Immunisation Advisory Centre

VERSION 5

Influenza disease

Influenza is our most common vaccine-preventable disease. Although it can be a mild disease, it may cause serious illness in otherwise healthy people and lead to hospitalisation, complications and death.

The virus

Influenza is caused by different strains of influenza virus. The surface antigens on influenza viruses can change from year to year by small (drift) or large (shift) amounts. These changes lead to seasonal outbreaks and potentially pandemics. The composition of influenza vaccines is reviewed each year to better match each season's vaccine with the circulating strains.

The clinical illness

Symptoms of influenza vary with age, immune status and health of the individual, and include fever, sore throat, muscle aches, headache, cough and severe fatigue. The onset of symptoms is typically sudden. The fever and body aches can last 3–5 days and the cough and fatigue can last for two or more weeks. While any influenza infection could become a severe illness, the risk of complications is highest in young children, elderly adults, pregnant people and those with underlying health conditions. Complications include pneumonia (either due to the influenza virus or secondary bacterial infections), otitis media, worsening of preexisting respiratory or cardiac conditions, febrile seizures, inflammation of the brain and Guillain-Barre syndrome. The risk of heart attacks and strokes is increased following influenza.

Diagnosis

Most influenza diagnoses are based on symptoms. Although a definitive diagnosis of influenza can only be made in the laboratory, usually from PCR testing of secretions from a nasopharyngeal swab, rapid antigen testing kits are available to purchase from pharmacies to indicate influenza A or B, respiratory syncytial virus or COVID-19 infection. Ideally, samples should be collected within the first four days of illness.

A meta-analysis of influenza disease found that approximately 20% of children and 10% of adults who did not receive an influenza vaccination were infected annually. Around half of those infected were asymptomatic. A study performed in New Zealand found around one in four people were infected with influenza during the 2015 influenza season and that four out of five children and adults with influenza did not have symptoms.

Transmission

The influenza virus is transmitted among people by direct contact, touching contaminated objects or by the inhalation of aerosols containing the virus. Influenza virus can be aerosolised without sneezing or coughing. Sneezing is more likely to contribute to contaminated surfaces and objects. Influenza virus can be transmitted by anyone who is infected, whether they have symptoms or not, and can infect others at home, in the community, at work and in healthcare institutions. Healthy adults with influenza are infectious for up to five days, and children for up to two weeks.

Seasonality

The peak incidence of influenza in New Zealand is typically between May and September, but cases occur year-round. Influenza activity is monitored using a variety of methods, including a general practice surveillance programme and hospital-based monitoring at several Auckland hospitals.

Influenza data 2023-2025

Although data from PHF Science show that the levels of influenza activity were lower in 2023, 2024 and 2025 than in 2022 (when the borders opened post-COVID-19 restrictions), they have been higher than seen during 2015-2019. In 2024 and 2025, cases extended beyond the typical autumn/winter period with a later than typical peak towards the end of August.

Some groups continue to carry the greatest burden from influenza. Hospital surveillance in Auckland shows that the rates of influenza-associated severe acute respiratory illness (SARI) continue to be highest in young children (0–4 years) and the elderly (≥65 years) compared to other age groups. Also, a higher rate is shown for Pacific and Māori ethnic groups compared to other ethnic groups.

For up-to-date influenza surveillance data, visit: www.phfscience.nz/digital-library/respiratory-illness-dashboard/

Call 0800 IMMUNE (0800 466 863) for clinical advice