

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2010-11: Number 17, Week 10

March 6 to March 12, 2011



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Continued Elevated Influenza Activity in BC

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Summary

During week 10 (March 6 – March 12, 2011), influenza surveillance indicators in BC remained elevated. The sentinel physician ILI rate decreased slightly over the past week, but MSP influenza visits were generally higher over the previous week or remained elevated overall and across all regions (though level of increase differed by region). One pandemic influenza A/H1N1 outbreak was reported in an adult residential facility. Pandemic influenza A/H1N1, A/H3N2, and B were detected sporadically throughout the province, though detections varied by region being higher in Fraser and Vancouver Island Health Authorities. At the BC Public Health Microbiology & Reference Laboratory, 237 respiratory specimens were tested. Influenza was detected in 75 (32%) specimens: pandemic influenza A/H1N1 in 17 (7%), A/H3N2 in 26 (11%), unsubtype influenza A in 7 (3%), and influenza B in 25 (10%) specimens. Of 237 specimens tested, other respiratory viruses found included: 34 (14%) RSV, 19 (8%) coronavirus, and 15 (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.amma.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 17, 2011

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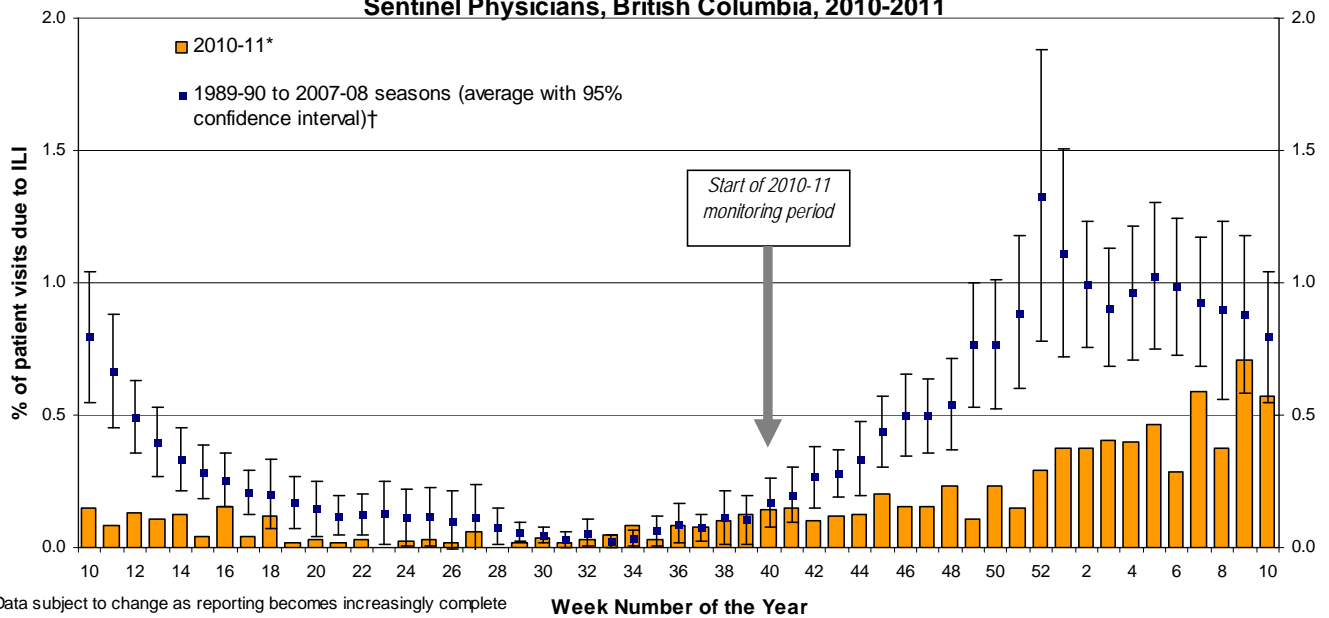
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British Columbia

Sentinel Physicians

During week 10, ~ 0.6% of patients presenting to sentinel physicians had ILI, which is lower than the previous week, and still within the expected range for this time of year. Fifty nine percent (27/46) of sentinel physician sites have reported to-date for week 10.

