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

British Columbia Influenza Surveillance Bulletin

Influenza Season 2013-14, Number 05, Week 48
November 24 to November 30, 2013

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Influenza activity remains low in BC

In week 48 (November 24 to 30, 2013), most surveillance indicators suggested that influenza activity remained low in BC. The proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians increased but remained within expected ranges for this time of year. The proportion of emergency room visits to BC Children's Hospital attributed to ILI increased but remained consistent with previous seasons. The proportion of Medical Services Plan (MSP) claims for influenza illness was at or below 10-year median levels throughout the province. The influenza positivity rate continued to increase in week 48 although remains low. Six (4.5%) specimens tested positive at the provincial laboratory for influenza viruses, including three influenza A(H1N1)pdm09 and three influenza A (subtype pending). Influenza A(H1N1)pdm09 has predominated so far this season (67% of influenza viruses with type/subtype information available), with lesser co-circulation of influenza A(H3N2) (17%) and influenza B (17%). Rhino/enteroviruses continue to be the most commonly detected respiratory viruses. No influenza viruses were detected by the BC Children's and Women's Centre Laboratory. No laboratory-confirmed influenza outbreaks were reported.

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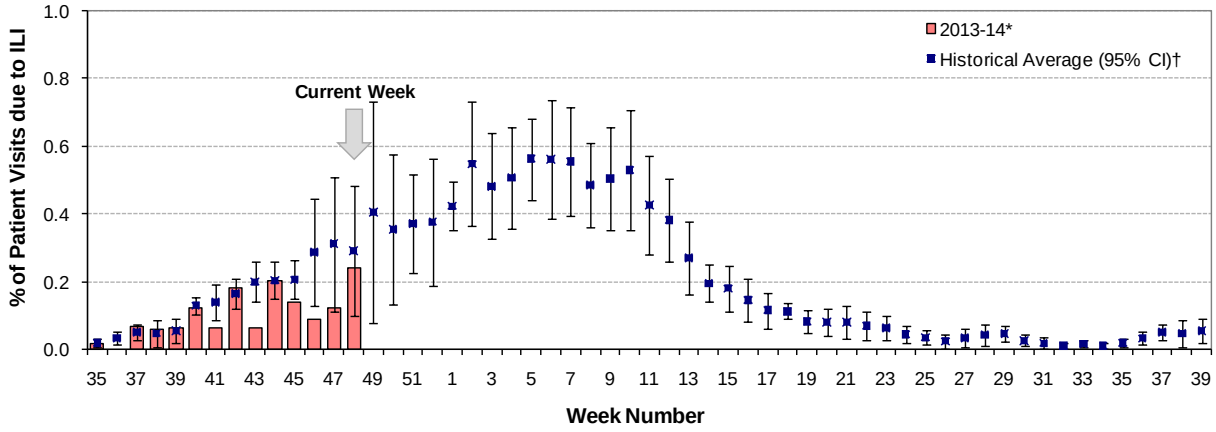
Report Disseminated: December 5, 2013

British Columbia

Sentinel Physicians

In week 48, the proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians was 0.24%, higher than previous weeks, but within the expected range for this time of year. In general, sentinel physician consultation rates have remained below historical averages so far this season. To date, 53% of sentinel physician sites reported data for week 48.

