

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 12, Week 5
January 30 to February 5, 2011



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

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Low level mix of influenza viruses detected in BC

Contents:

British Columbia:

Sentinel Physicians	Page 2
Children's Hospital ER	Page 2
Medical Services Plan	Page 3
Laboratory Surveillance	Page 5
ILI Outbreaks	Page 6

Canada:

FluWatch Activity levels	Page 6
NML Strain Characterization	Page 6
NML Antiviral Resistance	Page 7

International:

[Page 7](#)

Other:

List of Acronyms	Page 8
Web Sites	Page 8
Outbreak Report Form	Page 9

Summary

During week 5 (January 30 – February 5, 2011), influenza surveillance indicators in BC (sentinel physician ILI rate and MSP influenza visits) were consistent with those of the previous reporting week, remaining below historic levels for this time of year. At the BC Public Health Microbiology & Reference Laboratory, 190 respiratory specimens were tested. Influenza was detected in 34 (18%) specimens: pandemic influenza A/H1N1 in 13 (7%), A/H3N2 in 6 (3%), untyped influenza A in 6 (3%), and influenza B in 9 (5%) specimens. Of 190 specimens tested, other respiratory viruses detected included 14 (7%) RSV, 19 (10%) rhino/enterovirus and 17 (9%) coronavirus.

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

Report disseminated February 10, 2011

Contributors: Samson Chan, Lisan Kwindt, Naveed Janjua, Danuta Skowronski

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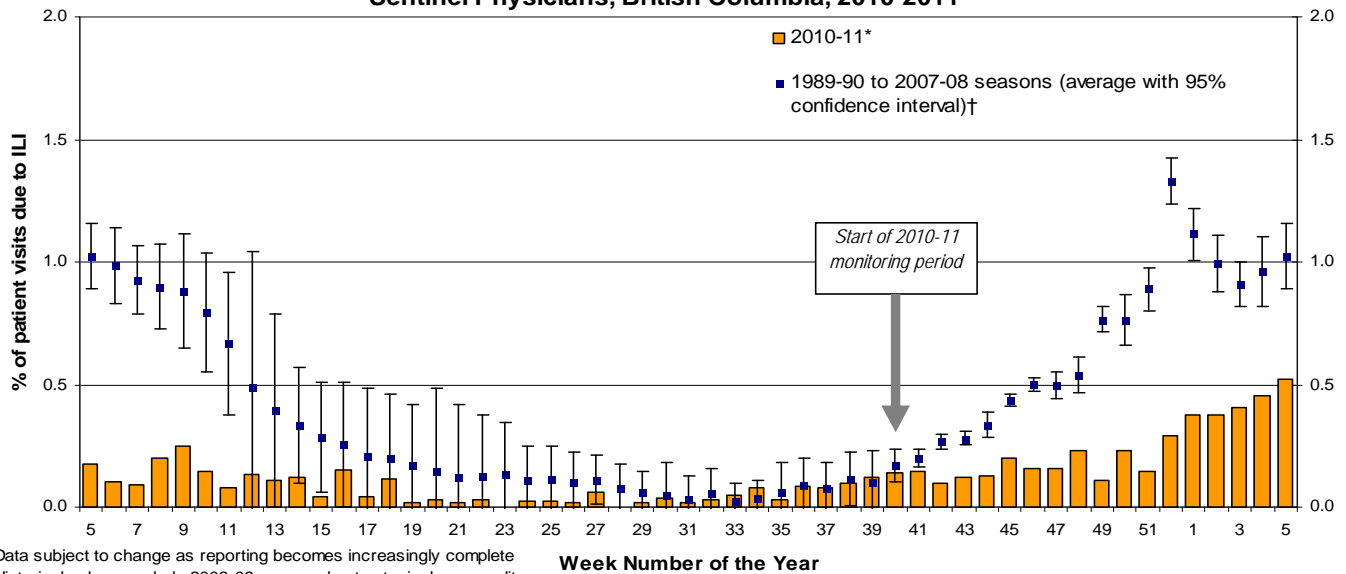
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British Columbia

Sentinel Physicians

During week 5, ~ 0.5% of patients presenting to sentinel physicians had ILI, which is similar to the previous week and still below the expected range for this time of year. Fifty-four percent (25/46) of sentinel physician sites have reported to-date for week 5.

