BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2012-13: Number 15, Week 7

February 10 to 16, 2013

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

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Influenza activity in BC declines to expected seasonal levels

Contents:

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.

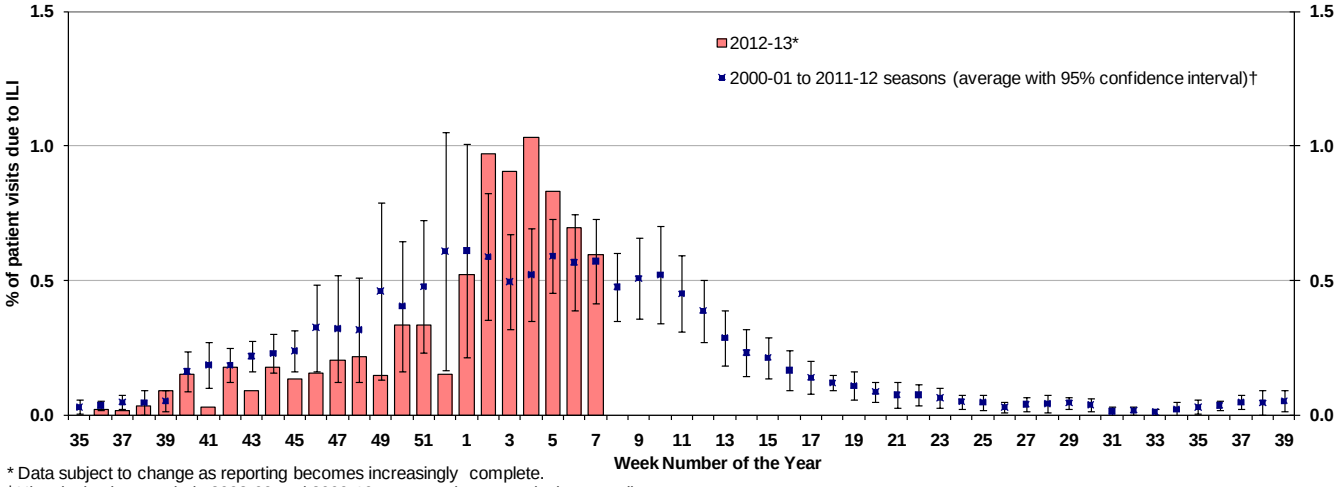
Report disseminated February 21, 2013
Contributors: Helen Guiyun Li, Lisan Kwindt, Naveed Janjua, Danuta Skowronski

British Columbia

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.

