthPathways –** *Nick Rosser*
5. **PHN Immunisation Resources –** *Lauren Crisell*
6. **Q&A**

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NBMLHD PHN Immunisation update

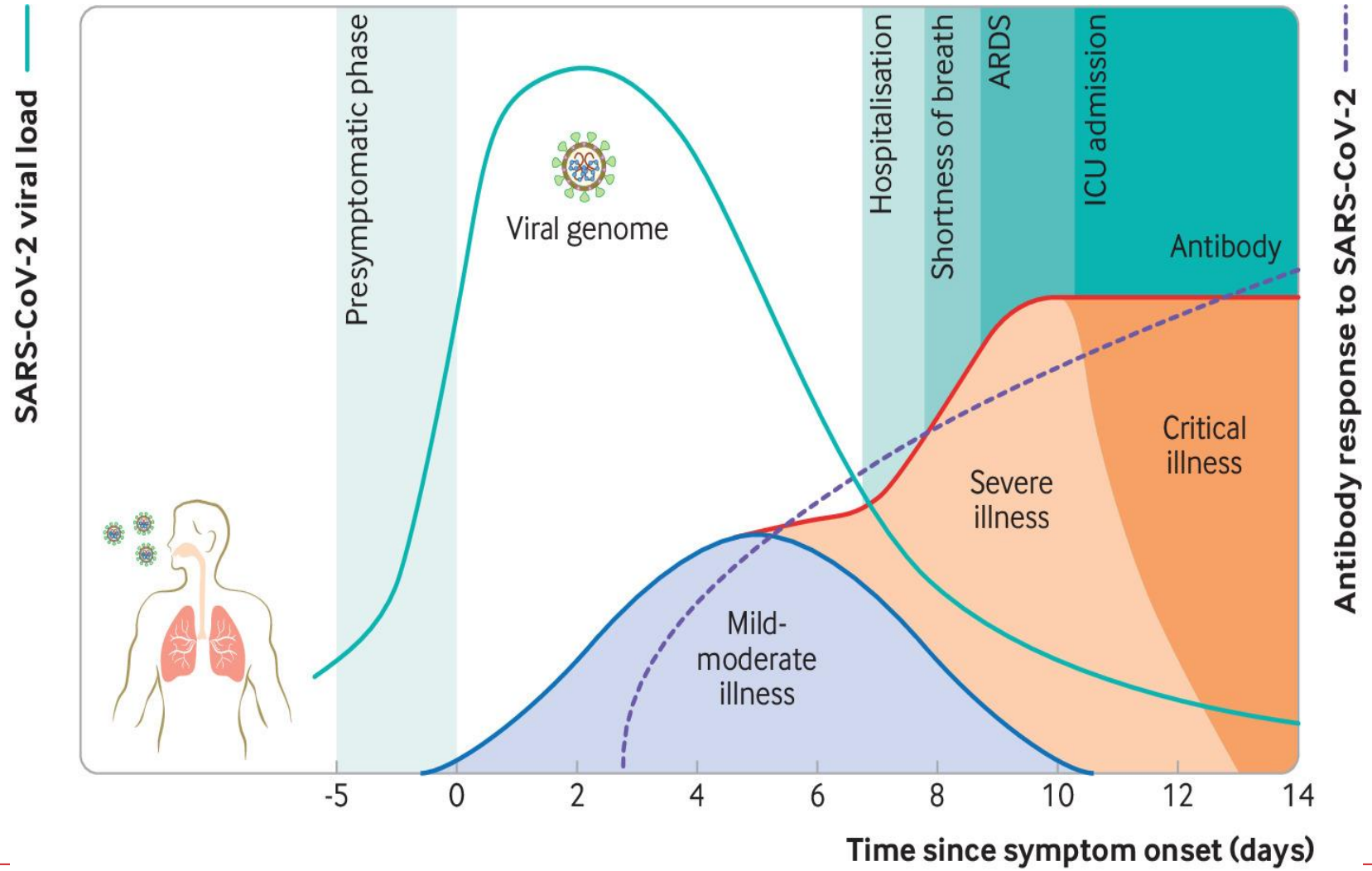
Archana Koirala
ID Physician, NCIRS, Nepean Hospital

NCIRS
National Centre
for Immunisation
Research and
Surveillance

Outline

- Quick update: COVID-19 vaccines
- Childhood immunisation coverage rates during COVID
- 2022 influenza vaccinations.
  - Co administration of COVID and influenza vaccines
- Effect of COVID on influenza infection
- Japanese encephalitis

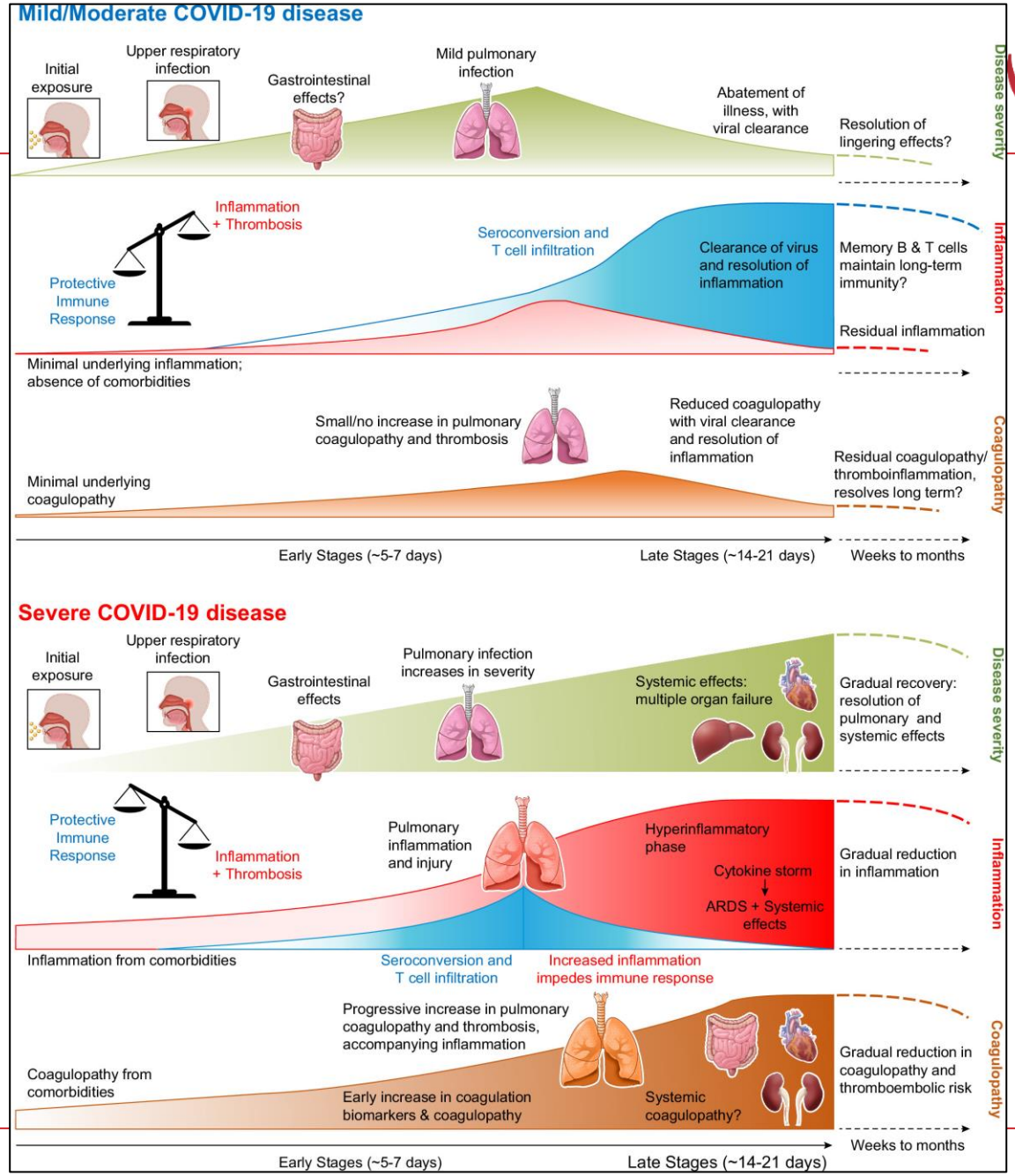
COVID-19



www.bmj.com/content/371/bmj.m3862

COVID-19

- Stages of illness
  - Viral
  - Inflammatory
  - Post-infectious
- Treatment needs to be tailored



https://journals.physiology.org/doi/full/10.1152/physrev.00035.2020

AUSTRALIAN TECHNICAL ADVISORY GROUP ON IMMUNISATION (ATAGI) RECOMMENDED DOSES AND VACCINES

GROUP	VACCINES	PRIMARY COURSE	BOOSTER	WINTER DOSE
GENERAL POPULATION				
5 years	Pfizer (COMIRNATY) (For Ages 5 to <12)	FIRST DOSE → SECOND DOSE	Not approved or recommended.	Not approved or recommended.
6 – 11 years	Pfizer (COMIRNATY) (For Ages 5 to <12) Moderna (SPIKEVAX)^	FIRST DOSE → SECOND DOSE	Not approved or recommended.	Not approved or recommended.
12 – 15 years	Pfizer (COMIRNATY) Moderna (SPIKEVAX)	FIRST DOSE → SECOND DOSE	Not approved or recommended.	Not approved or recommended.
16 – 64 years	Pfizer (COMIRNATY)* Moderna (SPIKEVAX) Novavax (NUVAXOVID) *(18+ only)* AstraZeneca (VAXZEVRIA) *(18+ only)*	FIRST DOSE → SECOND DOSE	BOOSTER *3 months after Primary Course*	Not approved or recommended.
65+ years	Pfizer (COMIRNATY) Moderna (SPIKEVAX) Novavax (NUVAXOVID) AstraZeneca (VAXZEVRIA)	FIRST DOSE → SECOND DOSE	BOOSTER *3 months after Primary Course*	WINTER DOSE *From 4 months after Booster*
SPECIAL POPULATIONS				
5 years Severely immunocompromised	Pfizer (COMIRNATY) (For Ages 5 to <12)	FIRST DOSE → SECOND DOSE → THIRD DOSE *Third dose 2 months after second dose*	Not approved or recommended.	Not approved or recommended.
6 – 11 years Severely immunocompromised	Pfizer (COMIRNATY) (For Ages 5 to <12) Moderna (SPIKEVAX)^	FIRST DOSE → SECOND DOSE → THIRD DOSE *Third dose 2 months after second dose*	Not approved or recommended.	Not approved or recommended.
12 – 15 years Severely immunocompromised	Pfizer (COMIRNATY) Moderna (SPIKEVAX)	FIRST DOSE → SECOND DOSE → THIRD DOSE *Third dose 2 months after second dose*	Not approved or recommended.	Not approved or recommended.
16+ years Severely immunocompromised	Pfizer (COMIRNATY)* Moderna (SPIKEVAX) Novavax (NUVAXOVID) *(18+ only)* AstraZeneca (VAXZEVRIA) *(18+ only)*	FIRST DOSE → SECOND DOSE → THIRD DOSE *Third dose 2 months after second dose*	BOOSTER *3 months after Primary Course*	WINTER DOSE *From 4 months after Booster*
Pregnant, breastfeeding or planning pregnancy	Pfizer (COMIRNATY) Moderna (SPIKEVAX) Novavax (NUVAXOVID) *(18+ only)* AstraZeneca (VAXZEVRIA) *(18+ only)*	FIRST DOSE → SECOND DOSE	BOOSTER *3 months after Primary Course*	Not approved or recommended.
Residents of aged care or disability care facilities	Pfizer (COMIRNATY) Moderna (SPIKEVAX) Novavax (NUVAXOVID) *(18+ only)* AstraZeneca (VAXZEVRIA) *(18+ only)*	FIRST DOSE → SECOND DOSE	BOOSTER *3 months after Primary Course*	WINTER DOSE *From 4 months after Booster*
Aboriginal and Torres Strait Islander people aged 50+ years	Pfizer (COMIRNATY) Moderna (SPIKEVAX) Novavax (NUVAXOVID) AstraZeneca (VAXZEVRIA)	FIRST DOSE → SECOND DOSE	BOOSTER *3 months after Primary Course*	WINTER DOSE *From 4 months after Booster*

Notes

https://www.health.gov.au/sites/default/files/documents/2022/03/atagi-recommended-covid-19-doses-and-vaccines.pdf

Childhood immunisation coverage rates during COVID

Table: Vaccines given to all children at the six age-based NIP milestones in 2020

2 months (can be from 6 weeks)	**4 months**	**6 months**
• Diphtheria-tetanus-pertussis-hepatitis B-polio-*Haemophilus influenzae* type b (Infanrix® hexa) dose 1 • Pneumococcal (Prevenar 13®) dose 1 • Rotavirus (Rotarix®) dose 1	• Diphtheria-tetanus-pertussis-hepatitis B-polio-*Haemophilus influenzae* type b (Infanrix® hexa) dose 2 • Pneumococcal (Prevenar 13®) dose 2 • Rotavirus (Rotarix®) dose 2	• Diphtheria-tetanus-pertussis-hepatitis B-polio-*Haemophilus influenzae* type b (Infanrix® hexa) dose 3
12 months	**18 months**	**48 months**
• Meningococcal ACWY (Nimenrix®) • Measles-mumps-rubella (M-M-R® II or Priorix®) • Pneumococcal (Prevenar 13®) dose 3 (or dose 4 for children with specified medical conditions and Indigenous children in WA, NT, SA and QLD, in whom dose 3 scheduled at 6 months)	• *Haemophilus influenzae* type b (ActHIB®) • Measles-mumps-rubella-varicella (Priorix-Tetra® or ProQuad®) • Diphtheria-tetanus-pertussis (Infanrix® or Tripacel®)	• Diphtheria-tetanus-pertussis-polio (Infanrix® IPV or Quadracel®)

WA: Western Australia; NT: Northern Territory; SA: South Australia; QLD: Queensland

https://ncirs.org.au/sites/default/files/2020-11/COVID-19_Impact_Analysis_Final%20Report.pdf

COVID's impact to childhood vaccination

unicef | for every child

ACT

Press release

COVID-19 pandemic leads to major backsliding on childhood vaccinations, new WHO, UNICEF data shows

23 million children missed out on basic childhood vaccines through routine health services in 2020, the highest number since 2009 and 3.7 million more than in 2019

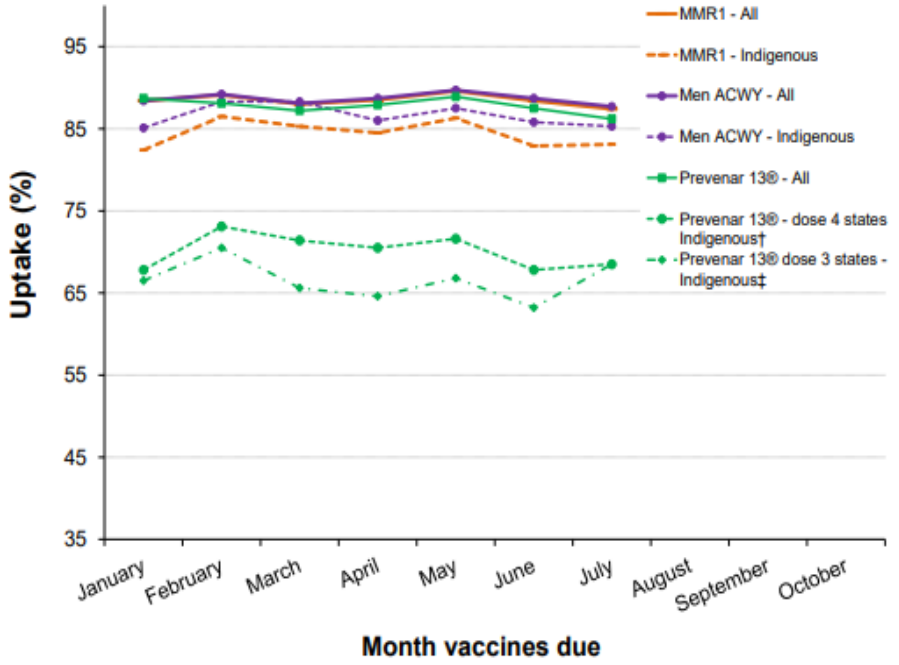
15 July 2021

https://www.unicef.org/press-releases/covid-19-pandemic-leads-major-backsliding-childhood-vaccinations-new-who-unicef-data

Childhood immunisation coverage rates during COVID

- No substantial impact
- Sustained and consistent messaging: immunisation is an essential health service
- Efforts by immunisation providers to provide COVID-19 safe vaccination services
- Continued public engagement wit immunisation.

Figure 3: Vaccination uptake at the 12-month age milestone, assessed 2 months after vaccines due for successive 1-month wide birth cohorts, by Indigenous status, Australia, 2020*



* Vaccination uptake reflected in this figure does not equate to vaccination coverage, which for this age-based milestone would usually be assessed at 24 months of age, capturing catch-up vaccinations well beyond the first two months assessed here.

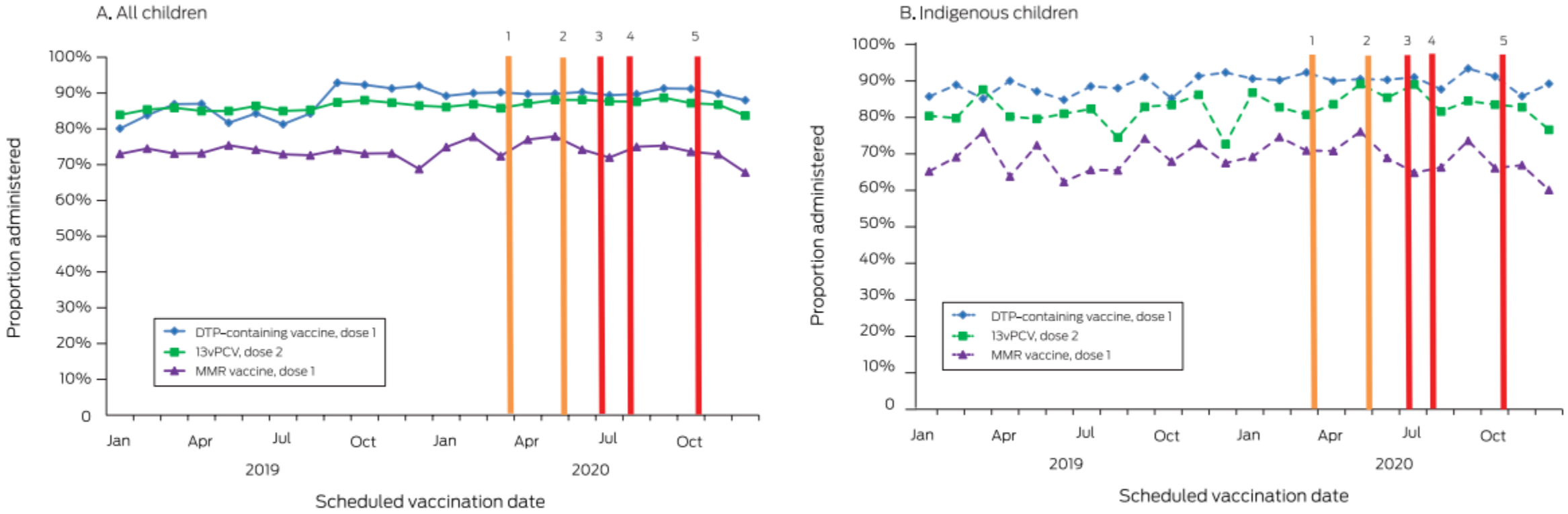
† The Northern Territory, Queensland, South Australia and Western Australia.

