

Influenza immunisation 2020 & other hot and cold topics





- Welcome – many professional groups
- CC & HNE LHD self- reporting professional development
- Education session – for Authorised Nurse immunisers counts towards annual update but not a complete annual update by itself.
- Thanks to PHN, Colleen & Donna @ CC PHU

Vaccines makes life possible



Provide vaccines

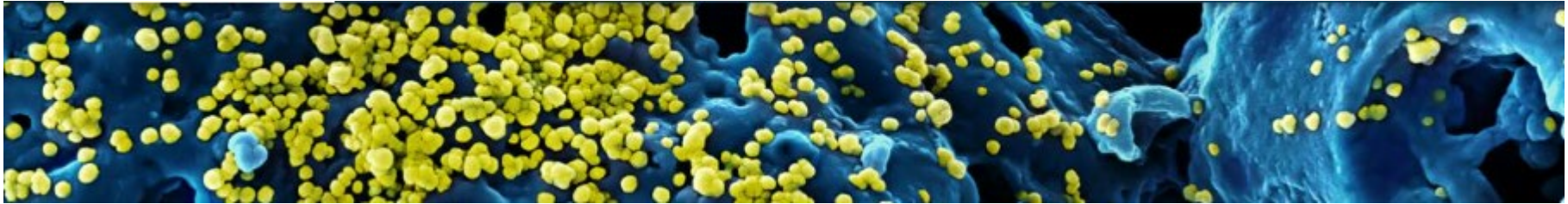


Samoa pop 200,000
Sept – Dec 2019
5,700 cases measles
61 deaths < 4 years



Earth pop 7.8 Billion
Jan – March 2020
470,973 cases Covid19
Zero Deaths < 9 years

Coronaviruses



- Hundreds of corona viruses – animals
- Jump to humans – spillover
- 7 corona viruses cause human disease
- 4 mild disease 229E, OC43, NL63 and HKU1
- SARS (severe acute respiratory syndrome)
- MERS (Middle East respiratory syndrome)
- SARS-CoV-2 causes Covid-19

R14 many respiratory viruses have no vaccine

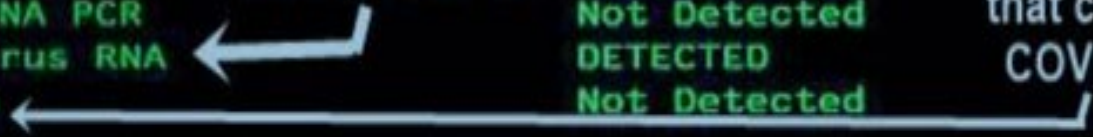
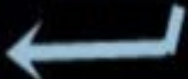


Respiratory Nucleic Acid Detection		Location No: JH20M44586
Specimen: Swab		
Specimen Source	Swab	
Rapid Influenza A RNA	Not Detected	
Rapid Influenza B RNA	Not Detected	
Rapid RSV RNA	Not Detected	
Influenza A RNA PCR	Not Detected	
Influenza B RNA PCR	Not Detected	
RSV RNA PCR	Not Detected	
Picornavirus RNA PCR	Not Detected	
Enterovirus RNA PCR	Not Detected	
Parechovirus RNA PCR	Not Detected	
Parainfluenza 1 RNA PCR	Not Detected	
Parainfluenza 2 RNA PCR	Not Detected	
Parainfluenza 3 RNA PCR	Not Detected	
Adenovirus DNA PCR	Not Detected	
Metapneumovirus RNA PCR	Not Detected	
B.pertussis DNA PCR	Not Detected	
M.pneumoniae DNA PCR	Not Detected	
Human Coronavirus RNA	DETECTED	
SARS-CoV-2 RNA	Not Detected	



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Parainfluenza 3 RNA PCR	Not Detected	
Adenovirus DNA PCR	Not Detected	
Metapneumovirus RNA PCR	Not Detected	
B.pertussis DNA PCR	Not Detected	
M.pneumoniae DNA PCR	Not Detected	
Human Coronavirus RNA	DETECTED	Name for the virus that causes COVID-19
SARS-CoV-2 RNA	Not Detected	

Cause of "common cold" NOT COVID-19



Disease control without a vaccine



Pneumococcal vaccine and coronavirus (COVID-19)



- Pneumococcal vaccines (Pneumovax 23 and Prevenar 13) protect against disease such as pneumonia caused specifically by the bacterium *Streptococcus pneumoniae*, or pneumococcus
- **Pneumococcal vaccines will not provide protection against the novel coronavirus infection.**

Influenza versus COVID-19 (SARS-CoV2)

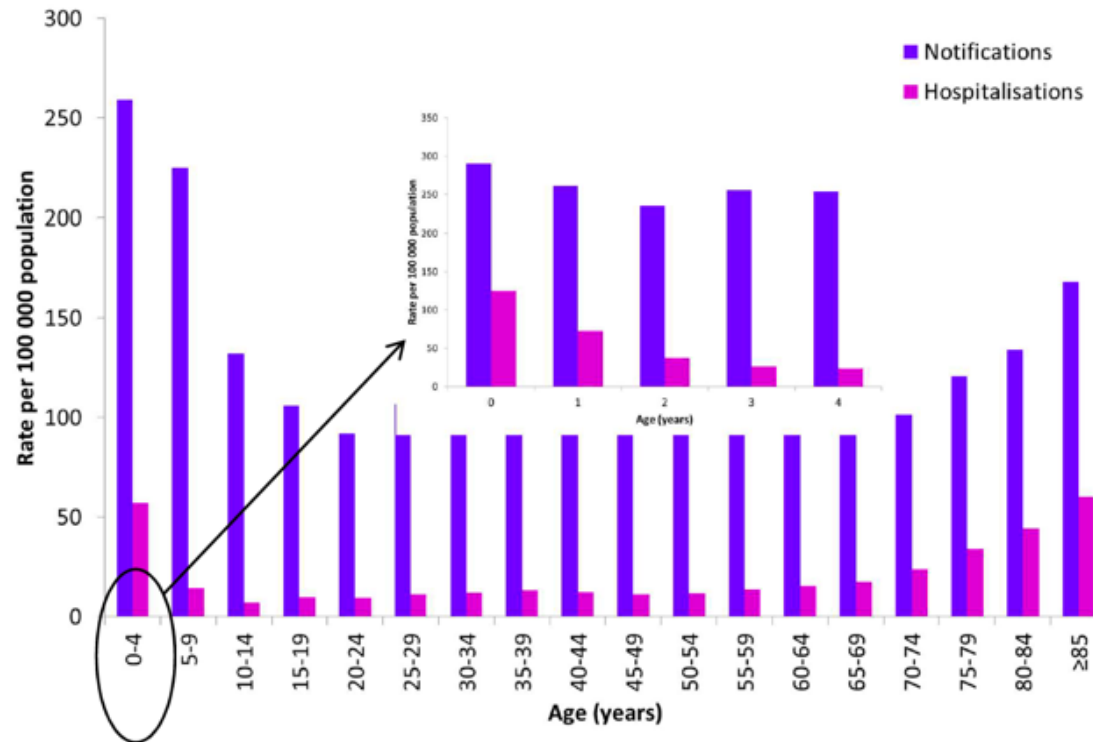


	COVID-19 (SARS-CoV2)	Seasonal Influenza (Influenza virus)
Incubation period	2-14 days Median onset 5 days	1-4 days Median 2 days
R_0 (number of secondary cases resulting from single case in non-immune population)	~2-3	~1.3
Mortality rate	? 1-2% overall 15% in 80+ years	0.01-0.1 %
Highest Risk groups	Older adults Chronic medical conditions Children – low attack rates, less severe	All ages Attack rates highest in children Mortality highest in elderly and those with chronic medical conditions
Prevention and management	No population immunity No vaccine/specific treatment	Partial immunity Vaccination Anti-virals

Kids get sick from influenza

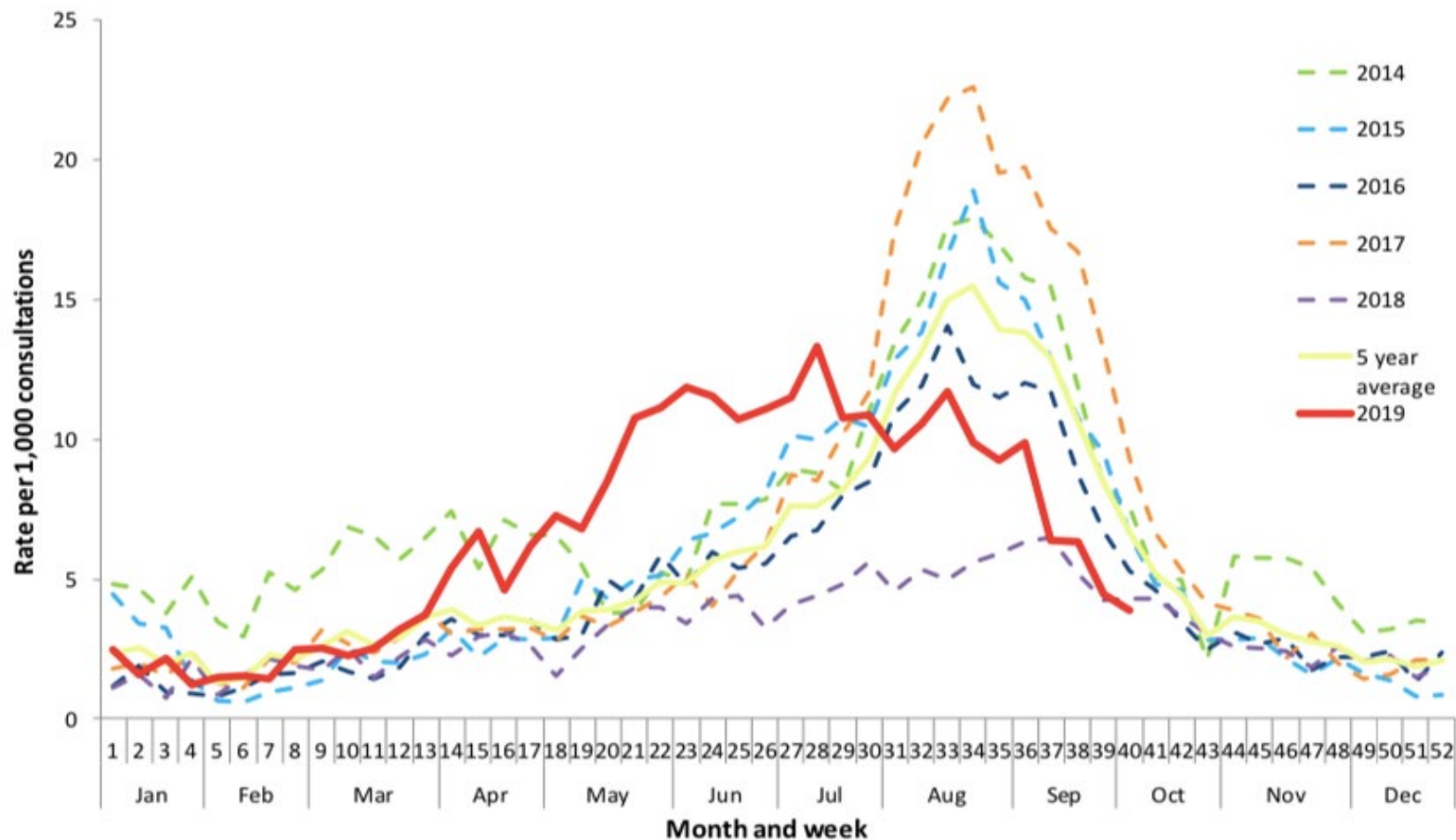


Average annual influenza notification and hospitalization rates in Australia (2010-2013)



