Continued low-level influenza activity in BC

Summary
In weeks 11-13 (March 11 to 31, 2012), influenza surveillance indicators including the sentinel physician reporting, MSP claims, and ER consultations at BC Children’s Hospital suggested low-level influenza activity in BC. In weeks 11-13, four lab-confirmed influenza outbreaks were reported from long term care facilities in Vancouver Island HA (3) and Interior HA (1), including 3 associated with influenza A/H3N2 and one associated with influenza B. Of three hundred and eighty-three specimens tested at the BC Public Health Microbiology & Reference Laboratory, PHSA, during this period, seventy-four (19.3%) were positive for influenza, including 41 (10.7%) influenza A/H3N2, 13 (3.4%) influenza A(H1N1)pdm09, 1 (0.3%) influenza A (subtype pending), and 20 (5.2%) influenza B. Other significant respiratory virus detections included rhino/enterovirus (65/383, 17.0%) and respiratory syncytial virus (44/383, 11.5%). Other respiratory viruses were also sporadically detected. RSV continued to dominate among the respiratory viruses detected at BC Children’s Hospital.

Report disseminated April 5, 2012
Contributors: Helen Guiyun Li, Lisan Kwindt, Naveed Janjua, Danuta Skowronski
Sentinel Physicians
In weeks 11-13, the proportion of patients with ILI among those presenting to sentinel physicians ranged from 0.17% to 0.22%, lower than the preceding week and below the expected range for this time of year. 74%, 63%, and 54% of sentinel physician sites have reported for weeks 11, 12, and 13, respectively, to-date.

Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 20 Seasons Sentinel Physicians, British Columbia, 2011-2012

BC Children's Hospital Emergency Room
The percentage of BC Children's Hospital ER visits attributed to “fever and cough” or flu-like illness in weeks 11-13 remained very low (0.3%, 0%, and 0% respectively), and below the expected level for this time of year.

Percentage of Patients Presenting to BC Children's Hospital ER with Presenting Complaint of "Flu," "Influenza," or "Fever/Cough", by Week

Source: BCCH Admitting, discharge, transfer database, ADT

Data provided by Decision Support Services at Children’s & Women’s Health Centre of BC

* Data subject to change as reporting becomes increasingly complete.
† Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.
Medical Services Plan
In weeks 11-13, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims increased slightly in Northern HA and Vancouver Island HA, but remained low (at or below the ten-year median level for this time of year) throughout BC.

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 28 August 2011 corresponds to sentinel ILI week 35; Data current to 4 April 2012
Laboratory Reports
In weeks 11-13, three hundred and eighty-three specimens were tested for influenza viruses at the BC Public Health Microbiology & Reference Laboratory, PHSA. Among them, seventy-four (19.3%) were positive for influenza viruses, slightly lower than the previous week, including 41 (10.7%) influenza A/H3N2 from all HAs, 13 (3.4%) influenza A(H1N1)pdm09 from all HAs except Vancouver Island, 1 (0.3%) influenza A (subtype pending), and 20 (5.2%) influenza B from all HAs except Northern. Of 383 specimens tested for other respiratory viruses, significant detections included rhino/enterovirus (65/383, 17.0%) and respiratory syncytial virus (44/383, 11.5%). Other respiratory viruses were also sporadically detected.

In weeks 11-13, BC Children's and Women's Health Centre Laboratory tested 225 respiratory specimens: 22 (9.8%) were positive for influenza virus, lower than the previous weeks, including 10 influenza A and 12 influenza B. RSV continued to predominate among the other respiratory viruses detected (54/195, 27.7%). Other respiratory viruses were also detected at low levels.

Data provided by Virology Department at Children's & Women's Health Centre of BC
ILI Outbreaks
In weeks 11-13, four lab-confirmed influenza outbreaks were reported from long-term care facilities in Vancouver Island HA (1 A/H3N2-associated in each of week 12 and 13, 1 influenza B-associated in week 13) and Interior HA (one influenza A/H3N2-associated in week 12).

