

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2012-13: Number 21, Weeks 25-34

June 16 to August 24, 2013



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Back-to-school influenza summary for BC

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Summary

In advance of the upcoming back-to-school season, we provide here an update and summary of influenza activity in BC for the summer of 2013. In weeks 25-34 (June 16 to August 24, 2013), all indicators suggested expected low-level sporadic influenza activity in BC. The proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians was generally within expected low levels for this time of year. No lab-confirmed influenza outbreaks were reported over this period. Of the 511 specimens tested at the provincial laboratory during this period, 13 (2.5%) were positive for influenza virus, including 11 influenza A/H3N2 and 2 A(H1N1)pdm09. Rhino/enteroviruses were the most commonly detected respiratory viruses over this period; other respiratory viruses were also sporadically detected. BC Children's Hospital Emergency Room also reported expected ILI trends and no respiratory specimens tested positive for influenza viruses at the BC Children's and Women's Centre Laboratory during this period.

Report disseminated August 30, 2013

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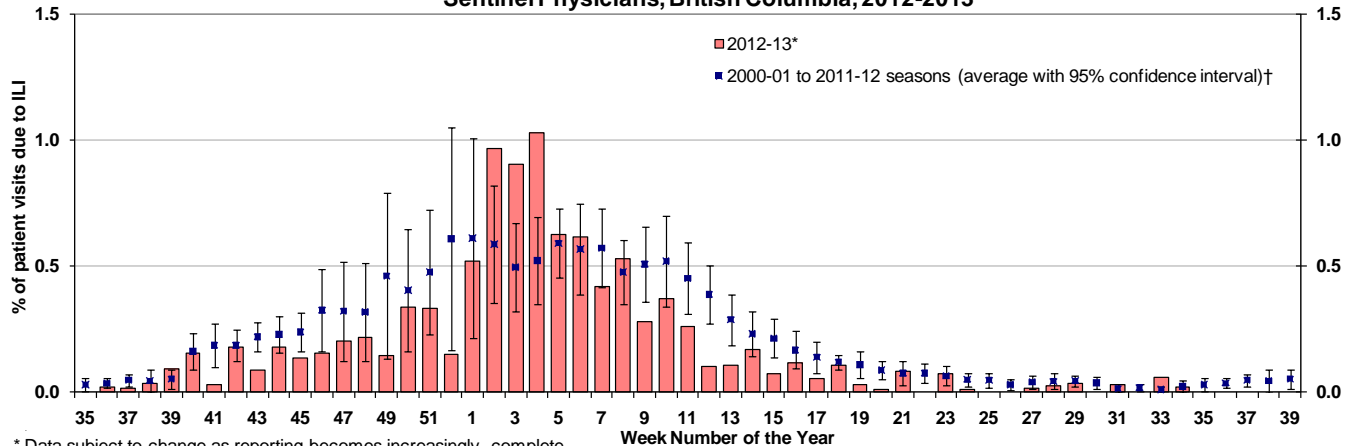
June 16 to August 24, 2013

British Columbia

Sentinel Physicians

In weeks 25-34, the proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians were generally within expected low-levels for the summer period. The proportion of sentinel physician sites reporting during weeks 25-34 ranged from 55% to 90% per week, consistent with previous inter-seasonal periods.

