

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 3, Week 48
November 28 to December 4, 2010



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

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Low influenza activity in BC; recent A/H3N2 detection by sentinel physicians and one school outbreak in week 49

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Summary

During week 48 (November 28 – December 4), influenza activity in BC remained low. Sentinel physician and MSP indicators were consistent with the low levels observed in previous weeks. At the BC Provincial Laboratory, 76 respiratory specimens were tested, 21 (28%) of which were positive for rhino/enterovirus. Three (4%) cases of influenza A/H3N2 were detected from different parts of the province (Northern Interior, Fraser North and Richmond), two of them submitted by sentinel physicians. Conversely, of 36 specimens tested at BC Children's Hospital Laboratory, none was positive for influenza. Other respiratory viruses were sporadically detected at both labs during this period. During week 49, influenza A/H3N2 virus was also detected from Northern Interior in one specimen submitted by a sentinel physician as well as among specimens from a school outbreak. In combination, these findings suggest some recent community A/H3N2 activity in BC, particularly in the northern parts of the province, that is still at low levels but requires monitoring for further possible increase in the weeks to come.

Report disseminated December 10, 2010

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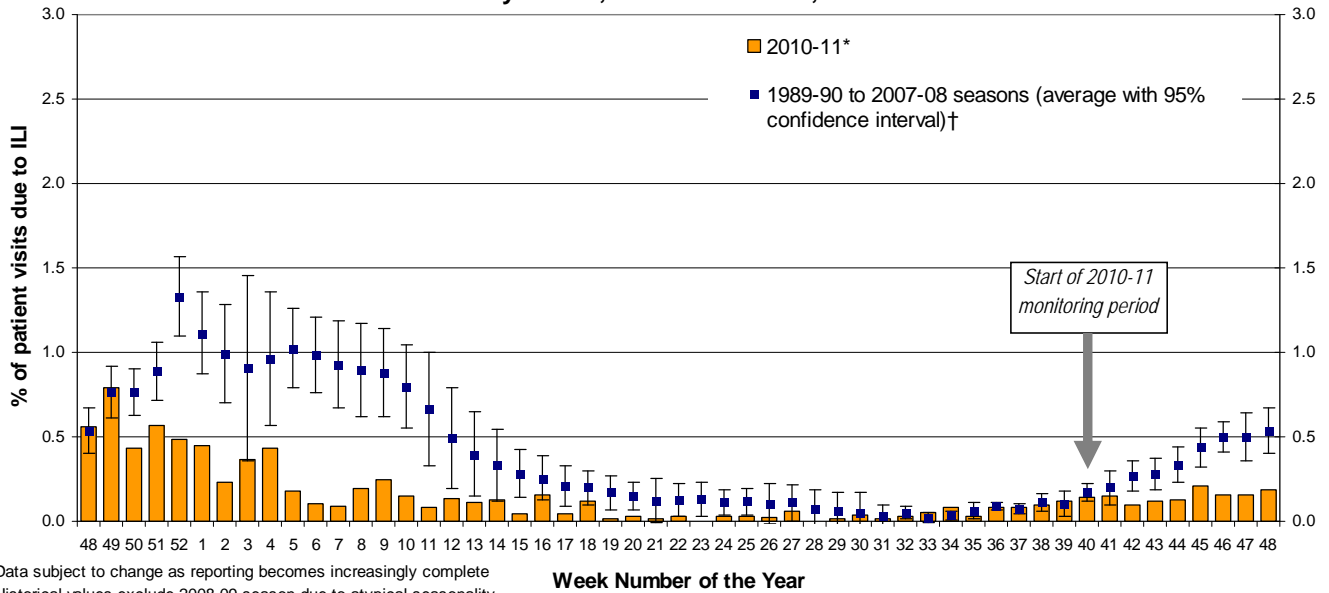
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British Columbia

Sentinel Physicians

During week 48, less than 0.2% of patients presenting to sentinel physicians had ILI, which is below the expected range for this time of year. Fifty-five percent (26/47) of sentinel physician sites have reported to-date for week 48.

