

INFLUENZA WEEKLY UPDATE

2015/27: 29 June – 5 July 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 27 (29 June – 5 July 2015).

Summary

- ILI through sentinel surveillance was reported from 18 out of 20 District Health Boards (DHB) with a national consultation rate of 42.1 per 100,000 (136 ILI consultations).
- A total of 619 swabs were received from sentinel (46) and non-sentinel (573) surveillance.
- 209 influenza viruses were identified: A(H3N2) (73), A (not sub-typed) (70), and B (66) including one B/Phuket/3073/2013.

INFLUENZA-LIKE ILLNESS SURVEILLANCE

In the past week, a total of 136 consultations for influenza-like illness were reported from 61 general practices in 18 out of 20 DHBs. This gives a weekly consultation rate of 42.1 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 above 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)

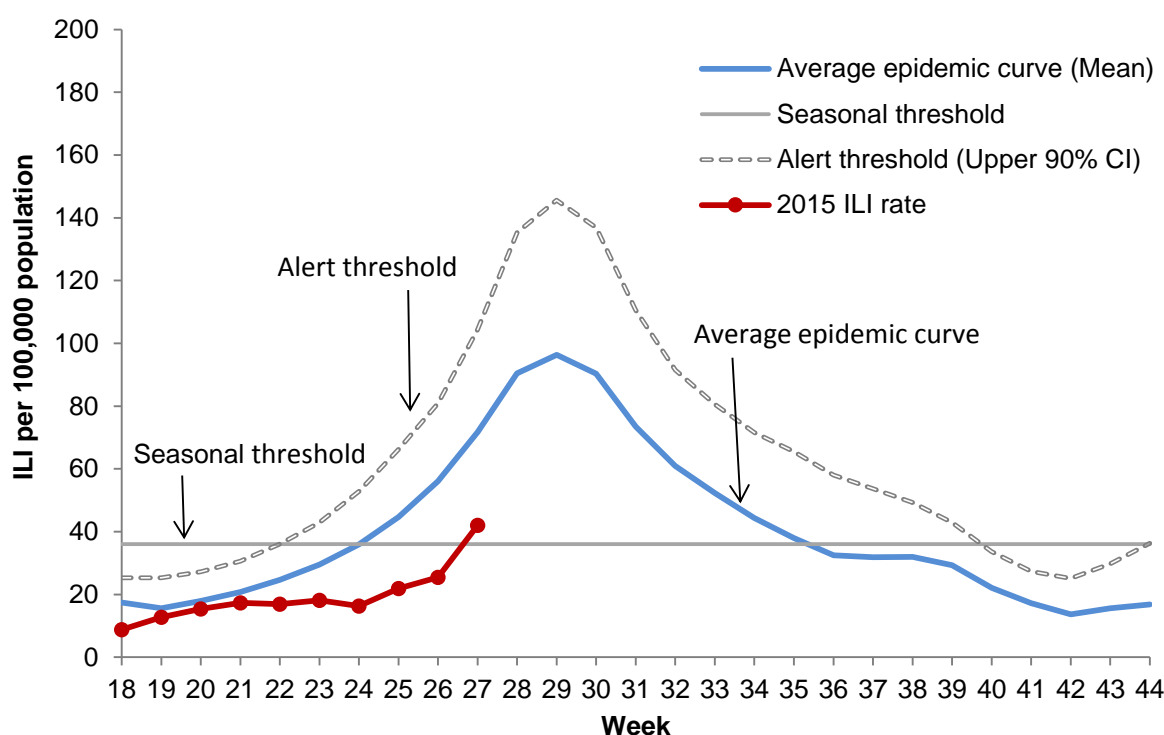


Figure 2 shows the weekly national consultation rate for 2015 in comparison to the previous years 2010–2014.