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



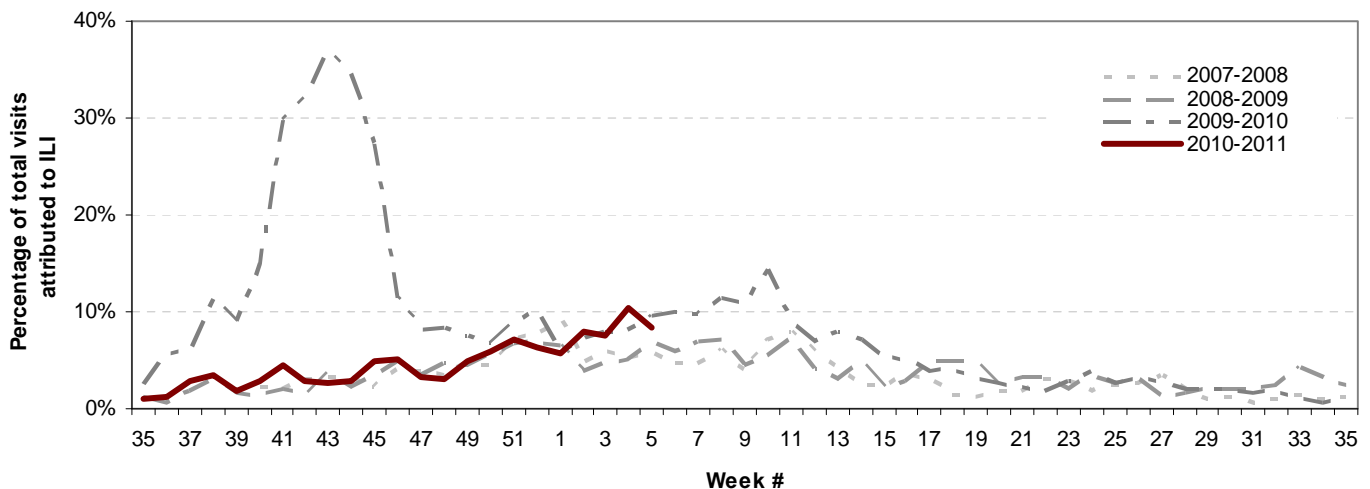
*Data subject to change as reporting becomes increasingly complete

†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 from 10.5% in week 4 to 8.4% towards the end of week 5.

Percentage of Patients Presenting to BC Children's Hospital ER with Presenting Complaint of "Flu," "Influenza," or "Fever/Cough", by Week



Source: BCCCH Admitting, discharge, transfer database, ADT

Data provided by Decision Support Services at Children's & Women's Health Centre of BC

