# BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2009-10: Number 9, Week 48

**November 29 – December 5, 2009**

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

**Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team**

# Influenza Activity Indicators Continue to Decline; Levels Approach Expected Range

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## Highlights

In week 48 (November 29-December 5), influenza activity indicators showed a decline in activity for the 5th consecutive week. Most indicators including the proportion of patients presenting to sentinel physicians, Medical Services Plan claims for influenza, laboratory positivity for influenza and school outbreaks decreased compared to the previous week. Emergency room visits from BC children's hospital remained at the same level. At the BC provincial laboratory, 12.4% (50/403) of respiratory specimens were positive for influenza A and all subtyped isolates were the pandemic H1N1 virus (pH1N1). Together surveillance indicators suggest that influenza activity due to pandemic H1N1 in BC is declining and activity levels are approaching the expected range for this time of year.

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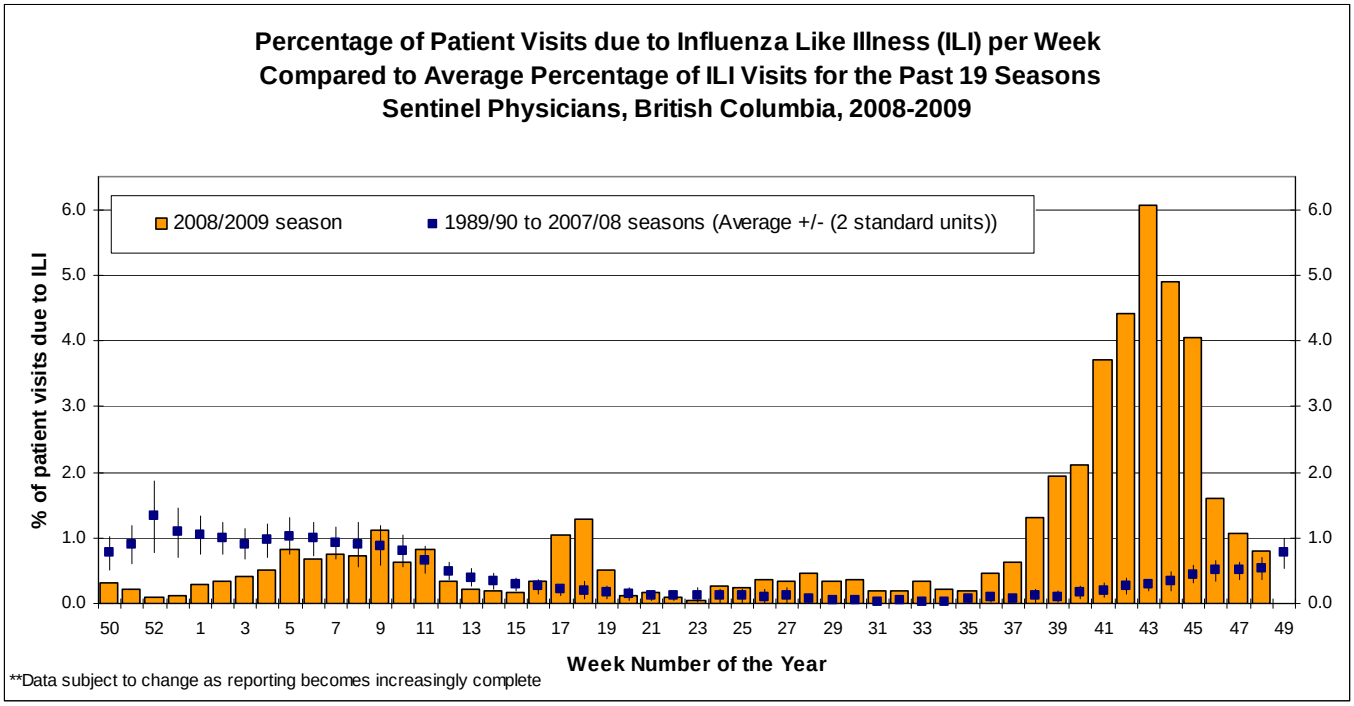
## British Columbia

