

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2011-12: Number 13, Weeks 11-13

March 11 to 31, 2012



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

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Continued low-level influenza activity in BC

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Summary

In weeks 11-13 (March 11 to 31, 2012), influenza surveillance indicators including the sentinel physician reporting, MSP claims, and ER consultations at BC Children's Hospital suggested low-level influenza activity in BC. In weeks 11-13, four lab-confirmed influenza outbreaks were reported from long term care facilities in Vancouver Island HA (3) and Interior HA (1), including 3 associated with influenza A/H3N2 and one associated with influenza B. Of three hundred and eighty-three specimens tested at the BC Public Health Microbiology & Reference Laboratory, PHSA, during this period, seventy-four (19.3%) were positive for influenza, including 41 (10.7%) influenza A/H3N2, 13 (3.4%) influenza A(H1N1)pdm09, 1 (0.3%) influenza A (subtype pending), and 20 (5.2%) influenza B. Other significant respiratory virus detections included rhino/enterovirus (65/383, 17.0%) and respiratory syncytial virus (44/383, 11.5%). Other respiratory viruses were also sporadically detected. RSV continued to dominate among the respiratory viruses detected at BC Children's Hospital.

Report disseminated April 5, 2012

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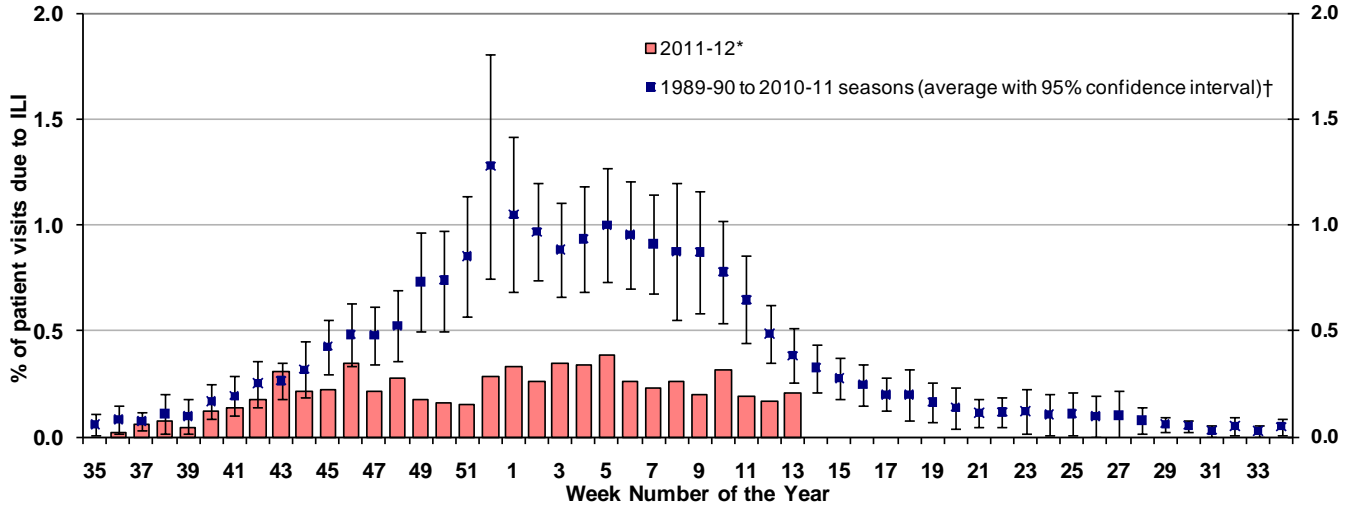
March 11 to 31, 2012

British Columbia

Sentinel Physicians

In weeks 11-13, the proportion of patients with ILI among those presenting to sentinel physicians ranged from 0.17% to 0.22%, lower than the preceding week and below the expected range for this time of year. 74%, 63%, and 54% of sentinel physician sites have reported for weeks 11, 12, and 13, respectively, to-date.

Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 20 Seasons Sentinel Physicians, British Columbia, 2011-2012



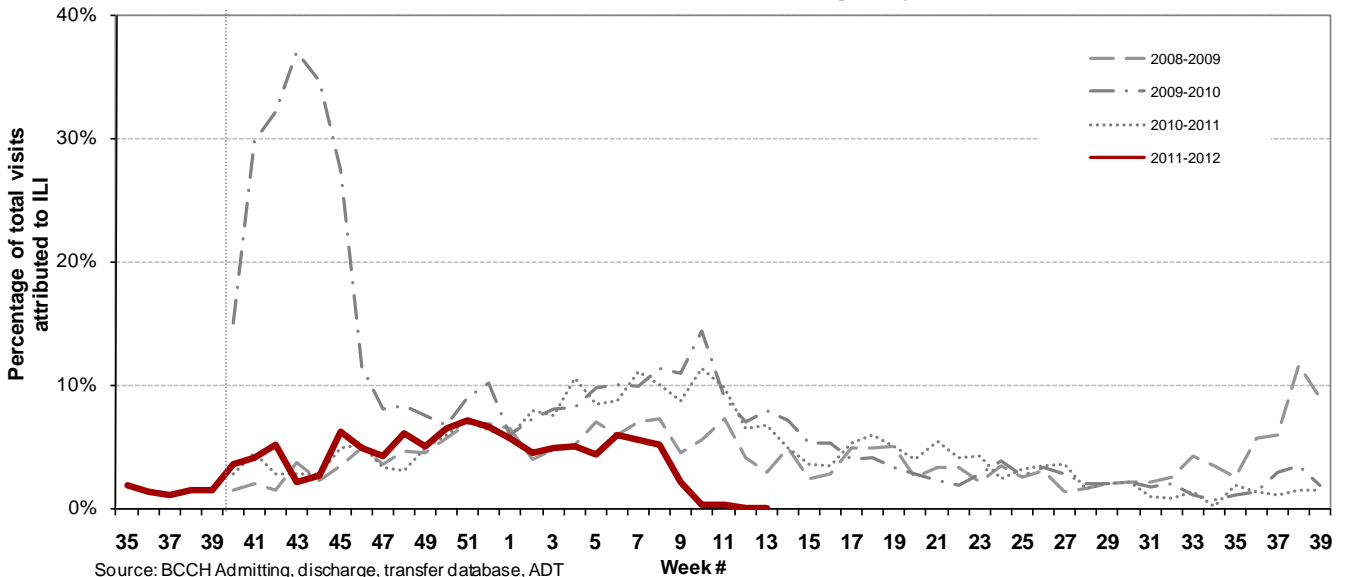
* Data subject to change as reporting becomes increasingly complete.

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

BC Children's Hospital Emergency Room

The percentage of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness in weeks 11-13 remained very low (0.3%, 0%, and 0% respectively), and below the expected level for this time of year.

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



Source: BCCH Admitting, discharge, transfer database, ADT

Data provided by Decision Support Services at Children's & Women's Health Centre of BC

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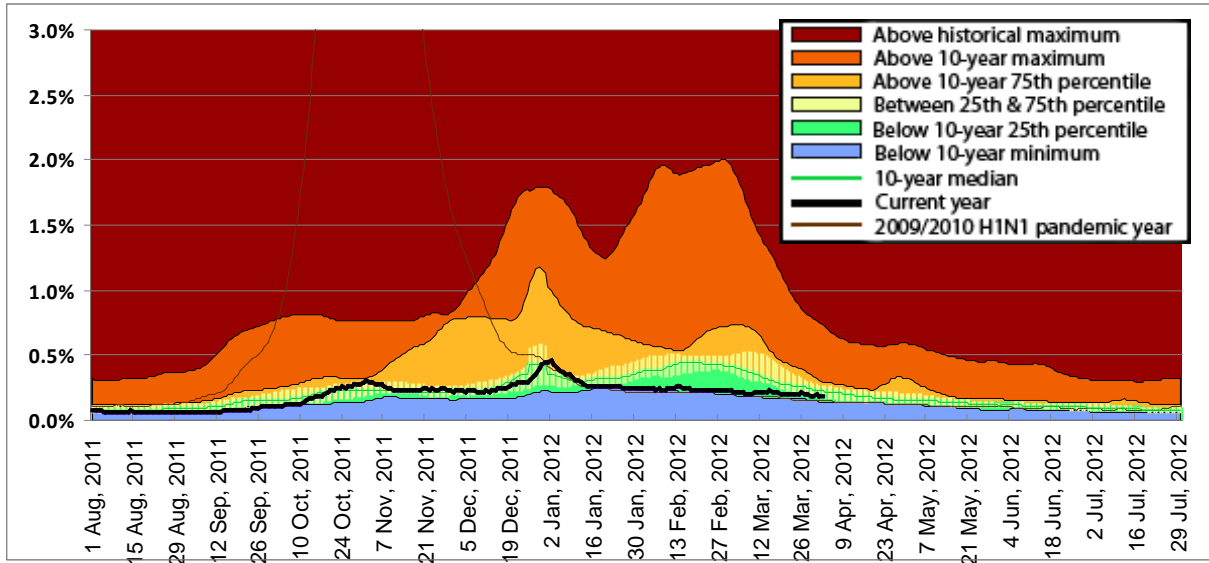
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Medical Services Plan

