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

British Columbia Influenza Surveillance Bulletin

Influenza Season 2013-14, Number 01, Weeks 35-40
August 25 to October 5, 2013

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Sporadic influenza activity in BC

In weeks 35-40 (August 25 to October 5, 2013), which includes the first week of the 2013-14 reporting period, surveillance indicators suggest sporadic influenza activity in BC. The proportion of patients presenting to sentinel physicians for ILI, as well as Medical Services Plan claims for influenza and the proportion of emergency room visits to BC Children's Hospital increased in the past few weeks but remain within expected historical levels for this time of year. No lab-confirmed influenza outbreaks were reported. Of the 385 specimens tested at the provincial laboratory, 2 (0.5%) were positive for influenza virus (all were influenza B). Rhino/enteroviruses were the most commonly detected respiratory viruses during this period; other respiratory viruses were also sporadically detected. No respiratory specimens tested positive for influenza at the BC Children's and Women's Centre Laboratory in weeks 35-40.

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Provincial Health Services Authority
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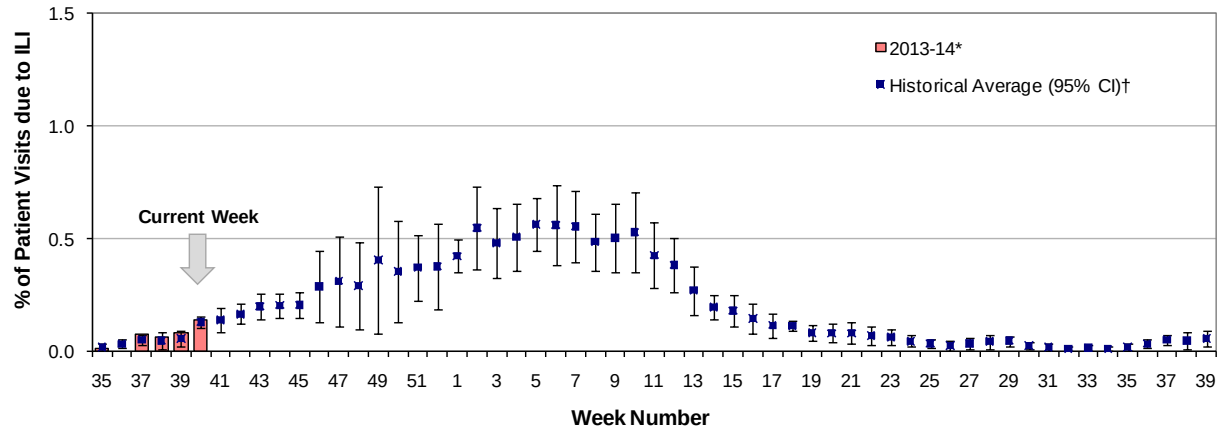
British Columbia

Sentinel Physicians

In weeks 35-40, the proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians gradually increased from 0.01% in week 35 to 0.14% in week 40, but remained within the expected level for this time of the year. The proportion of sentinel physician sites reporting during weeks 35-40 ranged from 51% to 83% per week.

Percent of patient visits to sentinel physicians due to influenza-like illness (ILI) compared to historical average, British Columbia, 2013-14

