

INFLUENZA WEEKLY UPDATE

2015/28: 6–12 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 28 (6–12 July 2015).

Summary

- ILI through sentinel surveillance was reported from 17 out of 20 District Health Boards (DHB) with a national consultation rate of 53.9 per 100,000 (168 ILI consultations).
- A total of 614 swabs were received from sentinel (47) and non-sentinel (567) surveillance.
- 278 influenza viruses were identified: B/Yamagata lineage (10) including three B/Phuket/3073/2013-like, B/Victoria lineage (3), and B (lineage not typed) (82), A(H3N2) (70), and A (not sub-typed) (113).

INFLUENZA-LIKE ILLNESS SURVEILLANCE

In the past week, a total of 168 consultations for influenza-like illness were reported from 56 general practices in 17 out of 20 DHBs. This gives a weekly consultation rate of 53.9 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)

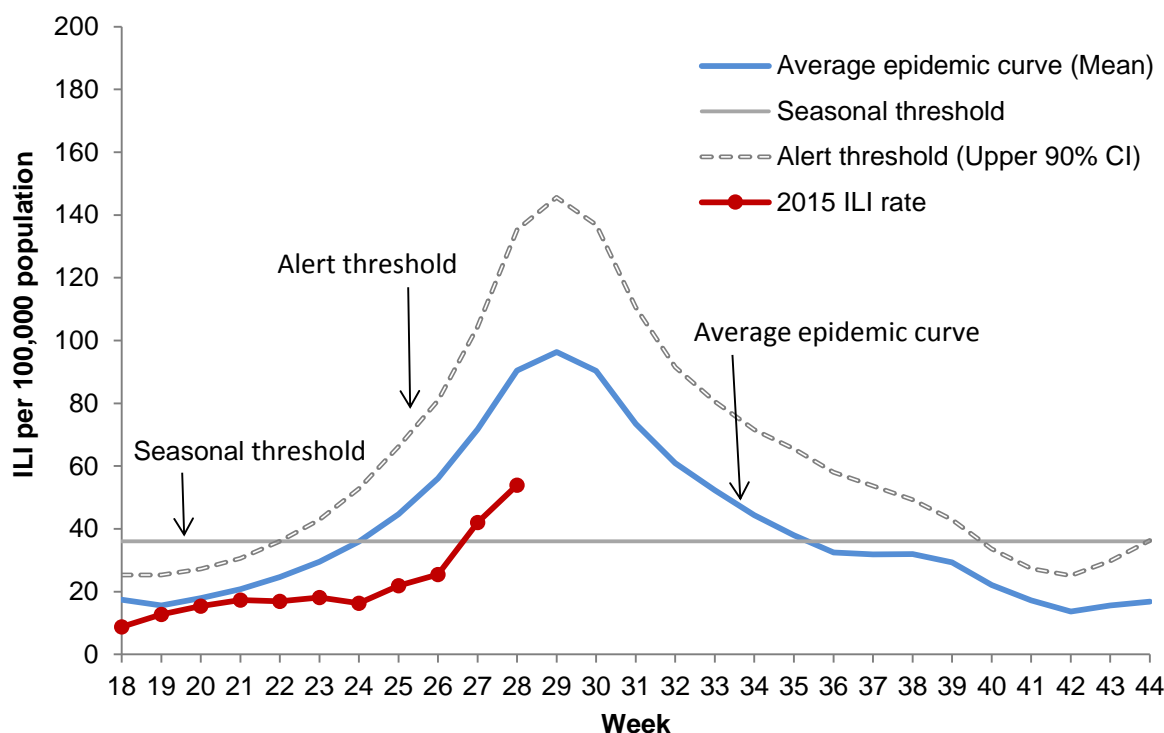


Figure 2 shows the weekly national consultation rate for 2015 in comparison to the previous years 2010–2014.

