

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 19, Weeks 12-13

March 20 to April 2, 2011



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Influenza Activity in BC Continues to Decline

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Summary

During weeks 12-13 (March 20 – April 2, 2011), influenza surveillance indicators in BC continued a general pattern of decline seen in previous weeks. The sentinel physician ILI rate continued to decrease over the previous week and was also below the expected level for this time of year. MSP influenza visits were still higher than usually observed at this time of year, but showed indication of decline from previous weeks. No outbreaks were reported from facilities or schools. Pandemic influenza A/H1N1, A/H3N2, and B were detected sporadically throughout the province during this period. Pandemic influenza A/H1N1 and influenza B were sporadically detected in all five HAs, while A/H3N2 was detected in all HAs except Northern. Of 391 specimens tested for other respiratory viruses during weeks 12-13, 51 (13.0%) were positive for RSV, 25 (6.4%) for coronavirus, and 47 (12.0%) for rhino/enterovirus. Other respiratory viruses were also sporadically detected.

Report disseminated April 8, 2011

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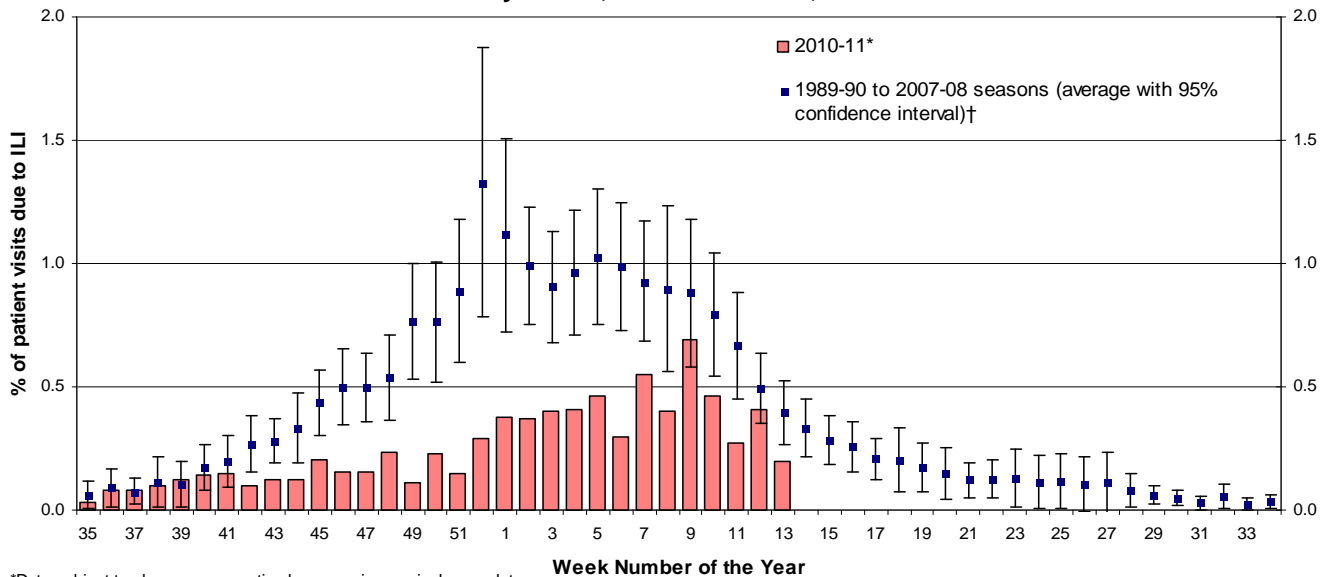
March 20 to April 2, 2011

British Columbia

Sentinel Physicians

During weeks 12-13, less than 0.2% 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. Sixty three percent (29/46) and 58% (26/45) of sentinel physician sites have reported to-date for week 12 and week 13, respectively.

