

Flu fact sheet for healthcare workers

Influenza.
Don't get it.
Don't give it.

March 2017

How serious is influenza?

- Influenza can vary from having no symptoms at all, to being extremely severe, even for fit and healthy people.
- Influenza is a potentially fatal disease, estimated to cause more deaths each year than accidents on NZ roads.
- On average up to 401 deaths are **estimated** to be caused directly or indirectly by influenza virus each year in New Zealand. This estimated death rate is 17 times higher than **recorded** influenza deaths.¹
- Many others can have mild or even asymptomatic flu but can still spread it. The Southern Hemisphere Influenza and Vaccine Effectiveness Research and Surveillance (SHIVERS) serosurvey² results show that in the 2015 winter season more than one quarter (26%) of New Zealanders were infected with flu with **four out of five of these being asymptomatic (not showing symptoms)**. These asymptomatic carriers can spread the virus among their family, co-workers and classmates without ever realising it.
- Children are much more likely to contract influenza in any given season: 20–50% compared with 10–30% in adults.³
- Applying SHIVERS serosurvey data to the New Zealand total population would suggest that in 2015 around:
 - 31,850 people sought help at their general practice and
 - 2,209 were hospitalised.

How contagious is influenza?

Studies have shown that influenza can survive for:³

- An hour or more in the air in enclosed environments.
- More than eight hours on hard surfaces such as stainless steel and plastic.
- Up to 15 minutes if transferred from tissues to hands.
- Up to five minutes after transfer from the environmental surfaces.

Does influenza vaccine work?

- Like all vaccines, influenza vaccine is not 100% effective in everyone, but in most people it does prevent influenza, or the person has a less severe illness. Generally, flu vaccines are considered to have 'moderate effectiveness'.
- Effectiveness rates depend on several factors, including the age and immune status of the recipient, as well as the match between circulating vaccine strains and the vaccine.
- The findings of a rigorous analysis of 44 years' worth of studies published online by *Lancet Infectious Diseases* in 2011, concluded that overall "...existing flu vaccines can provide moderate protection from laboratory-confirmed flu, but protection is much lower in some groups and during some seasons." The authors believed the **current influenza vaccines have a role in reducing influenza morbidity until more effective interventions were available**.⁴
- According to a 2008 report based on Institute of Environmental Science and Research Ltd. (ESR) surveillance data, influenza-related deaths in New Zealand reduced by more than 70% since 1997 when the vaccination policy changed to offer free flu vaccination for people 65 years and over, resulting in a steady increase of vaccine uptake.¹
- It is hard to give precise numbers for flu vaccine effectiveness as it varies from year to year and with different groups. While there are diverse results from single studies, meta-analyses show that flu vaccines are overall moderately effective, and likely to be more effective in healthy older children and adults and less effective in the very old and those with medical conditions that may affect response to the vaccine.⁵
- The ideal way to measure vaccine effectiveness would be with a randomised control trial (RCT) where one group is given a vaccine and compared to a control group who do not receive the vaccine. However, as it is known historically that flu vaccines are effective it would not be ethical to withhold vaccine from a control group which would leave them at risk of disease. This is why flu vaccine estimates rely on different methodologies and multiple studies to estimate effectiveness, most commonly using types of case control studies. Results can vary from study to study as there are more possible biases in this style of studies.
- Pooled New Zealand data from the SHIVERS study has shown that, while it varies a bit from season to season, across the seasons 2013–2016, influenza vaccine was around 50% effective both at preventing influenza-related presentations to general practice and at preventing influenza-related hospitalisations overall.^{6,7,8,9,10} In healthy adults, influenza vaccines are effective in reducing cases of influenza, more so when the vaccine and circulating virus strains are well-matched.^{6,7,8,9,10}
- Flu vaccines are effective in children. Less evidence is, however, available for children under two years old.^{3,11} The lack of RCTs make estimating vaccine effectiveness for the elderly even more difficult. Back in 2010, Dr Tom Jefferson and colleagues from the *Cochrane Collaboration* stated there was a lack of quality data to assess effectiveness in the elderly.¹² A recent meta-analysis that included the New Zealand SHIVERS data looking at effectiveness in elderly showed that the vaccine is significantly effective when the vaccine matches the circulating strains.¹³

Does being fit and healthy protect you from influenza?

Anyone can catch and spread, influenza. Being young, fit and healthy does not protect you from influenza. Immunisation offers the best protection from infection and reduces the spread of the virus to more vulnerable people.

Can I build up natural immunity to influenza?

Immunity only develops after you have been exposed to a particular strain of the virus, either through infection or immunisation. Flu immunisation prepares and boosts your immune system to help you fight the particular flu viruses expected to be circulating each year. Immunity against one strain of flu will not necessarily protect you against another.

You cannot catch influenza from the vaccine

The current influenza vaccines available in New Zealand do not contain live virus. These vaccines contain fragments of inactivated influenza viruses and cannot cause disease. It can take up to two weeks to be fully protected following vaccination. If you are exposed to influenza virus near the time you are vaccinated, the vaccine may not have time to work before you become unwell.

References

References are provided on page two.

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References

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