2012-2013 Influenza Surveillance
Update of Current Status and Issues
April 18, 2013

This report provides an update to the previous report issued on April 11, 2013. Between April 9 and the end of day on April 15, two new laboratory-confirmed influenza B cases were reported to the Middlesex-London Health Unit. The total number of reported cases is slightly lower than the previous week (April 2-8, 2013), when four laboratory-confirmed cases of influenza were reported to the Health Unit. One hospitalization and no deaths were reported among the cases. There were no influenza outbreaks declared in facilities between April 9 and April 15.

As of Monday April 15, 2013, a total of 464 laboratory-confirmed influenza cases have been reported in in Middlesex-London for the current surveillance season. Of these 462 laboratory-confirmed cases, 446 were influenza A cases and 18 were influenza B cases. This influenza season, there have been 291 hospitalizations and 25 deaths reported among laboratory-confirmed cases. Seventy-four of the reported influenza A cases have been subtyped as human influenza A(H3) and four have been subtyped as influenza A(H1N1)pdm09. To date, a total of 39 influenza outbreaks have been reported; 38 were influenza A outbreaks, and one was an influenza B outbreak. Thirty-four (34) of these outbreaks occurred in long-term care/retirement homes/assisted living facilities, while 5 occurred in acute care hospitals. There have also been outbreaks of several other respiratory viruses during this influenza season. One of the more common viruses, Respiratory Syncytial Virus (RSV), was the cause of a total of 11 outbreaks, nine in long-term care/retirement homes/assisted living facilities and two in acute care hospitals.

Appendix B shows the number of laboratory-confirmed influenza cases by week of illness. Influenza illness peaked in December and early January, with the highest number of reported influenza cases occurring the week of December 23 to 29, 2012. Overall, the number of new influenza cases has continued to decline since that time.

Influenza immunization status is known for 382 of the 464 reported cases. Of these 382, 180 people were 64 years of age and under, and 202 were 65 years of age and over. Of the 180 cases who were 64 years of age and under, 32 (18%) received their influenza immunization this influenza season and 148 (82%) did not. Of the 202 cases who were 65 years of age and over, 141 (70%) received their influenza immunization this season, 59 (29%) did not, and 2 (1%) were not sure. The National Advisory Committee on Immunization (NACI) states that “In the elderly, vaccine effectiveness is about half of that of healthy adults and varies depending on the outcome and the study population. Systematic reviews have also demonstrated that influenza vaccine decreases the incidence of pneumonia, hospital admissions and deaths in the elderly…”

Public Health Ontario reports that from March 31 to April 6, 2013, influenza activity was higher than the previous week, and was driven predominantly by influenza B. During this time period, influenza A increased slightly to 2.79% positivity, compared to 2.16% the previous week, and influenza B was similar at 5.03% positivity compared to 5.00% positivity the previous week. However, both influenza strains were less common than Respiratory Syncytial Virus (RSV), which had the highest proportion of respiratory samples testing positive, at 13.16%, followed by human metapneumovirus (9.37% positivity) and entero/rhinovirus (5.38% positivity).

In Canada, since the beginning of September 2012, 938 influenza viruses have been antigenically characterized. A total of 532 influenza A(H3N2) viruses were similar to A/Victoria/361/2011 and 155 A(H1N1)pdm09 viruses were similar to A/California/07/09. A total of 209 influenza B viruses were similar to B/Wisconsin/01/2010 and 52 were similar to B/Brisbane/60/2008. The components of the 2012/2013 influenza vaccine are A/Victoria/361/2011 (H3N2)-like virus, A/California/7/2009-like virus (an H1N1pdm09)-like virus, and B/Wisconsin/1/2010-like virus.

Precautions to prevent the spread of seasonal influenza are provided on page 6 of this report. **(continued on next page)**

Influenza A(H7N9) Update

The World Health Organization continues to report human cases of influenza A(H7N9) influenza in China. As of April 19, 2013, they are reporting a total of 87 cases that have been laboratory confirmed with influenza A(H7N9) virus in China including 17 deaths. The cases have been found in four eastern provinces in China (Anhui, Henan, Jiangsu and Zhejiang), and two municipalities (Shanghai and Bejing). The geographic totals, with cases (deaths) are broken down as follows: Anhui 3 (1), Henan 3 (0), Jiangsu 21 (3) and Zhejiang 27 (2), Beijing 1 (0) and Shanghai 32 (11). New cases are reported daily.