The Australian Immunisation Handbook, 10th ed

Influenza-like illness (ILI) 2014-2019



Source: ASPREN



Weekly Interim Report: Australia

Week ending 22 March 2020

(Data received up to 09:00 AM, Thursday 26 March)

This week influenza-like illness activity is low
54,207 participants this week

Influenza-like illness activity:

Fever and cough: 1.5% this week (flu-like illness activity is low)



*5 year average is calculated using 2015, 2016, 2017, 2018 and 2019 data
* Data are age standardised in this chart

2019 season in Australia

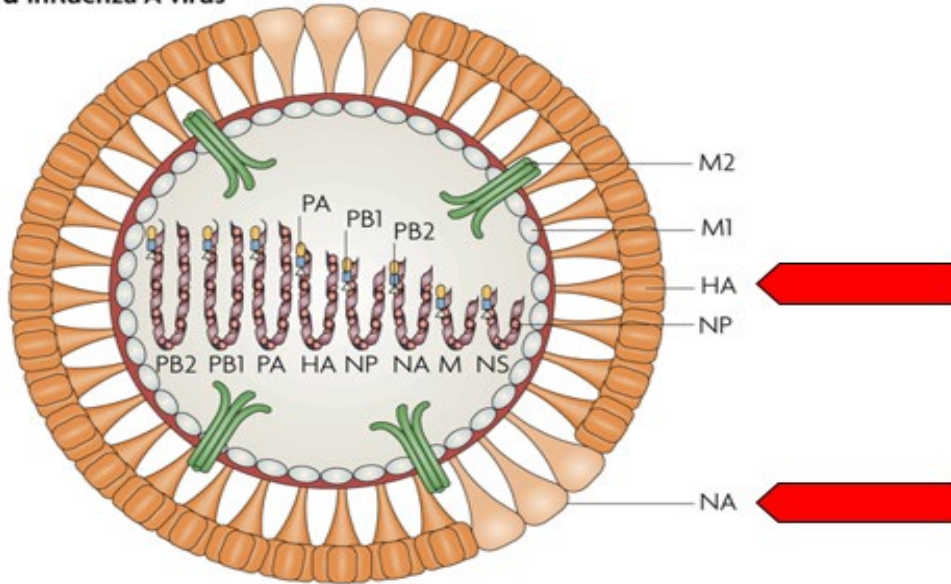


- On average, each year influenza causes ~
 - 3,500 deaths
 - 18,000 hospitalisations
 - 300,000 GP consultations
- Characteristics of season
 - Australia had mainly A(H3N2), followed by A(H1N1)pdm, some B's
 - FluCan data
 - High number of hospital admissions 3915 (April 1-Oct 6) (725 2018, 3969 2017)
 - 6.3% admitted directly to ICU (8.1% 2018, 8.9% 2017; 7% 2015, 11% 2014)
 - Most hospitalizations due to A(H3N2), then B, small number of A(H1N1)pdm
 - Influenza deaths (NNDSS); 902 med. 86y (<1-106y)

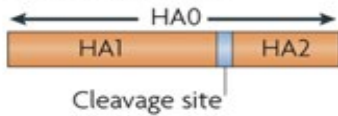
The haemagglutinin and neuraminidase are the main targets of the protective antibody response



