

INFLUENZA WEEKLY UPDATE

2013/42: 14–20 October 2013

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 42 (14–20 October 2013).

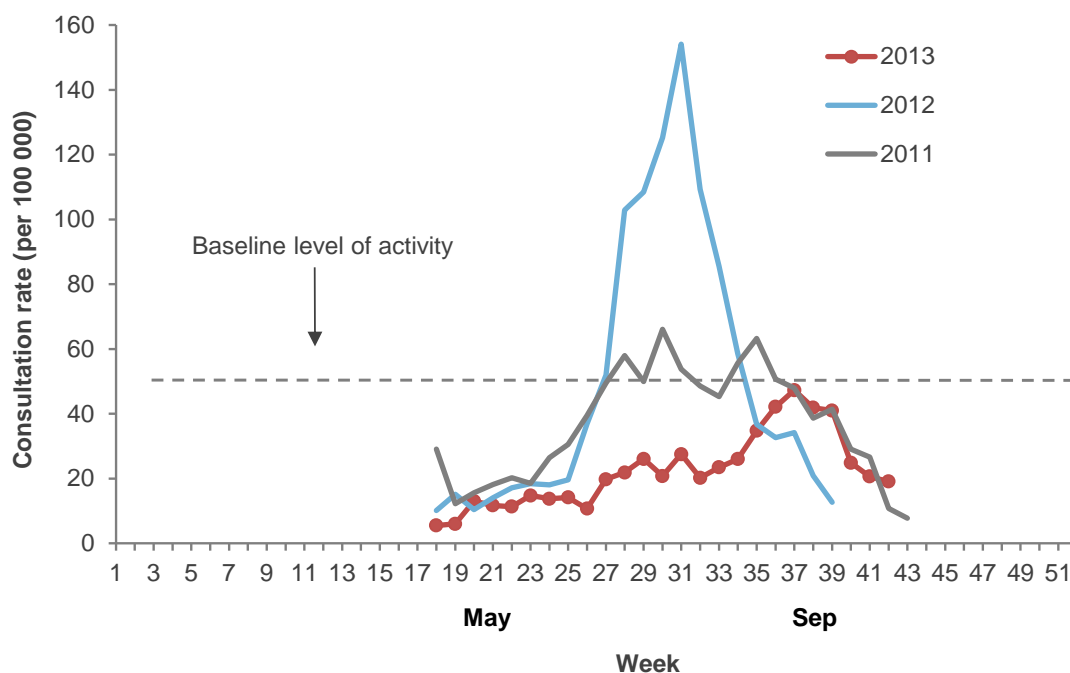
Summary

- Influenza-like illness (ILI) through sentinel surveillance was reported from 18 out of 20 District Health Boards (DHB) with a national consultation rate of 19.1 per 100 000 (69 ILI consultations).
- A total of 341 swabs were received from sentinel (19) and non-sentinel (322) surveillance.
- 95 influenza viruses were identified: A(H3N2) (32) including two A/Victoria/361/2011 (H3N2), A (not sub-typed) (31), B (21) including four B/Wisconsin/1/2010-like, and A(H1N1) pdm09 (11).

INFLUENZA-LIKE ILLNESS SURVEILLANCE

In the past week, a total of 69 consultations for influenza-like illness were reported from 67 general practices in 18 out of 20 DHBs. This gives a weekly consultation rate of 19.1 per 100 000 patient population. Figure 1 shows the weekly national consultation rates for the 2011 and 2012 seasons, and 2013 so far. The current rate of influenza-like illness is below the baseline level.

