

May 17, 2019

Gary McNamara
Windsor-Essex County Health Unit
1005 Oullette Avenue
Windsor, ON N9A 4J8

Dear Mr. McNamara:

Re: Protecting York Region's School Children through Immunization

On May 16, 2019 Regional Council adopted the following recommendations:

1. Regional Council endorse the position of the Council of Ontario Medical Officers of Health in support of a seamless immunization registry whereby health care providers directly input immunization information at the time of vaccine administration.
2. The Regional Clerk circulate this report to the Minister of Health and Long-Term Care, the Chief Medical Officer of Health, York Region Members of Provincial Parliament, the Association of Municipalities of Ontario, the Association of Local Public Health Agencies, the Council of Ontario Medical Officers of Health, the other 34 Ontario Boards of Health and the local municipalities.

The original staff report is enclosed for your information.

Please contact Marjolyn Pritchard, Director, Infectious Disease Control at 1-877-464-9675 ext. 74120 if you have any questions with respect to this matter.

Sincerely,



Christopher Raynor
Regional Clerk

Attachments

The Regional Municipality of York

Committee of the Whole
Community and Health Services
May 2, 2019

Report of the Commissioner of Community and Health Services and Medical Officer of Health

Protecting York Region's School Children through Immunization

1. Recommendations

It is recommended that:

1. Regional Council endorse the position of the Council of Ontario Medical Officers of Health in support of a seamless immunization registry whereby health care providers directly input immunization information at the time of vaccine administration.
2. The Regional Clerk circulate this report to the Minister of Health and Long-Term Care, the Chief Medical Officer of Health, York Region Members of Provincial Parliament, the Association of Municipalities of Ontario, the Association of Local Public Health Agencies, the Council of Ontario Medical Officers of Health and the other 34 Ontario Boards of Health.

2. Summary

This report outlines York Region Public Health's (Public Health) efforts in enforcing the *Immunization of School Pupils Act* (the Immunization Act) – an Ontario law requiring children under age 18 years attending school to have up-to-date immunization records (or valid exemptions) on file with their public health unit for a designated subset of publicly-funded childhood immunizations.

Key Points:

- Administration and enforcement of the Immunization Act is an important tool for: improving immunization coverage among school-age children; understanding trends and patterns in vaccine coverage; and supporting public health interventions in the event of a vaccine-preventable disease case or outbreak
- Administration of the Immunization Act in York Region would be enhanced if the provincial government were to create a provincial Electronic Medical Record and merge this record with the existing Digital Health Immunization Repository so that any time a health care provider administers a vaccine, it is captured in a central provincial registry

3. Background

Ontario's publicly-funded immunization program prevents diseases that could otherwise cause illness and death

Immunization is one of the most successful and cost-effective public health interventions available. It protects an individual from the negative health impacts of vaccine-preventable diseases like measles or pertussis, and further protects the community at large including those who cannot receive a particular vaccine due to their age or a medical condition.

York Region's immunization program is governed by the *Immunization of School Pupils Act* (the Immunization Act) for school-aged children, and the *Child Care and Early Years Act* for children attending licensed child care centres. Program specific requirements are detailed in the Ontario Public Health Standards, including the requirement to assess, maintain records, and report on the immunization status of children enrolled in schools and licensed child care centres.

Under the Immunization Act, parents or guardians of school-aged children are required to provide Public Health with proof of immunization or a valid exemption (medical or conscience/religious belief). These immunizations include diphtheria, tetanus, polio, measles, mumps, rubella, meningococcal disease, pertussis (whooping cough), and varicella (chickenpox). Most of these vaccine-preventable diseases are highly contagious and can have serious health consequences, including death.

York Regional Council as the Board of Health in York Region supports the activities of Public Health in promoting immunization among school age children

On February 18, 2016 Council endorsed Public Health's role in enforcement of the Immunization Act. The report detailed the administration and enforcement, discussed the benefits of publicly-funded immunization programs and outlined ongoing community efforts to improve immunization uptake and compliance among the Region's students. On April 20, 2017, an update on enforcement of the Immunization Act in York Region was received by Council, including details regarding the approach Public Health would take to improve Immunization Act-related activities in York Region private schools.

