

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2009-10: Number 2, Week 41

October 11 - 17, 2009



BC Centre for Disease Control

An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Sharp Increases in Influenza Activity Indicators for the Fourth Consecutive Week in BC

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Highlights

In week 41 (October 11-17), BC continued to experienced a large increase in influenza activity. All indicators including proportion of patients presenting to sentinel physicians for ILI, Medical Services Plan claims for influenza and laboratory positivity for influenza increased sharply compared to the previous week. Thirty-eight school ILI outbreaks were reported during this period. At the BC Provincial Laboratory, 48.4% (739/1528) of respiratory specimens were positive for influenza A, and over 99% of subtyped isolates were the pandemic H1N1 virus (pH1N1). Together surveillance indicators suggest that influenza activity due to pandemic H1N1 is increasing and remains above the expected range for this time of year.

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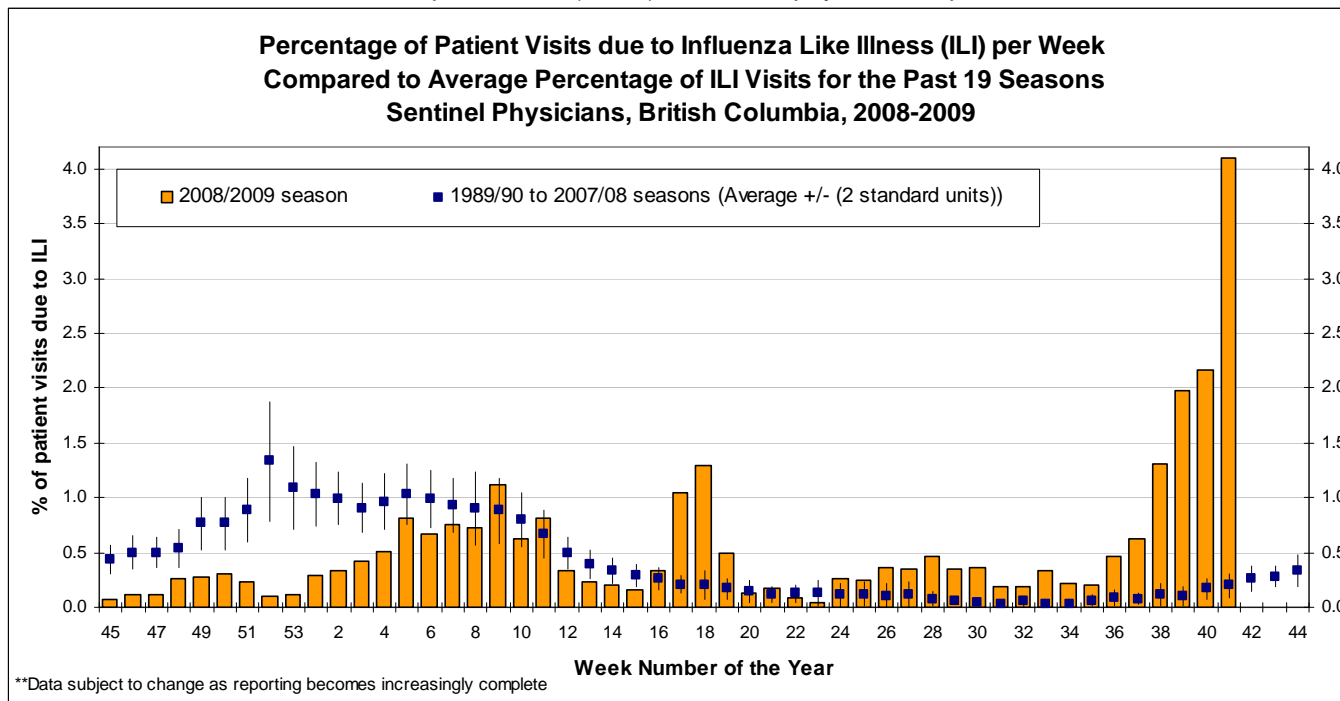
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British Columbia