a Influenza A virus



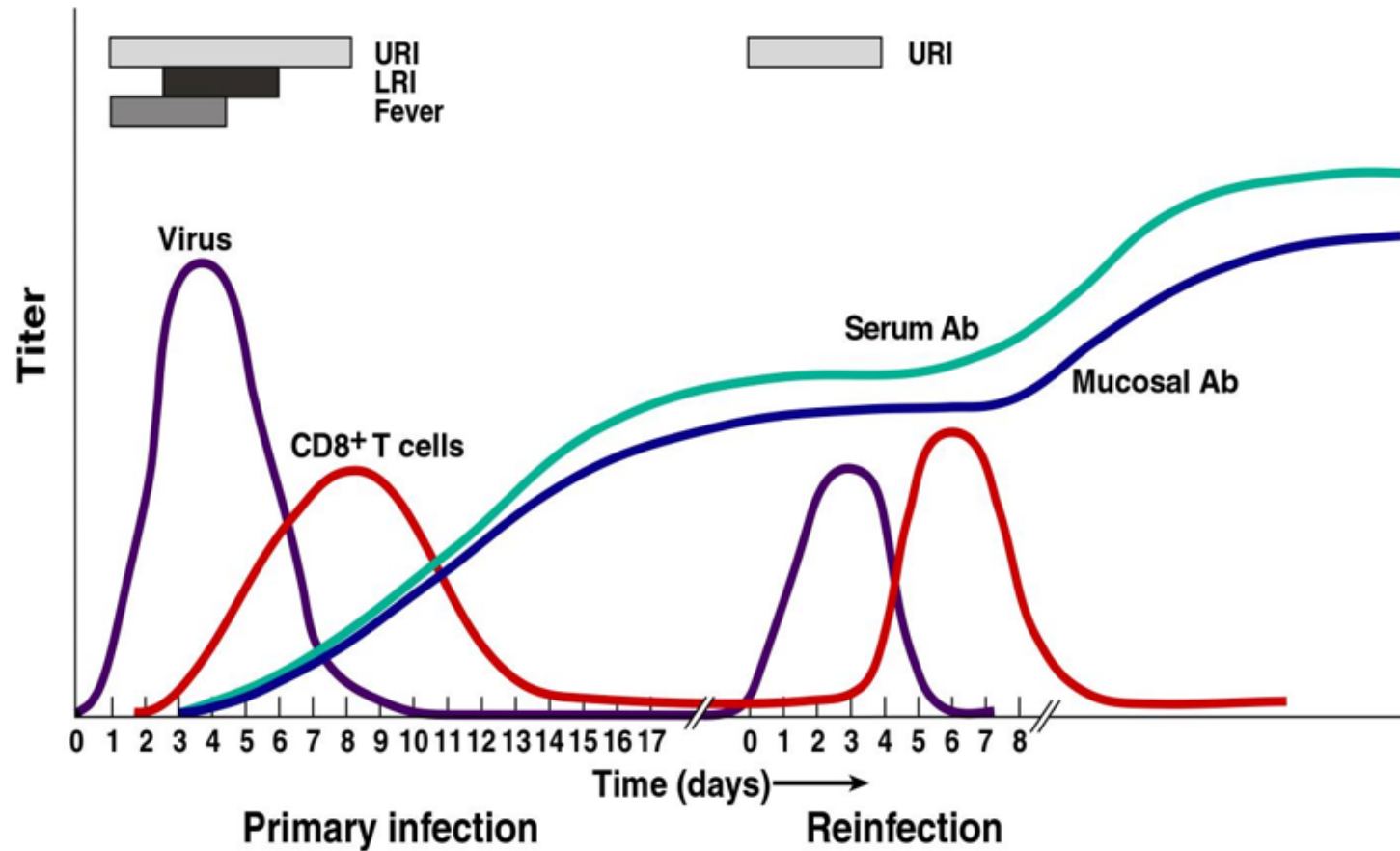
b Haemagglutinin



Nature Reviews | Immunology

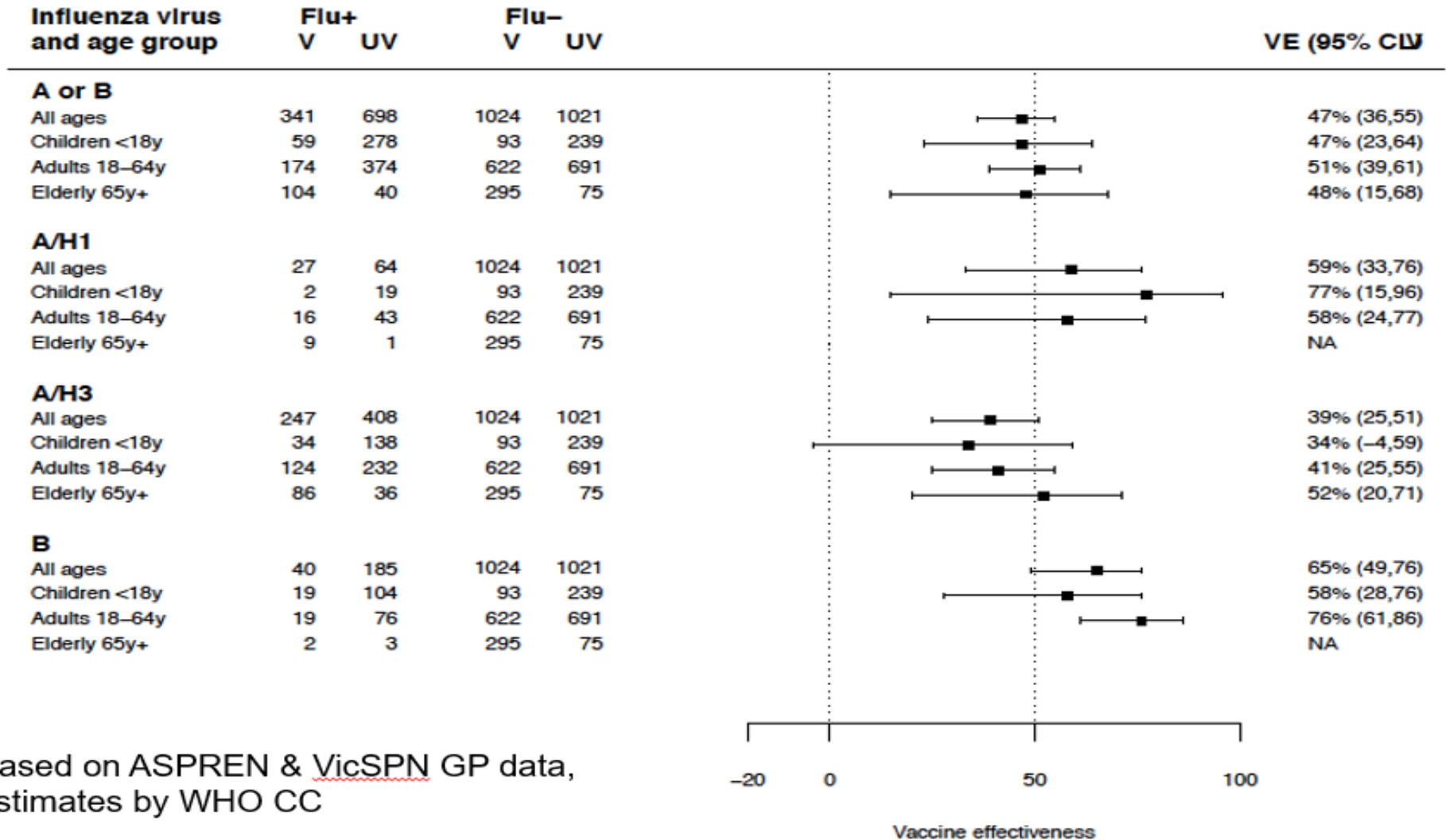
nature
REVIEWS IMMUNOLOGY

Course of Immune response during influenza infection



Source: Subbarao et al. *Immunity* 24, 5-9 (2006)

VE for Influenza vaccines used in Australia in 2019



Based on ASPREN & VicSPN GP data, estimates by WHO CC

Adjuvant improve immune response

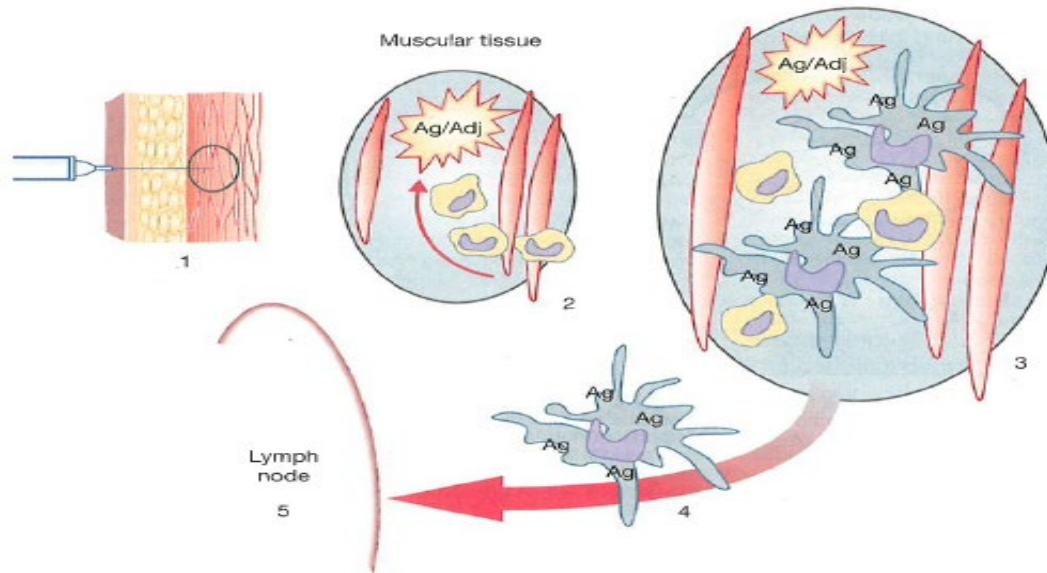


Figure 2-1 Initiation of a vaccine response.

Following injection (1), the pathogen-associated patterns contained in vaccine antigens attract dendritic cells, monocytes and neutrophils that patrol throughout the body (2). If vaccine antigens/adjuvants elicit sufficient 'danger signals,' this activates monocytes and dendritic cells (3) which changes their surface receptors and induces their migration along lymphatic vessels (4), to the draining lymph nodes (5) where the activation of T and B lymphocytes will take place.

2020 Flud Quad contains MF59C.1, an adjuvant. MF59C.1 adjuvant is a squalene based oil-in-water emulsion.

Squalene is a normal component in the human body and is easily metabolized and excreted.

Flu AD Flu -Adjuvant

2020 Influenza vaccines



Table 1. Seasonal influenza vaccines registered and available for use in Australia in 2020, by age

Vaccine Registered age group	FluQuadri 0.50 mL (Sanofi)	Vaxigrip Tetra 0.50 mL (Sanofi)	Fluarix Tetra 0.50 mL (GSK)	Afluria Quad 0.50 mL (Seqirus)	Influvac Tetra 0.50 mL (Mylan)	Fluad Quad 0.50 mL (Seqirus)
6 to 35 months (<3 years)	✓	✓	✓*	x	x	x
≥3 to <5 years	✓	✓	✓*	x	✓	x
≥5 to <65 years	✓*	✓*	✓*	✓*	✓	x
≥65 years	✓	✓	✓	✓	✓	✓†

Ticks indicate age at which a vaccine is registered and available. Shaded boxes represent funding under the NIP.

* Funding only for Aboriginal and Torres Strait Islander people, pregnant women and people who have certain medical conditions.

† Adjuvanted QIV preferred over standard QIVs.

- *Vaxigrip Tetra* * can be used for people from 6 months of age but should be prioritised for the universal 6 month to 5 year program.
- *FluQuadri* and *Fluarix Tetra* can be given from 6 months of age and should be prioritised for NIP eligible medically at risk patients.

NIP Eligibility



All people ≥ 6 months of age are strongly recommended to receive annual influenza vaccine.

NIP funded groups:

- All people aged 6 months to less than 5 years (newly NIP eligible in 2020)
- All Aboriginal and Torres Strait Islander people aged 6 months and over
- Pregnant women (during any stage of pregnancy)
- All people aged 65 years and over
- People aged 6 months and over with medical conditions which increase the risk of influenza disease complications

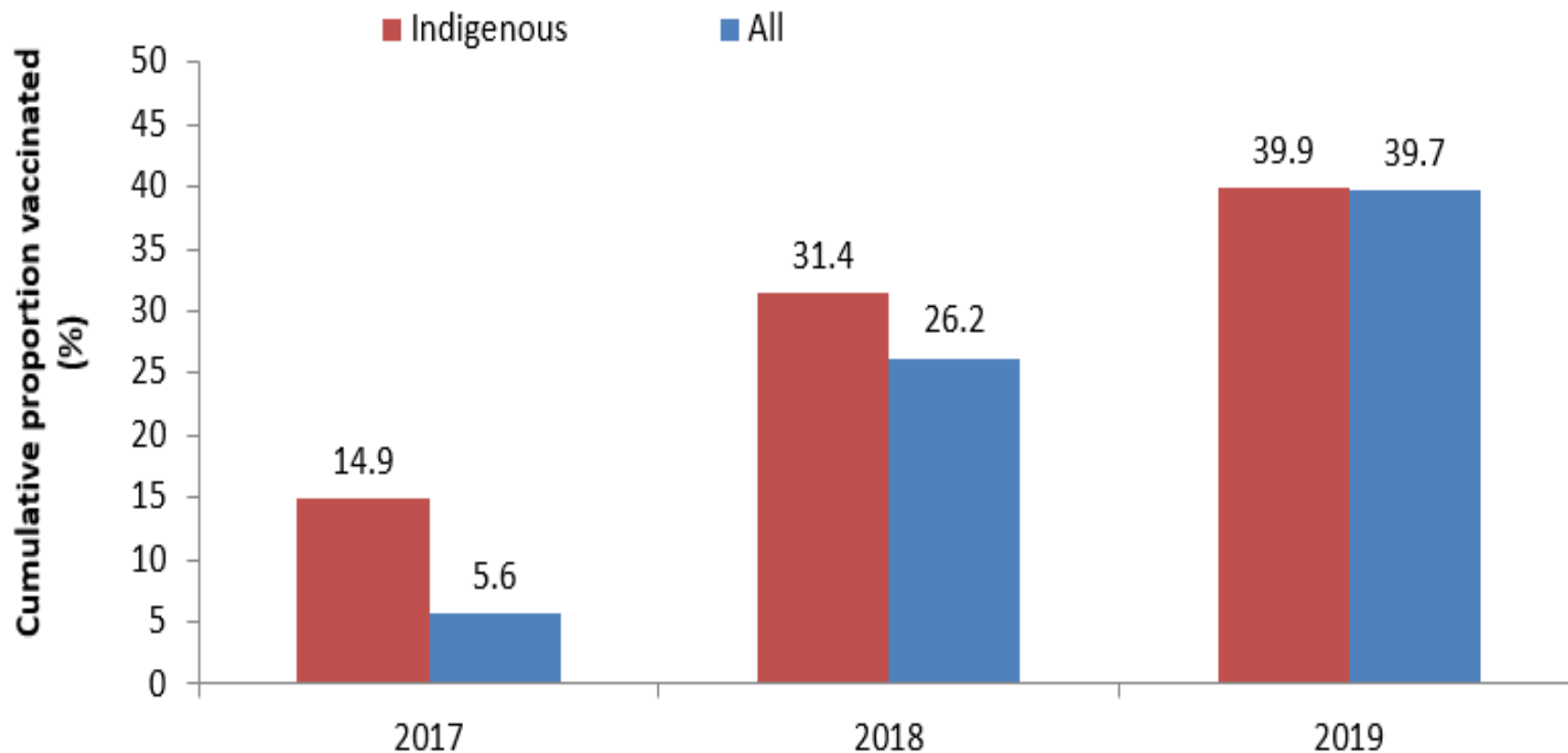
Influenza vaccination in pregnancy



- Influenza vaccine is recommended in every pregnancy and at any stage of pregnancy
- Influenza vaccine can safely be given at the same time as pertussis vaccine
- For women who received an influenza vaccine in 2019, revaccinate if the 2020 influenza vaccine becomes available before the end of pregnancy
- For women who receive an influenza vaccine before becoming pregnant, revaccinate during pregnancy to protect the unborn infant