CANADA
FluWatch
In week 12 (March 18 to 24, 2012), influenza activity in Canada continued to increase overall compared to the previous weeks; most indicators (such as laboratory detections, outbreaks, hospitalizations and ILI) showed higher levels in week 12 compared to the previous week. Certain regions in the country (in ON, the Prairies and the Atlantic Region) showed higher levels of activity compared to other regions. In total 1309 laboratory detections of influenza were reported in week 12: 10.0% A/H3N2, 7.5% A(H1N1)pdm09, 21.9% unsubtyped influenza A, and 60.6% influenza B. The ILI consultation rate in week 12 increased compared to the previous week but remained within the expected levels for this time of year. PHAC further reported 135 laboratory-confirmed influenza-associated hospitalizations including 54 paediatric (67% were due to influenza B, and 33% due to influenza A) and 81 adults (60% were due to influenza B, and 40% due to influenza A). www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization
Between September 1, 2011 and April 4, 2012, 820 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

- 166 A/Perth/16/2009-like (H3N2)* from QUE, ONT, MAN, SASK, ALTA, BC, and NT;
- 143 A/California/07/09-like (H1N1)* from NB, QUE, ONT, SASK, ALTA, and BC;
- 267 B/Brisbane/60/2008-like (B/Victoria/02/87 lineage)† from NFLD, NS, NB, QUE, ONT, MAN, SASK, ALTA, and BC;
- 244 B/Wisconsin/01/2010-like (recent B Yamagata lineage)‡ from NS, NB, QUE, ONT, MAN, ALTA, BC, and NU;

* indicates a strain match to the recommended H3N2 component of the 2011-12 northern hemisphere influenza vaccine
† indicates a strain match to the recommended H1N1 component for the 2011-2012 northern hemisphere influenza vaccine
‡ indicates a strain match to the recommended influenza B component for the 2011-2012 influenza vaccine
NML: Antiviral Resistance
From September 1, 2011 to April 5, 2012, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 155; zanamivir: 155; amantadine: 255), influenza A(H1N1)pdm09 (oseltamivir: 145; zanamivir: 145; amantadine: 192), and influenza B isolates (oseltamivir: 431; zanamivir: 431). The results indicated that all isolates were sensitive to oseltamivir and zanamivir, while all influenza A/H3N2 isolates but one, and all A(H1N1)pdm09 isolates, were resistant to amantadine.

INTERNATIONAL

USA: In week 12, ending 24 March 2012, influenza activity in the United States was elevated in some areas, but remained relatively low nationally. Nine hundred and eight (19.6%) specimens tested were positive for influenza, including 809 influenza A [378 A/H3N2, 135 A(H1N1)pdm09, and 296 un-subtyped A] and 99 influenza B. The proportion of outpatient visits for ILL was 2.0% which was below the national baseline of 2.4%. The proportion of all deaths due to pneumonia and influenza illness was 7.8%, slightly below the epidemic threshold of 7.9% for this time of the year. Four influenza-associated paediatric deaths were reported to CDC during week 12, including one A(H1N1)pdm09-associated and three influenza A associated (subtype pending). www.cdc.gov/flu/weekly/.

WHO news: (last updated on 30 March 2012). In the temperate regions of the northern hemisphere, this influenza season started late, but seemed to be reaching the peak or was decreasing in most countries. Severe acute respiratory infections were mainly observed in the age group above 65 years. The most commonly detected virus type or subtype throughout most of the temperate areas of the northern hemisphere temperate zone was influenza A/H3N2, although the proportion of influenza B detection was increasing. In Mexico, influenza A(H1N1)pdm09 was the predominant subtype circulating, while China and the surrounding countries were still reporting a predominance of influenza type B virus. Increasing genetic and antigenic diversity was noted in H3N2 viruses in the later part of the influenza season. No significant change in antiviral resistance has been reported so far this season. http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Avian Influenza:
According to WHO news to-date, five new confirmed cases of human infection with avian influenza A/H5N1 virus were reported during the period of March 12 to April 2, including one hospitalized case reported from Viet Nam, two fatal cases from Indonesia, and two cases (one fatal, another still under treatment) from Egypt. The cumulative deaths in 2012 have reached 13 out of the total of 23 cases reported. For details please see: www.who.int/influenza/human_animal_interface/avian_influenza/en/

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: http://www.who.int/influenza/vaccines/virus/recommendations/2012_13_north/en/index.html
Contact Us:

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.

## Reporting Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Answer</th>
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<tbody>
<tr>
<td>Health unit/medical health officer notified?</td>
<td>No</td>
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<tr>
<td>Person Reporting</td>
<td></td>
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<tr>
<td>Contact Phone</td>
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<td>Health Authority</td>
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<td>HSDA</td>
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<td>Full Facility Name</td>
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**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)

## 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

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<thead>
<tr>
<th>Numbers to date</th>
<th>Residents/Students</th>
<th>Staff</th>
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<td>Total</td>
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<td>With ILI</td>
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## 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

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## Laboratory Information

**Specimen(s) submitted?**

- □ Yes (location: ______________) □ No □ Don’t know

If yes, organism identified?

- □ Yes (specify: __________) □ No □ Don’t know