No Influenza Detections in BC; Low Levels of Activity in the Southern Hemisphere

Summary

In weeks 21-26 (May 23 – July 3), influenza-like illness (ILI) activity in BC remained low with no influenza detections at the provincial laboratory. Sentinel physician and Medical Services Plan ILI indicators both remained consistent with low levels observed in previous weeks. No influenza outbreaks were reported in the province. At the BC Provincial Laboratory, 268 respiratory specimens were tested between May 23 and July 3, 65 (21%) of which were positive for rhino/enterovirus. Other non-influenza respiratory viruses were sporadically detected. Of 252 specimens tested at BC Children’s Hospital Laboratory, none was positive for influenza, and 36 (14%) were positive for parainfluenza. In the southern hemisphere, rates of respiratory illness have recently increased; however, influenza detection rates have remained low. Detections to date have included a mix of pandemic influenza A/H1N1 virus and seasonal influenza B and A/H3N2 viruses, with variation by country. BCCDC continues to monitor the situation in the southern hemisphere during their typical influenza season (April - October).
**British Columbia**

**Sentinel Physicians**
During weeks 21-26, <0.04% of patients presenting to sentinel physicians had ILI, which is below the expected range for this time of year. Sixty-one percent (30/49) of sentinel physician sites have reported to-date for week 21, 63% (31/49) for week 22, 63% (31/49) for week 23, 69% (34/49) for week 24, 65% (32/49) for week 25, and 49% (24/49) for week 26.

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### Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 19 Seasons

**Sentinel Physicians, British Columbia, 2009-2010**

**BC Children’s Hospital Emergency Room**
The percentage of BC Children’s Hospital ER visits attributed to “fever and cough” or flu-like illness remained low (<4%) in weeks 21-26, consistent with levels observed in previous seasons.

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### 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
Medical Services Plan
Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims also remained low in the last six weeks. Proportions in all 5 RHAs remain at or below historical medians. To better reveal current low-level trends, the ~9% peak in MSP claims of late October/early November is not shown in the graphs below (consult earlier bulletins).

* 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, Ministry of Healthy Living & Sport

Notes:  MSP week 27 Sep 2009 corresponds to sentinel ILI week 39.
Data current to July 8, 2010
Laboratory Reports

Two hundred sixty-eight respiratory specimens were tested at the BC Provincial Laboratory in weeks 21-26. None was positive for influenza. Since September 1, 2009, >99% of all influenza detections in BC have been pandemic influenza A/H1N1 (pH1N1). To date, detections of other seasonal influenza viruses over the same period have been limited (14 out of 6569 influenza detections in total). In weeks 21-26, of 268 specimens tested for other respiratory viruses, 65 (21%) tested positive for rhino/enterovirus, 13 (4%) for parainfluenza, 10 (3%) for RSV, 5 (2%) for coronavirus, 5 (2%) for human bocavirus, 3 (1%) for adenovirus, and 2 (1%) for human metapneumovirus.

During weeks 21-26, BC Children’s and Women’s Health Centre Laboratory tested 252 respiratory specimens. None was positive for influenza. Thirty-six specimens (14%) tested positive for parainfluenza, 12 (5%) for adenovirus, and 7 (3%) for RSV.

Data provided by Virology Department at Children’s & Women’s Health Centre of BC
ILI Outbreaks
No lab-confirmed influenza outbreaks were reported in facilities and no ILI outbreaks were reported in schools in BC during weeks 21-26.

Number of Influenza and Influenza-Like Illness (ILI) Outbreaks Reported, Compared to Current Sentinel ILI Rate and Average Sentinel ILI Rate for past 19 years, per Week, British Columbia, 2009-2010

FluWatch
During weeks 25 and 26 (June 20 to July 3), influenza activity in Canada remained low. The sentinel ILI rate was 8 per 1000 patient-visits in week 25 and 3 per 1000 patient-visits in week 26, which is within the expected range for this time of year. Two influenza detections were reported nationally (< 1% of respiratory specimens tested); both were influenza A/not subtyped and from Québec. www.phac-aspc.gc.ca/fluwatch/

NML: Strain Characterization
Between September 1, 2009 and May 5, 2010, 868 influenza isolates (851 pandemic H1N1 and 17 seasonal influenza) were collected from provincial and hospital labs and characterized at the NML:
- 851 A/California/07/2009 (H1N1)-like from BC, AB, SK, MB, ON, QC, NB, NS, PEI, NL, & NT;
- 3 A/Brisbane/59/2007 (H1N1)-like from AB & QC;
- 2 A/Brisbane/10/2007 (H3N2)-like from BC & QC;
- 8 A/Perth/16/2009 (H3N2)-like from BC, AB, & QC;
- 2 B/Brisbane/60/2008 (Victoria lineage)-like from ON;
- 1 B/Florida/04/2006 (Yamagata lineage)-like from QC;
- 1 B/Malaysia/2506/2004 (Victoria lineage)-like from ON.