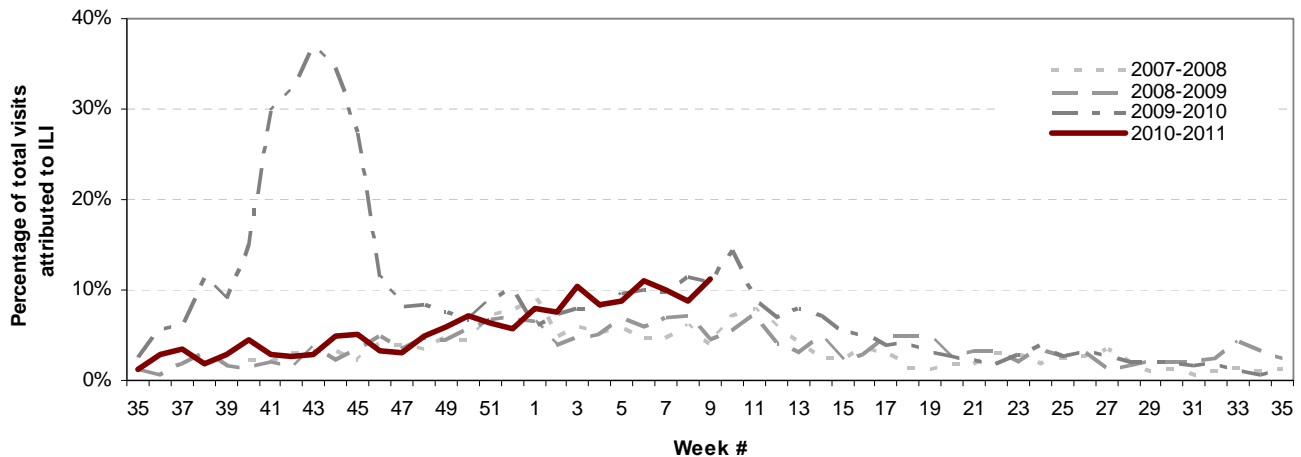
Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 19 Seasons
Sentinel Physicians, British Columbia, 2010-2011



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 10 was 11.3%, higher than that reported last week (8.7%).

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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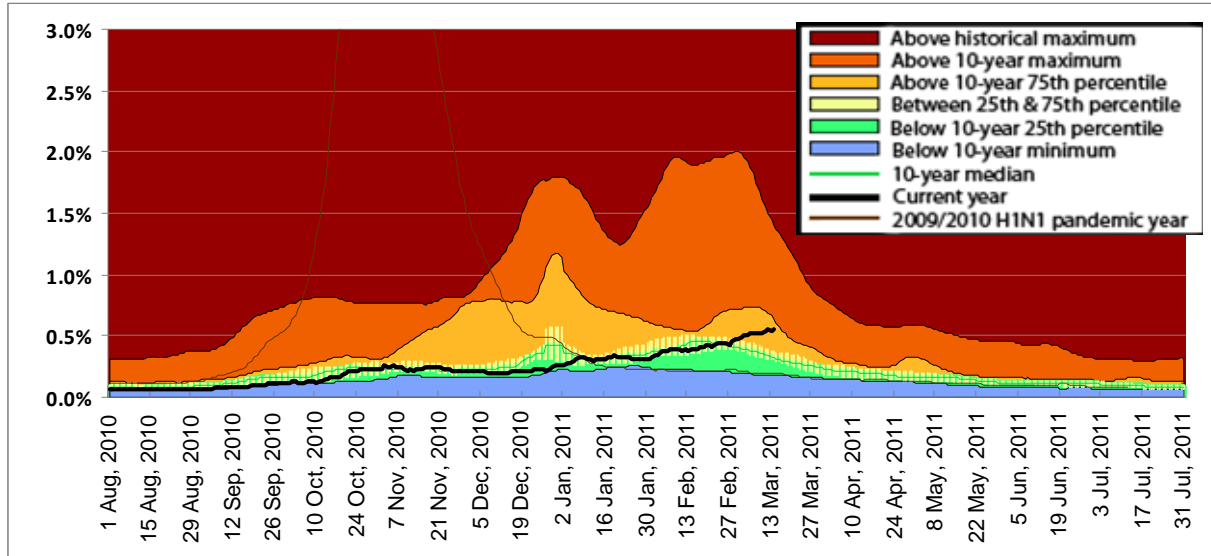
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims in week 10 remained elevated provincially and within each Health Authority. Influenza illness level was above the 10-year maximum in Interior and Vancouver Island Health Authorities. 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).

