



TO: Chair and Members of the Board of Health

FROM: Christopher Mackie, Medical Officer of Health

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## 2015-2016 INFLUENZA SEASON IN MIDDLESEX-LONDON - FINAL REPORT

### **Recommendation**

*It is recommended that Report No. 065-16 re 2015-2016 Influenza Season in Middlesex-London– Final Report be received for information.*

### **Key Points**

- There were 489 laboratory-confirmed cases, 197 hospitalizations, 19 deaths and 12 confirmed facility influenza outbreaks during the 2015-16 Influenza Season; the number of laboratory confirmed influenza cases was higher than in previous seasons
- The predominant strain during the 2015-2016 influenza season was influenza A (H1N1)pdm09
- The Health Unit began distributing influenza vaccine for the 2016-2017 flu season to Health Care Providers in early October.

### **Overview**

This report provides the final analysis of the 2015-2016 influenza season (see Table 1 for comparison with previous years). In total, 489 laboratory-confirmed cases of influenza were reported to the Health Unit during the 2015-2016 season. It should be noted that many more people may have been infected with influenza but did not have laboratory testing performed and so were not reported to the Health Unit. A graph outlining when laboratory-confirmed cases occurred is shown in Appendix A (Figure 1).

**Table 1: Influenza Cases, Middlesex-London, 2011-2012 through 2015-2016 Influenza Seasons**

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Laboratory-confirmed Cases	106	477	407	381	<b>489</b>
Hospitalizations	34	301	206	161	<b>197</b>
Deaths	3	26	17	14	<b>19</b>
Outbreaks	6	40	19	40	<b>12</b>

Cases ranged in age from 13 days to 101 years old. For cases whose ages were known, those aged 65 years and older accounted for 31% (150/487) of cases, followed by those aged 20-49 years, who accounted for 29% (142/487) of cases. There were 197 individuals with laboratory-confirmed influenza who were hospitalized; this represents 40% (197/489) of laboratory-confirmed cases. Those aged 65 years and older accounted for 43% (85/196) of hospitalized cases. There were 19 deaths reported among individuals with laboratory-confirmed influenza. The number of deaths was highest amongst those 65 years of age and older, representing 63% (12/19) of deaths among reported influenza cases.

### **Influenza Outbreaks**

During the 2015-2016 season, 12 influenza outbreaks were declared in facilities; nine in long-term care settings, one in a retirement home, one in a daycare, and one in a detention centre. Attack rates ranged from 3% to 77%. Duration of influenza outbreaks ranged from 6 to 18 days. Of the 12 outbreaks, influenza A was

identified in nine outbreaks and influenza B was identified in three outbreaks. Laboratory confirmed cases of influenza identified in facilities accounted for 9% (42/489) of cases. It should be noted that a number of cases associated with influenza outbreaks were identified but were not laboratory confirmed and are not included in this analysis. A graph outlining when outbreaks occurred is shown in [Appendix A](#) (Figure 2).

The rate of influenza by health unit within Ontario is shown in [Appendix A](#) (Figure 3). Median immunization coverage rates of staff at long term care homes and hospitals in the Health Unit and Ontario are shown in [Appendix A](#) (Figure 4).

### Timing of the Season and Strain Typing

The influenza season typically occurs from October to April. The peak of the influenza season was later than in previous years. As indicated in Figure 1 of [Appendix A](#), the first confirmed influenza case was reported to the health unit on October 7, 2015 and had an onset of symptoms on October 4, 2015. Influenza activity did not intensify until late January. The last case was reported on May 24, 2016. Of the 489 laboratory-confirmed cases in Middlesex-London, 66% (324/489) were influenza A, 34% (164/489) were influenza B, and 0.2% (1/489) were co-infected with influenza A and B. Both influenza A and B peaked at the same time in mid-March. Of the influenza A cases identified 23% (75/324) were typed as influenza A(H1N1)pdm 09, 1.2% (4/324) were typed influenza A(H3), 0.3% (1/324) were co-infected with influenza A(H1N1)pdm 09 and Influenza A (H3), and 75% (244/324) were not typed. Strain typing was conducted on 18 samples from Middlesex London. Eight cases were strain typed as influenza A/California/07/09-like, one was strain typed as A/Switzerland/97/15293/2013-like and four were strain typed as B/Phuket/3073/2013-like all of which were components of the 2015-2016 seasonal influenza vaccines. Five samples were typed as influenza B/Brisbane/60/2008-like which was a component of the 2015-2016 quadrivalent influenza vaccine.

### Influenza Immunization

The Health Unit distributed 179,230 doses of influenza vaccine to Health Care Providers in London and Middlesex County in the 2015-2016 influenza season; distribution for the 2016-2017 season has begun. Those over 18 years of age are offered trivalent influenza vaccine which protects against three strains (two A and one B) of influenza viruses. Those aged 6 months through 17 years are offered quadrivalent vaccine which offers protection against two Influenza A strains and two Influenza B stains, as the burden of illness caused by Influenza B strains is highest in this age group. The Health Unit will be offering influenza vaccine during its regularly scheduled Immunization Clinics.

### Conclusion

The number of confirmed cases during the 2015-2016 influenza season was higher than the previous season. Cases were reported from October 2015 to May 2016. Influenza A and B peaked in mid-March. The predominant strain of influenza identified this season was influenza A (H1N1)pdm09. The Health Unit will continue to encourage yearly influenza vaccination to reduce the risk of influenza infection in the population for the 2016-2017 season.

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This report addresses the following requirement(s) of the Ontario Public Health Standards: Infectious Diseases Prevention and Control and Vaccine Preventable Disease