

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2012-13: Number 19, Weeks 13-15

March 24 to April 13, 2013



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Low-level influenza activity in BC

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Summary

In weeks 13-15 (March 24 to April 13, 2013), influenza activity in BC remained low. The proportion of medical visits with an influenza diagnosis was below the 10-year median throughout the province. The proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians was below or within the expected range for this time of year. BC Children's Hospital Emergency Room also reported declining ILI consultations. Although the influenza positive rate increased slightly in weeks 14 and 15, still less than a quarter of the specimens tested at the provincial laboratory during this period were positive for influenza, predominantly influenza B and from the BC Children and Women's Centre, few influenza viruses were detected. Two lab-confirmed influenza B outbreaks were reported from long-term care facilities in FHA (1) and IHA (1), and one lab-confirmed influenza A/H3N2 LTCF outbreak was reported from IHA during this period.

Report disseminated April 18, 2013

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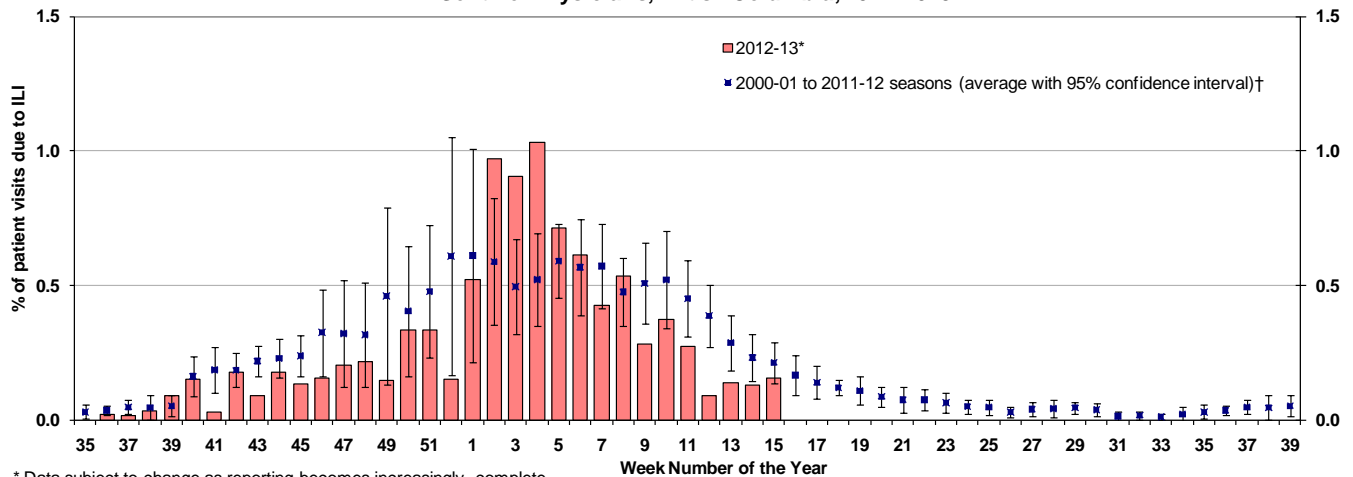
March 24 to April 13, 2013

British Columbia

Sentinel Physicians

In weeks 13-15, the proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians was less than 0.15%, within or below the expected range for this time of year. To date at least 50% of sentinel physician sites have reported for each of the weeks 13-15.

