

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2011-12: Number 9, Week 4

January 22 to 28, 2012



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

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Low-level activity but greater mix of contributing influenza types and subtypes in BC compared to previous weeks

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Summary

In week 4 (January 22-28, 2012), most influenza surveillance indicators suggested that influenza activity in BC remained low. The influenza-like illness (ILI) rate reported by sentinel physicians was low and below the expected range for this time of year (0.21%). The MSP influenza illness proportion continued to be below the 10-year median for this time of year throughout the province. The ILI consultation rate at BC Children's Hospital ER remained low and consistent with the expected level for this time of year. However, to date 9 school ILI outbreaks have been reported since the start of week 4; in addition three long term care facilities reported ILI outbreaks for which test results remain unavailable or pending from Vancouver Island, Fraser and Interior Health Authorities. In week 4, A/H3N2 positive detections continued to predominate at the BC Public Health Microbiology & Reference Laboratory, PHSA, though the proportions of influenza A(H1N1)pdm09 and influenza B detection increased compared to the previous weeks. Of one hundred and forty-one specimens tested at the provincial laboratory in week 4, twenty-seven (19.1%) influenza positives were detected, similar to the previous week, including 17 (12.1%) influenza A/H3N2, 4 (2.8%) influenza A(H1N1)pdm09, and 6 (4.3%) influenza B. Other significant respiratory virus detections included human metapneumovirus (19/141, 13.5%), rhino/enterovirus (17/141, 12.1%), and respiratory syncytial virus (10/141, 7.1%). Other respiratory viruses were also detected sporadically. In addition, RSV continued to dominate among the respiratory viruses detected at BC Children's Hospital.

Report disseminated February 2, 2012

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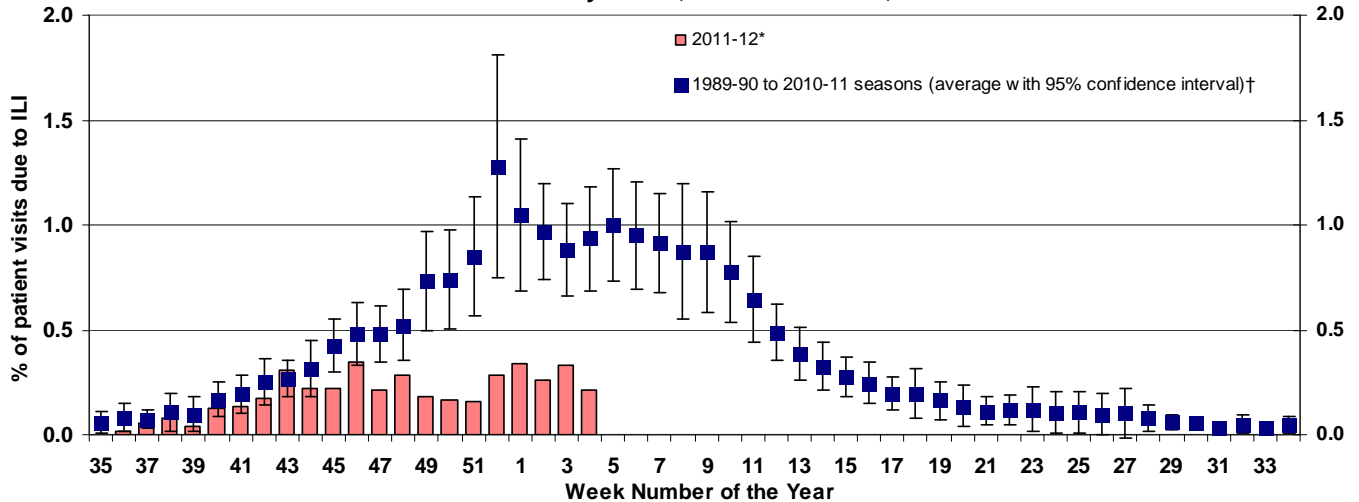
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British Columbia

Sentinel Physicians

In week 4, the proportion of patients with ILI among those presenting to sentinel physicians was 0.21%, slightly less than the previous week and remaining below the expected range for this time of year. Fifty-nine percent of sentinel physician sites have reported for week 4 to-date.

Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 19 Seasons Sentinel Physicians, British Columbia, 2011-2012



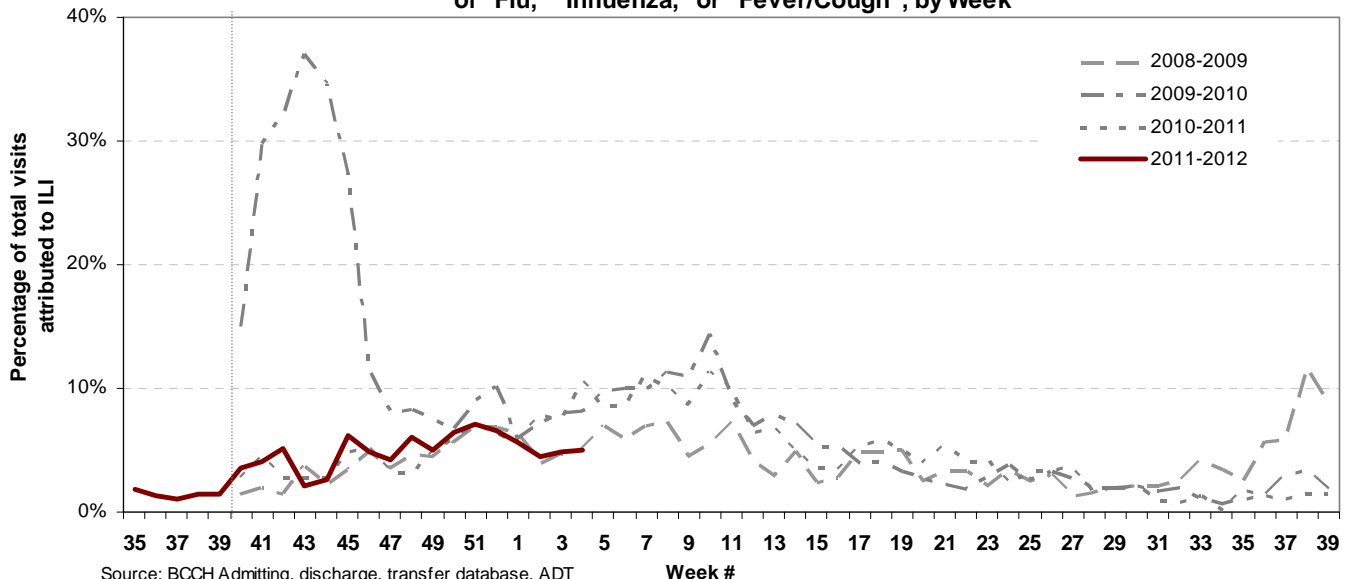
* Data subject to change as reporting becomes increasingly complete.

† 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 week 4 was 5%, similar to the previous week and slightly lower than this time of last 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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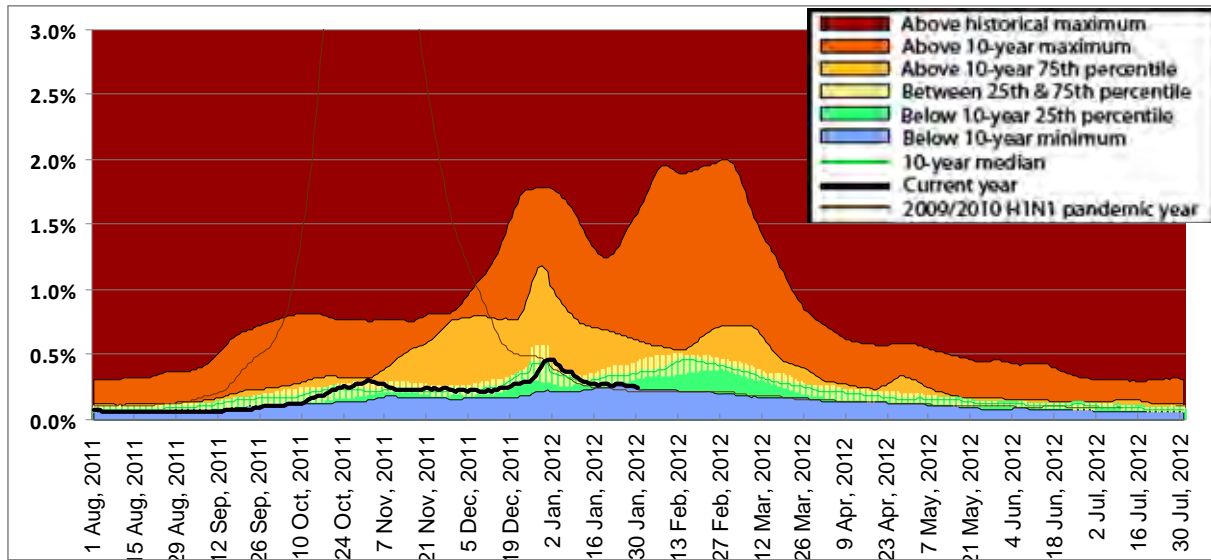
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Medical Services Plan

