ImmNuZ
The official newsletter of The Immunisation Advisory Centre

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Usual Synflorix® or high-risk Prevenar® 13 administration

The administration schedules for Synflorix (PCV10) on the usual Immunisation Schedule and Prevenar 13 (PCV13) for high-risk babies are different.

Synflorix is funded for all children aged under 5 years. It is on the usual Immunisation Schedule at the 6 weeks, 5 months and 12 months immunisation visits.

Prevenar 13 is funded for children aged under 5 years who have a medical condition that increases their risk of invasive pneumococcal disease and that is listed on the *Pharmaceutical Schedule*. These children are given Prevenar 13 instead of Synflorix. Prevenar 13 is given to high-risk children at 6 weeks, 3 months, 5 months and 12 months.

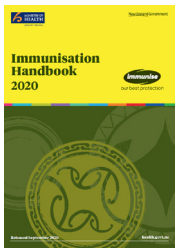
The high-risk medical conditions in children aged under 5 years that are eligible for Prevenar 13 are listed in Table 16.3 in the online *Immunisation Handbook 2020*. Eligible high-risk conditions in children aged 5 years to under 18 years, and adults aged 18 years or older are described in tables 16.4 and 16.5 respectively in the Handbook.

Pneumovax 23 (23PPV) is also funded for children aged 2 years or older and adults with an eligible condition that increases their risk of pneumococcal disease.

Age	Synflorix Usual schedule	OR	Prevenar 13 High-risk schedule	Dose
6 weeks	PCV10	OR	PCV13	Primary series
3 months	No PCV10		PCV13	
5 months	PCV10	OR	PCV13	
12 months	PCV10	OR	PCV13	Booster dose

Synflorix **IS NOT** given at 3 months of age with Infanrix®-hexa and Rotarix®.

Prevenar 13 **IS** given at 3 months of age with Infanrix®-hexa and Rotarix®.



Immunisation Handbook 2020

Please use the current version of the electronic Immunisation Handbook 2020 that can be downloaded as a PDF or an e-book or used online on the Ministry of Health website at www.health.govt.nz/publication/immunisation-handbook-2020.

The **online Immunisation Handbook is updated regularly**, with the most recent update on 20 April 2021.

The **printed Handbooks from 2017 are out of date** and must not be used. Please remove them from your clinical spaces.

Fluad® Quad

Fluad Quad is an inactivated quadrivalent influenza vaccine. Influenza virus is grown in embryonated hens' eggs and inactivated with formaldehyde. The haemagglutinin protein for each strain is harvested, purified and combined with MF59, the squalene-based oil in water adjuvant.[1]

- Fluad Quad vaccine contains traces of kanamycin and neomycin.[1]
- Fluad Quad can be administered to people with a history of egg allergy or anaphylaxis at general practices, pharmacies or at the workplace, although the data sheet advises caution in people who have a history of egg anaphylaxis.[2] The residual ovalbumin in one dose of Fluad Quad is one microgram or less.[1]
- Fluad Quad syringes do not have any components made using natural rubber latex.[1]

Fluad Quad can be administered to people on anticoagulants.[3] After vaccination, apply firm pressure over the injection site without rubbing for 10 minutes to reduce the risk of bruising.

Fluad Quad can be administered with other non-COVID-19 vaccines, such as Tdap, the zoster (shingles) vaccine, meningococcal, pneumococcal or the childhood National Immunisation Schedule vaccines. However, the vaccines must be given at different injection sites.

What are the expected vaccine responses?

Adults aged 65 years or older are more likely to experience local and/or systemic responses to the adjuvanted influenza vaccine Fluad Quad than the non-adjuvanted Afluria Quad vaccine[4-6] because the adjuvant enhances the person's immune response.[5,7]

Common responses associated with the Fluad Quad in adults aged 65 years or older include injection site warmth, tenderness/pain, swelling, and/or itching at the site of injection. Systemic responses such as and fatigue, feverishness, nausea, muscle aches, and/or headache may also occur.[4-6]

Fluad Quad is –

1. Only approved for use in adults aged 65 years or older.
2. The only influenza vaccine available for adults aged 65 years or older.
3. Funded for eligible adults aged 65 years or older.

