

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 15, Week 8

February 20 to 26, 2011



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Overall activity still low despite regional upswing in ILI and H3N2 facility outbreak detection

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Summary

During week 8 (February 20 – 26, 2011), influenza surveillance indicators in BC (sentinel physician ILI rate and MSP influenza visits) showed that overall activity remained below the expected level for this time of year, with regional upswings along with a surge in influenza A positive long term care facility outbreaks. Five long term care facility influenza A positive outbreaks (four A/H3N2; one as yet unsubtyped) were reported; three from VIHA and two from FHA, compared to none in previous weeks. At the BC Public Health Microbiology & Reference Laboratory, 227 respiratory specimens were tested. Influenza was detected in 55 (24%) specimens: pandemic influenza A/H1N1 in 6 (3%), A/H3N2 in 19 (8%), unsubtyped influenza A in 17 (7%), and influenza B in 13 (6%) specimens. Of 227 specimens tested, other respiratory viruses detected included 36 (16%) RSV, 21 (9%) rhino/enterovirus and 17 (8%) coronavirus.

Report disseminated March 3, 2011

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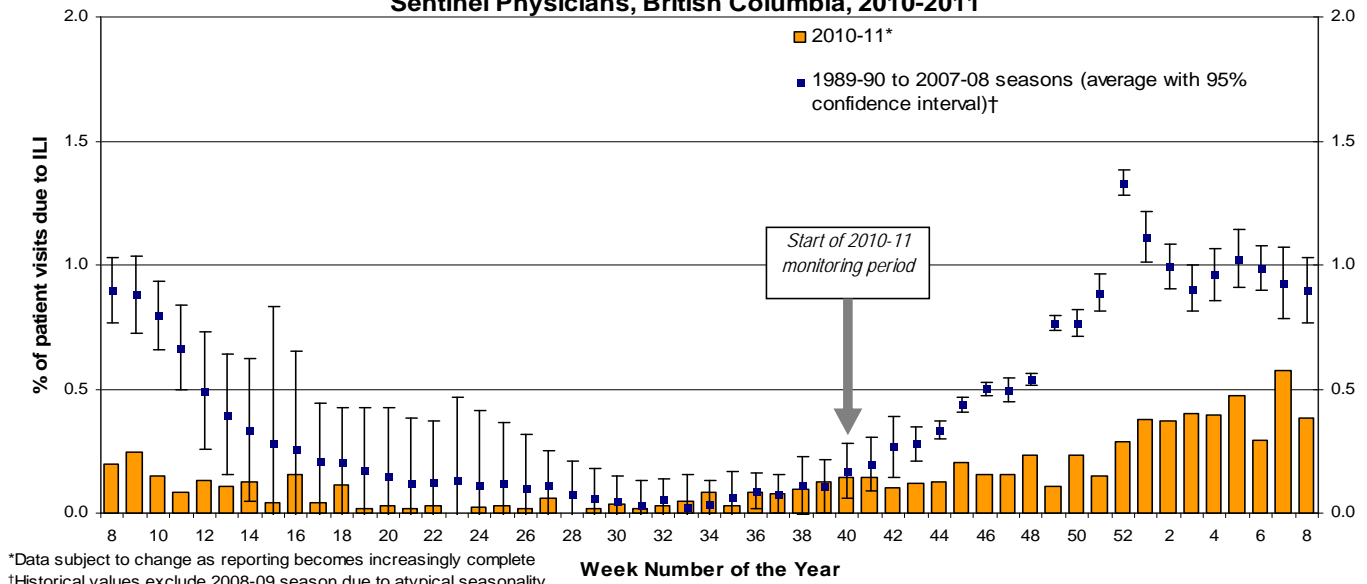
February 20 to 26, 2011

British Columbia

Sentinel Physicians

During week 8, ~ 0.4% of patients presenting to sentinel physicians had ILI, which is lower than the previous week and below the expected range for this time of year. Fifty four percent (25/46) of sentinel physician sites have reported to-date for week 8.