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, 2010-2011

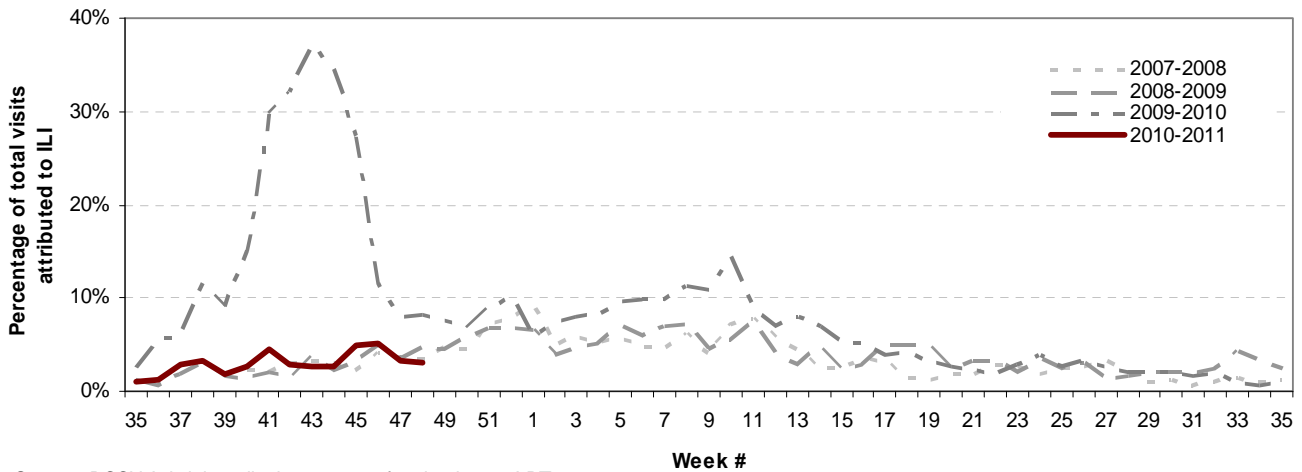


*Data subject to change as reporting becomes increasingly complete
†Historical values exclude 2008-09 season due to atypical seasonality.

BC Children's Hospital Emergency Room

The percentage of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness decreased to under 5% towards the end of this period and remains consistent with levels observed in previous seasons.

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

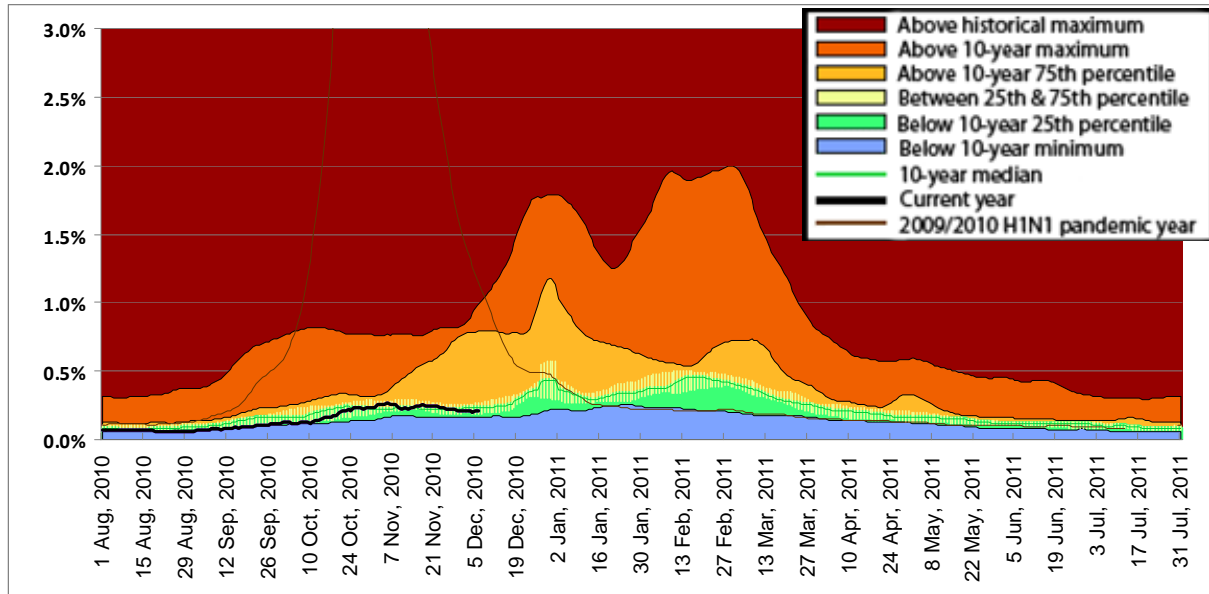
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims also remained low during this past week. Proportions in all RHAs remained at or below historical medians, except Vancouver Island which was slightly elevated. To better reveal current low-level trends, the ~9% peak in MSP claims of late October/early November 2009 is not shown in the graphs below (consult earlier bulletins).

