

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 6, Week 51

December 19 to December 25, 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 51 (December 19 – December 25), influenza activity in BC remained low. Sentinel physician and MSP indicators were consistent with the low levels observed in previous weeks. At the BC Public Health Microbiology & Reference Laboratory, 82 respiratory specimens were tested, 9 (11%) of which were positive for rhino/enterovirus. Pandemic influenza A/H1N1 was detected in 6 (4%) specimens collected from young adults. Influenza A was detected in 4 additional specimens from three adults and one infant (2 A/H3N2, 2 unsubtype). One influenza B was also detected. Other respiratory viruses were sporadically detected at the lab during this period.

Report disseminated December 30, 2010

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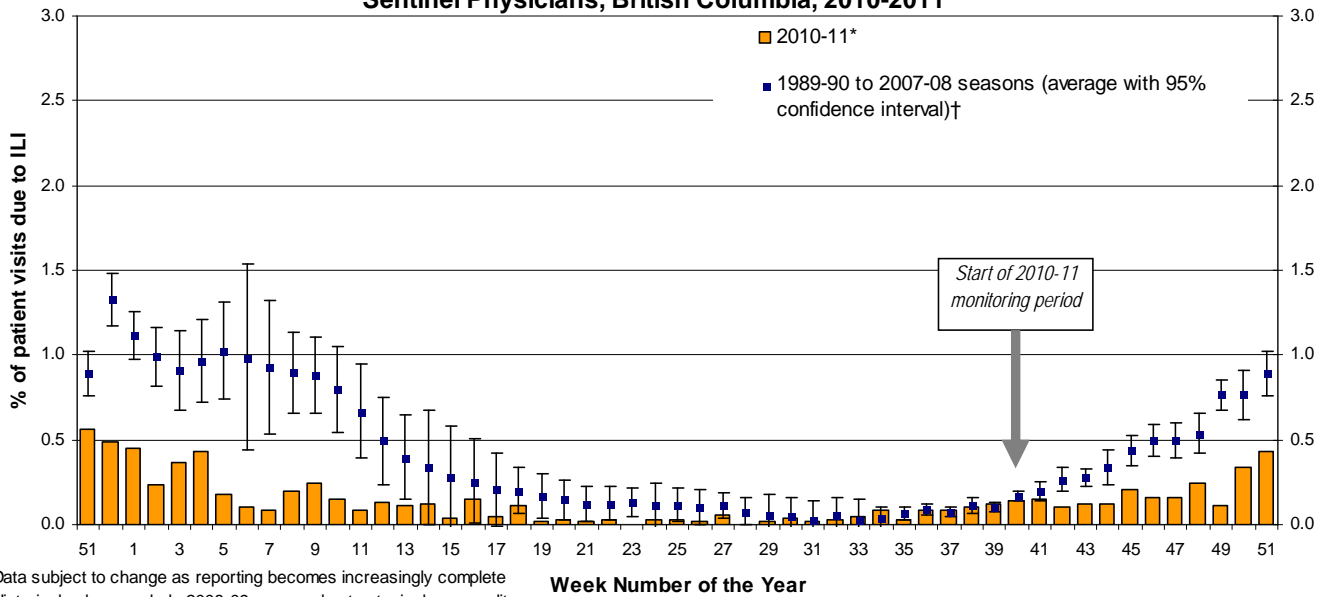
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British Columbia

Sentinel Physicians

During week 51, less than 0.5% of patients presenting to sentinel physicians had ILI, which is below the expected range for this time of year. Fifteen percent (7/47) of sentinel physician sites have reported to-date for week 51.