In week 4, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims remained low, and was at or below the ten-year 25th percentile level for this time of year throughout BC.

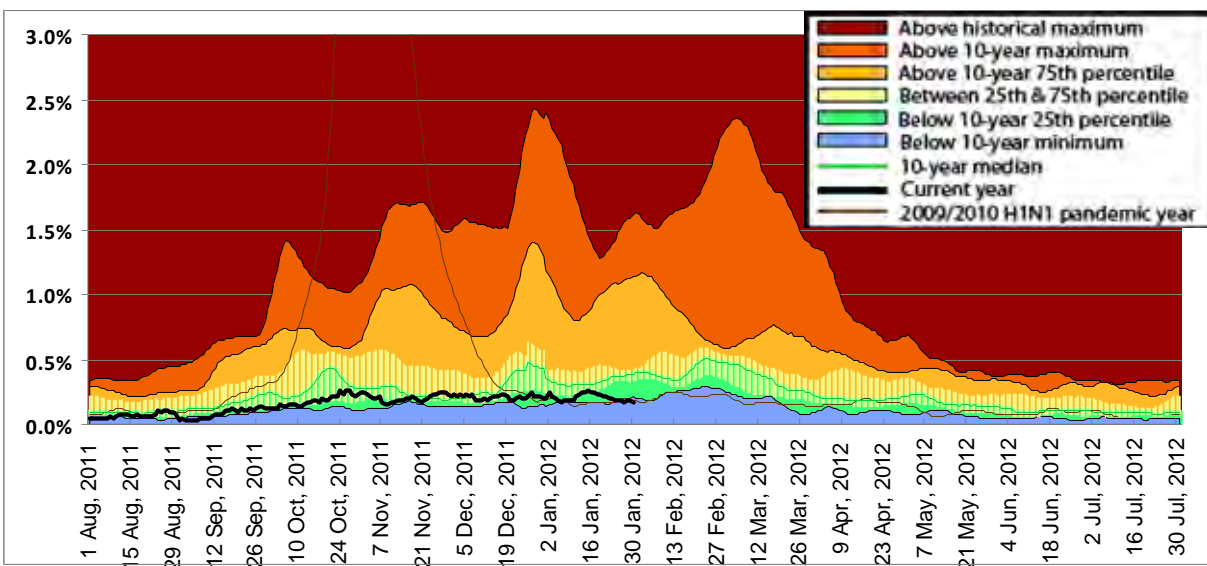
Influenza Illness Claims* British Columbia