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



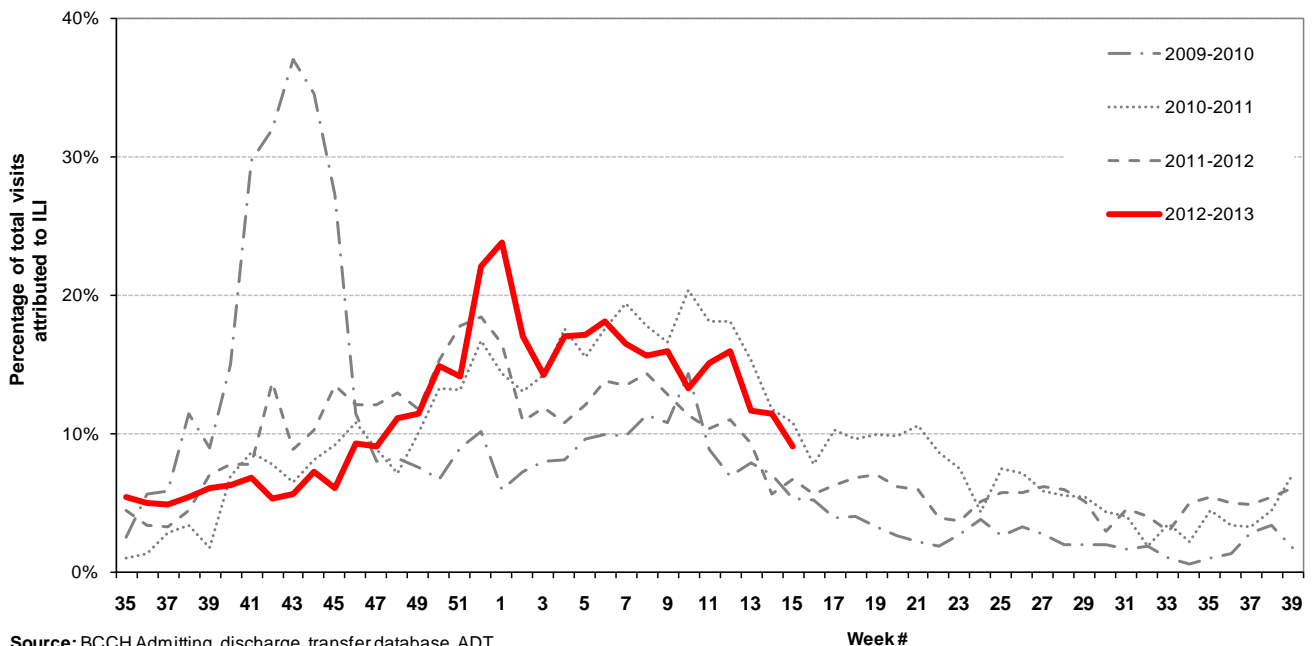
* Data subject to change as reporting becomes increasingly complete.

† 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 ranged from 11.7% to 9.1% in weeks 13-15, lower than the previous week and 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.

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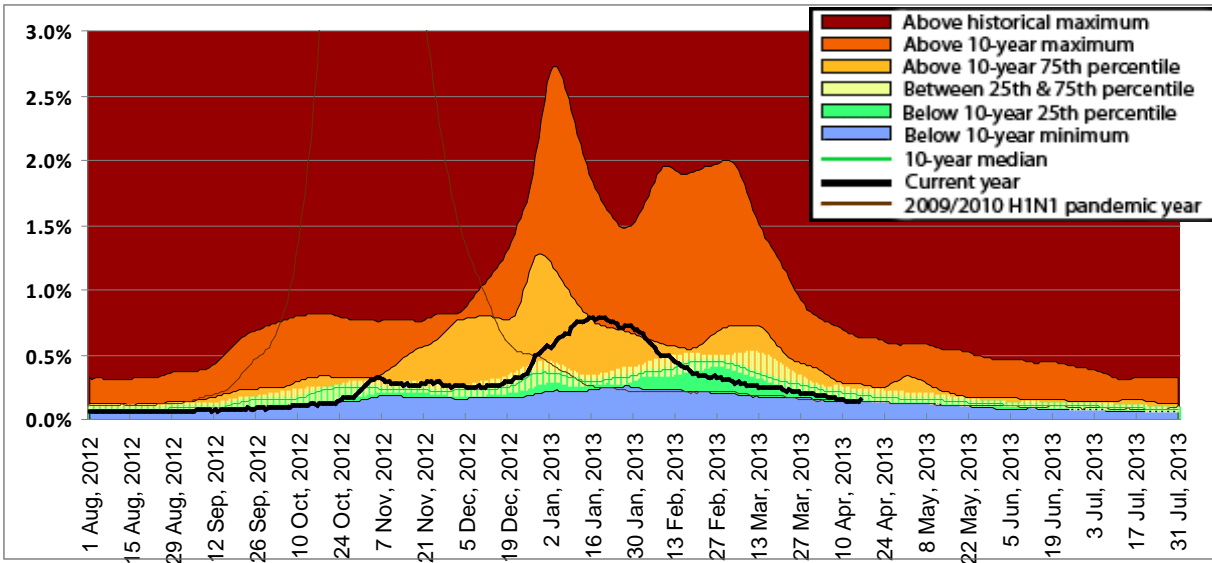
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Medical Services Plan