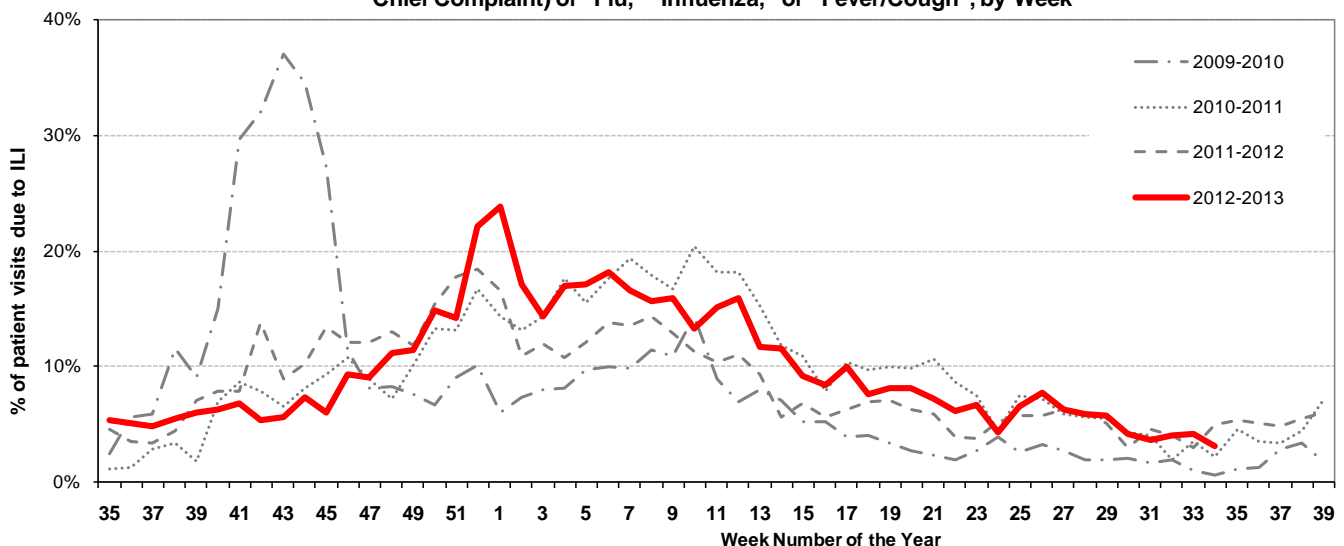
Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 10 Seasons Sentinel Physicians, British Columbia, 2012-2013



BC Children's Hospital Emergency Room

The proportion of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness ranged from a maximum of 7.8% in week 26 to a minimum of 3.1% in week 34, consistent with declining trends observed for this time of year in previous seasons.

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



Source: BCCH Admitting, discharge, transfer database, ADT

Note: Data from 2010-11 and 2011-12 is based on new system (Triage Chief Complaint) not directly comparable to data for 2009-10. In bulletins before week 9 of 2011-12 season, data is based on old system.

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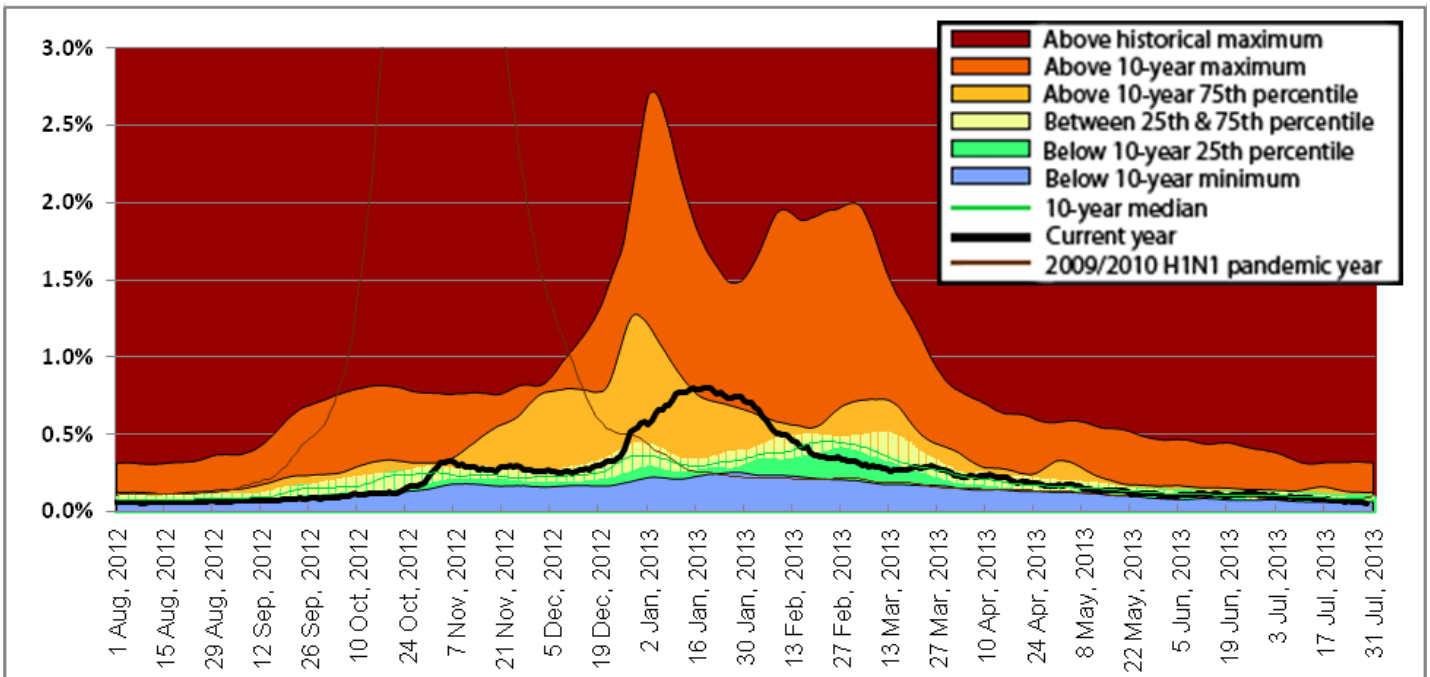
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Medical Services Plan