‡ The Australian Capital Territory, New South Wales, Tasmania and Victoria.

https://ncirs.org.au/sites/default/files/2020-11/COVID-19_Impact_Analysis_Final%20Report.pdf

Childhood immunisation in Victoria during COVID

1 Vaccination rates at 2, 4 and 12 month milestones for selected vaccine doses, assessed one month after scheduled vaccination dates for successive one-month birth cohorts, Victoria, 2019 and 2020*

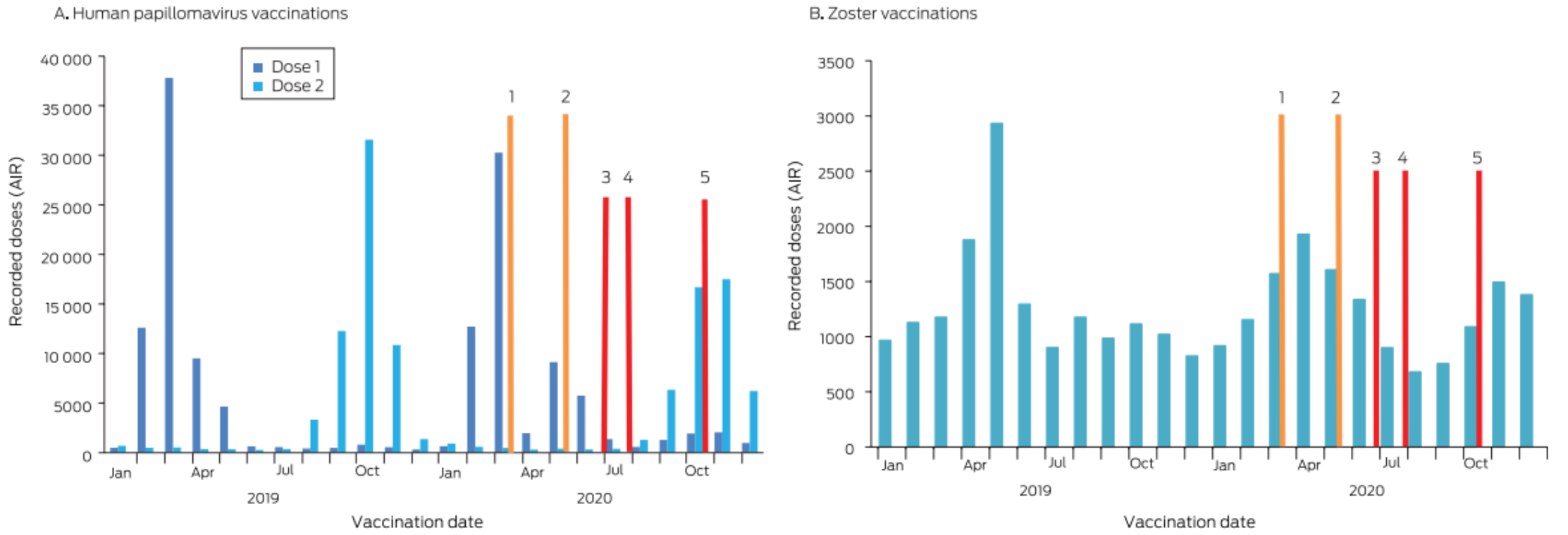


DTP = diphtheria/tetanus/pertussis; 13vPCV = 13-valent pneumococcal conjugate vaccine; MMR = measles/mumps/rubella.
* Data source: Australian Immunisation Register.
COVID-19-related restrictions: 1. Stage 3 lockdown starts (23 March); 2. Stage 3 lockdown ends (partial return to school, 26 May; full return, 9 June); 3. Stage 3 lockdown starts (Melbourne, Mitchell Shire: 8 July); 4. Stage 4 lockdown (Melbourne), stage 3 lockdown (regional Victoria) starts (2 August); 5. Lockdown ends (regional Victoria, 12 October; Melbourne, 26 October).

https://www.mja.com.au/journal/2021/215/2/impact-covid-19-pandemic-routine-vaccinations-victoria

HPV and Zoster immunisation in Victoria during COVID

2 Monthly administered vaccination doses: human papillomavirus vaccinations for adolescents (11–14 years; doses 1 and 2) and zoster vaccinations for adults (70 years), Victoria, 2019 and 2020



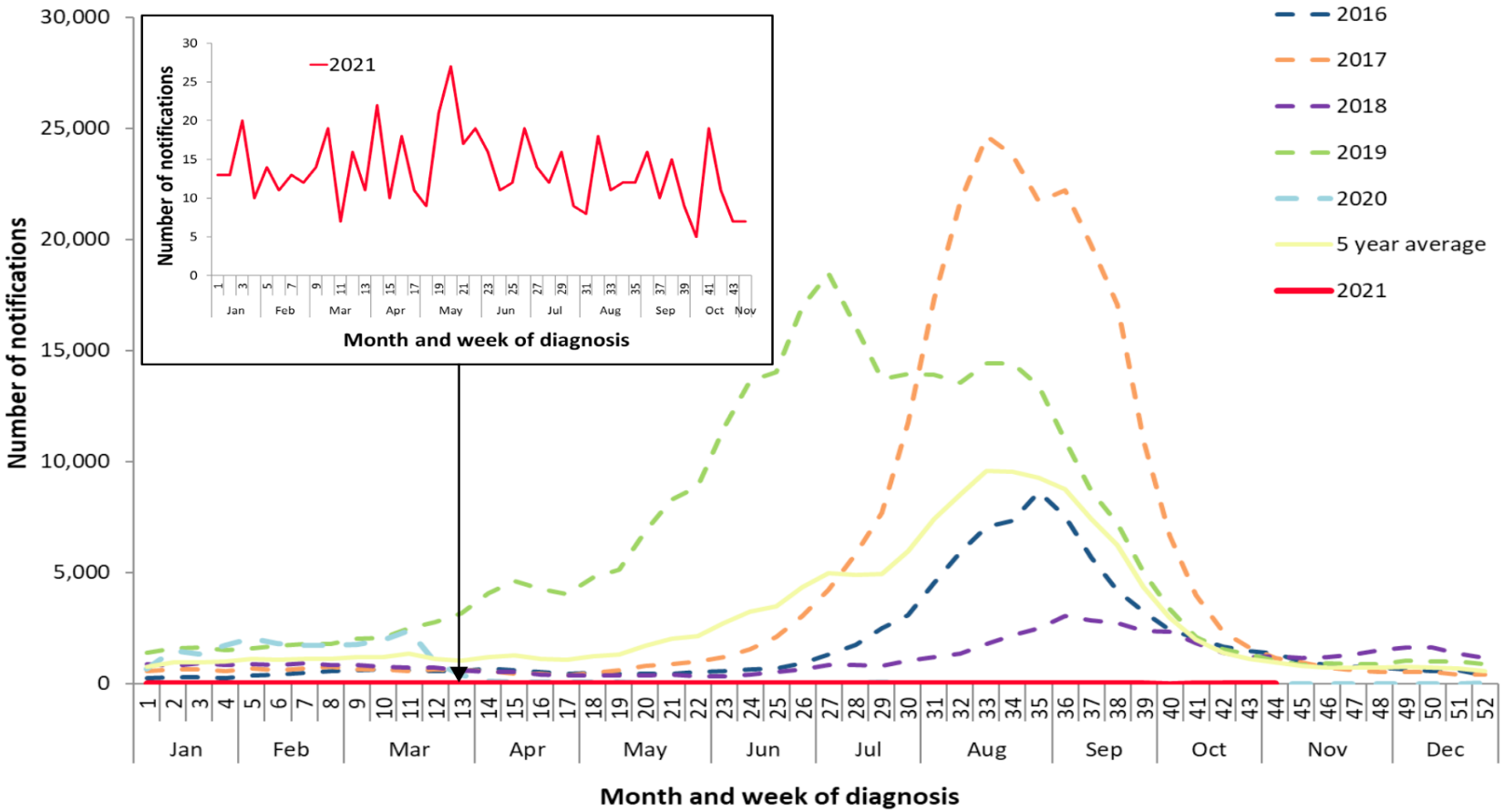
* Data source: Australian Immunisation Register.

COVID-19-related restrictions: 1. Stage 3 lockdown starts (23 March); 2. Stage 3 lockdown ends (partial return to school, 26 May; full return, 9 June); 3. Stage 3 lockdown starts (Melbourne, Mitchell Shire: 8 July); 4. Stage 4 lockdown (Melbourne), stage 3 lockdown (regional Victoria) starts (2 August); 5. Lockdown ends (regional Victoria, 12 October; Melbourne, 26 October).

https://www.mja.com.au/journal/2021/215/2/impact-covid-19-pandemic-routine-vaccinations-victoria

2021 Influenza season; Laboratory confirmed influenza in Australia – notifications have never been so low

Figure 4. Notifications of laboratory-confirmed influenza, Australia, 01 January 2016 to 07 November 2021, by month and week of diagnosis*



Source: NNDSS

Australian Influenza Surveillance Report, No 16, 2021; 16-25 October to 07 November 2021

FluTracking- COVID-19

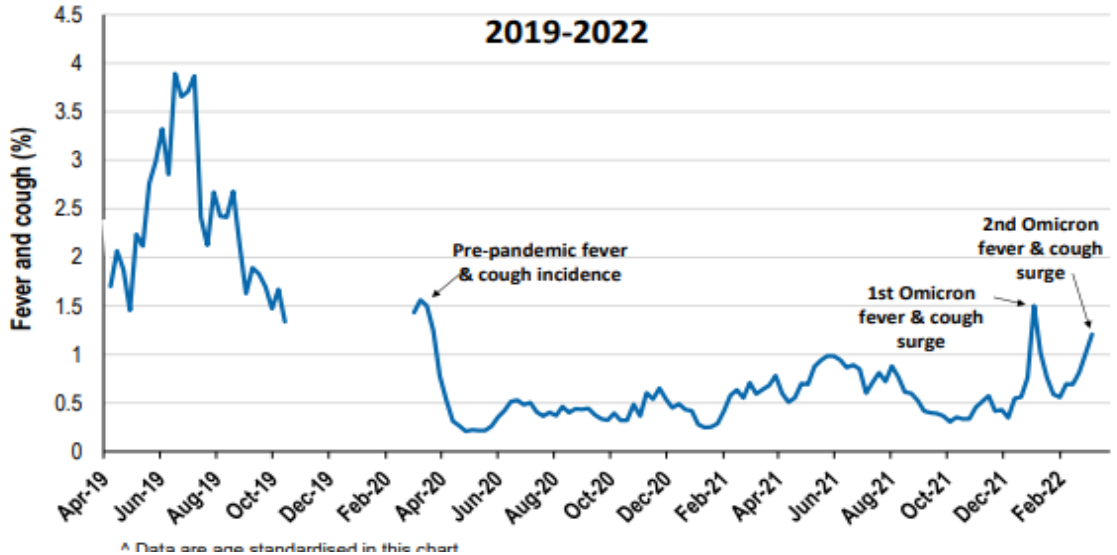
FluTracking
Tracking COVID-19

Weekly Interim Report: Australia
Week ending 13 March 2022
(Data received up to 09:00 AM, Thursday 17 March)

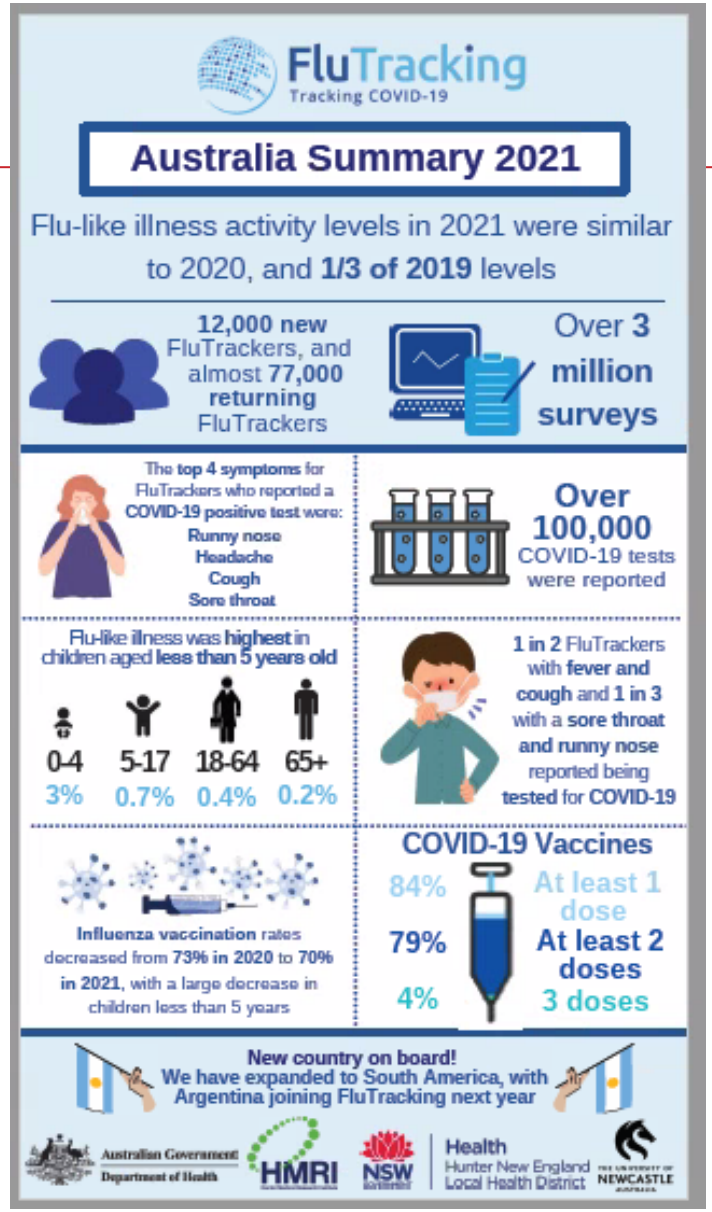
Respiratory illness levels are low, but increasing across all age groups

57,692 participants this week

Respiratory illness activity*:
*Respiratory illness activity is defined as fever & cough for this report
1.2% this week: respiratory illness activity is low



^ Data are age standardised in this chart



What will the 2022 influenza season look like?

What could impact in 2022:

- More freedom to mingle and meet
- Return to face to face meetings, schools
- Reduce mask wearing and density limits
- Opening of domestic borders
- International travel
- Poor uptake of influenza vaccine in 2021
- Low influenza notifications in 2017 & 2018
- Vaccine fatigue

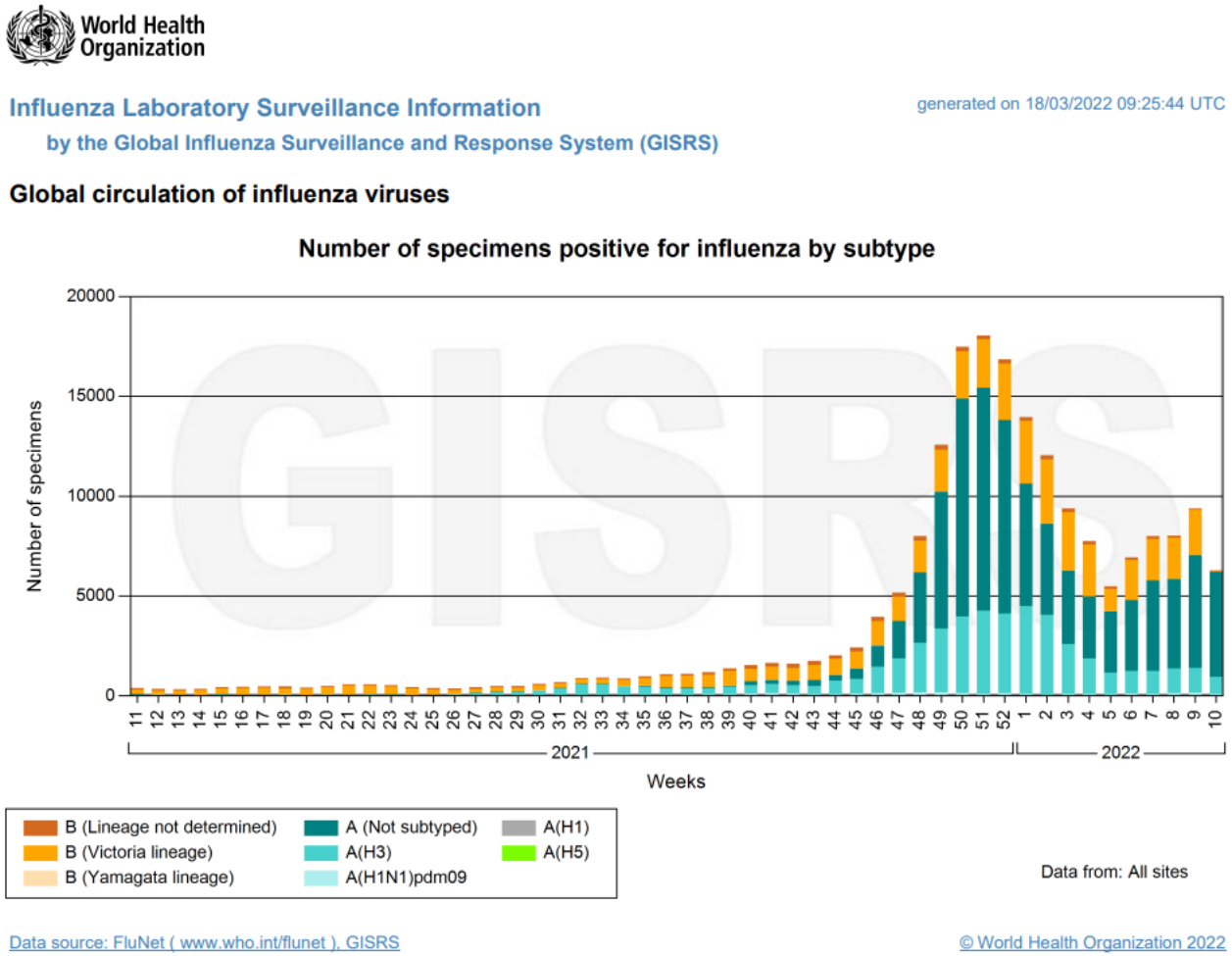
Flu return 'inevitable' in 2022

After a succession of record lows, *newsGP* looks at what the traditional flu season might bring this year and the risks of community complacency.

https://www1.racgp.org.au/newsgp/clinical/flu-return-inevitable-in-2022

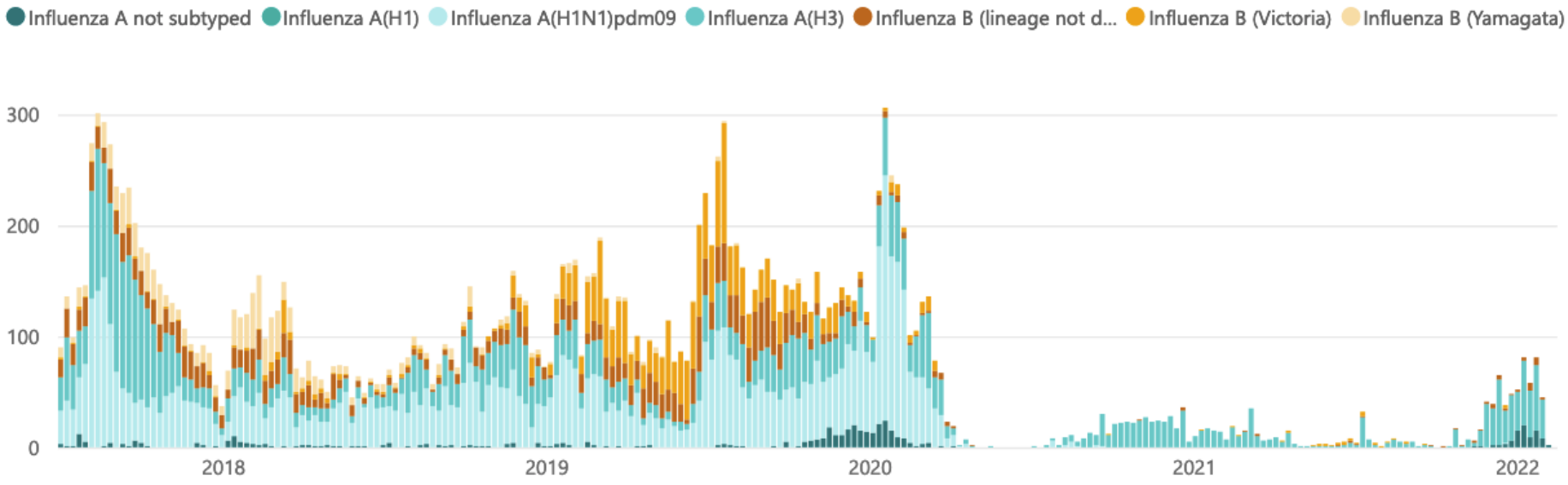
Flu circulation

Mostly A/H3
Some B/Victoria
Little A/H1
No B/Yamagata



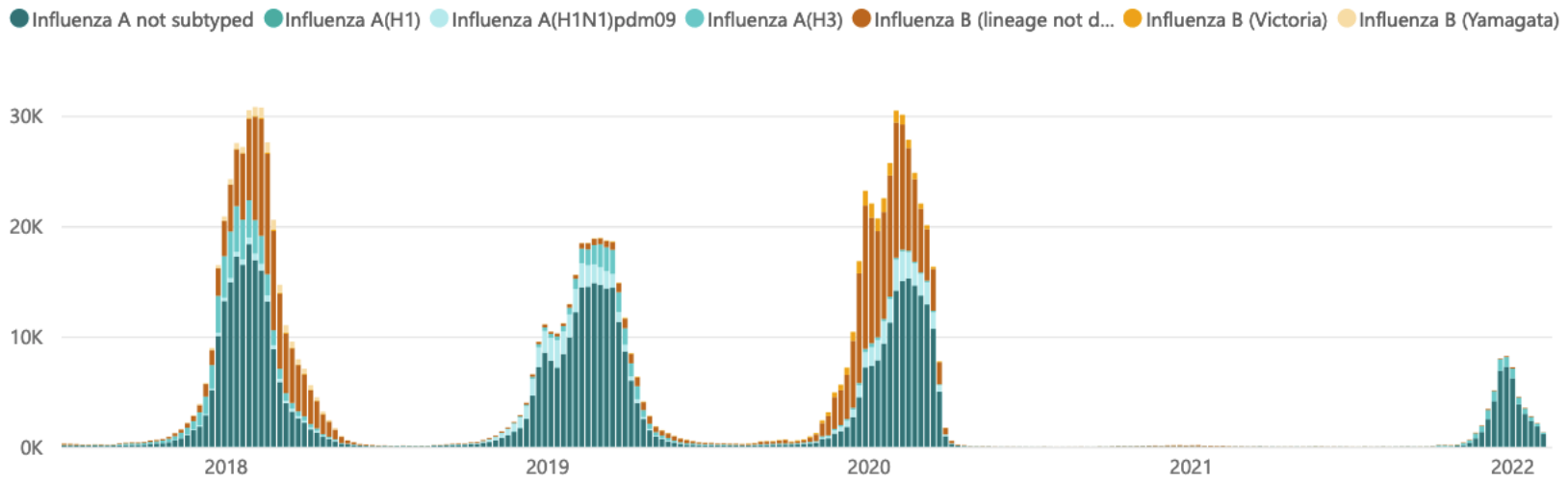
Flu circulation

Continued low level circulation of virus in South East Asia and tropics

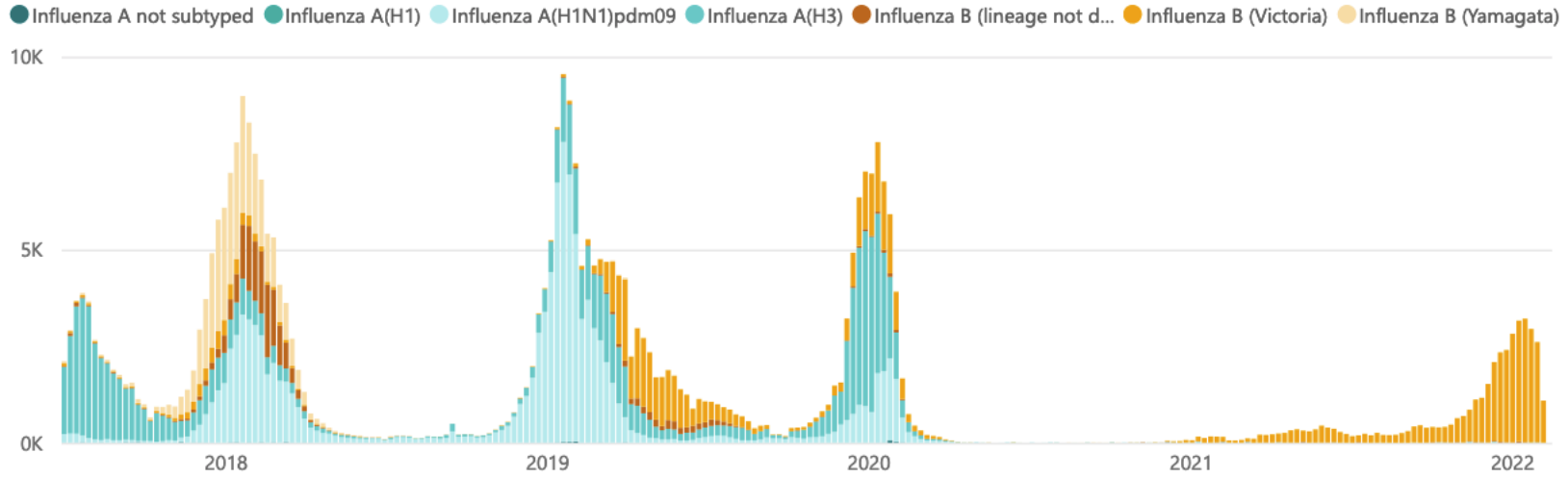


What flu strains are circulating?