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

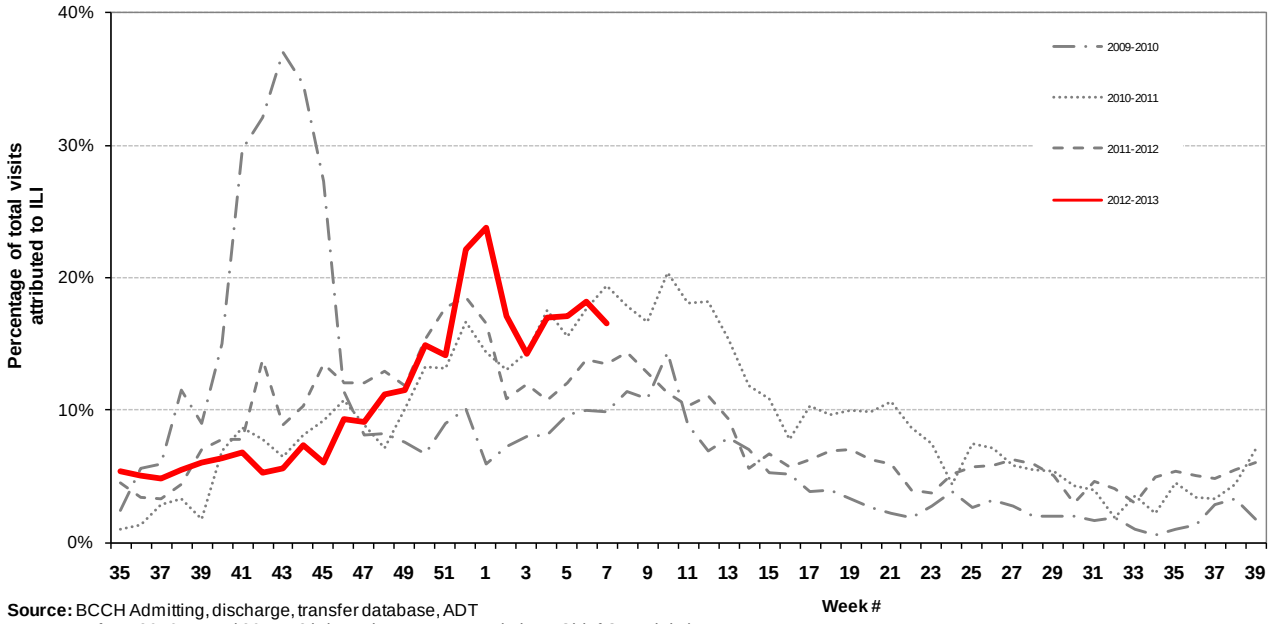


* Data subject to change as reporting becomes increasingly complete.
† Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

BC Children's Hospital Emergency Room

The proportion of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness decreased to 16.6% in week 7, consistent with the expected level for this time of year.

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

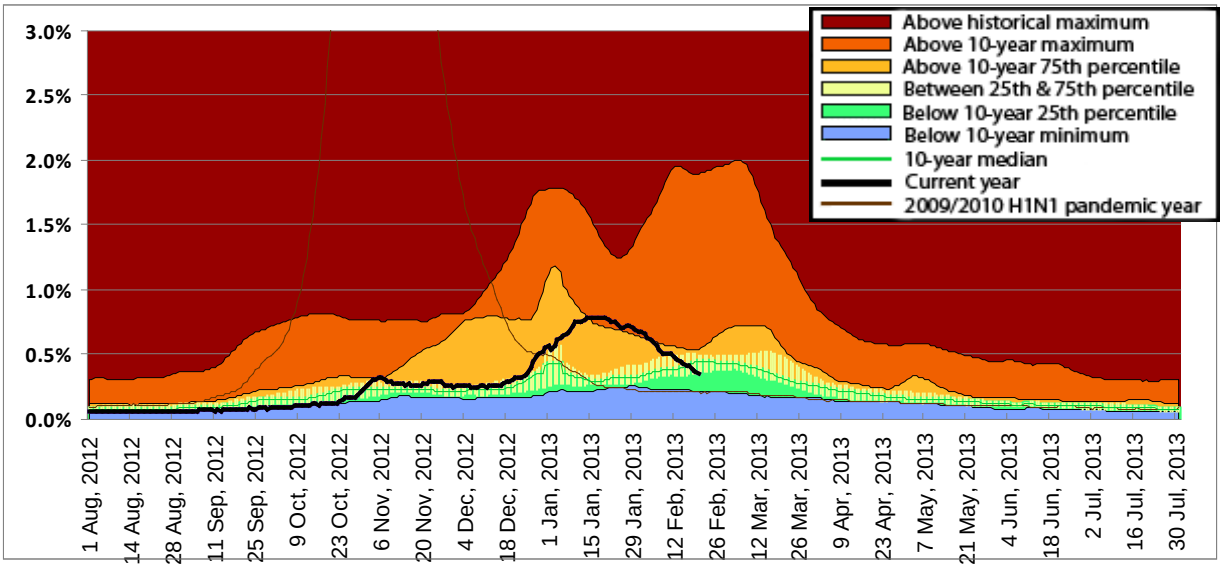


Source: BCCH Admitting, discharge, transfer database, ADT
Note: Data from 2010-11 and 2011-12 is based on new system (Triage Chief Complaint) not directly comparable to data for 2009-10. In bulletins before week 9 of 2011-12 season, data is based on old system.

Medical Services Plan

During week 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.