Currently, immunization information is not shared between primary health care providers and Public Health

Under the current system, children receive most childhood vaccinations by their primary care provider, who will then typically update the child's personal paper immunization record (the "yellow card"). Immunization information is also recorded in the electronic or paper-based medical record held by their primary care provider. It is then the responsibility of parents or guardians to provide their child's immunization record to Public Health in order for their immunization information to be updated within the provincial Digital Health Immunization Repository.

The Digital Health Immunization Repository is the provincial electronic immunization database that houses all student immunization information. Public Health can input and access student immunization information through this database however, primary health care providers who administer vaccines to children do not have access to the system.

There have been previous attempts to create online portals where patients and health care providers could securely submit immunization information to the Digital Health Immunization Repository. For example, Immunization Connect Ontario developed a platform for both the public as well as primary health care providers to enter information. However, there have been barriers to universal adoption of Immunization Connect Ontario by primary health care providers and public health units across Ontario.

The provincial government recently announced plans to create a provincial Electronic Medical Record and merge it with the Digital Health Immunization Repository

A provincial immunization registry would allow for the seamless reporting of immunization information by primary health care providers at the time of administration.

4. Analysis

Public Health employs a number of strategies to promote immunization among school-aged children

A number of activities occur to support parents and guardians in ensuring their children follow Ontario's publicly-funded immunization schedule (Attachment 1). Public Health sends letters to parents detailing the Immunization Act process and ensures local clinicians are aware of the immunization requirements for school-aged children. Through the school immunization program, Public Health nurses administer three publicly-funded vaccines to grade 7 (twelve year old) students: hepatitis B (two doses), meningitis (one dose, required under the Immunization Act), and human papillomavirus virus (HPV) (two doses). Over the course of the calendar year, community clinics are also held where students can receive publicly funded vaccines.

Public Health responds to vaccine education requests from the community, and proactively raises awareness among the community and local clinicians about the benefits of immunization.

The Immunization Act enforcement process occurs yearly, with Catholic, Public, French and private school boards

The process begins with merging the student demographic information, provided by the schools, with the provincial immunization database and the Digital Health Immunization Repository to identify which students do not have up-to-date records or valid exemptions on file.

Students aged 7 to 17 who are not up-to-date on their immunizations are identified. At least two reminder letters are sent out to parents or guardians and students, which:

- provide information on the benefits of vaccination
- provide the process for submitting updated immunization records to Public Health and how students can receive immunizations they have missed
- notify parents or guardians and students of any pending enforcement activities

Parents or guardians and students have two months after receiving the reminder letters to update their records with Public Health

The Immunization Act provides authority for Public Health to suspend a student for up to a maximum of 20 school days if he/she does not provide up-to-date records or a valid exemption. School principals are responsible for implementing a suspension order. Suspending students is a last resort for Public Health.

Between 2015 and 2018, approximately 82,000 student records were assessed for compliance, resulting in approximately 1,200 suspensions (Table 1). For those students who were suspended, almost all were permitted to return to school within a few days.

Table 1

Results of the Act Enforcement, 2015/16 to 2017/18 School Years, York Region

| School Year | Number of student records assessed | Number of students received first letter* | Number of students received second letter | Number of suspension orders sent | Number of students suspended (% of students assessed) |
|--|------------------------------------|---|---|----------------------------------|---|
| 2015/2016¹ First year of Digital Health Immunization Repository | 19,415 | 8,893 | 5,050 | 3,098 | 356 (1.8%) |
| 2016/2017² | 26,540 | 17,640 | 10,696 | 6,860 | 273 (1.0%) |
| 2017/2018³ | 36,935 | 23,866 | 15,752 | 12,159 | 649 (1.8%) |

Notes:

1. Only 17 year olds attending York Region Catholic and public high schools were assessed
2. 7 and 17 year olds attending York Region Catholic, public and French schools were assessed
3. 7 and 17 year olds attending York Region Catholic and public schools and 7 to 17-year olds attending York Region private and French schools were assessed

* refers to the total number of students who were non-compliant at the onset of enforcement

In 2012/2013, Public Health set out to build relationships with each of the private schools and their respective boards. This has been a major undertaking because the private schools are not unified by one all-encompassing board like the Catholic, French and Public boards. Public Health recently partnered with York Region's 71 private schools to administer the Immunization Act. This work resulted in 100 per cent compliance with the Act among private

school students age 7 to 17 during the 2017/18 school year within the 70 schools who provided student demographic records that year. Since that time, the additional private school has provided Public Health with their student demographic information. Immunization data for all 71 private schools will be captured in 2018/2019.