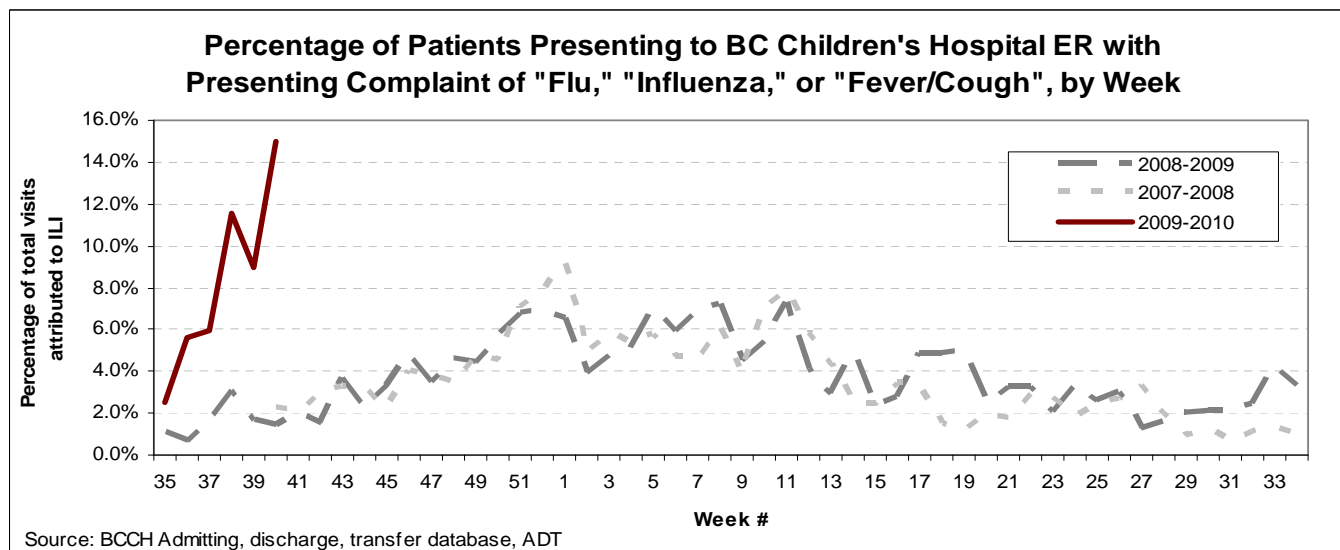
Sentinel Physicians

During week 41, the percentage of patients presenting to sentinel physicians with ILI sharply increased to 4.1%. This is higher than both the proportion reported in the previous week, the proportion observed during the peak of the 2008-09 season and the historic peak. 67% (32/48) of sentinel physicians reported for week 41.



BC Children's Hospital Emergency Room

During week 40, the proportion of Emergency Room visits BC Children's hospital attributed to ILI increased from 9% to 15.0%, this is higher than the proportions observed during the same week in previous years. Week 41 data is not available yet.



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

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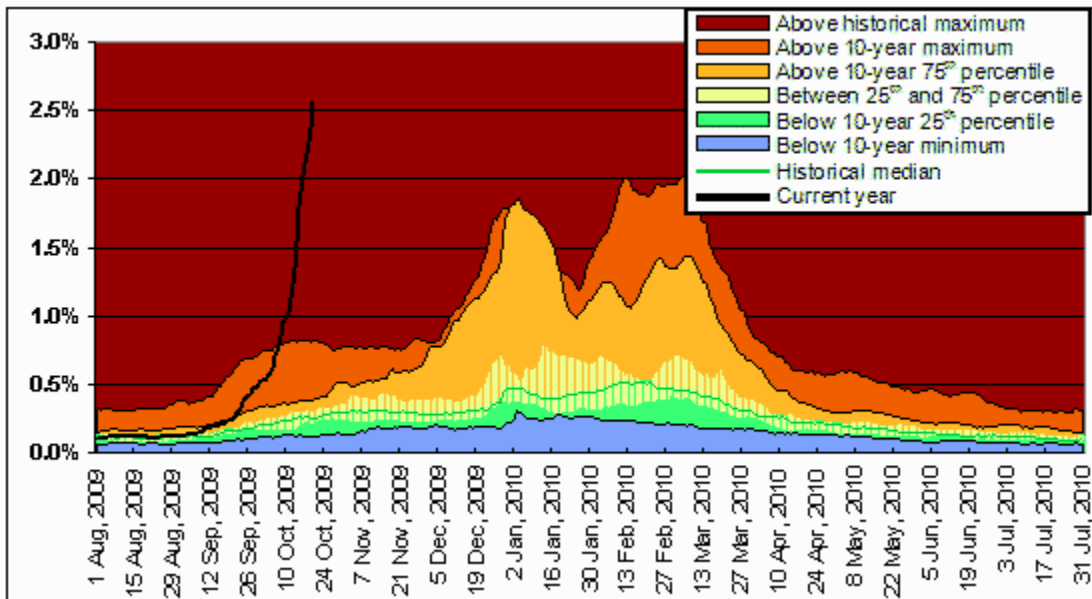
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims continued to climb steeply in week 41. On a regional level, increases occurred in all five RHAs. In VCH, FHA and IHA and VIHA the proportion of claims for influenza are above the historical maximum.