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

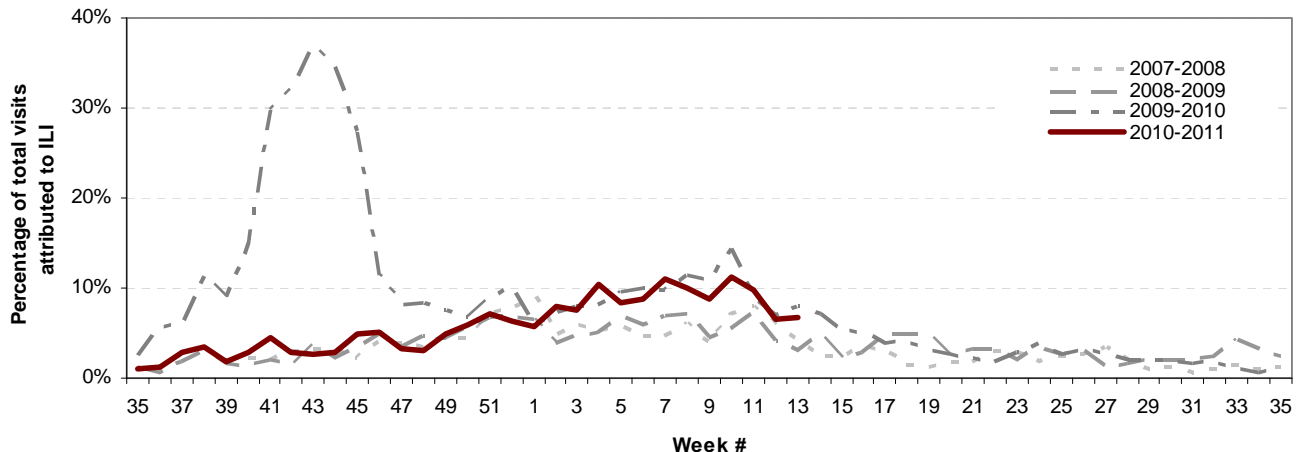
†Historical values exclude 2008-09 season due to atypical seasonality.

Note change to start week for x axis compared to previous bulletins.

BC Children's Hospital Emergency Room

The percentage of BC Children's Hospital Emergency Room visits attributed to "fever and cough" or flu-like illness during weeks 12-13 was less than 6.8%, lower than that reported in week 11 (9.7%), consistent with the 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



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

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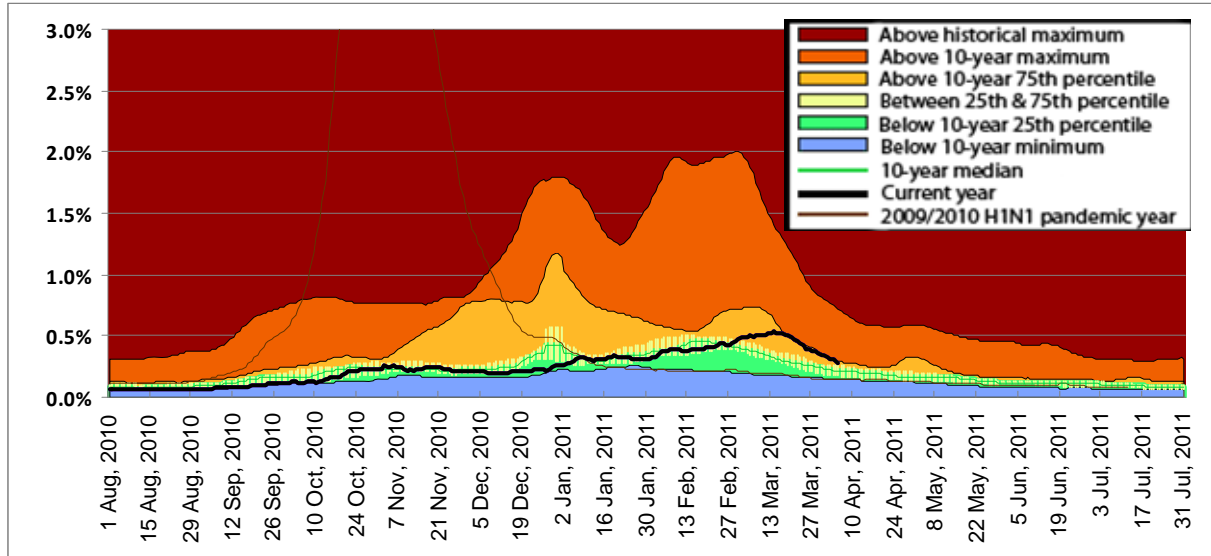
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims continued to decrease during the last two weeks provincially and within all the health authorities, though still marginally above that usually observed at this time of year. 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).

