



Bringing the Voices of Canadian Seniors Together in the Fight Against Influenza

IFA Technical Report

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Introduction

In Canada, the ageing population is constantly growing, the number of persons aged 65 years and over is 6.8 million as of July 2020. By 2036 projections suggest there will be between 9.9 to 10.9 million older people, representing some 23% of the total population. As the population continues to age so does the likelihood of increased burden of disease and pressures on the health and social care systems.

Healthy ageing is the process of developing and maintaining the functional ability that enables wellbeing into older ageⁱⁱⁱ. Health promotion and prevention as part of a comprehensive public health plan is essential to provide opportunities for older persons to maintain their functional ability and be able to meet their basic needs, learn, grow, and make decisions while remaining mobile and contributing to society^{iv}. An important preventative action to support the process of healthy ageing is immunization.

Parallel to the process of ageing and the importance of ensuring healthy ageing is the increasing vulnerability of individuals with noncommunicable diseases (NCDs). NCDs include cardiovascular diseases, cancer, and chronic respiratory diseases putting individuals with these conditions at higher risk of complications from vaccine preventable diseases. Ageing populations, combined with the rise in Canadians with NCDs that require complex health management, are driving an unprecedented demand for health and social care.

Threat of Influenza

Influenza in Canada is one of the top ten causes of hospitalization and death^v. Despite common misconceptions, healthy people of all ages can often have severe febrile illness from seasonal influenza^{vi}. There is, however, a growing proportion of the general population such as older persons, people with underlying health conditions and those with lifestyle risk factors such as drinking and smoking that are especially at risk of serious complications, an exacerbation of underlying health conditions, and or flu related death. Individuals that consider themselves 'healthy' are also at-risk for suffering from the short-term and long-term effects of influenza and should also be aware of the importance of immunization. While the risks to the health of older persons from influenza are well-known^{vii}, the voices of Canadian seniors are largely absent from policy that would result in improved coverage.

Seasonal influenza vaccination is important to reduce the risk of flu illnesses, hospitalizations, and the risk of flu-related death. Immunize Canada estimates that influenza vaccines reduce 40% of all hospitalizations related to the illness^{viii}. To ensure that at-risk populations including older persons are protected against more severe cases of influenza vaccination needs to be equitable and safeguarded across Canada.

The National Advisory Committee on Immunization (NACI) sets a target of 80% for influenza immunization, but rates remain between 62% to 64% every year^{ix}. In Canada, it is the provincial governments that have the jurisdictional responsibility for procurement and distribution of vaccines. Unfortunately, the non-harmonized approach is less than ideal and results in not only confusion for Canadians but a disparate pattern of influenza vaccination coverage across the nation. Therefore, it is fundamental to bring the voices of Canadian seniors together in the fight against influenza to understand what specific barriers they are facing to then advocate for policy change.

Purpose

The goal of the International Federation on Ageing (IFA) is to improve the uptake rates of adult vaccination. The study entitled *Bringing the Voices of Canadian Seniors Together in the Fight Against Influenza*, contributes to this goal, and collected real world evidence of barriers to influenza vaccination faced by seniors across Canada. The project aims to help build the capacity of patient and senior's organizations to improve influenza vaccination coverage.

The study explores the perspectives of Canadian seniors on influenza and influenza vaccination through a systematic literature review and survey to identify the barriers to vaccination including misconceptions about the perceived risk and severity of influenza, vaccination gateways and health professional influences.

Findings of the Literature Review

Conducting a systematic literature review on factors affecting adult vaccination as perceived by older Canadians is an important step to informing more effective policy. Overall, the current literature in this field is limited to self-appraised health status, vaccination gateways, and health professional influences, which in and of itself is an important finding.

The Canadian secondary literature ranges from 2002 to 2019 in journals such as the *Canadian Journal on Ageing, BMC Public Health, and Human Vaccines and Immunotherapeutics*. To further inform the literature and subsequent survey several global and country studies (1998 to 2015) that considered barriers to influenza vaccination amongst older persons (United States, Portugal, Spain, and United Kingdom) were reviewed. The literature review is limited in that the sources reviewed are not all recent, but nonetheless are relevant to the barriers continuously experienced by older persons.

