

Supporting the PHO Performance Programme



Seasonal influenza vaccination: CHANGES FOR 2011



Key concepts

- Two brands of influenza vaccination are available in 2011 - Fluarix may be given to adults and children aged over six months, Fluvax is recommended only for adults and children aged over nine years
- The seasonal influenza vaccine for 2011 contains strains identical to the previous year's vaccine, including Pandemic (H1N1) Influenza 09 strain (Swine Flu)
- People who were vaccinated in 2010 are still recommended to be vaccinated in 2011
- Similar eligibility criteria for free seasonal influenza vaccination apply in 2011, however vaccinations for all children are not funded this year (unless eligible under other criteria such as those with pre-existing conditions)
- Vaccine order forms require a separate order to be placed for vaccines for children aged under nine years and for adults and children aged over nine years

What's in the flu vaccine this year?

The seasonal influenza vaccination for 2011 contains the same strains that were in the 2010 vaccination (Stage Two):

- A/California/7/2009(H1N1)-like strain ("Swine flu")
- A/Perth/16/2009 (H3N2)-like strain
- B/Brisbane/60/2008-like strain

People vaccinated last year are still recommended to be vaccinated in 2011 as immunity diminishes over time.

Different vaccine brand recommended for children aged under nine years

There are two brands of influenza vaccine available in 2011:

Fluarix – approved for adults and children aged six months and over.

Fluvax – only recommended for use in adults and children aged nine years and over, also should not be given to any child with a history of febrile convulsion.

Therefore;

- For children aged between six months and nine years, use only Fluarix
- For all others, use either Fluarix or Fluvax

N.B. Vaccine order forms in 2011 require a separate order to be placed for vaccines for children aged under nine years and for adults and children aged over nine years.

Febrile reactions following Fluvax administration in New Zealand

In a sample of 23 general practices in New Zealand in 2010, it was found that fever occurred significantly more frequently within 24 hours of administration of Fluvax in children aged under five years, compared to Vaxigrip, the other vaccine brand available that year. Of the 104 vaccinations with Fluvax, 31% of children developed fever after the event. This compares to 11% of the 267 vaccinations with Vaxigrip. There were 16 occurrences of fever measured at 39°C or above and one febrile seizure with Fluvax, compared to no occurrences of either event in the children who received Vaxigrip. The authors of the study concluded that Fluvax was associated with unacceptably high rates of febrile reactions and that there has been insufficient safety evaluation of seasonal influenza safety in this population. They suggest that there should be active monitoring of a limited number of doses of seasonal influenza vaccine at the beginning of each influenza season.¹



Fluvax brand associated with febrile convulsions in young children

In 2010, there was an increase in reports of fever and febrile convulsions associated with the Fluvax brand of influenza vaccination in the Southern Hemisphere (see sidebar). Fluvax brand is now not indicated for use in children aged under five years. Febrile reactions also appear to be more common in children aged between five and nine years, therefore use of Fluvax in this age group is not recommended.

It is stressed that these reports were only associated with the Fluvax brand and that children aged between six months and nine years can still be safely vaccinated using the alternative brand – Fluorix.

How many doses this year?

Children aged between six months and nine years:

- First ever influenza vaccine – two doses,* at least four weeks apart
- One dose received in 2010 – one or two doses,† at least four weeks apart
- Two doses received in 2010 – one dose

Adults and children aged over nine years: one dose

* Children require two doses when vaccinated for the first time because they are likely to be immunologically naive to influenza and therefore a better immune response is achieved after two exposures to the vaccine.

† The Ministry of Health recommends that children who had one dose of vaccine last year, require two doses this year, however there is no strong scientific data to support this position. Clinicians may use their judgement to decide whether a child requires an extra dose, e.g. children at high risk of influenza.

Who is eligible for free influenza vaccination?