In weeks 11-13, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims increased slightly in Northern HA and Vancouver Island HA, but remained low (at or below the ten-year median level for this time of year) throughout BC.

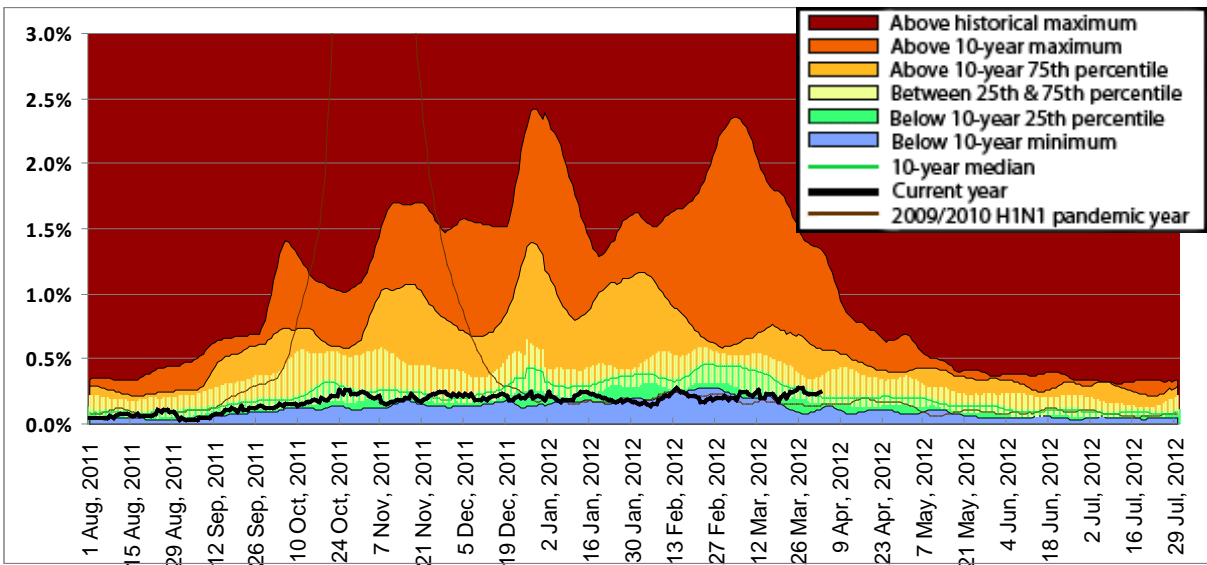
Influenza Illness Claims* British Columbia



* 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 28 August 2011 corresponds to sentinel ILI week 35; Data current to 4 April 2012

