INFLUENZA REPORT AT A GLANCE

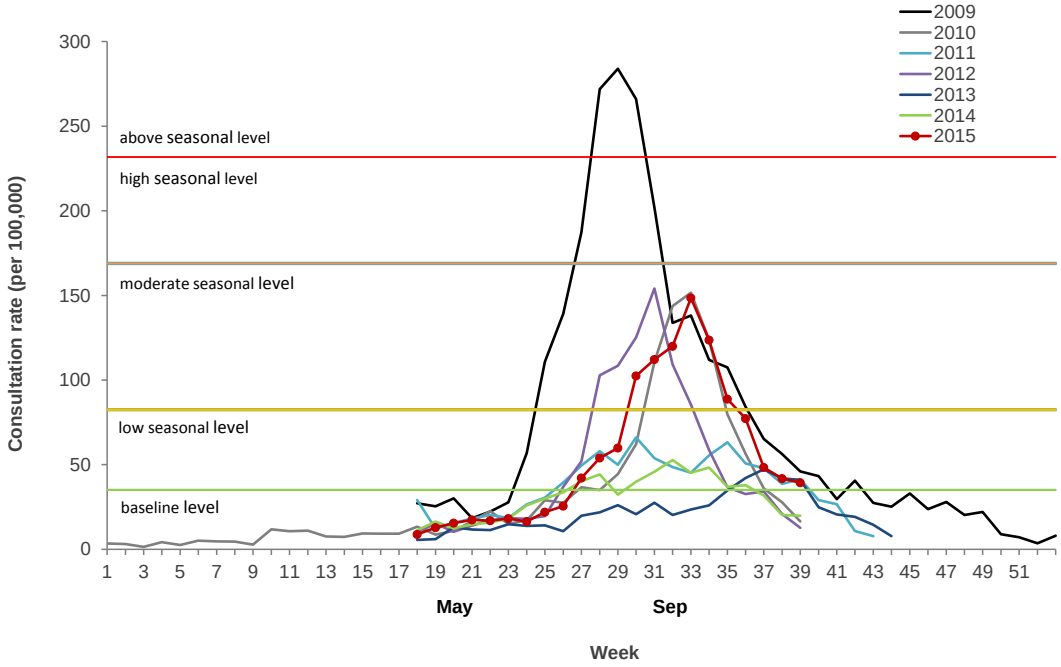
This document provides an overview of the influenza surveillance in New Zealand in 2015 (https://surv.esr.cri.nz/virology/influenza_annual_report.php). Influenza surveillance provides critical information about a virus that can rapidly change to cause substantial morbidity and mortality. The New Zealand influenza surveillance system compiles information from a variety of sources to guide public health action and policy with essential information on disease burden, epidemiology, aetiology, risk factors, clinical spectrum and outcomes, and vaccine effectiveness. The influenza surveillance system is in place to detect influenza epidemics/pandemics, inform vaccination policy and vaccine strain selection, and guide public health control measures. NZ influenza surveillance also contributes to these activities at a global level.

2015 Influenza Activity

NZ conducts both hospital- and general practice- (GP) based surveillance, because these systems capture disease presentations at different levels of severity. Due to differences in care seeking, the combination of these systems also allows for a better representation of the burden of influenza in NZ. The very young (under 5 years old), older adults (65 years or older), and those of Maori or Pacific ethnicities are more likely to be admitted in hospital but less likely to be seen at GPs.