1. Anyone aged 65 years or over
2. Anyone aged 65 years or under with one (or more) of the following medical conditions:
 - Cardiovascular and cerebrovascular disease (except hypertension or dyslipidaemia)
 - Chronic respiratory disease (except asthma not requiring regular preventive treatment)
 - Diabetes
 - Chronic renal disease
 - Cancer (except non-invasive basal or squamous cell carcinoma)
 - Other chronic conditions including; epilepsy, rheumatoid arthritis, autoimmune disease, immune suppression, HIV, cerebral palsy, multiple sclerosis, muscular dystrophy, children on long-term aspirin, congenital myopathy, haemoglobinopathies, hydrocephaly, motor neurone disease, myasthenia gravis, neuromuscular and CNS diseases, Parkinson's disease, sickle cell anaemia and transplant recipients.
3. Pregnant women

N.B. Eligibility criteria apply until July 31st 2011

 For a full list of eligible conditions, visit: www.influenza.org.nz/?t=887 or check with the Immunisation Advisory Centre, Ph **0800 466 863** or email **0800IMMUNE@auckland.ac.nz**

Who else should be vaccinated?

Although not subsidised, parents should be encouraged to have children aged between six months and five years vaccinated, especially if any of the following factors are present, which may increase the risk of complications from influenza:

- Māori or Pacific ethnicity

- Living in a low socioeconomic area, crowded household or exposed to second-hand cigarette smoke
- Recurrent medical presentations

Lead by example – get immunised

It is strongly recommended that all healthcare workers receive a seasonal influenza vaccine each year. This is not only for personal protection, but more importantly to protect vulnerable patients who may have a poor response to the influenza vaccine themselves and are at risk of complications from influenza.

Traditionally the uptake of influenza vaccine among healthcare workers is low. A 2006 editorial suggested that uptake among healthcare workers in New Zealand was between 20 to 40%, with the lowest coverage among nurses.² The major barrier to vaccination is perceived to be educational, i.e. a lack of personal concern about influenza and concern about adverse effects of the vaccine.

Some countries, e.g. the United States, are currently considering introducing mandatory influenza vaccine for healthcare workers in some areas. Unvaccinated workers are seen to be jeopardising public health and seasonal influenza vaccination is regarded as a safe, low-cost and effective method to greatly enhance patient safety.³

Other groups of people who should be strongly encouraged to have an influenza vaccine include teachers and childcare workers.

 **Best Practice Tip:** Send a message strongly encouraging influenza vaccination to all staff in the workplace via email, intranet or a notice in the tea room or meeting areas. It is important that messages are endorsed by senior staff. If the observation period is a barrier to receiving the vaccine, consider using “I’ve been immunised” stickers to enable the staff member to keep working during the observation period.

Why get immunised?

Immunisation is the single most effective intervention to prevent the influenza virus. A lack of education about the risks of influenza and concerns about the safety and effectiveness of the vaccine is most likely the greatest barrier to immunisation. Improved communication to increase vaccine uptake is the key.

Convincing people to have the 2011 influenza vaccine may be more challenging than usual. The vaccine targets identical strains as those targeted by the stage two vaccine in 2010, and this may lead to people being less motivated to be vaccinated again. Despite much publicity surrounding “swine flu”, rates of influenza in 2010 were still in the medium range compared to previous years. Widely reported adverse reactions in young children administered Fluvax in 2010 may also reduce patient confidence.

Take the opportunity to talk to all patients about whether influenza vaccine is appropriate for them. Target people who are at risk of complications of influenza, and those who are eligible to receive funded vaccination. Ensure that balanced and informative information about influenza vaccine is provided and that any barriers to vaccination are identified and addressed.

Remind healthcare professionals about their responsibilities to their patients and the importance of being vaccinated themselves.

Common myths and misconceptions about influenza vaccination

“It gives me a cold”

Influenza vaccination does not carry a risk of transmission of the common cold or influenza viruses.

The virus strains within the vaccine are subunit proteins, i.e. not live. The body’s immune response to vaccination can result in symptoms such as fever, malaise and myalgia,

but these are usually mild and of short duration. People are vaccinated at a time of year when other respiratory viruses are circulating and by chance, they may contract such a virus at a similar time.