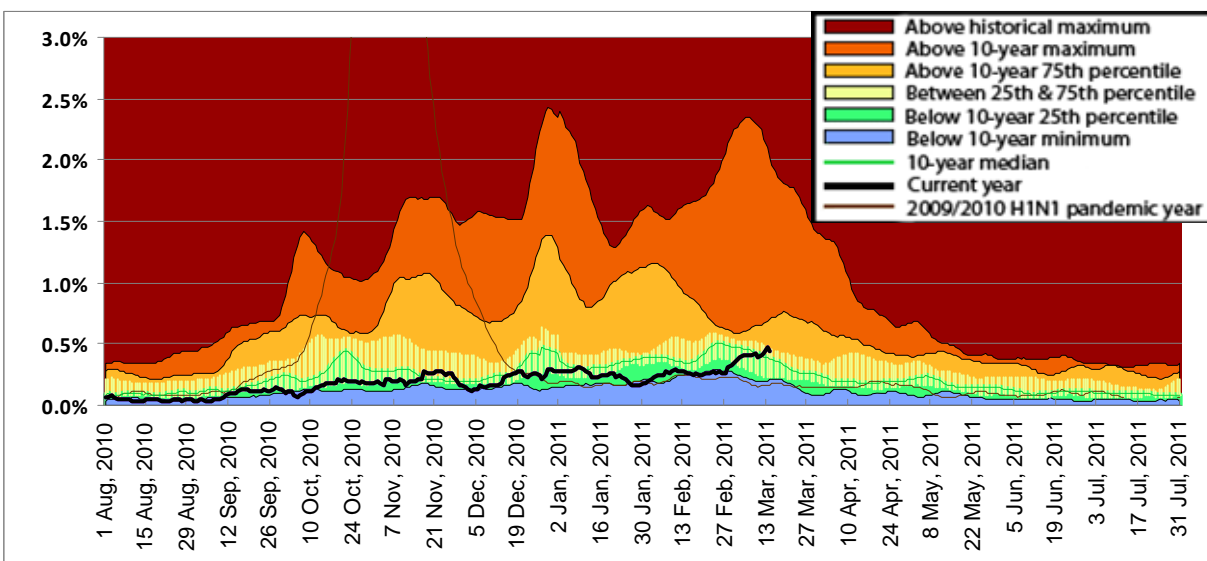
Influenza Illness Claims* British Columbia



