



Influenza Activity Continues to be Sporadic in BC

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Highlights

Influenza activity in BC remains limited with a small increase in laboratory detections. During weeks 49 and 50 (Nov 30 – Dec 13, 2008), BC laboratories reported 12 positive respiratory specimens for influenza A and no positive specimens for influenza B. To date this season (Dec 18), 83% (19 / 23) of the influenza isolates in BC have been sub-typed as A/H1. Nineteen A/H1 viruses have been assessed genotypically for oseltamivir resistance; 14 showed this resistance mutation, and the other 5 were indeterminate. One school ILI outbreak (pathogen unknown) was reported in week 50, and no facility influenza outbreaks were reported. The rate of ILI visits to physicians remains lower than average for this time of year.

Please remember to notify BCCDC if an outbreak of ILI occurs in your region, by emailing ilioutbreak@bccdc.ca and

attaching the outbreak report form (a copy is found at the end of this report).

Sentinel Physicians

Based on the historic range for this time of year, the rate of ILI visits to sentinel physicians was lower than expected in both weeks. In week 49, the percentage of all patient visits due to ILI was 0.28%, and in week 50, the percentage was 0.12%. (See graph and table on page 4.)

ILI Outbreaks

One ILI outbreak (pathogen unknown) in a school was reported in BC during week 50. Since the start of the season (Sept 28), specimens have been submitted to BCCDC Laboratory Services in relation to 19 ILI outbreak investigations. Rhino/enterovirus was identified in 9 (47%) of the investigations, RSV was identified in 1 (5%) investigation, and no pathogen was identified in the other 9 investigations. (See graph on page 5.)

Laboratory Reports

During weeks 49 and 50 (Nov 30 – Dec 13, 2008), BCCDC Laboratory Services tested 96 respiratory specimens. Influenza A was identified in 12 specimens. Of these, 11 were sub-typed as H1, and 1 was sub-typed as H3. Nine specimens tested positive for RSV, 8 for rhino/enterovirus, 4 for parainfluenza, and 3 for adenovirus.

During week 49 (Nov 30 – Dec 6, 2008), Children's and Women's Health Centre Laboratory tested 55 respiratory specimens. Twenty specimens tested positive for RSV and 1 tested positive for parainfluenza. (See graphs on page 6.)



Oseltamivir Resistance

During the 2007-08 season, oseltamivir resistance was identified among circulating A/H1N1 viruses worldwide. Testing in Canada indicated that 26% of last season's A/H1N1 isolates were resistant to oseltamivir. Influenza activity remains low, and only a small sample of viruses is yet available for assessment. To date (Dec 18), BCCDC has assessed 19 A/H1N1 isolates for oseltamivir resistance; 14 show genotypic evidence of oseltamivir resistance, and the other 5 are indeterminate. These specimens were from community-based cases of ILI; none was associated with an outbreak.

Health care providers considering use of antivirals are advised to regularly consult public health and surveillance updates and to stay informed about influenza activity and resistance patterns throughout the season. This may be relevant to the appropriate choice among antiviral options.

CANADA

Flu Watch

During week 49, sporadic activity was reported in BC, Ontario, and Quebec, and localized activity was reported in Alberta. ILI outbreaks in schools have been reported in Alberta and BC during weeks 49 and 50. Since August 24, 2008 provincial/territorial laboratories have detected 89 cases of influenza, 54 influenza A and 35 influenza B. The national rate of ILI visits to sentinel physicians (12 cases per 1,000 visits during week 49) is below the expected range for this time of the season. <http://www.phac-aspc.gc.ca/fluwatch/>

National Microbiology Laboratory

Since Sept 1, 16 influenza isolates from provincial and hospital labs have been characterized at the National Microbiology Laboratory (NML):
1 A/Brisbane/59/07(H1N1)-like* from Nova Scotia,

2 A/Brisbane/10/07(H3N2)-like* from BC (week 43: Oct 19 – 25) and Ontario,
3 B/Florida/04/06(Yamagata)-like* from Alberta and Ontario,
and 10 B/Malaysia/2506/04(Victoria)-like from Alberta and Ontario.

* indicates a strain match to the vaccine component.

Antiviral Resistance

Drug susceptibility testing at the NML showed that the H1N1 isolate from Nova Scotia was sensitive to amantadine and zanamivir but resistant to oseltamivir and that both H3N2 isolates were resistant to amantadine but sensitive to oseltamivir and zanamivir. Eleven influenza B viruses have been tested for oseltamivir resistance, and all were found to be sensitive. Nine influenza B viruses have been tested for zanamivir resistance, and all were found to be sensitive.