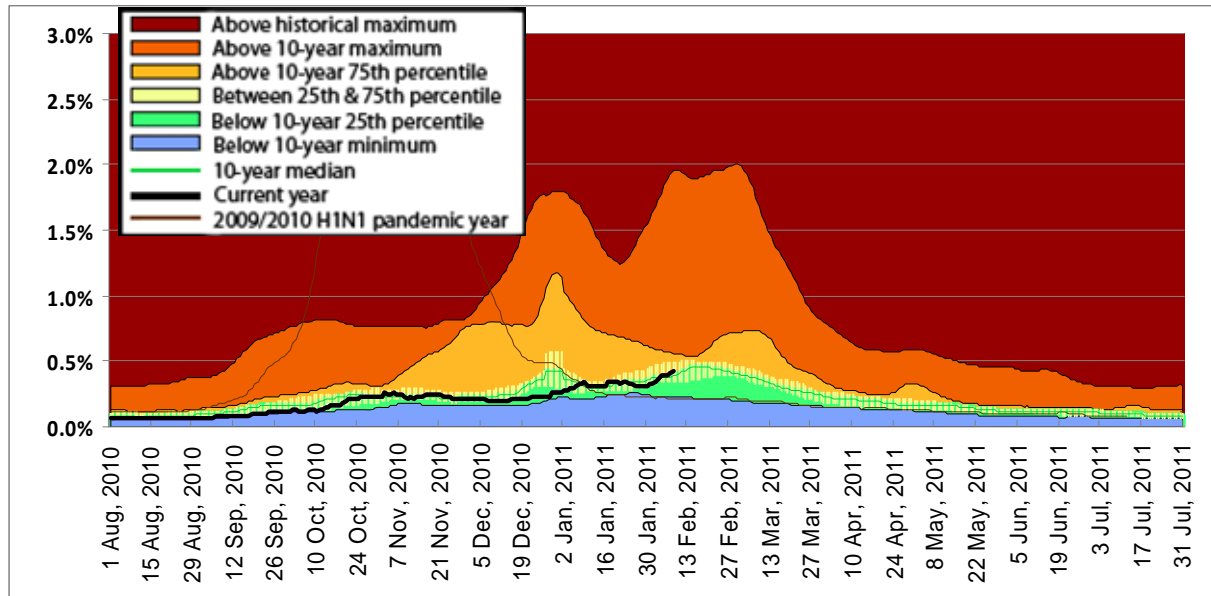
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2010-11: Number 12, Week 5
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims is also similar to the previous week in most regions, being at or above 10-year medians provincially and in Vancouver Coastal, Fraser, Vancouver Island and Interior (where evidence of recent increase is observed) while remaining below the 10-year median in Northern HA. 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).

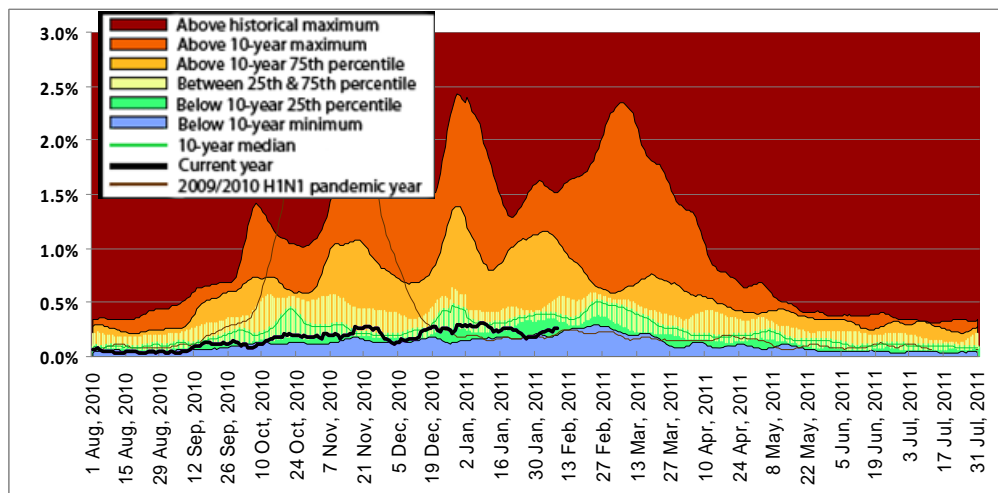
Influenza Illness Claims* British Columbia



* 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 Feb 2010 corresponds to sentinel ILI week 7.
Data current to Feb 08, 2011