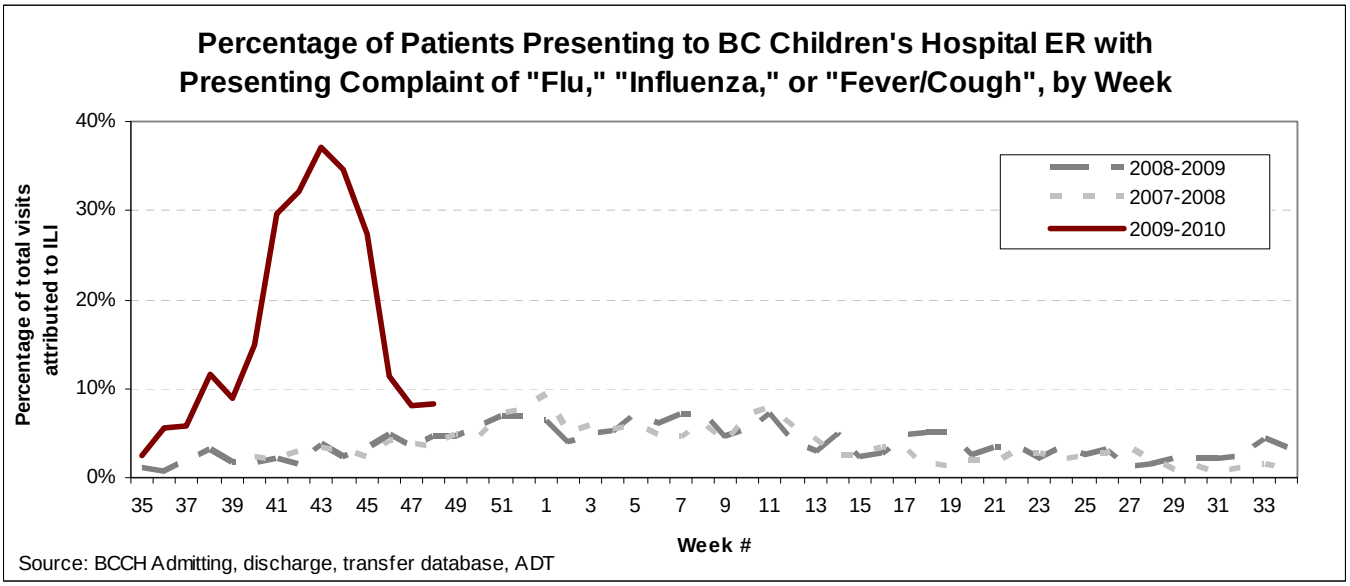
### Sentinel Physicians

During week 48, the percentage of patients presenting to sentinel physicians with ILI was 0.79%. This represents a steep decrease from 6.1% in week 43. It remains slightly above the expected range for this time of year. 59% (30/51) of sentinel physician sites reported for week 48.




### BC Children's Hospital Emergency Room

During week 48, the proportion of Emergency Room visits that BC Children's hospital attributed to fever and cough remained similar to the previous week at 8.3%, this represents a substantial decline from a high of 37% in week 43.

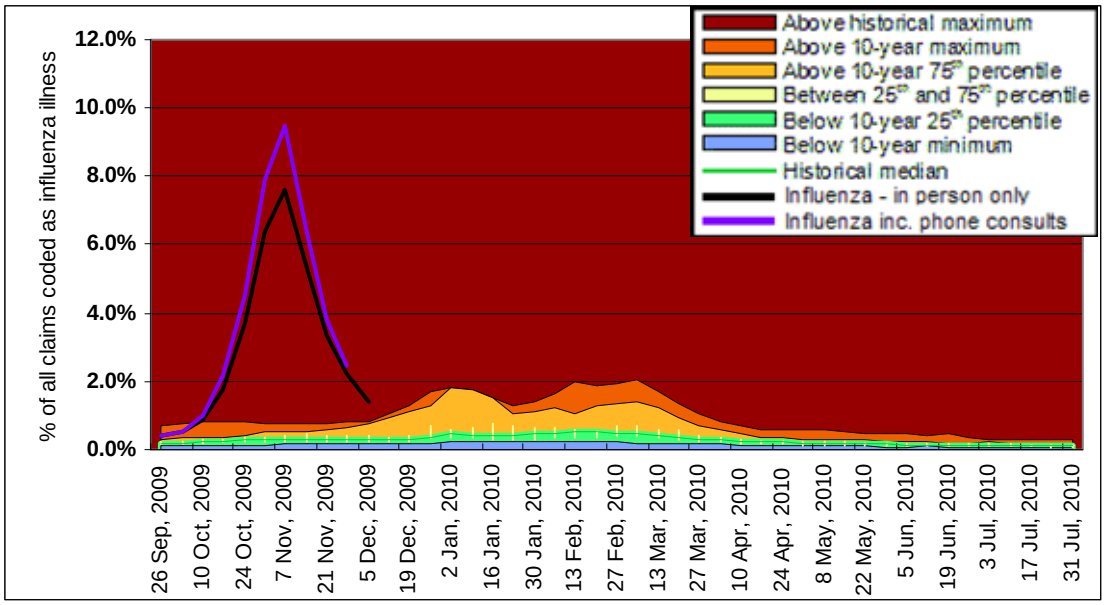



Emergency Room data kindly provided by the Decision Support Services at BC Children's Hospital