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

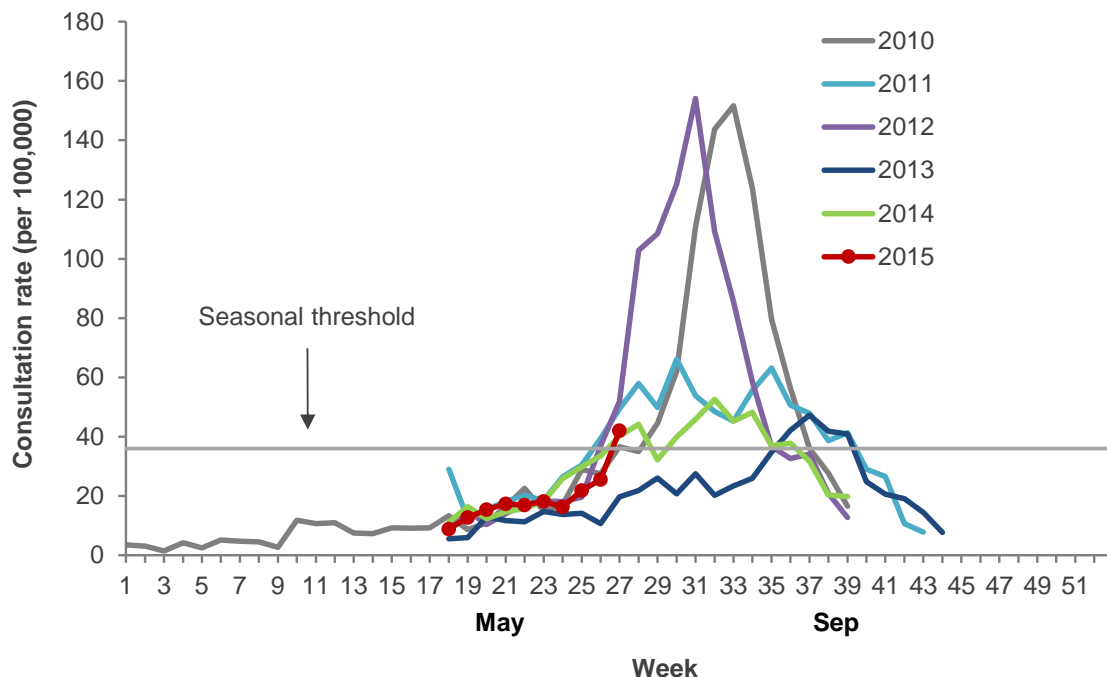
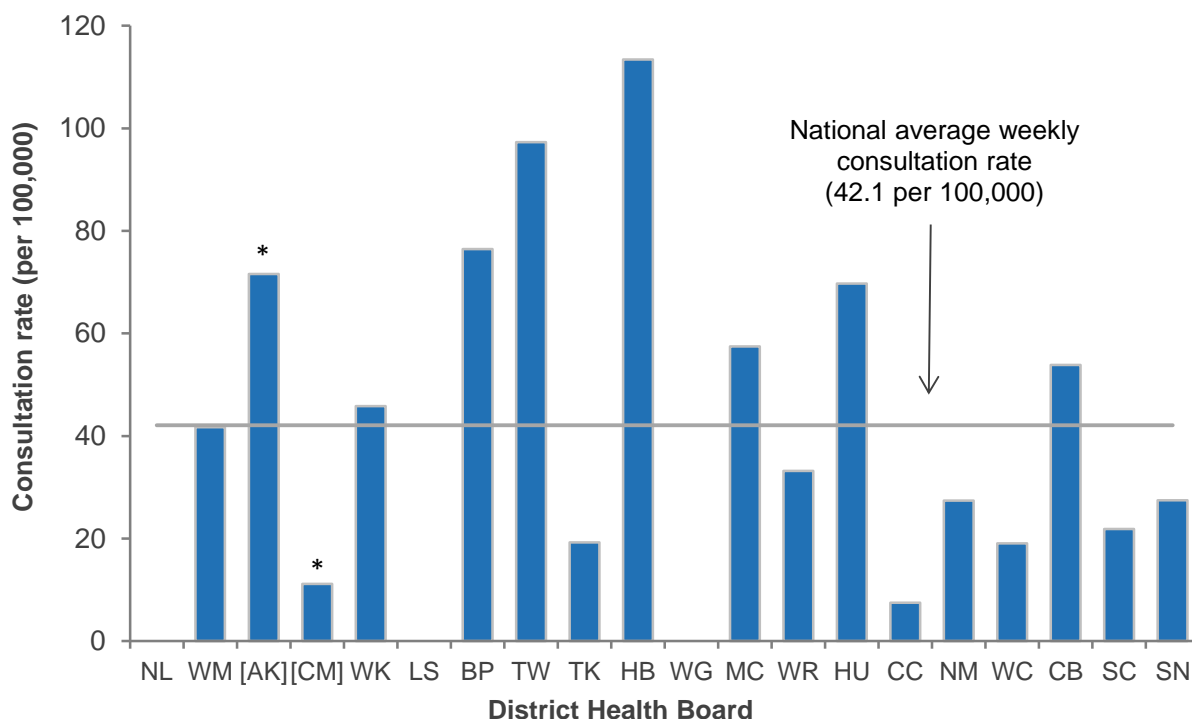