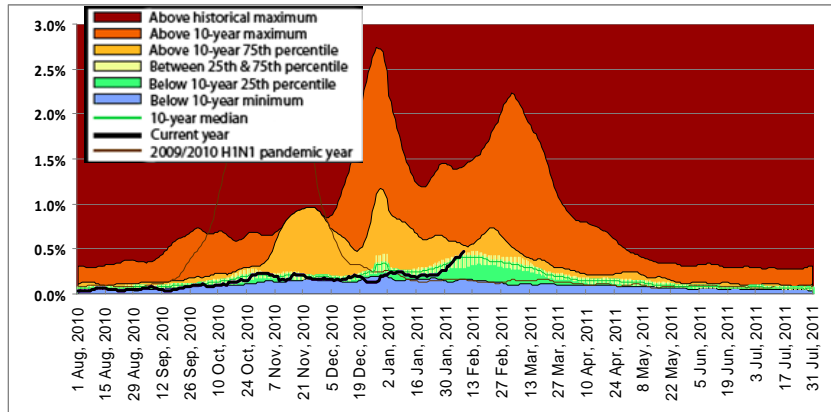
Northern



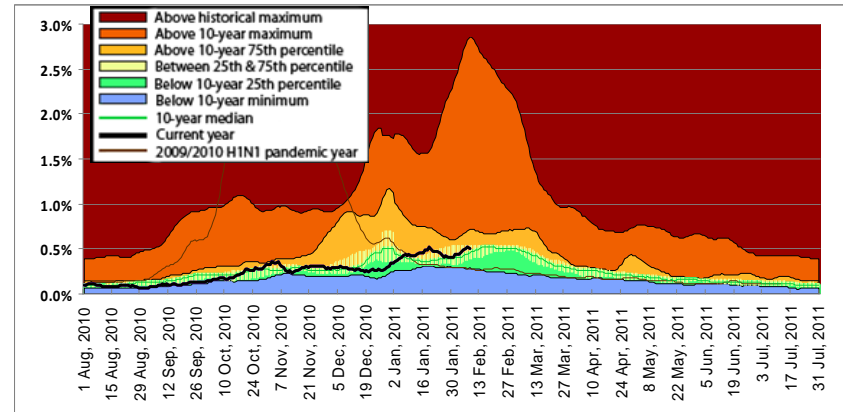
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2010-11: Number 12, Week 5
January 30 to February 5, 2011

