

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 1, Weeks 40-45

October 3 to November 13, 2010



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Influenza activity in BC remains low; sporadic A/H3N2 detected

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Summary

During weeks 40 through 45 (October 3 – November 13), influenza activity in BC remained low. Sentinel physician and MSP indicators were consistent with low levels observed in previous weeks. No lab-confirmed influenza outbreaks were reported in the province. At the BC Provincial Laboratory, 458 respiratory specimens were tested between October 3 and November 13, 219 (48%) of which were positive for rhino/enterovirus. Six (<2%) influenza A/H3N2 viruses were detected, all in children and young adults. Of 276 specimens tested at BC Children's Hospital Laboratory, 2 (<1%) were positive for influenza. Other non-influenza respiratory viruses were sporadically detected at both labs during this period. In the temperate Northern Hemisphere there has been little respiratory illness activity to date. In tropical regions and temperate parts of the Southern Hemisphere, rates of respiratory illness have persisted in recent weeks, with regionally intense activity (South East Asia, China, South Africa) and low levels of activity in others. Detections to date in the Southern Hemisphere have included a mix of pandemic influenza A/H1N1 virus and seasonal influenza B and A/H3N2 viruses, with variation by country.

Report disseminated November 19, 2010

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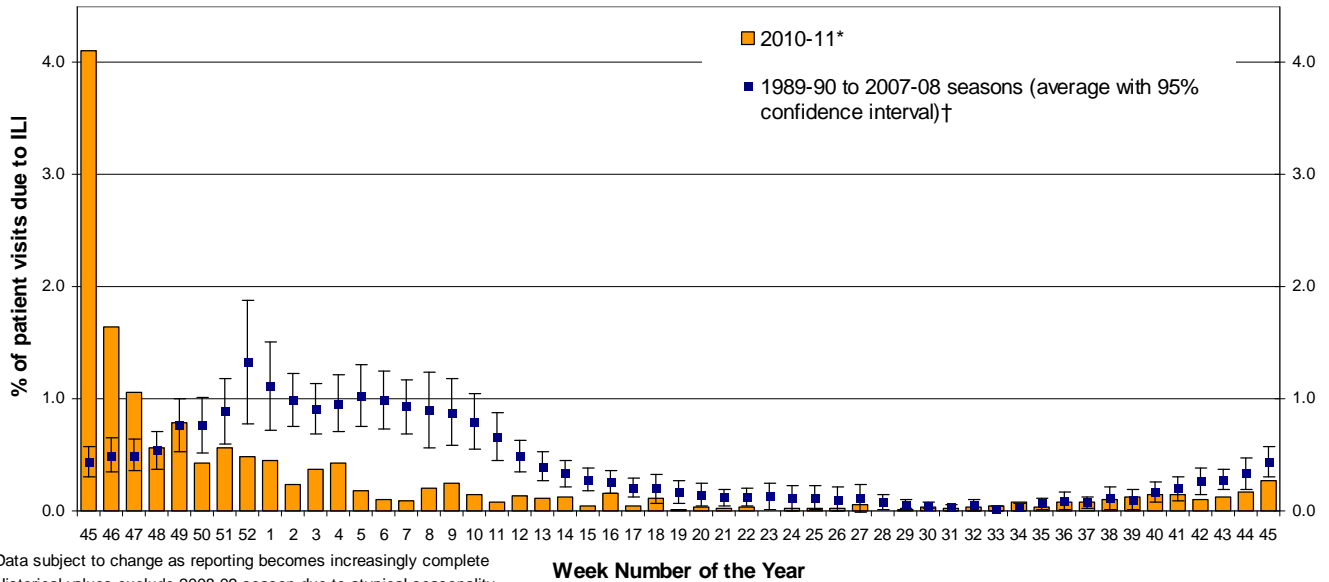
October 3 to November 13, 2010

British Columbia

Sentinel Physicians

During weeks 40-45, less than 0.3% of patients presenting to sentinel physicians had ILI, which is below the expected range for this time of year. Eighty-one percent (39/48) of sentinel physician sites have reported to-date for week 40, 83% (40/48) for week 41, 81% (39/48) for week 42, 79% (37/47) for week 43, 70% (33/47) for week 44, and 51% (24/47) for week 45.

