Early low-level signals of increase in influenza activity in BC

Summary
During week 46 (November 11-17, 2012), there were low-level signals of increase in influenza activity in BC from the previous week, still within the expected level for this time of the year. The proportion of patients with influenza-like illness among those presenting to sentinel physicians was 0.23%, higher than the previous week, but within the expected level of this time of year. The ILI consultation rate in the BC Children’s Hospital ER increased to 9.3%, still consistent with this time of year. Two lab-confirmed A/H3N2 influenza outbreaks were reported in week 46 from long-term care facilities in Vancouver Coastal Health Authority. So far in the current week (week 47), one school ILI outbreak has been reported from Northern Health Authority (pathogen unknown), and one influenza A outbreak has been reported from a long-term care facility in Fraser Health Authority (subtype pending). Compared to the previous weeks, influenza virus detections increased in week 46. Out of the 97 specimens submitted, 13 (13.4%) were positive for influenza, including 12 A/H3N2 from all Health Authorities except Northern, and 1 influenza B from Interior Health Authority. Rhino/enteroviruses continued to predominate (22/97, 22.7%). Other respiratory viruses were also sporadically detected.
British Columbia

Sentinel Physicians
In week 46, the proportion of patients with ILI among those presenting to sentinel physicians was 0.23%, higher than the preceding week, but below the expected range for this time of year. To date, 66% of sentinel physician sites have reported for week 46.

BC Children’s Hospital Emergency Room
In week 46, the percentage of BC Children’s Hospital ER visits attributed to “fever and cough” or flu-like illness increased to 9.3%, higher than last week but consistent with the expected level for this time of year.
Laboratory Reports
In week 46, ninety-seven specimens were tested for influenza viruses at the BC Public Health Microbiology & Reference Laboratory, PHSA, of which 13 (13.4%) were positive for influenza. A single influenza B was detected from an adult in the Interior. The remaining 12 influenza A were all of the H3 subtype and were detected from all HAs except Northern, distributed as follows: 6 in Vancouver (1 child < 19 years, 1 adult 20-64 years, 4 elderly 65+), 4 in Fraser (3 adults, one elderly), 1 on Vancouver Island (elderly), and one from the Interior (adult). Rhinovirus/enteroviruses (22/97, 22.7%) continued to be the most common detections during this period. Other respiratory viruses were sporadically detected.

In week 46, BC Children’s and Women’s Health Centre Laboratory tested 62 respiratory specimens, of which 2 (3.2%) were positive for influenza A (un-subtyped). RSV (9/62, 14.5%) was the most common detection among the other respiratory viruses. Parainfluenza and human metapneumovirus were also sporadically detected.
ILI Outbreaks
The first lab-confirmed influenza outbreaks for the 2012-13 season were reported in week 46 from two long-term care facilities in VCHA, both influenza A/H3N2: one began on the last day of week 45 (reporting delayed), and another in week 46. So far in the beginning of week 47, one ILI outbreak report has been received from a school in NHA (pathogen unknown), and one lab-confirmed influenza A outbreak report has been received from an LTCF in FHA (subtype pending).

Number of Influenza and Influenza-Like Illness (ILI) Outbreaks Reported, Compared to Current Sentinel ILI Rate and Average Sentinel ILI Rate for past 20 years, per Week, British Columbia, 2012-2013 season

* Facility influenza outbreak defined as 2 or more ILI cases within 7-day period, with at least one case laboratory-confirmed as influenza.
† School ILI outbreak defined as >10% absenteeism on any day, most likely due to ILI.
** Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

CANADA

FluWatch
In week 45 (November 4 - November 10, 2012), influenza activity in Canada increased compared to the previous week, but overall activity in Canada still remained relatively low. A total of 106 laboratory detections of influenza were reported, of which 92.5% were for influenza A viruses, predominantly A/H3N2. [www.phac-aspc.gc.ca/fluwatch/](http://www.phac-aspc.gc.ca/fluwatch/)

National Microbiology Laboratory (NML): Strain Characterization
From September 1 to November 22, 2012, 20 isolates were collected from provincial and hospital labs and characterized at the NML as follows:
12 A/Victoria/361/2011-like (H3N2)\* from PEI, QUE, ONT, SASK, and BC;
3 A/California/07/2009-like\* from ONT;
1 B/Brisbane/60/2008-like\* from ONT;
4 B/Wisconsin/01/2010-like\* from QUE and ONT;

\* indicates a strain match to the recommended H3N2 component for the 2012-2013 northern hemisphere influenza vaccine
\*\* belongs to the B Yamagata lineage, and is the recommended influenza B component for the 2012-2013 northern hemisphere influenza vaccine.

