



## Sustained, Low-Level Influenza Activity in BC

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due to ILI and is below the average proportion for this time of year (0.28%). (See graph on page 4.)

### ILI Outbreaks

In week 15, three influenza A/H3 outbreaks were reported in LTCFs in IHA and VCHA. Since the start of the season (Sept 28), specimens have been submitted to BCCDC Laboratory Services in relation to 122 ILI outbreak investigations (106 in LTCFs, 10 in ACFs, 4 in schools, 1 in a correctional facility, and 1 in a substance abuse treatment centre). Influenza was identified in 49 (40%) of the investigations (38 in LTCFs, 7 in ACFs, and 4 in schools). Among the 38 influenza outbreaks in LTCFs this season, 34 (89%) were attributed to influenza A/H3, 1 to influenza A/H1, 2 to influenza A (sub-type not available), and 1 to influenza B. Rhino/enterovirus was furthermore identified in 13 (11%) of the investigations, RSV in 7 (6%), human metapneumovirus (HMPV) in 5 (4%), parainfluenza in 3 (2%), coronavirus in 2 (2%), and adenovirus in 1 (1%). No pathogen was identified in the other 42 investigations. (See graph on page 4.)

**Please remember to notify BCCDC of any ILI outbreaks occurring in your region by sending an e-mail to [ilioutbreak@bccdc.ca](mailto:ilioutbreak@bccdc.ca) and attaching the outbreak report form (a copy is found at the end of this report).**

### Laboratory Reports

During week 15, BCCDC Laboratory Services tested 79 respiratory specimens. Nineteen (24%) specimens tested positive for influenza A, and 9 (11%) tested positive for influenza B. Of the 16 influenza A specimens which were sub-typed during week 15, 15 (94%) were A/H3 and 1 (6%) was A/H1. An additional 9 specimens tested positive for rhino/enterovirus, 3 for HMPV, 2 for RSV, 1 for parainfluenza, and 1 for coronavirus.

During week 15, Children's and Women's Health Centre Laboratory tested 72 respiratory specimens. Eight (11%) specimens tested positive for parainfluenza, 5 (7%) for RSV, 2 (3%) for influenza A, and 1 (1%) for influenza B. (See graphs on page 5.)

To date this season (Apr 22), 76% (718 / 947) of influenza isolates tested at both laboratories have

### Highlights

In week 15 (Apr 12-18), the rate of ILI visits to sentinel physicians was 0.14%, which is a slight decrease from week 14 and below the expected range for this time of year. Over the course of the past 4 weeks, sentinel ILI rates have shown an overall decline. Three lab-confirmed influenza A/H3 outbreaks occurred in LTCFs in IHA and VCHA during week 15. Twenty-one percent (31 / 151) of respiratory specimens tested in BC laboratories (BCCDC and Children's and Women's Health Centre) during week 15 were positive for influenza, a decrease from week 14, in which 25% of specimens were positive for influenza. Sixty-eight percent of the influenza detections during week 15 were influenza A, and of those sub-typed, 94% were A/H3. To date this season (Apr 22), 76% (718 / 947) of influenza isolates have been type A, and of those sub-typed, 70% (445 / 636) have been A/H3.

### Sentinel Physicians

In week 15, 0.14% of all patient visits to sentinel physicians were attributed to ILI. This is a slight decrease from week 14, in which 0.17% of visits were

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2008-2009

UPDATE



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been type A, and of those sub-typed, 70% (445 / 636) have been A/H3.

## Oseltamivir Resistance

To date (Apr 22) during the 2008-09 season, BCCDC has assessed 163 A/H1N1 isolates for oseltamivir resistance; 148 show genotypic evidence of oseltamivir resistance, and the other 15 are indeterminate and undergoing further assessment through sequencing of the neuraminidase gene. Thus, all A/H1N1 specimens for which oseltamivir sensitivity could be determined have so far been found resistant to date in BC during the 2008-09 season.