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

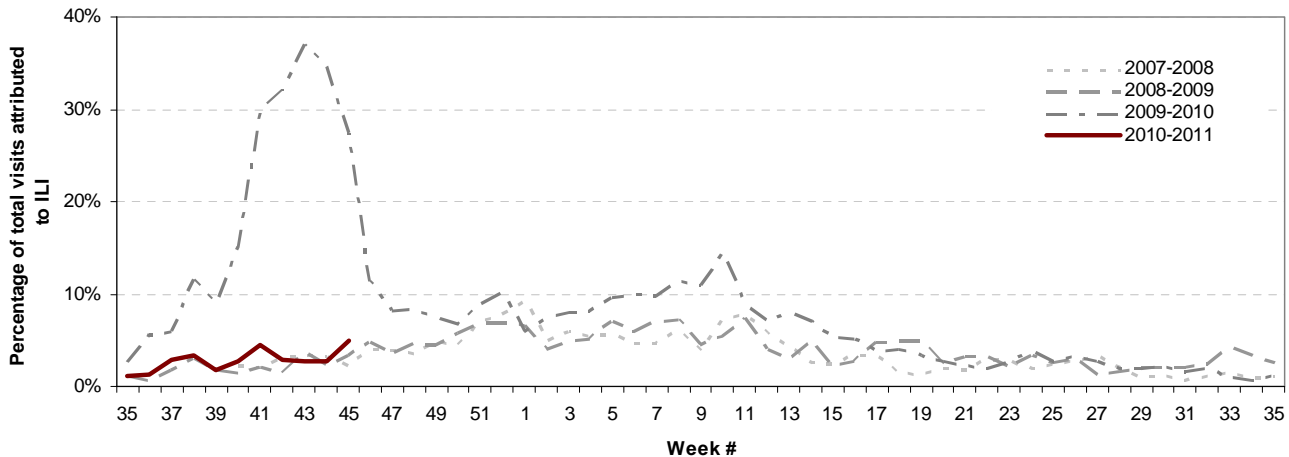


*Data subject to change as reporting becomes increasingly complete
 †Historical values exclude 2008-09 season due to atypical seasonality.

