

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2009-10: Number 7, Week 46

November 15 - 21, 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 Remain Above Expected Range

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Highlights

In week 46 (November 15-21), influenza activity indicators showed a decline in activity for the third consecutive week. All indicators including the proportion of patients presenting to sentinel physicians, Medical Services Plan claims for influenza, emergency room visits from BC children's hospital, laboratory positivity for influenza and school outbreaks decreased steeply compared to the previous week. At the BC provincial laboratory, 34.7% (348/1003) of respiratory specimens were positive for influenza A and over 99% of subtyped isolates were the pandemic H1N1 virus (pH1N1). While surveillance indicators suggest that influenza activity due to pandemic H1N1 in BC is declining, it should be noted that current activity levels are still well above the expected range for this time of year and community transmission remains high.

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Disseminated/posted to web: November 25, 2009

Contributors: Vanita Sahni, Travis Hottes, Naveed Janjua, Danuta Skowronski

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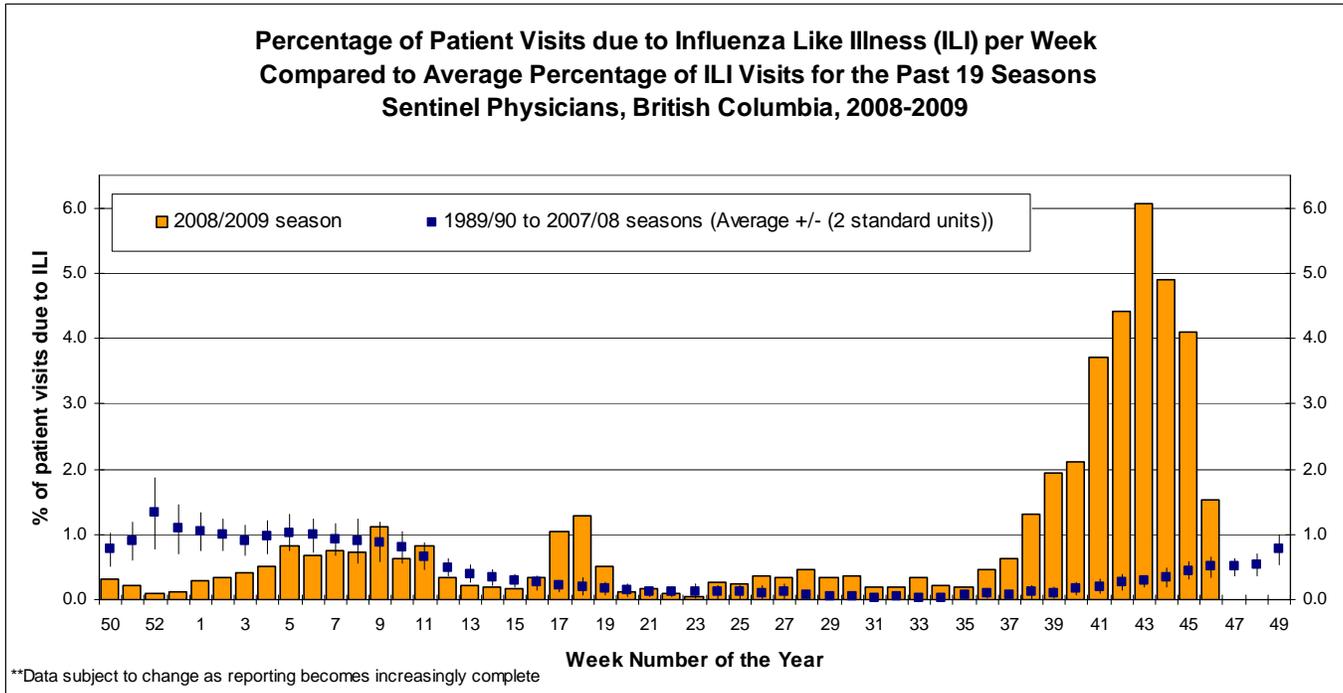
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British Columbia