## Medical Services Plan

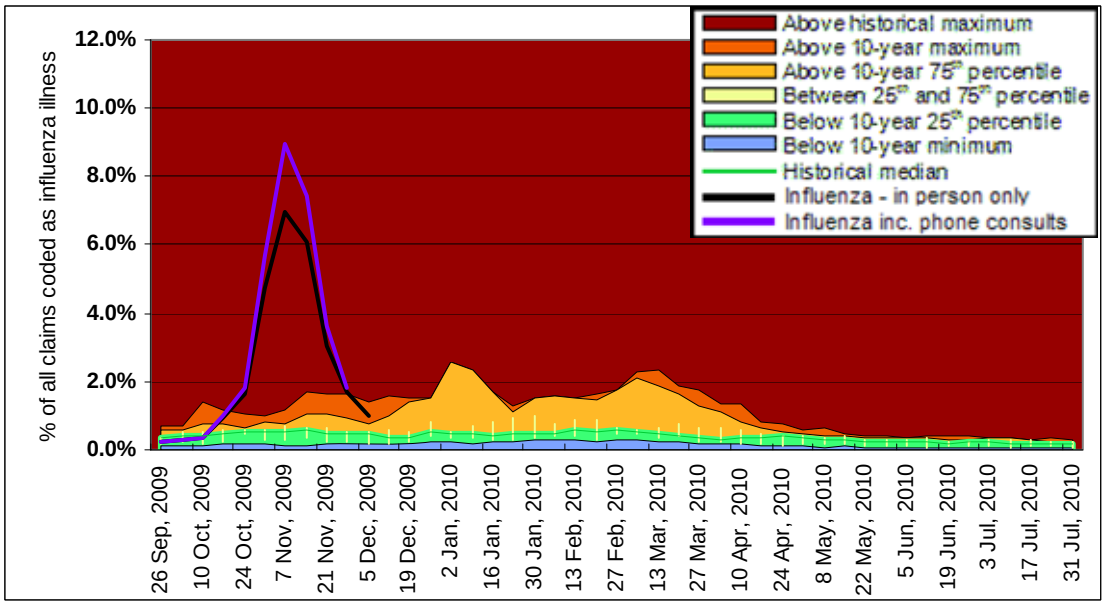
Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims show a steep decrease after several weeks of constant increase. Proportions in VCHA, FHA and VIHA remain above the historical maximum for this time of year. Graphs presented below include two indicators: one reflecting in-person physician visits only with influenza illness claims (black) and one reflecting influenza illness claims whether in-person visits or phone consultations (purple).

**Influenza Illness Claims* British Columbia**

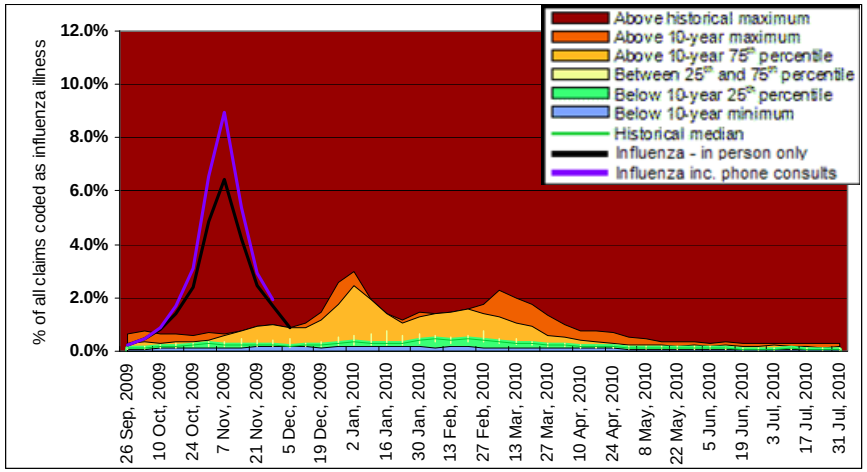



*Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).
**MSP week 27 Sep 2009 corresponds to sentinel ILI week 39**.**
***Current to December 8, 2009