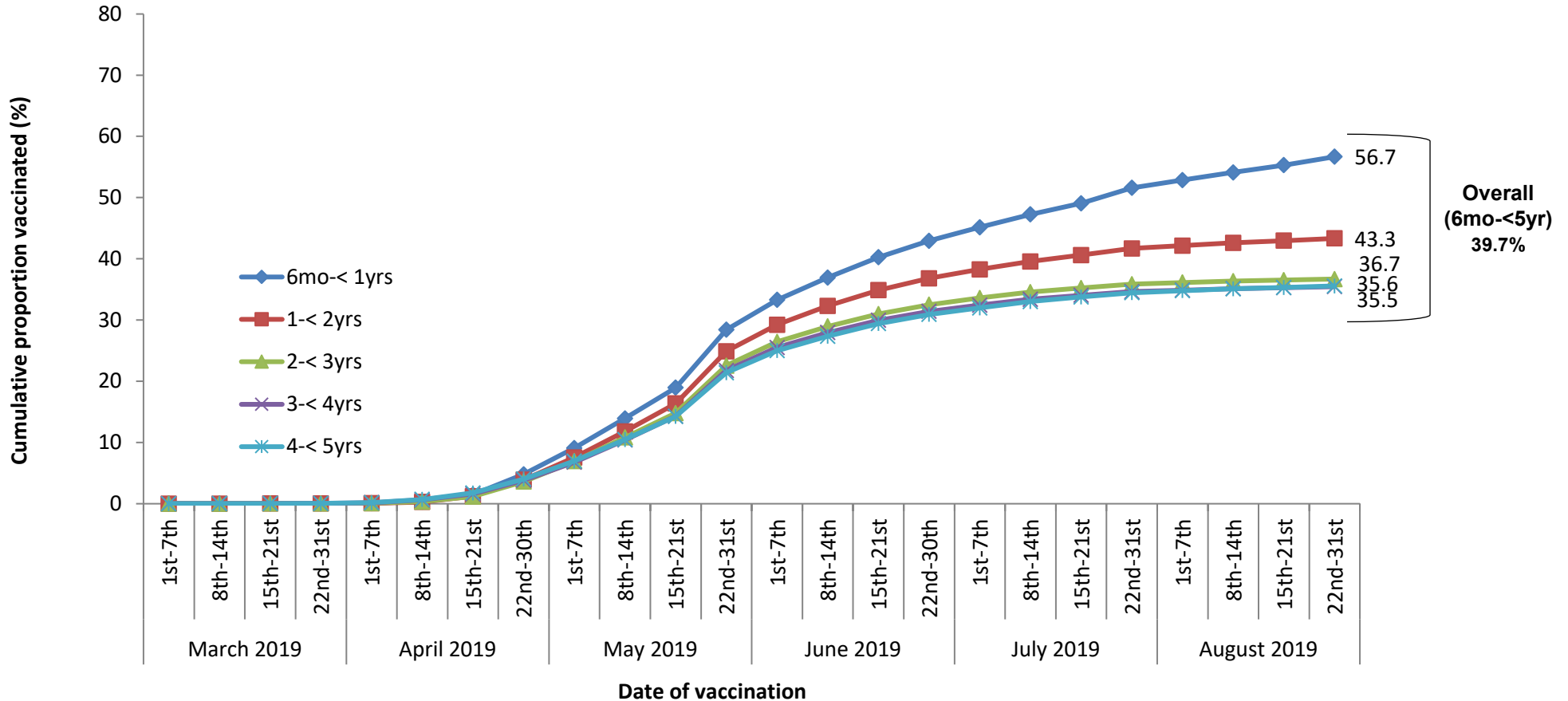
Influenza vaccine uptake in children aged 6 months - <5 years Indigenous versus all children, 2017 - 2019



Unpublished data from AIR, courtesy of Alex Hendry, NCIRS (submitted for publication)



Influenza vaccine uptake in all Australian children aged 6 months - < 5 years by age group, 2019



Source: Australian Immunisation Register; unpublished data analysed by Alex Hendry NCIRS

When is a second dose of influenza recommended?



- **A single annual dose of influenza vaccine is recommended**
- 2 doses at least 4 weeks apart are only recommended for:
 - children aged 6 months to <9 years receiving influenza vaccine for the first time
 - people of any age receiving influenza vaccine for the first time after haematopoietic stem cell or solid organ transplant
- However, receipt of 2 separate doses in the same season is not contraindicated
 - may benefit some individuals due to personal circumstances, such as travel or if pregnancy spans vaccination seasons



AusVaxSafety: the how



Vaccination



A few days after vaccination

SMS asking about AEFI

AEFI



No AEFI

Survey of details



Attended GP or ED
(Medical attendance)



Flag to clinic for follow up & reporting



De-identified responses monitored



Results shared with Australian Government & on website



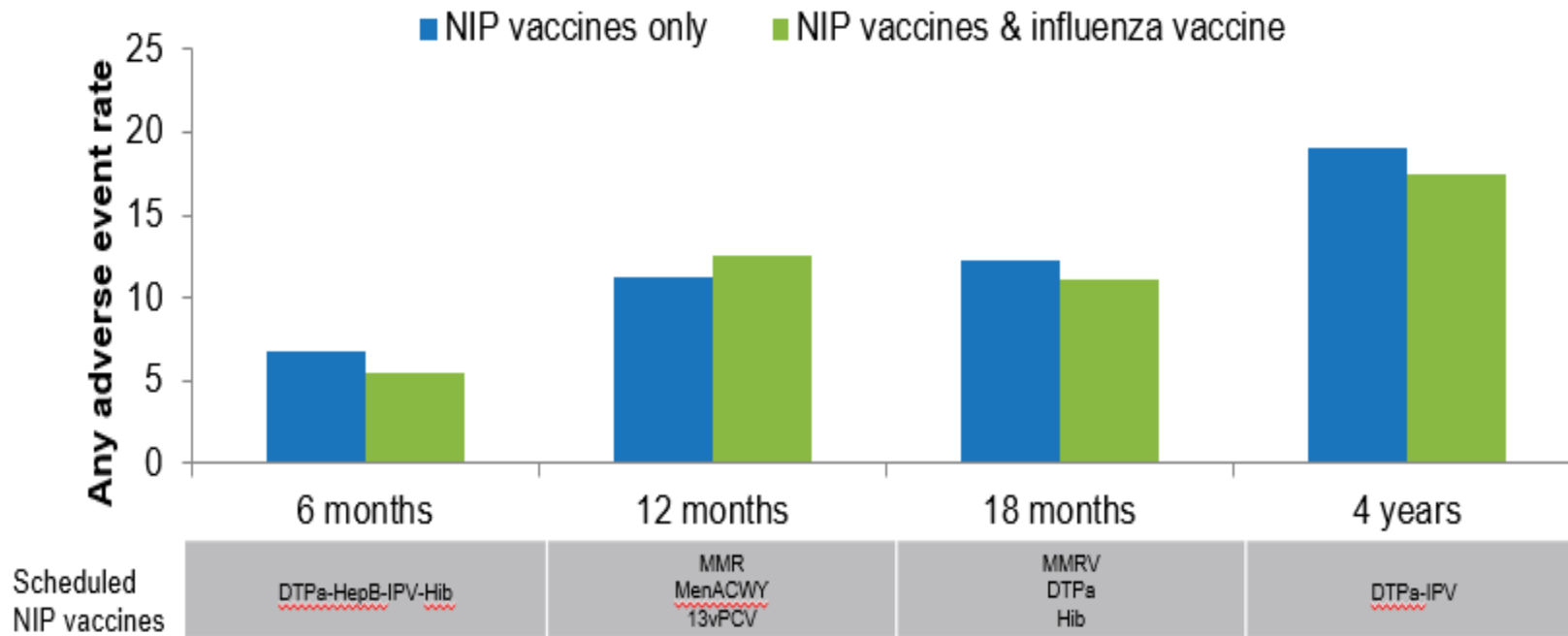
NCIRS National Centre for Immunisation Research and Surveillance Australia

AEFI: Adverse event following immunisation
GP: General practice
ED: Emergency department

AEFI after NIP and influenza vaccines (2019) in children



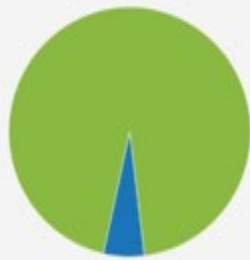
No difference in AEFI when influenza vaccines given with scheduled NIP vaccines



Pregnant women (2019)



3,718 Women responded to an SMS about their health a few days after their influenza vaccinations.



95.5%
reported **no** adverse events

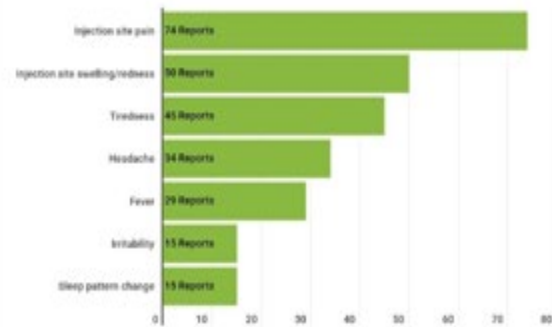


5.5%
reported any adverse event, including...

0.5%
who reported going to a doctor or emergency department in the days after vaccination.

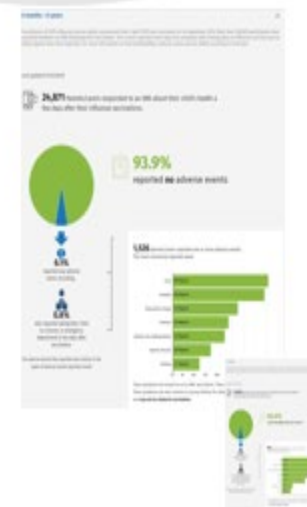
The adverse events they reported were similar to the types of adverse events reported overall.

