

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 5, Week 50

December 12 to December 18, 2010



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Recent A/H3N2 and pandemic A/H1N1 detections but low influenza activity overall in BC to date

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Summary

During week 50 (December 12 – December 18), 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, 95 respiratory specimens were tested, 16 (17%) of which were positive for rhino/enterovirus. Four (4%) cases of pandemic A/H1N1 were detected among adults in the Lower Mainland. One further adult A/H3N2 case was also detected. Of 46 specimens tested at BC Children's Hospital Laboratory, none were positive for influenza. Other respiratory viruses were sporadically detected at both labs during this period. Given recent A/H3N2 and pandemic A/H1N1 detections, those at risk should consider receiving the influenza vaccine prior to the holiday period when both social contact and influenza exposure opportunities may increase.

Report disseminated December 23, 2010

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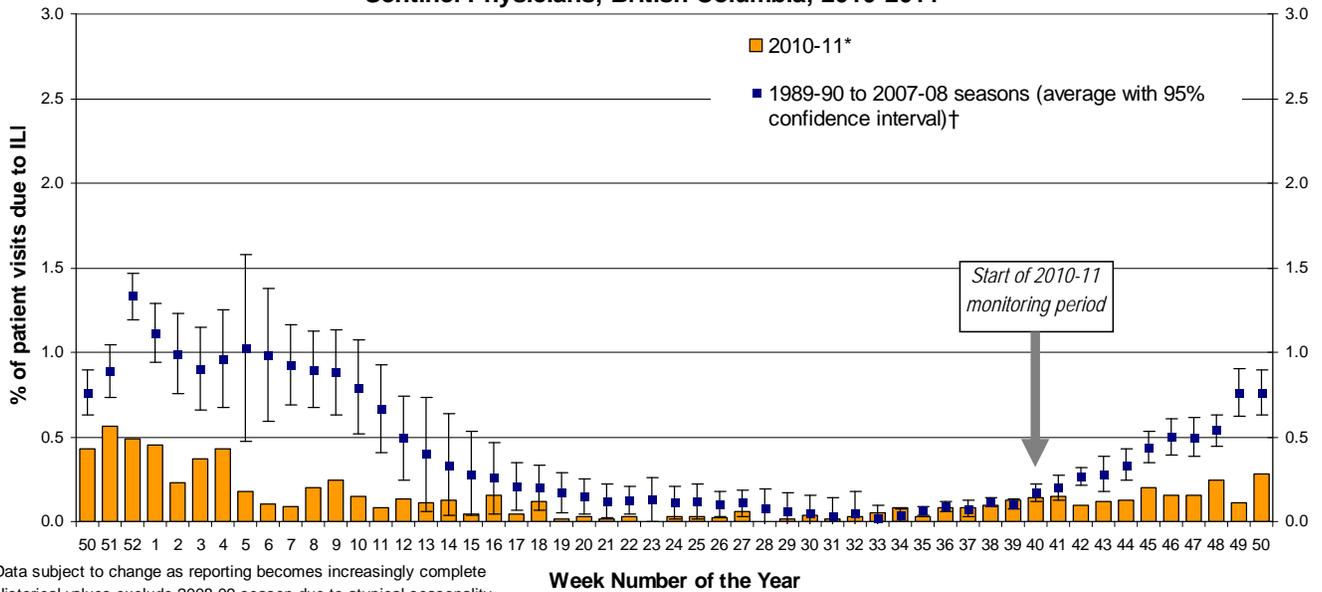
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British Columbia

Sentinel Physicians

During week 50, less than 0.3% of patients presenting to sentinel physicians had ILI, which is below the expected range for this time of year. Forty-nine percent (23/47) of sentinel physician sites have reported to-date for week 50.