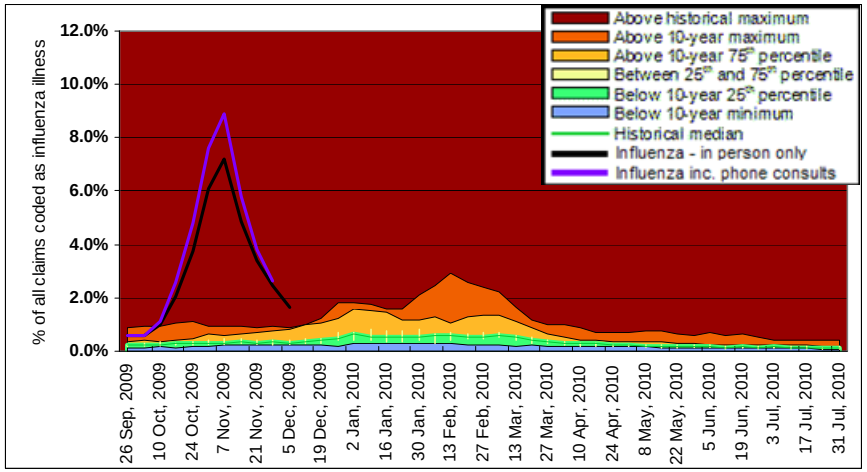
**Northern**



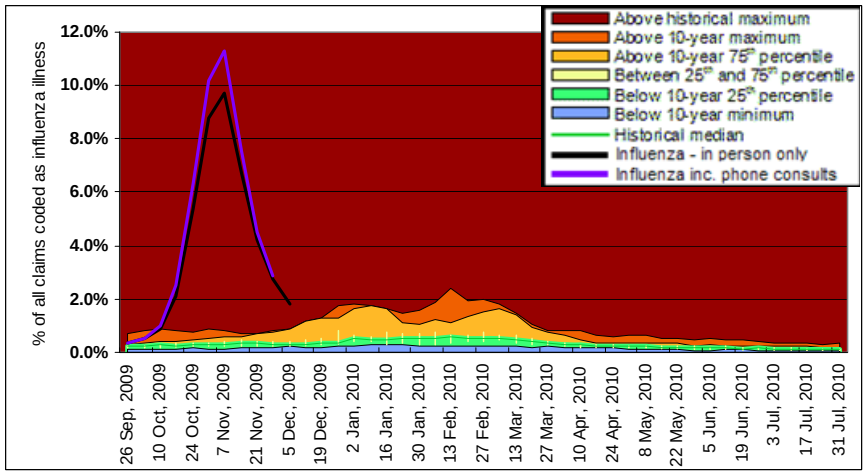
## Interior



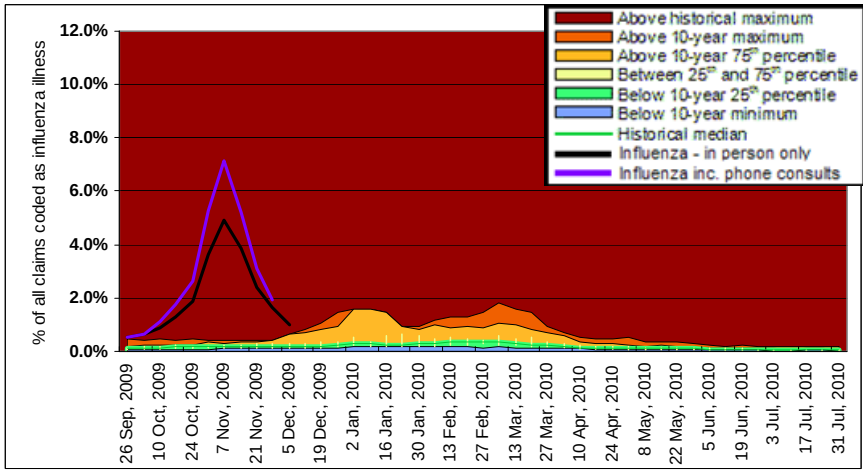

## Vancouver Coastal




## Fraser



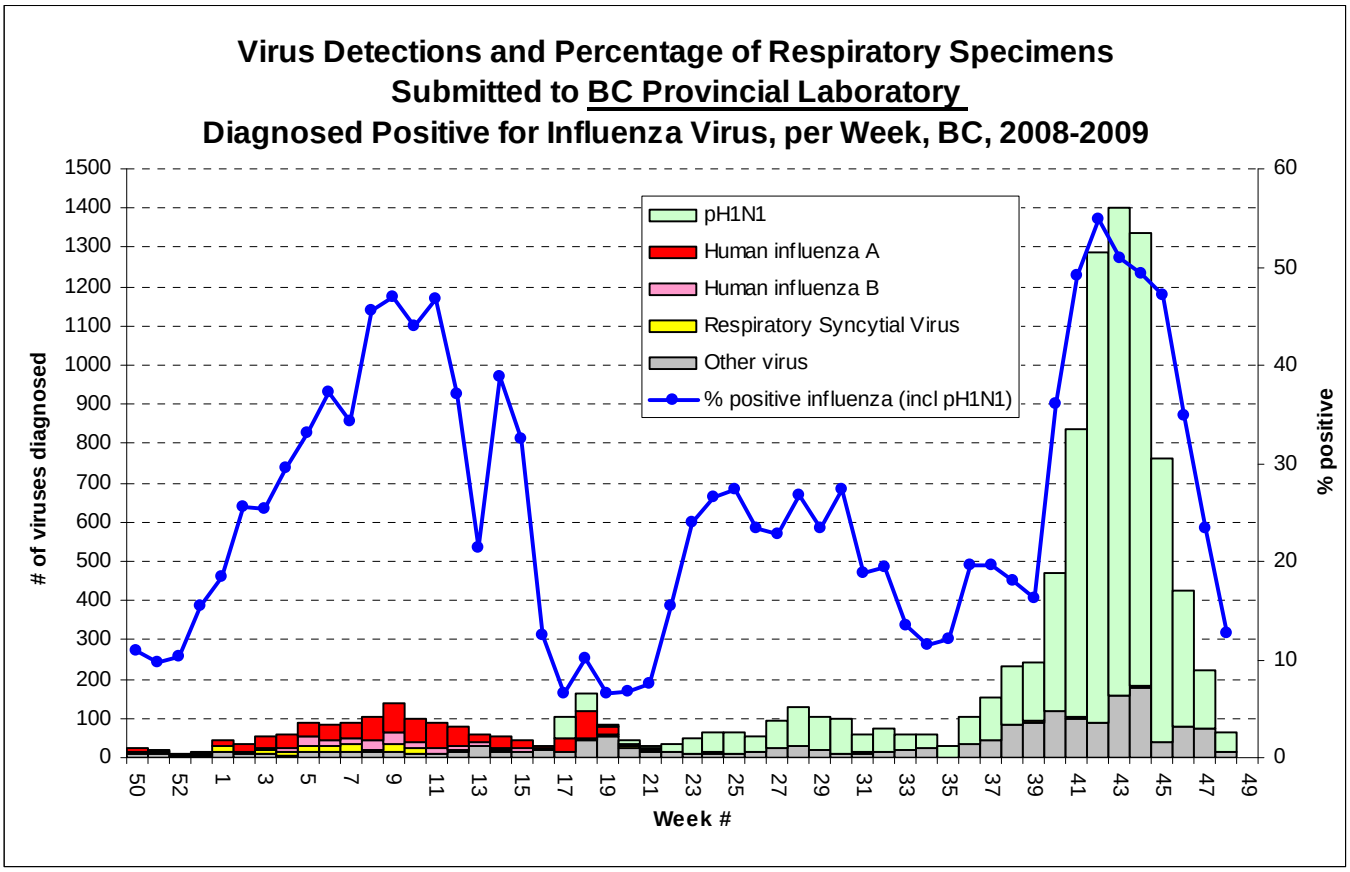

## Vancouver Island

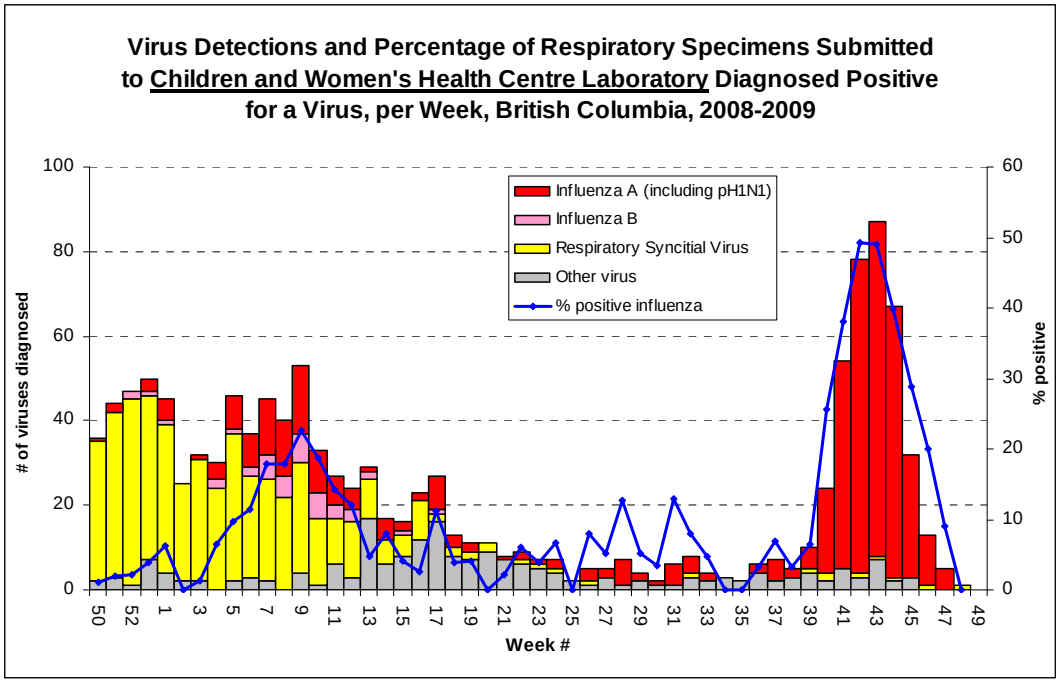


## Laboratory Reports

There has been a decrease in volume of submitted specimens from 2458 specimens in