

INFLUENZA WEEKLY UPDATE

2015/24: 8–14 June 2015

The national influenza surveillance system in New Zealand is an essential public health component for assessing and implementing strategies to control influenza. This report summarises the data collected from sentinel general practice (GP) surveillance and non-sentinel surveillance for week 24 (8–14 June 2015).

Summary

- ILI through sentinel surveillance was reported from 18 out of 20 District Health Boards (DHB) with a national consultation rate of 16.5 per 100 000 (52 ILI consultations).
- A total of 364 swabs were received from sentinel (25) and non-sentinel (339) surveillance.
- Forty-four influenza viruses were identified: A (not sub-typed) (25), A(H3N2) (13) and B (not lineage-typed) (6).

INFLUENZA-LIKE ILLNESS SURVEILLANCE

In the past week, a total of 52 consultations for influenza-like illness were reported from 61 general practices in 18 out of 20 DHBs. This gives a weekly consultation rate of 16.5 per 100,000 patient population. Figure 1 shows the weekly national consultation rate for 2015 in comparison to the average epidemic curve in 2000–2013 (excluding 2009). For more details on threshold definitions, see Appendix. The current rate of influenza-like illness is below the seasonal threshold.

Figure 1. Weekly consultation rates for influenza-like illness in New Zealand in 2015 in comparison to the average epidemic curve in 2000–2013 (excluding 2009)

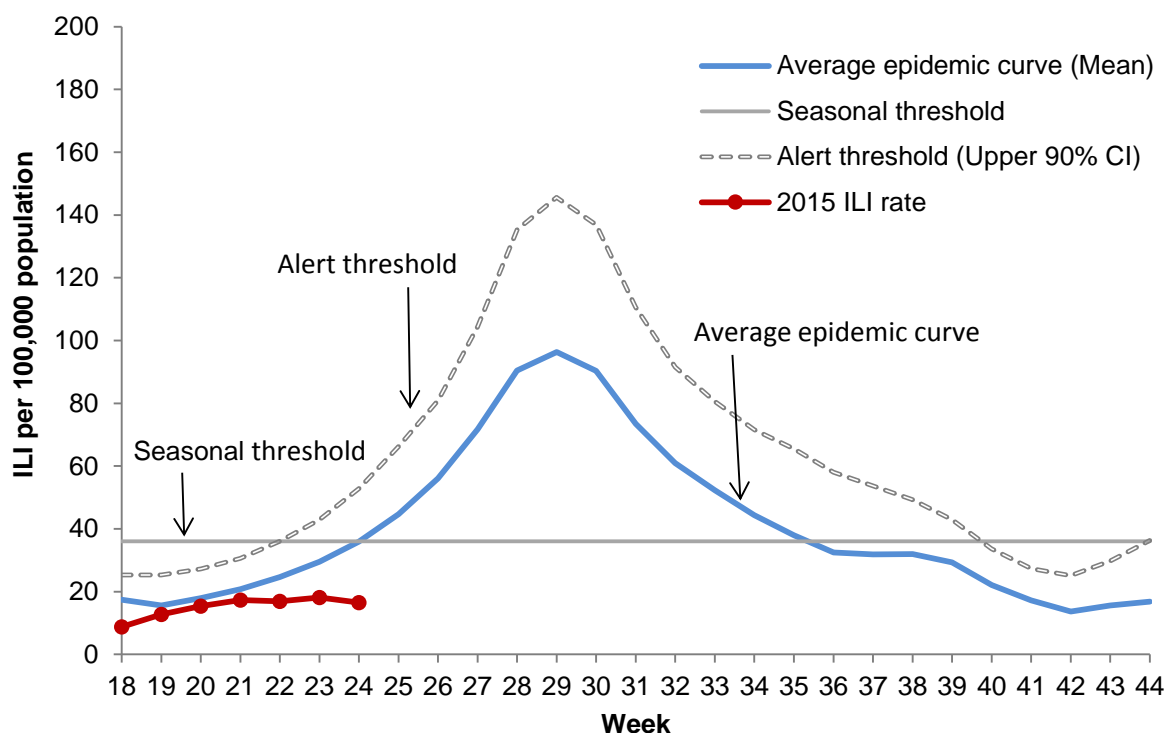


Figure 2 shows the weekly national consultation rate for 2015 in comparison to the previous years 2010–2014.

