Influenza Activity Remains Low in BC

Summary

In weeks 17-20 (April 25 – May 22), influenza activity in BC remained low with only sporadic 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, 357 respiratory specimens were tested between April 25 and May 22, and 2 influenza viruses (1 pH1N1, 1 influenza B) were detected. Other respiratory virus detections predominantly included rhino/enterovirus (26% of specimens tested) and RSV (11%). Of 201 specimens tested at BC Children’s Hospital Laboratory, none was positive for influenza, and 16 (8%) were positive for RSV. Recent increases in localized ILI activity and pH1N1 detections have been noted in some parts of Chile, as expected. BCCDC continues to monitor the situation in the southern hemisphere during their typical influenza season (April - October).

Note: Given continued low levels of activity, we are reducing the frequency of these bulletins. As of May 1, we will issue a bulletin monthly—more frequently only as needed.
Sentinel Physicians
During weeks 17-20, 0.03-0.15% of patients presenting to sentinel physicians had ILI, which is at or below the expected range for this time of year. Sixty-four percent (32/50) of sentinel physician sites have reported to-date for week 17, 64% (32/50) for week 18, 54% (27/50) for week 19, and 42% (21/50) for week 20.

BC Children’s Hospital Emergency Room
The percentage of BC Children’s Hospital ER visits attributed to “fever and cough” or flu-like illness has continued to decrease in recent weeks, from a peak of 14% in week 10 to 3% in week 20. The peak observed in week 10 corresponds to a peak in RSV positivity at BC Children’s Hospital laboratory (see graph on page 6).
Medical Services Plan
Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims remained low in the last four weeks, consistent with the decrease over the past few months, and below the expected range for this time of year. 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 May 25, 2010

**Northern**
BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN
2009-10: Number 27, Weeks 17-20
April 25 – May 22, 2010

Interior

Vancouver Coastal

Fraser

Vancouver Island
Laboratory Reports
Three hundred and fifty-seven respiratory specimens were submitted for testing at the BC Provincial Laboratory in weeks 17-20. Two were positive for influenza: 1 pH1N1 (week 17) and 1 influenza B (week 19). Since week 35 (September 1, 2009), >99% of all influenza detections in BC have been 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 17-20, of 357 specimens tested for other respiratory viruses, 93 (26%) tested positive for rhino/enterovirus, 40 (11%) for RSV, 10 (3%) for human metapneumovirus, 9 (3%) for parainfluenza, 5 (1%) for human bocavirus, 5 (1%) for adenovirus, and 4 (1%) for coronavirus.

Recent detections of pH1N1 now tally a cumulative total of 12 since the last week of January, all since March 5, 2010. Continued sporadic cases of pH1N1 are not unexpected, and similar sporadic detections have been observed in recent weeks in other provinces (see graph on page 7). To date, there is no evidence of resurgence in community pH1N1 outbreak activity in BC. Nevertheless, clinicians should keep pH1N1 in mind, including appropriate testing and early treatment among high-risk patients or those with clinically severe presentations of acute respiratory illness. Vaccination against pH1N1 is the most effective means of prevention, and public health measures (hand hygiene, cough etiquette, self-isolation) are worth underscoring with patients.
During weeks 17-20, BC Children’s and Women’s Health Centre Laboratory tested 201 respiratory specimens. None was positive for influenza. Sixteen specimens (8%) tested positive for RSV, 12 (6%) for parainfluenza, and 7 (3%) for adenovirus.

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 17-20.
Pandemic H1N1 (pH1N1) Severe Outcomes
No additional pH1N1 hospitalizations or deaths were reported in weeks 17-20. More than 1000 pH1N1 hospitalizations and >50 pH1N1 deaths have been reported in the province to-date, since April 2009. Sixty-five percent of hospitalized cases have had at least one reported underlying medical condition (excluding pregnancy). Twenty-six percent of hospitalized cases have been admitted to the ICU, and 8% have died.

For details see pH1N1 Surveillance Update: www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm (bottom of page)

CANADA

FluWatch
During week 19 (May 9-15), influenza activity in Canada remained low. The sentinel ILI rate was 11 per 1000 patient-visits, 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 B (BC and AB). Nationally reported RSV positivity peaked in week 7 (28%) and has since declined to 6% in week 19. www.phac-aspc.gc.ca/fluwatch/

As illustrated below, while overall lab positivity for influenza has been low (<1%) across Canada since January 2010, recent sporadic detections of pH1N1 and seasonal influenza have occurred in BC as well as other provinces.

Influenza detections in Canada, Feb-May 2010

Source: FluWatch (www.phac-aspc.gc.ca/fluwatch/)

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.
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.

§ 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

INTERNATIONAL

During week 19 (May 9-15), influenza activity remained low in the United States. One percent (14/1621) of respiratory specimens tested in reference laboratories were positive for influenza, and all 4 subtyped influenza A viruses were pH1N1. No influenza B viruses were detected. The proportion of sentinel physician visits due to ILI remained low (0.8%) and below the national baseline. www.cdc.gov/flu/weekly/

In Europe, all countries reported low-level influenza activity for the week of May 10-16. Six of 115 (5%) sentinel laboratory samples were positive for influenza, of which 2 were influenza B, 3 were pH1N1, and 1 was non-subtyped influenza A. www.eiss.org

Globally, pH1N1 activity remains low in the temperate zone of the northern hemisphere. Low activity levels or sporadic detections of influenza B continue in some parts of Asia and Europe. In the southern hemisphere, Chile has reported regional increases in ILI activity for the past few weeks, where increasing pH1N1 detections have been noted, especially among young adults (RSV continues to be the predominant virus detected among children). In Australia and New Zealand, influenza activity remains low, with only sporadic detections of pH1N1 to date in 2010. www.who.int/csr/don/2010_05_21/en/index.html
www.pandemia.cl

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
List of Acronyms
ACF: Acute Care Facility
Al: 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/en_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/InfluenzaSurveillanceReports.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.

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)

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): __________ /_______ / ______

<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>

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): __________ /_______ / ______

<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>

SECTION D: Laboratory Information

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