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THE INFLUENZA IMMUNIZATION CHALLENGE

Using a Public Recognition Approach to Improve Immunization Rates of Healthcare Workers in Simcoe County & the District of Muskoka, 2009 to 2012.

Public Health Ontario
PARTNERS FOR HEALTH

Santé publique Ontario
PARTENAIRES POUR LA SANTÉ

Regional Infection Control Network
North Simcoe Muskoka

Réseau régional de contrôle des infections
Simcoe-Nord Muskoka

simcoe muskoka
DISTRICT HEALTH UNIT

BACKGROUND

Beginning in the 2006-2007 influenza season there had been a marked decline in the uptake of influenza immunization amongst health care workers in Ontario – primarily those in acute care and long-term care facilities. This decline conflicts with one of the best public health interventions in reducing healthcare acquired infections—influenza vaccination. The literature on this issue is unequivocal and illustrates clearly that:

- Health care workers who are vaccinated help to reduce the following:
    - transmission of influenza
    - staff illness and absenteeism
    - influenza-related illness and death, especially among people at increased risk for severe influenza illness;
- Higher vaccination coverage among hospital staff have been associated with a lower risk of nosocomial (hospital-acquired) influenza cases;
- Influenza outbreaks in hospitals and long-term care facilities have been attributed to low influenza vaccination coverage among health care workers in those facilities;
- Higher influenza vaccination coverage among healthcare workers can reduce influenza-related illness, and even deaths, in settings such as long-term care homes. [1, 2,3,]

Effective strategies used to increase the influenza immunization coverage of health care workers illustrated in the literature include the following:

- Using the authority of the Medical Officer of Health to contribute to an increase in influenza immunization coverage in health care workers [4]
- Making influenza immunization a requirement of employment [5]
- Requiring those who refuse the influenza immunization to sign a declination form to promote acceptance of influenza immunization [6]
- Using a pandemic preparedness drill [7]
- Using multiple intervention approaches [8,9]
- Implementing a community-wide influenza immunization plan [10]
- Administering surveys to determine the factors influencing health care workers decisions to accept influenza immunization [11,12]
- Measuring health care workers knowledge of influenza immunization and its relationship with vaccine receipt [13, 14]
- Providing health care workers with resources to respond to arguments against immunization[15,16]

In an effort in increase the rate of health care workers immunization for influenza we considered the literature demonstrating evidence that certain strategies, in fact, did reduce the incidence of influenza in hospitals and long-term care homes.

