

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2009-10: Number 10, Week 49

December 6-12, 2009



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Influenza Activity Similar to Previous Week Levels Approach Expected Range

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Highlights

In week 49 (December 6-12), influenza activity indicators suggested no change in activity compared to the previous week. The proportion of patients presenting to sentinel physicians increased slightly while laboratory positivity for influenza decreased compared to the previous week. Emergency room visits from BC children's hospital and school outbreaks remained at the same level. At the BC provincial laboratory, 9.4% (25/267) 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 similar to the previous week and levels are approaching the expected range for this time of year.

Report written: December 16, 2009

Edited: December 16, 2009

Disseminated/posted to web: December 16, 2009

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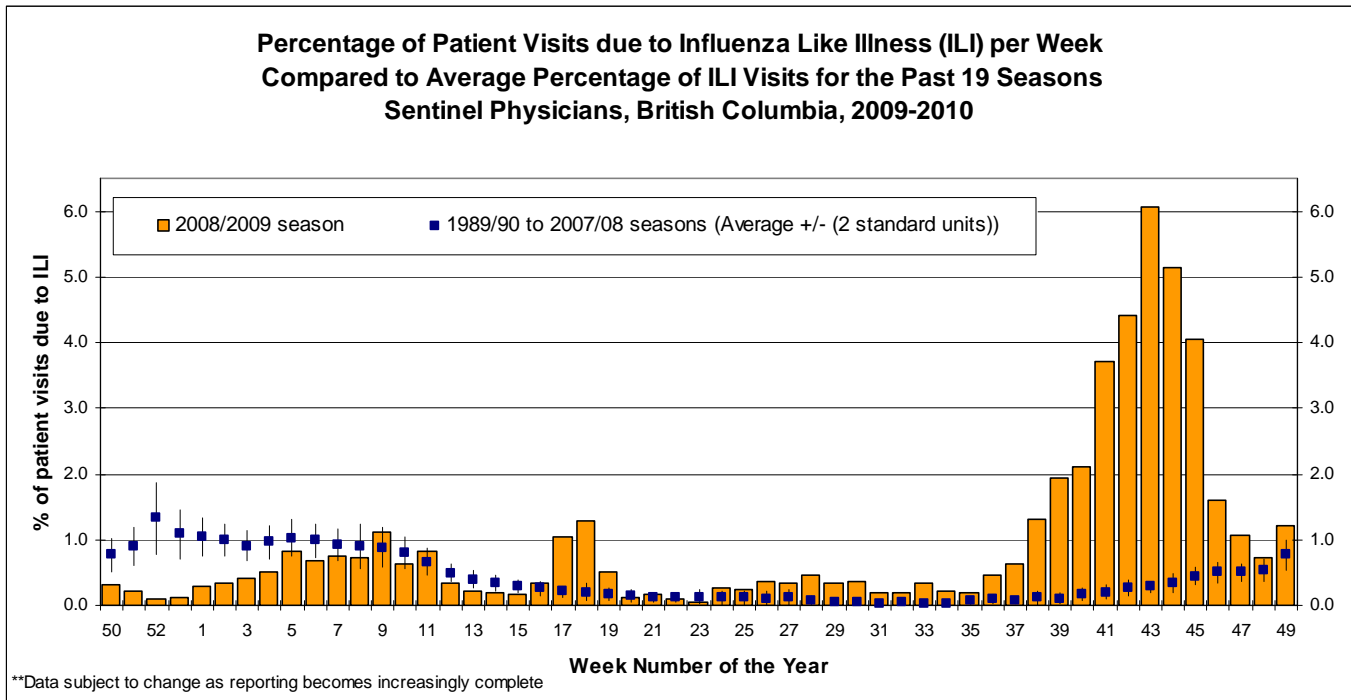
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British Columbia