During weeks 13-15, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims was 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

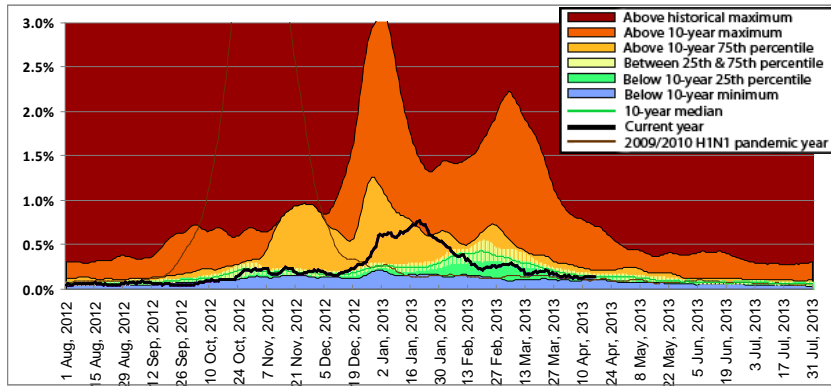
Notes: MSP week beginning 1 August 2012 corresponds to sentinel ILI week 31; Data current to 17 April 2013.

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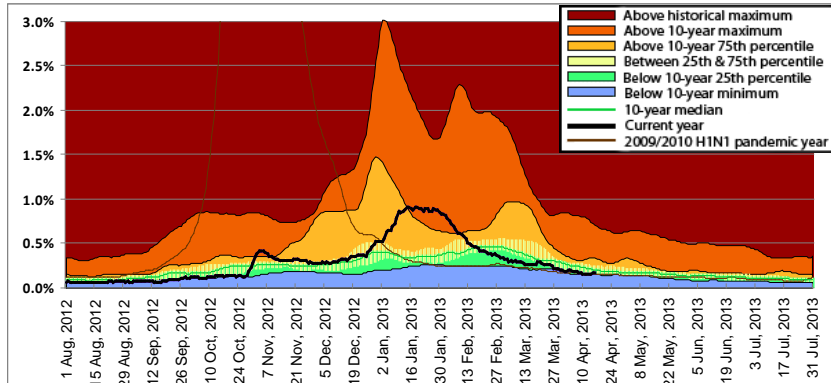
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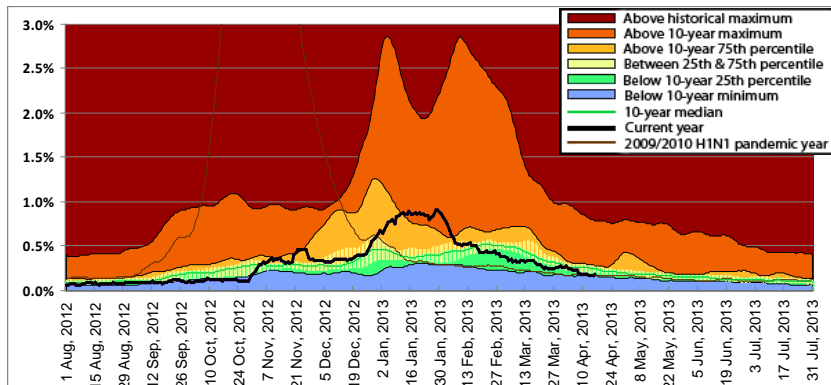
Interior