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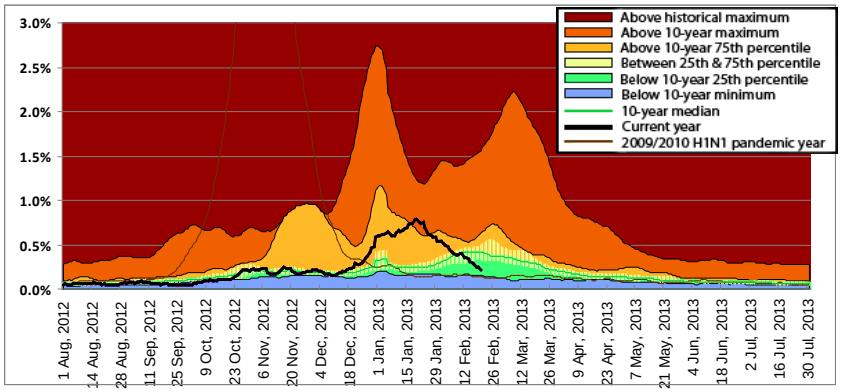
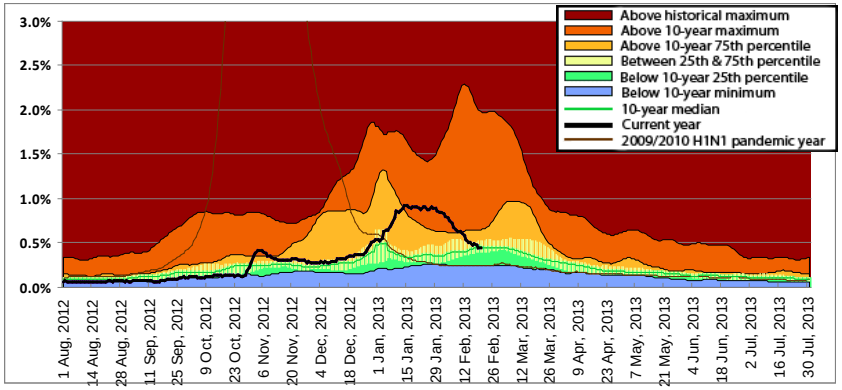
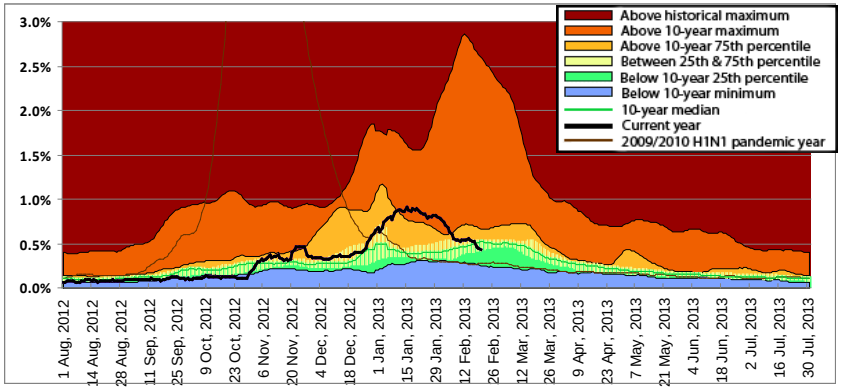
Interior