North America; similar in Europe

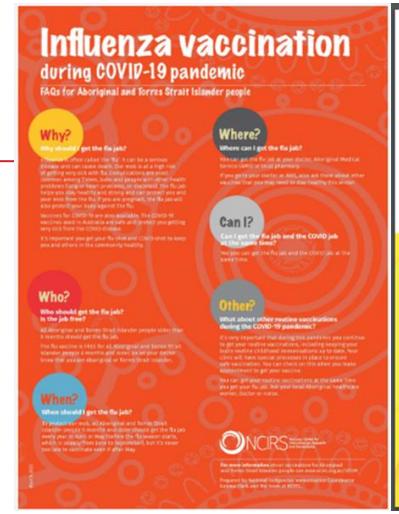


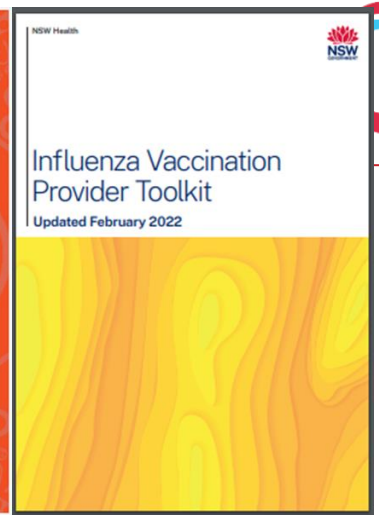
Eastern Asia – mainly China



Influenza program 2022

- **Flu vaccine uptake has dropped modestly in last 2 years especially in young children (fallen from 50-25%)**
- Relative lower immunity to influenza in population and potential for increased circulation
- Can give COVID-19 and flu vaccine doses on same day
- Adults ≥65 years Fluad® Quad, is preferentially recommended
- Vaccinating from April provides protection before peak season
- If a person received 2021 flu vaccine in late 2021 or early 2022, recommended to receive 2022 flu vaccine
- ATAGI influenza clinical advice now available





https://www.health.gov.au/news/2022-influenza-vaccination-early-advice-for-vaccination-providers
https://www.health.gov.au/resources/publications/atagi-advice-on-seasonal-influenza-vaccines-in-2022
https://info.flutracking.net/wp-content/uploads/2021/12/FluTracking-Summary-2021.pdf

High risk groups

- Influenza vaccines are recommended for all people aged ≥6 months

- National Immunisation Program funding is targeted at high risk groups:
    - aged ≥6 months to <5 years and ≥65 years
    - all Aboriginal and Torres Strait Islander people
    - pregnant women
    - people aged ≥6 months with specific medical conditions

Australian influenza hospitalisations and deaths

Figure 6: Rate of ICD-coded hospitalisation for influenza (any diagnosis) with 95% confidence intervals, Australia, 2006 to 2013, by age group and time period

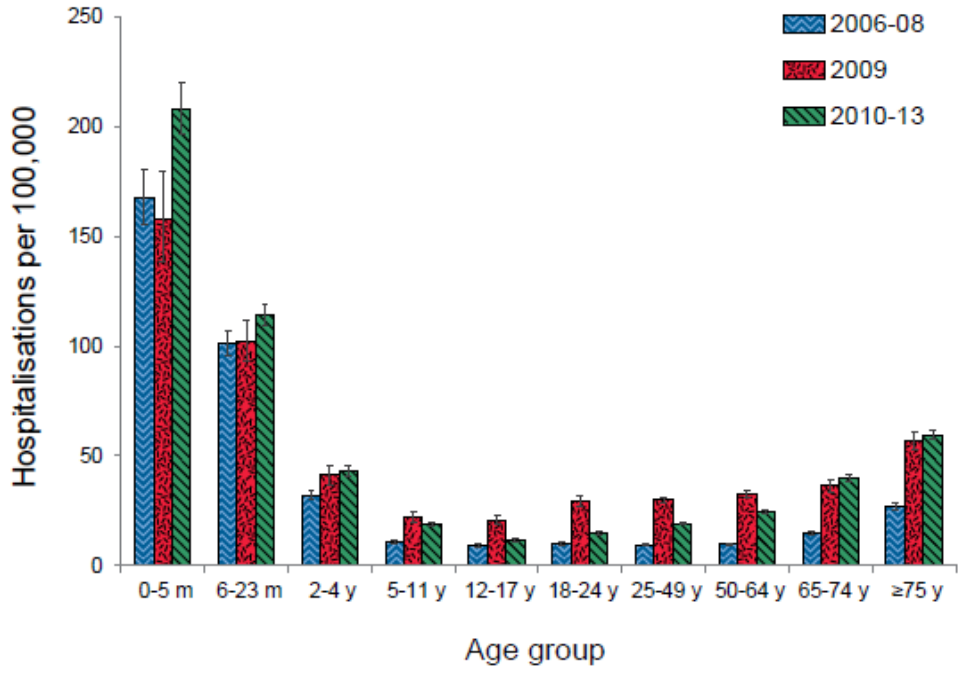
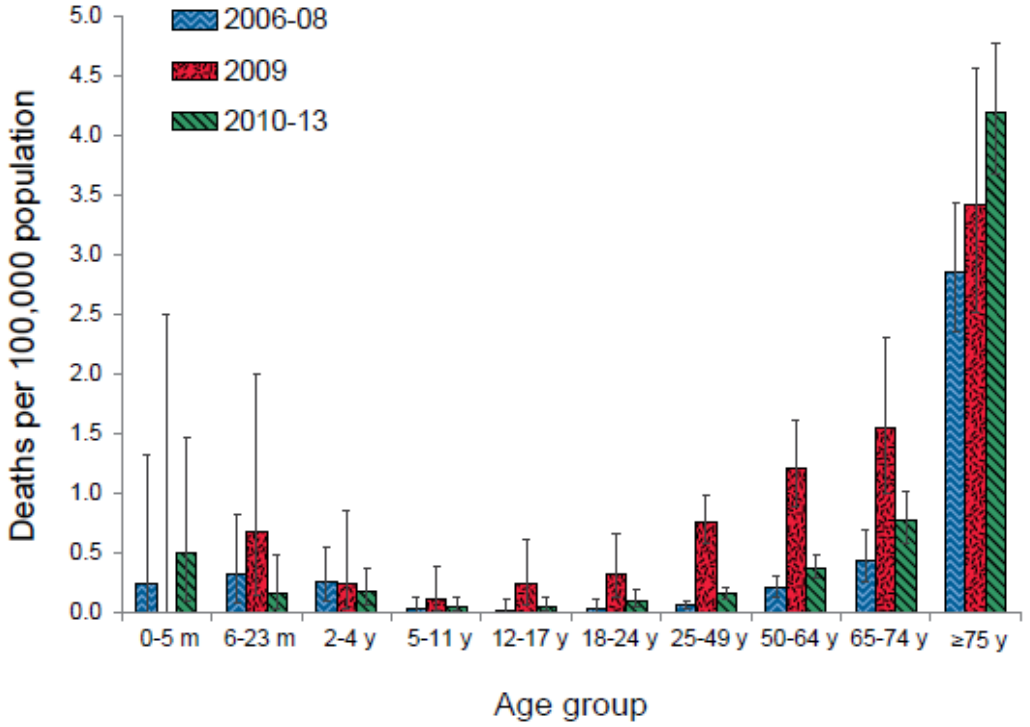


Figure 10: Rate for influenza deaths with 95% confidence intervals, Australia, 2006 to 2013, by age group time period



Vaccine Strains in 2022

Egg-based influenza vaccines	Cell-based influenza vaccines
A/Victoria/2570/2019 (H1N1)pdm09-like virus	A/Wisconsin/588/2019 (H1N1)pdm09-like virus
A/Darwin/9/2021 (H3N2)-like virus	A/Darwin/6/2021 (H3N2)-like virus
B/Austria/1359417/2021-like (B/Victoria lineage) virus	B/Austria/1359417/2021-like (B/Victoria lineage) virus
B/Phuket/3073/2013-like (B/Yamagata lineage) virus	B/Phuket/3073/2013-like (B/Yamagata lineage) virus

Influenza vaccines in 2022

Vaccine / Registered age group	**Vaxigrip Tetra** 0.5 mL (Sanofi)	**Fluarix Tetra** 0.5 mL (GSK)	**Afluria Quad** 0.5 mL (Seqirus)	**FluQuadri** 0.5 mL (Sanofi)	**Influvac Tetra** 0.5 mL (Mylan)	**Flucelvax Quad** 0.5 mL (Seqirus)	**Fluad Quad** 0.5 mL (Seqirus)	**Fluzone High-Dose Quad** 0.7 mL (Sanofi)
6 to 24 months (<2 years)	✓	✓	X	✓	✓	X	X	X
≥2 to <5 years	✓	✓	X	✓	✓	✓	X	X
≥5 to <60 years	✓*	✓*	✓*	✓	✓	✓	X	X
≥60 to <65 years	✓*	✓*	✓*	✓	✓	✓	X	✓
≥65 years	✓	✓	✓	✓	✓	✓	✓	✓

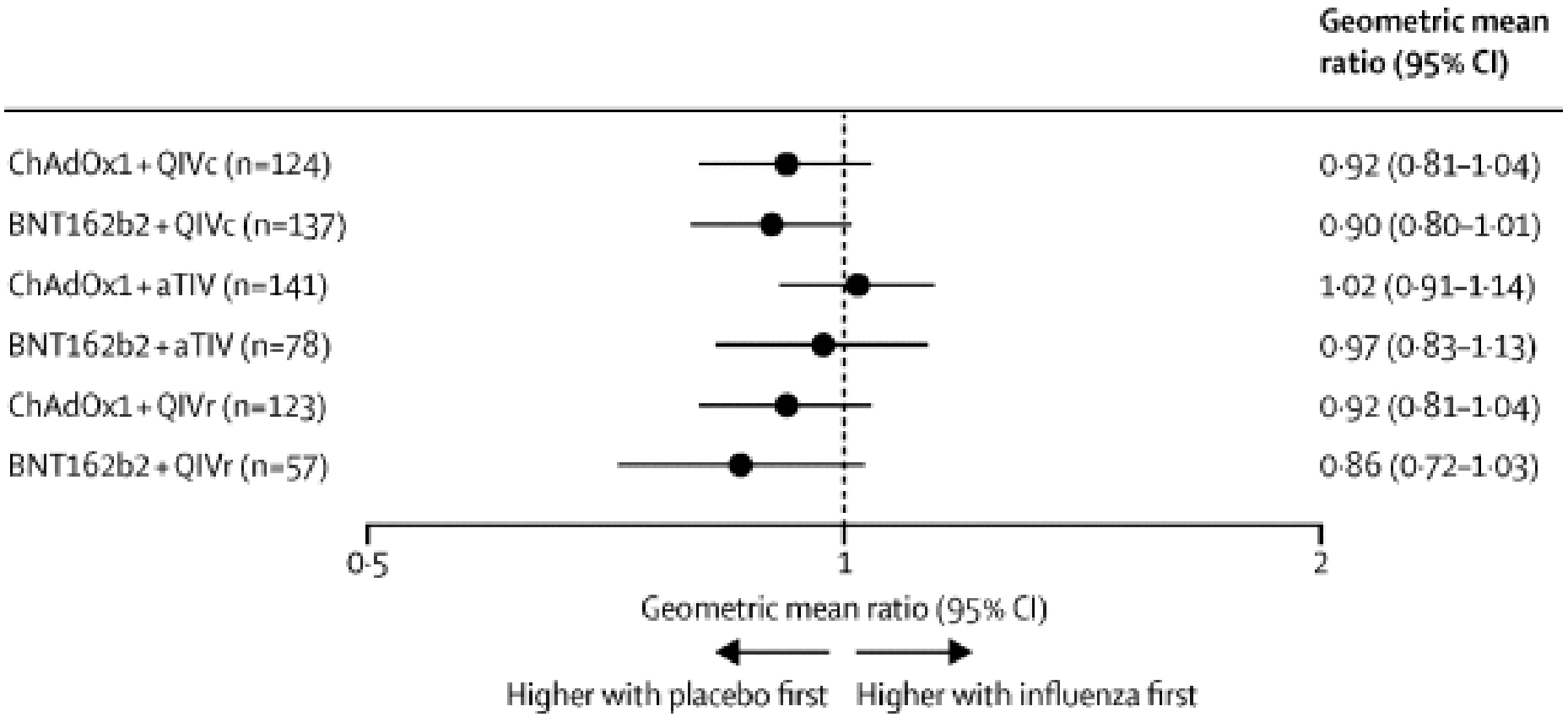
Ticks indicate age at which a vaccine is registered and available. White boxes indicate availability for free under the NIP.
* NIP funding only for Aboriginal and Torres Strait Islander people, pregnant women and people who have certain medical conditions.

https://www.health.gov.au/resources/publications/atagi-advice-on-seasonal-influenza-vaccines-in-2022

Co-administration of influenza and COVID-19 vaccines

- Initial advice in early 2021 was to have 14 days between influenza and COVID-19 vaccines
- This advice was based on little evidence to support co-administration and enable better monitoring of safety of COVID-19 vaccines
- Since then new evidence suggests safe and effective to administer COVID-19 vaccines and influenza vaccines together

Co-administration of influenza and COVID-19 vaccines - immunogencity

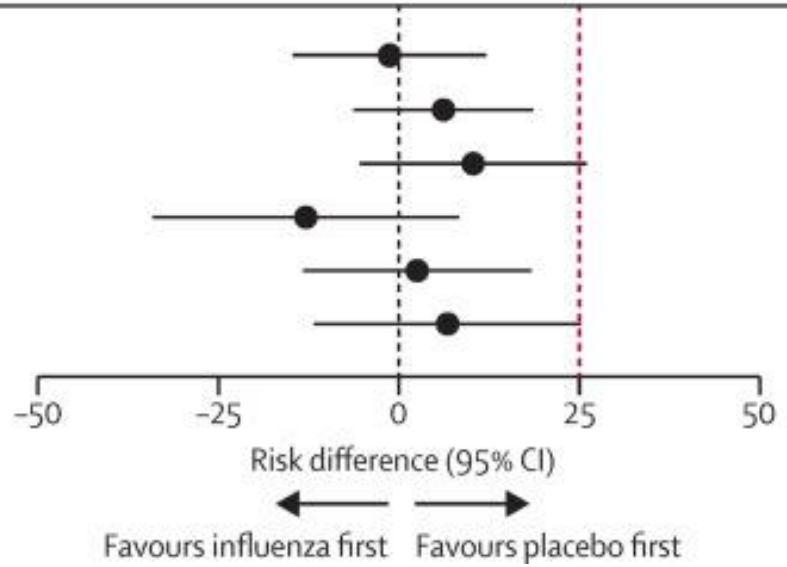


Ratio of Anti-spike Abs comparing co-administration with only COVID-19 vaccine

Lazarus et al. Lancet 2021; 398:2277-2287
https://www.sciencedirect.com/science/article/pii/S0140673621023291

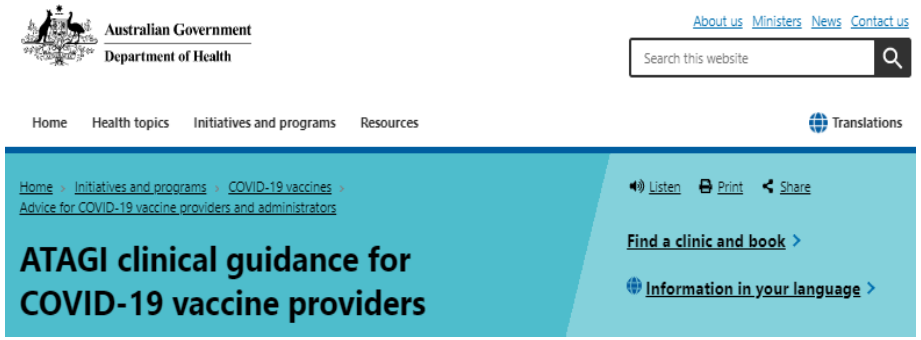
Co-administration of influenza and COVID-19 vaccines - safety

	Number of participants experiencing one or more solicited systemic events in the 7 days after second COVID-19 vaccination/ number of participants with the primary outcome in each group for each cohort		Risk difference (95% CI)
	Placebo first	Influenza first	
ChAdOx1+QIVc ITT	52/63	52/64	-1·29 (-14·69 to 12·11)
BNT162b2+QIVc ITT	54/67	59/68	6·17 (-6·27 to 18·61)
ChAdOx1+aTIV ITT	42/68	49/68	10·29 (-5·44 to 26·03)
BNT162b2+aTIV ITT	25/35	24/41	-12·89 (-34·15 to 8·37)
ChAdOx1+QIVr ITT	43/60	46/62	2·53 (-13·25 to 18·31)
BNT162b2+QIVr ITT	23/28	24/27	6·75 (-11·75 to 25·25)



Lazarus et al. Lancet 2021; 398:2277-2287
https://www.sciencedirect.com/science/article/pii/S0140673621023291

Co-administration with other vaccines



- People can receive influenza vaccines at anytime before or after, or with, most other vaccines, including COVID-19 vaccine.
- Can give COVID-19 and flu vaccine doses on same day (different injection sites)
- Can also give other vaccines and COVID-19 vaccine on same day (advise patients of possible increase in adverse events)
- The safety of concomitant administration of the adjuvanted vaccines Fluad Quad and Shingrix has not been studied. It is acceptable to co-administer these vaccines on the same day if necessary. It is preferable to separate their administration by a few days

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

Co-administration studies – Moderna vaccine

- Izikson et al.: mRNA-1273 (100µg) **booster** dose co-administered with influenza vaccine
  - SARS-CoV-2 binding Ab GMCs increased to similar levels in the Coad and mRNA-1273 groups at D22
  - At D22, the proportions of participants in the Coad and mRNA-1273 groups with ≥ 2-fold and ≥ 4-fold rises in antibody concentration from baseline were high and similar between groups
  - The SARS-CoV-2 anti-S binding IgG GMC ratio between the Coad and mRNA-1273 groups at D22 was **0·97 (95% CI 0·79–1·19)**