“But I got vaccinated last year”

Each year, the seasonal influenza vaccine constituents are carefully selected based on the predicted strains for that year. In the Southern hemisphere, this prediction can be based on which strains were prevalent in the preceding Northern Hemisphere winter. For this reason, it is important to be vaccinated each year to cover against the particular strains represented in that year’s vaccine.

However, perhaps the key reason to be vaccinated each year is that immunity lessens over time and those most at risk need maximum protection. Although the constituents in the 2011 vaccine are the same as last year, vaccination is still recommended. While healthy individuals are likely to have immunity lasting longer than a season it is difficult to predict with each individual how long immunity will last.

“It doesn’t work”

It is still possible to contract influenza after being vaccinated. This is especially true for elderly people, those with chronic conditions that may impair immune responses and infants aged under two years. However, the severity of the illness and risk of hospitalisation is likely to be reduced in those who have been vaccinated. In some cases a person may have been exposed to the influenza virus prior to being vaccinated.

In healthy adults, influenza vaccine is approximately 80% effective in preventing influenza, provided that the vaccine and circulating virus strains are well matched.⁴

“My immune system is strong”

People who rarely contract viruses such as influenza or the common cold can be regarded as having a strong or healthy immune system. Vaccinations such as seasonal influenza vaccine enhance a healthy immune system and make people more resilient against illness.

“I prefer natural remedies such as echinacea and vitamin C”

There is no consistent evidence that natural remedies such as echinacea or vitamin C are clinically effective in reducing the occurrence or severity of influenza viruses.

“Vaccines contain mercury”

Both Fluvax and Fluarix are preservative free.

Historically, some vaccines contained thiomersal as a preservative. Thiomersal is a mercury derivative and there was some concern that exposure to mercury was associated with neurological deficits including autism. However, this association has now been invalidated by multiple epidemiological studies.

N.B. All vaccines on the current New Zealand immunisation schedule are thiomersal free.

Resources

An influenza resource kit from the National Influenza Strategy Group will be sent out to all practices before the influenza programme commences. This kit, along with other influenza-related resources, is also available to download or order from: www.immune.org.nz/?t=890

 For further information about managing influenza, including the use of antiviral medicines, see “Diagnosing and managing influenza”, BPJ 21 (Jun, 2009).

ACKNOWLEDGEMENT Thank you to **Dr Nikki Turner**, Director, Immunisation Advisory Centre, Senior Lecturer, Division of General Practice and Primary Health Care, University of Auckland for expert guidance in developing this article.

Influenza activity in New Zealand in 2010

Influenza activity in New Zealand in 2010 has been classified in the low to medium range compared to the past 19 years of surveillance. There was a cumulative incidence of influenza of 947 cases per 100 000 people, which was the seventh lowest incidence recorded since 1992. Influenza activity started late in the season last year, with incidence peaking in late August. The highest rates of notification were seen in children aged under one year and high hospitalisation and notification rates were seen among Māori and Pacific peoples.⁵

References

1. Petousis-Harris H, Poole T, Booy R, Turner N. Fever following administration of two inactivated influenza vaccines – a survey of parents of New Zealand infants and children 5 years of age and under. *Vaccine* 2011;[Epub ahead of print].
2. Jennings L. Influenza vaccination among New Zealand healthcare workers: low rates are concerning. *NZ Med J* 2006;119(1233).
3. Ottenberg A, Wu J, Poland G, et al. Vaccinating healthcare workers against influenza: the ethical and legal rationale for a mandate. *Am J Public Health* 2011;101(2):212-6.
4. Demicheli V, Pietranonj C, Jefferson T, et al. Vaccines for preventing influenza in healthy adults. *Cochrane Database Syst Rev* 2009;(3).
5. Hope V, Huang QS, Bandaranayake D. Recommendation for seasonal influenza vaccine composition for New Zealand 2011. Report prepared for the Ministry of Health. 2010.