Overall, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims remained at low levels throughout the province during weeks 25 to 31 (31 July 2013). MSP data for the remainder of the summer is not currently available but will be presented when available in subsequent 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, BC Ministry of Health Services

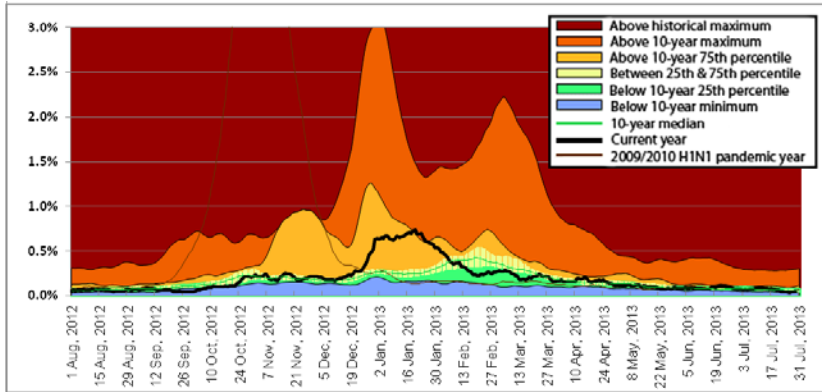
Notes: MSP week beginning 1 August 2012 corresponds to sentinel ILI week 31; Data current to 31 July 2013.

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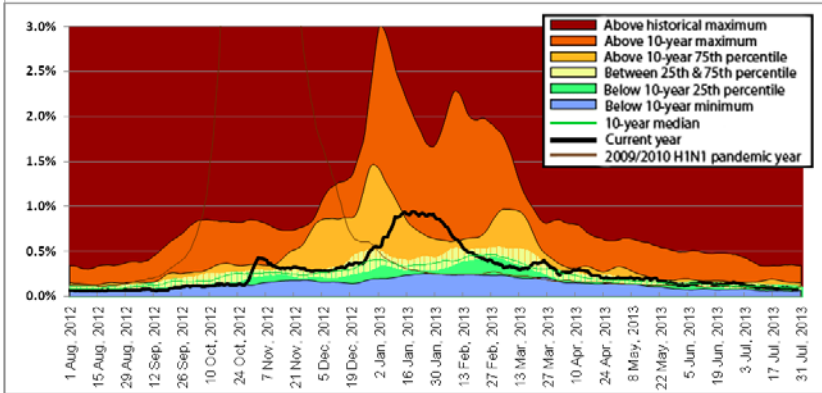
2012-13: Number 21, Weeks 25-34

