

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 16, Week 9

February 27 to March 5, 2011



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Increase in BC influenza activity

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Summary

During week 9 (February 27 – March 5, 2011), influenza surveillance indicators in BC (sentinel physician ILI rate and MSP influenza visits) showed further overall increase. Four long-term care and one adult residential facility influenza A outbreaks were reported (3 A/H3N2, one pandemic influenza A/H1N1, and one subtype pending). Both influenza B and pandemic H1N1 were identified in one school outbreak. At the BC Public Health Microbiology & Reference Laboratory, 271 respiratory specimens were tested. Influenza was detected in 67 (25%) specimens: pandemic influenza A/H1N1 in 6 (2%), A/H3N2 in 25 (9%), unsubtype influenza A in 16 (6%), and influenza B in 20 (7%) specimens. Of 271 specimens tested, other respiratory viruses found were: 37 (14%) RSV, 19 (7%) coronavirus, and 17 (6%) rhino/enterovirus.

With overall increase in influenza activity in recent weeks, clinicians are reminded that updated 2010-11 influenza antiviral guidance is available on the Association of Medical Microbiology and Infectious Disease, Canada (AMMI Canada) website at the following link: www.ammi.ca/index.php. During the 2010-11 season, the BC Ministry of Health Services has expanded Pharmacare coverage of antiviral treatment for individuals with influenza illness who are at high risk for complications.

Report disseminated March 10, 2011

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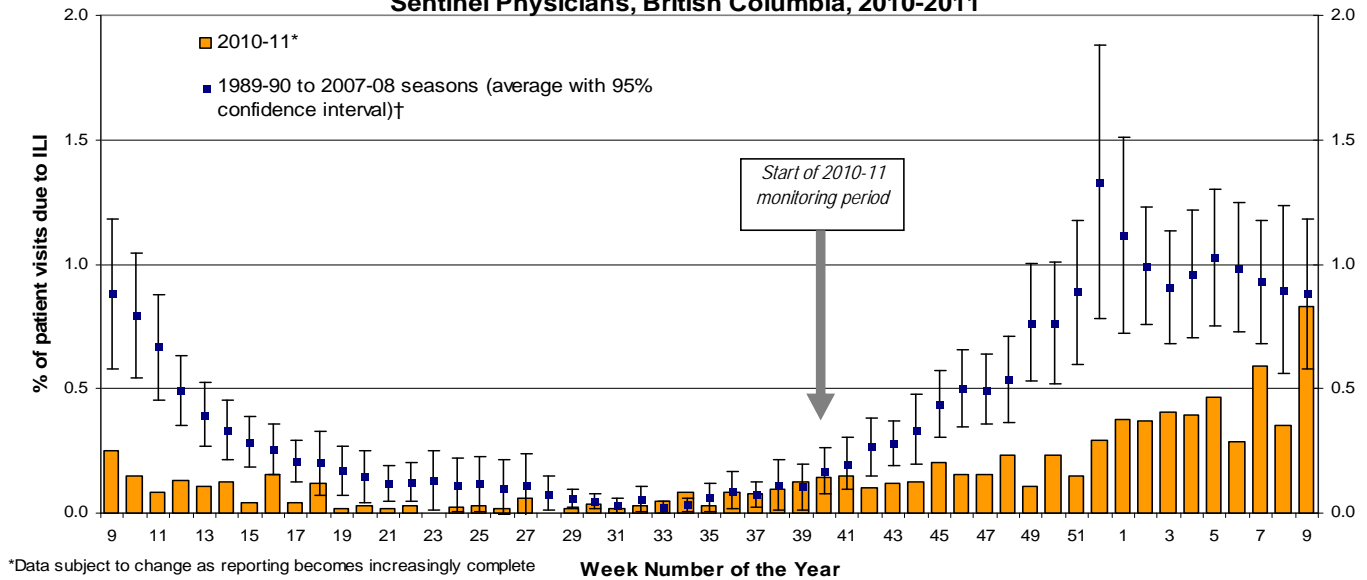
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British Columbia

Sentinel Physicians

During week 9, ~ 0.8% of patients presenting to sentinel physicians had ILI, which is higher than the previous week and consistent with the expected range for this time of year. Forty three percent (20/46) of sentinel physician sites have reported to-date for week 9.

