BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2012-13: Number 13, Week 5

January 27 to February 2, 2013

BC Centre for Disease Control
An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Influenza in BC may have peaked but remains high

Contents:

Summary

In week 5 (January 27 to February 2, 2013), most indicators suggested that influenza activity in BC remained high but may have peaked. The proportion of patients with influenza-like illness among those presenting to sentinel physicians, though not increasing, continued to be above the expected range for this time of year. For the sixth consecutive week, more than a third of the respiratory specimens tested at the BC Public Health Microbiology & Reference Laboratory were positive for influenza, predominantly A/H3N2. Among other viruses, respiratory syncytial virus continued to be the most common detection. The proportion of medical visits with an influenza diagnosis continued to decrease at the provincial level and in most Health Authorities, but remained high for the time of year in most regions. The number of long-term care facility lab-confirmed influenza outbreaks has dropped in the past two weeks, although many school outbreaks continue to be reported. Compared to previous weeks, at the BC Children's and Women's Health Centre Laboratory, the influenza-positive percentage was similar with a slightly increasing influenza B proportion. The proportion of consultations for influenza-like illness at BC Children's Hospital emergency room remained somewhat elevated.

Report disseminated February 7, 2013
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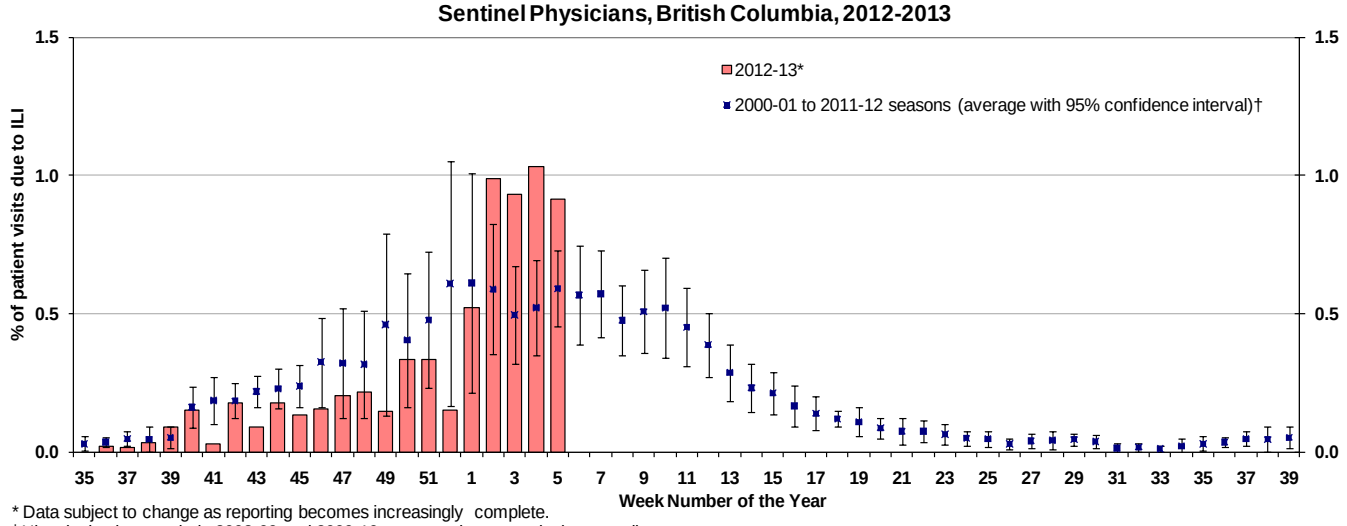
British Columbia

Sentinel Physicians

In week 5, the proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians fell slightly to 0.92% in week 5 compared to the previous week, still above the expected level for this time of year. To date, 59% of sentinel physician sites have reported for week 5.

Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 10 Seasons Sentinel Physicians, British Columbia, 2012-2013

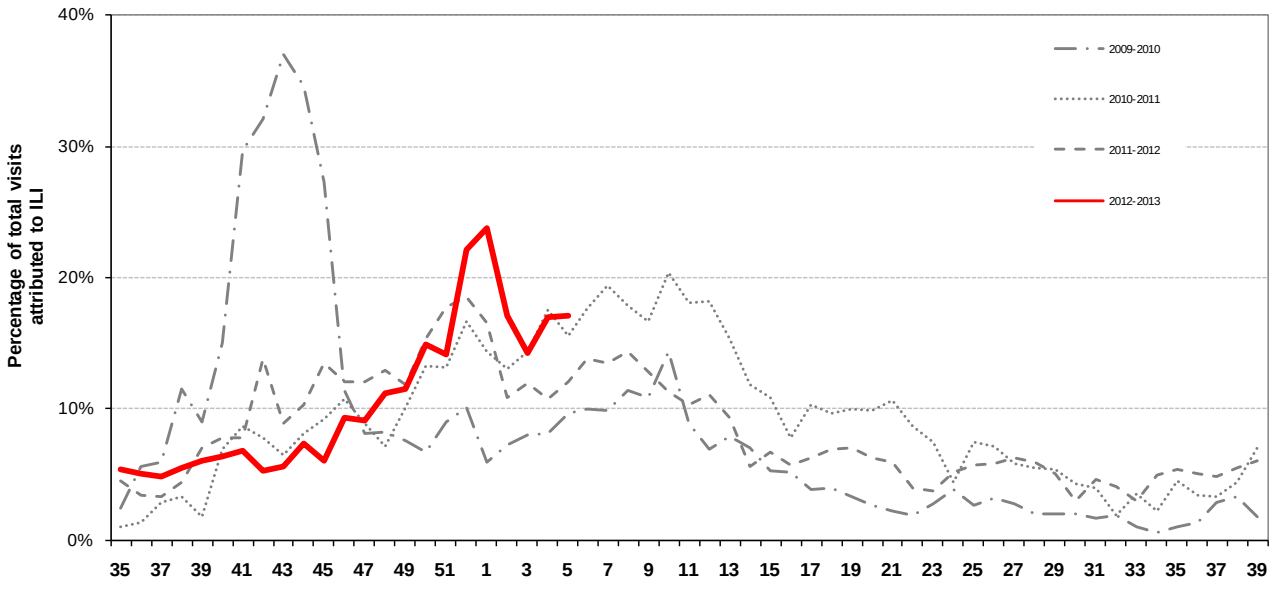


* Data subject to change as reporting becomes increasingly complete.
† Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

BC Children's Hospital Emergency Room

The proportion of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness was 17.1% in week 5, similar to the previous week, near the upper range seen in recent previous seasons.