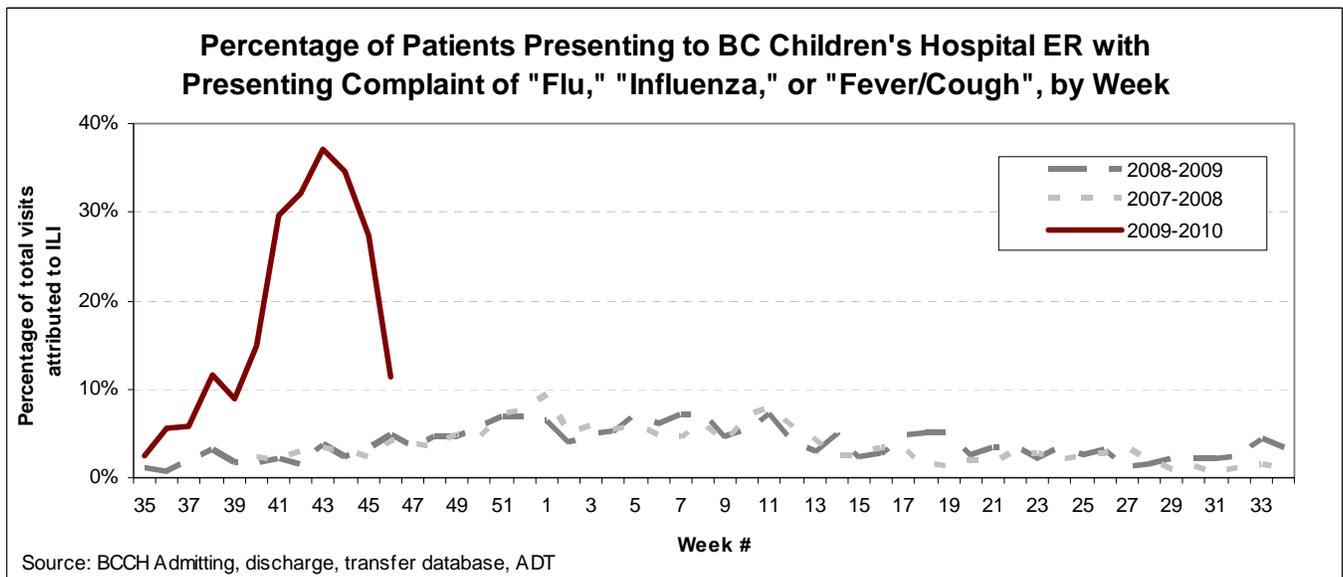
Sentinel Physicians

During week 46, the percentage of patients presenting to sentinel physicians with ILI was 1.5%. This represents a steep decrease from 6.0% in week 43, but is higher than the proportion observed during the peak of the 2008-09 season and still slightly above the historic peak. 53% (27/51) of sentinel physician sites reported for week 46.



BC Children's Hospital Emergency Room

During week 46, the proportion of Emergency Room visits that BC Children's hospital attributed to fever and cough also declined sharply to 11.4% 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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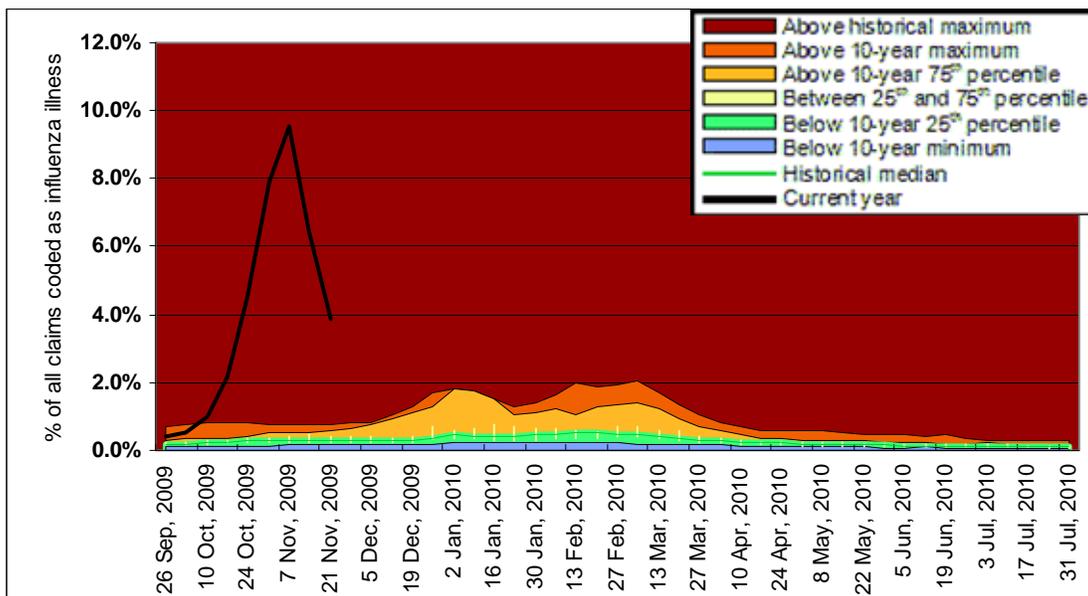
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims showed a steep decrease after several weeks of constant increase. However proportions in all five RHA's remain well above the historical maximum.