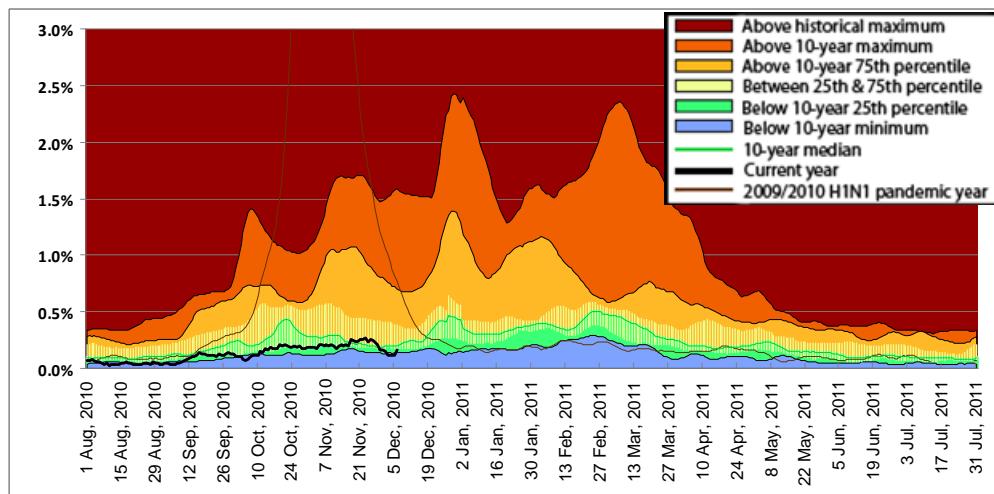
Influenza Illness Claims* British Columbia



* 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, Ministry of Healthy Living & Sport

Notes: MSP week 21 Nov, 2010 corresponds to sentinel ILI week 47.
 Data current to Dec 6, 2010

