

## **2012/2013 Influenza Immunization of Healthcare Workers in Toronto Healthcare Facilities**

|                          |                           |
|--------------------------|---------------------------|
| <b>Date:</b>             | June 21, 2013             |
| <b>To:</b>               | Board of Health           |
| <b>From:</b>             | Medical Officer of Health |
| <b>Wards:</b>            | All                       |
| <b>Reference Number:</b> |                           |

### **SUMMARY**

---

Influenza is a highly contagious acute viral infection of the respiratory tract that causes annual outbreaks and periodic worldwide epidemics. Annual immunization of persons at high risk, healthcare workers (HCWs), and others who are capable of transmitting influenza to those at high risk, is the most effective measure for reducing the impact of influenza. In 2012, a number of new endorsements/position statements in favour of influenza immunization of HCWs as a condition of service or appointment were released by various groups.<sup>1,2,3,4</sup> In addition, two large Canadian healthcare organizations, Horizon Health Network and the British Columbia Health Authority, implemented influenza immunization condition of service policies.

For the 2012/2013 influenza season, Toronto HCW influenza immunization rates remained unacceptably low with a slight decline in Toronto hospital rates (i.e., acute care and complex continuing care) and a slight increase in Toronto long-term care home (LTCH) rates when compared with the 2011/2012 influenza season. Healthcare facilities with coverage rates in the lowest quintile for the 2011/2012 season that received follow up with Toronto Public Health (TPH) staff however showed significant improvement in their 2012/2013 coverage rates.

### **RECOMMENDATIONS**

---

**The Medical Officer of Health recommends that:**

1. Toronto Public Health continue to work with the Toronto Academic Health Sciences Network (TAHSN) to improve Toronto HCW influenza immunization rates to 95% or greater.

2. The Medical Officer of Health work with Toronto healthcare facilities with HCW influenza immunization coverage rates in the lowest quintile to develop a plan to increase coverage rate in 2013-2014, including the use of the Canadian Healthcare Influenza Immunization Network (CHIIN) Successful Healthcare Personnel Influenza Immunization Programs – A Guide for Program Planners.
3. The Medical Officer of Health continue to report annually to the Board of Health on influenza immunization coverage rates of HCWs in Toronto healthcare facilities.
4. The Board of Health advocate to the Ministry of Health and Long-Term Care (MOHLTC) to work with the Public Health Agency of Canada and pharmaceutical companies to improve the effectiveness of influenza vaccine.
5. The Board of Health advocate to the MOHLTC to include annual institutional HCW influenza immunization coverage rates as an indicator within the publicly reported Ontario Patient Safety Initiatives.
6. The Board of Health advocate to the MOHLTC to set a minimum provincial target of 95% for institutional HCW influenza immunization coverage rates.

### **Financial Impact**

There are no financial impacts arising from this report.

### **DECISION HISTORY**

Since 2009, the Medical Officer of Health has reported annually to the Board of Health on HCW influenza immunization coverage rates in Toronto healthcare facilities. Rates have not substantially improved and in general remain unacceptably low.

As a result, a number of recommendations have been made which include:

- Urging CEOs of Toronto healthcare facilities to provide a comprehensive program to promote annual influenza immunization of HCWs,
- Requesting that the Medical Officer of Health report on detailed plans to increase influenza immunization rates of Toronto HCWs,
- Advocating that the MOHLTC include annual institutional HCW immunization coverage rates as an indicator within the publicly reported Ontario Patient Safety Initiatives,
- Requesting that MOHLTC take proactive measures to increase HCW influenza immunization coverage rates for healthcare institutions, and, if coverage rates did not improve significantly after the first four years of reporting (2011/2012 season), to consider making annual HCW influenza immunization mandatory, and
- Consulting with healthcare sector stakeholders, including employee groups regarding mandatory measures.

At the meeting of the Board of Health on June 7, 2012, the Medical Officer of Health reported on influenza immunization rates of HCWs in Toronto healthcare facilities for the 2011/2012 influenza season. Median influenza immunization coverage rates increased by a small to moderate amount for all facilities types but regardless of this increase, Toronto HCW influenza immunization rates remained unacceptably low.

The Board of Health made the following recommendations: 1) the Board of Health Chair write to the CEOs and Board of Toronto healthcare facilities urging them to develop and implement institutional policies regarding mandatory influenza immunization of HCWs, in consultation with worker representatives, 2) the Medical Officer of Health continue to report annually to the Board of Health on influenza immunization coverage rates of HCWs in Toronto healthcare facilities as part of the annual update on influenza, and 3) the Medical Officer of Health work with Toronto healthcare facilities with HCW influenza immunization rates in the lowest quintile to develop a plan to increase coverage rates in 2012/2013.

At the October 4, 2012 meeting of the Board of Health, the Medical Officer of Health reported on efforts to increase influenza immunization rates among HCWs in Toronto healthcare facilities as part of the larger “Influenza Update” Board of Health Report. The strategy for the 2012/2013 season included:

- Conduct a social marketing campaign targeting HCW's in all Toronto healthcare facilities,
- Actively follow-up with those healthcare facilities with HCW influenza immunization coverage rates in the lowest quintile to develop a plan to increase coverage rates in 2012-2013, and
- Continue to participate on the TAHSN Healthcare Worker Influenza Immunization Working Group.

