BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2012-13: Number 17, Weeks 9-10

February 24 to March 9, 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 continues at low levels

Contents:

Summary

In weeks 9-10 (February 24 to March 9, 2013), most indicators suggest that influenza activity in BC remains low. The proportion of medical visits with an influenza diagnosis remained below seasonal norms throughout the province. The proportion of patients with influenza-like illness among those presenting to sentinel physicians was lower than the previous week and within the expected range for this time of year. Less than a quarter of the specimens tested at the provincial laboratory were positive for influenza, still predominantly influenza A, but with an increasing B contribution. No lab-confirmed influenza outbreaks were reported during this period. Compared to the previous week, the average proportion of consultations during this period for influenza-like illness at BC Children's Hospital emergency room declined slightly. At the BC Children and Women's Centre Laboratory, the percentage of influenza viruses detected continued to decrease, and the proportion of respiratory syncytial virus detections declined sharply but remained the most common virus detected.

Report disseminated March 14, 2013

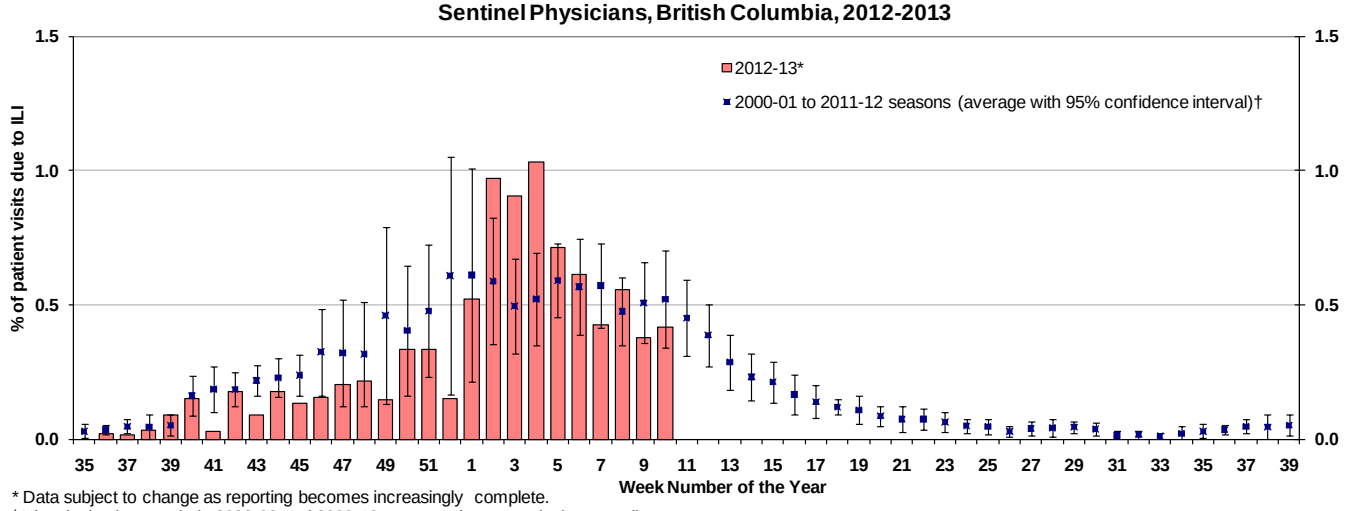
Contributors: Helen Guiyun Li, Lisan Kwindt, Naveed Janjua, Danuta Skowronski

British Columbia

Sentinel Physicians

In weeks 9-10, the proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians was 0.38% and 0.42% respectively, lower than the previous week, and within the expected range for this time of year. To date 67% and 50% of sentinel physician sites have reported for weeks 9 and 10 respectively.