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



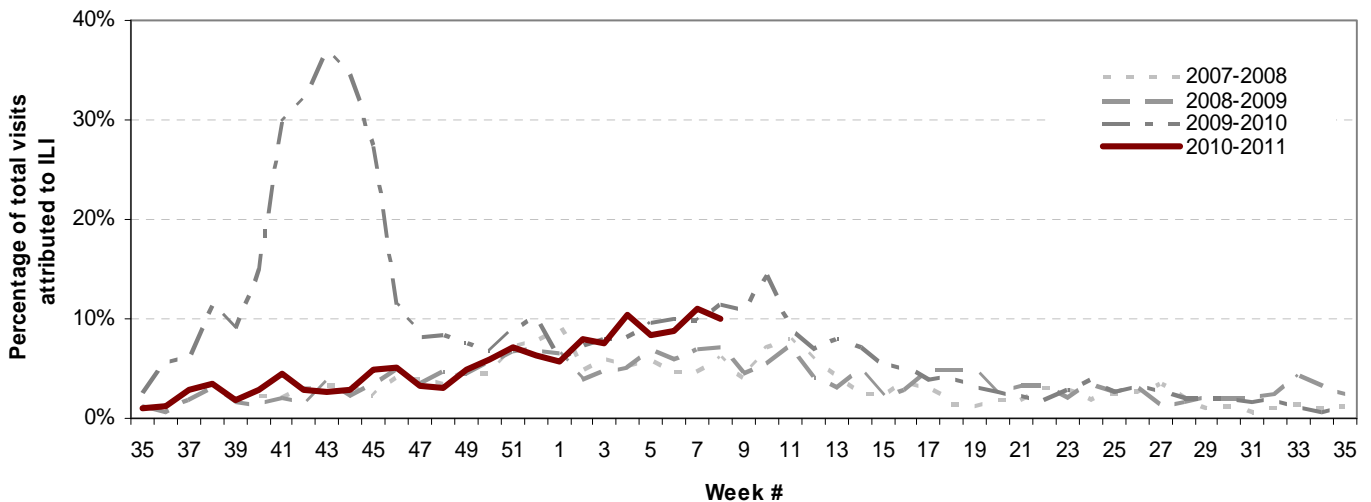
*Data subject to change as reporting becomes increasingly complete

†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 during week 8 was 10.0%, lower than that reported last week (11.0%).

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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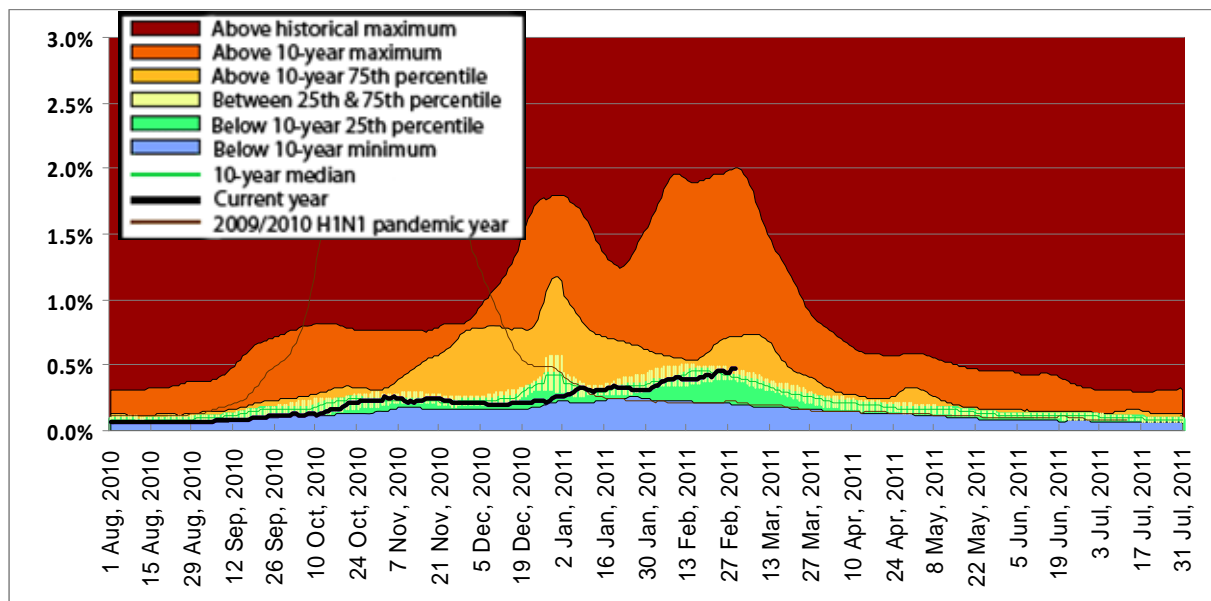
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims registered a slight increase provincially along with Fraser Health Authority. Activity has started to decline in Vancouver Island and Interior Health Authorities, but remains above the 10- year median in Interior HA. The influenza illness level in Vancouver Coastal and Northern HAs remained similar to that reported during the previous week, being below the 10-year median. 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).

