Influenza activity in BC declines to expected seasonal levels

Summary

In week 7 (February 10 to 16, 2013), indicators suggest that the influenza activity in BC has returned to expected levels for this time of the year. The proportion of patients with influenza-like illness among those presenting to sentinel physicians continued to decrease, and lies within the expected range for this time of year. The proportion of medical visits with an influenza diagnosis was at or below seasonal norms throughout the province. In both BC Public Health Microbiology & Reference Laboratory and BC Children and Women’s Centre Laboratory, the percentage of influenza viruses detected continued to decrease, whereas the proportion of respiratory syncytial virus detections continued to increase. Less than a quarter of the specimens tested at the provincial laboratory were positive for influenza, predominantly A/H3N2, though the share of A/H3N2 has dropped. Among other viruses, respiratory syncytial virus continued to be the most common detection. The number of long-term care facility lab-confirmed influenza outbreaks continued to decline in the past few weeks. Compared to the previous week, the proportion of consultations for influenza-like illness at BC Children’s Hospital emergency room declined though remained somewhat elevated.

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Contributors: Helen Guiyun Li, Lisan Kwindt, Naveed Janjua, Danuta Skowronski
Sentinel Physicians
In week 7, the proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians was 0.6%, lower than the previous week and within the expected range for this time of year. To date, 63% of sentinel physician sites have reported for week 7.

BC Children’s Hospital Emergency Room
The proportion of BC Children’s Hospital ER visits attributed to “fever and cough” or flu-like illness decreased to 16.6% in week 7, consistent with the expected level for this time of year.
Medical Services Plan
During week 7, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims continued to decrease and was at or below the 10-year median level throughout the province.

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 20 February 2013.
Laboratory Reports
In week 7, both the volume of specimens submitted for respiratory virus testing and the influenza positive rate continued to decline compared to previous weeks. During this period, 340 specimens were tested at the BC Public Health Microbiology & Reference Laboratory, PHSA. Among them, 82 (24.1%) were positive for influenza, including 61 influenza A from all Health Authorities [41 A/H3N2, 13 A(H1N1)pdm09, 7 A (subtype pending)], and 21 influenza B from all HA but Northern. The proportion of A/H3N2 among influenza positive specimens continued to decline. Among other respiratory viruses, RSV continued to be the most common detection (71/340, 20.9%). A subset of submitted specimens (286) was further tested for other viruses, indicating sporadic detections of these viruses.

In week 7, BC Children’s and Women’s Health Centre Laboratory tested 81 respiratory specimens, of which 11 (13.6%) were positive for influenza viruses, including 8 influenza A (un-subtyped) and 3 influenza B. RSV (33/81, 40.7%) remained the most common detection. Parainfluenza and human metapneumovirus were also sporadically detected.
ILI Outbreaks
The number of outbreaks reported from long-term care facilities (LTCF) continued to decline in week 7. During this period, three ILI outbreaks were reported from LTCFs including 2 in Fraser HA (1 RSV, 1 lab result pending) and 1 lab-confirmed influenza B in Vancouver Island HA. Two school ILI outbreaks (unknown pathogen) were further reported in week 7. In the beginning of week 8, one lab-confirmed LTCF influenza A outbreak has been reported from Vancouver Coastal HA. To date, 85 lab-confirmed influenza outbreaks have been reported from LTCFs in BC in the current season (since week 40, 30 September 2012): 35 in Fraser, 21 in Interior, 11 in Vancouver Coastal, 12 in Vancouver Island, and 6 in Northern Health Authority.

FluWatch
In week 6 (3 to 9 February 2013), the percentage of laboratory detections positive for influenza continued to decrease; among the influenza viruses detected in week 6, 90.7% were positive for influenza A [32.1% A/H3N2, 7.6% A(H1N1)pdm09, and 60.3% A (un-subtyped)]. Although influenza B remains a very small percentage of laboratory detections, the proportion has increased over the past three weeks from 2.1% to 9.3%. The percentage of tests positive for RSV continued to increase. The number of regions reporting widespread and localized influenza activity decreased, with activity primarily in central and eastern regions of Canada. Few new influenza/ILI outbreaks were reported compared to the past 5 weeks. The ILI consultation rate decreased and is now within the expected range for this time of year.

www.phac-aspc.gc.ca/fluwatch/
National Microbiology Laboratory (NML): Strain Characterization

From September 1, 2012 to February 7, 2013, 425 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

- 297 A/Victoria/361/2011-like (H3N2)† from NFLD, PEI, NS, NB, QUE, ONT, MAN, SASK, ALTA and BC;
- 56 A/California/07/2009-like [A(H1N1)pdm09]* from NB, QUE, ONT and SASK;
- 14 B/Brisbane/60/2008-like** from QUE, ONT, MAN, and SASK;
- 58 B/Wisconsin/01/2010-like† from NB, QUE, ONT, SASK and BC;

* indicates a strain match to the recommended H1N1 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.