week 43 to 403 in week 48. In week 48, 50 out of 403 (12.4%) tested positive for influenza A, all subtyped specimens were pH1N1. This proportion is now below the seasonal peak observed last year. Since week 35 (September 1, 2009), >99% of all subtyped influenza A viruses have been pH1N1. Other respiratory pathogens detected included parainfluenza, rhino-entero, adenovirus and coronavirus. Of these other detected viruses, 81% were rhino-enterovirus.

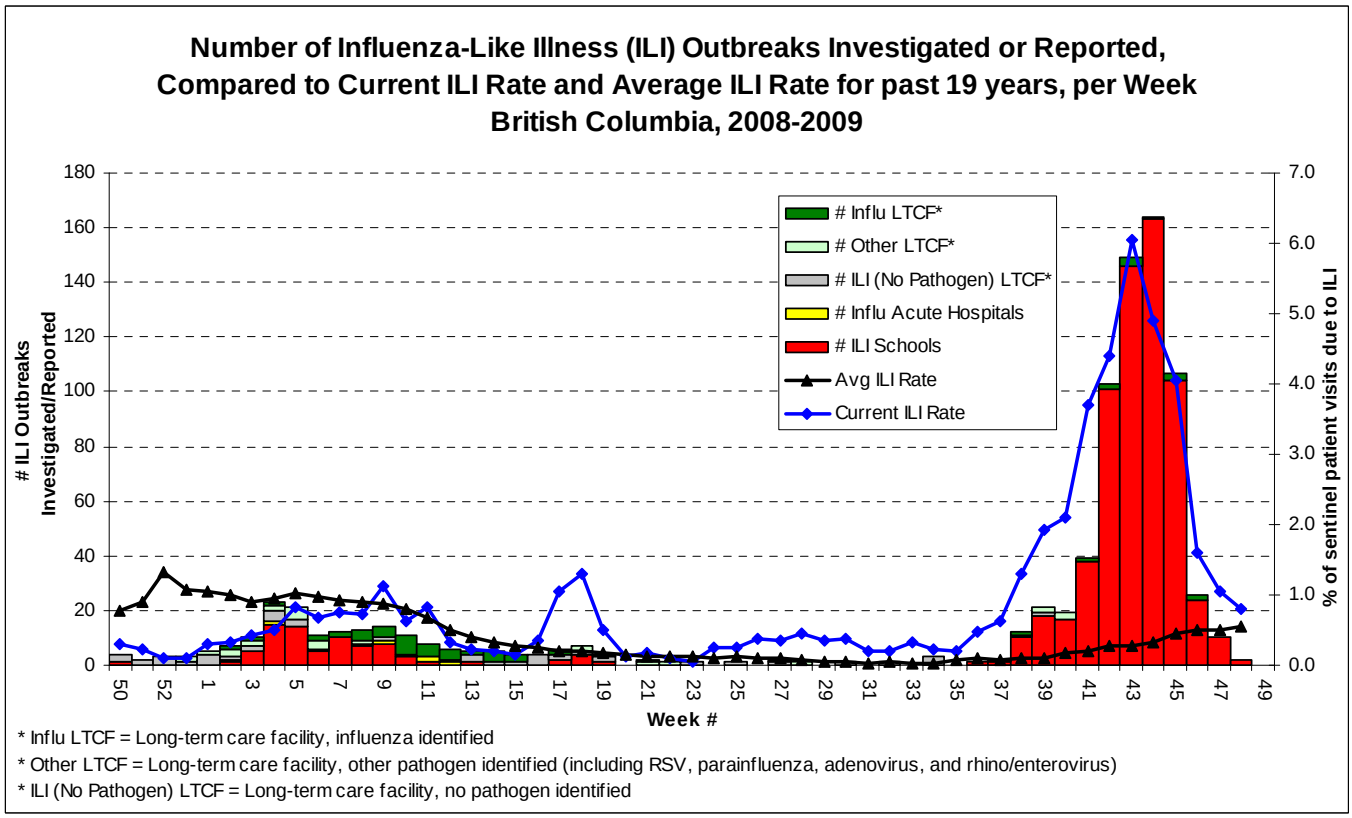
During week 48, Children's and Women's Health Centre Laboratory tested 57 respiratory specimens. None were positive for influenza; this represents a decrease compared to the previous week. Two specimens tested positive for parainfluenza, one tested positive for RSV and two tested positive for adenovirus.






