

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2009-10: Number 6, Week 45

November 8 - 14, 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 Show Signs of Decline; Levels Remain Above Historical Maximums in BC

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Highlights

In week 45 (November 8-14), influenza activity indicators showed signs of decline for the second 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 compared to the previous week. At the BC provincial laboratory, 47.1% (729/1548) of respiratory specimens were positive for influenza A, and all 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 risk of community transmission remains high.

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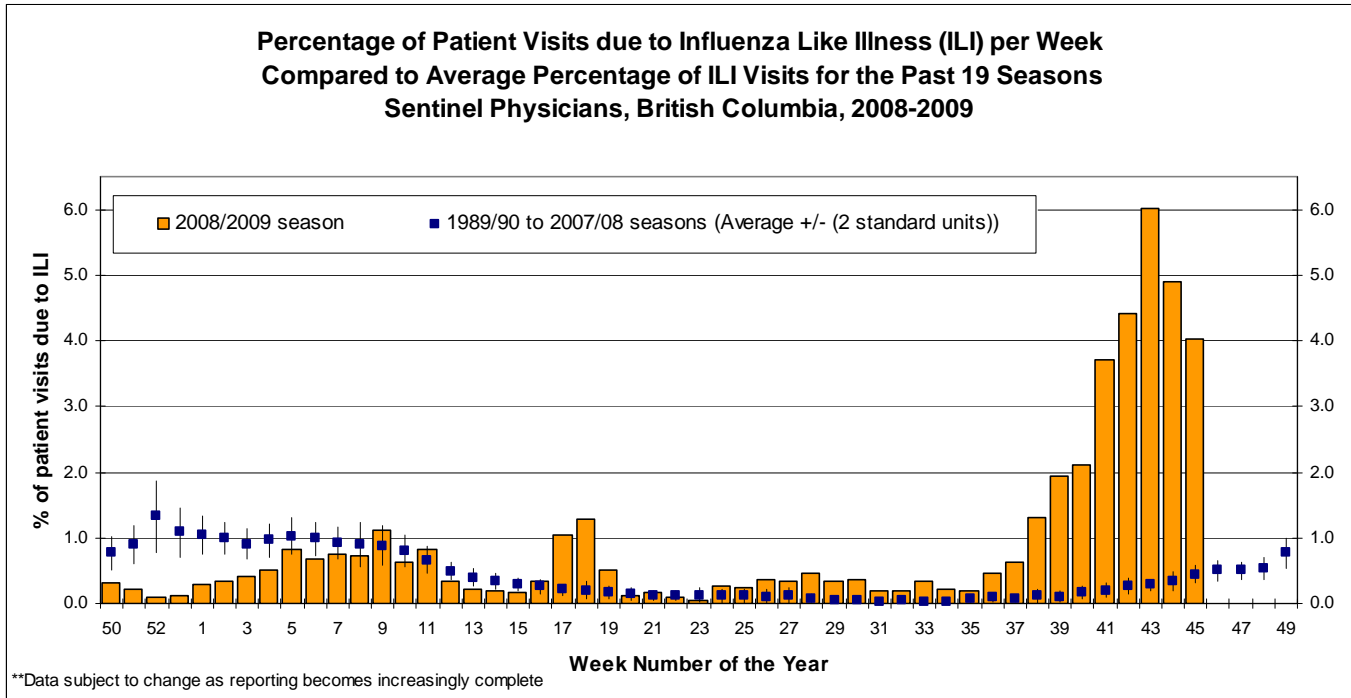
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British Columbia

