

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2011-12: Number 12, Weeks 9-10

February 26 to March 10, 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; increasing contribution of influenza B

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Summary

In weeks 9-10 (February 26 to March 10, 2012), influenza surveillance indicators including the sentinel physician reporting, MSP claims and ER consultations at BC Children's Hospital, pointed to only low-level influenza activity in BC. In weeks 9-10, four ILI outbreaks were reported from schools. Of three hundred and twenty-four specimens tested at the BC Public Health Microbiology & Reference Laboratory, PHSA, during this period, 68 (21.0%) were positive for influenza, including 31 (9.6%) influenza A/H3N2, 14 (4.3%) influenza A(H1N1)pdm09, 5 (1.5%) influenza A (subtype pending), and 18 (5.6%) influenza B. Other significant respiratory virus detections included rhino/enterovirus (51/324, 15.7%), respiratory syncytial virus (46/324, 14.2%), human metapneumovirus (22/324, 6.8%), and coronavirus (17/324, 5.2%). Other respiratory viruses were also sporadically detected. RSV continued to dominate among the respiratory viruses detected at BC Children's Hospital.

Report disseminated March 16, 2012

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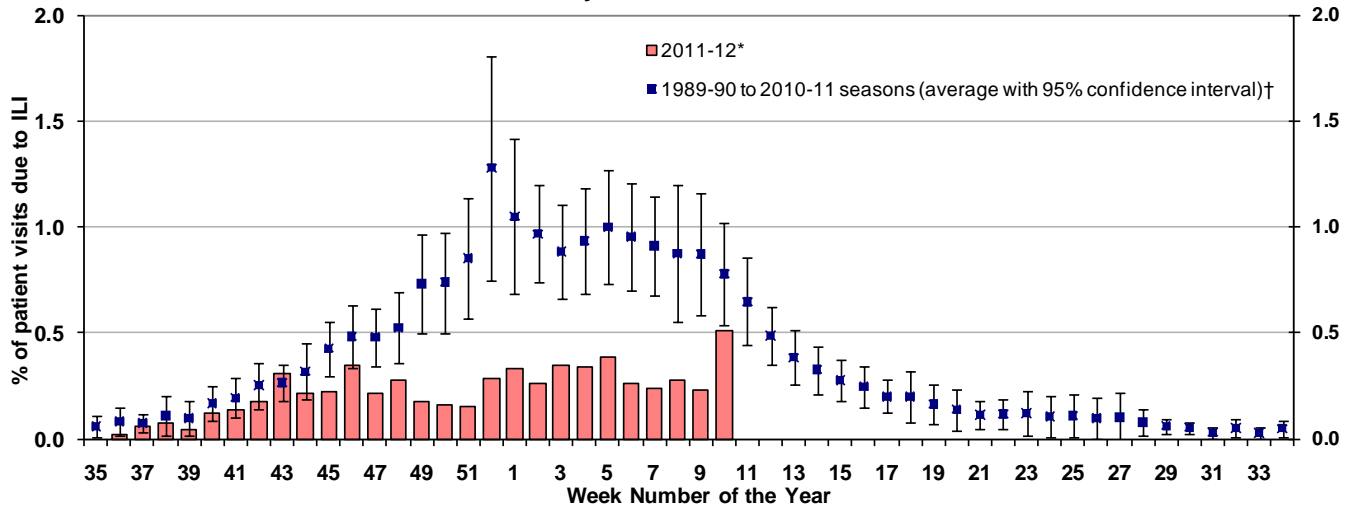
February 26 to March 10, 2012

British Columbia

Sentinel Physicians

In weeks 9-10, the proportion of patients with ILI among those presenting to sentinel physicians was 0.23% and 0.51% respectively, increasing but remaining below the expected range for this time of year. Fifty-nine percent of sentinel physician sites have reported for week 9, while 48% of have reported for week 10 to-date. Rates for recent weeks may change as reporting becomes more complete.