* 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 14, 2011

Northern

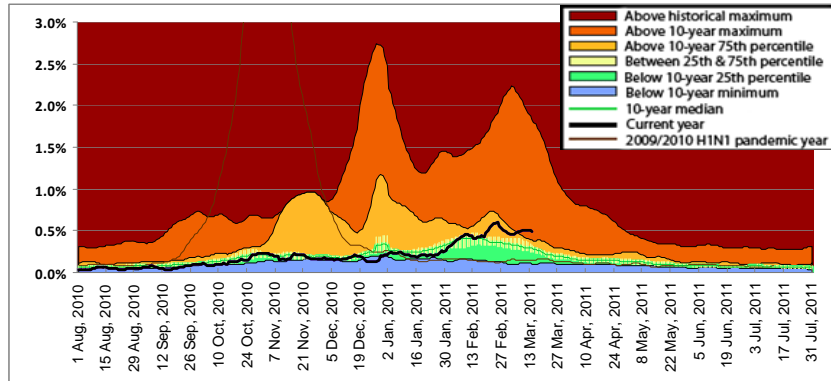


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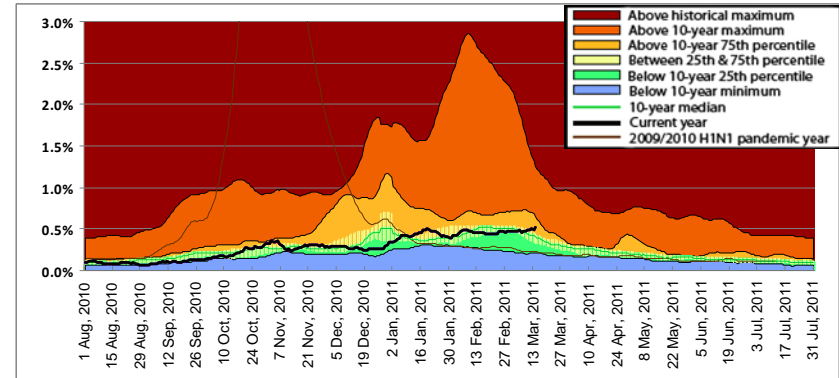
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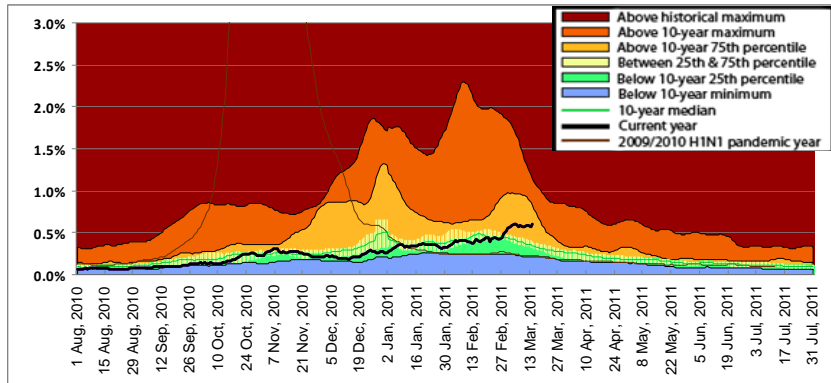
Interior