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



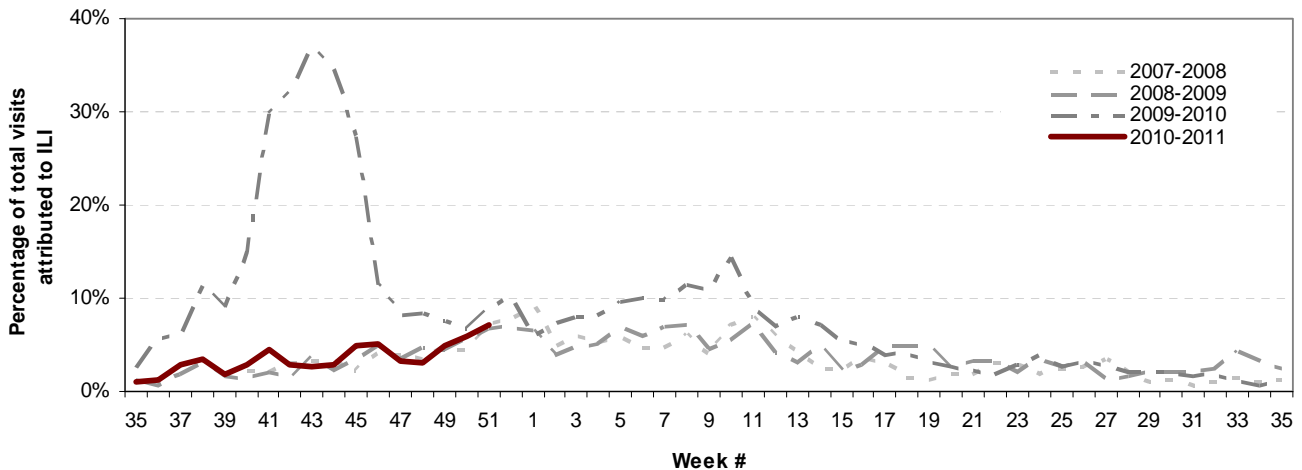
*Data subject to change as reporting becomes increasingly complete

†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 above 7% 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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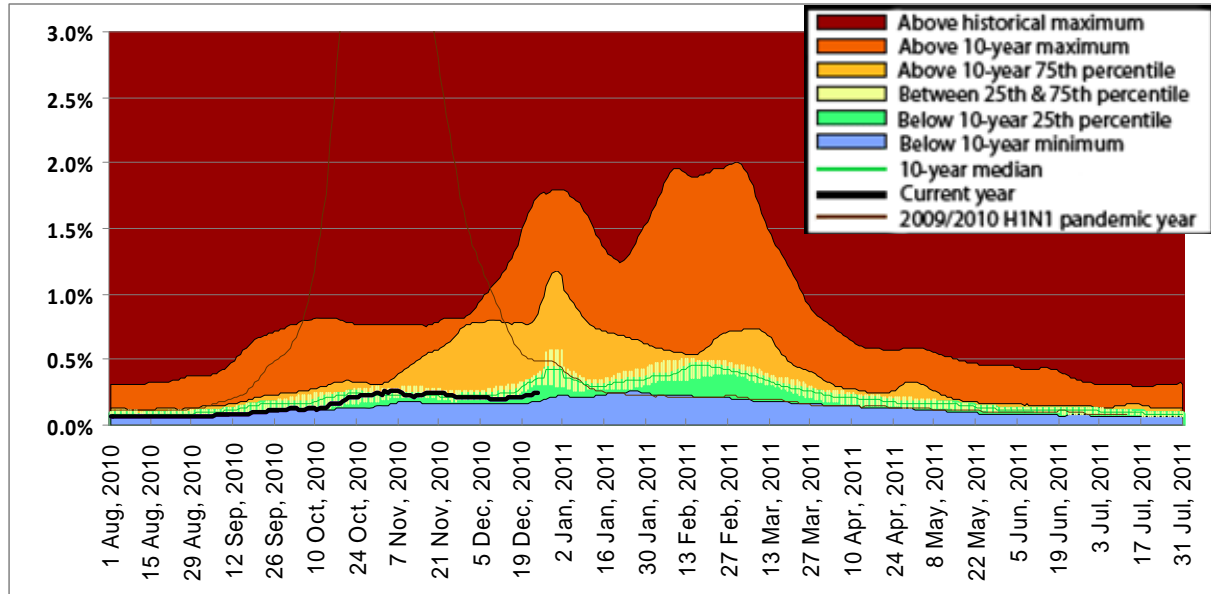
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Medical Services Plan

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).