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

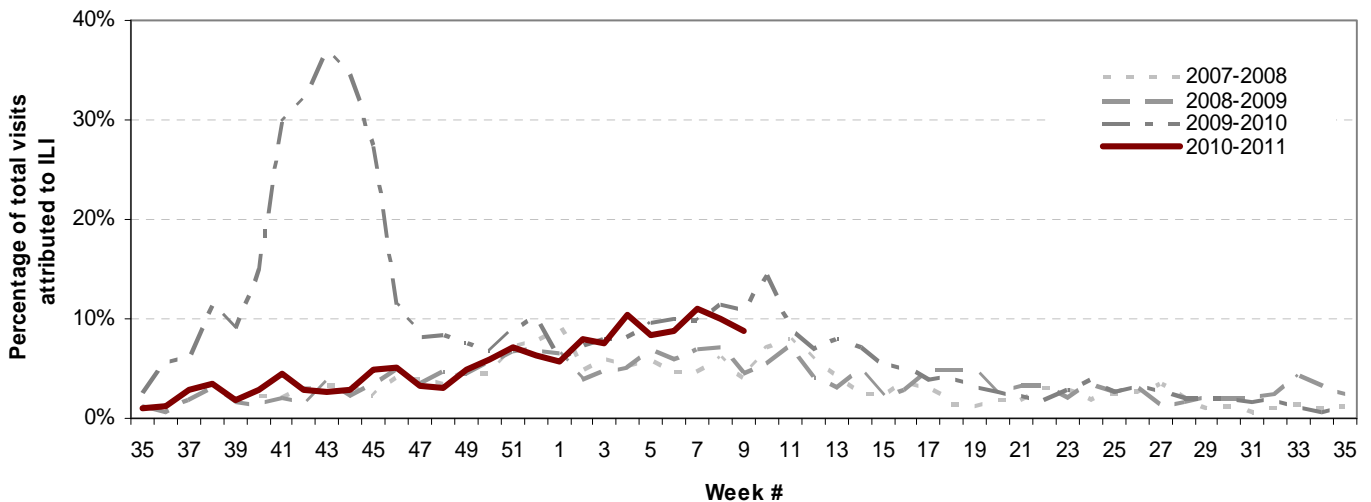


*Data subject to change as reporting becomes increasingly complete
†Historical values exclude 2008-09 season due to atypical seasonality.

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 9 was 8.7%, slightly lower than that reported last week (10.0%).

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

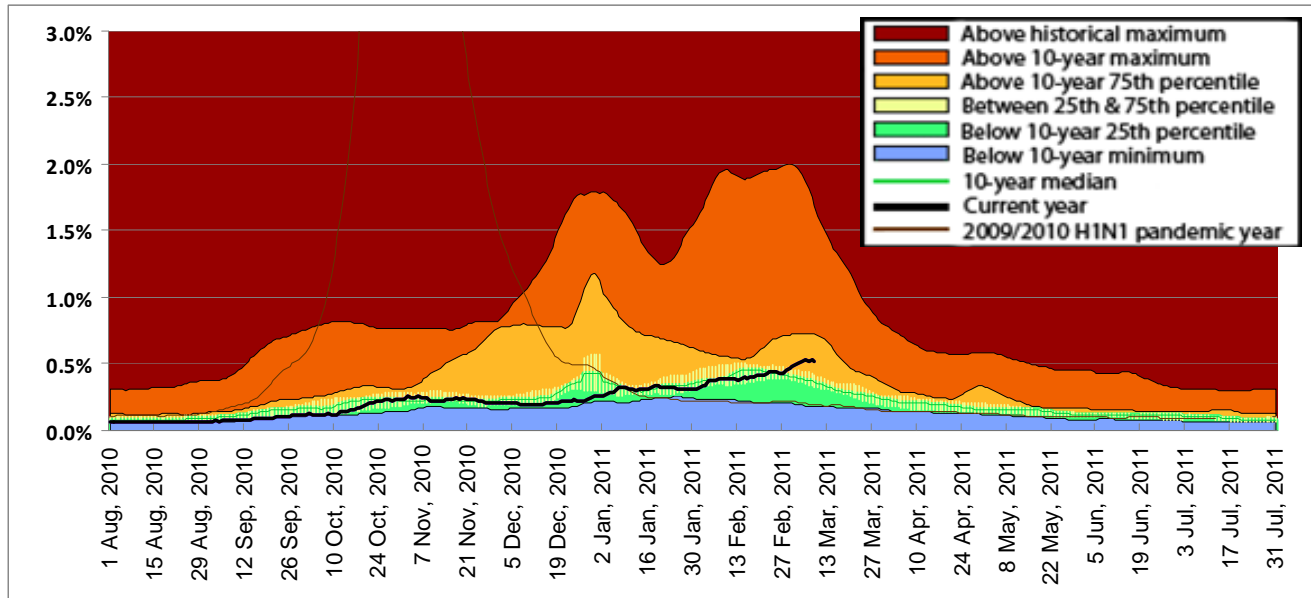
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims remains elevated provincially and within Fraser, Interior, and Vancouver Island Health Authorities. The influenza illness level in Vancouver Coastal and Northern HAs remained similar to that reported during the previous week, being at or 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).