Northern

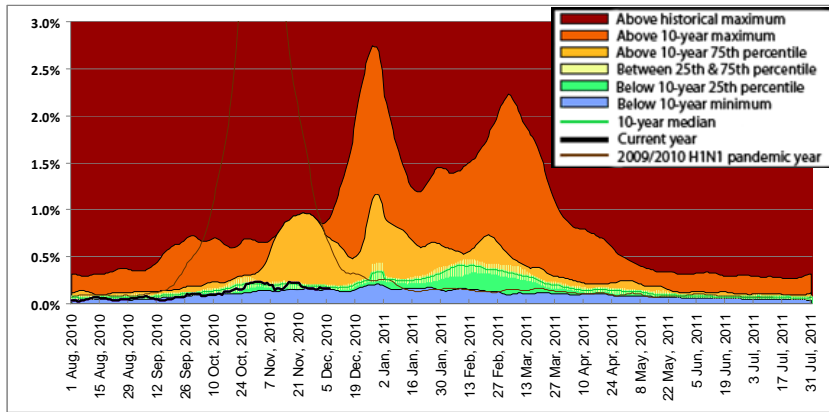


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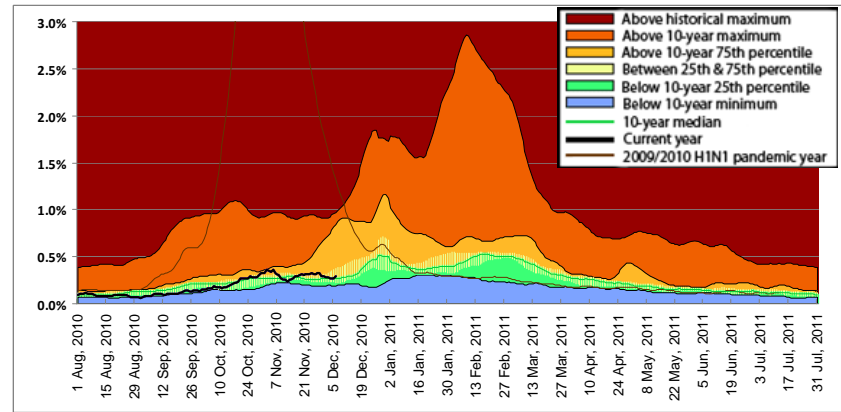
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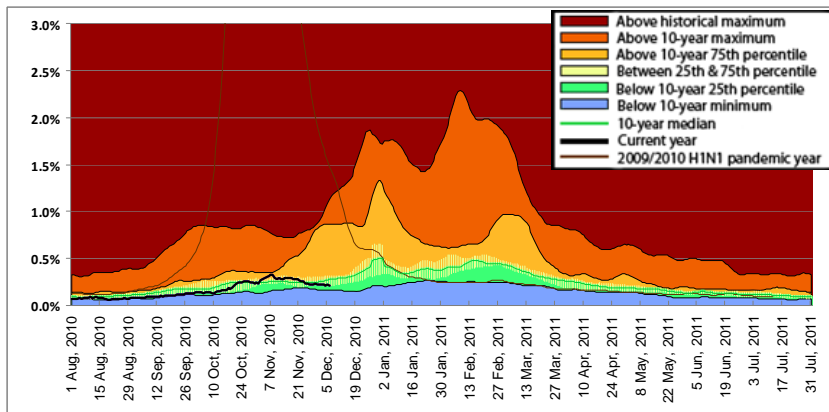
Interior



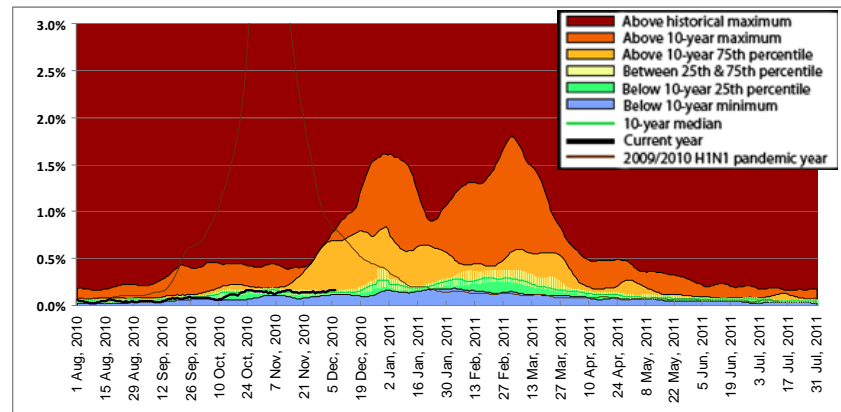
Vancouver Coastal



Fraser



Vancouver Island



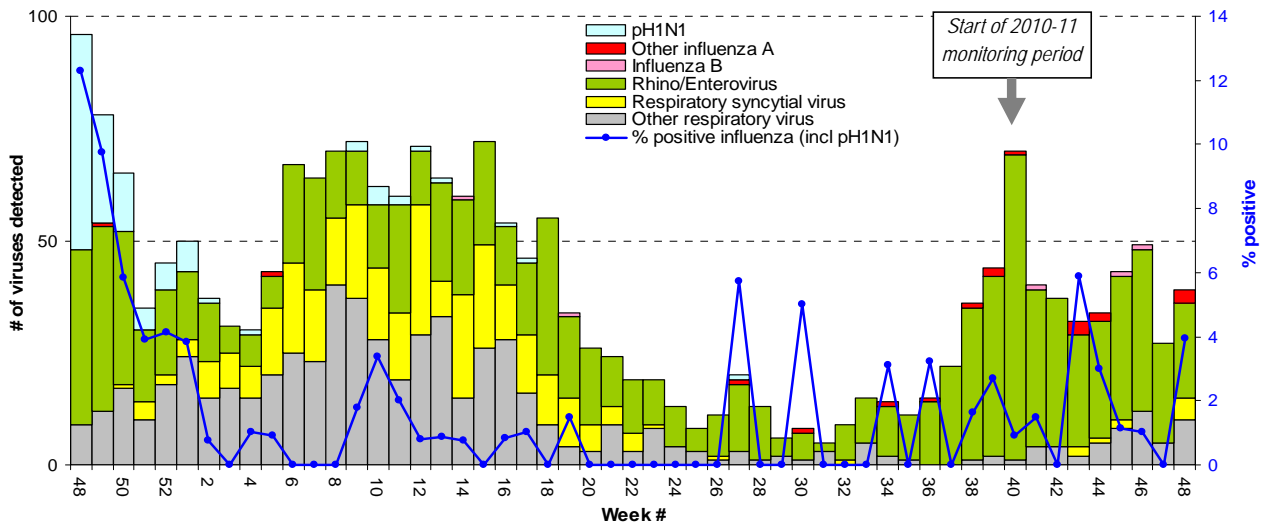
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Laboratory Reports