Under the Ontario Public Health Standards, Public Health is required to maintain immunization records for children in licensed child care centres

In York Region, licensed child care centre operators collect and retain immunization information from parents, and provide it to Public Health upon request. In the event of a vaccine-preventable disease occurring in a licensed child care centre, Public Health can assess each child's records to decide who to exclude and who can safely remain in the child care centre.

Immunization information for children currently in licensed child care centres is captured in the Immunization Act school enforcement activities when the children turn seven. Moving forward, Public Health will focus on collecting information from younger cohorts since most of the publicly-funded immunizations recommended for children are to be given before school entry (Attachment 1). The earlier Public Health can ensure up-to-date records, the more streamlined the Immunization Act process is once children are enrolled in school.

Parents or guardians are able to obtain a medical or conscience/religious belief exemption if they choose not to immunize their child

Medical exemptions are available to children who are unable to receive a vaccine for medical reasons. Parents may request a medical exemption for a child who has a life-threatening allergy and cannot receive a vaccine that contains the allergy-inducing component, or for a child who is undergoing certain treatments for cancer. A written statement from a physician or a nurse practitioner outlining medical reason(s) why the child should not be immunized must be provided to public health to obtain a medical exemption. For the 2017/18 school year, less than one per cent of 7 year-old students in York Region obtained a medical exemption.

A non-medical exemption may be obtained when a parent or guardian has chosen not to vaccinate their child based on conscience or religious belief. Parents or guardians wishing to file a non-medical exemption must complete a "statement of conscience or religious belief" form, have their exemption form signed and affirmed before a lawyer or notary public, and submit to Public Health. In addition, the Immunization Act requires parents or guardians who are requesting an exemption based on conscience or religious beliefs to attend an education session developed by the Ministry of Health and Long-Term Care (Ministry). Public Health provides these sessions at the immunization clinic located at the Newmarket Health Centre. For the 2017/18 school year, approximately one per cent of 7 year-old students in York Region obtained a religious or conscience (non-medical) exemption. Previous Ontario data suggest that non-medical exemptions are increasing over time, however, the absolute proportion remains low, at less than 2.5 per cent on average for the province.

Public Health uses immunization data from the age seven cohort to estimate immunization coverage

Health units across Ontario report data for the age 7 cohort because most childhood vaccines are administered by this age. Seven year-old students in York Region have higher than average immunization coverage rates compared to the rest of the province. For example, for the 2017/18 school year, the proportion of 7 year-old students (those born in 2010) who are up-to-date for immunizations under the Act in York Region is 86.9 per cent, compared to the provincial average of 79.5 per cent. For specific diseases, York Region students have immunization coverage comparable to the provincial average for the 2016/17 school year (Table 2).

Table 2
Immunization Coverage Estimates¹ (%) for 7 year-olds for
Key Childhood Vaccines, 2016/17 school year

| | Measles | Mumps | Rubella ² | Tetanus | Pertussis | Polio |
|--------------------|---------|-------|----------------------|---------|-----------|-------|
| York Region | 90.7 | 90.5 | 94.1 | 84.8 | 84.7 | 84.9 |
| Ontario | 91.2 | 91.1 | 96.2 | 84.7 | 84.6 | 85.0 |

Notes:

1. more robust estimates of vaccine coverage are not available because Ontario does not have a provincial immunization registry
2. the Provincial definition of up-to-date is ≥ 1 valid dose of rubella compared to ≥ 2 valid doses for measles and mumps

Public Health is well-positioned to respond in the event of a vaccine-preventable disease case or outbreak in a school, such as measles

Measles has been in the news recently with outbreaks in New York City, Vancouver, and recently, a report of an infected individual being in a public place in York Region. In the event of a measles case in a York Region school, Public Health can quickly determine those students whose records indicate inadequate protection (based on immunization history or exemptions). For students who are under-immunized, the measles vaccine can be administered within 72 hours of exposure to help prevent them from becoming sick, or they can be removed from school to ensure their safety and the safety of others.