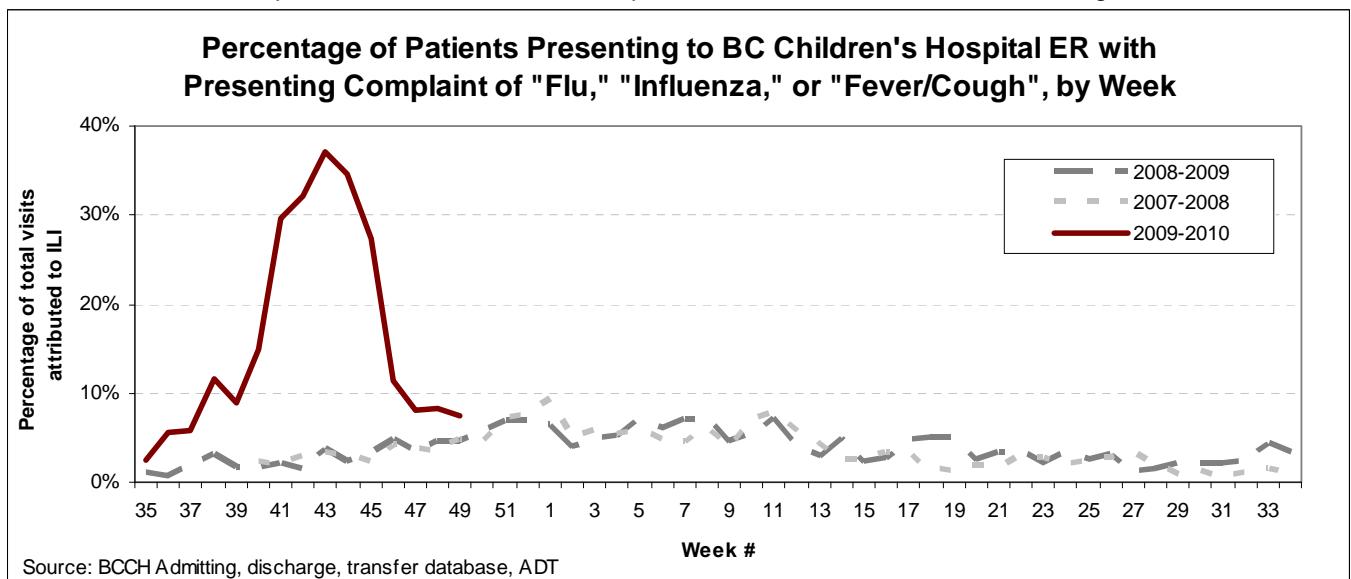
Sentinel Physicians

During week 49, the percentage of patients presenting to sentinel physicians with ILI increased to 1.22%. This represents an increase compared to the previous week but a steep decrease from 6.1% in week 43. It remains slightly above the expected range for this time of year. 51% (26/51) of sentinel physician sites reported for week 49.



BC Children's Hospital Emergency Room

During week 49, the proportion of Emergency Room visits that BC Children's hospital attributed to fever and cough remained similar to the previous week at 7.6%, 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

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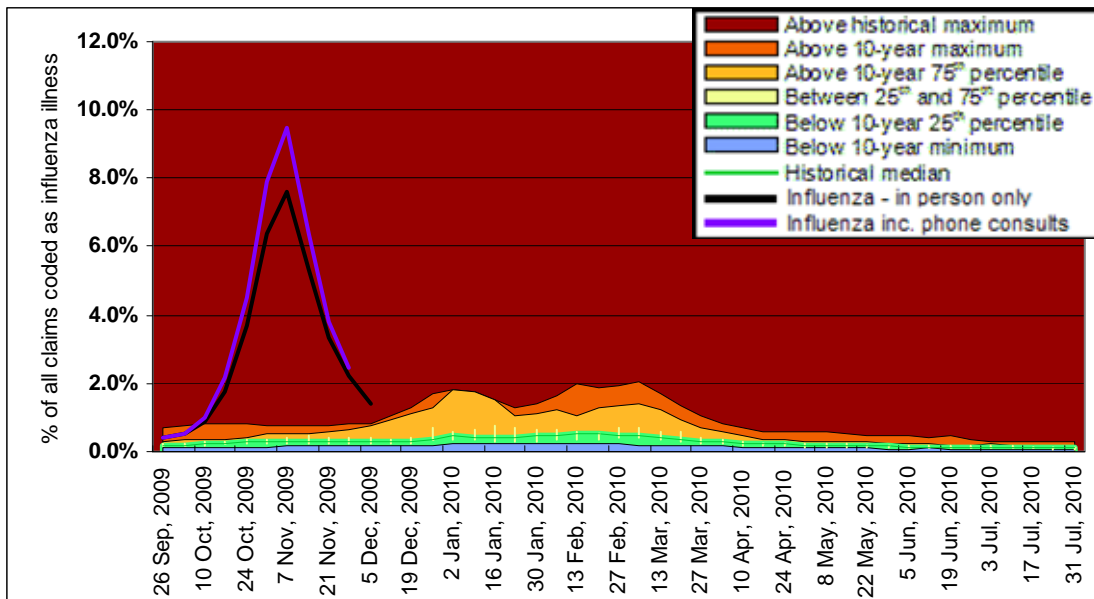
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Medical Services Plan