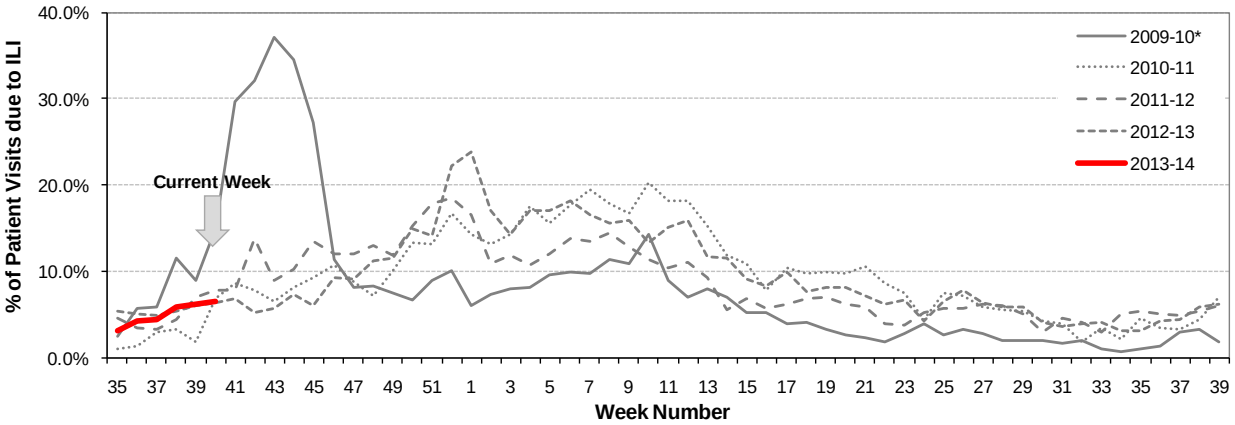


* Data are subject to change as reporting becomes more complete.
† Historical average based on 2001-02 to 2012-13 seasons, excluding 2008-09 and 2009-10 due to atypical seasonality; CI=confidence interval.

BC Children's Hospital Emergency Room

The proportion of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness gradually increased from 3.2% in week 35 to 6.5% in week 40, consistent with the trends observed from this time of year in previous seasons.

Percent of patients presenting to BC Children's Hospital ER with triage chief complaint of "flu," or "influenza" or "fever/cough," British Columbia, 2013-14

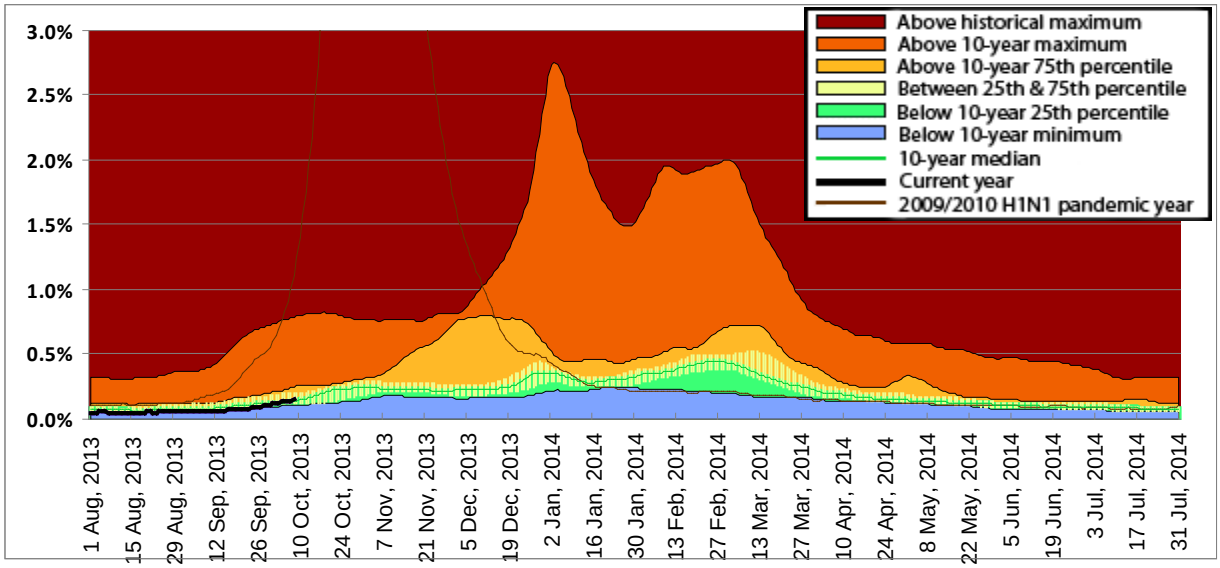


Source: BCCH Admitting, discharge, transfer database, ADT
* Data from 2010-11 to 2013-14 is based on new system (Triage Chief Complaint) not directly comparable to data for 2009-10. In bulletins before week 9 of 2011-12 season, data is based on old system.