Public Health has implemented an eight-year strategic program plan for implementation of the Immunization Act

York Region has the third largest student population in Ontario, with 194,082 students in 408 schools. Immunization information recorded in the Digital Health Immunization Repository covers approximately 83 per cent of students aged 4 to 17, and 95 per cent of students, aged 7 to 17, attending schools in York Region. By June 2023 the annual student record

assessment and the Act enforcement expansion will include all York Region students aged 7 to 17 and moving forward will continue to include every student within this age range, with the exception of the age 12 cohort, which currently receive immunizations directly from Public Health through the grade 7 program.

Once the immunization records of all students, aged 7 to 17 have been collected, Public Health will begin collecting immunization records for school aged children less than seven years of age. Currently, immunization information captured in the Digital Health Immunization Repository covers approximately 33 per cent of students aged four to six. Under Ontario's publicly-funded immunization schedule, two vaccines are administered between the ages of four to six; however immunization records are not captured until age seven when Public Health collects student demographic information from the schools under the Immunization Act.

York Region Public Health and the Council of Ontario Medical Officers of Health strongly support creation of an immunization registry

A major challenge to administration of the Immunization Act is the lack of a provincial immunization registry to seamlessly transfer immunization information from primary health care providers at the time the vaccine is administered, to the Digital Health Immunization Repository. Self-reporting of immunization information without verification is the standard across all Ontario health units. Public Health Units across Ontario do not have a process to verify the "yellow card" with primary health care providers since this would be immensely labour intensive and costly. It is possible some inaccuracies exist in records collected by Public Health because of the reliance on parents to provide immunization information themselves.

In March 2019, the Council of Ontario Medical Officers of Health – a subgroup of the Association of Local Public Health Agencies representing Associate Medical Officers of Health and Medical Officers of Health across the province – wrote to the Minister of Health and Long-Term Care supporting the Ministry's proposed plan to develop a provincial Electronic Medical Record and merge it with the Digital Health Immunization Repository (Attachment 2). This Electronic Medical Record - Digital Health Immunization Repository integration project would allow for the seamless reporting of immunizations from primary health care providers at the time of vaccine administration directly to local public health.

Public Health is very supportive of the recommendation made by the Council of Ontario Medical Officers of Health that the Ministry assume the role of the health information custodian for the Digital Health Immunization Repository. The Ministry has previously assumed this role with the Ontario Laboratory Information System and the Digital Health Repository. The Ministry taking on the role of the health information custodian, instead of 35 Medical Officers of Health doing so would mean a more consistent approach in obtaining consent for the collection of vaccine information not covered under the Immunization Act.

Immunization Act enforcement supports the corporate strategic goal of supporting community health, safety and well-being

The York Region *2019 to 2023 Corporate Strategic Plan: From Vision to Results* articulates the corporate priority of supporting community health, safety and well-being. Enforcing the Immunization Act among designated cohorts of students supports this priority.

5. Financial

In 2018, activities related to enforcement of the Immunization Act were managed within the Public Health Branch council approved budget of \$65.7 million. Table 3 provides a summary of the budget for Public Health in 2018. In 2019, program activities related to the enforcement of the Act will continue to be managed within the approved Public Health Branch budget of \$68.4 million

Table 3
Public Health Branch 2018 Financial Summary

| | 2018 Budget (\$'000) | 2019 Budget (\$'000) |
|--------------------|-------------------------|-------------------------|
| Gross expenditures | 65,750 | 68,365 |
| Provincial funding | (48,746) | (49,962) |
| Net Levy | 17,004 | 18,403 |

6. Local Impact

There is no direct impact from these recommendations on local municipalities. Enforcement of the Immunization Act relies heavily on partnerships with the local public, Catholic, and French school boards and individual private schools to support suspension orders. Enforcement will continue on a yearly basis to ensure students comply with the legislation and to ensure that students are vaccinated as they move through the publicly-funded immunization schedule, before they reach their 18th birthday when they no longer fall within the requirements of the Immunization Act.