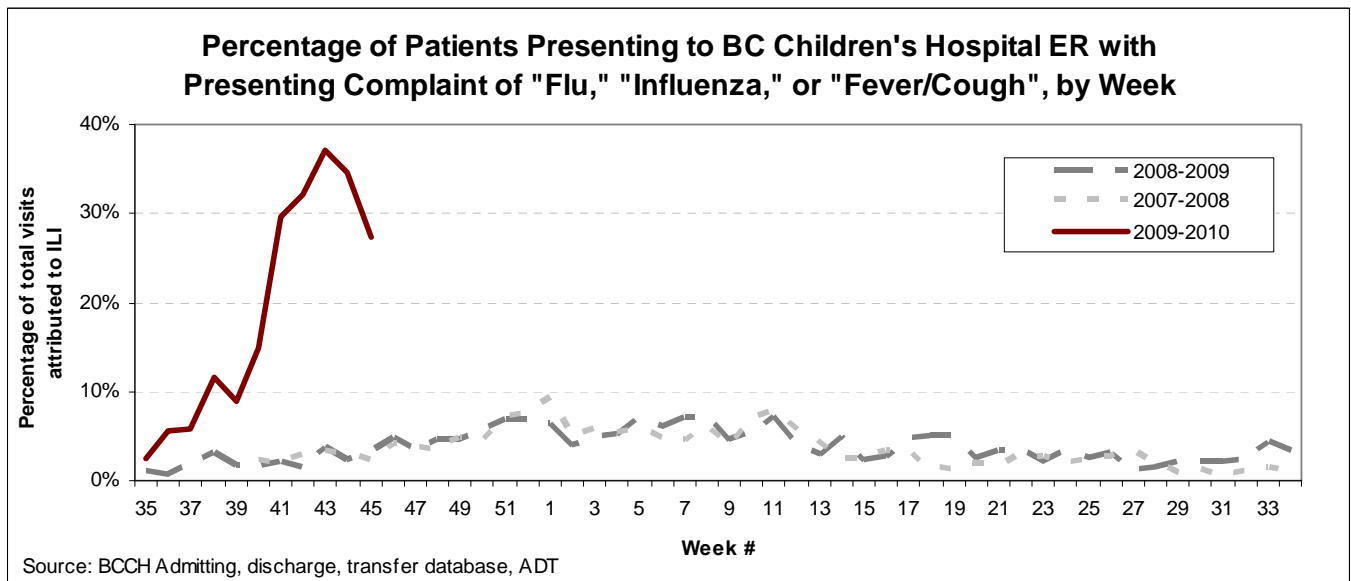
Sentinel Physicians

During week 45, the percentage of patients presenting to sentinel physicians with ILI was 4.0%. This is a decrease from 6.0% in week 43, but is higher than the proportion observed during the peak of the 2008-09 season and the historic peak. 63% (32/51) of sentinel physicians reported for week 45.



BC Children's Hospital Emergency Room

During week 45, the proportion of Emergency Room visits that BC Children's hospital attributed to fever and cough declined to 27% 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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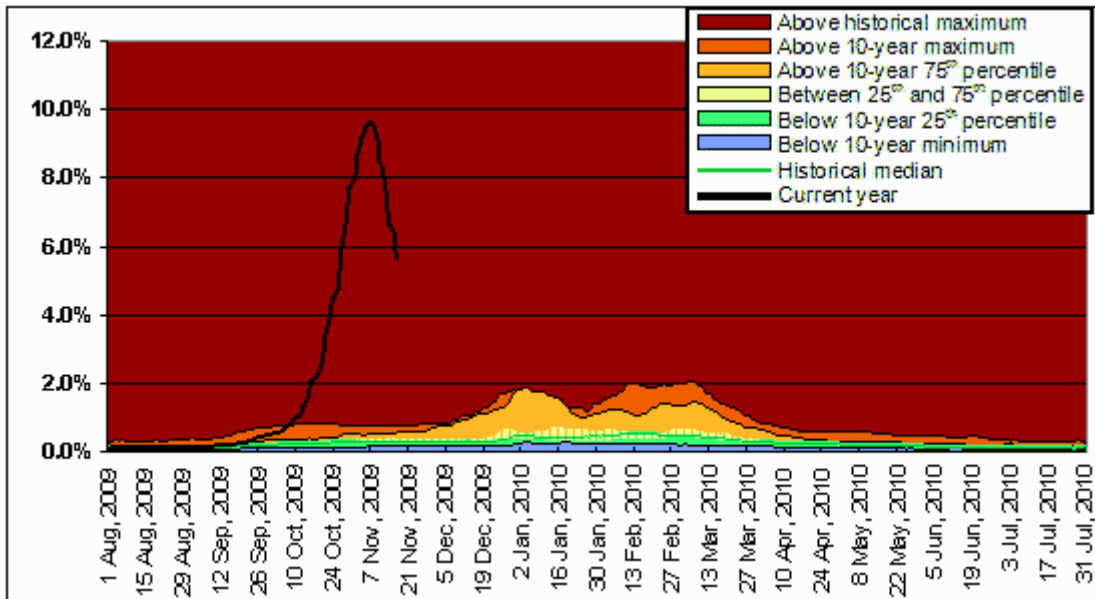
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Medical Services Plan