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



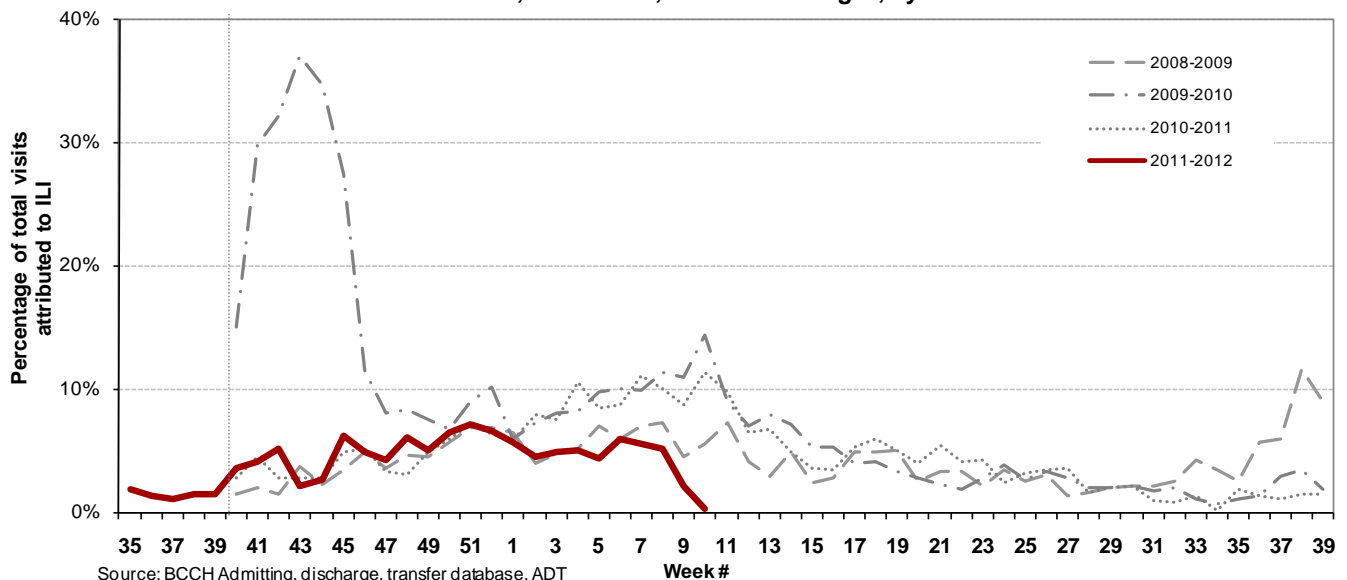
* Data subject to change as reporting becomes increasingly complete.

† 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 9-10 was 2.2% and 0.3%, respectively, lower than the previous weeks and the level expected 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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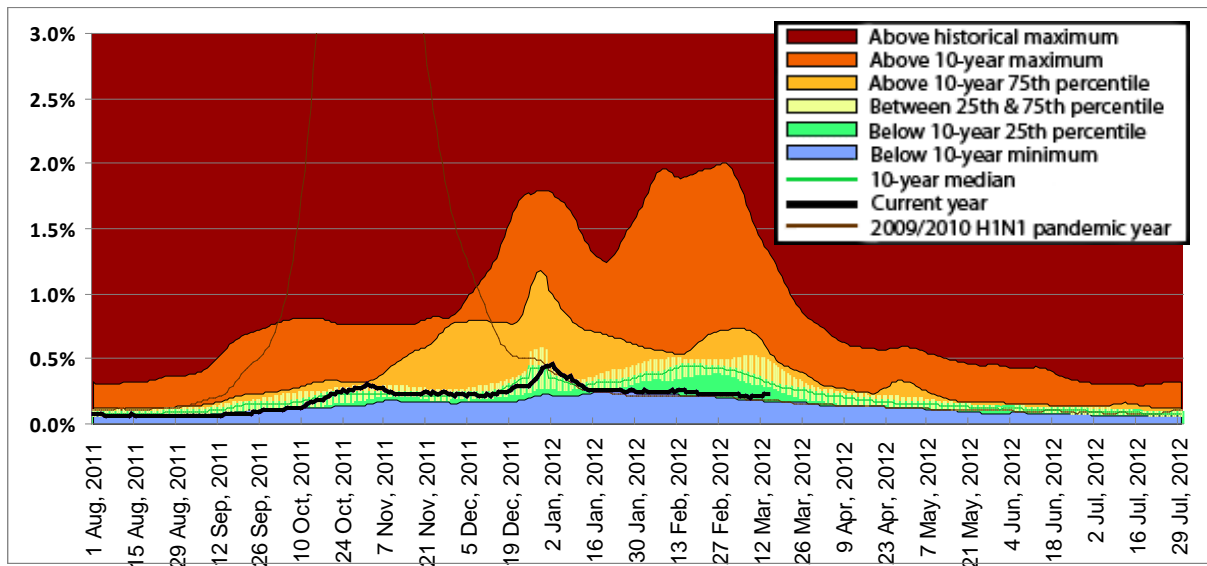
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Medical Services Plan

