

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2008-09: Number 32, Week 36

September 6 – 12, 2009



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

Prepared by BCCDC Influenza &
Emerging Respiratory Pathogens Team

Increasing Influenza Activity in BC, Predominantly Attributed to Pandemic pH1N1

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Highlights

In week 36 (Sept 6-12), BC experienced an increase in influenza activity. The proportion of patients presenting to sentinel physicians with ILI, and emergency room visits to BC Children's Hospital due to ILI both sharply increased compared to the previous week. The proportion of Medical Services Plan claims for influenza illness also increased. One school outbreak was reported during this period. At the BC Provincial Laboratory, 14% (49/374) of respiratory specimens were positive for pandemic H1N1 virus (pH1N1), an increase from the previous week. Together surveillance indicators suggest that influenza activity is increasing and remains above the expected range for this time of year.

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

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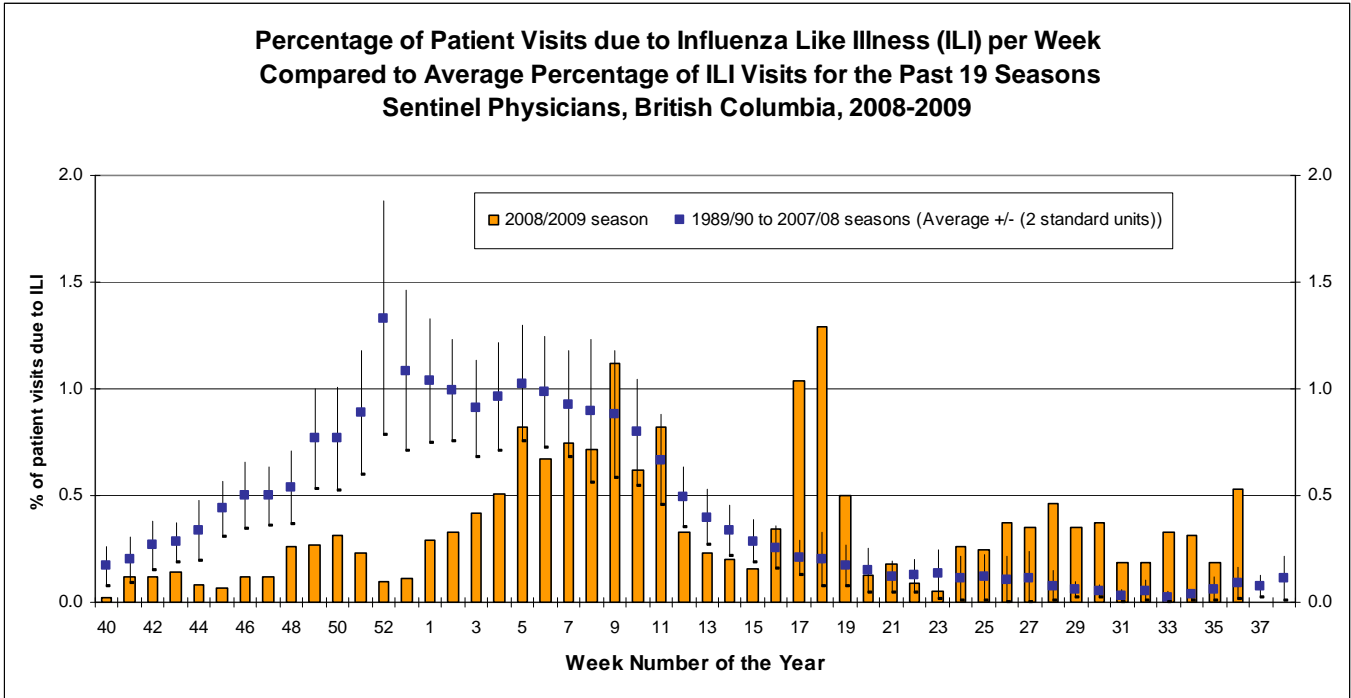
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British Columbia