Figure 2. Weekly consultation rates for influenza-like illness in New Zealand, 2010–2015

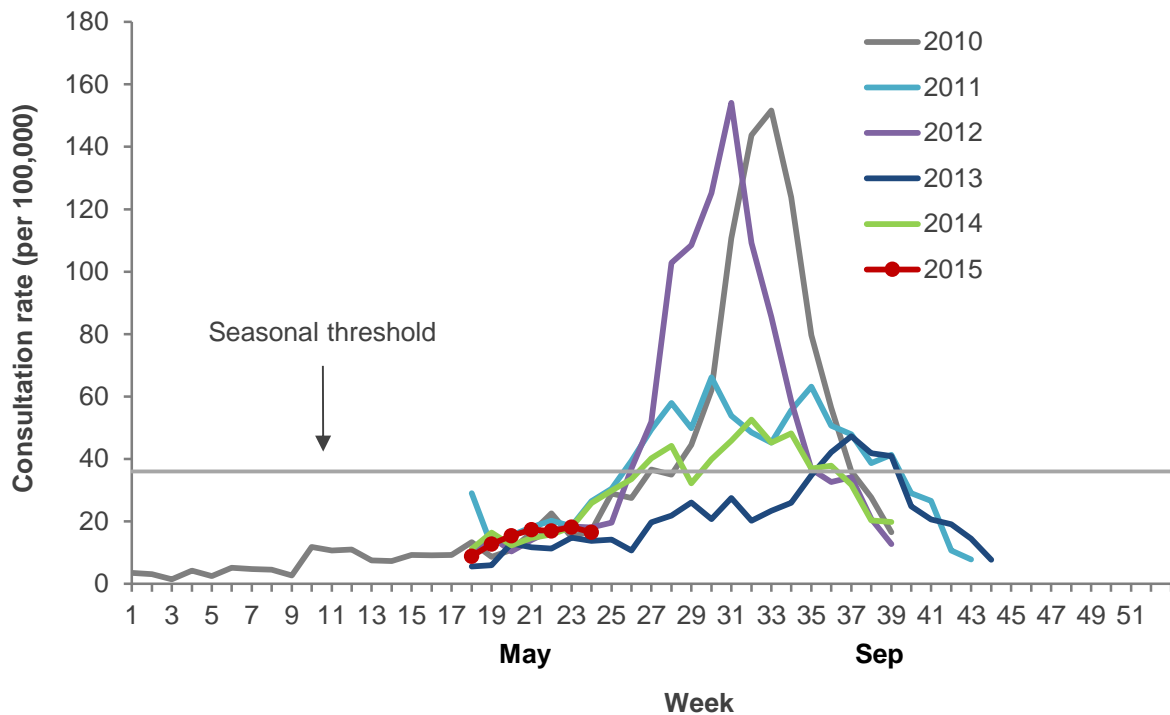
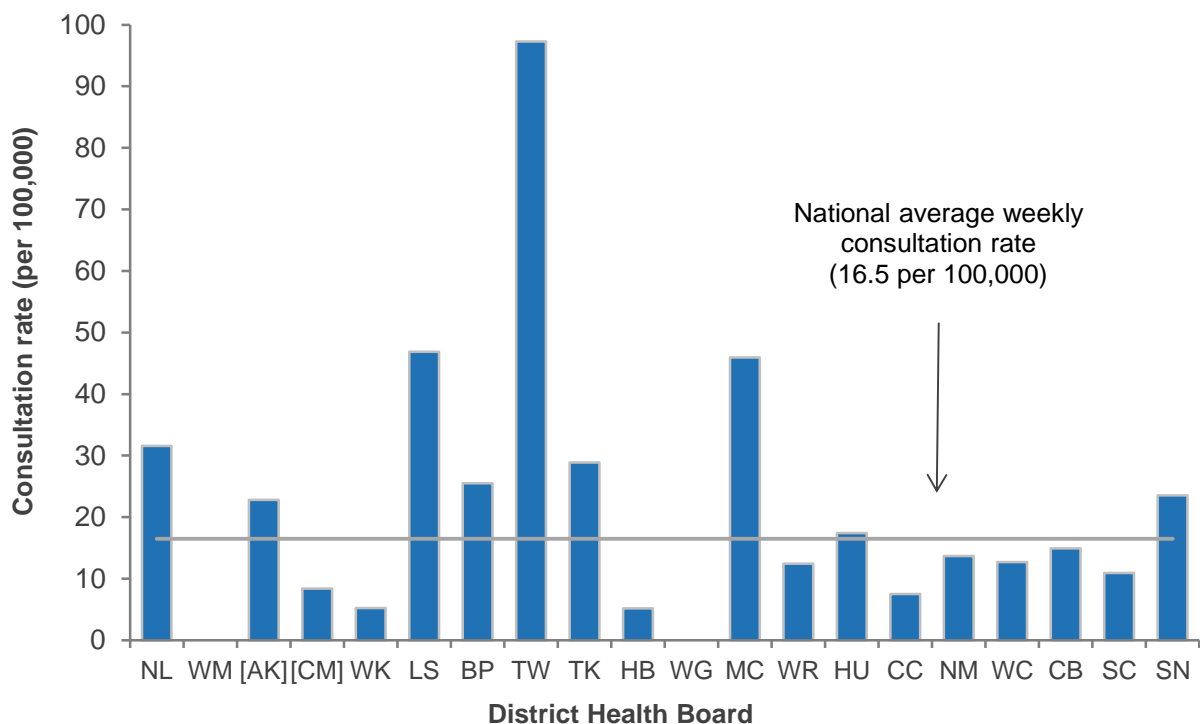