\* indicates a strain match to the recommended H1N1 component for the 2012-2013 northern hemisphere influenza vaccine.
\*\* belongs to the B Victoria lineage, which was the recommended influenza B component for the 2011-2012 northern hemisphere influenza vaccine.
NML: Antiviral Resistance
From September 1 to November 22, 2012, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 12; zanamivir: 12; amantadine: 35), A(H1N1)pdm09 (oseltamivir: 3; zanamivir: 3; amantadine: 1), and influenza B isolates (oseltamivir: 5; zanamivir: 5). The results indicated that all isolates were sensitive to oseltamivir and zanamivir, while all influenza A isolates were resistant to amantadine.

INTERNATIONAL

USA: during week 46 (November 11 to November 17, 2012), influenza activity increased. 494 (13.2%) influenza viruses were detected, including 67.6% influenza A viruses [52% A/H3N2, 2% A(H1N1)pdm09, and 46% un-subtyped A], and 32.4% influenza B. One influenza-A/H3N2 associated paediatric death was further reported by the USA. www.cdc.gov/flu/weekly


Avian Influenza: The WHO has issued no new reports.

WHO Recommendations for 2012-13 Northern Hemisphere Influenza Vaccine
On 23 February, 2012 the WHO announced the recommended strain components for the 2012-13 northern hemisphere vaccine:

- A/California/7/2009 (H1N1)pdm09 virus
- A/Victoria/361/2011 (H3N2)-like virus*
- B/Wisconsin/1/2010 (Yamagata lineage)-like virus*

* these two of the three recommended components are different from the northern hemisphere seasonal TIV vaccines produced and administered in 2010-11 and 2011-2012. For further details, see: www.who.int/influenza/vaccines/virus/recommendations/2012_13_north/en/index.html
List of Acronyms

ACF: Acute Care Facility
AI: Avian influenza
FHA: Fraser Health Authority
HBoV: Human bocavirus
HMPV: Human metapneumovirus
HSDA: Health Service Delivery Area
IHA: Interior Health Authority
ILI: Influenza-Like Illness
LTCF: Long-Term Care Facility
MSP: BC Medical Services Plan
NHA: Northern Health Authority
NML: National Microbiological Laboratory
pH1N1: Pandemic H1N1 influenza
RSV: Respiratory syncytial virus
VCHA: Vancouver Coastal Health Authority
VIHA: Vancouver Island Health Authority
WHO: World Health Organization

Web Sites

1. Influenza Web Sites
Canada – Flu Watch: www.phac-aspc.gc.ca/fluwatch/
Washington State Flu Updates: www.doh.wa.gov/FLUNews/
USA Weekly Surveillance reports: www.cdc.gov/flu/weekly/
European Influenza Surveillance Scheme: www.ecdc.europa.eu
WHO – Global Influenza Programme: www.who.int/csr/disease/influenza/mission/
WHO – Weekly Epidemiological Record: www.who.int/wer/en/
Influenza Centre (Australia): www.influenzacentre.org/

2. Avian Influenza Web Sites
World Organization for Animal Health: www.oie.int/eng/en_index.htm

3. This Report On-line: www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm

Communicable Disease Prevention and Control (CDPACS):
BC Centre for Disease Control (BCCDC)
Influenza-Like Illness (ILI) Outbreak Summary Report Form

Please complete and email to ilioutbreak@bccdc.ca

Note: This form is for provincial surveillance purposes. Please notify your local health unit per local guidelines/requirements.

ILI: Acute onset of respiratory illness with fever and cough and with one or more of the following: sore throat, arthralgia, myalgia, or prostration which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

Schools and work site outbreak: greater than 10% absenteeism on any day, most likely due to ILI.

Residential institutions (facilities) outbreak: two or more cases of ILI within a seven-day period.

A Reporting Information

Health unit/medical health officer notified? □ Yes □ No

Person Reporting: ______________________ Title: ______________________
Contact Phone: ______________________ Email: ______________________
Health Authority: ______________________ HSDA: ______________________
Full Facility Name: _________________________________________________

Is this report: □ First Notification (complete section B below; Section D if available)
□ Update (complete section C below; Section D if available)
□ Outbreak Over (complete section C below; Section D if available)

B First Notification

Type of facility: □ LTCF □ Acute Care Hospital □ Senior’s Residence
(if ward or wing, please specify name/number: ______________________)
□ Workplace □ School (grades: ) □ Other (___________)

Date of onset of first case of ILI (dd/mm/yyyy): _DD_/ _MMM_/ _YYYY_

<table>
<thead>
<tr>
<th>Numbers to date</th>
<th>Residents/Students</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With ILI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitalized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Died</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C Update AND Outbreak Declared Over

Date of onset for most recent case of ILI (dd/mm/yyyy): _DD_/ _MMM_/ _YYYY_
If over, date outbreak declared over (dd/mm/yyyy): _DD_/ _MMM_/ _YYYY_

<table>
<thead>
<tr>
<th>Numbers to date</th>
<th>Residents/Students</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With ILI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitalized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Died</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D Laboratory Information

Specimen(s) submitted? □ Yes (location: ______________) □ No □ Don’t know
If yes, organism identified? □ Yes (specify: ____________) □ No □ Don’t know