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 just under 5% 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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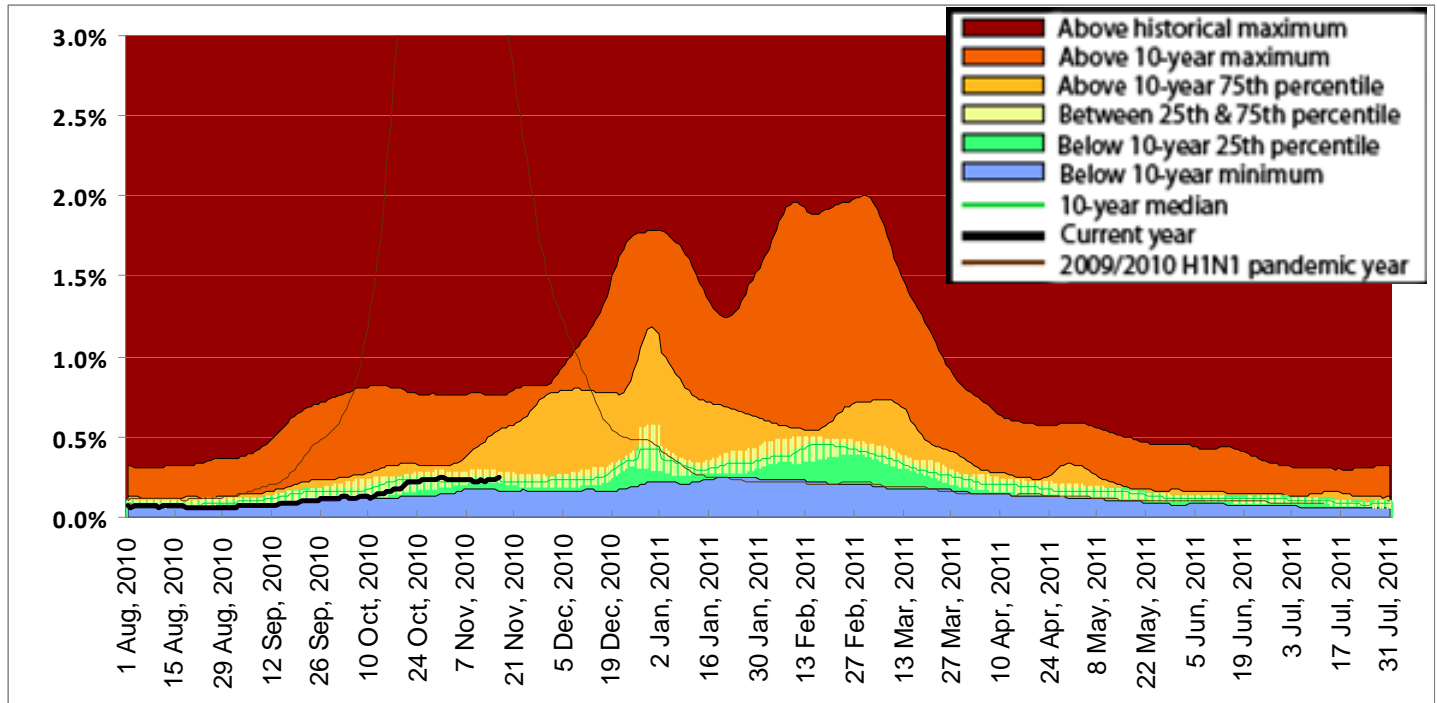
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims also remained low during the last four weeks. Proportions in all 5 RHAs remain 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).

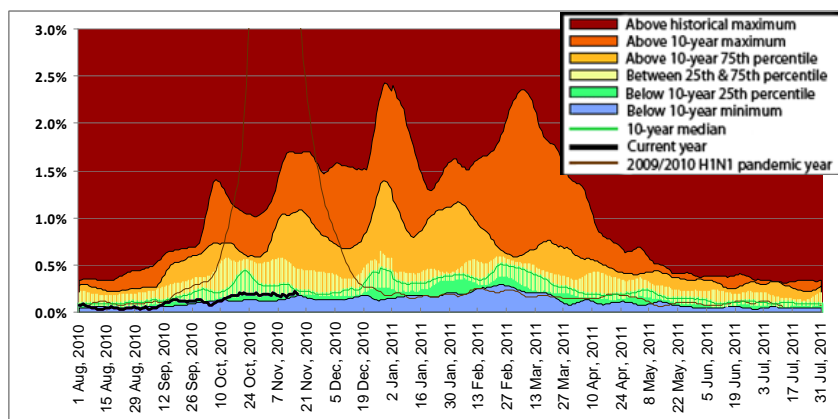
Influenza Illness Claims* British Columbia



* 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 7 Nov, 2010 corresponds to sentinel ILI week 45.
Data current to Nov 16, 2010