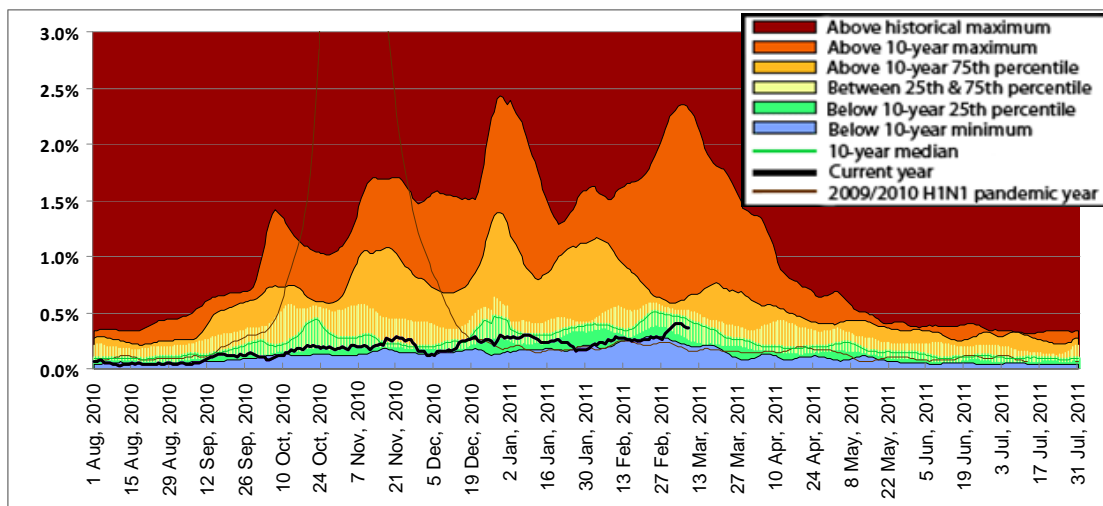
Influenza Illness Claims* British Columbia