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

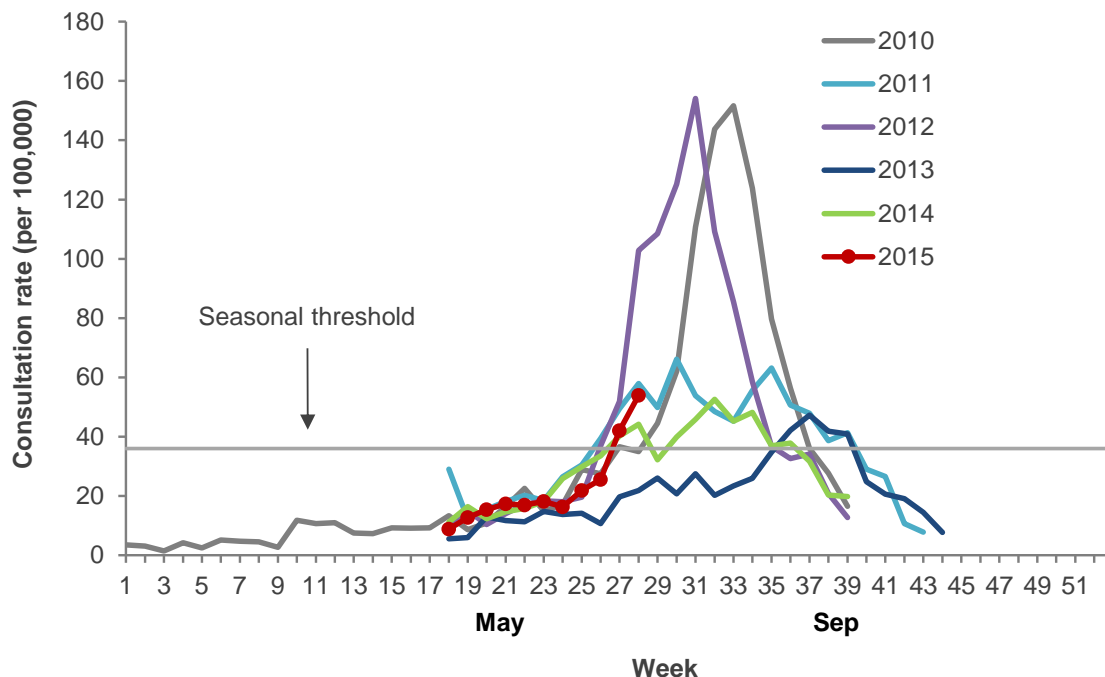
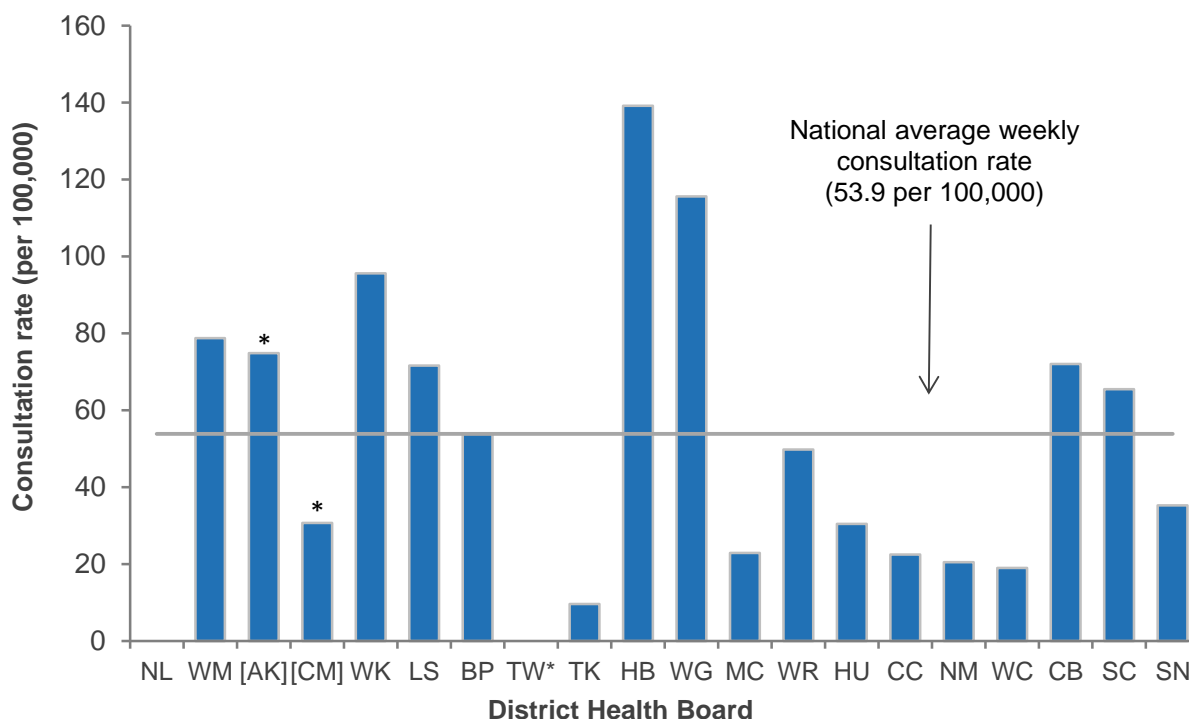