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

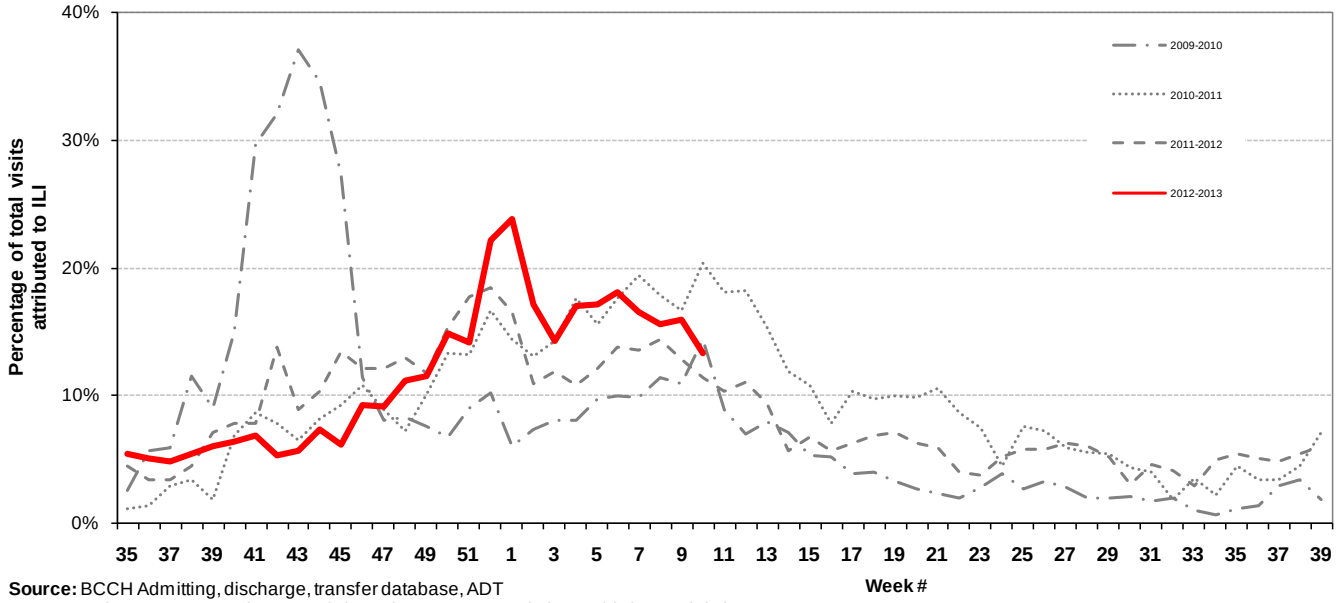


* Data subject to change as reporting becomes increasingly complete.
† Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

BC Children's Hospital Emergency Room

The proportion of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness were 16.0% and 13.3% in weeks 9 and 10 respectively, 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