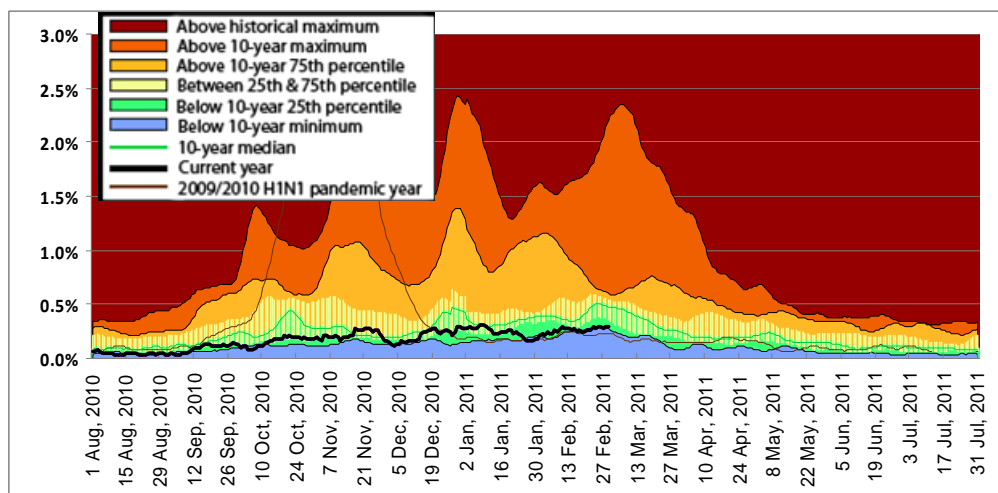
Influenza Illness Claims* British Columbia



* 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 Health Services

Notes: MSP week beginning 13 Mar 2010 corresponds to sentinel ILI week 11.
Data current to Mar 01, 2011