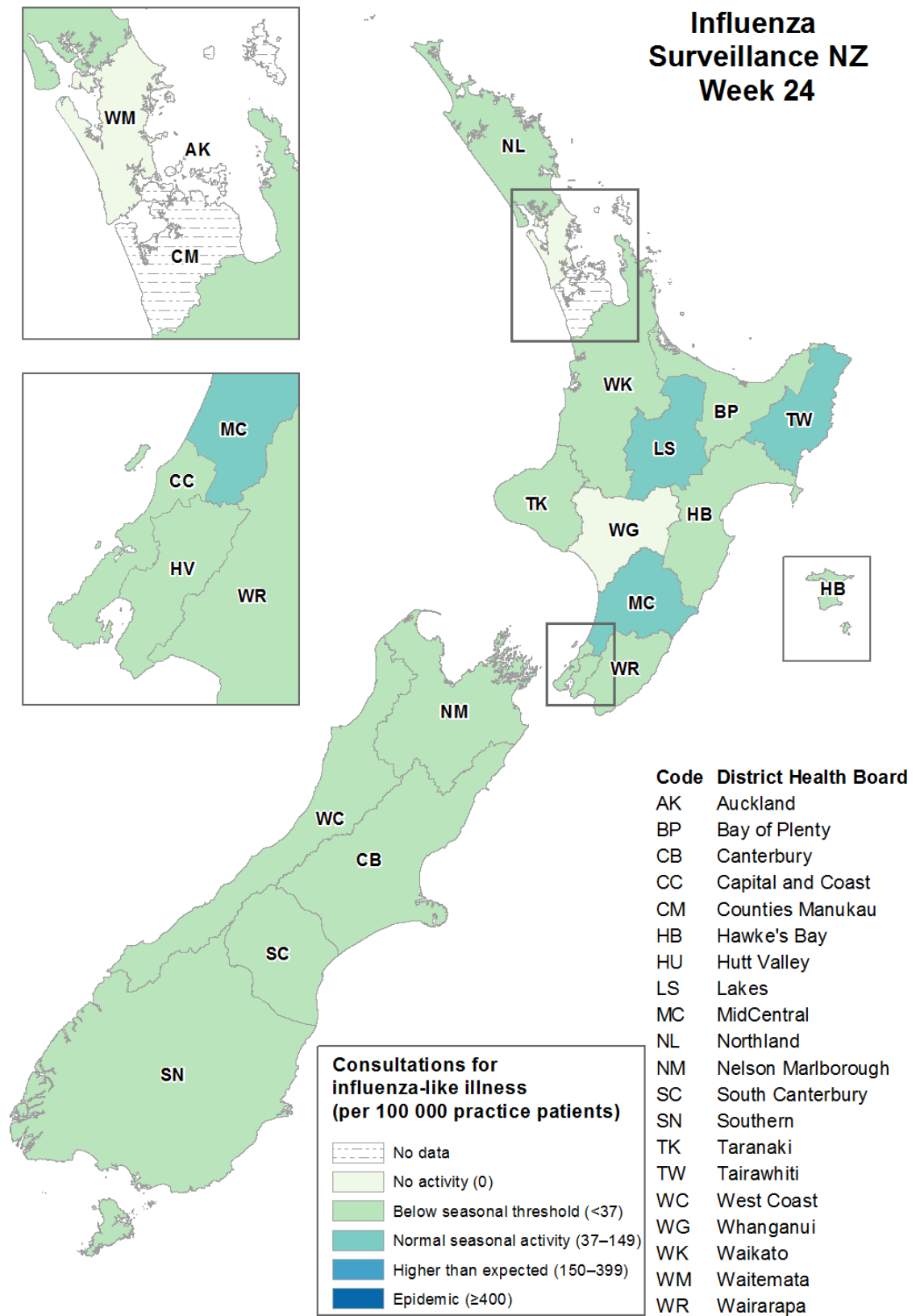
Figure 3 compares the consultation rates for influenza-like illness for each DHB over the past week. Tairāwhiti DHB had the highest consultation rate (97.3 per 100,000, 1 case) followed by Lakes DHB (46.9 per 100,000, 2 cases) and MidCentral (46.0 per 100,000, 4 cases).