The H7N9 influenza virus has been identified in birds (chickens and a pigeon) in a live bird market in Shanghai although birds do not seem to display symptoms of the virus. Several live markets have halted their trading of live birds and thousands of birds have been culled from the market where H7N9 influenza was found. So far, there is no evidence of sustained human-to-human transmission, based on monitoring of approximately 1,000 close contacts of infected people. Investigations into potential sources of infection and viral reservoirs are continuing.

On April 13, 2013, the Ministry of Health and Long Term Care issued guidance information on the management of patients suspected to have H7N9 influenza based on:

- Illness compatible with influenza of any severity and travel to China in the past 10 days; or
- Illness compatible with influenza of any severity and contact with a person who is confirmed or very likely to have H7N9 influenza.

The document outlines the case definitions, reporting, assessment, testing and treatment recommendations from the Ministry. It can be found on the Middlesex London Health Unit's website at https://www.healthunit.com/updates-for-health-professionals-blog/alysena-26-H7N9-influenza.

A suspected case should be tested using a nasopharyngeal swab, as is done for seasonal influenza. Please contact the Health Unit if a case of H7N9 influenza is suspected at 519-663-5317 ext. 2330, or after hours at 519-675-7523.

The World Health Organization has indicated that the virus is sensitive to both oseltamavir and zanamavir.

Additional information can be found on the World Health Organization's website.

Clinical precautions to use when caring for someone suspected of having H7N9 influenza are provided on page 6 of this report.

Appendix A
Summary of Community Influenza Surveillance Indicators
April 18, 2013

Since the beginning of the year, influenza activity in Middlesex-London **has declined**. Influenza-like activity this week was **slightly decreased** compared to the previous week.

Indicator	Recent trends / data	Comments for most recent week
Hospital emergency room reports regarding the percentage of patients with fever and respiratory illness	Similar to previous week overall; slight increase at paediatric emergency department	From April 7-13, an average of 6.6% patients at London Health Sciences Centre (LHSC) emergency departments and the St. Joseph's Health Care (SJHC) urgent care centre presented with a fever and respiratory symptoms. This is similar to 6.9% from the previous week. The proportion was highest at the paediatric emergency department, where 18.6% of patients presented with a fever and respiratory symptoms. This is slightly higher compared to 17.3% from the previous week.
Absence reports from elementary schools (i.e., absenteeism > 10%)	Slightly decreased	From April 8–12, nine elementary schools in the two main English public school boards reported a 5-day average absenteeism exceeding 10%. This number is somewhat lower than the previous week, when 11 elementary schools reported average absenteeism exceeding 10%.
Laboratory-confirmed cases	Slight decrease compared to previous week	From April 9-15, two laboratory-confirmed cases of influenza (both influenza B) were reported. This is slightly less than the previous week, when four laboratory-confirmed influenza cases were reported. Since the beginning of the surveillance season on September 2, 2012, a total of 464 laboratory-confirmed influenza cases (446 Influenza A and 18 influenza B) have been reported to the Health Unit.
Hospitalizations	Slight decrease compared to previous week	From April 9-15, one person with laboratory-confirmed influenza was reported to be hospitalized. This is less compared to the previous week, when three hospitalizations were reported. To date, 291 people with laboratory-confirmed influenza have been hospitalized.
Deaths	Similar to previous week	From April 9-15, no deaths were reported among newly reported laboratory-confirmed influenza cases. This is comparable to the previous week, when no deaths were reported. To date, 25 deaths have been reported among cases with laboratory-confirmed influenza. However, it should be noted that the reporting of deaths may be incomplete.