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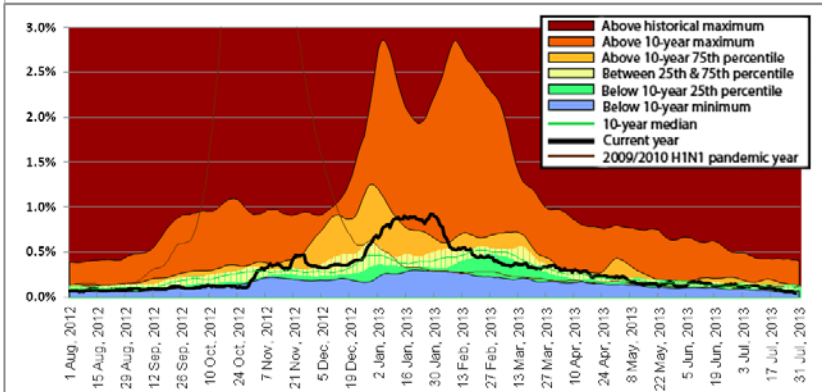
Interior



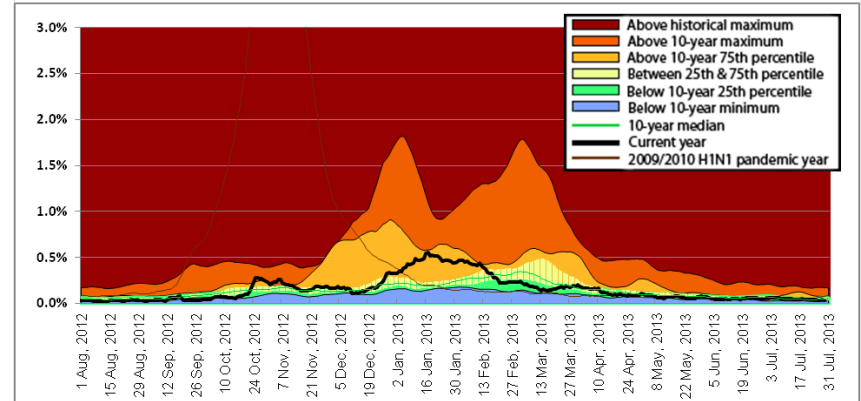
Fraser



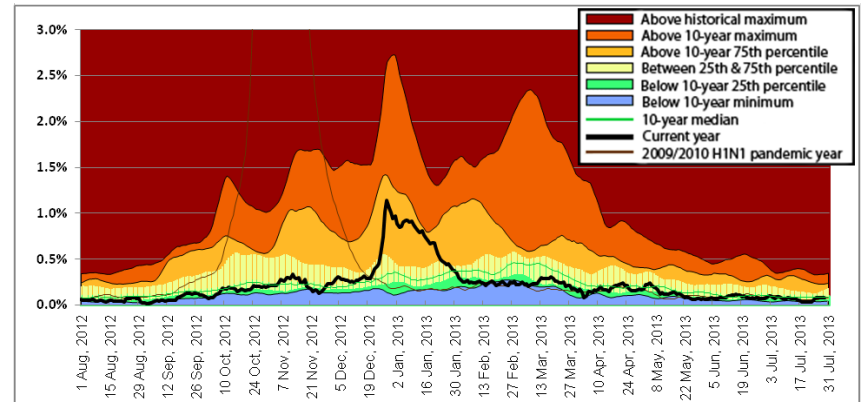
Vancouver Coastal



Vancouver Island



Northern



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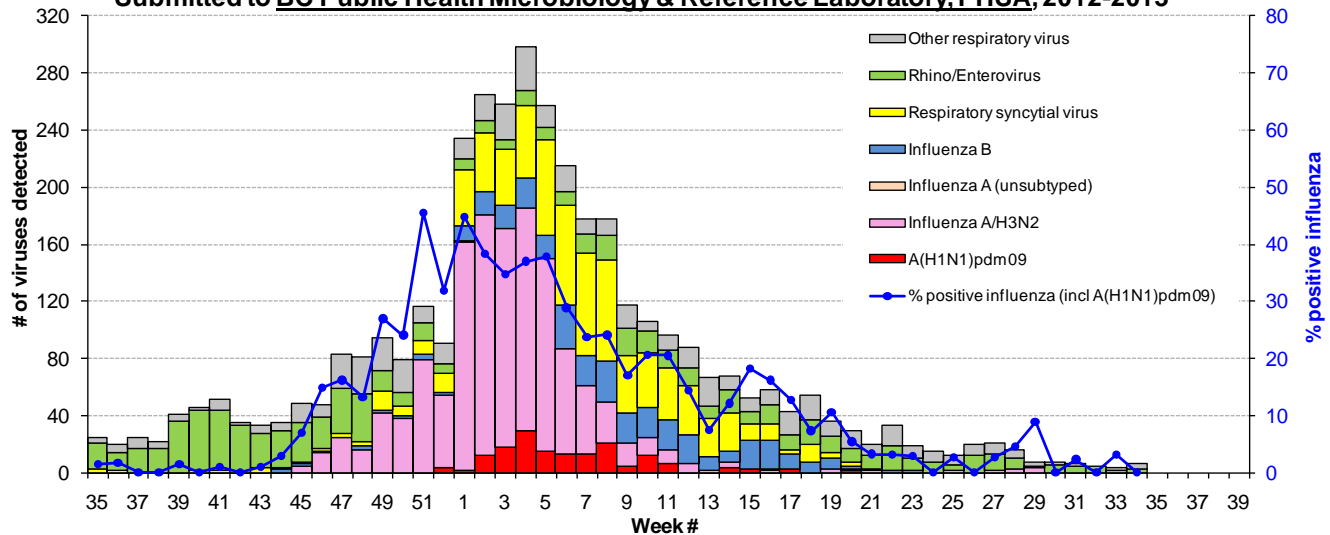
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Laboratory Reports

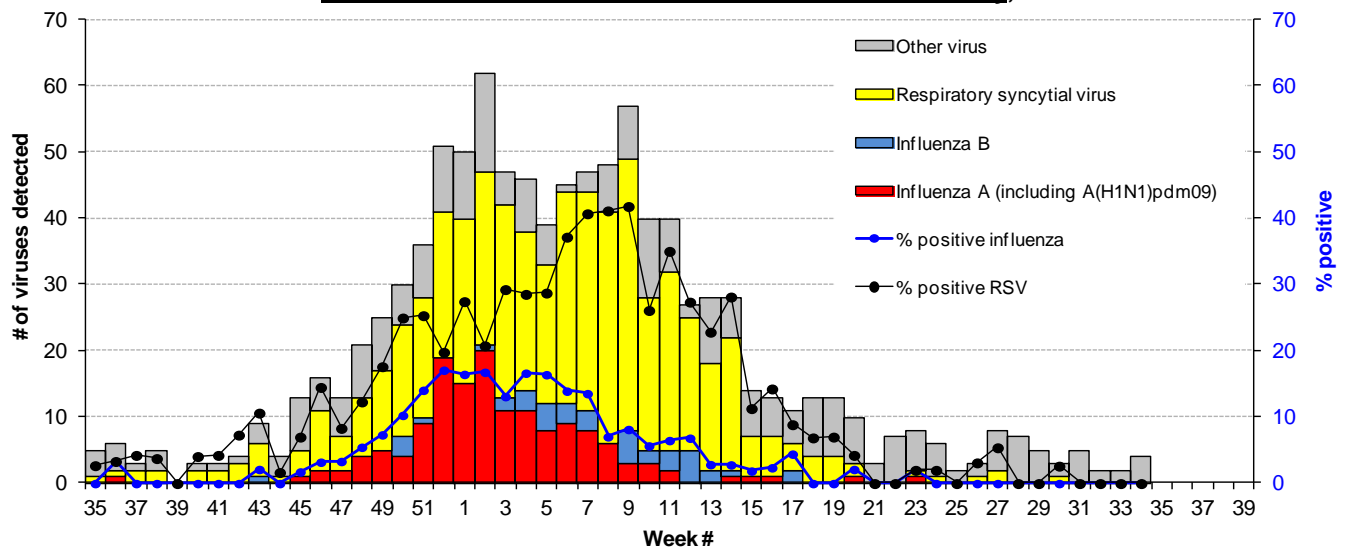
As reported by the BC Public Health Microbiology & Reference Laboratory, PHSA, for weeks 25-34, 511 respiratory specimens were tested for influenza viruses. Of these, 13 (2.5%) were positive for influenza viruses: all were influenza A, including 11/13 (85%) influenza A/H3N2 and 2/13 (15%) A(H1N1)pdm09. Rhino/enteroviruses were the most commonly detected respiratory viruses during this period. Other respiratory viruses were sporadically detected, including human metapneumovirus (HMPV) and parainfluenza virus.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Public Health Microbiology & Reference Laboratory, PHSA, 2012-2013