* 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 09, 2011

Northern

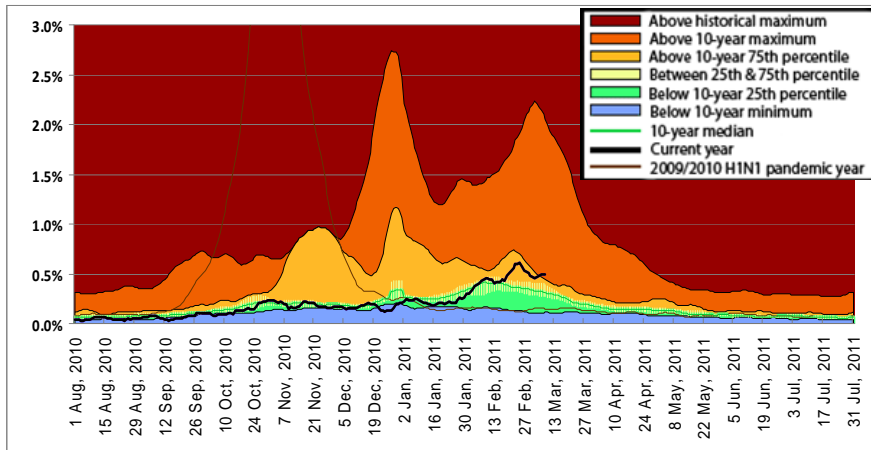


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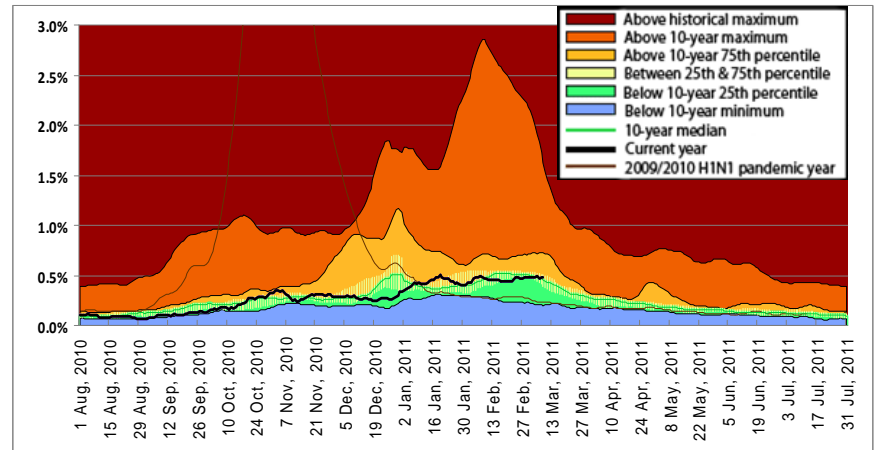
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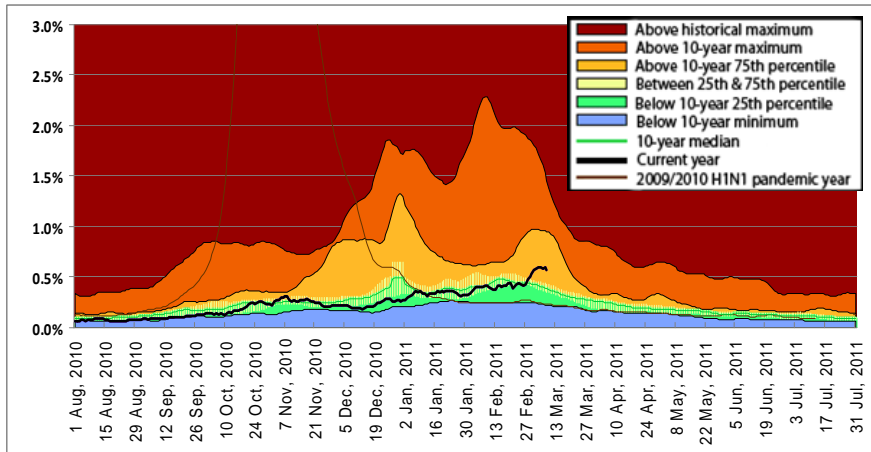
Interior