Figure 3 compares the consultation rates for influenza-like illness for each DHB over the past week. Hawke’s Bay had the highest consultation rate (139.2 per 100,000, 27 cases) followed by Whanganui (115.7 per 100,000, 6 cases), and Waikato (95.6 per 100,000, 13 cases) DHBs.

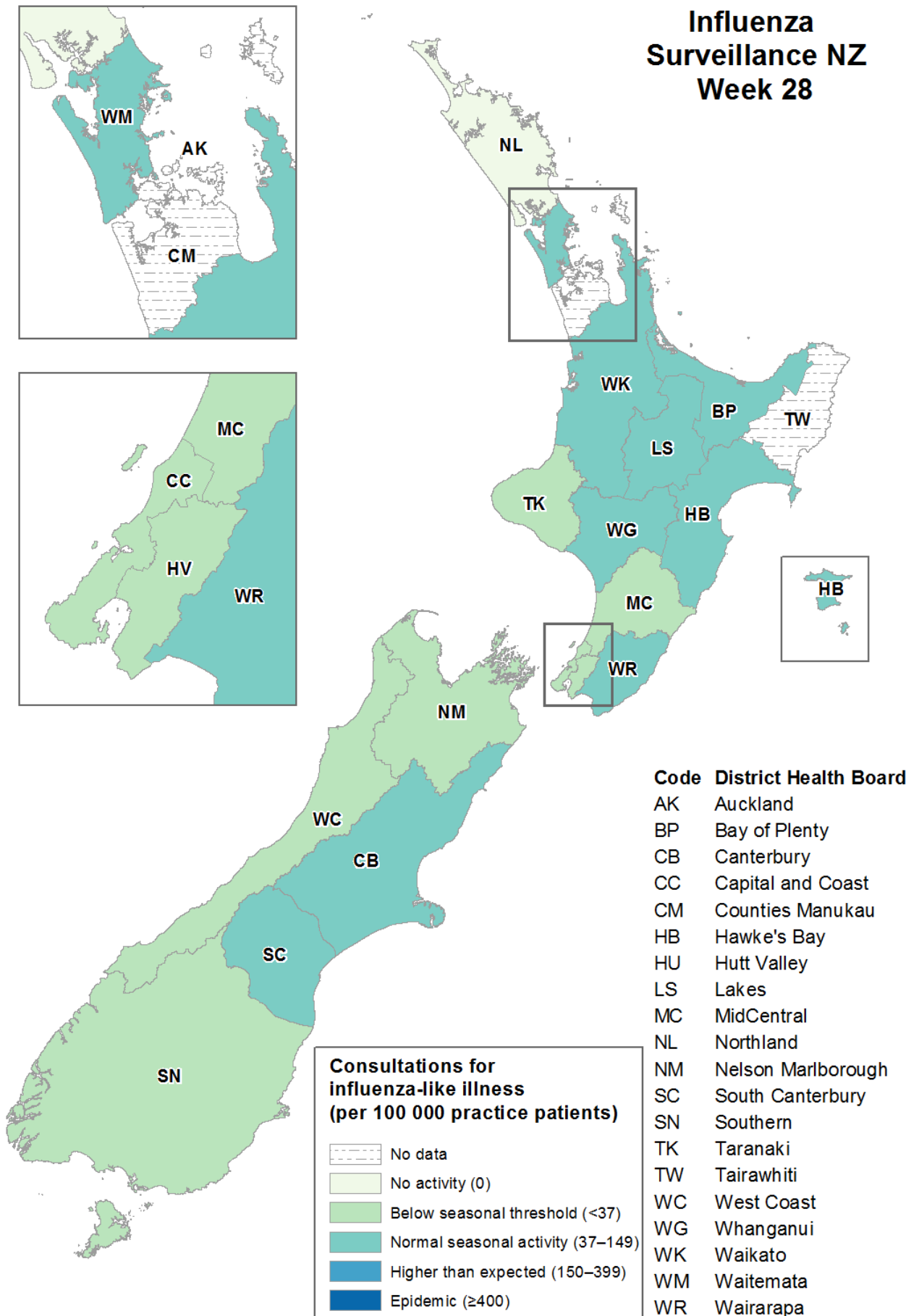
Figure 3. Weekly consultation rates for influenza-like illness by DHB week ending 12 July 2015



*No data for the week.