In weeks 9-10, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims increased slightly in Vancouver Coastal and Interior HAs, but remained low (at or below the ten-year median level for this time of year) throughout BC.

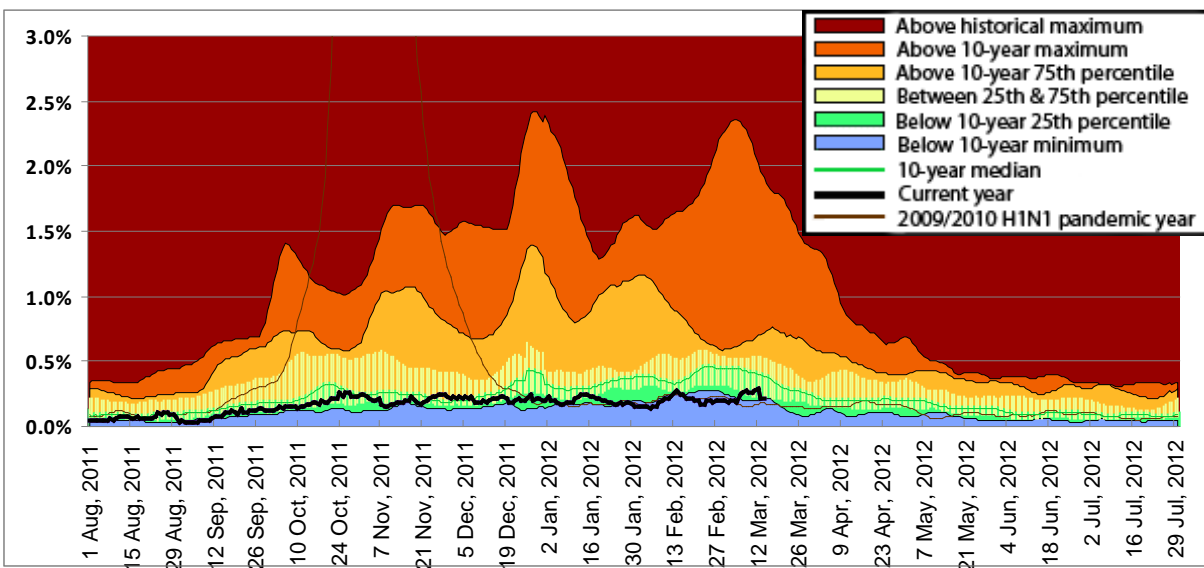
Influenza Illness Claims* British Columbia