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). Please note that data for the current week is not yet available.

Influenza Illness Claims* British Columbia

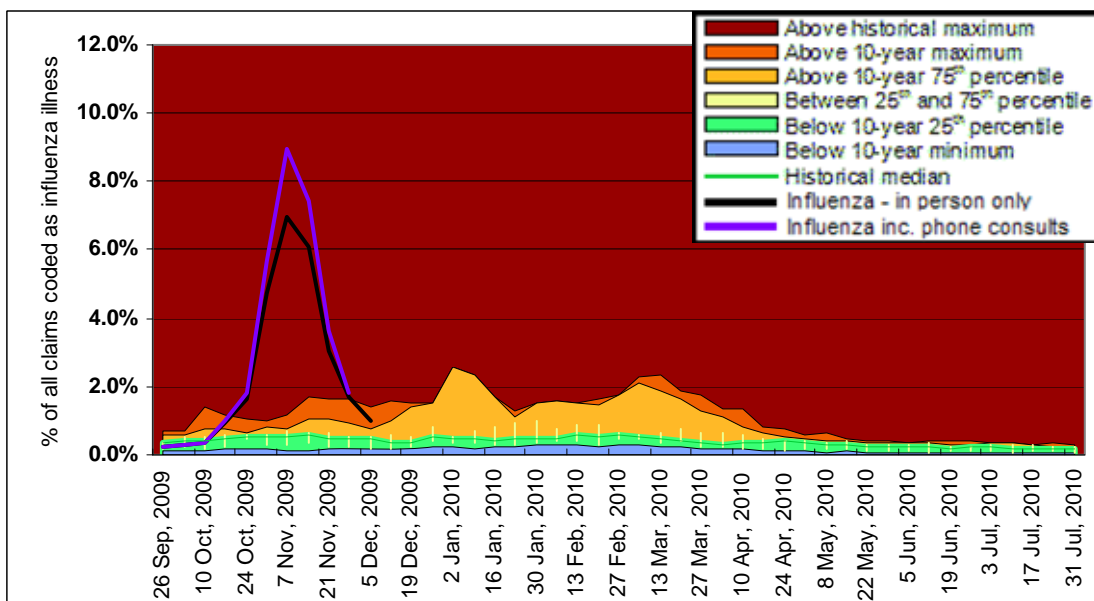


*Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

