

**Report to
Rapport au:**

**Ottawa Board of Health
Conseil de santé d'Ottawa
19 June 2017 / 19 juin 2017**

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Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE File Number: ACS2017-OPH-HPDP-0004

SUBJECT: UPDATE ON OTTAWA PUBLIC HEALTH'S IMMUNIZATION STRATEGY

OBJET: MISE À JOUR SUR LA STRATÉGIE D'IMMUNISATION DE SANTÉ PUBLIQUE OTTAWA

REPORT RECOMMENDATIONS

That the Board of Health for the City of Ottawa Health Unit:

- 1. Receive, for information, an update on implementation of Ottawa Public Health's Immunization Program: a multi-phased immunization strategy; and**

2. **Approve that the Chair of the Board of Health write a letter to the Minister of Health and Long-Term Care recommending that social determinants of health data be collected and analysed in the Panorama database.**

RECOMMANDATIONS DU RAPPORT

Que le Conseil de santé de la circonscription sanitaire de la ville d'Ottawa :

1. **Reçoive, pour information, une mise à jour sur la mise en œuvre de la Stratégie d'immunisation en plusieurs étapes du Programme d'immunisation de Santé publique Ottawa; et**
2. **Approuve la rédaction, par le président du Conseil de la santé, d'une lettre à l'intention du ministre de la Santé et des Soins de longue durée afin de recommander la collecte et l'analyse des données sur les déterminants sociaux de la santé dans la base de données Panorama.**

EXECUTIVE SUMMARY

In June 2015, the Board of Health approved a multi-phase immunization strategy aimed at strengthening surveillance of immunization status by reviewing the immunization records of all children and youth attending schools and licensed daycares; reducing inequities by identifying how best to serve residents who face barriers and are at greater risk for vaccine preventable diseases (e.g. children under five, the elderly) and expanding promotion of immunization at all ages.

Over the past two years, Ottawa Public Health (OPH) has made progress on its immunization strategy, particularly in strengthened surveillance. During the 2015-16 and the 2016-17 school years, OPH reviewed and assessed the immunization records of the approximately 150, 000 Ottawa students from Kindergarten to grade 12, to ensure that they meet the requirements of the *Immunization of School Pupils Act (ISPA)*. As a result, OPH can now rely on high documented immunization rates and has the information necessary to rapidly identify children at risk in the event of a vaccine preventable disease outbreak.

In addition, for the first time, the Public Health Ontario is releasing public health unit-specific data about vaccine coverage rates across communities in Ontario. This provincial data demonstrates that Ottawa's vaccine coverage rates are higher than the provincial average. For instance, among 17 year olds in the 2015-2016 school year, coverage in Ottawa was 96% for measles (compared with 95% for Ontario) 96 % for mumps (compared with 94% for Ontario) 98% for rubella (compared with 97% for

Ontario) 78% for diphtheria (compared with 72% for Ontario) 78 % for tetanus (compared with 72% for Ontario) and 70 % for pertussis (compared with 65% for Ontario). Much work remains, however, to address challenges and barriers to vaccination in Ottawa.

Moving forward with the immunization strategy, OPH plans to focus on reducing inequities and barriers faced by sub-groups of residents (e.g. language, immigration status), expanding promotion of immunization and maintaining the work done to improve immunization surveillance.

Further, OPH is recommending enhancements to the Ministry of Health and Long-Term Care's database – Panorama – to allow for the collection of and analysis of social determinants of health data (e.g. ethnicity, income) in order to better serve these Ottawa residents and ensure they are protected from vaccine preventable diseases.

RÉSUMÉ

En juin 2015, le Conseil de santé a approuvé une stratégie d'immunisation en plusieurs étapes visant à renforcer la surveillance du statut d'immunisation par l'examen des dossiers d'immunisation de toutes les écoles et de tous les services de garde agréés; à réduire l'iniquité en déterminant la meilleure façon de servir les résidents qui font face à des obstacles et qui sont plus à risque de développer une maladie évitable par la vaccination (p. ex. enfants de moins de cinq ans, personnes âgées); à promouvoir davantage la vaccination à tous les âges.