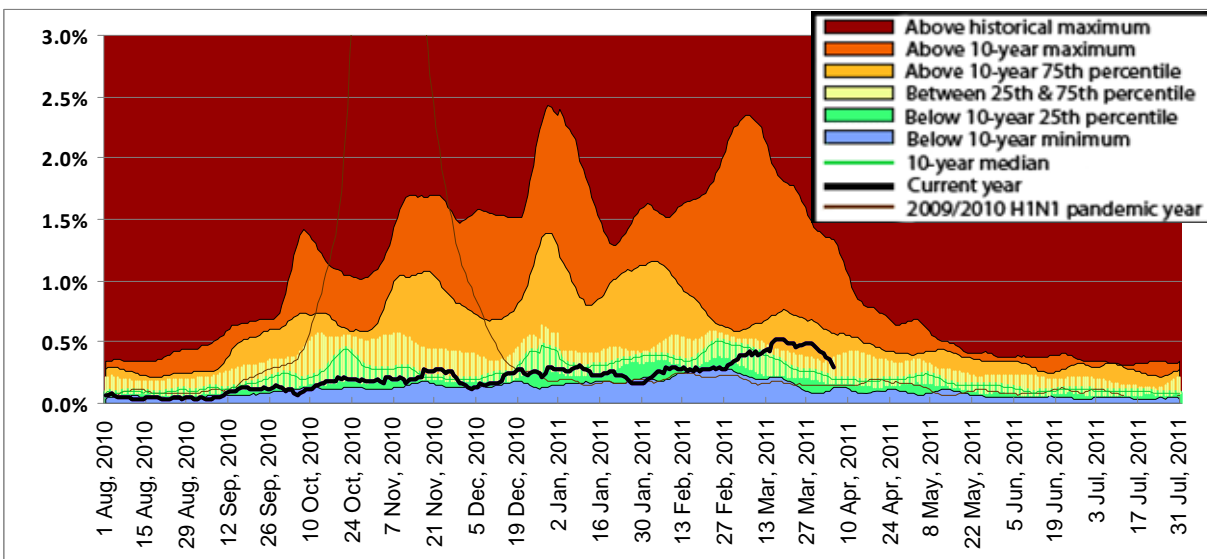
Influenza Illness Claims* British Columbia