Influenza Illness Claims* British Columbia

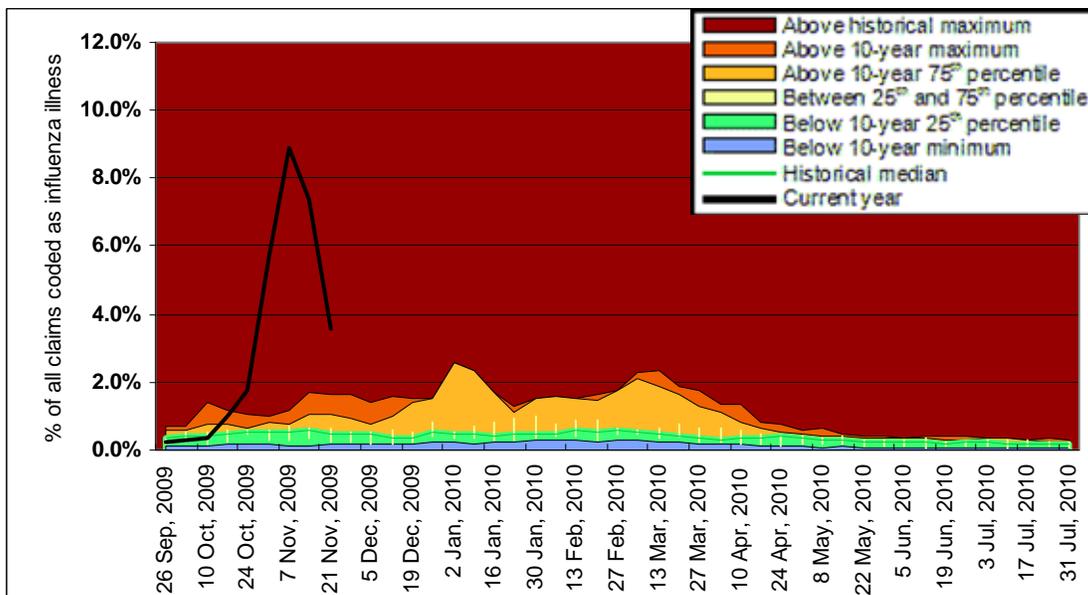


*Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

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

***Current to November 25, 2009

Northern

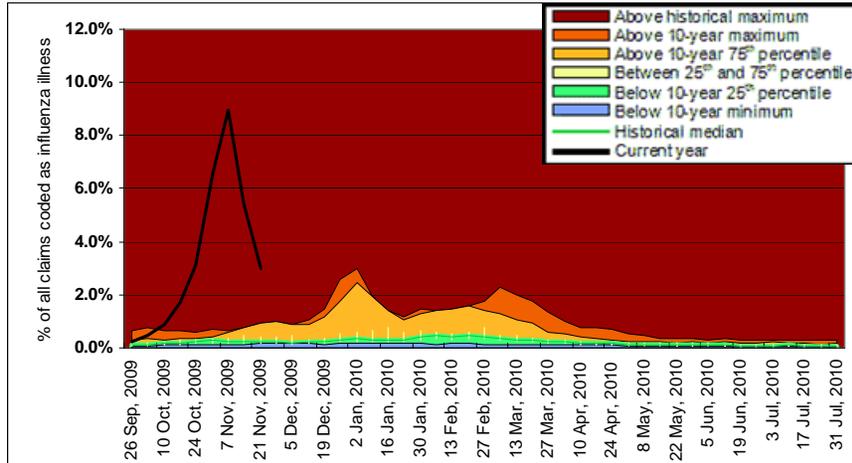


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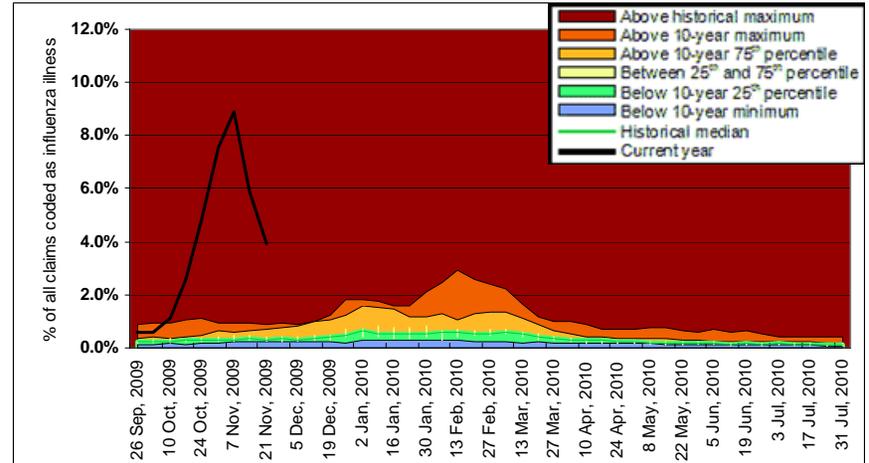
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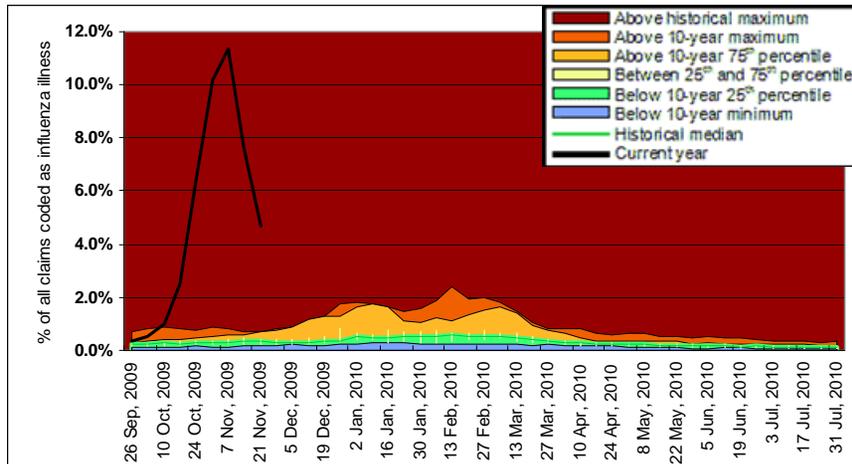
Interior