INTERNATIONAL

A low level of Influenza activity was reported during week 49 (Nov 30 – Dec 6) in the United States. Localized activity was reported in Hawaii, Texas, and Massachusetts, and sporadic activity was reported elsewhere. The rate of ILI visits to sentinel physicians remained below national baseline levels. To date this season, US laboratories have typed 507 influenza-positive specimens: 408 (81%) influenza A and 99 (20%) influenza B. Of the influenza A isolates, 175 have been sub-typed, of which 90% were A/H1. Forty-five of 46 A/H1 viruses tested were found to be resistant to oseltamivir. For information about influenza surveillance indicators in the United States, please visit: <http://www.cdc.gov/flu/weekly/>.

Most countries in Europe continued to report lower than average activity during week 49. Of the 668 influenza virus detections in Europe since the start of the season (week 40), 621 (93%) were influenza A, and of those subtyped, 92% were A/H3. For more information, please visit: <http://www.eiss.org>.



Avian Influenza

Four additional cases of human H5N1 AI have been reported by the WHO since Sept 10, 2008 (2 in Indonesia, 1 in Cambodia, and 1 in Egypt). Since 2003, the WHO has confirmed 391 human AI cases and 247 deaths. For more information on human avian influenza cases please visit:

http://www.who.int/csr/disease/avian_influenza

For further information on confirmed avian influenza outbreaks in poultry, please visit:

http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm.

Vaccine Composition

This year's (2008-09) influenza vaccine contains the following virus antigens:

- A/Brisbane/59/2007(H1N1)-like
- A/Brisbane/10/2007(H3N2)-like
Note: A/Uruguay/716/2007(H3N2) is antigenically equivalent to A/Brisbane/10/2007(H3N2) and may be included by vaccine producers.
- B/Florida/04/2006(Yamagata lineage)-like

Activity Level Definitions

Sporadic influenza activity: sporadically occurring ILI and laboratory-confirmed influenza during previous 4 weeks, with no outbreaks.

Localized influenza activity: as for sporadic activity, but with ILI outbreaks in schools and worksites, or laboratory-confirmed influenza outbreaks in residential institutions occurring in less than 50% of the influenza surveillance regions during the week of reporting.

Widespread influenza activity: as for localized activity, but with outbreaks occurring in greater than or equal to 50% of the influenza surveillance regions during the week of reporting.

Contact Us:

Epidemiology Services

BC Centre for Disease Control (BCCDC)
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Tel: (604) 660-6061 / Fax: (604) 660-0197
InfluenzaFieldEpi@bccdc.ca

List of Acronyms

AI: Avian Influenza
FHA: Fraser Health Authority
HPAI: Highly Pathogenic Avian Influenza
HSDA: Health Service Delivery Area
IHA: Interior Health Authority
ILI: Influenza-Like Illness
LTCF: Long Term Care Facility
NHA: Northern Health Authority
NML: National Microbiological Laboratory
OIE: World Organization for Animal Health
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:

<http://www.phac-aspc.gc.ca/fluwatch/>

NACI Statement on Influenza Vaccination for the

2008-09 Season: <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/08vol34/acs-3/index-eng.php>

Washington State Flu Updates:

<http://www.doh.wa.gov/ehsph/epidemiology/CD/HTML/FluUpdate.htm>

USA Weekly Surveillance reports:

<http://www.cdc.gov/flu/weekly/>

European Influenza Surveillance Scheme:

<http://www.eiss.org/index.cgi>

WHO – Global Influenza Programme:

<http://www.who.int/csr/disease/influenza/mission/>

WHO – Weekly Epidemiological Record:

<http://www.who.int/wer/en/>

Influenza Centre (Australia):

<http://www.influenzacentre.org/>

2. Avian Influenza Web Sites

World Health Organization – Avian Influenza:

http://www.who.int/csr/disease/avian_influenza/en/

World Organization for Animal Health:

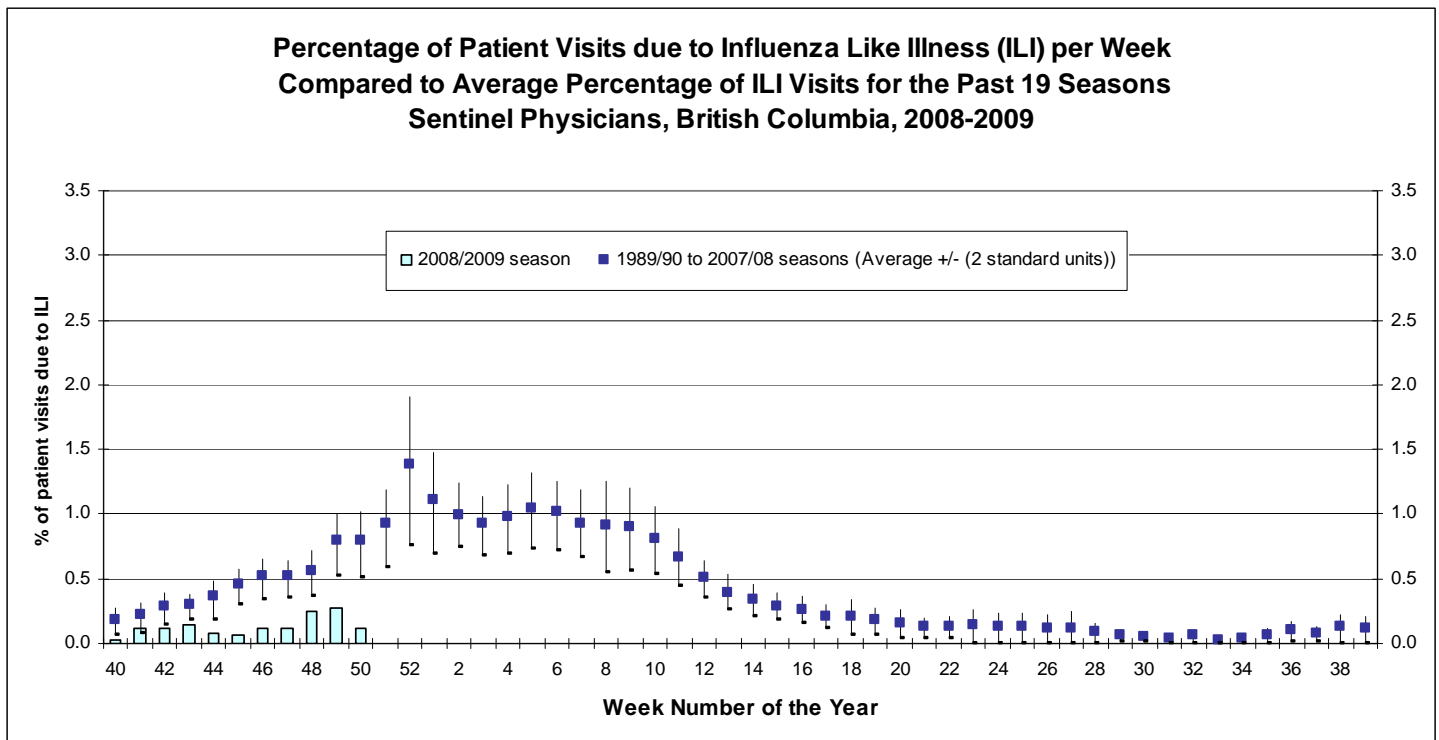
http://www.oie.int/eng/en_index.htm

3. This Report On-line

<http://www.bccdc.org/content.php?item=35>

WEEKLY ILI

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, 2008-2009

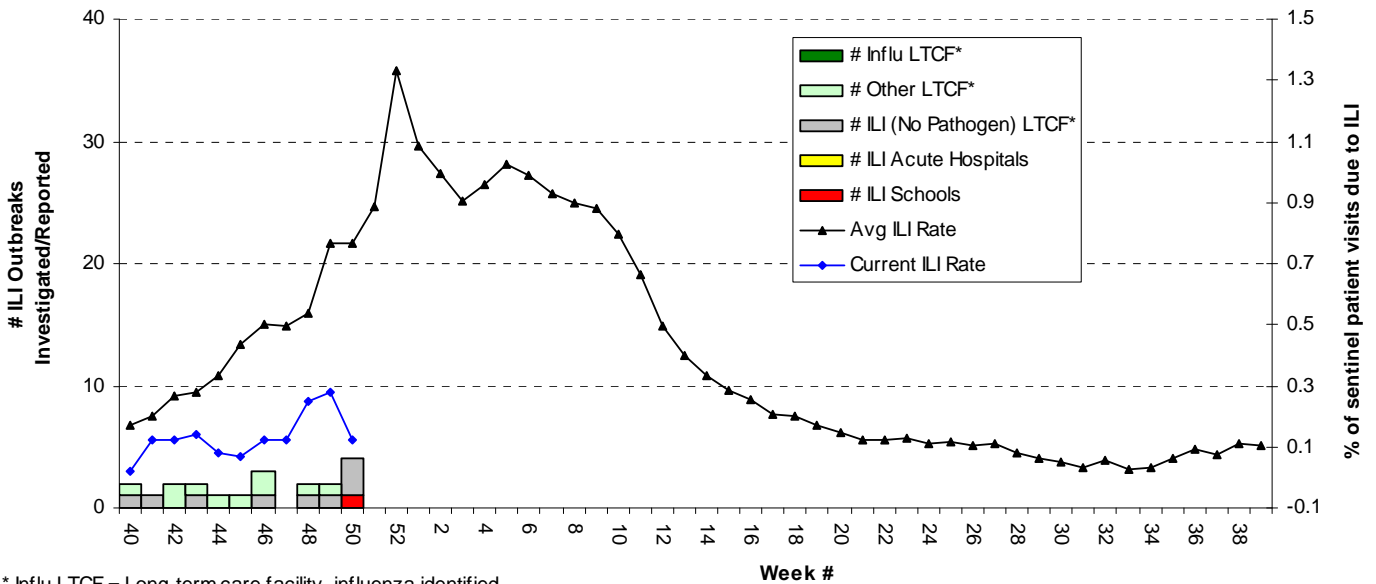


INFLUENZA-LIKE ILLNESS BY HEALTH AUTHORITY

HEALTH AUTHORITY	Week 49 Nov 30 – Dec 6			Week 50 Dec 7 – 13		
	ILI Visits	Total Visits	% ILI	ILI Visits	Total Visits	% ILI
	Fraser	5	2,448	0.20%	8	9,475
Interior	1	570	0.18%	2	721	0.28%
Northern	1	370	0.27%	1	332	0.30%
Vancouver Coastal	7	1,680	0.42%	0	1,263	0.00%
Vancouver Island	5	1,809	0.28%	5	1,809	0.28%
BC Total	19	6,877	0.12%	16	13,600	0.12%

ILI OUTBREAKS

Number of Influenza-Like Illness (ILI) Outbreaks Investigated or Reported, Compared to Current ILI Rate and Average ILI Rate for past 19 years, per Week British Columbia, 2008-2009