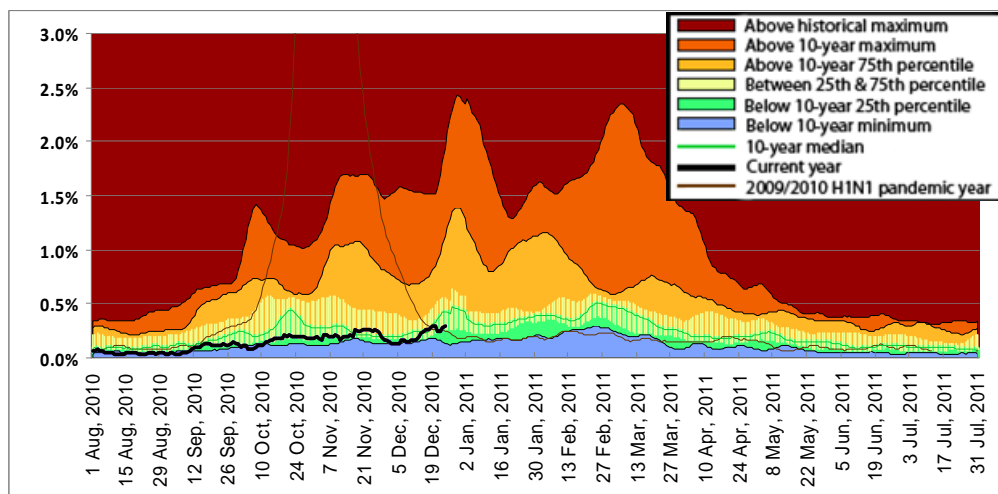
Influenza Illness Claims* British Columbia



* 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 19 Dec, 2010 corresponds to sentinel ILI week 51.
Data current to Dec 24, 2010

Northern

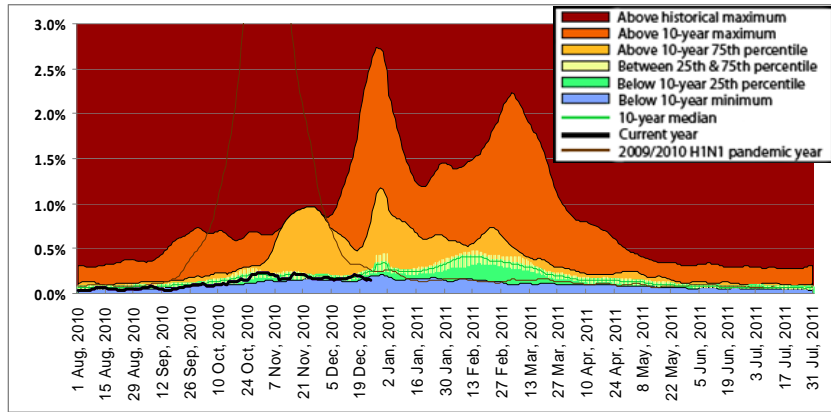


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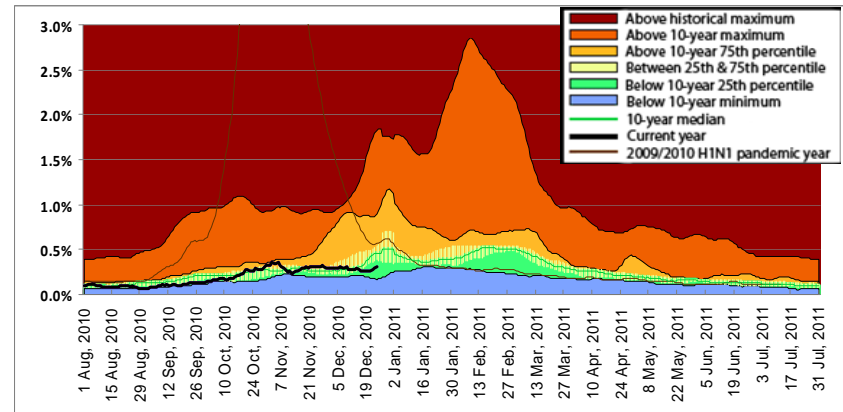
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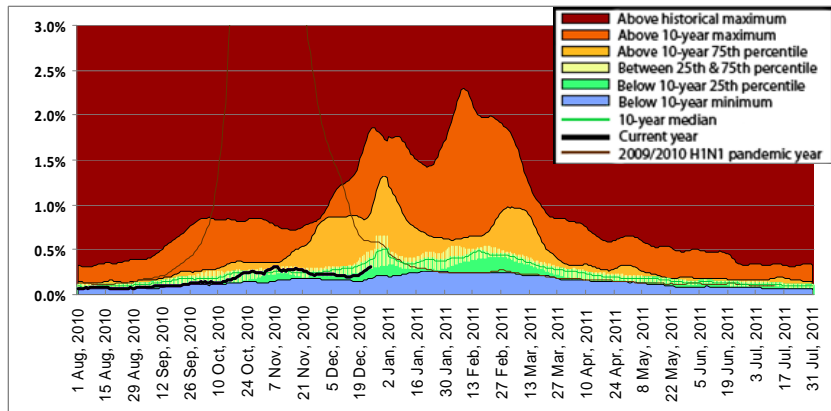
Interior