Medical Services Plan

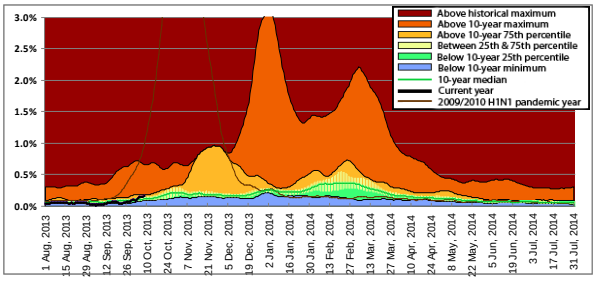
BC Medical Services Plan (MSP) general practitioner claims for influenza illness, as a proportion of all submitted MSP claims, fluctuated around the 10-year median level throughout the province during weeks 35-40. A slight upward trend was observed at the provincial level in early October, but proportions remained within expected historical norms. Increased activity in recent weeks was also observed in the Interior, Vancouver Costal and Northern Health Authorities. We will continue to monitor these trends in the coming weeks, as we enter the 2013-14 influenza season reporting period.

Service claims submitted to MSP for influenza illness (Il)* as a proportion of all submitted general practitioner service claims, British Columbia, 2013-14

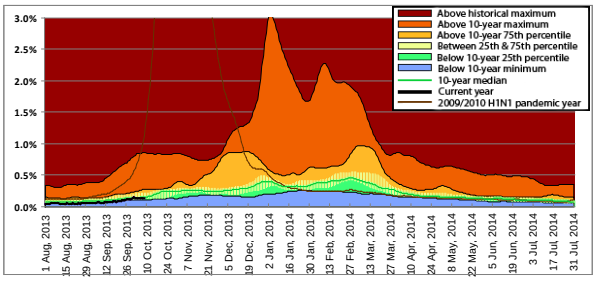


* Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza). Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services
Note: MSP week beginning 1 August 2013 corresponds to sentinel ILI week 31; Data current to 8 October 2013.