Generally, the vaccine responses are mild to moderate.[5,6] Injection site pain and swelling, and fatigue, feverishness and/or nausea typically resolve more quickly in adjuvanted vaccine recipients during the four days after vaccination compared with those who receive a non-adjuvanted.[5,6]

How effective is Fluad Quad?

Advancing age[8,9] and increasing frailty[10] limit an older person's response to vaccines and decrease vaccine efficacy against acute infection. The use of adjuvanted influenza vaccine can enhance the immune response in older adults and increase protection against the influenza infection and complications.[7,11-14]

Reviews of effectiveness against confirmed influenza:

- MF59 vaccine 60% (-1.3–84%)[12]
- Standard vaccine 49% (33–62%)[25] to 58% (34–73%)[26]

Comparison of MF59 vaccine with the standard vaccine:

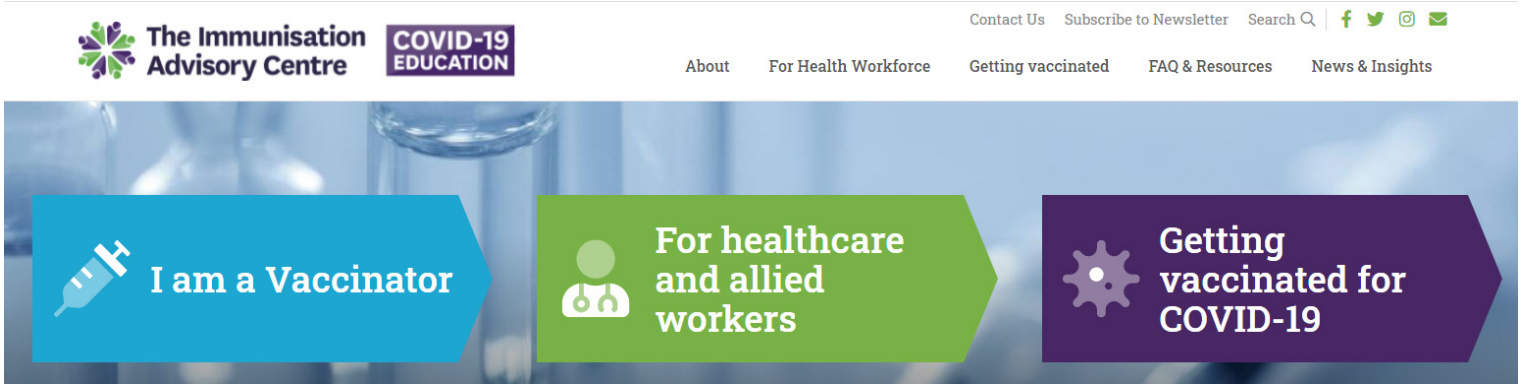
- Risk of hospitalisation for pneumonia, cerebrovascular, and cardiovascular events, 39% (4–61%) lower risk[14]

Comparison of MF59 vaccine with the no influenza vaccine:

- Risk of hospitalisation:
  - with acute coronary syndrome, 87% (35–97%) lower risk[13]
  - with a cerebrovascular accident, 93% (52–99%) lower risk[13]

References are available on request, please contact the editorial team by email to k.batty@auckland.ac.nz.

The Immunisation Advisory Centre



www.covid.immune.org.nz

Visit our new website

IMAC has launched a new website to hold the growing information and resources available to support vaccinators and the healthcare workforce in their work. Find information about training, FAQ, resources, articles, upcoming events and more at covid.immune.org.nz.

Our role: The NZ COVID-19 vaccination programme

The Immunisation Advisory Centre (IMAC) is supporting vaccinators and the healthcare workforce with training and information to administer COVID-19 vaccines in New Zealand. This is the country's largest ever vaccination programme.