Northern

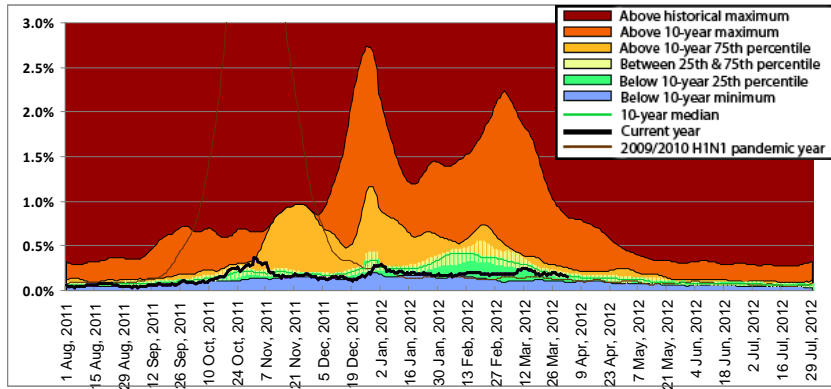


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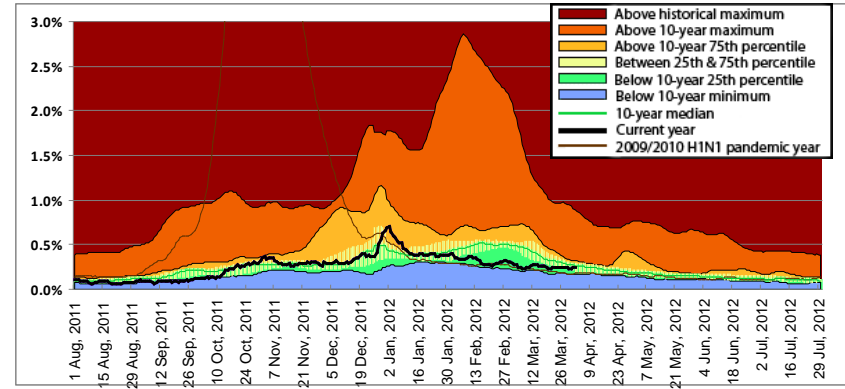
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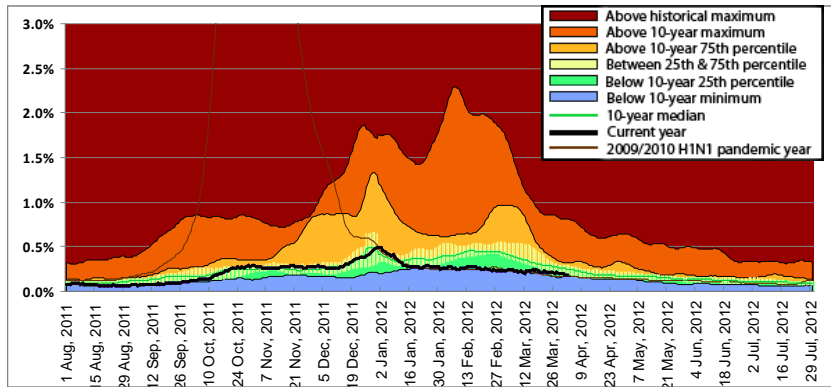
Interior



