



CITY OF HAMILTON
PUBLIC HEALTH SERVICES
Clinical & Preventive Services Division

TO:	Mayor and Members Board of Health
COMMITTEE DATE:	July 10, 2014
SUBJECT/REPORT NO:	Vaccine Program Update - BOH14025 (City Wide)
WARD(S) AFFECTED:	City Wide
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SIGNATURE:	

RECOMMENDATION

That the Medical Officer of Health be directed to focus staff resources on improving immunization coverage rates for priority populations in the community and for school-based immunizations (hepatitis B, meningococcus and Human Papillomavirus vaccinations) by:

- (a) Discontinuing large community-based influenza vaccine clinics;
- (b) Collaborating with the Community and Emergency Services Department to pilot an alternate model of delivering influenza immunizations alongside other community-based social and health services (i.e. health fair) in 1-2 priority neighbourhoods for the 2014/2015 influenza season;
- (c) Offering influenza immunizations at Public Health Services' three general clinic locations and at locations serving hard to reach populations (i.e. Wesley Urban Ministries, Good Shepherd) to ensure that influenza immunizations remain accessible and available to citizens, particularly to children under 5 years of age and persons at risk of influenza-related complications;
- (d) Promoting on the City website, the location of influenza vaccine clinics that are available to the general public (i.e. pharmacies, walk-in clinics) and working with the health sector and community agencies to identify gaps and solutions in service delivery;

- (e) Working closely with community partners to understand reasons for inequities in coverage rates between schools and/or wards; and to develop and implement plans to address these inequities;
- (f) Reporting back to the Board of Health in spring 2015 on progress to improve coverage rates and decrease inequities within community and school-based programs through the reallocation of staffing resources from the influenza program.

EXECUTIVE SUMMARY

Significant pressures in service delivery are being experienced by the Vaccine Program, in particular the school-based immunization and vaccine storage and distribution areas. Nurses on this team go into approximately 120 schools three times a year to administer three vaccines to eligible grade 7 and 8 students. These vaccines are hepatitis B, meningococcal, and Human Papillomavirus (HPV). The vaccine storage and distribution service area involves the inspection, processing of vaccine orders, support and education for over 400 facilities in the City of Hamilton.

Pressures experienced by the program are the result of staff resources being redirected to accommodate new programs and initiatives introduced by the Ministry of Health and Long-term Care (MOHLTC) often without an associated increase in funding. Public Health Services (PHS) is the only provider of these services in the City. Other program areas such as influenza clinics; however, have experienced a significant decline in community demand as more health care providers become eligible to participate in providing influenza immunizations through new MOHLTC initiatives. This has led the Vaccine Program to explore other options for more cost effective ways of delivering influenza vaccine clinics.

Implementing a new model for influenza vaccine administration (i.e. health fairs) that involves collaboration with other City departments and community partners will focus vaccine availability and accessibility where need is highest. It will also free up staff resources to focus on providing essential provincially mandated service in our schools for vaccines that only PHS can administer; address the inequalities in coverage that exist between schools and wards and designing and delivering tailored programs aimed at decreasing this disparity. It will also permit staff to focus on supporting pharmacies that store and administer publicly funded vaccines by responding more quickly to vaccine storage issues.

Alternatives for Consideration – See Page 8

FINANCIAL – STAFFING – LEGAL IMPLICATIONS (for recommendation(s) only)

Financial: By collaborating with other City departments to provide flu vaccine where need is highest and by using existing PHS clinic locations, PHS will be able to administer vaccine programs in a more cost-effective manner that is accessible and acceptable to citizens who are most at risk of influenza-related complications.

The influenza program is reimbursed at \$5.00/dose of vaccine administered. Each year, an increasing pressure to the program is experienced due to the decrease in community uptake. Revenue generated offsets staffing and supply costs and little is left to advertise and promote the importance of influenza vaccination and clinic locations. The implementation of 1-2 health fairs and increasing access at general clinic locations is not anticipated to impact the levy, as long as other community-based influenza vaccine clinics are discontinued.