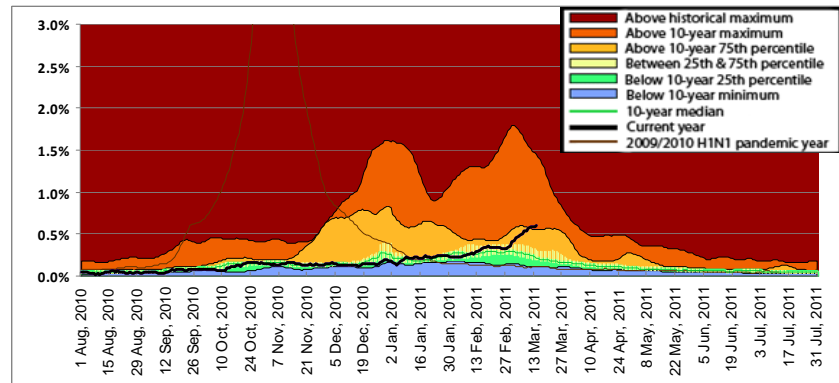
Vancouver Coastal



Fraser



Vancouver Island



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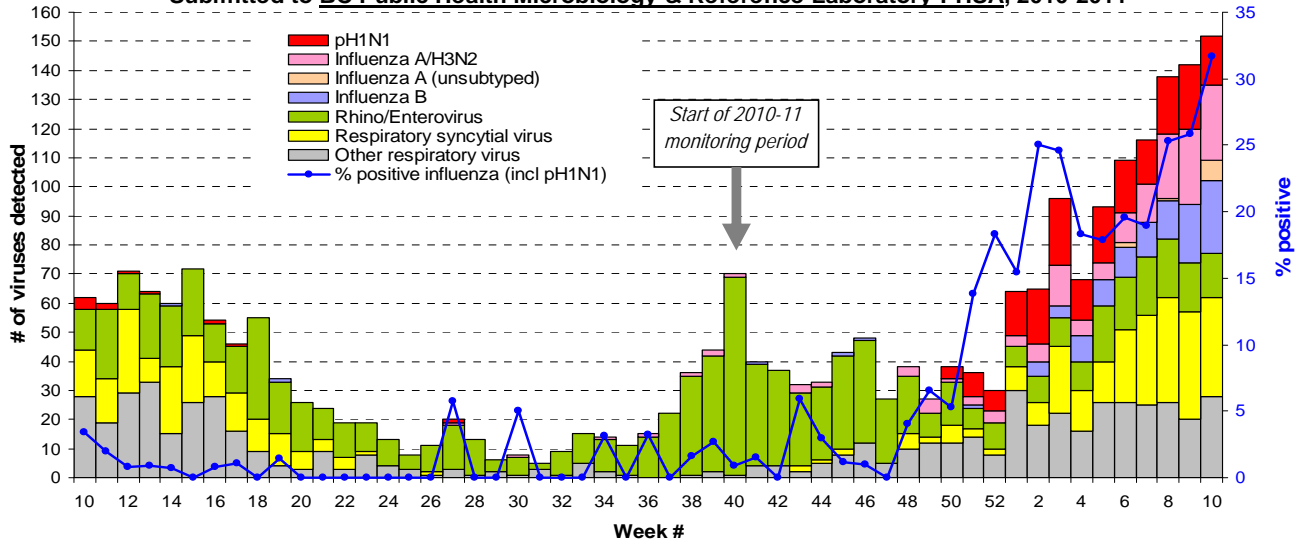
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Laboratory Reports

Two hundred and thirty seven respiratory specimens were tested at the BC Public Health Microbiology & Reference Laboratory in week 10. Influenza was detected in 75 (31.6%) submitted specimens: seventeen (7.2% of submitted specimens) were pandemic A/H1N1, 26 (11.0%) were A/H3N2, 25 (10.5%) were type B, and 7 (3.0%) were unsubtyped. Five pandemic H1N1s were detected in specimens submitted as part of a facility outbreak investigation submitted from Fraser HA. In addition there were sporadic detections of influenza B from all HAs but predominantly from Fraser HA, A/H3N2 from all HAs except Northern, and pandemic A/H1N1 from all HAs except Interior. During this week, of 237 specimens tested for other respiratory viruses, 34 (14.3%) were positive for RSV, 19 (8.0%) for coronavirus, and 15 (6.3%) for rhino/enterovirus. Other respiratory viruses were also sporadically detected.