## ILI Outbreaks

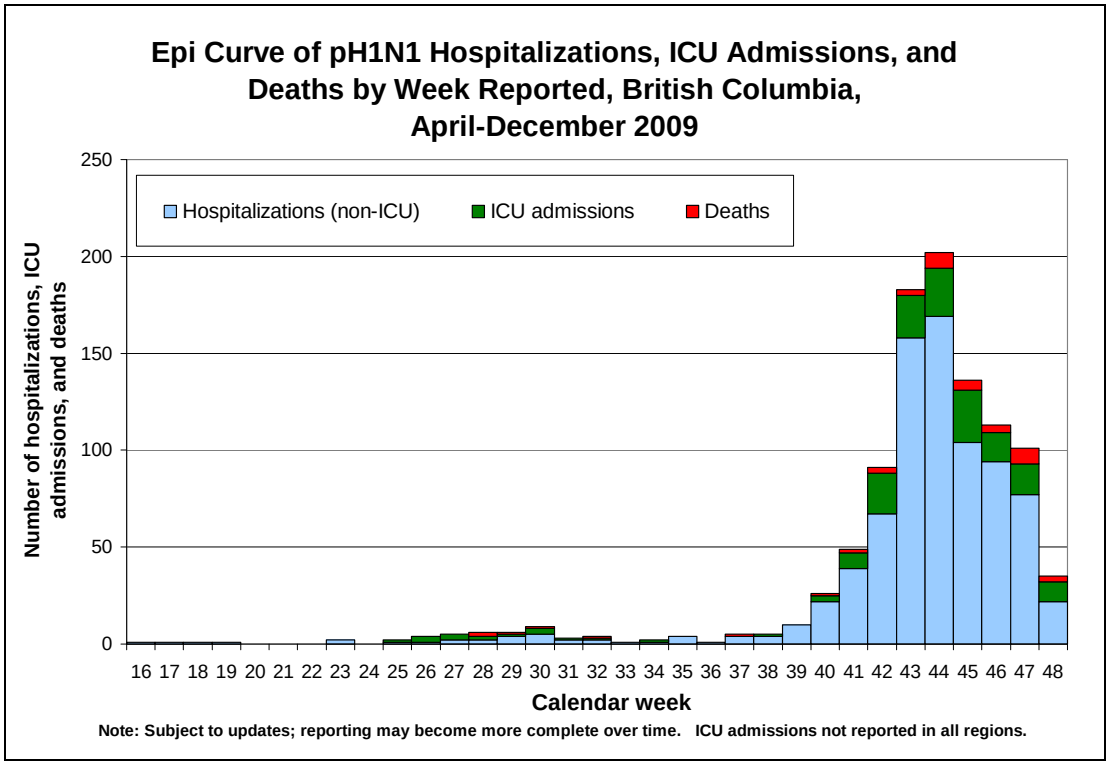
In week 48, the number of school ILI outbreaks decreased to 2 (1 in FHA and 1 in NHA). No outbreaks in long term care facilities were reported.

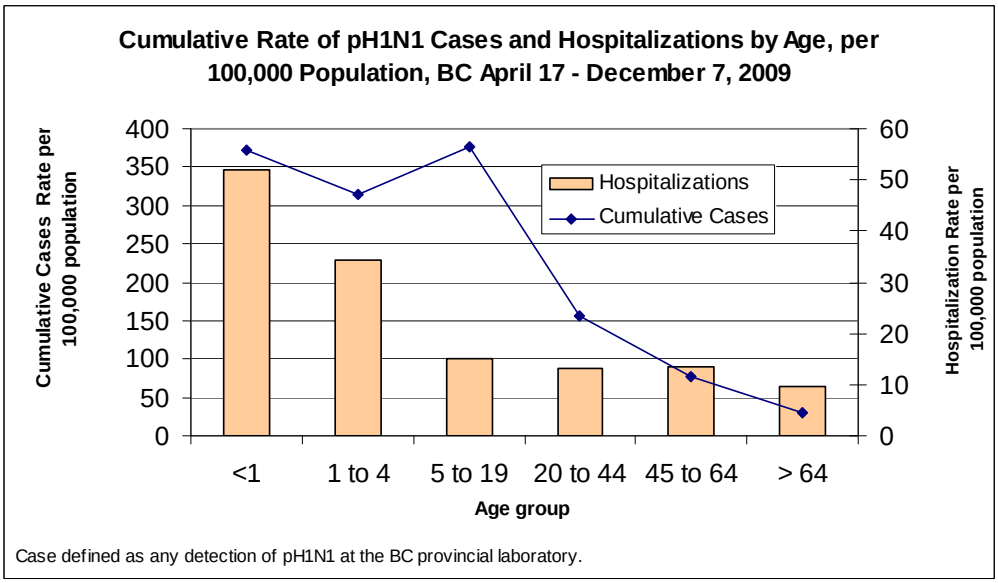


## Pandemic H1N1 (pH1N1) Severe Outcomes

As of December 7 and since April 2009, 1009 hospitalizations in patients with laboratory-confirmed pH1N1 have been reported in BC, of which 32 were reported in the preceding week. Among hospitalized cases, 64.5% had at least one reported underlying medical condition (excluding pregnancy). Twenty-eight percent of hospitalized cases have been admitted to the intensive care unit and 8% have died. As shown in the graph below, pH1N1 total case detection rates have been highest among those under 20 years of age, while hospitalization rates have been highest in those under one year of age.