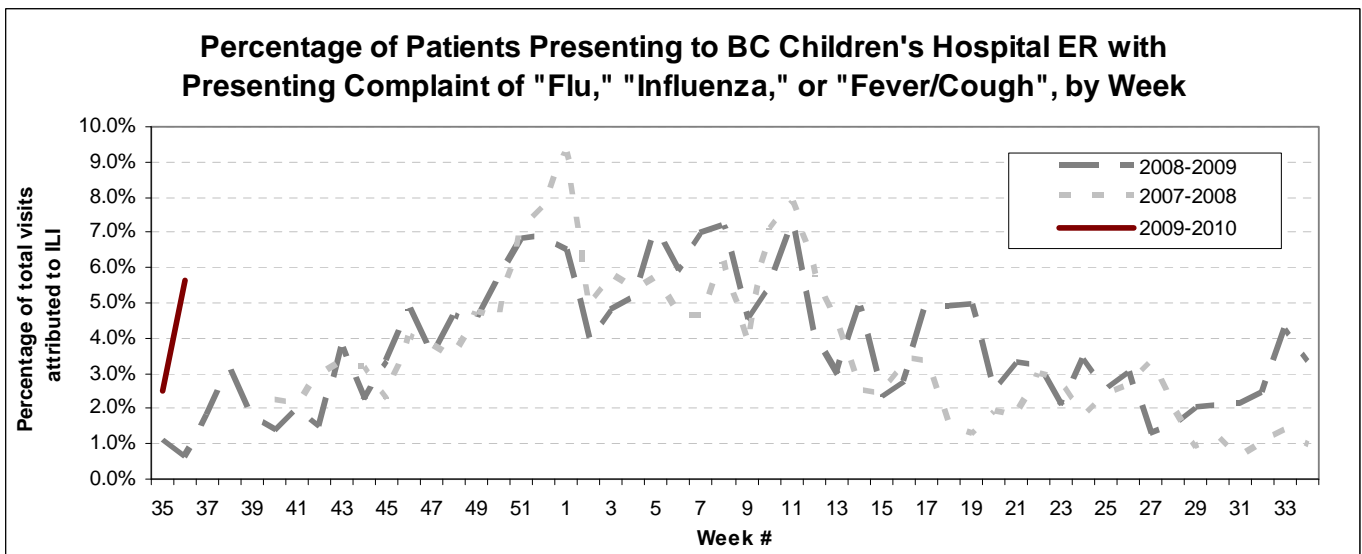
Sentinel Physicians

During week 36, the percentage of patients presenting to sentinel physicians with ILI was 0.53%. This proportion is more than double that of the previous week, and is above the expected range for this time year. 60% of sentinel physicians reported for week 36.



BC Children's Hospital Emergency Room

During week 36, 5.6% of Emergency Room visits to BC Children's hospital were attributed to ILI. This is an increase from 2.5% in the previous week and above the proportion observed during the same time last year.



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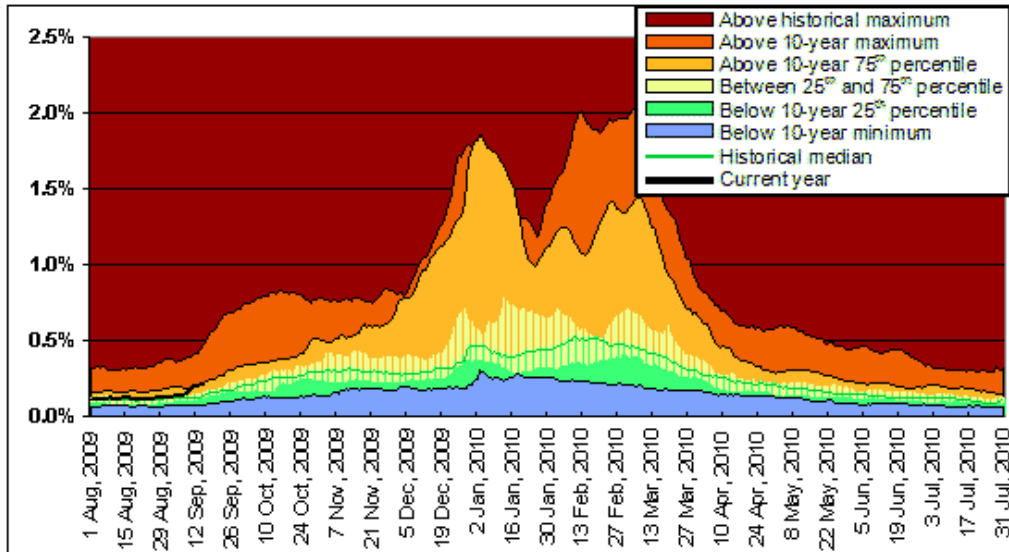
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Medical Services Plan

Influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims increased in week 36. On a regional level, increases occurred in VIHA, VCH, and FHA. NHA has a reduced proportion of ILI claims compared to previous years.