* 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 15 March 2012

Northern

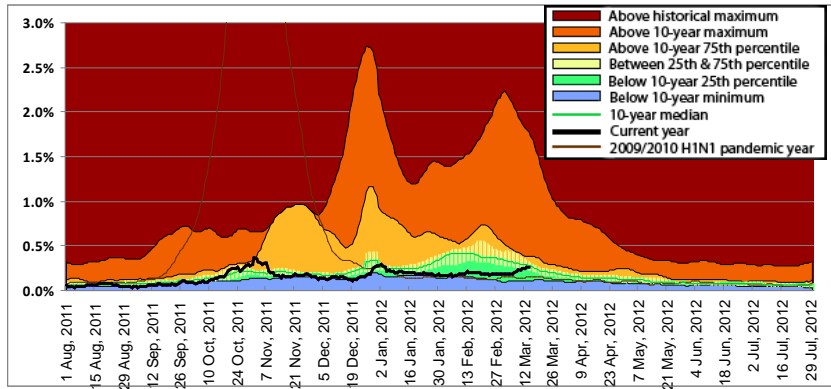


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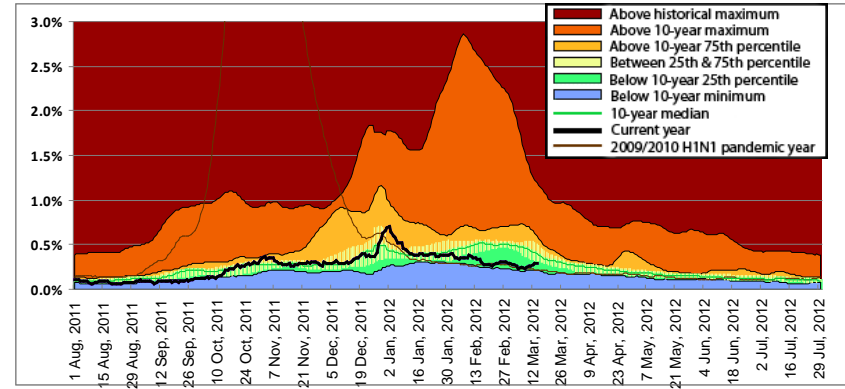
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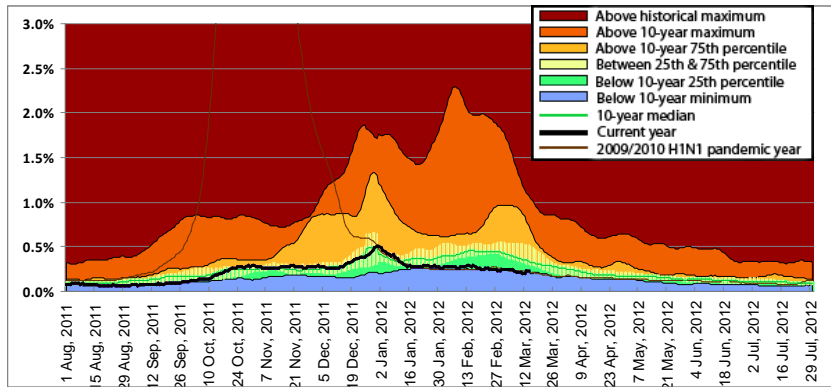
Interior