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

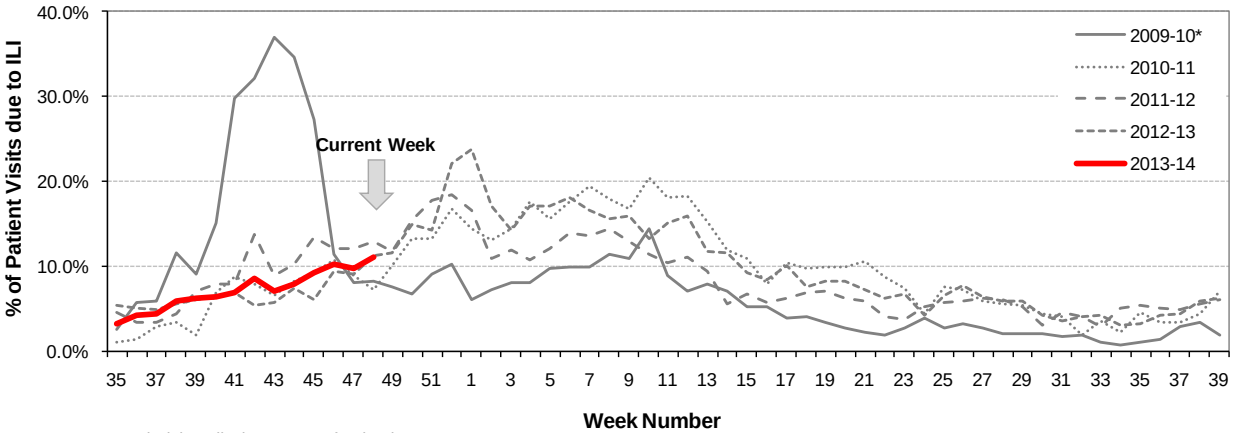


* Data are subject to change as reporting becomes more complete.
† Historical average based on 2001-02 to 2012-13 seasons, excluding 2008-09 and 2009-10 due to atypical seasonality; CI=confidence interval.

BC Children's Hospital Emergency Room

The proportion of visits to BC Children's Hospital Emergency Room (ER) attributed to ILI increased to 11.1% in week 48 from 9.7% in week 47. As with previous weeks, rates were consistent with past 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

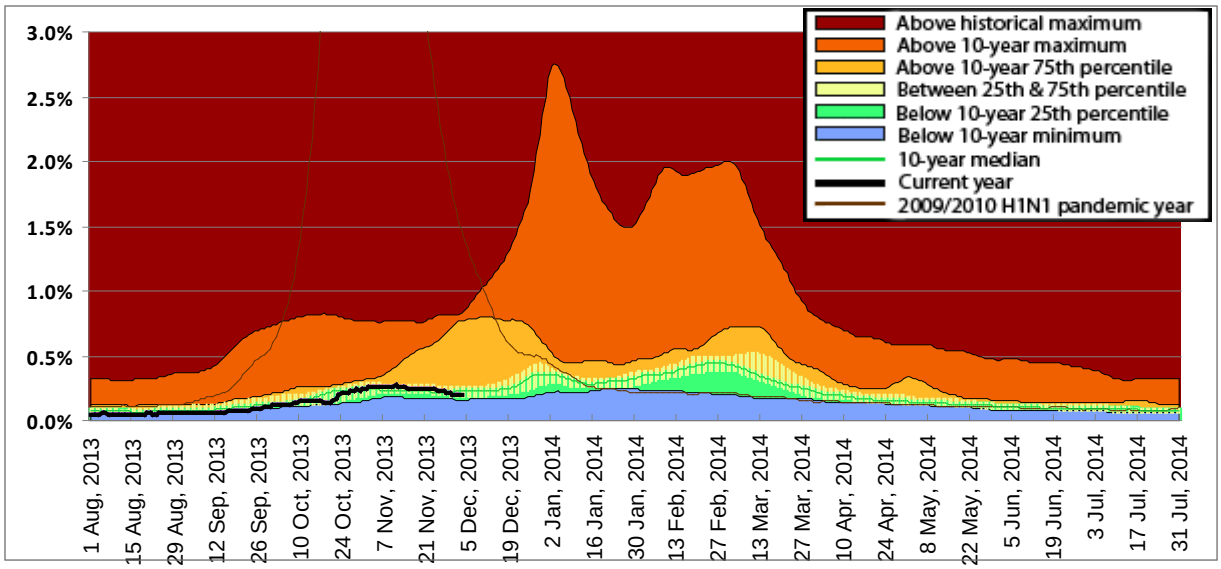


Source: BCCH Admitting, discharge, transfer database, ADT
* Data from 2010-11 to 2013-14 is based on new system (Triage Chief Complaint) not directly comparable to data for 2009-10. In bulletins before week 9 of 2011-12 season, data is based on old system.