Influenza Illness Claims* British Columbia

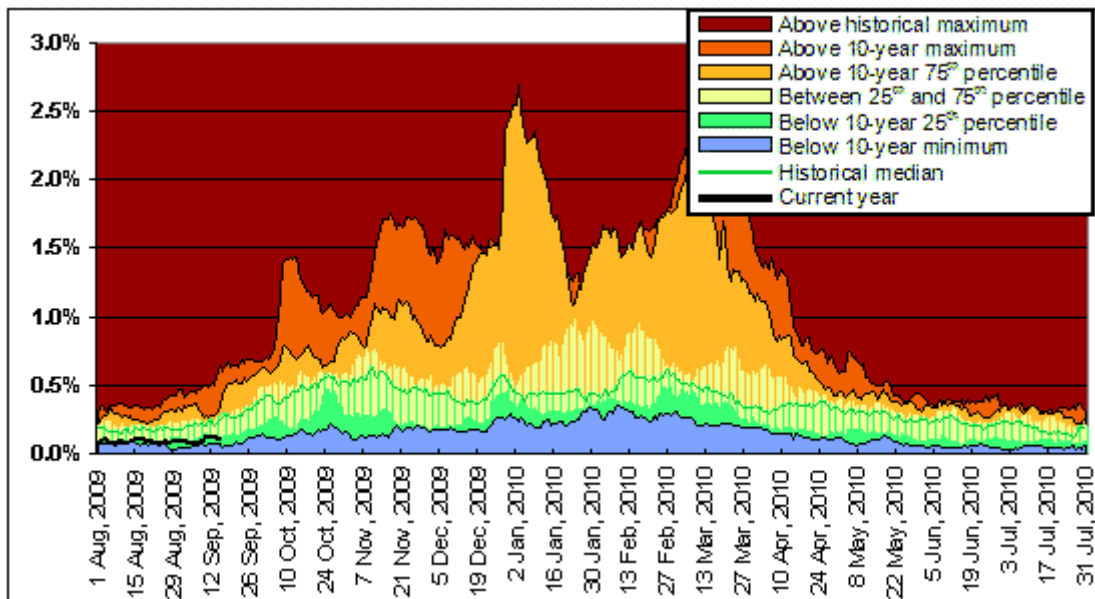


*Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).