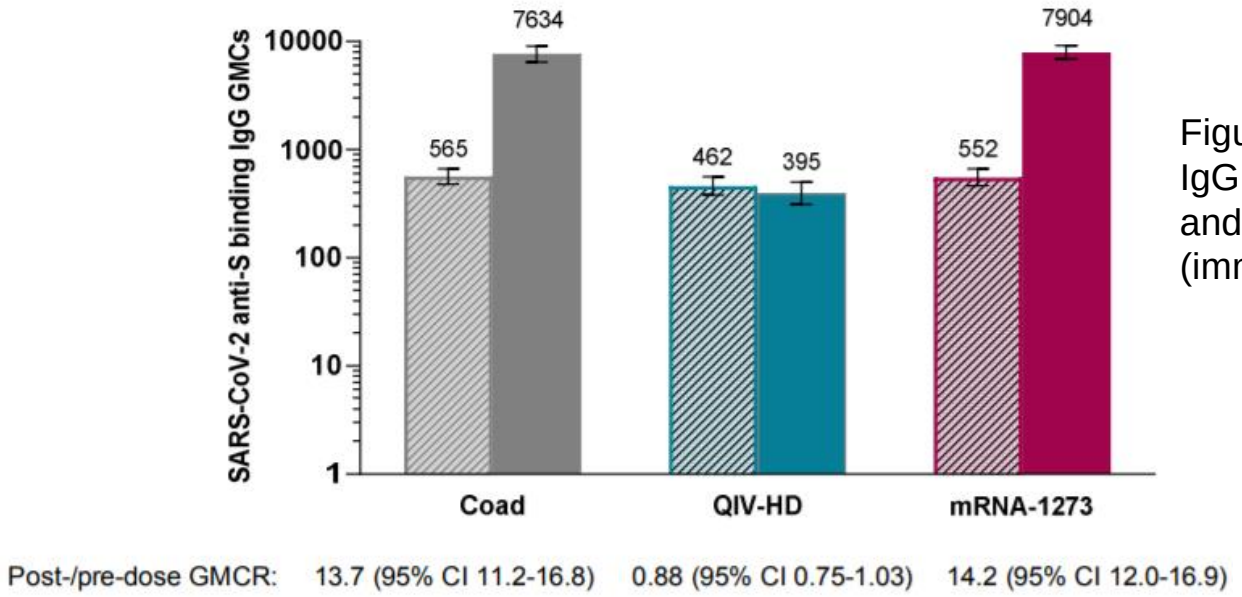


Figure. SARS-CoV-2 anti-S binding IgG antibody responses on Day 1 and Day 22 for each treatment group (immunogenicity analysis set)

Izikson et al. (29 Oct 2021). Safety and immunogenicity of a high-dose quadrivalent influenza vaccine administered concomitantly with a third dose of the mRNA-1273 SARS-CoV-2 vaccine in adults ≥ 65 years of age: a Phase II, open-label study. DOI: 10.1101/2021.10.29.21265248
https://www.medrxiv.org/content/10.1101/2021.10.29.21265248v1

Co-administration studies - Novavax

Table. Vaccine efficacy against PCR-confirmed symptomatic Covid-19 with an onset at least 7 days after second study vaccination in serologically negative participants

Parameter	Analysis	
	NVX-CoV2373	Placebo
Participants, 18 to 84 years, per-protocol influenza sub-study, n	191	195
Participants with first occurrence of event, n	2	8
Vaccine efficacy (%)*	74.8	
95% CI	-19.7, 94.7	
Participants, 18 to <65 years, per-protocol influenza sub-study, n	178	182
Participants with first occurrence of event, n	1	8
Vaccine efficacy (%)*	87.5	
95% CI	-0.2, 98.4	
Participants, 18 to 84 years, intention-to-treat influenza sub-study, n	217	214
Participants with first occurrence of event, n	2	10
Vaccine efficacy (%)	80.6%	
95% CI	13.3, 95.7	
Participants, 18 to <65 years, main study per-protocol population, n	5067	5062
Participants with first occurrence of event, n	9	87
Vaccine efficacy (%)	89.8	
95% CI	79.7, 95.5	
Participants, 18 to 84 years, main study per-protocol population, n	7020	7019
Participants with first occurrence of event (due to Alpha variant), n	8	58
Vaccine efficacy for Alpha variant (%)	86.3	
95% CI	71.3, 93.5	

Efficacy in co-administration substudy

Efficacy in main phase 3 study

Toback S et al. (17 November 2021). Safety, immunogenicity, and efficacy of a COVID-19 vaccine (NVX-CoV2373) co-administered with seasonal influenza vaccines: an exploratory substudy of a randomised, observer-blinded, placebo-controlled, phase 3 trial. *The Lancet*. DOI: 10.1016/S2213-2600(21)00409-4
https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00409-4/fulltext

Co-administration of COVID-19 vaccines and Novavax - safety

	Influenza substudy (n=431)		Main study participants (n=14 708)*	
	NVX-CoV2373 plus influenza vaccine (n=217)	Placebo plus influenza vaccine (n=214)	NVX-CoV2372 alone (n=7352)	Placebo alone (n=7356)
Any adverse event	40 (18·4%)	31 (14·5%)	1297 (17·6%)	1030 (14·0%)
Any severe adverse event	1 (0·5%)	0	33 (0·4%)	33 (0·4%)
Serious adverse event	1 (0·5%)	0	43 (0·6%)	44 (0·6%)
Medically attended adverse event	17 (7·8%)	18 (8·4%)	279 (3·8%)	288 (3·9%)
Treatment-related medically attended adverse event	3 (1·4%)	0	34 (0·5%)	17 (0·2%)
Potentially immune-mediated medical condition	0	0	5 (<0·1%)	8 (0·1%)
Adverse event of special interest related to COVID-19	0	0	8 (0·1%)	22 (0·3%)

Unsolicited adverse events and severe adverse events are those within 21 days of study dose one (with or without co-administration of influenza vaccine). Serious adverse events, medically attended adverse events, adverse events of special interest, and potentially immune-mediated medical conditions are assessed for the entire study period.
*The main study intention-to-treat population (n=15 139) were all participants who received at least one dose of NVX-CoV2373 or placebo; those who were enrolled in the influenza sub-study (n=431) were then removed to create the main study safety population (n=14 708) for comparison with the substudy participants.

***Table 2:* Safety data from participants in the influenza vaccine co-administration substudy and participants in the entire intention-to-treat study population (without substudy participants)**

Toback S et al. (17 November 2021). Safety, immunogenicity, and efficacy of a COVID-19 vaccine (NVX-CoV2373) co-administered with seasonal influenza vaccines: an exploratory substudy of a randomised, observer-blinded, placebo-controlled, phase 3 trial. *The Lancet*. DOI: 10.1016/S2213-2600(21)00409-4
https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00409-4/fulltext

Influenza vaccine FAQs

Question	Answer
Can flu vaccine be administered to those with latex allergy?	Yes, all influenza vaccines on NIP are latex free.
Can people with an egg allergy receive the influenza vaccine?	Yes, persons with egg allergy, including anaphylaxis, can receive influenza vaccines.
Additional doses of flu vaccine?	• Not routinely recommended • Some people may benefit: travel or pregnancy • Pregnant women who received an influenza vaccine in 2021 should receive a 2022 if available before the end of pregnancy
Guillain-Barre' syndrome	AusVaxSafety An NCIRS led collaboration APPROACH TO INFLUENZA VACCINATION IN PATIENTS WITH A HISTORY OF GUILLAIN–BARRÉ SYNDROME

Summary

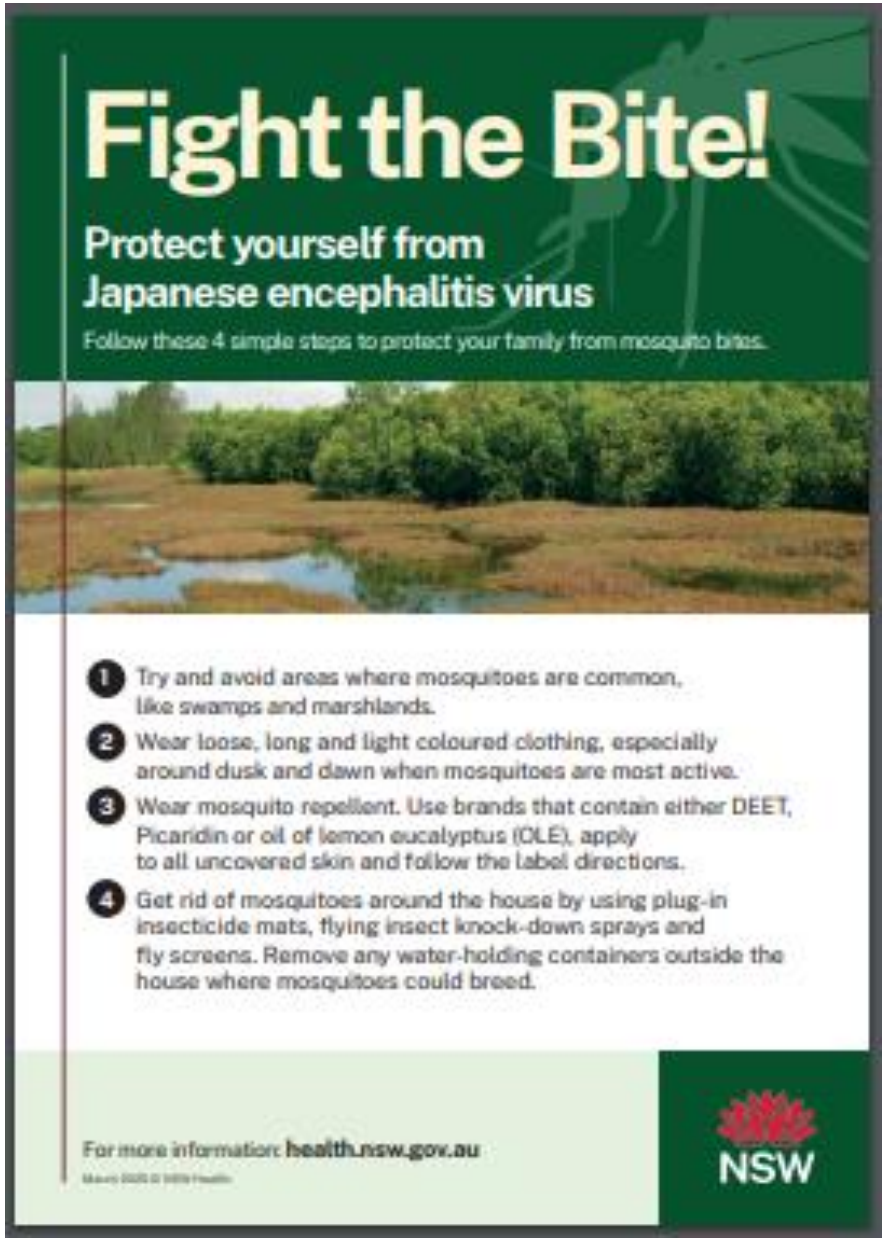
- Eight influenza vaccines available in 2022 with high-dose vaccine for older adults
- Currently no changes to the groups eligible for influenza vaccines under the NIP
- High risk groups who are eligible for NIP influenza vaccines include:
    - 6 months to 5 years; 65+ years
    - All Aboriginal and Torres Strait Islander populations
    - Pregnant women
    - People with co-morbidities
- Co-administration of influenza vaccines with COVID-19 vaccines is safe and acceptable
- Fact sheets on influenza vaccines: https://ncirs.org.au/influenza-vaccination-2022

05/04/2022: Managing seasonal respiratory viruses: Flu and SARS-CoV-2 Winter 2022

https://www.ncirs.org.au/ncirs-webinar-series/05042022-managing-seasonal-respiratory-viruses-flu-and-sars-cov-2-winter-2022

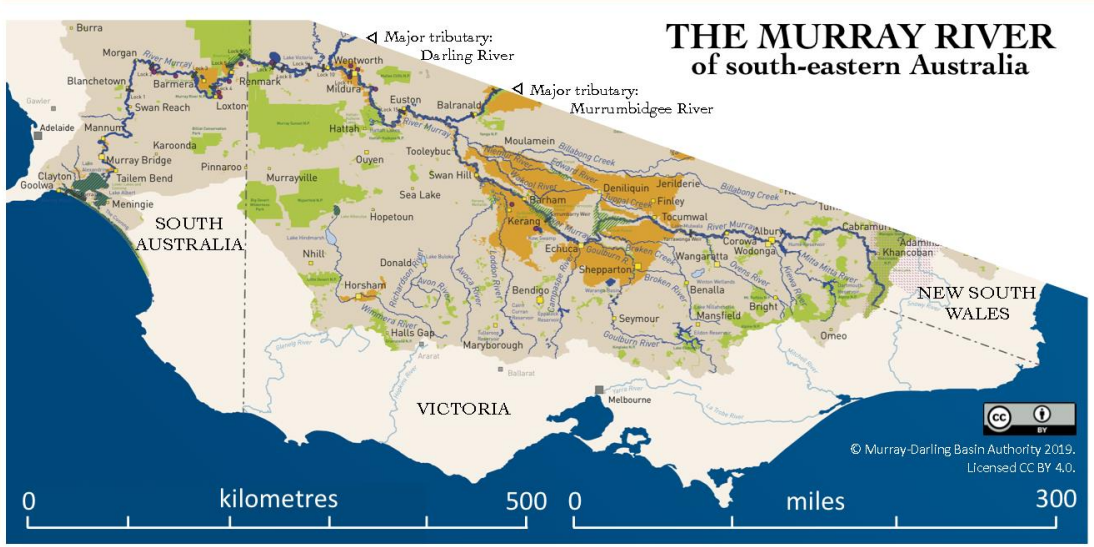
Japanese encephalitis

- JEV is a mosquito-borne flavivirus
  - associated with pigs and water birds,
  - can cause disease in humans and rarely other animals.
- Pigs are **amplifying** hosts that can infect mosquitoes with subsequent transmission to humans
- Infection is usually asymptomatic or associated with mild symptoms in humans, but it can cause severe disease including an acute encephalitis



Japanese encephalitis virus (JEV)

- JEV has recently been identified in NSW, Queensland, Victoria and South Australia.

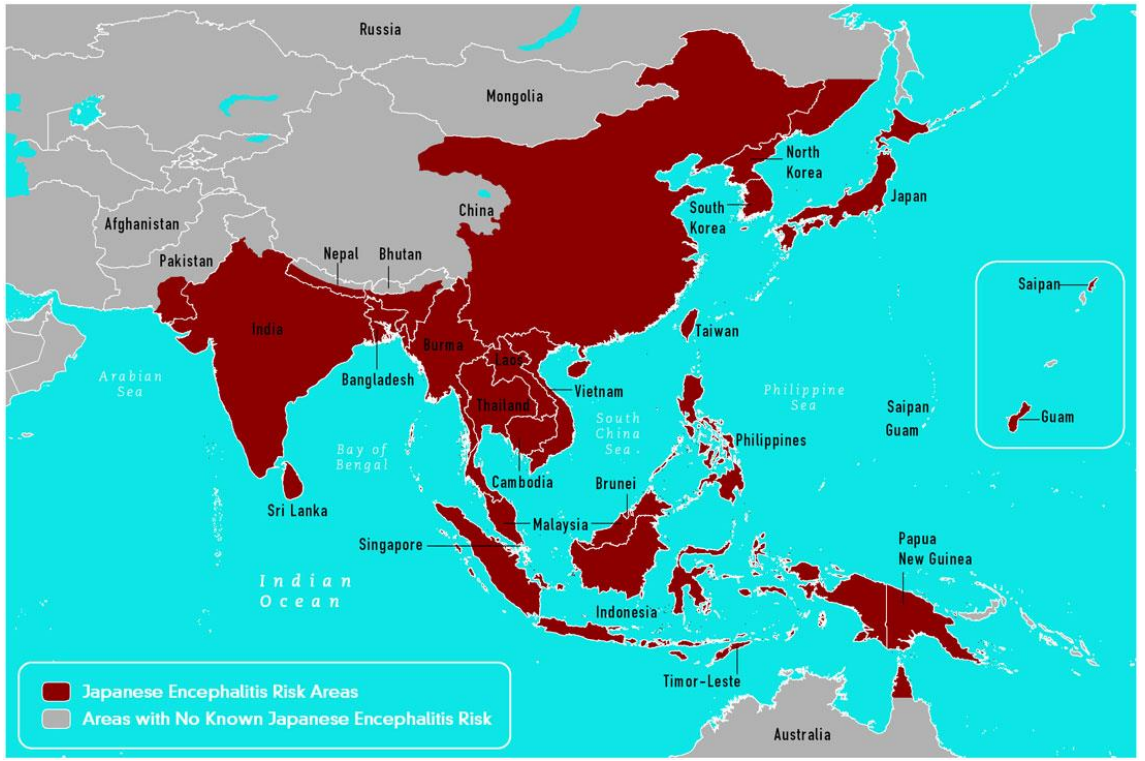


Source: Murray–Darling Basin Authority (https://www.mdba.gov.au/sites/default/files/pubs/1269-Murray-Darling-Basin-Map-Poster-A1_0.pdf).

virus alert

NSW

- JEV is endemic in much of Asia and parts of the Pacific.



JEV diagnosis treatment and prevention

Diagnosis

- JEV infection is usually diagnosed from measuring levels of antibodies to JEV in samples of blood or spinal fluid.
- Around 50% of people who survive the acute illness will have neurological sequelae.
- JE has a high case-fatality rate of around 30%

Treatment

- There is no specific treatment available for JE - avoid being bitten by mosquitoes

Prevention

- Avoid mosquito bites
- Personal protection and environmental measures
- **Vaccination**
  - **Two vaccines available (Imojjec and Jespect). Approved for different ages and doses**
  - **Vaccination against JE is currently only recommended for those at highest risk of infection and who have been prioritised.**

JE vaccination priority groups in NSW

- Communicable Diseases Network Australia (CDNA) has prioritised the following groups for priority vaccination:
  - people who work at, reside at, or have a planned non-deferable visit (including children aged 2 months and older) living at the piggery, transport workers, veterinarians and others involved in the care of pigs
  - pork abattoir or pork rendering plant
- personnel who work directly with mosquitoes through their surveillance:
  - environmental health officers and workers (urban and remote)
  - entomologists
- all diagnostic and research laboratory workers who may be exposed to the virus, such as persons working with JEV cultures or mosquitoes with the potential to transmit JEV; as per the Australian Immunisation Handbook.

Contact your local public health authority for more information on JEV vaccine

Immunisation and Vaccine Preventable Disease update in a COVID world

George Truman

Epidemiologist, Public Health

6 April 2022

What I will cover

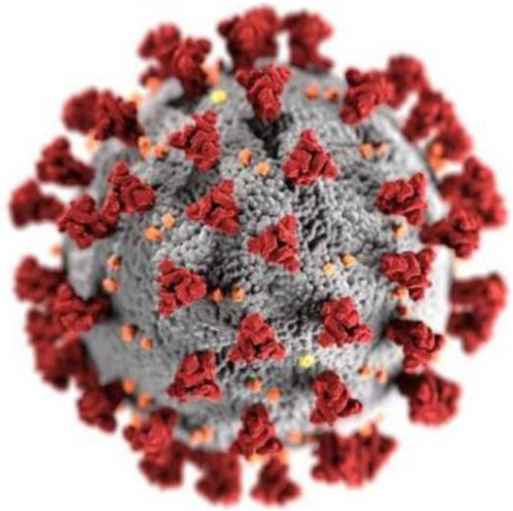
- What is the impact of pandemic on vaccination programs globally?
- What were our childhood vaccination coverages and what was the impact of the pandemic?
- COVID vaccination rates
- Vaccine Preventable Diseases (VPDs) of local significance – case study of influenza and pertussis

Interruptions to vaccination programs due to COVID

Significant immunization service interruptions as a result of COVID-19

World Health Organization

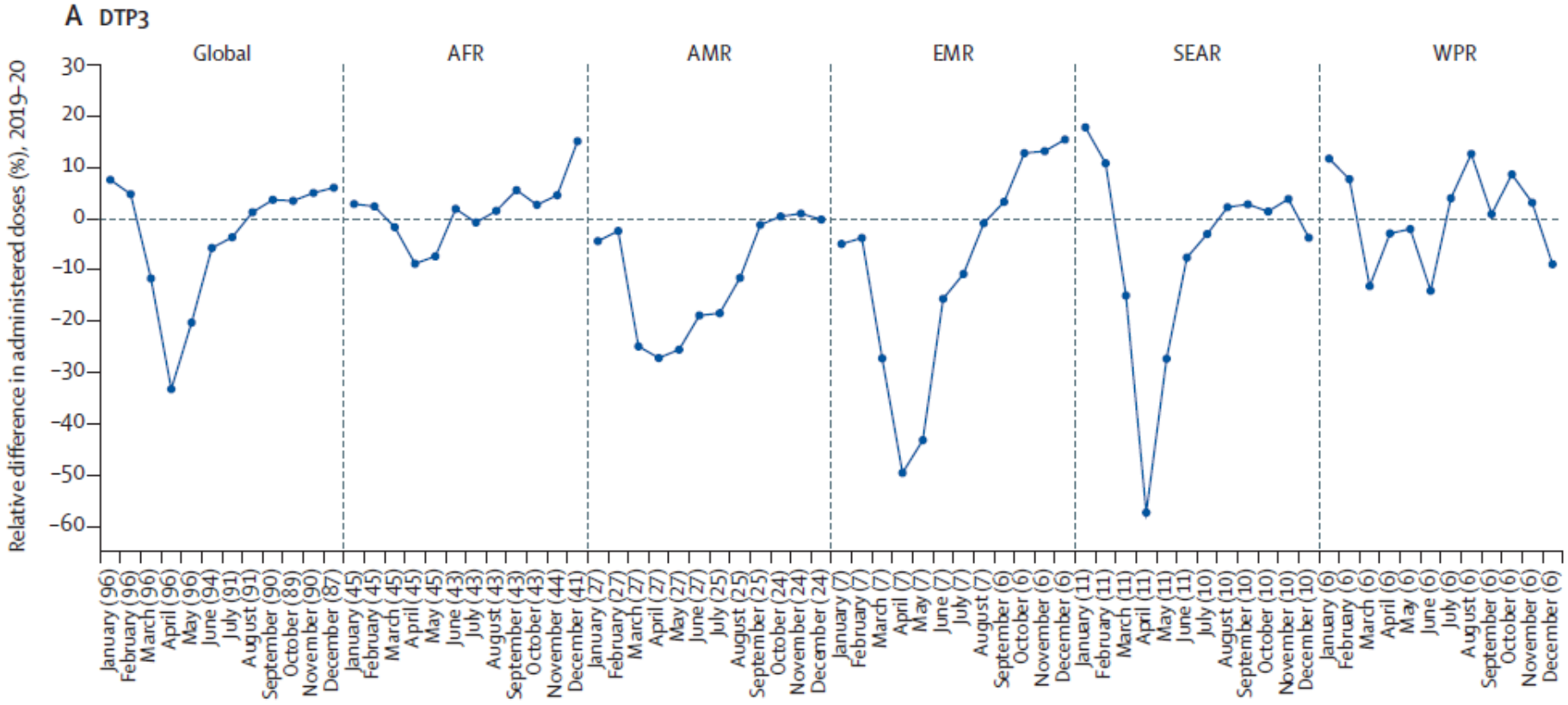
- Service delivery disruptions and mass vaccination campaign suspensions
- Decreased access due to physical distancing and transportation reductions
- Concerns by caregivers and health workers about COVID-19 exposure
- Supply chain interruptions
- High risk populations at increased risk for immunization inequity
  - COVID-19 morbidity and mortality
  - Economic downturn



