BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2009-10: Number 29, Weeks 27-32

July 4 – August 14, 2010

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

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Influenza Activity Remains Low in BC

Contents:

Summary

In weeks 27-32 (July 4 to August 14), influenza-like illness (ILI) activity in BC remained low with few influenza detections at the provincial laboratory. Sentinel physician indicators remained consistent with low levels observed in previous weeks. No influenza outbreaks were reported in the province. At the BC Provincial Laboratory, 170 respiratory specimens were tested between July 4 and August 14, 49 (29%) of which were positive for rhino/enterovirus. Two influenza A/H3N2 viruses (weeks 27 and 30), and one pandemic influenza A/H1N1 virus (week 27) were detected. Other non-influenza respiratory viruses were sporadically detected. Of 238 specimens tested at BC Children's Hospital Laboratory, one was positive for influenza (A/H3N2), and 27 (11%) were positive for parainfluenza. In the southern hemisphere, rates of respiratory illness have fluctuated in recent weeks, with locally intense activity in some areas and low levels of activity in others. Detections to date have included a mix of pandemic influenza A/H1N1 virus and seasonal influenza B and A/H3N2 viruses, with variation by country. BCCDC continues to monitor the situation in the southern hemisphere during their typical influenza season (April - October).

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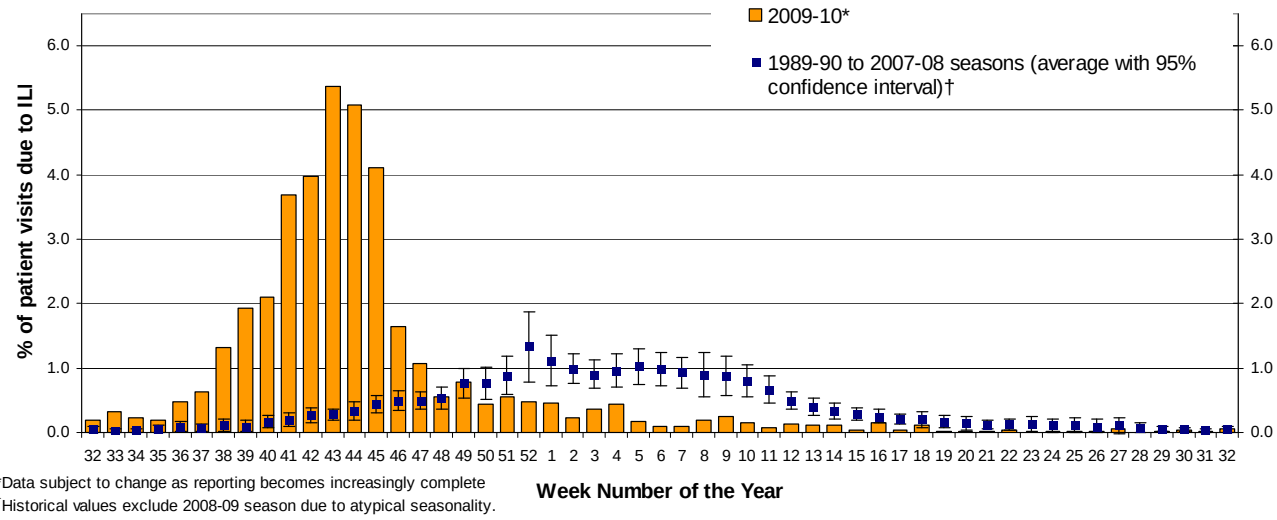
British Columbia

Sentinel Physicians

During weeks 27-32, approximately 0.03% of patients presenting to sentinel physicians had ILI, which is consistent with the expected range for this time of year. Sixty-three percent (31/49) of sentinel physician sites have reported to-date for week 27, 51% (25/49) for week 28, 57% (28/49) for week 29, 55% (27/49) for week 30, 59% (29/49) for week 31, and 47% (23/49) for week 32.

