



Sporadic Influenza Activity in BC

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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 47, the percentage of all patient visits due to ILI was 0.12%, and in week 48, the percentage was 0.29%. (See graph and table on page 4.)

ILI Outbreaks

Since the start of the season (Sept 28), specimens have been submitted to BCCDC Laboratory Services in relation to 14 ILI outbreak investigations. Rhino/enterovirus was identified in 9 (64%) of the investigations; no pathogen was identified in the other 5 investigations. (See graph on page 5.)

Laboratory Reports

During weeks 47 and 48 (Nov 16 – 29), BCCDC Laboratory Services tested 85 respiratory specimens. Influenza A was identified in seven specimens, and influenza B was identified in one specimen. Of the seven influenza A isolates, six were sub-typed as H1 (the other has not been sub-typed). Influenza-positive specimens were received from Interior, Fraser, Vancouver Coastal, and Vancouver Island Health Authorities. Twenty-one specimens tested positive for rhino/enterovirus, 6 for RSV, 3 for parainfluenza, and 1 for adenovirus.

During weeks 47 and 48 (Nov 16 – 29), Children's and Women's Health Centre Laboratory tested 137 respiratory specimens. Influenza A was identified in one specimen. Thirty-eight specimens tested positive for RSV, 3 for parainfluenza, and 2 for adenovirus. (See graphs on page 6.)

Highlights

During weeks 47 and 48 (Nov 16 – 29, 2008), BC laboratories reported eight positive respiratory specimens for influenza A and one positive specimen for influenza B. To date (Dec 5), ten influenza A viruses have been sub-typed as A/H1 in total this season; six of these A/H1 viruses have been assessed genotypically for oseltamivir resistance, and all showed this resistance mutation. No facility influenza outbreaks were reported, and 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. Please also complete and attach the outbreak report form (a copy is found at the end of this report).



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 5), BCCDC has detected ten A/H1N1 isolates (dates: Nov 13 to Dec 3); six of these have been assessed for oseltamivir resistance, and all six show genotypic evidence of oseltamivir resistance. These specimens were from community-based cases of ILI; none was associated with an outbreak. The cases were mostly young adults (age range: 10 to 42), identified in 3 of the 5 Health Authorities.

Health care providers considering use of antivirals are advised to regularly consult surveillance updates and stay informed about influenza activity and resistance patterns throughout the season.

CANADA

Flu Watch

During weeks 47 and 48, sporadic activity was reported in BC, Alberta, Ontario, and Quebec. No outbreaks in LTCFs have been reported in Canada since week 36 of last season (Aug 31 – Sept 6). Since August 24, 2008 provincial/territorial laboratories have detected 71 cases of influenza, 48 influenza A and 23 influenza B. The national rate of ILI visits to sentinel physicians (17 and 18 cases per 1,000 visits during weeks 47 and 48 respectively) is within the expected range for this time of the season.

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

National Microbiology Laboratory

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

Scotia, two A/Brisbane/10/07(H3N2)-like*—one from BC (week 43: Oct 19 – 25) and one from Ontario, two B/Florida/04/06(Yamagata)-like*—one from Alberta and one from Ontario, and one B/Malaysia/2506/04(Victoria)-like from Alberta. * 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 but resistant to oseltamivir and that one of the H3N2 isolates (from BC) was resistant to amantadine but sensitive to oseltamivir (the other has not yet been tested for antiviral resistance). All three influenza B viruses were found to be sensitive to oseltamivir.

INTERNATIONAL

A low level of Influenza activity was reported during week 47 (Nov 16 – 22) in the United States. Localized activity was reported in one state (Hawaii), and sporadic activity was reported in 19 states and the District of Columbia. The rate of ILI visits to sentinel physicians was below national baseline levels. For information about influenza surveillance indicators in the United States, please visit: <http://www.cdc.gov/flu/weekly/>.

