

# Seasonal influenza vaccination update: 2017

Immunisation against influenza has begun for the 2017 season. Influvac is the sole subsidised influenza vaccine in 2017. Influvac contains three strains, including one new strain, which is expected to provide cover for the influenza viruses currently circulating globally and likely to affect New Zealand in winter. All patients can be encouraged to receive the vaccine, but patients aged 65 years and over, pregnant women, and other patients at high risk of complications can receive subsidised Influvac and will potentially benefit the most from vaccination.

Influenza vaccination is an opportunity to reduce the risk of serious complications of influenza infection, particularly in vulnerable groups. In New Zealand, people of Māori and Pacific ethnicity, those in lower socioeconomic circumstances, people aged 65 years and over, pregnant women, infants aged under 12 months and people with co-morbid conditions have the highest burden of influenza illness.<sup>1</sup>

Many people in these groups can benefit from subsidised influenza vaccination, and infants aged under six months can benefit from maternal vaccination during pregnancy.<sup>1</sup> Influenza vaccination is recommended, but not subsidised, for all other adults and children aged over six months, especially if they are in contact with people at high risk of complications from influenza infection, e.g. healthcare and rest home workers and close contacts of young children or elderly people.<sup>1</sup>

Data collected in Auckland as part of an international influenza surveillance programme showed that approximately one-quarter of people were infected with the influenza virus in the winter season of 2015, with 80% of these people asymptomatic, therefore able to pass the virus on without being aware they were infected.<sup>2</sup> Annual influenza vaccination is important because the virus mutates resulting in changes


to the surface antigens which are recognised by the immune system; therefore, immunity from prior vaccination or infection may not provide effective protection against future illness.<sup>1</sup> Vaccine effectiveness can vary from season to season, but on average vaccination reduces the risk of influenza infection by approximately 50%.<sup>3-5</sup> Higher effectiveness is likely for healthy children and adults and lower effectiveness for very elderly people and those with significant co-morbidities.<sup>1,6</sup>

## Eligibility for subsidised influenza vaccination has not changed in 2017

The influenza vaccine is recommended and fully subsidised for:<sup>1,7</sup>

- Women at any stage during pregnancy
- People aged 65 years or over
- People aged under 65 years who are at high risk of complications from influenza, including patients with:
  - A range of cardiovascular diseases\*
  - Chronic respiratory diseases such as chronic obstructive pulmonary disease†
  - Diabetes
  - Chronic renal disease
  - Autoimmune disease or immunosuppression
- Children aged under five years who have been hospitalised for respiratory illness or have a history of significant respiratory illness

The influenza vaccination programme for high risk patients has been extended this year; subsidised influenza vaccination is available until 31 December, 2017.

 The full list of conditions and criteria that qualify a patient for subsidised vaccination is available at: [www.influenza.org.nz/eligibility-criteria](http://www.influenza.org.nz/eligibility-criteria) or [www.pharmac.govt.nz/Schedule?osq=influenza%20vaccine](http://www.pharmac.govt.nz/Schedule?osq=influenza%20vaccine)

\* Patients with hypertension or dyslipidaemia but without evidence of end-organ disease are not eligible for subsidised vaccination<sup>2</sup>

† Patients who have asthma, but do not require regular use of a preventer medicine are not eligible for subsidised vaccination<sup>2</sup>

## A new strain is included in the 2017 influenza vaccine

The sole subsidised influenza vaccine in 2017 is Inluvac. It contains three virus strains – one new strain and two strains that were components of the 2016 vaccines:<sup>2,8</sup>

- A/Michigan/45/2015 (H1N1)pdm09-like virus (new)
- A/Hong Kong/4801/2014 (H3N2)-like virus
- B/Brisbane/60/2008-like virus

Inluvac is an inactivated influenza vaccine and cannot cause influenza infection.<sup>2,9</sup> It does not contain thiomersal.<sup>9</sup>

## How many doses are required?

The dosing schedule for influenza vaccination remains the same as in previous years:<sup>2</sup>

- Two doses, given four weeks apart, for children aged six months to eight years who have not been previously vaccinated against influenza
- One dose for people aged over nine years, and children aged six months to eight years who have previously received an influenza vaccination\*

\* Two doses are recommended for people undergoing chemotherapy<sup>2</sup>

For children aged three years and over and adults, each dose should be 0.5 mL, i.e. the full volume of the pre-filled syringe.<sup>2</sup> For children aged six months to three years, each dose should be 0.25 mL, i.e. half the injection volume of the pre-filled syringe.