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

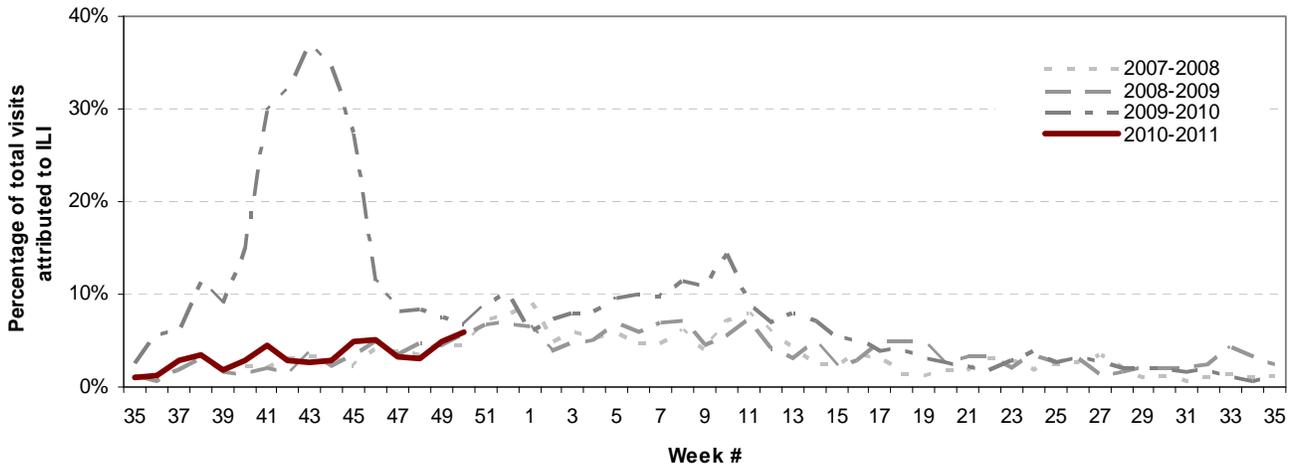


*Data subject to change as reporting becomes increasingly complete
 †Historical values exclude 2008-09 season due to atypical seasonality.

BC Children's Hospital Emergency Room

The percentage of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness increased to slightly below 6% towards the end of this period but 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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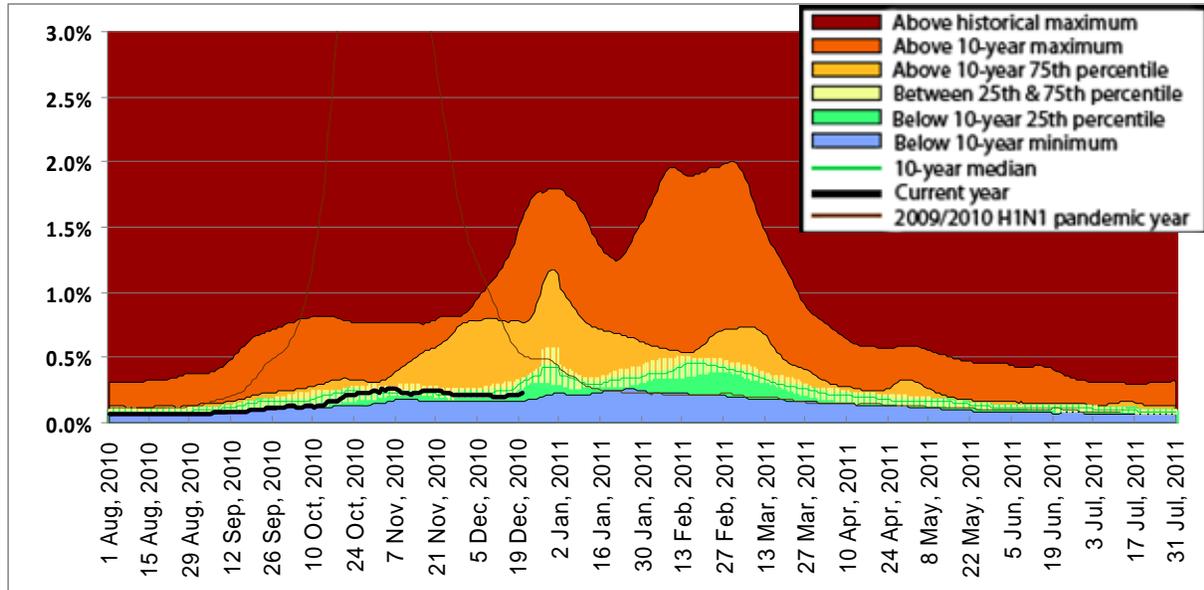
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Medical Services Plan

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. 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).