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

***Current to September 15, 2009

Northern

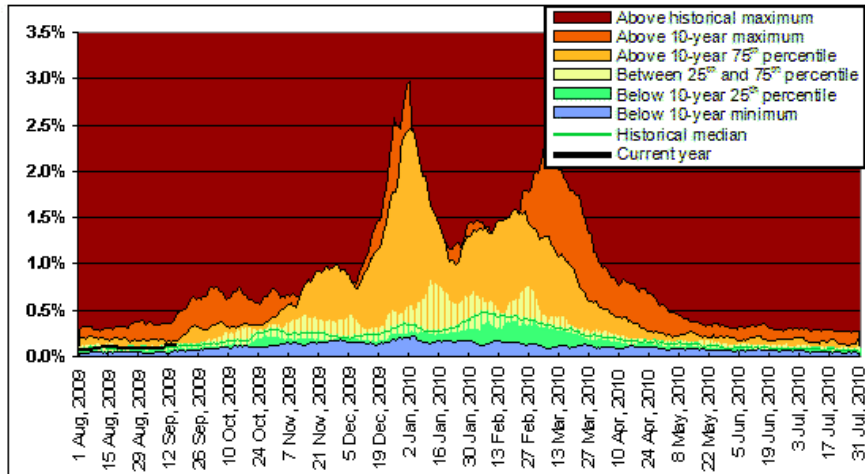


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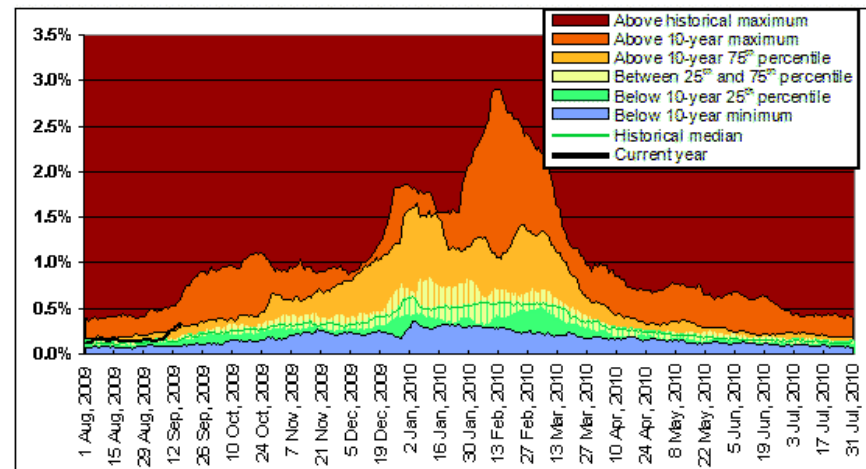
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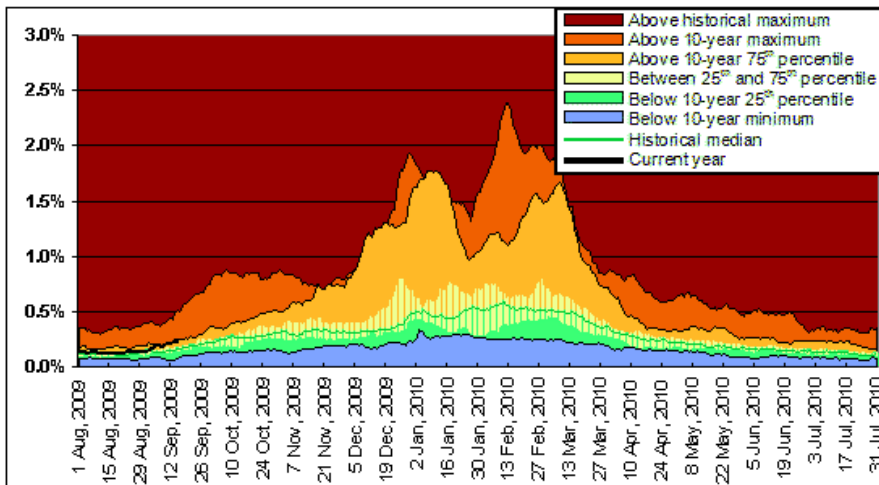
Interior