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

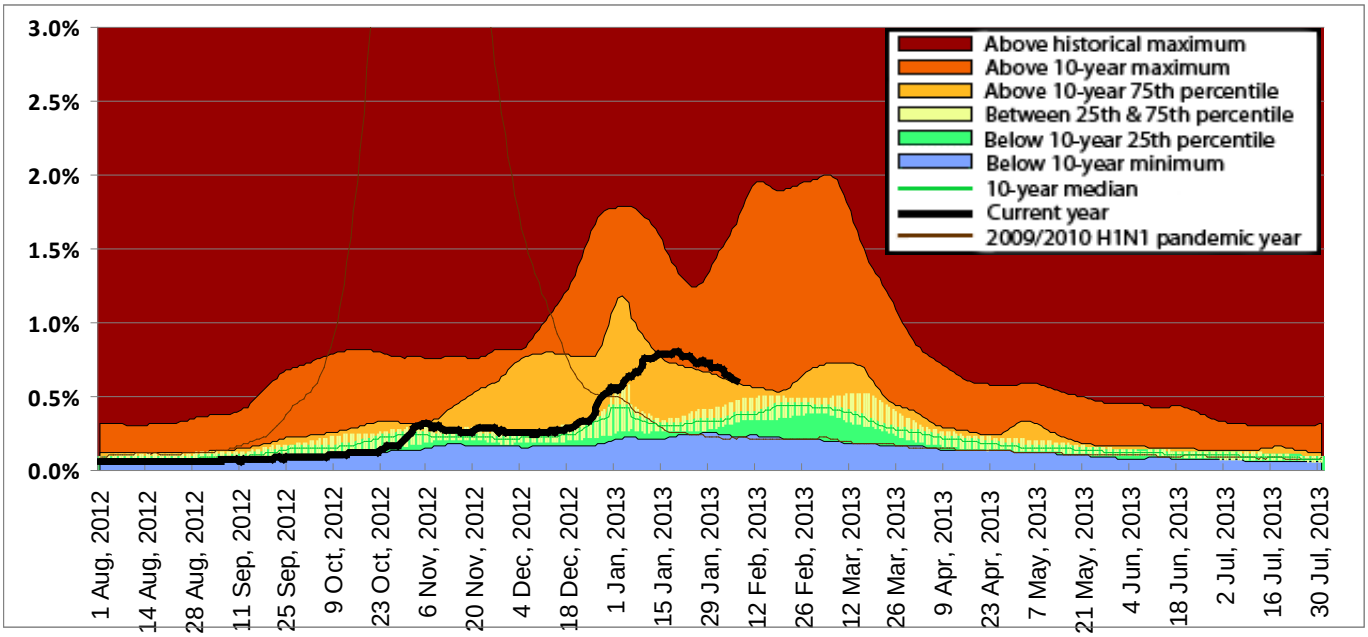


Source: BCCH Admitting, discharge, transfer database, ADT
Note: Data from 2010-11 and 2011-12 is based on new system (Triage Chief Complaint) not directly comparable to data for 2009-10. In bulletins before week 9 of 2011-12 season, data is based on old system.

Medical Services Plan

During week 5, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims declined compared to the past few weeks at the provincial level and in each Health Authority except Vancouver Island, with variability in the level of illness proportions across HAs. This trend suggests that the peak of activity may have passed in most regions of 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 6 February 2013.

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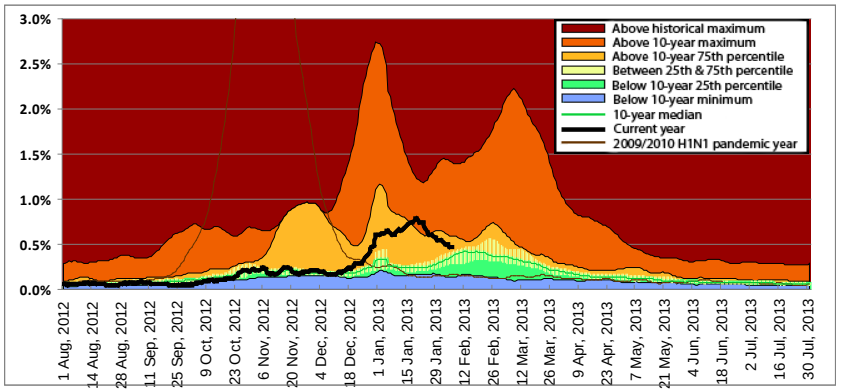
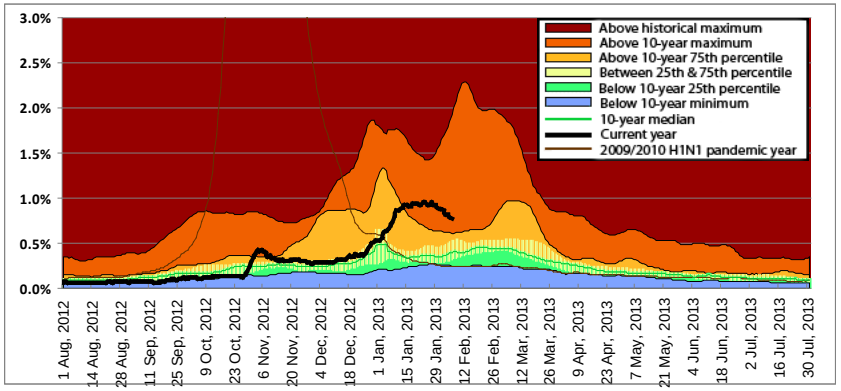
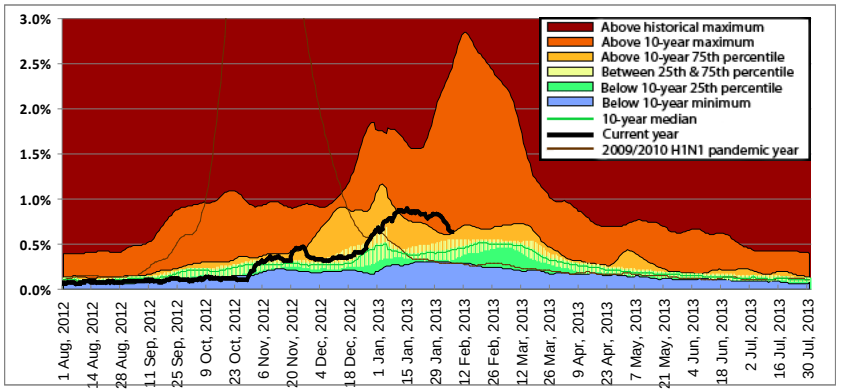
Interior