2

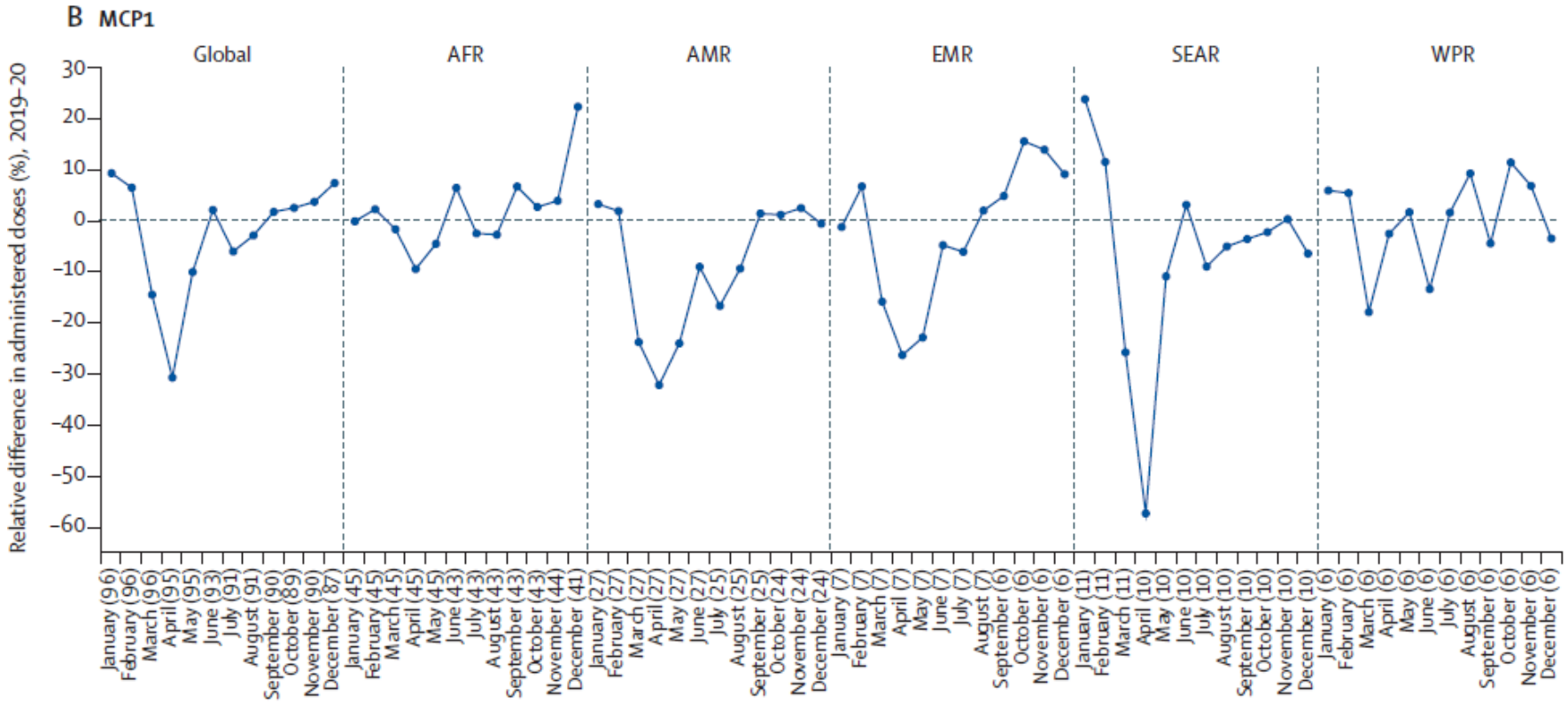
Closing Immunization Gaps Caused by COVID-19 (World Health Organisation; Draft – 11 August 2020)

Disruption to Administration of Diphtheria-Tetanus-Pertussis Containing Vaccines



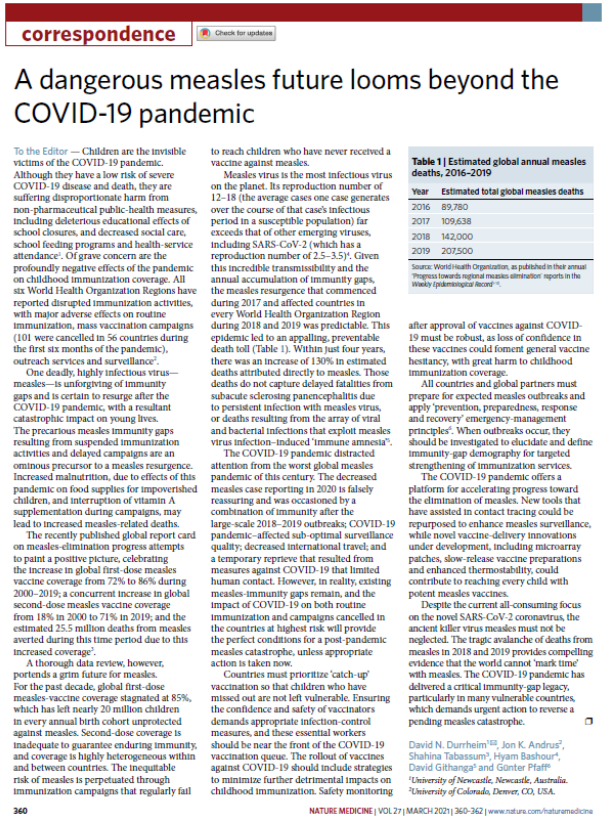
Shet, A et al. (2022). Impact of the SARS-CoV-2 pandemic on routine immunisation services: Evidence of disruption and recovery from 170 countries and territories. Lancet Global Health; 10: e186-94.

Disruption to Administration of Measles Containing Vaccines



Shet, A et al. (2022). Impact of the SARS-CoV-2 pandemic on routine immunisation services: Evidence of disruption and recovery from 170 countries and territories. Lancet Global Health; 10: e186-94.

Measles warning



correspondence

Check for updates

A dangerous measles future looms beyond the COVID-19 pandemic

To the Editor — Children are the invisible victims of the COVID-19 pandemic. Although they have a low risk of severe COVID-19 disease and death, they are suffering disproportionate harm from non-pharmaceutical public-health measures, including deleterious educational effects of school closures, and decreased social care, school feeding programs and health-service attendance[1]. Of grave concern are the profoundly negative effects of the pandemic on childhood immunization coverage. All six World Health Organization Regions have reported disrupted immunization activities, with major adverse effects on routine immunization, mass vaccination campaigns (101 were cancelled in 56 countries during the first six months of the pandemic), outreach services and surveillance[1].

One deadly, highly infectious virus—measles—is unforgiving of immunity gaps and is certain to resurge after the COVID-19 pandemic, with a resultant catastrophic impact on young lives. The precarious measles immunity gaps resulting from suspended immunization activities and delayed campaigns are an ominous precursor to a measles resurgence. Increased malnutrition, due to effects of this pandemic on food supplies for impoverished children, and interruption of vitamin A supplementation during campaigns, may lead to increased measles-related deaths.

The recently published global report card on measles-elimination progress attempts to paint a positive picture, celebrating the increase in global first-dose measles vaccine coverage from 72% to 86% during 2000–2019; a concurrent increase in global second-dose measles vaccine coverage from 18% in 2000 to 71% in 2019; and the estimated 25.5 million deaths from measles averted during this time period due to this increased coverage[2].

A thorough data review, however, portends a grim future for measles. For the past decade, global first-dose measles-vaccine coverage stagnated at 85%, which has left nearly 20 million children in every annual birth cohort unprotected against measles. Second-dose coverage is inadequate to guarantee enduring immunity, and coverage is highly heterogeneous within and between countries. The inequitable risk of measles is perpetuated through immunization campaigns that regularly fail to reach children who have never received a vaccine against measles.

Measles virus is the most infectious virus on the planet. Its reproduction number of 12–18 (the average cases one case generates over the course of that case's infectious period in a susceptible population) far exceeds that of other emerging viruses, including SARS-CoV-2 (which has a reproduction number of 2.5–3.5)[3]. Given this incredible transmissibility and the annual accumulation of immunity gaps, the measles resurgence that commenced during 2017 and affected countries in every World Health Organization Region during 2018 and 2019 was predictable. This epidemic led to an appalling, preventable death toll (Table 1). Within just four years, there was an increase of 130% in estimated deaths attributed directly to measles. Those deaths do not capture delayed fatalities from subacute sclerosing panencephalitis due to persistent infection with measles virus, or deaths resulting from the array of viral and bacterial infections that exploit measles virus infection–induced 'immune amnesia'[4].

The COVID-19 pandemic distracted attention from the worst global measles pandemic of this century. The decreased measles case reporting in 2020 is falsely reassuring and was occasioned by a combination of immunity after the large-scale 2018–2019 outbreaks; COVID-19 pandemic–affected sub-optimal surveillance quality; decreased international travel; and a temporary reprieve that resulted from measures against COVID-19 that limited human contact. However, in reality, existing measles-immunity gaps remain, and the impact of COVID-19 on both routine immunization and campaigns cancelled in the countries at highest risk will provide the perfect conditions for a post-pandemic measles catastrophe, unless appropriate action is taken now.

Countries must prioritize 'catch-up' vaccination so that children who have missed out are not left vulnerable. Ensuring the confidence and safety of vaccinators demands appropriate infection-control measures, and these essential workers should be near the front of the COVID-19 vaccination queue. The rollout of vaccines against COVID-19 should include strategies to minimize further detrimental impacts on childhood immunization. Safety monitoring after approval of vaccines against COVID-19 must be robust, as loss of confidence in these vaccines could foment general vaccine hesitancy, with great harm to childhood immunization coverage.

All countries and global partners must prepare for expected measles outbreaks and apply 'prevention, preparedness, response and recovery' emergency-management principles[5]. When outbreaks occur, they should be investigated to elucidate and define immunity-gap demography for targeted strengthening of immunization services.

The COVID-19 pandemic offers a platform for accelerating progress toward the elimination of measles. New tools that have assisted in contact tracing could be repurposed to enhance measles surveillance, while novel vaccine-delivery innovations under development, including microarray patches, slow-release vaccine preparations and enhanced thermostability, could contribute to reaching every child with potent measles vaccines.

Despite the current all-consuming focus on the novel SARS-CoV-2 coronavirus, the ancient killer virus measles must not be neglected. The tragic avalanche of deaths from measles in 2018 and 2019 provides compelling evidence that the world cannot 'mark time' with measles. The COVID-19 pandemic has delivered a critical immunity-gap legacy, particularly in many vulnerable countries, which demands urgent action to reverse a pending measles catastrophe.

David N. Durrheim[1✉], Jon K. Andrus[2], Shahina Tabassum[3], Hyam Bashour[4], David Githanga[3] and Günter Pfaff[5]
[1]University of Newcastle, Newcastle, Australia. [2]University of Colorado, Denver, CO, USA.

Table 1 | Estimated global annual measles deaths, 2016–2019

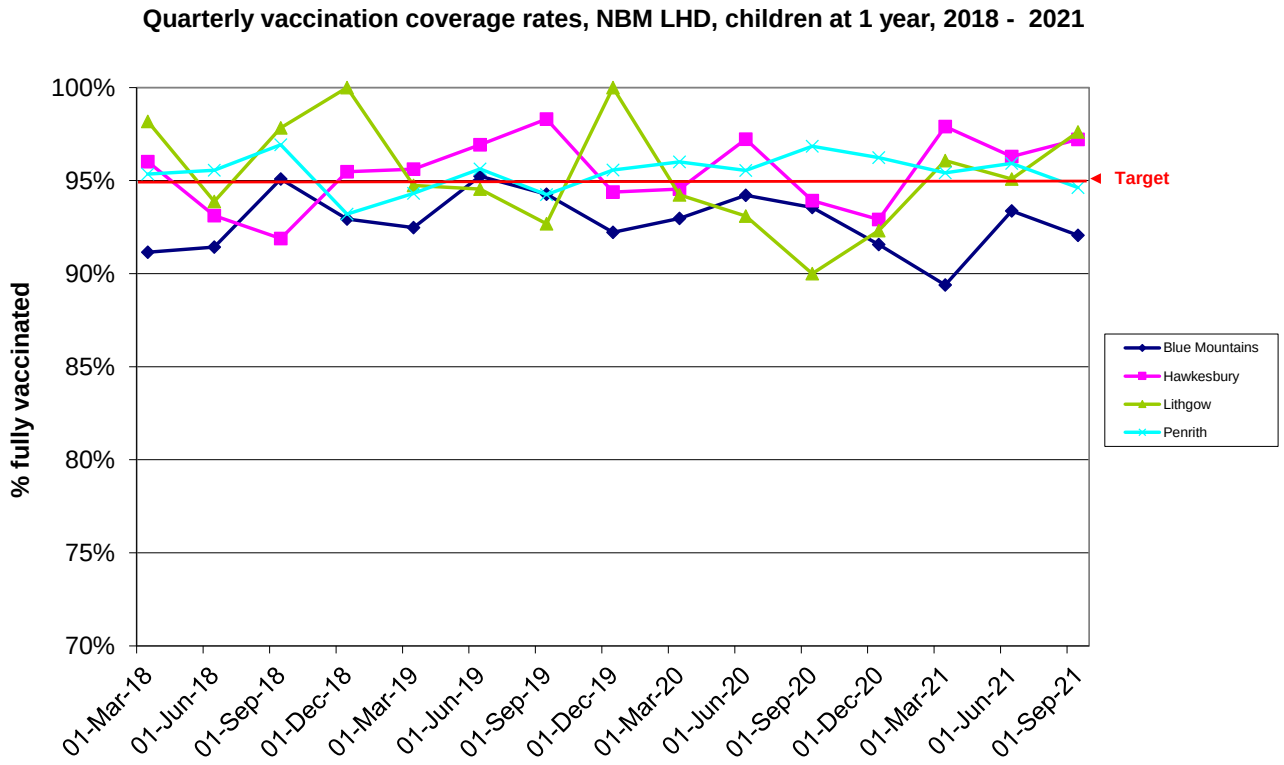
Year	Estimated total global measles deaths
2016	89,780
2017	109,638
2018	142,000
2019	207,500

Source: World Health Organization, as published in their annual 'Progress towards regional measles elimination' reports in the *Weekly Epidemiological Record*[2–5].

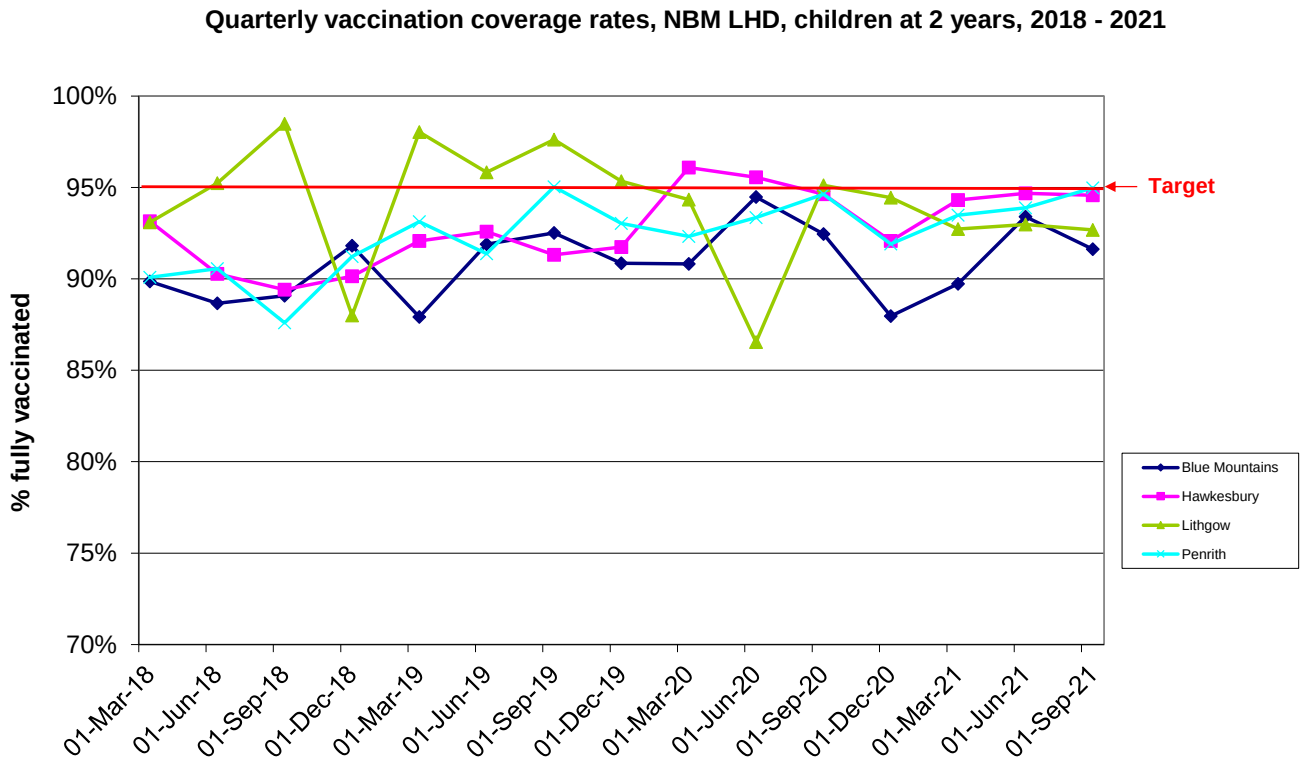
Durrheim, D et al. (2021). A dangerous measles future looms beyond the COVID-19 pandemic. Nature Medicine; 27: 360-362.