* 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 31 January 2012

Northern

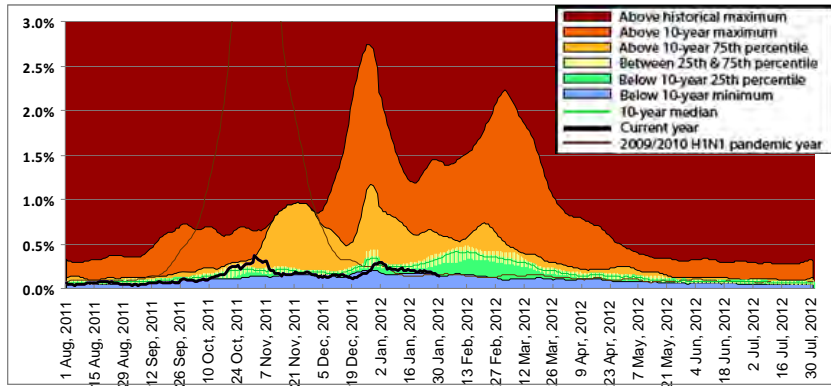


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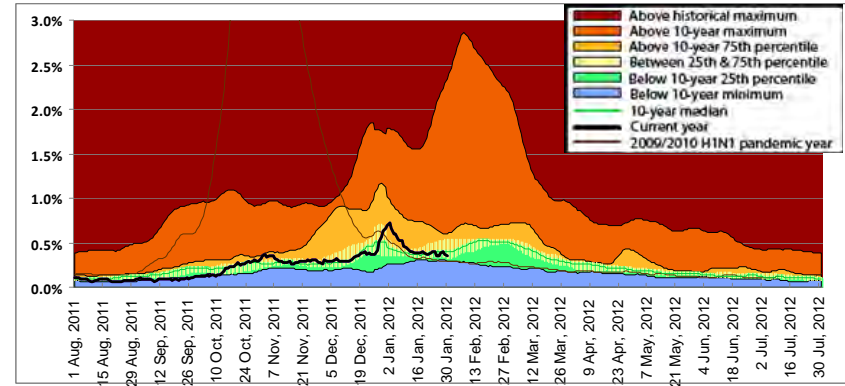
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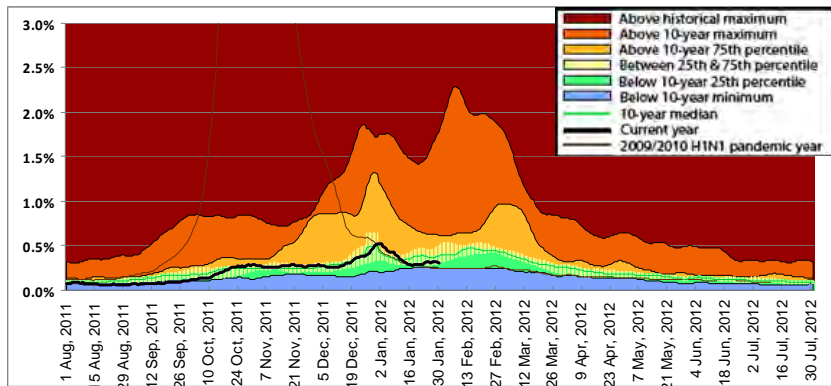
Interior



