

INFLUENZA WEEKLY UPDATE

2013/40: 30 September–6 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 40 (30 September–6 October 2013).

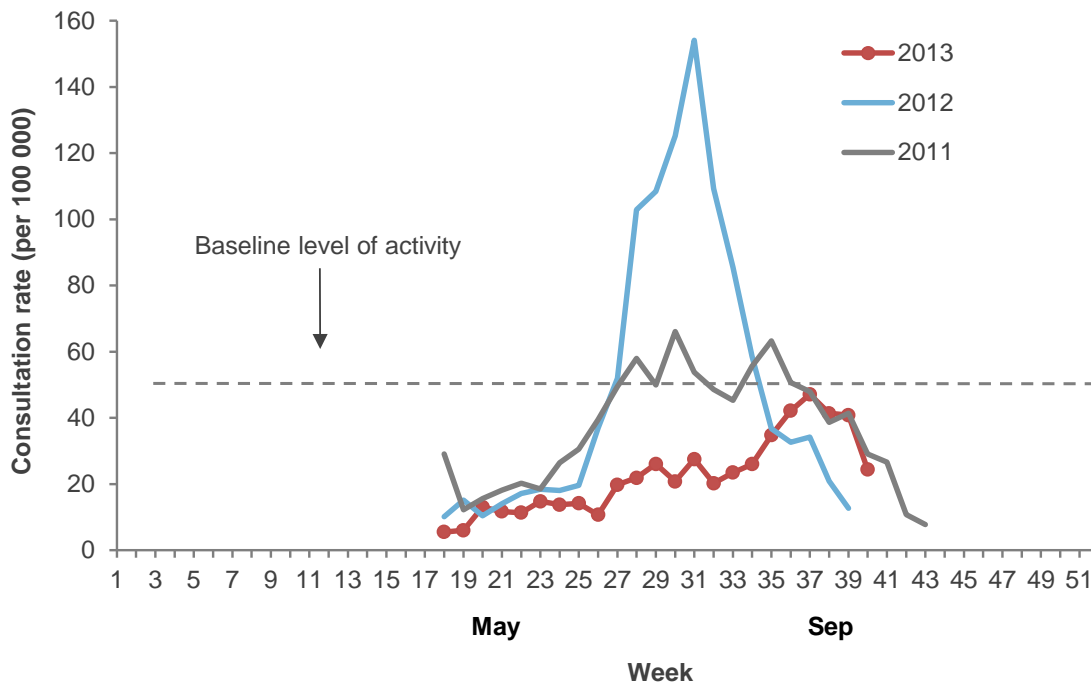
Summary

- Influenza-like illness (ILI) through sentinel surveillance was reported from 18 out of 20 District Health Boards (DHB) with a national consultation rate of 24.4 per 100 000 (93 ILI consultations).
- A total of 303 swabs were received from sentinel (28) and non-sentinel (303) surveillance.
- 161 influenza viruses were identified: A (not sub-typed) (74), B (49), A(H3N2) (16) including five A/Victoria/361/2011 (H3N2), and A(H1N1) pdm09 (22) including one A/California/7/2009 (H1N1)-like virus.

INFLUENZA-LIKE ILLNESS SURVEILLANCE

In the past week, a total of 93 consultations for influenza-like illness were reported from 68 general practices in 18 out of 20 DHBs. This gives a weekly consultation rate of 24.4 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.