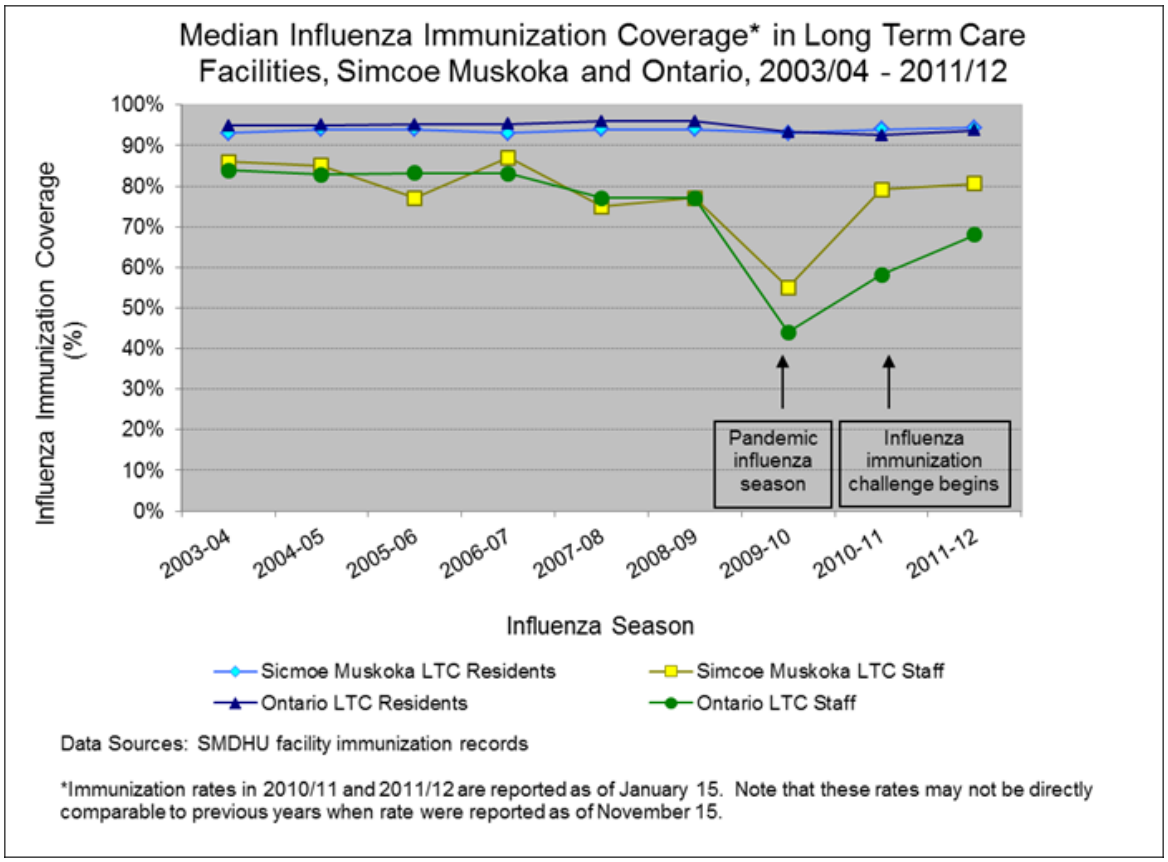
Data Collection and Interpretation

Long-Term Care Homes

As mandated by the Ministry of Health and Long-Term Care (MOHLTC), the Simcoe Muskoka District Health Unit (SMDHU) collects influenza immunization coverage as of mid-November for long-term care homes (LTCH) staff and residents and hospital staff from Simcoe Muskoka facilities every fall. The MOHLTC provides a hard copy data collection form for this purpose which does not provide definitions of staff or residents. These data are reported annually to the MOHLTC by all health units in Ontario. The health unit also analyzes coverage data annually for program planning and evaluation. The median is used to show trends over time because it is less sensitive to outliers than the mean.

The median influenza immunization coverage for long-term care residents in Simcoe Muskoka and Ontario have remained above 90% since 2003 (see Figure 1). The median influenza immunization coverage for LTCH staff in Simcoe Muskoka was comparable to the provincial median at 75% to 87% from 2003/04 to 2008/09. In 2009/10, there was a significant decrease in local and provincial seasonal influenza immunization coverage to 55% and 44% respectively because the pandemic influenza vaccine was also available that year and it received a higher uptake (62% of local LTC staff received the pandemic vaccine). The Influenza Immunization Challenge started for LTCH in 2010/11 and there is a significant increase back up to 79% in staff coverage that year whereas the provincial comparator was lower at 58%. The local coverage for 2011/12 remained steady at 81% and the provincial coverage improved over 2010/11 to 68% but remained lower than Simcoe Muskoka.