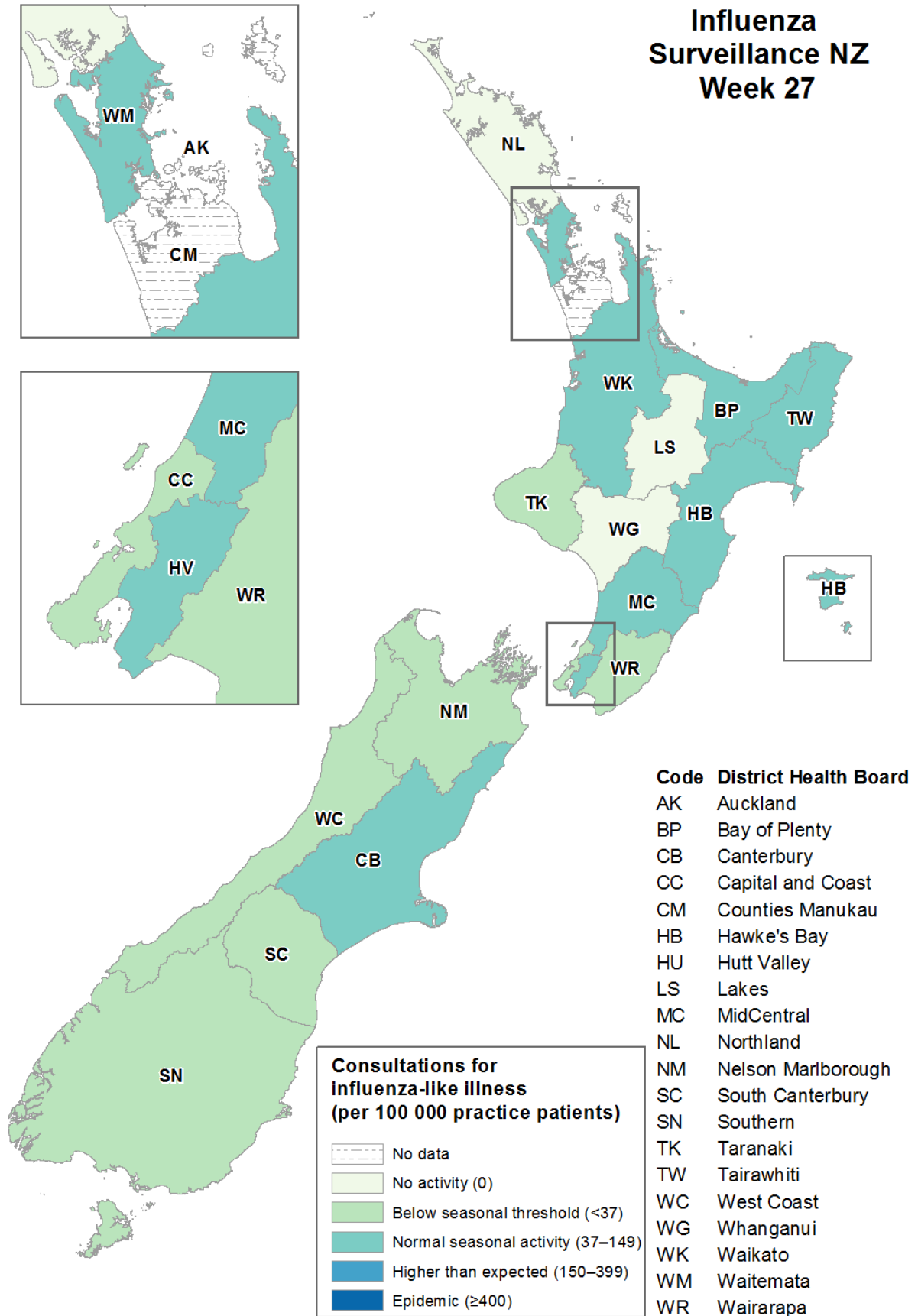
Figure 3 compares the consultation rates for influenza-like illness for each DHB over the past week. Hawke’s Bay had the highest consultation rate (113.4 per 100,000, 22 cases) followed by Tairāwhiti (97.3 per 100,000, 1 case), and Bay of Plenty (76.5 per 100,000, 3 cases) DHBs.