Au cours des deux dernières années, Santé publique Ottawa (SPO) a accompli des progrès quant à sa stratégie d'immunisation en général et au renforcement de sa surveillance en particulier. Au cours des années scolaires 2015-2016 et 2016-2017, SPO a examiné et évalué les dossiers d'immunisation de 150 000 élèves d'Ottawa, de la maternelle à la 12^e année, pour s'assurer qu'ils satisfont aux exigences de la *Loi sur l'immunisation des élèves*. En conséquence, SPO peut désormais compter sur des taux élevés de vaccination documentés et dispose des informations dont elle a besoin pour repérer rapidement les enfants à risque en cas d'éclosion d'une maladie évitable par la vaccination.

De plus, pour la première fois, Santé publique Ontario publie des données propres aux bureaux de santé publique concernant les taux de vaccination dans les collectivités de l'Ontario. Ces données provinciales récentes montrent que les taux de vaccination d'Ottawa sont plus élevés que la moyenne provinciale. Par exemple, les taux d'immunisation chez les jeunes Ottaviens de 17 ans pour l'année scolaire 2015-2016

étaient de 96 % pour la rougeole (comparativement à 95 % en Ontario), de 96 % pour les oreillons (comparativement à 94 % en Ontario), de 98 % pour la rubéole (comparativement à 97 % en Ontario), de 78 % pour la diphtérie (comparativement à 72 % en Ontario), de 78 % pour le tétanos (comparativement à 72 % en Ontario) et de 70 % pour la coqueluche (comparativement à 65 % en Ontario).

Beaucoup de travail reste à faire cependant pour s'attaquer aux enjeux et aux obstacles concernant la vaccination à Ottawa.

À compter de maintenant, SPO envisage d'axer sa stratégie d'immunisation sur la réduction de l'iniquité vécue et des obstacles rencontrés par des sous-groupes de résidents (p. ex. langue, statut d'immigrant), sur la promotion de la vaccination et sur la poursuite du travail visant l'amélioration de la surveillance de la vaccination.

De plus, SPO recommande des améliorations à la base de données Panorama du ministère de la Santé et des Soins de longue durée pour permettre la collecte et l'analyse des données sur les déterminants sociaux de la santé (ethnicité, revenus, etc.). Ces améliorations nous permettront de mieux servir ces résidents d'Ottawa et, de ce fait, de nous assurer qu'ils sont protégés contre les maladies évitables par la vaccination.

BACKGROUND

In June 2015, the Board of Health approved a multi-phased immunization strategy aimed at enhancing immunization delivery and improving surveillance through focusing on data quality. Ottawa Public Health (OPH)'s Immunization Strategy focuses on three priority areas:

- Every Child Every Year: Focus on improving surveillance of immunization status by reviewing the immunization records of all children and youth attending school and licensed daycare centres.
- Reducing Inequities: Focus on identifying subpopulations that face health inequities and are more at risk for vaccine preventable diseases.
- Across the Lifespan: Focus on expanding the promotion and uptake of immunization across the lifespan.

In October 2015, the Board received an update [report](#) on the strategy's progress regarding enhanced activities to achieve full immunization surveillance for all (approximately 150,000) school-aged children in Ottawa. In June 2016, a [memo](#) was

provided to the Board to further update information on the percentage of students meeting provincial immunization requirements and other aspects of the strategy.

One hundred years ago, infectious diseases were the leading cause of death worldwide. In Canada, they now cause less than 5% of all deaths. Immunization is one of the most cost-effective health investments. Without immunization, we would expect to see more and more outbreaks of diseases.ⁱ High immunization rates are important to maintain community immunity, which protects not only the people getting immunized, but also the most vulnerable in our community, including infants who are too young to be immunized, people who cannot be vaccinated for medical reasons, and people with weaker immune systems.

Since 2015, OPH and the provincial government have sought to improve the uptake of immunization through various activities. There have been a number of provincial changes to which OPH has responded, as outlined below.