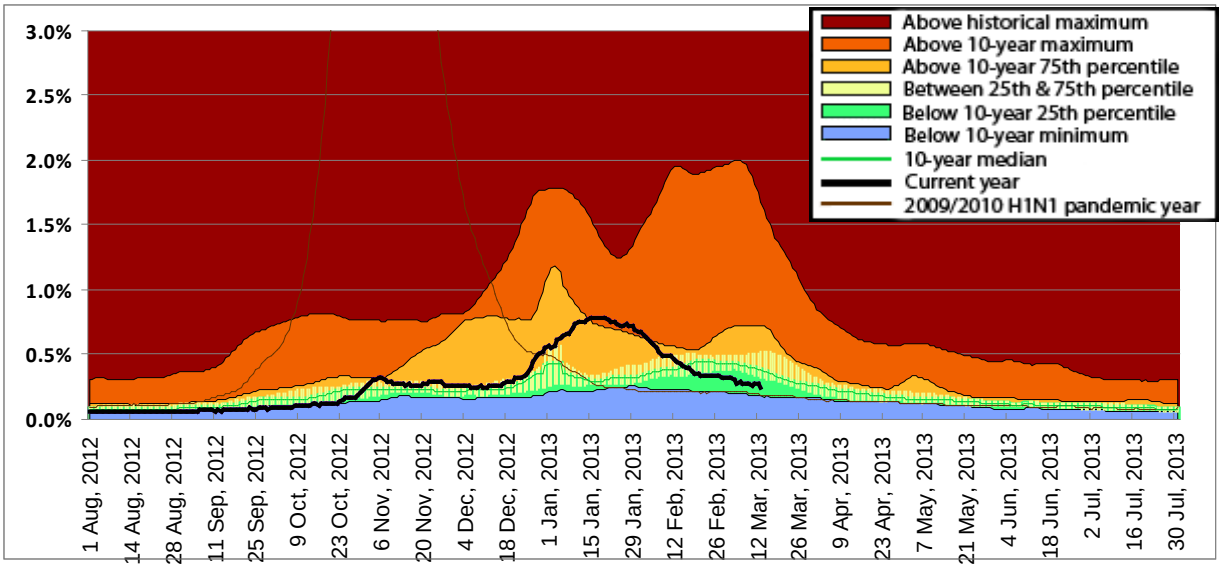


Source: BCCH Admitting, discharge, transfer database, ADT
Note: Data from 2010-11 and 2011-12 is based on new system (Triage Chief Complaint) not directly comparable to data for 2009-10. In bulletins before week 9 of 2011-12 season, data is

Medical Services Plan

During weeks 9-10, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims was below or at the 10-year 25th percentile 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 13 March 2013.

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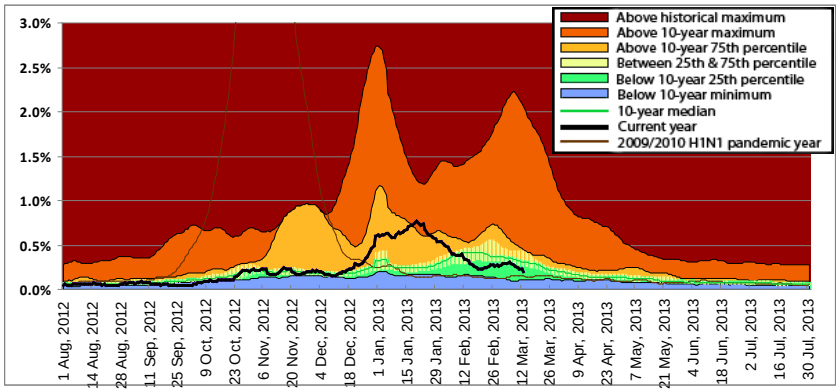
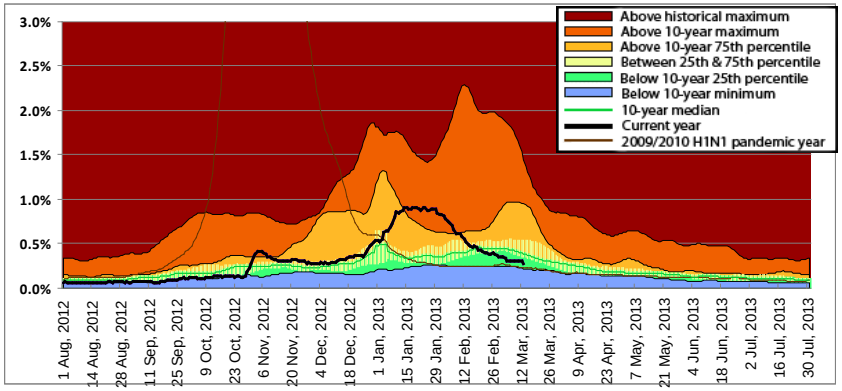
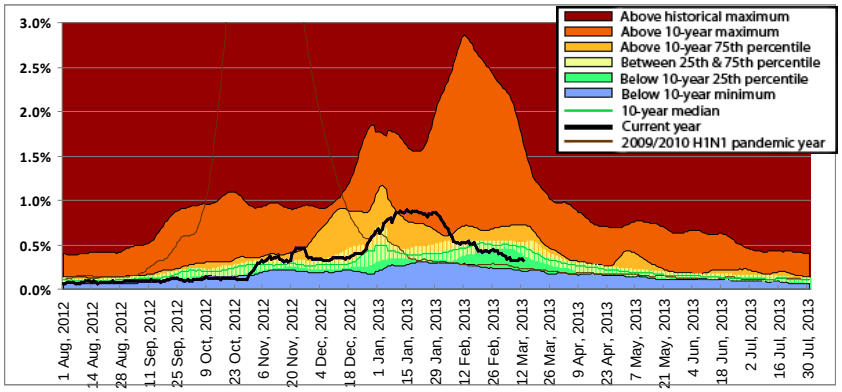
Interior