Northern

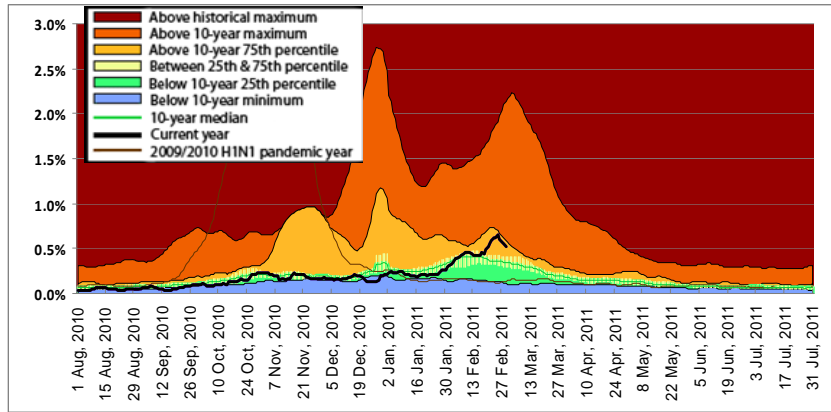


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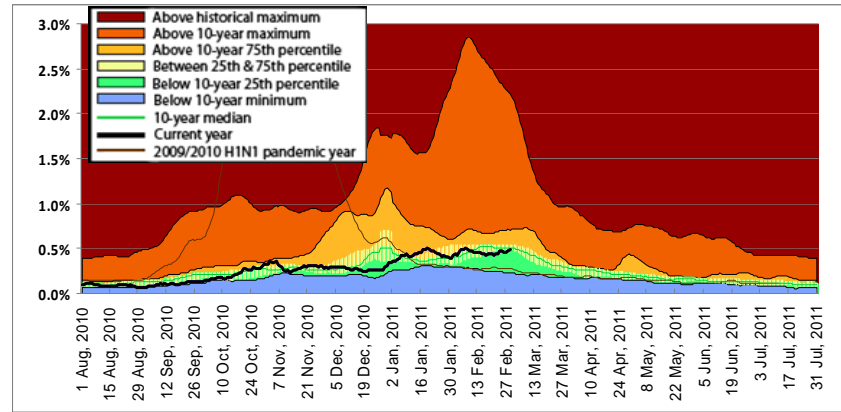
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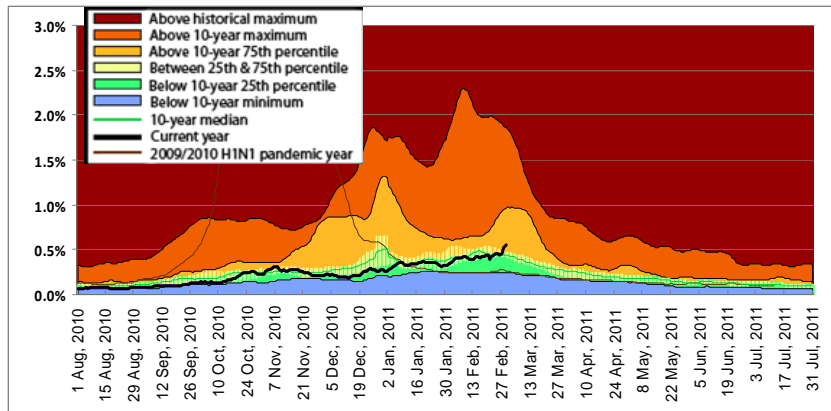
Interior



