

STAFF REPORT ACTION REQUIRED

2014 Influenza Update

Date:	October 31, 2014
To:	Board of Health
From:	Medical Officer of Health
Wards:	All
Reference Number:	

SUMMARY

This report provides an overview of the 2013-14 influenza season, as well as a description of Toronto Public Health's (TPH) planned activities for the 2014-15 influenza season. This includes initiatives designed to increase influenza immunization rates of healthcare workers (HCWs) in healthcare facilities and a description of an approach to influenza prevention being used by 12 Toronto area hospitals that are members of the Toronto Academic Health Sciences Network (TAHSN), that are implementing an influenza "vaccination or mask" policy.

This report also provides an update on TPH's pandemic influenza preparedness activities – an ongoing planning process to ensure public health preparedness and organized response activities in the event of a pandemic.

RECOMMENDATIONS

The Medical Officer of Health recommends that:

- 1. The Board of Health endorse the TAHSN Healthcare Worker Influenza Vaccination (vaccination or mask) Policy.
- 2. The Board of Health request the Ministry of Health and Long-Term Care (MOHLTC) to implement an influenza vaccination or mask policy for all Ontario HCWs.

- 3. The Board of Health reiterate its request of the MOHLTC to include annual institutional HCW influenza immunization coverage rates as an indicator within the publicly reported Ontario Patient Safety Initiatives.
- 4. The Board of Health request the MOHLTC to include, free of charge, the influenza vaccine nasal spray (FluMist®) for children age two to six years old, as part of the province's Universal Influenza Immunization Program (UIIP).
- 5. The Board of Health forward this report to the Minister of Health and Long-Term Care, the Chief Medical Officer of Health for Ontario, Public Health Ontario, the Association of Local Public Health Agencies, and the Ontario Public Health Association.

Financial Impact

There are no financial impacts arising from this report.

DECISION HISTORY

At the June 1, 2010 meeting, the Board of Health requested that the Medical Officer of Health report annually on the state of pandemic influenza preparedness, incorporating lessons learned from the H1N1 pandemic

(http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2010.HL31.2).

At the July 10, 2013 Board of Health meeting the Medical Officer of Health reported on influenza immunization rates of HCWs in Toronto healthcare facilities for the 2012-13 influenza season

(http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.HL23.4).

Beginning with this year's report, the annual Influenza Update will now include the annual data on influenza immunization rates of healthcare workers in Toronto healthcare facilities.

ISSUE BACKGROUND

Influenza is a highly contagious acute viral infection of the respiratory tract that causes annual outbreaks and periodic worldwide epidemics. It is estimated that each year, 10-20% of the population is infected with influenza. In Canada, an average of 12,200 hospitalizations and 3,500 deaths due to influenza occur annually. There are three types of influenza viruses: A, B, and C. Influenza A viruses are further divided into subtypes based on two viral surface glycoproteins: hemagglutinin (H) and neuraminidase (N). Only influenza A is associated with pandemics; and both influenza A and B viruses can cause seasonal outbreaks. Influenza C is rarely reported as a cause of human illness.

Under the provincial Health Protection and Promotion Act, and in accordance with the Ontario Public Health Standards and associated protocols, Ontario's 36 local public health units are mandated to:

- Conduct surveillance for influenza;
- Promote and provide provincially-funded influenza immunization for the general public and priority populations;
- Investigate reported cases;
- Provide information and education to the general public and HCWs regarding influenza prevention and control; and
- Lead the development of a local pandemic influenza plan.

Influenza vaccine is recognized as the most effective way to protect against influenza infection, ² Although flu shots are about 60% effective in preventing influenza illness^{2,3,4} and are less effective in the elderly, the flu vaccine is the best way to prevent the spread of seasonal flu and prevent or lessen the severity of influenza symptoms. ¹ Since 2000, the influenza vaccine is free to everyone aged six months or older who lives, works or goes to school in Ontario through provincial UIIP. The flu shot is available in a variety of settings such as primary care offices, public health clinics, work-place clinics, and at participating pharmacies.

COMMENTS

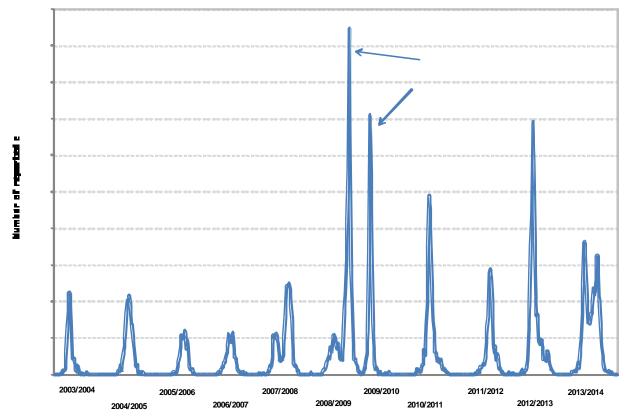
SUMMARY OF THE 2013-14 INFLUENZA SEASON

A. Influenza Activity 2013-14

In the 2013-14 influenza season, a total of 2,519 laboratory-confirmed influenza cases were reported in the City of Toronto. The 2013-14 rate of confirmed cases was higher than that reported for the 2012-13 season (2,097 cases) and was the highest number of cases reported in a non-pandemic year over the previous 10-years (see Figure 1). It is important to note that only lab-confirmed cases of influenza are counted by TPH; people with less severe cases of illness are less likely to seek medical attention and therefore are not tested and thus not counted. Laboratory-confirmed and hospitalized influenza cases are only the "tip of the iceberg" of all influenza cases.