Northern

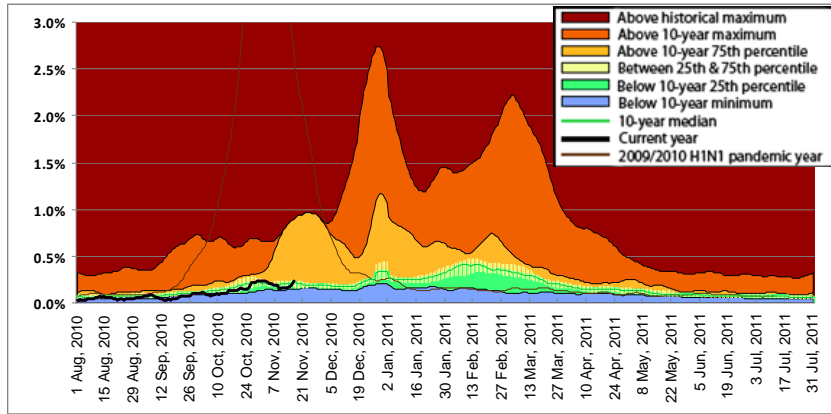


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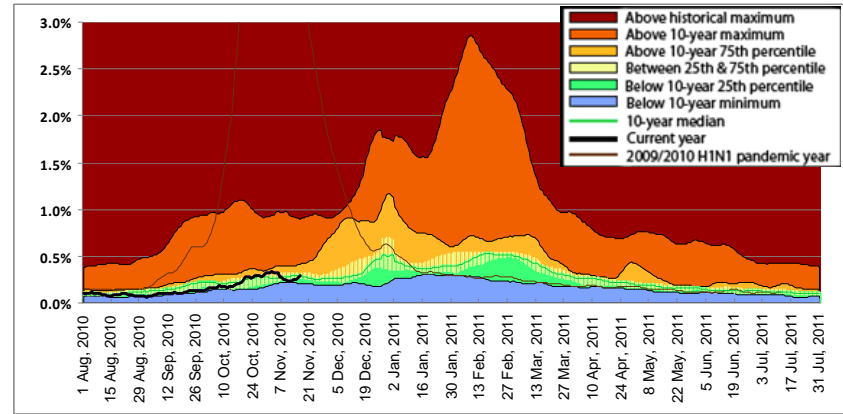
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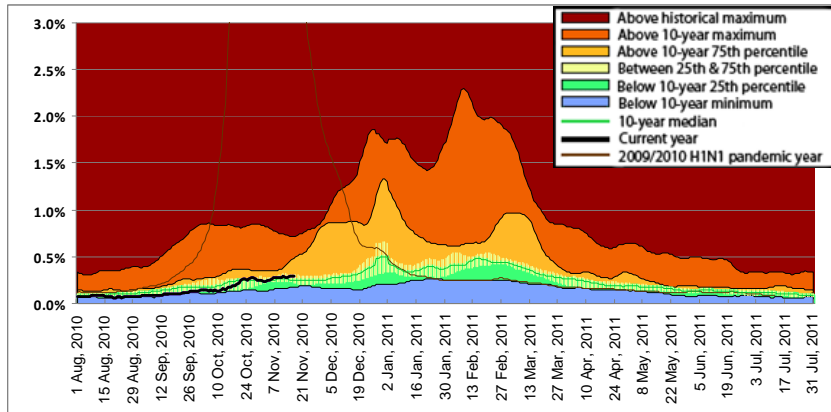
Interior