Provincial Context

Immunization 2020

In December of 2015, the Ministry of Health and Long-Term Care launched *Immunization 2020 - Modernizing Ontario's Publicly Funded Immunization Program*, a roadmap aimed at strengthening the publicly funded immunization program in Ontario through the implementation of 20 priority actions by 2020. *Immunization 2020* follows the conclusions of the Advisory Committee for Ontario's Immunization System Review and the recommendations of the Auditor General of Ontario's 2014 Annual Report. A number of the priorities set out in *Immunization 2020* align with OPH's immunization strategy and once the 20 priorities actions are implemented, will contribute to strengthening OPH's immunization strategy. Most notably, the province's commitment to developing targeted health equity approaches for vulnerable communities and their commitment to advance the provincial immunization registry, will contribute to achieving our second and third phase of our immunization strategy. The current provincial immunization database, Panorama, does not allow for data collection and analysis of social determinants of health such as home language, ethnicity and immigration status. Having this data easily accessible in Panorama would facilitate program development and implementation to meet the specific needs of the priority populations.

Modernized Standards

More recently, the Ministry of Health and Long-Term Care of Ontario released new draft *Standards for Public Health Programs and Services*. These new standards detail program outcomes for Immunization including a focus on identification of priority populations facing barriers to immunization and underserved populations as well as on implementation of strategies based on assessment of local needs. The modernized standards also include an increased focus on promoting immunization as a core health behaviour.

Updated Provincial Immunization Requirements

In Ontario, there are 17 diseases for which there are publicly funded vaccines. The recommendations for immunization vary across the lifespan, based on age, risk factors and effectiveness of different vaccines. Infants receive their first vaccine at two months of age and vaccines continue to be given across the lifespan, (see supporting document 1 for the full schedule).

In 2016, changes to Ontario's publicly funded immunization requirements to increase protection of specific populations included:

- New eligibility for males in grade seven for human papillomavirus (HPV) vaccine and the move of the grade eight HPV school immunization program for females to grade seven. In previous years, only grade eight girls were eligible to receive this vaccine publicly. This change resulted in OPH offering additional vaccines and catch up immunizations through school based immunization clinics. As of May 31, 2017, OPH has immunized 8543 girls and 3974 boys against HPV for the 2016-2017 school year.
- The expansion of eligibility of the HPV vaccine for people 26 years of age and younger who identify as gay, bisexual, as well as men who have sex with men, including transgendered people. OPH is collaborating with partners and with providers to ensure that eligible individuals have access to the vaccine.
- The Herpes zoster (shingles) vaccine has also become publicly funded for people aged 65 to 70. To increase the availability and access to this new vaccine, OPH collaborates with health care providers ensuring that they have vaccine information as well as adequate supply.

Of note, on May 30, 2017, *Bill 87, Protecting Patients Act, 2017* (Bill 87) received royal assent. When Schedule 1 of Bill 87 comes into force and associated regulatory amendments are promulgated, the *Immunization of School Pupils Act* will require parents to complete an immunization education session before filling a statement of conscience or religious belief. Bill 87 also expands the categories of persons who may provide statements regarding the administration of immunizing agents and requires those who administer immunizing agents to provide information to the Medical Officer of Health.

Universal Influenza Immunization Program

In 2012, Ontario expanded the influenza immunization delivery model to include pharmacists as a vaccine provider for residents over five years of age. Pharmacies offer an easily accessible alternative for residents to access the vaccine as they are open seven days a week and offer extended hours compared to community immunization clinics that are only available at a specific time, in a specific location. In recent years the proportion of vaccines given by pharmacists has increased and the proportion of vaccines given by public health units has decreased. During the 2016-2017 influenza season, OPH immunized 7,397 Ottawa residents for influenza, which represents a decrease of 68% in the number of influenza vaccines given by OPH since the 2012-2013 season, when pharmacies began giving the influenza vaccine. Local data on the number of doses given by pharmacists and physicians is not available, however, provincially, data shows that 2.35% of the influenza vaccines are given by public health units, 33.35% by pharmacists and 63.07% by physicians.ⁱⁱ The Ministry of Health and Long-Term Care, in collaboration with Public Health Ontario is currently conducting a review of the Universal Influenza Immunization Program, which may result in changes in public health program implementation plan.

Local Initiatives

Supporting parents and health care providers in reporting to OPH

The provincial requirements for parents to report their child's immunizations directly to OPH and the inability of primary care providers to input the data remains an issue and a barrier to ensuring OPH has complete immunization records. To make it easier for parents to report their child's immunization, OPH has redesigned our online reporting tool and partnered with CANImmunize app developers to provide Ottawa parents with an easy way to report their child's immunization from their smart phone. Similar to other jurisdictions, OPH is exploring technology that would enable physicians to report all immunizations directly to OPH.