Influenza Illness Claims* British Columbia

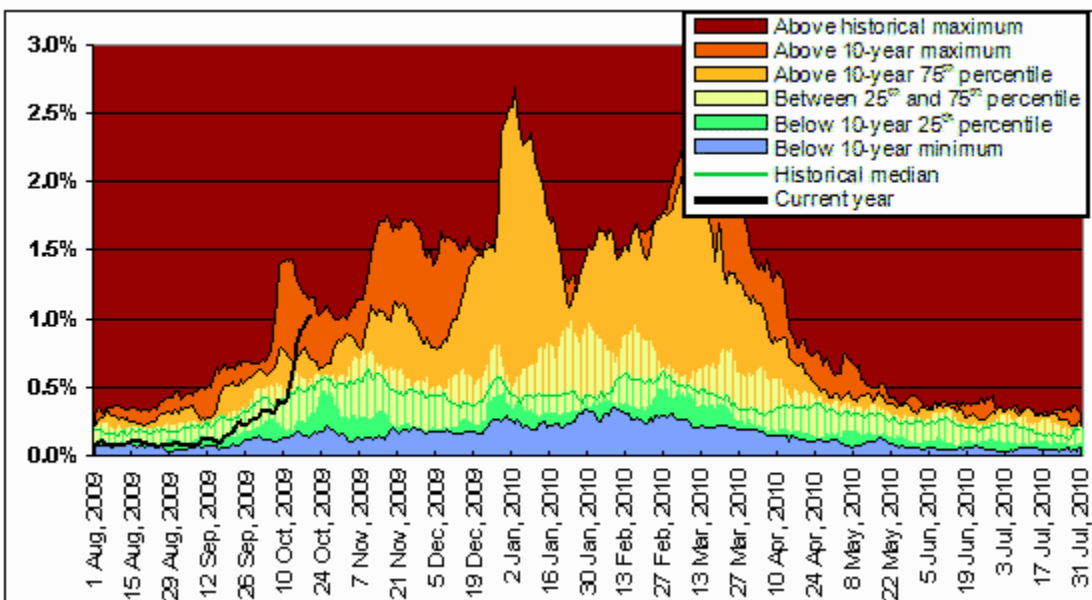


*Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

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

***Current to October 20, 2009

Northern