Medical Services Plan

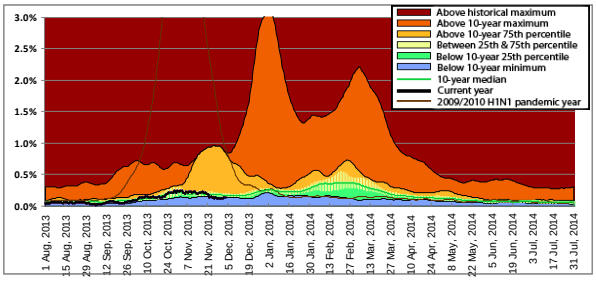
In week 48, BC Medical Services Plan (MSP) general practitioner claims for influenza illness (II), as a proportion of all submitted MSP claims, remained at or below 10-year median levels throughout the province. Rates in FHA, which increased to above 10-year median levels in weeks 46-47, have since returned to expected levels for this time of year. The atypical spike in MSP claims in NHA in week 41 was attributed to a surveillance artefact.

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

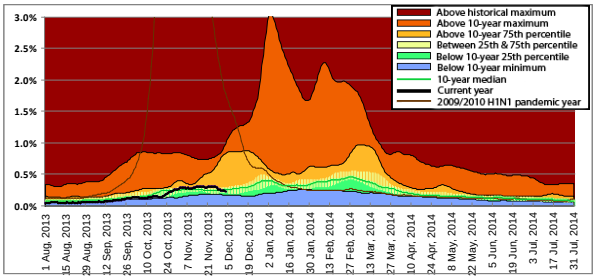


* Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).
Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services
Note: MSP week beginning 1 August 2013 corresponds to sentinel ILI week 31; data current to 03 December 2013.