* 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 April 6, 2011

Northern

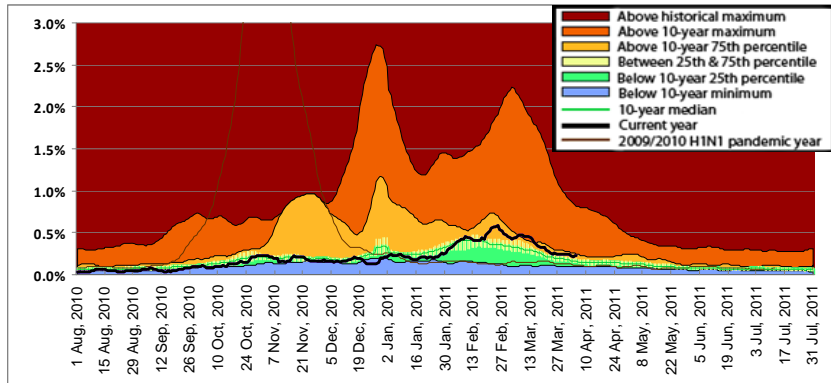


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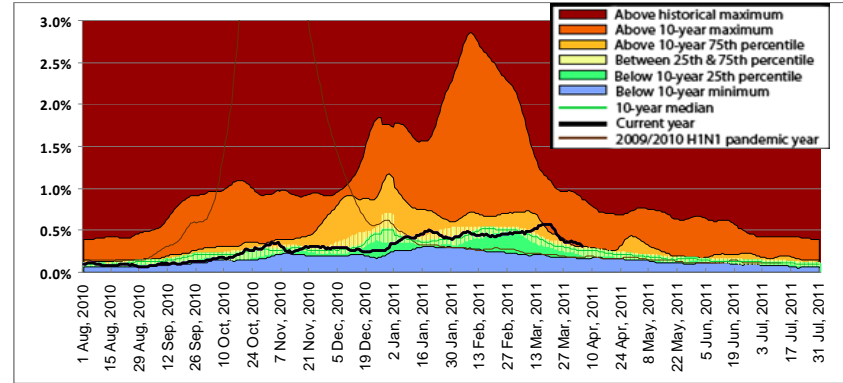
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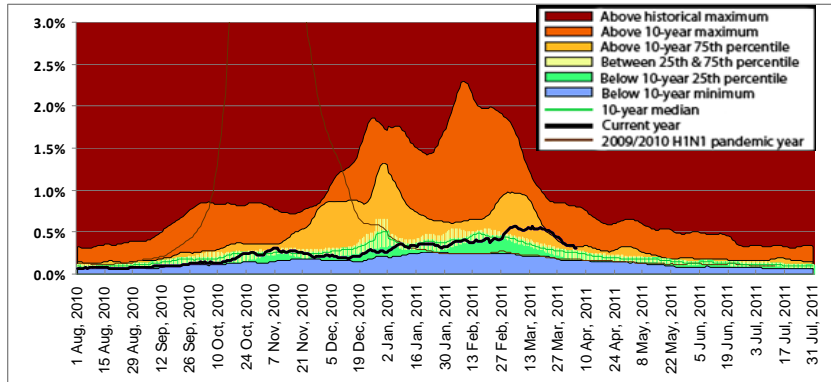
Interior



