

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 8, Week 01
January 02 to January 08, 2011



BC Centre for Disease Control
An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Slight increase in influenza activity in BC

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Summary

During week 1 (January 2 – 8, 2011), influenza surveillance indicators in BC (sentinel physician ILI rate and MSP influenza visits) showed slight increase while remaining below historic levels for this time of year. At the BC Public Health Microbiology & Reference Laboratory, 125 respiratory specimens were tested. Influenza A was detected in 19 (15%) specimens: pandemic influenza A/H1N1 in 15 (12%) and A/H3N2 in 4 (3%). One laboratory-confirmed pandemic A/H1N1 elementary school outbreak was reported in Northern Health.

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

Report disseminated January 13, 2011

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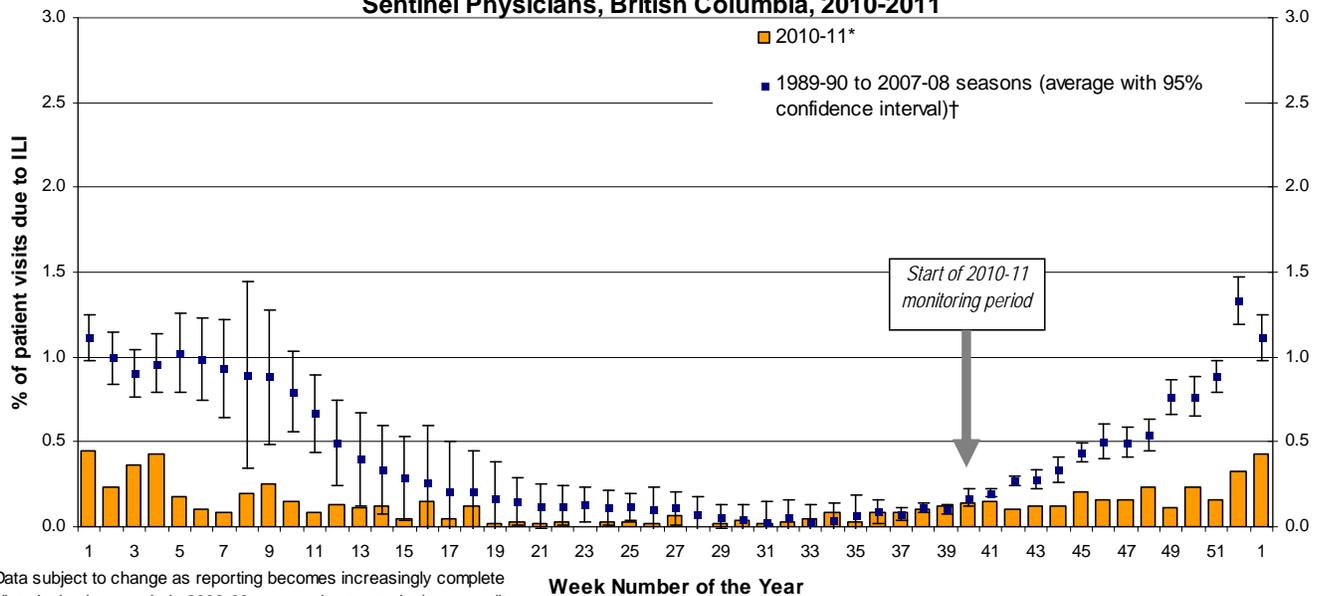
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British Columbia

Sentinel Physicians

During week 1, less than 0.5% of patients presenting to sentinel physicians had ILI, which is slightly higher than last week but well below the expected range for this time of year. Fifty-five percent (26/47) of sentinel physician sites have reported to-date for week 1.

