INFLUENZA WEEKLY UPDATE
2013/37: 9–15 September 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 37 (9–15 September 2013).

Summary
- ILI through sentinel surveillance was reported from 18 out of 20 District Health Boards (DHB) with a national consultation rate of 47.1 per 100 000 (172 ILI consultations).
- A total of 410 swabs were received from sentinel (40) and non-sentinel (370) surveillance.
- 194 influenza viruses were identified: B (69) including two B/Wisconsin/1/2010-like viruses, A(H3N2) (65), A (not sub-typed) (37), and A(H1N1)pdm09 (23) viruses.

INFLUENZA-LIKE ILLNESS SURVEILLANCE

In the past week, a total of 172 consultations for influenza-like illness were reported from 65 general practices in 18 out of 20 DHBs. This gives a weekly consultation rate of 47.1 per 100 000 patient population. Figure 1 shows the weekly national consultation rates for 2011, 2012 seasons, and 2013 so far. The current rate of influenza-like illness is almost at baseline level.

* 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. Waitemata DHB had the highest consultation rate (259.2 per 100 000, 33 cases), followed by South Canterbury (231.6 per 100 000, 22 cases), and Whanganui (84.6 per 100 000, 4 cases).

[ ] Not participating in the influenza sentinel surveillance.

Note: Auckland (AK) and Counties Manukau (CM) DHBs follow the Southern Hemispheric 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 37 were 193.1 per 100 000 and 25.2 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 37, 2013

Influenza Surveillance NZ
Week 37

Consultations for influenza-like illness (per 100,000 practice patients)

- No data
- No activity (0)
- Baseline (<50)
- Normal (50 - 249)
- High activity (250 - 399)
- Epidemic (>400)

Code  District Health Board
AK    Auckland
BP    Bay of Plenty
CB    Canterbury
CC    Capital and Coast
CM    Counties Manukau
HB    Hawke's Bay
HU    Hutt Valley
LS    Lakes
MC    MidCentral
NL    Northland
NM    Nelson Marlborough
SC    South Canterbury
SN    Southern
TK    Tararua
TW    Tairawhiti
WC    West Coast
WG    Whanganui
WK    Waikato
WM    Waitemata
WR    Wairarapa
VIROLOGICAL SURVEILLANCE

A total of 40 swabs were received by virology laboratories from sentinel surveillance. From these 14 viruses were identified (Figure 4): B (lineage not determined) (6), A(H3N2) (5), A(H1N1)pdm09 (2), and A (not sub-typed) (1). The distribution by DHB is shown in Table 1.

**Figure 4. Total influenza viruses from sentinel surveillance by type and week reported, week 18–37**

![Influenza viruses by type and week](image)

**Table 1. Influenza viruses from sentinel surveillance for week 37 by DHB**

<table>
<thead>
<tr>
<th>Antigenic strain</th>
<th>WM</th>
<th>WK</th>
<th>TW</th>
<th>HB</th>
<th>WG</th>
<th>MC</th>
<th>CC</th>
<th>CB</th>
<th>SC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (not sub-typed)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>A(H1N1)pdm09</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>A(H3N2)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>B (lineage not determined)</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>14</td>
</tr>
</tbody>
</table>

In addition, 370 swabs were received by virology laboratories from non-sentinel surveillance. From these, 180 influenza viruses were identified (Figure 5): B (lineage not determined) (61), A(H3N2) (60), A (not sub-typed) (36), A(H1N1)pdm09 (21), and B/Wisconsin/1/2010-like (2). The distribution by DHB is shown in Table 2.
Table 2. Influenza viruses from non-sentinel surveillance for week 37 by DHB

<table>
<thead>
<tr>
<th>Antigenic strain</th>
<th>WM</th>
<th>AK</th>
<th>CM</th>
<th>WK</th>
<th>LS</th>
<th>TK</th>
<th>CC</th>
<th>CB</th>
<th>SN</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (not sub-typed)</td>
<td>0</td>
<td>27</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>36</td>
</tr>
<tr>
<td>A(H1N1)pdm09</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>A(H3N2)</td>
<td>3</td>
<td>14</td>
<td>34</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>60</td>
</tr>
<tr>
<td>B (lineage not determined)</td>
<td>1</td>
<td>20</td>
<td>8</td>
<td>13</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>B/Wisconsin/1/2010-like</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>63</td>
<td>48</td>
<td>22</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td>30</td>
<td>1</td>
<td>180</td>
</tr>
</tbody>
</table>

Figure 6 shows the cumulative total of influenza viruses confirmed (sentinel and non-sentinel surveillance) from week 1 to the end of week 37 (15 September 2013). A total of 1377 influenza viruses were identified: B (627) including 156 B/Wisconsin/1/2010-like and five of B/Brisbane/60/2008-like viruses, A(H3N2) (385) including 88 A/Victoria/361/2011 (H3N2)-like viruses, A (not sub-typed) (242), and A(H1N1)pdm09 (123) including 32 A/California/7/2009 (H1N1)-like viruses.
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–16 September 2013, antiviral susceptibility were tested for 355 influenza viruses: (37 A(H1N1)pdm09, 120 A(H3N2) and 198 influenza B) were tested for the neuraminidase inhibitor oseltamivir (Tamiflu) and none of them showed resistance to oseltamivir. In addition, 354 influenza viruses (37 A(H1N1)pdm09, 121 A(H3N2) and 196 influenza B) for the neuraminidase inhibitor zanamivir (Relenza) and none of them showed resistance to zanamivir.