Figure 3. Weekly consultation rates for influenza-like illness by DHB week ending 5 July 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 27 were 71.6 per 100,000 and 11.2 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 27, 2015



VIROLOGICAL SURVEILLANCE

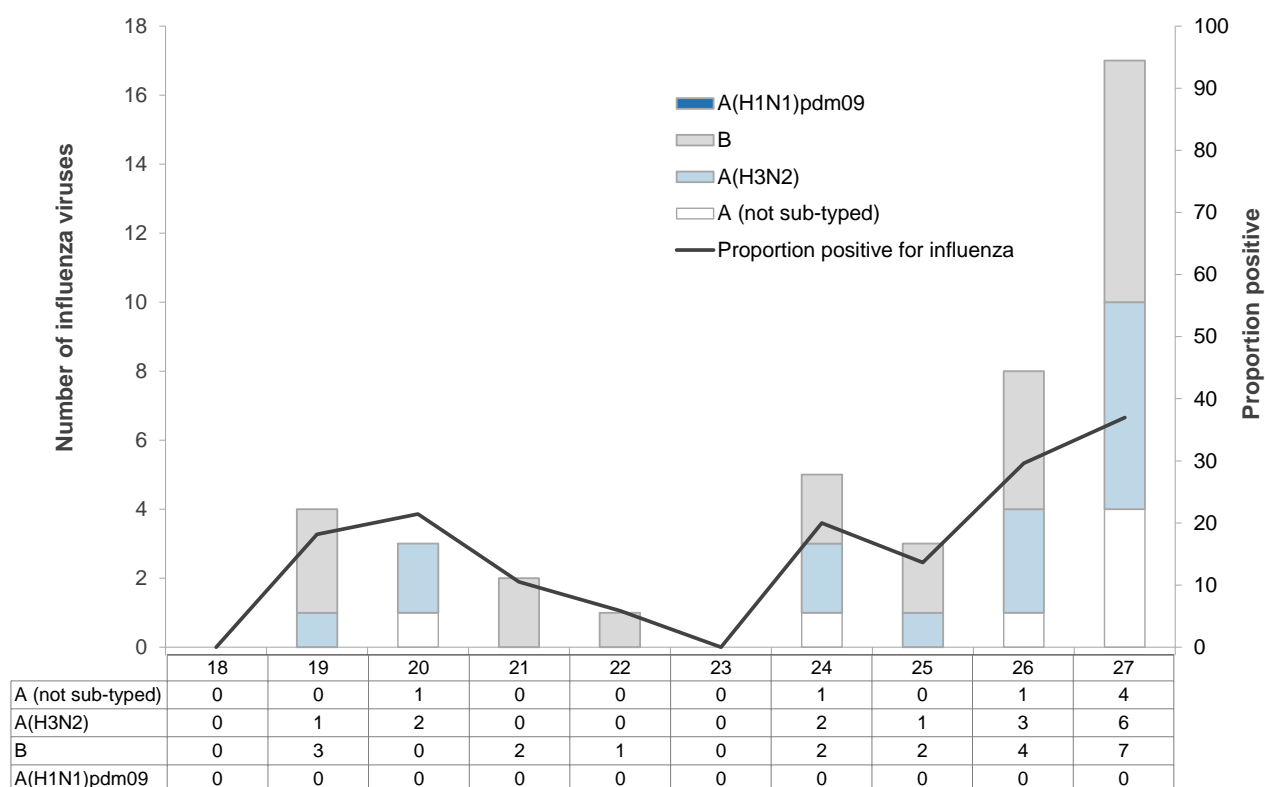
A total of 46 swabs were received from sentinel surveillance. Of these, 17 influenza viruses were identified: B (7), A(H3N2) (6), and A (not sub-typed) (4). The distribution by DHB is shown in Table 1.