Staffing: Nurses in the Vaccine Program will use the time normally spent planning and working large influenza clinics to implement more targeted interventions in schools and the community. This will be done in partnership with individual schools and the Neighbourhood Action Strategy to increase coverage rates for hepatitis B, meningococcus and HPV vaccinations, and provide service for influenza vaccine where the greatest disparities exist in the City.

Legal: No legal implications.

HISTORICAL BACKGROUND (Chronology of events)

The following reports that relate to the work of the Vaccine Program have been presented for information and/or recommendation to the Board of Health and Audit, Finance and Accounting:

- BOH14013 – Accountability Agreement Indicator 2013 Year-End Results (May 2014)
- BOH13042 – Public Health Accountability Agreement Indicators – 2013 Mid-Year Provincial Summary and 2014-16 Agreement Update (November 2013)
- AUD13020 – Public Health Services Cold Chain/BIOS Program (June 2013)
- BOH13005 – OPHS Compliance Report (January 2013)
- BOH12009 – Universal Influenza Immunization Program (June 2012)
- BOH12014 – VPD School Program Review (June 2012)
- BOH10038a – Public Health Accountability Agreements (February 2012)

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

The Vaccine Program provides services to the community under the Ontario Public Health Standards (2008) (OPHS) and respective protocols. These standards and protocols outline the minimum requirements that immunization programs must provide including: provision of immunizations in school and community-based settings;

screening and assessment of student records; storage and distribution of vaccines; and investigation of adverse events following immunization.

The Board of Health is required under the OPHS to provide provincially-funded vaccine to any eligible person in the health unit through board of health based clinics; school-based clinics; community-based clinics; and outreach clinics to priority populations. How these clinics operate is at the discretion of the health unit.

Accountability agreements between local boards of health and the Province replaced the Program-Based Grants Terms and Conditions which had been the legal framework under which boards of health received provincial funding to carry out the OPHS and related programs. The Vaccine Program has six indicators for which they are accountable:

- % of vaccine wasted by vaccine type that is stored/administered by the public health unit (HPV)
- % of vaccine wasted by vaccine type that is stored/administered by the public health unit (influenza)
- % of school-aged children who have completed immunizations for Hepatitis B
- % of school-aged children who have completed immunizations for HPV
- % of school-aged children who have completed immunizations for meningococcus
- % of refrigerators storing publicly funded vaccine that have received a complete routine annual cold chain inspection

RELEVANT CONSULTATION

The Neighbourhood and Community Initiatives Division of the Community and Emergency Services Department was consulted prior to writing this report to identify possible strategies and solutions to ensure influenza vaccine is accessible to priority neighbourhoods. Both departments have agreed to pilot 1-2 health fairs this fall as a way to ensure access to influenza vaccinations, but also to other health and social services information.

This Neighbourhood and Community Initiatives Division also facilitated a discussion between the Vaccine Program Manager and the Community Developers working in the priority neighbourhoods to brainstorm reasons for low rate of return for consents for school-based immunizations and identify tailored strategies to reach parents and students with the goal of increasing the number of students vaccinated.

In addition to internal City consultation, the Vaccine Program worked with the Children's Aid Society and Juravinski Cancer Centre in 2012 to identify reasons for low acceptance of HPV vaccine in girls and to identify possible strategies to raise awareness and uptake. Unfortunately, due to resource constraints (staffing, financial), this work has yet to be implemented. Approval of the recommendations will allow the program to work towards reaching these goals.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

PHS has offered influenza vaccine since 2000 within the community through large community-based clinics at recreation centres and schools, as well as targeted clinics for priority populations at locations such as Street Health Centre, YMCA, Mission Services and Wesley Urban Ministries. PHS also administers influenza vaccine in a limited capacity at its general clinic locations to individuals without a family physician and to children requiring a second dose.

Since 2010, attendance at influenza immunization clinics hosted by PHS has declined significantly while vaccine distribution rates have remained relatively stable (Appendix A). Since the total amount of vaccine distributed is unchanged, it is unlikely that the decrease in attendance can be attributed to apathy but rather due to the increased accessibility of vaccine in the community through other locations such as walk-in clinics, workplaces and pharmacies. Accessibility of influenza vaccine across the City for the 2013/2014 season can be found in Appendix B. As this map demonstrates, there is wide access to influenza vaccine across the City from a variety of providers.