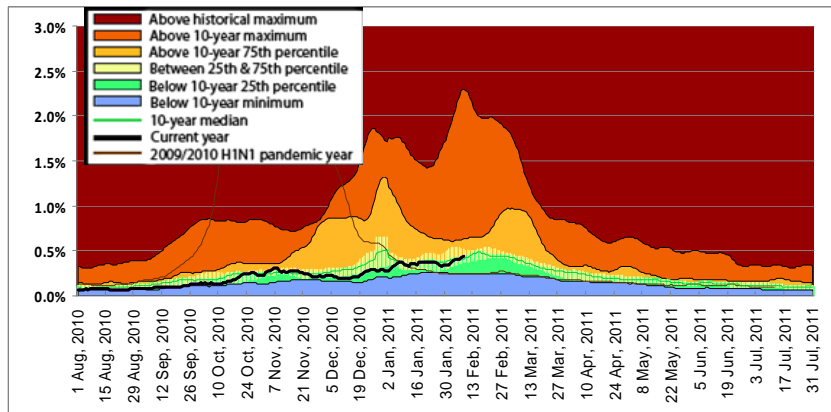
Interior



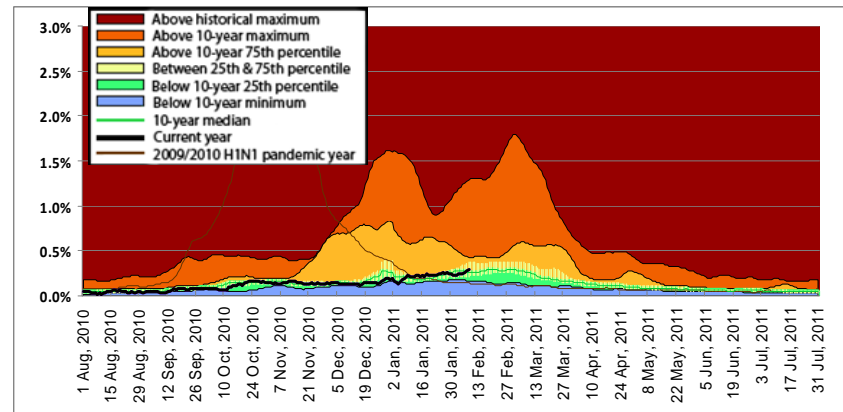
Vancouver Coastal



Fraser



Vancouver Island



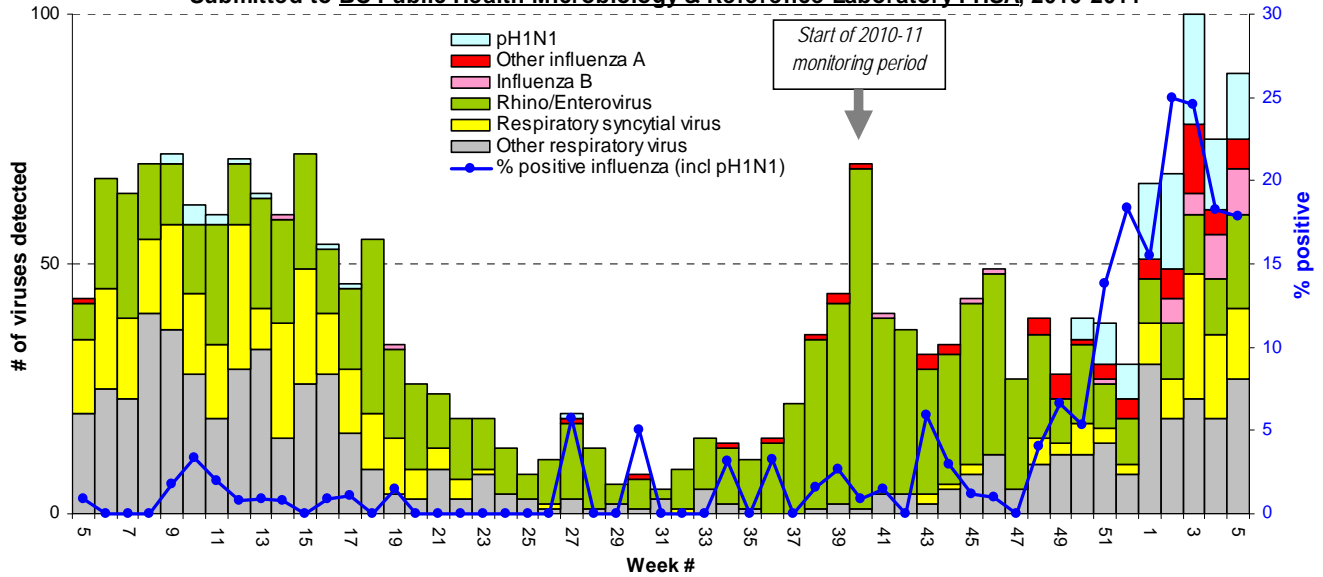
BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 12, Week 5
January 30 to February 5, 2011

Laboratory Reports

One hundred and ninety respiratory specimens were tested at the BC Public Health Microbiology & Reference Laboratory in week 5. Influenza was detected in 34 (18%) submitted specimens. Thirteen of these (7% of submitted specimens) were pandemic A/H1N1, 6 (3%) were A/H3N2, 6 (3%) were unsubtype A, and 9 (5%) were type B. There were sporadic detections of influenza A/H3N2 viruses from Fraser, Vancouver Coastal, and Vancouver Island Health Authorities. Pandemic A/H1N1 was detected sporadically from all HAs except Northern. Influenza B was sporadically detected from all HAs. During this week, of 190 specimens tested for other respiratory viruses, 19 (10%) were positive for rhino/enterovirus, 14 (7%) were for RSV, and 17 (9%) for coronavirus. Other respiratory viruses were also sporadically detected.