## **ISSUE BACKGROUND**

Influenza is a highly contagious acute viral infection of the respiratory tract which causes annual seasonal outbreaks and periodic worldwide pandemics. Influenza transmission and outbreaks in hospitals<sup>5,6,7,8,9</sup> and LTCHs<sup>10,11,12</sup> are well documented and can result in significant patient, resident and staff morbidity and mortality. Four randomized controlled trials have shown that HCW influenza immunization in chronic care/long-term care home facilities for the elderly reduces patient mortality.<sup>2</sup>

In Toronto over the previous ten influenza seasons, an average of 42 (ranging from 5 to 103) seasonal influenza outbreaks were reported each year from acute care hospitals, complex continuing care hospitals, and LTCHs. 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 in close proximity to a range of HCWs. Healthcare workers can acquire influenza from patients/residents and the community and then may readily transmit infection to other patients/residents, other HCWs, and their family members.

When there is a good match between influenza strains in the vaccine and those circulating in the community, influenza vaccination has been shown to prevent laboratory-confirmed influenza in 59% to 82% of healthy children, and 80% of healthy adults.<sup>13</sup> These rates are lower in seniors (half that of healthy adults) and when there is a significant difference between circulating and vaccine influenza strains (about 50%).<sup>13</sup> In January 2013, two studies were released that showed early estimates of 2012/2013 influenza vaccine effectiveness that are lower than previously shown: one study found an overall rate of 62%<sup>14</sup> while another one found that immunization with the influenza A (H3N2) component of the vaccine cut the risk of becoming ill with this strain of influenza by about half.<sup>15</sup>

Although the influenza vaccine is not as effective as other commonly used vaccines, it is recognized as the most effective way to protect against influenza infection.<sup>14</sup> Serious adverse reactions associated with the influenza vaccine are rare.<sup>13</sup> Annual influenza immunization of HCWs is recommended by the National Advisory Committee on Immunization (NACI).<sup>13</sup> In the Mandatory Health Programs and Services Guidelines (1997), the MOHLTC had suggested a target annual facility-wide influenza immunization coverage rate of 70% for HCWs in facilities. In 2009, these guidelines were replaced by the Ontario Public Health Standards which do not provide a specific influenza immunization target for HCWs. A target coverage rate for HCW influenza immunization has not been set, however vaccination policies in some United States healthcare facilities demonstrate that coverage rates greater than 90% are achievable. Research suggests that vaccination of every additional HCW protects an additional fraction of patients.<sup>16</sup> In addition, according to a summary of three randomized controlled trials, in long-term care homes immunizing, eight healthcare personnel saves one life.<sup>17</sup>

Influenza vaccine is provided free-of-charge to the staff of hospitals and LTCHs in Ontario through the provincial Universal Influenza Immunization Program. Under provincial protocols, LTCHs and public hospitals are required to report their HCW influenza vaccination coverage rates each year to the local Medical Officer of Health. In 2012, the reporting deadline was permanently extended from November 15 to December 15 to support facilities reporting rates in an accurate, consistent and timely manner. The rates are then reported to the MOHLTC by local public health units by January 15.

There has been a growing trend among American organizations and regulatory agencies to make influenza immunization a condition of employment for healthcare personnel (HCP). The Society for Healthcare Epidemiology of America (SHEA) has published a position paper on this topic and noted "Voluntary vaccination programs have been in place for decades with little evidence for an overall increase in HCP vaccination rates. Furthermore multifaceted mandatory vaccination programs have been tried and tested and have been found to be the single most effective strategy to increase HCP vaccination rates, with multiple facilities and systems achieving vaccination coverage rates of more than 95%."<sup>18</sup> Further, the authors of the SHEA position paper state "therefore, for the safety of both patients and HCP, SHEA endorses a policy in which annual influenza vaccination is a condition of both initial and continued HCP employment and/or professional privileges."<sup>18</sup>

In 2012, a number of new endorsements/position statements in favour of influenza immunization of HCWs as a condition of service or appointment have been released by various groups including the Association of Medical Microbiology and Infectious Disease Canada, the Canadian Nurses Association, the Provincial Infectious Diseases Advisory Committee, and the United State's National Association of County and City Health Officials.<sup>2,3,1,4</sup>

For the 2012/2013 influenza season, two large Canadian healthcare organizations implemented influenza immunization condition of service policies:

1. Horizon Health Network, the largest health-care organization in Atlantic Canada serving New Brunswick, northern Nova Scotia and Prince Edward Island, implemented a policy that required employees and non-employee personnel to either receive influenza immunization or wear a mask within six feet of a patient during the influenza season. There were no exemptions to this policy. The organization achieved an overall employee immunization rate of 67% (up 25% from the previous season's rate of 42%). Initially, seven employees were sent home as they refused to comply with the policy. Within several days of implementation, all employees complied with the policy.
2. British Columbia introduced a policy that all Health Authority staff in care settings in that province receive influenza vaccine, or if unable to do so for medical or religious reasons, wear a surgical mask during the influenza season. Initially, non-compliance was to be dealt with by disciplinary measures; however the day before the policy was to be enforced, the policy was changed to focus on staff education for the first year. Despite the non-enforcement, vaccination coverage in full time staff was around 75% in most Health Authorities, a doubling from previous years. The intention for the 2013/2014 influenza season is to fully apply the policy.<sup>19</sup>