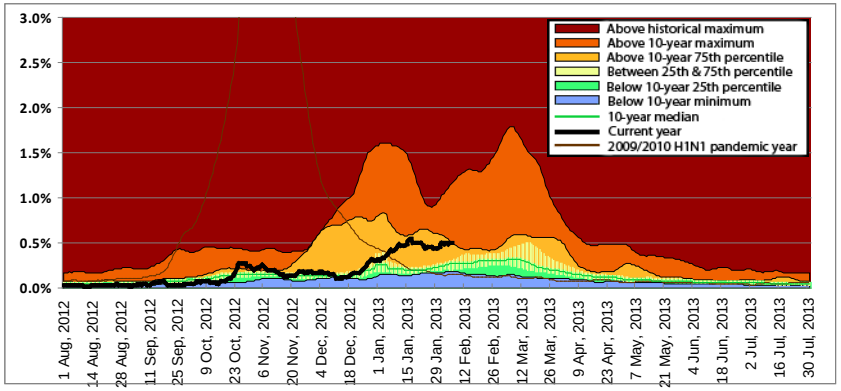
Fraser



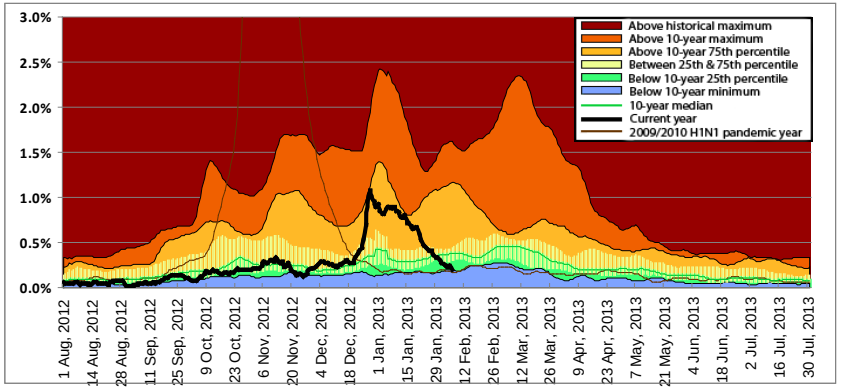
Vancouver Coastal



Vancouver Island

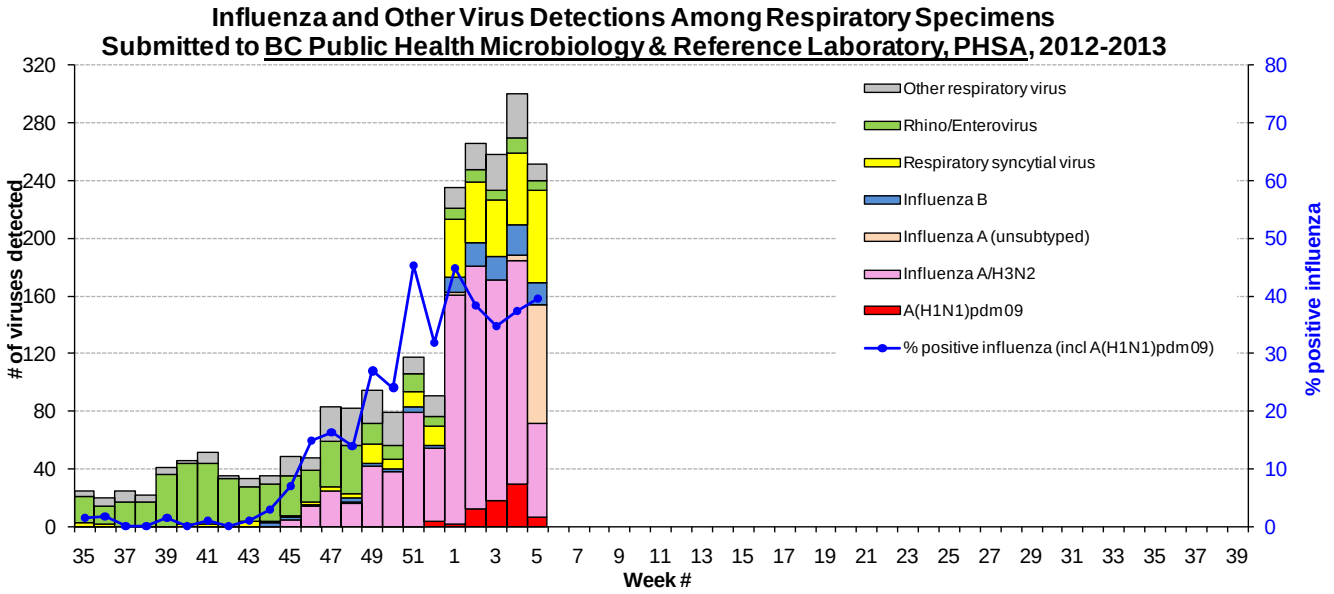


Northern

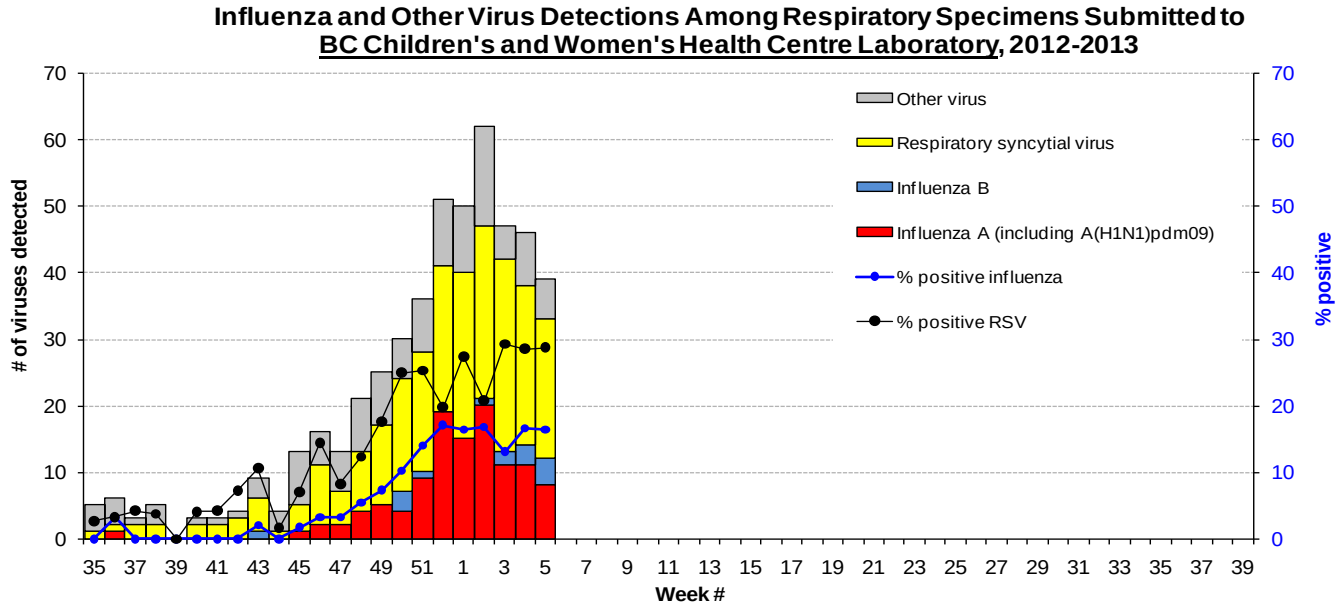


Laboratory Reports

In week 5, four hundred and forty specimens were tested at the BC Public Health Microbiology & Reference Laboratory, PHSA. Among them, 174 (39.5%) were positive for influenza, including 158 influenza A from all Health Authorities [65 A/H3N2, 7 A(H1N1)pdm09, 86 A (subtype pending)], and 16 influenza B. Among other respiratory viruses, RSV continued to be the most common detection (66/440, 15%) with other respiratory viruses also sporadically