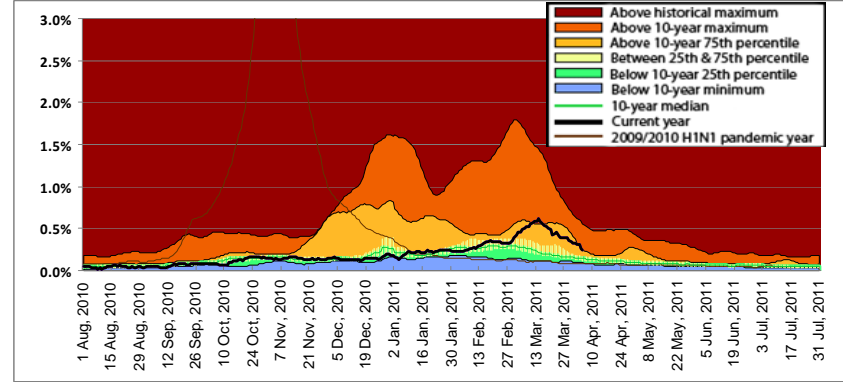
Vancouver Coastal



Fraser



Vancouver Island



BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

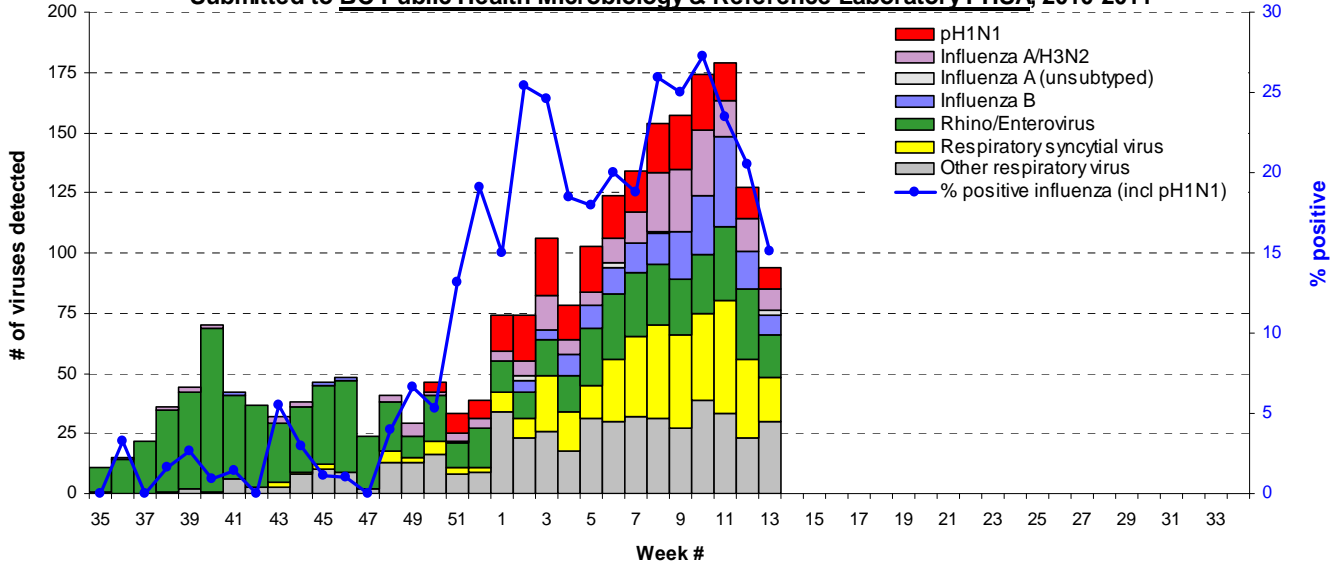
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Laboratory Reports

Three hundred and ninety-one respiratory specimens were tested at the BC Public Health Microbiology & Reference Laboratory during weeks 12-13. Influenza was detected in 70 (17.9% of) submitted specimens: twenty-two (5.6% of submitted specimens) were pandemic A/H1N1, 22 (5.6%) were A/H3N2, 24 (6.1%) were type B, and 2 (0.5%) were unsubtype influenza A. Pandemic influenza A/H1N1 and influenza B were sporadically detected in all five HAs, while A/H3N2 was detected in all HAs except Northern. During week 12-13, of 391 specimens tested for other respiratory viruses, 51 (13.0%) were positive for RSV, 47 (12.0%) for rhino/enterovirus, and 25 (6.4%) 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