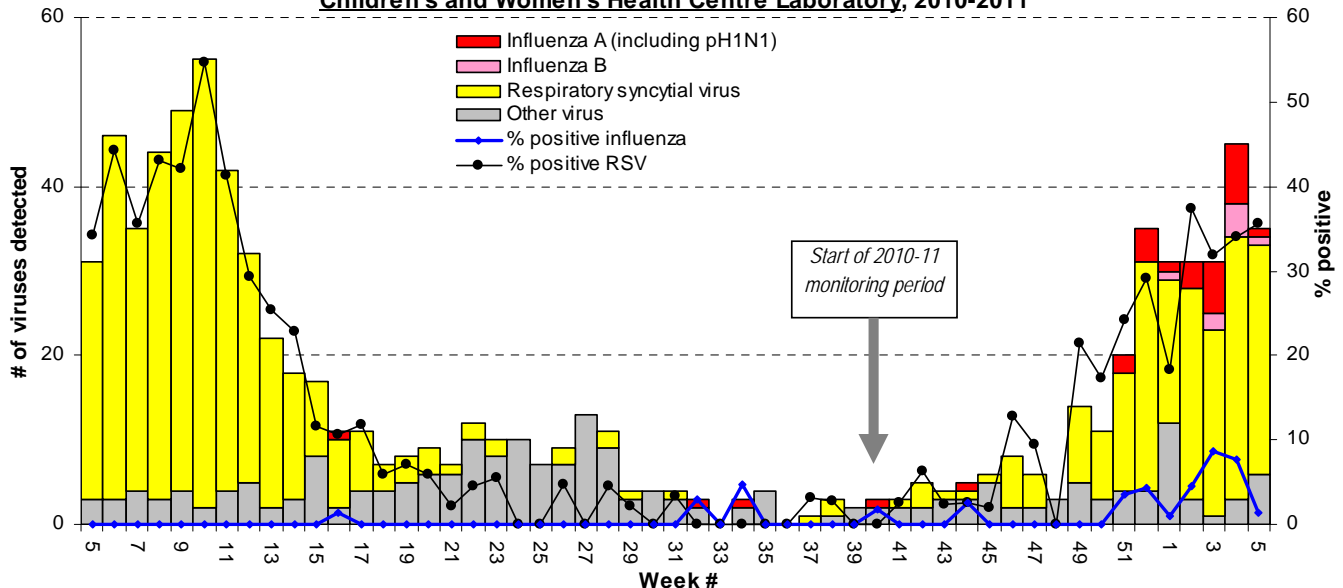
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory PHSA, 2010-2011



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

During week 5, BC Children's and Women's Health Centre Laboratory tested 76 respiratory specimens. One (1%) was positive for influenza A and 1 (1%) was positive for type B. Twenty seven specimens (35.5%) 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

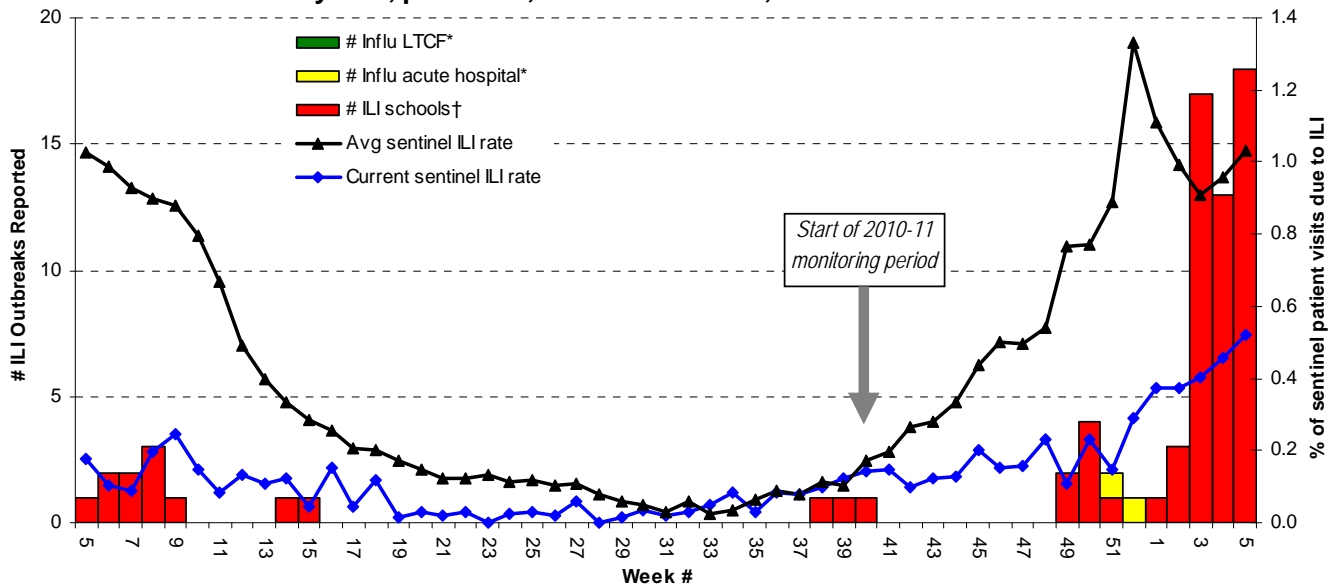
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2010-11: Number 12, Week 5
January 30 to February 5, 2011