Seventy-six respiratory specimens were tested at the BC Provincial Laboratory in week 48. Three (4%) were positive for influenza A/H3N2; two in adults (30 - 35 years old), and one in a 6-year-old. Two of these were submitted by separate sentinel sites (Northern Interior and Fraser North), suggesting Influenza H3 activity in the community. During week 49, another influenza A/H3N2 virus was detected among specimens submitted by sentinel physicians from the same community in Northern Interior. No specimen was positive for pH1N1 or influenza B in week 48. In this week, of 76 specimens tested for other respiratory viruses, 21 (28%) tested positive for rhino/enterovirus, 2 (3%) for adenovirus, and 4 (5%) for parainfluenza. Although other respiratory viruses may still be making greater contribution to acute febrile respiratory illness in BC, the detection of influenza at separate sentinel sites warrants monitoring for further possible increase in the weeks to come.

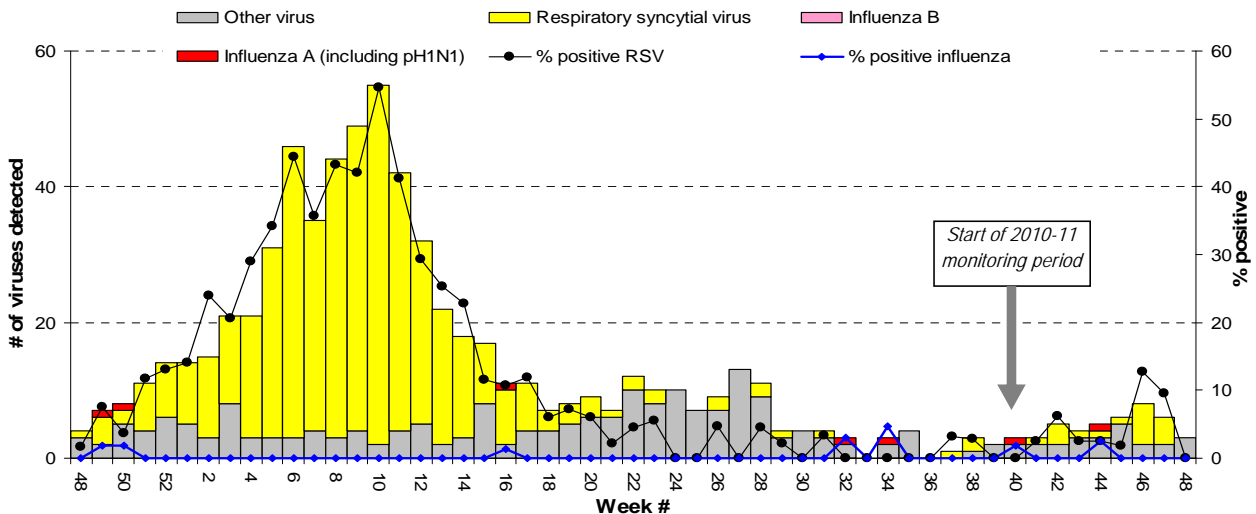
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Provincial Laboratory, 2010-2011



Older data truncated to show greater detail in newer data (see earlier bulletins).
 Before week 14 testing for other viruses was performed on a subset of specimens.