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, 2009-2010



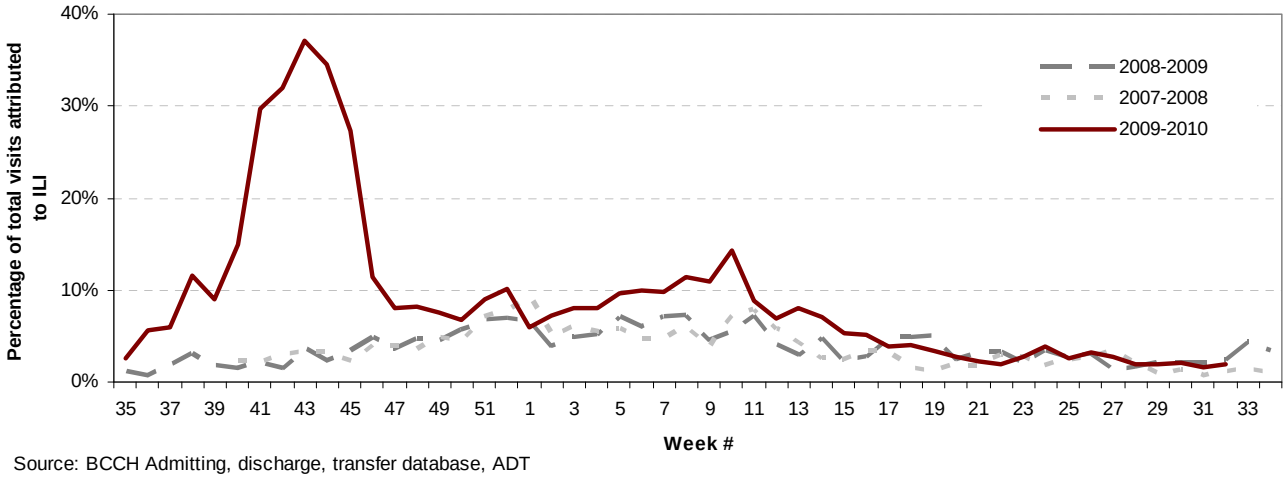
*Data subject to change as reporting becomes increasingly complete

†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 remained low (<3%) in weeks 27-32, 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

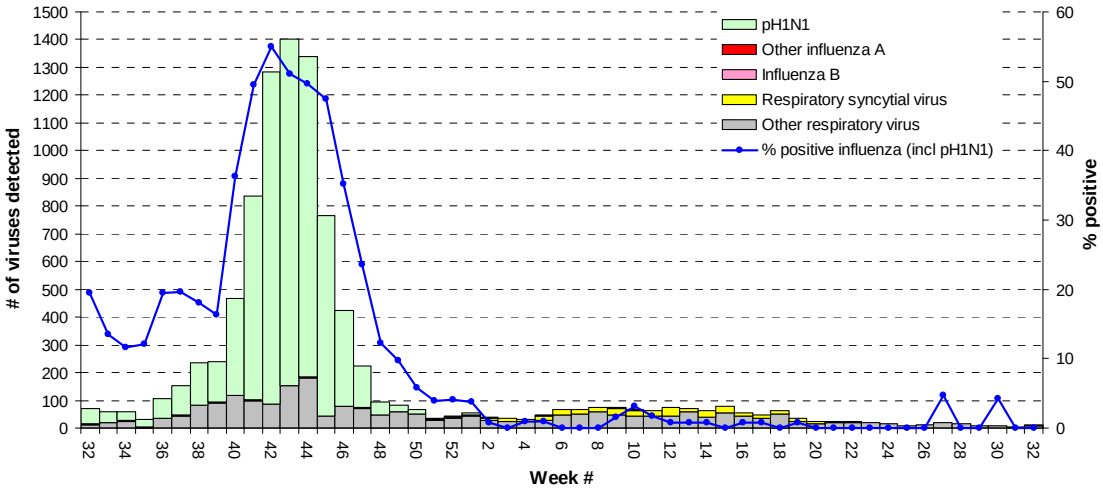
Medical Services Plan

Due to preparations for the coming influenza season, latest MSP reports were unavailable at time of writing. MSP reports will reappear in the next bulletin issued.