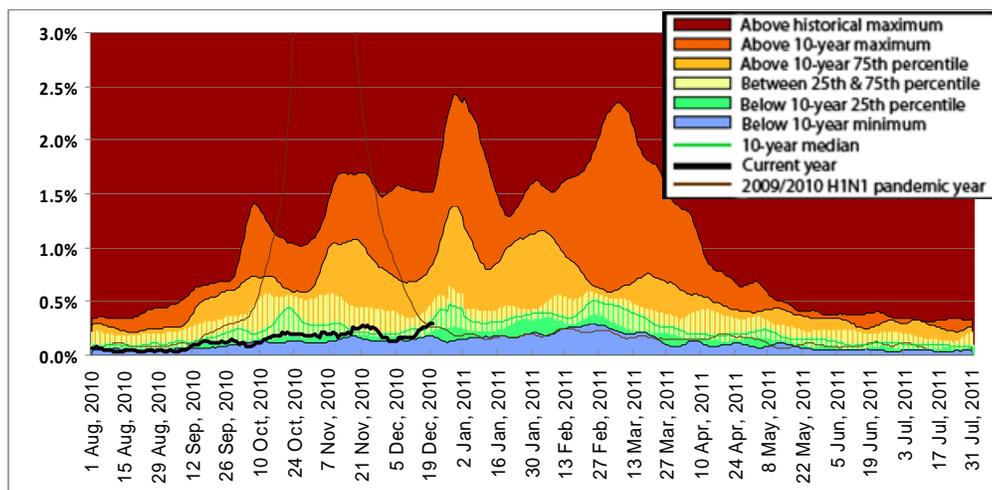
Influenza Illness Claims* British Columbia



* 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 5 Dec, 2010 corresponds to sentinel ILI week 49.
Data current to Dec 20, 2010

Northern

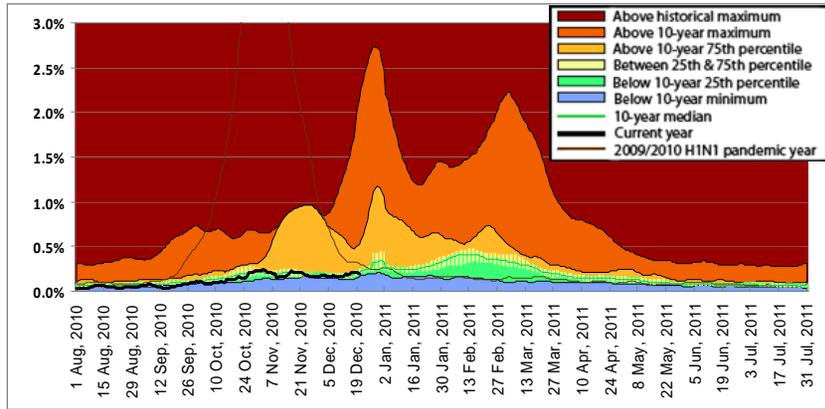


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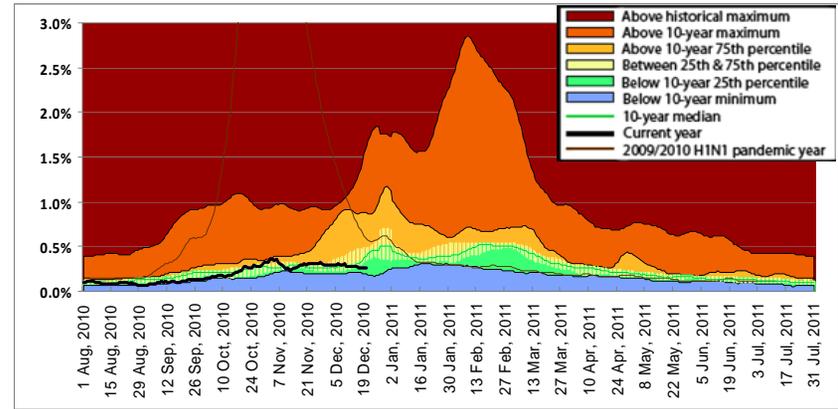
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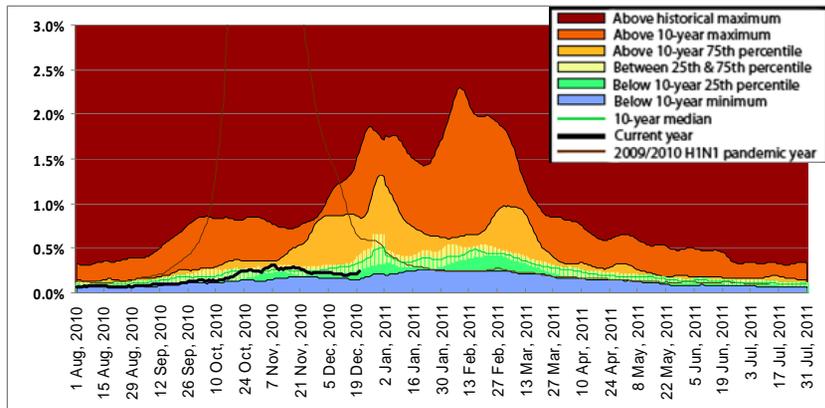
Interior