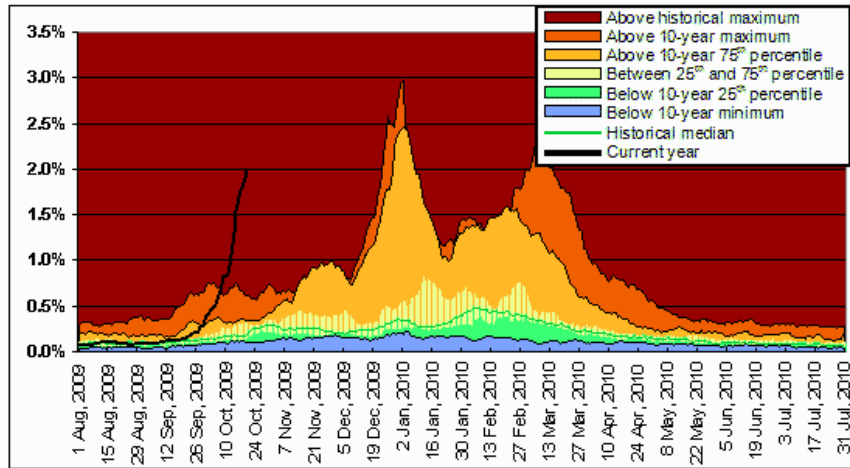


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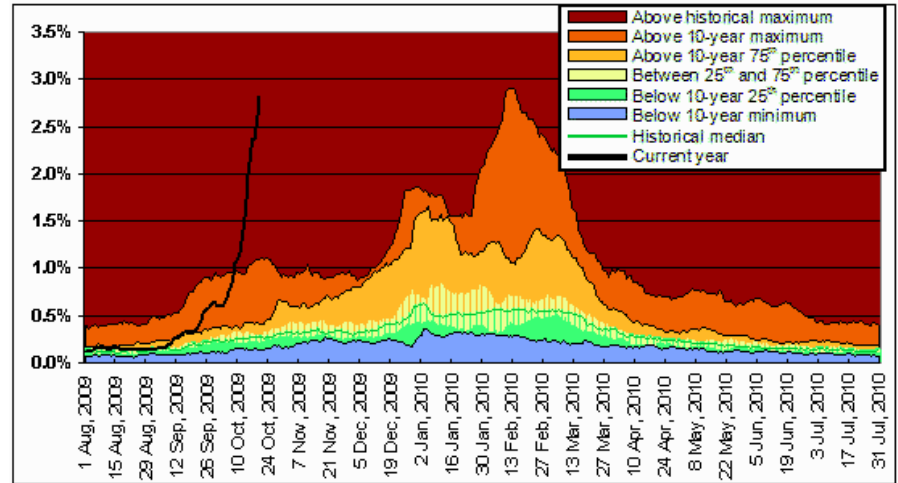
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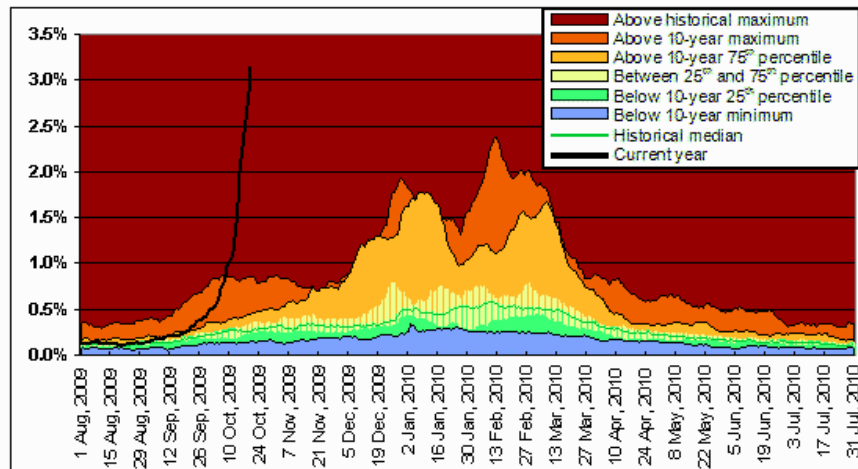
Interior