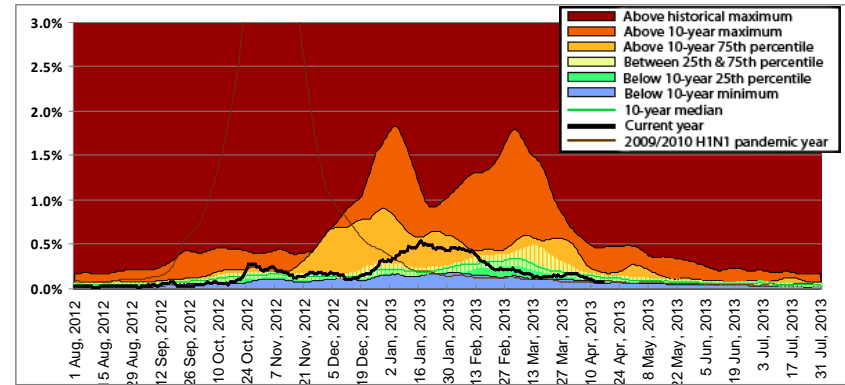
Fraser



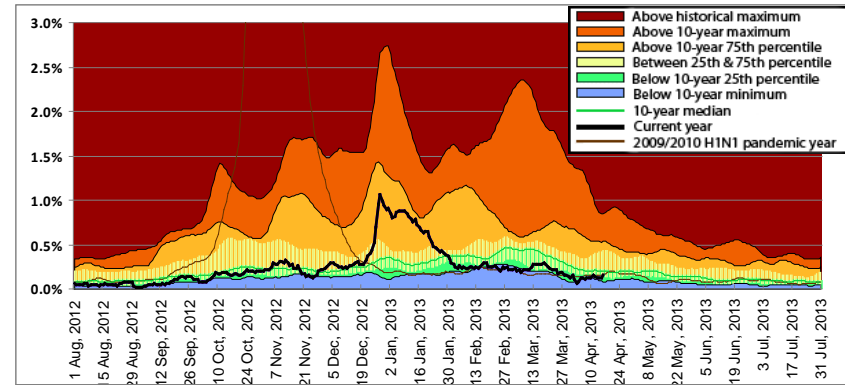
Vancouver Coastal



Vancouver Island



Northern



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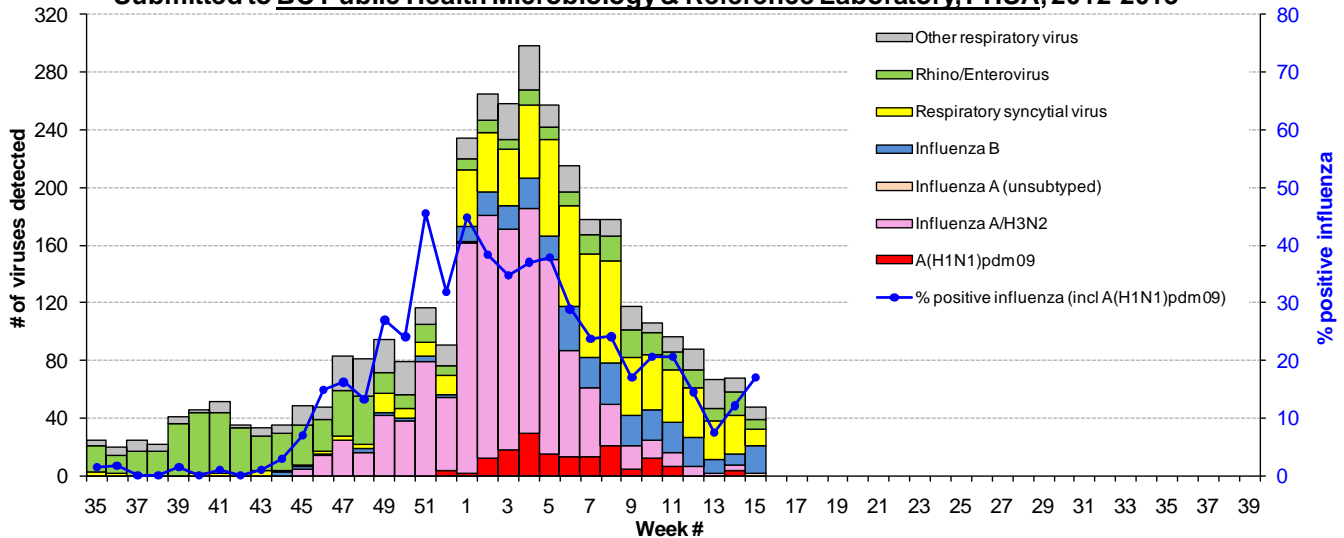
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Laboratory Reports