For further description of BC pH1N1 cases, visit: www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm
Resources for healthcare professionals: www.bccdc.ca/resourcematerials/newsandalerts/healthalerts/H1N1FluVirusHumanSwineFlu.htm



## CANADA

### FluWatch

During week 47, all national influenza activity indicators decreased. ILI consultation rates decreased for the fourth consecutive week from 111 (in week 43) to 37 consultations per 1000 patient visits in week 47; this is above the expected range for this time of year. People under 20 had the highest consultation rates. The proportion of tests positive for influenza was 34.3%, a decline from the previous week. Over 99% of all subtyped influenza A specimens were positive for pH1N1; 1 specimen was positive for H3N2 and none were positive for seasonal H1N1. One specimen was positive for influenza B. Geographically BC, Saskatchewan, and Newfoundland reported widespread activity. www.phac-aspc.gc.ca/fluwatch/

### National Microbiology Laboratory

Between September 1st and December 3, 2009, 379 influenza isolates were collected from provincial and hospital labs and characterized at the National Microbiology Laboratory (NML):
374 A/California/07/2009 (H1N1)-like[§] from BC, AB, SASK, ON, QC, NB, NS, NT, & NU;
2 A/Brisbane/59/2007(H1N1)-like[†] from AB & QC;
1 A/Brisbane/10/2007(H3N2)-like[†] from ON;
1 A/Perth/16/2009 (H3N2)-like from AB;
1 B/Brisbane/60/2008-like[†] from ON

[§] A/California/07/2009 (H1N1) is the variant reference virus (pH1N1) selected by WHO for a pandemic influenza A/H1N1 vaccine.
[†] indicates a strain match to the 2009-10 vaccine

### Antiviral Resistance

Drug susceptibility testing at the NML between September 1st and December 3rd, 2009 indicated that most pH1N1 (n=358) isolates were sensitive to oseltamivir, 3 viruses were resistant. All influenza B isolates (n=1) and influenza A/H3N2 isolates (n=2) tested were sensitive and the 2 seasonal A/H1N1 isolates tested were resistant. All pH1N1 (n=351), seasonal H1N1(n=2), A/H3N2 (n=2) and influenza B (n=1) isolates were sensitive to zanamivir. All pH1N1 (n=369), and A/H3N2 (n=8) isolates were resistant to amantadine. One isolate for seasonal H1N1 was sensitive and one was resistant to amantadine.

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

In the United States (http://www.cdc.gov/flu/weekly/), in the week ending November 28th, influenza activity continued to decrease. 15.4% of respiratory specimens tested in reference laboratories in week 47 were positive for influenza, and over 99% percent of the subtyped influenza A viruses were pH1N1. 0.6% of specimens tested positive for Influenza B. The proportion of sentinel physician visits for ILI decreased to 3.7%, this is similar to the seasonal peak for last year. The proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold for the ninth consecutive week.

In Europe for the week ending December 4 influenza activity remained high. All reporting countries indicated medium to high intensity influenza activity; nine countries (northern, central and western Europe) reported a declining trend, and 11 countries (eastern and southern Europe) reported an increasing trend. 38% of sentinel laboratory samples were positive for influenza. Over 99% of specimens positive for influenza A were pH1N1. (http://www.eiss.org )

**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
**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 or swine origin 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/ehsphl/epidemiology/CD/HTML/FluUpdate.htm
USA Weekly Surveillance reports: www.cdc.gov/flu/weekly/
European Influenza Surveillance Scheme: www.eiss.org/index.cgi
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.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**
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. Pandemic H1N1 Influenza Web Sites**
BCCDC: www.bccdc.ca/dis-cond/a-z/_h/HumanSwineFlu/default.htm
BC Provincial Government: http://www.gov.bc.ca/h1n1/
BC H1N1 Pandemic Response Plan: http://www.health.gov.bc.ca/pandemic/response/index.html
PHAC: www.phac-aspc.gc.ca/alert-alerte/swine_200904-eng.php
US CDC: www.cdc.gov/swineflu/index.htm
WHO: www.who.int/csr/disease/swineflu/en/index.html

**4. 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