** 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, 2012 to February 8, 2013, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 285; zanamivir: 285; amantadine: 495), A(H1N1)pdm09 (oseltamivir: 52; zanamivir: 51; amantadine: 50), and influenza B isolates (oseltamivir: 60; zanamivir: 60). 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 6 (3-9 February 2013), influenza activity remained elevated in the United States but decreased in most areas. The proportion of deaths attributed to pneumonia and influenza remained high at 9.1% (vs. 9.0% in week 5), well above the epidemic threshold of 7.4%. For the third consecutive week, the proportion of outpatient visits for influenza-like illness decreased but remained above the national baseline of 2.2%. The percentage of specimens testing positive continued to decline, with an increasing share of influenza B. One thousand four hundred ninety-nine (19.7%) influenza viruses were detected, including 66.2% influenza A viruses (predominantly A/H3N2 among those subtyped), and 33.8% influenza B. The US CDC’s weekly influenza surveillance report is available at: [www.cdc.gov/flu/weekly](http://www.cdc.gov/flu/weekly).

Across Europe (ECDC report to 10 February 2013), influenza activity in most countries remained high and widespread, although few reported increasing trends. The proportion of influenza-positive sentinel specimens dropped slightly since the previous week (53% vs. 55%). Influenza A (56%) and B (44%) continued to co-circulate. Among influenza A specimens subtyped, the percentage of A(H1N1)pdm09 continued to increase marginally (to 65%).


In temperate Asia (WHO report of 15 February 2013), moderate influenza activity continued, while activity in most of the southern hemisphere remained at inter-seasonal levels.


Novel Coronavirus: The WHO announced a new confirmed case of novel coronavirus (NCoV) on 21 February 2013, identified from Saudi Arabia (the fourth case of 2013) in addition to a recent report (15 February 2013) of a 3rd case from a family cluster in the UK. Globally, this brings the total number of NCoV cases to 13. The most recent UK case, the third in a family cluster, recovered after mild illness and appears to have contracted NCoV from the first case in this cluster (case 10). This is the first confirmation that NCoV may produce relatively mild symptoms, and supports the potential for human-to-human transmission. Further information is available at the following links:


[www.who.int/csr/disease/coronavirus_infections/](http://www.who.int/csr/disease/coronavirus_infections/)

Avian Influenza:
The WHO and the Cambodian MoH jointly reported two new cases of avian influenza A/H5N1. These female children under six years old each were initially treated locally after developing symptoms (on 25 January 2013 and 3 February, respectively), but then died after a week of intensive hospital care. Both were likely to have had close contact with sick/dead poultry. The cumulative number of confirmed human cases of avian influenza A/H5N1 reported to the WHO in the 2013 calendar year has reached 10, of which 7 (70%) were fatal. www.who.int/influenza/human_animal_interface/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:

WHO Recommendations for 2013-14 Northern Hemisphere Influenza Vaccine
On 21 February 2013, the WHO announced the recommended strain components for the 2013-14 northern hemisphere vaccine:

- A/California/7/2009 (H1N1)pdm09 virus
- A/Victoria/361/2011 (H3N2)-like virus*
- B/Massachusetts/2/2012-(Yamagata lineage)-like virus**

*For A/H3N2, it is recommended that A/Texas/50/2012 be used as the A(H3N2) vaccine component because of antigenic changes in earlier A/Victoria/361/2011-like vaccine viruses (such as IVR-165) resulting from adaptation to propagation in eggs.

** This one of the three recommended components is different from the northern hemisphere seasonal TIV vaccines produced and administered in 2012-13.

For further details, see:
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
A(H1N1)pdm09: 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/
USA Weekly Surveillance reports: www.cdc.gov/flu/weekly/
European Influenza Surveillance Scheme: ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx
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/inflSurveillanceReports.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.

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<th>Health unit/medical health officer notified? ☐ Yes ☐ No</th>
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<td>Contact Phone: ______________________</td>
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<td>HSDA: ______________________</td>
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<td>Full Facility Name: _________________________________________________</td>
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<tr>
<td>Is this report: ☐ First Notification (complete section B below; Section D if available)</td>
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<td>☐ Update (complete section C below; Section D if available)</td>
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<tr>
<td>☐ Outbreak Over (complete section C below; Section D if available)</td>
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<td>(if ward or wing, please specify name/number: ______________________)</td>
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<td>☐ Workplace ☐ School (grades: ) ☐ Other (____________)</td>
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<td>Died</td>
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<td>If over, date outbreak declared over (dd/mm/yyyy): DD / MMM / YYYY</td>
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<td>If yes, organism identified? ☐ Yes (specify: _____________) ☐ No ☐ Don’t know</td>
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