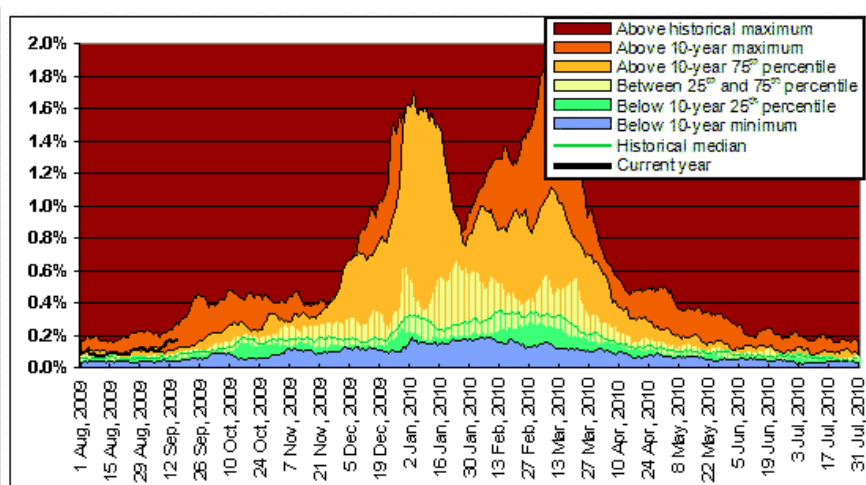
Vancouver Coastal



Fraser



Vancouver Island



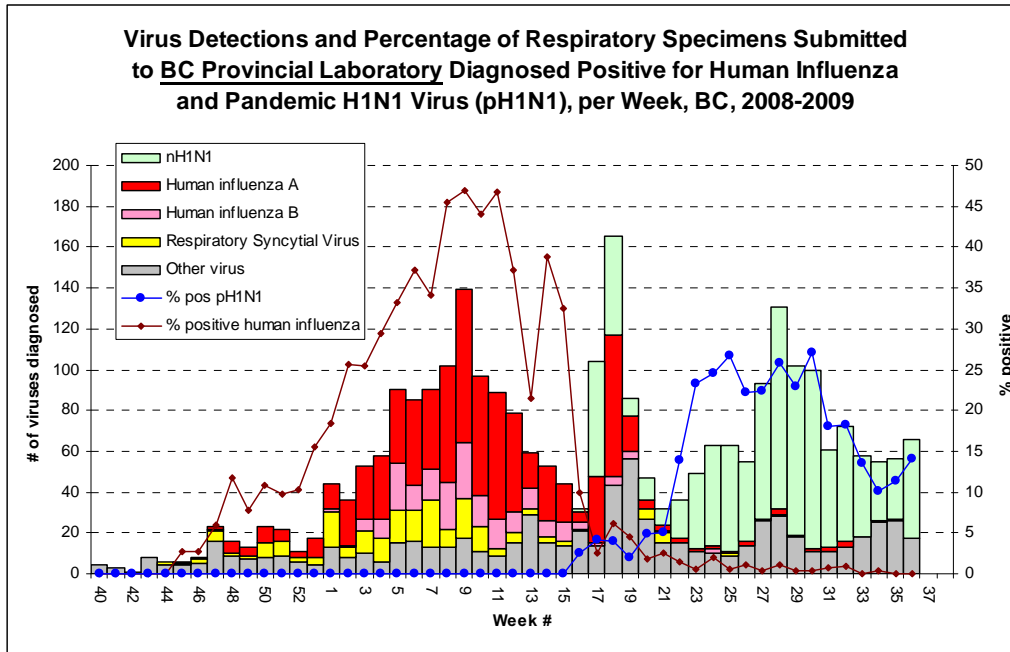
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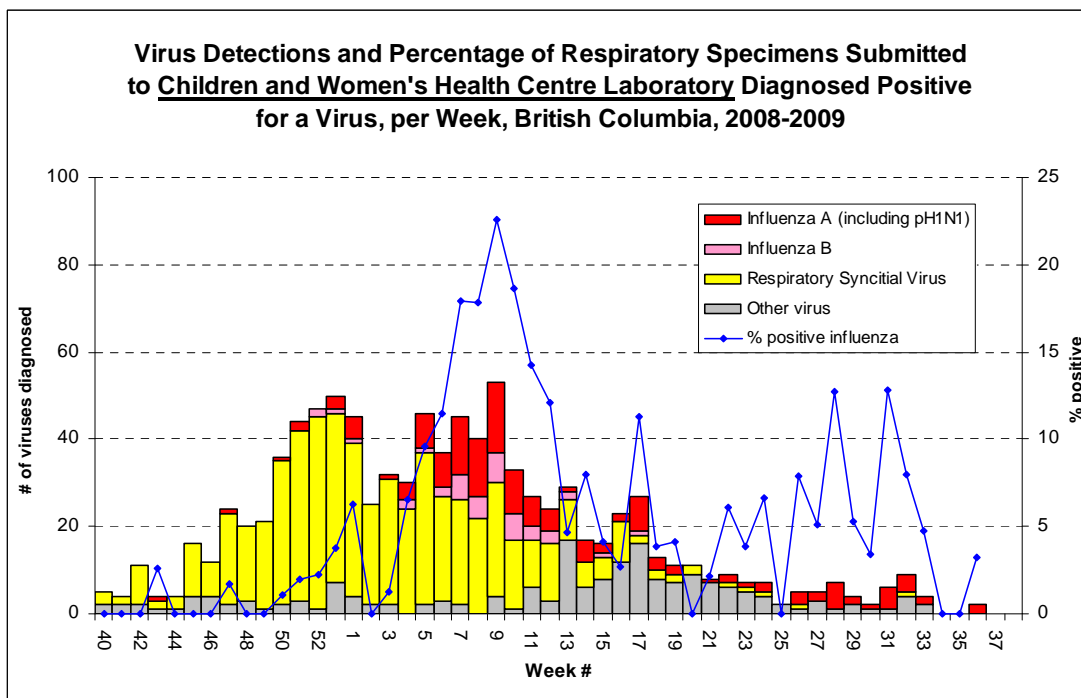
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Laboratory Reports