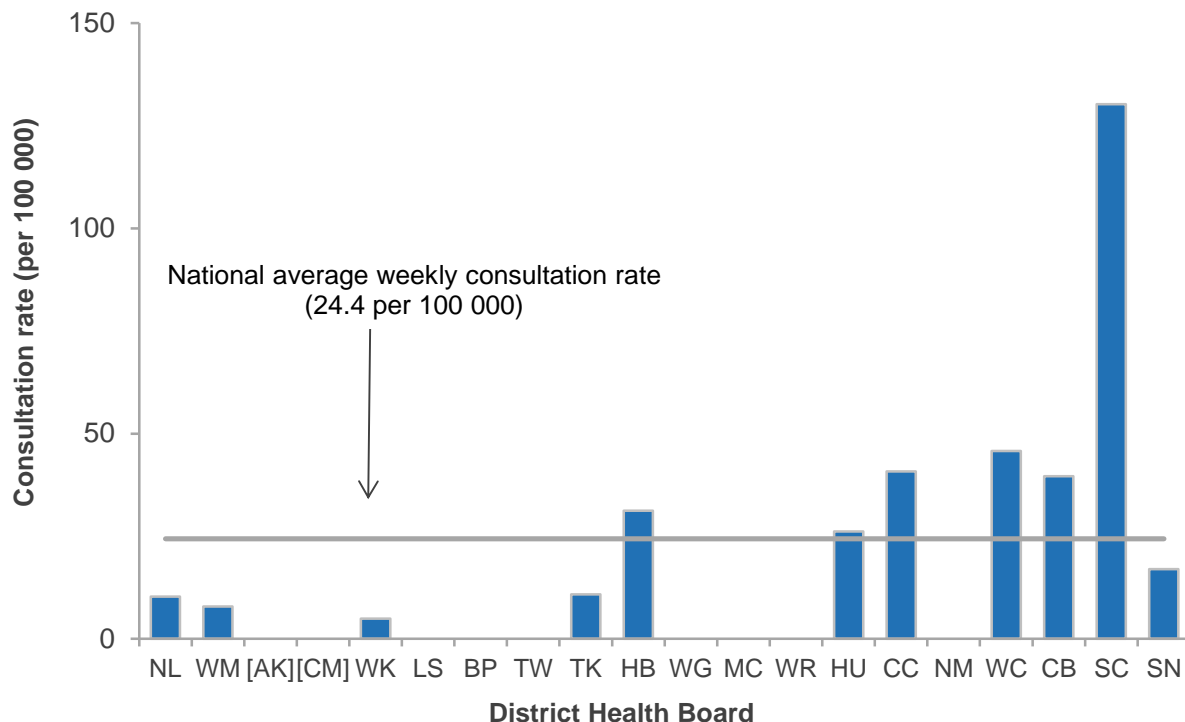
Figure 1. Weekly consultation rates for influenza-like illness in New Zealand, 2011, 2012 and 2013



* 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. South Canterbury DHB had the highest consultation rate (130.3 per 100 000, 9 cases), followed by West Coast (45.7 per 100 000, 9 cases), and Capital & Coast (40.8 per 100 000, 13 cases) DHBs.

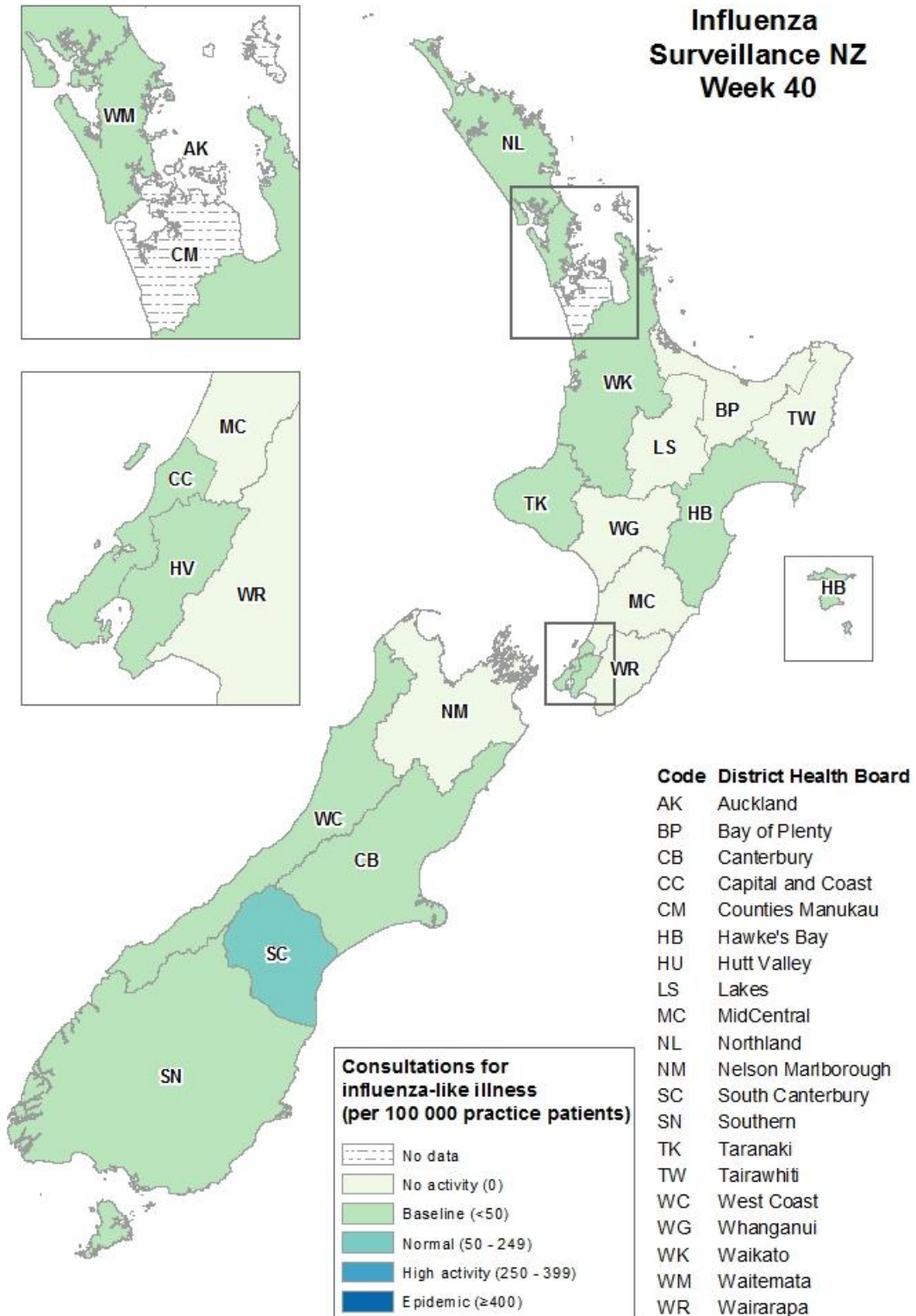
Figure 2. Weekly consultation rates for influenza-like illness by DHB for week 40 (30 September–6 October 2013)