We are training an extra 2000–3000 vaccinators to support the rollout, and there are several training pathways available for COVID-19 vaccinators including for:

- Authorised vaccinators
- Provisional vaccinators
- Health professionals with lapsed vaccinator status
- Health professionals with prescribing rights
- Non-practicing registered or retired health professionals

For more information on these pathways and available training please visit our new website covid.immune.org.nz → For Health Workforce → Becoming a COVID-19 vaccinator.

An introductory guide to the COVID-19 vaccination programme

The **free general interest** course *An introductory guide to the COVID-19 vaccination programme* is available for health professionals through the covid.immune.org.nz website.

This course provides information about the Pfizer/BioNTech COVID-19 vaccine (m-RNA-CV, Comirnaty™), including patient screening, vaccine effectiveness, and New Zealand's vaccination strategy.

The free course is not a pre-requisite for, nor does it replace, the *COVID-19 Vaccinator Education Course*. Access to this course is now available to all vaccinators through IMAC Learning, from the Health Professionals/Education web[page on immune.org.nz.

Immunisation support workforce training

Standalone education modules for healthcare workers with a range of responsibilities that support vaccinators and the programme roll out will be available in the near future. The modules include:

- Introduction to immunisation
- Immunisation communication
- Vaccine storage and management
- Post-vaccination observation and safety

COVID-19 vaccination webinars

IMAC is hosting a range of frequent webinars and drop-in online Q&A sessions to share what we know on COVID-19 vaccines and the rollout.

Save the dates

Upcoming webinars

- 6 May – Vaccinator workforce and programme delivery update
- 11 May – Vaccination administration: Review of current practice and opportunity for questions
- 30 May – COVID-19 vaccination and pregnancy and mammograms

Replay past webinars

- How Comirnaty works and what we know about its safety
- COVID-19 vaccines for special immunisation groups
- Engaging with the vaccine hesitant
- Adverse events following immunisation: recognising and understanding anaphylaxis and the reporting process

How?

Visit covid.immune.org.nz news-insights#webinars to register for future webinars and replay past webinars.

The Immunisation Advisory Centre
COVID-19 EDUCATION

The Comirnaty™ (Pfizer/BioNTech) vaccine

How Comirnaty works

The Comirnaty mRNA COVID vaccine provides muscle cells with the instructions to make copies of the SARS-CoV-2 spike protein. The immune system responds to these protein copies in the same way it responds to other vaccine antigens to develop immunity.

Vaccine safety

The safety profile of Comirnaty is like that of other vaccines given in New Zealand. Aound four out of 10 people may experience mild to moderate discomfort at the injection-site and flu-like symptoms for just a day or two after vaccination. These are more commonly reported after the second dose (up to around six out of 10 people) and in younger adults.

Reporting Comirnaty adverse events following immunisation (AEFI) to CARM

» AEFI that occur at time of vaccination, i.e., the person is at the vaccination centre, should be reported to CARM via the CIR.

» AEFI that occur after vaccination, i.e., the person has left the vaccination centre, should be reported via the CARM website, nzphvc.otago.ac.nz/reporting/, using the specific *COVID-19 Adverse Events – Report Online (Health Professional)* form.

It is **important to complete all the tick boxes** and not only provide free text/written information and/or descriptions when completing a report. Completing all the tick boxes ensures that quality data is available to be assessed, reduces the risk that a significant AEFI would not be identified during the triage process, and supports the integrity of New Zealands COVID-19 vaccine safety monitoring.

Vaccine effectiveness

Data from the clinical trials and now from extensive use, after many millions of doses, show that Comirnaty is highly effective against symptomatic disease (87–90%) and severe COVID-19 (75–100%). Preliminary data also show that the vaccine is effective at preventing SARS-CoV-2 infection, which is important for reducing transmission.

Want to learn more about Comirnaty?

Visit covid.immune.org.nz/comirnaty.

Real time global vaccine safety

International active vaccine safety monitoring identified very rare cases of blood clots combined with low platelets after receipt of the AstraZeneca or Janssen COVID-19 vaccine. These vaccines are not available in New Zealand. The syndrome has been called Thrombosis with Thrombocytopenia Syndrome (TTS). In the U.K., it has occurred once for every 200,000 vaccine doses.