**Health care providers considering use of antivirals are advised to consult public health and surveillance updates and to stay informed about influenza activity and resistance patterns throughout the season. The BCCDC has posted interim guidelines, for clinician reference, concerning antiviral options in the context of evolving resistance patterns:**

[http://www.bccdc.org/downloads/pdf/epid/reports/BC\\_Interim\\_Antiviral\\_Treatment\\_Guidelines\\_Influenza.pdf](http://www.bccdc.org/downloads/pdf/epid/reports/BC_Interim_Antiviral_Treatment_Guidelines_Influenza.pdf).

## CANADA

### FluWatch

During week 14 (Apr 5-11), influenza activity in Canada remained unchanged from the previous week, with most provinces and territories reporting localized activity and one region of BC (VCHA) reporting widespread activity. Fifteen new ILI outbreaks were reported: 10 in LTCFs (BC, AB, MB, & QC), 1 in a school (NS), 1 in a hospital (NL), and 3 in other facilities not described (AB). The proportion of tests that were positive for influenza decreased from 12% in week 13 to 11% in week 12. Since August 24, 2008, provincial/territorial laboratories have detected 8,767 cases of influenza, of which 5,283 (60%) were influenza A and 3,484 (40%) were influenza B. The national rate of ILI visits to sentinel physicians was 24 ILI consultations per 1,000 patient visits in week 14, which is within the expected range for this time of the season. <http://www.phac-aspc.gc.ca/fluwatch/>

### National Microbiology Laboratory

Since Sept 1 and as of Apr 17, 828 influenza isolates from provincial and hospital labs have been characterized at the National Microbiology Laboratory (NML):

202 A/Brisbane/59/07(H1N1)-like\* † from BC, AB, SK, MB, ON, QC, NB, NS, & PEI;  
142 A/Brisbane/10/07(H3N2)-like\* † from BC, AB, SK, MB, ON, QC, NB, PEI, & NL;  
9 B/Florida/04/06(Yamagata)-like\* from AB, ON, QC, & NB;  
368 B/Malaysia/2506/04(Victoria)-like from all ten provinces;  
and, 107 B/ Brisbane/60/08(Victoria)-like † from BC, SK, MB, ON, QC, NB, and NL.

\* indicates a strain match to the 2008-09 vaccine

† indicates a strain match to the 2009-10 vaccine

## Antiviral Resistance

Drug susceptibility testing at the NML as of Apr 9 indicated that all (n=225) H1N1 isolates tested to date were resistant to oseltamivir, while all H3N2 (n=154) and influenza B (n=460) isolates tested were sensitive to oseltamivir. Of those isolates tested for amantadine resistance, all (n=242) H1N1 isolates were found to be sensitive, and all (n=285) H3N2 isolates were found to be resistant. All 794 (176 H1N1, 152 H3N2, and 466 influenza B) isolates that have been tested for zanamivir resistance were sensitive.

## INTERNATIONAL

During week 14 (Apr 5-11), influenza activity in the United States continued to decrease. To date this season, US laboratories have detected influenza in 25,407 (14%) respiratory specimens, of which 67% were influenza A. Of the influenza A isolates that have been sub-typed, 90% were A/H1. Seven hundred and forty-three of 748 (99%) A/H1 viruses tested this season have been found to be resistant to oseltamivir, and three (0.4%) A/H1 viruses have been found resistant to adamantanes. For more information, visit: <http://www.cdc.gov/flu/weekly/>.

During week 14 (Apr 5-11), all countries in Europe reported decreasing or baseline influenza activity. Of the 28,495 influenza virus detections in Europe since the start of the season (week 40), 86% were influenza A, and of those sub-typed, 89% were A/H3. For more information, visit: <http://www.eiss.org>.

## Avian Influenza

Since 2003 and to date (Apr 21, 2009), the WHO has confirmed 420 human avian influenza A/H5N1 cases and 257 deaths, with additional recent cases reported in Egypt. For more information on human avian influenza cases, please visit:

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[http://www.who.int/csr/disease/avian\\_influenza](http://www.who.int/csr/disease/avian_influenza) .