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

Influenza Illness Claims* British Columbia

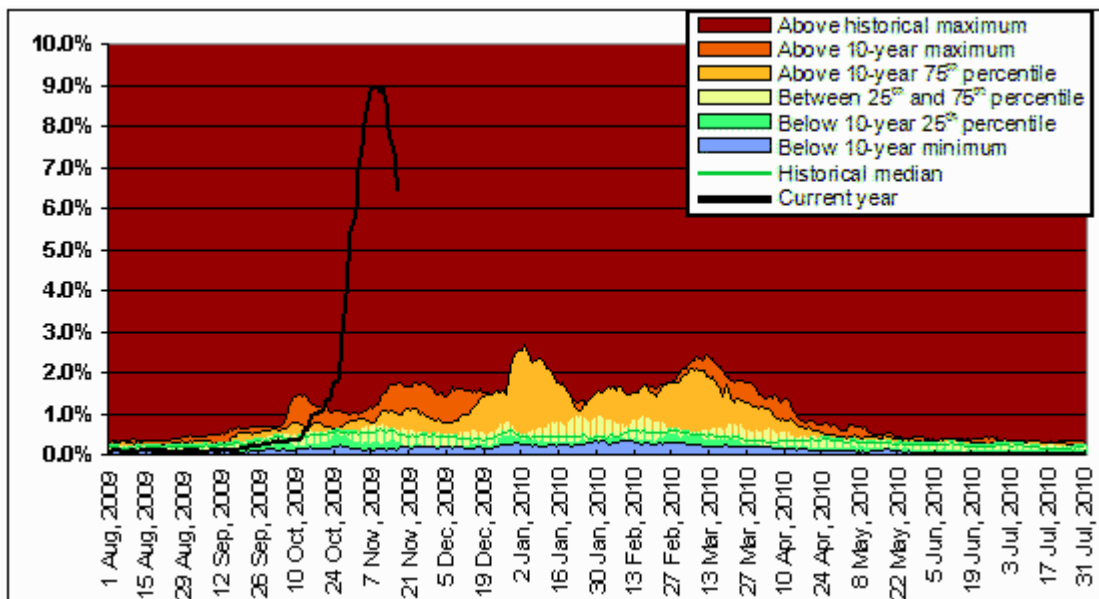


*Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

**MSP week 27 Sep 2009 corresponds to sentinel ILI week 40.

***Current to November 17, 2009

Northern

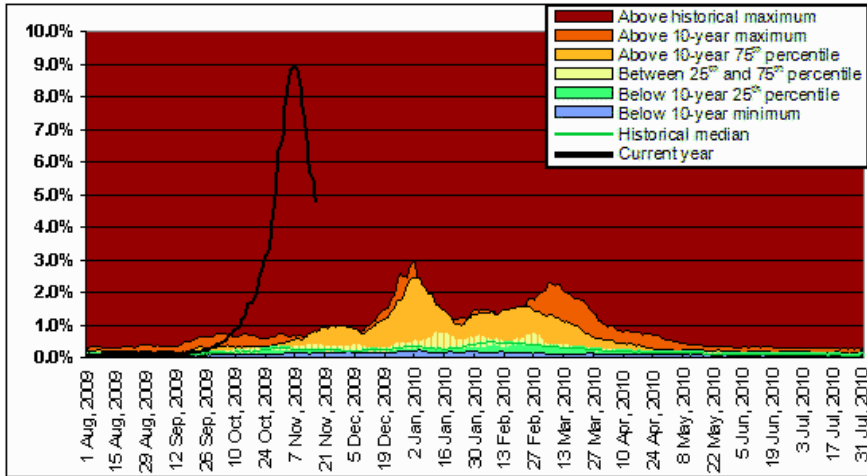