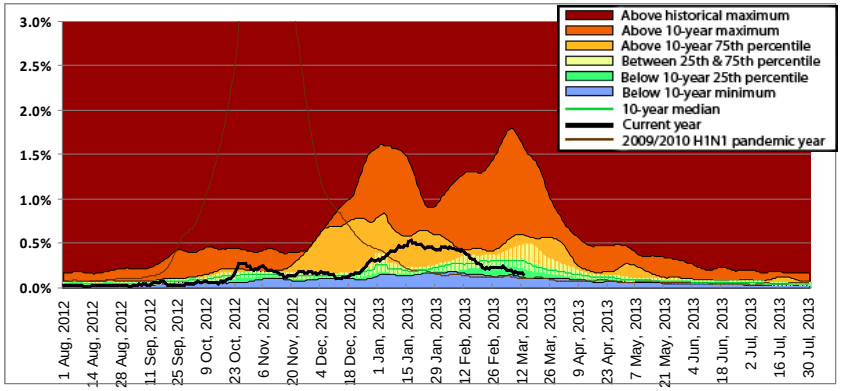
Fraser



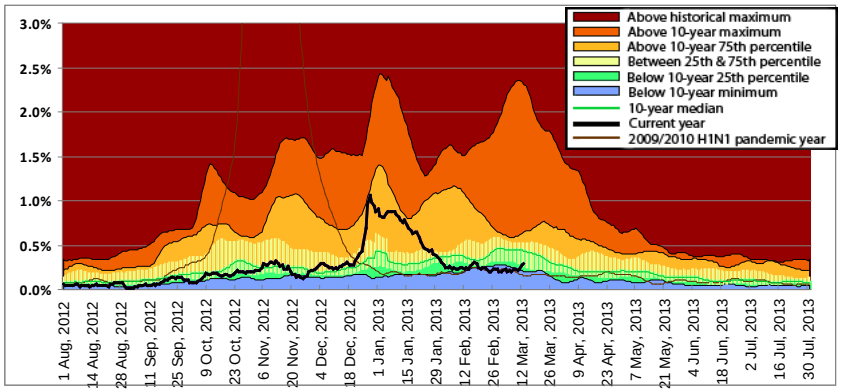
Vancouver Coastal



Vancouver Island

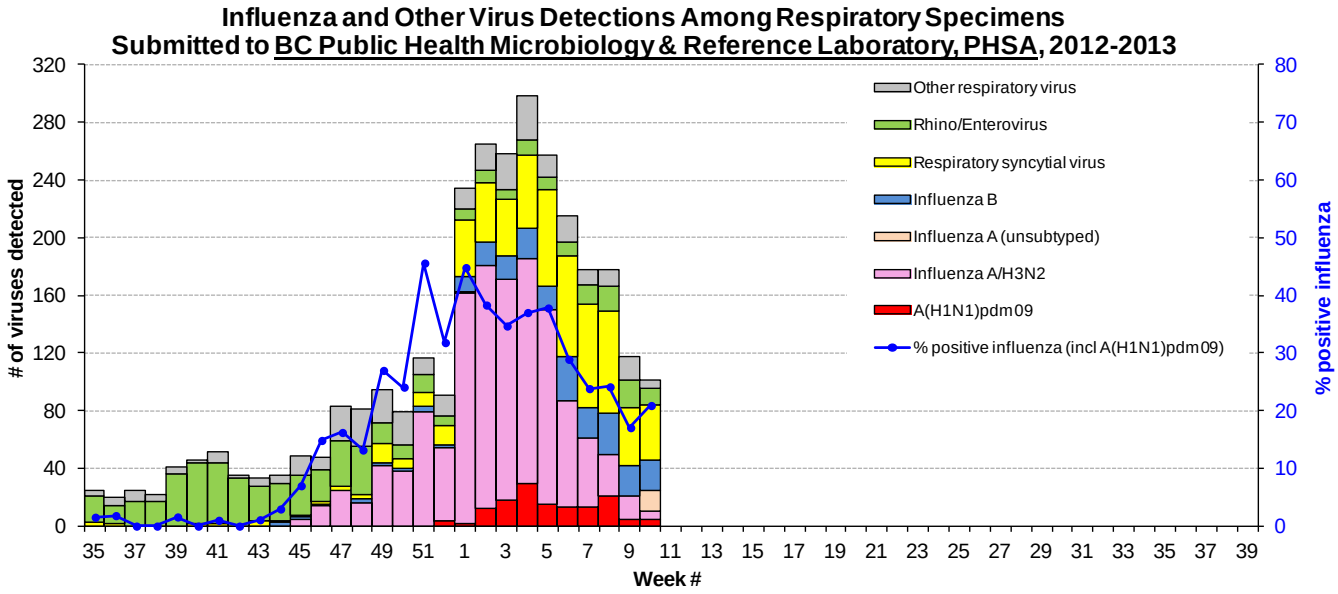


Northern

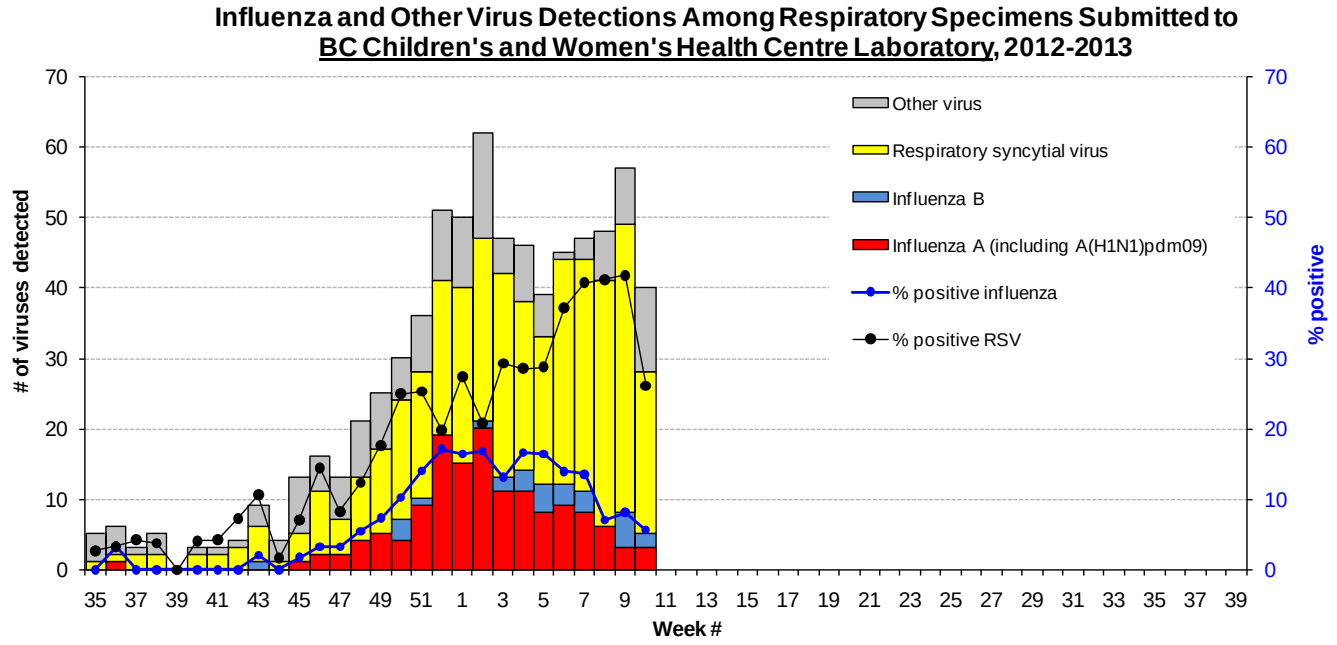


Laboratory Reports

As reported by the BC Public Health Microbiology & Reference Laboratory, PHSA for weeks 9-10, four hundred and sixty-two specimens were tested for influenza. Among