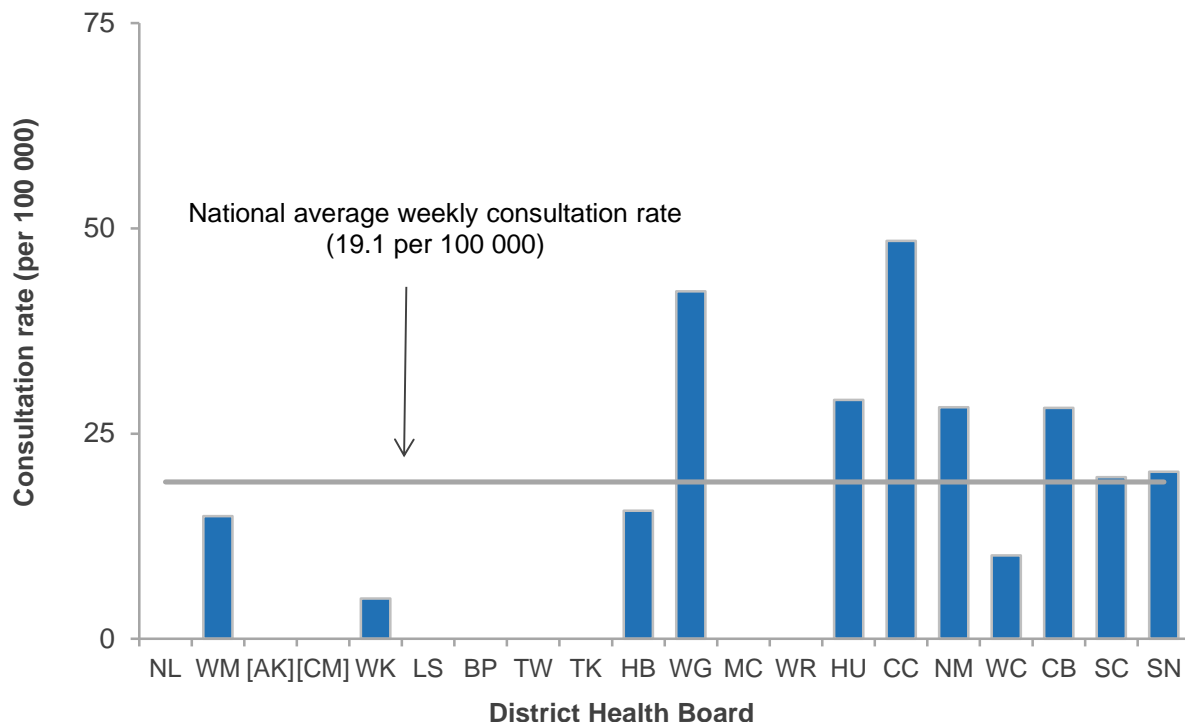
Figure 1. Weekly consultation rates for influenza-like illness in New Zealand, 2011, 2012 and 2013



* A weekly rate <50 ILI consultations per 100 000 patient population is considered baseline activity. A rate of 50–249 is considered indicative of normal seasonal influenza activity, and a rate of 250–399 indicative of higher than expected influenza activity. A rate >400 ILI consultations per 100 000 patient population indicates an epidemic level of influenza activity.

Figure 2 compares the consultation rates for influenza-like illness for each DHB over the past week. Capital & Coast DHB had the highest consultation rate (48.5 per 100 000, 11 cases), followed by Whanganui (42.3 per 100 000, 2 cases), and Hutt Valley (29.1 per 100 000, 10 cases) DHBs.