Figure 3. Weekly consultation rates for influenza-like illness by DHB week ending 14 June 2015



Note: Auckland (AK) and Counties Manukau (CM) DHBs follow the Southern Hemisphere Influenza and Vaccine Effectiveness Research and Surveillance (SHIVERS) case definition which is different from this sentinel surveillance. Based on the SHIVERS weekly report, the ILI incidence for Auckland and Counties Manukau DHBs for week 24 were 22.8 per 100,000 and 8.4 per 100,000 patient populations, respectively. For more details, please refer to the website: <http://www.esr.cri.nz/competencies/shivers/Pages/SHIVERSReports.aspx>

Figure 4. Consultation rates for influenza-like illness mapped by DHB for week 24, 2015

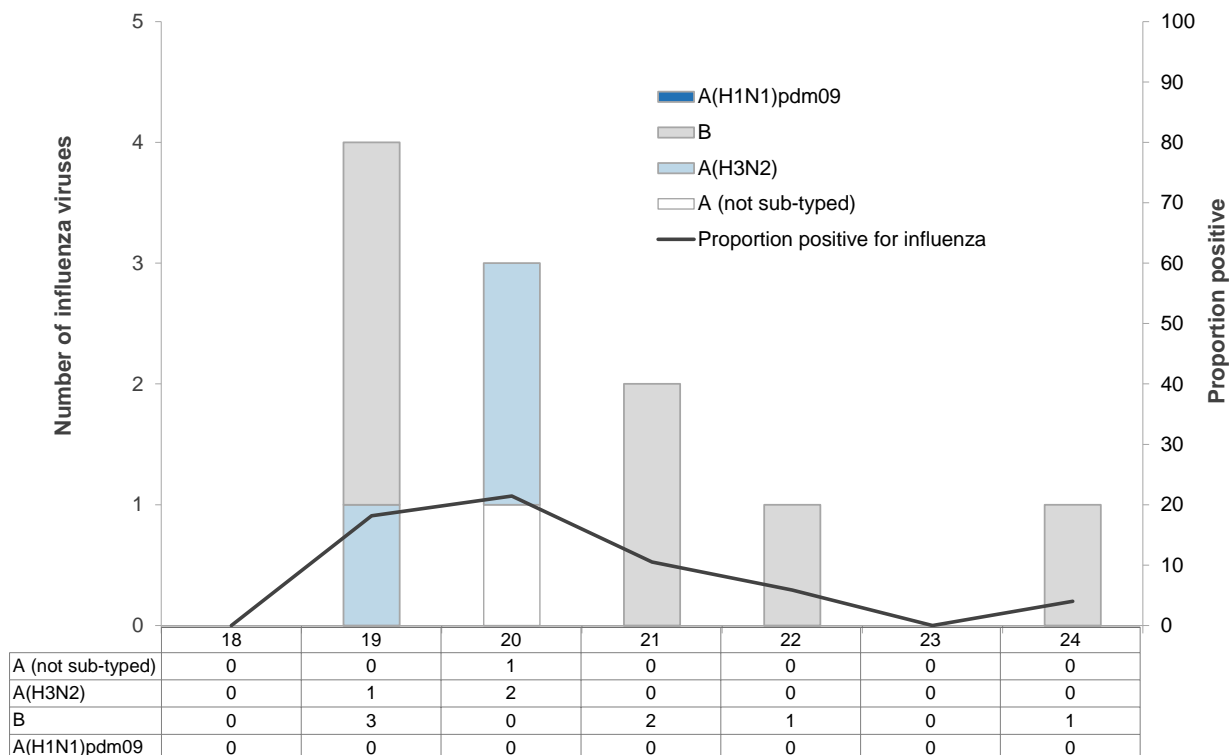


VIROLOGICAL SURVEILLANCE

A total of 25 swabs were received from sentinel surveillance. One influenza B (not lineage-typed) virus was identified from Canterbury DHB.

The temporal distribution of influenza viruses is shown in the graphs below for sentinel and non-surveillance from week 18 (27 April–3 May 2015) to week 24 (8–14 June 2015). The predominant strain was influenza B in the sentinel (63.6%) and A(H3N2) (32.7%) in the non-sentinel surveillance.

Figure 5. Total influenza viruses from sentinel surveillance by type and week reported, week 18–24 and the total percentage positive from the swabs received



In addition, 339 swabs were received by virology laboratories from non-sentinel surveillance. Of these, 43 influenza viruses were identified: A (not sub-typed) (25), A(H3N2) (13) and B (not lineage-typed) (5). The distribution by DHB is shown in Table 1.

Table 1. Influenza viruses from non-sentinel surveillance for week 24 by DHB

| Antigenic strain | DHB | | | | | | | | Total |
|-----------------------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| | AK | CM | WK | LS | BP | MC | HU | CB | |
| A (not sub-typed) | 3 | 0 | 2 | 1 | 19 | 0 | 0 | 0 | 25 |
| A(H3N2) | 0 | 4 | 0 | 8 | 0 | 1 | 0 | 0 | 13 |
| B (not lineage-typed) | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 5 |
| Total | 4 | 5 | 2 | 9 | 19 | 1 | 1 | 2 | 43 |

Figure 6. Total influenza viruses from non-sentinel surveillance by type and week reported, week 18–24 and the total percentage positive from the swabs received