7. Conclusion

York Region Public Health protects the health of the community by preventing vaccine-preventable diseases among our growing population. In light of recent media reports of vaccine-preventable disease outbreaks and issues relating to our current system of

immunization data collection, Public Health will continue to collaborate with parents, local school boards, and individual schools to ensure compliance of the Act, improve immunization rates and protect the health of our communities. Moving toward a seamless immunization registry would increase efficiencies and result in more accurate information about vaccine coverage in the population, supporting public health interventions in the event of a school outbreak or exposure to a vaccine-preventable disease.

For more information on this report, please contact Marjolyn Pritchard, Director, Infectious Disease Control at 1-877-464-9675 ext. 74120. Accessible formats or communication supports are available upon request.

Recommended by: **Katherine Chislett**
Commissioner of Community and Health Services

Dr. Karim Kurji
Medical Officer of Health

Approved for Submission: **Bruce Macgregor**
Chief Administrative Officer

April 17, 2019
Attachments (2)
#9309454

Publicly Funded Immunization Schedules for Ontario – December 2016

Publicly funded vaccines may be provided only to eligible individuals and must be free of charge

| Routine Schedule: Children Starting Immunization in Infancy | | | | | | | | | | | | | |
|---|-----|----------|----------|----------|-----------|-----------|-----------|------------------------|---------|--------------------------|--------------------------|------------------------|----------|
| Vaccine | Age | 2 Months | 4 Months | 6 Months | 12 Months | 15 Months | 18 Months | 4-6 Years [^] | Grade 7 | 14-16 Years [†] | 24-26 Years [‡] | ≥34 Years [‡] | 65 Years |
| DTaP-IPV-Hib Diphtheria, Tetanus, Pertussis, Polio, <i>Haemophilus influenzae</i> type b | | ◆ | ◆ | ◆ | | | ◆ | | | | | | |
| Pneu-C-13 Pneumococcal Conjugate 13 | | ◆ | ◆ | | ◆ | | | | | | | | |
| Rot-1 Rotavirus | | ▲ | ▲ | | | | | | | | | | |
| Men-C-C Meningococcal Conjugate C | | | | | ◆ | | | | | | | | |
| MMR Measles, Mumps, Rubella | | | | | ■ | | | | | | | | |
| Var Varicella | | | | | | ■ | | | | | | | |
| MMRV Measles, Mumps, Rubella, Varicella | | | | | | | | ■ | | | | | |
| Tdap-IPV Tetanus, diphtheria, pertussis, Polio | | | | | | | | ◆ | | | | | |
| HB Hepatitis B | | | | | | | | | ● | | | | |
| Men-C-ACYW Meningococcal Conjugate ACYW-135 | | | | | | | | | ● | | | | |
| HPV-4 Human Papillomavirus | | | | | | | | | ● | | | | |
| Tdap Tetanus, diphtheria, pertussis | | | | | | | | | | ◆ | ◆ | | |
| Td (booster) Tetanus, diphtheria | | | | | | | | | | | | ◆ | |
| HZ Herpes Zoster | | | | | | | | | | | | | ■ |
| Pneu-P-23 Pneumococcal Polysaccharide 23 | | | | | | | | | | | | | ■ |
| Inf Influenza | | | | | | | | | | | | | |

* Every year in the fall

◆ = A single vaccine dose given in a syringe and needle by intramuscular injection
 ■ = A single vaccine dose given in a syringe and needle by subcutaneous injection
 ▲ = A single vaccine dose given in an oral applicator by mouth
 ● = Provided through school-based immunization programs. Men-C-ACYW is a single dose; HB is a 2 dose series (see Table 6); HPV-4 is a 2 dose series (see Table 10). Each vaccine dose is given in a syringe and needle by intramuscular injection
[^] = Preferably given at 4 years of age
[§] = Given 10 years after the (4-6 year old) Tdap-IPV dose
[†] = Given 10 years after the adolescent (14-16 year old) Tdap dose
[‡] = Once a dose of Tdap is given in adulthood (21-26 years of age), adults should receive Td boosters every 10 years thereafter
 * = Children 6 months to 8 years of age who have not previously received a dose of influenza vaccine require 2 doses given ≥4 weeks apart. Children who have previously received ≥1 dose of influenza vaccine should receive 1 dose per season thereafter
 Note: A different schedule and/or additional doses may be needed for high risk individuals (see Table 3) or if doses of a vaccine series are missed (see appropriate Tables 4-23)

