Summary

In week 3 (January 15-21, 2012), most influenza surveillance indicators suggested that influenza activity in BC remained low. The influenza-like illness (ILI) rate reported by sentinel physicians was low and below the expected range for this time of year (0.34%). The MSP influenza illness proportion continued to be at or below the 10-year median level for this time of year throughout the province. The ILI consultation rate in BC Children’s Hospital ER remained low and consistent with the expected level for this time of year. One lab-confirmed influenza B outbreak was reported from a long term care facility in Vancouver Coastal Health Authority; five ILI outbreaks from schools were further reported from the Interior and Northern Health Authorities. Of one hundred thirty-six specimens tested at the provincial laboratory in week 3, twenty-five (18.4%) influenza positives were detected, higher than the previous week, including 24 (17.6%) influenza A/H3N2 and 1 (0.7%) influenza A(H1N1)pdm09. Other significant respiratory virus detections included rhino/enterovirus (18/136, 13.2%), RSV (12/136, 8.8%), and human metapneumovirus (9/136, 6.6%). In addition, RSV continued to dominate among the respiratory viruses detected at BC Children’s Hospital.
Sentinel Physicians

In week 3, the proportion of patients with ILI among those presenting to sentinel physicians was 0.34%, similar to the previous week and remaining below the expected range for this time of year. Fifty percent of sentinel physician sites have reported for week 3 to-date.

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 week 3 was 4.8%, similar to the previous week.
Medical Services Plan
In week 3, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims was low and remained at or below the ten-year median for this time of year throughout BC.

*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 25 January 2012
Laboratory Reports
In week 3, one hundred and thirty-six respiratory specimens were tested at the BC Public Health Microbiology & Reference Laboratory, PHSA. Twenty-five (18.4%) submitted specimens were positive for influenza, an increase compared to the previous week, including 24 (17.6%) influenza A/H3N2 from all HAs except Northern, and 1 (0.7%) influenza A(H1N1)pdm09 from Fraser HA. Of 136 specimens tested for other respiratory viruses, significant detections included 18 rhino/enterovirus (13.2%), 12 respiratory syncytial virus (8.8%), 9 human metapneumovirus (6.6%), and 8 coronavirus (5.9%). Other respiratory viruses were also sporadically detected.

In week 3, BC Children’s and Women’s Health Centre Laboratory tested 77 respiratory specimens: three (3.9%) were positive for influenza A. RSV continued to predominate among the other respiratory viruses detected (29/77, 37.7%). Other respiratory viruses were also detected at low levels.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory, PHSA, 2011-2012

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Children’s and Women’s Health Centre Laboratory, 2011-2012

Data provided by Virology Department at Children’s & Women’s Health Centre of BC
ILI Outbreaks

In week 3, one lab-confirmed influenza B outbreak was reported from a long term care facility in Vancouver Coastal HA. Five ILI outbreaks from schools were further reported from the Interior and Northern HAs.

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, 2011-2012 season

CANADA

FluWatch

In week 2 (January 15 to 21, 2012), Influenza activity increased in more regions across Canada but remained low in certain areas (i.e. Atlantic region, the Territories, and northern regions of QC and ON). The proportion of tests positive for influenza in week 2 was 3.4% (134/3,894). One hundred and thirty-four influenza detections included 73 A/H3N2, 9 A(H1N1)pdm09, 14 A (unsubtyped) and 38 influenza B. The ILI consultation rate declined in week 2 compared to previous weeks and remained within expected levels for this time of year.

www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

Between September 1, 2011 and January 26, 2012, 107 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

- 40 A/Perth/16/2009-like (H3N2)† from ONT, SASK, ALTA, and BC;
- 24 A/California/07/09-like (H1N1)* from QUE and ONT;
- 25 B/Brisbane/60/2008-like (B/Victoria/02/87 lineage)† from NFLD, QUE, ONT, ALTA, and BC;
- 18 B/Wisconsin/01/2010-like (recent B Yamagata lineage) from NB, QUE, ONT, ALTA, and BC;

† 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 January 26, 2012, drug susceptibility to oseltamivir and zanamivir was tested at the NML for thirty-seven influenza A/H3N2, twenty-two influenza A(H1N1)pdm09, and forty-two influenza B isolates. The results indicated that all isolates were sensitive to oseltamivir and zanamivir. In addition, fifty-one A/H3N2 and twenty A(H1N1)pdm09 isolates were also tested for susceptibility to amantadine and all were found to be resistant.
INTERNATIONAL

USA: in week 2 ending January 14, 2012, influenza activity in the United States remained relatively low. 138 (3.7%) specimens tested were positive for influenza including 6 influenza B and 132 influenza A (65 A/H1N1, 15 pandemic H1N1, and 52 unsubtyped A). The proportion of outpatient visits for ILI was 1.2% which was below the national baseline of 2.4%. The USA further reported that 7.6% of all deaths were due to pneumonia and influenza illness, which was also below the epidemic threshold for this time of the year. www.cdc.gov/flu/weekly/.

WHO news: (updated on 20 January 2012) Northern Hemisphere: Influenza activity in the temperate regions of the northern hemisphere remained low overall though notable local increases in activity were reported in some areas of Canada, Europe, northern Africa, China and the middle East. The most commonly detected virus type or subtype throughout the northern hemisphere temperate zone was influenza A/H3N2 with the exception of Mexico, where influenza A(H1N1)pdm09 was the predominant subtype circulating, and China which was reporting a predominance of influenza type B. Tropics and Southern Hemisphere: Countries in the tropical zone reported generally low or undetectable levels of influenza activity with the exception of southern China, where influenza type B detections were increasing, and Costa Rica, which continued to report influenza A/H3N2 but at declining levels. Influenza activity in the temperate countries of the southern hemisphere was at inter-seasonal levels though Chile, Paraguay and Australia all reported persistent low level transmission of A/H3N2 during their summer season. Antigenic characterization and Virological surveillance: Reports from countries that did antigenic characterization indicate that nearly all influenza A viruses tested were antigenically related to those viruses included in the current trivalent influenza vaccine. Many of the influenza type B viruses were of the Yamagata lineage, which was not included in the current vaccine. Oseltamivir resistance continued to be observed at very low levels and had not increased notably over levels reported in previous seasons.

Avian Influenza:
On 24 January 2012, The Ministry of Health of China notified the WHO of a fatal case of human infection with avian influenza A/H5N1 virus: a 39 year-old male who developed symptoms on 6 January 2012 and died on 22 January 2012 after hospitalization; the epidemiological investigation for this case is ongoing. On 20 January 2012, the Ministry of Health of Viet Nam announced a confirmed case of human infection with avian influenza A/H5N1 virus: an 18-year-old male who developed symptoms on 10 January 2012 and was admitted to hospital on 14 January 2012 but died on 16 January 2012. The cumulative deaths in 2012 has reached 4 out of the total of 5 cases reported.

WHO Recommendations for 2011-12 Northern Hemisphere Influenza Vaccine
On February 17, 2011 the WHO announced the recommended strain components for the 2011-12 northern hemisphere trivalent influenza vaccine (TIV):
- A/California/7/2009 (H1N1)-like virus
- A/Perth/16/2009 (H3N2)-like virus
- B/Brisbane/60/2008 (Victoria lineage)-like virus

All three recommended components are the same as for northern hemisphere seasonal TIV vaccines produced and administered in 2010-11. For further details, see: www.who.int/influenza/vaccines/virus/2011_12north/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.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/eng_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

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### First Notification

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