The 2013-14 season had two distinct peaks: one in early January 2014, associated with influenza A; and one in early April 2014, associated with influenza B. In addition, 78 institutional outbreaks (i.e., hospitals and LTCHs) were reported, which was higher than the average number of outbreaks reported over the previous decade.

Consistent with historical trends, the highest rates of illness were reported in those 65 years of age and older (251.5 cases per 100,000) and those under 5 years of age (245.0 cases per 100,000) (see Table 1 and Figure 2). Almost half of the cases (1,185 people) reported to TPH were hospitalized, and 2% of all reported cases (52 people) died. Both hospitalization and death rates are similar to those over the previous five years.



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS), extracted September 2014.

Table 1: Number of lab-confirmed influenza cases by age group. Toronto, comparison of 2013-14 season to the previous, 5-year mean (2007-08 - 2012-13*) and to the H1N1 pandemic cases.

	2013-14 Season		5-year mean 2007-08 - 2012-		H1N1 Pandemic (April 2009 - August 2010)
Age group (years)	Number of cases (%)	Rate	Number of cases (%)	Rate	Number of cases (%)
< 5	362 (14)	245.0	258 (19)	180.6	407 (13)
5 - 14	173 (7)	65.3	124 (9)	45.9	878 (29)
15 - 24	70 (3)	19.7	51 (4)	14.9	558 (18)
25- 44	413 (16)	45.8	186 (13)	21.3	701 (23)
45 - 64	514 (20)	70.3	187 (14)	27.8	390 (13)
65+	986 (39)	251.5	574 (42)	157.5	119 (4)
Unknown	1 (<1)		<1 (<1)		17 (1)
Total	2519 (100)	90.2	1381 (100)	51.0	3070 (100)

^{*} Excludes the H1N1 pandemic cases

Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS), extracted September 2014.

[†] Rateper 100,000 population

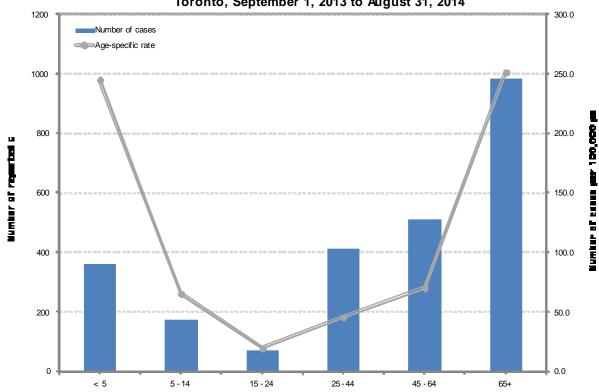


Figure 2: Number and rate of reported influenza cases by age group.

Toronto, September 1, 2013 to August 31, 2014

Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS), extracted September 2014.

Influenza B was identified as the predominant strain this season, accounting for 72% (n=56) of the outbreaks, and 50% (1,267 people) of reported cases.

During the 2013-14 influenza season, the National Microbiology Laboratory (NML) tested 2,486 influenza viruses that were received from provincial laboratories across the country and found that the vast majority of viruses (99%) matched this season's influenza vaccine components.¹⁸

B. Influenza Immunization Community Campaign 2013-14

Toronto Public Health conducted a total of 29 community influenza immunization clinics at nine different sites across Toronto between October 2013 and January 2014. Clinics were held at Civic Centres and large commercial mall sites across the City.

Toronto Public Health immunized a total of 12,970 individuals against seasonal influenza at its clinics, compared to the previous five year season average of 31,186 (excluding the 2009-10 pH1N1 pandemic influenza season).

It is important to note that a decrease in attendance at public health clinics was experienced throughout the province. This decrease was likely attributed to the provincial government's expansion of the program to include pharmacies, which has allowed residents greater access to the influenza vaccine. In 2013-14, 363 Toronto pharmacies participated providing 136,430 doses of vaccine (an increase from 93 pharmacies in 2012-13).

As in previous years, TPH also partnered with Toronto Emergency Medical Services (TEMS) to provide influenza vaccine to homeless and under-housed individuals at the City's drop-in centres, homeless shelters, and clients of TPH's The Works. During the 2013-2014 season, the two organizations vaccinated 758 homeless and under-housed clients.

C. Influenza Immunization Rates Among Healthcare Workers in Toronto Healthcare Facilities 2013-2014

Since 2008-09, TPH has been publicly reporting on influenza immunization rates among HCWs in Toronto healthcare facilities. In addition, TPH shares Toronto's HCW immunization coverage rates by facility with all Toronto healthcare facilities.

In 2013-14, TPH undertook a number of activities in an effort to increase HCW influenza immunization rates:

- Worked collaboratively with representatives from 12/13 TAHSN hospitals to develop a social marketing campaign with consistent messaging. "Be a Flu Fighter" posters, immunization card, flu cart flags, and badge stickers were developed for use by TAHSN hospitals and TPH;
- Invited CEOs/Executive Directors from the 25 healthcare facilities with influenza immunization rates in the lowest quintile to attend a special half day meeting regarding influenza immunization rates. Topics included presentations on "why influenza prevention matters", the Canadian Healthcare Influenza Immunization Network Guide (an evidence-based approach for improving HCW influenza immunization rates), and "lessons learned" from one hospital which had successfully worked to improve their rates. A roundtable discussion regarding barriers to improving influenza immunization rates and solutions took place.
- As part of the October Influenza Surveillance Alert, a reminder for Toronto healthcare workers to receive their influenza immunization was included;
- The Medical Officer of Health continued to participate on the TAHSN Healthcare
 Worker Influenza Immunization Working Group. The Working Group prepared a
 report that went to the TAHSN CEOs in February 2014 recommending an
 "influenza vaccination or mask policy". The CEOs adopted this policy as a
 common approach. An implementation steering committee was struck; and
- Participated on the MOHLTC's second annual roundtable discussion regarding Healthcare Worker Influenza Immunization. Senior health care leaders and stakeholders discussed challenges and opportunities.

As of the December 15, 2013 reporting date, the median influenza immunization coverage rates among HCWs in Toronto was:

- 44% (ranging from 30 to 59%) for acute care facilities, a reduction of 3% from the previous year;
- 67% (ranging from 41 to 89%) for complex continuing care/rehab facilities, an increase in 10% from the previous year; and
- 77% (ranging from 12 to 99%) for LTCHs, an increase in 1% from the precious year (see Tables 2a, 2b, and 2c, and Figure 3).

For the 2013-14 season, the Toronto acute care facility coverage rate was 11% below the Ontario median coverage rates for hospitals of 55% (see Table 2a), while the Toronto complex continuing care/rehab hospital rate was 12% higher than the Ontario coverage rate (see Table 2b). Please note that the median Ontario coverage rate for hospitals combines acute care and complex continuing care/rehab. The Toronto LTCH median rate was 1% below the Ontario median rate of 78% (see Table 2c). See Appendix A (Tables 3a, 3b, and 3c) for a detailed breakdown of HCW influenza immunization rates by Toronto hospitals and LTCHs.

Further analysis showed that generally those Toronto hospitals and LTCHs in the lowest quintile that received follow up from TPH significantly improved their HCW influenza immunization coverage rates in 2013/2014 compared with the previous season, with an overall improvement of 9%.

Table 2a: Healthcare Worker Influenza Immunization Coverage Rates by Influenza Season and Vaccine Type, Toronto and Ontario, 2007/08 - 2013/14

Acute Care Facilities

	Toronto		Ontario
Influenza Season and Vaccine Type	N*	Median Rate (Range)	Median Rate
2007/08			
Seasonal	17	40% (17% to 62%)	50%
2008/09			
Seasonal	18	42% (24% to 63%)	51%
2009/10			
pH1N1	18	58% (40% to 99%)	65%
2010/11			
Seasonal	18	37% (14% to 65%)	42%
2011/12			
Seasonal	18	48% (25% to 67%)	49%
2012/13			
Seasonal	18	47% (29% to 57%)	51%
2013/14			
Seasonal	20	44% (30% to 59%)	55%
2013/14			
Seasonal	20	44% (30% to 59%)	-

^{*}Count of institutions submitting rates to TPH for December 15, 2013; Immunization rate based on the number of immunized staff of total number of staff, less individuals with documented medical exemption.

Table 2b: Healthcare Worker Influenza Immunization Coverage Rates by Influenza Season and Vaccine Type, Toronto and Ontario, 2007/08 - 2013/14

Complex Continuing Care/Rehabilitation Facilities

		Toronto	Ontario
Influenza Season and Vaccine Type	N*	Median Rate (Range)	Median Rate
2007/08	47	000/ (000/ 1 000/)	500/
Seasonal 2008/09	17	38% (23% to 80%)	50%
Seasonal	16	55% (20% to 80%)	51%
2009/10			
pH1N1	16	59% (37% to 85%)	65%
2010/11 Seasonal	16	38% (17% to 80%)	42%
2011/12 Seasonal	16	60% (21% to 87%)	49%
2012/13 Seasonal	16	57% (41% to 93%)	51%
2013/14			
Seasonal	15	67% (41% to 89%)	55%
2013/14 Seasonal	15	68% (41% to 95%)	-

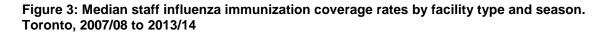
^{*}Count of institutions submitting rates to TPH for December 15, 2013; Immunization rate based on the number of immunized staff of total number of staff, less individuals with documented medical exemption.

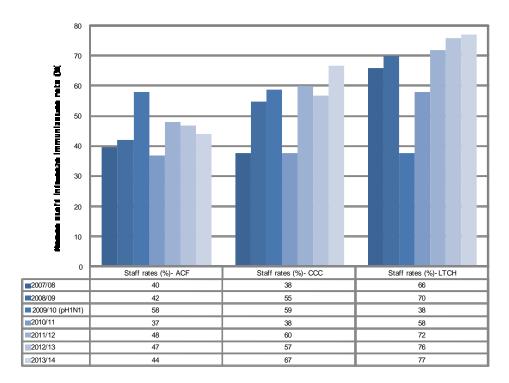
Table 2c: Healthcare Worker Influenza Immunization Coverage Rates by Influenza Season and Vaccine Type, Toronto and Ontario, 2007/08 - 2013/14

Long-Term Care Homes

		Toronto	Ontario
Influenza Season and Vaccine Type	N*	Median Rate (Range)	Median Rate
2007/08 Seasonal	77	66% (19% to 98%)	77%
2008/09 Seasonal			
2009/10	84	70% (19% to 98%)	77%
pH1N1 2010/11	85	38% (0% to 97%)	51%
Seasonal	81	58% (8% to 98%)	58%
2011/12 Seasonal	73	72% (5% to 100%)	68%
2012/13 Seasonal	87	76% (5% to 100%)	74%
2013/14			
Seasonal	86	77% (12% to 99%)	78%
2013/14			
Seasonal	86	79% (12% to 100%)	-

^{*}Count of institutions submitting rates to TPH for December 15, 2013; Immunization rate based on the number of immunized staff of total number of staff, less individuals with documented medical exemption.





Note: In the past, the direction from the MOHLTC to local public health units was to calculate HCW influenza immunization rates including staff with medical exemptions to vaccine in the denominator. In 2013-14, the MOHLTC advised public health units to remove staff with medical exemptions from the denominator when calculating HCW influenza immunization rates. 2013-14 rates were calculated both ways.

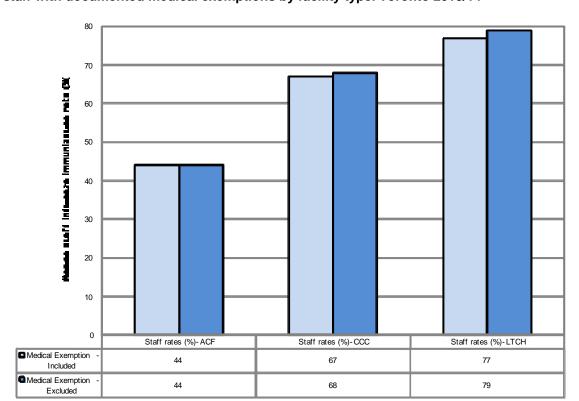


Figure 4: Median staff influenza immunization coverage rates – including and excluding staff with documented medical exemptions by facility type. Toronto 2013/14

Note: the above figure 4 demonstrates that the removal of staff with medical exemptions made no difference to acute care rates, and increased complex continuing care/rehab and LTCH rates by 1% and 2%, respectively.

D. Toronto Public Health Staff Influenza Immunization Campaign 2013-2014

Toronto Public Health continued to use multiple strategies to increase awareness of the importance of influenza immunization, ensure staff access to clinics, and improve staff influenza immunization rates.

Highlights from the 2013-14 season included:

- Increase in the number of clinic locations to 11 (from 10 in 2012);
- Change and expansion of clinic hours to 9:00 a.m. to 1:00 p.m. (from 10:00 a.m. to 1:00 p.m.) to improve accessibility for staff who need to leave the office for morning work assignments while maintaining access over the lunch hour;
- Utilization of TPH Senior Management Team members as champions for influenza immunization through their receipt of influenza vaccine at staff clinics, and by conducting "walk-abouts" to promote on-site clinics and encourage staff attendance:
- Introduction of a roving influenza vaccination cart at large office locations;
- Use of promotional campaign material developed jointly with TAHSN;

• Communication of all staff messages from the Medical Officer of Health through posting of promotional messages on the TPH Intranet site, and inclusion of articles in TPH Weekly (an email-based staff newsletter).

A total of 701 staff were immunized at TPH clinics, an increase of 20.2% from the previous year.

E. Pandemic Influenza Planning and Preparedness 2013-14

Toronto Public Health has been maintaining the TPH Pandemic Influenza Plan, and working closely with the City of Toronto, local healthcare system partners, other stakeholders and the MOHLTC to strengthen preparedness. In 2013-14, TPH undertook a series of activities related to pandemic preparedness including:

- Approved a revised TPH Pandemic Influenza Plan, that aligns with the 2013 Ontario Health Plan for an Influenza Pandemic (OHPIP);
- Implemented lessons learned and recommendations from the "Internal Evaluation of the TPH Response to Pandemic H1N1 in Toronto, Fall 2009";
- Continued development of the Mass Immunization Clinic Plan; and
- Participated in Toronto Central Local Health Integration Network Integrated Health System Emergency Response Implementation Committee.

2014-15 INFLUENZA SEASON

A. Influenza Surveillance for 2014-15

As in previous years, TPH conducts surveillance in order to detect the arrival of influenza in the City; confirm the types of influenza virus(es) that are circulating, monitor any changes in the severity of illness associated with the virus, and identify which groups (e.g., children ages 5-years or younger, seniors/elderly or the young and healthy) are most affected by the year's circulating strain(s).

Toronto Public Health collects, collates, analyses and disseminates data from the following sources:

- Reportable disease notifications from laboratories and clinicians;
- Institutional (LTCHs and hospitals) respiratory outbreak notifications;
- Syndromic Surveillance, using chief complaint data, from select Toronto hospital emergency departments; and
- School-based absenteeism from both the Toronto District School Board and the Toronto Catholic District School Board.

In addition, TPH actively monitors the following:

- Reports of influenza activity in neighbouring health regions, the rest of Canada and other nations;
- Weekly summaries of test results for influenza and other respiratory viruses from Public Health Ontario; and
- Sentinel physician influenza-like illness (ILI) counts from the Flu Watch program coordinated by Public Health Agency of Canada (PHAC).

Toronto Public Health will continue to publish the Weekly Influenza News report on the TPH website which provides epidemiologic data and influenza activity trends for health professionals and is published during the influenza season (October to April). Alerts and updates on global or local communicable disease activities, including information on influenza (e.g., notification that influenza has arrived in Toronto, advisory of changes detected in influenza epidemiology, importance of HCW influenza immunization) are also issued. Healthcare professionals may subscribe to receive these products directly via email.

As of October 25, 2014, TPH has received reports of 22 lab-confirmed cases of influenza since the beginning of the 2014-15 influenza season (nine influenza A(H3), one influenza A(H1N1), eight influenza A not sub-typed, and four influenza B). This compares with 10 laboratory-confirmed influenza cases reported at the same time last year.

B. Influenza Immunization Community Campaign 2014-15

For the 2014-15 season, TPH is offering 13 community influenza immunization clinics at 8 locations over five weeks beginning at the end of October. Locations include shopping malls, Civic Centres, and public libraries. The number of TPH clinics has been reduced this season given the increased availability of influenza vaccine through approximately 500 Toronto pharmacies. In addition, the TPH clinics will not extend into January as in past years, in order to emphasize the importance of getting a flu shot prior to the peak of influenza activity, which usually occurs between late December and early January. However, since pharmacy-run flu shot clinics cannot provide vaccine to children less than five years of age, or to individuals who do not have an Ontario health card, TPH clinics are required to assist with the provision of influenza vaccine to these populations.

Toronto Public Health continues to partner with Toronto EMS to provide influenza vaccine to the City's most vulnerable populations through shelters, drop-in centres, and The Works.

Toronto Public Health is promoting the TPH clinics by distributing posters of the clinic schedule to more than 5,000 community partners (e.g., schools, community centres, and libraries). Through the TPH website, information on influenza (both the disease and the vaccine) is provided to the public (translated into six different languages) and health care providers. In addition, TPH is advertising the clinics through on-line ads (e.g., CP24, CTV News), social media (Twitter, Facebook) and a media event to kick off the 2014-15 community influenza immunization campaign.

In 2014-15, the MOHLTC is funding four influenza vaccines that are given by injection (Agriflu®, Fluviral®, Fluzone®, and Vaxigrip®) for the UIIP. The vaccine spray in the nose (FluMist®) is about 80% effective^{1,4} in children aged two to less than six years old, and is, as a result, recommended as the preferred vaccine for this age group by the National Advisory Committee on Immunization (NACI). The nasal spray vaccine is not publicly funded in Ontario and costs about \$30 per dose. TPH is advocating for the

MOHLTC to make this vaccine publicly funded in the 2015/16 season, for children aged two to less than six years old based on the NACI recommendation.

C. Influenza Immunization among Healthcare Workers in Toronto Healthcare Facilities 2014-15

Prior to the 2014-15 season, TPH took the following actions to address sub-optimal coverage rates in Toronto healthcare facilities:

- Worked with representatives from TAHSN to develop a social marketing campaign that can be used by all Toronto healthcare facilities;
- Participated on the TAHSN HCW Influenza Immunization Implementation
 Steering Committee to provide support in the refinement, and development of the
 related procedures and protocols; and advice regarding technical matters to the 12
 Toronto hospitals implementing influenza "vaccination or mask" policies, and
- Updated TPH's Employee Immunization Policy and Procedure to include direction for TPH staff who enter Toronto hospitals implementing an influenza "vaccination or mask" policy.

Influenza and Health Care Workers 2014-15 and beyond:

Influenza transmission and outbreaks in hospitals^{5,6,7,8,9} and LTCHs^{10,11,12} are well documented and can result in significant patient and resident morbidity and mortality. The increased risk of influenza to residents and patients in these facilities is related to their advanced age and underlying health problems, as well as the setting in which they are cared for is in close proximity to a range of HCWs. Healthcare workers can acquire influenza from patients/residents and the community and can readily transmit infection to other patients/residents, other HCWs and their family members.

Four randomized controlled trials have shown that HCW influenza immunization in chronic care/LTCH settings for the elderly reduces patient mortality. ^{13,14,15,16} Despite comprehensive, multifaceted programs to encourage HCW immunization, HCW influenza immunization coverage rates remain unacceptably low. As a result, numerous public health agencies and professional associations, such as NACI, the Canadian Nurses Association, and the United States Centers for Disease Control and Prevention, recommend that influenza immunization of HCWs be a condition of service or appointment.

Also in response to low rates of HCW influenza vaccination, there has been a trend in the United States and Canada for hospitals to implement condition of service influenza vaccination policies, such as vaccination required or vaccinate-or-mask policies.

In 2012, two large Canadian healthcare organizations, the British Columbia Regional Health Authorities and Horizon Health Network, introduced vaccinate-or-mask policies. In Ontario, at least 13 hospitals have introduced vaccinate or mask policies and a number of these organizations have noted a decrease in the number of influenza outbreaks in their hospitals.¹⁷

In 2012, in response to declining HCW influenza immunization coverage rates in Ontario, the Chief Medical Officer of Health (CMOH) convened a special task group to identify and summarize priority areas to increase HCW coverage rates. Input from the task group helped to shape the development of the "Health Care Worker Influenza Immunization 3-Year Strategic Framework," which is currently in its second year. The goal of this framework is to increase HCW influenza immunization coverage rates to a minimum of 95% by the end of 2016.

In 2014-15, twelve Toronto hospitals are implementing influenza "vaccination or mask" policies as part of comprehensive infection control efforts to improve patient safety and promote wellness among HCW. For the 2015-16 season, TPH is recommending that the province develop an influenza "vaccination or mask" policy for all HCW in Ontario.

D. Toronto Public Health Staff Influenza Immunization Campaign 2014-15 Toronto Public Health built on the success of the 2013-14 TPH staff influenza immunization campaign by continuing to employ similar strategies including holding 12 staff immunization clinics with extended clinic hours from 9:00 a.m. to 1:00 p.m. to 9:00 a.m. to 3:00 p.m. in three locations with large numbers of employees.

E. Pandemic Influenza Planning and Preparedness 2014-15

The World Health Organization (WHO) continues to conduct surveillance and report on circulating strains of influenza with pandemic potential. In 2013, the WHO released the interim guidance document Pandemic Influenza Risk Management.

The PHAC is currently updating the Canadian Plan for an Influenza Pandemic which is expected to be released later this fall.

The 2013 OHPIP is the last iteration. The MOHLTC released the "Seasonal Influenza 2013/2014: Ontario's Blueprint for Action" report to support response activities. Eventually the Ontario Influenza Response Plan will replace both the OHPIP and the Blueprint to build a seasonal influenza response and escalate those measures during a pandemic.

In addition to continuing to work with local partners to strengthen emergency preparedness, TPH plans the following key pandemic preparedness activities for 2014-2015:

- Provide advice to the City Manager regarding City stockpiling of pandemic supplies and equipment;
- Complete TPH's Mass Immunization Clinic Plan; and
- Address two remaining recommendations from the "Internal Evaluation of the TPH Response to Pandemic H1N1 in Toronto, Fall 2009" (i.e., Finalizing scalable continuity plans, and reviewing health and safety policies and procedures when Mass Immunization Plan complete).

CONTACT

Dr. Irene Armstrong Associate Medical Officer of Health Communicable Disease Control Toronto Public Health

Tel: 416-338-7993

Email: <u>iarmstr@toronto.ca</u>

Dr. Barbara Yaffe Director, Communicable Disease Control

& Associate Medical Officer of Health Toronto Public Health

Tel: 416-392-7405

Email: byaffe@toronto.ca

SIGNATURE

Dr. David McKeown Medical Officer of Health

ATTACHMENTS:

Appendix A: Tables 3a – 3c) Influenza Immunization Rates for Healthcare Workers, 2013/2014 Influenza Season

REFERENCES

- 1. National Advisory Committee on Immunization. Statement on seasonal influenza vaccine for 2014-2015. Available at http://www.phac-aspc.gc.ca/naci-ccni/flu-grippe-eng.php.
- Centers for Disease Control and Prevention. Early estimates of seasonal influenza vaccine effectiveness United States, January 2013.MMWR 2013;62:1-4.
 Available at

 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6202a4.htm?s_cid=mm6202a
- 3. Centres for Disease Control and Prevention. Interim estimates of 2013-14 seasonal influenza vaccine effectiveness United States, February 2014. MMWR 2014;63:137-43. Available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6307a1.htm.
- 4. Osterholm MT, Kelley NS, Sommer A, Belongia EA. Efficacy and effectiveness of influenza vaccines: A systematic review and meta-analysis. Lancet Infect Dis 2012;12:36-44. Available at http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(11)70295-X/fulltext
- 5. Malavaud S, Malavaud B, Sandres K, Durand D, Marty N, Icart J, et al. Noscocomial outbreak of influenza A virus(H3N2) in a solid organ transplant department. Transplantation 2001;72:535-7.
- 6. Maltezou HC, Drancourt M. Nosocomial influenza in children. J Hosp Infect 2003;55:83-91.
- 7. Cunney RJ, Bialachowski A, Thornley D, Smaill FM, Pennie RA. An outbreak of influenza A in a neonatal intensive care unit. Infect Cont Hosp Ep 2000;21:449-54.
- 8. Salgado CD, Farr BM, Hall KK, Hayden FG. Influenza in the acute care hospital setting. Lancet Infect Dis 2002;2:145-55.
- 9. Sartor C, Zandotti C, Romain F, Jacomo V, Simons S, Atlan-Gepner C, et al, Disruption of services in an internal medicine unit due to a nosocomial influenza outbreak. Infect Cont Hosp Ep;2002:23:615-9.
- 10. Drinka PJ, Krause P, Schilling M, Miller BA, Shult PA, Gravenstein S. Report on an outbreak: nursing homes architecture and influenza A attack rates. J Am Geriatr Soc 1996;44:910-3.
- 11. Degelau J, Somani SK, Cooper SL, Guay DRP, Crossley KB. Amantadine-resistant influenza in a nursing facility. Arch Intern Med 1992;152:390-2.
- 12. Morens DM, Rash VM. Lessons from a nursing home outbreak of influenza A. Infect Cont Hosp Ep 1995;16:275-80.
- 13. Potter J, Stott DJ, Roberts MA, Elder AG, O'Donnell B, Knight PV, Carman WF. Influenza vaccination of health care workers in long-term-care hospitals reduces the mortality of elderly patients. J Infect Dis 1997;175:1-6.
- 14. Carman WF, Elder AG, Wallace LA, McAulay K, Walker A, Murray GD, Stott DJ. Effects of influenza vaccination of health-care workers on mortality of elderly people in long-term care: a randomised controlled trial. Lancet 2000;355:93-7.
- 15. Hayward AC, Harling R, Wetten S, Johnson AM, Munro S, Smedley J, Murad S, Watson JM. Effectiveness of an influenza vaccine programme for care home staff to prevent

- death, morbidity, and health service use among residents: cluster randomised controlled trial. BMJ 2006;333:1241.
- 16. Lemaitre M, Meret T, Rothan-Tondeur M, Belmin J, Lejonc JL, LuquelL, Piette F, Salam M, Verny M, Vetel JM, Veyssier P, Carrat F. Effect of influenza vaccination of nursing home staff on mortality of residents: a cluster-randomized trial. JAm Geriatr Soc;57:1580-6.
- 17. Toronto Academic Health Science Network. Healthcare worker influenza immunization: report and Recommendations of the TAHSN healthcare worker influenza immunization working group. February 24, 2014.
- 18. PHAC. FluWatch report: August 10 to August 23, 2014 (weeks 33 and 34). Available at http://www.phac-aspc.gc.ca/fluwatch/13-14/w34_14/index-eng.php.

APPENDIX A

Table 3a: Influenza Immunization Rates for Healthcare Workers of Toronto Acute Care Facilities, 2013/2014 Influenza Season.

Acute Care Facilities	Total Staff	Number of Staff Immunized	Staff Coverage Rate* (%)	Coverage Rate (%) (No exempt)
The Hospital for Sick Children	6746	3986	59	59
St. Joseph Mealth Centre	2288	1268	55	56
North York General Hospital ĞBranson Division	198	107	54	55
Mount Sinai Hospital	5068	2688	53	54
St. Michael® Hospital	5546	2954	53	53
Trillium Health Partners	5726	2949	52	52
Sunnybrook Health Sciences Centre	6873	3501	51	51
Toronto East General Hospital	2341	1103	47	47
The Scarborough Hospital ĞGrace Division	1071	491	46	46
Women® College Hospital	578	254	44	44
North York General Hospital Ğ General Division	3011	1303	43	43
The Scarborough Hospital GGeneral Division	2142	874	41	41
University Health Network Ğ Princess Margaret Hospital	2741	1065	39	39
University Health Network GToronto General Hospital	6363	2243	35	35
William Olser Health Centre, Etobicoke General Hospital	1153	371	32	32
Rouge Valley Centenary Hospital	2626	845	32	32
University Health Network ĞToronto Western Hospital	2413	765	32	32
Humber River Regional Hospital ĞFinch Site	1058	327	31	31
Humber River Regional Hospital ĞChurch Site	1655	511	31	31
Humber River Regional Hospital ĞKeele Site	164	50	30	30

^{*}Influenza immunization rate based on the number of immunized staff of total number of staff at the healthcare facility.

Influenza immunization rate based on the number of immunized staff of total number of staff, less individuals with documented medical exemption.

Table 3b: Influenza Immunization Rates for Healthcare Workers of Toronto Complex Continuing Care/Rehabilitation Facilities, 2013/2014 Influenza Season.

Complex Continuing Care/Rehabilitation Facilities	Total Staff	Number of Staff Immunized	Staff Coverage Rate* (%)	Staff Coverage Rate (%) (less exempt)
McCall Centre for Continuing Care	158	141	89	95
Runnymede Healthcare Centre	441	375	85	86
Holland Bloorview Kids Rehabilitation Hospital	1040	824	79	80
Baycrest Geriatric Health Care System	1916	1407	73	74
Centre for Addiction and Mental Health ĞQueen Site	2366	1670	71	72
Bridgepoint Active Healthcare	1051	739	70	71
Centre for Addiction and Mental Health ĞCollege Site	1092	759	70	71
West Park Healthcare Centre	974	653	67	68
Providence Healthcare Hospital	806	538	67	68
The Salvation Army ĞToronto Grace Health Centre	411	259	63	63
St. John's Rehabilitation Hospital	385	206	54	54
Toronto Rehabilitation Institute ĞLyndhurst Centre	212	100	47	47
Toronto Rehabilitation Institute ĞRumsey Centre	96	45	47	47
Toronto Rehabilitation Institute ĞUniversity Centre	850	367	43	43
Toronto Rehabilitation Institute ĞBickle Centre	365	151	41	41

^{*}Influenza immunization rate based on the number of immunized staff of total number of staff at the healthcare facility.

Table 3c: Immunization Rates for Healthcare Workers of Toronto Long-Term Care Homes (LTCHs), 2013/14 Influenza Season.

Influenza immunization rate based on the number of immunized staff of total number of staff, less individuals with documented medical exemption.

Long-Term Care Homes (LTCHs)	Total Staff	Staff Immunized	Staff Coverage Rate* (%)	Staff Coverage Rate (%) (less exempt)
Mon Sheong Home for the Aged (Downtown)	145	144	99	100
Leisureworld Caregiving Centre ĞCheltenham	173	171	99	100
Yee Hong Centre for Geriatric Care ĞFinch Site	332	327	98	99
Yee Hong Centre for Geriatric Care ĞMcNiccoll Site	313	308	98	99
Mon Sheong Scarborough Long Term Care Centre	226	222	98	99
Kennedy Lodge Nursing Home	301	285	95	97
McCall Centre Interim LTC Unit	17	16	94	100
Chester Village	265	246	93	93
Leisureworld Caregiving Centre ĞSt.George	243	223	92	96
Elm Grove Living Centre Inc.	128	117	91	93
Leisureworld Caregiving Centre ĞO Connor Gate	194	177	91	93
Hellenic Home Care for the Aged ĞToronto	89	81	91	95
Rose of Sharon Korean Long Term Care	98	89	91	100
Extendicare ĞBayview	239	215	90	92
Norwood Nursing Home	79	71	90	91
Villa Colombo	429	385	90	92
Garden Court Nursing Home	48	43	90	91
Thompson House	189	169	89	92
Tony Stacey Centre for Veteran® Care Home for the Aged	151	135	89	90
Eatonville Care Centre	309	275	89	89
Leisureworld Caregiving Centre ĞScarborough	295	262	89	90
Leisureworld Caregiving Centre ĞEtobicoke	213	186	87	90
Extendicare ĞScarborough	217	189	87	94
The O 🕅 eill Centre	205	176	86	86
Craiglee Nursing Home ĞScarborough	206	176	85	87
Ehatare Nursing Home	52	44	85	88
Belmont House	258	218	84	85
Main Street Terrace	178	149	84	85
Lakeside Long Term Care Centre	185	154	83	85
Extendicare ĞGuildwood	247	205	83	86
Harold and Grace Baker Centre	189	156	83	87
North Park Nursing Home	119	98	82	86
Leisureworld Caregiving Centre ĞRockcliffe	258	212	82	87
Vermont Square	157	129	82	94
Kensington Gardens	447	366	82	85

^{*}Influenza immunization rate based on the number of immunized staff of total number of staff at the healthcare facility.

Table 3c: Immunization Rates for Healthcare Workers of Toronto Long-Term Care Homes (LTCHs), 2013/14 Influenza Season (cont'd from previous page).

Influenza immunization rate based on the number of immunized staff of total number of staff, less individuals with documented medical exemption.

Long-Term Care Homes (LTCHs)	Total Staff	Staff Immunized	Staff Coverage Rate* (%)	Staff Coverage Rate (%) (less exempt)
Hellenic Home for the Aged ĞScarborough	159	128	81	83
Lakeshore Lodge	183	147	80	82
sabel & Arthur Meighen Health Centre	202	161	80	81
The Westbury	255	202	79	80
Leisureworld Caregiving Centre O Connor Court	256	200	78	79
Dom Lipa Nursing Home ĞEtobicoke	104	81	78	79
Providence Long Term Care Home	284	220	77	81
Sunnybrook Veterans Centre	668	517	77	78
Fudger House	260	201	77	79
Cedarvale Terrace Long Term Care Home	251	192	76	76
Maynard Nursing Home	92	70	76	76
Leisureworld Caregiving Centre ĞLawrence	308	232	75	77
Baycrest Hospital - Apotex Centre (LTCH)	1128	843	75	75
Central Park Lodge Westside	253	186	74	74
Leisureworld Caregiving Centre ĞEllesmere	325	233	72	72
Tendercare Living Centre ĞScarborough	407	291	71	82
Leisureworld Caregiving Centre Altamont	192	137	71	71
True Davidson Acres	211	149	71	73
Carefree Lodge	162	112	69	71
Casa Verde Health Centre	303	206	68	68
Bendale Acres	318	216	68	71
The Heritage Nursing Home	225	151	67	67
Leisureworld Caregiving Centre ĞNorfinch	184	122	66	66
North York General Hospital ŠSenior's Health Centre	216	143	66	74
Suomi Koti Nurisng Home Toronto	82	54	66	66
The Gibson Long Term Centre	285	185	65	65
ha Grafton- Gage Home	185	116	63	63
The Wexford	347	213	61	62
West Park Long Term Care Centre	240	146	61	63
Drs. Paul and John Rekai Centre	181	108	60	61
St. Clair O Connor Community Nursing Home	39	23	59	59
Shepherd Lodge Nursing Home	314	179	57	58
Cummer Lodge	442	250	57	57
Valley View Residence	199	110	55	55
Yorkview Lifecare Centre	328	180	55	55

^{*}Influenza immunization rate based on the number of immunized staff of total number of staff at the healthcare facility.

Influenza immunization rate based on the number of immunized staff of total number of staff, less individuals with documented medical exemption.

Table 3c: Immunization Rates for Healthcare Workers of Toronto Long-Term Care Homes (LTCHs), 2013/14 Influenza Season (cont'd from previous page).

Long-Term Care Homes (LTCHs)	Total Staff	Staff Immunized	Staff Coverage Rate* (%)	Staff Coverage Rate (%) (less exempt)
Castleview Wychwood Towers	442	239	54	55
Wesburn Manor	235	126	54	56
Wellesley Central Place	202	107	53	53
Seven Oaks	311	162	52	54
Nisbet Lodge	145	75	52	52
Trilogy Long Term Care Centre	280	143	51	51
Humber Valley Terrace	167	85	51	52
Fairview Nursing Home	123	58	47	54
Extendicare Ğ Rouge Valley Nursing Home	240	110	46	48
White Eagle Nursing Home	74	31	42	42
Kipling Acres	254	104	41	42
The Village of Humber Heights	269	110	41	41
Copernicus Lodge	564	171	30	31
lvan Franko Home ĞEtobicoke	103	31	30	30
Ukrainian Canadian Care Centre	222	55	25	25
Labdara Lithuanian Nursing Home	144	17	12	12

^{*}Influenza immunization rate based on the number of immunized staff of total number of staff at the healthcare facility.

Influenza immunization rate based on the number of immunized staff of total number of staff, less individuals with documented medical exemption.