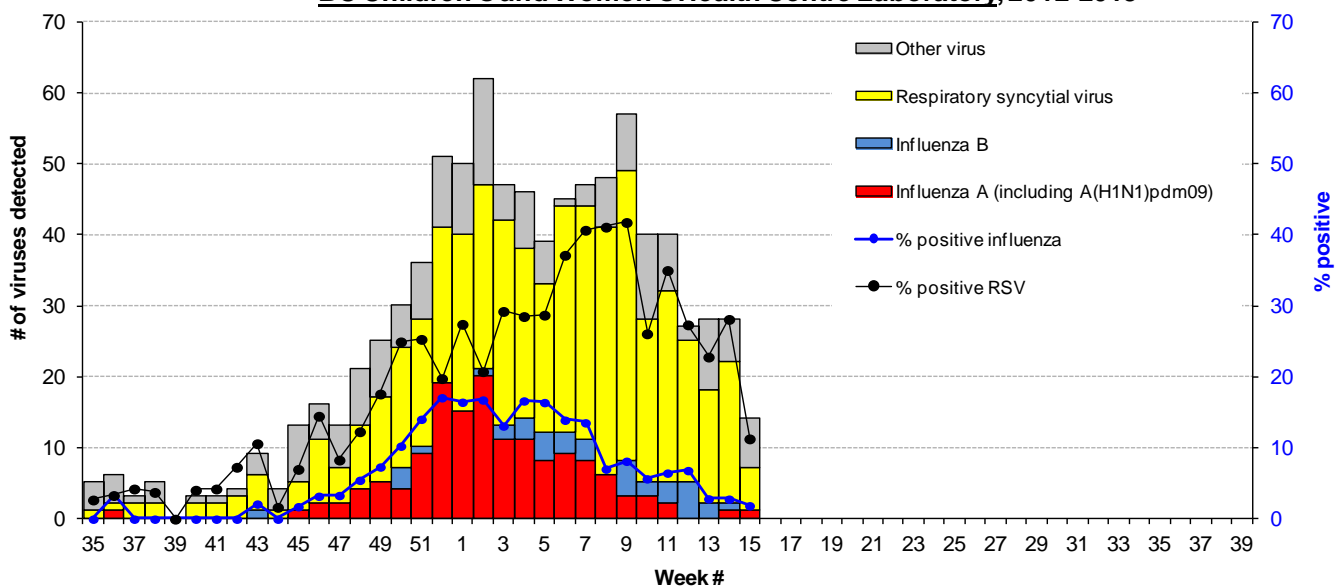
As reported by the BC Public Health Microbiology & Reference Laboratory, PHSA, for weeks 13-15, 396 specimens were tested for influenza. Among them, 48 (12.1%, 48/396) were positive, including 36 (75%, 36/48) influenza B from all health authorities, and 12 (25%, 12/48) influenza A [5 A/H3N2, 6 A(H1N1)pdm09, 1 un-subtyped] from Vancouver Coastal, Fraser, and Interior Health Authorities. The proportion of influenza positives increased during this period although overall testing volumes continued to decline. Other respiratory viruses were sporadically detected.