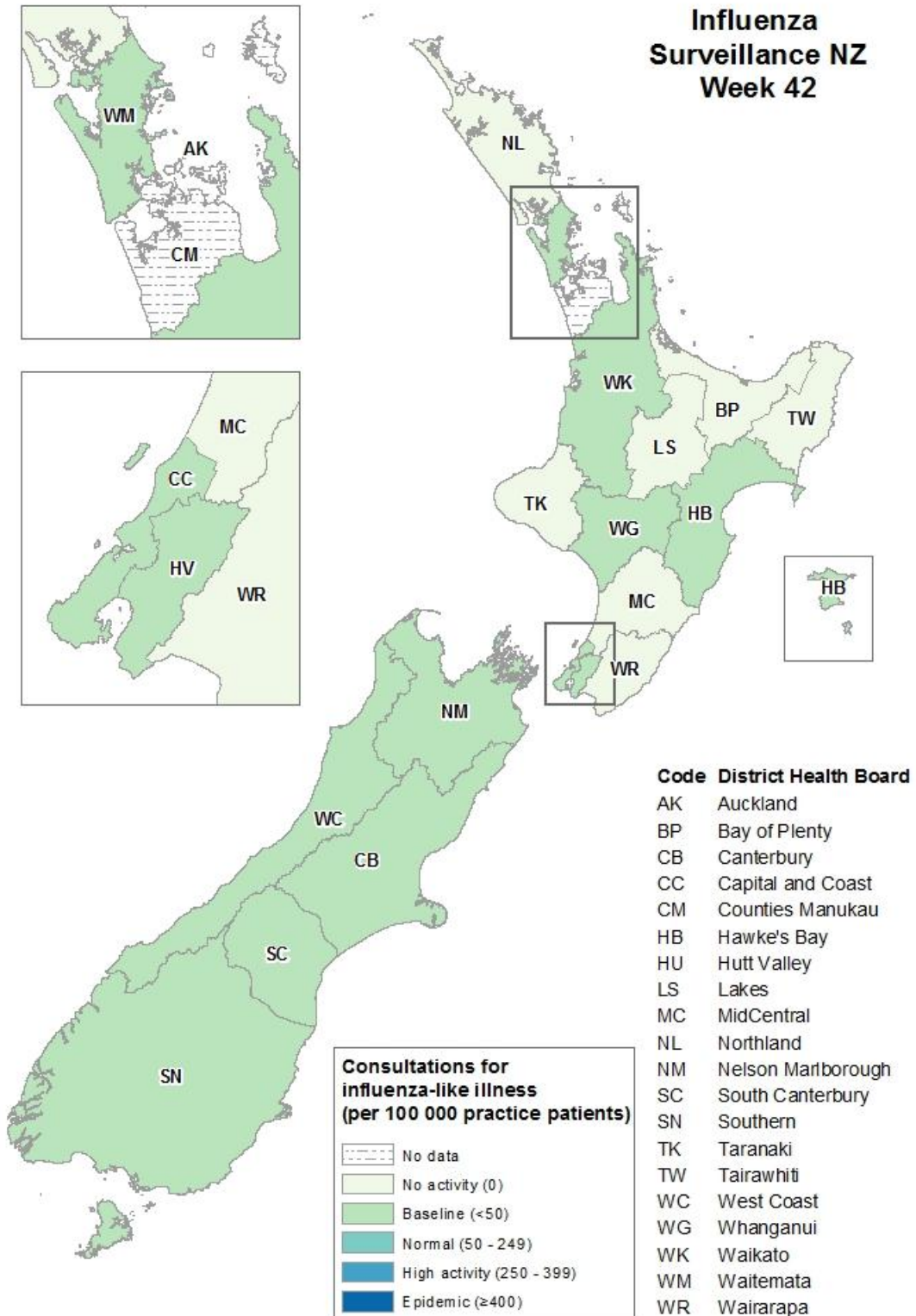
Figure 2. Weekly consultation rates for influenza-like illness by DHB for week 42 (14–20 October 2013)



[] Not participating in the influenza sentinel surveillance.

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 42 were 76.6 per 100 000 and 9.2 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 3. Consultation rates for influenza-like illness mapped by DHB for week 42 (14–20 October 2013)



VIROLOGICAL SURVEILLANCE

A total of 19 swabs were received by virology laboratories from sentinel surveillance in week 42. From these 12 viruses were identified (Figure 4): A (not sub-typed) (3), A(H1N1)pdm09 (3), A(H3N2) (3), and B (lineage not determined) (3). The distribution by DHB is shown in Table 1.