NBM childhood vaccination coverage

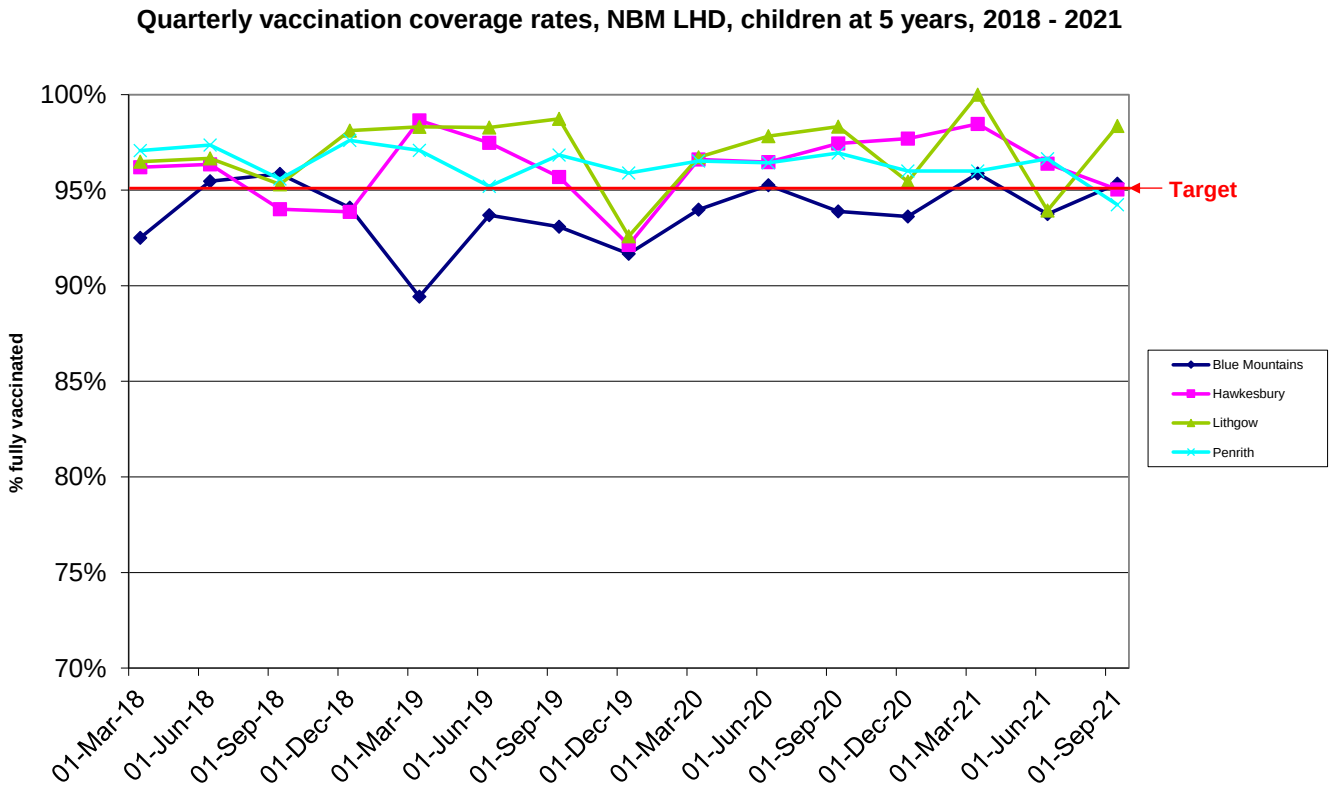
Quarterly childhood vaccination coverage 2018 – 2021 (1 year olds)



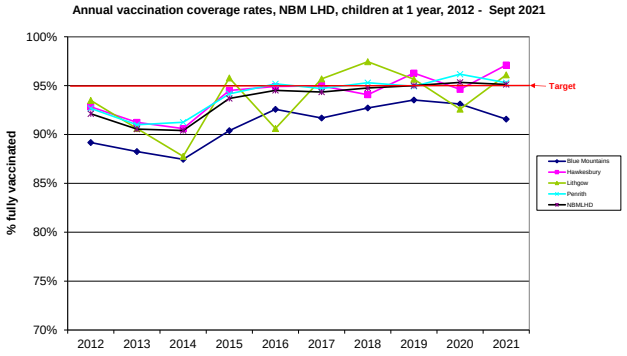
Quarterly childhood vaccination coverage 2018 – 2021 (2 year olds)

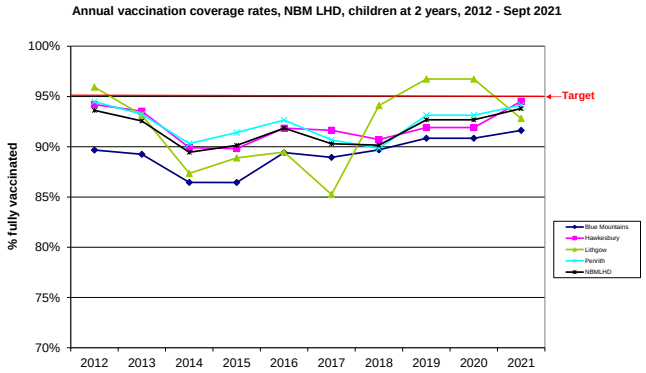


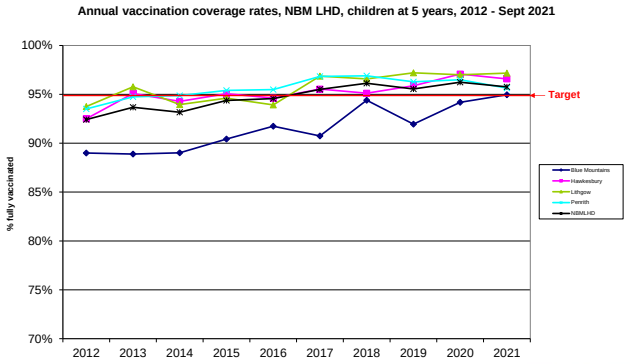
Quarterly childhood vaccination coverage 2018 – 2021 (5 year olds)



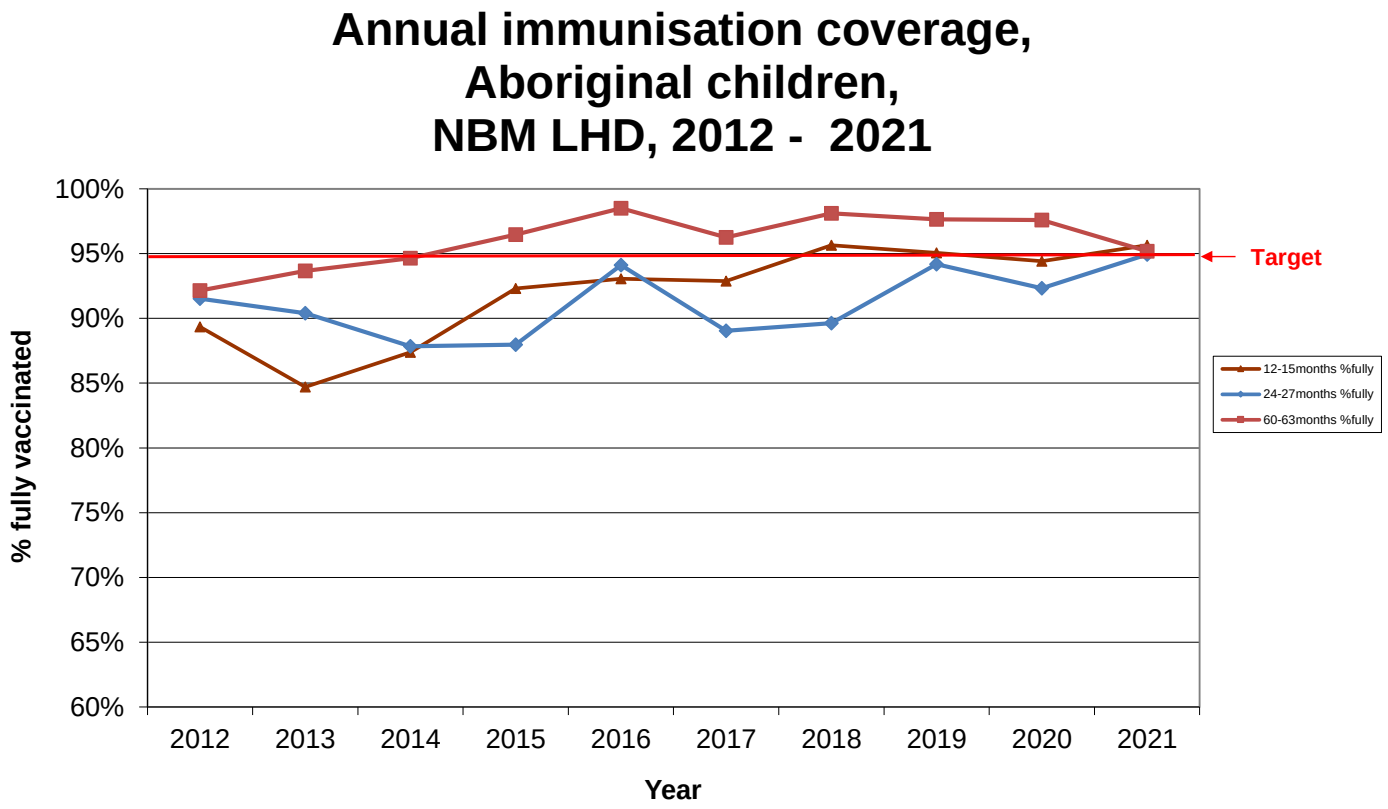
Annual childhood vaccination coverage 2018 – 2021





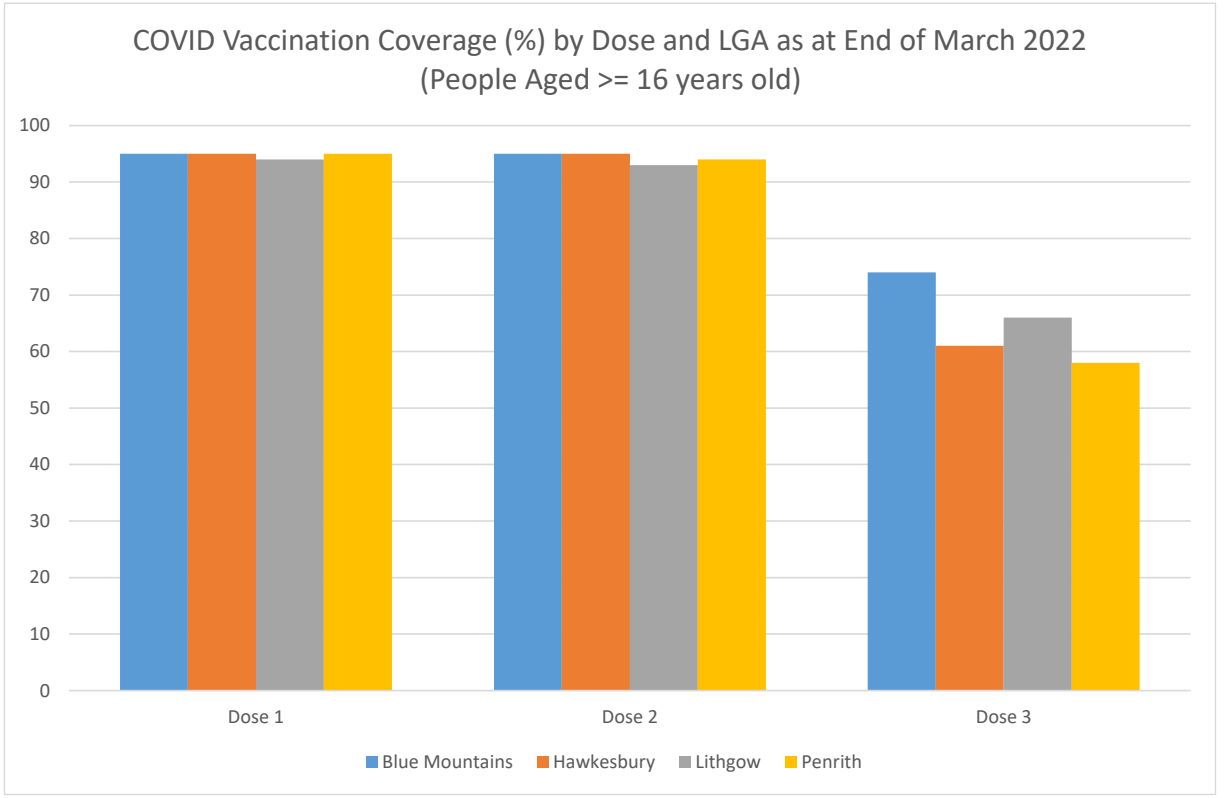


Annual Aboriginal childhood vaccination coverage 2012 – 2021



NBM COVID vaccination rates

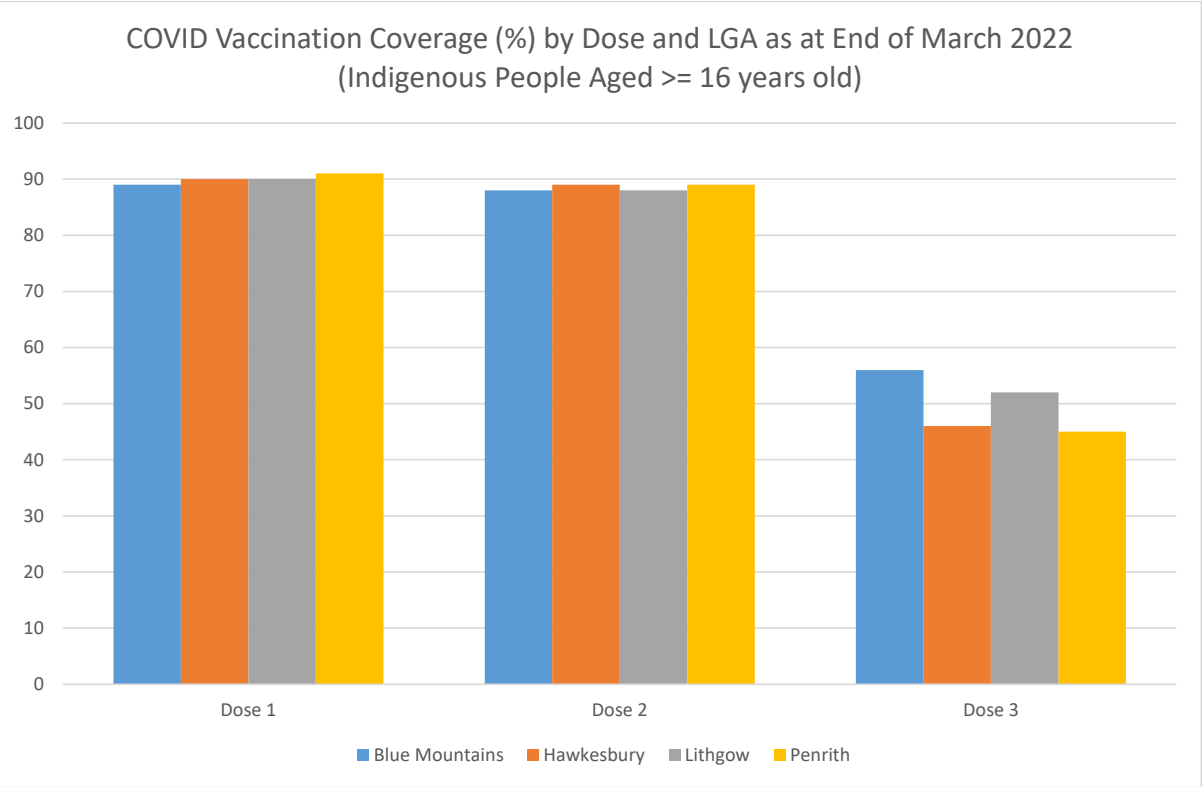
COVID Vaccination Coverage (by Dose and LGA)



- Note: Maximum score reported is > 95%

https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/numbers-statistics#daily-update-reports

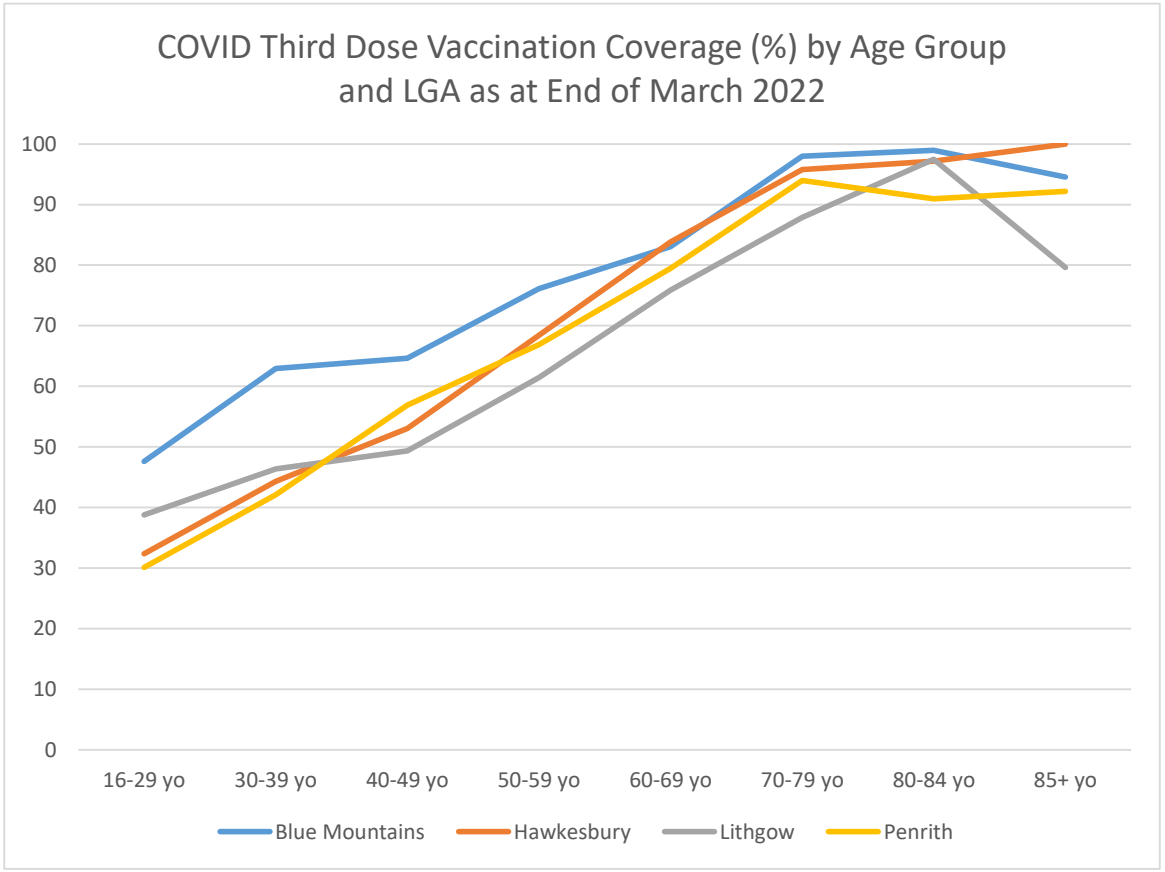
COVID Vaccination Coverage (by Dose and LGA) – Aboriginal and Torres Strait Islander People



- Note: Maximum score reported is > 95%

https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/numbers-statistics#daily-update-reports

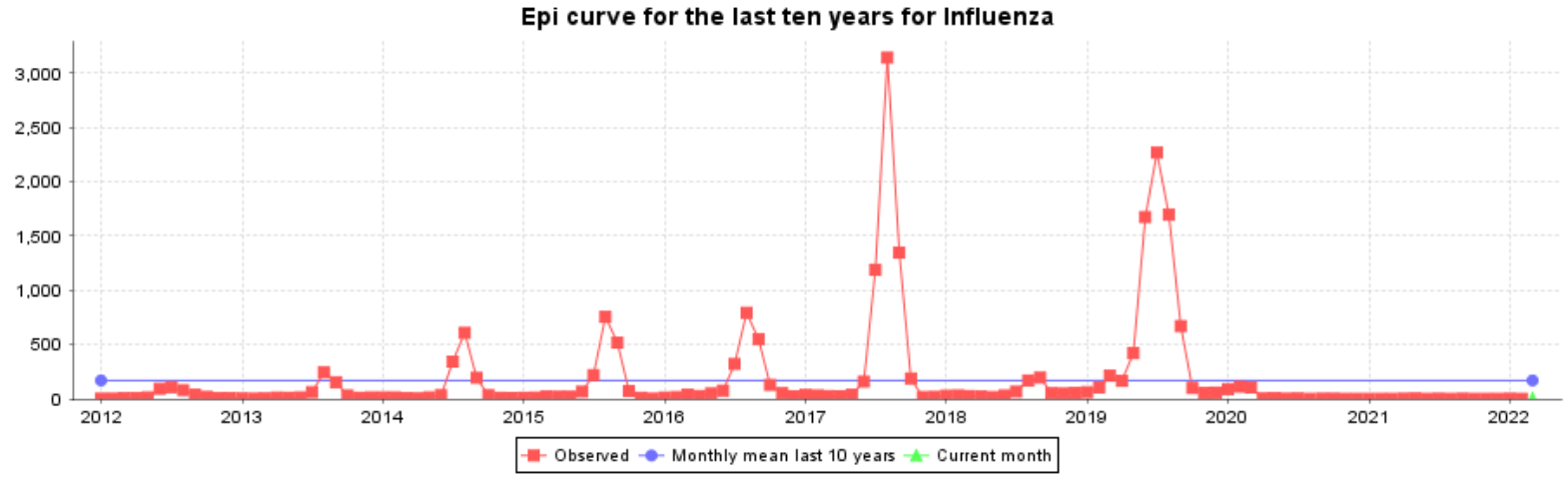
COVID Third Dose Vaccination Coverage (by Age Group and LGA



Source: Australian Immunisation Register (AIR) COVID Enterprise Data Warehouse. Data extracted 31 March 2022. Population estimates at 30 June 2020 based on the Australian Bureau of Statistics estimated resident population.

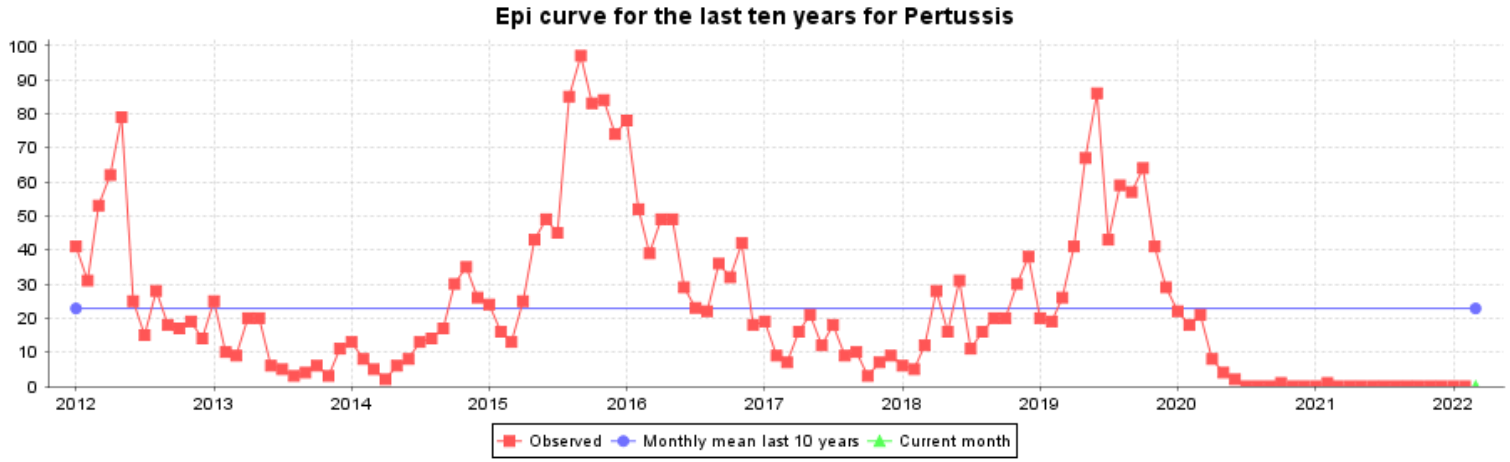
NBM selected VPDs

Influenza



- Typically 500 to 1,000 notifications.
- Regular outbreak years (eg, 2017, 2019).
- Jan, Feb and Mar 2020 high.
- Since March very, very few cases.