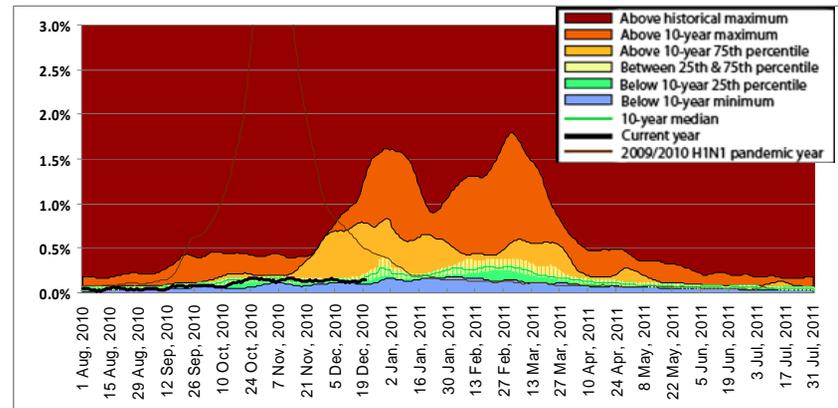
Vancouver Coastal



Fraser



Vancouver Island



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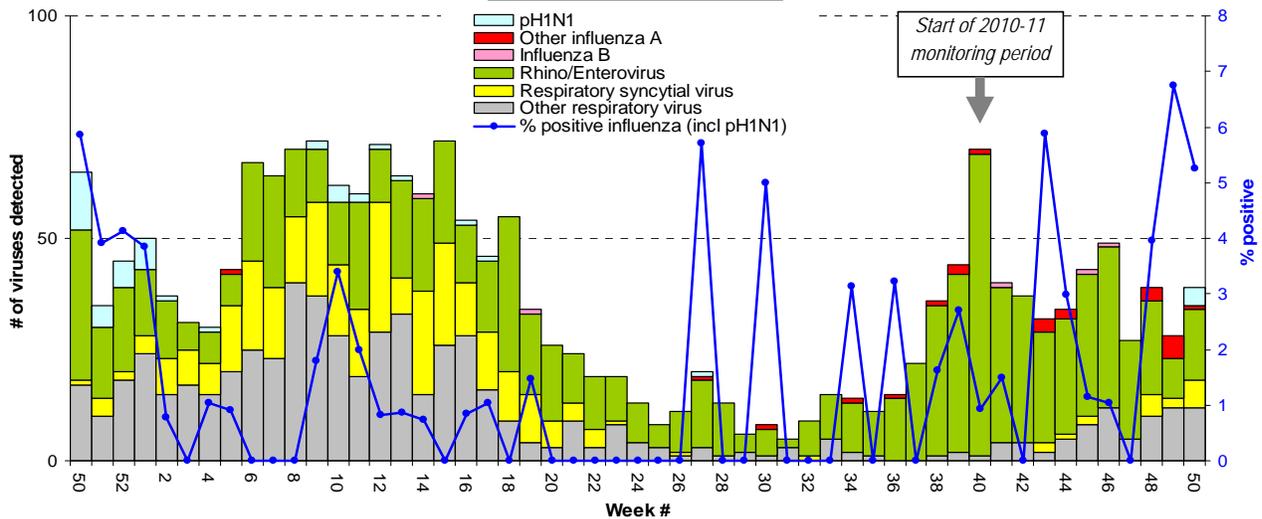
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Laboratory Reports

Ninety-five respiratory specimens were tested at the BC Provincial Laboratory in week 50. Four (4%) were positive for pandemic H1N1 among adults in the Lower Mainland; three were 20-49 years of age and one was >50 years of age. These pandemic A/H1N1 detections are the first since the one reported case more than five months ago in week 27. One specimen (1%) was positive for A/H3N2 in an adult >50 years of age. No specimen was positive for influenza B in week 50. In this week, of 95 specimens tested for other respiratory viruses, 16 (17%) tested positive for rhino/enterovirus, 7 (7%) for parainfluenza, and 6 (6%) for RSV. Although other respiratory viruses may still be making greater contribution to acute febrile respiratory illness in BC, the recent detection of community influenza activity warrants monitoring for further possible increase in the weeks to come. In light of recent A/H3N2 and pandemic A/H1N1 detections in BC, those at risk are reminded to consider immunization prior to the holiday period of increased social contact and influenza exposure opportunities.