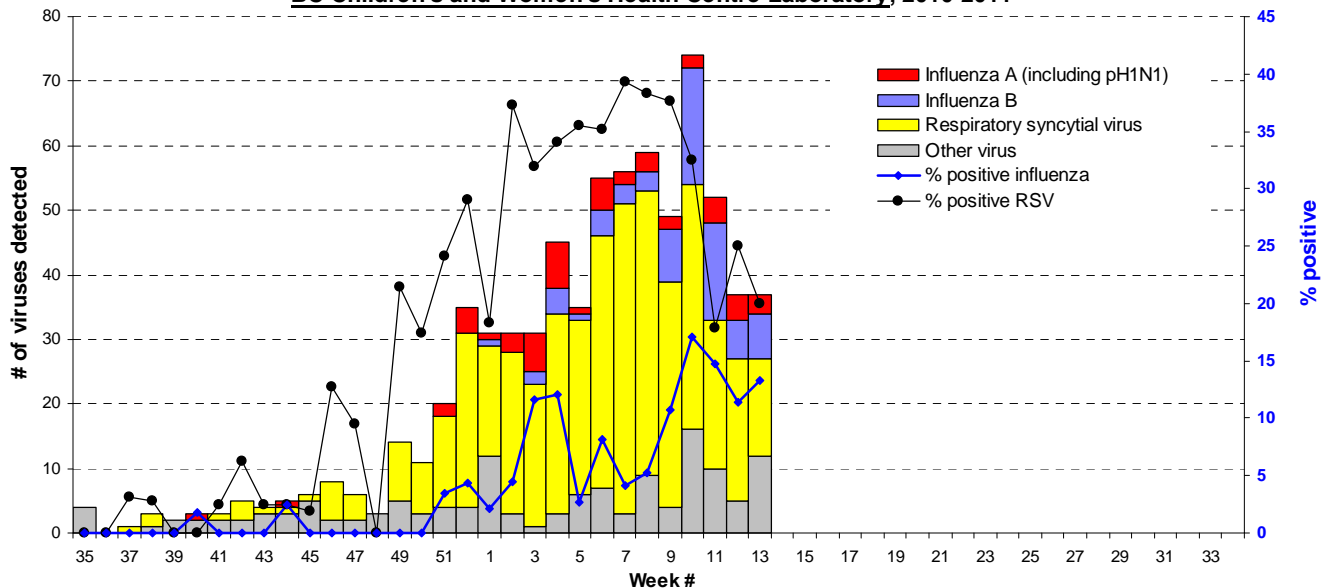


Note change to start week for x axis compared to previous bulletins.

The proportionate contribution of other respiratory viruses has been updated for previous weeks to reflect recent change in analytical algorithm applied.

During weeks 12-13, BC Children's and Women's Health Centre Laboratory tested 163 respiratory specimens. Seven (4.3%) were positive for influenza A and 13 (8.0%) were positive for type B. Thirty-seven specimens (22.7%) 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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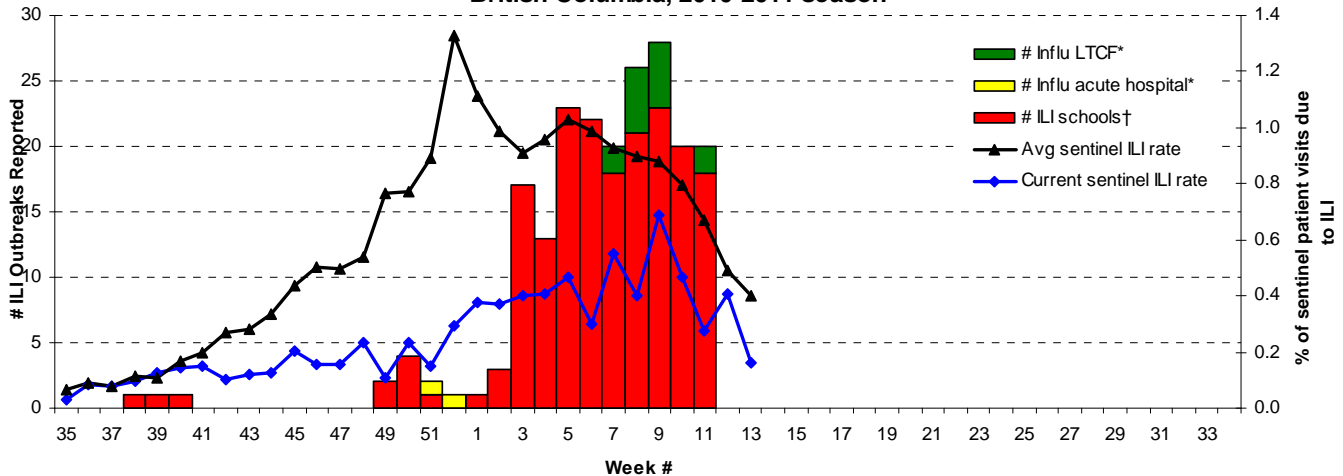
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ILI Outbreaks

No ILI outbreaks were reported by facilities or schools in the province during weeks 12-13, the March break holiday period for most public schools.

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.

Note change to start week for x axis compared to previous bulletins.