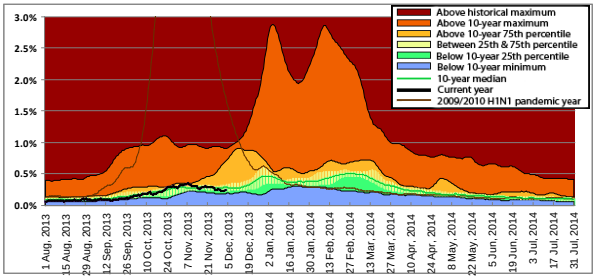
Interior



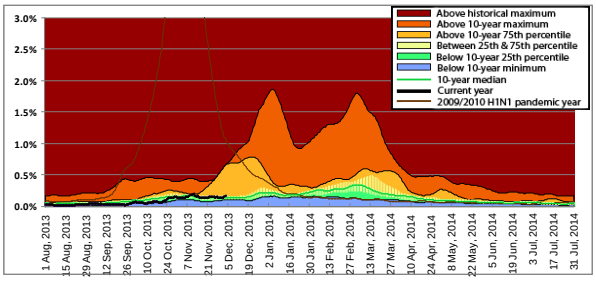
Fraser



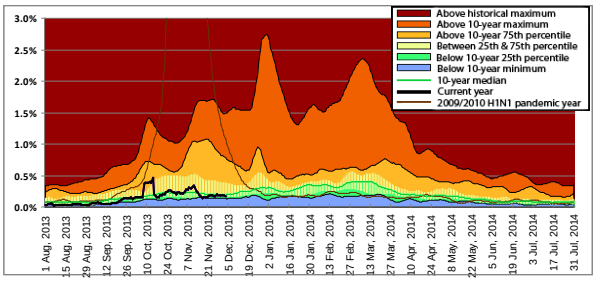
Vancouver Coastal



Vancouver Island



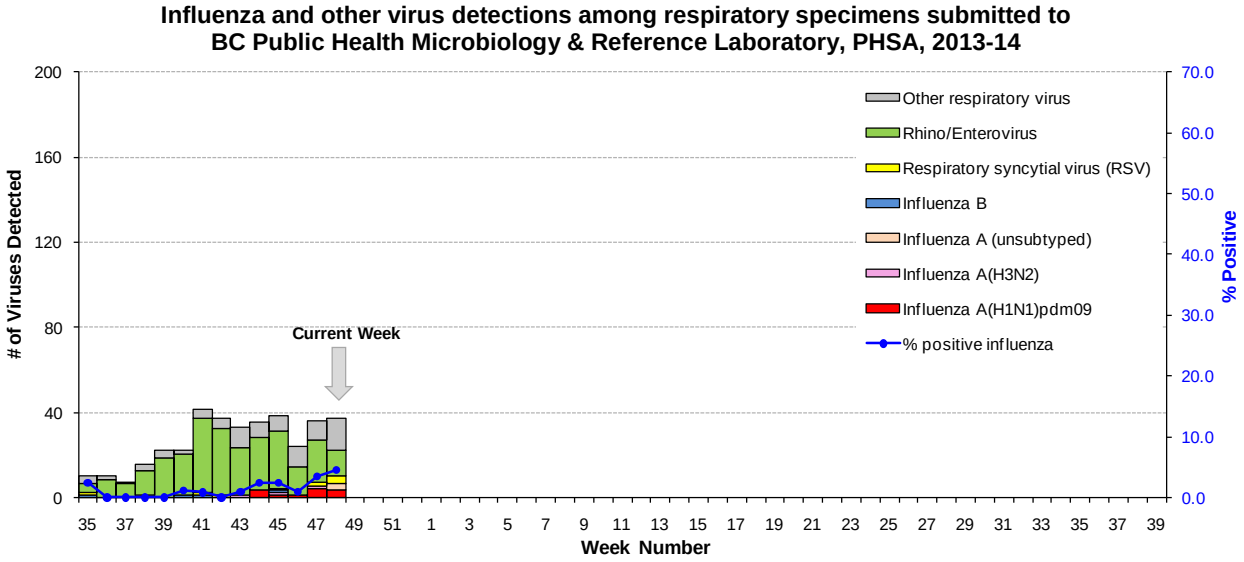
Northern



Laboratory Reports

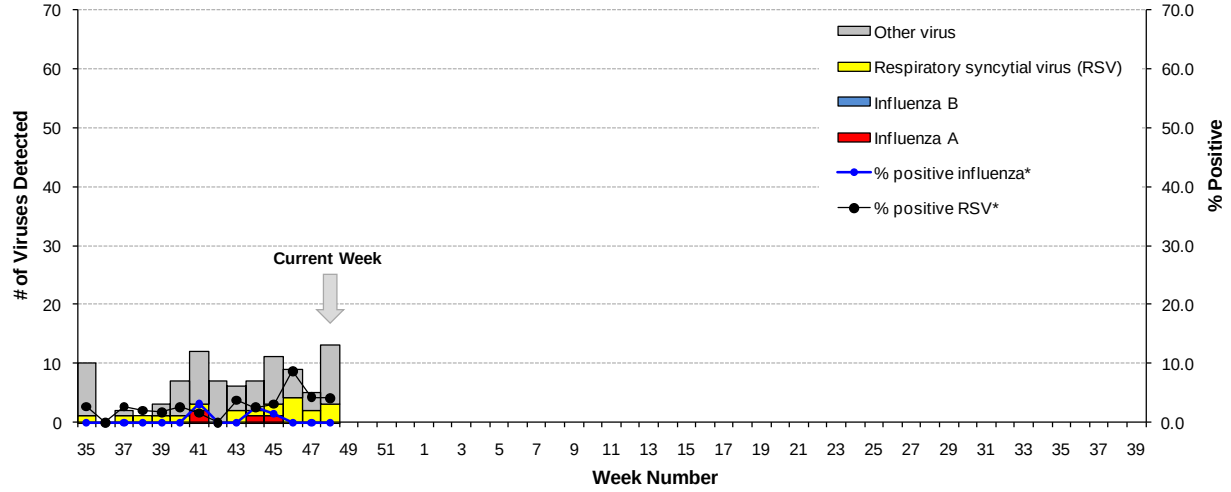
A total of 133 respiratory specimens were submitted to the BC Public Health Microbiology & Reference Laboratory, PHSA, for influenza testing in week 48. Six (4.5%) specimens were positive for influenza, including three for influenza A(H1N1)pdm09 and three for influenza A (subtype pending). Rhino/enteroviruses continue to be the most commonly detected respiratory virus.

To date during the current monitoring period (weeks 40-48 inclusive), of the 18 influenza viruses for which type/subtype results are available, 12 (67%) were influenza A(H1N1)pdm09, 3 (17%) were influenza A(H3N2), and 3 (17%) were influenza B. An additional 3 influenza viruses await subtype information. Thus, early in the season, there is co-circulation of influenza A and B viruses but with a predominance of influenza A(H1N1)pdm09.