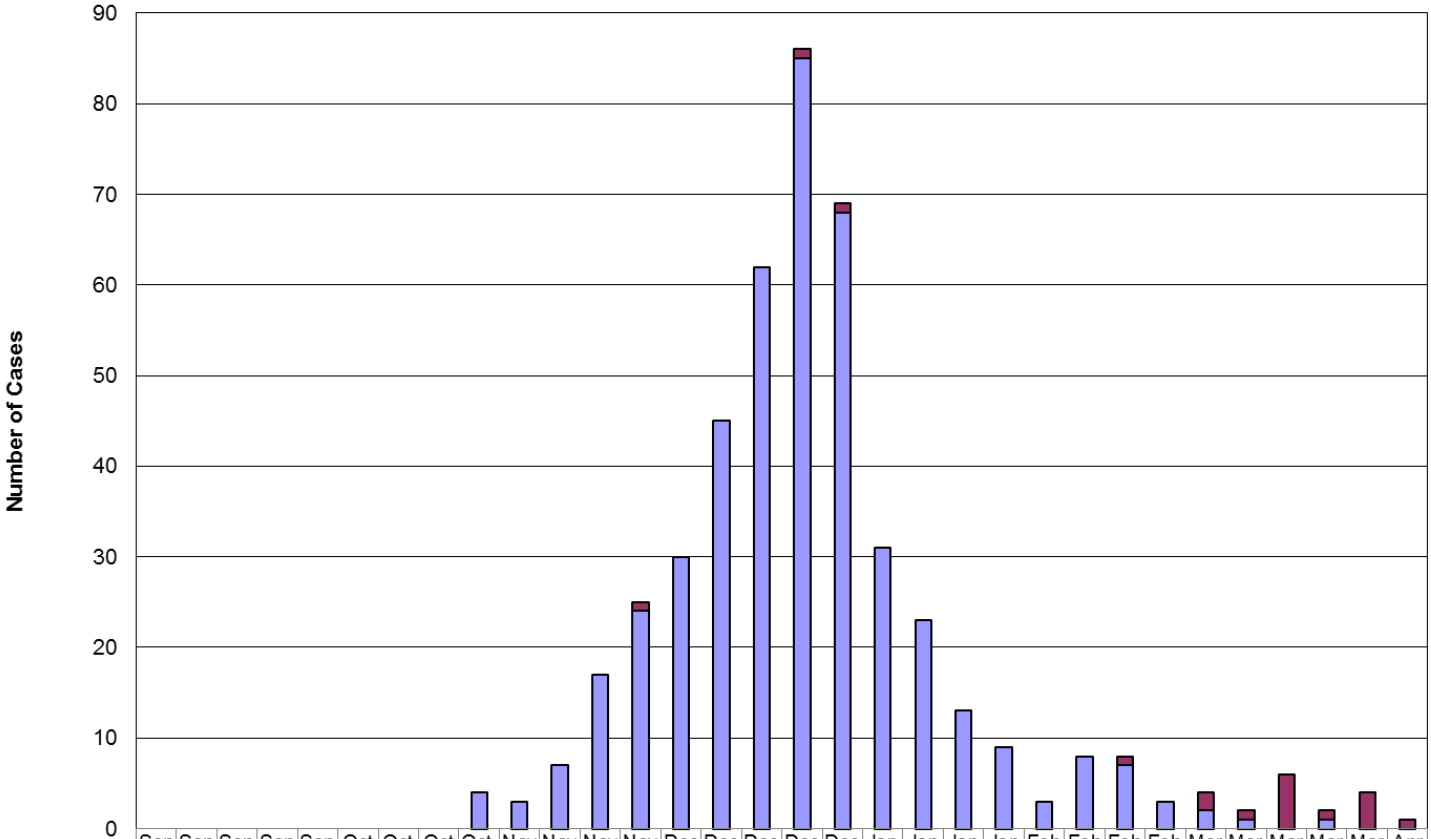
Indicator	Recent trends / data	Comments for most recent week
Influenza outbreaks in long-term care homes/retirement homes/acute care	Similar to previous week	From April 9-15, no influenza outbreaks were declared in long term care facilities. This is similar to the previous week, when no outbreaks were declared in long term care facilities. To date, a total of 39 influenza outbreaks have been reported; 38 influenza A outbreaks and one influenza B outbreak. Of these 39 outbreaks, 34 occurred in long-term care/retirement homes/assisted living facilities and five occurred in acute care hospitals.
Sentinel X-ray provider reports regarding newly identified bronchopneumonia cases	Slightly less than two weeks' previous	At the time of the last report, data for the current week were not available, so this week's report has two weeks of data. From April 8-13, 2.92% of chest x-rays performed by the sentinel x-ray provider were newly diagnosed bronchopneumonia cases, while from April 1-6, 2.23% of chest x-rays performed by the sentinel x-ray provider were newly diagnosed bronchopneumonia cases. These are lower than two weeks ago, when 3.2% of chest x-rays performed were newly diagnosed bronchopneumonia cases.
Percentage of Ontario laboratory samples that are positive for influenza	Slight increase for influenza A; Similar for influenza B compared to previous week	According to the Ontario Respiratory Virus Bulletin issued for the week of March 31-April 6, in Ontario, 36 of 1,291 tests were positive for influenza A (2.79% positivity) and 65 of 1,291 tests were positive for influenza B (5.03% positivity). The percent positivity for influenza A is slightly higher compared to the previous week, when the percent positivity for influenza A was 2.16%. The percent positivity for influenza B is similar to the 5.00% positivity reported the previous week. This week, Respiratory Syncytial Virus (RSV) had the highest percent positivity among all circulating respiratory viruses (13.16% positivity), followed by human metapneumovirus (9.37% positivity) and then entero/rhinovirus (5.38% positivity).