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

[http://www.oie.int/download/AVIAN%20INFLUENZA/A\\_AI-Asia.htm](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

The WHO has announced the recommended components of the 2009-10 northern hemisphere influenza vaccines:

- A/Brisbane/59/2007(H1N1)-like
- A/Brisbane/10/2007(H3N2)-like
- B/Brisbane/60/2008(Victoria lineage)-like

Thus, only the B component will be changed from the 2008-09 vaccine. Additional information can be found here:

[http://www.who.int/csr/disease/influenza/recommendations2009\\_10north/en/index.html](http://www.who.int/csr/disease/influenza/recommendations2009_10north/en/index.html) .

## Contact Us:

### Epidemiology Services

BC Centre for Disease Control (BCCDC)  
655 W. 12<sup>th</sup> Ave, Vancouver BC V5Z 4R4  
Tel: (604) 660-6061 / Fax: (604) 660-0197  
[InfluenzaFieldEpi@bccdc.ca](mailto:InfluenzaFieldEpi@bccdc.ca)

## List of Acronyms

**ACF:** Acute Care Facility  
**AI:** Avian Influenza  
**FHA:** Fraser Health Authority  
**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  
**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-](http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/08vol34/acs-3/index-eng.php)

[rmtc/08vol34/acs-3/index-eng.php](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/](http://www.who.int/csr/disease/avian_influenza/en/)

World Organization for Animal Health:

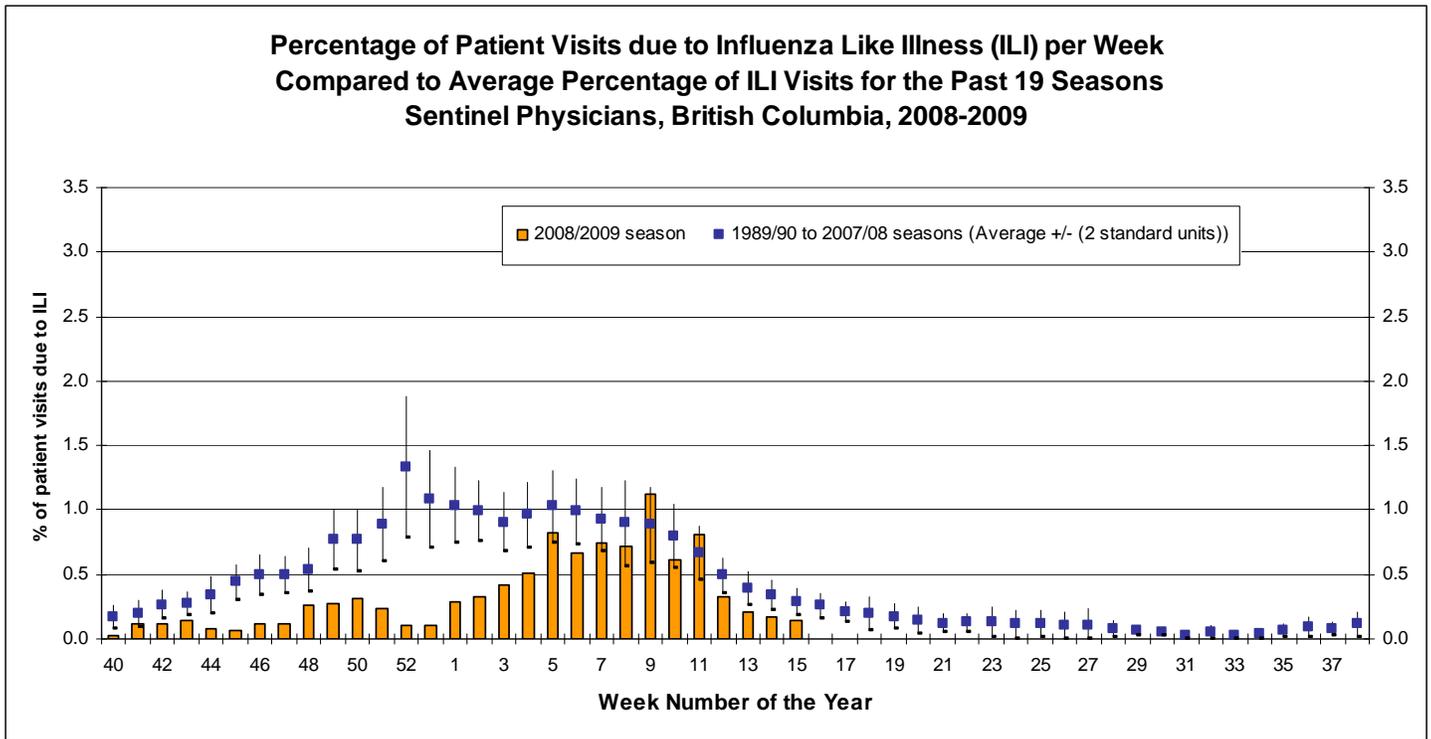
[http://www.oie.int/eng/en\\_index.htm](http://www.oie.int/eng/en_index.htm)