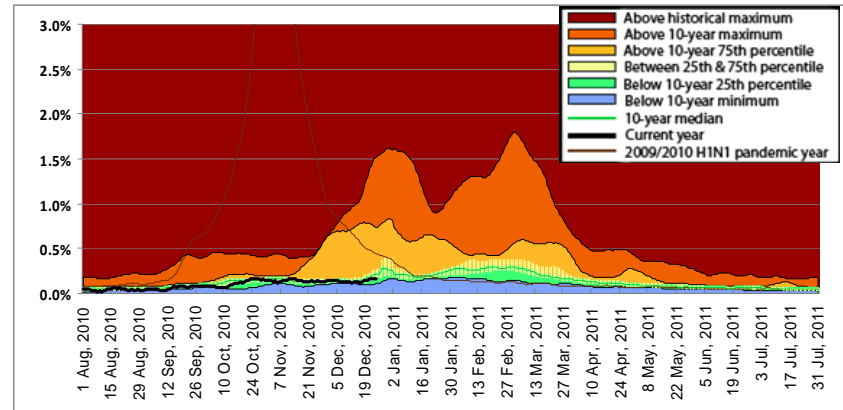
Vancouver Coastal



Fraser



Vancouver Island



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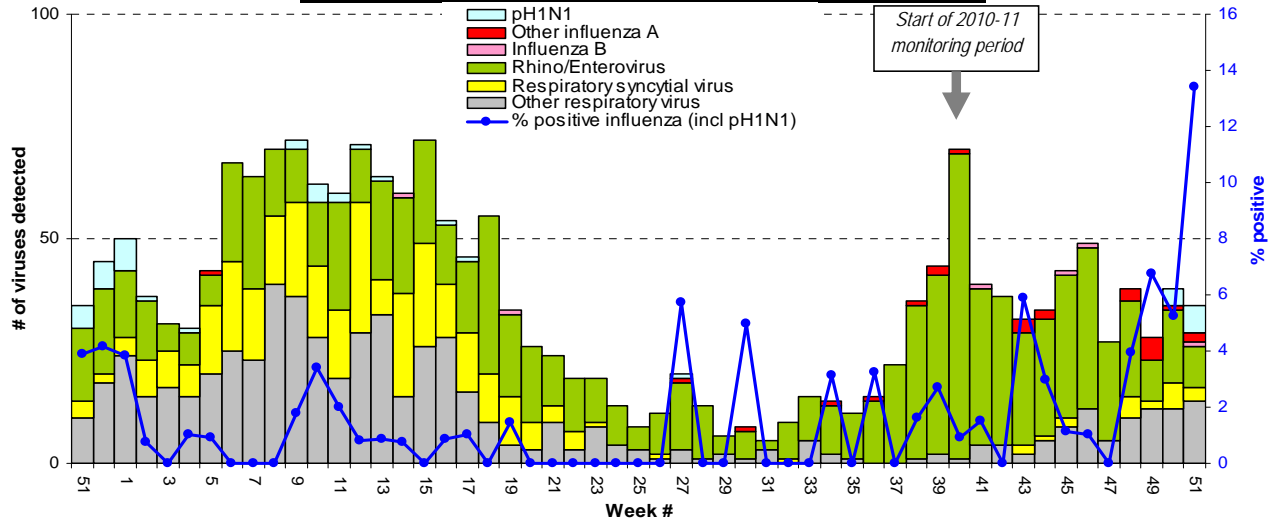
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Laboratory Reports

Eighty-two respiratory specimens were tested at the BC Public Health Microbiology & Reference Laboratory in week 51. Six (7%) were positive for pandemic H1N1 among adults in Vancouver Coastal and Fraser HA. Two specimens (2%) were positive for A/H3N2 in adults. Two specimens were positive for influenza A (subtype pending), detected in an infant and an older adult. One specimen from an adult was positive for influenza B in week 51. In this week, of 82 specimens tested for other respiratory viruses, 9 (11%) tested positive for rhino/enterovirus, 8 (10%) for parainfluenza, and 3 (4%) for RSV.