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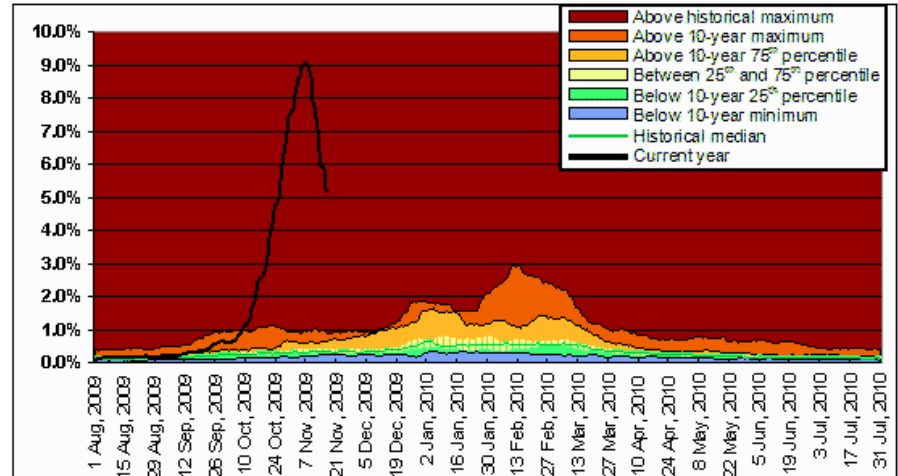
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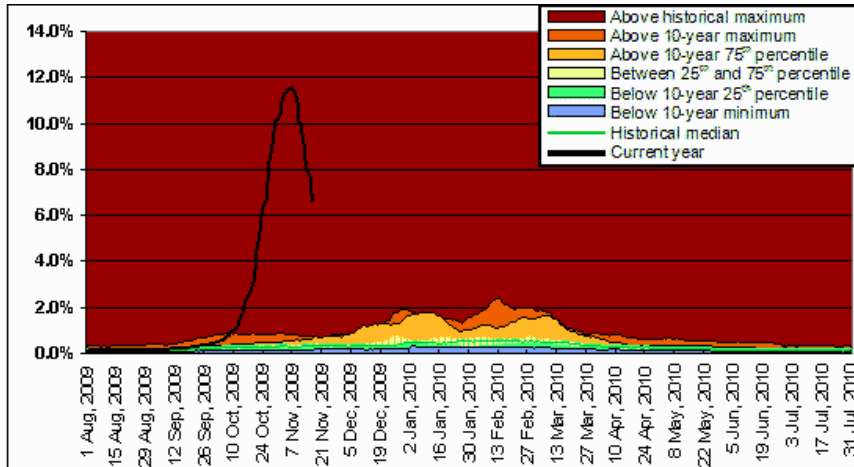
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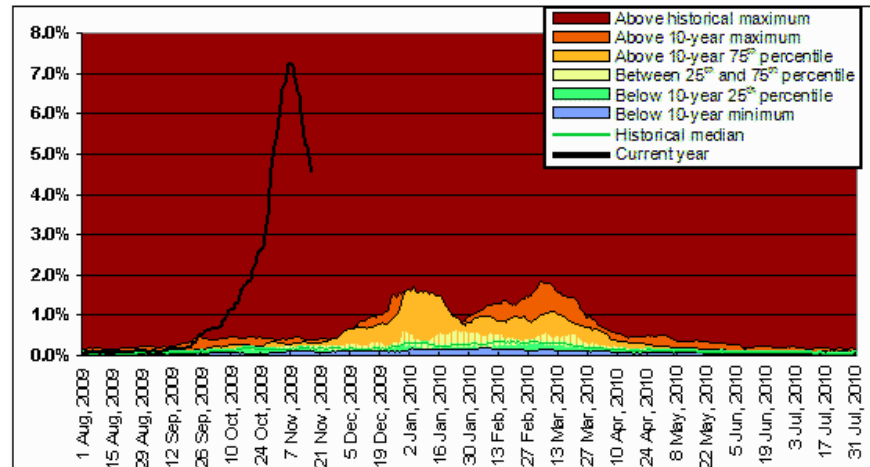
Vancouver Coastal