It should be noted that there are a small number of experts who, while they support influenza immunization of HCWs, feel vaccine should remain voluntary until there is a better influenza vaccine and additional evidence supporting benefits for patients/residents.<sup>20</sup>

### **2012/2013 Influenza Season**

The 2012/2013 Northern Hemisphere influenza vaccine contained the following strains recommended by both the World Health Organization and NACI: A/California/7/2009 (H1N1)pdm09-like virus, A/Victoria/361/2011 (H3N2)-like virus, and B/Wisconsin/1/2010-like virus (B Yamagata lineage).<sup>13</sup>

Since the beginning of this influenza season (August 26, 2012), the National Microbiology Laboratory tested 1 332 influenza viruses that were received from provincial/territorial laboratories across the country and found that there was an excellent match between this season's influenza A vaccine components and the circulating influenza A viruses in Canada (as of weeks 20 and 21: May 19 – June 1, 2013).<sup>21</sup> In

addition, approximately 75% of the circulating influenza B viruses were found to match the influenza component in this year's vaccine.<sup>21</sup> The remaining circulating influenza B viruses matched the influenza B component from the 2011/2012 influenza vaccine (B/Brisbane/60/2008).

Compared to the previous ten years of influenza activity tracked through surveillance data (2002/2003 to 2011/2012), this year's influenza season peaked on the early side. Toronto reported high rates of influenza activity this season. Excluding the pandemic 2008/2009 season, none of the previous ten years reported as many lab-confirmed cases as the 2 081 reported this season (as of week 23: June 2-8, 2013). In addition, the 103 institutional outbreaks detected tied for most number of outbreaks with the 2004/2005 season when compared with the previous ten years of data, and was more than double the average number of institutional outbreaks for the last ten seasons (average 42, with a range of 5 to 103).

## **COMMENTS**

### **Influenza Vaccine Availability and Distribution to Toronto Healthcare Facilities**

Each year, TPH staff offer influenza immunization education sessions and material for HCWs in all Toronto acute care, complex continuing care, and LTCHs.

In order to promote influenza immunization, some healthcare facilities have had some success with the use of multi-faceted immunization campaigns, including strategies such as incentives, stickers for staff ID badges to indicate receipt of vaccine, mobile influenza vaccination carts, evening and weekend access to immunization, and strong support/championing by senior leadership.

### **Effort to Increase 2012/2013 Healthcare Worker Influenza Immunization Rates**

The strategy for the 2012/2013 season included:

- All Toronto healthcare facilities received a letter from the Chair of the Board of Health urging them to review their internal policies and procedures with a view to making annual influenza immunization a condition of service for HCWs in their facilities, in consultation with their worker representatives,
- A social marketing campaign targeting HCWs using two posters: one for hospitals and one for LTCHs. Posters and a covering letter were distributed to all Toronto healthcare facilities,
- The October Influenza Surveillance Alert, which was sent to Toronto physicians to advise them that the influenza season had commenced, included a reminder for them to receive their influenza immunization,
- Toronto Public Health worked collaboratively with Public Health Ontario to sponsor Public Health Ontario Rounds in September titled Health Care Worker Influenza Immunization as a Condition of Service,

- Communicable Disease Control staff and managers followed up with the 24 Toronto healthcare facilities with 2011/2012 HCW influenza immunization rates in the lowest quintile. CEOs from each of these facilities received a letter advising them of their rates and requesting they meet with TPH representatives in the early fall. One facility was unable to arrange a mutually convenient meeting time so TPH followed up with 23/24 lowest quintile facilities. Prior to the meetings, TPH employees received standardized training and information (e.g., background, evidence, key messages, tips for meeting structure, additional readings, and materials). Toronto Public Health employees promoted use of the CHIIN document Successful Healthcare Personnel Influenza Immunization Programs – A Guide for Program Planners, and copies of the guide were distributed to healthcare facility staff at these meetings,
- A strengthened TPH Employee Immunization Policy was implemented in advance of the 2012/2013 influenza season and included recommendations for influenza immunization for all staff who work with clients at high risk for influenza-related complications, as outlined by NACI,<sup>13</sup>
- An enhanced TPH staff influenza immunization campaign was launched in fall 2012 and included: identification of Divisional champions, expansion of the number of staff clinics to 10 (from seven) and the addition of clinics in three new locations, bigger and brighter signage advertising clinic dates, weekly all staff messages from the Medical Officer of Health, promotional materials such as buttons and lanyards, and a draw to "win a coffee break served by your director,"
- A TPH Associate Medical Officer of Health sat on the MOHLTC Healthcare Worker Influenza Immunization Task Group which provided a report with recommendations to the Chief Medical Office of Health,
- The Medical Officer of Health continued to participate on the Toronto Academic Health Sciences Network (TAHSN) Healthcare Worker Influenza Immunization Working Group, and
- The City's Seniors' Strategy, endorsed by City Council at its meeting on May 7, 2013, included the following recommendation: The City of Toronto will create a Health Care Worker Influenza Immunization Group to examine all options to increase influenza immunization rates of City employees whose job involves providing health care to older adults.

## **Influenza Immunization Coverage Rates in Toronto Healthcare Facilities**

In 2012/2013, median HCW influenza immunization rates decreased slightly for Toronto hospitals (i.e., acute care and complex continuing care), and rose slightly for LTCHs. Overall, rates continue to remain less than optimal.