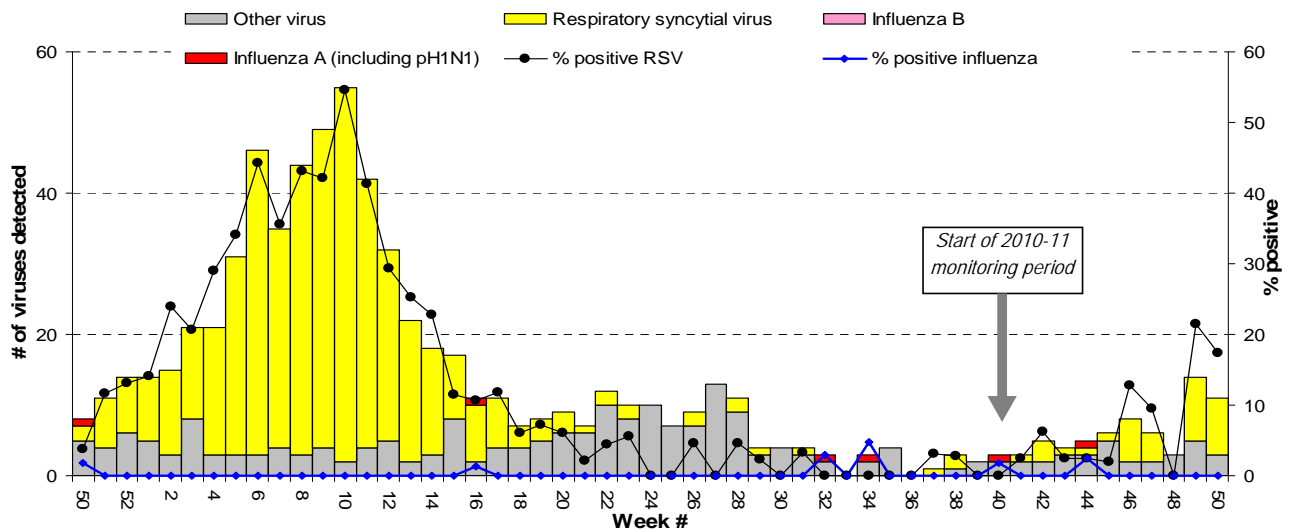
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory PHSa, 2010-2011



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.

Data from BC Children's and Women's Health Centre Laboratory for week 51 is pending. The graph below reflects the most recent data available. During week 50, this lab tested 46 respiratory specimens. None were positive for influenza. Eight specimens (17.4%) were positive for RSV, 1 (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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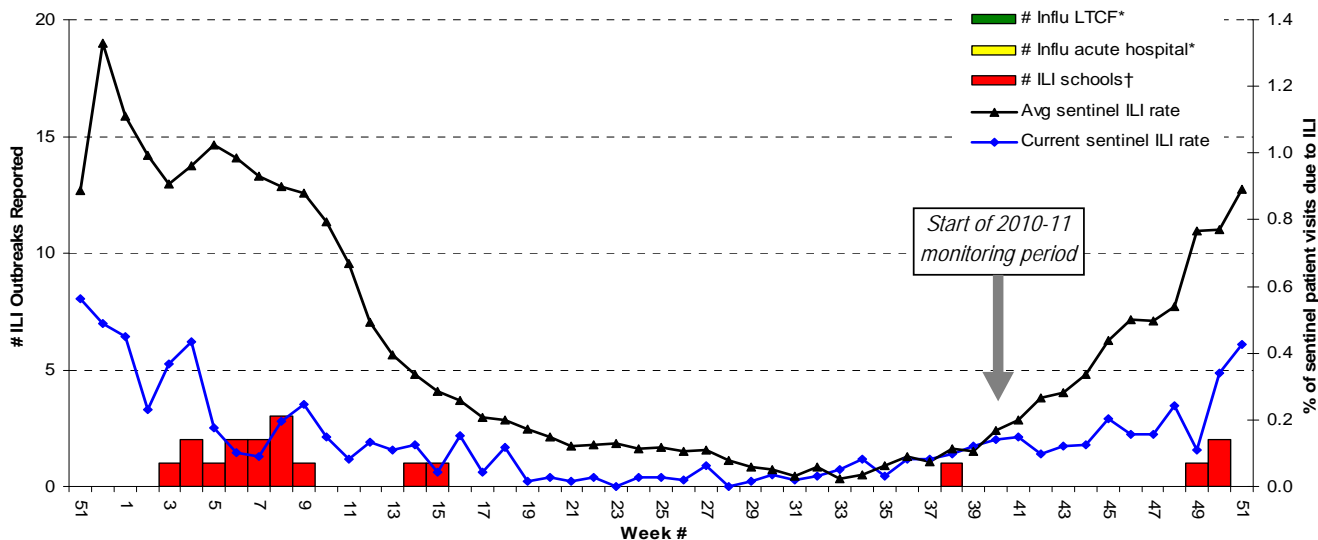
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ILI Outbreaks