Figure 4. Total influenza viruses from sentinel surveillance by type and week reported, weeks 18–42 (29 April–20 October 2013)

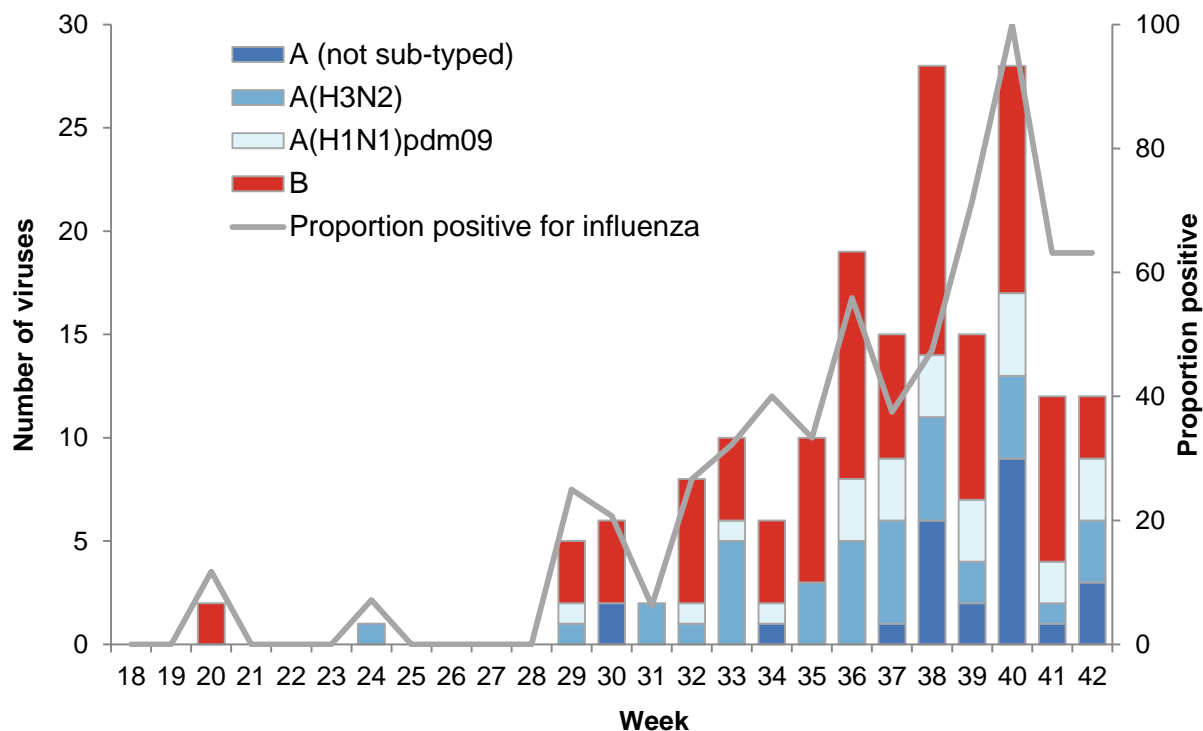


Table 1. Influenza viruses from sentinel surveillance by DHB for week 42 (14–20 October 2013)

Influenza type/sub-typed	DHB					Total
	NL	WG	CC	NM	CB	
A (not sub-typed)		1	1	1		3
A(H1N1)pdm09	1			2		3
A(H3N2)		1		2		3
B (lineage not determined)			1		2	3
Total	1	2	2	5	2	12

In addition, 322 swabs were received by virology laboratories from non-sentinel surveillance in week 42. From these, 83 influenza viruses were identified (Figure 5): A (not sub-typed) (28), A(H3N2) (27), B (lineage not determined) (14), A(H1N1)pdm09 (8), B/Wisconsin/1/2010-like (4), and A/Victoria/361/2011 (H3N2) (2). The distribution by DHB is shown in Table 2.