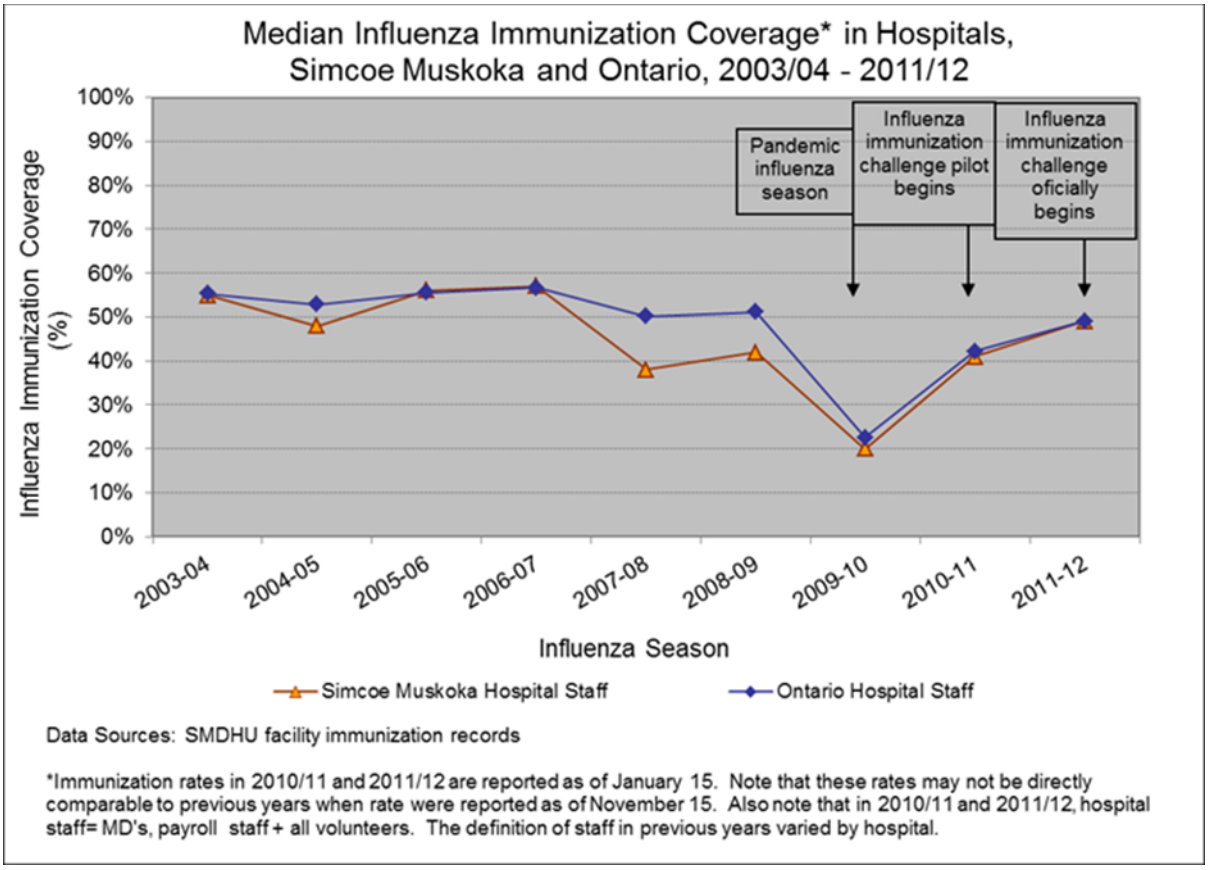
Figure: 1



Hospitals

The median influenza immunization coverage for hospital staff in Simcoe Muskoka was comparable to the provincial median between 2003/04 and 2006/07 at 48% to57% (see Figure 2). In 2007/08, the local coverage dropped to approximately 40% for two consecutive years while the provincial coverage remained above 50%. The hospital staff coverage for seasonal influenza dropped dramatically in the pandemic season (2009/10) to 20% whereas the median pandemic vaccine coverage for Simcoe Muskoka hospital staff was more than three times higher at 68%. This discrepancy may be because hospital staff perceived pandemic influenza to be a threat to their personal health, whereas seasonal influenza is generally not perceived by hospital staff to be a personal threat. The Influenza Immunization Challenge (IIC) for hospitals started as a pilot in 2010/11 during which year both the local and provincial coverage increased to 41% and 42% respectively. The IIC officially began for hospitals in 2011/12 and the Simcoe Muskoka and provincial coverage both increased to 49%. It is important to note that prior to the IIC, the definition of hospital staff was being interpreted differently by each facility. The 2010/11 and 2011/12 median staff coverage are for physicians, staff on hospital payroll and all volunteers. These data do not include students and contractors.