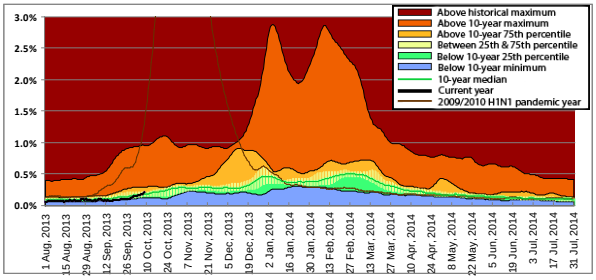
Interior



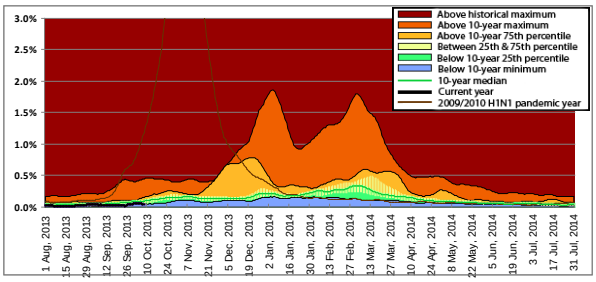
Fraser



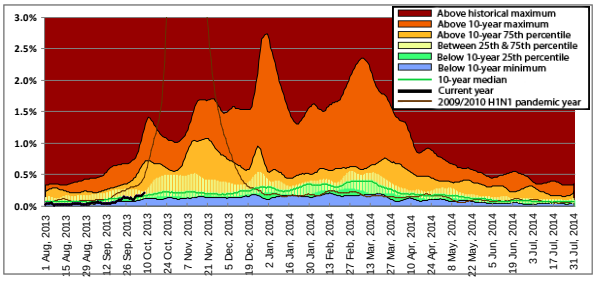
Vancouver Coastal



Vancouver Island



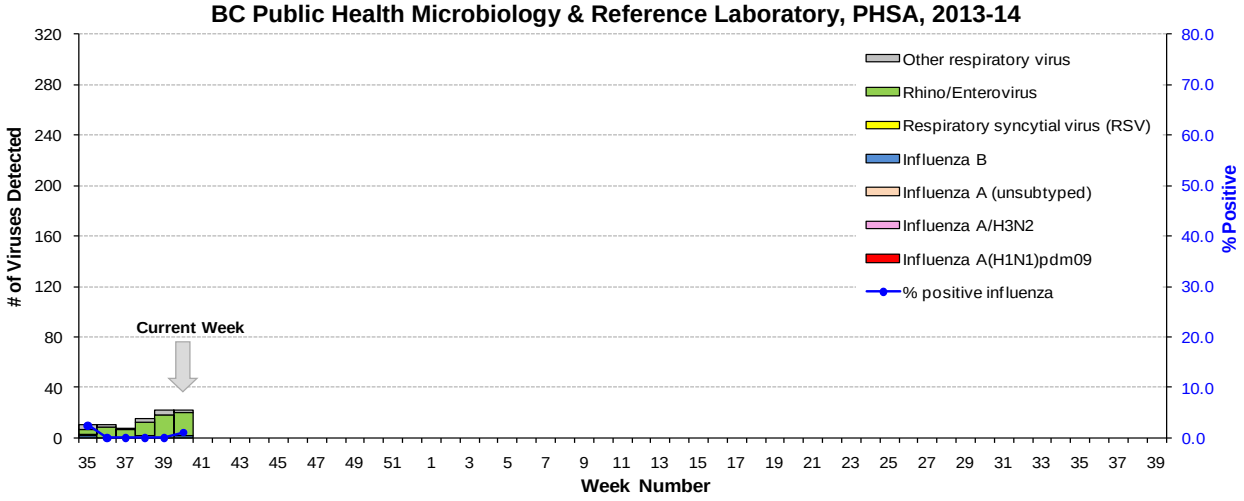
Northern



Laboratory Reports

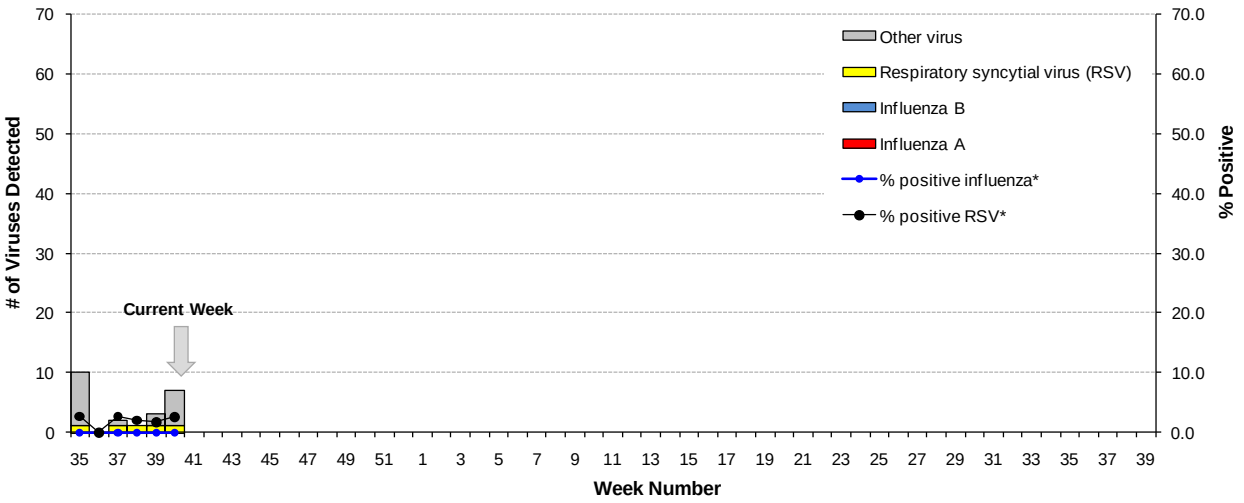
The number of specimens submitted to the BC Public Health Microbiology & Reference Laboratory, PHSA, for respiratory virus testing significantly increased starting from week 38. In weeks 35-40, 385 respiratory specimens were tested for influenza A and B viruses. Of these, 2 (0.5%) were positive for influenza B virus: one from Fraser Health Authority in week 35 and one from Vancouver Coastal Health Authority in week 40. Rhino/enteroviruses were the most commonly detected respiratory viruses during this period; other respiratory viruses were also sporadically detected.