**MSP week 27 Sep 2009 corresponds to sentinel ILI week 39.

***Current to December 8, 2009

Northern

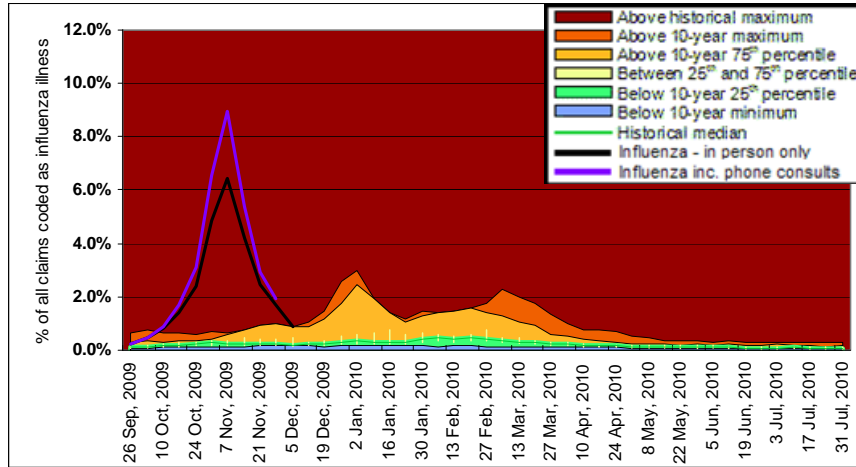


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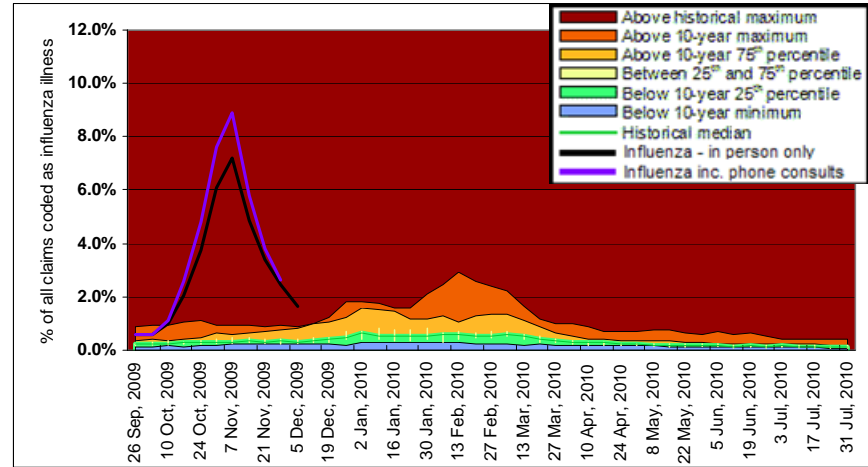
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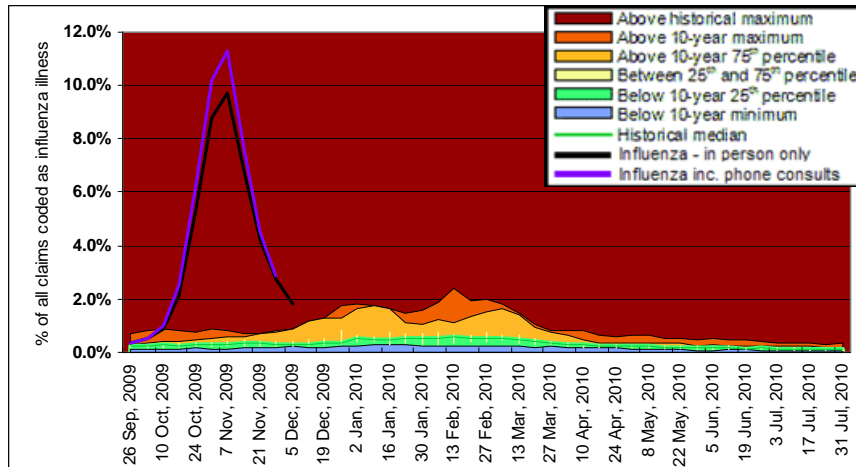
Interior