detected. However, it should be noted that due to the volume of specimens, only a subset is tested for other respiratory viruses with emphasis on children, hospitalized and care facility patients anticipated to skew related trends in other respiratory virus detection.



In week 5, BC Children's and Women's Health Centre Laboratory tested 73 respiratory specimens, of which 12 (16.4%) were positive for influenza viruses, including 8 influenza A (un-subtyped) and 4 influenza B. RSV (21/73, 28.8%) remained the most common detection. Other respiratory viruses were also sporadically detected.

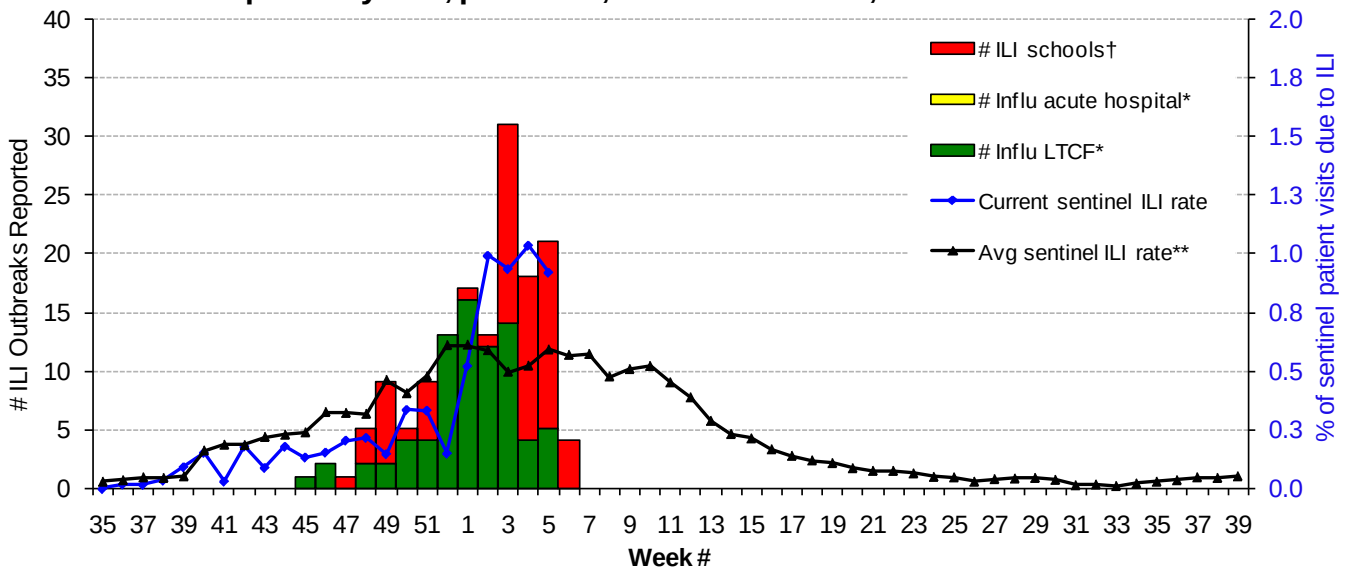


Data provided by Virology Department at Children's & Women's Health Centre of BC

ILI Outbreaks

The number of outbreaks reported from long-term care facilities (LTCF) dropped in recent weeks. In week 5, six ILI outbreaks were reported from LTCF, including 5 lab-confirmed influenza A and 1 with negative lab result. Sixteen school ILI outbreaks (unknown pathogen) were further reported in week 5. In the beginning of week 6, four school ILI outbreaks (unknown pathogen) have been reported. To date, 79 lab-confirmed influenza outbreaks have been reported from LTCFs in BC in the current season (since week 40, 30 September 2012): 34 in Fraser, 21 in Interior, 10 in Vancouver Coastal, 8 in Vancouver Island, and 6 in Northern Health Authority.