The median influenza immunization coverage rates among HCWs in Toronto was 47% (ranging from 29% to 57%) for acute care facilities, 57% (ranging from 41% to 93%) for complex continuing care facilities, and 76% (ranging from 5% to 100%) for LTCHs (see Tables 1a, 1b, and 1c, and Figure 1).

For the 2012/2013 influenza season, the Toronto acute care facility coverage rate falls slightly below the Ontario median coverage rate for hospitals of 51%, while the Toronto complex continuing care rate is higher than the Ontario coverage rate. Please note that the Ontario median coverage rate for hospitals combines acute care and complex continuing care. The Toronto LTCH median rate is 2% higher than the provincial median rate of 74%.

A detailed breakdown of HCW influenza immunization rates by Toronto healthcare facilities as of December 15, 2012 is provided in Tables 2a, 2b, and 2c.

Further analysis showed that generally those facilities in the lowest quintile that received follow up from TPH significantly improved their HCW influenza immunization coverage rates in 2012/2013 compared with the previous season, with an overall improvement of 14%. Toronto healthcare facilities that did not receive follow up (i.e., facilities with rates not in the lowest quintile) had an overall decrease of 4% in their HCW influenza immunization rates between November 15, 2011 and December 15, 2012.



**Table 1a: Healthcare Worker Influenza Immunization Coverage Rates by Influenza Season and Vaccine Type, Toronto and Ontario, 2007/08 - 2012/13**

| <b>Acute Care Facilities</b>             |                |                            |                    |
|--|----------------|----------------------------|--------------------|
| <b>Influenza Season and Vaccine Type</b> | <b>Toronto</b> |                            | <b>Ontario</b>     |
|  | <b>N*</b>      | <b>Median Rate (Range)</b> | <b>Median Rate</b> |
| 2007/08<br>Seasonal                      | 17             | 40% (17% to 62%)           | 50%                |
| 2008/09<br>Seasonal                      | 18             | 42% (24% to 63%)           | 51%                |
| 2009/10<br>pH1N1                         | 18             | 58% (40% to 99%)           | 65%                |
| 2010/11<br>Seasonal                      | 18             | 37% (14% to 65%)           | 42%                |
| 2011/12<br>Seasonal                      | 18             | 48% (25% to 67%)           | 49%                |
| 2012/13<br>Seasonal                      | 18             | 47% (29% to 57%)           | 51%                |

\*Count of institutions submitting rates to TPH for December 15, 2012.

**Table 1b: Healthcare Worker Influenza Immunization Coverage Rates by Influenza Season and Vaccine Type, Toronto and Ontario, 2007/08 - 2012/13**

| <b>Complex Continuing Care Facilities</b> |                |                            |                    |
|---|----------------|----------------------------|--------------------|
| <b>Influenza Season and Vaccine Type</b>  | <b>Toronto</b> |                            | <b>Ontario</b>     |
|   | <b>N*</b>      | <b>Median Rate (Range)</b> | <b>Median Rate</b> |
| 2007/08<br>Seasonal                       | 17             | 38% (23% to 80%)           | 50%                |
| 2008/09<br>Seasonal                       | 16             | 55% (20% to 80%)           | 51%                |
| 2009/10<br>pH1N1                          | 16             | 59% (37% to 85%)           | 65%                |
| 2010/11<br>Seasonal                       | 16             | 38% (17% to 80%)           | 42%                |
| 2011/12<br>Seasonal                       | 16             | 60% (21% to 87%)           | 49%                |
| 2012/13<br>Seasonal                       | 16             | 57% (41% to 93%)           | 51%                |

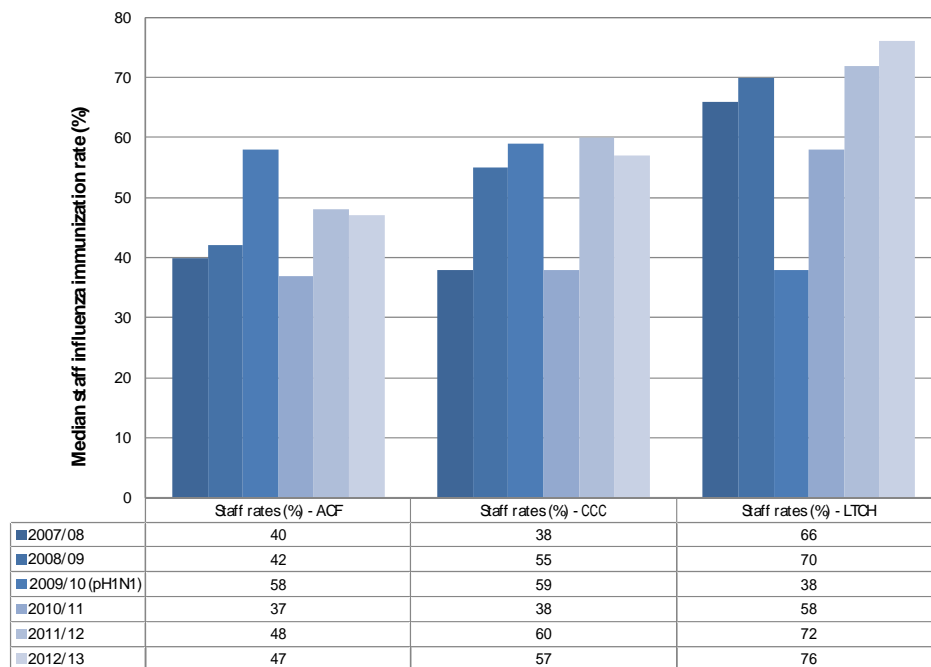
\*Count of institutions submitting rates to TPH for December 15, 2012.