Fraser



Vancouver Island



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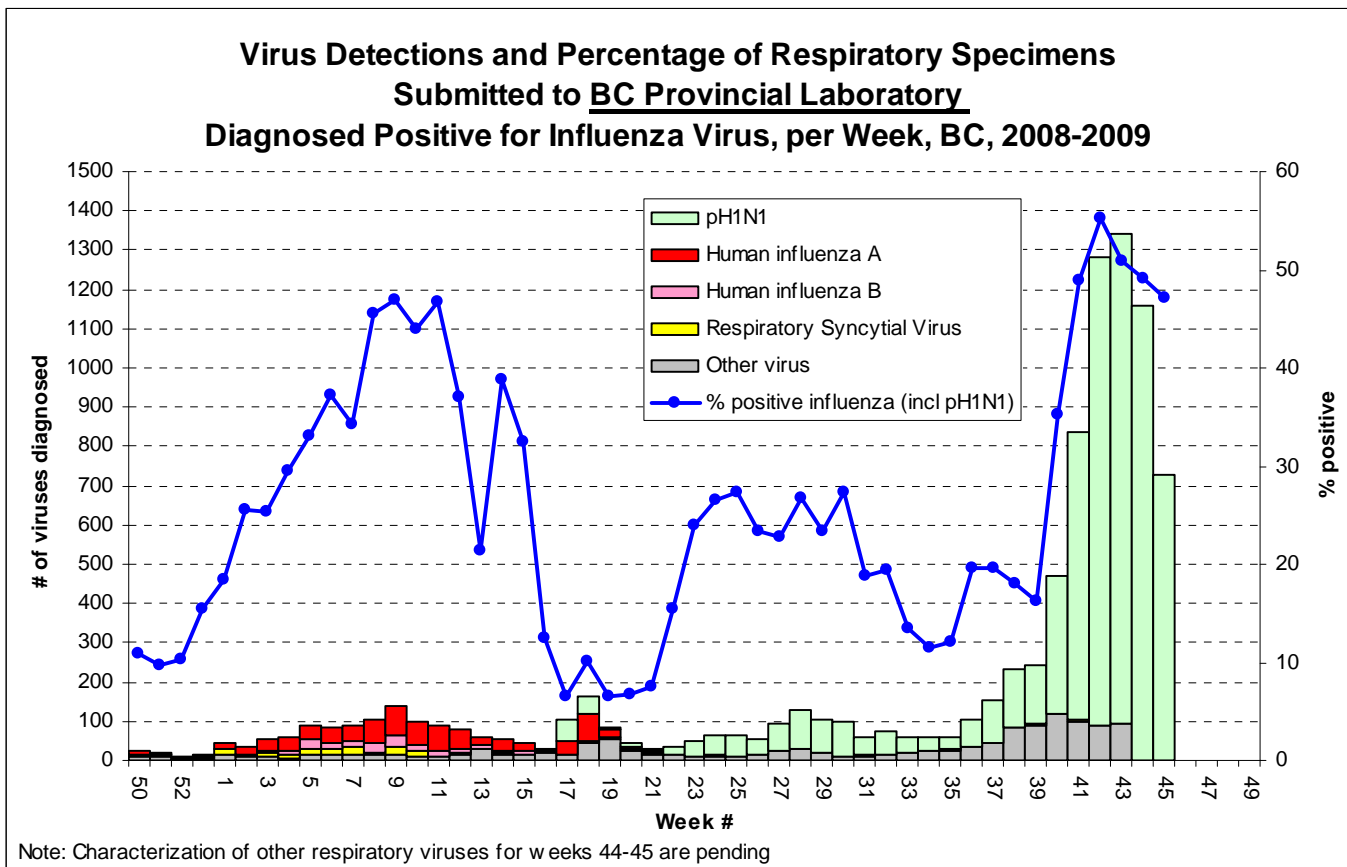
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Laboratory Reports

There is a decrease in volume of submitted specimens from 2380 specimen in week 44 to 1548 in week 45. In week 45, 729 out of 1548 (47.1%) tested positive for influenza A, all were pH1N1. The percent positivity is similar to the seasonal peak observed last year. Since week 35 (September 1, 2009), >99% of all subtyped influenza A viruses have been pH1N1. No influenza B was detected during week 45. Results of other respiratory pathogen testing since week 43 are not yet available.

During week 45, Children's and Women's Health Centre Laboratory tested 101 respiratory specimens. The proportion positive for influenza was 28.7% and all subtyped specimens were pH1N1. This proportion positive represents a decrease compared to the previous week. Three specimens tested positive for parainfluenza. No other respiratory viruses were detected.