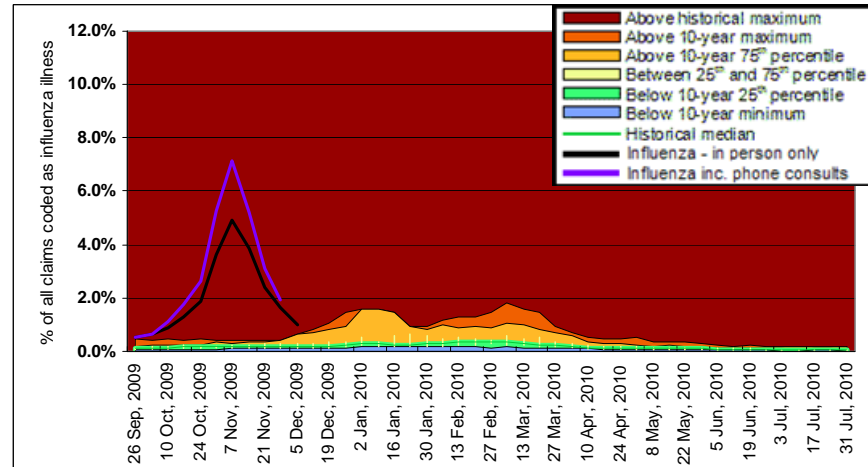
Vancouver Coastal



Fraser



Vancouver Island



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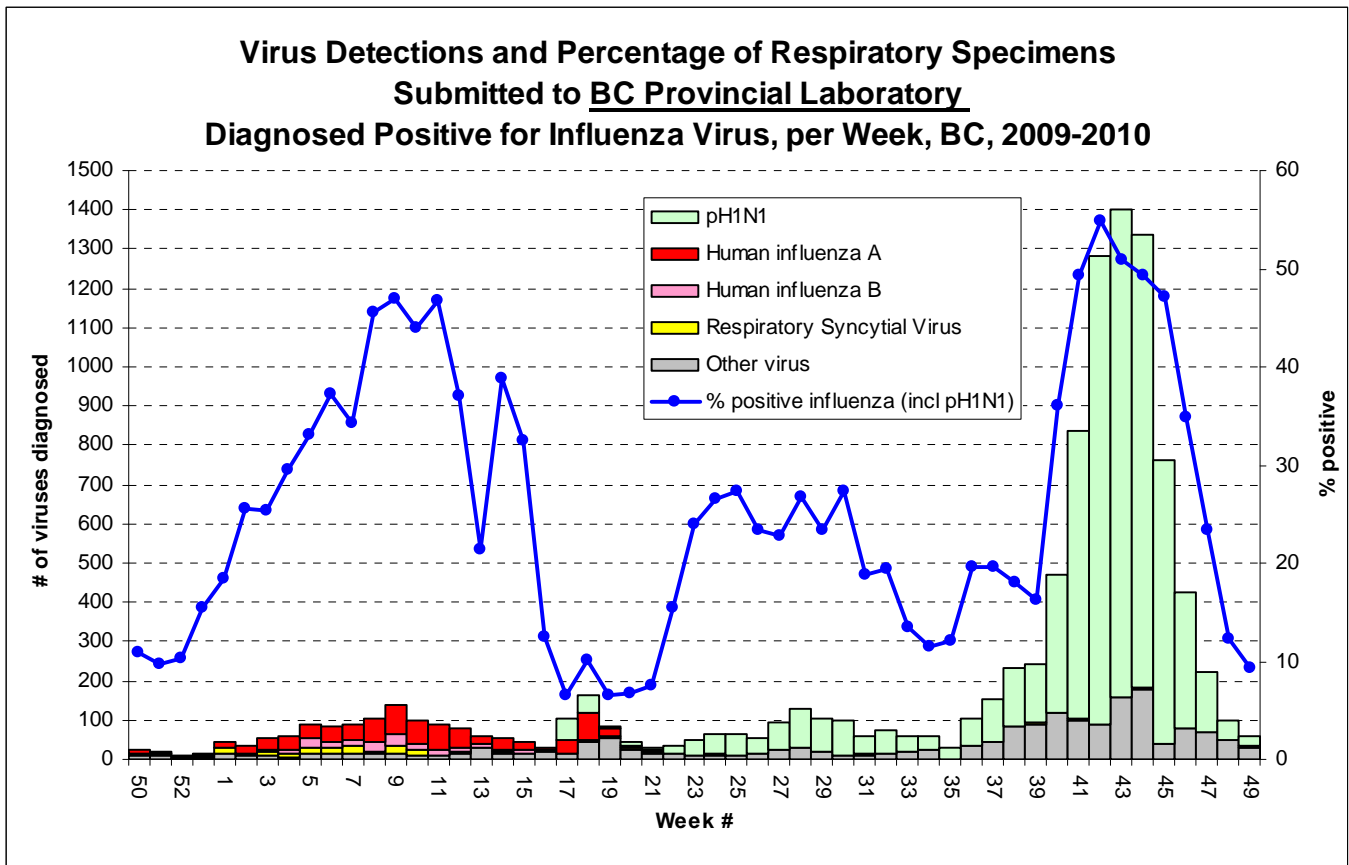
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Laboratory Reports

