Immunizing health care workers against influenza: A glimpse into the challenges with voluntary programs and considerations for mandatory policies

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Background: Vaccination of health care workers (HCWs) is an important patient safety initiative. It prevents influenza infection among patients and reduces staff illness and absenteeism. Despite these benefits, HCW influenza immunization uptake is low. Therefore, strategies to achieve high immunization coverage in HCWs, barriers to uptake, and perceptions of mandatory influenza immunization policies were discussed in key informant interviews with influenza immunization program planners.

Methods: We conducted telephone interviews with 23 influenza immunization program planners from 21 organizations (7 acute care hospitals, 6 continuing care facilities, and 8 public health organizations) across Canada. We used content analysis to identify themes from the interviews.

Results: Participants used a variety of promotional and educational activities, and many vaccine delivery approaches, to support HCW immunization programs. Barriers to achieving high coverage in HCWs included misconceptions about the safety and effectiveness of the influenza vaccine, negative personal experiences associated with the vaccine, and antivaccine sentiments. Participants mentioned mandatory influenza immunizations as a solution to low coverage. However, they identified challenges with this approach such as obtaining support from stakeholders, enforcement, and limiting personal autonomy.

Conclusion: Participants believed immunization coverage in health care organizations will continue to be suboptimal using existing program strategies. Although participants discussed mandatory immunization as a way to improve uptake, potential obstacles will need to be addressed for this to be implemented successfully.

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Vaccinating health care workers (HCWs) against influenza is the most effective strategy to prevent spread in health care settings.1 Canada’s National Advisory Committee on Immunization recommends HCW influenza immunization to protect them from infection and to prevent transmission to patients at high risk for influenza and its complications,2 and influenza immunizations are provided for free to HCWs. Despite the evidence supporting the benefits of influenza immunization, vaccine coverage in Canadian health care organizations is low (40%-60%).3,4 and health care organizations have identified this as a significant occupational health and safety issue.

To address this issue in the United States, policies and laws making HCW influenza immunization mandatory have been implemented. These measures have dramatically improved immunization uptake (>90%).5,6 In Canada, mandatory immunization policies of any kind are rare; only 3 provinces (Ontario, New Brunswick [NB], and Manitoba) have compulsory immunization legislation for vaccine-preventable diseases at school entry with exemptions allowed only for medical or religious reasons.7,8 In contrast, all 50 US states have laws requiring immunization but allow exemptions for medical, religious, or philosophical reasons.9,10 Some Canadian health care organizations require proof of HCW influenza immunization only during outbreaks. To date, only 1 province (Ontario) has attempted to legislate mandatory immunization for HCWs; in 2000, Ontario’s Ministry of Health and Long-Term Care required influenza immunizations for paramedics. Rather than legislate mandatory immunization, British Columbia’s (BC) Ministry of Health required HCWs to be immunized or wear a mask during the 2012/2013 influenza season as a condition of service.11 The Ontario attempt at mandatory immunization and the BC attempt at mandatory protection (ie, immunization or masking) have been challenged as being violations of personal autonomy. Because of HCW opposition, the mandate for Ontario paramedics was repealed, and implementation of the enforcement and disciplinary components of the BC policy was delayed.12-14

We conducted semistructured interviews with HCW influenza immunization planners from across Canada to understand their strategies for program implementation. In this paper, we describe themes associated with barriers to achieving high immunization coverage and mandatory influenza immunization policies.

METHODS

In-depth interviews were conducted in January 2012 to learn about immunization program strategies and processes for collecting immunization data, including barriers and facilitating factors for measuring and reporting influenza immunization rates.

Sampling and recruitment

The key informants selected for this study were identified from a 2011 online survey of Canadian health care organizations.15 Individuals responsible for HCW influenza immunization at acute care hospitals or continuing care organizations across Canada were identified through multiple methods, including consultation with provincial/regional public health authorities and regional infection control networks, postings in infection control and occupational health and safety bulletins, e-mail lists, Web site advertisements, and cold calls to organizations. Sixty-six percent (n = 478) of the online survey respondents agreed to future contact for research. From this group, we selected individuals from 30 organizations to follow-up with in-depth interviews. The organizations were selected based on the type of care provided (acute, long-term care, both), number of HCWs employed, and province, with the aim of having representation from a variety of organizations and provinces. Provinces and territories without HCW influenza immunization programs (Nunavut, Northwest Territories, Yukon) or with incomplete responses to the immunization rate measurement questions on the online survey (BC and Newfoundland) were excluded. Ethics approval was obtained from the University of Toronto’s Health Sciences Research Ethics Board. All participants provided informed consent.