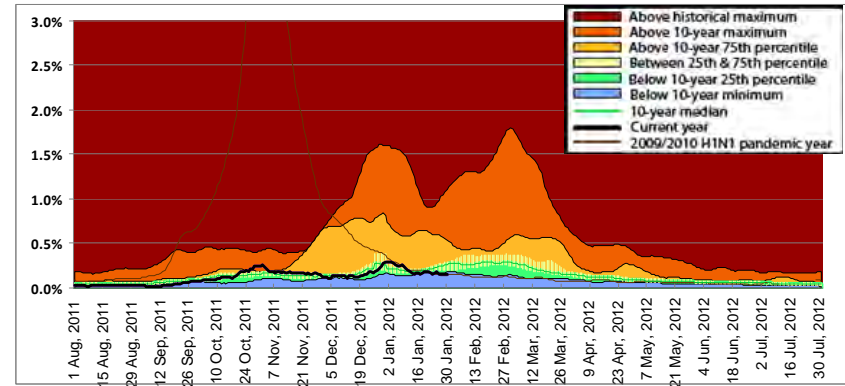
Vancouver Coastal



Fraser



Vancouver Island



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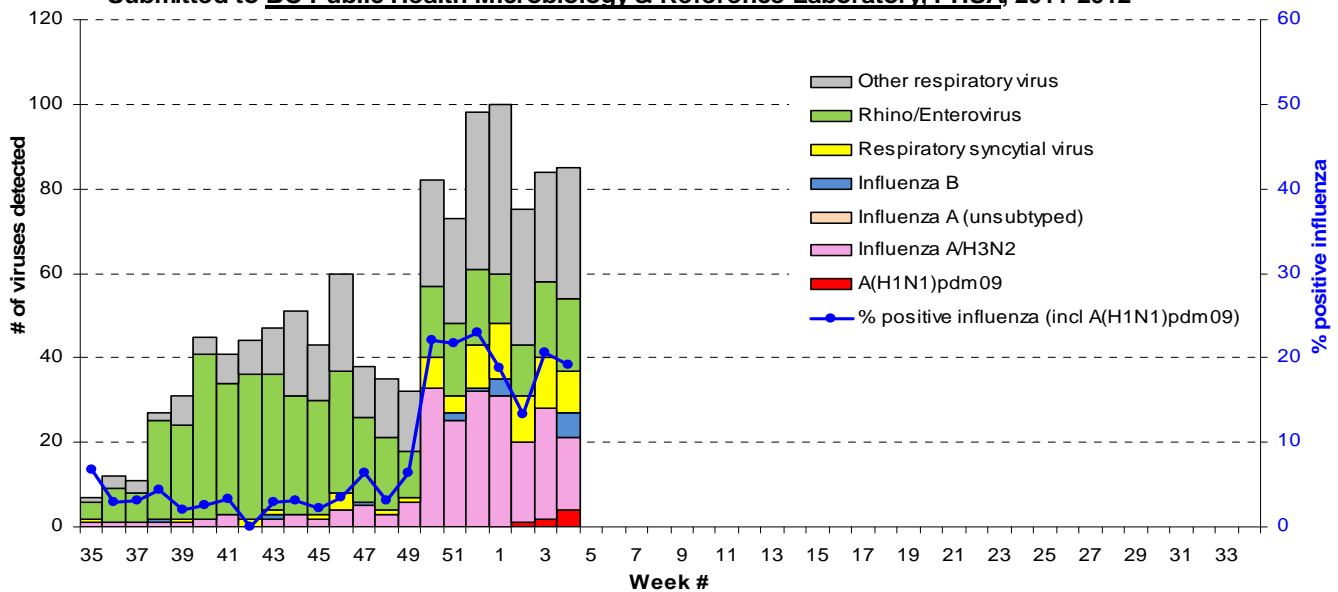
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Laboratory Reports