In weeks 25-34, BC Children's and Women's Health Centre Laboratory tested 363 respiratory specimens. No influenza viruses were detected during this period. Eighteen respiratory specimens were positive for parainfluenza virus (4.9%), 9 for adenovirus (2.5%), and 7 for HMPV (1.9%), as well as sporadic detections of other respiratory viruses.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Children's and Women's Health Centre Laboratory, 2012-2013



Note: Positivity rates were calculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.

Data provided by Virology Department at Children's & Women's Health Centre of BC

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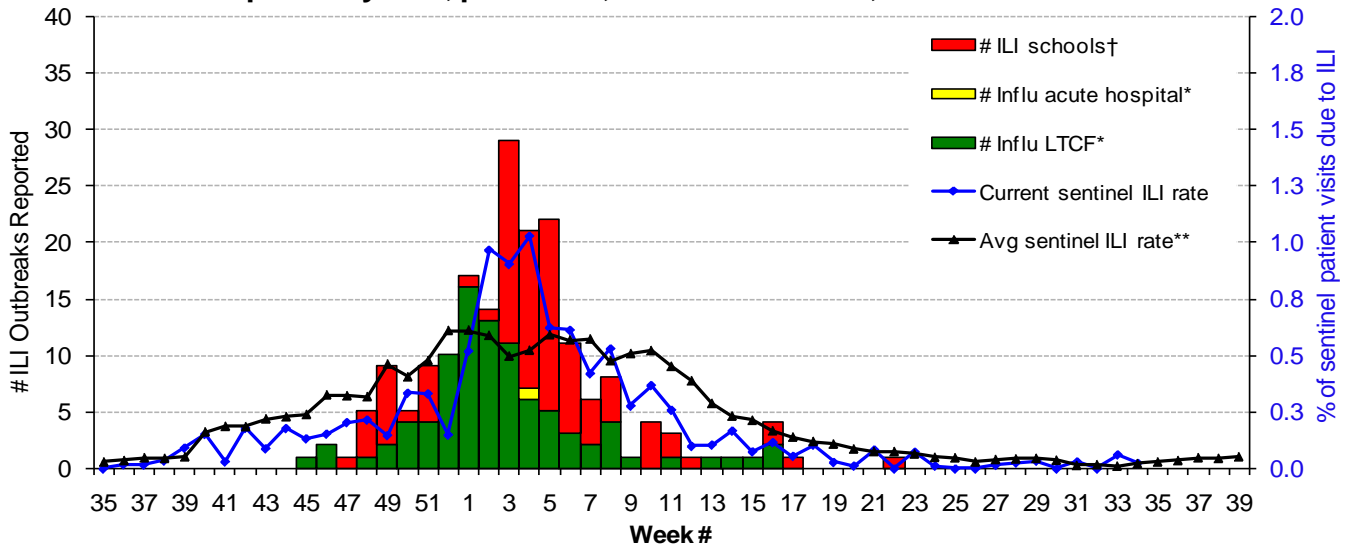
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ILI Outbreaks

No lab-confirmed influenza outbreaks were reported during weeks 25-34. Two non-influenza ILI outbreaks were reported from long-term care facilities (LTCF) in week 27. Since week 40 of last year (30 September 2012), a total of 91 lab-confirmed influenza LTCF outbreaks have been reported in BC.

Number of Influenza and Influenza-Like Illness (ILI) Outbreaks Reported, Compared to Current Sentinel ILI Rate and Average Sentinel ILI Rate for past 10 years, per Week, British Columbia, 2012-2013 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.

** Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

FluWatch (weeks 25 to 32)

In Canada, influenza activity generally remained at inter-seasonal levels in weeks 25 and 32. The proportion of laboratory tests positive for influenza, predominately influenza A, was low and ranged from 0.1% to 0.8% across the country. Rhinoviruses were the most commonly detected among the other respiratory viruses during this period. The ILI consultation rate was fairly stable and above the expected range over weeks 25 to 31, and decreased in week 32.

Details are available at www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

From September 1, 2012 to August 29, 2013, 1514 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

662 A/Victoria/361/2011-like (H3N2)[†] from NFLD, PEI, NS, NB, QUE, ONT, MAN, SASK, ALTA and BC;

250 A/California/07/2009-like [A(H1N1)pdm09]^{*} from NFLD, NS, NB, QUE, ONT, MAN, SASK, ALTA, BC and NU;

138 B/Brisbane/60/2008-like^{**} from NB, QUE, ONT, MAN, SASK, ALTA, BC, NT and NU;

464 B/Wisconsin/01/2010-like[†] from NFLD, NB, QUE, ONT, MAN, SASK, ALTA, BC and NT;

[†] indicates a strain match to the recommended H3N2 component for the 2012-2013 northern hemisphere influenza vaccine

[†] belongs to the B Yamagata lineage, and is the recommended influenza B component for the 2012-2013 northern hemisphere influenza vaccine.

^{*} indicates a strain match to the recommended H1N1 component for the 2012-2013 northern hemisphere influenza vaccine.

^{**} belongs to the B Victoria lineage, which was the recommended influenza B component for the 2011-2012 northern hemisphere influenza vaccine.

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NML: Antiviral Resistance

From 1 September 2012 to 29 August 2013, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 653; zanamivir: 653; amantadine: 1049), A(H1N1)pdm09 (oseltamivir: 254; zanamivir: 251; amantadine: 295), and influenza B isolates (oseltamivir: 601; zanamivir: 601). The results indicated that all but two influenza A and all but three influenza B isolates were sensitive to oseltamivir; all but one influenza A and all but three influenza B isolates were sensitive to zanamivir, and all but one influenza A isolates were resistant to amantadine.

INTERNATIONAL

USA: During weeks 25 to 32, influenza activity in the United States remained at inter-seasonal levels with co-circulation of influenza A and influenza B. So far in 2013, a total of 16 human infections with A(H3N2)v have been reported, including one hospitalized case, since June. All cases have reported close contact with swine in the week prior to illness onset, and no sustained human-to-human transmission has been identified. Details are available at www.cdc.gov/flu/weekly.

WHO (as of 16 August 2013): In the **Northern Hemisphere**, influenza activity remained at inter-seasonal levels. In most of **tropical Asia**, influenza activity decreased. In **Central America and Caribbean** regions, influenza and Respiratory Syncytial Virus (RSV) transmission showed a decreasing trend. RSV and influenza A(H1N1)pdm09 were the main respiratory viruses reported. In Nicaragua activity has decreased again after a sharp increase due to influenza A/H3N2 in the beginning of July. In **tropical South America**, influenza A(H1N1)pdm09 remained the most commonly detected respiratory virus. A sharp increase in influenza A(H1N1)pdm09 activity was observed in Peru in the middle of July. Influenza activity decreased in Colombia, Venezuela, Bolivia and Brazil. In **South America and South Africa**, influenza peaked in the southern cone of South America and in South Africa in late June. In all of those areas, activity was primarily associated with influenza A(H1N1)pdm09. In **Australia and New Zealand**, the number of influenza viruses detected and rates of influenza-like illness were lower than in previous years, but had not yet definitively peaked. Influenza A(H3N2) and type B were more commonly detected than A(H1N1)pdm09 in both countries. Details are available at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html.