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 28 were 74.9 per 100,000 and 30.7 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 28, 2015



VIROLOGICAL SURVEILLANCE

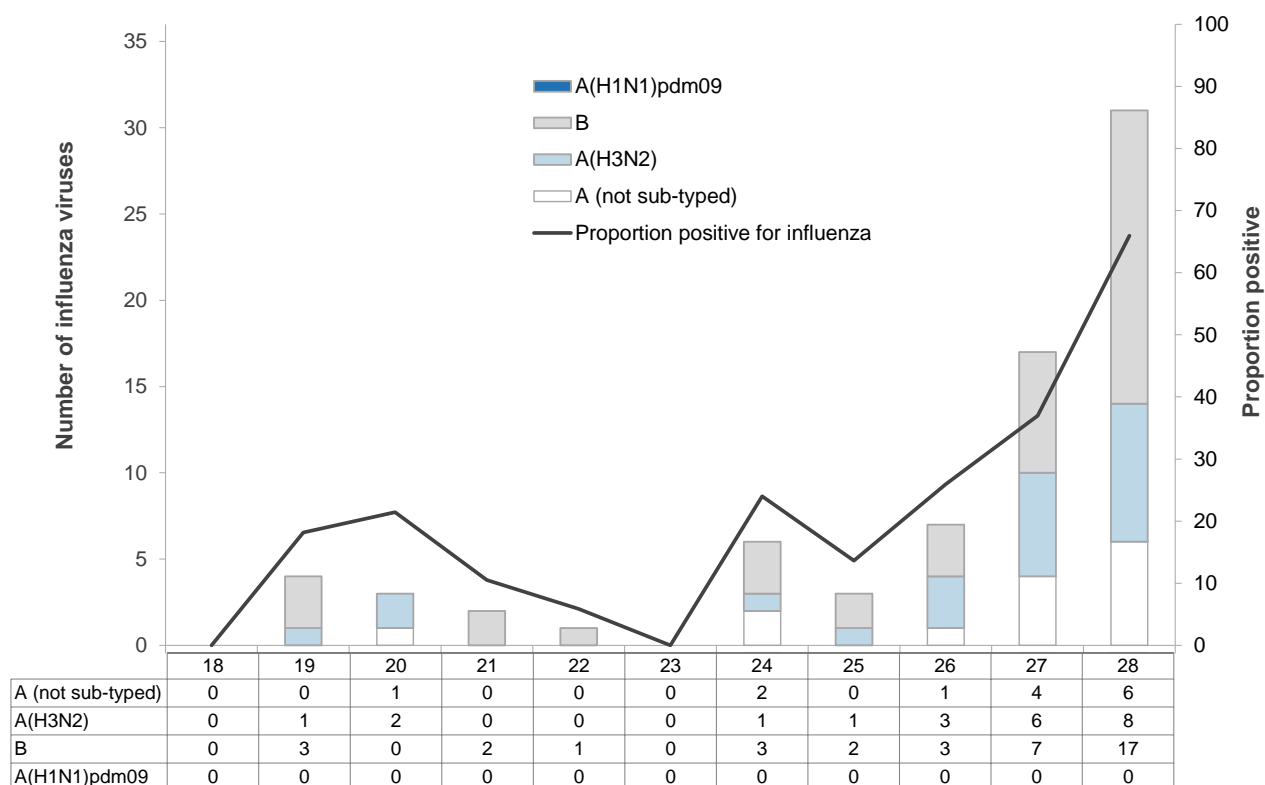
A total of 47 swabs were received from sentinel surveillance. Of these, 31 influenza viruses were identified: B/Victoria lineage (2), B/Yamagata lineage (1), B (not lineage typed) (14), A(H3N2) (8), and A (not sub-typed) (6). The distribution by DHB is shown in Table 1.