204 Women reported one or more adverse events.
The most commonly reported were:



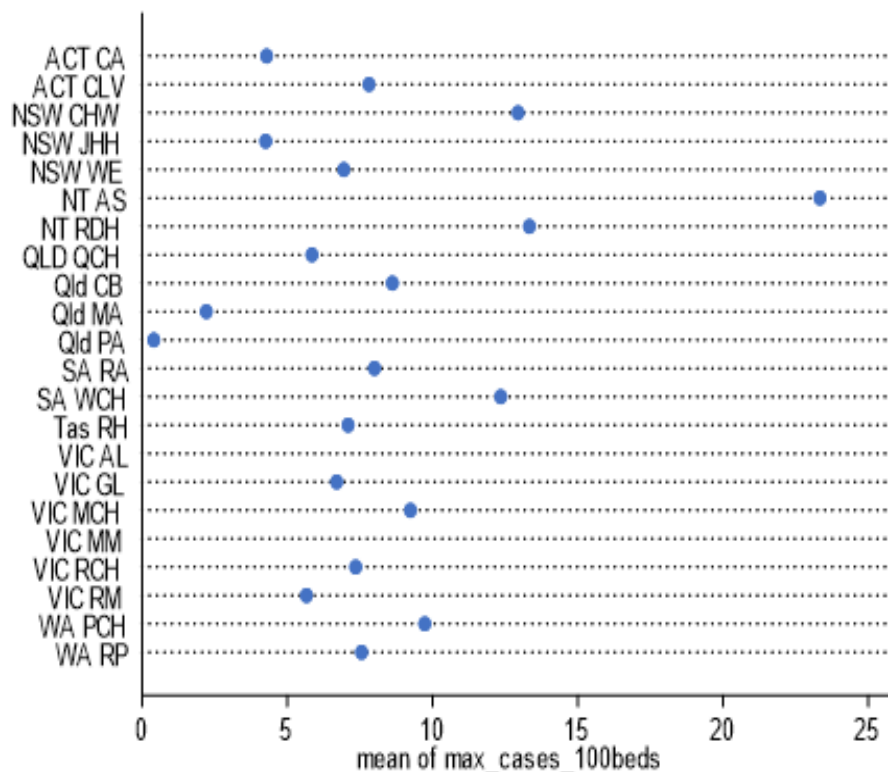
These symptoms are known to occur after vaccination. They are generally mild and short-lived.

Visit our website
Ausvaxsafety.org.au
for weekly updates!





FluCAN: Peak admissions per week in 2019 from lab confirmed influenza



- Max incidence 4.5 admissions/week (week 27)
- Mean LOS 4.9 days
- Max prevalence 3.2%



Influenza Vaccination Provider Toolkit

Updated 1 March 2020

2020 INFLUENZA VACCINE 6 months – less than 5 years • Vaxigrip Tetra	2020 INFLUENZA VACCINE 6 months – 64 years • Fluartx Tetra • FluQuadri
2020 INFLUENZA VACCINE 6 months – less than 5 years • Vaxigrip Tetra	2020 INFLUENZA VACCINE 6 months – 64 years • Fluartx Tetra • FluQuadri
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Privately Funded Influenza Vaccines	2020 INFLUENZA VACCINE 5 – 64 years • Afluria Quad
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Privately Funded Influenza Vaccines	2020 INFLUENZA VACCINE 5 – 64 years • Afluria Quad
2020 INFLUENZA VACCINE 65 years and over • Fluad Quad	2020 INFLUENZA VACCINE 65 years and over • Fluad Quad
2020 INFLUENZA VACCINE 65 years and over • Fluad Quad	2020 INFLUENZA VACCINE 65 years and over • Fluad Quad



Monday, March 16, 2020

NIH clinical trial of investigational vaccine for COVID-19 begins

Study enrolling Seattle-based healthy adult volunteers.

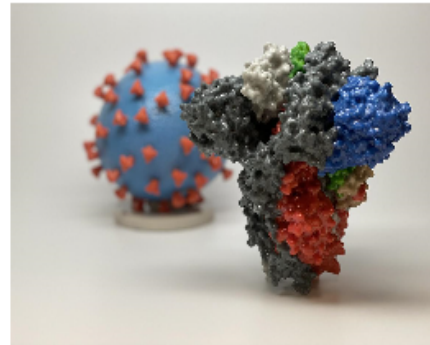


A Phase 1 clinical trial evaluating an investigational vaccine designed to protect against coronavirus disease 2019 (COVID-19) has begun at Kaiser Permanente Washington Health Research Institute (KPWHRI) in Seattle. The [National Institute of Allergy and Infectious Diseases \(NIAID\)](#), part of the National Institutes of Health, is funding the trial. KPWHRI is part of NIAID's [Infectious Diseases Clinical Research Consortium](#). The open-label trial will enroll 45 healthy adult volunteers ages 18 to 55 years over approximately 6 weeks. The first participant received the investigational vaccine today.

The study is evaluating different doses of the experimental vaccine for safety and its ability to induce an immune response in participants. This is the first of multiple steps in the clinical trial process for evaluating the potential benefit of the vaccine.

The vaccine is called mRNA-1273 and was developed by NIAID scientists and their collaborators at the biotechnology company Moderna, Inc., based in Cambridge, Massachusetts. The Coalition for Epidemic Preparedness Innovations (CEPI) supported the manufacturing of the vaccine candidate for the Phase 1 clinical trial.

"Finding a safe and effective vaccine to prevent infection with SARS-CoV-2 is an urgent public health priority," said NIAID Director Anthony S. Fauci, M.D. "This Phase 1 study, launched in record speed, is an important first step toward achieving that goal."



3D print of a spike protein of SARS-CoV-2—also known as 2019-nCoV, the virus that causes COVID-19—in front of a 3D print of a SARS-CoV-2 virus particle. The spike protein (foreground) enables the virus to enter and infect human cells. On the virus model, the virus surface (blue) is covered with spike proteins (red) that enable the virus to enter and infect human cells. For more information, visit [NIH](#)

Race to develop coronavirus vaccine

24 January 2020

The University of Queensland has been asked to develop a vaccine for the recent coronavirus outbreak at unprecedented speed, using new technology.

The [Coalition for Epidemic Preparedness Innovations \(CEPI\)](#) has requested the University use its recently developed [rapid response technology](#) to develop a new vaccine, which could be available worldwide in as little as six months.

UQ Vice-Chancellor and President Professor Peter Høj AC said the fluidity of the current outbreak represented a significant challenge to the international community.

"There is a lot that is still unknown regarding how easily the virus is able to be transmitted between humans," he said.

"Working with CEPI, The University of Queensland is using its vaccine technology to respond to this global health challenge."



What reactions should we be looking out for with this years influenza vaccines?



Vaxigrip TETRA (for 6mo to <5years FULL DOSE)



Table 1 - Frequency of unsolicited adverse reactions within 7 days after vaccination with Vaxigrip Tetra in adults (18 to 60 years of age) and elderly (> 60 years of age)

	Adults (18 to 60 years) (N=3040)		Elderly (> 60 years) (N=1392)	
	%	Frequency	%	Frequency
Subjects experiencing at least one:				
General disorders and administration site conditions				
Local reactions				
Injection site pain	52.8	Very Common	25.8	Very Common
Injection site erythema	7.6	Common	7	Common
Injection site swelling	5.9	Common	3.5	Common
Injection site induration	5.7	Common	3	Common
Injection site ecchymosis	0.9	Uncommon	0.4	Uncommon
Systemic reactions				
Malaise	19.2	Very Common	9.3	Common
Shivering	6.2	Common	4.3	Common
Fever	1.3	Common	0.9	Uncommon
Nervous system disorders				
Headache	27.8	Very Common	15.6	Very Common
Musculoskeletal and connective tissue disorders				
Myalgia	23	Very Common	13.9	Very Common



FLUQUADRI (6months to 64 years of age)



- In children, injection site reaction, irritability, appetite loss and fever
- In adults- pain at injection site



Fluarix Tetra (for 6mo to 64 year old)



Table 1: FLUARIX TETRA: Incidence of adverse reactions per dose in subjects ≥18 years of age

<u>System Organ Class</u>	<u>Frequency</u>	<u>Adverse Reactions</u>
Nervous system disorders	Common	Headache
	Uncommon	Dizziness ¹
Gastrointestinal disorders	Common	Gastrointestinal symptoms (including nausea, vomiting, diarrhoea and/or abdominal pain)
Skin and subcutaneous tissue disorders	Common	Sweating ²
Musculoskeletal and connective tissue disorders	Very common	Myalgia
	Common	Arthralgia
General disorders and administration site conditions	Very common	Injection site pain, fatigue
	Common	Injection site redness, injection site swelling, shivering, fever, injection site induration ²
	Uncommon	Injection site hematoma ¹ , injection site pruritus ¹

¹ Reported as unsolicited adverse reaction



Afluria Quad (5 – 64 years of age)



	Afluria® Quad vaccine N=854 ^b	
	Any	Gr 3
Local Adverse Reactions^c		
Pain	47.9	0.7
Swelling/Lump	3.7	0.1
Redness	2.9	0
Systemic Adverse Events^d		
Myalgia (muscle ache)	25.5	1.9
Headache	21.7	1.7
Malaise	8.9	0.7
Nausea	6.9	0.6
Chills	4.8	0.6
Vomiting	1.5	0.4
Fever	1.1	0.4

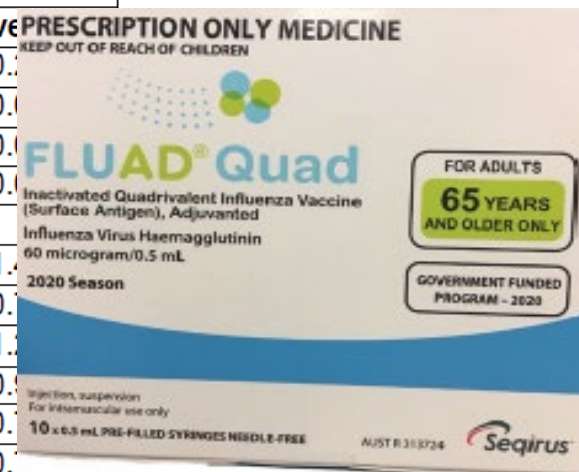


FLUAD Quad (for 65 years & over only)



Table 1: Incidence of Solicited Local and Systemic Adverse Events^a in the Solicited Safety Population^b Reported within 7 Days After Dosing (Study V118_20)