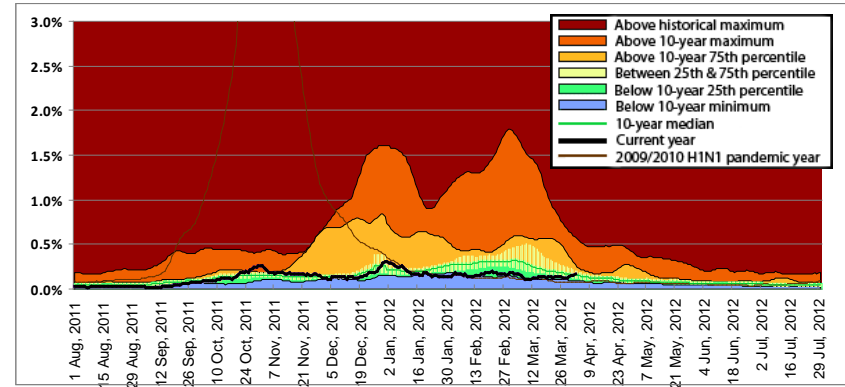
Vancouver Coastal



Fraser



Vancouver Island



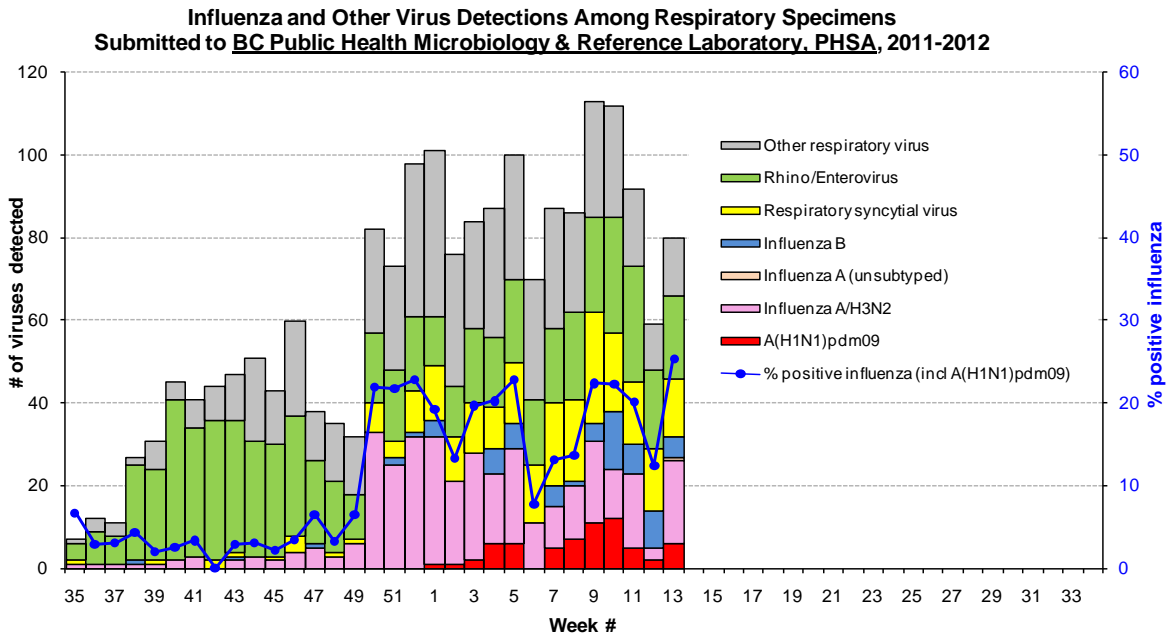
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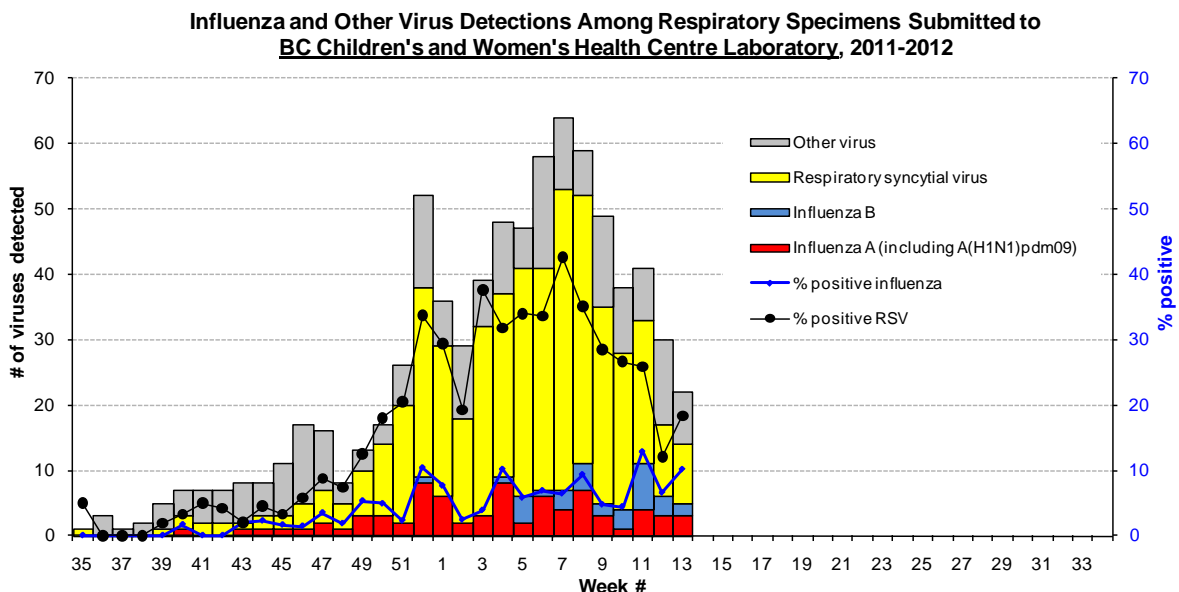
March 11 to 31, 2012