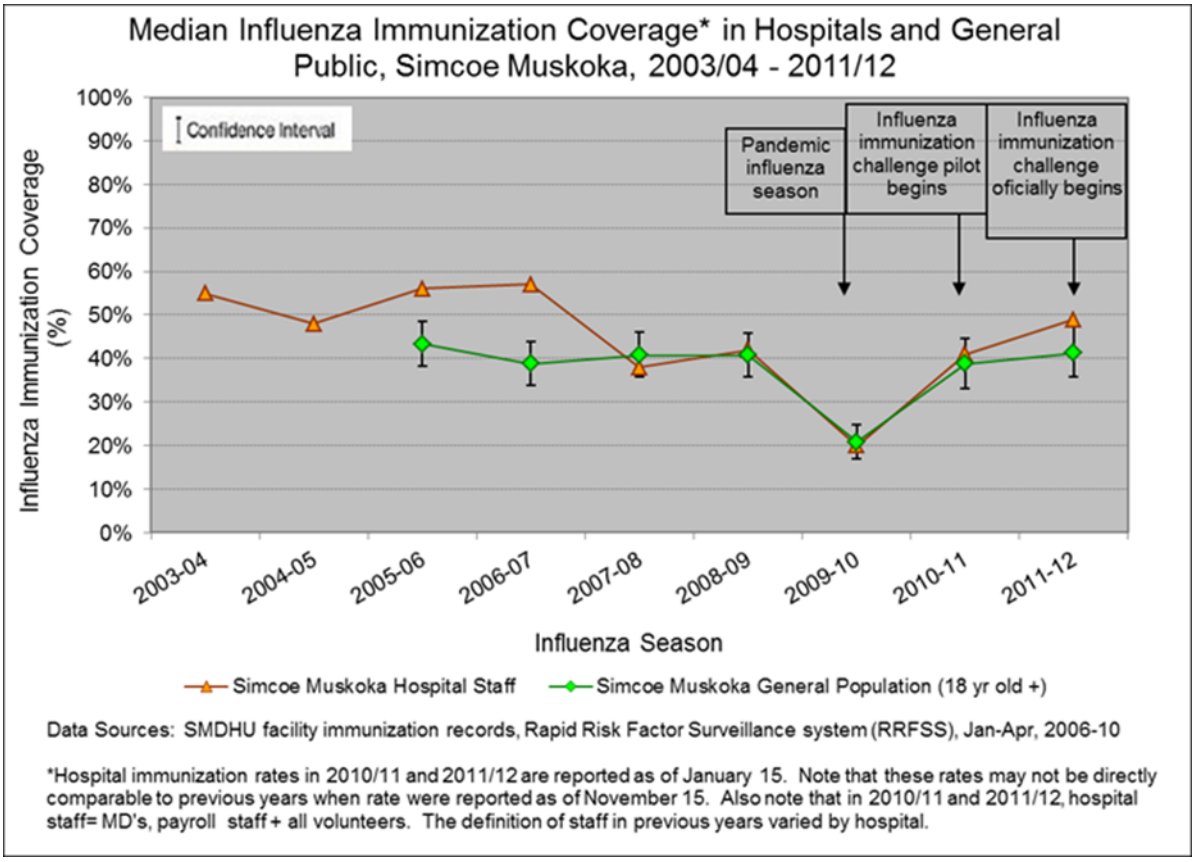
Figure 2:



General Public

Data for seasonal influenza vaccine coverage for the general public (18 years old and older) in Simcoe Muskoka are collected in the Rapid Risk Factor Surveillance System (RRFSS). It is noteworthy that in 2005/06 and 2006/07, the hospital coverage was 13% to 18% higher than the general population; however, starting in 2007/08, the hospital coverage is strikingly similar to that of the general population until 2011/2012 when the hospital coverage increased to 49% and that of the general public remained at approximately 40% (see Figure 3).

Figure 3:



PROJECT DESCRIPTION

Influenza Immunization Challenge Objectives:

- To improve influenza immunization coverage of hospital staff and LTCH staff and residents in Simcoe County and the District of Muskoka.
- To provide public recognition for hospitals and long-term care homes achieving high (or greatly improved) influenza immunization coverage.

The Approach:

- The health unit collects influenza immunization coverage rates for the MOHLTC. This information has been collected for many years. It was noted by the health unit that the influenza coverage rates for LTCH staff and residents and acute care facility staff was declining.
- An Influenza Immunization Challenge Committee (IICC) was created to help facilitate the work that would be involved to execute the Influenza Immunization Challenge (IIC).
- In 2009, two long-term care facilities and two acute care facilities that had recently demonstrated an increase in coverage were invited by the (IICC) to attend a meeting and share their positive experiences. These experiences and the collective brainstorming of the committee became the basis of the IIC Tool Kit.
- In addition to using the IIC Tool Kit, participants were encouraged to make use of other local, innovative strategies to increase their coverage.
- All facilities were invited to attend the annual influenza education session sponsored by the health unit and the Regional Infection Control Network (RICN).
- Communication concerning the IIC to LTCHs occurred via the public health LTCH Liaisons and to hospitals primarily through the local network of Infection Control Professionals called SMIPACN (Simcoe Muskoka Infection Prevention and Control Network) and the RICN.