BCCDC Laboratory Services tested 348 respiratory specimens in week 36. Forty-nine (14.1%) tested positive for pH1N1, an increase from the previous week. Respiratory pathogens detected included: rhino/enterovirus (3.7% of specimens tested), corona virus (0.3%) and parainfluenza (0.8%). During week 36, Children's and Women's Health Centre Laboratory tested 62 respiratory specimens. Two isolates were positive for influenza. Four tested positive for parainfluenza.



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).



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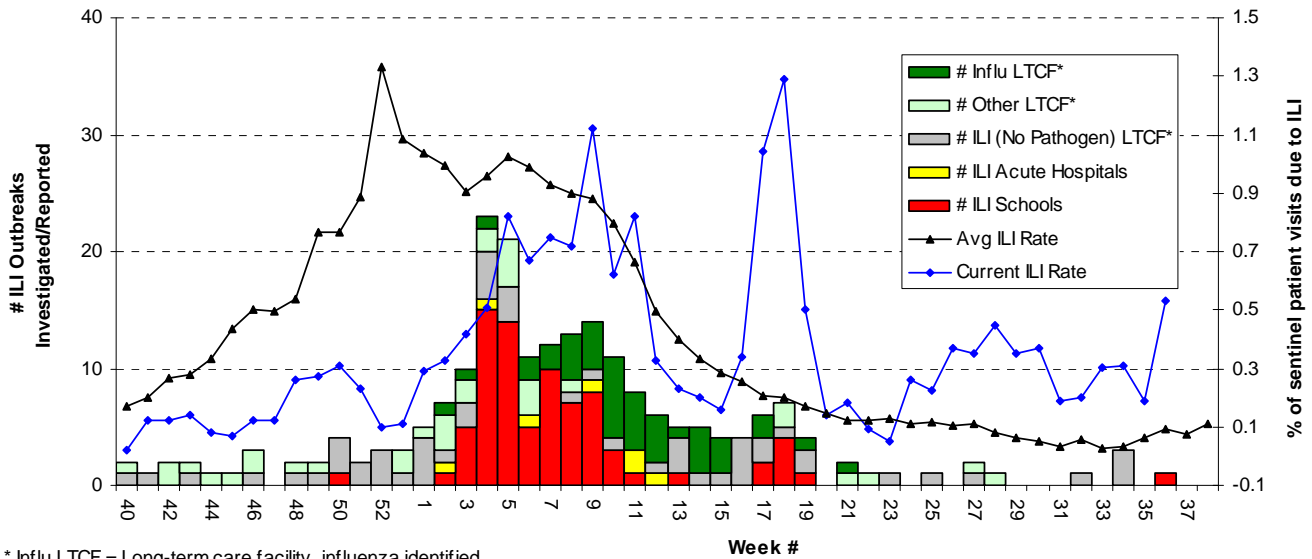
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ILI Outbreaks

One school outbreak was reported in Interior Health Authority during week 36.