them, 88 (19.0%) were positive, including 46 influenza A from all Health Authorities but Northern [21 A/H3N2, 10 A(H1N1)pdm09, 15 A (subtype pending)], and 42 influenza B from all Health Authorities. Compared to the previous week, the average proportion of influenza B among influenza-positive specimens during this period increased (42/88, 47.7%).



In weeks 9-10, BC Children's and Women's Health Centre Laboratory reported that they tested 186 respiratory specimens, of which 13 (7.0%) were positive for influenza (all influenza A [un-subtyped]). RSV (64/186, 34.4%) remained the most common detection. Human metapneumovirus and adenovirus were also sporadically detected.



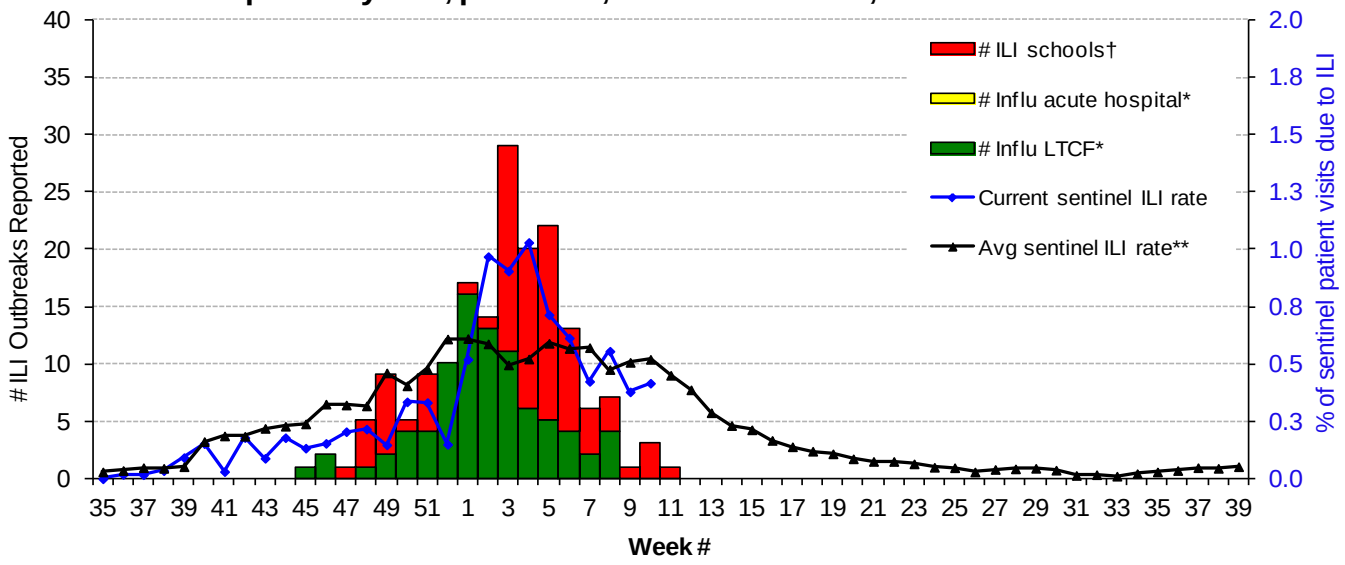
Data provided by Virology Department at Children's & Women's Health Centre of BC

