2012-2013 Influenza Surveillance
Update of Current Status and Issues
April 11, 2013

This report provides an update to the previous report issued on April 4, 2013. Between April 2 and the end of day on April 8, one new laboratory-confirmed influenza A case and three new laboratory-confirmed influenza B cases were reported to the Middlesex-London Health Unit. The total number of reported cases is slightly higher than the previous week (March 26-April 1, 2013), when two laboratory-confirmed cases of influenza were reported to the Health Unit. Three hospitalizations and no deaths were reported among the newly reported cases. There were no influenza outbreaks declared in long-term care facilities between April 2 and April 8.

As of Monday April 8, 2013, a total of 462 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 16 were influenza B cases. This influenza season, there have been 288 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 38 influenza outbreaks have been reported; 37 were influenza A outbreaks, and one was an influenza B outbreak. Thirty-three of these outbreaks occurred in long-term care/retirement homes/assisted living facilities, while five occurred 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 380 of the 462 reported cases. Of these 380, 178 people were 64 years of age and under, and 202 were 65 years of age and over. Of the 178 cases who were 64 years of age and under, 31 (17%) received their influenza immunization this influenza season and 147 (83%) 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 24 to March 30, 2013, influenza activity was lower than the previous week, and was driven predominantly by influenza B. During this time period, influenza A decreased slightly to 2.16% positivity, compared to 3.54% the previous week, and influenza B was similar at 5.00% positivity compared to 4.92% 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 11.10%, followed by human metapneumovirus (7.27% positivity) and entero/rhinovirus (6.29% positivity).

This week, Public Health Ontario notified the Health Unit that from April 2-8, the number of Telehealth Ontario calls related to respiratory illness exceeded expected norms for a geographic area within Middlesex-London. It is important to note that respiratory illnesses may be due to any combination of circulating respiratory illnesses such as RSV, human metapneumovirus, influenza and common cold viruses (e.g. rhinoviruses).

In Canada, since the beginning of September 2012 until March 30, 2013, 902 influenza viruses have been antigenically characterized. A total of 515 influenza A(H3N2) viruses were similar to A/Victoria/361/2011 and 150 A(H1N1)pdm09 viruses were similar to A/California/07/09. A total of 190 influenza B viruses were similar to B/Wisconsin/01/2010 and 47 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)**

H7N9 Update

The World Health Organization continues to report human cases of H7N9 influenza in China. As of April 11, 2013, they are reporting a total of 38 cases that have been laboratory confirmed with influenza A(H7N9) virus in China; including 10 deaths, 19 severe cases and nine mild cases. The cases have all been found in four eastern provinces in China (Shanghai, Zheijian, Jiangsu and Anhui). A few new cases continue to be 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 760 close contacts of infected people.

There are currently no recommendations about who should be tested for H7N9 influenza infection, although testing is clearly indicated for those who are seriously ill with respiratory symptoms and have a recent travel history to an affected part of China or are a close contact of someone with a recent travel history to these areas. The testing is 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 11, 2013

Since the beginning of the year, influenza activity in Middlesex-London **has declined**. Influenza-like activity this week was **slightly increased** 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; decrease at paediatric emergency department	From March 31-April 6, an average of 6.9% 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 7.5% from the previous week. The proportion was highest at the paediatric emergency department, where 17.3% of patients presented with a fever and respiratory symptoms. This is lower compared to 19.2% from the previous week.
Absence reports from elementary schools (i.e., absenteeism > 10%)	Increased	From April 2–5, 11 elementary schools in both of the two main English public school boards reported a 4-day average absenteeism exceeding 10%. This number is higher than the previous week, when six elementary schools reported a 4-day average absenteeism exceeding 10%.
Laboratory-confirmed cases	Slight increase compared to previous week	From April 2-8, four laboratory-confirmed cases of influenza (one influenza A and three influenza B) were reported. This is slightly more than the previous week, when just two laboratory-confirmed influenza B cases were reported. Since the beginning of the surveillance season on September 2, 2012, a total of 462 laboratory-confirmed influenza cases (446 Influenza A and 16 influenza B) have been reported to the Health Unit.
Hospitalizations	Similar to previous week	From April 2-8, three people with laboratory-confirmed influenza were reported to be hospitalized. This is similar compared to the previous week, when two hospitalizations were reported. To date, 288 people with laboratory-confirmed influenza have been hospitalized.
Deaths	Similar to previous week	From April 2-8, 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.