There has been a decrease in volume of submitted specimens from 2458 specimens in week 43 to 267 in week 49. In week 49, 25 out of 267 (9.4%) 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. In week 49, 112 were tested for other respiratory pathogens, of these 5% were parainfluenza, 3% were coronavirus and 22% were rhino-entero virus. No other respiratory pathogens were identified

During week 49, Children's and Women's Health Centre Laboratory tested 53 respiratory specimens. One was positive for influenza; this is similar to the previous week. Four specimens tested positive for RSV, one tested positive for parainfluenza, and one tested positive for adenovirus.

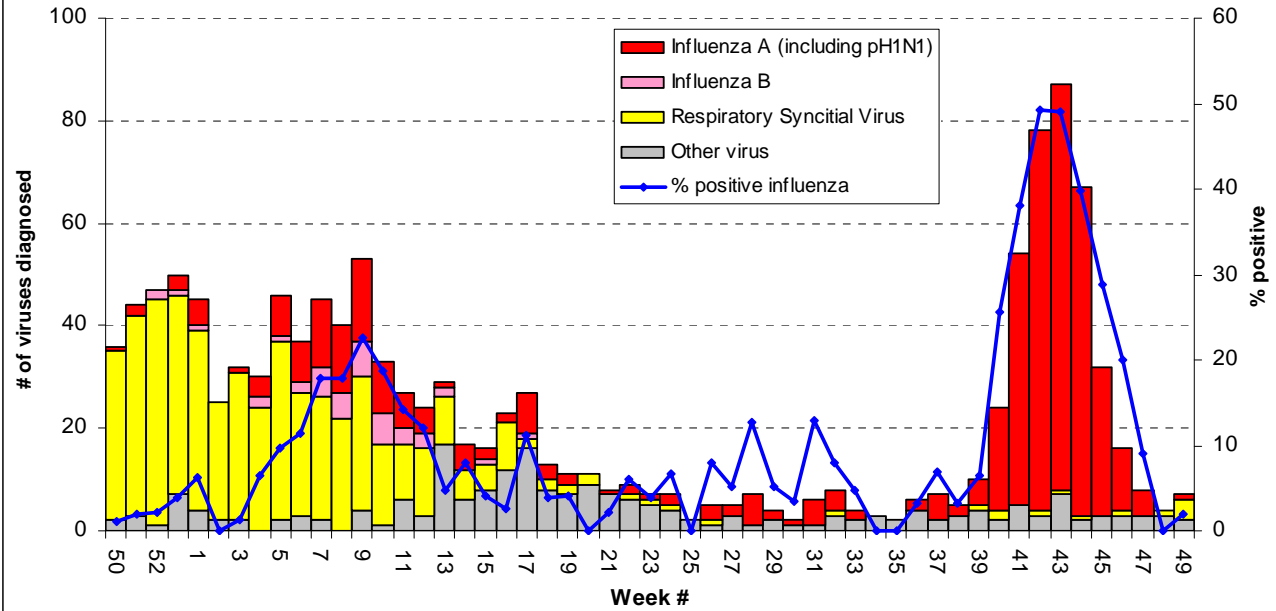


