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2018 Suggested information to assist with consent for annual influenza immunisation of GP staff

What is Influenza, how is it transmitted and who does it affect?

Both influenza A and influenza B viruses undergo frequent changes in their surface antigens, resulting in cumulative changes in the virus which is responsible for the annual outbreaks and epidemics of influenza - this requires the composition of influenza vaccines to be reviewed annually. The virus is transmitted person to person by droplets/aerosols produced during coughing or sneezing, or by direct contact with respiratory secretions e.g. handles. Infection produces a range of symptoms ranging from none or minimal symptoms, to respiratory illness, to multisystem complications and death from primary viral or secondary bacterial pneumonia. Severe disease is more likely with advanced age; lack of previous exposure to related influenza virus; greater virulence; chronic conditions, such as heart or lung disease, renal failure, diabetes and neurological conditions; immunocompromise; pregnancy; and smoking. In pandemics, severe disease occurs in otherwise healthy young adults. Many infections may not be detected. In adults, the onset of symptoms is often abrupt, classically after an incubation period of 1 to 3 days, and includes systemic features such as malaise, feverishness, chills, headache, anorexia and myalgia which may be accompanied by a cough, nasal discharge and sneezing. Fever is a prominent sign of infection and peaks at the height of the systemic illness. Infections due to influenza A (H3N2) strains are more likely to lead to severe morbidity /mortality than influenza B or seasonal influenza A (H1N1) strains. Symptoms are similar for children but temperatures may be higher and may result in febrile convulsions, otitis media and gastrointestinal symptoms. Complications include: acute bronchitis, croup, acute otitis media, pneumonia, cardiovascular complications including myocarditis and pericarditis, post-infectious encephalitis, Reye syndrome, and various haematological abnormalities. Primary viral pneumonia occurs rarely, but secondary bacterial pneumonia is a frequent complication in persons whose medical condition makes them vulnerable to the disease. It is estimated that there are an average of over 13 500 hospitalisations due to influenza per year in Australia and over 3000 deaths in Australians aged over 50 years alone.

What is in the vaccine?

The composition of vaccines for use in Australia is determined annually by the Australian Influenza Vaccine Committee. Influenza vaccines normally contain three recommended strains of virus (two influenza A subtypes and influenza B), representing currently circulating viruses. The included strains may differ from those selected for use in the northern hemisphere vaccine formulation

examples of commonly used vaccines

- ***Fluarix*** – GlaxoSmithKline (inactivated influenza virus). Each 0.5 mL pre-filled syringe contains 15 µg haemagglutinin of each of the three recommended strains. May contain traces of formaldehyde, gentamicin, polysorbate 80, octoxinol 10 and egg protein.
- ***Influvac*** – Abbott Products Pty Ltd (inactivated influenza virus). Each 0.5 mL pre-filled syringe contains 15 µg haemagglutinin of each of the three recommended strains. May contain traces of formaldehyde, CTAB, polysorbate 80, gentamicin and egg protein.

Influenza vaccines currently available in Australia are purified inactivated influenza virus cultivated in embryonated hens' eggs. Both the split virion and subunit vaccine types are substantially free of the systemic reactions sometimes induced by whole virus vaccines except for Fluvax (CSL Limited), which in 2010 resulted in higher rates of adverse events, specifically fevers and febrile convulsions, in children aged <5 years. Because influenza vaccine viruses are cultivated in embryonated hens' eggs, these vaccines may contain traces of egg-derived proteins. Manufacturing processes vary by manufacturer, and different chemicals (formaldehyde or β-propiolactone) may be used to inactivate the virus. The product information should be consulted for known egg allergy.

How effective is the vaccine?

Most (approx 85%) adults develop antibody levels post vaccination that are likely to protect against strains of virus in the vaccine. There is likely to be protection against related influenza variants. Infants, the very elderly, and the immunocompromised may develop lower protective levels but the vaccine may be more effective in preventing LRT involvement or other complications.

What are the side effects of the vaccine?

- Recently published reviews show anaphylaxis risk associated with the vaccination of egg-allergic pts is very low
- **Fever, malaise and myalgia occur commonly, in 1 to 10% of persons who receive influenza vaccination**
- Local adverse events (redness, swelling etc) occur more commonly with intradermal influenza vaccine
- Post-vaccination symptoms may mimic infection, but do not cause influenza because **there is no live virus.**
- Immediate adverse events e.g. hives, angioedema or anaphylaxis) are rare and probably represent an allergic response to a residual component of the manufacturing process, most likely egg protein

Reference - 10th ed Australian Immunization handbook 2013

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