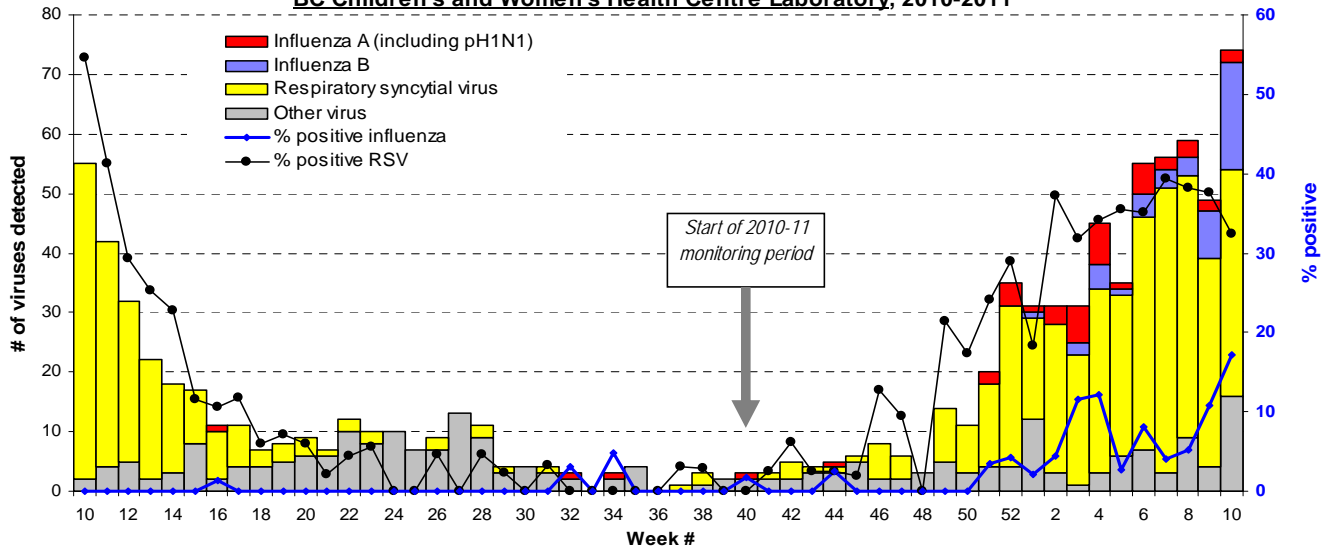
Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory PHSA, 2010-2011



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

During week 10, BC Children's and Women's Health Centre Laboratory tested 117 respiratory specimens. Two (1.7%) were positive for influenza A and 18 (15.4%) were positive for type B. Thirty eight specimens (32.4%) 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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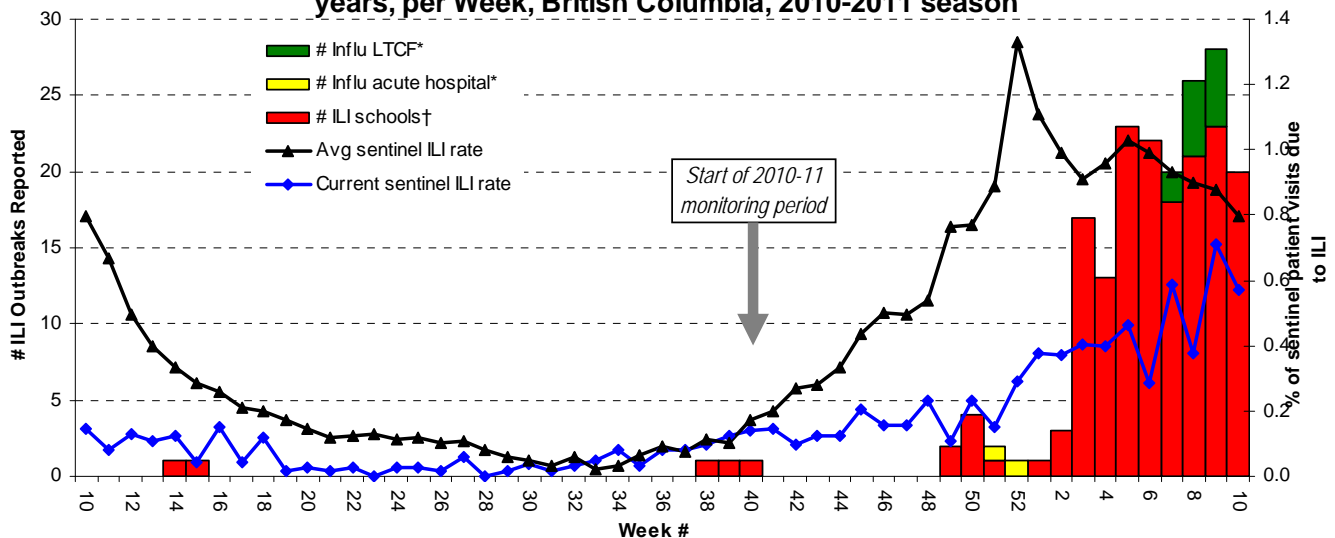
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ILI Outbreaks