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



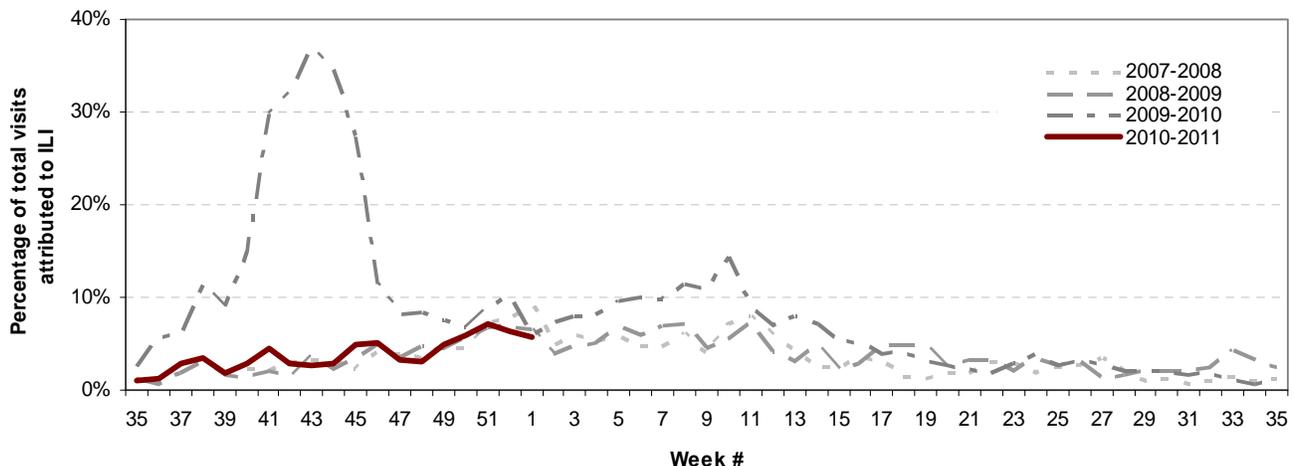
*Data subject to change as reporting becomes increasingly complete

†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 decreased slightly from 6.3% last week to 5.8% towards the end of this period and 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

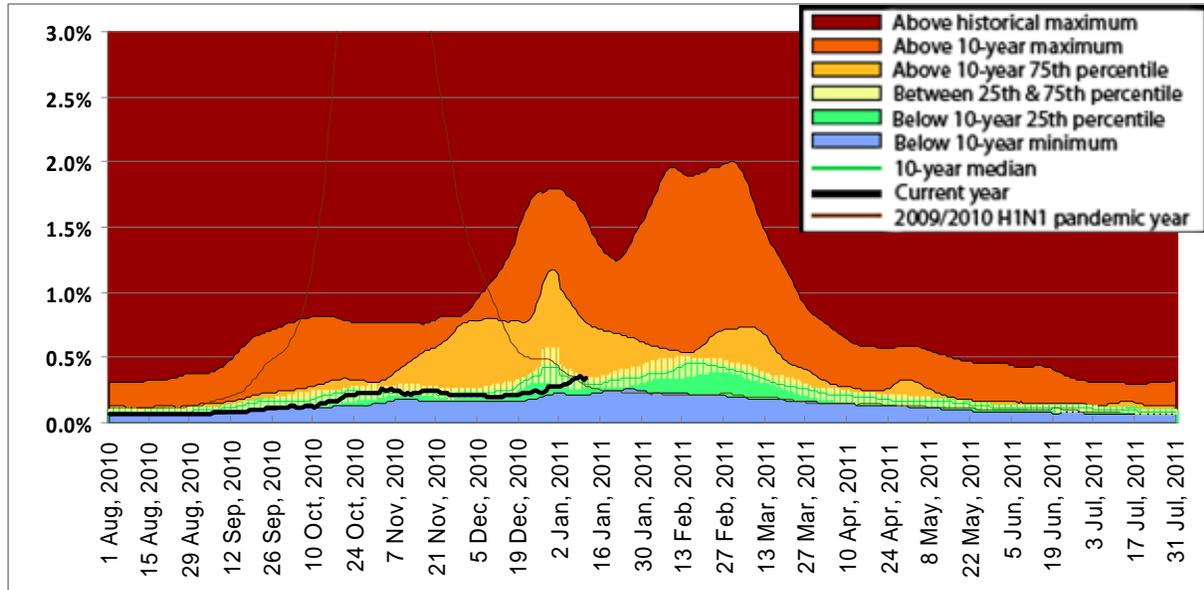
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims also showed slight increase while being at or above 10-year medians provincially and in all HAs except Northern where it is still 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).