Data collection

The semistructured interview guide included questions about influenza immunization programs, data collection processes and systems, methods for measuring immunization coverage rates, and policies and procedures to support immunization coverage measurement and reporting. The questions were based on the study objectives and the results of the online survey.16 Themes emerged describing barriers to achieving high immunization coverage and mandatory influenza immunizations. These topics were not included in the interview guide and were entirely initiated by the participants; no probing was done to facilitate discussion.

Most interviews lasted approximately 1 hour (range, 45-90 minutes). Each interview was conducted with a single participant from each organization, with the exception of 2 interviews where 2 participants from the same organization were interviewed simultaneously. Eighteen interviews were conducted in English and 3 in French. The English interview guide was translated into French and reviewed for accuracy. We recorded all interviews with an electronic recorder and transcribed the interviews verbatim (interviews in French were translated after transcription).

Data analysis

We used content analysis to interpret the interview data. Two researchers (S.Q. and J.A.P.) co-coded 25% of transcripts, documented key phrases and developed individual codes to create a coding dictionary. Next, 3 researchers (S.Q., J.A.P., and J.A.B.) reviewed and discussed the transcripts and revised the coding dictionary to ensure codes were consistently defined and applied to the same concepts. QSR NVivo (version 9.0; Melbourne, Victoria, Australia) was used to organize coded data; codes were categorized and sorted to allow dominant themes to emerge. Key themes that arose from the data were further examined by organization type.

RESULTS

In total, 23 participants representing 21 health care organizations (6 continuing care organizations, 7 acute care hospitals, and 8 regional public health organizations) participated in the interviews. Of those, 15 participants representing 13 health care organizations (3 continuing care organizations, 6 acute care hospitals, and 4 public health organizations) described barriers to achieving high immunization coverage and mandatory influenza immunization policies. The 13 organizations represented 7 provinces: Alberta (1), Saskatchewan (1), Manitoba (1), Ontario (5), Quebec (1), NB (1), and Nova Scotia (3). Participants had 2 to 10 years of experience with HCW influenza immunization programs (median, 5 years) and were the lead organizer for their organization; this was similar for those who did and did not discuss barriers and mandatory immunization. The 15 participants included 6 occupational health and safety
nurses, 4 occupational health and safety managers, 3 infection control nurses, 1 workplace health and safety advisor, and 1 director. Most participants (n = 9/15) worked in large health care organizations (>500 employees).

Current strategies to support immunization programs

All participants used a variety of vaccine delivery methods and strategies to support voluntary uptake of influenza immunizations (Table 1) and numerous educational and promotional activities to enhance their programs. These activities were designed to increase knowledge about influenza vaccines, address common concerns about vaccine safety and effectiveness, and raise awareness of the program. More acute care hospitals used strategies to promote and deliver influenza vaccine compared with other types of organizations.

Barriers to achieving high influenza immunization coverage in HCWs

Despite promotional activities and accessible delivery methods, participants expressed frustration about being unable to achieve what they perceived as a high immunization uptake among their HCWs. They identified several barriers to vaccine uptake.

1. Antivaccination/vaccine-hesitant HCWs

Ten participants described the difficulties they had convincing HCWs who expressed antivaccine sentiments to be immunized. Moreover, participants stated that traditional strategies for promoting the vaccine were insufficient to reach antivaccine or vaccine-hesitant HCWs because more time and effort were required to address their concerns and change their perceptions of influenza immunization. More participants from large acute care hospitals discussed experiences dealing with highly vaccine-hesitant groups in their facility compared with other types of organizations. The types of HCWs (eg, laundry staff, nurses, paramedics, physicians) and department groups (eg, intensive care, emergency department, pre-hospital care, laboratory) with these opinions varied across organizations. Participants noted that individuals working closely together held similar attitudes about influenza vaccines and described instances where HCWs with strong antivaccine views may have influenced their peers’ decisions:

“I have whole departments that’ll refuse to [get vaccinated]. And the lab people, I’m really having a hard time getting them onboard because they have a couple of people that are sort of anti-vaccine and have pulled up all sorts of stuff from the Internet . . .”