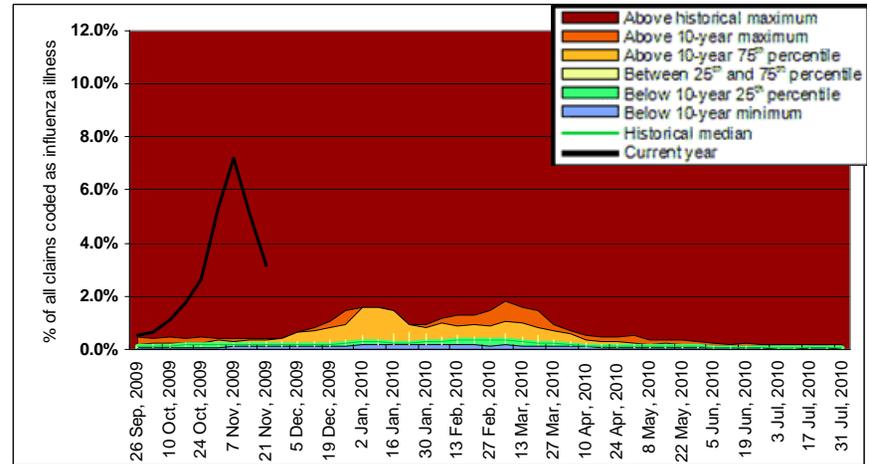
Vancouver Coastal



Fraser



Vancouver Island



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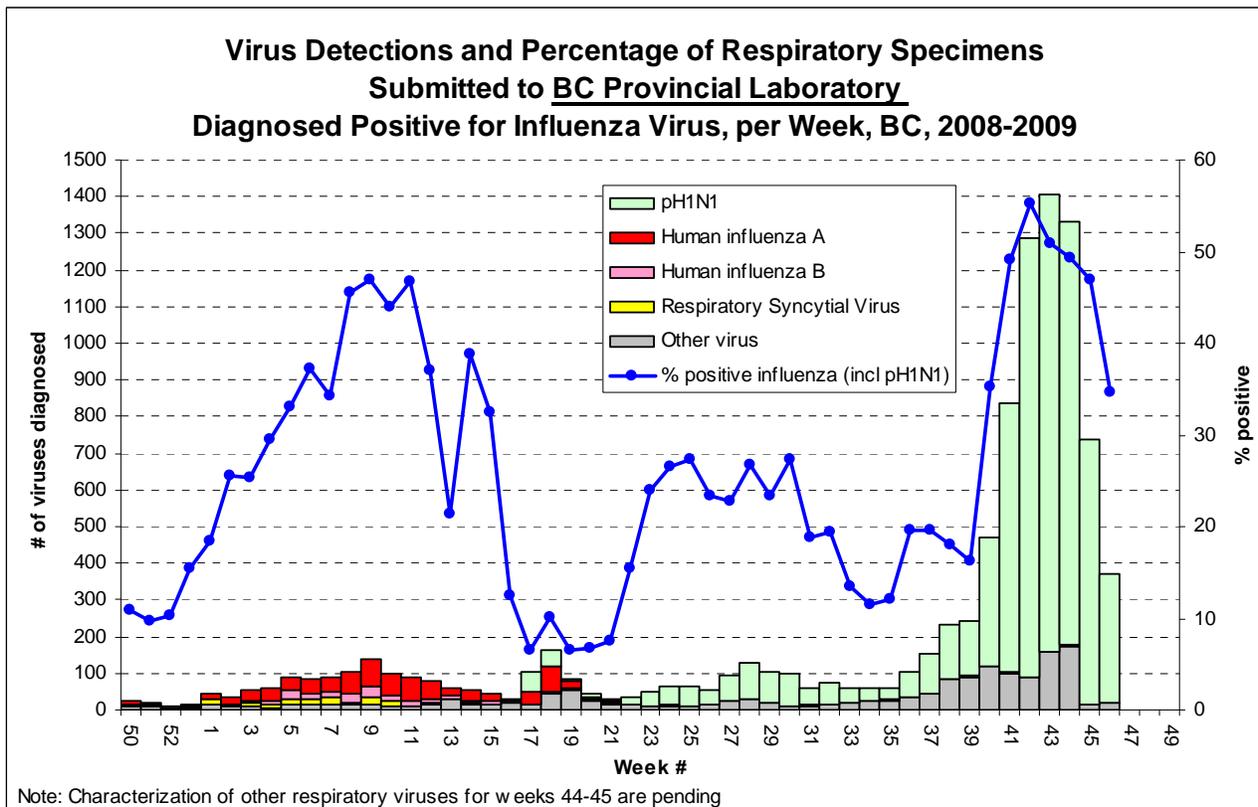
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Laboratory Reports

There has been a decrease in volume of submitted specimens from 2458 specimens in week 43 to 1003 in week 46. In week 46, 348 out of 1003 (34.7%) tested positive for influenza A, all 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. Results of other respiratory pathogen testing since week 43 are not yet complete.