Laboratory Reports

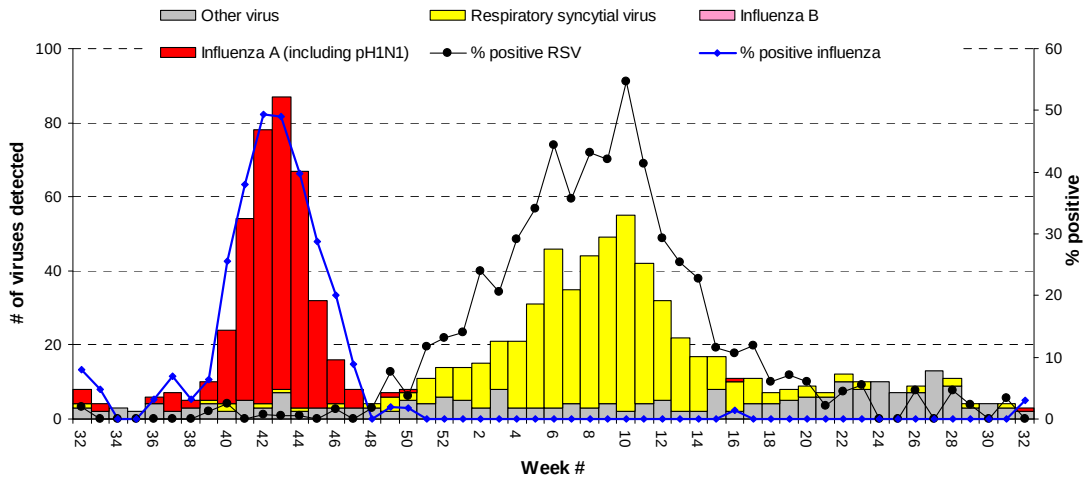
One hundred seventy respiratory specimens were tested at the BC Provincial Laboratory in weeks 27-32. Two were positive for influenza A/H3N2 (weeks 27 and 30), and one was positive for pandemic influenza A/H1N1 (pH1N1; week 27). Since September 1, 2009, >99% of all influenza detections in BC have been pH1N1. To date, detections of other seasonal influenza viruses over the same period have been limited (16 out of 6572 influenza detections in total), although the most recent sporadic detections do include seasonal H3N2 virus. In weeks 27-32, of 170 specimens tested for other respiratory viruses, 49 (29%) tested positive for rhino/enterovirus, 8 (5%) for parainfluenza, 1 (0.6%) for RSV, 1 (0.6%) for coronavirus, 2 (1%) for human bocavirus, 1 (0.6%) for adenovirus, and none for human metapneumovirus.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Provincial Laboratory, 2009-2010



During weeks 27-32, BC Children's and Women's Health Centre Laboratory tested 238 respiratory specimens. One (0.4%) was positive for influenza A/H3N2. Twenty-seven specimens (11%) tested positive for parainfluenza, 7 (3%) for adenovirus, and 4 (2%) for RSV.

Influenza and Other Virus Detections Among Respiratory Specimens Submitted to BC Children's and Women's Health Centre Laboratory, 2009-2010

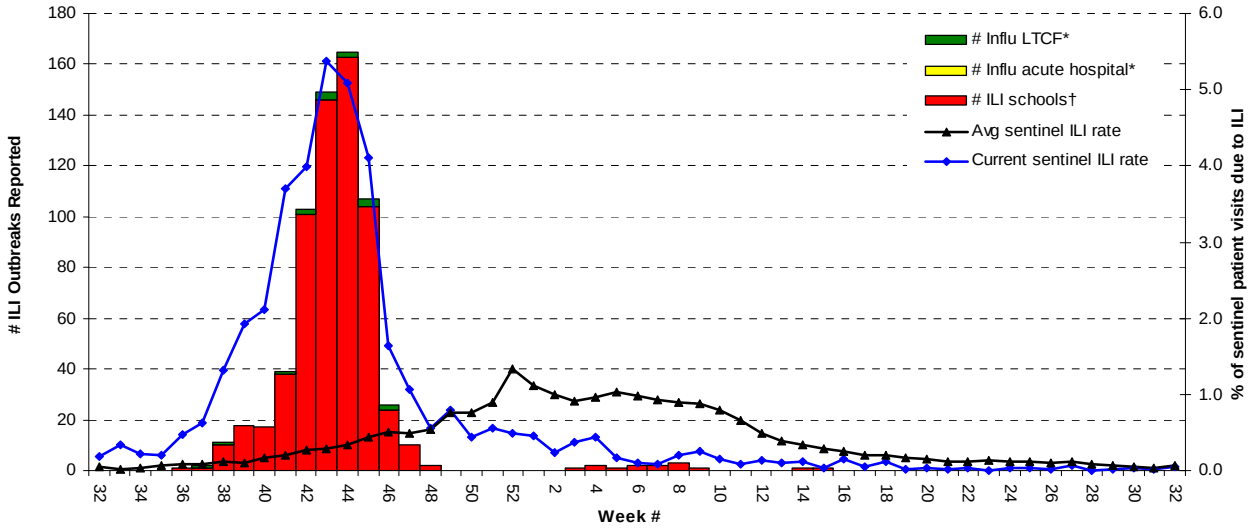


Data provided by Virology Department at Children's & Women's Health Centre of BC

ILI Outbreaks

No lab-confirmed influenza outbreaks were reported in facilities and no ILI outbreaks were reported in schools in BC during weeks 27-32.