CANADA

FluWatch

The influenza activity level during week 12 ending March 26, 2011 declined in most of western Canada but persisted in parts of Alberta, Ontario, Quebec and the Atlantic provinces. All influenza indicators including the number of outbreaks, the proportion of positive influenza detections, adult and paediatric hospitalizations, and the ILI consultation rate declined nationally in week 12. Influenza B continued to increase steadily in most regions of the country except the Atlantic provinces. Of the 520 positive tests reported during week 12, 55.6% were influenza A and 44.4% were influenza B. The influenza-like illness (ILI) consultation rate per 1,000 patient visit in week 12 was slightly lower than the previous week (23.4 vs. 25.9), and below the expected rate for this time of year. Five hundred and twenty (11.3%) specimens in week 12 tested positive for influenza, a slight decrease from the previous week (13.1%), including 289 (55.6%) influenza A and 231 (44.4%) of influenza B. Among all the detections of influenza A, 110 (38.1%) were reported as A/H3N2, 33 (11.4%) as pandemic H1N1, and 146 (50.5%) as unsubtype influenza A. Twenty-three new outbreaks were reported during this week. In addition, 17 new paediatric hospitalizations and 12 new adult hospitalizations related to influenza were reported through IMPACT and CNISP networks in week 12 (a decrease for both paediatric hospitalizations and adult hospitalizations over previous week 11). www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

Between September 1, 2010 and April 4, 2011, five hundred and sixty-two influenza isolates were collected from provincial and hospital labs and characterized at the NML as follows:

216 A/Perth/16/2009 (H3N2)-like[¶] from NB, QC, ON, MB, SK, ALTA, BC & NU;

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

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

9 B/Wisconsin/01/2010-like (Yamagata lineage)-like[‡] from ON & 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 April 5, 2011 indicated that all but one A/H3N2 and all pandemic H1N1 isolates were resistant to amantadine. All the isolates (183 A/H3N2, 91 pandemic H1N1, 161 type B) tested for zanamivir showed susceptibility. Oseltamivir resistance testing found that all but one pandemic H1N1, all but one A/H3N2, and all type B isolates were susceptible.

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 12 ending March 26, 2011, influenza activity decreased in the United States www.cdc.gov/flu/weekly/. Seven hundred and thirty seven (13.9% out of the 5,319 specimens) tested positive for influenza in week 12: 114 (21.7%) pandemic H1N1, 187 (35.6%) A/H3, 224 (42.7%) untyped influenza A, and 212 (28.8%) type B. The proportion of outpatient visits for ILI was 2.0%, which was below the national baseline of 2.5%. The CDC further reported that the proportion of deaths attributed to pneumonia and influenza in week 12 (8.7%) was above the epidemic threshold (8.0%) for the ninth consecutive week in the USA.

Europe and Other Areas: According to WHO (http://www.who.int/csr/disease/influenza/latest_update_GIP_surveillance/en/index.html) as of 25 March 2011, influenza activity continued to decline in Europe. All countries reported either medium or low influenza activity, and only Bulgaria reported increased activity. In week 10 the proportion of samples testing positive for influenza among sentinel doctors was 46%. Influenza viruses in Europe continue to be primarily pandemic influenza A/H1N1, about 70% of all viruses characterized, and influenza type B, making up about 28% of all viruses. Data from parts of Northern Africa showed that there was ongoing

community transmission of both pandemic influenza A/H1N1 and influenza type B in Tunisia and Algeria. In Northern Asia, influenza activity continued to decrease or remained stable at low levels. However, ILI activity in Japan saw a slight increase after several weeks of decreasing activity. The majority of cases involved pandemic influenza A/H1N1, with influenza A/H3N2 and B circulating in lower numbers.

Avian Influenza: Five confirmed cases of influenza A/H5N1 were recently reported by WHO. Four of these were reported by Egypt's MOH on April 6: three had recovered and one had stabilised. The fifth recent case was reported by Indonesia's MOH on April 1, and died after hospitalization. As of April 6, the cumulative number of confirmed human cases of avian influenza A/H5N1 in 2011 is 27, with 12 (44%) deaths. Details can be found in the latest WHO reports at: http://www.who.int/csr/disease/avian_influenza/en/index.html

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