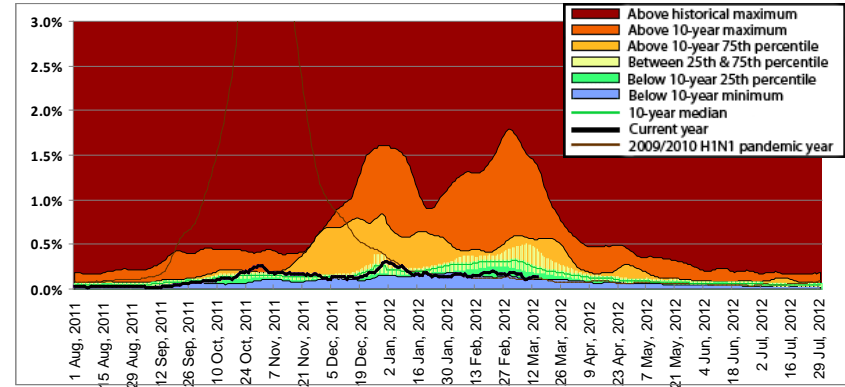
Vancouver Coastal



Fraser



Vancouver Island



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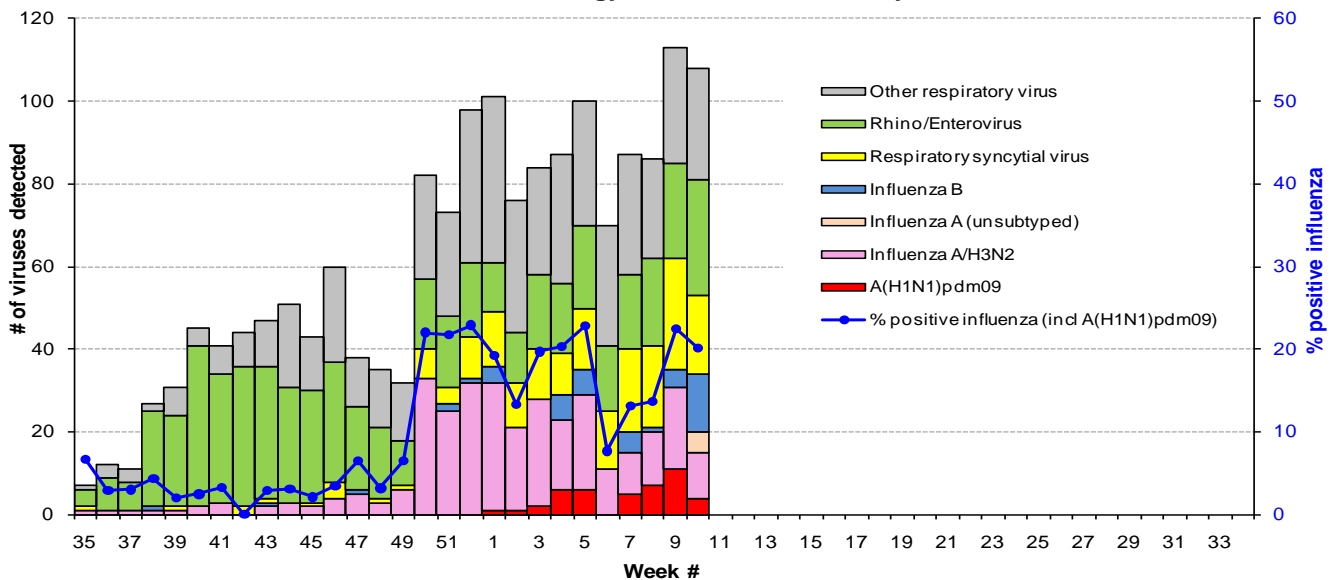
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Laboratory Reports