[] 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 40 were 104.9 per 100 000 and 36.6 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 40 (30 September–6 October 2013)



VIROLOGICAL SURVEILLANCE

A total of 28 swabs were received by virology laboratories from sentinel surveillance in week 40. From these 28 viruses were identified (Figure 4): A (not sub-typed) (12), B (lineage not determined) (11), A(H1N1)pdm09 (3), and A(H3N2) (2). The distribution by DHB is shown in Table 1.

Figure 4. Total influenza viruses from sentinel surveillance by type and week reported, weeks 18–40 (29 April–6 October 2013)

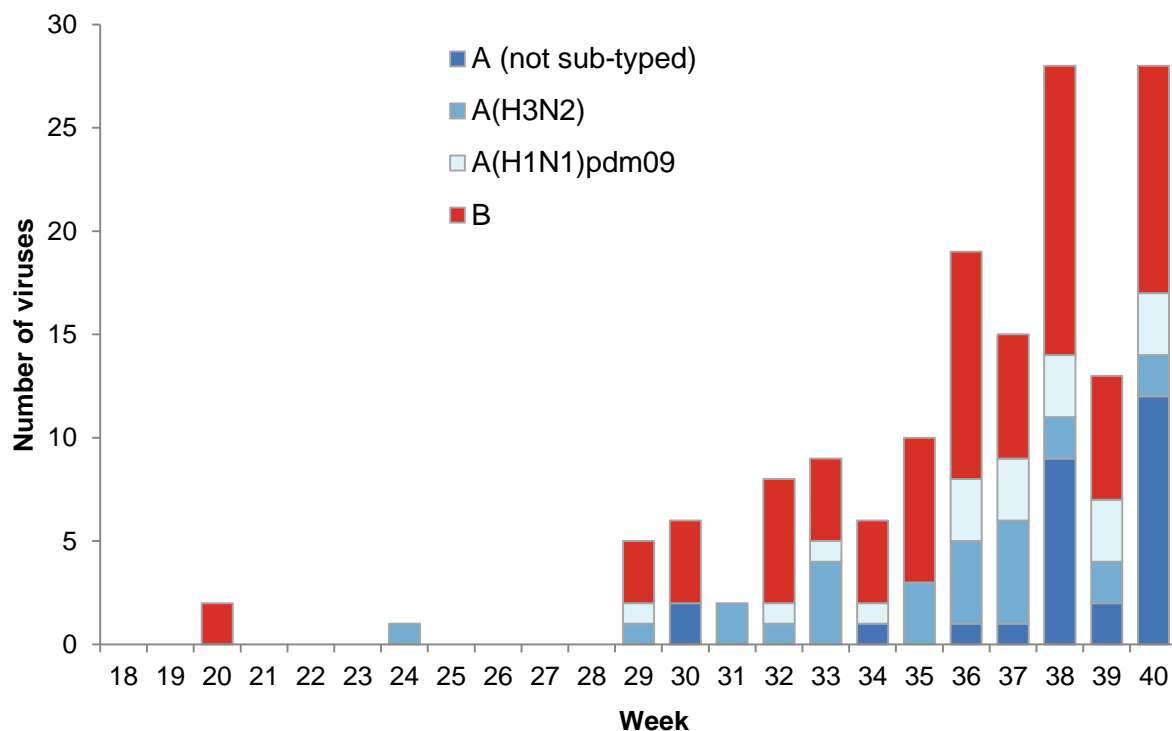


Table 1. Influenza viruses from sentinel surveillance by DHB for week 40 (30 September–6 October 2013)