DISCUSSION

Recommendation #1: Receive, for information, an update on implementation of the 3-phase strategy approved in June 2015, including an analysis of challenges in reducing inequities.

As outlined in previous updates (October 2015 and June 2016) and earlier in this report, OPH has implemented a number of initiatives to meet the specific objectives of this multi-phase strategy and has developed plans to maintain the work on phase 1 while shifting focus to phases 2 and 3.

Phase 1: Every Child Every Year:

OPH improved surveillance of children's immunization status by reviewing the immunization records of all children attending school and licensed child care centres. As a result, OPH can rely on high documented immunization rates and has the information necessary to rapidly identify children at risk in the event of a vaccine preventable disease outbreak.

In June 2017, Public Health Ontario published the [*Immunization coverage report for school pupils in Ontario*](#). The report uses an 'up-to-date' coverage estimate. Up-to-date immunization coverage refers to the proportion of students who have received a specific number of vaccine doses based on their age at the time of assessment. It measures the proportion of students who are fully immunized for their age. The report presents provincial and health unit specific coverage estimates for the 2013-2014 to 2015-2016 school years. The data outlined below, shows that Ottawa's immunization coverage rates are above the provincial average.

Table 1: Immunization coverage estimate (%) among children 7 and 17 years old, 2015-2016 school year

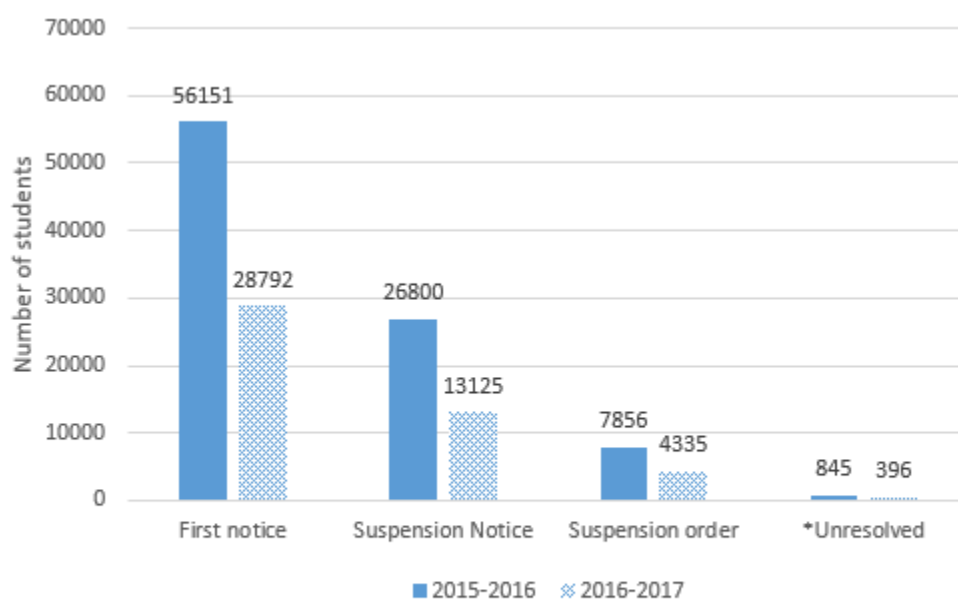
	Ottawa - 7 year old	Ontario - 7 year old	Ottawa - 17 year old	Ontario - 17 year old
Measles	93.6	91.8	96.2	94.6
Mumps	93.5	91.6	95.9	94.0
Rubella	97.3	95.9	98.1	96.9
Diphtheria	87.1	84.3	77.7	71.5
Pertussis	87.1	84.1	70.3	65.0
Tetanus	87.1	84.3	77.8	71.5
Polio	87.6	84.5	94.3	92.9
Varicella	54.3	46.4	n/a	n/a
Meningococcal disease	88.5	92.1	79.6	80.6

Work to date

Immunization surveillance in schools:

During the 2015-16 and the 2016-17 school years, OPH staff reviewed and assessed the immunization records of the approximately 150,000 Ottawa students from Kindergarten to grade 12 to ensure that they meet the requirements of the *Immunization of School Pupils Act (ISPA)* for school attendance. ISPA requires that children under the age of 18 show proof of immunization against measles, mumps, rubella, diphtheria, pertussis, polio, tetanus, varicella (for children born in 2010 or after) and meningococcal disease, or a valid exemption. The record review and assessment process in schools occurs in three steps. Firstly, OPH reviews the immunization records for all students and determines which students have incomplete records. Secondly, for students with incomplete records, OPH sends a first notice of incomplete immunization to parents, giving them 30 days to update their child's immunization information with OPH. If they fail to do so, OPH sends a second notice with an Order of Suspension from School Attendance, issued by the Associate Medical Officer of Health under the authority of the

ISPA that provides parents with two weeks from the date of the letter to provide the information. If the immunization record is still not updated, the child is suspended from school for a period of up to 20 school days. The Associate Medical Officer of Health rescinds suspension orders after the parent provides the required updates to the immunization record.



*Data note: In special circumstances, students may not be suspended after issuing a suspension order. This accounts for 179 unresolved students in 2015-2016 and 66 students in 2016-2017

Figure 1: Numbers of students in Ottawa schools receiving first notices of overdue immunizations, suspension notices, suspension orders, and remaining unresolved, surveillance periods 2015-2016 and 2016-2017

Immunization surveillance, with follow-up to ensure individuals are up-to-date, has shown to be an effective way to ensure immunization rates remain high. As highlighted in Table 2, rates of compliance with the requirements of the *Immunization School Pupils Act (ISPA)* among Ottawa students are high, ranging from 93% to close to 100%, depending on the disease. Compliance is defined as the proportion of students who are compliant with Ontario's Routine Immunization Schedule and are immunized according to their age or have an exemption on file with OPH. Children who are not overdue for a vaccine are deemed compliant. Under the *Immunization School Pupils Act (ISPA)*, OPH is responsible for the collection and assessment of student immunization records to ensure compliance. The way immunization is monitored in Panorama is through compliance.

Table 2: Vaccine Compliance by agent for all students in public school boards, 2016-2017, Ottawa

	Compliant %	Exemption %
Measles	98.61	2.1
Mumps	98.57	2.1
Rubella	99.89	2.1
Diphtheria	94.96	1.7
Polio	97.57	1.6
Pertussis	94.82	1.7
Meningococcal Disease	98.43	2.4
Tetanus	95.14	1.7
Varicella *	93.43	2.5

** Data on Varicella immunization only pertains to children born between 2010-2012*

Data source: Panorama, MOHLTC, data extracted by Ottawa Public Health on May 9, 2017

Immunization surveillance in licensed child care centres:

In 2016, OPH staff worked with child care partners to review and assess the immunization records of 223 children registered at municipal child care centres. Under the *Child Care and Early Years Act* child care centre operators are responsible for ensuring children have proof of immunization, according to the publicly funded schedule, with the following diseases: rotavirus, diphtheria, pertussis, tetanus, polio, Haemophilus influenzae B, pneumococcal disease, meningococcal disease, measles, mumps, rubella and varicella. The record review and assessment process in child care centres does not include suspension of the children from daycare attendance. Between July 2016 to August 2016, OPH:

- Worked with all 11 municipal child care centres
- Reviewed 223 immunization records

- Issued 161 notices of incomplete immunization
- Updated 50 records

Next steps– Strengthening Relationships

Over the next year, OPH will seek to strengthen relationships with partners, in an aim to increase immunization coverage rates by:

- Maintaining work done to improve immunization surveillance with the student population by continuing to review and assess the immunization records of all students every year for all mandatory vaccines under the *Immunization of School Pupils Act*. OPH continues to collaborate closely with all four Ottawa school boards and private schools to seek opportunities to enhance this work and to better meet their needs and the needs of the schools.
- Expanding immunization surveillance with licensed child care centres to include all children who attend child care centres that offer subsidized places in 2017 (139 centres), followed by all licensed childcare centres in 2018 (274 centres), This work will be done in collaboration with the child care centre operators to build effective partnership in order to maintain high immunization compliance among that population throughout the year by ensuring operators are able to assess and maintain records as stated in the *Early Years and Child Care Act*.
- Maintaining partnership with the CANImmunize app project group and continue to work with the Ministry of Health and Long Term Care to leverage technology and implementation of Panorama extensions in order to provide parents with easier ways to report their children's immunizations to OPH.