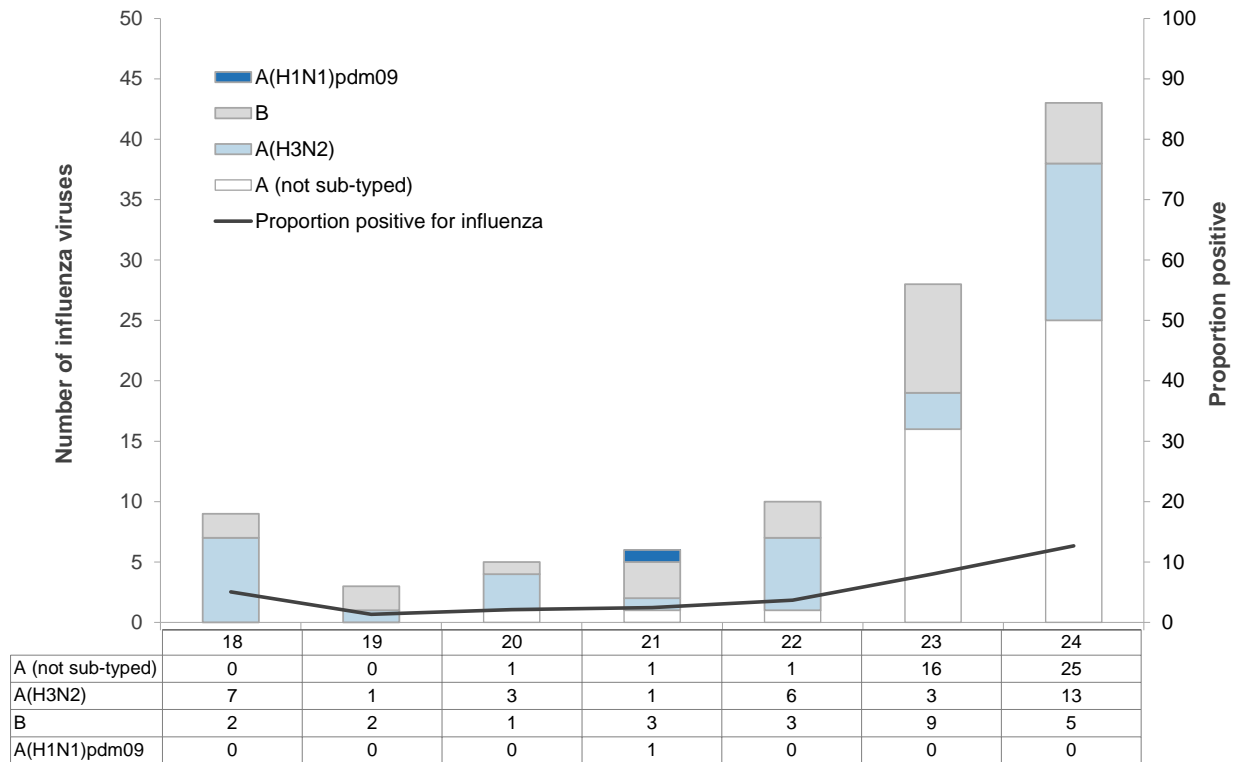