In New Zealand, there have been cases of blood clots with normal platelets after receipt of the Pfizer-BioNTech/Comirnaty vaccine (three cases up to 22 April). The international data and these were independently reviewed by New Zealand's COVID-19 Vaccine Independent Safety Monitoring Board. They confirmed that these cases are not related to TTS.

Medsafe also conducted a review and did not find any evidence that supports a link between receipt of Comirnaty and the onset of blood clots. They found less cases of blood clots had occurred in the vaccinated group compared with the number of cases that usually occur in unvaccinated people.

No safety concerns have been identified for Comirnaty. Medsafe will continue to monitor vaccine safety data here and overseas, with international medicine/vaccine regulators, as part of active global vaccine safety surveillance.

...from the COVID vaccinator phones

Addressing some of the questions we receive on the phone line COVID vaccinators

What are the contraindications for receiving a COVID vaccine?

There are two contraindications:

- Anaphylaxis to an ingredient in the COVID vaccine.
- Anaphylaxis to a previous dose of the COVID vaccine.

There are no medical conditions, past or current, or medicines that prevent a person receiving a COVID vaccination.

Who can receive a COVID vaccine?

- Aged 16 years or older.
- Allergy desensitisation treatment to anything that is not an ingredient in the COVID vaccine.
- Antibiotic or antiviral medication.
- Anticoagulant medication.
- Blood or plasma donor, anytime around donation.
- Breastfeeding.
- Allergy or anaphylaxis to antibiotics, seafood, shellfish.
- Autoimmune disease.
- Blood clotting disorder or a history of a blood clot(s).
- Cancer (past or current).
- COVID disease, history of.
- Guillain-Barre Syndrome, chronic or history of.
- Immune checkpoint inhibitor treatment.
- Immunocompromised.
- Pregnant.

Can we give the second COVID vaccination early?

The minimum interval between COVID vaccination doses is 21 days. The clinical trials balanced the significant levels of COVID disease in overseas countries and completing the two-dose vaccine course as soon as possible without compromising of how effective the vaccine is.

With little or no community COVID disease in New Zealand, it is preferably for a person who cannot receive their second COVID vaccination 21 days after their first dose to receive their second dose later than it is due instead of earlier, to ensure their immune response is maximised. If dose two is delayed, it is not necessary to repeat dose one no matter how long the interval is since dose one was given.

What is the spacing of the COVID vaccine and other vaccines?

If a non-COVID vaccine has been given, the general recommendation is for a two-week gap between another inactive and a subsequent COVID vaccination, or a four-week gap between a live vaccine and a subsequent COVID vaccination.

- If it is not practicable to keep the recommended gap between non-COVID and COVID vaccination, then do not delay.

If a COVID vaccine has been given, a two-week gap is recommended before vaccination with a non-COVID vaccine (inactive or live).

- If it is clinically important to administer a non-COVID vaccine less than two weeks after a COVID vaccination, e.g., the person has a tetanus-prone wound and requires a tetanus-booster vaccination, then do not delay.

Once a person has received their first COVID vaccination, administration of non-COVID vaccines should be deferred until two weeks after the second COVID vaccine dose, unless the non-COVID vaccination is clinically important, such as a tetanus-prone wound and booster vaccination.

COLD CHAIN MATTERS ...

Vaccine storage and transportation

Some providers keep a supply of influenza vaccines in a clinical room for ease of administration. Many providers conduct off-site immunisation clinics at workplaces, aged care facilities or community events. All vaccines, including influenza vaccine, must be stored between +2°C and +8°C at all times.

Now is a good time to check you have everything in place. Do a test run to confirm that the chilly bin temperature can be maintained between +2°C and +8°C throughout the entire time vaccines are being stored outside your refrigerator. Contact your Immunisation/Cold Chain Coordinator if you require assistance.

Temperature-monitored chilly bins must be used to store vaccines when they are not in the provider's pharmaceutical refrigerator.

Freezing is your biggest risk when using a chilly bin as the damage is immediate not cumulative. It is important to make sure your vaccines are safely insulated from the ice packs.