### 3. This Report On-line

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

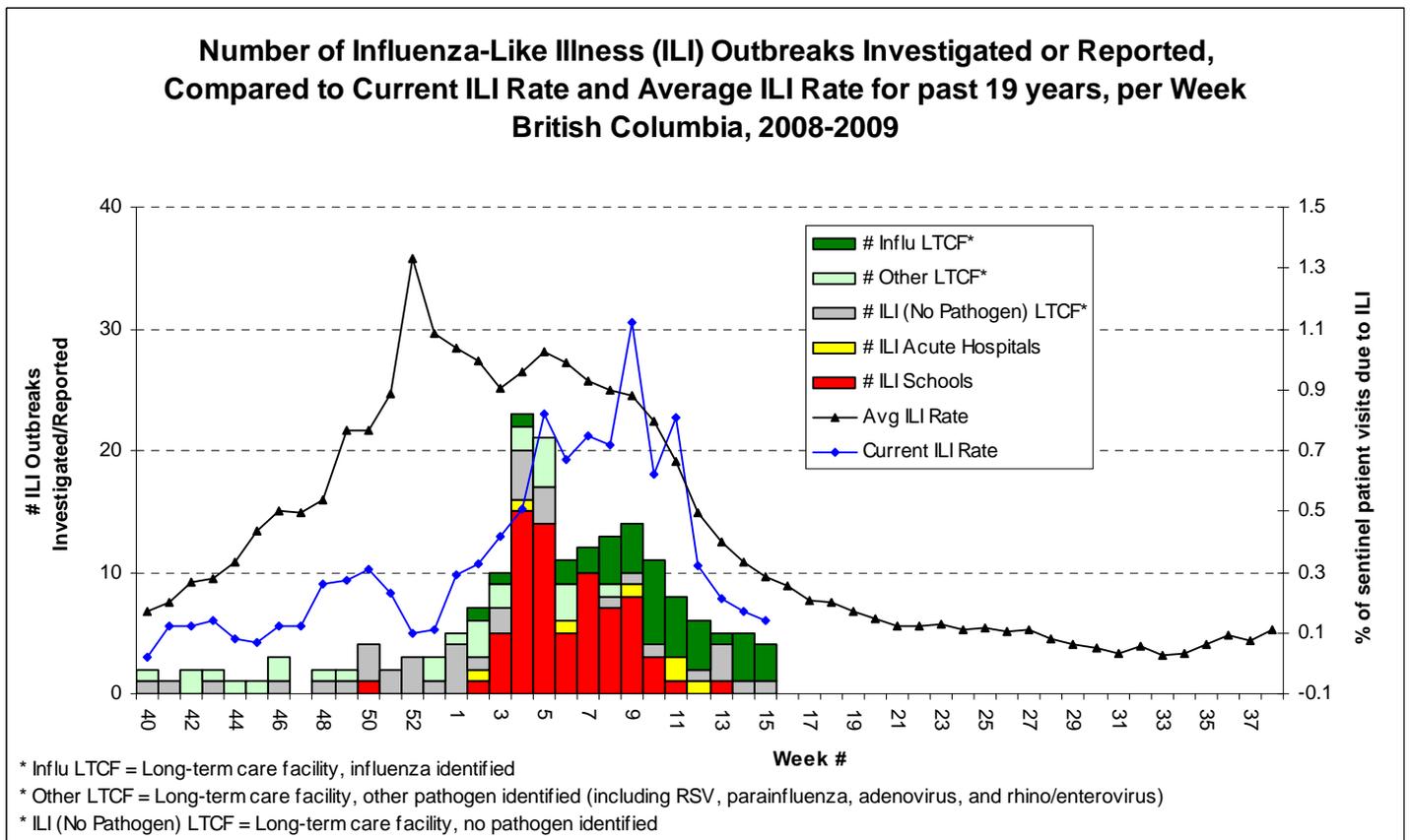
### WEEKLY SENTINEL ILI

**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



### 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

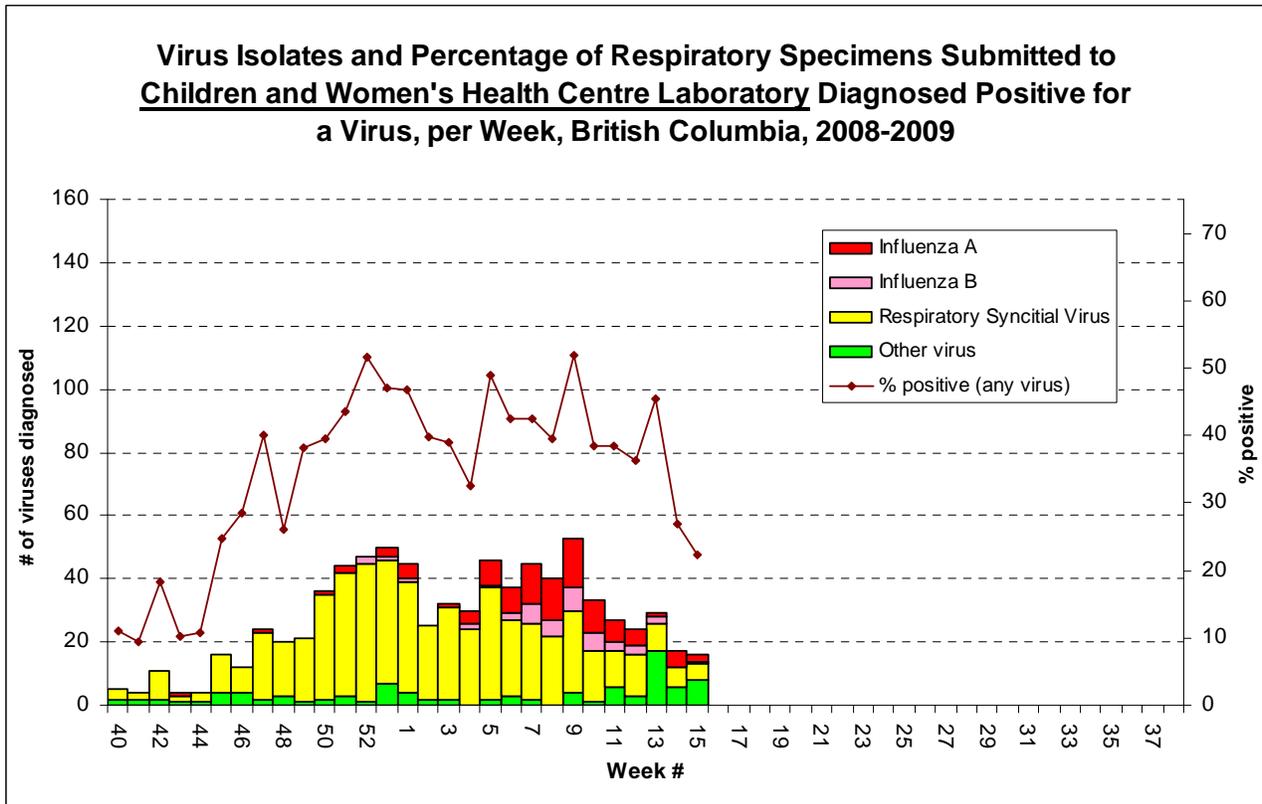