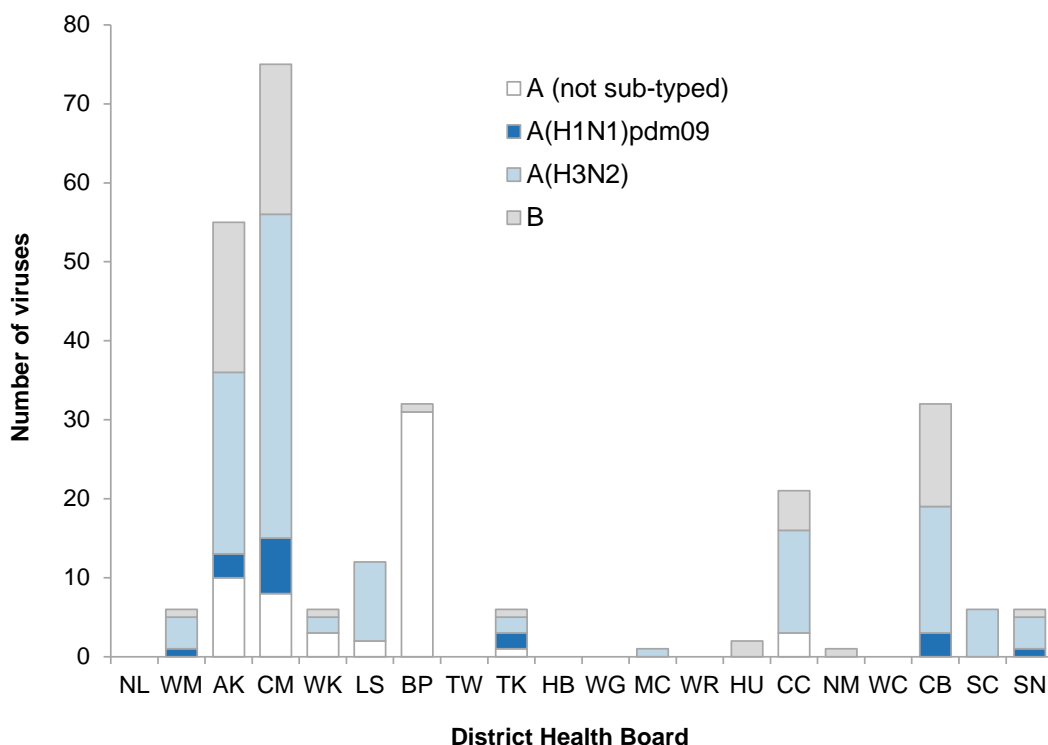