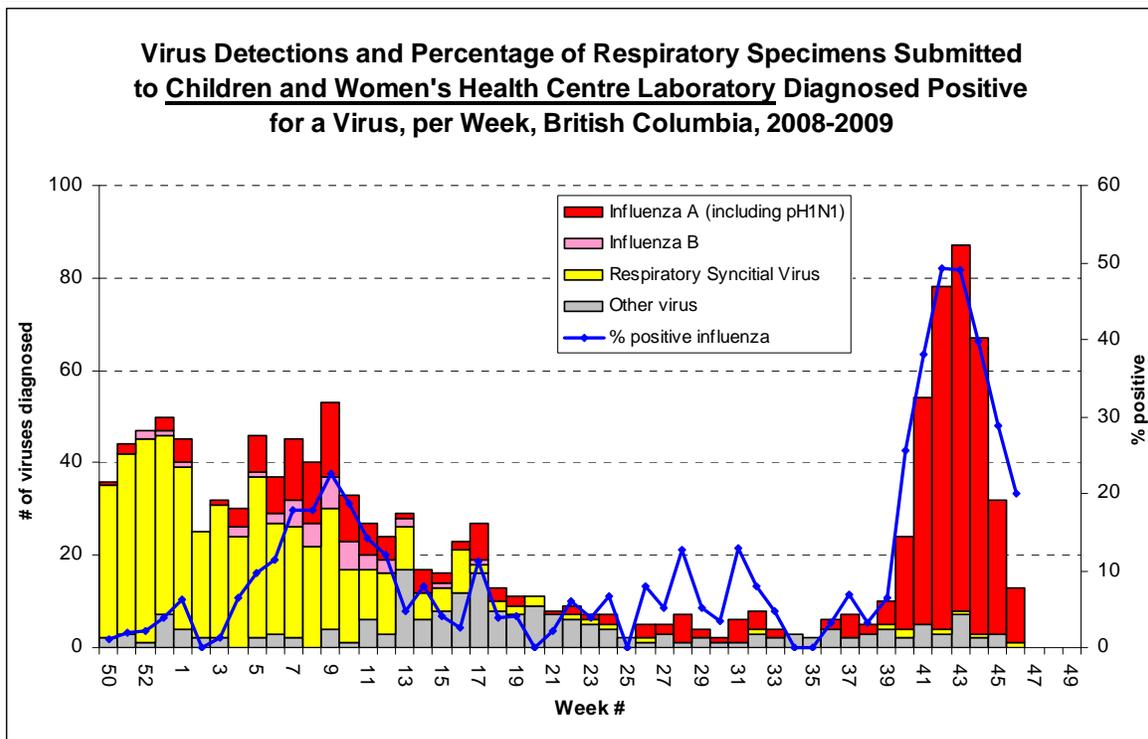
During week 46, Children's and Women's Health Centre Laboratory tested 60 respiratory specimens. The proportion positive for influenza was 20% and all subtyped specimens were pH1N1. This proportion positive represents a decrease compared to the previous