“And then if we get anybody [HCW] that really doesn’t care for the flu vaccine and if they’re talking in front of people [HCWs] who might be sitting on the fence one way or the other, I personally feel that they can sway those individuals against having the vaccine.”

One participant noted a shift in attitudes about professional responsibility among younger nurses, observing resistance to influenza immunization because they did not perceive it as part of their professional obligation and they prioritized their own interests over their patients’ health.

2. Negative personal experiences perceived to be associated with influenza immunizations

In some acute care hospitals, immunization uptake was influenced by negative events experienced by HCWs as a result of their occupation.

“[Emergency staff] are the first point of contact when people come in or they get admitted through ambulance bay. So they’ve seen GBS cases, and the patients have verbalized they felt it was related to the flu shot. What I try to explain with the Emerg staff is that you see them at point of contact when they believe that’s what their illness or symptoms are related to. You don’t see the end case where they actually tell you what caused it . . . Maybe it’s department specific, like I said, ER. I find it difficult [to convince them to get vaccinated]. ICU can be as well because they actually care for the GBS patients. We had a patient in ICU that received the H1N1 vaccine and at first, for the first couple of weeks that they were here, it was believed that the influenza vaccine could have caused that. And so that caused a lot of fear and trepidation in the staff, especially when I came around with my cart. . . .”

Such episodes promoted fear and concerns about the vaccine in vaccine-hesitant HCWs and provided additional evidence to support antivaccine sentiments.

3. Misconceptions of influenza immunizations

Several common misconceptions about influenza immunizations were used to justify not being immunized:

- Influenza vaccine is ineffective at preventing influenza
  “There’s a portion of people who are against getting the vaccine and those people you aren’t going to change their minds because they don’t believe the vaccine works.”

- Influenza vaccine is unnecessary for healthy individuals
  “A lot of people don’t get the flu shot, they’ll say, ‘I’m healthy, ‘I don’t need it.’ So that’s their rationale for not getting the flu shot. . . . what people get from the advertisements is you really only need it if you’re sick or in the nursing home or you have a lot of health issues.”

- Vaccine should not be given to pregnant women or those with contraindication concerns (eg, egg allergies) because it is not safe
“There were a couple of women who were pregnant and their friends told them never to get the flu shot ‘cause, you know, ‘your baby will die,’ things like that, you know.”

- Vaccine is not safe because it can cause neurological disorders

“A lot of people last year were really scared of GBS. So they felt that the ingredients or preservatives were causing the neurological disorder and that actually some people went as far as saying that I was injecting them with diseases.”

- Influenza vaccine causes influenza

“And there’s people that hear gossip that somebody got sick because they had the flu needle. And all you can do is continue to educate the staff and put posters up and explain to them that no, you cannot get sick from getting a flu needle. It doesn’t give you the flu . . . .”

4. Influence of H1N1 pandemic on subsequent immunization programs

Seven participants representing 5 organizations mentioned that immunization rates were high during the 2009 A/H1N1 pandemic but had dropped significantly in subsequent years. Increased fear about disease severity and vaccine rationing were mentioned as reasons to explain the high pandemic vaccine coverage rates. Because vaccine was initially provided only to specific groups of HCWs, this stimulated demand and motivated HCWs to be immunized. Three participants attributed low coverage in the following season to negative media coverage and conflicting messages from health officials during the pandemic and confusion about ingredients of the 2010-2011 seasonal vaccine.

“And something happened in 2010, with regard to the number of staff that wanted to accept the [seasonal] vaccine. . . . We’ve seen a big drop since they put the H1N1 in there. Also we tried to do a lot of education this year for staff around the fact that the vaccine always has three strains and that the H1N1 is just one of those strains. But it doesn’t seem to be catching on.”