Figure 7 shows the cumulative total of influenza viruses confirmed (sentinel and non-sentinel surveillance) from week 1 to the end of week 24 (14 June 2015). A total of 261 influenza viruses were identified: A(H3N2) (122) including 28 A/Texas/50/2012 (H3N2)-like viruses, B (64) including 15 B/Massachusetts/2/2012-like, B/Yamagata lineage (3), B/Brisbane/60/2008-like (2), A(H1N1)pdm09 (17) including three A/California/7/2009 (H1N1)-like viruses, and A (not sub-typed) (58).

Figure 7. Cumulative laboratory-confirmed viruses by DHB from week 1 to week 24, 14 June 2015



APPENDIX

* New Zealand's ILI data during 2000–2013 (excluding 2009) was reviewed and updated:

- The average epidemic curve indicated here is the usual level of influenza activity that may occur during a typical year using the method described in “*Global epidemiological surveillance standards for influenza*” (http://www.who.int/influenza/resources/documents/WHO_Epidemiological_Influenza_Surveillance_Standards_2014.pdf).
- The seasonal threshold indicated here is the level of influenza activity that signals the start and end of the annual influenza season and it was based on the Moving Epidemic Method (Vega *et al. Influenza and other respiratory viruses* 2013;7(4):546-558). A weekly rate of 36 ILI consultations per 100,000 patient population is considered the seasonal threshold.
- Alert threshold (defined as 90% upper confidence interval) indicated here is a level above which, varying by time of year, influenza activity is higher than most years.
- The ILI rates used here to describe different level of influenza activity is based on the 25th and 75th percentiles of the ILI data. A rate of 37–149 per 100,000 patient population is considered indicative of normal seasonal influenza activity; a rate of 150–399 indicative of higher than expected influenza activity; a rate of ≥ 400 indicative of a severe epidemic level of influenza activity.

Compiled by:

Liza Lopez

Health Intelligence Team
ESR Kenepuru Science Centre
PO Box 50 348, Porirua

T: 04 914 0647 F: 04 978 6690 E: liza.lopez@esr.cri.nz

Dr. Sue Huang

WHO National Influenza Centre
ESR Wallaceville Science Centre
PO Box 40158, Upper Hutt