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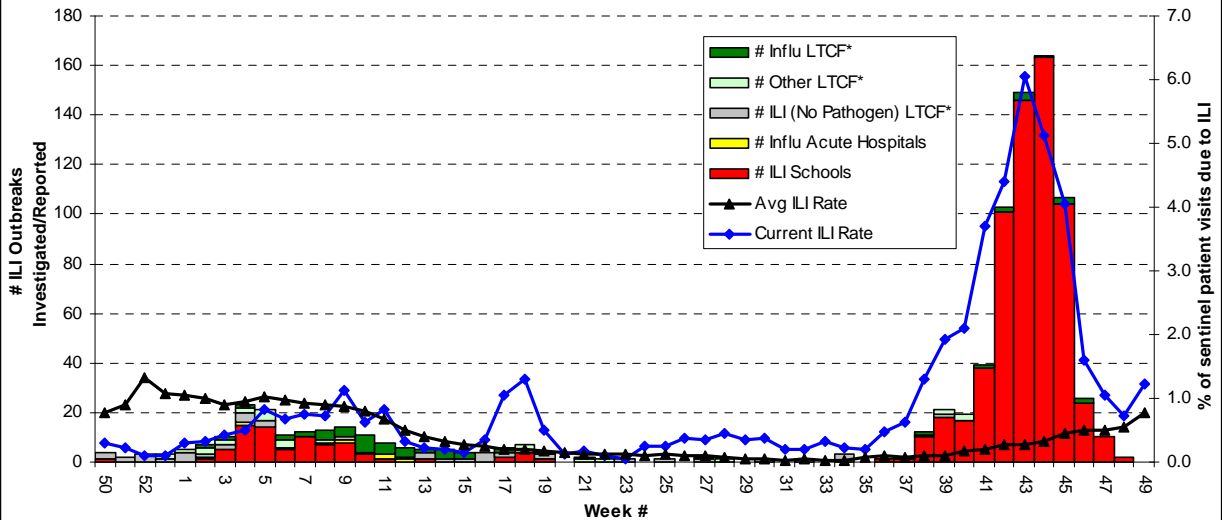
Virus Detections and Percentage of Respiratory Specimens Submitted to Children and Women's Health Centre Laboratory Diagnosed Positive for a Virus, per Week, British Columbia, 2009-2010



ILI Outbreaks

In week 49, no outbreaks were reported.

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, 2009-2010



* 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

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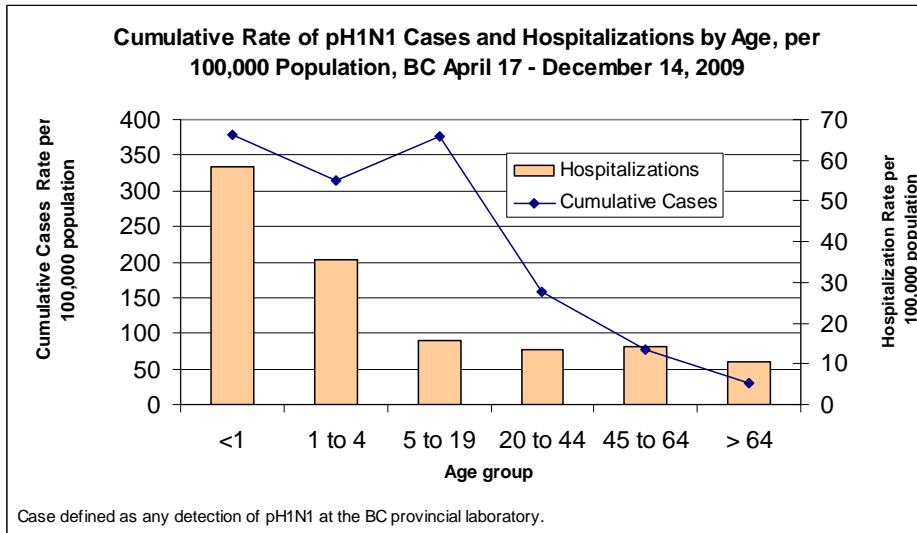
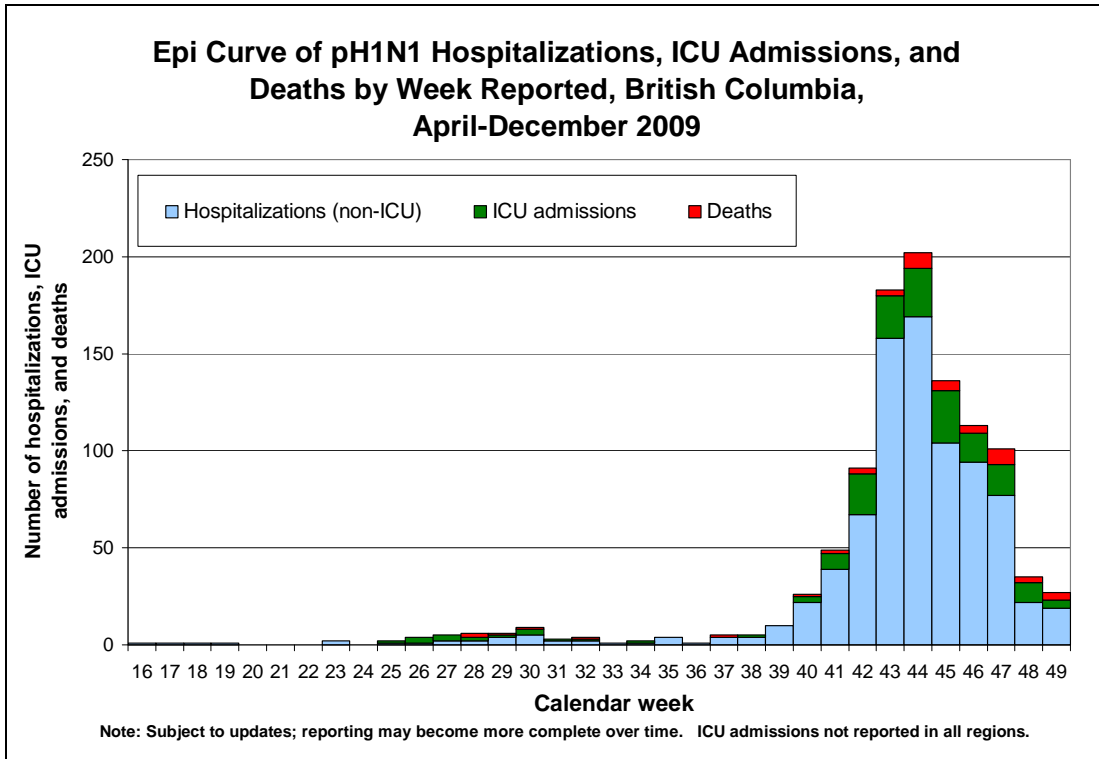
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Pandemic H1N1 (pH1N1) Severe Outcomes