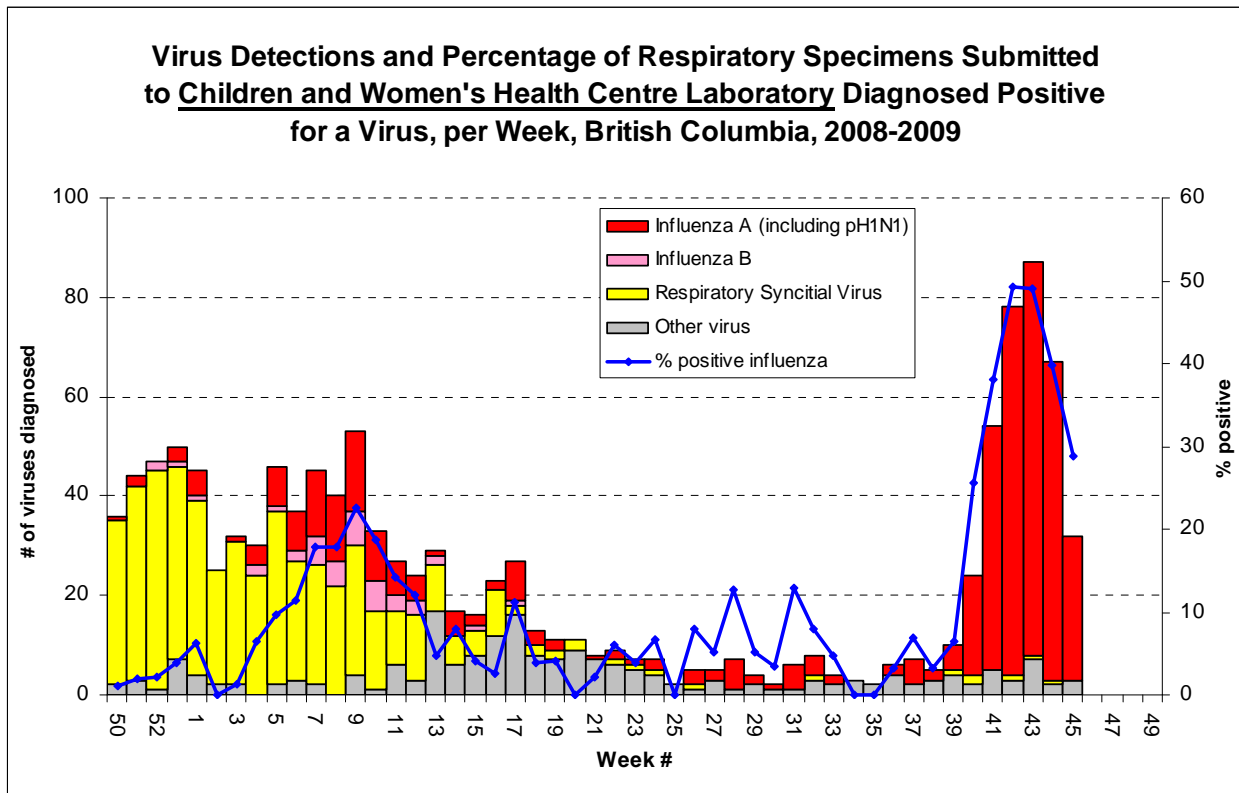


Note: The increase in bars during weeks 17-19 above reflects the large surge in specimens submitted to BCCDC for testing (2594 specimens were tested, a 5-fold increase over the number of tests performed during the 3-week period of peak activity this season). The increases in weeks 38-44 reflect a similar surge in testing.

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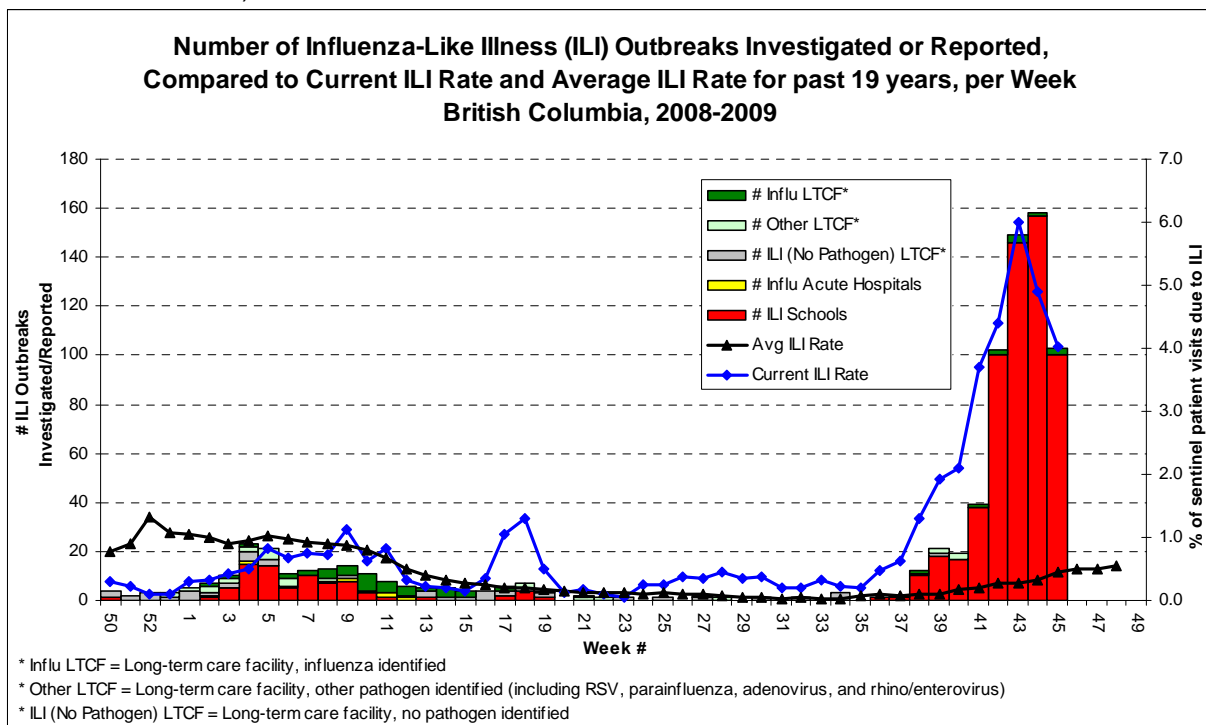
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ILI Outbreaks