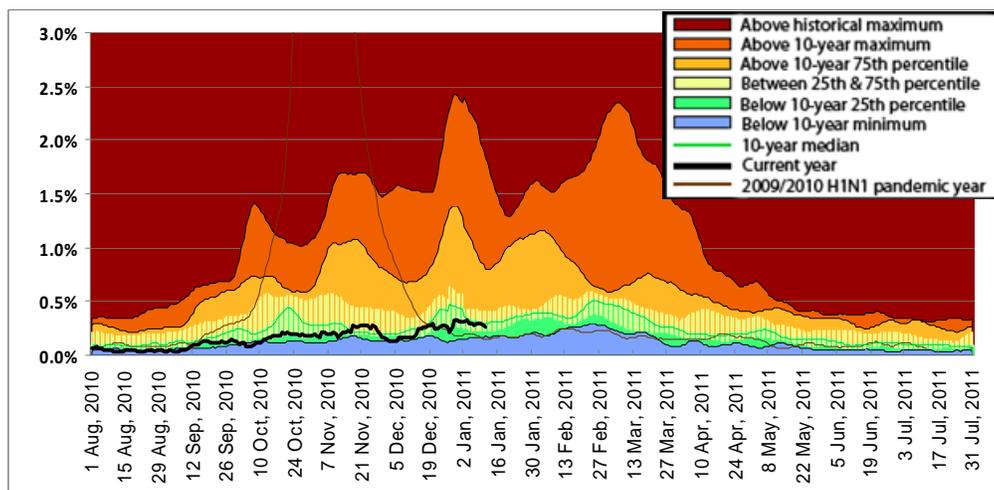
Influenza Illness Claims* British Columbia



* 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 2 Jan 2010 corresponds to sentinel ILI week 01.
Data current to Jan 11, 2011

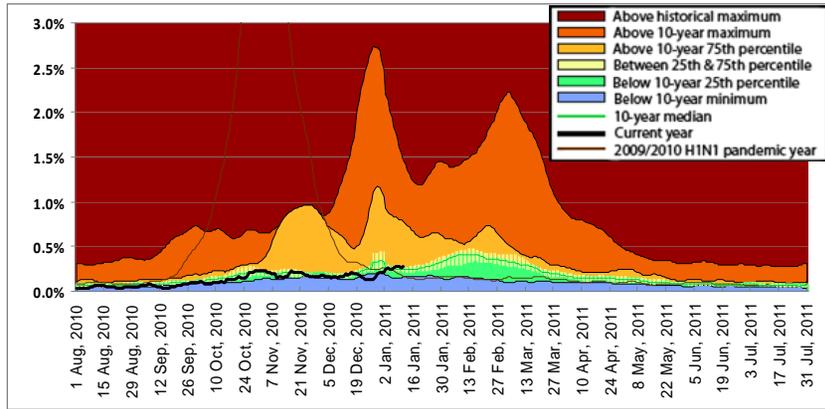
Northern



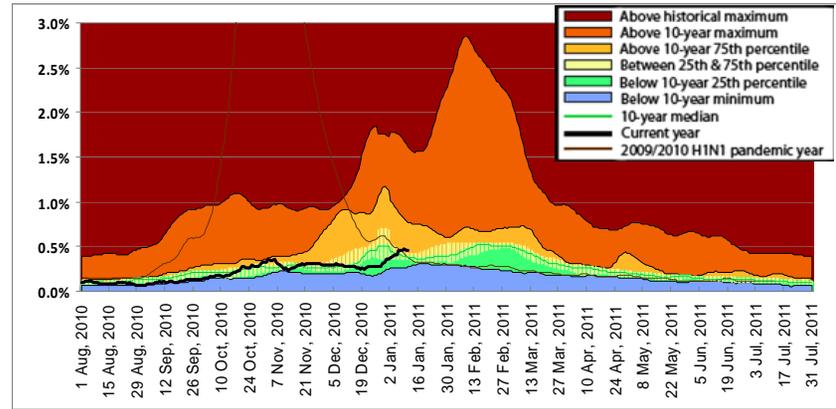
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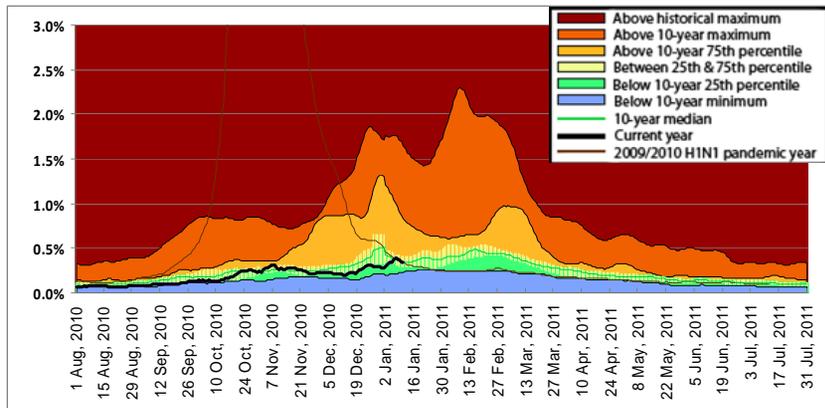
Interior