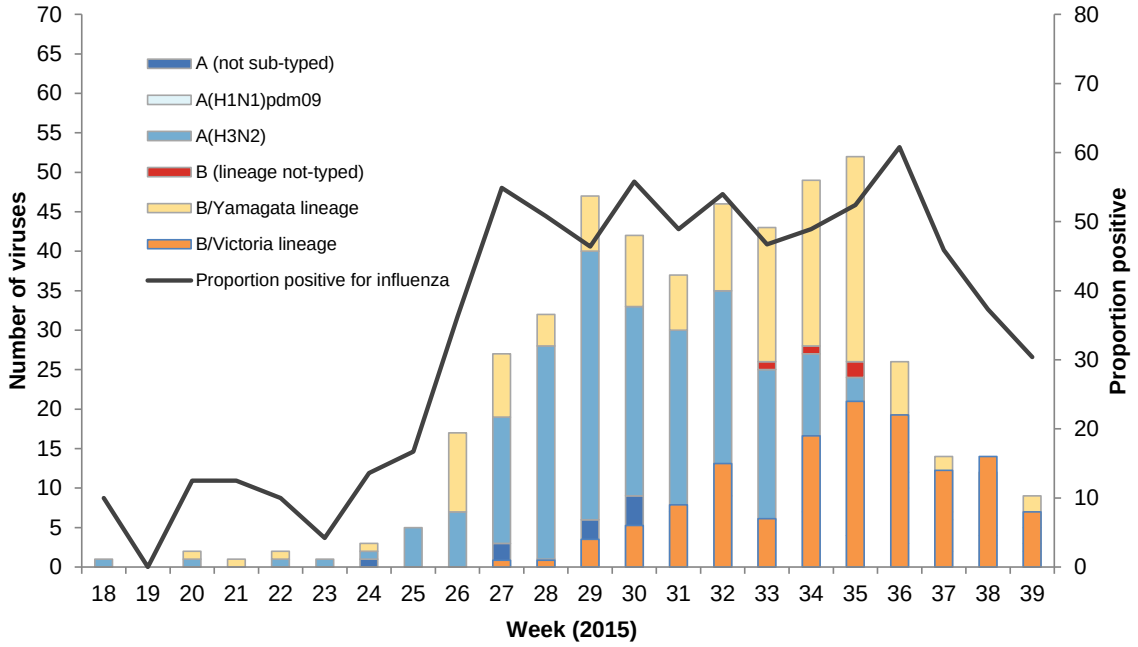
Visits to the GP (Figure 1) and hospital for acute respiratory illnesses were at a moderate level during 2015. However, the number of influenza-positive acute respiratory illnesses in both settings were at high levels. In the national ILI system, ILI consultation rates varied greatly across District Health Boards (DHBs), with the highest rates reported from South Canterbury and Tairawhiti DHBs.

Figure 1. Weekly consultation rates for Influenza-like Illness (ILI) in New Zealand, 2009–2015



Influenza A(H3N2) was the predominant 2015 influenza virus among subtyped and lineage-typed viruses; however, two lineages of influenza B viruses (Yamagata and Victoria) also circulated (Figure 2). The influenza B (Victoria lineage) was not included in the 2015 trivalent influenza vaccine. The influenza B (Victoria lineage) virus will be added to the 2016 trivalent and quadrivalent influenza vaccines. More details on 2016 influenza vaccine recommendations are here: https://surv.esr.cri.nz/virology/influenza_vaccine.php.

Figure 2. Temporal distribution of the number and proportion of influenza viruses from ILI specimens by type and week, 27 April to 27 September 2015



Influenza in Populations at Elevated Risk

Groups at increased risk for infection with influenza or poor outcomes with influenza infection are a particular focus of influenza surveillance. Pregnant women, adults with specific underlying medical conditions, and children under five years old who have been hospitalised for respiratory illness or have a history of significant respiratory illness are all eligible for free seasonal influenza vaccine. http://www.influenza.org.nz/eligibility-criteria

Pregnant women: Pregnant women were five times (95% Confidence Interval [CI]: 2-11) as likely as other similarly aged women (15–45 years old) to be hospitalised with influenza.

Adults with underlying medical conditions: Of the nearly 200 adults (15 years or older) who were hospitalised with influenza during 2015, many (60%) had underlying medical conditions or prior respiratory hospitalisation with cardiovascular disease, asthma and diabetes being the most common.

Children: Around a third (36%) of children under 15 years old hospitalised with influenza had any underlying conditions or prior respiratory hospitalisation.

Vaccine Coverage, Vaccine Effectiveness and Antiviral Resistance in 2015

In 2015, a reported 26% of the NZ population was vaccinated for influenza, which is slightly lower than the peak in 2013 when influenza vaccine for children under 5 years old with significant respiratory illness became funded. Influenza vaccine coverage was also low (<30%) among SARI patients who are eligible for free vaccine (ie. those >=65 years, those <65 years with underlying conditions, and children with prior respiratory hospitalisations).

The 2015 seasonal influenza vaccine was 36% (95% CI: 11-54) effective at preventing influenza-related general practice consultations and 50% (95% CI: 20-68) effective at preventing influenza-associated hospitalisations. Even with moderate vaccine effectiveness (35-65%), influenza vaccine can not only help protect those who are vaccinated but can also help protect their close contacts from getting ill with influenza (http://www.cdc.gov/flu/about/qa/vaccineeffect.htm). The circulating influenza viruses were all sensitive to oseltamivir and zanamivir (antiviral agents).