ILI Outbreaks

During week 5, eighteen new ILI school outbreaks were reported from schools in Interior (12), Fraser (5), and Northern (1). One specimen from the school outbreak in Northern was lab-confirmed to be Influenza B positive. Other outbreaks were not tested for respiratory viruses. In week 5, an ILI outbreak was identified in a correctional facility in Interior HA. Lab testing confirmed 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 week 4 ending January 29, 2011, influenza activity in Canada appeared to have peaked in most regions across the country. The influenza-like illness (ILI) consultation rate remained within the expected range for this time of year. One thousand one hundred and fifty-five specimens (17.7% in week 3) tested positive for influenza, a slight decrease from the previous week (20.8%): 380 A/H3N2, 658 unsubtype influenza A, 55 pandemic H1N1, and 62 influenza B. Specimens were reported from all provinces; influenza A activity was mainly concentrated in ON, QC, AB, and NB. During week 4, 24 new paediatric hospitalizations and 26 new adult hospitalizations related to influenza were reported through IMPACT and CNISP networks. This is a decrease over previous weeks. In Ontario, during week 4, 463 influenza laboratory confirmed cases were detected with 16.5% positivity; a decrease from the previous week. The overall ILI consultation rate has decreased from 55/1,000 patient visits in Week 3 to 42/1,000 patient visits in Week 4. In Quebec during week 3, 545 (22%) tested specimens were positive for influenza.

www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

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

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

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

27 B/Brisbane/60/2008 (Victoria lineage)-like[†] from 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 3, 2011 indicated that all but one A/H3N2 and all pandemic H1N1 isolates were resistant to amantadine. All the isolates (107 A/H3N2, 31 pandemic H1N1, 26 type B) tested for zanamivir and 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 4 ending January 29, 2011, influenza activity had increased in the United States www.cdc.gov/flu/weekly/. Two thousand and forty-four specimens (out of 6,209, or 32.9%) tested positive for influenza in week 4: 423 pandemic H1N1, 718 A/H3, 530 untyped influenza A, and 373 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 above the epidemic threshold in the USA.

The WHO report for week 5 is pending. As of January 28, influenza activity continues to increase in Europe, particularly in the West. The United Kingdom reported that flu activity has peaked and the number of severe cases is now declining. In many other countries of Western Continental Europe such as Denmark and France, significant numbers of severe and fatal cases of influenza are now reported. Of the samples tested from sentinel sites across Europe, 43% were positive for influenza. Overall in Europe, pandemic H1N1 remains the dominant strain, co-circulating with A/H3N2 and type B. In North Africa and the Middle East, influenza activity appears to have peaked, though Morocco, Pakistan, and Tunisia reported increased activity. Pandemic H1N1 is

the predominant strain in this area. Influenza activity has peaked in Egypt in late December or early January. In North Asia (including Mongolia, northern China, the Republic of Korea, and Japan), influenza activity has recently peaked and is now declining. Influenza activity was associated with A/H3N2 in Mongolia and northern China, but had peaked in late December when number of pandemic H1N1 cases began to be detected. Japan had earlier detections of A/H3N2 but pandemic H1N1 has become the predominant virus. The Republic of Korea reported mainly pandemic H1N1 circulation.

http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1287147913271
http://www.who.int/csr/disease/influenza/2011_01_28_GIP_surveillance/en/index.html

Avian Influenza: As of February 9, 2011, one new human case of A/H5N1 was reported. A 5-year-old female with exposure to sick poultry developed symptoms on January 29, was hospitalized on February 3, and died 12 hours following admission. More details and a complete tally of A/H5N1 detections can be found at the links below:

http://www.who.int/csr/don/2011_02_09/en/index.html
www.who.int/csr/disease/avian_influenza/en/

WHO Recommendations for 2010-11 Northern Hemisphere Influenza Vaccine

On February 18, 2010 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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January 30 to February 5, 2011

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