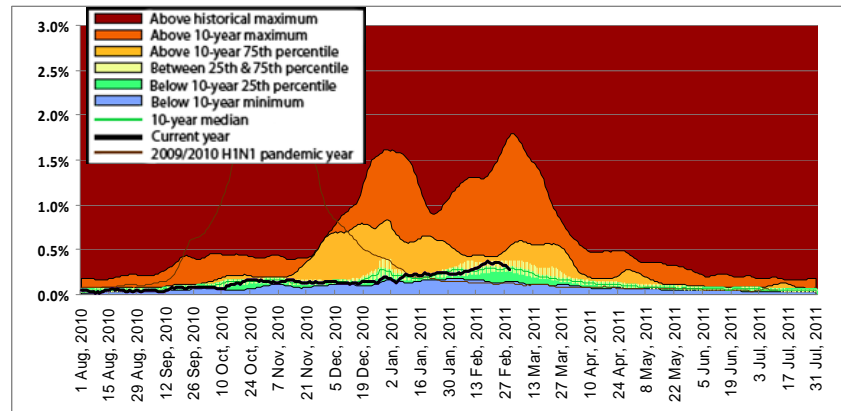
Vancouver Coastal



Fraser



Vancouver Island



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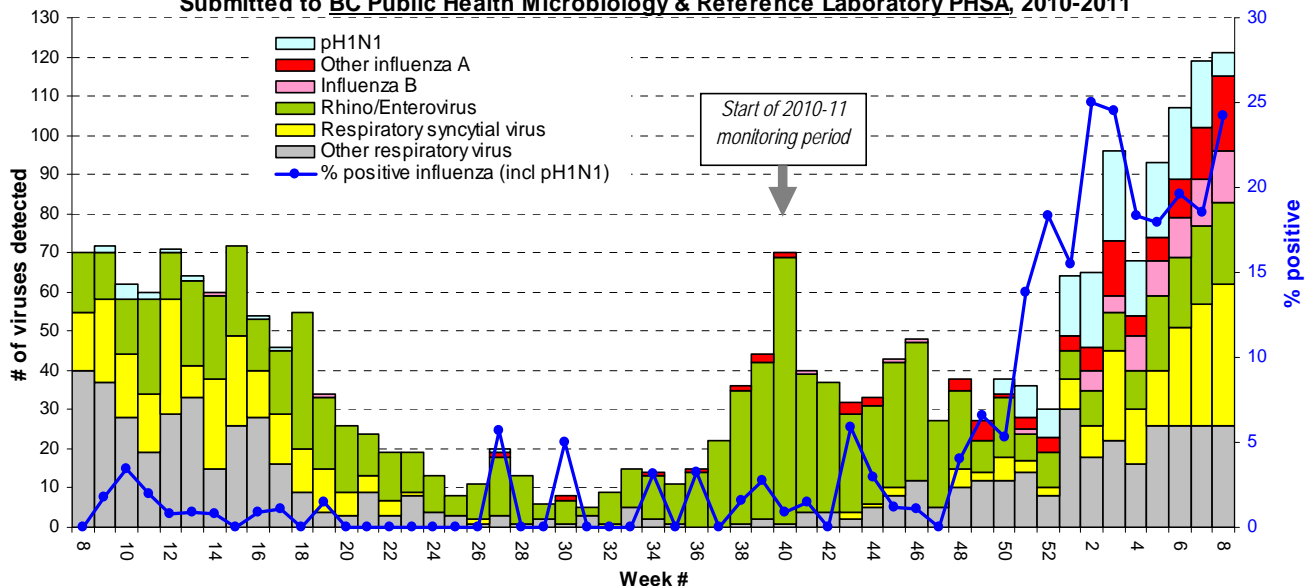
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Laboratory Reports

Two hundred and twenty seven respiratory specimens were tested at the BC Public Health Microbiology & Reference Laboratory in week 8. Influenza was detected in 55 (24%) submitted specimens. Six of these (3% of submitted specimens) were pandemic A/H1N1, 19 (8%) were A/H3N2, 17 (7%) were untyped A, and 13 (6%) were type B. Some of these A/H3N2s were detected in specimens submitted from outbreaks in Vancouver Island and Fraser Health Authorities. Besides outbreaks, there were also sporadic detections of influenza A/H3N2 from all Health Authorities except Northern. Pandemic A/H1N1 virus was sporadically detected from Fraser, Vancouver Coastal, and Vancouver Island HAs. Influenza B was sporadically detected from Interior, Fraser, and Vancouver Coastal HAs. During this week, of 227 specimens tested for other respiratory viruses, 36 (16%) were positive for RSV, 21 (9%) for rhino/enterovirus, and 17 (8%) for coronavirus. Other respiratory viruses were also sporadically detected.

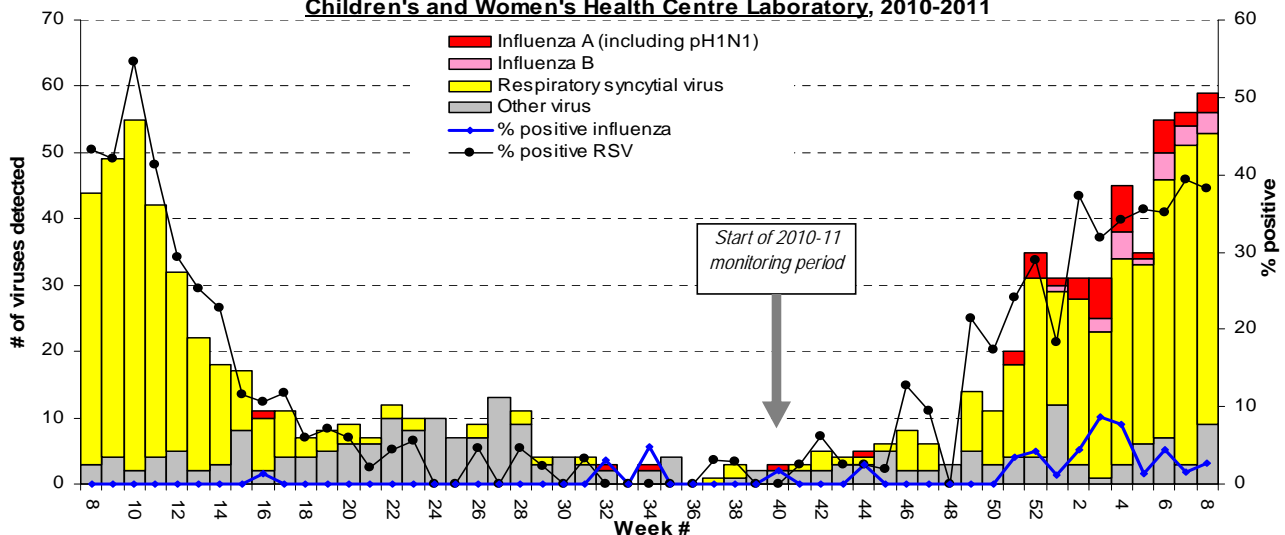
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory PHSA, 2010-2011



Before week 14 testing for other viruses was performed on a subset of specimens.