	Percentage (%) of Subjects Reporting a Solicited Event					
	Fluad [®] Quad N=883		Fluad [®] N=439		aTIV-2 N=438	
Local (Injection site) Reactions						
	Any^c	Severe^d	Any^c	Severe^d	Any^c	Severe^d
Injection site pain	31.9	0.0	29.1	0.9	25.7	0.0
Erythema	7.6	0.0	7.4	0.3	8.6	0.0
Induration	7.0	0.0	5.4	0.0	5.3	0.0
Ecchymosis	2.5	0.1	1.5	0.0	1.5	0.0
Systemic Reactions						
Fatigue	16.0	0.7	15.4	0.7	11.5	1.4
Headache	12.0	0.5	10.6	0.7	11.3	0.0
Arthralgia	9.1	0.3	8.5	0.0	7.1	1.4
Myalgia	8.1	0.5	7.8	0.0	6.9	0.0
Diarrhoea	5.5	0.6	5.5	0.5	6.9	0.0
Chills	4.7	0.2	3.4	0.5	4.4	0.0
Nausea	4.0	0.2	4.1	0.0	4.6	0.9
Loss of appetite	3.2	0.2	4.8	0.0	3.7	0.5
Vomiting	0.8	0.1	0.5	0.0	2.1	0.7
Fever	0.5	0.1	0.2	0.0	0.5	0.0



Adverse Event Following Immunisation



- An Adverse Event Following Immunisation (AEFI) can be any unexpected or serious outcome that happens following administration of a vaccine.
- It may be related to the vaccine itself, handling of the vaccine or its administration.
- An AEFI can be coincidentally associated with the timing of immunisation without necessarily being caused by the vaccine or immunisation process
- National reporting form – note in NSW the form is to send to your PHU not TGA

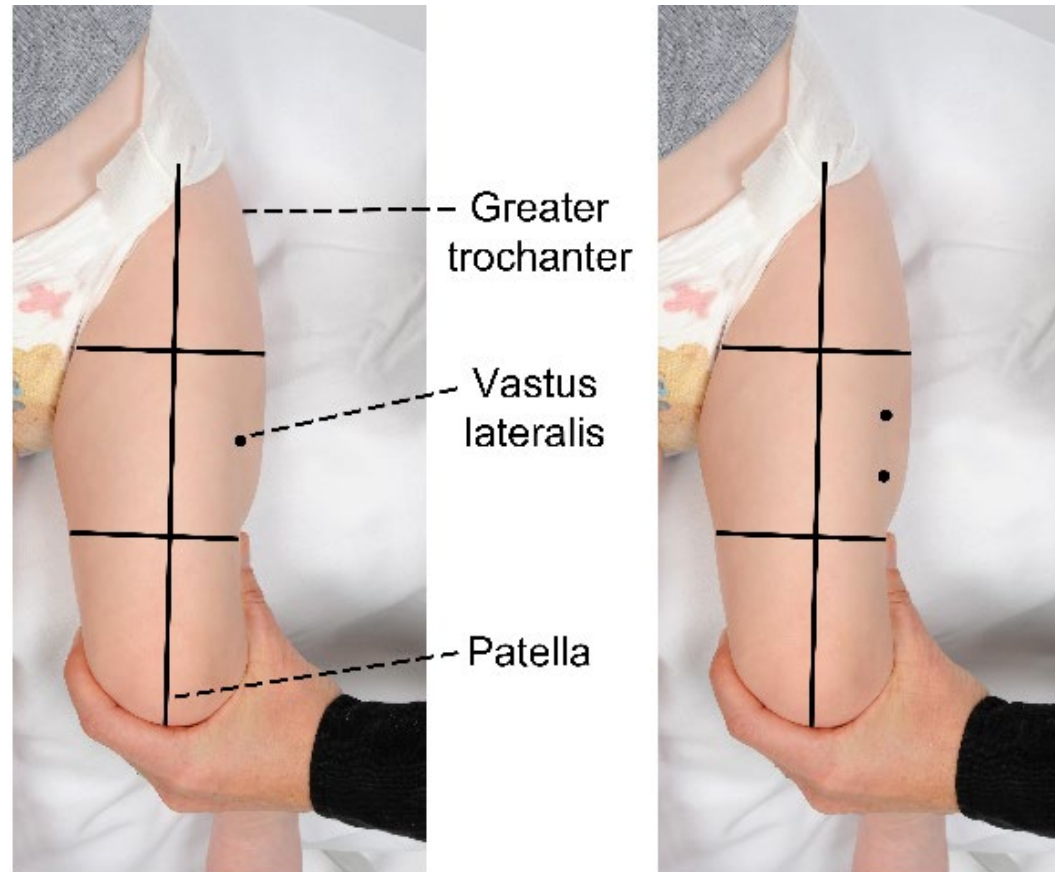
Recommendations and dosing



- All influenza vaccine to be administered IM at 90 deg
- Individuals from 9 years of age: one injection of 0.5 mL dose. (except for...)
- Children from 6 months to 8 years of age:
 - If the child has not previously been vaccinated: two 0.5 ml injections at least one month apart.
 - If the child has been previously vaccinated: a single 0.5 ml injection.

Recommended injection sites by age

Infants < 12-months

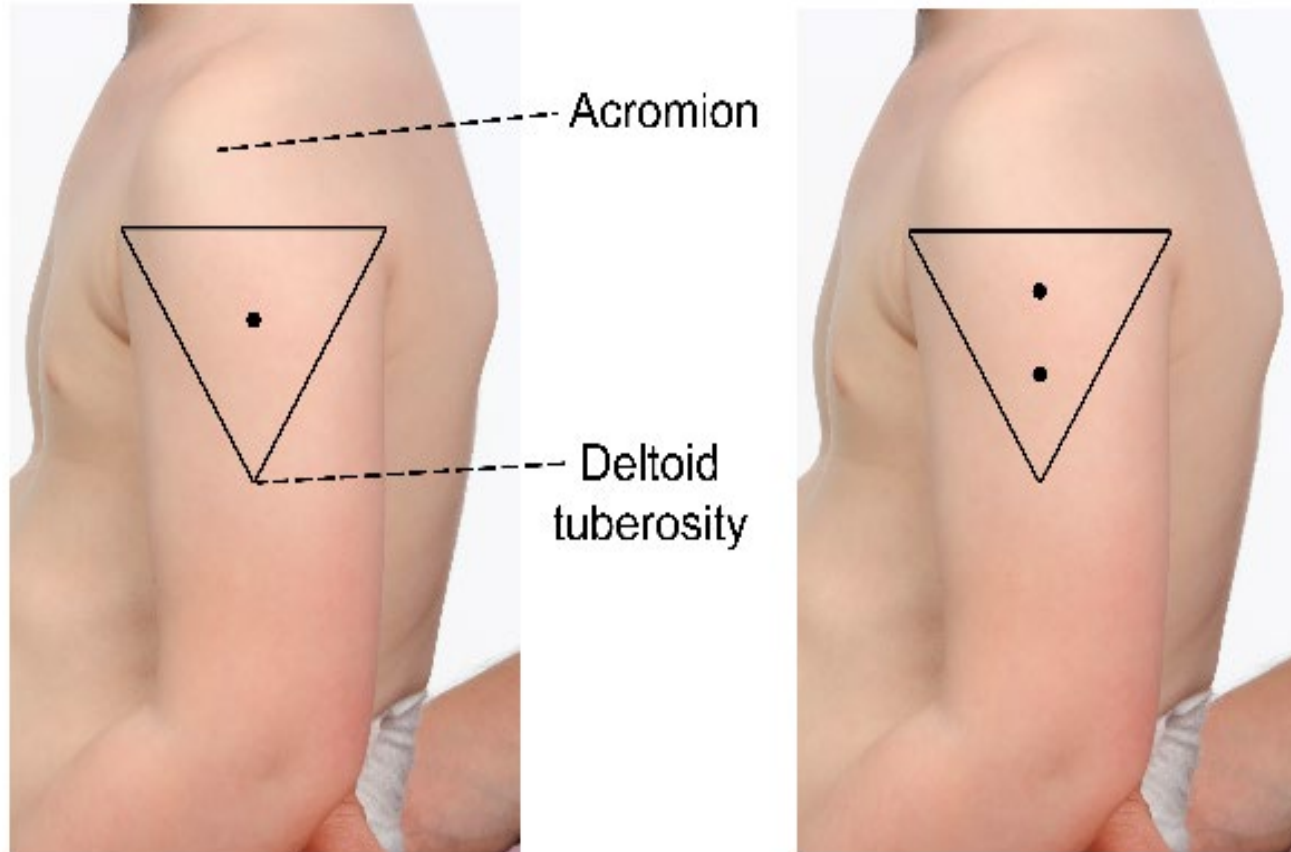


Do not inject into the anterior aspect of the thigh as underlying structures may be damaged.

Children \geq 12-months of age, adolescents and adults



More than one vaccine can be given into the deltoid muscle ensuring each vaccine is separated by 2.5cm.



Implications of incorrect injection technique



- **Injection site reactions** –
more likely if vaccine inadvertently given into subcutaneous tissue
- Shoulder injury related to vaccine administration (SIRVA)

Some good questions



Q. Anaphylaxis to previous influenza vaccine or components – A. **should not have vaccine**

Q. Egg allergy – A. **good to have vaccine**

Q. When is it too late in the season? –A. **offer all season**

Q. I've had influenza this season do I need the vaccine? A. **well yes, yes you should**

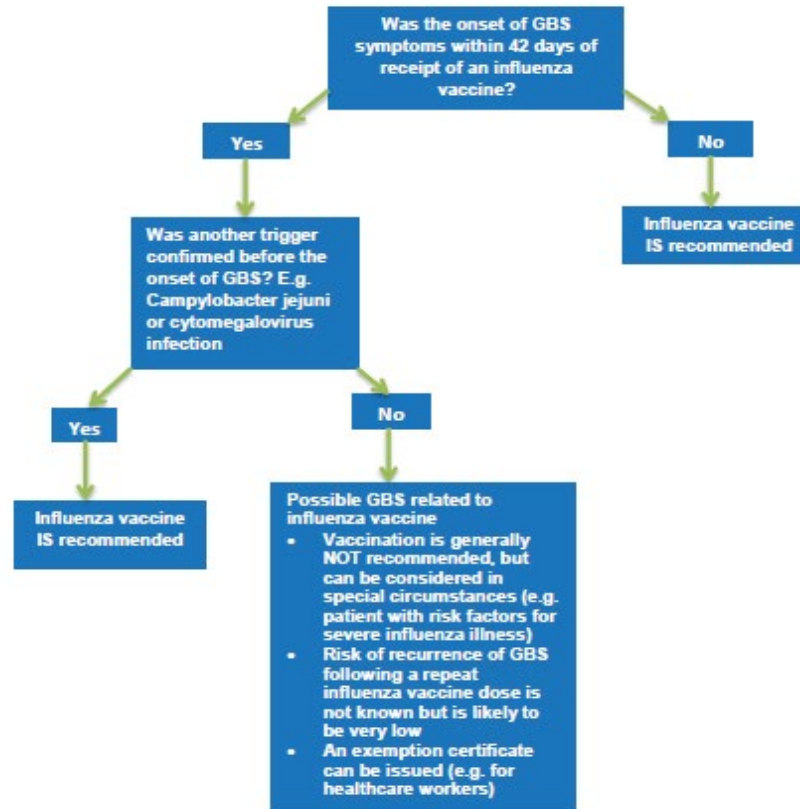
Q. Latex allergy and influenza vaccine – A. **nil latex**