## Who should not receive an influenza vaccine?

People who have previously had an anaphylactic reaction to influenza vaccination or vaccine components should not receive further influenza vaccinations.<sup>1</sup>

Influenza vaccines are not indicated or recommended for children aged under six months.<sup>9</sup> Although young infants are at greater risk of complications of influenza (and hospitalisation) there is a lack of clinical trials in this age group and vaccination is not expected to be effective.<sup>10</sup> Vaccination during pregnancy can provide protection to young infants in the first six months of life, and vaccinating other close contacts and household members “cocoon” the infant by reducing the spread of illness.<sup>11,12</sup>

## Caution is required in some patients

Vaccination should be delayed in people who have an acute febrile illness; the decision to delay can be based on clinical judgement of the severity of symptoms and signs.<sup>1</sup> It is recommended that vaccination is delayed in people with a fever of over 38°C or a moderate to severe acute illness without fever, in order to avoid the diagnostic uncertainty of whether worsening fever or illness after vaccination is due to a pre-existing acute illness or an adverse effect of vaccination.<sup>1,13</sup> The decision to vaccinate is reasonable in people with mild illnesses such as an upper respiratory tract infection, otitis media, who have diarrhoea, are taking antibiotics or are in the convalescent phase of an acute illness.<sup>1,13</sup>

Preparation of the influenza vaccine involves the use of eggs. People who have an allergic reaction to egg protein can still receive influenza vaccination; however, some patients should only do so under the supervision of an immunologist. See the Immunisation Handbook for details: [www.immunisation.book.health.govt.nz](http://www.immunisation.book.health.govt.nz)

Patients with thrombocytopaenia or bleeding disorders are at risk of developing a haematoma following intramuscular influenza vaccination. For these individuals, intramuscular administration is possible if performed by a practitioner familiar with their bleeding risk, or patients can receive vaccination by subcutaneous injection.<sup>1</sup> Intramuscular administration may provide a better immune response.<sup>1</sup>

Influvac does not contain any latex components, however, the manufacturer cannot guarantee that it has not come into contact with latex during manufacture or packaging; caution may be required in people with a history of severe hypersensitivity.<sup>2</sup>

### Adverse effects are typically only local injection site reactions

Local injection site reactions are common, and can persist for up to 48 hours.<sup>1</sup> Systemic symptoms such as fever, malaise or myalgia occur in 1% of adults. Systemic symptoms are more likely in children, especially those who have not been previously exposed to the influenza virus or vaccine.<sup>1</sup> Monitoring data from the previous use of Influvac in New Zealand suggest systemic symptoms occur in 9 – 19% of children, and parents may notice fever, irritability and loss of appetite.<sup>2, 14</sup> Administering the 13-valent pneumococcal vaccine (PCV13) at the same time as the influenza vaccine is associated with a higher rate of fever in children; it is estimated that 7 – 8 children per 100 receiving influenza vaccine alone will develop a temperature over 38°C, but this increases to 27 – 28 children per 100 when

receiving both vaccinations concomitantly.<sup>15</sup> Clinicians should explain the increased risk to parents if children are due both vaccinations at the same time; vaccinations can be separated by two days if parents prefer.<sup>2</sup>

For infants with post-vaccination fever, initial management should consist of non-pharmacological measures such as cooling the child by removing clothing layers. Analgesics such as paracetamol or ibuprofen can be used for relieving pain or significant discomfort following vaccination if non-pharmacological measures provide insufficient relief.<sup>2</sup> However, analgesics should not be used routinely as pre-vaccination prophylaxis; there is evidence this may reduce the immune response to some antigens.<sup>2</sup> Parents should be advised to report any concerns about the duration or severity of post-vaccination symptoms.<sup>2</sup>

Adverse reactions to the influenza vaccine should be reported to the Centre for Adverse Reactions Monitoring (CARM): <https://nzphvc.otago.ac.nz>. In 2016, CARM received reports of adverse reactions from influenza vaccination at a rate of 17 per 100,000 doses, with the most common adverse events being injection site inflammation, arm pain, dizziness and headache.<sup>16</sup>

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### Record influenza vaccinations on the National Immunisation Register

The National Immunisation Register (NIR) helps ensure that a patient's immunisation records are kept up to date if they move practices or to another part of the country, and can be used to record contraindications a patient may have to a vaccine. It is also used by the Ministry of Health to collect information about immunisation coverage. Children born from 2005 onwards have their information recorded on the NIR, and some vaccinations, including influenza, can be recorded for adults.<sup>17, 18</sup>

Patients or parents may choose to opt themselves or their child out of the NIR if they wish. Details such as a patient's name, address, date of birth and vaccination history are recorded on the NIR, which can only be accessed by authorised health professionals.<sup>2</sup>

 An information sheet for patients describing the National Immunisation Register is available at: <https://www.healthed.govt.nz/health-topic/national-immunisation-register>



The National Immunisation Register

Information for adults about where your immunisation details are held

Information about the immunisations you've had today will be recorded in the Ministry of Health's National Immunisation Register (NIR).

The NIR will make sure that information about your immunisations is kept up to date, even if you change your doctor or go to a health service in another part of the country.

The NIR is also used to help control diseases by providing information about immunisation coverage across the population.

**immunise**  
your best protection

number makes it easier for health care providers to identify each individual patient.

**immunise**  
your best protection

This resource is available from healthed.govt.nz or the Authorised Provider at your local DHB. March 2016. Code HE2423

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