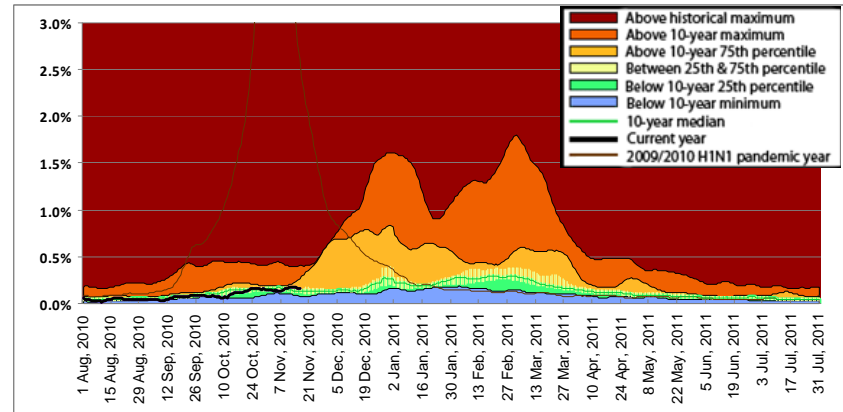
Vancouver Coastal



Fraser



Vancouver Island



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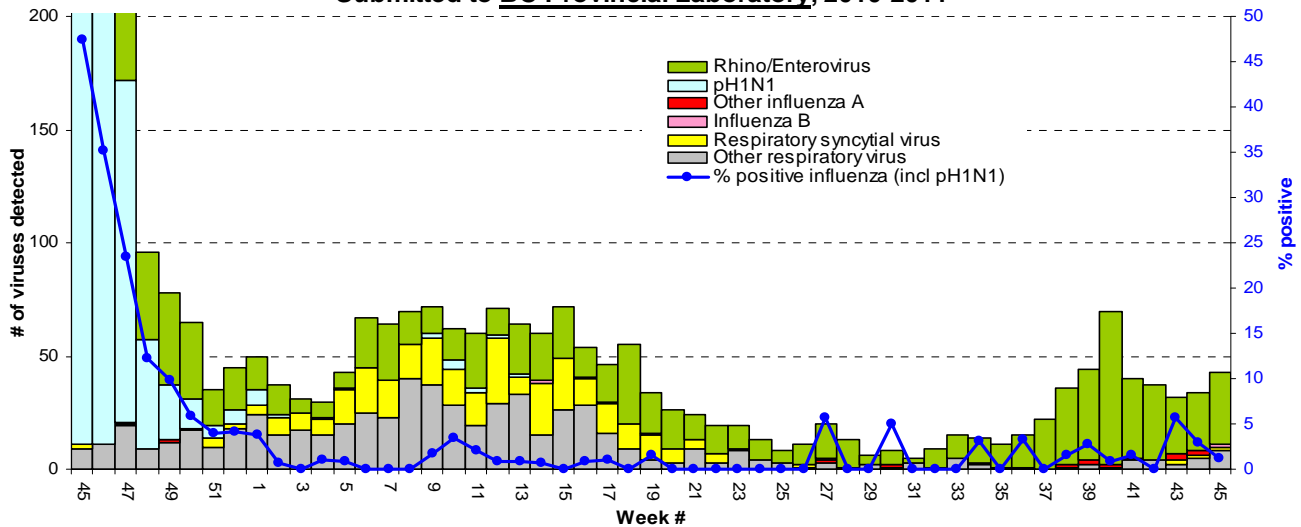
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Laboratory Reports

Four hundred fifty-eight respiratory specimens were tested at the BC Provincial Laboratory in weeks 40-45. Six (<2%) were positive for influenza A/H3N2 (one in week 40, three in week 43, and two in week 44). Five of those cases were among children under 14 years old; the other was 27 years old. Two (<1%) positive type B specimens were detected. There has been no detection of pH1N1 at BC Provincial Lab since week 27. In weeks 40-45, of 458 specimens tested for other respiratory viruses, 219 (48%) tested positive for rhino/enterovirus, 5 (1%) for adenovirus, and 10 (2%) for parainfluenza. This suggests that acute febrile respiratory symptoms observed in the population at this time may be more likely due to other respiratory viruses, notably rhino/enterovirus, than influenza.