During week 48, BC Children's and Women's Health Centre Laboratory tested 36 respiratory specimens. None were positive for influenza. One specimen (2.8%) was positive for parainfluenza, and 2 (5.6%) for adenovirus.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Children's and Women's Health Centre Laboratory, 2010-2011



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

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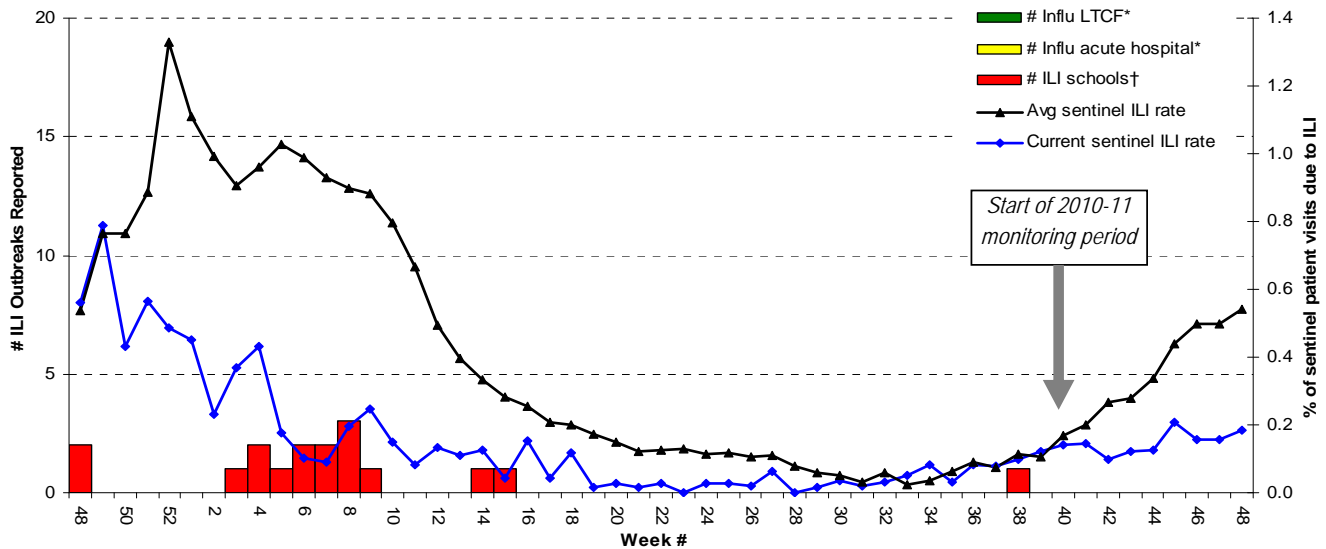
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ILI Outbreaks

One ILI outbreak was reported by a long-term care facility (LTCF) in the province, but no influenza was identified. Laboratory testing identified RSV. No ILI outbreaks were reported in BC schools in week 48. During week 49, a laboratory-confirmed influenza A/H3N2 outbreak was reported from a school in Northern Interior.

Number of Influenza and Influenza-Like Illness (ILI) Outbreaks Reported, Compared to Current Sentinel ILI Rate and Average Sentinel ILI Rate for past 19 years, per Week, British Columbia, 2010-2011 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.

CANADA

FluWatch

During the week ending December 4, 2010, influenza activity in Canada continued to increase, particularly in some regions of the Prairies, Ontario and Quebec. The influenza-like illness (ILI) consultation rate remained within the expected range for this time of year. Two hundred twenty-five specimens (out of 2,728 or 8.25%) tested positive for influenza in week 48, an increase from the previous week (4.59%): 104 A/H3N2, 111 untyped influenza A, 5 pH1N1, and 5 influenza B. Those specimens were reported from ON, QC, MB, AB, SK, and BC. Influenza A activity was mainly concentrated in ON, QC and MB. During week 48, 8 new paediatric hospitalizations and one death (pandemic H1N1 in a 6-23 month old with comorbidity) and 18 new adult hospitalizations related to influenza were reported through IMPACT and CNISP networks. This is an increase over previous weeks. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

Between September 1 and December 9, 2010, Fifty-one influenza isolates were collected from provincial and hospital labs and characterized at the NML:

42 A/Perth/16/2009 (H3N2)-like[†] from QC, ON, MN, AB & BC;

3 A/California/07/2009 (H1N1)-like* from ON;

6 B/Brisbane/60/2008 (Victoria lineage)-like[†] from QC, ON AB & BC;

[†] indicates a strain match to the recommended H3N2 component of the 2010-11 northern hemisphere trivalent influenza vaccine

* indicates a strain match to the recommended H1N1 component of the 2010-11 northern hemisphere trivalent influenza vaccine

[†] indicates a strain match to the influenza B component of the 2010-2011 northern hemisphere trivalent influenza vaccine

NML: Antiviral Resistance

Drug susceptibility testing at the NML between September 1 and December 8, 2010 indicated that all A/H3N2 and pH1N1 isolates were resistant to amantadine. All the isolates tested for zanamivir and oseltamivir resistance (33 A/H3N2, 2 pH1N1, 6 type B) showed susceptibility.