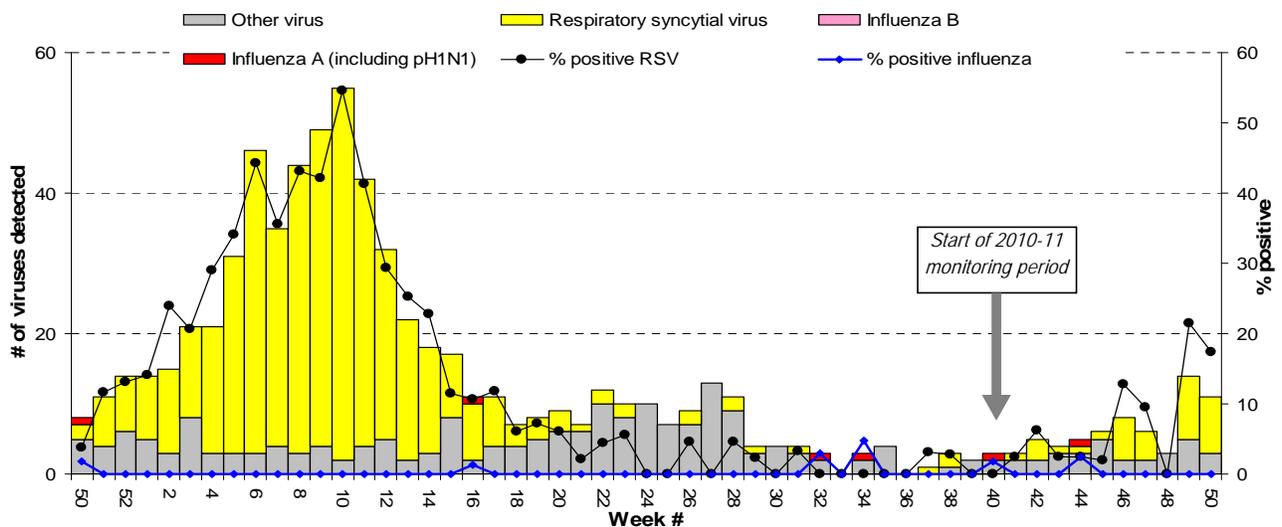
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Provincial Laboratory, 2010-2011



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 50, BC Children's and Women's Health Centre Laboratory tested 46 respiratory specimens. None were positive for influenza. Eight specimens (17.4%) were positive for RSV, one (2.2%) for parainfluenza, and 2 (4.3%) 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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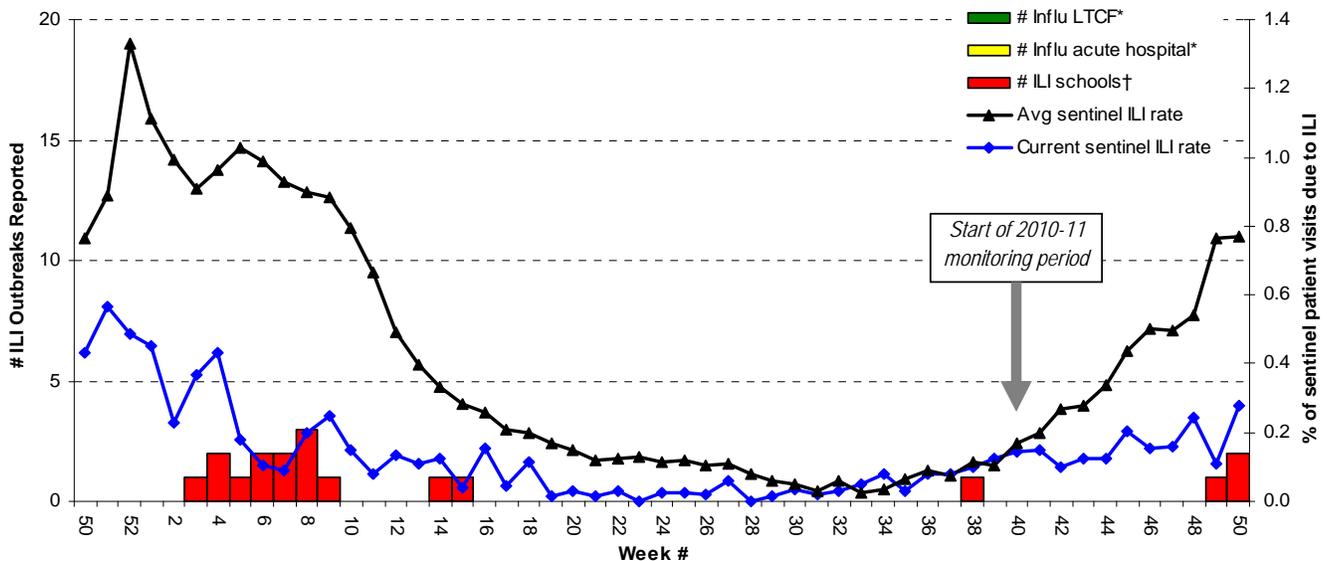
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ILI Outbreaks