Phase 2: Reducing Inequities:

Ensuring provision of services for the most vulnerable populations in our communities is a foundational principle at OPH and of public health practice, specifically defined in the immunization Standards for Public Health Programs and Services. Focussing on identifying subpopulations that face health inequities and are more at risk for vaccine preventable diseases is the main goal of the second phase of OPH's Immunization Strategy. This will be accomplished by identifying under-immunized groups and regions in Ottawa, focussing health promotion, partner engagement and vaccine delivery on populations with barriers and risks and prioritizing influenza vaccine clinics to populations with limited access to physicians and pharmacists.

Work to date

OPH has developed and implemented initiatives aimed at reducing inequities by focusing vaccine delivery on priority populations facing barriers to immunization. These initiatives include:

- Opening an immunization clinic at the Mary Pitt centre. The clinic is open five days a week, including one evening a week, and offers immunizations to all age groups. The clinic offers services to residents who are facing barriers to accessing publicly funded immunizations, due to lack of access to a primary care physician, lack of availability of their primary care physician or lack of access to health care services. Between September 2016 and June 2017, nurses gave 5,461 vaccines to 3,443 clients. Clients who visited the clinic expressed that they were able to access a service that their physicians do not provide, that the wait time to receive services was short and that staff were knowledgeable. Of the clients surveyed, 20% reported that they currently do not have access to a primary health care provider.
- A pilot project in collaboration with Centertown Community Health Centre and the YMCA to provide immunization services to residents of the temporary YMCA shelter who could not access immunization services due to geographic and systems barriers. A total of 111 immunizations were provided to 47 clients who were in majority newly landed immigrants. OPH continues to work with key partners to assess systematic approaches to increasing access to primary care services for under-immunized populations who don't have access to a regular primary care provider.
- A redesign of the Universal Influenza Immunization Program to focus on geographic availability of the vaccine. OPH provided 17 community Influenza Immunization Clinics, in areas where, in general, there are a low number of pharmacies offering the vaccine. OPH also provided influenza immunization in seven shelters and 11 group homes and offered the influenza immunization vaccine by appointment to children under five (who cannot receive vaccine at pharmacies), and their immediate families. In 2016-17, OPH gave 5,500 vaccines to the general public, 180 to shelters, 326 to group homes and 1347 to children under five and their immediate families.

Next Steps– Enhancing data

Over the next year, OPH will seek to enhance our data with an aim to increase immunization coverage rates for underserved populations by:

- Analysing data collected through the school immunization surveillance process to define under-immunized communities and populations. More specifically, this will be done by geographically mapping children who have received a notification and suspension order to identify grouping and areas where families seem to be under-immunized and therefore more vulnerable to vaccine preventable diseases. School entry immunization data will also be analysed in the same manner; those data will identify populations who did not receive all vaccines that should have been received in infancy. The result of this data analysis will be compared to the results of the Ottawa Neighbourhood Study to further identify under-immunized and priority populations facing barriers to immunization.
- Collect and analyse social determinants of health data (language, racial/ethnic group, gender, sexual orientation, income and information on chronic diseases, disabilities and addictions) with the client population who uses OPH's immunization services, to better understand their characteristics and specific needs. This data collection and analysis will further define priority populations who use immunization services at the OPH immunization clinic, and provide data on the barriers they face. OPH will consider privacy law requirements when collecting and using social determinants of health data and answering the questions will be voluntary.
- Design, develop and implement public health interventions based on the specific needs of those under-immunized populations to address barriers faced.
- Continue to offer influenza immunization clinics in areas with limited access to the influenza vaccine from other primary care providers. Continue the outreach to priority populations through the provision of influenza immunization clinics in group homes, shelters and by appointment for children under 5 and their immediate families.

Phase 3: Across the lifespan:

Promotion of immunization as a core health behaviour across the lifespan is the main focus of the third phase. OPH intends to promote all vaccines (publicly funded and non-publicly funded) and deepen existing and new partnerships. OPH's has largely focused

on the promotion of childhood immunization, but there is a need to expand the promotion to adult immunization. OPH will use enhanced immunization promotion to promote immunization across the lifespan.