During week 8, BC Children's and Women's Health Centre Laboratory tested 115 respiratory specimens. Three (2.6%) were positive for influenza A and 3 (2.6%) were positive for type B. Forty four specimens (38%) were positive for RSV.

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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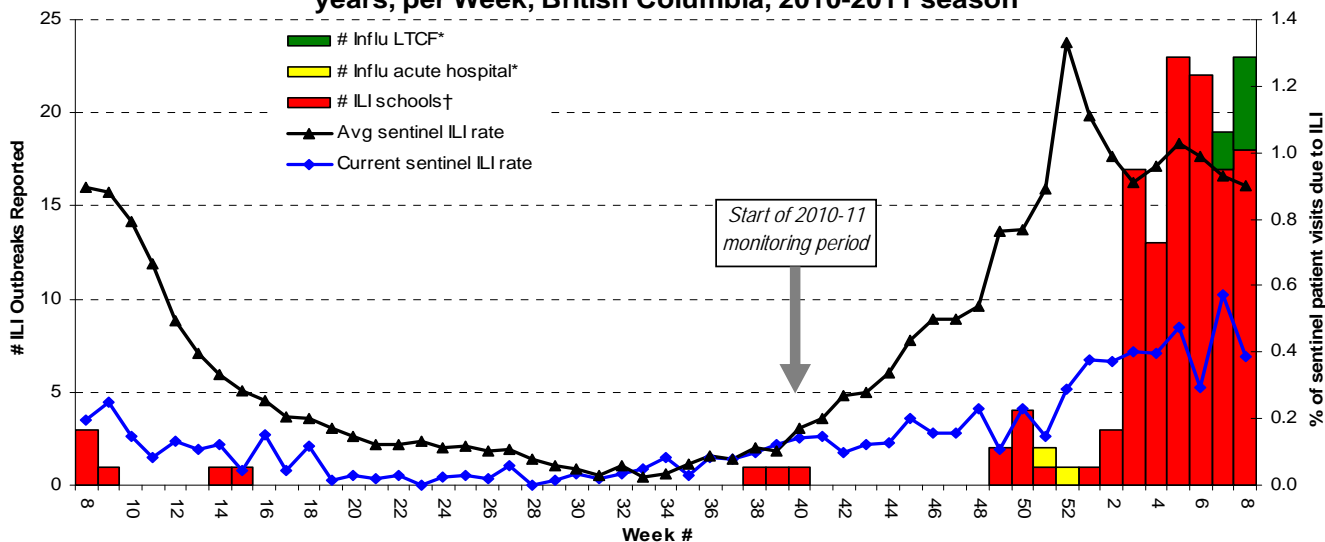
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ILI Outbreaks

During week 8, eighteen new school ILI outbreaks were reported from schools in Interior (9), Fraser (8), Vancouver Island (1), and Vancouver Coastal (1) HAs. These outbreaks were not tested for respiratory viruses. Five ILI outbreaks were reported from LTCFs in Vancouver Island (3) and Fraser (2) HAs. Influenza A was detected in all of these five outbreaks, in which four were positive for A/H3N2 and one remains unsubtype.