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, 2009-2010



* 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 27 through 30 (July 4 -31), influenza activity in Canada remained low. The sentinel ILI rate remained at or below the expected range for this time of year. Six specimens (out of 2,005 or 0.3%) tested positive for influenza in weeks 27-28; one pandemic H1N1 2009, one influenza A/H3N2, two unsubtyped influenza A and two influenza B. Those specimens were reported from BC, AB and QC. Only three specimens (out of 1,582) tested positive for influenza in weeks 29-30. Of the three positive specimens, one specimen was reported as influenza A/H3N2, one as unsubtyped influenza A and one was positive for influenza B. BC, ON and QC were the only provinces to report positive influenza specimens during those reporting weeks. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

No new strain characterization updates have been issued by NML since May 2010.
Between September 1, 2009 and May 5, 2010, 868 influenza isolates (851 pandemic H1N1 and 17 seasonal influenza) were collected from provincial and hospital labs and characterized at the NML:
851 A/California/07/2009 (H1N1)-like[§] from BC, AB, SK, MB, ON, QC, NB, NS, PEI, NL, & NT;
3 A/Brisbane/59/2007 (H1N1)-like[†] from AB & QC;
2 A/Brisbane/10/2007 (H3N2)-like[†] from BC & QC;
8 A/Perth/16/2009 (H3N2)-like[¶] from BC, AB, & QC;
2 B/Brisbane/60/2008 (Victoria lineage)-like[†] from ON;
1 B/Florida/04/2006 (Yamagata lineage)-like* from QC;
1 B/Malaysia/2506/2004 (Victoria lineage)-like[#] from ON.

[§] A/California/07/2009 (H1N1) is the variant reference virus (pH1N1) selected by WHO for the pandemic influenza A/H1N1 vaccine
[†] indicates a strain match to the 2009-10 northern hemisphere trivalent influenza vaccine
[¶] indicates a strain match to the recommended H3N2 component of the 2010-11 northern hemisphere trivalent influenza vaccine
* indicates a strain match to the influenza B component of the 2008-09 northern hemisphere trivalent influenza vaccine
[#] indicates a strain match to the influenza B component of the 2007-08 northern hemisphere trivalent influenza vaccine

NML: Antiviral Resistance

No new antiviral resistance updates have been issued by NML since May 2010.
Drug susceptibility testing at the NML between September 1, 2009 and May 6, 2010 indicated that 99% (1067/1079) of pH1N1 isolates were sensitive to oseltamivir. All influenza B isolates (n=4) and influenza A/H3N2 isolates (n=13) tested were sensitive to oseltamivir, and the 6 seasonal A/H1N1 isolates tested were oseltamivir-resistant. All pH1N1 (n=1057), seasonal H1N1 (n=2), A/H3N2 (n=13), and influenza B (n=4) isolates were sensitive to zanamivir. All pH1N1 (n=1136) and A/H3N2 (n=24) isolates were resistant to amantadine. Four seasonal H1N1 isolates were sensitive to amantadine, and one was resistant. Global surveillance has shown that circulating pH1N1 viruses are resistant to amantadine but remain sensitive to zanamivir and oseltamivir, although sporadic cases of oseltamivir resistance have been observed worldwide.

INTERNATIONAL

Throughout the northern hemisphere, low levels of influenza have been observed in recent weeks. Except in South Africa and New Zealand, overall pandemic and seasonal influenza activity remains low in temperate regions of the southern hemisphere. In July 2010, pH1N1 virus transmission was locally intense in parts of India, New Zealand, and Ghana. South eastern Asia has been experiencing moderate levels of activity with a mix of pH1N1, B, and seasonal A/H3N2 detected. The predominant influenza viruses among those detected and characterized have been seasonal influenza B and A/H3N2 in South Africa, pH1N1 with some B in Australia and New Zealand, and a mix of A/H3N2, pH1N1, and B in the tropical regions of the Americas.
www.who.int/csr/don/2010_08_13/en/index.html
www.pandemia.cl
www.surv.esr.cri.nz/virology/influenza_weekly_update.php

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) is 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

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