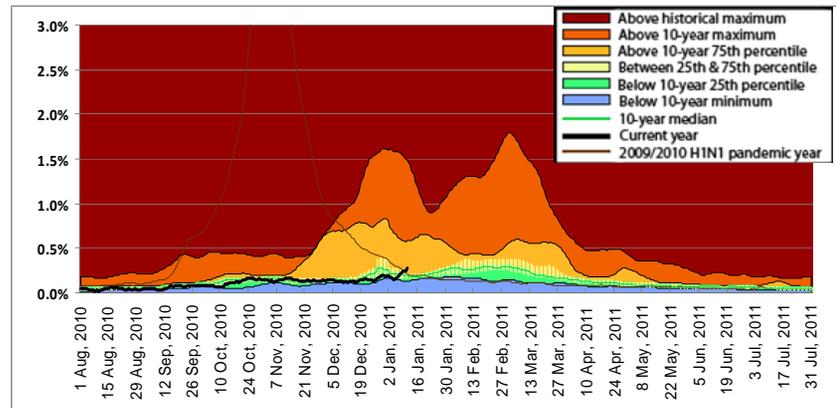
Vancouver Coastal



Fraser



Vancouver Island



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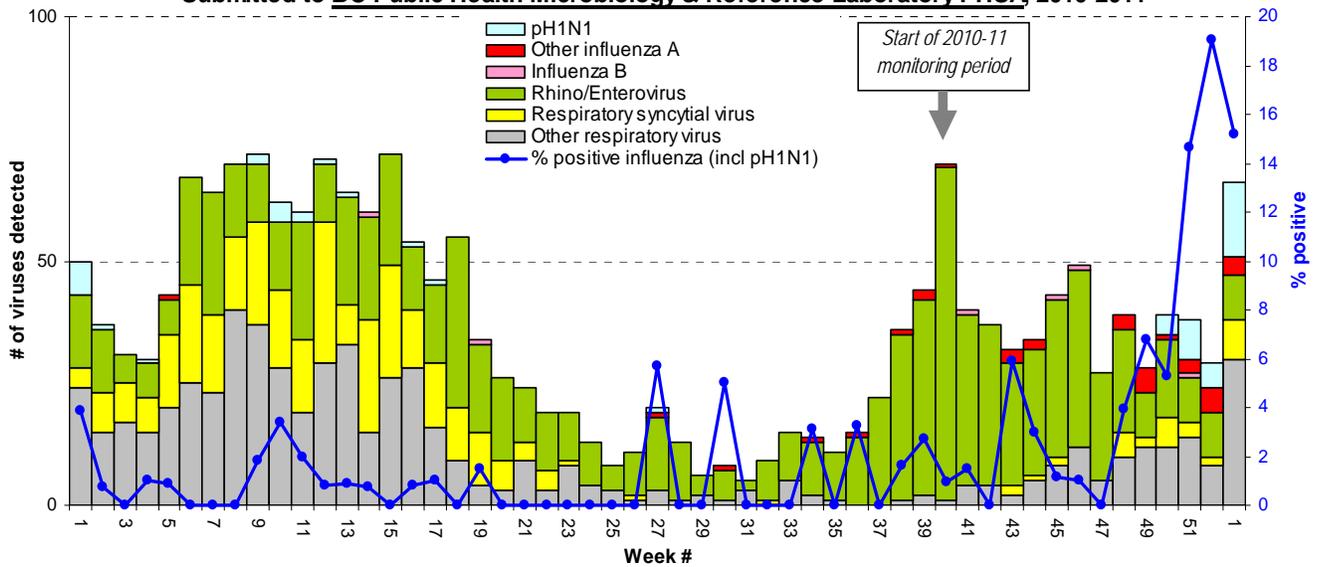
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Laboratory Reports

One hundred and twenty-five respiratory specimens were tested at the BC Public Health Microbiology & Reference Laboratory in week 1. Influenza was detected in 19 (15%) submitted specimens. Fifteen of these (12% of submitted specimens) were pandemic A/H1N1 and the remainder (4, or 3%) were A/H3N2. During this week, of 125 specimens tested for other respiratory viruses, 14 (11%) were positive for coronavirus, 11 (9%) for parainfluenza, 9 (7%) for rhino/enterovirus, and 8 (6%) for RSV. Other respiratory viruses were also sporadically detected.