Q. Hx of GBS should I vaccinate– A. **Well depends**

Influenza vaccine and patients with a history of GBS



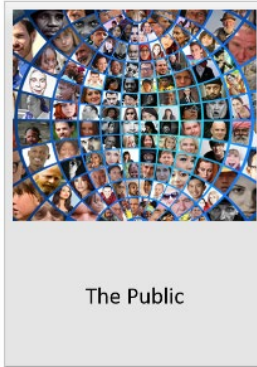
APPROACH TO INFLUENZA VACCINATION IN PATIENTS WITH A HISTORY OF GUILLAIN-BARRÉ SYNDROME



Excellent Resources



Immunisation information for:



Influenza Vaccination Provider Toolkit

Updated 1 March 2020



Let's all be vaccine heroes.





PRESCRIPTION ONLY MEDICINE
KEEP OUT OF REACH OF CHILDREN

Vaccine Storage and Cold Chain Management



This module contains audio, please make sure your speakers are turned on or your headphones are plugged in.



Click the **Next >** button to continue.

Download Content Pages



Vaccine ordering



- All non aged care facilities must order online
- <https://nsw.tollhealthcare.com/>
- After all facilities receive their first order, subsequent orders can be filled
- DO NOT overfill your fridge – use your order history on the vaccine centre website to monitor requirements.



Vaccine storage and cold chain management – see NSW Health Website

<https://www.health.nsw.gov.au/immunisation/Pages/cold-chain-management.aspx>

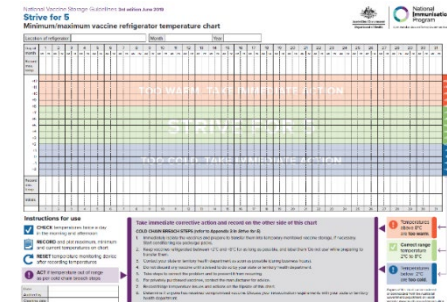
In order to obtain funded vaccines from the NSW Government, immunisation providers make a declaration that they will do the following:

- Follow the new [National Vaccine Storage Guidelines 'Strive for 5' \(3rd edition\) 2019](#)
- At least one person in the facility must have undertaken Vaccine Storage and Cold Chain Management online training module. (it is recommended that all staff coming into contact with vaccine fridges complete this module).
https://nswhealth.seertechsolutions.com.au/public_content/HETICP/HETI/CCMWebv3/story_html5.html
- **Only use a purpose built vaccine fridge to store vaccines**
- Have a computerised temperature data logger (logger) to continuously record fridge temps.
 - New thermostability data enables some vaccines to be kept even when exposed to temperatures outside 2 - 8 degrees. In order to do this, the time outside these temps is needed, the only accurate method is with a logger
- Download the logger weekly, review the data and store files so they can be retrieved when required
- Document twice daily manual logging on the Commonwealth temperature graph (next slide)
- Contact the HNELHD immunisation team if temperatures outside 2-8 degrees (except excursions of >8°C to up to 12°C for no longer than 15 minutes).
- Conduct annual self audit - Appendix 2 Strive for 5
- Educate ALL people who can come into contact with the vaccine fridge, the power supply or are responsible for ordering and receiving vaccines about vaccine storage management



Resources

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



Hunter New England Immunisation Website

Under Immunisation Information for Health Professionals

Cold Chain Breach

Click form [HERE](#) to report a cold chain breach.
(disregard temperatures < 12 degrees for < 15 mins)

<http://www.hnehealth.nsw.gov.au/hnep/Immunisation/Pages/Cold-Chain-Breach.aspx>

Vaccine Ordering and Management

If your facility is unable to order vaccines please contact us on 49246477 (eg. If there is a block on your account)

- Request for Vaccine Account Number for New Practice
- Vaccine Ordering
- To order new CCB labels (order extras)



Vaccine Cold Chain Resources

- NSW MoH Vaccine Storage and Cold chain Management Policy Directive (Mandatory)
- Strive for 5
- Temperature Graph

<http://www.hnehealth.nsw.gov.au/hnep/Immunisation/Pages/Vaccine-Ordering-and-Management.aspx>

NSW Health - Cold chain toolkit for immunisation providers

<https://www.health.nsw.gov.au/immunisation/Documents/cold-chain-toolkit.pdf>



Managing a cold chain breach

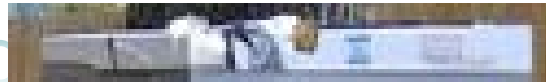


Immunisation providers must report all cold chain breaches to their local public health unit.

1. Isolate vaccines and place a '**DO NOT USE**' sign on the fridge.
2. Continue to store vaccines between +2°C to +8°C
3. **Do not discard** any vaccines.
4. Download and review the data logging report to assess the duration of the breach and temperature the refrigerator reached.

Cold Chain Breach

Click form [HERE](#) to report a cold chain breach.
(disregard temperatures < 12 degrees for < 15 mins)



Vaccine Thermostability Data

CONFIDENTIAL NOT FOR FURTHER DISTRIBUTION

NATIONAL IMMUNISATION PROGRAM AND NSW FUNDED VACCINES			
Vaccine	<-2°C	>8 to ≤25°C	>25 to ≤37°C
Rabipur	Discard	Maximum cumulative time 48 hours	Maximum cumulative time 48 hours to 30 C. Discard >30 C
Rotarix	Stable to -18°C or if visibly frozen	Maximum cumulative time 72 hours	Maximum cumulative time 24 hours
Tripcael	*Discard <-0°C or visibly frozen	Discard	Discard
Vaqta	7 days at 0°C to <-2°C *Discard <-0°C	Maximum cumulative time 72 hours	Discard
Varilrix	Stable to -20°C	Maximum cumulative time 72 hours	Discard
Varivax	Stable to -50°C	Discard	Discard
Verorab	*Discard <-0°C	Discard	Discard
Zostavax	-50°C unlimited time (vaccine) -20°C up to 10 days for 2 cycles only (water for injection diluent)	Maximum cumulative time of 6 hours	Discard



Where is that back-up storage you have prepared, get it ready

Temperature above +8°C to less than +12°C for less than 15 minutes?

our of re
2 & 8 degrees?

) reporting form and
<http://www.health.nsw.gov.au/immunisation/Pages/Immunisation.asp>

You arrive at work

What do I do?

1. Turn the alarm on
2. Is the door closed
3. Is the power on
4. Take a look at the temperature
5. Isolate your area
6. What if the temperature is
7. Download your vaccine
8. When can you return
9. Visit our website for further instructions
<http://www.health.nsw.gov.au/immunisation/Pages/Immunisation.asp>

x

10. Gather together the details as described in the CCB form and phone the PHU, Immunisation team on 49246477
11. DO NOT DISCARD ANY VACCINES - why?



Vaccine Thermostability Data

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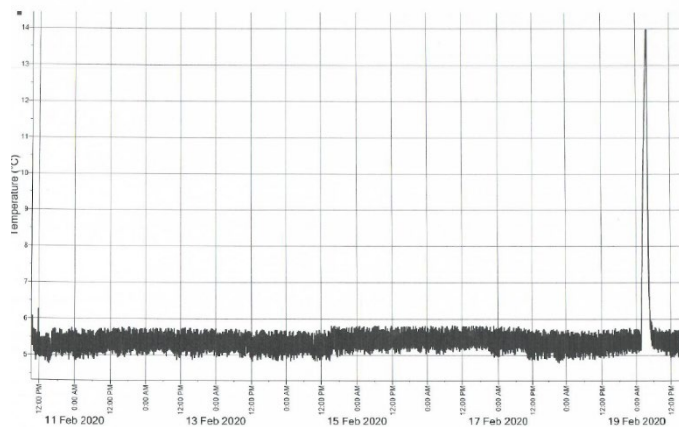
Learn how to email logger file to the PHU



- Ensure more than one person knows how to use the logger
- This includes initiating, downloading, storing and emailing the file.

WHY

If you send a pdf, this is what we can see; We have no idea how long the fridge was above 8 degrees.



Learn how to email logger file to the PHU



- Locate where file is stored on your computer or server

LogTag

Name	Date modified	Type	Size
1020018258 Started 17-Dec-19, Finished 0...	6/01/2020 12:22 PM	Analyzer Document	12 KB

Tiny Tag

Name	Date modified	Type	Size
Fridge temp graph 20.2.19 to 26.2.20 OK ...	23/03/2020 1:16 PM	Tinytag Explorer File	50 KB

- Right click on the file
- Click on send to

There should be an option to send to mail recipient or similar. Click on this and add our email address and send.

The screenshot shows a file explorer window with the following path: Immunisation > 16 Cold Chain > 02 Fridge Temp reports > Cold Chain records 2020 > Wee Waa CHC. A table of files is displayed:

Name	Date modified	Type	Size
27WW_Tiny_Tag_Vaccine Fridge_06 Jan - ...	4/02/2020 3:06 PM	Tinytag Explorer File	66 KB
31WW_Tiny_Tag_Vaccine Fridge_03Feb-0...	6/03/2020 9:11 AM	Tinytag Explorer File	66 KB

A context menu is open over the selected file, with the 'Send to' option highlighted. The 'Send to' sub-menu is also open, showing various destinations:

- Bluetooth device
- Compressed (zipped) folder
- Desktop (create shortcut)
- Documents
- Fax recipient
- Mail recipient
- 50019870 (\\HNEHOME\home05) (H)
- Population Health TRIM (M)
- HNE Population Health\Project 2 (N)
- Population Health General (O)
- HNE Public Health Projects (P)
- HNE Population Health Committee (O)
- HNEPH Cati (R)
- HNEPH Stats (T)

hnelhd-phimmunisation@health.nsw.gov.au

2020 NSW School Vaccination Program



Vaccines offered.