During week 10, twenty new school ILI outbreaks were reported from schools in Interior (4), Fraser (2), Vancouver Coastal (12), and Northern (2) HAs. These outbreaks were not tested for respiratory viruses. No new outbreaks were reported from long-term care facilities (LTCF). One outbreak was reported from an adult residential facility in FHA 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

Compared to the previous week, the influenza activity level during week 9 ending March 5, 2011 decreased nationally and in 14 regions, increased in 12 regions, and maintained a stable level in 25 regions. The influenza-like illness (ILI) consultation rate per 1,000 patient visit in week 9 was slightly higher than the previous week (37.7 vs. 35.8), but remained within the expected range for this time of year. Eight hundred and seventy (15.8%) specimens in week 9 tested positive for influenza, a slight decrease from the previous week (17.8%): 317 (36.4%) A/H3N2, 338 (38.9%) unsubtype influenza A, 59 (6.8%) pandemic H1N1, and 156 (17.9%) influenza B. Specimens were reported from all provinces. The influenza activity in week 9 was mainly concentrated in BC, Ontario, Quebec and Atlantic provinces. Thirty-two outbreaks were reported during this week. During week 9, 18 new paediatric hospitalizations and 17 new adult hospitalizations related to influenza were reported through IMPACT and CNISP networks (a decrease for both paediatric hospitalizations and adult hospitalizations over previous weeks).

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

National Microbiology Laboratory (NML): Strain Characterization

Updates for week 10 from NML are pending. 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 9 ending March 5, 2011, influenza activity decreased in the United States www.cdc.gov/flu/weekly/. One thousand eight hundred and sixty nine (27.9% out of the 7,556 specimens) tested positive for influenza in week 9: 396 pandemic H1N1, 497 A/H3, 510 unsubtype influenza A, and 466 type B. The proportion of outpatient visits for ILI was 3.1%, 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 for the sixth consecutive week in USA.

Europe and Other Areas: According to WHO (http://www.who.int/csr/disease/influenza/latest_update_GIP_surveillance/en/index.html) as of 11 March 2011, influenza activity is decreasing in the majority of European countries, more notably in the west. In western Europe the number of influenza infections with severe outcome also has declined but remained high in Greece. The overall percentage of sentinel specimens testing positive for influenza in the whole of Europe, 36% of 525 specimens collected, is also declining. Influenza B is the dominant subtype (51%). Of influenza A viruses subtyped, 95% were pandemic H1N1 and 5% were H3N2. Severe and fatal cases of influenza vary by country, in particular, between the countries of

the European Economic Area (EEA) and the rest of the Europe Region. Data from 11 countries of the EEA indicate that pandemic H1N1 is much more commonly detected in severe cases than in outpatients.

In North Africa and the Middle East, influenza activity and positive influenza cases remains low. Pandemic H1N1 and B are co-circulating in most of the region. In Northern Asia, influenza activity is continuously decreasing or stable at low level with the majority of cases involving pandemic H1N1. 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.

Avian Influenza: Two confirmed cases of influenza A/H5N1 were recently reported by WHO. A 38 year old Egyptian female who was believed to have had contact with sick poultry was hospitalized and died on 11 March. A 16 month old female from Bangladesh presented with symptoms on March 8 and subsequently recovered. As of March 16, the cumulative number of confirmed human cases of avian influenza A/H5N1 in 2011 is 24, with 10 (56%) 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