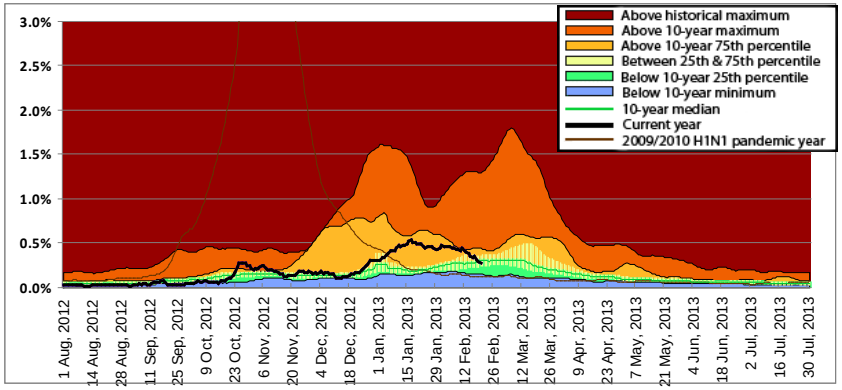
Fraser



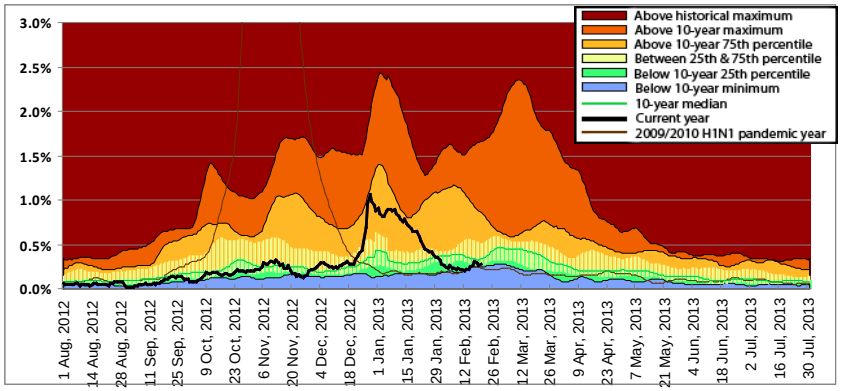
Vancouver Coastal



Vancouver Island



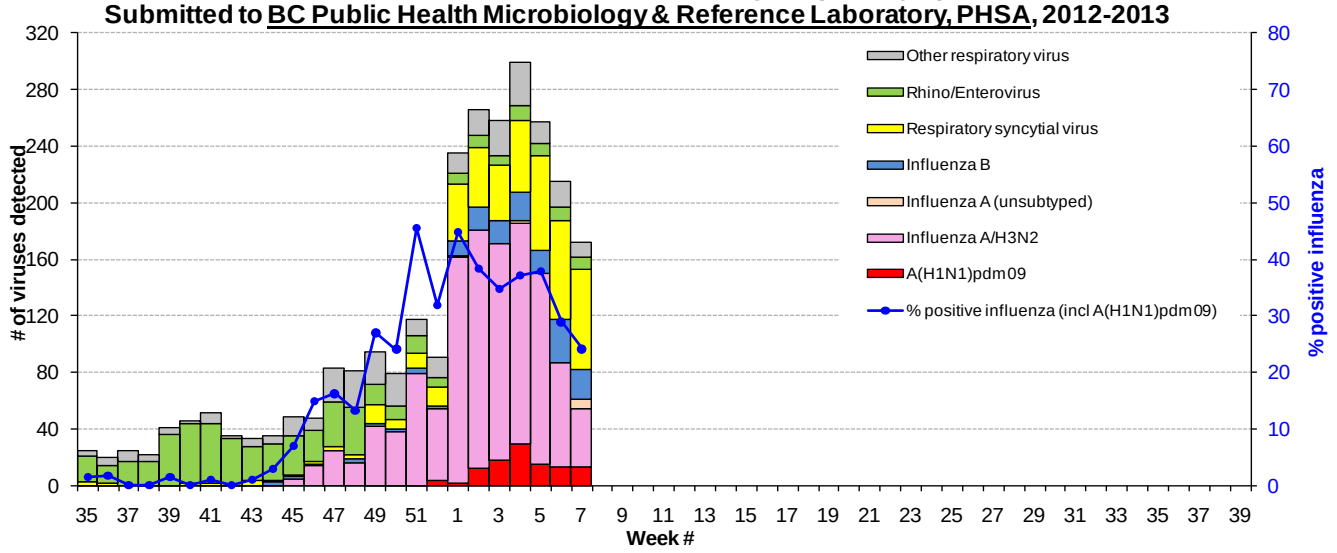
Northern



Laboratory Reports

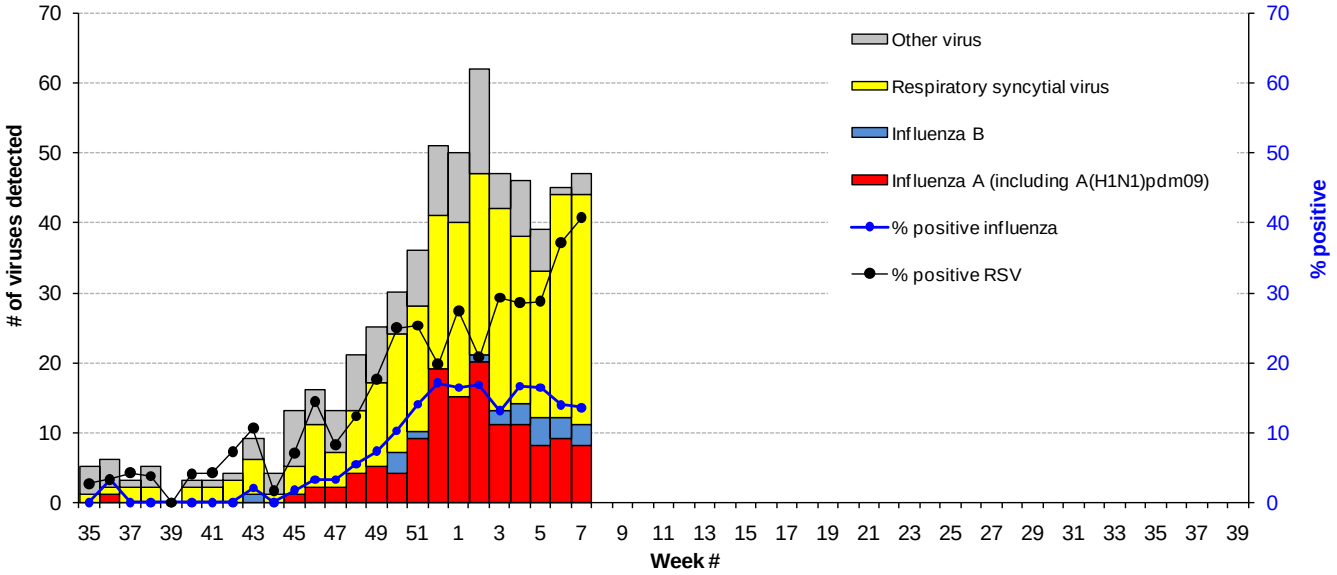
In week 7, both the volume of specimens submitted for respiratory virus testing and the influenza positive rate continued to decline compared to previous weeks. During this period, 340 specimens were tested at the BC Public Health Microbiology & Reference Laboratory, PHSA. Among them, 82 (24.1%) were 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.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory, PHSA, 2012-2013