Table 1. Influenza viruses from sentinel surveillance for week 28 by DHB

Antigenic strain	DHB								Total
	WM	WK	BP	TW	HB	CC	CB	SN	
A (not sub-typed)	0	1	1	1	0	2	0	1	6
A(H3N2)	1	2	0	0	4	0	1	0	8
B (not lineage-typed)	1	0	0	0	0	0	13	0	14
B/Victoria lineage	0	0	0	0	0	0	0	2	2
B/Yamagata lineage	0	0	0	0	0	0	0	1	1
Total	2	3	1	1	4	2	14	4	31

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 28 (6–12 July 2015). The predominant strain was influenza B in the sentinel (51.4%) and A(H3N2) (37.6%) in the non-sentinel surveillance.

Figure 5. Total influenza viruses from sentinel surveillance by type and week reported, week 18–28 and the total percentage positive from the swabs received



In addition, 567 swabs were received by virology laboratories from non-sentinel surveillance. Of these, 247 influenza viruses were identified: B/Yamagata lineage (9) including three B/Phuket/3073/2013-like, B/Victoria lineage (1), B (not lineage typed) (68), A(H3N2) (62), and A (not sub-typed) (107). The distribution by DHB is shown in Table 2.

Table 2. Influenza viruses from non-sentinel surveillance for week 28 by DHB

Antigenic strain	DHB											Total
	AK	CM	WK	BP	TW	TK	HB	HU	CC	CB	SC	
A (not sub-typed)	40	1	30	35	1	0	0	0	0	0	0	107
A(H3N2)	32	17	0	0	0	1	4	0	1	6	1	62
B (not lineage-typed)	6	3	4	0	0	0	2	1	1	51	0	68
B/Yamagata lineage	6	0	0	0	0	0	0	0	0	0	0	6
B/Phuket/3073/2013-like	0	2	0	0	0	0	0	0	0	1	0	3
B/Victoria lineage	1	0	0	0	0	0	0	0	0	0	0	1
Total	85	23	34	35	1	1	6	1	2	58	1	247

Figure 6. Total influenza viruses from non-sentinel surveillance by type and week reported, week 18–28 and the total percentage positive from the swabs received