Work to date

Following the amendments of the provincially funded immunization schedule, OPH expanded the reach of some adult vaccination programs:

- The promotion of the new publicly funded Shingles vaccine for people between 65 and 70 years of age. Since the program's inception, OPH has distributed 13,031 shingles vaccines to local providers.
- The implementation of the expanded publicly funded HPV vaccine for people 26 years of age and younger who identify as gay, bisexual, as well as men who have sex with men, including transgendered people. OPH has distributed 372 doses of HPV for the expanded program.

Next Steps– Leveraging Technologies and Strengthening Relationships

Over the next years, OPH will implement different interventions to strengthen established key partnerships and use available technologies to enhance the promotion of immunizations, across the lifespan.

- Primary care providers remain the main providers of publicly funded immunizations. Enhanced communication and collaboration with this group is key to promotion of immunization across the lifespan. Regular updates and education will be planned and implemented in order to ensure that primary care partners can efficiently promote immunization to all clients, across the lifespan.
- OPH will leverage technologies to enhance promotion with residents and with primary care providers. More specifically, ensure that up-to date and timely information is available on the different accessible platforms.
- OPH will target promotion interventions to address barriers identified in phase 2 and the specific needs of the priority populations defined previously.

Recommendation #2: Approve that the chair of the Board of Health write a letter to the Minister of Health and Long-Term Care recommending improved social determinants of health data collection and analysis at the individual level in the Panorama database

Studies show that children of parents with lower levels of education, from lower income households or from single parent families are more likely to be unvaccinated or under vaccinated.^{iii iv} In January 2012, Toronto Public Health analysed the inequalities and immunization rates in their school population. They found that, although not statistically significant, a clear association existed between the proportion of low income families in an area of the City and the initial low immunization coverage rate. This association disappeared after the immunization surveillance was conducted: virtually all children had received the mandatory immunizations.^v

To move forward on the full implementation of the next two phases of the immunization strategy, OPH will identify priority populations facing barriers to accessing immunizations. OPH will also develop and implement interventions to address the specific needs of those priority populations and the barriers they face. Challenges in collecting social determinants of health data and analysing it at the individual level, in correlation with immunization status have been identified. Currently the provincial immunization database, Panorama, does not enable the collection and analysis of social determinants of health at the individual level and correlation of this data with the immunization status of the clients. Innovative ways to collect and analyse social determinants of health data through Panorama to better define under-immunized populations in Ottawa need to be identified in order to meet the program outcomes of the Standards for Public Health Programs and Services, and the specific needs of the most vulnerable populations.

Enabling health units to capture social determinants of health data, at the individual level in Panorama will increase targeted interventions to specific populations facing barriers and ensure that OPH services are well designed and implemented to meet the needs of those populations.

RURAL IMPLICATIONS

Residents living in rural locations may have reduced access to immunization providers due to the physical distance and availability of vaccine. OPH is mindful of this when planning outreach activities and services.

CONSULTATION

OPH routinely collects comments and feedback from residents on immunization services.

LEGAL IMPLICATIONS

There are no legal impediments to receiving the information in this report and there are no legal impediments to the implementation of the second recommendation in this report.

RISK MANAGEMENT IMPLICATIONS

Potential risks and mitigation strategies are outlined in in the body of this report.

FINANCIAL IMPLICATIONS

There are no financial implications to receiving this report.

ACCESSIBILITY IMPACTS

There are no accessibility implications to receiving this report.

SUPPORTING DOCUMENTATION

Appendix A – Publically Funded Immunization Schedule

DISPOSITION

Upon approval of the report, OPH will implement the recommendation in this report and report back to the Board of Health on progress.

ⁱ Immunize.ca retrieved on May 9, 2017

ⁱⁱ Ministry of Health and Long-Term Care, Pharmacists Debrief Presentation, 2017 03 31

ⁱⁱⁱ Dubé E, Laberge C, Guay M, Bramadat P, Roy R, Bettinger J. (2013) Vaccine Hesitancy and Barriers to Using Available Immunization Services.

^{iv} Luman ET, McCauley MM, Shefer A, Chu SY. (2013) Maternal Characteristics Associated with Vaccination of Young Children. *Pediatrics* 2003; 111:1215-8; PMID:12728141

^v Toronto Public Health, Inequalities and Immunization Rates in Toronto School Children, January 2012