As of December 14 and since April 2009, 1032 hospitalizations in patients with laboratory-confirmed pH1N1 have been reported in BC, of which 23 were reported in the preceding week. Among hospitalized cases, 64.4% 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 9% 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



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CANADA

FluWatch

During week 48, all national influenza activity indicators decreased. ILI consultation rates decreased for the fourth consecutive week from 111 (in week 43) to 18 consultations per 1000 patient visits in week 48; this is within the expected range for this time of year. People under 20 had the highest consultation rates. The proportion of tests positive for influenza was 12.4%, 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. No specimens were positive for influenza B. Geographically Saskatchewan and Newfoundland reported widespread activity. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory

Between September 1st and December 9, 2009, 451 influenza isolates were collected from provincial and hospital labs and characterized at the National Microbiology Laboratory (NML):

433 A/California/07/2009 (H1N1)-like[§] from BC, AB, SASK, MN, 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;

4 A/Perth/16/2009 (H3N2)-like from AB & QC;

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 9th, 2009 indicated that most pH1N1 (n=448) isolates were sensitive to oseltamivir, 5 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=440), seasonal H1N1 (n=2), A/H3N2 (n=2) and influenza B (n=1) isolates were sensitive to zanamivir. All pH1N1 (n=441), and A/H3N2 (n=10) 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 December 5th, influenza activity continued to decrease. 8.9% of respiratory specimens tested in reference laboratories in week 48 were positive for influenza, and over 98% percent of the subtyped influenza A viruses were pH1N1. 1.5% of specimens tested positive for Influenza B. The proportion of sentinel physician visits for ILI decreased to 2.7%; this is below the seasonal peak for last year, but above baseline levels. The proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold for the tenth consecutive week.

In Europe for the week ending December 11 influenza activity remained elevated. Most reporting countries indicated medium to high intensity influenza activity and thirteen countries reported a declining trend. 32% of sentinel laboratory samples were positive for influenza. Over 99% of specimens positive for influenza A were pH1N1. (<http://www.eiss.org>)

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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