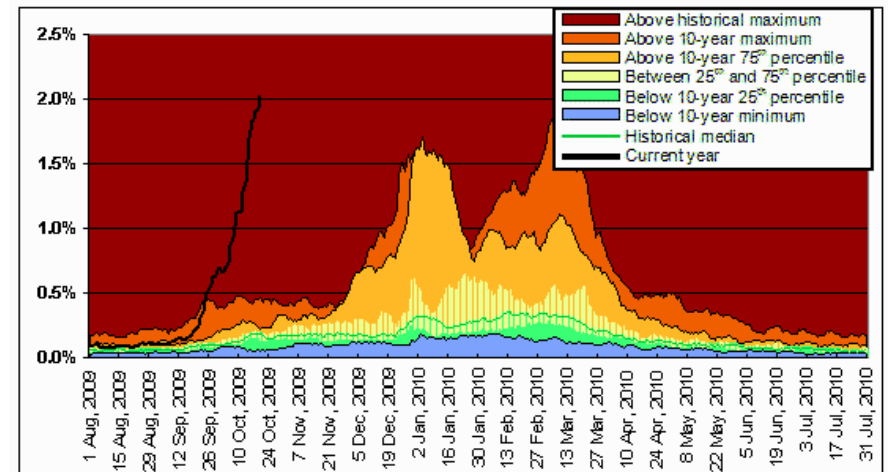
Vancouver Coastal



Fraser



Vancouver Island



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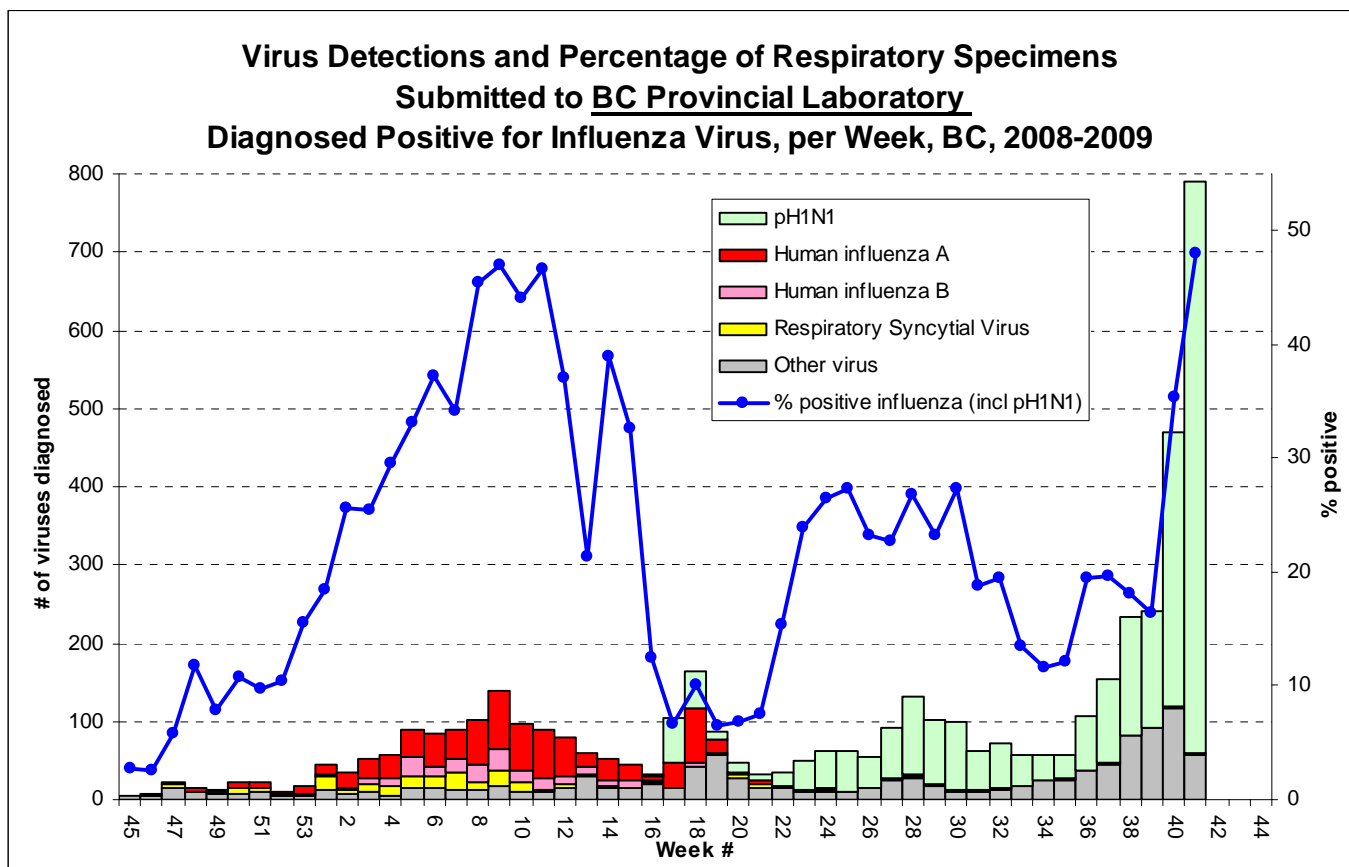
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Laboratory Reports

There has been a large increase in the number of respiratory specimens submitted to BCCDC Laboratory Services. In week 41 the lab tested 1528 respiratory specimens, 739 (48.4%) tested positive for influenza A (including pH1N1), a sharp increase compared to the previous week and similar to the seasonal peak observed last year. Of those subtyped (n=730) over 99% were pH1N1, one specimen was H3. Since week 35 (September 1, 2009), >99% of all subtyped influenza A viruses have been pH1N1. No influenza B was detected during week 41. Other respiratory pathogens detected included rhino/enterovirus (3.4%), RSV (0.1%), parainfluenza (0.3%) and adenovirus (0.1%).

During week 41, Children's and Women's Health Centre Laboratory tested 129 respiratory specimens. An increase in the proportion positive for influenza A was observed compared to previous weeks; 32 were positive for pH1N1 and 17 were positive for influenza A but had not yet been subtyped. Five tested positive for parainfluenza and 1 for adenovirus.