week. One specimen tested positive for RSV and three tested positive for parainfluenza. No other respiratory viruses were detected.



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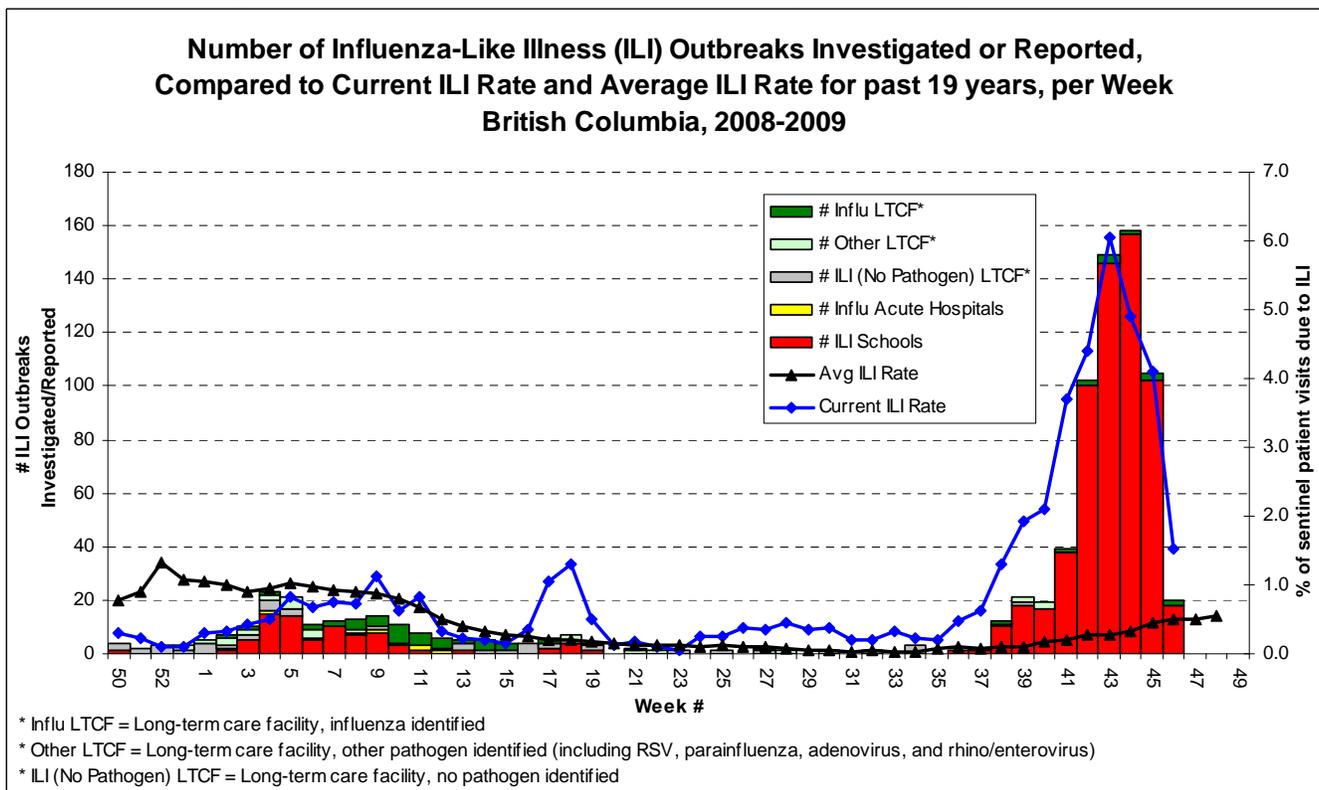
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ILI Outbreaks