In Hamilton, physicians and pharmacies administered 80% of the influenza vaccine doses across the City last influenza season. Only 2% of the vaccine administered in Hamilton was given by PHS. The number of doses administered by provider type in the 2013/2014 season can be found in Appendix C. This is a trend that is being seen provincially, and health units are re-evaluating their role in influenza vaccine administration. For example, the Niagara Region will be offering four community clinics in areas that have limited pharmacy and primary care support. The Region of Waterloo will be offering eight clinics this influenza season that target the same areas for service.

As part of the effort to increase coverage rates for influenza, PHS works closely with health care sector partners including local hospital systems and community-based health care (long-term care, Community Care Access Centre), pharmacy, family physician practices and Emergency Medical Services. This group works together to monitor influenza illness; coordinate communication messages with health care workers and the general community on the importance of influenza vaccination; and advocates for policy changes to support increased coverage (i.e. mandatory flu shots for health care workers) and accessibility (i.e. public access in hospitals; shut-in patients).

While the influenza program has seen some decreases in community uptake for PHS offered clinics, there has been significant growth in other service areas for the Vaccine Program: storage and distribution of vaccines and school-based immunization programs. This is due to the introduction of several new programs and requirements from the province.

Vaccine Storage and Distribution

The Vaccine Storage and Handling Protocol (2010) outlines the requirements of Boards of Health for the storage, handling and distribution of publicly funded vaccines within the health unit. Part of this protocol involves an inspection component. Nurses conduct cold chain inspections annually for every refrigerator in the City of Hamilton that stores publicly funded vaccine. Cold chain is the process of maintaining optimal conditions for the transport, storage and handling of vaccines. The number of refrigerators requiring inspection annually has been steadily increasing since 2010.

Number of refrigerators requiring inspections (2010-2014)				
2010	2011	2012	2013	2014
310	322	316	432	426

These numbers represent the total number of refrigerators that were still operational as of December 31, 2013.

Reasons for the increase in number of inspections include: more physician practices opening and/or closing; increased availability within hospitals; and the introduction of pharmacies into the influenza vaccine program. There are approximately 170 pharmacies in Hamilton. Of these, 40 administered influenza vaccine in 2012. In 2013, 100 pharmacies participated. It is hoped that for the upcoming flu season, more pharmacies will be approved by the province to participate.

The addition of pharmacy inspections, as a Ministry condition to participation in the influenza vaccine program, comes with little increase in resources. These inspections are expected by the Ministry to be completed within the current program complement, with the Ministry simply providing reimbursement for additional printing and mileage expenses, not staffing.

With an increase in the number of refrigerators storing publicly funded vaccine, there has been an associated increase in the number of violations of temperature requirements reported to the program. Vaccines are required to be stored at temperatures between +2°C and +8°C. When temperatures go outside that range at a facility, PHS is notified and assesses the viability of every product that has been stored in the refrigerator during that period, and makes a recommendation on whether the vaccine is useable or considered wastage. This assessment of viability is made in consultation with product manufacturers and provincial stability guidelines.

**Number of temperature violations requiring assessment
(2010-2014)**

2010	2011	2012	2013	2014*
144	165	158	193	54

*2014 number is as of June 11/14.

Reasons for temperature violations include power outages, fridge or equipment malfunction or human error. The program works closely with facilities to ensure that policies are closely adhered to and provides necessary education and support to ensure compliance.

In 2013, the Vaccine Program requested an audit from Internal Audit Services to determine compliance with the requirements of the Ministry in the Vaccine Storage and Handling Protocol. Recommendations from the audit included improvements to inventory control management practices; strengthening policies; and implementing ways to increase collaboration with and accountability of health care providers for vaccine wastage. While the program is committed to continuing to implement these recommendations, these improvements have resulted in further work load pressures for the team within the existing staffing model.

School-based Immunization Program

PHS provides three vaccinations through school-based clinics: hepatitis B, meningococcus and human papillomavirus. These vaccines are not approved by the MOHLTC for administration in physician practices, except as part of a catch-up program (i.e. the student has exited the school system and remains eligible).

The Board of Health previously approved Report BOH12009 allowing PHS to decrease the number of large community influenza vaccine clinics to focus resources on the Ministry's school immunization program accountability indicators. This gave the program an opportunity to notify students with incomplete immunization records and to provide clinics to catch students who missed doses of their vaccination series. This summer strategy helped to raise the overall coverage rates for Ministry accountability indicator reporting. Unfortunately, the program is no longer able to sustain this service due to increased Ministry demands (i.e. refrigerator inspections); thus new ways of increasing vaccine uptake is needed again.

The program has looked at coverage by school across the City. Although the program is meeting its provincial targets overall (BOH14013 and BOH13042), there is wide disparity in coverage between wards in the City (Appendices D, E, F). PHS would like to address this disparity and identify targeted, tailored ways to ensure equitable access to vaccine programs, beginning with schools distributed across the City that have coverage rates of 60% or less (~29 schools). This work will require more engagement

with schools, parents and students and the time for nurses to spend building these relationships and implementing strategies for each school.

ALTERNATIVES FOR CONSIDERATION

(Include Financial, Staffing, Legal and Policy Implications and Pros and Cons for each alternative)

As an alternative to the presented recommendation, PHS would reduce the number of influenza clinics from 12 to 7. Twelve clinics have been offered across geographical areas of the City for the last two influenza seasons. These clinics would include locations that have had high attendance in previous seasons as well as areas that have limited access through pharmacies or walk-in clinics. The seven areas that are being considered include: Dundas, Waterdown, Downtown (2 locations), West Mountain, Lower East End, and the East Mountain.

Influenza immunizations would also be provided at general clinics and at locations serving hard to reach populations to ensure that influenza immunizations remain accessible and available to citizens, particularly to children under 5 years of age and persons at risk of influenza-related complications.

If this alternative is approved, the Vaccine Program would not have the ability to resume catch-up programs or other targeted approaches to increase coverage in those schools with less than 60% coverage rates.

Financial, Staffing, Legal Implications: The Vaccine Program is committed to trying to use resources in a more effective and innovate way to deal with pressures and meet the OPHS requirements. However, if the recommended or alternative changes are implemented and pressures continue to exist, ways to manage these pressures will be presented to the Board of Health through the budget process, with the associated financial and staffing implications.

ALIGNMENT TO THE 2012 – 2015 STRATEGIC PLAN

Strategic Priority #1

A Prosperous & Healthy Community

WE enhance our image, economy and well-being by demonstrating that Hamilton is a great place to live, work, play and learn.

Strategic Objective

- 1.5 Support the development and implementation of neighbourhood and City wide strategies that will improve the health and well-being of residents.

Strategic Priority #2

Valued & Sustainable Services

WE deliver high quality services that meet citizen needs and expectations, in a cost effective and responsible manner.

Strategic Objective

2.1 Implement processes to improve services, leverage technology and validate cost effectiveness and efficiencies across the Corporation.

APPENDICES AND SCHEDULES ATTACHED

Appendix A to Report BOH14025 - Comparison of the Number of Influenza Vaccine Doses Administered at PHS Clinics to Number of Doses Distributed in the City

Appendix B to Report BOH14025 – Community Locations Offering Influenza Vaccinations 2013-14 Season, City of Hamilton

Appendix C to Report BOH14025 - Influenza Doses Administered by Location Type

Appendix D to Report BOH14025 - Hepatitis B Vaccination Coverage Rates by Ward and by School – 2012-2013 school season, City of Hamilton

Appendix E to Report BOH14025 - Meningococcal Vaccination Coverage Rates by School and by Ward – City of Hamilton, 2012-2013 school season

Appendix F to Report BOH14025 - HPV Vaccination Coverage Rates for Third Dosage by Ward and by School – 2012-2013 school season, City of Hamilton