Ã— A/California/07/2009 (H1N1) is the variant reference virus (pH1N1) selected by WHO for the pandemic influenza A/H1N1 vaccine
† indicates a strain match to the 2009-10 northern hemisphere trivalent influenza vaccine
‡ indicates a strain match to the recommended H3N2 component of the 2010-11 northern hemisphere trivalent influenza vaccine
§ indicates a strain match to the influenza B component of the 2008-09 northern hemisphere trivalent influenza vaccine
# indicates a strain match to the influenza B component of the 2007-08 northern hemisphere trivalent influenza vaccine

* 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.
National Microbiology Laboratory (NML): Antiviral Resistance
Drug susceptibility testing at the NML between September 1, 2009 and May 6, 2010 indicated that 99% (1067/1079) of pH1N1 isolates were sensitive to oseltamivir. All influenza B isolates (n=4) and influenza A/H3N2 isolates (n=13) tested were sensitive to oseltamivir, and the 6 seasonal A/H1N1 isolates tested were oseltamivir-resistant. All pH1N1 (n=1057), seasonal H1N1 (n=2), A/H3N2 (n=13), and influenza B (n=4) isolates were sensitive to zanamivir. All pH1N1 (n=1136) and A/H3N2 (n=24) isolates were resistant to amantadine. Four seasonal H1N1 isolates were sensitive to amantadine, and one was resistant. Global surveillance has shown that circulating pH1N1 viruses are resistant to amantadine but remain sensitive to zanamivir and oseltamivir, although sporadic cases of oseltamivir resistance have been observed worldwide.

INTERNATIONAL
Elsewhere in the northern hemisphere, influenza detections have been sporadic in recent weeks with low levels of ILI activity reported throughout North America and Europe. Overall pandemic and seasonal influenza activity also remains low in temperate regions of the southern hemisphere. Although rates of respiratory illness have shown signs of increase in recent weeks in several southern hemisphere countries, influenza detections have been limited. The predominant influenza viruses among those detected and characterized have been seasonal influenza A/H3N2 and B in South Africa, pH1N1 and seasonal A/H3N2 in Australia, and pH1N1 in Chile and Brazil.

WHO Recommendations for 2010-11 Northern Hemisphere Influenza Vaccine
On February 18, the WHO announced the recommended strain components for the 2010-11 Northern Hemisphere trivalent influenza vaccine:
- A/California/7/2009 (H1N1)-like virus
- A/Perth/16/2009 (H3N2)-like virus
- B/Brisbane/60/2008 (Victoria lineage)-like virus
A/California/7/2009 (H1N1) is the recommended component for pandemic H1N1 vaccines produced and administered in 2009-10. The recommended H3N2 virus has changed from the previous year’s vaccine (A/Brisbane/10/2007), while the recommended B virus remains unchanged (B/Brisbane/60/2008). For further details, see: www.who.int/csr/disease/influenza/recommendations2010_11north/en/index.html
Contact Us:

Epidemiology Services : BC Centre for Disease Control (BCCDC)
655 W. 12th Ave, Vancouver BC V5Z 4R4. Tel: (604) 707-2510 / Fax: (604) 707-2516. InfluenzaFieldEpi@bccdc.ca

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.eiss.org
   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/eng_index.htm

3. Pandemic H1N1 Influenza Web Sites
   BCCDC: www.bccdc.ca/dis-cond/a-z_/h/HumanSwineFlu/default.htm
   BC Provincial Government: www.gov.bc.ca/h1n1/
   PHAC: www.phac-aspc.gc.ca/alert-alerte/swine_200904-eng.php
   US CDC: www.cdc.gov/swineflu/index.htm

4. 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 or fax to (604) 707-2516*

**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.

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### SECTION A: Reporting Information

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)*

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### SECTION 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): __________ /_______ / ______

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### SECTION C: Update AND Outbreak Declared Over

Date of onset for most recent case of ILI (dd/mm/yyyy): __________ / _______ /________

If over, date outbreak declared over (dd/mm/yyyy): ________ / _______ /________

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### SECTION D: Laboratory Information

Specimen(s) submitted?  
☐ Yes (location: ______________ )  
☐ No  
☐ Don’t know

If yes, organism identified? ☐ Yes (specify: _______________ )  
☐ No  
☐ Don’t know