In week 46, the number of school ILI outbreaks decreased to 18 (10 in NHA, 5 in IHA, 2 in VIHA and 1 in FHA,). Two outbreaks in long term care facilities in VIHA were confirmed as pH1N1 and reported in week 46.



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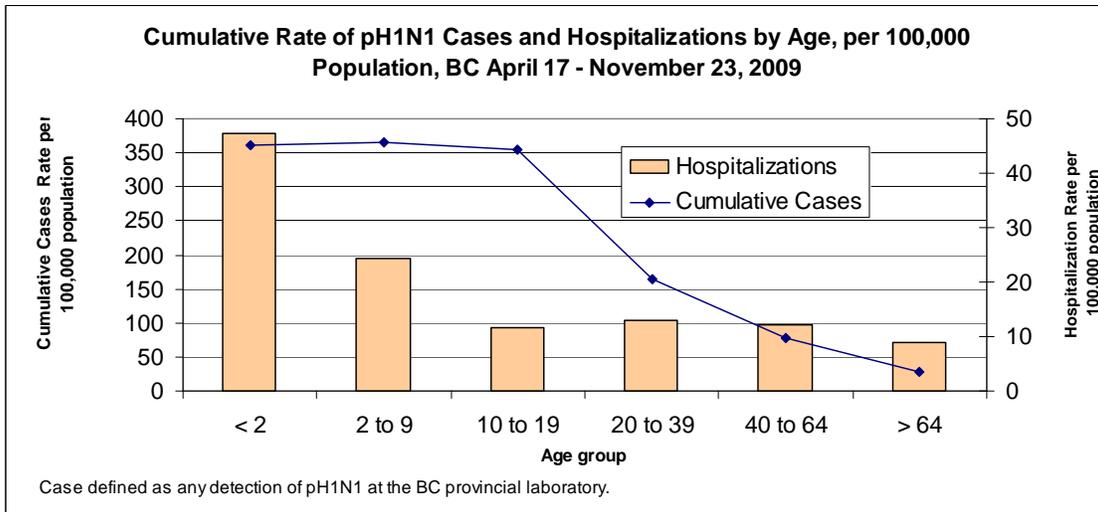
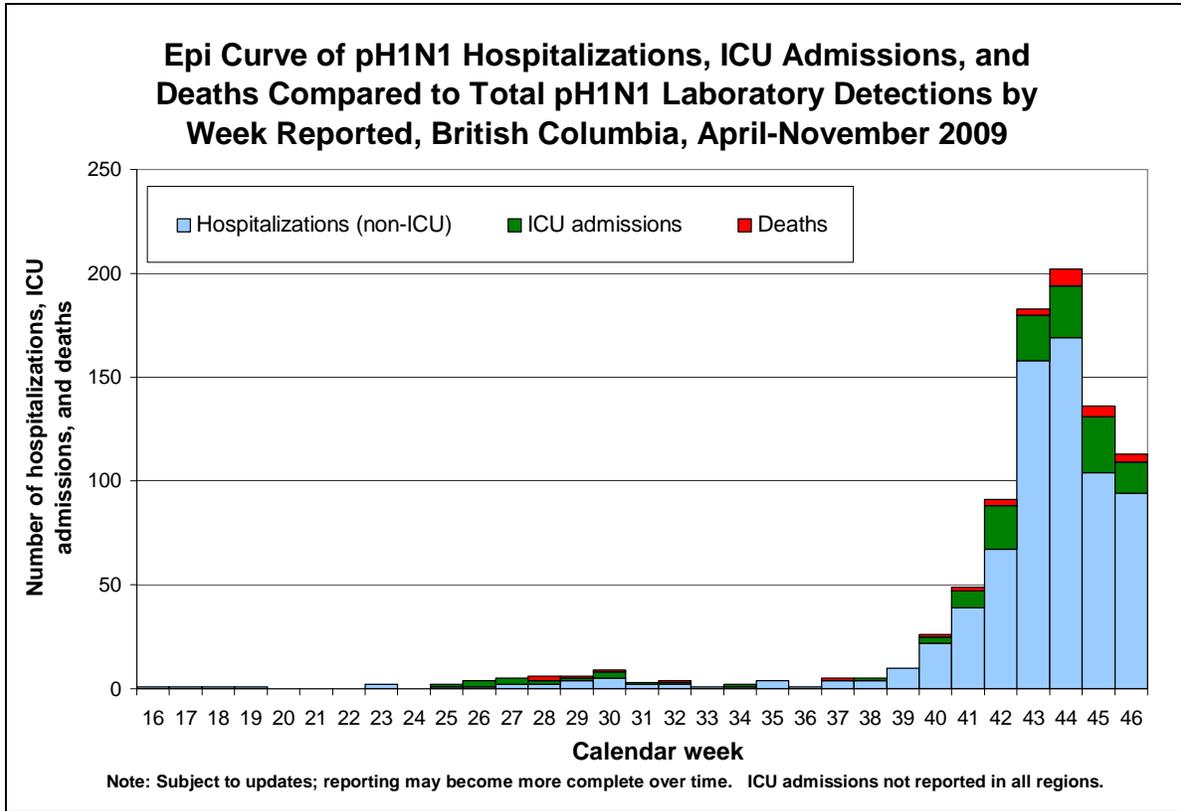
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Pandemic H1N1 (pH1N1) Severe Outcomes