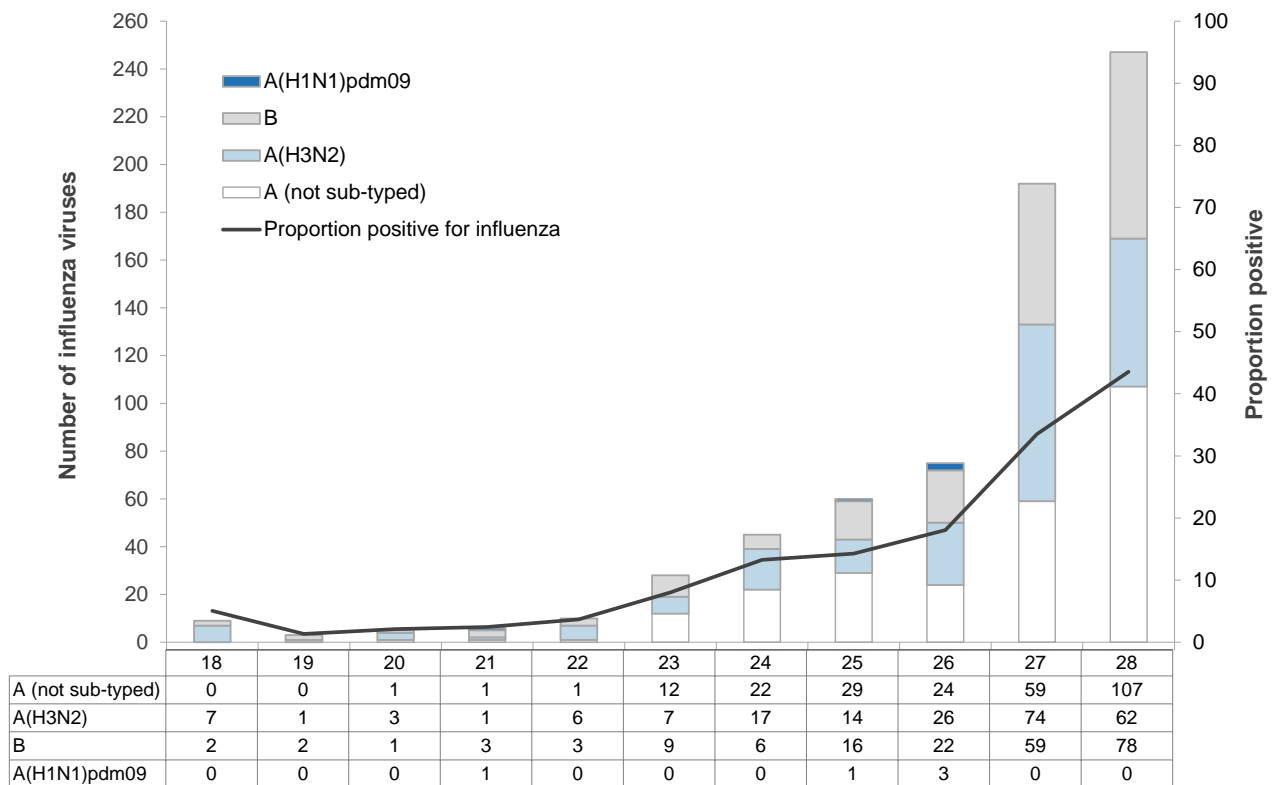
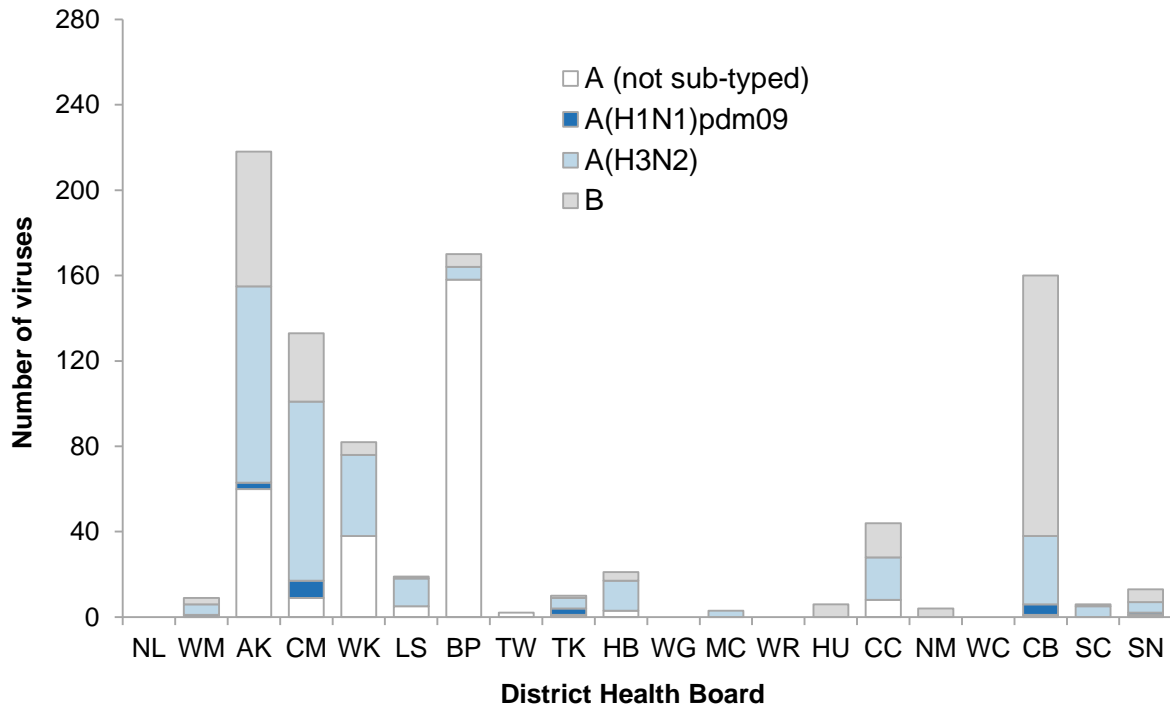


Figure 7 shows the cumulative total of influenza viruses confirmed (sentinel and non-sentinel surveillance) from week 1 to the end of week 28 (12 July 2015). A total of 900 influenza viruses were identified: A(H3N2) (322) including 29 A/Texas/50/2012 (H3N2)-like viruses and 12 A/Switzerland/9715293/2013 (H3N2)-like, B/Yamagata lineage (43) including 24 B/Phuket/3073/2013-like and seven B/Massachusetts/2/2012-like, B/Victoria lineage (6) including three B/Brisbane/60/2008-like, B (not lineage typed) (222), A(H1N1)pdm09 (21) including five A/California/7/2009 (H1N1)-like viruses, and A (not sub-typed) (286).

Figure 7. Cumulative laboratory-confirmed viruses by DHB from week 1 to week 28, 12 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.

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