

2011-2012 Influenza Surveillance Update of Current Status and Issues

April 17, 2012

Influenza activity in Middlesex-London:

From April 10 to April 16, 2012, fourteen new cases of laboratory confirmed influenza (five influenza A and nine influenza B) were reported to the Middlesex-London Health Unit. Of the fourteen cases, 6 were community cases (1 A and 5 Bs) and 8 were institutional cases (4 As and 4 Bs). The community case of influenza A was typed as Influenza A(H1N1)pdm09. The total number of reported cases is higher than the one case of influenza that was reported the previous week. One new hospitalization and no deaths were reported during this time period.

To date, there have been 30 influenza A cases and 41 influenza B cases identified in Middlesex-London for the 2011-2012 influenza surveillance season. Nine of the influenza A samples have been typed as human influenza A (H3) and four as influenza A (H1N1) pdm09. One of the H3 samples has been strain typed as A/Perth/16/2009-like (H3N2) which is the H3N2 component for this year's influenza vaccine. One influenza B sample was strain typed as B/Wisconsin/01/2010-like which belongs to a different lineage than the influenza B strain that is in this year's vaccine.

Since the previous report, two new institutional outbreaks of influenza (one influenza A and one influenza B) have been reported to the Middlesex-London Health Unit. The overall proportion of patients presenting to London emergency departments and urgent care with fever and respiratory symptoms decreased compared to the previous week, but school absenteeism was increased. Based on the available information, influenza activity in Middlesex London is higher compared to the previous report.

Provincial and National Influenza Activity:

Influenza: According to the latest Ontario Influenza Bulletin for the week of April 1-7, 2012 based on all sources of information influenza activity across the province was lower compared to the previous week. Based on testing at the Public Health Ontario laboratory from April 1 to 7, 44 of 290 samples tested for influenza B were positive, for a positivity rate of 15.2%. For influenza A, 10 of 290 samples tested positive, for a positivity rate of 3.4%. According to the latest Ontario Influenza Bulletin, 124 new laboratory-confirmed cases of influenza were reported across the province between April 1 and 7, compared to 314 the previous week. In total, 2,973 influenza cases have been reported in the province for the 2011-2012 surveillance season. The majority of the influenza cases reported were influenza B, which accounts for 72.6% (2,159/2,973) of cases reported to date.

Provincially, three new influenza outbreaks were reported between April 1 and 7; all three were influenza B. In total, 81 institutional influenza outbreaks have been reported across the province this season, 60 of which were influenza B, 18 influenza A (all subtypes) and three combined influenza A and B.

Nationally, influenza activity has started to decline however, activity remains higher in Ontario, the Atlantic Provinces, Alberta and British Columbia. The percent positivity for influenza A increased while the percent positivity for influenza B decreased compared to the previous week. Influenza B remained the predominant respiratory virus type circulating in Manitoba, Ontario and all of the Atlantic Provinces.

Since the start of the season, the National Microbiology Lab has characterized 857 samples from across Canada with the following results: 162 Influenza A (H3N2)/Perth/16/2009-like and 16 showing reduced titers with antiserum produced against A/Perth/16/2009; 154 Influenza A/California/07/2009-like and one showing reduced titer with antiserum produced against A/California/07/2009. Both influenza A (H3N2)/Perth/16/2009 and A/California/07/2009 are components of the 2011-2012 influenza vaccine. Of the 524 influenza B viruses characterized, 273 influenza B strains were antigenically related to the strain B/Brisbane/60/2008, which also is a component of the 2011-2012 influenza vaccine. The other 251 (48%) influenza B viruses were antigenically related to B/Wisconsin/01/2010-like, which belongs to a different lineage than the influenza B strain that is in this year's vaccine.

Other Respiratory Pathogens: Provincially, coronavirus was the most notable respiratory pathogen other than influenza that was identified between April 1 and 7, 2012. At the Ontario Public Health Laboratory, the percent positivity for coronavirus was 26.8%, which is higher than 6.3% from the previous week.

Appendix A

Summary of Community Influenza Surveillance Indicators

Based on the available information, influenza activity in Middlesex London is higher compared to the previous report.

Indicator	Recent trends / data	Comments
Hospital emergency room reports regarding the percentage of patients with fever and respiratory illness	Lower	<p>From April 8 to 14, an average of 6.5% of 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 value is slightly lower compared to 6.7% from the previous week.</p> <p>The proportion was highest at the paediatric emergency department, where 15.6% of patients presented with a fever and respiratory symptoms. This value is lower compared to 19.4% from the previous week.</p>
Absence reports from schools (i.e., absenteeism > 10%)	Higher	<p>From April 10 to 13, seven elementary schools in one of the two main English language public school boards reported a 4-day average absenteeism exceeding 10%. This is higher than the previous week when no schools reported elevated absenteeism, but this observation might be related to the long holiday weekend.</p>
Laboratory-confirmed cases	Higher	<p>From April 10 to 16, fourteen cases of influenza (five influenza A and 9 B) were reported to the Health Unit. One of the five influenza A samples was typed as influenza A(H1N1) pdm09.</p> <p>Since the beginning of the influenza surveillance season, 30 influenza A (nine influenza A H3, four influenza A pdm09, the remainder untyped) and 41 influenza B cases have been reported in Middlesex-London. One influenza A has been strain typed as A/Perth/16/2009-like (H3N2) and one influenza B sample was strain typed as B/Wisconsin/01/2010-like</p>
Hospitalizations	Same	<p>From April 10 to 16, one individual with laboratory-confirmed influenza was reported to the Health Unit as being hospitalized.</p> <p>Since the start of the influenza surveillance season, 23 people with laboratory-confirmed influenza have been hospitalized.</p>
Deaths	Lower	<p>No deaths were reported from April 10 to 16, 2012.</p> <p>Since the start of the influenza surveillance season, five individuals with laboratory-confirmed influenza have died.</p>

Long-term care facility outbreaks	Higher	<p>From April 10 to 16, two institutional outbreaks of influenza were reported (one influenza A and one influenza B).</p> <p>Since the beginning of the influenza surveillance season, five influenza outbreaks (three A and two B) have been reported.</p>
Sentinel X-ray provider reports regarding newly identified bronchopneumonia cases	Higher	<p>Between April 9 and 14, 4.1% of chest x-rays performed by the sentinel x-ray provider were newly diagnosed bronchopneumonia cases. This proportion is slightly higher than 3.9% from the previous week.</p>
Calls to Telehealth Ontario related to respiratory and influenza-like illness	None reported	
Percentage of influenza tests performed by the Ontario Public Health Laboratory that are positive from across the province	<p>Influenza A slightly Higher</p> <p>Influenza B slightly Lower</p>	<p>Based on provincial testing done by the Ontario Public Health Laboratory from April 1 to 7, 10 of 290 samples tested positive for influenza A for a positivity rate of 3.4%, which is slightly higher compared to 2.5% the previous week. For influenza B, 44 of 290 samples tested positive, for a positivity rate of 15.2%, which is slightly lower than 16.0% the previous week.</p>