In week 48, 73 respiratory specimens were tested for influenza at the BC Children's and Women's Health Centre Laboratory; none were positive for influenza viruses. Parainfluenza was the most commonly detected respiratory virus. Other respiratory viruses, including RSV, were also sporadically detected.

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

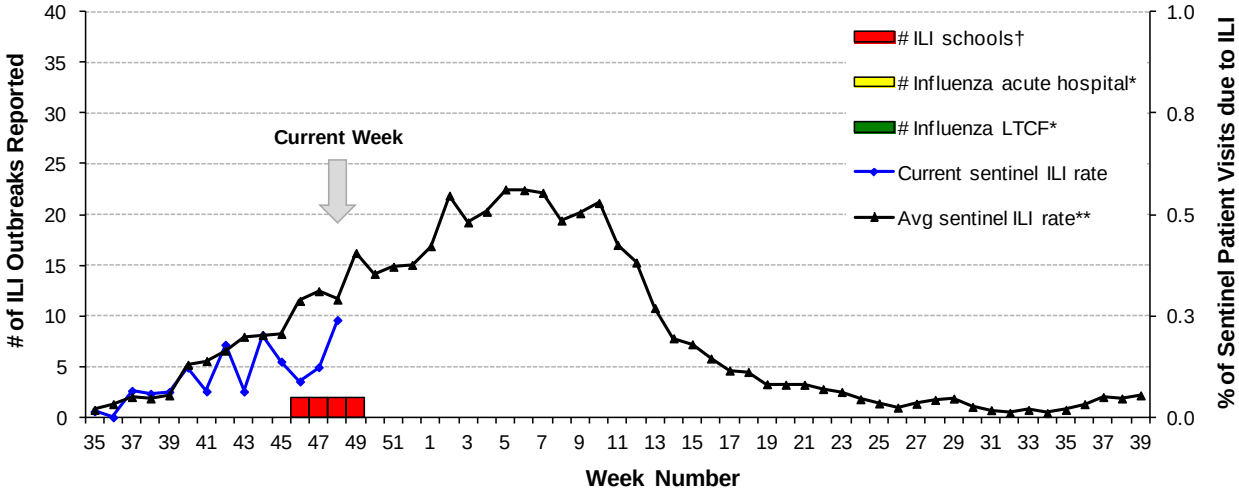


* Positive rates were caculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.

Influenza-like Illness (ILI) Outbreaks

In week 48, two ILI outbreaks were reported from long-term care facilities (LTCF) in IHA. Submitted specimens from one of the reported outbreaks were negative for influenza; laboratory results are pending for the other outbreak. Two school ILI outbreaks were also reported from IHA in week 48. In week 49, two additional school ILI outbreaks have been reported to date. So far during the 2013-14 season, no ILI outbreaks due to laboratory-confirmed influenza have been reported.

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 (week 47):

National influenza activity continued to increase in week 47. Influenza A(H1N1)pdm09 has predominated so far this season, but influenza A(H3N2) and influenza B were also detected. The overall influenza percent positivity was 2.2%. The ILI consultation rate increased to above historical averages in week 47, following a period of stability in the previous four weeks. Six new paediatric hospitalizations due to laboratory-confirmed influenza were reported; four were diagnosed with influenza A and two with influenza B. Five new adult hospitalizations due to laboratory-confirmed influenza were also reported; all were influenza A. Rhinovirus detections continued to decline, while parainfluenza, RSV and adenovirus detections increased. Details are available at: www.phac-aspc.gc.ca/fluwatch/13-14/w47_13/index-eng.php.

National Microbiology Laboratory (NML): Strain Characterization

From September 1 to December 5, 2013, 57 isolates were collected from provincial and hospital laboratories for antigenic characterization at the NML:

- 6 A/Texas/50/2012-like (H3N2)¶ from ON and AB;
- 35 A/California/07/09-like [A(H1N1)pdm09]***** from NL, NB, ON, MB, SK and AB;
- 11 B/Massachusetts/02/12-like† from ON and AB;
- 5 B/Brisbane/60/2008-like****** from ON, MB, and AB;

¶ Virus most closely related to the recommended H3N2 reference virus for the 2013-14 northern hemisphere influenza vaccine.