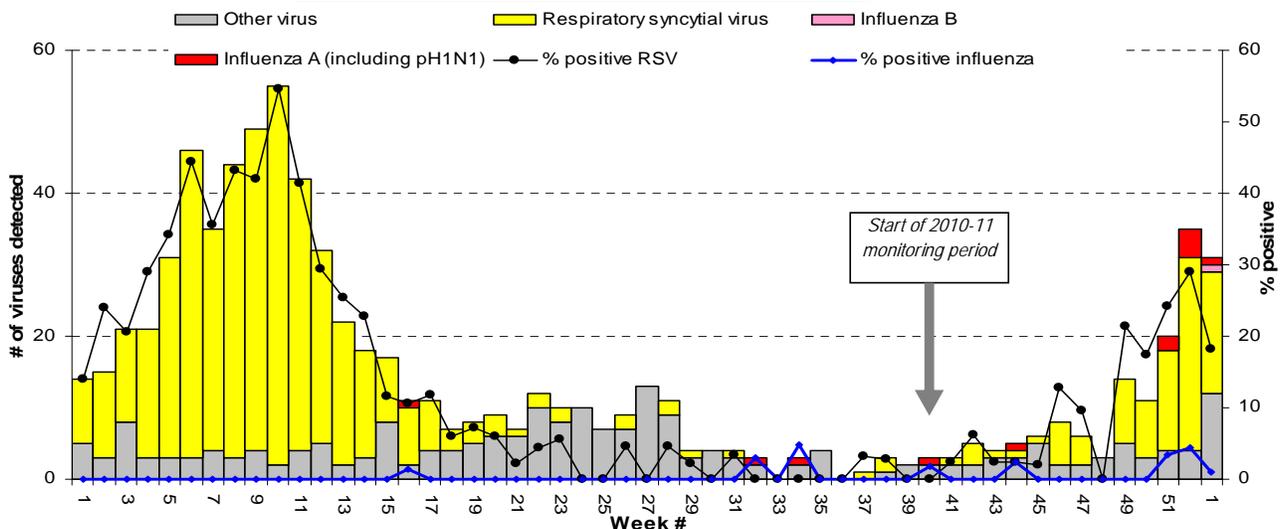
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory PHSA, 2010-2011



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

During week 1, BC Children's and Women's Health Centre Laboratory tested 93 respiratory specimens. Two (2.2%) were positive for influenza (one influenza A and one influenza B). Seventeen specimens (18.3%) were positive for RSV, 8 (8.6%) for parainfluenza, and 4 (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

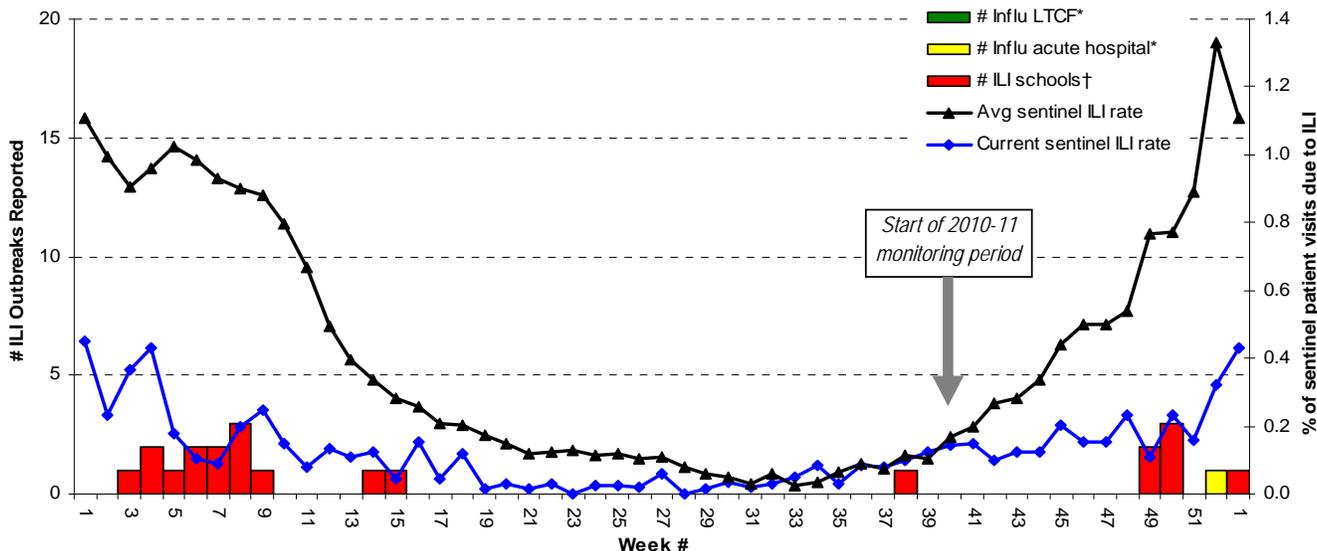
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ILI Outbreaks