Avian Influenza A(H7N9) Virus

To date, 136 human infections (of which 44 have been fatal) and 1 asymptomatic case of an emerging avian influenza A(H7N9) virus have been identified, including 135 from mainland China and one from Taiwan. The most recent case became ill on 27 July 2013. Evidence available so far in the ongoing investigation suggests primarily bird-to-person and limited (but not sustained) person-to-person transmission. Details are available at www.who.int/influenza/human_animal_interface/influenza_h7n9

Novel Coronavirus (MERS-CoV)

As of 30 August 2013, WHO had been informed of a total of 108 lab-confirmed cases of infection with MERS-CoV, including 50 (46%) deaths. Of the 14 most recent cases reported by the WHO since late August, 12 were reported from Saudi Arabia and 2 from Qatar, including one with recent travel to Saudi Arabia in the 6 days prior to symptom onset. The two most recent cases were asymptomatic young children (one teen and one under ten), identified through contact tracing. The rest of these latest cases range in age from 29 to 70 years old (median=50.5 years) and include 3 deaths, 2 asymptomatic cases and 7 hospitalized cases. Details are available at www.who.int/csr/don/archive/year/2013/en/index.html.

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WHO Recommendations for 2013-14 Northern Hemisphere Influenza Vaccine

On 21 February 2013, the WHO announced the recommended strain components for the 2013-14 northern hemisphere vaccine:

A/California/7/2009 (H1N1)pdm09 virus

A/Victoria/361/2011 (H3N2)-like virus*

B/Massachusetts/2/2012-(Yamagata lineage)-like virus**

*For A/H3N2, it is recommended that A/Texas/50/2012 be used as the A(H3N2) vaccine component because of antigenic changes in earlier A/Victoria/361/2011-like vaccine viruses (such as IVR-165) resulting from adaptation to propagation in eggs.

** This one of the three recommended components is different from the northern hemisphere seasonal TIV vaccines produced and administered in 2012-13 (although remaining of the same lineage).

For further details, see:

www.who.int/influenza/vaccines/virus/recommendations/2013_14_north/en/index.html

Contact Us:

Communicable Disease Prevention and Control (CDPACS):
BC Centre for Disease Control (BCCDC)

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

A(H1N1)pdm09: 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/Portals/1/Documents/5100/fluupdate.pdf

USA Weekly Surveillance reports: www.cdc.gov/flu/weekly/

European Influenza Surveillance Scheme:

ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx

WHO – Weekly Epidemiological Record: www.who.int/wer/en/

WHO Collaborating Centre for Reference and Research on Influenza (Australia): www.influenzacentre.org/

Australian Influenza Report: www.health.gov.au/internet/main/publishing.nsf/content/cda-surveil-ozflu-flucurr.htm

New Zealand Influenza Surveillance Reports: www.surv.esr.cri.nz/virology/influenza_weekly_update.php

2. Avian Influenza Web Sites

WHO – Influenza at the Human-Animal Interface: 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

**Note: This form is for provincial surveillance purposes.
Please notify your local health unit per local guidelines/requirements.**

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.

A	Reporting Information	Health unit/medical health officer notified? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Person Reporting: _____	Title: _____
	Contact Phone: _____	Email: _____
	Health Authority: _____	HSDA: _____
	Full Facility Name: _____	
	Is this report:	<input type="checkbox"/> First Notification (<i>complete section B below; Section D if available</i>) <input type="checkbox"/> Update (<i>complete section C below; Section D if available</i>) <input type="checkbox"/> Outbreak Over (<i>complete section C below; Section D if available</i>)

B	First Notification
	Type of facility: <input type="checkbox"/> LTCF <input type="checkbox"/> Acute Care Hospital <input type="checkbox"/> Senior's Residence (if ward or wing, please specify name/number: _____)
	<input type="checkbox"/> Workplace <input type="checkbox"/> School (grades: _____) <input type="checkbox"/> Other (_____)
	Date of onset of first case of ILI (dd/mm/yyyy): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

C	Update AND Outbreak Declared Over
	Date of onset for most recent case of ILI (dd/mm/yyyy): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>
	If over, date outbreak declared over (dd/mm/yyyy): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

D	Laboratory Information
	Specimen(s) submitted? <input type="checkbox"/> Yes (location: _____) <input type="checkbox"/> No <input type="checkbox"/> Don't know If yes, organism identified? <input type="checkbox"/> Yes (specify: _____) <input type="checkbox"/> No <input type="checkbox"/> Don't know