Pertussis



- Outbreaks every 3 to 5 years (eg, 2015, 2019).
- Early 2020 coming to the end of the 2019 outbreak.
- Since early 2020 very, very few cases.

Takeaway messages

- Although our childhood vaccination program has good coverage rates, there was some effect of the pandemic and the threat of importation from overseas is real (especially for measles).
- COVID vaccination rates are good, but the third dose rates could be higher (especially in younger age groups).
- COVID vaccination rates for Indigenous people could be improved.
- Influenza and pertussis are of concern as we enter the ‘flu season with co-circulating COVID.

Nepean Blue Mountains Local Health District

Immunisation Update

Lisa Allchin

NSW GOVERNMENT Health
Nepean Blue Mountains
Local Health District

Japanese Encephalitis

- Japanese encephalitis is mosquito-borne viral illness

- Vaccination is recommended for priority groups
  - people who work at, reside at, or have a planned non-deferrable visit to a
    - Piggery
    - Pork abattoir
  - personnel who work directly with mosquitoes
  - all diagnostic and research laboratory workers who may be exposed to the virus

- Order through state vaccine centre

- Encourage patients to protect themselves against mosquito bites

Shingles vaccine

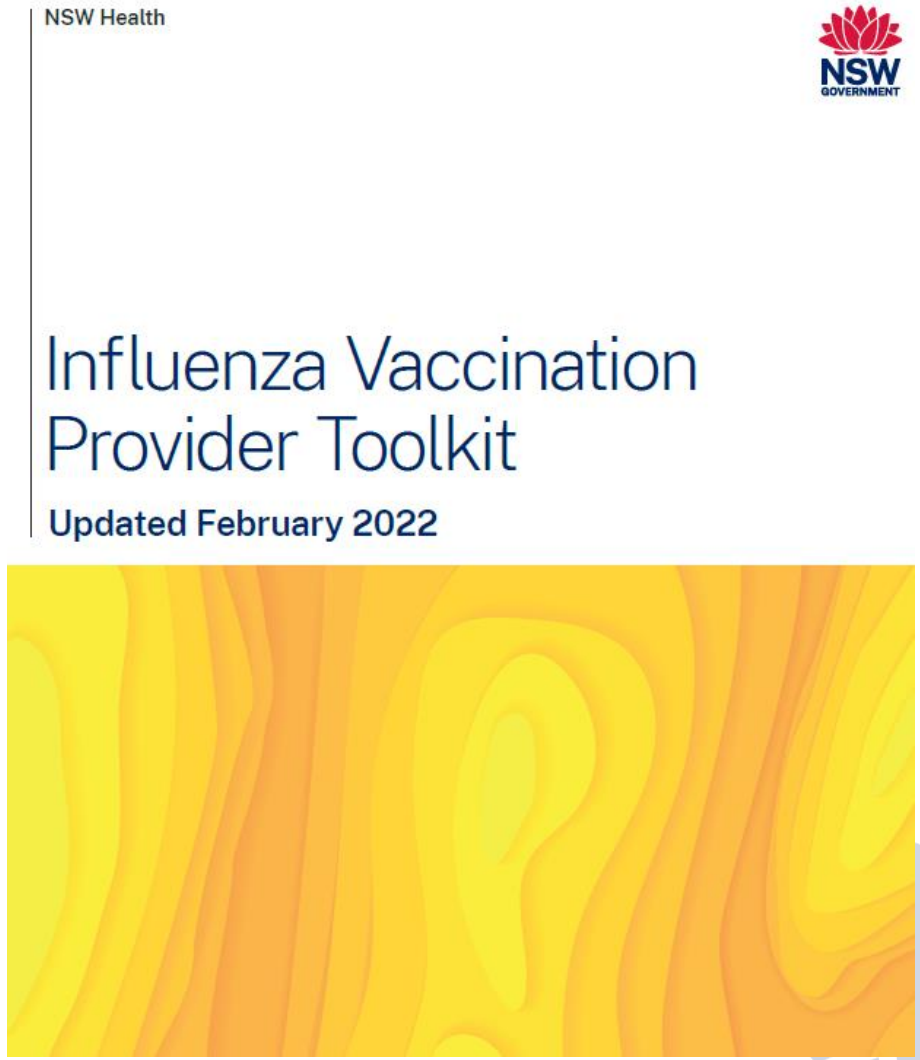
- The catch up program for Zostavax has been extended to 31 October 2023

- Shingrix is now available in Australia

NSW GOVERNMENT Health
Nepean Blue Mountains
Local Health District

Influenza Vaccination Provider Toolkit

- Provides information on:
  - Vaccine ordering
  - Which patients to target for funded vaccines
    - Aboriginal and Torres Strait Islander people
    - Children 6 months to less than 5 years
    - Pregnant women
    - Medically at risk patients
    - People aged 65 years and over
    - Healthcare workers
  - Reporting to the immunisation register
  - Influenza vaccine safety
  - Vaccine storage



NSW GOVERNMENT Health
Nepean Blue Mountains Local Health District

2022 Influenza Vaccines

2022 INFLUENZA VACCINES AVAILABLE UNDER THE NIP, BY AGE

Before administering an influenza vaccine, CHECK you have the correct vaccine for the person's age. Ages are identified on the syringe.

	Quadrivalent (QIV) vaccines			
Registered age group	**Vaxigrip Tetra®** 0.50 mL (Sanofi)	**Fluarix® Tetra** 0.50 mL (GSK)	**Afluria® Quad** 0.50 mL (Seqirus)	**Fluad® Quad** 0.50 mL (Seqirus)
<6 months	✗	✗	✗	✗
6 months to <5 years	✓	✓	✗	✗
5-64 years	✓[1]	✓[1]	✓[1]	✗
65 years and over	✓	✓	✓	✓[2]

2022 influenza vaccine presentation and free vaccine eligibility

NSW GOVERNMENT

6 MONTHS TO LESS THAN 5 YEARS

Vaxigrip Tetra® and Fluarix® Tetra

Registered for use in people aged 6 months and over:
- All children 6 months to less than 5 years
- Give two doses one month apart for children aged 6 months to less than 5 years if first year of receiving flu vaccine
- Fluarix Tetra is available in 10 and single packs. Vaxigrip Tetra is only available in 10-dose packs.
- Children should receive a full dose (i.e. not a half dose)
- Do NOT contain latex

5 YEARS TO 64 YEARS

Vaxigrip Tetra®, Fluarix® Tetra and Afluria® Quad

- People 5 years and over with medical risk factors predisposing to severe influenza
- All Aboriginal persons 5 years to 64 years of age
- Pregnant women
- Give two doses one month apart for children aged 5 years to less than 9 years if first year of receiving flu vaccine
- Fluarix Tetra is available in 10 and single packs. Vaxigrip Tetra and Afluria Quad are only available in a 10 pack.
- Children should receive a full dose (i.e. not a half dose)
- Do NOT contain latex
- Do not use Afluria Quad for children less than 5 years of age

65 YEARS AND OVER

Fluad® Quad

- Adjuvanted quadrivalent vaccine
- All persons aged 65 years and over
- Milky-white suspension
- Available in 10 packs
- Does NOT contain latex
- Do not use in pregnant women or children

For more information visit **health.nsw.gov.au/immunisation**

NSW GOVERNMENT Health
Nepean Blue Mountains Local Health District

Medical exemption to vaccination

Australian Government
Services Australia

medicare

Australian Immunisation Register immunisation medical exemption (IM011)

When to use this form

Use this form if you are a general practitioner, paediatrician, clinical immunologist, infectious disease physician or public health physician and would like to notify the Australian Immunisation Register (AIR) of an individual who has a vaccine exemption due to a medical contraindication or natural immunity.

You can record a vaccine exemption due to a medical contraindication or natural immunity online through the AIR site. Vaccine exemptions recorded on the AIR site are processed immediately.

This form will not be accepted if it has been altered in any way or is incomplete.

For more information

Go to **servicesaustralia.gov.au/hpair**

Filling in this form

You can fill and sign this form digitally in some browsers, or you can open it in Adobe Acrobat Reader. If you do not have Adobe Acrobat Reader, you can print this form and sign it.

If you have a printed form:

- Use black or blue pen.
- Print in BLOCK LETTERS.

Individual's details

1 Medicare card number

Ref no.

or

Individual Healthcare Identifier (if known)

8 0 0 3 6 0

2 Family name

First given name

Second given name

3 Postal address

Postcode

4 Date of birth (DD MM YYYY)

5 Gender Male Female

Vaccines exempt due to medical contraindication

The medical basis for vaccine exemption is to be based on guidance in *The Australian Immunisation Handbook*. Advice on what constitutes a valid medical exemption to vaccination is provided on page 3 of this form.

6 The individual identified on this form has a:

permanent vaccine exemption due to medical contraindication because of the following:

Tick one only

previous anaphylaxis (to vaccine/vaccine component) (DD MM YYYY)

significant immunocompromise (live attenuated vaccines only)

or

temporary vaccine exemption until (DD MM YYYY)

due to a non-permanent contraindication because of the following:

Tick one only

acute major medical illness

significant immunocompromise of short duration (live attenuated vaccines only)

the individual is pregnant (live attenuated vaccines only)

7 Select from the following vaccines:

Live	Tick all that apply		
M-M-R II		ProQuad	
Priorix		Rotarix	
Priorix-Tetra			

Non-live	Tick all that apply		
ActHIB		Hiberix	
AstraZeneca Vaxzevria		Infanrix	
Moderna Spikevax		Infanrix Hexa	
Novavax NUVAXOVID		Infanrix IPV	
Pfizer Comirnaty		Nimenrix	
Gardasil 9		Prevenar 13	
Other		Specify	

CLKDIM011 2202

Guidelines for immunisation medical exemption

What is considered a valid medical contraindication to immunisation?

The medical basis for vaccine exemption is to be based on guidance in *The Australian Immunisation Handbook* which is available on the Department of Health website **immunisationhandbook.health.gov.au**

The Australian Technical Advisory Group on Immunisation has released expanded guidance on acute major medical conditions that warrant a temporary medical contraindication relevant for COVID-19 vaccines. This information is available on the Department of Health website **health.gov.au/resources/collections/covid-19-vaccination-provider-resources**

Medical contraindications include:

- anaphylaxis following a previous dose of the relevant vaccine
- anaphylaxis following any component of the relevant vaccine
- significant immunocompromise (for live attenuated vaccines only).

  For further details, including what is considered significant immunocompromise, see *The Australian Immunisation Handbook*. For example, HIV-infected persons in whom immunocompromise is mild can be given MMR and varicella vaccines.

Individuals should not be denied the benefits of immunisation by withholding vaccines for inappropriate reasons. A comprehensive list of false contraindications to vaccination is provided in *The Australian Immunisation Handbook*.

- Egg allergy, even severe, is not necessarily a valid exemption for any vaccine routinely recommended for children.
- Presence of a chronic underlying medical condition (apart from significant immunocompromise) is not a valid vaccine exemption.
- Family history of any adverse events following immunisation is not a valid vaccine exemption.

In what circumstances should a vaccine be temporarily deferred?

There are some circumstances where the administration of a vaccine should be deferred. These include:

- acute major medical condition
- significantly impaired immune function that is anticipated to be of short duration
- pregnancy (for live attenuated vaccines only).

While vaccination should be deferred in persons with acute febrile illness (current T ≥38.5°C) or other self-limiting acute systemic illness, this would usually be for short periods only and not require completion of this form. For detailed advice check *The Australian Immunisation Handbook*.

What evidence should I consider when assessing a possible natural immunity?

A previous infection is not a contraindication to immunisation against that same disease. Laboratory testing (via serology, antigen detection or polymerase chain reaction [PCR]) can reliably provide evidence of immunity to hepatitis B, varicella, measles, mumps and rubella. A physician-based clinical diagnosis is accepted although is less reliable than laboratory testing as these diseases are now uncommon among Australian children due to the widespread immunisation and other infections can have similar clinical presentations.

Who do I contact if I am uncertain whether to vaccinate or not?

Further advice can be sought from your state or territory health authority (see contact details below). In most states and territories specialist immunisation clinics exist which are equipped to assist with complex issues, such as how to manage patients who have experienced a previous adverse event following immunisation or who have an underlying medical condition.

Resources for communicating the risks and benefits of immunisation

The following resources are available to facilitate discussion on the risks and benefits of immunisation with patients and/or their carers, including those who may have concerns relating to vaccines and immunisation:

- The summary table inside the back cover of the *The Australian Immunisation Handbook* providing 'Comparison of the effects of diseases and the side effects of NIP vaccines'.
- Other resources available at **health.gov.au/health-topics/immunisation/health-professionals**
- Vaccine preventable disease and vaccine safety factsheets prepared by the National Centre for Immunisation Research and Surveillance available at **ncirs.org.au/health-professionals/ncirs-fact-sheets-faqs**
- Commonwealth COVID-19 vaccine hub available at **health.gov.au/COVID19-vaccines**

Contact details for state and territory government health authorities

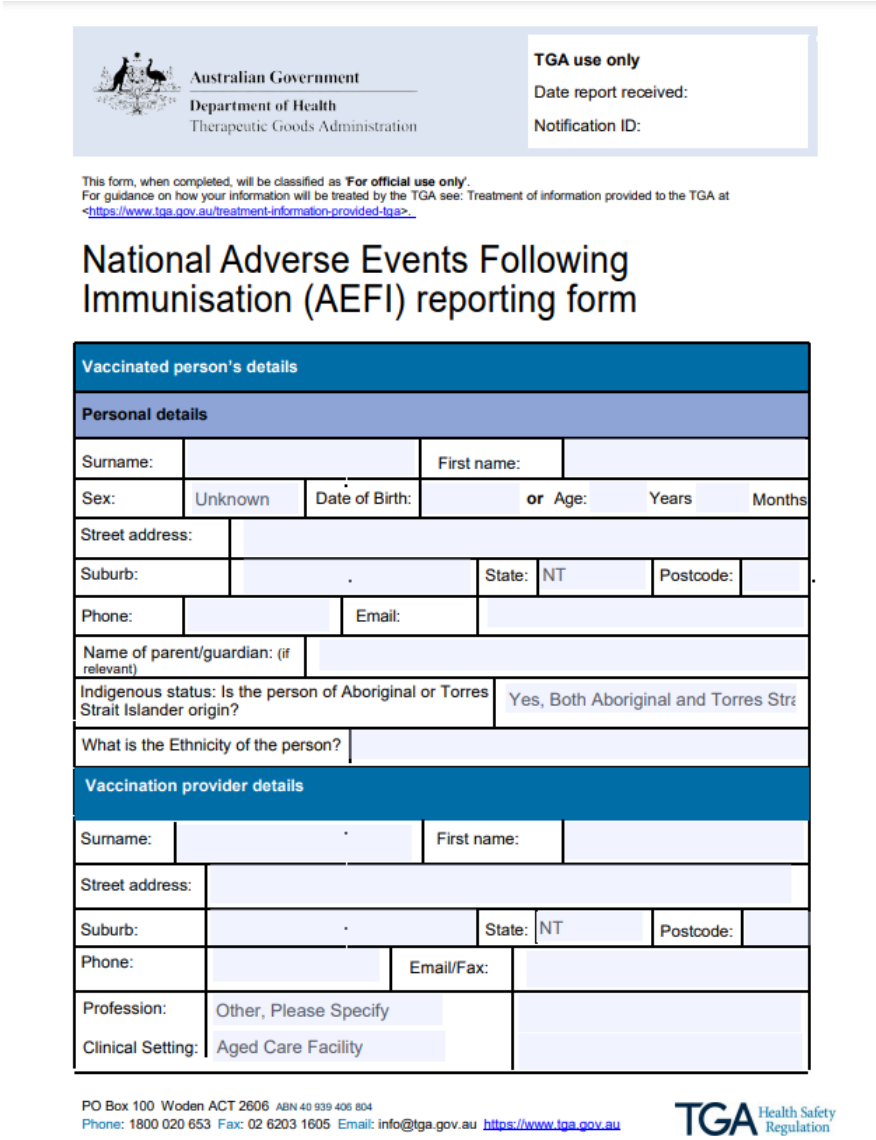
Australian Capital Territory Immunisation Enquiry Line	**02 6205 2300**
New South Wales (to contact your local public health unit)	**1300 066 055**
Northern Territory Centre for Disease Control	**08 8922 8044**
Queensland (to contact your local public health unit)	**13 HEALTH (13 4325 84)**
South Australia	**1300 232 272**
Tasmania	**1800 671 738**
Victoria	**1300 882 008**
Western Australia	**08 6456 0208**

NSW GOVERNMENT

Adverse Events following Immunisation (AEFI)

- AEFI is **any negative reaction that follows immunisation**. It can be either expected or unexpected
- Serious or unexpected AEFIs to be notified to Public Health
- In 2021 445 AEFIs notified to Public Health
- For clinical advice contact NSWISS

email: **SCHN-NSWISS@health.nsw.gov.au**. (Monday-Friday 9am-5pm)



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

NSW GOVERNMENT Health
Nepean Blue Mountains Local Health District

AusVax safety

COVID-19 vaccine safety data - at a glance

As at 28 March 2022

6,202,345

safety surveys completed*

95,314

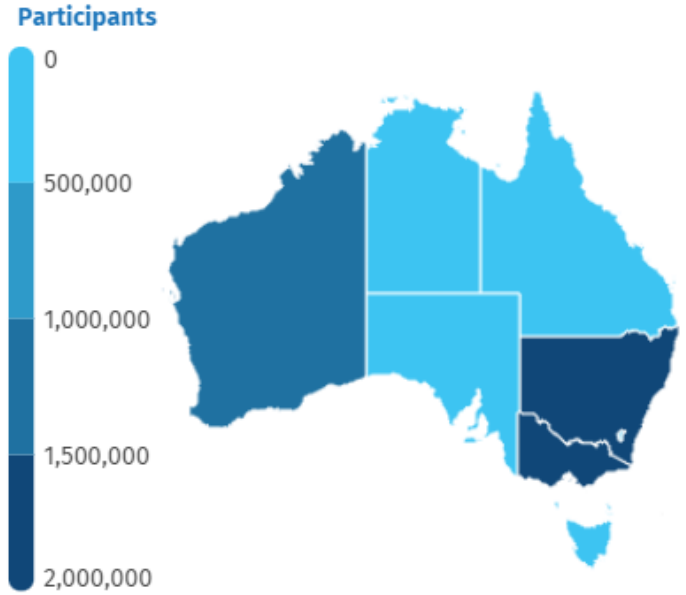
safety surveys completed by Aboriginal and Torres Strait Islander people*

44.7%

reported at least one adverse event

1.0%

reported visiting a GP or ED



* Surveys sent on Day 3 post vaccination. NOTE: Adverse events are self-reported, have not been clinically verified, and do not necessarily have a causal relationship with the vaccine.

AusVaxSafety
An NCIRS led collaboration

Safety surveys completed

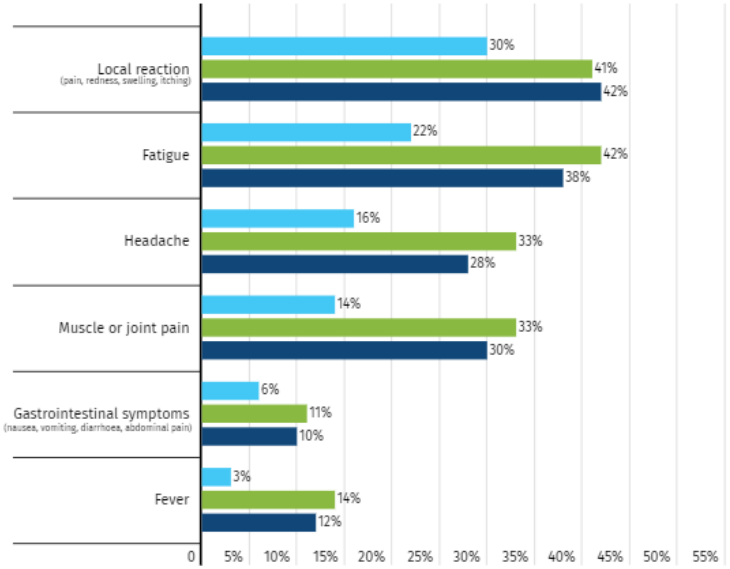
2,097,253 Pfizer dose 1

1,885,845 Pfizer dose 2

921,854 Pfizer dose 3 / booster

Reported at least one adverse event

Commonly reported adverse events



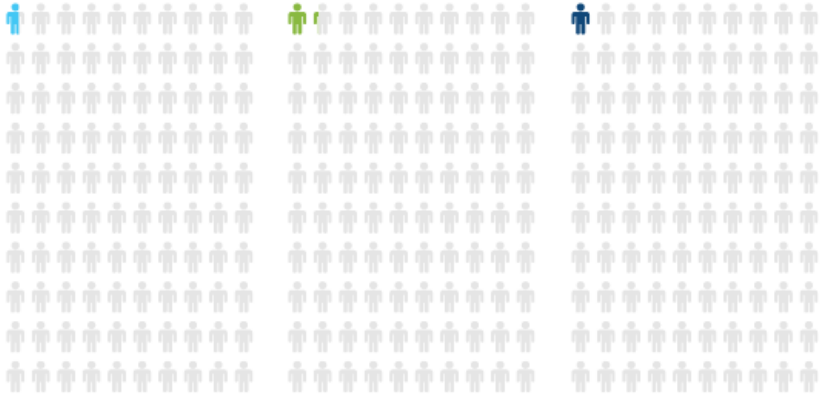
These symptoms are known to occur after vaccination. They are generally mild and short-lived. **As with any adverse event reports, not all symptoms reported may be caused by the vaccine; they may be coincidental and due to other causes.**

Medical attendance

Less than 1 in 100 people reported seeing a doctor or going to the emergency department in the days after Pfizer dose 1

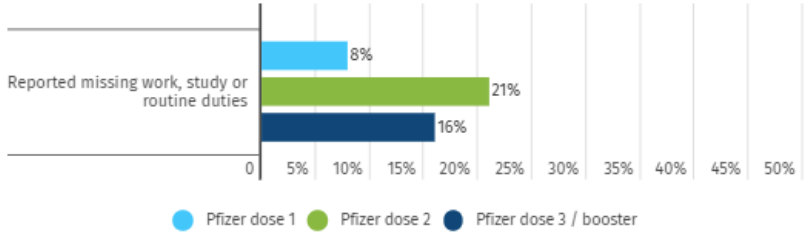
Just over 1 in 100 people reported seeing a doctor or going to the emergency department in the days after Pfizer dose 2

1 in 100 people reported seeing a doctor or going to the emergency department in the days after Pfizer dose 3 / booster



Those who presented to GPs and emergency departments had similar adverse events to those who didn't. AusVaxSafety does not specifically ask participants the reason why they accessed medical care in the days following vaccination. Therefore medical attendance reported may or may not be related to any adverse events reported.