During week 1, one new ILI outbreak was reported from an elementary school in Northern Health. Four specimens were tested and all were positive for pandemic 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 weeks 51-52 ending January 1, 2011, influenza activity in Canada had continued to increase across the country. The influenza-like illness (ILI) consultation rate remained within the expected range for this time of year. Two thousand and three hundred specimens (23.1% in week 51, 24.6% in week 52) tested positive for influenza, an increase from the previous week (15.8%): 658 A/H3N2, 1561 unsubtype influenza A, 40 pandemic H1N1, and 40 influenza B. Those specimens were reported from all provinces except NL. Influenza A activity was mainly concentrated in ON, QC and MB. During weeks 51-52, 81 new paediatric hospitalizations and 166 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, 2010 and January 6, 2011, ninety-four influenza isolates were collected from provincial and hospital labs and characterized at the NML:

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

8 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 recommended influenza B component of the 2010-2011 northern hemisphere trivalent influenza vaccine

NML: Antiviral Resistance

Drug susceptibility testing at the NML between September 1, 2010 and January 6, 2011 indicated that all but one A/H3N2 and all pandemic H1N1 isolates were resistant to amantadine. All the isolates (61 A/H3N2, 8 pH1N1, 15 type B) tested for zanamivir and oseltamivir resistance showed susceptibility.

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INTERNATIONAL

Northern Hemisphere: Report for week 1 is pending. During week 52 ending January 1, 2011, influenza activity had decreased slightly in the United States <http://www.cdc.gov/flu/weekly/>. Nine hundred ninety-five specimens (out of 4,911, or 20.3%) tested positive for influenza in week 52: 44 pandemic H1N1, 269 A/H3, 343 untyped influenza A, and 339 type B. The proportion of ILINet physician visits for ILI was 2.6%, which was above 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.

ILI activity continued to increase in Europe, with a mix of A/H3N2, pandemic A/H1N1, and type B identified. France, Ireland, the Russian Federation, and Ukraine reported clinical consultation rates above their baseline thresholds. As of December 30, the ILI activity in United Kingdom has not yet peaked. Severe cases related primarily to pandemic A/H1N1 continued to occur and a total of 17 required advance respiratory supports. Overall, severe cases were predominantly associated with pandemic A/H1N1, less than 65 years of age, and largely unvaccinated. The circulating strains are overall well matched to the current influenza vaccine. In Europe, pandemic influenza A/H1N1 and influenza B are the predominant circulating viruses. However, the type B

viruses were a mix of Florida-like and Brisbane-like. Only the Brisbane-like strain is in the influenza vaccine for type B. In the Middle East, Iran noted a sharp increase in pandemic A/H1N1, co-circulating with small numbers of type B. Oman reported continued detection of predominantly pandemic A/H1N1 and small numbers of type B, while Algeria detected primarily type B. In Asia, Mongolia reported a sharp increase of outpatients with ILI in sentinel clinics above the epidemic threshold. Northern China reported slight increase in the ILI rate, with 18% of specimens positive for influenza virus. A/H3N2 was the predominant circulating influenza virus in both countries. The Republic of Korea and Japan both noted low level but increasing rates of ILI. In the Republic of Korea, 35% of specimens were positive for influenza virus. Pandemic A/H1N1 was the predominant circulating influenza virus in both countries, which suggested a shift from the more common detections of A/H3N2 in Japan in recent weeks.

http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1287147913271

http://www.who.int/csr/disease/influenza/2010_12_30_GIP_surveillance/en/index.html

Avian Influenza: Four new cases of A/H5N1 were reported by Egypt as of January 5. One 56 year-old woman developed symptoms on December 22, was hospitalized on December 23 and treated with oseltamivir, and discharged from hospital on December 30 in stable condition. One 25 year-old female with exposure to poultry developed symptoms on December 19, was hospitalized on December 27, and died on December 29. One 27 year-old male developed symptoms on December 23, was hospitalized on December 28 and is still under treatment. One 40 year-old male with exposure to poultry developed symptoms on December 25, was hospitalized on December 30, and died on January 2. More details and a complete tally of A/H5N1 detections can be found at the links below:

http://www.who.int/csr/don/2011_01_05/en/index.html

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

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