In week 45, the number of school ILI outbreaks decreased to 100 (26 in IHA, 15 in FHA, 21 in VIHA, 27 in NHA, and 11 in VCH). Three outbreaks in long term care facilities were confirmed as pH1N1 and reported in week 45 (2 from FHA and 1 from VCH).



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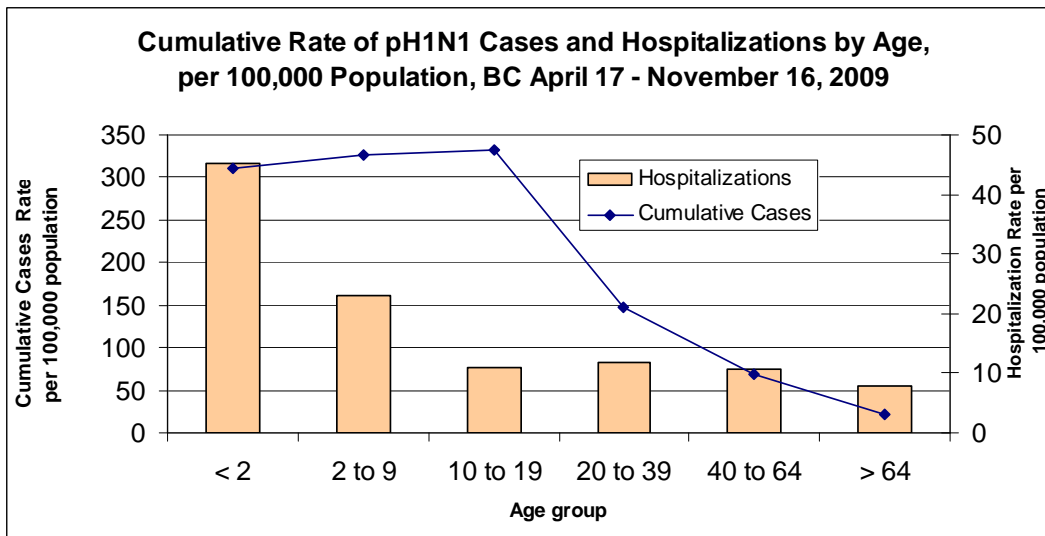
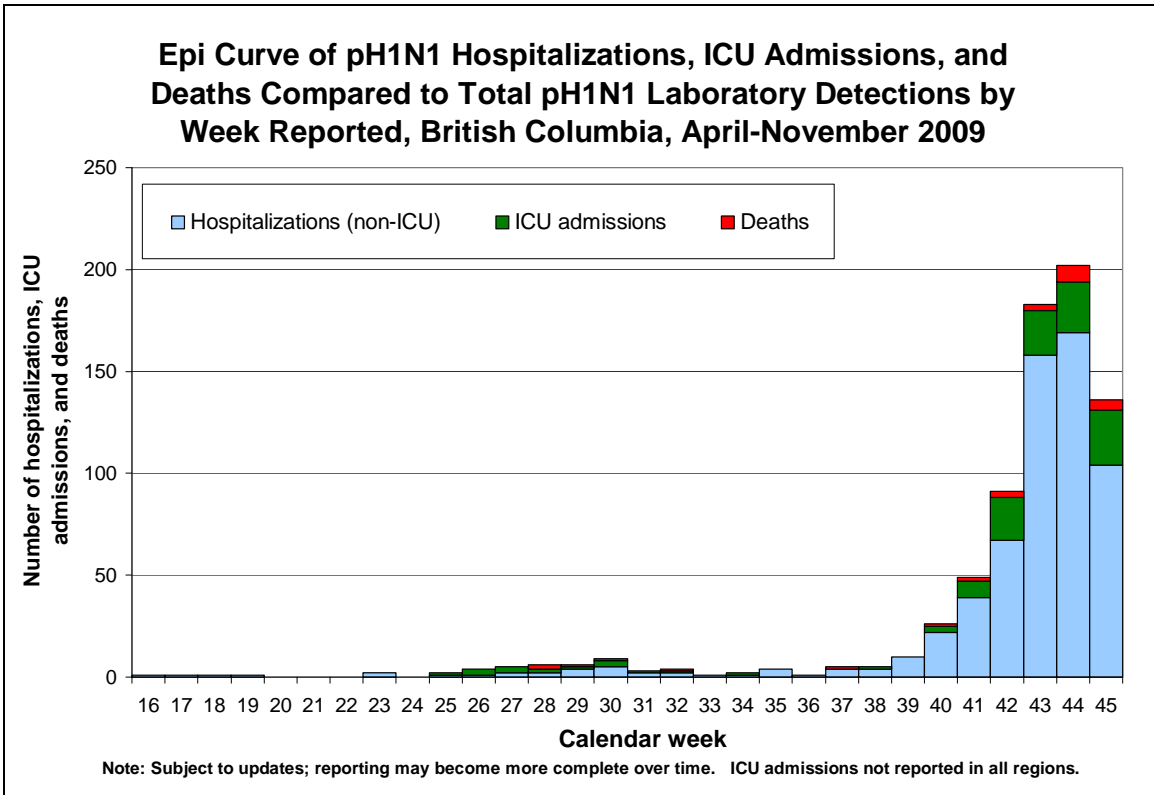
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Pandemic H1N1 (pH1N1) Severe Outcomes