Laboratory Reports

In weeks 11-13, three hundred and eighty-three specimens were tested for influenza viruses at the BC Public Health Microbiology & Reference Laboratory, PHSA. Among them, seventy-four (19.3%) were positive for influenza viruses, slightly lower than the previous week, including 41 (10.7%) influenza A/H3N2 from all HAs, 13 (3.4%) influenza A(H1N1)pdm09 from all HAs except Vancouver Island, 1 (0.3%) influenza A (subtype pending), and 20 (5.2%) influenza B from all HAs except Northern. Of 383 specimens tested for other respiratory viruses, significant detections included rhino/enterovirus (65/383, 17.0%) and respiratory syncytial virus (44/383, 11.5%). Other respiratory viruses were also sporadically detected.



In weeks 11-13, BC Children's and Women's Health Centre Laboratory tested 225 respiratory specimens: 22 (9.8%) were positive for influenza virus, lower than the previous weeks, including 10 influenza A and 12 influenza B. RSV continued to predominate among the other respiratory viruses detected (54/195, 27.7%). Other respiratory viruses were also detected at low levels.



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

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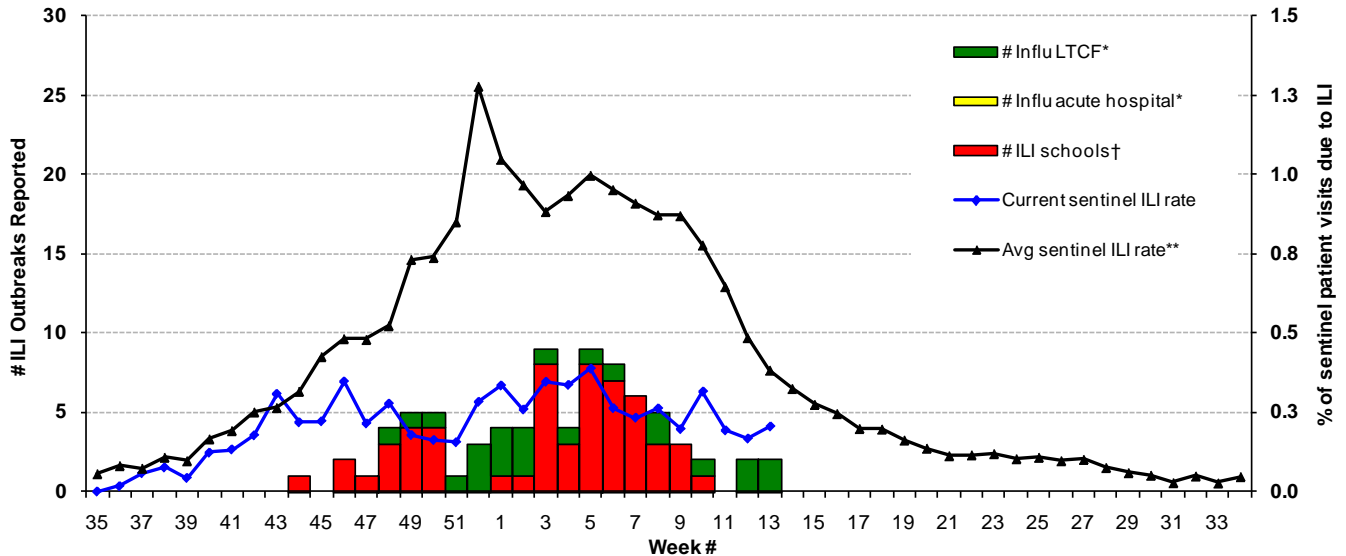
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ILI Outbreaks

In weeks 11-13, four lab-confirmed influenza outbreaks were reported from long-term care facilities in Vancouver Island HA (1 A/H3N2-associated in each of week 12 and 13, 1 influenza B-associated in week 13) and Interior HA (one influenza A/H3N2-associated in week 12).