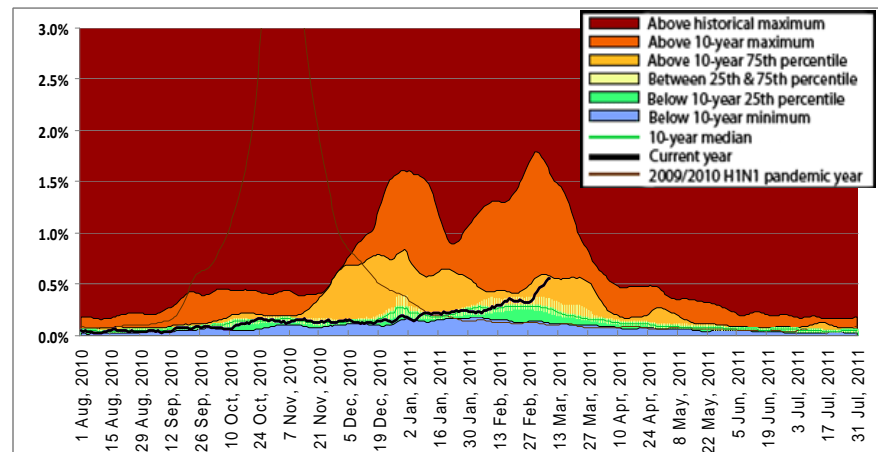
Vancouver Coastal



Fraser



Vancouver Island



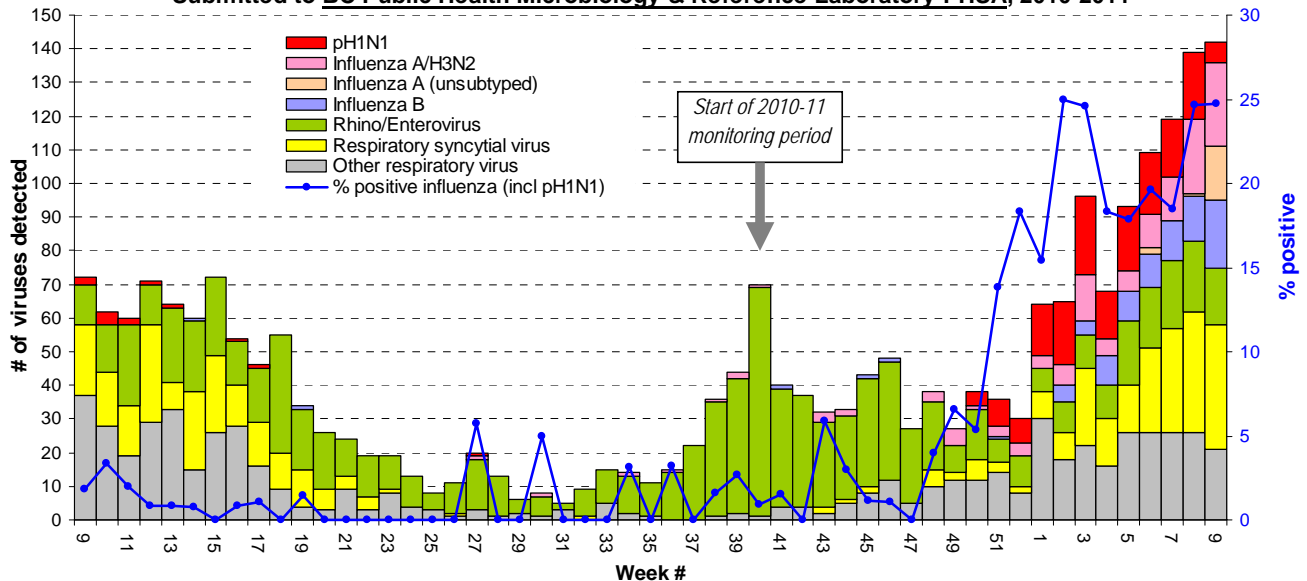
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Laboratory Reports

Two hundred and seventy one respiratory specimens were tested at the BC Public Health Microbiology & Reference Laboratory in week 9. Influenza was detected in 67 (25%) submitted specimens. Six of these (2% of submitted specimens) were pandemic A/H1N1, 25 (9%) were A/H3N2, 16 (6%) were unsubtype A, and 20 (7%) were type B. Several A/H3N2s were outbreak specimens submitted from Fraser Health Authority. In addition there were sporadic detections of influenza A/H3N2 from all Health Authorities except Interior. Pandemic A/H1N1 and influenza B viruses were sporadically detected from all HAs. During this week, of 271 specimens tested for other respiratory viruses, 37 (14%) were positive for RSV, 19 (7%) for coronavirus, and 17 (6%) for rhino/enterovirus. Other respiratory viruses were also sporadically detected.