On-site immunisation chilly bins

- Must use either a minimum/maximum thermometer or a data logger with an external display, remote probe, i.e., attached to the data logger by a cable, and visible/audible alarm.
- Have the temperature monitored throughout the time vaccines are stored in the chilly bin. The provider must:
  - Document the minimum, maximum and current temperature every 20–30 minutes after putting the vaccines in the chilly bin, and
  - Review the documented temperatures and take action to prevent a cold chain event occurring if required.

Off-site immunisation chilly bins

- Need to be solid walled and have a clip to hold the lid in place.
- Must use a data logger with an external display, remote probe, i.e., attached to the data logger by a cable, and visible/audible alarm.
- Have the temperature monitored throughout the time vaccines are stored in the chilly bin.
  - The provider must document the minimum, maximum and current temperature every 20–30 minutes after putting the vaccines in the chilly bin.
  - The data logger must record the temperature every 5 minutes. Download, review and save the data after returning to the clinic. Take action if required.

Cold chain breaches

There always seems to be an increase in the number of cold chain events around this time of year. However, there are some things that you can do to help reduce the risk:

1. **Reduce the risk that someone accidently unplugs your fridge**
   Ensure the plug is inaccessible and/or is clearly labelled 'Do not disconnect this vaccine fridge'.
2. **Make sure the door on your fridge self-closes**
   The door being left ajar is a common reason for cold chain breaches; adjust the feet at the front of the fridge if needed.
3. **Do not hold the door open for too long**
   Make sure you know what you are looking for when you open the door. If you have a solid door on your fridge, have a map on the front to show where each vaccine is situated.
4. **If your fridge is in a patient area, make sure it is secure**
   Lock the fridge so only your staff can open it.
5. **Check the fridge door seals to ensure they close tightly**
   Use the paper test.
6. **Make sure your fridge has its routine annual service**

...from the phones

Addressing some of the questions we receive on the 0800 IMMUNE phone line

How long does a person have to wait at the clinic after receiving an influenza vaccination?

The 20-minute waiting period continues to be the best option when the waiting area is adequate and safe.

Adolescents aged 13 years or older and adults receiving only an influenza vaccination:

If the risk of exposure to infectious disease in a crowded waiting rooms is higher than the low risk of anaphylactic events; adolescents and adults who meet ALL the following criteria may not need to wait for 20 minutes post-vaccination:

- do not have a history of severe allergic reactions,
- have been assessed for any immediate post vaccination adverse reactions (5 minutes),
- are aware of when they need to and how to seek post-vaccination advice,
- will have another adolescent or adult with them for the first 20 minutes post vaccination, and
- have the ability to contact emergency services if required.

Adolescents aged 13 years or older and adults receiving any other vaccination, and all children aged under 13 years need to remain under observation for the 20-minutes post-vaccination.

Can influenza vaccines be administered to people receiving anticoagulant mediation?

Yes. Influenza vaccines can be administered to people on anticoagulant medication.

Do we have to use the needles sourced by Seqirus to administer Afluria Quad or Fluad Quad?

No. At the time of vaccination, the choice of needle gauge and length will be based on the vaccinator's clinical judgment to ensure needle length is appropriate to reach muscle. Table 2.8 in the online *Immunisation Handbook 2020* provides guidance on the needle gauge and length by site and age.

What antibiotic residuals are in influenza vaccines?

Antibiotic residual in vaccines is due to their use during vaccine production.

- Fluad Quad vaccines contain traces of kanamycin and neomycin.
- Influvac Tetra vaccines contain traces of gentamicin.
- Afluria Quad and Afluria Quad Junior vaccines contain traces of neomycin and polymixin B.
  - A history of anaphylaxis to the antibiotic that IS IN the vaccine IS a contraindication to giving that vaccine.
  - A history of anaphylaxis to any antibiotic that IS NOT in the vaccine IS NOT a contraindication to giving that vaccine.

GET THE FACTS ON IMMUNISATION
0800 IMMUNE
4 6 6 8 6 3