The Middlesex-London Health Unit gratefully acknowledges the contributions of the following community partners who provide data for this report:

London District Catholic School Board
London Health Sciences Centre
London X-Ray Associates
St. Joseph's Health Care London
Thames Valley District School Board

Appendix B

Laboratory-confirmed influenza cases, by influenza episode date and influenza type, Middlesex-London, September 2, 2012 – April 13, 2013 (n=465)



	Sep 2-Sep 8	Sep 9-Sep 15	Sep 16-Sep 22	Sep 23-Sep 29	Sep 30-Oct 6	Oct 7-Oct 13	Oct 14-Oct 20	Oct 21-Oct 27	Oct 28-Nov 3	Nov 4-Nov 10	Nov 11-Nov 17	Nov 18-Nov 24	Nov 25-Dec 1	Dec 2-Dec 8	Dec 9-Dec 15	Dec 16-Dec 22	Dec 23-Dec 29	Dec 30-Jan 5	Jan 6-Jan 12	Jan 13-Jan 19	Jan 20-Jan 26	Jan 27-Feb 2	Feb 3-Feb 9	Feb 10-Feb 16	Feb 17-Feb 23	Feb 24-Mar 2	Mar 3-Mar 9	Mar 10-Mar 16	Mar 17-Mar 23	Mar 24-Mar 30	Mar 31-Apr 6	Apr 7-Apr 13
Influenza B	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	1	0	2	1	6	1	4	1
Influenza A	0	0	0	0	0	0	0	0	4	3	7	17	24	30	45	62	85	68	31	23	13	9	3	8	7	3	2	1	0	1	0	0

Source: Infectious Disease Control (IDC) Database (MLHU internal tracking database), extracted April 17, 2013.

Notes: Influenza episode date source varies. In 437 cases, episode date is the date that the case's symptoms began. In 27 cases, episode date is date the specimen was collected for laboratory testing, and in one case, episode date is the date that the case was report to the Health Unit. Numbers are subject to change week by week given the retrospective nature of reporting.

Measures to Prevent the Spread of Influenza and other Seasonal Viruses, Including Norovirus

- Stay home if you are sick. Individuals who work as food handlers, health care providers or child care workers who have diarrhea and/or vomiting should stay at home until at least 48 hours have passed from their last episode of diarrhea or vomiting.

- Clean hands frequently using soap and water or alcohol-based hand sanitizers. Alcohol-based hand sanitizers should contain 70-90% alcohol. Hands should be cleaned after using the washroom, after changing diapers, after shaking hands and before preparing and eating food.

- If you have diarrhea or vomiting, do not prepare food for others for at least 48 hours after the last episode.

- Clean frequently-touched surfaces often. When cleaning up vomit or diarrhea, thoroughly clean the area with detergent and water, removing all debris, then disinfect with a 1:50 bleach solution if the object being cleaned will tolerate it. Discard or wash all clean-up materials then wash hands thoroughly.

Clinical Precautions When Caring For Suspected Cases of Influenza (H7N9)

Influenza A(H7N9) has recently been found in parts of China. This type of influenza A is a novel strain of influenza, about which relatively little is currently known. The Ontario Ministry of Health and Long Term Care recommends the following precautions when caring for someone with suspected H7N9 influenza:

- Place the patient in a negative pressure airborne isolation room;

- Use of gloves, gowns and fit-tested, seal-checked N95 respirators and eye protection by health workers when entering the same room as, transporting or caring for the patient;

- Masking the patient with a surgical mask when outside of the negative pressure airborne isolation room.

Please ensure that the Health Unit is notified if a case of H7N9 influenza is suspected (519-663-5317 ext. 2330; afterhours 519-675-7523).