Low levels of influenza activity in Europe were reported during weeks 47 and 48. Since week 40 of this season, 20 countries (of the 27 providing data) have reported sporadic laboratory-confirmed cases of influenza. Of the 430 influenza virus detections in Europe since the start of the season (week 40), 395 (92%) were influenza A, and of those subtyped, 90% were A/H3. For more information, please visit: <http://www.eiss.org>.

Avian Influenza

No new cases of human H5N1 AI have been reported by the WHO since Sept 10, 2008. Since 2003, the WHO has confirmed 387 human AI cases and 245 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/downld/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

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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/ehsphl/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:

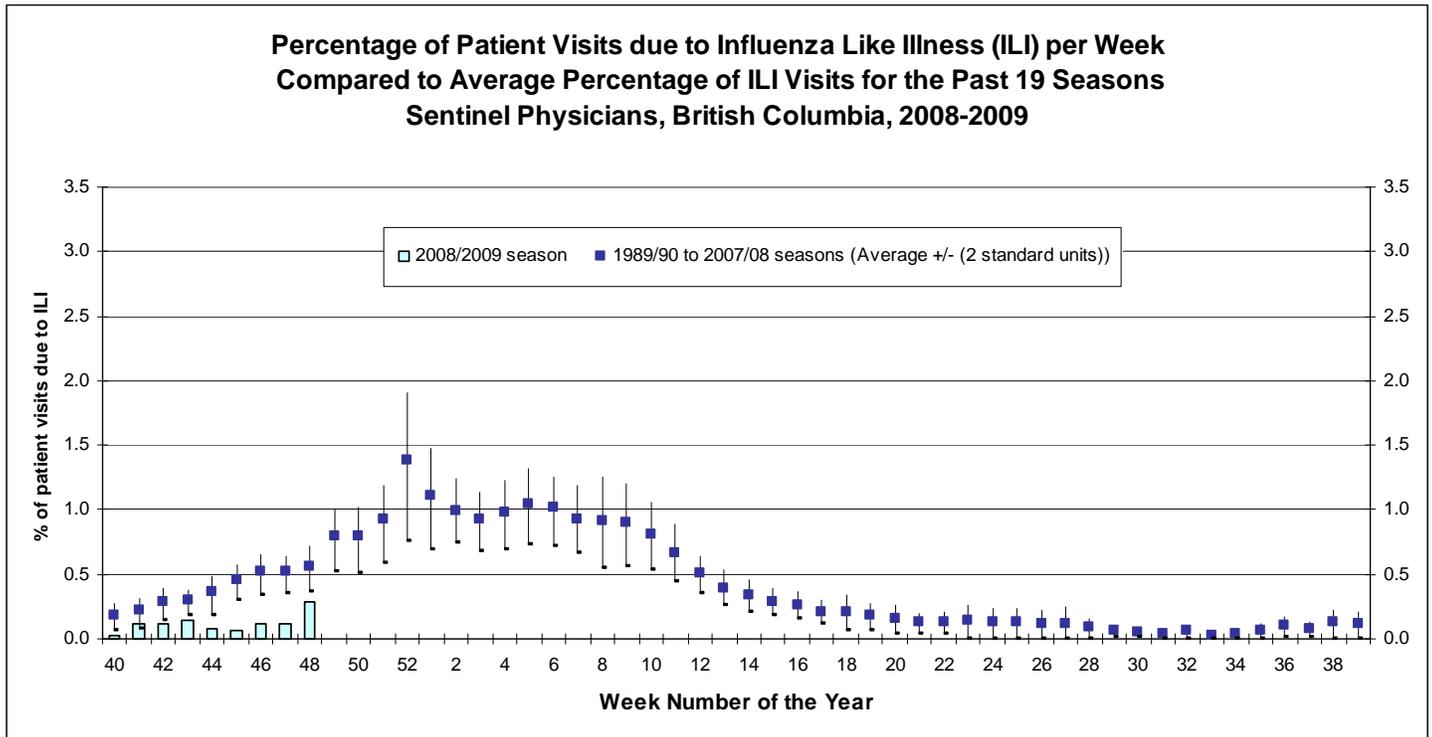
http://www.oie.int/eng/en_index.htm

3. This Report On-line

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



WEEKLY ILI

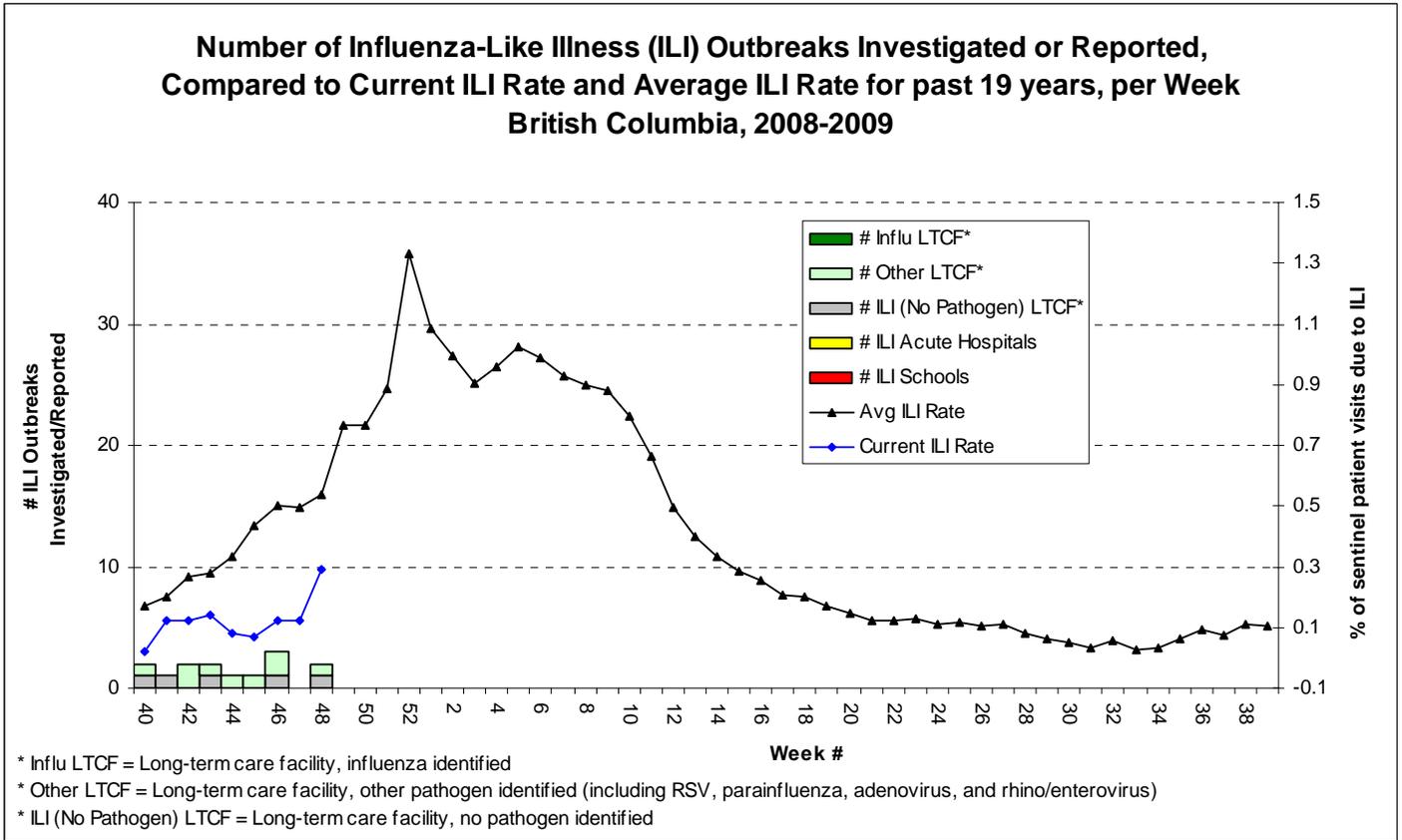


INFLUENZA-LIKE ILLNESS BY HEALTH AUTHORITY

HEALTH AUTHORITY	Week 47 Nov 16 – 22			Week 48 Nov 23 – 29		
	ILI Visits	Total Visits	% ILI	ILI Visits	Total Visits	% ILI
	Fraser	6	2,640	0.23%	7	1,724
Interior	0	387	0.00%	1	555	0.18%
Northern	0	201	0.00%	0	285	0.00%
Vancouver Coastal	1	1,495	0.07%	5	1,469	0.34%
Vancouver Island	1	2,005	0.05%	4	1,769	0.23%
BC Total	8	6,728	0.12%	17	5,802	0.29%