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INTERNATIONAL

Northern Hemisphere: During the week ending December 4, 2010, influenza activity remained low in the United States <http://www.cdc.gov/flu/weekly/>. Three hundred eighty six specimens (out of 3,572, or 10.8%) tested positive for influenza in week 48: 21 pH1N1, 96 A/H3, 106 unsubtype influenza A, and 163 type B. The proportion of ILINet physician visits for ILI was 1.5%, which was below the national baseline of 2.5%. The CDC further reported that the proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold in the USA. Most countries in Europe continued to report low ILI activity, with a mix of A/H3N2, pH1N1, and type B identified. Russia and Bulgaria reported medium level of circulation of respiratory disease, but it is unknown if influenza was associated. In East Asia, China, Japan and Republic of Korea reported low influenza activity. Northern China reported increase of positive cases of influenza (primarily A/H3N2) in late October to mid November 2010 but ILI rate remained low. In Mongolia, the rate of A/H3N2 increased in mid to late November which increased the ILI rate above the seasonal threshold, suggesting that local winter influenza season had begun.

Southern Hemisphere: To December 3, 2010, the WHO reported low influenza activity overall worldwide. Influenza virus circulation remained most active in areas of South Asia and central and western Africa. In Central and South America, Chile and Argentina reported that late season epidemics of A/H3N2 had largely subsided. Low level of activity was reported in Costa Rica (A/H3N2 and type B) and Columbia (pH1N1). Bolivia reported sustained active circulation of A/H3N2 since mid September. Cuba reported low to moderate level of circulation of A/H3N2 since early August. In southern Mexico, active A/H3N2 circulation was reported from August to November 2010 and had now largely subsided. In Asia, several countries in Southeast Asia continued to report low to moderate circulation of A/H3N2. Sri Lanka reported a recent surge of pH1N1 during mid-October through late November 2010, though unusual clinical severity of the cases was not reported. In India and Bangladesh, influenza activity had largely subsided. In South Africa, influenza activity had subsided after a low circulation of type B and pH1N1 during November 2010. In Sub-Saharan Africa, Cameroon and Ethiopia reported recent surge of pH1N1. Kenya and Ghana continued to report low to moderate levels of A/H3N2 circulation.

http://www.who.int/csr/disease/influenza/2010_12_03_GIP_surveillance/en/index.html

<http://www.nicd.ac.za/>

<http://www.flu.org.cn/>

<http://www.flu.mn/eng/>

<http://www.msal.gov.ar/hm/site/alerta-epidemiologico.asp>

Human Avian Influenza Infections

Two new human cases of avian influenza A/H5N1 have been reported from Indonesia and Egypt. The Indonesian patient (21 year old female) developed severe respiratory illness requiring ICU admission and assisted respiration. Patient condition is improving and assisted respiration has been terminated. The Egyptian patient (30 year old female) developed symptoms on 28 Nov 2010, was hospitalized on 1 Dec 2010, where she received oseltamivir treatment, and died on 2 Dec 2010. Investigations into the source of infection indicated that the case had exposure to sick and dead poultry. More information can be obtained from:

http://www.who.int/csr/disease/avian_influenza/en/index.html

WHO Recommendations for 2010-11 Northern Hemisphere Influenza Vaccine

On February 18, the WHO announced the recommended strain components for the 2010-11 Northern Hemisphere trivalent influenza vaccine:

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

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

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

A/California/7/2009 (H1N1) was the recommended component for pandemic H1N1 vaccines produced and administered in 2009-10. The recommended H3N2 virus has changed from the previous year's vaccine (A/Brisbane/10/2007), while the recommended B virus remains unchanged (B/Brisbane/60/2008). For further details, see:

www.who.int/csr/disease/influenza/recommendations2010_11north/en/index.html

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Contact Us:

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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.eiss.org

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.healthemergency.gov.au/internet/healthemergency/publishing.nsf/Content/ozflucurrent.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