Figure 5. Total influenza viruses from non-sentinel surveillance by type and week reported for weeks 18–42 (29 April–20 October 2013)

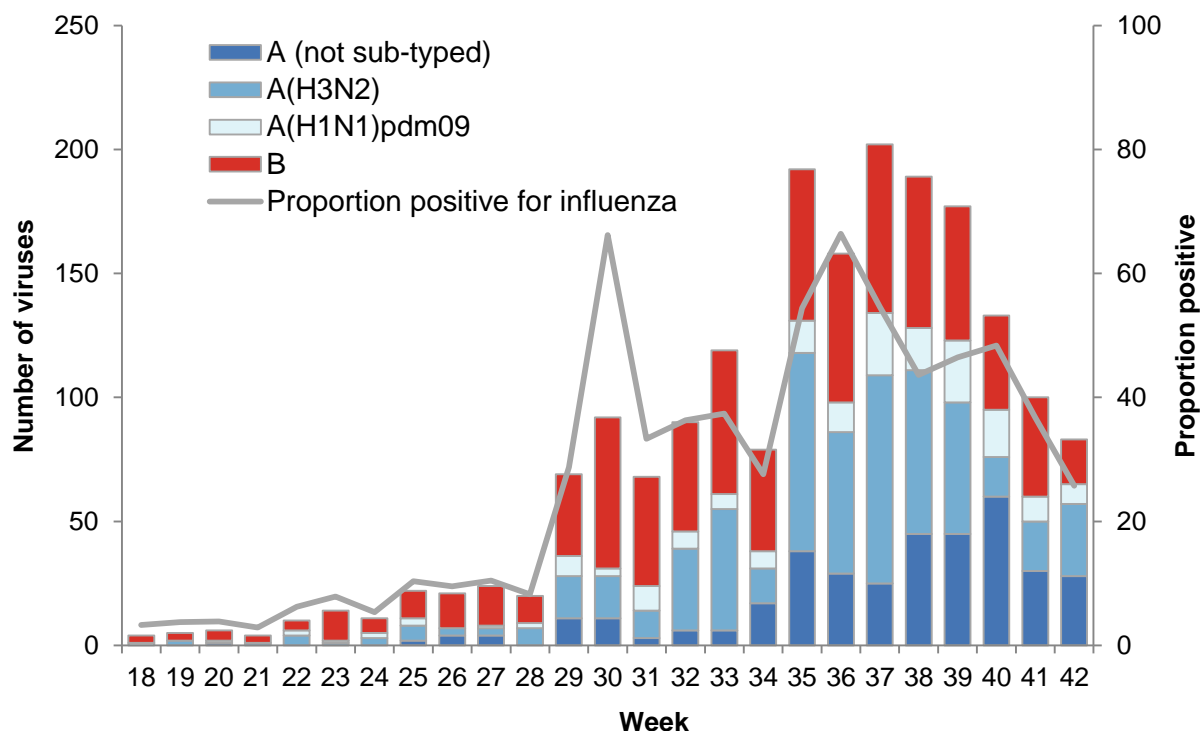
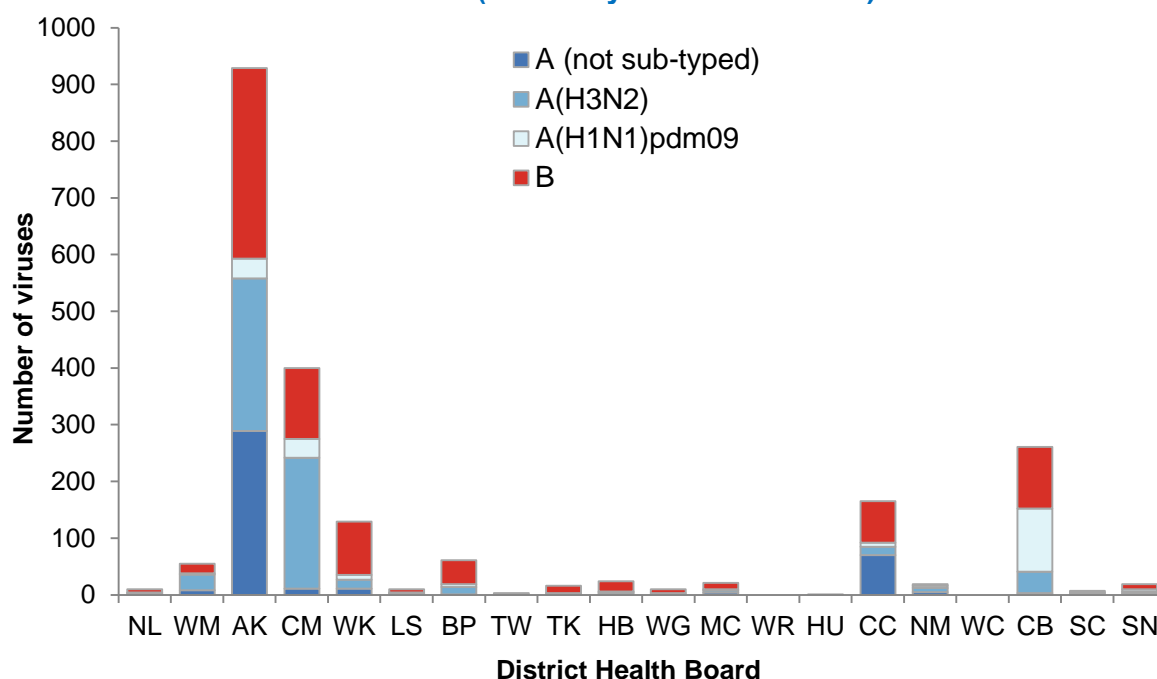