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 w within 7-day period, w ith 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 week 7 ending February 19, 2011, there was an increase in overall influenza activity level compared to the previous week across the country. This is reflected in higher reports of localized activity and outbreaks. However, the influenza-like illness (ILI) consultation rate remained within the expected range for this time of year. One thousand one hundred and fifty specimens (18.7% in week 7) tested positive for influenza, a slight decrease from the previous week (20.2%): 337 A/H3N2, 608 unsubtype influenza A, 92 pandemic H1N1, and 113 influenza B. Specimens were reported from all provinces; influenza A activity was mainly concentrated in ON, QC, AB, and NB. During week 7, 23 new paediatric hospitalizations and 27 new adult hospitalizations related to influenza were reported through IMPACT and CNISP networks (a decrease over previous weeks). In Ontario, during week 7, 295 influenza laboratory confirmed cases were detected with 15.0% positivity; a decrease from the previous week. The overall ILI consultation rate has decreased from 38.7/1,000 patient visits in Week 6 to 36.8/1,000 patient visits in Week 7. In Quebec during week 7, 381 (20%) tested specimens were positive for influenza. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

Between September 1, 2010 and February 24, 2011, two hundred and ninety-seven influenza isolates were collected from provincial and hospital labs and characterized at the NML as follows:

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

58 A/California/07/2009 (H1N1)-like* from NS, NB, QC, ON, AB & BC;

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

1 B/Florida/04/2006-like (Yamagata lineage)-like[‡] from 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 recommended influenza B component of the 2010-2011 northern hemisphere trivalent influenza vaccine

[‡] indicates a strain match to the recommended influenza B component of the 2008-2009 northern hemisphere trivalent influenza vaccine

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NML: Antiviral Resistance

Drug susceptibility testing at the NML between September 1, 2010 and February 17, 2011 indicated that all but one A/H3N2 and all pandemic H1N1 isolates were resistant to amantadine. All the isolates (146 A/H3N2, 56 pandemic H1N1, 77 type B) tested for zanamivir and (147 A/H3N2, 59 pandemic H1N1, 76 type B) oseltamivir resistance showed susceptibility.

For your information, an updated influenza antiviral guidance document entitled "The Use of Antiviral Drugs for Influenza: Guidance for Practitioners, 2010-11" has been posted on the Association of Medical Microbiology and Infectious Disease, Canada (AMMI Canada) website available at the following link: www.ammi.ca/index.php. This document is also available on the Public Health Agency of Canada FightFlu.ca website at: www.fightflu.ca/health_professionals-eng.html

INTERNATIONAL

Northern Hemisphere: During week 7 ending February 19, 2011, influenza activity remained elevated in the United States www.cdc.gov/flu/weekly/. Two thousand eight hundred and sixty six specimens (out of 9,154, or 31.3%) tested positive for influenza in week 7: 585 pandemic H1N1, 755 A/H3, 883 unsubtype influenza A, and 642 type B. The proportion of ILINet physician visits for ILI was 4.9%, which was above the national baseline of 2.5%. The CDC further reported that the proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold in the USA.

As of February 25, influenza activity remains high in Europe, though activity appears to have peaked in many western and northern European countries. Georgia, Luxembourg, and the Siberian region of the Russian Federation reported very high activity. Many countries in Europe are reporting severe and fatal cases of influenza. United Kingdom reported an increase of fatal cases of influenza over the past two weeks. In general, severe cases in Europe are mostly between 15-64 years of age, have a pre-existing medical condition as risk factor, and have not been vaccinated. The dominant influenza virus is still pandemic H1N1, co-circulating with influenza B. In North Africa and the Middle East, influenza activity and positive influenza cases have been declining for

several weeks. In North Asia, influenza activity has either peaked or declined in different regions. Northern China, the Republic of Korea, and Japan reported declining ILI activity. Mongolia reported an increased ILI activity during early February. In most countries of northern Asia, pandemic H1N1 has become predominant over A/H3N2 in recent weeks.

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

Avian Influenza: As of March 2, 2011, three new human case of A/H5N1 were reported in Egypt. A 26-year-old female developed symptoms on January 18, was hospitalized on January 23, and discharged 12 hours on February 7 upon recovery. A 45-year-old male developed symptoms on January 20, was hospitalized on January 26, and died on February 5. A 4-year-old male developed symptoms on February 14, was hospitalized on February 16, and is now in stable condition. One new human case of A/H5N1 was also reported in Indonesia. A 26-year-old female with exposure to poultry developed symptoms on January 30, was hospitalized on February 3, and died on February 8. More details and a complete tally of A/H5N1 detections can be found at the links below:

http://www.who.int/csr/don/2011_03_02/en/index.html

www.who.int/csr/disease/avian_influenza/en/

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:

http://www.who.int/csr/disease/influenza/recommendations_2011_12north/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