***** Virus most closely related to the recommended H1N1 reference virus for the 2013-14 northern hemisphere influenza vaccine.

† Virus most closely related to the recommended influenza B component for the 2013-14 northern hemisphere influenza vaccine; belongs to the B Yamagata lineage.

** Virus most closely related to the recommended influenza B component for the 2011-2012 northern hemisphere influenza vaccine; belongs to the B Victoria/02/87 lineage.

NML: Antiviral Resistance

From September 1 to December 5, 2013, 27 influenza A [7 A(H3N2) and 20 A(H1N1)pdm09] viruses were tested for resistance to amantadine at the NML; all tested viruses were found to be resistant. Forty-seven influenza viruses [6 A(H3N2), 27 A(H1N1)pdm09, and 14 B] were tested for resistance to oseltamivir and 45 [6 A(H3N2), 25 A(H1N1)pdm09, and 14 B] were tested for resistance to zanamivir; all tested viruses were sensitive to both antiviral drugs.

International

USA (week 47): Influenza activity in the United States increased slightly in week 47. Of the 4,996 specimens tested, 397 (7.9%) were positive for influenza viruses, of which 87.7% were influenza A [60.3% A(H1N1)pdm09, 3.4% A(H3N2), 36.2% un-subtyped] and 12.3% were influenza B. Details are available at: www.cdc.gov/flu/weekly/.

WHO (as of November 22, 2013): There has been no update since our last bulletin. The most recent information is available at: www.who.int/influenza/surveillance_monitoring/updates/en/.

Avian Influenza A(H7N9) Virus: This week, Hong Kong reported its first case of human infection with avian-origin influenza A(H7N9) in a 36-year-old female with symptom onset in late November. Two cases were previously reported from the adjacent province of Guangdong, China, earlier this year. This latest case traveled to Shenzhen in Guangdong province during her exposure period where she was in close contact with live poultry. A total of 142 human cases of A(H7N9) have been reported to date, including 47 deaths. Six cases have been reported so far this fall, following a period of inactivity in late August and September. At this time, there is no evidence of sustained human-to-human transmission and the risk assessment and recommendations remain unchanged. However, the recent announcement of new cases, combined with the natural seasonality of influenza in temperate regions, raises concerns about a possible re-emergence of this virus during winter months. Clinicians should remain vigilant for patients presenting with severe acute respiratory illness (SARI) with recent travel or epidemiological links to affected areas. Details are available at: www.who.int/influenza/human_animal_interface/influenza_h7n9.

Middle East Respiratory Syndrome Coronavirus (MERS-CoV): Since September 2012, the WHO has been informed of a total of 163 lab-confirmed cases of MERS-CoV and 71 deaths. A family cluster involving a 32-year-old pregnant woman who died of her illness, her 38-year-old husband, and their 8-year-old son was reported this week in the United Arab Emirates (UAE). The woman gave birth while in hospital, and preliminary reports suggest that the newborn has tested negative for the virus. Further investigation of close contacts is ongoing. The family reported no contact with known confirmed cases or animals and had no travel history, according to the WHO. Six countries in the Middle East have been affected, including the Kingdom of Saudi Arabia (which accounts for ~80% of case reports), the UAE, Jordan, Qatar, Oman, and Kuwait. Only two cases have been reported associated with the Hajj pilgrimage in October in two women in Spain; these cases are still classified as probable pending confirmatory laboratory testing. Human-to-human transmission has been observed in households, health care settings, and other non-health care workplaces. However, continued reports of sporadic cases from affected regions of the Middle East suggest that sustained transmission in the community, combined with sporadic spillover from an unknown animal or other non-human reservoir into human populations, may be occurring. Given ongoing activity in affected regions and an incubation period of 10 days or more, clinicians are reminded to stay alert for possible importations among patients presenting with severe acute respiratory illness (SARI) and links to the Middle East. 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:

BCCDC Emerging Respiratory Pathogen Updates: www.bccdc.ca/dis-cond/DiseaseStatsReports/default.htm

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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