Table 2. Influenza viruses from non-sentinel surveillance by DHB for week 42 (14–20 October 2013)

Influenza type/sub-typed	DHB						Total
	AK	CM	WK	BP	CC	CB	
A (not sub-typed)	18			1	9		28
A(H1N1)pdm09	1					7	8
A(H3N2)	9	12				6	27
A/Victoria/361/2011 (H3N2)				2			2
B (lineage not determined)	8	3				3	14
B/Wisconsin/1/2010-like			2	2			4
Total	36	15	2	5	9	16	83

Figure 6 shows the cumulative total of influenza viruses confirmed (sentinel and non-sentinel surveillance) from week 1 to the end of week 42 (20 October 2013). A total of 2140 influenza viruses were identified: B (875) including 212 B/Wisconsin/1/2010-like and five B/Brisbane/60/2008-like viruses, A(H3N2) (633) including 181 A/Victoria/361/2011 (H3N2)-like viruses, A (not sub-typed) (413), and A(H1N1)pdm09 (219) including 47 A/California/7/2009 (H1N1)-like viruses.

Figure 6. Cumulative laboratory-confirmed viruses by DHB for weeks 1–42 (1 January–20 October 2013)



The 2013 southern hemisphere influenza vaccine has the following composition: A/California/7/2009(H1N1)-like, A/Victoria/361/2011(H3N2)-like and B/Wisconsin/1/2010-like strains.

*Note: A/California/7/2009 is an influenza A(H1N1)pdm09 strain.

Antiviral susceptibility monitoring, WHO National Influenza Centre, Institute of Environmental Science and Research (ESR)

From 1 January–23 October 2013, antiviral susceptibility were tested on 548 influenza viruses: (56 A(H1N1)pdm09, 234 A(H3N2) and 258 influenza B) for sensitivity to the neuraminidase inhibitor oseltamivir (Tamiflu) and none of them showed resistance to oseltamivir. In addition, 550 influenza viruses (55 A(H1N1)pdm09, 237 A(H3N2) and 258 influenza B) for sensitivity to the neuraminidase inhibitor zanamivir (Relenza) and none of them showed resistance to zanamivir.

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