**Table 1c: Healthcare Worker Influenza Immunization Coverage Rates by Influenza Season and Vaccine Type, Toronto and Ontario, 2007/08 - 2012/13**

| <b>Long-Term Care Homes</b>              |                |                            |                    |
|--|----------------|----------------------------|--------------------|
| <b>Influenza Season and Vaccine Type</b> | <b>Toronto</b> |                            | <b>Ontario</b>     |
|  | <b>N*</b>      | <b>Median Rate (Range)</b> | <b>Median Rate</b> |
| 2007/08 Seasonal                         | 77             | 66% (19% to 98%)           | 77%                |
| 2008/09 Seasonal                         | 84             | 70% (19% to 98%)           | 77%                |
| 2009/10 pH1N1                            | 85             | 38% (0% to 97%)            | 51%                |
| 2010/11 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%                |

\*Count of institutions submitting rates to TPH for December 15, 2012.

**Figure 1: Median staff influenza immunization coverage rates by facility type and season. Toronto, 2007/08 to 2012/13**



ACF: Acute Care Facility; CCC: Complex Continuing Care Hospital; LTCH: Long-Term Care Home.

Facility type

**Table 2a: Health Care Worker Influenza Immunization Coverage Rates by Acute Care Facility, Toronto, 2012/13.**

| <b>Acute Care Facilities</b>                            | <b>Total Staff</b> | <b>Number of Staff Immunized</b> | <b>Staff Coverage Rate (%)</b> |
|---|--------------------|----------------------------------|--------------------------------|
| The Hospital for Sick Children                          | 6676               | 3833                             | <b>57</b>                      |
| University Health Network – Princess Margaret Hospital  | 2618               | 1441                             | <b>55</b>                      |
| North York General Hospital – Branson Division          | 206                | 112                              | <b>54</b>                      |
| University Health Network – Toronto General Hospital    | 7032               | 3634                             | <b>52</b>                      |
| University Health Network – Toronto Western Hospital    | 2811               | 1431                             | <b>51</b>                      |
| Sunnybrook Health Sciences Centre                       | 6426               | 3243                             | <b>50</b>                      |
| Mount Sinai Hospital                                    | 5262               | 2575                             | <b>49</b>                      |
| The Scarborough Hospital – General Division             | 2324               | 1112                             | <b>48</b>                      |
| The Scarborough Hospital – Grace Division               | 1427               | 682                              | <b>48</b>                      |
| Toronto East General Hospital                           | 2886               | 1356                             | <b>47</b>                      |
| St. Michael's Hospital                                  | 5707               | 2667                             | <b>47</b>                      |
| Women's College Hospital                                | 646                | 269                              | <b>42</b>                      |
| North York General Hospital – General Division          | 3143               | 1298                             | <b>41</b>                      |
| Rouge Valley Centenary Hospital                         | 2175               | 875                              | <b>40</b>                      |
| St. Joseph's Health Centre                              | 2288               | 914                              | <b>40</b>                      |
| William Osler Health Centre, Etobicoke General Hospital | 1202               | 452                              | <b>38</b>                      |
| Trillium Health Centre                                  | 3601               | 1300                             | <b>36</b>                      |
| Humber River Regional Hospital                          | 3361               | 968                              | <b>29</b>                      |

**Table 2b: Health Care Worker Influenza Immunization Coverage Rates by Complex and Continuing Care Facility, Toronto, 2012/13.**

| <b>Complex and Continuing Care (CCC) Facilities</b>                       | <b>Total Staff</b> | <b>Number of Staff Immunized</b> | <b>Staff Coverage Rate (%)</b> |
|---|--------------------|----------------------------------|--------------------------------|
| McCall Centre for Continuing Care   | 142                | 132                              | <b>93</b>                      |
| Runnymede Healthcare Centre   | 448                | 357                              | <b>80</b>                      |
| Centre for Addiction and Mental Health – College & Russell Site           | 1122               | 749                              | <b>67</b>                      |
| Centre for Addiction and Mental Health – Queen St.                        | 2073               | 1333                             | <b>64</b>                      |
| Providence Healthcare Hospital  | 1061               | 670                              | <b>63</b>                      |
| West Park Healthcare Centre   | 967                | 584                              | <b>60</b>                      |
| Baycrest Hospital C.C.C.  | 1200               | 721                              | <b>60</b>                      |
| Bridgepoint Hospital  | 1147               | 658                              | <b>57</b>                      |
| Toronto Rehabilitation Institute – Rumsey Centre                          | 94                 | 53                               | <b>56</b>                      |
| Toronto Rehabilitation Institute – University Centre                      | 640                | 352                              | <b>55</b>                      |
| Salvation Army Toronto Grace Health Centre                                | 282                | 147                              | <b>52</b>                      |
| Toronto Rehabilitation Institute – Bickle Centre (Queen Elizabeth Centre) | 427                | 213                              | <b>50</b>                      |
| St. John's Rehabilitation Hospital  | 433                | 210                              | <b>48</b>                      |
| Holland Bloorview Kids Rehab Hospital                                     | 1482               | 689                              | <b>46</b>                      |
| Toronto Rehabilitation Institute – Lyndhurst Centre                       | 227                | 103                              | <b>45</b>                      |
| Toronto Rehabilitation Institute – Hillcrest Centre                       | 148                | 60                               | <b>41</b>                      |