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



In weeks 13-14, BC Children's and Women's Health Centre Laboratory reported having tested 194 respiratory specimens, of which 5 (2.6%) were positive for influenza, including 3 influenza B and 2 influenza A (un-subtyped). Other significant detections included RSV (42/194, 21.6%) and human metapneumovirus (19/194, 9.8%); parainfluenza virus was 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

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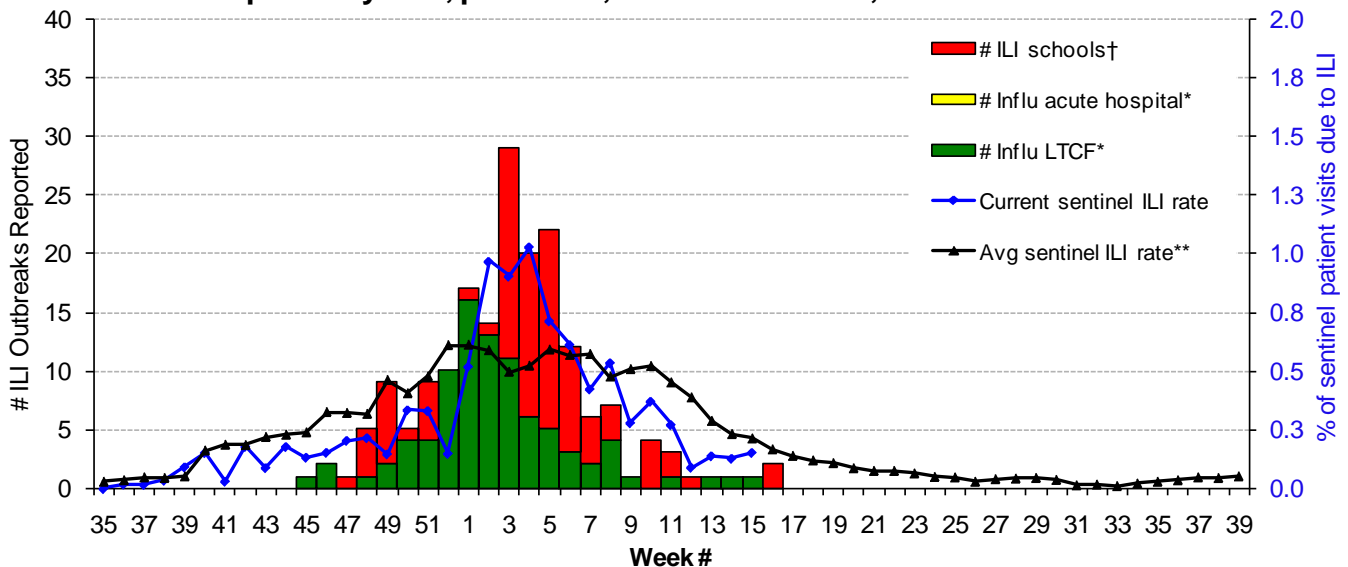
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ILI Outbreaks

In weeks 13-15, four outbreaks were reported from long-term care facilities (LTCF) including 2 lab-confirmed influenza B [1 FHA in week 15, 1 IHA in week 14], 1 lab-confirmed influenza A/H3N2 from IHA in week 13, and one RSV from FHA in week 14. At the beginning of week 16, two LTCF outbreaks from FHA and IHA and 2 school outbreaks from NHA have been reported (lab result pending). To date, a total of 89 lab-confirmed influenza LTCF outbreaks have been reported in BC for the current season (since week 40, 30 September 2012): 37 in Fraser, 23 in Interior, 12 in Vancouver Coastal, 13 in Vancouver Island, and 4 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 (week 14; 31 March – 6 April, 2013)

In Canada overall, influenza activity continued to decline in week 14. Laboratory detections of influenza decreased slightly compared to the previous 2 weeks, although influenza B continued to represent 72.7% of positive specimens in week 14. The number of regions reporting widespread or localized activity was the same as in the previous week. The ILI consultation rate increased but was within the expected range for this time of year. Detections of RSV and human metapneumovirus increased while detections of other respiratory viruses were stable or decreasing. Details are available at www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

From September 1, 2012 to April 18, 2013, 1016 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

553 A/Victoria/361/2011-like (H3N2)[†] from NFLD, PEI, NS, NB, QUE, ONT, MAN, SASK, ALTA and BC;

162 A/California/07/2009-like [A(H1N1)pdm09]^{*} from NFLD, NS, NB, QUE, ONT, SASK, ALTA and BC;

53 B/Brisbane/60/2008-like^{**} from NB, QUE, ONT, MAN, SASK, ALTA and BC;

248 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.