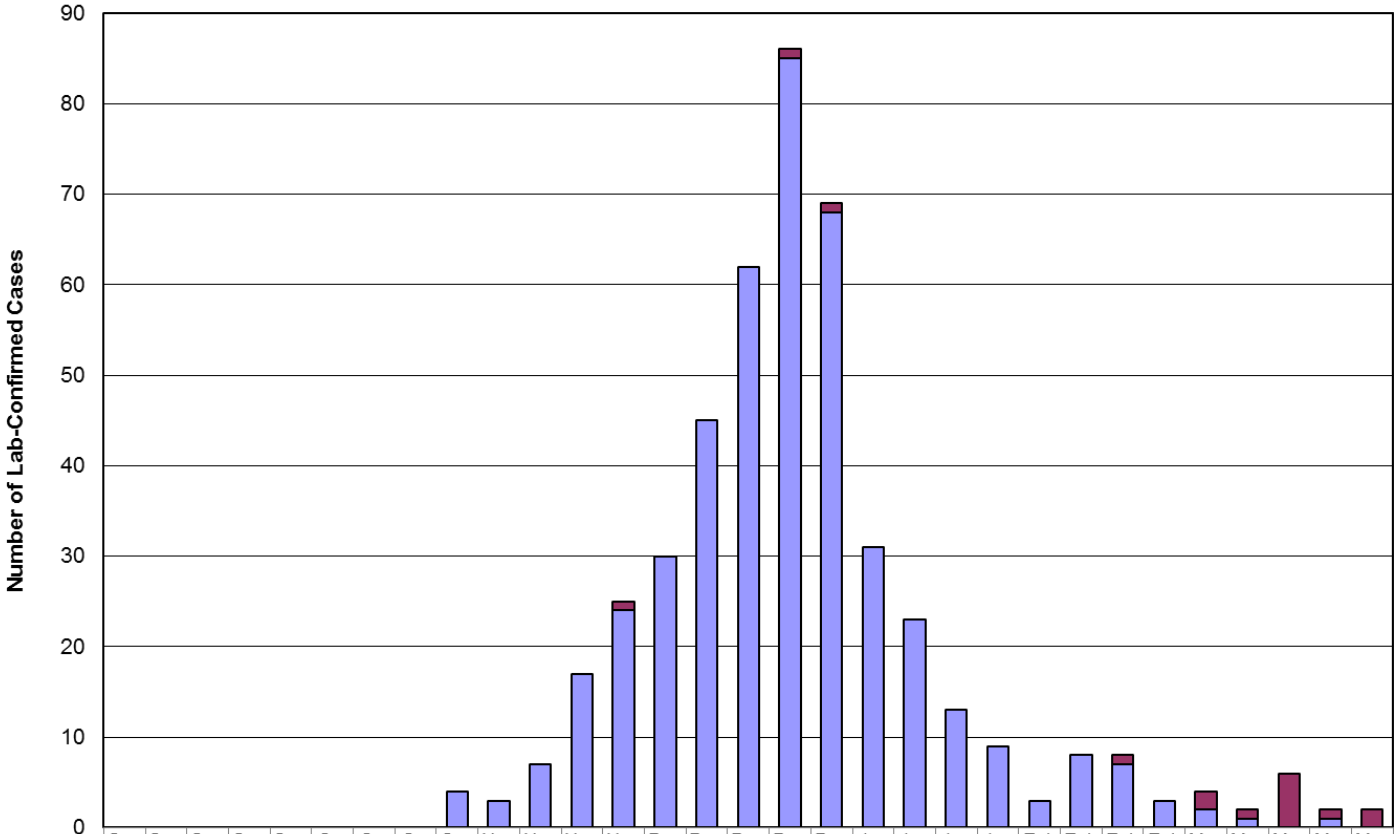
Indicator	Recent trends / data	Comments for most recent week
Influenza outbreaks in long-term care homes/retirement homes/acute care	Similar to previous week	From April 2-8, no influenza outbreaks were declared in long term care facilities. This is similar to the previous week, when no outbreaks were declared in long term care facilities. To date, a total of 38 influenza outbreaks have been reported; 37 influenza A outbreaks and one influenza B outbreak. Of these 38 outbreaks, 33 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	Not available	No bronchopneumonia data were received from the sentinel x-ray provider this week. Last week, 3.2% of chest x-rays performed by the sentinel x-ray provider were newly diagnosed bronchopneumonia cases.
Percentage of Ontario laboratory samples that are positive for influenza	Slight decrease for influenza A; Similar for influenza B compared to previous week	According to the Ontario Respiratory Virus Bulletin issued for the week of March 24-30, in Ontario, 22 of 1,019 tests were positive for influenza A (2.16% positivity) and 51of 1,019 tests were positive for influenza B (5.00% positivity). The percent positivity for influenza A is slightly lower compared to the previous week, when the percent positivity for influenza A was 3.54%. The percent positivity for influenza B is similar to the 4.92% positivity reported the previous week. This week, Respiratory Syncytial Virus (RSV) had the highest percent positivity among all circulating respiratory viruses (11.10% positivity), followed by human metapneumovirus (7.27% positivity) and then entero/rhinovirus (6.29% 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 6, 2013 (n=462)



	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
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	2
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

Source: Infectious Disease Control (IDC) Database (MLHU internal tracking database), extracted April 9, 2013.

Notes: Influenza episode date source varies. In 434 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).