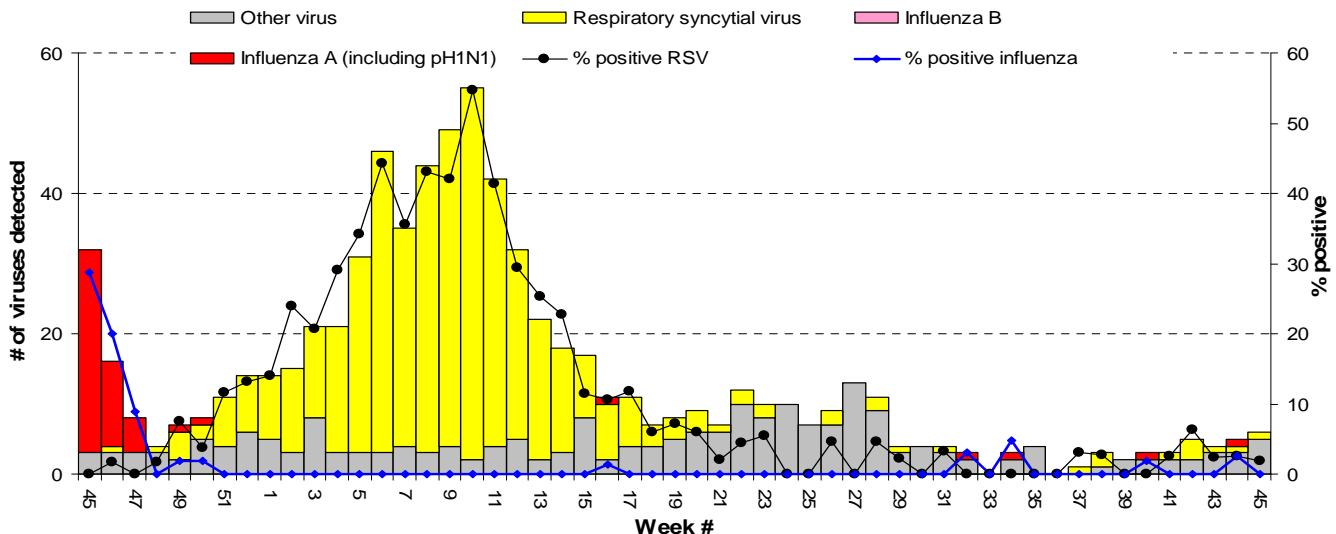
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Provincial Laboratory, 2010-2011



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 weeks 40-45, BC Children's and Women's Health Centre Laboratory tested 276 respiratory specimens. Two (0.7%) were positive for influenza. Seven specimens (2.5%) were positive for RSV, 6 (2.2%) for parainfluenza, and 11 (4.0%) 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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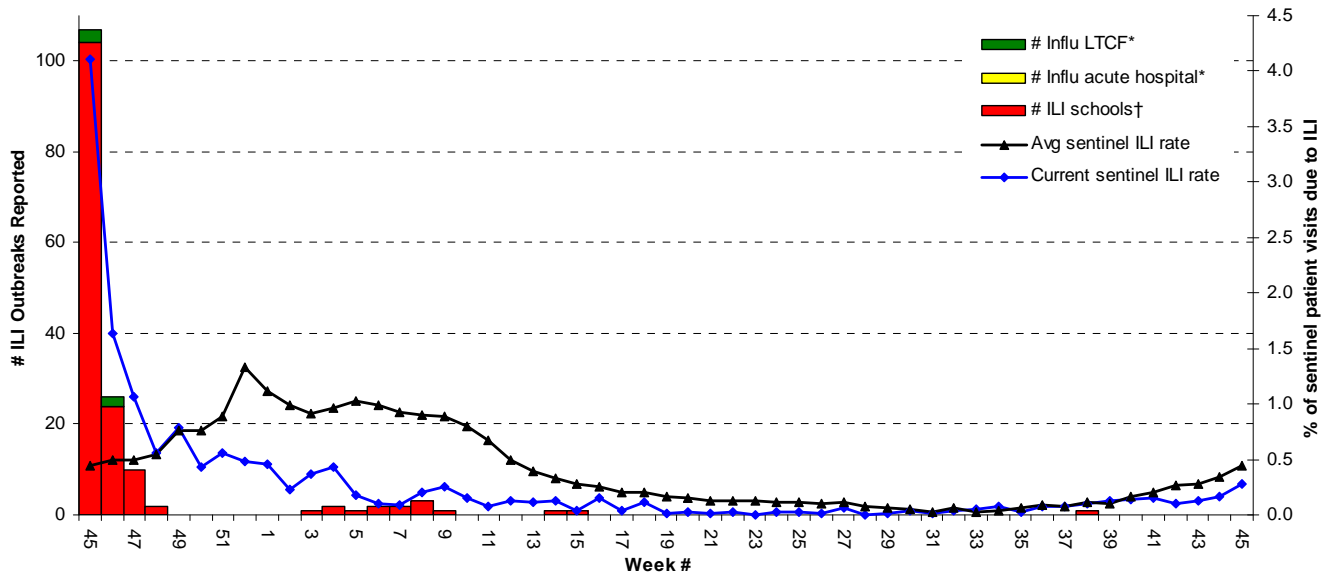
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ILI Outbreaks