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NML: Antiviral Resistance

From September 1, 2012 to April 18, 2013, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 528; zanamivir: 532; amantadine: 855), A(H1N1)pdm09 (oseltamivir: 156; zanamivir: 153; amantadine: 174), and influenza B isolates (oseltamivir: 257; zanamivir: 257). The results indicated that all isolates were sensitive to oseltamivir and zanamivir, while all but one influenza A isolates were resistant to amantadine.

INTERNATIONAL

USA: during week 14 (ending April 6, 2013), influenza activity decreased in the United States. The proportion of deaths attributed to pneumonia and influenza was 7.2%, below the epidemic threshold of 7.5%. The proportion of outpatient visits for influenza-like illness continued a four-week decline to 1.5%, below the national baseline of 2.2% in week 14. The percentage of specimens testing positive for influenza continued to decline. Four hundred and eighty-four (10.9%) specimens tested were positive for influenza viruses, including 28.9% influenza A (predominantly A/H3N2 among those subtyped), and 71.1% influenza B. www.cdc.gov/flu/weekly.

Throughout **Europe** (ECDC report to 7 April 2013), influenza activity was declining and generally of low intensity in week 14. The proportion of influenza-positive sentinel specimens continued to fall. Since the beginning of this season, a roughly even distribution of influenza virus types has been observed, about 50% each for type A and type B viruses. Of the influenza A viruses subtyped, the proportion of A(H1N1)pdm09 viruses had been 63%.

http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=1097

Influenza activity throughout the temperate region of **Asia** (WHO report of 12 April 2013) decreased overall except in China and the Republic of Korea, which reported sustained activity. 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.

Avian Influenza A(H7N9) Virus

Since February 2013, 88 human infections (of which 17 fatal) caused by an emerging avian influenza A(H7N9) virus have been identified in four provinces (Jiangsu, Zhejiang, Anhui, Henan) and two municipalities (Shanghai and Beijing) in China. Evidence available so far in the ongoing investigation suggests primarily bird-to-person and limited (not sustained) person-to-person transmission. For details and updates please see:

www.health.gov.bc.ca/pho/physician-resources.html

www.newsroom.gov.bc.ca/2013/04/dr-perry-kendalls-statement-on-h7n9-influenza.html

www.who.int/influenza/human_animal_interface/influenza_h7n9

www.ecdc.europa.eu/en/healthtopics/avian_influenza/Pages/index.aspx

www.cdc.gov/flu/avianflu/h7n9-virus.htm

www.phac-aspc.gc.ca/phn-asp/2013/h7n9-0403-eng.php

Novel Coronavirus

No new cases of novel coronavirus (NCoV) have been reported since 26 March 2013.

www.who.int/csr/don/2013_03_26/en/index.html

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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

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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

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? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Person Reporting: _____	Title: _____
	Contact Phone: _____	Email: _____
	Health Authority: _____	HSDA: _____
	Full Facility Name: _____	
	Is this report:	<input type="checkbox"/> First Notification (<i>complete section B below; Section D if available</i>) <input type="checkbox"/> Update (<i>complete section C below; Section D if available</i>) <input type="checkbox"/> Outbreak Over (<i>complete section C below; Section D if available</i>)

B	First Notification
	Type of facility: <input type="checkbox"/> LTCF <input type="checkbox"/> Acute Care Hospital <input type="checkbox"/> Senior's Residence (if ward or wing, please specify name/number: _____)
	<input type="checkbox"/> Workplace <input type="checkbox"/> School (grades: _____) <input type="checkbox"/> Other (_____)
	Date of onset of first case of ILI (dd/mm/yyyy): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>

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): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>
	If over, date outbreak declared over (dd/mm/yyyy): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>

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

D	Laboratory Information
	Specimen(s) submitted? <input type="checkbox"/> Yes (location: _____) <input type="checkbox"/> No <input type="checkbox"/> Don't know If yes, organism identified? <input type="checkbox"/> Yes (specify: _____) <input type="checkbox"/> No <input type="checkbox"/> Don't know