ATTACHMENT 1

*The Council of Ontario
Medical Officers of
Health (COMOH) is a
Section of*



**alpha's members are
the public health units
in Ontario.**

alpha Sections:

Boards of Health
Section

Council of Ontario
Medical Officers of
Health (COMOH)

**Affiliate
Organizations:**

Association of Ontario
Public Health Business
Administrators

Association of
Public Health
Epidemiologists
in Ontario

Association of
Supervisors of Public
Health Inspectors of
Ontario

Health Promotion
Ontario

Ontario Association of
Public Health Dentistry

Ontario Association of
Public Health Nursing
Leaders

Ontario Dietitians in
Public Health

March 14, 2019

Hon. Christine Elliott
Minister of Health and Long-Term Care
10th Flr, 80 Grosvenor St,
Toronto, ON M7A 2C4

Dear Minister Elliott,

Re: Support of Immunizations and the Electronic Medical Record (EMR) and Digital Health Immunization Repository (DHIR) Integration Project

On behalf of the Council of Ontario Medical Officers of Health, I am writing to express our thanks for the Minister's support of immunizations and the immunization programs in Ontario. Getting the public support of the Minister in the face of so much misinformation on vaccines is very valuable and appreciated.

We would also like to provide our full support to the Ministry for moving forward with online health records for patients, and in particular, the Electronic Medical Record (EMR) and Digital Health Immunization Repository (DHIR) Integration Project, namely the seamless reporting of immunizations from health care providers directly to local public health. This will reduce the considerable burden on parents to manually report their child's immunizations to local public health units. It will also be more efficient and ensure more accurate vaccine records. If done well, it could also serve as a model for future digital integration between electronic medical record solutions and other provincial health digital assets, supporting the Ontario government's priorities for digitization.

Public health uses vaccination records in the DHIR to prevent and stop outbreaks of infectious diseases such as measles. When EMR integration with the DHIR is established, in order for a vaccination record to be shared between a patient's physician and public health, consent from the patient or their guardian would be required. We would like to encourage the Ministry to consider removing the need for individual informed consent to share vaccine records to improve the efficiency for public health to prevent the spread of infectious diseases.

The Ministry might also consider being the Health Information Custodian for immunization records in the DHIR, administering the DHIR in a manner similar to other Ministry assets like the Ontario Laboratory Information System (OLIS) and the Digital Health Drug Repository. This would further simplify the system by eliminating the need for individual agreements between each of the 35 local public health units and the Ministry and streamline the current process where each local PHU must verify immunization records as they are added to the DHIR.

If the Ministry prefers that local medical officers of health remain the health information custodians for the immunization records of their respective health units, a new consent form would be required. A Ministry-approved, IPC-compliant consent form for the collection of non-ISPA/CCEYA information would be needed for use by all 35 public health units prior to the project being implemented.

Having one database containing the immunization records for all Ontarians would also provide added protection and benefit when outbreaks of infectious diseases occur: quickly identifying those that are susceptible and vulnerable and inform the provision of timely vaccinations to interrupt transmission.

Vaccine wastage or inappropriate administration could also be managed by permitting patients and health care providers across the province to easily access recorded immunization histories.

The proposed project is also consistent with the mention in "Ending Hallway Medicine" to consider technology solutions to improve health outcomes for patients, to integrate care at the local level, and to identify options for integrated health information systems that would facilitate smooth transfers between care settings, in this case from doctor's offices to local public health.

To that end, we thank you again for your announced commitment to this project and look forward to working with your office towards an efficient health care system that meets the needs of Ontarians.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Chris Mackie".

Dr. Chris Mackie
Chair, Council of Ontario Medical Officers of Health

COPY: Dr. David Williams, Chief Medical Officer of Health
Dr. Rueben Devlin, Chair, Premier's Council on Improving Healthcare and Ending Hallway
Medicine