As of November 16, 755 pH1N1 cases in BC have been admitted to hospital, of which 144 were reported in the preceding week. Among hospitalized cases, 63.1% had at least one underlying medical condition (excluding pregnancy). Twenty-six percent of hospitalized cases have been admitted to the intensive care unit and 6% have died. As shown in the graph below, pH1N1 total case detection rates have been highest among those 10 to 19 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 44, national influenza activity levels remained elevated. ILI consultation rates decreased slightly from 111 to 99 consultations per 1000 patient visits; 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 38.1%, similar compared to the previous week. 99.8% of all subtyped influenza A specimens were positive for pH1N1; 10 specimens were positive for H3N2 and none were positive for seasonal H1N1. Two were positive for influenza B. Geographically BC, Alberta Saskatchewan, Ontario, Nova Scotia, Newfoundland and Prince Edward Island reported widespread activity. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory

Between September 1st and November 12, 2009, 72 influenza isolates were collected from provincial and hospital labs and characterized at the National Microbiology Laboratory (NML):

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

1 A/Brisbane/59/2007(H1N1)-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 November 12th, 2009 indicated that most pH1N1 (n=67) isolates were sensitive to oseltamivir, 2 viruses were resistant. All influenza B isolates (n=1) and influenza A/H3N2 isolates tested were sensitive and the one seasonal A/H1N1 isolate tested was resistant. All pH1N1 (n=70), seasonal H1N1(n=1), A/H3N2 (n=1) and influenza B (n=1) isolates were sensitive to zanamivir. All pH1N1 (n=62), seasonal H1N1(n=1) and A/H3N2 (n=3) isolates were 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

Northern Hemisphere: In the United States (<http://www.cdc.gov/flu/weekly/>), in the week ending November 7th, influenza activity decreased slightly. 30.1% of respiratory specimens tested in reference laboratories in week 44 were positive for influenza, and 100% percent of the subtyped influenza A viruses were pH1N1. 0.5% of specimens tested positive for Influenza B. The proportion of sentinel physician visits for ILI decreased to 6.7%, this is above the seasonal peak for last year. The proportion of deaths attributed to pneumonia and influenza was at the epidemic threshold. In Europe for the week ending November 13 influenza activity continued to increase. Seven countries reported a very high or high activity, and 20 reported an increasing trend. 43% of sentinel laboratory samples were positive for influenza, and 100% of specimens positive for influenza A were pH1N1. (<http://www.eiss.org>)

Southern Hemisphere: Many countries in the Southern Hemisphere previously reporting severe winter influenza activity have now passed the peak. Notably Australia, influenza activity is continuing to decrease with most jurisdictions reporting activity at or near baseline levels. In New Zealand pH1N1 activity continues to decline; consultations with sentinel physicians have declined from the peak in early July, and are now approaching baseline levels. In Chile, ILI activity is within the range expected for this time of year. In South Africa cases are also declining, but pH1N1 remains the dominant subtype. Previously, in June and July of this year the dominant subtype was A/H3N2.

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Contact Us:

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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