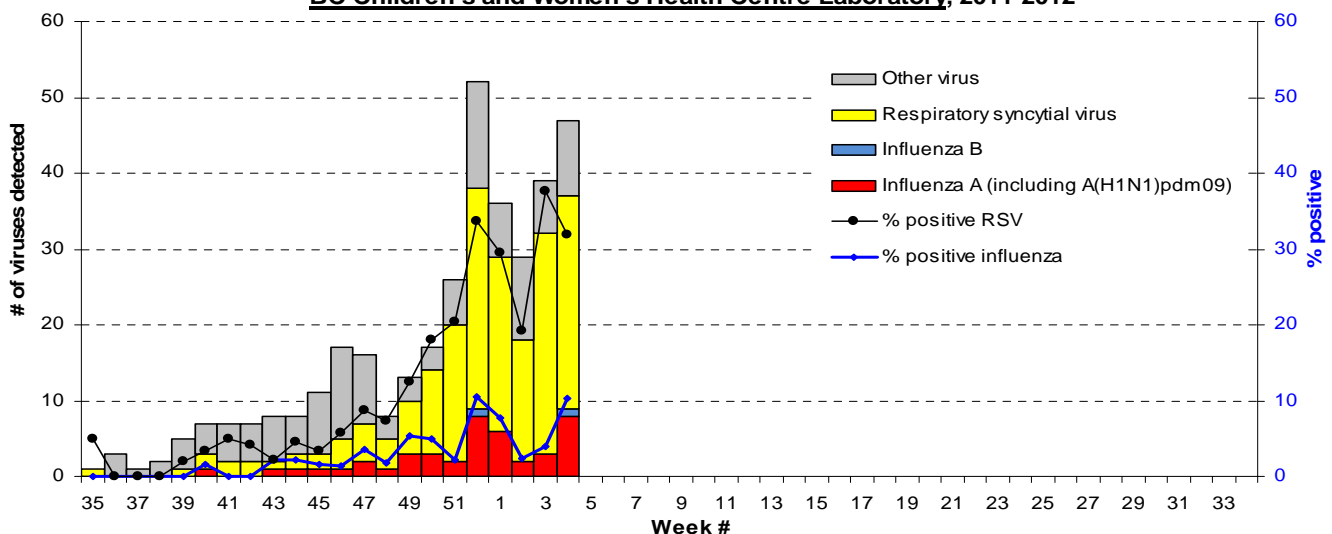
In week 4, A/H3N2 continued to predominate among influenza detections at the BC Public Health Microbiology & Reference Laboratory, PHSA, although the proportions of influenza A(H1N1)pdm09 and influenza B detection increased compared to the previous weeks. One hundred and forty-one respiratory specimens were tested at the provincial laboratory. Twenty-seven (19.1%) submitted specimens were positive for influenza, including 17 (12.1%) influenza A/H3N2 from all HAs, 4 (2.8%) influenza A(H1N1)pdm09 from Fraser and Vancouver Coastal HAs, and 6 (4.3%) influenza B from Vancouver Coastal HA. Of 141 specimens tested for other respiratory viruses, significant detections included 19 human metapneumovirus (13.5%), 17 rhino/enterovirus (12.1%), and 10 respiratory syncytial virus (7.1%). 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 week 4, BC Children's and Women's Health Centre Laboratory tested 88 respiratory specimens: 9 (10.2%) were positive for influenza virus, an increase compared to the previous week, including 8 influenza A (unsubtyped) and 1 influenza B. RSV continued to predominate among the other respiratory viruses detected (28/88, 31.8%). 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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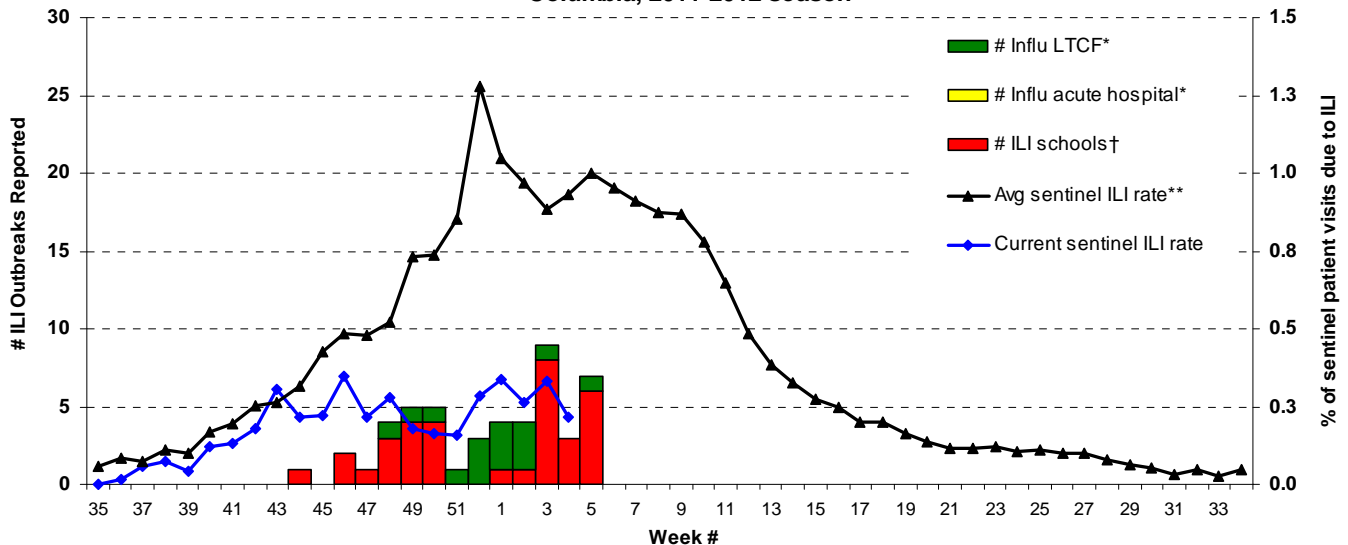
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ILI Outbreaks

In week 4, three ILI outbreaks were reported from schools in Interior HA. In the first half of week 5, six ILI outbreak reports have already been received from schools in Interior HA (5) and Vancouver Coastal HA (1). In addition, since the start of week 4, three ILI outbreaks in long term care facilities for which specimen results remain unavailable or pending have been reported from Vancouver Island, Fraser and Interior Health Authorities.