**Table 2c: Health Care Worker Influenza Immunization Coverage Rates by Long-Term Care Home, Toronto, 2012/13.**

| <b>Long-Term Care Homes (LTCHs)</b>                         | <b>Total Staff</b> | <b>Number of Staff Immunized</b> | <b>Staff Coverage Rate (%)</b> |
|---|--------------------|----------------------------------|--------------------------------|
| McCall Centre Interim LTC Unit                              | 22                 | 22                               | 100                            |
| Mon Sheong Home for the Aged (Downtown)                     | 145                | 145                              | 100                            |
| Rose of Sharon Korean Long Term Care                        | 104                | 103                              | 99                             |
| Leisureworld Caregiving Centre – Cheltenham                 | 177                | 175                              | 99                             |
| Mon Sheong Scarborough Long Term Care Centre                | 202                | 199                              | 99                             |
| Yee Hong Centre for Geriatric Care – McNiccoll Site         | 303                | 297                              | 98                             |
| Yee Hong Centre for Geriatric Care – Scarborough Finch Site | 299                | 288                              | 96                             |
| Leisureworld Caregiving Centre – Rockcliffe                 | 229                | 219                              | 96                             |
| Extencicare – Scarborough                                   | 182                | 167                              | 92                             |
| Leisureworld Caregiving Centre – Norfinch                   | 167                | 153                              | 92                             |
| Chester Village   | 275                | 248                              | 90                             |
| Tony Stacey Centre for Veteran’s Care Home for the Aged     | 120                | 108                              | 90                             |
| Hellenic Home for the Aged – Scarborough                    | 141                | 126                              | 89                             |
| Norwood Nursing Home  | 74                 | 66                               | 89                             |
| Hellenic Home Care for the Aged – Toronto                   | 135                | 120                              | 89                             |
| Leisureworld Caregiving Centre – O’Connor Gate              | 199                | 175                              | 88                             |
| Villa Colombo   | 552                | 484                              | 88                             |
| Kensington Gardens  | 452                | 395                              | 87                             |
| The O’Neill Centre  | 205                | 179                              | 87                             |
| Craiglee Nursing Home – Scarborough                         | 212                | 184                              | 87                             |
| Leisureworld Caregiving Centre – Scarborough                | 295                | 256                              | 87                             |
| Wellesley Central Place                                     | 150                | 129                              | 86                             |
| Garden Court Nursing Home                                   | 41                 | 35                               | 85                             |
| Leisureworld Caregiving Centre – Ellesmere                  | 265                | 226                              | 85                             |
| Extencicare – Bayview                                       | 229                | 194                              | 85                             |
| Leisureworld Caregiving Centre – Etobicoke                  | 196                | 166                              | 85                             |
| Belmont House   | 215                | 181                              | 84                             |
| The Westbury  | 227                | 191                              | 84                             |
| Kennedy Lodge Nursing Home                                  | 344                | 289                              | 84                             |
| Harold and Grace Baker Centre                               | 314                | 263                              | 84                             |
| North Park Nursing Home                                     | 106                | 88                               | 83                             |
| Thompson House  | 157                | 128                              | 82                             |

**Table 2c: Health Care Worker Influenza Immunization Coverage Rates by Long-Term Care Home, Toronto, 2012/13 (cont'd from previous page)**

| <b>Long-Term Care Homes (LTCHs)</b>           | <b>Total Staff</b> | <b>Number of Staff Immunized</b> | <b>Staff Coverage Rate (%)</b> |
|---|--------------------|----------------------------------|--------------------------------|
| Eatonville Care Centre                        | 355                | 284                              | <b>80</b>                      |
| Fairview Nursing Home                         | 110                | 88                               | <b>80</b>                      |
| Tendercare Living Centre – Scarborough        | 325                | 260                              | <b>80</b>                      |
| Christie Gardens Apartments and Care          | 184                | 147                              | <b>80</b>                      |
| Main Street Terrace                           | 174                | 138                              | <b>79</b>                      |
| Bendale Acres                                 | 305                | 240                              | <b>79</b>                      |
| Ehatare Nursing Home                          | 58                 | 45                               | <b>78</b>                      |
| Leisureworld Caregiving Centre Altamont       | 187                | 144                              | <b>77</b>                      |
| Leisureworld Caregiving Centre O'Connor Court | 217                | 167                              | <b>77</b>                      |
| Cummer Lodge                                  | 412                | 317                              | <b>77</b>                      |
| Lakeshore Lodge                               | 164                | 126                              | <b>77</b>                      |
| Leisureworld Caregiving Centre – St.George    | 253                | 192                              | <b>76</b>                      |
| St. Clair O'Connor Community Nursing Home     | 66                 | 50                               | <b>76</b>                      |
| Dom Lipa Nursing Home – Etobicoke             | 106                | 79                               | <b>75</b>                      |
| Sunnybrook Veterans Centre                    | 681                | 506                              | <b>74</b>                      |
| The Wexford                                   | 218                | 161                              | <b>74</b>                      |
| The Heritage Nursing Home                     | 235                | 172                              | <b>73</b>                      |
| Extencare – Rouge Valley Nursing Home         | 136                | 98                               | <b>72</b>                      |
| Carefree Lodge                                | 149                | 107                              | <b>72</b>                      |
| Yorkview Lifecare Centre                      | 305                | 219                              | <b>72</b>                      |
| Trilogy Long Term Care Centre                 | 208                | 146                              | <b>70</b>                      |
| Vermont Square                                | 207                | 144                              | <b>70</b>                      |
| White Eagle Nursing Home                      | 59                 | 40                               | <b>68</b>                      |
| The Gibson Long Term Centre                   | 243                | 162                              | <b>67</b>                      |
| Maynard Nursing Home                          | 103                | 68                               | <b>66</b>                      |
| Seven Oaks                                    | 267                | 176                              | <b>66</b>                      |
| Fudger House                                  | 256                | 167                              | <b>65</b>                      |
| Shepherd Lodge Nursing Home                   | 299                | 192                              | <b>64</b>                      |
| Wesburn Manor                                 | 204                | 130                              | <b>64</b>                      |
| Elm Grove Living Centre Inc.                  | 127                | 79                               | <b>62</b>                      |
| True Davidson Acres                           | 209                | 130                              | <b>62</b>                      |
| Cedarvale Terrace Long Term Care Home         | 259                | 161                              | <b>62</b>                      |
| Drs. Paul and John Reikai Centre              | 110                | 67                               | <b>61</b>                      |