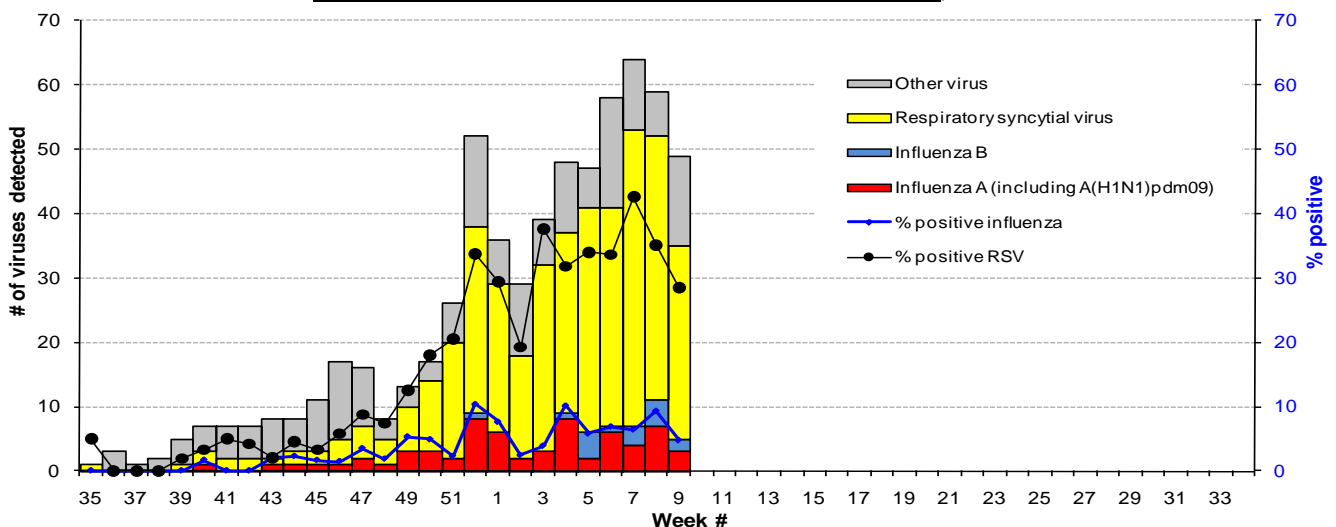
In weeks 9-10, three hundred and twenty-four specimens were tested for influenza viruses at the BC Public Health Microbiology & Reference Laboratory, PHSA. Among them, sixty-eight (21.0%) were positive for influenza viruses, higher compared to the previous three weeks, including 31 (9.6%) influenza A/H3N2 from all HAs, 14 (4.3%) influenza A(H1N1)pdm09 from all HAs, 5 (1.5%) influenza A (subtype pending), and 18 (5.6%) influenza B from all HAs except Northern. Of 324 specimens tested for other respiratory viruses, significant detections included rhino/enterovirus (51/324, 15.7%), respiratory syncytial virus (46/324, 14.2%), human metapneumovirus (22/324, 6.8%), and coronavirus (17/324, 5.2%). Other respiratory viruses were also sporadically detected.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory, PHSA, 2011-2012



In weeks 9-10, BC Children's and Women's Health Centre Laboratory tested 195 respiratory specimens: 9 (4.6%) were positive for influenza virus, lower than the previous week, including 4 influenza A and 5 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.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Children's and Women's Health Centre Laboratory, 2011-2012



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

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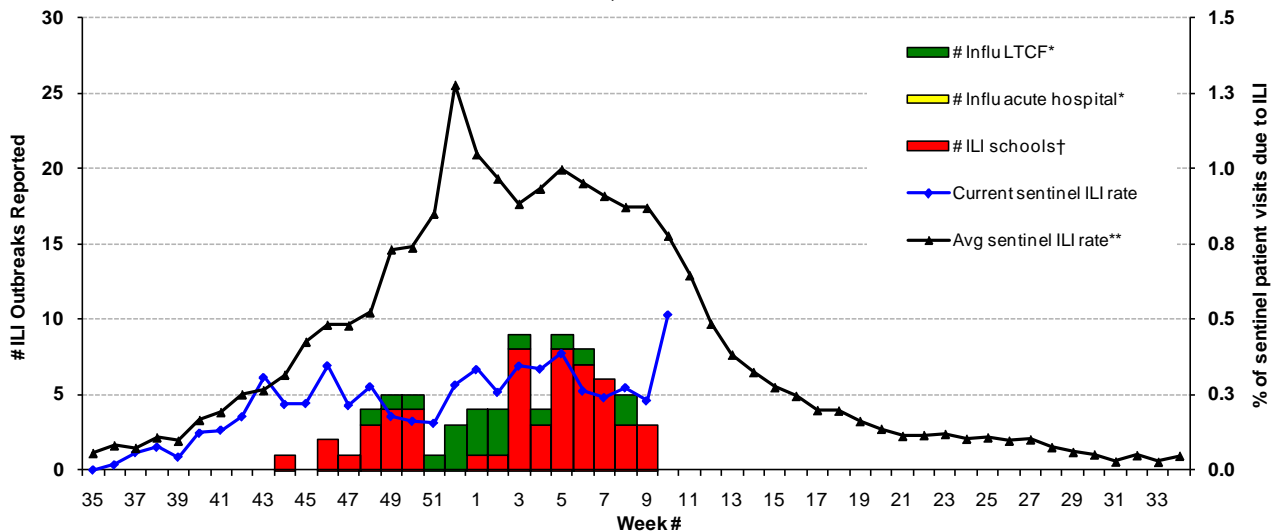
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ILI Outbreaks