The IIC Committee implemented the following supportive strategies:

- Distributing an Influenza Immunization Tool Kit containing relevant literature, sample policies and procedures, posters, stickers, fact sheets, and promotion ideas.
- Organizing an annual infection control workshop.
- Sending letters from the Medical Officer of Health to hospital and LTCHs CEOs on the importance of influenza immunization and encouraging participation in the challenge.
- Advocating for provincial influenza immunization policy through the Association of Local Public Health Agencies (alPHa).
- Advocating for influenza immunization through the Simcoe Muskoka Local Health Integrated Network (LHIN) Leadership Council.

A system of annual public recognition awards were developed as follows:

Gold Award	Total facility immunization coverage of 90-100 % (for staff in acute care, and for staff and residents in LTCH)
Silver Award	Total facility immunization coverage of 80-89% (for staff in acute care, and for staff and residents in LTCH)
Bronze Award	Total facility immunization coverage of 70-79% (for staff in acute care, and for staff and residents in LTCH)
Honourable Mention	To each facility that has improved their staff immunization rates by an absolute rate of 10% from the previous season.

DISCUSSION

2011-2013 IIC Feedback from Participants

At the conclusion of the 2011-2012 influenza season, the health unit distributed a questionnaire to individuals responsible for the influenza immunization programs within their health care facilities. Those that responded were either the Infection Prevention and Control or Occupational Health and Safety leads within acute care facilities and the Director of Care or Assistant Director of Care of our long-term care facilities**.**

Feedback from the facilities that participated in the Influenza Immunization Challenge

- "I feel that the recognition categories of Gold, Silver and Bronze are a good measure of the immunization rates. It gives a home a benchmark and something to strive for."
- "Influenza immunization should be a Patient Safety Indicator and become mandatory for all HCW."
- "The October 2011 Recognition day was a good forum to publicly display each facilities accomplishments."
- "Provide local media coverage of the event for 2012 to spread your message further"
- Many facilities shared their rates with their staff and displayed award certificate in facility.
- Some facilities indicated that without further incentives it will be hard to change those healthcare workers who have refused time after time and feel it may not be possible to increase their overall rate.

Initiatives used in 2011-2012 to improve and/or maintain influenza immunization coverage

The IIC was created to encourage facilities to increase their influenza immunization coverage. The health unit was able to create a venue in which other health care facilities could utilize other facilities initiatives that would allow them to create their own strategies to increase the coverage rates. The health unit with the help of the local RICN was the catalyst in cultivating the idea that influenza immunization was an initiative that was important to patient and residents.

Changes that have occurred over 2009 to 2012

- 8 facilities increased the time allocated to vaccinate and increased the amount of staff to help with the influenza immunization program within their facilities.
- 3 facilities created policies that included the "Condition of Employment"
- 7 facilities used education, research and presentations
- 3 facilities had strong upper management support

Numbers of Facilities that Met the IIC Criteria		
Year	2010-2011	2011-2012 (LTCH and Hospital)
Gold	8	10
Silver	12	9
Bronze	7	5
Honorable Mention	0	2

The Movement towards Change in Health Care Facilities during the 2010-2012 Influenza Challenge

One movement that has taken hold within Simcoe Muskoka health care facilities is the heightened awareness that facilities and health care workers must change how they view influenza immunization. It is now fundamentally viewed as a critical component of patient safety in the reduction of influenza mortality and morbidity in high-risk populations.

The strategy of creating stronger policies and procedures began with several LTCH partners after the re-launch of the influenza challenge in 2010, and with acute care partners after the launch in 2010 and full participation in 2011. The health unit has also become an example for the community in creating strong staff influenza immunization policies with a 90% staff influenza immunization coverage rate for 2011-2012.