“And then with H1N1, people were kind of scared so more people got it [the vaccine] that year. So I got a better turnout. I think it was from fear. . . .”

“I was an immunizer here and it was very upsetting because one day they [health officials] said, ‘Oh, you have to separate the shots two weeks apart.’ Then a little while later, they said, ‘No, you don’t separate the shots. You can give one in each arm.’ Then came, ‘No, you can give both in the same arm.’ And that was only one example of misinformation that went on with H1N1. We lost a lot of credibility there.”

“Our rates were quite high until after the pandemic—they were the highest in 2009. The following year they went back down probably ten to twenty percent. . . . I guess all the negative media coverage caused a lot of doubt in people’s minds. So now it feels like we’re kind of starting over in the education process.”

Mandatory influenza immunization policies

All participants mentioned that their organization had policies or procedures recommending influenza vaccinations for HCWs and provided this to employees free of charge; most made it a requirement during influenza outbreaks. However, none of the organizations had a mandatory policy requiring seasonal influenza vaccination for HCWs outside of an outbreak scenario. Three organizations required influenza immunization for external groups (eg, students, contractors).

Participants expressed frustration that a voluntary program was inadequate for obtaining high coverage. Several stated that a mandatory program was the only solution for reaching and sustaining high coverage in HCWs, although they recognized potential concerns and challenges. Nine participants shared their thoughts about the positive attributes and anticipated challenges of a mandatory policy.

Reasons to support a mandatory influenza immunization policy

Participants believed that, in addition to existing program strategies, a mandatory policy was needed to improve coverage. Without a mandatory program, organizations would continue to struggle with influenza immunization.

“Until it’s mandatory, organizations flounder and we do the best we can with intimidation and prizes. It’s like measles, mumps, rubella. I can run you off the stats for measles, mumps, rubella and I will tell you every employee in this hospital is immunized and they’ve had [immunization] done. For hepatitis B, everybody who has a potential to be—have contact with blood—they’re immunized against hep B, because it’s mandated. . . . Until they do that for influenza immunization, organizations are just going to flounder. With measles, mumps, rubella, it’s mandatory that you’re immunized.”

Others cited how mandatory policies in the United States have improved coverage. Mandating the vaccine would reinforce HCWs’ professional responsibilities to protect their patients while also increasing confidence and support for the vaccine.

“If the influenza vaccination was mandated, I think the staff would see it not so much as their right to choose [but] as a responsibility part of it as being a health care worker, being willing to get the vaccine. I don’t like to see mandates, but I don’t see any other option with the current negative publicity regarding immunizations. . . . They would believe that the vaccine is safe if it was mandatory. . . .”

A few participants mentioned that having a mandatory policy would make their jobs easier.

Challenges associated with a mandatory policy

Although participants recognized positive aspects of mandatory policies, many also had concerns about implementation challenges.

1. Loss of personal autonomy

Participants were concerned that a mandatory policy would curtail personal autonomy by eliminating an individual’s right to choose whether to be immunized. This concern was consistent across different types of organizations. Participants suspected this could increase resistance to immunization and discontent among HCWs. Mandatory immunizations would be a violation of human rights, as demonstrated by the repeal of the Ontario mandatory legislation for paramedics. A few mentioned that vaccination was a personal choice that required informed consent. Although some participants mentioned that they would support a mandatory policy as it related to their occupational role, they had difficulties accepting the limits on personal autonomy that would be imposed by such a policy and mentioned it would be uncomfortable to enforce.
“We talked about trying to make it [influenza immunization] mandatory here this year. This was brought on by a new administrator. But our understanding is that that’s against human rights or something. So we didn’t do that [this year].”

“I have a real ethical problem with that [mandatory immunizations]. The nurse in me says it should be mandatory. But then the citizen in me says what happened to free choice? It’s a conflict. And why should it be mandatory for health care workers and not mandatory for the person who works in my bank who can cough on me and infect me or other people?”

“We [senior management] thought that some of them [HCWs] would really get their backs up. People don’t like to be told what to do and some who might actually take it [the vaccine] wouldn’t take it just because we were trying to force them into it. . . . I don’t believe you can force somebody to do something just because they’re a health care worker. Is it best practice? Sure. Should people do it? Sure. But everybody has their own choice. . . .”