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, 2008-2009



* 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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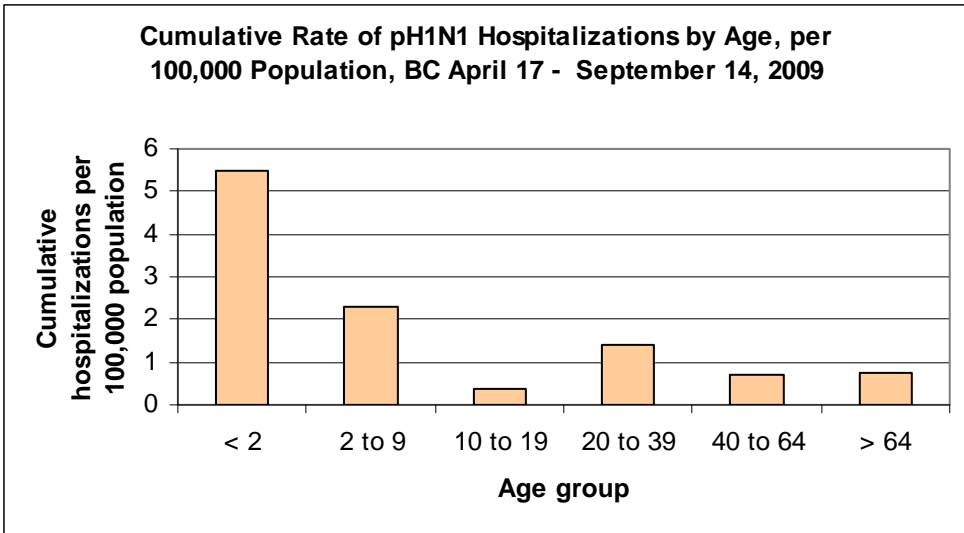
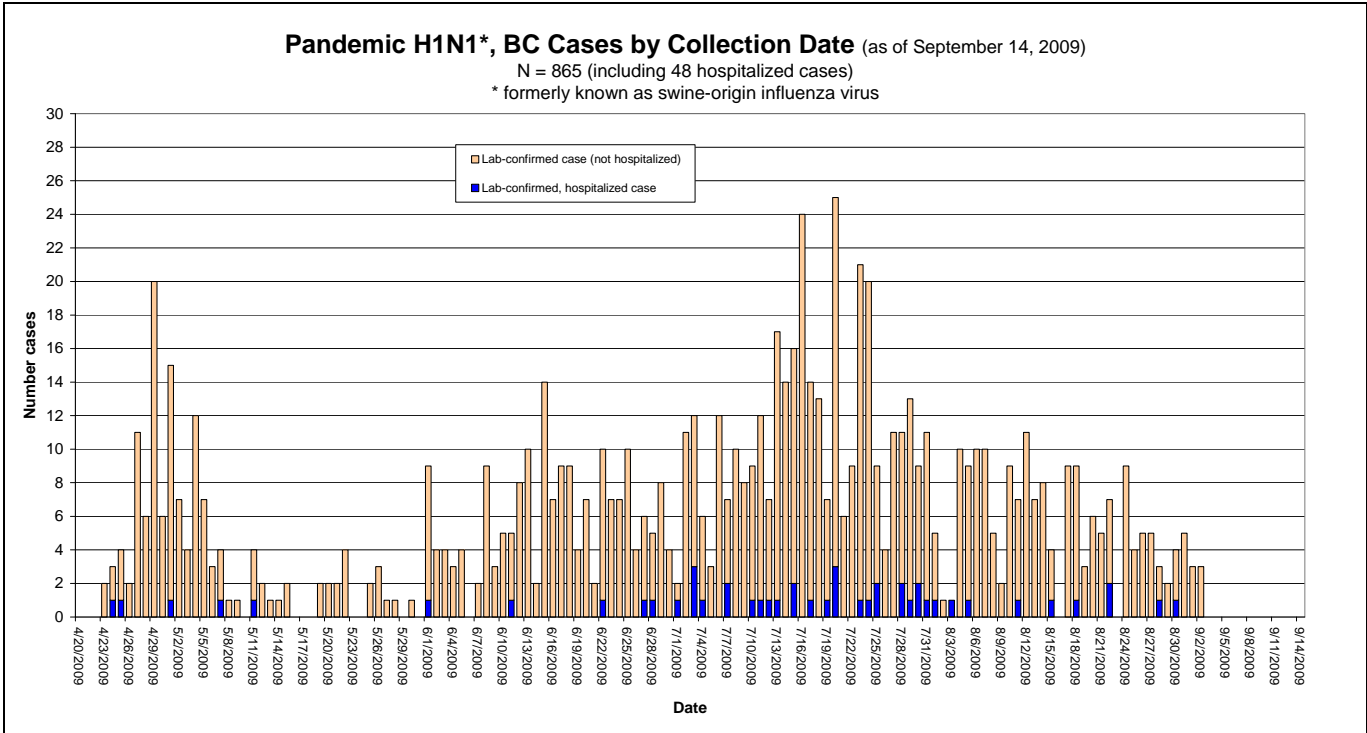
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Pandemic H1N1 (pH1N1)