Examples of these policies include the “Condition of Service/Employment” for all new hires to sign off that upon hire into a health care facility the health care worker shall consent to taking their influenza immunization during influenza season. Other facilities are creating policies that state that when the MOH of the health unit declares widespread influenza activity, health care workers must be immunized with the influenza immunization to work, or consent to taking of an antiviral or consent to wearing a surgical mask while working during this time period.

Challenges to the program

Facilities and staff continue to strive for high influenza immunization coverage but there are challenges that our partners have voiced during the program:

- mismatch of the vaccine to the circulating stains
- need for mandatory staff influenza immunization and the creation of legislation
- working with families of residents who are now declining the influenza immunization
- working with naturopaths and holistic health care workers to educate on the benefits of the influenza immunization.

FUTURE PLANS

Working with policy makers i.e. MOHLTC/PHO to make influenza immunization a patient-safety indicator.

Continue to work with our healthcare facilities to develop internal policies and procedures that mirror our own internal SMDHU staff influenza immunization model.

Continue to track the progress of healthcare agencies and staff influenza immunization rates, comparing our region with others and with provincial rates.

Appendix A

2009-2010, Pandemic Influenza Immunization Season Survey Results

The Influenza Immunization Challenge Committee distributed a survey in the post pandemic season to both LTCH and acute care partners. The survey was provided to evaluate the Influenza Immunization Challenge Tool Kit (IIC Tool Kit) and to also seek knowledge on the challenges faced by institutions during an influenza season dominated by a pandemic strain.

In May of 2009 the health unit launched the 2009/2010 IIC to our LTCH partners but due to the start of the pandemic the challenge was cancelled in October of 2009 and then re-launched in 2010/2011 for the upcoming influenza season.

During the pandemic, healthcare facilities identified a number of challenges concerning health care worker influenza immunization and outlined below is our response.

Challenge

Provision of concise and up-to-date information on different influenza virus strains (H1N1 vs. seasonal) and the influenza immunization, i.e. health care workers received multiple (sometimes conflicting) messages from multiple sources (i.e. media, internet, health unit, physicians and peers).

What worked?

The Influenza Immunization Challenge Committee provided facilities in June of 2009 a Tool Kit. It contained best practices documents, literature reviews, and fact sheets from credible sources of information such as the Ministry of Health and Long-Term Care, the Provincial Infectious Disease Advisory Committee and Canadian Coalition for Immunization. This allowed facilities to dispel myths and provide science-based information to staff.

Challenge

Vaccine distribution and accessibility, for example:

1. Two influenza immunizations were provided during the pandemic season at different times to different populations. This caused confusion among health care workers. The uptake of the pandemic H1N1 immunization was higher in HCW than the seasonal influenza immunization. Due to the lack knowledge of the influenza vaccine, many health care workers opted out of taking both immunizations.

2. There was not enough staff to administer influenza immunizations to staff due to timing (of vaccine distribution?) and work load during the pandemic. The health unit was staffing public immunization clinics at this time therefore could not provide staff to help immunize at local acute care facilities.

3. Storage of large quantities of vaccines at the health unit and health care facilities were concerns, as was the distribution of vaccines from the health unit to health care facilities. Facilities were only given half orders of vaccine to allow for equal distribution to prevent a shortage. Adhering to vaccine storage requirements such as maintaining adequate storage temperatures became difficult for some facilities.

What worked?

1. The health unit provides each facility with a Communicable Disease Team liaison. This allows for one-on-one education and partnership. Facility liaisons answer questions, provide education on vaccine storage, dispel vaccine myths and assist with other issues. The role of this position was noted as one of the most important assets to our health care partners.

2. The Tool Kit also provided each facility with fact sheets on influenza immunizations and storage, and strategies used by other health care facilities to increase their immunization uptake.

Overall it was noted in the survey that facilities experienced increased coverage for the H1N1 influenza immunization but decreased coverage for the seasonal influenza immunization. Over half of the facilities found that the IIC Tool Kit was useful and was used even though the challenge was cancelled. Facilities also indicated the importance of the health unit Communicable Disease Team liaison role and the ability to quickly access health unit staff and resources to answer questions and provide health care workers with credible and concise information on influenza and the influenza immunization.

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