Number of Influenza and Influenza-Like Illness (ILI) Outbreaks Reported, Compared to Current Sentinel ILI Rate and Average Sentinel ILI Rate for past 10 years, per Week, British Columbia, 2012-2013 season



* 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.
** Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

FluWatch

In week 4 (20-26 January 2013), several indicators including the percentage of positive laboratory tests for influenza, the ILI consultation rate, the proportion of antiviral prescriptions, and the number of adult and paediatric influenza-associated hospitalizations showed a decline in influenza activity across Canada. Compared to the previous week, fewer regions reported widespread and localized influenza activity and influenza outbreaks. The ILI consultation rate decreased but remained above the expected range for this time of year. Almost all of the influenza viruses detected were influenza A, predominantly subtype A/H3N2. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

From September 1, 2012 to Jan. 31, 2013, 372 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

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

¶ indicates a strain match to the recommended H3N2 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.
* indicates a strain match to the recommended H1N1 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 January 31, 2013, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 241; zanamivir: 241; amantadine: 437), A(H1N1)pdm09 (oseltamivir: 40; zanamivir: 39; amantadine: 42), and influenza B isolates (oseltamivir: 48; zanamivir: 48). 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 4 (20-26 January 2013), influenza activity remained elevated in the United States but decreased in some areas. The proportion of deaths attributed to pneumonia and influenza jumped to 9.4%, well above the epidemic threshold of 7.4%. The proportion of outpatient visits for influenza-like illness declined slightly to 4.2%, but remained above the national baseline of 2.2%. The percentage of specimens testing positive continued to decline marginally; 2,701(25.5%) influenza viruses were detected, including 79.3% influenza A viruses (almost exclusively A/H3N2 among those subtyped), and 20.7% influenza B. Eight paediatric deaths were further reported by the USA. The US CDC's weekly influenza surveillance report is available at: www.cdc.gov/flu/weekly.

Across **Europe** (ECDC report to 27 January 2013), influenza activity continued to increase, although the epidemic may have passed its peak in some north-western countries. Influenza A and B continued to co-circulate. Among influenza-positive specimens subtyped, an increase in the proportion of A(H1N1)pdm09 over A/H3N2 was observed over the past two weeks. The proportion of influenza-positive sentinel specimens was high and increasing.
http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=1046.

According to the WHO influenza update of 1 February 2013, in temperate **Asia**, ILI activity continued to increase in the past weeks. Among influenza lab detections, influenza A predominated, with the proportion of A(H1N1)pdm09 increasing [54% A/H3N2 and 46% A(H1N1)pdm09]. Influenza activity in most of the rest of Asia and the southern hemisphere was at inter-seasonal levels.
www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

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:
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
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/
Washington State Flu Updates: www.doh.wa.gov/EHSPHL/Epidemiology/CD/fluupdate.pdf
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/
Australian Influenza Report: www.health.gov.au/internet/main/publishing.nsf/content/cda-surveil-ozflu-flucurr.htm
New Zealand Influenza Surveillance Reports: www.surv.esr.cri.nz/virology/influenza_weekly_update.php

2. Avian Influenza Web Sites

World Health Organization – Avian Influenza: www.who.int/csr/disease/avian_influenza/en/
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

version: 26 Oct 2011

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.

A

Reporting Information

Health unit/medical health officer notified? ☐ *Yes* ☐ *No*

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)*

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): DD / MMM / YYYY

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

C

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

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

D

Laboratory Information

Specimen(s) submitted? ☐ Yes (location: _____) ☐ No ☐ Don't know

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

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