Year	Vaccine	Brand	Doses	Schedule
7	HPV	Gardasil 9	2	6 month gap
	dTpa	Boostrix	1	
10	Men ACWY	Nimenrix	1	



Catch up in School program



Catch up is available in schools into Year 8 and 11 as below.

Year	Vaccine	Brand	Doses	Schedule
8*	HPV	Gardasil 9	2	6 month gap
	dTpa	Boostrix	1	
11^	Men ACWY	Nimenrix	1	

* Where consent was given in Year 7

^ Where consent was given in Year 10

COVID-19 & School Program



- The school program has been suspended in HNE at present – recommencement for review in September 2020.
- Any student who has missed a vaccination at school will be caught up in the program during either 2020 or 2021.
- Practices should refer parents of these students back into the school program.
- Parents can be reassured that overdue school vaccines **DO NOT** incur income support penalties.

Conducting immunisation clinics in general practice



Immunisation services must continue!


Now more than ever, it is important to maintain high vaccination coverage levels to prevent outbreaks of vaccine preventable diseases in the community.

Providing vaccines recommended on the National Immunisation Program (NIP) is a priority.

Essential immunisation services should continue, in particular:

- Infant and early childhood
- Adolescent for catch up
- Winter influenza
- Adult and additional immunisations

NSW Immunisation Schedule
updated March 2020



AGE	DISEASE	VACCINE
CHILDHOOD VACCINES		
Birth	Hepatitis B	H-B-VAX I OR ENGERIX B
6 weeks	Diphtheria, tetanus, pertussis, Haemophilus influenzae type b, hepatitis B, polio Pneumococcal	INFANRIX HEXA PREVENAR 13
4 months	Rotavirus Diphtheria, tetanus, pertussis, Haemophilus influenzae type b, hepatitis B, polio Pneumococcal	ROTARIX INFANRIX HEXA PREVENAR 13
6 months ¹	Rotavirus Diphtheria, tetanus, pertussis, Haemophilus influenzae type b, hepatitis B, polio Meningococcal ACWY	ROTARIX INFANRIX HEXA PREVENAR 13
12 months	Meningococcal ACWY	NMENERIX
18 months	Measles, mumps, rubella Diphtheria, tetanus, pertussis Measles, mumps, rubella, varicella	MMR II OR PRIORIX INFANRIX OR TRIPACEL PRIORIX TETRA OR PROGUARD
4 years ²	Haemophilus influenzae type b Diphtheria, tetanus, pertussis, polio	ACT 488 INFANRIX IPV OR QUADRACEL
ADOLESCENT VACCINES - SCHOOL VACCINATION PROGRAM		
Year 7	Diphtheria, tetanus, pertussis Human papillomavirus (2 doses)	BOOSTRIX GARDASIL 9
Year 10	Meningococcal ACWY	NMENERIX
ADULT VACCINES		
Pregnant women	Influenza (Annually) Pertussis (ideally between 30-32 weeks)	INFLUENZA BOOSTRIX OR ADACEL
65 years and over	Influenza (Annually) Pneumococcal (One dose, unless medical risk factors ^{3,4})	FLUAD QUAD PNEUMOVAX 23
70 years (Catch up for 71-79 years until 31 October 2020)	Zoster	ZOSTAVAX
AT RISK GROUPS		
All children 6 months to < 5 years ¹ Aboriginal people 6 months and over	Influenza (Annually)	INFLUENZA
6 months and over with medical risk conditions ² Aboriginal people 15-49 years with medical risk factors Aboriginal people 50 years and over	Pneumococcal ³	PNEUMOVAX 23

1. All risk children require an additional dose of pneumococcal (Prevenar 13). 2. All risk children require an additional dose of pneumococcal (Pneumovax 23). 3. Refer to the current edition of the Australian Immunisation Handbook for listing of doses. 4. Refer to the current edition of the Australian Immunisation Handbook for all medical risk factors and conditions.

March 2020 © NSW Health
SIPP (IPCR) 2020L

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

Recommendations for venues



Signage should be displayed at the entrances of all vaccination clinics and include the following information:

- Due to the ongoing coronavirus (COVID-19) pandemic, our clinic is taking measures to protect the community. It is vital that all instructions are followed
- Only one parent/guardian should accompany a child into the session
- People should not attend the session if they or their child have symptoms of a respiratory infection (such as fever, **OR** a sore throat, **OR** a runny nose, **OR** shortness of breath **OR** a cough) **OR** have returned from overseas in the past 14 days **OR** have been told to self isolate.
- Wash hands or use hand sanitiser provided at the entrance to reception or waiting area.



Consideration should be given to the translation of all signage and messaging into other key community languages

IMMUNISATION CLINICS

Due to the ongoing coronavirus (COVID-19) pandemic our clinic is taking measures to protect the community.

It is vital that all instructions are followed.

- Only one parent/guardian should accompany a child into the session
- People should not attend the session if they or their child:
 - ✓ have symptoms of a respiratory infection (such as fever, **OR** a sore throat, **OR** a runny nose, **OR** shortness of breath **OR** a cough)
 - OR**
 - ✓ have returned from overseas in the past 14 days
 - OR**
 - ✓ have been told to self-isolate.
- Wash hands or use hand sanitiser provided at the entrance to reception or waiting area when entering and leaving the clinic.

Social distancing measures



- Remind staff that if they are unwell they **should not** attend work
- Send reminders to eligible patients and ask them to call in advance if they are not feeling well
- Ensure that a process is available to undertake a phone assessment
- Ask patients not to arrive early, phone before presenting to clinic.
- Make a staff member available to monitor queueing to ensure social distancing - **Options:**
 - an appointment system for vaccinations
 - Patients wait in car to be phoned when time to come into clinic, then return outside/in car following vaccination
- Ensure administration, clinical and patient areas are wiped down **frequently** using a sodium hypochlorite based solution.



- Arrange a process and a checklist to assess each patient as they arrive for their vaccination prior to entering the practice. This could include keeping doors locked and ask patients to call once they are outside
- Designate specific times throughout the week for vaccination clinics to ensure that only well patients are in the clinic during those times
- Ensure that seating and queuing areas allow 1.5 metres between clients and staff
- **Remove all toys and magazines from your waiting room**
- If available use alternative entrance/exit to avoid patients walking through waiting area

Vaccination process



- **Ensure** that hand hygiene is performed between each patient
- Preferably wash hands or gel, before opening your vaccine fridge and repeatedly touching multi-dose boxes
- Minimise physical contact with client record documents
- Limit the vaccine process to one adult with the child/minor where possible
- Consider a separate room for clients to wait post vaccination dependant on numbers at each session or have clients wait outside/in cars.

Vaccination process



Consider.....

Immunisation providers are usually recommended to vaccinate children who have minor illnesses (without acute systemic symptoms/signs).

In the setting of the COVID-19 outbreak, immunisation providers should consider deferring routine immunisations for children with respiratory symptoms.

AEFI vs COVID-19

General advice not to attend clinic

Consider alternate models



Alternate locations for influenza vaccination clinics may also be considered if practicable such as an outdoor area e.g. practice car park.

This could include combining/sharing resources and staff with other practices in your local area.

Points to consider for alternate models include:

- Patient/staff safety and comfort e.g. weather and traffic
- Requirements to maintain confidentiality and undertake pre-vaccination assessments
- Appropriate cold chain management
- Pre-vaccination waiting and post vaccination observation areas that provide social distancing
- Facilities/area to manage adverse events
- Maintaining vaccination records
- Bathroom and break facilities for staff
- Messaging to patients

To preserve your sanity!



Consider referring families to Child and family health clinics for routine immunisations. These clinics are held each regularly and are especially for immunising children. This should limit the risk of exposure to other illness.

<http://www.hnehealth.nsw.gov.au/hneph/Immunisation/Pages/FREE-Immunisation-Clinic-Dates.aspx>

Immunisation in Aged Care Facilities FAQs



Our vaccines have arrived. When do we start vaccinating our residents?

- ✓ **Now! Administer influenza vaccines as soon as possible after they arrive at your facility.**

The fridge at our facility is normally empty. What cold chain management am I required to do to in an ACF for the vaccines in my fridge?

- ✓ **Fridges in ACF's are required to be monitored twice daily using a min/max thermometer for at least a week prior to vaccine storage then twice day until no vaccines are left in the fridge.**

How is this year's over 65's vaccine different from last year's?

- ✓ **2020 over 65 vaccine is an enhanced (adjuvanted) Quadrivalent vaccine.**

Will a dose of Pneumovax 23 help protect from Covid-19?

- ✓ **There is currently no evidence to suggest that pneumococcal vaccine provides protection against COVID-19 pneumonia.**
- ✓ **Continue to give Pneumovax 23 for whom it is indicated.**



FAQ's continued-



Does my ACF have to provide Flu vaccines for the staff?

- ✓ All Aged Care providers are mandated to provide Influenza vaccines for their staff

Can we give them now or wait until April?

Staff should be vaccinated as soon as vaccines are available.

Can they have it elsewhere like at the Pharmacy?

- ✓ Yes, but a record must be provided to your ACF.

How do I respond to people who say that they don't want the vaccine because it just doesn't work very well?

- ✓ As the vaccine is less effective as people age it is even more important to vaccinate the people providing care for best protection of the residents.

What's the best thing I can do to help protect residents from Covid-19?

- ✓ Wash your hands! Get them and yourselves vaccinated for Influenza. People with concurrent respiratory disease are for more vulnerable to COVID-19.
- ✓ Use PPE appropriately.

How to access PPE for Aged Care sector



Aged care providers who require Personal Protective Equipment (PPE) email their request to agedcarecovidppe@health.gov.au

please do not approach Primary Health Networks.

Requests:

- Are triaged by the Department of Health - **priority given to facilities, programs and workers where there has been a confirmed case of COVID-19.**
- Can be made by aged care services and workers providing aged care support in the community
- **Should include:**
 - Facility, program or service name
 - Whether you have a confirmed COVID-19 case at facility
 - Type and quantity of PPE required – note only masks available at present
 - Details of other suppliers from whom you have attempted to source PPE



This process also applies if facility is experiencing an Influenza outbreak.