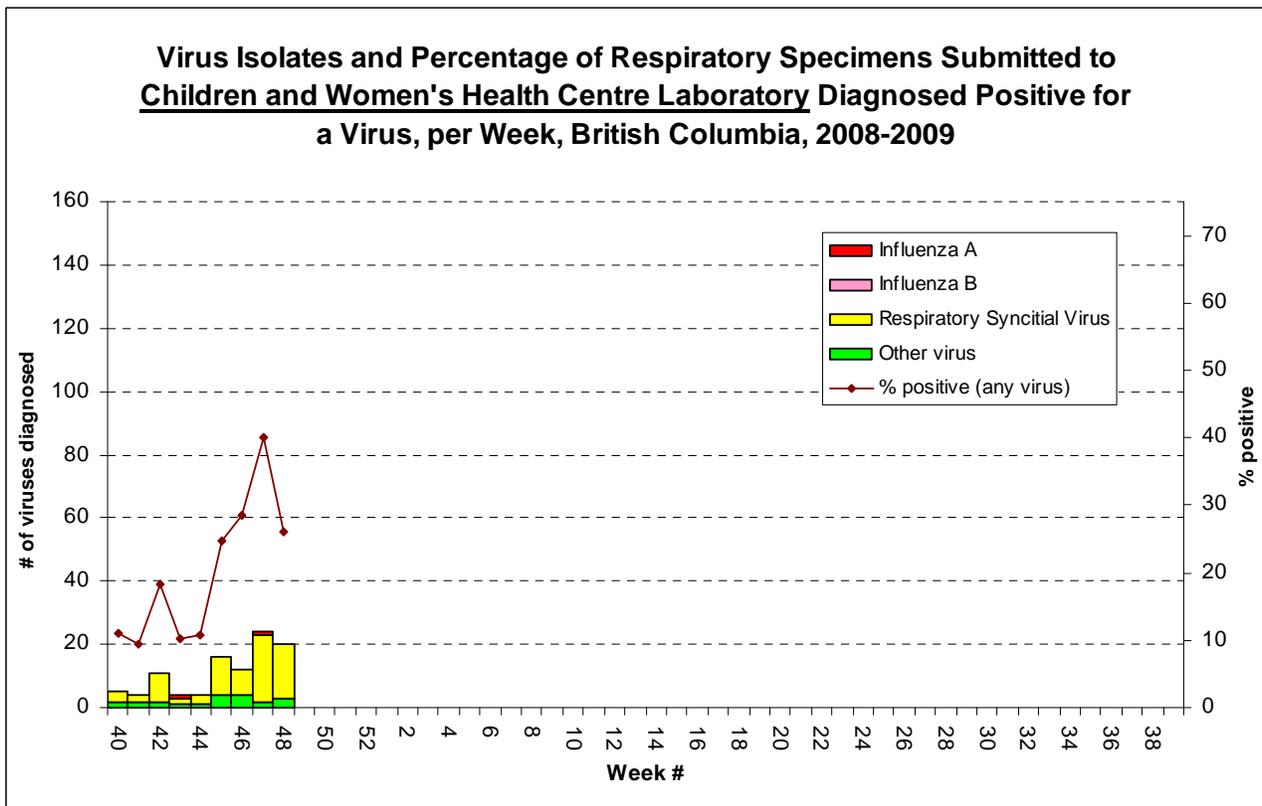
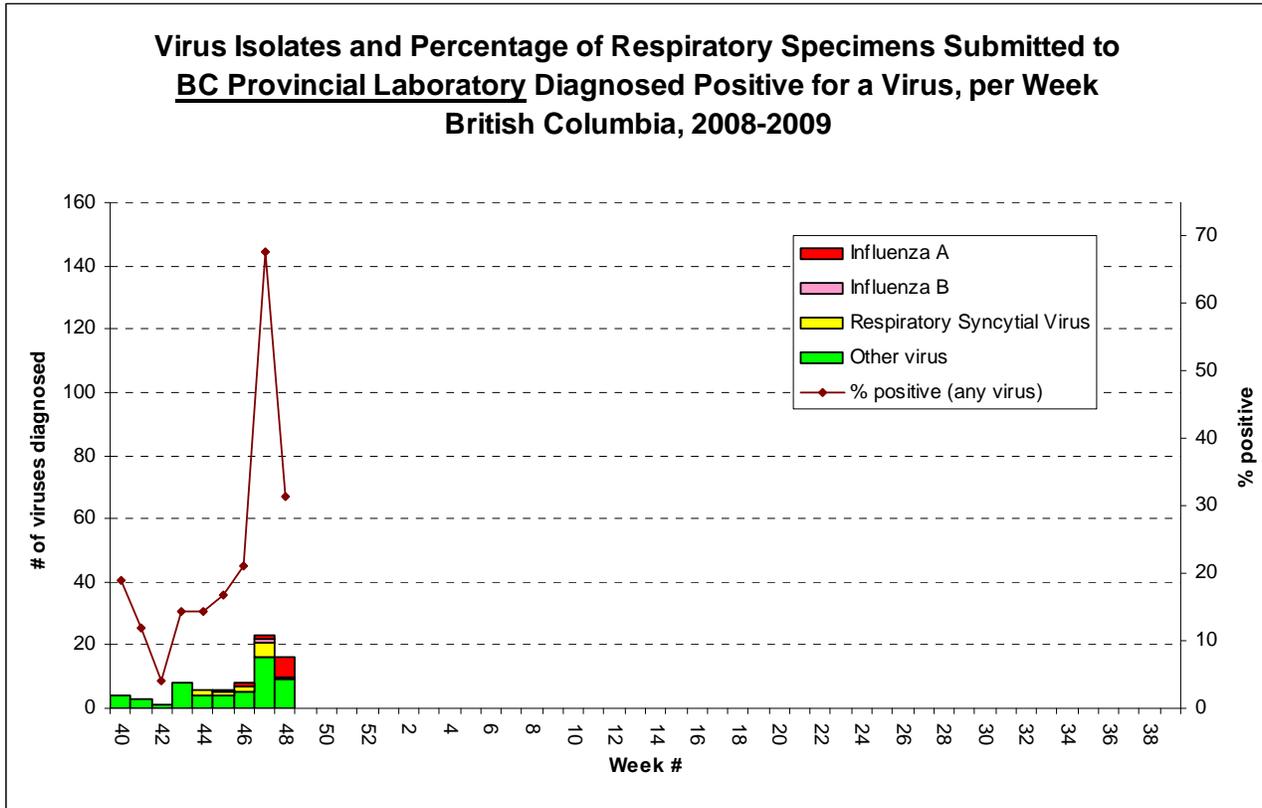


ILI OUTBREAKS





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