**Table 2c: Health Care Worker Influenza Immunization Coverage Rates by Long-Term Care Home, Toronto, 2012/13 (cont'd from previous page)**

| Long-Term Care Homes (LTCHs)                         | Total Staff | Number of Staff Immunized | Staff Coverage Rate (%) |
|--|-------------|---------------------------|-------------------------|
| Suomi Koti Nurisng Home Toronto                      | 69          | 42                        | 61                      |
| Ina Grafton- Gage Home                               | 170         | 103                       | 61                      |
| Baycrest Hospital - Apotex Centre (LTCH)             | 647         | 391                       | 60                      |
| Providence Long Term Care Home                       | 364         | 215                       | 59                      |
| Isabel & Arthur Meighen Health Centre                | 222         | 131                       | 59                      |
| Extencicare – Guildwood                              | 245         | 137                       | 56                      |
| North York General Hospital – Senior's Health Centre | 219         | 122                       | 56                      |
| Leisureworld Caregiving Centre – Lawrence            | 302         | 168                       | 56                      |
| West Park Long Term Care Centre                      | 264         | 134                       | 51                      |
| Castleview Wychwood Towers                           | 466         | 230                       | 49                      |
| Casa Verde Health Centre                             | 320         | 133                       | 42                      |
| The Village of Humber Heights                        | 220         | 91                        | 41                      |
| Lakeside Long Term Care Centre                       | 178         | 73                        | 41                      |
| Central Park Lodge Westside                          | 291         | 118                       | 41                      |
| Valley View Residence                                | 271         | 109                       | 40                      |
| Nisbet Lodge   | 140         | 50                        | 36                      |
| Kipling Acres  | 319         | 107                       | 34                      |
| Ivan Franko Home – Etobicoke                         | 108         | 36                        | 33                      |
| Copernicus Lodge                                     | 561         | 166                       | 30                      |
| Humber Valley Terrace                                | 210         | 44                        | 21                      |
| Ukrainian Canadian Care Centre                       | 215         | 43                        | 20                      |
| Labdara Lithuanian Nursing Home                      | 150         | 7                         | 5                       |

Toronto Public Health strongly recommends employees who work with clients at high risk of influenza-related complications receive annual influenza immunization. In the 2012/2013 influenza season, 63% of these employees received the seasonal influenza vaccine.

## **FUTURE DIRECTIONS**

Toronto Public Health will undertake the following actions to address sub-optimal coverage rates in Toronto healthcare facilities:

- Encourage all Toronto healthcare facilities to use the CHIIN guide when developing their influenza immunization campaigns.
- Work with City Long-Term Care Homes and Services and Emergency Medical Services to examine all options to increase influenza immunization rates of City employees whose job involves providing health care to older adults.

- Continue to report to the Board of Health on HCW influenza immunization coverage rates annually.
- The Medical Officer of Health will continue to participate in the TAHSN Healthcare Worker Influenza Immunization Working Group.
- Toronto Public Health staff will work with appropriate staff from TAHSN hospitals to develop a social marketing campaign that can be used in all Toronto healthcare facilities to encourage influenza immunization of HCWs.
- Toronto Public Health will work with Toronto healthcare facilities with influenza immunization coverage rates in the lowest quintile.

Although the current influenza vaccine is not as effective as many other common vaccines, it is recognized as the most effective way to protect against influenza infection.

In 2012, a number of new endorsements/position statements in favour of influenza immunization of HCWs as a condition of service or appointment were released by various groups, and two large Canadian healthcare organizations implemented influenza immunization condition of service policies.

Despite the use of multiple strategies the rates of HCW influenza immunization in Toronto healthcare facilities remained unacceptably low.

A concerted effort to improve HCW influenza immunization rates remains a public health priority.

## **CONTACT**

Dr. Irene Armstrong  
Associate Medical Officer of Health  
Communicable Disease Control  
Toronto Public Health  
Tel: 416-338-7993  
Email: [iarmstr@toronto.ca](mailto:iarmstr@toronto.ca)

Dr. Barbara Yaffe  
Director, Communicable Disease Control &  
Associate Medical Officer of Health  
Toronto Public Health  
Tel: 416-392-7405  
Email: [byaffe@toronto.ca](mailto:byaffe@toronto.ca)

## **SIGNATURE**

---

Dr. David McKeown  
Medical Officer of Health



## References

---

- <sup>1</sup> Provincial Infectious Disease Advisory Committee. Best practices for infection prevention and control programs in Ontario in all health care settings (3<sup>rd</sup> ed). May 2012. Available at [http://www.publichealthontario.ca/en/eRepository/BP\\_IPAC\\_Ontario\\_HCSettings\\_2012.pdf](http://www.publichealthontario.ca/en/eRepository/BP_IPAC_Ontario_HCSettings_2012.pdf)
- <sup>2</sup> Bryce E, Embree J, Evans G, Johnston L, Katz K, McGeer A, et al. AMMI Canada position paper: 2012 mandatory influenza immunization of health care workers. *Can J Infect Dis Med Microbiol* 2012; 23(4):e93-5. Available at [http://www.phsa.ca/NR/rdonlyres/662F1BEF-57EE-43D4-AFCD-83CB7CA588AE/61398/AMMI\\_position\\_paper\\_flu.pdf](http://www.phsa.ca/NR/rdonlyres/662F1BEF-57EE-43D4-AFCD-83CB7CA588AE/61398/AMMI_position_paper_flu.pdf)
- <sup>3</sup> Canadian Nurses Association. Position statement on influenza immunization of registered nurses. November 2012. Available at [http://www2.cna-aiic.ca/cna/documents/pdf/publications/PS\\_Influenza\\_Immunization\\_for\\_RNs\\_e.pdf](http://www2.cna-aiic.ca/cna/documents/pdf/publications/PS_Influenza_Immunization_for_RNs_e.pdf)
- <sup>4</sup> National Association of County & City Health Officials. Statement of Policy: Influenza vaccinations for healthcare personnel. November 14, 2012. Available at <http://www.naccho.org/advocacy/positions/upload/12-14-Influenza-Vax-for-Healthcare-Personnel.pdf>
- <sup>5</sup> Malavaud S, Malavaud B, Sandres K, Durand D, Marty N, Icart J, et al. Nosocomial outbreak of influenza A virus A(H3N2) infection in a solid organ transplant department. *Transplantation* 2001;72:535-7.
- <sup>6</sup> Maltezou HC, Drancourt M. Nosocomial influenza in children. *J Hosp Infect* 2003;55:83-91.
- <sup>7</sup> 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.
- <sup>8</sup> Salgado CD, Farr BM, Hall KK, Hayden FG. Influenza in the acute hospital setting. *Lancet Infect Dis* 2002;2:145-55.
- <sup>9</sup> 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.
- <sup>10</sup> 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.
- <sup>11</sup> Degelau J, Somani SK, Cooper SL, Guay DRP, Crossley KB. Amantadine-resistant influenza in a nursing facility. *Arch Intern Med* 1992;152:390-2.

---

<sup>12</sup> Morens DM, Rash VM. Lessons from a nursing home outbreak of influenza A. *Infect Cont Hosp Ep* 1995;16:275-80.

<sup>13</sup> National Advisory Committee on Immunization. Statement on seasonal influenza vaccine for 2012-2013. *CCDR* 2012;38(ACS-2):1-36. Available at <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/12vol38/acs-dcc-2/index-eng.php>

<sup>14</sup> 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=mm6202a4\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6202a4.htm?s_cid=mm6202a4_w)

<sup>15</sup> Skowronski D, Janjua NZ, De Serres G, Dickinson JA, Winter A-L, Mahmud SM et al. Interim estimates of influenza vaccine effectiveness in 2012/2013 from Canada's sentinel surveillance network, January 2013. *Eurosurveillance* 2013;18(5):1-10. Available at <http://www.eurosurveillance.org/images/dynamic/EE/V18N05/art20394.pdf>

<sup>16</sup> van den Dool C, Bonten MJC, Hak E, Heijne JCM, Wallinga J. The effects of influenza vaccination of health care workers in nursing homes: Insights from a mathematical model. *PLoS Medicine* 2008; 5(10):1453-60.

<sup>17</sup> CHIIN. Healthcare personnel influenza immunization saves lives. Available at [http://www.chiin.ca/docs/OLTCA\\_Poster.pdf](http://www.chiin.ca/docs/OLTCA_Poster.pdf)

<sup>18</sup> Talbot TR, Babcock H, Caplan AL, Maragakis LL, Poland GA, Septimus EJ, et al. Revised SHEA position paper: Influenza vaccination of healthcare personnel. *Infect Cont Hosp Ep* 2010;31:987-95.

<sup>19</sup> Dr. Paul Van Buynder, Chief Medical Health Officer, Fraser Health Authority. Personal communication, May 29, 2013.

<sup>20</sup> Gardam M, Lemieux C. Mandatory influenza vaccination? First we need a better vaccine. *CMAJ* 185;639-40.

<sup>21</sup> Public Health Agency of Canada. Flu Watch, April 7 to April 13, 2013 (week 15). Available at [http://www.phac-aspc.gc.ca/fluwatch/12-13/w15\\_13/index-eng.php](http://www.phac-aspc.gc.ca/fluwatch/12-13/w15_13/index-eng.php)