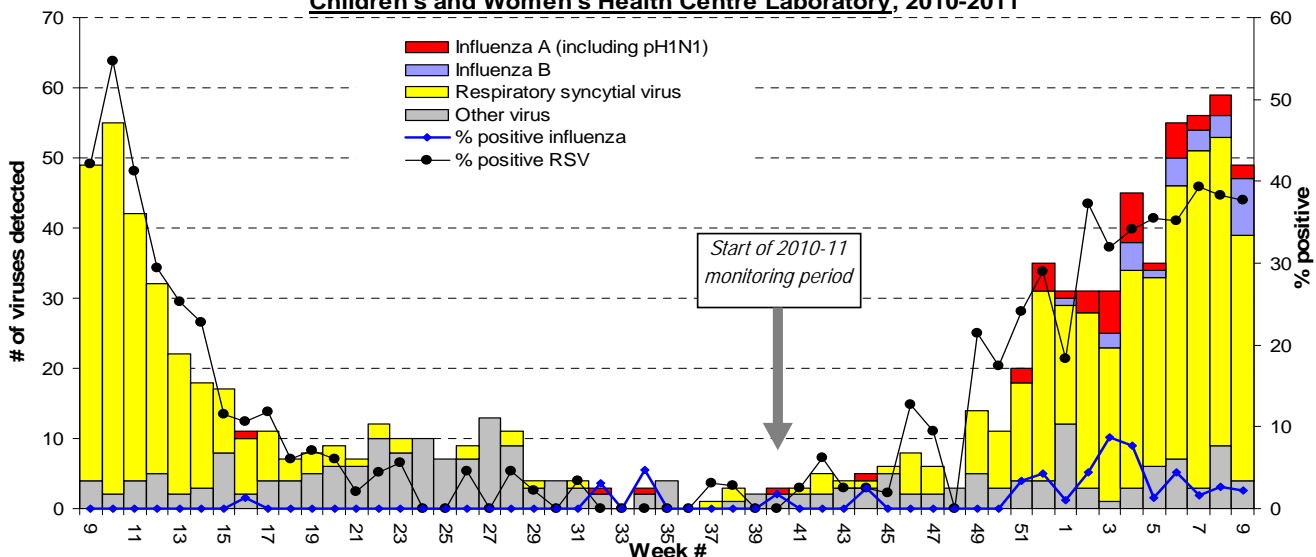
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory PHSA, 2010-2011



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

During week 9, BC Children's and Women's Health Centre Laboratory tested 93 respiratory specimens. Two (2.2%) were positive for influenza A and 8 (8.6%) were positive for type B. Thirty five 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

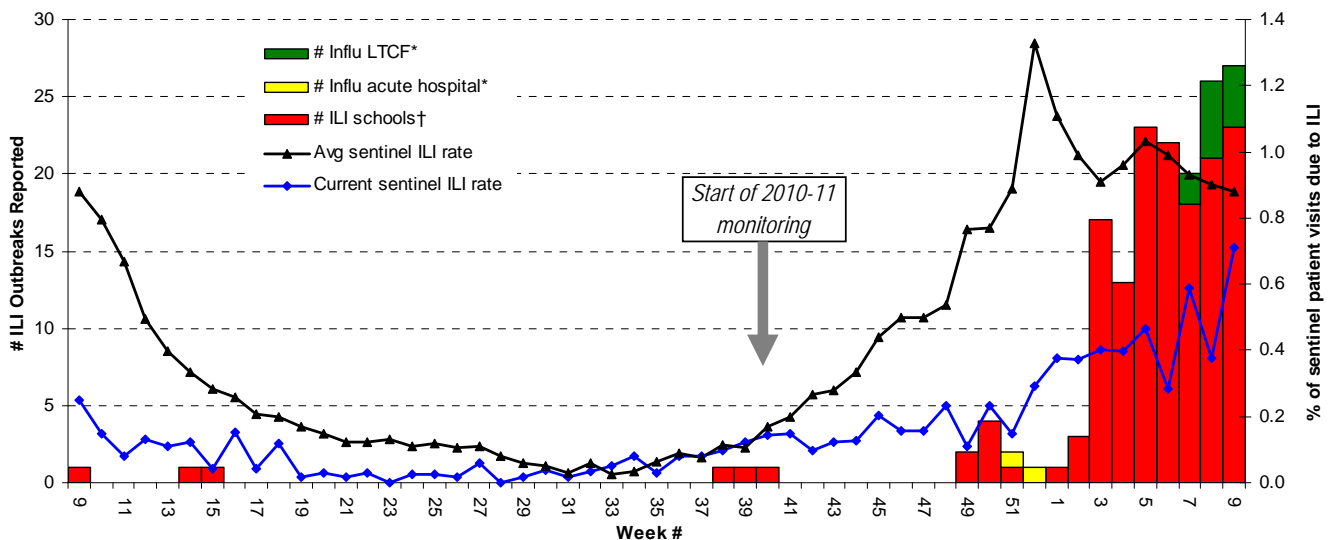
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ILI Outbreaks