During week 50, three ILI outbreaks were reported by long-term care facilities (LTCF) in the province, but no influenza was identified. Laboratory testing identified entero/rhinovirus and/or parainfluenza in two facilities, while specimens were negative in one. ILI outbreaks were also reported in two schools in Interior Health.

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

A full national update for week 50 is still pending. During week 49 ending December 11, 2010, influenza activity in Canada had 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. Three hundred twenty-three specimens (out of 3,000 or 10.8%) tested positive for influenza in week 49, an increase from the previous week (8.25%): 79 A/H3N2, 228 unsubtype influenza A, 5 pandemic H1N1, and 11 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 49, 13 new paediatric hospitalizations and 16 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 16, 2010, sixty-six influenza isolates were collected from provincial and hospital labs and characterized at the NML:

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

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

13 B/Brisbane/60/2008 (Victoria lineage)-like[†] from QC, ON, SK, 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 16, 2010 indicated that all A/H3N2 and pandemic H1N1 isolates were resistant to amantadine. All the isolates tested for zanamivir (34 A/H3N2, 3 pH1N1, 11 type B) and oseltamivir resistance (39 A/H3N2, 3 pH1N1, 11 type B) showed susceptibility.

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INTERNATIONAL

Northern Hemisphere: A full international update for week 50 is still pending. During week 49 ending December 11, 2010, influenza activity had increased in the United States <http://www.cdc.gov/flu/weekly/>. Three hundred sixty three specimens (out of 3,295, or 11.0%) tested positive for influenza in week 49: 11 pandemic H1N1, 95 A/H3, 88 unsubtyped influenza A, and 169 type B. The proportion of ILINet physician visits for ILI was 1.8%, 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. A swine origin triple reassortant A/H3N2 case was reported in Minnesota, the latest to be reported since the two cases in week 44. The cases are not epidemiologically linked, and all have been associated with contact with pigs.

At least 13 countries in Europe reported small to moderate increase of ILI activity, particularly among children <14 years of age, with a mix of A/H3N2, pandemic H1N1, and type B identified. As of December 23, the **United Kingdom** reported continued increase in influenza activity with primary care ILI rate above the base line thresholds in England. Pandemic influenza A/H1N1 and influenza B are the predominant circulating viruses. Sixty-five percent of specimens from patients with ILI presenting to sentinel GPs in England in week 50 were reported as positive for influenza. The rise in the number of reported cases in the community has been accompanied by reports of patients with serious illness requiring hospitalization and numerous outbreaks of flu in schools across the country. The virus strains circulating are well matched to the current influenza vaccine. The Russian Federation and Ukraine reported levels of ILI or ARI above the seasonal baseline. In East Asia there was low influenza activity reported by China, Japan and the Republic of Korea. The Republic of Korea reported a substantial increase of positive cases of influenza (primarily pH1N1) since mid to late November 2010 but the ILI rate only increased slightly. During the same period in Mongolia, the rate of A/H3N2 increased, which increased the ILI rate above the seasonal threshold, suggesting that the local winter influenza season had begun. Northern China reported an increase of positive cases of influenza (primarily A/H3N2) in late October to mid November 2010 but the ILI rate remained low.
<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/EpidemiologicalData/02influsweeklyreport/>
http://www.who.int/csr/disease/influenza/2010_12_17_GIP_surveillance/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