Table 1. Influenza viruses from sentinel surveillance for week 27 by DHB

Antigenic strain	DHB							Total
	WM	WK	LS	HB	TK	CC	CB	
A (not sub-typed)	0	1	0	3	0	0	0	4
A(H3N2)	0	1	0	3	1	0	1	6
B (not lineage-typed)	1	0	1	0	0	1	4	7
Total	1	2	1	6	1	1	5	17

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 27 (29 June – 5 July 2015). The predominant strain was influenza B in the sentinel (48.8%) and A(H3N2) (33.0%) in the non-sentinel surveillance.

Figure 5. Total influenza viruses from sentinel surveillance by type and week reported, week 18–27 and the total percentage positive from the swabs received



In addition, 573 swabs were received by virology laboratories from non-sentinel surveillance. Of these, 192 influenza viruses were identified: A(H3N2) (67), A (not sub-typed) (66), and B (59) including one B/Phuket/3073/2013-like. The distribution by DHB is shown in Table 2.

Table 2. Influenza viruses from non-sentinel surveillance for week 27 by DHB

Antigenic strain	DHB											Total
	AK	CM	WK	LS	BP	HB	MC	CC	CB	SC	SN	
A (not sub-typed)	15	0	1	0	49	0	0	1	0	0	0	66
A(H3N2)	18	19	18	2	0	2	2	4	1	0	1	67
B (not lineage-typed)	20	3	0	0	1	0	0	4	27	1	2	58
B/Phuket/3073/2013	1	0	0	0	0	0	0	0	0	0	0	1
Total	54	22	19	2	50	2	2	9	28	1	3	192

Figure 6. Total influenza viruses from non-sentinel surveillance by type and week reported, week 18–27 and the total percentage positive from the swabs received