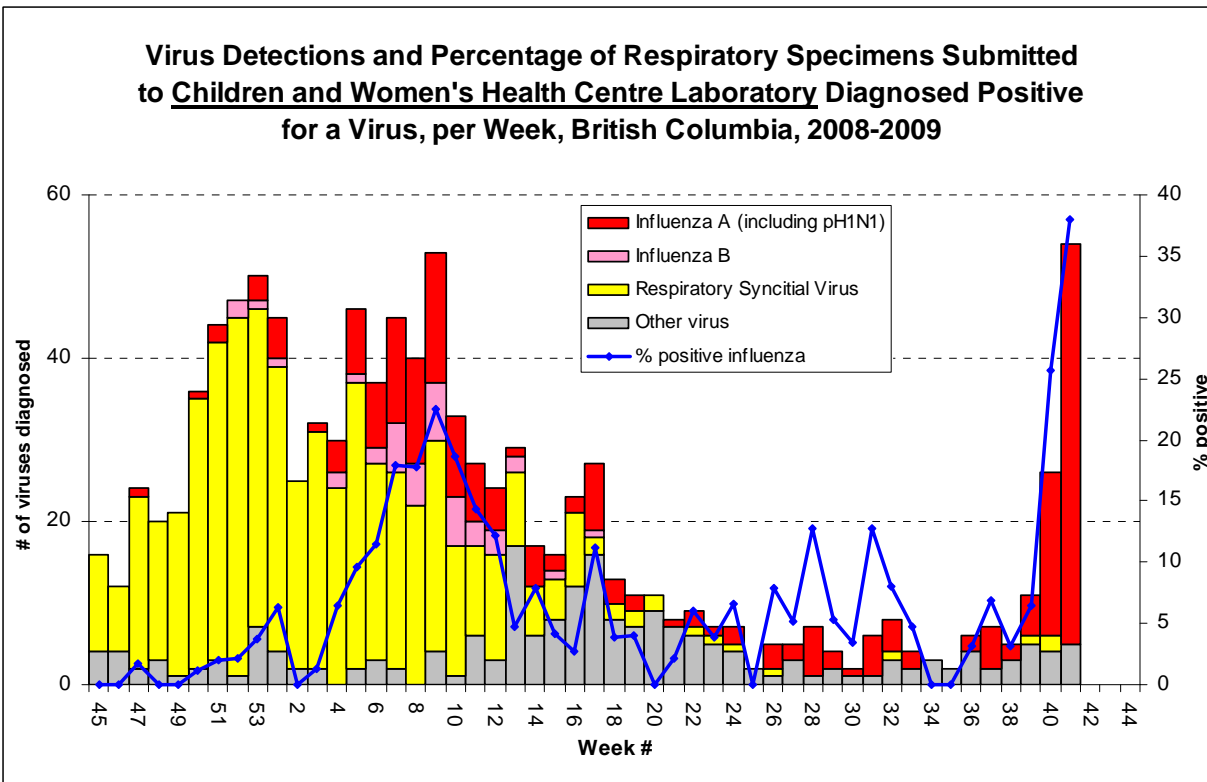


Note: The increase in bars during weeks 17-19 above reflects the large surge in specimens submitted to BCCDC for testing (2594 specimens were tested, a 5-fold increase over the number of tests performed during the 3-week period of peak activity this season). The increases in weeks 38-41 reflect a similar surge in testing.

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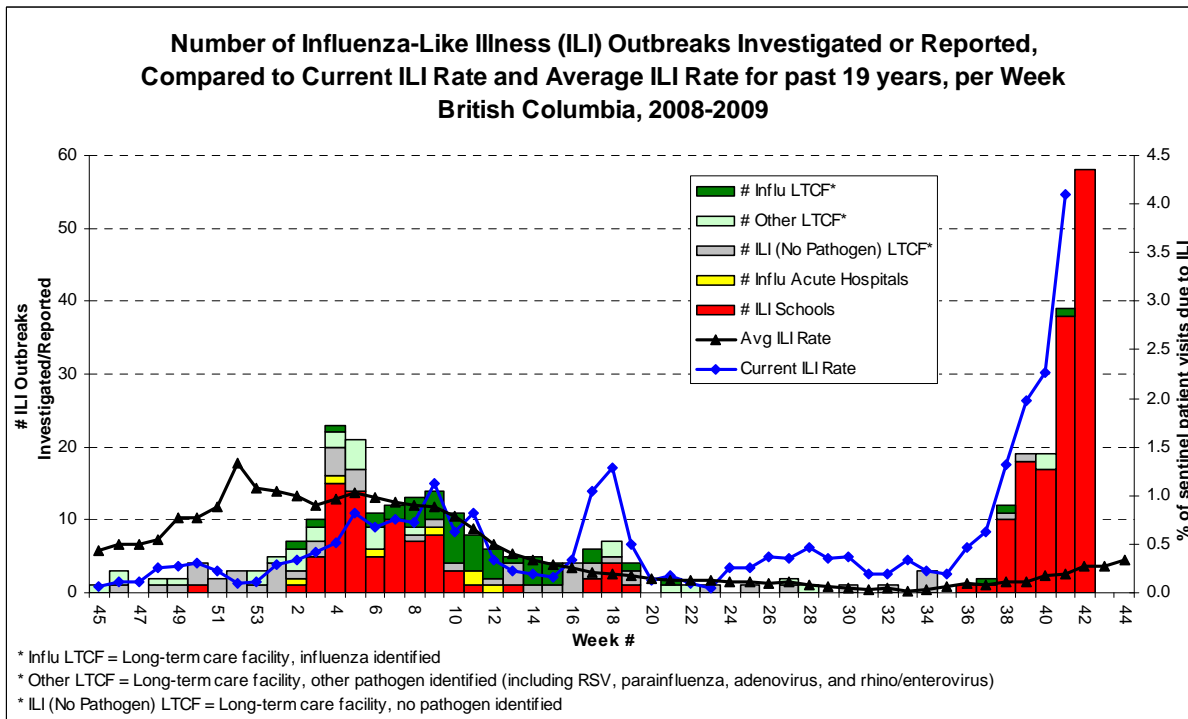
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ILI Outbreaks