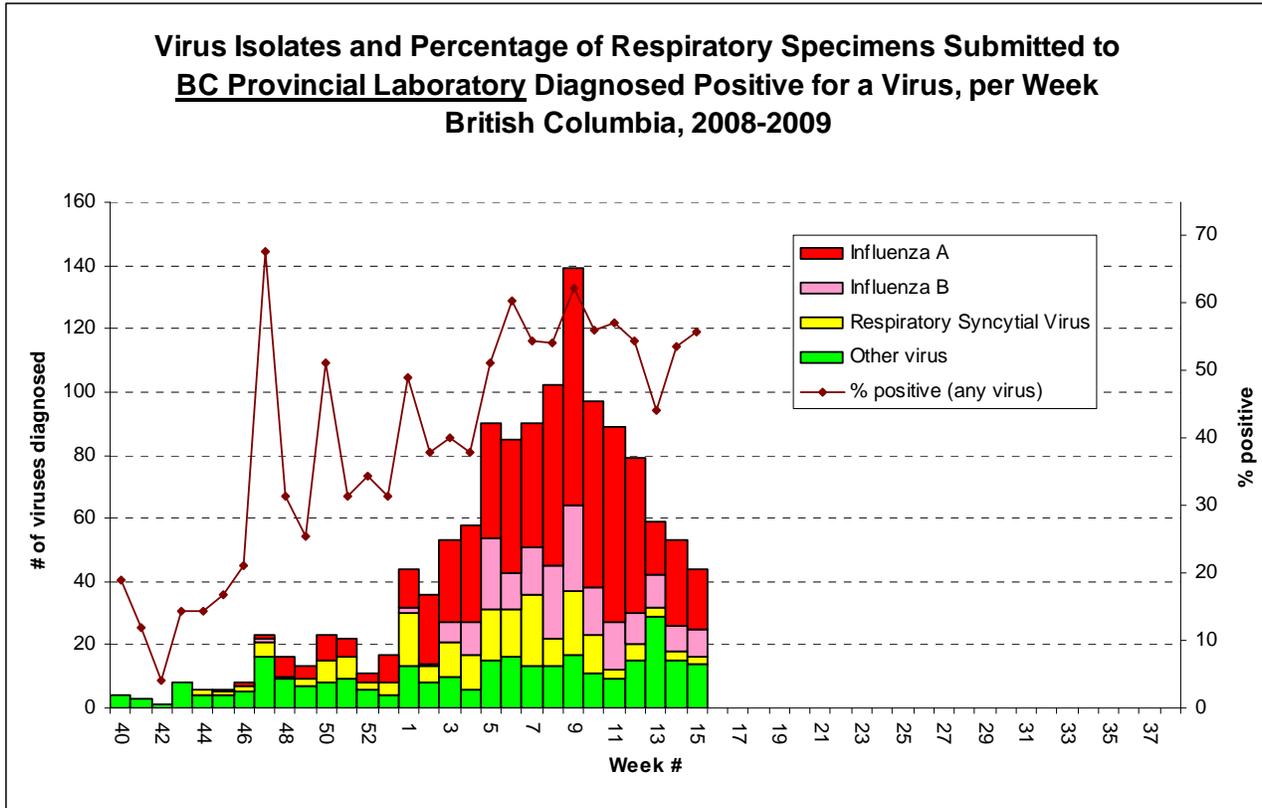


\* Influenza LTCF = Long-term care facility, influenza identified

\* 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](mailto: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
<b>Total</b>		
<b>With ILI</b>		
<b>Hospitalized</b>		
<b>Died</b>		

## 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
<b>Total</b>		
<b>With ILI</b>		
<b>Hospitalized</b>		
<b>Died</b>		

## SECTION D: Laboratory Information

Specimen(s) submitted?  Yes (location: \_\_\_\_\_ )  No  Don't know  
 If yes, organism identified?  Yes (specify: \_\_\_\_\_ )  No  Don't know