2. Support from all external and internal stakeholders

Many participants mentioned that they needed support and direction from internal and external stakeholders to implement and enforce a mandatory policy. Internal stakeholders included HCWs and senior management. External stakeholders included governments, academic institutions, union groups, the general public, and health care professional bodies. Obtaining support from internal and external stakeholders was more commonly mentioned by participants representing acute care hospitals than continuing care organizations. For example, 2 of the organizations that by participants representing acute care hospitals than continuing care organizations. For example, 2 of the organizations that mentioned that HCWs perceived the vaccine to be ineffective, low HCW in immunizations and fostering a patient safety culture. In BC and Nova Scotia, immunization champions encourage fellow HCWs to accept influenza vaccination, and they also help administer vaccines.

Well, you know, if you’re not going to take it, do you need a doctor’s note?”

4. Union groups

Union support was described as being important by participants in all types of organizations. Participants provided examples from the Ontario paramedics’ union experience. Because of this experience, some participants perceived that a mandatory approach would never work in Canada.

“I know this will never happen, but, I think if there’s something that could come from the unions that represent our staff, the nurses union and the union that represents housekeeping and the kitchen, just saying, ‘we’re also interested in the health of our union members’ . . . . They should support this initiative, too. But I don’t think that will ever happen”

“It’s basically a human rights and arbitration decision. So that’s mainly union-driven that cause a problem. ‘Cause I know they tried to mandate the ambulance workers in Ontario, but they obviously won the grievance that they could still decline and they wouldn’t lose their jobs.”

“They [senior management] have talked about it [mandatory immunizations], but nothing’s in the works yet ‘cause it’s such a grey area, especially where everybody’s unionized.”

DISCUSSION

We found that voluntary influenza immunization programs struggle to achieve high coverage among HCWs despite myriad educational and promotional activities. Participants expressed frustration with the current state and thought their efforts were inadequate. Although mandatory influenza immunization is a potential solution, many participants were concerned about implementation and acceptability.

Low HCW influenza immunization coverage has been an ongoing challenge for most health care organizations, yet not all evidence-based strategies (eg, declination forms, reporting of rates, immunization champions, peer immunizers) are universally employed. For example, although declination forms are associated with improving coverage, only 32% of Canadian health care organizations use them. Some study participants report coverage rates to staff and public health, but none report rates to the public because this is not a requirement and may generate negative repercussions.

Despite extensive education about the vaccine, common misconceptions persist. Similar to other studies, participants mentioned that HCWs perceived the vaccine to be ineffective, unsafe, and unnecessary for healthy individuals. HCW groups and departments often exhibit similar immunization behaviors, consistent with the normative belief concept in the Theory of Planned Behavior, which suggests that perceived social pressure from significant others can influence one’s behavior. Other studies have also demonstrated that HCWs take into consideration peer opinions about vaccinations. To overcome this, immunization champions can be used to better promote and expand the campaign to the frontlines by influencing attitudes about influenza immunizations and fostering a patient safety culture. In BC and Nova Scotia, immunization champions encourage fellow HCWs to accept influenza vaccination, and they also help administer vaccines. Addressing common misconceptions and developing a culture that fosters social acceptance of influenza immunization can increase coverage.
Although not all evidence-based strategies are used, participants thought that a saturation point has been reached for voluntary strategies, and several mentioned mandatory influenza immunization policies as a potential solution. Participants elicited factors necessary to implement mandatory policies in Canada.

Mandatory policies require support and guidance from multiple stakeholders, including senior management. Strong commitment of senior leadership was a key factor identified by US health care organizations with successful mandatory policies.27 Other factors that support mandatory policies include early delivery of information and education to staff, extensive communication, reliable and extensive vaccine distribution plan including multiple delivery methods, ability to track employees to ensure compliance, and accountability from frontline managers.52 Whereas some of these are already routine, additional time and resources may be required to expand their scope when implementing a mandatory policy.