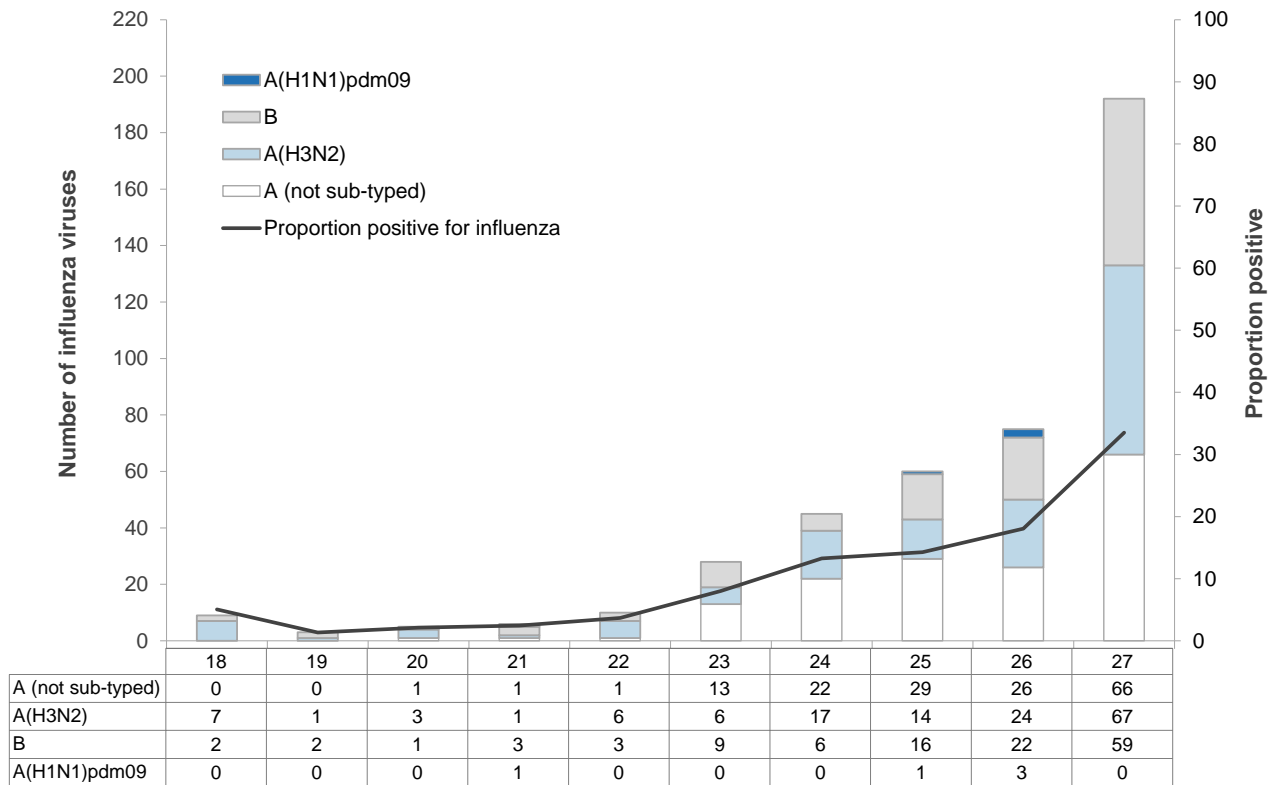
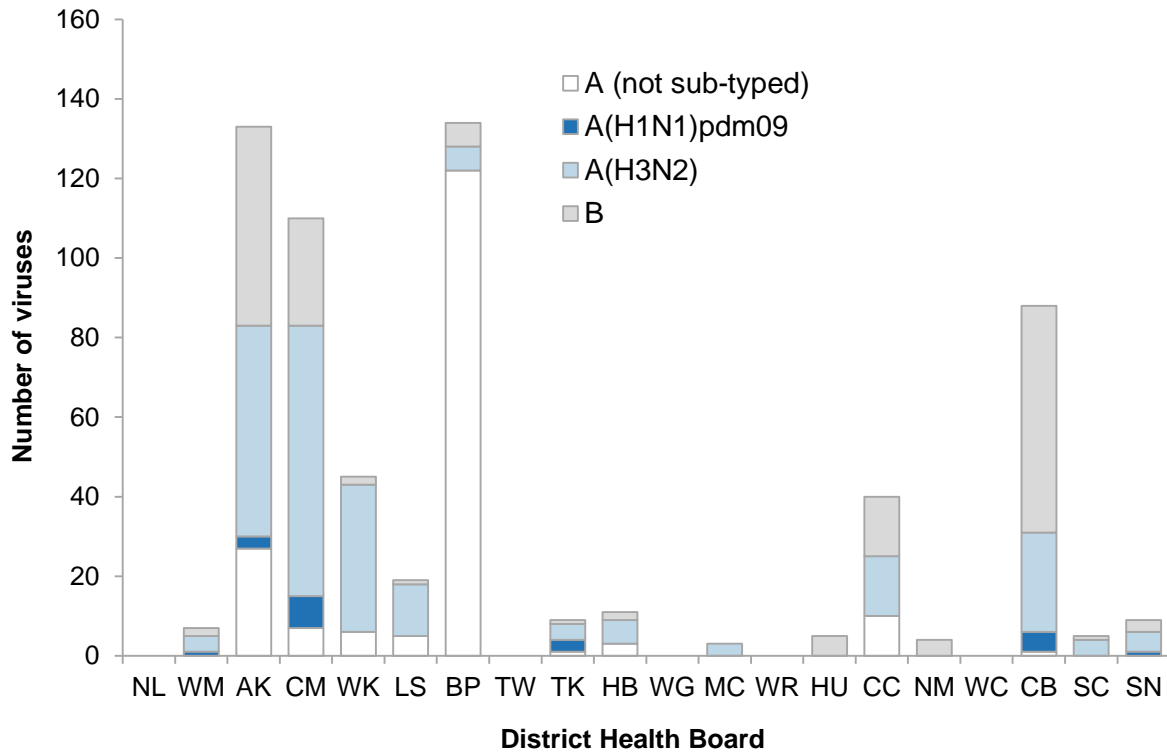


Figure 7 shows the cumulative total of influenza viruses confirmed (sentinel and non-sentinel surveillance) from week 1 to the end of week 27 (5 July 2015). A total of 622 influenza viruses were identified: A(H3N2) (243) including 33 A/Texas/50/2012 (H3N2)-like viruses and eight A/Switzerland/9715293/2013 (H3N2)-like, B (176) including 22 B/Massachusetts/2/2012, six B/Yamagata lineage, three B/Brisbane/60/2008-like and three B/Phuket/3073/2013-like, A(H1N1)pdm09 (21) including five A/California/7/2009 (H1N1)-like viruses, and A (not sub-typed) (182).

Figure 7. Cumulative laboratory-confirmed viruses by DHB from week 1 to week 27, 5 July 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.

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