Perceived Risk and Severity of Influenza

The vaccination behavior of individuals and populations is a complex process. One of the factors influencing decision making is perceived risk and severity of influenza which is based on self-appraised health, attitudes and beliefs towards the vaccine and beliefs of vaccine effectiveness. The interrelationship of these factors helps inform a person's decision about whether to be vaccinated or not and provides a sense of the potential population impact on health systems.

Self-Appraised Health and Ageist Attitudes Amongst Older Persons

Self-appraised health status is an important factor affecting adult vaccination. Nagata et al (2011) confirmed the link between 'health' as perceived by older persons and its role in vaccination behavior. For some older persons 'health' represented the absence of medical conditions. This understanding of 'health' was attributed to a cultural norm'.

To have effective influenza campaigns they must target and dismantle misconceptions of 'health' amongst older persons. In fact, the World Health Organization definition of "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."xi Influenza is a contagious respiratory illness caused by the influenza viruses that infect the nose, throat, and sometimes the lungs. Influenza can have short-term and long-term consequences for both at-risk individuals and even those considered 'healthy'. However, for those with a weakened immunity, a natural response with age, and those with chronic conditions mild to severe illness can at times lead to death. Vaccination across life needs to be reinforced and a clearer effort to dismantle beliefs about health need to be undertaken. This misconception and self-appraised health status amongst individuals must be targeted to improve vaccination uptake across communities.

Self-appraised health status is also believed to be related to ageist beliefs by older persons. A qualitative study by Evans et al (2007) found that many patients did not think of themselves as being old and as such, being 65 years of age did not mean they should or needed to be vaccinated^{xii}. Some participants reported that advertising calling for those in older age groups was ageist. A further belief was that the absence of an underlying health condition was associated with good health and minimized serious risk^{xiii}. Findings suggest there is a misconception about self-perceived health and the possible impacts of influenza on healthy older people. Furthermore, ageism is not only evident when examining misconceptions of health, but the pervasiveness of ageism as emphasized in the WHO Global report on ageism indicates that it is also embedded in how older persons view themselves^{xiv}. These recent findings are important in the development of future public health immunization campaigns.

Attitudes and Beliefs About the Severity of Influenza

The literature clearly demonstrates that influenza vaccination is tied to attitudes and beliefs that manifest in 'knowledge'. A 2019 Canadian survey found that 90.8% of respondents knew who was at higher risk of influenza related health complications^{xv}. One of the most common reasons for non-vaccination was the belief that this infectious disease was not severe, or the vaccine was not effective. Those who had been previously

vaccinated had a greater understanding of the serious complications and were more likely to be vaccinated annually^{xvi}. Findings from numerous studies indicate that individuals who are routinely vaccinated for influenza understand the symptoms of influenza. This sheds light on the importance of misinformation and targeted messaging debunking misconceptions especially in individuals who are not routinely vaccinated^{xviixviiixixxxxxi}.

The relationship between health literacy and vaccination has been investigated only to a limited extent. The term 'vaccine literacy' considers health literacy from the perspective of vaccine attitudes and hesitancy to better define and understand the main determinants of vaccine uptake. It was the source of a systematic literature review by Lorini et al in 2018, that found vaccine hesitancy or acceptance was influenced by country, age, and type of vaccinexxiii. The literature review found that the relationship between health literacy and vaccination was driven by risk perceptions and by the likelihood of getting sick from the vaccine prevented diseasexxiii. The countries examined in the literature review were the United States, India, the Netherlands, and Israel. Furthermore, the review suggests that vaccine hesitancy is culturally specific and influenced by many factors apart from health literacy and culture must be considered when developing targeted resources around influenza and influenza vaccination.

Beliefs on Vaccine Effectiveness

Understanding perceived risk and severity is related to the views and opinions of influenza vaccine effectiveness in population groups. Ward and Draper (2007) through a literature review in the United Kingdom found that older persons have concerns that the vaccine may not be effective, can cause the influenza illness and is not safe^{xxiv}. These misconceptions can then influence vaccination behavior and is a possible reason for non-vaccination.

A Canadian study in 2018 analyzed data from the 2015-2016 Influenza Immunization Coverage Survey to understand determinants of non-vaccination for seasonal influenza. The most common reported reason for non-vaccination was a lack of belief in vaccine effectiveness even among individuals who were considered high-risk**. The belief in vaccine effectiveness appears to be associated with the potential cost of vaccines to the consumer (in Canada). Overall, Canadians were less likely to opt for adult vaccines if there was an additional cost***. