Influenza activity continues to increase in BC

Summary

During week 48 (November 25 to December 1, 2012), most indicators suggested that influenza activity in BC continued to increase. The proportion of patients with influenza-like illness among those presenting to sentinel physicians was 0.35%, higher than the previous week. The MSP influenza illness proportion was above the 10-year median for this time of year throughout the province. Four ILI outbreaks were reported in week 48 including two from long-term care facilities in FHA (one A/H3N2, the other rhino/enterovirus) and two from schools in IHA (unknown pathogen). So far in the beginning of week 49, two school ILI outbreaks have been reported from NHA (one A/H3N2, the other of unknown pathogen). During week 48, out of 138 specimens tested at the BC Public Health Microbiology & Reference Laboratory, PHSA, 15 (10.9%) were positive for influenza, including 13 A/H3N2 and 2 influenza B. Among other respiratory viruses, rhino/enterovirus (32/138, 23.2%) continued to be the most common detection. Compared to the previous week, more influenza viruses (4/73, 5.5%) were detected by BC Children’s and Women’s Health Centre Laboratory in week 48. The ILI consultation rate in BC Children’s Hospital ER continued to increase (11.2%).

Report disseminated December 6, 2012
Contributors: Helen Guiyun Li, Lisan Kwindt, Naveed Janjua, Danuta Skowronski
Sentinel Physicians
In week 48, the proportion of patients with ILI among those presenting to sentinel physicians was 0.35%, higher than previous weeks but within the expected range for this time of year. To date, 63% of sentinel physician sites have reported for week 48.

BC Children’s Hospital Emergency Room
In week 48, the percentage of BC Children’s Hospital ER visits attributed to “fever and cough” or flu-like illness continued to increase (11.2%), still consistent with the preceding two seasons.
Medical Services Plan
During week 48, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims remained above the 10-year median in each Health Authority and provincially.

Influenza Illness Claims* British Columbia

* Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services

Notes: MSP week beginning 1 August 2012 corresponds to sentinel ILI week 31; Data current to 5 December 2012
Laboratory Reports

In week 48, one hundred and thirty-eight specimens were tested for influenza viruses at the BC Public Health Microbiology & Reference Laboratory, PHSA, of which 15 (10.9%) were positive for influenza viruses including 13 influenza A/H3N2 from all Health Authorities but Northern (IHA: 1 child ≤19 years; FHA: 2 adults 20-64 years, 5 elderly 65+; VCHA: 3 adults 20-64 years, 1 elderly 65+; VIHA: 1 adult 20-64 years), and 2 influenza B from 2 adults aged 20-64 years in VCHA. Among other respiratory viruses tested, rhino/enterovirus (32/138, 23.2%) and parainfluenza (13/138, 9.4%) were the most common detections. Other respiratory viruses were also sporadically detected.

In week 48, BC Children’s and Women’s Health Centre Laboratory tested 73 respiratory specimens, of which 4 (5.5%) were positive for influenza A (un-subtyped), an increase over the previous week. RSV (9/73, 12.3%) was the most common detection among the other respiratory viruses tested. Parainfluenza and adenovirus were also sporadically detected.
ILI Outbreaks

Four ILI outbreaks were reported in week 48, including two from long-term care facilities in FHA (one lab-confirmed A/H3N2, the other rhino/enterovirus) and two from schools in IHA (pathogen unknown). So far in the beginning of week 49, two ILI outbreaks have been reported from schools in NHA (one lab-confirmed A/H3N2, the other pathogen unknown). The subtype of the previously-reported FHA LTCF (week 46) was confirmed by lab testing to be A/H3N2.

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

**CANADA**

FluWatch

According to the most current report (dated 30 Nov. 2012), an increase in all influenza indicators was observed in Canada during week 47. More regions reported sporadic or localized activity compared to the previous week. A total of 278 laboratory detections of influenza virus were reported, of which 97.8% 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 December 6, 2012, 49 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

- 33 A/Victoria/361/2011-like (H3N2)† from PEI, QUE, ONT, MAN, SASK, and BC;
- 6 A/California/07/2009-like* from ONT;
- 3 B/Brisbane/60/2008-like** from ONT and MAN;
- 7 B/Wisconsin/01/2010-like† from QUE, ONT and BC;

† indicates a strain match to the recommended H3N2 component for the 2012-2013 northern hemisphere influenza vaccine

‡ indicates a strain match 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 BVictoria lineage, which was the recommended influenza B component for the 2011-2012 northern hemisphere influenza vaccine.
NML: Antiviral Resistance
From September 1 to December 6, 2012, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 28; zanamivir: 27; amantadine: 72), A(H1N1)pdm09 (oseltamivir: 7; zanamivir: 7; amantadine: 6), and influenza B isolates (oseltamivir: 10; zanamivir: 10). 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 47 (November 18 -24, 2012), influenza activity increased. 812 (15.2%) influenza viruses were detected, including 70.3% influenza A viruses [34.9% A/H3N2, 0.2% A(H1N1)pdm09, and 65.0% un-subtyped A], and 29.7% influenza B. The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. The proportion of outpatient visits for influenza-like illness was 2.2% which is at the national baseline. www.cdc.gov/flu/weekly WHO: no updates have been posted since 23 November 2012. www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Human Swine Influenza:
One human infection with a novel influenza A/H3N2 variant (H3N2v) virus was reported during week 47 from Iowa, USA, the first since 28 September 2012. The infection was detected in a child during routine surveillance. No contact with swine or other livestock in the week preceding illness was reported, but investigation into potential additional sources of infection is ongoing. Between July 2012 and November 28, 2012, a total of 311 infections with variant influenza viruses (307 H3N2v viruses, 3 H1N2v viruses, and 1 H1N1v virus) have been reported from 11 states in the USA. Further details available from: www.cdc.gov/flu/swineflu/h3n2v-case-count.htm

Avian Influenza:
The WHO has issued no new reports since 10 August 2012. www.who.int/influenza/human_animal_interface/en/

Novel Coronavirus:
On 30 November 2012, Jordan informed the WHO of two new fatal cases of human infection of novel coronavirus. This brings the total number of laboratory-confirmed cases to nine, including five cases from Saudi Arabia (three fatal), and two cases from Qatar. www.who.int/csr/don/2012_11_30/en/index.html

Based on additional information reported since the original surveillance recommendations, the WHO has updated its guidance, available from: www.who.int/csr/disease/coronavirus_infections/InterimRevisedSurveillanceRecommendations_nCoVInfection_20121128.pdf

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
Communicable Disease Prevention and Control (CDPACS):
BC Centre for Disease Control (BCCDC)

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
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