In week 41, the number of school outbreaks increased, 38 were reported (15 in FHA, 8 in IHA, 14 in VCH and 1 in NHA). pH1N1 was detected in 1 outbreak investigations during week 41 in a long term care facility in FHA.



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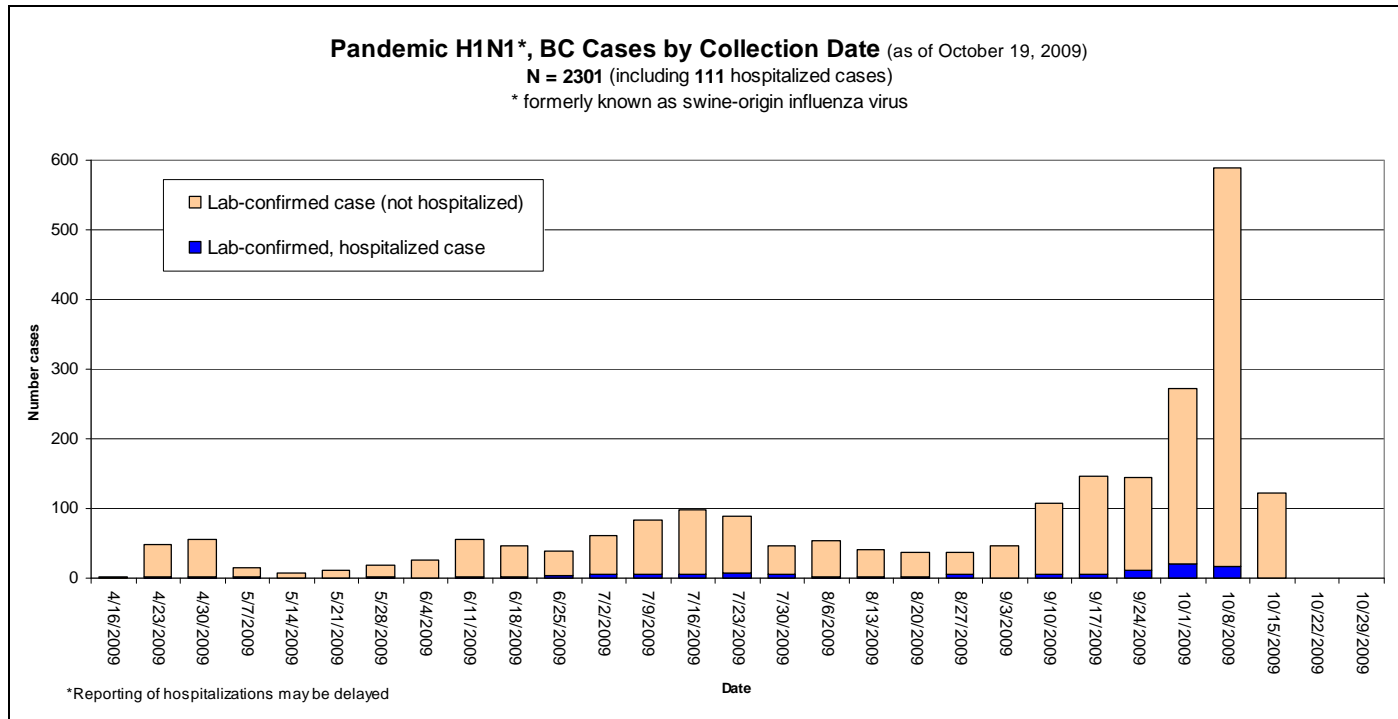
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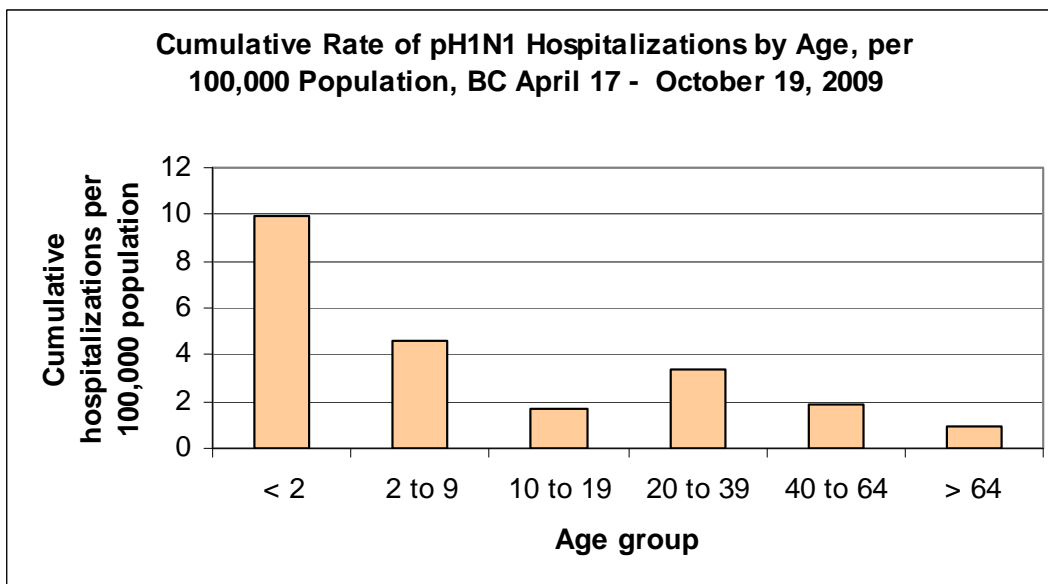
Pandemic H1N1 (pH1N1)