As of November 23 and since April 2009, 863 hospitalizations in patients with laboratory-confirmed pH1N1 have been reported in BC, of which 109 were reported in the preceding week. Among hospitalized cases, 63.8% had at least one reported underlying medical condition (excluding pregnancy). Twenty-six percent of hospitalized cases have been admitted to the intensive care unit and 7% 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 2 years 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 45, national influenza activity levels remained elevated. ILI consultation rates decreased for the second consecutive week from 111 (in week 43) to 91 consultations per 1000 patient visits in week 45; 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 40.6%, similar to the previous two weeks. Over 99% of all subtyped influenza A specimens were positive for pH1N1; 4 specimens were positive for H3N2 and none were positive for seasonal H1N1. One specimen was positive for influenza B. Geographically BC, Saskatchewan, Ontario, Nova Scotia and Newfoundland reported widespread activity. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory

Between September 1st and November 18, 2009, 221 influenza isolates were collected from provincial and hospital labs and characterized at the National Microbiology Laboratory (NML):

218 A/California/07/2009 (H1N1)-like[§] from AB, ON, SASK, BC, NT, & NU;

1 A/Brisbane/59/2007(H1N1)-like[†] from AB;

1 A/Brisbane/10/2007(H3N2)-like[†] from ON;

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 November 18th, 2009 indicated that most pH1N1 (n=122) 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 one seasonal A/H1N1 isolate tested was resistant. All pH1N1 (n=114), seasonal H1N1 (n=1), A/H3N2 (n=2) and influenza B (n=1) isolates were sensitive to zanamivir. All pH1N1 (n=82), and A/H3N2 (n=6) 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 14th, influenza activity decreased slightly. 28.8% of respiratory specimens tested in reference laboratories in week 45 were positive for influenza, and over 99% percent of the subtyped influenza A viruses were pH1N1. 0.1% of specimens tested positive for Influenza B. The proportion of sentinel physician visits for ILI decreased to 5.5%, this is above the seasonal peak for last year. The proportion of deaths attributed to pneumonia and influenza was at the epidemic threshold for the seventh consecutive week.

In Europe for the week ending November 20 influenza activity remained high. Twenty-seven countries reported activity above baseline values, but seven reported a decreasing trend. 45% of sentinel laboratory samples were positive for influenza, this proportion is similar to that typically observed at the seasonal peak. 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