Influenza virus	DHB												Total
	NL	WM	WK	TW	TK	HB	WG	MC	CC	NM	CB	SN	
A (not sub-typed)	1	2				4		2	1	1		1	12
A(H1N1)pdm09											3		3
A(H3N2)											2		2
B (lineage not determined)	1	1	1	1	1	3	2		1				11
Total	2	3	1	1	1	7	2	2	2	1	5	1	28

In addition, 275 swabs were received by virology laboratories from non-sentinel surveillance in week 40. From these, 133 influenza viruses were identified (Figure 5): A (not sub-typed) (62), B (lineage not determined) (38), A(H1N1)pdm09 (18), A(H3N2) (9), A/Victoria/361/2011 (H3N2) (5), and A/California/7/2009 (H1N1)-like (1). 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 18–40 (29 April–6 October 2013)

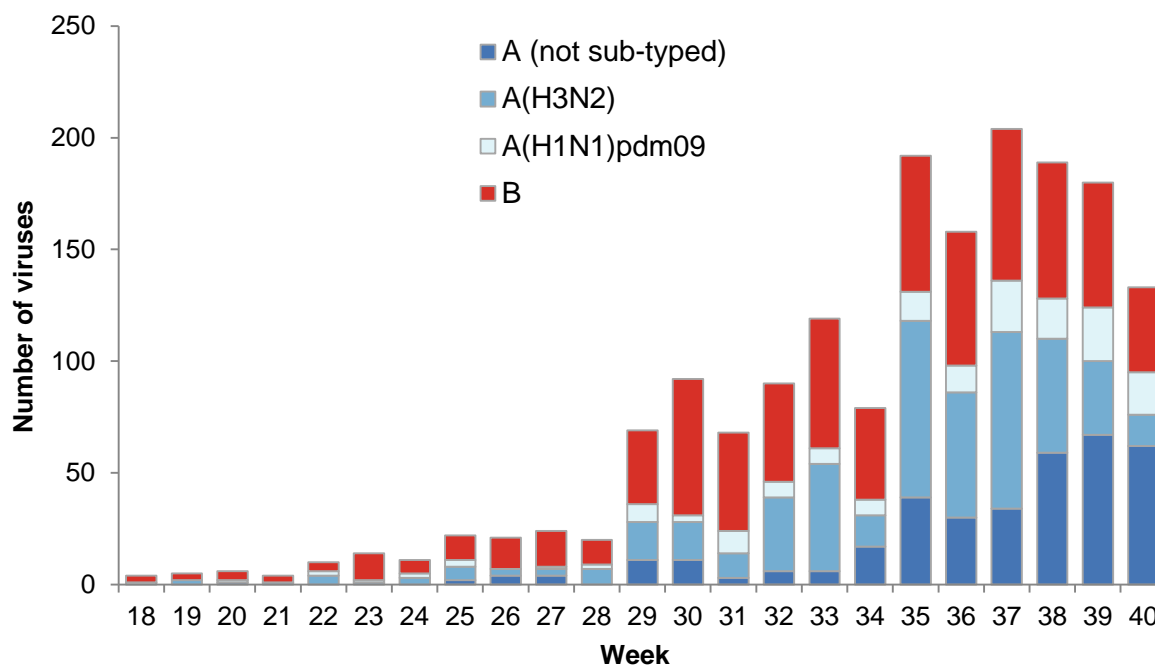
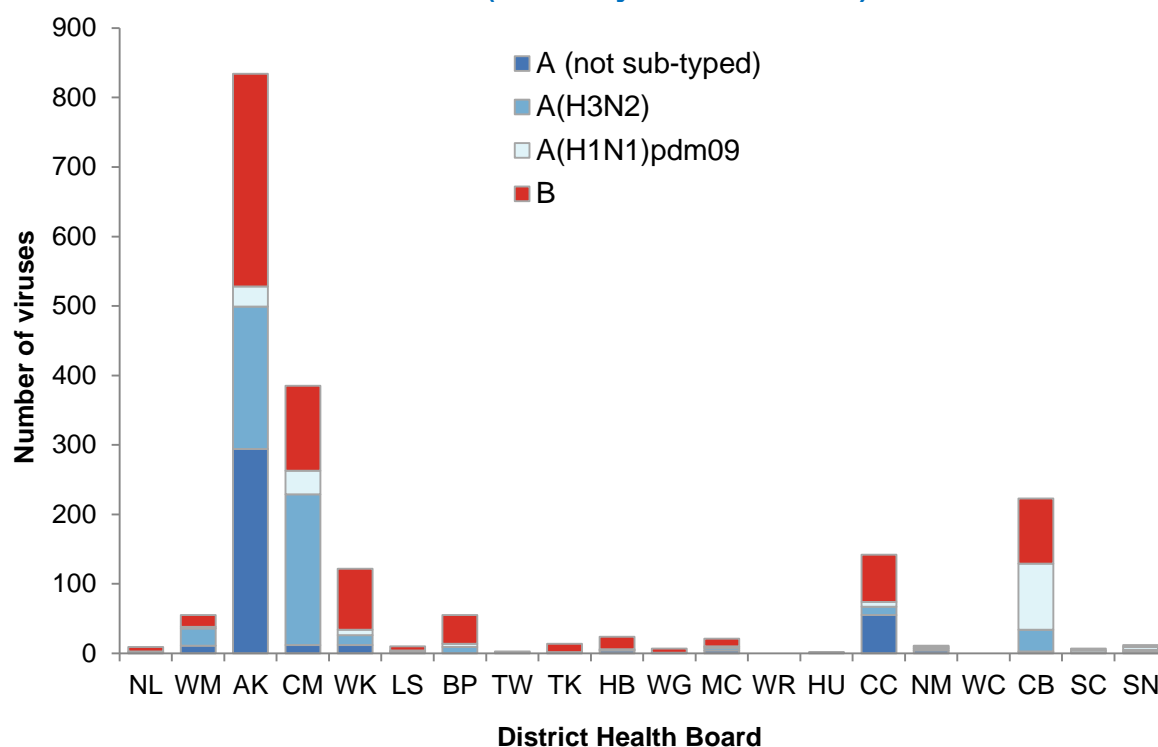


