



TO: Chair and Members of the Board of Health

FROM: Christopher Mackie, Medical Officer of Health / CEO

DATE: 2019 October 17

ESTIMATED IMMUNIZATION COVERAGE IN MIDDLESEX-LONDON SCHOOLS

Recommendation

It is recommended that Report No. 062-19 re: “Estimated Immunization Coverage in Middlesex-London Schools” be received for information.

Key Points

- In August 2019, the Health Unit received a media request for immunization coverage rates for schools in the Middlesex-London region. The request, which was received by all health units in Ontario, pertained to selected vaccines.
- In consultation with other health units, estimated coverage rates were calculated (see [Appendix A](#)). In the 2018–19 school year, the overall coverage rate for diphtheria, tetanus, polio (DTP) vaccine was 81.9%, with 2.5% philosophical exemptions. The overall coverage rate for measles, mumps, rubella (MMR) vaccine was 91.4%, with 2.6% philosophical exemptions. These data were provided to the requesting reporter.
- Given the Health Unit’s screening process, these rates likely underrepresent true coverage levels in Middlesex-London. The rarity of vaccine-preventable diseases in Middlesex-London schools also suggests that vaccine coverage is currently adequate to provide herd immunity for these illnesses.

Background

In August 2019, the MLHU received a media request for immunization coverage rates for schools in the Middlesex-London region. This request, which was received by all health units in Ontario, pertained to selected vaccines.

The *Immunization of School Pupils Act (ISPA)* requires that students attending primary or secondary schools in Ontario be immunized against certain diseases. Each year, MLHU screens several cohorts of students, with a focus on those aged 7 to 17, to ensure compliance with this legislation. A student is considered compliant if they have submitted an up-to-date vaccination record or a valid medical or philosophical exemption.

Immunization records are documented in Ontario’s Digital Health Immunization Repository (DHIR) and are available for analysis by public health units through the Panorama Enhanced Analytical Reporting (PEAR) tool. The methodology used to extract data and calculate the estimated coverage rates was modelled on the approach used by Toronto Public Health and was consistent with the approach used by most other health units in the province.

When the vaccination rate in a population is adequate to stop a given illness from propagating in the context of sporadic imported cases, the resultant ‘herd immunity’ helps protect even those who are unable to be vaccinated due to medical reasons.

Coverage in Middlesex-London Schools

Immunization coverage rates in Middlesex-London schools for all students aged 7 to 17 during the 2018–19 school year can be seen in [Appendix A](#). The overall coverage rate for diphtheria, tetanus, polio (DTP) vaccine was 81.9%, with 2.5% philosophical exemptions. The overall coverage rate for measles, mumps, rubella (MMR) vaccine was 91.4%, with 2.6% philosophical exemptions.

Only data for publicly funded schools in the City of London and Middlesex County, and within the Thames Valley District School Board, the London District Catholic School Board, le Conseil scolaire Viamonde, and le Conseil scolaire catholique Providence, were included in this analysis. All relevant school boards were notified of the data request. The data were provided to the requesting reporter.

Limitations

While the Health Unit screens several grades each year, not all students between the ages of 7 and 17 are screened. Therefore, the figures presented here likely underrepresent true coverage levels in Middlesex-London, since not all students will have been screened. A student who has received all the necessary vaccines may nonetheless be considered non-compliant because their record is incomplete. During the screening process, if a student is found to have an incomplete immunization record, but has in fact received all appropriate immunizations, that student's record is updated in the immunization database.

These estimates will differ from the coverage rates for the entire Middlesex-London region as officially calculated annually by Public Health Ontario (PHO). PHO's approach describes coverage by antigen as opposed to vaccine, captures coverage for 7- and 17-year-old students only, and uses a different methodology to determine if a student is up to date or has a philosophical exemption.

Immunization rates do not generally reflect the actions or attitudes of any particular school. The rates are typically more indicative of the needs of the school and its surrounding community, delays in reporting, and previous school suspension actions.

Next Steps

The Vaccine Preventable Disease team continues to work toward comprehensive screening of all students aged 7 to 17. Although the relative rarity of vaccine-preventable diseases in Middlesex-London suggests adequate immunization coverage in the region, vaccine hesitancy remains an ongoing and growing risk to public health. Additional efforts to address this risk will be required.

This report was prepared by the Associate Medical Officer of Health, the Population Health Assessment and Surveillance team, and the Vaccine Preventable Disease team, Environmental Health and Infectious Diseases Division.



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