Impact on routine activities

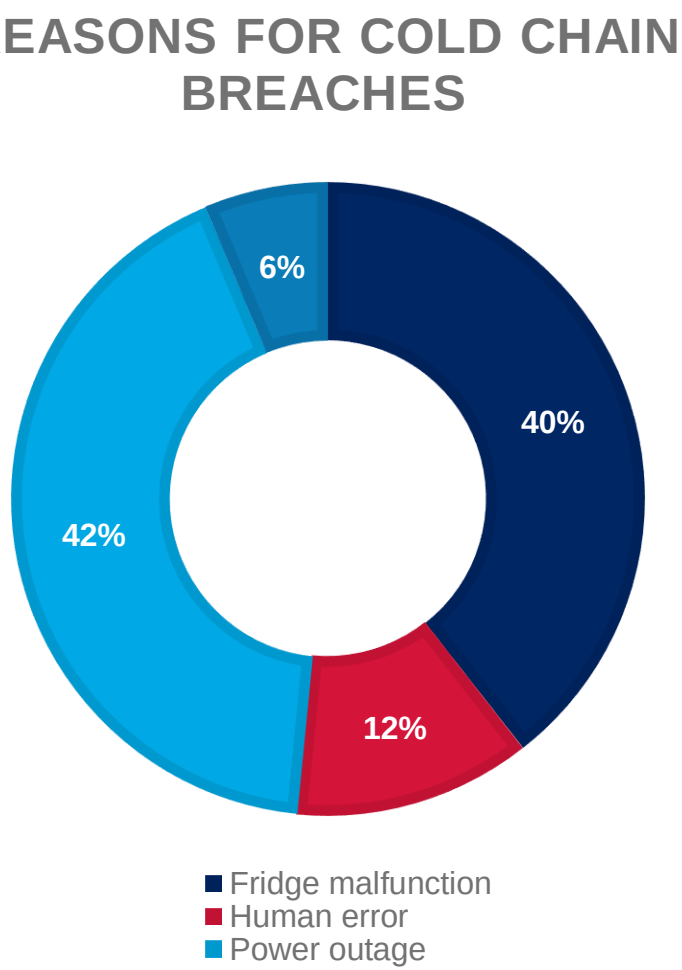


The majority reported missing 1 day or less. Most participants who reported not being able to do work or routine duties had lethargy, headache and joint pain. These are common adverse events linked to the immune response following immunisation and understandably have meant some people have chosen to rest after vaccination.

NSW GOVERNMENT Health
Nepean Blue Mountains Local Health District

Vaccine Storage and Cold Chain Management

- In 2021 67 cold chain breaches were notified to Public Health
- 92% from GP practices
- COVID vaccine cold chain breaches to be reported to Vaccine Operation Centre on 1800 318 208



Cold Chain Audits

- Cold Chain audits continuing
- Strive for 5 self audit

NSW Health Random Cold Chain Audit for General Practices

Public Health Unit details:

Contact person:		Date audit issued:
Contact number:		Email:

General Practice details:

Date audit completed:	Vaccine account number:
Practice name:	
Practice address:	
Email address:	Phone number:
Name, signature and position of person completing the audit:	

Instructions:
Once completed, please forward the completed NSW Health Cold Chain Audit and required attachments (refer to section 4) to your local PHU at the email above within 14 days of receiving the audit.

	Audit Questions	Yes	No	Response/ Comment:
	Staff education and training			
1	Has at least one staff member completed the online NSW Health Cold Chain Learning Module? *It is however recommended that ALL staff complete the online learning module to ensure staff are competent in cold chain management.*	☐	☐	
2	Has a vaccine storage self-audit been completed in the last 12 months? **Note:** Refer to the 'Strive for 5' vaccine storage self-audit	☐	☐	**If yes, date of last self-audit:**
	Reporting vaccinations to the AIR			
3	Does the Practice report all administered vaccinations (childhood, adolescent & adult) including influenza vaccinations to the Australian Immunisation Register?	☐	☐	**If no, are any vaccines reported to the AIR? (Please specify)**
	Please submit the following to your local public health unit with the completed audit questionnaire			
4.1	Certificate(s) of completion of the online NSW Health Cold Chain Learning Module	☐	☐	
4.2	Most recent annual vaccine storage self-audit	☐	☐	
4.3	Photo of the inside and outside of the vaccine fridge(s)	☐	☐	
4.4	72 hrs data logging for each vaccine fridge (for the 3 days prior to receiving this audit)	☐	☐	
4.5	A copy of the current twice daily temperature chart of each vaccine fridge(s) **Note:** Refer to the 'Strive for 5' — Vaccine Fridge Temperature Chart	☐	☐	

Thank you for completing the NSW Health Cold Chain Audit. Your local public health unit may contact you if further information is required. If you have any questions about items in this audit, please call your PHU on 1300 066 055.

Outcome (PHU use only)

Date Audit received:	Reviewer details:

Practice compliant at time of audit: ☐ YES ☐ NO (consider site visit)
Date of site visit (if applicable):
Practice now compliant (following PHU/PHN support) ☐ YES ☐ NO
Comments:

APPENDIX 2:
Vaccine storage self-audit

Immunisation service providers are required to use this checklist to carry out a self-audit at least once every 12 months, and more frequently if there have been problems with equipment or cold chain breaches. Documentation should be stored for future reference.

Print this checklist and use it as required.

Self-auditing is important because:

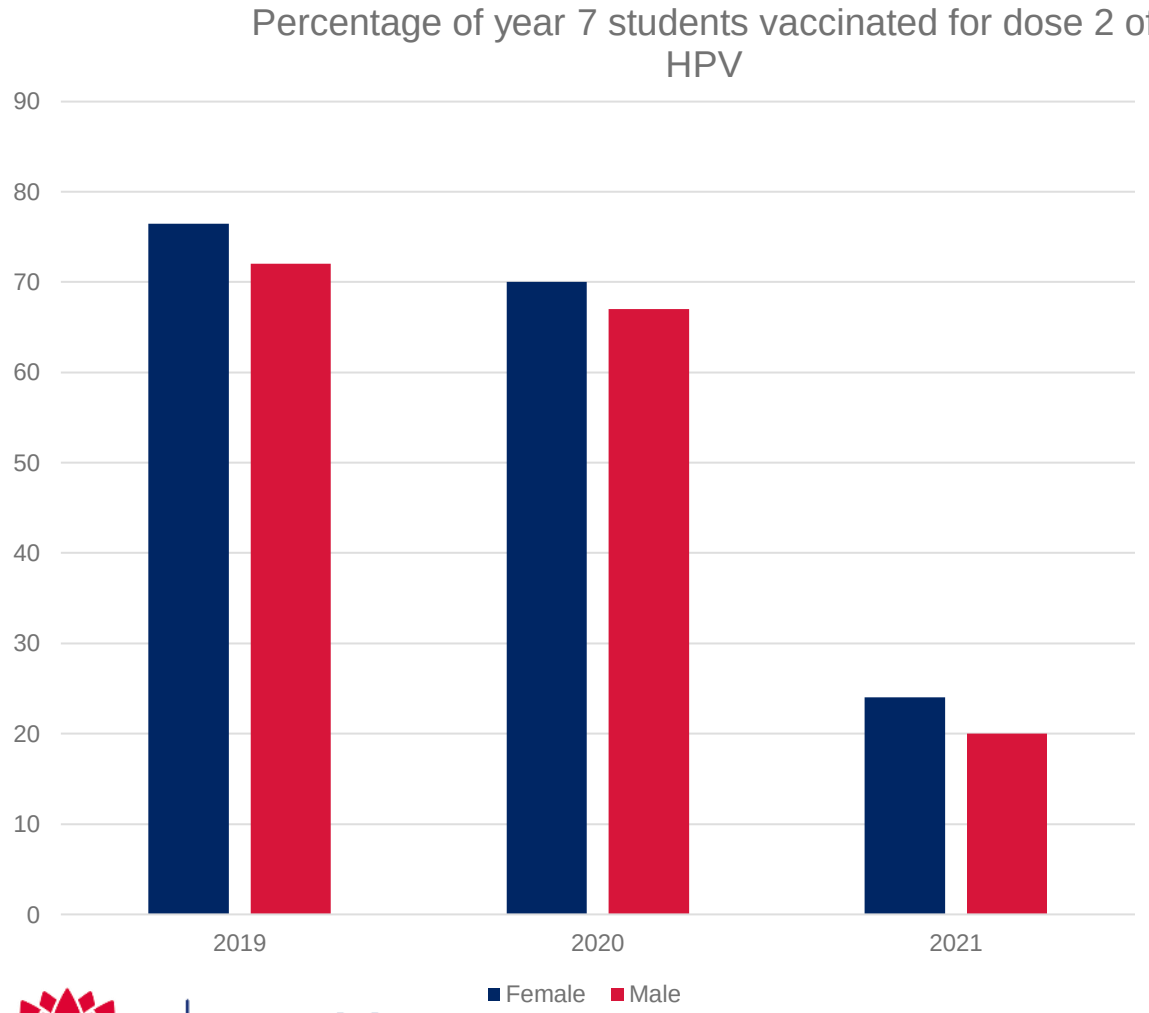
- it is part of routine quality assurance and risk management processes
- it enables staff to have confidence that they are providing a safe and effective vaccine.

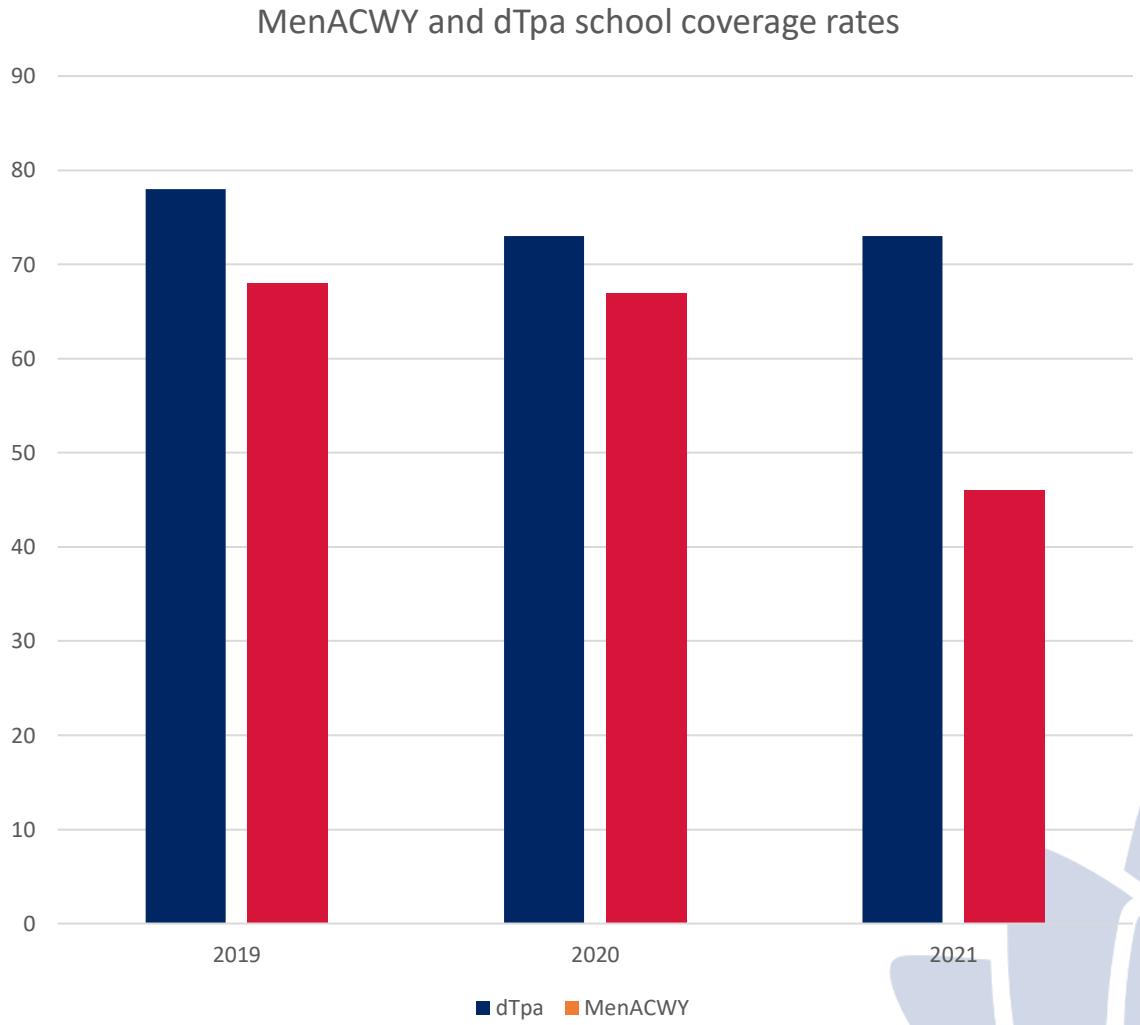
Print or photocopy this page and keep it as a record of an audit.

Nominated person responsible for vaccine management	
Nominated back-up person for vaccine management	
Make and model of refrigerator	
Date of self-audit	
Person conducting audit	

National vaccine storage guidelines – Strive for 5

Adolescent School Vaccination Program





NSW GOVERNMENT Health
Nepean Blue Mountains Local Health District

HealthPathways
Nepean Blue Mountains

Nepean Blue Mountains HealthPathways

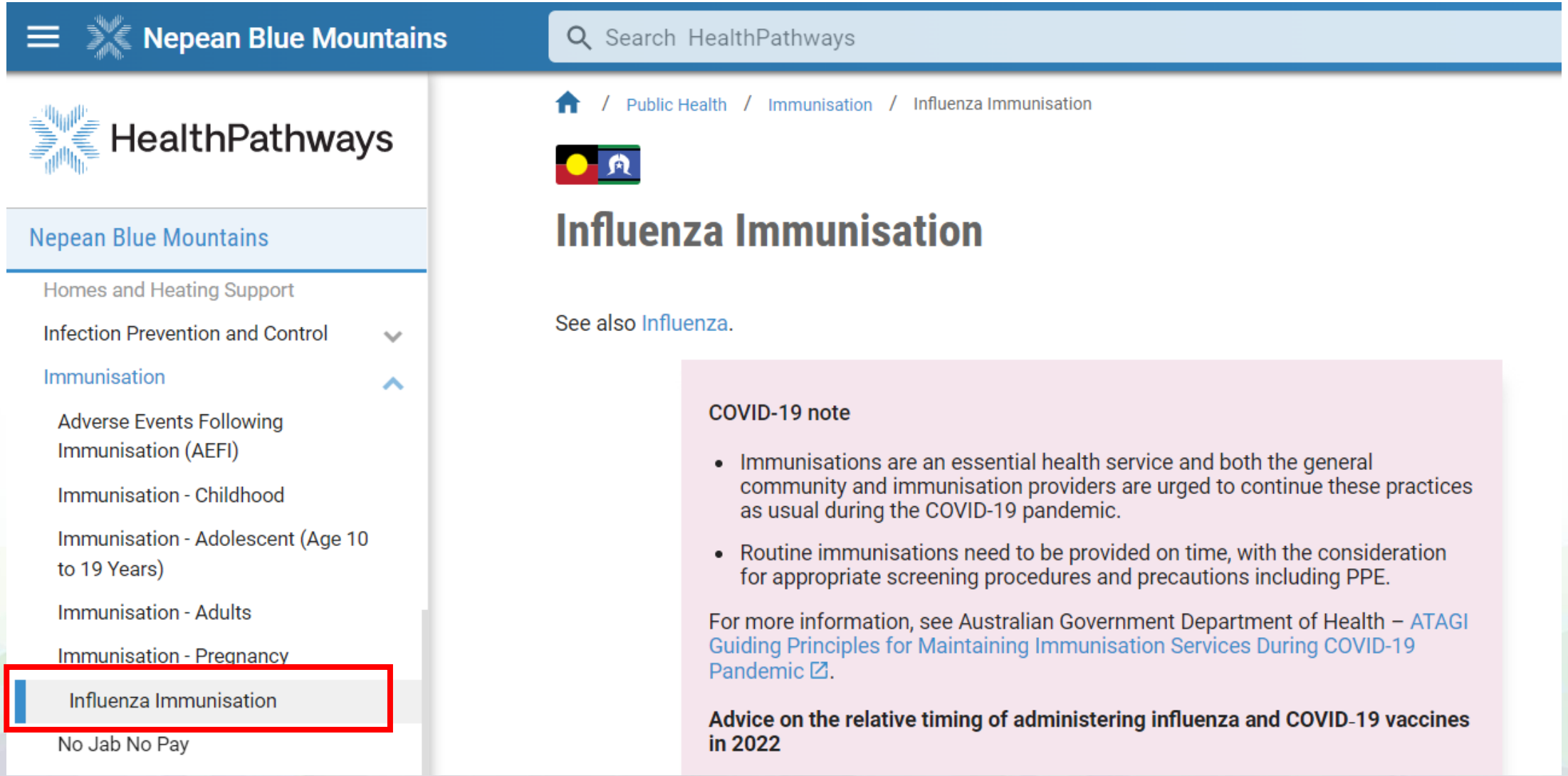
HealthPathways | Nepean Blue Mountains

NBM HealthPathways URL: https://nbm.healthpathwayscommunity.org/index.htm		
	Username	**Password**
Blue Mountains	hpbluemount	hpbmpassword
Hawkesbury	hphawkesbury	hphpassword
Lithgow	hplithgow	hplpassword
Penrith	hppenrith	hpppassword

Use the access details for the LGA you are based in.

Access available for all NSW and Australian HealthPathways sites on request.

https://nbm.communityhealthpathways.org/52701.htm



https://nbm.communityhealthpathways.org/803793.htm

Nepean Blue Mountains

Search HealthPathways

HealthPathways

Nepean Blue Mountains

COVID-19 Vaccination Procedure

Last reviewed: 04 April 2022

What's changed? Read about new and important changes.

This pathway is about preparing the practice to be a COVID-19 vaccination site, preparing patients for COVID-19 vaccination including answering queries, and the clinical management processes involved in delivering COVID-19 vaccination.

See also:

- COVID-19 Vaccination Resources
- Myocarditis and Pericarditis After mRNA COVID-19 Vaccines

Background

https://nbm.communityhealthpathways.org/44304.htm

HealthPathways

Nepean Blue Mountains

- Public Health Updates
- Asbestos Exposure
- Homes and Heating Support
- Infection Prevention and Control
- Immunisation
  - Adverse Events Following Immunisation (AEFI)
  - Immunisation - Childhood
  - Immunisation - Adolescent (Age 10 to 19 Years)
  - Immunisation - Adults
  - Immunisation - Pregnancy

Immunisation - Adults

See also Immunisation - Pregnancy.

COVID-19 note

- Immunisations are an essential health service and both the general community and immunisation providers are urged to continue these practices as usual during the COVID-19 pandemic.
- Routine immunisations need to be provided on time, with the consideration for appropriate screening procedures and precautions including PPE.
- For more information, see Australian Government Department of Health – ATAGI Guiding Principles for Maintaining Immunisation Services During COVID-19 Pandemic.

Red Flags

PHN Immunisation Resources

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An Australian Government Initiative

Wentworth Healthcare
Blue Mountains | Hawkesbury | Lithgow | Penrith

Your Practice Portal

Your Practice Portal
Online Training Hub

www.yourpracticeportal.com.au

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An Australian Government Initiative

Wentworth Healthcare
Blue Mountains | Hawkesbury | Lithgow | Penrith

Useful Links

- NBMPHN Immunisation Website
- Influenza Vaccination Provider Toolkit 2022
- Immunisation Medical Exemption Form
- National Adverse Events Following Immunisation (AEFI) Reporting Form
- Vaccine Storage Self-Audit

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Wentworth Healthcare Blue Mountains | Hawkesbury | Lithgow | Penrith

Thank you