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 3 (January 15 to 21, 2012), influenza activity remained low in certain areas (i.e. Atlantic region and the Territories), sporadic in most of the country, but with localised activity in a few regions. The proportion of tests positive for influenza in week 3 was 3.3% (127/3,854), similar to the previous week. One hundred and twenty-seven influenza detections included 68 A/H3N2, 9 A(H1N1)pdm09, 18 A (unsubtyped) and 32 influenza B. The ILI consultation rate declined in week 3 compared to previous weeks and remained within expected levels for this time of year. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

Between September 1, 2011 and February 2, 2012, 150 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

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

37 A/California/07/09-like (H1N1)^{*} from QUE and ONT;

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

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

[†] 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

NML: Antiviral Resistance

From September 1, 2011 to February 2, 2012, drug susceptibility to oseltamivir and zanamivir was tested at the NML for forty-seven influenza A/H3N2, thirty-five influenza A(H1N1)pdm09, and sixty-one influenza B isolates. The results indicated that all isolates were sensitive to oseltamivir and zanamivir. In addition, fifty-six A/H3N2 and twenty-four A(H1N1)pdm09 isolates were also tested for susceptibility to amantadine and all were found to be resistant.

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INTERNATIONAL

USA: in week 3 ending January 21, 2012, influenza activity in the United States remained relatively low. 175 (4.9%) specimens tested were positive for influenza including 9 influenza B and 166 influenza A [101 seasonal A/H1N1, 20 A(H1N1)pdm09, and 45 untyped A]. The proportion of outpatient visits for ILI was 1.4% which was below the national baseline of 2.4%. The proportion of all deaths due to pneumonia and influenza illness was 7.8%, slightly above the epidemic threshold for this time of the year. The USA further reported one paediatric death related to influenza B infection. www.cdc.gov/flu/weekly/.

WHO news: (last updated on 20 January 2012) Northern Hemisphere: Influenza activity in the temperate regions of the northern hemisphere remained low overall though notable local increases in activity were reported in some areas of Canada, Europe, northern Africa, China and the middle East. The most commonly detected virus type or subtype throughout the northern hemisphere temperate zone was influenza A/H3N2 with the exception of Mexico, where influenza A(H1N1)pdm09 was the predominant subtype circulating, and China which was reporting a predominance of influenza type B. According to a ProMED report (www.promedmail.org/direct.php?id=20120130.1026907), health officials in Mexico have attributed 29 deaths and many more infections to an influenza A(H1N1)pdm09 outbreak in that country.

Tropics and Southern Hemisphere: Countries in the tropical zone reported generally low or undetectable levels of influenza activity with the exception of southern China, where influenza type B detections were increasing, and Costa Rica, which continued to report influenza A/H3N2 but at declining levels. Influenza activity in the temperate countries of the southern hemisphere was at inter-seasonal levels though Chile, Paraguay and Australia all reported persistent low level transmission of A/H3N2 during their summer season. Antigenic characterization and Virological surveillance: Reports from countries that did antigenic characterization indicate that nearly all influenza A viruses tested were antigenically related to those viruses included in the current trivalent influenza vaccine. Many of the influenza type B viruses were of the Yamagata lineage, which was not included in the current vaccine. Oseltamivir resistance continued to be observed at very low levels and had not increased notably over levels reported in previous seasons.

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

Avian Influenza:

According to ProMED (www.promedmail.org/direct.php?id=20120201.1028827), on 1 February 2012, the Ministry of Health of Viet Nam reported a confirmed case of human infection with avian influenza A/H5N1 virus in a young adult female who succumbed to the infection shortly after hospital admission in late January. The patient was reported to have slaughtered and eaten infected poultry. The cumulative deaths in 2012 has reached 5 out of the total of 6 cases reported.

www.who.int/influenza/human_animal_interface/en/ (update at this site pending)

WHO Recommendations for 2011-12 Northern Hemisphere Influenza Vaccine

On February 17, 2011 the WHO announced the recommended strain components for the 2011-12 northern hemisphere trivalent influenza vaccine (TIV):

A/California/7/2009 (H1N1)-like virus

A/Perth/16/2009 (H3N2)-like virus

B/Brisbane/60/2008 (Victoria lineage)-like virus

All three recommended components are the same as for northern hemisphere seasonal TIV vaccines produced and administered in 2010-11. For further details, see:

www.who.int/influenza/vaccines/virus/2011_12north/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	<u>Reporting Information</u>	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	<u>First Notification</u>
	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	<u>Update AND Outbreak Declared Over</u>
	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	<u>Laboratory Information</u>
	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