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.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Children's and Women's Health Centre Laboratory, 2012-2013

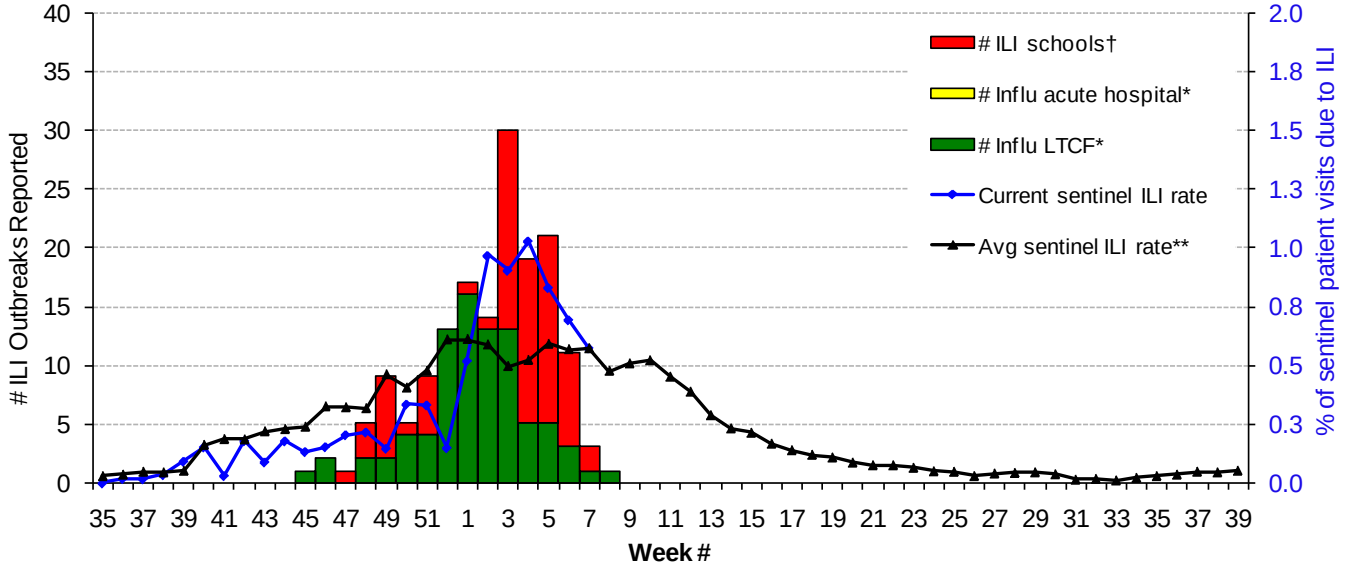


Data provided by Virology Department at Children's & Women's Health Centre of BC

ILI Outbreaks

The number of outbreaks reported from long-term care facilities (LTCF) 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.

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 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 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 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.

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%).
http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=1055

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.
www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

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.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/NovelCoronavirus2012/

www.who.int/csr/disease/coronavirus_infections/

ECDC has issued an updated risk assessment on February 19, 2013, available at
http://ecdc.europa.eu/en/publications/Publications/novel-coronavirus-rapid-risk-assessment-update.pdf

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:
www.who.int/influenza/vaccines/virus/recommendations/2012_13_north/en/index.html

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:
www.who.int/influenza/vaccines/virus/recommendations/2013_14_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

Communicable Disease Prevention & Control Services
655 W. 12th Ave.
Vancouver BC V5Z 4R4

Phone: (604) 707-2510
Fax: (604) 707-2516
ilioutbreak@bccdc.ca