Influenza and other virus detections among respiratory specimens submitted to BC Public Health Microbiology & Reference Laboratory, PHSA, 2013-14



In weeks 35-40, BC Children's and Women's Health Centre Laboratory tested 260 respiratory specimens; none were positive for influenza. Parainfluenza was the most common virus detected during this period. Respiratory syncytial virus (RSV), adenovirus and entero/rhinovirus were also detected sporadically.

Influenza and other virus detections among respiratory specimens submitted to BC Children's and Women's Health Centre Laboratory, 2013-14

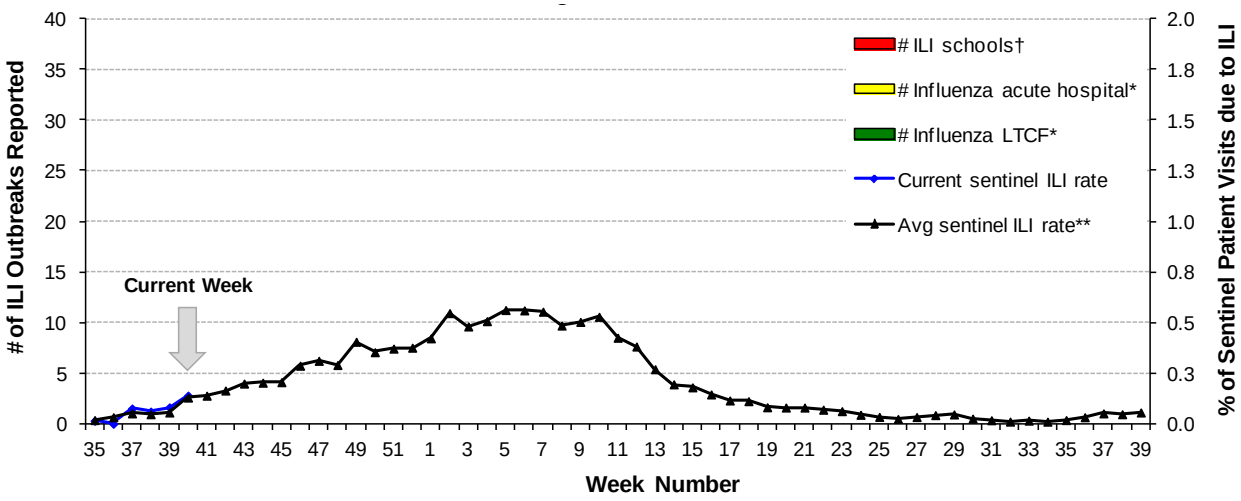


* Positive rates were caculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.

ILI Outbreaks

In weeks 35-40, 5 ILI outbreaks were reported from long-term care facilities (LTCF), but none were lab-confirmed for influenza. All 5 outbreaks were reported in Interior Health Authority and included one lab-confirmed entero/rhinovirus in week 38 and one lab-confirmed parainfluenza in week 40. A pathogen could not be identified for the remaining 3 outbreaks.

Number of influenza-like illness (ILI) outbreaks reported, compared to current sentinel ILI rate and historical average sentinel ILI rate, British Columbia 2013-14



* Facility-based influenza outbreaks defined as 2 or more ILI cases within 7-day period, with at least one **laboratory-confirmed** case of influenza.
† School-based ILI outbreak defined as >10% absenteeism on any day, most likely due to ILI.
** Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

National

FluWatch (weeks 35 to 38)

In Canada, influenza activity generally remained at inter-seasonal levels. The ILI consultation rate was stable in recent weeks, with a slight increase seen in week 38. Details are available at www.phac-aspc.gc.ca/fluwatch/13-14/w38_13/index-eng.php.