Table 2. Influenza viruses from non-sentinel surveillance by DHB for week 40 (30 September–6 October 2013)

Influenza virus	DHB									Total
	WM	AK	CM	WK	BP	CC	NM	CB	SC	
A (not sub-typed)		46		3		11		2		62
A(H1N1)pdm09			1				2	15		18
A(H3N2)	1	3	4				1			9
A/California/7/2009 (H1N1)-like					1					1
A/Victoria/361/2011 (H3N2)		1	3		1					5
B (lineage not determined)	1	18	2	4		1	1	10	1	38
Total	2	68	10	7	2	12	4	27	1	133

Figure 6 shows the cumulative total of influenza viruses confirmed (sentinel and non-sentinel surveillance) from week 1 to the end of week 40 (6 October 2013). A total of 1936 influenza viruses were identified: B (806) including 196 B/Wisconsin/1/2010-like and five B/Brisbane/60/2008-like viruses, A(H3N2) (529) including 159 A/Victoria/361/2011 (H3N2)-like viruses, A (not sub-typed) (407), and A(H1N1)pdm09 (194) including 33 A/California/7/2009 (H1N1)-like viruses.

Figure 6. Cumulative laboratory-confirmed viruses by DHB for weeks 1–40 (1 January–6 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–10 October 2013, antiviral susceptibility were tested for 424 influenza viruses: (41 A(H1N1)pdm09, 156 A(H3N2) and 227 influenza B) were tested for the neuraminidase inhibitor oseltamivir (Tamiflu) and none of them showed resistance to oseltamivir. In addition, 431 influenza viruses (42 A(H1N1)pdm09, 161 A(H3N2) and 228 influenza B) for the neuraminidase inhibitor zanamivir (Relenza) and none of them showed resistance to zanamivir.

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