During week 51, no new ILI outbreak was reported by facilities in the province. An outbreak of pandemic H1N1 was reported in a young adult facility during late week 50; control measures are in place.

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

Report for week 51 is pending. During week 50 ending December 18, 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. Five hundred sixty-five specimens (out of 3,577 or 15.8%) tested positive for influenza in week 50, an increase from the previous week (10.8%): 153 A/H3N2, 392 untyped influenza A, 15 pandemic H1N1, 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 50, 24 new paediatric hospitalizations and 20 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 23, 2010, seventy-nine influenza isolates were collected from provincial and hospital labs and characterized at the NML:

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

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

15 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 (41 A/H3N2, 6 pH1N1, 13 type B) and oseltamivir resistance (47 A/H3N2, 6 pH1N1, 13 type B) showed susceptibility.

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INTERNATIONAL

Northern Hemisphere: Report for week 51 is pending. During week 50 ending December 18, 2010, influenza activity had increased in the United States <http://www.cdc.gov/flu/weekly/>. Seven hundred forty four specimens (out of 4,733, or 15.7%) tested positive for influenza in week 50: 22 pandemic H1N1, 171 A/H3, 223 untyped influenza A, and 328 type B. The proportion of ILINet physician visits for ILI was 2.1%, 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.

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

Avian Influenza: Two new cases of A/H5N1 were reported by Egypt as of December 29. One 28 year-old woman with exposure to live animals developed symptoms on December 12, was admitted to hospital on the 14th, and was discharged on the 22nd in good condition. One 11 year-old girl developed symptoms on December 18, was admitted to hospital on the 19th, and died on the 23rd. No history of poultry exposure was available. http://www.who.int/csr/don/2010_12_29/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:

Epidemiology Services : BC Centre for Disease Control (BCCDC)

655 W. 12th Ave, Vancouver BC V5Z 4R4. Tel: (604) 707-2510 / Fax: (604) 707-2516. InfluenzaFieldEpi@bccdc.ca

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

Influenza-Like Illness (ILI) Outbreak Summary Report Form

Please complete and email to ilioutbreak@bccdc.ca or fax to (604) 707-2516

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.

SECTION A: Reporting Information

Person Reporting: _____ Title: _____

Contact Phone: _____ Email: _____

Health Authority: _____ HSDA: _____

Full Facility Name: _____

- Is this report: First Notification (*complete section B below; Section D if available*)
 Update (*complete section C below; Section D if available*)
 Outbreak Over (*complete section C below; Section D if available*)

SECTION B: First Notification

Type of facility: LTCF Acute Care Hospital Senior's Residence
(if ward or wing, please specify name/number: _____)
 Workplace School (grades: _____) Other (_____)

Date of onset of first case of ILI (dd/mm/yyyy): _____ / _____ / _____

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

SECTION C: Update AND Outbreak Declared Over

Date of onset for most recent case of ILI (dd/mm/yyyy): _____ / _____ / _____

If over, date outbreak declared over (dd/mm/yyyy): _____ / _____ / _____

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

SECTION D: Laboratory Information

Specimen(s) submitted? Yes (location: _____) No Don't know
 If yes, organism identified? Yes (specify: _____) No Don't know