BCCDC continues to monitor the pH1N1 virus pandemic. As of September 14, forty-eight cases have been admitted to hospital. Of those, 62% had underlying medical conditions. 42% (20) of hospitalized cases have been admitted to the intensive care unit and 10% (5) 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



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CANADA

FluWatch

During week 35, activity levels were similar to the previous week, but are consistent with a declining trend. Compared to week 33 the proportion of tests positive for influenza and ILI consultation rate remained approximately constant at 2.9 % and 14 per 1000 patient visits respectively. These figures illustrate of a decline from 23% tests positive and 14 per 1000 patient visits in the week ending June 13. Overall activity remains slightly higher than expected for this time of year. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory

Since Sept 1, 2008 and as of August 31, 1306 influenza isolates from provincial and hospital labs have been characterized at the National Microbiology Laboratory (NML):

262 A/Brisbane/59/07(H1N1)-like* † from BC, AB, SK, MB, ON, QC, NB, NS, & PEI;

172 A/Brisbane/10/07(H3N2)-like* † from ten provinces;

11 B/Florida/04/06(Yamagata)-like* from AB, ON, QC & NB;

379 B/Malaysia/2506/04(Victoria)-like from all ten provinces;

180 B/ Brisbane/60/08(Victoria)-like † from BC, AB, SK, MB, ON, QC, NB, NS, & NU; and

302 A/California/07/2009-like[§] from BC, AB, SK, MB, ON, QC, NB, NS, NT, & NU;

* indicates a strain match to the 2008-09 vaccine

† indicates a strain match to the 2009-10 vaccine

[§] 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 as of August 31 indicated that most (n=320) human influenza A/H1N1 isolates tested to date were resistant to oseltamivir (one human H1N1 isolate identified since mid-April was sensitive). All human H3N2 (n=194), influenza B (n=573), and pH1N1 (n=527) isolates tested at the NML were found to be sensitive to oseltamivir. Of the isolates tested for amantadine resistance, all (n=319) human H1N1 isolates were found to be sensitive, all (n=396) human H3N2 isolates were found to be resistant, and all (n=361) pH1N1 isolates were found to be resistant. All 1305 (257 human H1N1, 190 human H3N2, 578 influenza B, and 280 pH1N1) isolates that have been tested for zanamivir resistance were sensitive.

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, in the week ending September 5 influenza activity as determined by sentinel physician visits and geographic spread increased. 3.6% of visits to sentinel physicians were for ILI, an increase from 1.4% in week 33. Twenty-one percent of respiratory specimens tested in reference laboratories during this week were positive for influenza, representing an overall decrease from the peak of 39% during week ending June 20. Ninety-seven percent of the subtyped influenza A viruses were pH1N1. In Europe for the week ending September 6, influenza activity remains low or declining in most countries, with the exception of Sweden where there is medium, widespread activity with an increasing trend. In Hong Kong ILI visits to sentinel physicians have increased in recent weeks to levels that exceed the expected range for this time of year.

<http://www.cdc.gov/flu/weekly/> and <http://www.eiss.org> .

Southern Hemisphere: Several countries in the Southern Hemisphere previously reporting severe winter influenza activity have now passed the peak. Notably as of August 28th in Australia, influenza activity is decreasing, presentations to sentinel physicians and ERs is below the previous years average. In New Zealand as of September 6th, pH1N1 activity continues to decline; consultations with sentinel physicians have declined to less than a third those observed during the peak in early July, but remains slightly elevated compared to previous years. The highest consultation rates are among children less than 5 years, followed by the 5-19 and 20-34 age groups. In Chile as of September 9, ILI activity is within the range expected for this time of year. In South Africa, laboratories

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are currently reporting pH1N1 as the dominant influenza subtype; previously, in June and July of this year the dominant subtype was A/H3N2.

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

OIE: World Organization for Animal Health

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. Swine 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