During week 9, fifteen new school ILI outbreaks were reported from schools in Interior (7), Fraser (5), Vancouver Coastal (2), and Northern (1) HAs. Laboratory testing confirmed influenza B and pandemic influenza A/H1N1 in the school outbreak in Northern HA. Other school outbreaks were not tested for respiratory viruses. Four outbreaks were reported from long-term care facilities (LTCF): three were diagnosed as influenza A/H3N2 (two in FHA, one in VCH); and one in VIHA as influenza A with subtype pending. One outbreak was reported from an adult residential facility in VIHA diagnosed as pandemic influenza A/H1N1.

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 week 8 ending February 26, 2011, there was a decrease in influenza activity level compared to the previous week in most regions of the country. The influenza-like illness (ILI) consultation rate remained within the expected range for this time of year. One thousand and fifty five specimens (17.8% in week 8) tested positive for influenza, a slight decrease from the previous week (18.7%): 363 A/H3N2, 489 unsubtype influenza A, 73 pandemic H1N1, and 130 influenza B. Specimens were reported from all provinces; influenza A activity was mainly concentrated in ON, QC, and NB. During week 8, 39 new paediatric hospitalizations and 21 new adult hospitalizations related to influenza were reported through IMPACT and CNISP networks (an increase for paediatric hospitalizations and decrease for adult hospitalizations over previous weeks). In Ontario, during week 8, 299 influenza laboratory confirmed cases were detected with 12.7% positivity; a decrease from the previous week. The overall ILI consultation rate has decreased from 36.8/1,000 patient visits in Week 7 to 51.3/1,000 patient visits in Week 8. In Quebec during week 8, 332 (16%) tested specimens were positive for influenza. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

Between September 1, 2010 and March 3, 2011, three hundred and fifty-two influenza isolates were collected from provincial and hospital labs and characterized at the NML as follows:

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

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

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

7 B/Wisconsin/01/2010-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 March 2, 2011 indicated that all but one A/H3N2 and all pandemic H1N1 isolates were resistant to amantadine. All the isolates (152 A/H3N2, 61 pandemic H1N1, 85 type B) tested for zanamivir and (153 A/H3N2, 63 pandemic H1N1, 84 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 8 ending February 26, 2011, influenza activity remained elevated in the United States www.cdc.gov/flu/weekly/. Two thousand one hundred and six specimens (out of 7,543, or 27.9%) tested positive for influenza in week 8: 360 pandemic H1N1, 505 A/H3, 693 unsubtype influenza A, and 548 type B. The proportion of ILINet physician visits for ILI was 4.0%, which was above 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.

Updates from WHO are pending. 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 7, 2011, two new human cases of A/H5N1 were reported in Egypt. A 32 year old female developed symptoms on February 10, was hospitalized on February 14, and is now in critical condition. A 2 year old male developed symptoms on February 18, was hospitalized on February 20, and is in good condition. 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_07/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