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



* 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.

CANADA

FluWatch

In week 12 (March 18 to 24, 2012), influenza activity in Canada continued to increase overall compared to the previous weeks; most indicators (such as laboratory detections, outbreaks, hospitalizations and ILI) showed higher levels in week 12 compared to the previous week. Certain regions in the country (in ON, the Prairies and the Atlantic Region) showed higher levels of activity compared to other regions. In total 1309 laboratory detections of influenza were reported in week 12: 10.0% A/H3N2, 7.5% A(H1N1)pdm09, 21.9% unsubtype influenza A, and 60.6% influenza B. The ILI consultation rate in week 12 increased compared to the previous week but remained within the expected levels for this time of year. PHAC further reported 135 laboratory-confirmed influenza-associated hospitalizations including 54 paediatric (67% were due to influenza B, and 33% due to influenza A) and 81 adults (60% were due to influenza B, and 40% due to influenza A). www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

Between September 1, 2011 and April 4, 2012, 820 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

166 A/Perth/16/2009-like (H3N2)[‡] from QUE, ONT, MAN, SASK, ALTA, BC, and NT;

143 A/California/07/09-like (H1N1)^{*} from NB, QUE, ONT, SASK, ALTA, and BC;

267 B/Brisbane/60/2008-like (B/Victoria/02/87 lineage)[†] from NFLD, NS, NB, QUE, ONT, MAN, SASK, ALTA, and BC;

244 B/Wisconsin/01/2010-like (recent B Yamagata lineage) from NS, NB, QUE, ONT, MAN, ALTA, BC, and NU;

[‡] 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

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NML: Antiviral Resistance

From September 1, 2011 to April 5, 2012, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir 155; zanamivir: 155; amantadine: 255), influenza A(H1N1)pdm09 (oseltamivir: 145; zanamivir: 145; amantadine: 192), and influenza B isolates (oseltamivir: 431; zanamivir: 431). The results indicated that all isolates were sensitive to oseltamivir and zanamivir, while all influenza A/H3N2 isolates but one, and all A(H1N1)pdm09 isolates, were resistant to amantadine.

INTERNATIONAL

USA: In week 12, ending 24 March 2012, influenza activity in the United States was elevated in some areas, but remained relatively low nationally. Nine hundred and eight (19.6%) specimens tested were positive for influenza, including 809 influenza A [378 A/H3N2, 135 A(H1N1)pdm09, and 296 un-subtyped A] and 99 influenza B. The proportion of outpatient visits for ILI was 2.0% which was below the national baseline of 2.4%. The proportion of all deaths due to pneumonia and influenza illness was 7.8%, slightly below the epidemic threshold of 7.9% for this time of the year. Four influenza-associated paediatric deaths were reported to CDC during week 12, including one A(H1N1)pdm09-associated and three influenza A associated (subtype pending). www.cdc.gov/flu/weekly/.

WHO news: (last updated on 30 March 2012). In the temperate regions of the northern hemisphere, this influenza season started late, but seemed to be reaching the peak or was decreasing in most countries. Severe acute respiratory infections were mainly observed in the age group above 65 years. The most commonly detected virus type or subtype throughout most of the temperate areas of the northern hemisphere temperate zone was influenza A/H3N2, although the proportion of influenza B detection was increasing. In Mexico, influenza A(H1N1)pdm09 was the predominant subtype circulating, while China and the surrounding countries were still reporting a predominance of influenza type B virus. Increasing genetic and antigenic diversity was noted in H3N2 viruses in the later part of the influenza season. No significant change in antiviral resistance has been reported so far this season. http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Avian Influenza:

According to WHO news to-date, five new confirmed cases of human infection with avian influenza A/H5N1 virus were reported during the period of March 12 to April 2, including one hospitalized case reported from Viet Nam, two fatal cases from Indonesia, and two cases (one fatal, another still under treatment) from Egypt. The cumulative deaths in 2012 have reached 13 out of the total of 23 cases reported. For details please see: www.who.int/influenza/human_animal_interface/avian_influenza/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:

http://www.who.int/influenza/vaccines/virus/recommendations/2012_13_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

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/

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