National Microbiology Laboratory (NML): Strain Characterization

From September 1, 2012 to August 31, 2013, 1520 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

663 A/Victoria/361/2011-like (H3N2)¶ from NFLD, PEI, NS, NB, QUE, ONT, MAN, SASK, ALTA and BC;
255 A/California/07/2009-like [A(H1N1)pdm09]* from NFLD, NS, NB, QUE, ONT, MAN, SASK, ALTA, BC and NU;
138 B/Brisbane/60/2008-like** from NB, QUE, ONT, MAN, SASK, ALTA, BC, NT and NU;
464 B/Wisconsin/01/2010-like† from NFLD, NB, QUE, ONT, MAN, SASK, ALTA, BC and NT;

¶ indicates a strain match to the recommended H3N2 component for the 2012-2013 northern hemisphere influenza vaccine

† belongs to the B Yamagata lineage, and is the recommended influenza B component for the 2012-2013 northern hemisphere influenza vaccine.

* indicates a strain match to the recommended H1N1 component for the 2012-2013 northern hemisphere influenza vaccine.

** belongs to the B Victoria lineage, which was the recommended influenza B component for the 2011-2012 northern hemisphere influenza vaccine.

NML: Antiviral Resistance

From September 1, 2012 to August 31, 2013, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 657; zanamivir: 656; amantadine: 1053), A(H1N1)pdm09 (oseltamivir: 260; zanamivir: 257; amantadine: 297), and influenza B isolates (oseltamivir: 601; zanamivir: 601). The results indicated that all but two influenza A and all but three influenza B isolates were sensitive to oseltamivir; all but one influenza A and all but three influenza B isolates were sensitive to zanamivir; and all but one influenza A isolates were resistant to amantadine.

International

USA (as of October 10, 2013): Updates to the US CDC influenza surveillance reports are not available at this time. Available reports can be found at: www.cdc.gov/flu/weekly/.

WHO (as of September 30, 2013): In the Northern Hemisphere temperate zones, influenza activity remained at inter-seasonal levels. In most of tropical Asia, influenza activity decreased. In tropical Asia, influenza activity decreased in most regions, with the exception of Hong Kong where influenza A/H3N2 activity increased. In the Caribbean region of Central America and tropical South America, the influenza season appeared to have come to an end. RSV, influenza A(H1N1)pdm09 and influenza A/H3N2 were the main respiratory viruses reported in these regions since May of this year. In the temperate countries of South America and in South Africa, influenza activity peaked in late June; influenza activity in these regions was primarily associated with influenza A(H1N1)pdm09 throughout the season, but since July greater numbers of influenza A/H3N2 and influenza B viruses were observed. In Australia and New Zealand, following a late start to the season in August, influenza activity seems to have decreased by mid-September; influenza A/H3N2, influenza A(H1N1)pdm01 and influenza B viruses co-circulated in both countries. Details are available at: www.who.int/influenza/surveillance_monitoring/updates/en/.

Avian Influenza A/H7N9 Virus

Since its emergence in February, 2013, 136 human cases of avian influenza A/H7N9 have been reported, including 44 deaths (per case fatality = 32%). Cases have been reported from a wide geographic area in eastern China, covering 12 provinces in mainland China and Taiwan. The most recent case, with onset in July, was reported in Guangdong province, located within 100 km of Hong Kong. The age and sex distribution of human cases of A/H7N9 is skewed toward older adult males; 70% of cases with known sex are male, and the median age is ~60 years (range: 2-91 years). Evidence available so far in the ongoing investigation suggests primarily bird-to-person and limited (but not sustained) person-to-person transmission. Details are available at: www.who.int/influenza/human_animal_interface/influenza_h7n9.

Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

As of October 4, 2013, the WHO had been informed of a total of 136 lab-confirmed cases and 17 probable cases; 49 (47%) of the lab-confirmed cases have succumbed to their infection. Cases range in age from 2 to 94 years (median: 50 years); approximately two-thirds of cases are male. About 80% of cases have been reported from the Kingdom of Saudi Arabia (KSA). There has been a considerable increase in case reports of MERS-CoV since April 2013; however, few of these reports have been accompanied by epidemiological information (e.g., dates of symptom onset) that would allow for real-time tracking of MERS-CoV. To date, the dominant pattern of MERS-CoV activity appears similar to SARS-CoV: sporadic cases and multiple clusters involving close-contact settings such as households and health care settings but without sustained community spread. With the upcoming Hajj October 13-18, 2013, clinicians are reminded to be vigilant for severe acute respiratory illness (SARI) among travellers returning from affected areas and to undertake appropriate infection control precautions and consultation with local health authorities. Additional MERS-CoV details are available at: www.who.int/csr/disease/coronavirus_infections/en/index.html.

WHO Recommendations for 2013-14 Northern Hemisphere Influenza Vaccine

On February 21, 2013, the WHO announced the recommended strain components for the 2013-14 northern hemisphere vaccine:

A/California/7/2009 (H1N1)pdm09 virus
A/Victoria/361/2011 (H3N2)-like virus*
B/Massachusetts/2/2012-(Yamagata lineage)-like virus**

*For A/H3N2, it is recommended that A/Texas/50/2012 be used as the A/H3N2 vaccine component because of antigenic changes in earlier A/Victoria/361/2011-like vaccine viruses (such as IVR-165) resulting from adaptation to propagation in eggs.

** This one of the three recommended components is different from the northern hemisphere seasonal TIV vaccines produced and administered in 2012-13 (although remaining of the same lineage).

For further details, see:
www.who.int/influenza/vaccines/virus/recommendations/2013_14_north/en/index.html.

Additional Information

List of Acronyms:

ACF: Acute Care Facility
AI: Avian influenza
FHA: Fraser Health Authority
HBoV: Human bocavirus
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
A(H1N1)pdm09: Pandemic H1N1 influenza
RSV: Respiratory syncytial virus
VCHA: Vancouver Coastal Health Authority
VIHA: Vancouver Island Health Authority
WHO: World Health Organization

Web Sites:

Influenza Web Sites

Canada – Flu Watch: www.phac-aspc.gc.ca/fluwatch/
Washington State Flu Updates: www.doh.wa.gov/Portals/1/Documents/5100/fluupdate.pdf
USA Weekly Surveillance reports: www.cdc.gov/flu/weekly/
European Influenza Surveillance Scheme: ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx
WHO – Weekly Epidemiological Record: www.who.int/wer/en/
WHO Collaborating Centre for Reference and Research on Influenza (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

Avian Influenza Web Sites

WHO – Influenza at the Human-Animal Interface: www.who.int/csr/disease/avian_influenza/en/
World Organization for Animal Health: www.oie.int/eng/en_index.htm

Contact Us:

Tel: (604) 707-2510
Fax: (604) 707-2516
Email: InfluenzaFieldEpi@bccdc.ca

Communicable Disease Prevention and Control Services (CDPACS)
BC Centre for Disease Control
655 West 12th Ave, Vancouver BC V5Z 4R4

Online: www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm

version: 26 Oct 2011

Influenza-Like Illness (ILI) Outbreak Summary Report Form

Please complete and email to ilioutbreak@bccdc.ca

Note: This form is for provincial surveillance purposes.
Please notify your local health unit per local guidelines/requirements.

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.

A

Reporting Information *Health unit/medical health officer notified?* ☐ *Yes* ☐ *No*

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)*

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): DD / MMM / YYYY

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

C

Update AND Outbreak Declared Over

Date of onset for most recent case of ILI (dd/mm/yyyy): DD / MMM / YYYY

If over, date outbreak declared over (dd/mm/yyyy): DD / MMM / YYYY

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

D

Laboratory Information

Specimen(s) submitted? ☐ Yes (location: _____) ☐ No ☐ Don't know

If yes, organism identified? ☐ Yes (specify: _____) ☐ No ☐ Don't know

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