Obtaining support from unions was also mentioned as a prerequisite to mandatory policies in Canada. Approximately 61% of HCWs are unionized, with nurses having the highest percentage of unionization at 79%.24 In contrast, only 13% of HCWs in the United States are unionized.25 Thus, because the majority of Canadian HCWs are represented by unions, working with union leadership to develop mandatory policies is critical. Without their support, grievances can compromise policy implementation, as mentioned by several participants. For example, condition of service policies requiring HCWs to either be immunized or wear a mask throughout the influenza season were introduced in both BC and in 1 of the health authorities in NB in 2012 (M. Babineau, personal communication; April 29, 2013). Those who did not follow the policy would face disciplinary procedures. The BC Nurses’ Union launched a grievance over the policy, stating vaccination should remain a voluntary choice and that nurses should retain the right to exercise their professional judgement.26 In contrast, the nurses’ union in NB supported the policy based on improved patient care and safety (M. Quinn, personal communication; April 29, 2013). Although conditions of the 2 policies were fairly similar, successful implementation depended on support from unions and government stakeholders. Ideally, health care leaders should involve union leaders and other important stakeholders early in the policy development stages and in the collective bargaining agreement to ensure the process stays centered on balancing patient safety needs with workers’ rights.

Participants had concerns about the limits that mandatory policies would place on personal autonomy and the tension between individuals’ right to choose versus the greater societal good. This ideology can be traced to the Canadian Charter of Rights and Freedom, which broadly describes the rights of individuals as good. This ideology can be traced to the Canadian Charter of Rights and Freedom, which broadly describes the rights of individuals as part of the Constitution of Canada.27 In the interviews, half of the respondents who mentioned this tension were from Ontario where the Charter of Rights and Freedom was applied to the 2002 para-medic’s case. In that case, the labor union argued that the requirement was a violation of individual rights and freedoms. However, in a 2009 review of the legislation and rulings surrounding this issue, Rodal et al found that, in some circumstances, condition of service requirements for HCW influenza immunization could be justifiable under the Charter.28 Proponents for mandating influenza immunizations argue that HCWs who care for patients accept an ethical obligation governed by the Hippocratic Oath: first, do no harm.28 This is consistent with National Advisory Committee on Immunization’s argument that “HCWs who have direct patient contact should consider it their responsibility to provide the highest standard of care, which includes annual influenza vaccination. In the absence of contraindications, refusal of HCWs who have direct patient contact to be immunized against influenza implies failure in their duty of care to patients.” Similarly, the Canadian Nurses Association considers mandatory immunization policies by employers to be in agreement with the Code of Ethics for Registered Nurses in Canada and the obligation to act in the public interest.30 The Association of Medical Microbiology and Infectious Disease Canada issued a recent position paper stating that immunization as a condition of employment was ethically justified because HCWs have specific obligations to do no harm and to take all reasonable action to protect patients, over HCWs’ personal preferences.31 Offering an alternative to vaccination such as wearing a mask or being reassigned to another work setting where patient contact is limited may provide the balance needed to protect both personal autonomy and professional obligations.

Strengths and limitations

Participation was voluntary, and, at the start of each interview, privacy was assured; therefore, we are confident that individuals thought they could be open and honest in their responses. The themes explored in this study were not predefined and emerged at the data analysis stage, after the interviews had been completed. Therefore, in-depth probing of these topics did not occur. The results reflect the spontaneous thoughts of the participants rather than any guidance from the interviewer. Our study did not include representation from all the provinces and territories. Finally, the participants reflect a small sample of individuals who manage immunization programs; therefore, these results cannot be generalized to all influenza immunization program planners in Canada.

CONCLUSION

In summary, this study provides a glimpse into the challenges of implementing voluntary influenza immunization programs in health care settings. Based on the interviews, the majority of participants was frustrated at the current status and perceived that existing promotional and educational activities had minimal impact on coverage. Similarly, many Canadian health care organizations and governments have also realized this, leading to increased advocacy for mandatory approaches or condition of service policies.14,29,32 Whereas many recognized the potential benefits of mandatory influenza immunization policies on coverage, more work is needed to understand how to best implement such a strategy in the current Canadian environment. Moving forward, health care and public health leaders must engage HCWs and other stakeholders to determine how to balance personal autonomy against the need to immunize HCWs as part of an effective influenza prevention strategy.

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References