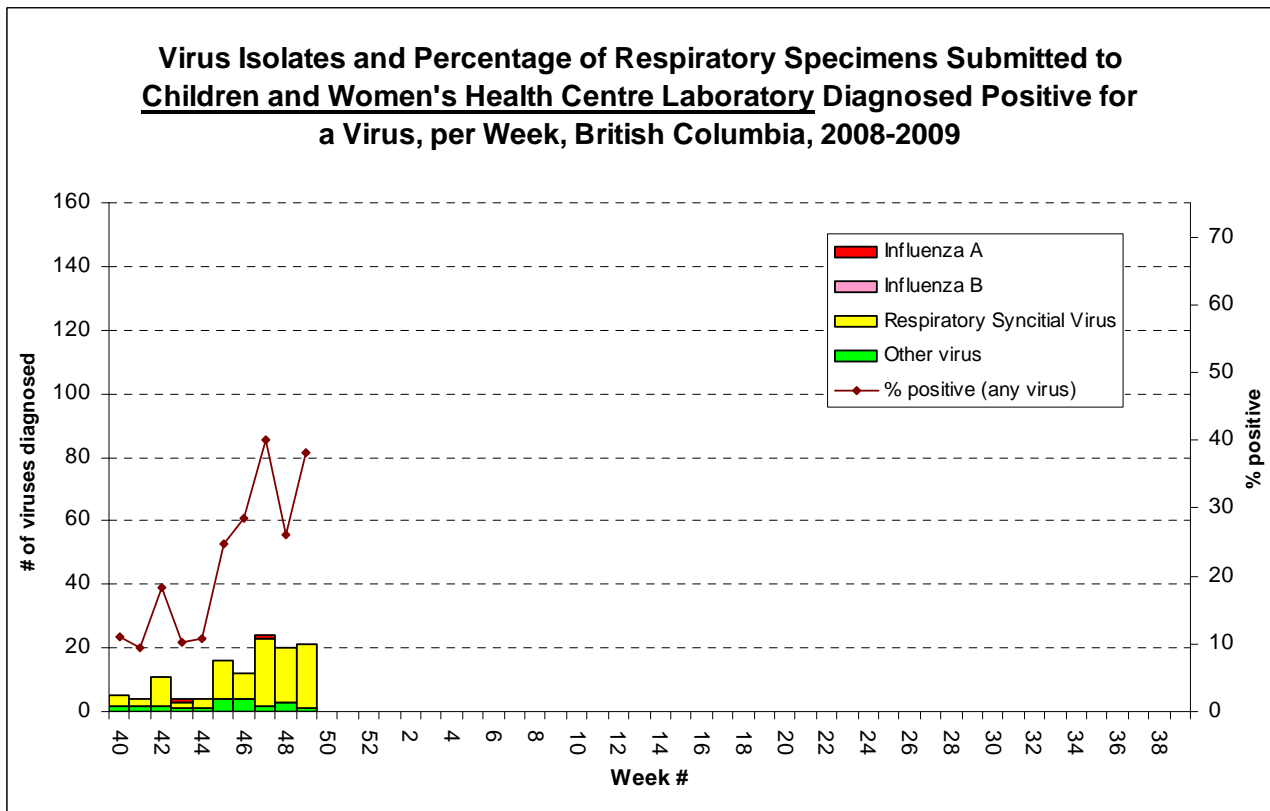
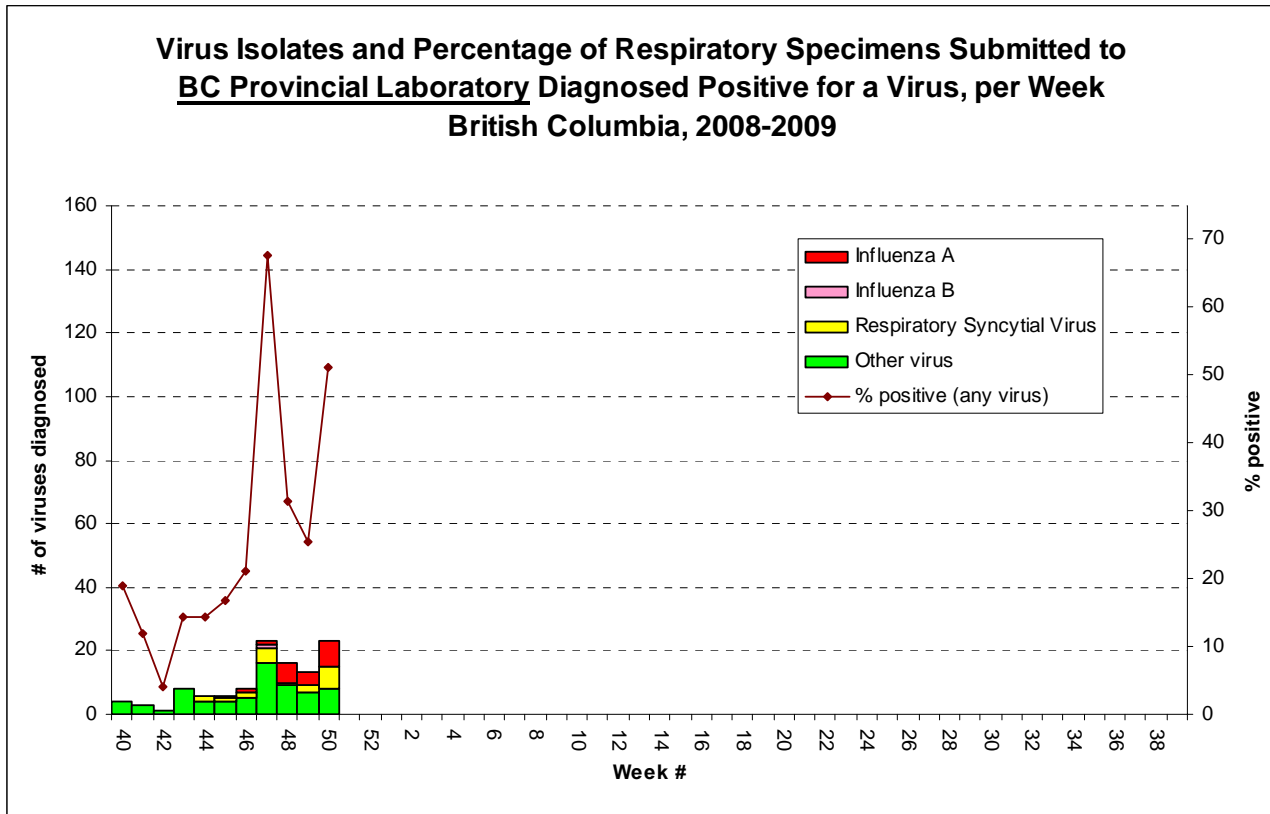


* Influenza LTCF = Long-term care facility, influenza identified

* Other LTCF = Long-term care facility, other pathogen identified (including RSV, parainfluenza, adenovirus, and rhino/enterovirus)

* ILI (No Pathogen) LTCF = Long-term care facility, no pathogen identified

LABORATORY SUMMARY





Influenza-Like Illness (ILI) Outbreak Summary Report Form

Please complete and email to ilioutbreak@bccdc.ca or fax to (604) 660-0197

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