ILI Outbreaks

In weeks 9-10, no lab-confirmed influenza outbreaks were reported from long-term care facilities (LTCF). In total, 85 lab-confirmed influenza LTCF outbreaks have been reported in BC for the current season (since week 40, 30 September 2012): 36 in Fraser, 20 in Interior, 12 in Vancouver Coastal, 13 in Vancouver Island, and 4 in Northern Health Authority[¶]. One outbreak from a LTCF in Northern Health Authority (parainfluenza) and four school ILI outbreaks (NHA: 3; IHA:1; all unknown pathogen) were further reported during this period. In the beginning of week 11, one school outbreak has been reported from NHA (unknown pathogen).

[¶]Numbers revised since previous bulletin upon further reconciliation of reports.

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 (as of 9 March 2013)

The ILI consultation rate decreased in the past few weeks and was within the expected range for this time of year. In week 9 (24 February to 2 March, 2013), influenza detections increased slightly over week 8, primarily in Eastern Canada (14.9% in week 9, compared to 12.1% in week 8). Among the influenza viruses detected in week 9, 64.1% were positive for influenza A [20.5% A/H3N2, 17.3% A(H1N1)pdm09, and 62.2% A (un-subtyped)]. The proportion of tests positive for influenza B increased in recent weeks. The number of paediatric hospitalizations was similar to the previous 2 weeks. Nationally, the number of regions reporting widespread or localized activity, as well as the ILI consultation rate continued to decline. The percentage of laboratory detections positive for RSV and rhinovirus both decreased.
www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

From September 1, 2012 to March 14, 2013, 730 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

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

[¶] 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 March 14, 2013, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 460; zanamivir: 459; amantadine: 756), A(H1N1)pdm09 (oseltamivir: 94; zanamivir: 92; amantadine: 103), and influenza B isolates (oseltamivir: 145; zanamivir: 145). 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 9 (February 24 to March 2, 2013), influenza activity remained elevated in the United States but decreased in most areas. The proportion of deaths attributed to pneumonia and influenza remained above the epidemic threshold of 7.5%. For the sixth 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 for influenza continued to decline. One thousand and seventy-four (17.2%) specimens tested were positive for influenza viruses, including 35.8% influenza A (predominantly A/H3N2 among those subtyped), and 64.2% influenza B. The US CDC's weekly influenza surveillance report is available at: www.cdc.gov/flu/weekly.

In **Europe** (ECDC report to 3 March 2013), most countries reported decreasing trends, but concomitantly high/medium-intensity transmission and wide geographic spread. The proportion of influenza-positive sentinel specimens remained high (54%) but had continued to decrease since the peak observed in week 5 (61%). Since the beginning of this season, an even distribution of influenza virus types has been observed, 50% each for type A and type B viruses. Among influenza A viruses, after increasing from week2, the proportion of A(H1N1)pdm09 had remained unchanged since week 7 at about 60% of specimens subtyped.
http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=1072

Influenza activity throughout the temperate region of **Asia** (WHO report of 1 March 2013) decreased except in Mongolia where it appeared to have reached a peak. Only low levels of influenza activity were reported across the tropical regions of the world and activity in countries 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 reported two new confirmed cases of infection with the novel coronavirus (NCoV) in Saudi Arabia. Neither was known to have had contact with other NCoV cases. An elderly male was hospitalised on 10 February 2013 and died on 19 Feb. He had no recent history of travel. The other patient, a 39-year-old male, developed symptoms on 24 February 2013 and died on 2 March in hospital. Other potential exposures are under investigation. To date WHO confirms 15 cases of human infection with NCoV, including nine deaths. Detailed information is available at:
www.who.int/csr/don/2013_03_06/en/index.html
www.who.int/csr/don/2013_03_12/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

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

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