In weeks 9-10, four ILI outbreaks were reported from schools in Interior HA (3) and Vancouver Coastal HA (1). There were no lab-confirmed ILI outbreaks reported from long-term care facilities during this period.

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 9 (February 26 to March 3, 2012), influenza activity in Canada continued to increase compared to the previous weeks; all provinces and most territories (except Nunavut) reported either sporadic or localized influenza activity in at least one region. Eight hundred and seventy-one laboratory detections of influenza were reported: 15.6% A/H3N2, 25.1% A(H1N1)pdm09, 25.1% untyped influenza A, and 46.6% influenza B. The ILI consultation rate in week 9 increased compared to the previous week, but remained within the expected levels for this time of year. FluWatch further reported 39 laboratory-confirmed influenza-associated hospitalizations: 10, 3 and 6 were due to influenza A (un-subtyped), A(H1N1)/pdm09 and A/H3N2 respectively, and 20 were associated with influenza B. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

Between September 1, 2011 and March 15, 2012, 532 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

121 A/Perth/16/2009-like (H3N2)[†] from QUE, ONT, SASK, ALTA, and BC;

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

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

145 B/Wisconsin/01/2010-like (recent B Yamagata lineage) from NB, QUE, ONT, 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 March 15, 2012, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir 112; zanamivir: 111; amantadine: 166), influenza A(H1N1)pdm09 (oseltamivir: 104; zanamivir: 103; amantadine: 116), and influenza B isolates (oseltamivir: 304; zanamivir: 303). 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 10, ending 10 March 2012, influenza activity in the United States was elevated in some areas, but influenza-like-illness remains relatively low nationally. One thousand and ninety-nine (23.2%) specimens tested were positive for influenza, including 1,049 influenza A [394 A/H3N2, 172 A(H1N1)pdm09, and 483 un-subtyped A] and 50 influenza B. The proportion of outpatient visits for ILI was 2.2% which was below the national baseline of 2.4%. The proportion of all deaths due to pneumonia and influenza illness was 7.3%, slightly below the epidemic threshold of 7.9% for this time of the year. No influenza-associated paediatric deaths were reported in week 10. www.cdc.gov/flu/weekly/.

WHO news: (last updated on 16 March 2012) *Northern Hemisphere:* Influenza activity in the temperate regions of the northern hemisphere continued, increasing in North America, northern China and parts of Europe. A few countries of southern Europe and North Africa appeared to have peaked as well as Japan and the Republic of Korea. The most commonly detected virus type or subtype throughout the northern hemisphere temperate zone remained influenza A/H3N2 with the exception of Mexico and Central America where influenza A(H1N1)pdm09 was the predominant subtype circulating, and China and the surrounding countries where influenza type B was predominant. *Tropics and Southern Hemisphere:* Most countries in the tropical zone reported low levels of influenza activity. Influenza activity in the temperate countries of the southern hemisphere remained at inter-seasonal levels. http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Avian Influenza:

According to WHO, to-date seven new confirmed cases of human infection with avian influenza A/H5N1 virus were reported during the period of March 1-7, including one fatal case reported from Indonesia; five recovered cases from Bangladesh, and one hospitalized case from Viet Nam. The cumulative deaths in 2012 have reached 9 out of the total of 16 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: http://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