Twenty-six ILI outbreaks were reported by facilities in the province, but none were confirmed due to laboratory influenza. Laboratory testing identified rhino/enterovirus in 23 of these. No ILI outbreaks were reported in BC schools during weeks 40-45.

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 November 13, 2010, influenza activity in Canada increased slightly but most of the influenza surveillance regions reported no activity. One influenza outbreak was reported in a long-term care facility in ON. The influenza-like illness (ILI) consultation rate remained within the expected range for this time of year. Forty-two specimens (out of 1,951 or 2.15%) tested positive for influenza in week 45: 15 A/H3N2, 23 unsubtype influenza A, and four influenza B. Those specimens were reported from ON, QC, and BC. www.phac-aspc.gc.ca/fluwatch/

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National Microbiology Laboratory (NML): Strain Characterization

Between September 1 and November 18, 2010, twenty four influenza isolates (all seasonal influenza) were collected from provincial and hospital labs and characterized at the NML:

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

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

2 B/Brisbane/60/2008 (Victoria lineage)-like[†] from QC & 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 November 18, 2010 indicated that all A/H3N2 and pH1N1 isolates were resistant to amantadine. All the isolates tested for zanamivir and oseltamivir resistance (19 A/H3N2, 1 pH1N1, 2 type B) showed susceptibility. Type B isolates were not assessed for resistance to amantadine.

INTERNATIONAL

Northern Hemisphere: During the week ending November 13, 2010, influenza activity remained low in the United States <http://www.cdc.gov/flu/weekly/>. Two hundred twenty specimens (out of 2,876, or 7.7%) tested positive for influenza in week 45: 4 pH1N1, 17 A/H3, 79 untyped influenza A, and 120 type B. The proportion of ILINet physician visits for ILI was 1.3%, which was below the national baseline of 2.5%. The CDC further reported that the proportion of deaths attributed to pneumonia and influenza was at 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. Northern China, Japan, and South Korea reported sporadic influenza activity.

Southern Hemisphere: To November 8, 2010, the WHO reported low influenza activity overall. Influenza virus circulation remained most active in areas of Southeast Asia and tropical areas of the Americas. As of early to mid October, Australia and New Zealand reported decreasing ILI activity and a level that was below the seasonal baseline respectively. Most of the lab detections were pH1N1, but co-circulation of A/H3N2 and type B was also reported in Australia. Chile reported a decrease in national ILI activity of its unusually late winter and springtime epidemic. In Asia, significant influenza virus circulation continues to be reported in Thailand and to a lesser extent in southern China, Hong Kong, and India. In India, the national epidemic of A/H1N1 had greatly decreased since September, whereas Bangladesh continued to have persistent influenza virus circulation. In Hong Kong, the first case of A/H5N1 since 2003 was reported on November 17, 2010. History of transmission was unknown and no known history of contact with live poultry was reported by WHO http://www.who.int/csr/don/2010_11_19/en/index.html and Hong Kong Centre for Health Protection http://www.chp.gov.hk/files/pdf/cdw_v7_24.pdf. The case remains in serious condition. In South Africa, peak wintertime influenza activity has passed but there continues to be active co-circulation of seasonal influenza (type B and H3N2) viruses and also, more recently, influenza H1N1 (2009) viruses in neighbouring Namibia.

http://www.who.int/csr/disease/influenza/2010_11_08_GIP_surveillance/en/index.html
www.pandemia.cl

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