BCCDC continues to monitor the pH1N1 virus pandemic. As of October 19, one hundred and eleven cases in BC have been admitted to hospital, of these 33 were reported in the preceding week. Among hospitalized cases, 67% had underlying medical conditions; 18% had lung disease, 16% had asthma and 5% had chronic heart disease. 27% (30) of hospitalized cases have been admitted to the intensive care unit and 8% (9) have died. As shown in the graph below, pH1N1 hospitalization rates are 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



Note: Case count for most recent week represents an underestimate due to delays in testing and reporting.



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CANADA

FluWatch

During week 40, national influenza activity levels increased from the previous week. Compared to the week ending September 5, ILI consultation rates increased from 14 to 43 consultations per 1000 patient visits; this is above the expected range for this time of year. The proportion of tests positive for influenza was 8.7%, which is low compared to the summer peak of 23%. Ninety-seven percent of all subtyped influenza A specimens were positive for pH1N1; the remainder were positive for seasonal H1N1. One specimen was positive for influenza B. National levels were primarily driven by influenza activity in BC. The Northwest Territories also indicated widespread activity; ILI activity was much lower in the rest of the country. (www.phac-aspc.gc.ca/fluwatch/)

National Microbiology Laboratory

Between September 1st and October 15, 2009, 9 influenza isolates have been collected from provincial and hospital labs and characterized at the National Microbiology Laboratory (NML).

All 9 were A/California/07/2009-like[§] from AB, ON, NT, & NU;

[§] A/California/07/2009 (H1N1) is the variant reference virus (pH1N1) selected by WHO for a pandemic influenza A/H1N1 vaccine.

Antiviral Resistance

Drug susceptibility testing at the NML between September 1st and October 15 indicated that all pH1N1 (n=9) isolates were sensitive to both oseltamivir and zanamivir, but resistant to amantadine. All human H3N2 (n=2) 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. The first cases of oseltamivir resistance with an epidemiological link were identified in the US on August 14 and 19.

INTERNATIONAL

Northern Hemisphere: In the United States (<http://www.cdc.gov/flu/weekly/>), in the week ending October 10 influenza activity increased. Twenty-nine percent of respiratory specimens tested in reference laboratories in week 40 were positive for influenza, and 100% percent of the subtyped influenza A viruses were pH1N1. 0.4% of specimens tested positive for Influenza B. The proportion of sentinel physician visits for ILI increased to 6.1%, in comparison this proportion for in the previous two years was approximately 1%. The proportion of deaths attributed to pneumonia and influenza was at the epidemic threshold. In Europe for the week ending October 20, seven countries (Belgium, Ireland, Malta, Spain, Sweden and Northern Ireland and Wales) reported influenza activity above baseline levels and fourteen countries reported an increasing trend. All 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 as of October 9th in Australia, influenza activity is continuing to decrease with most jurisdictions reporting activity at or near baseline levels. In New Zealand as of October 11th, 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:

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

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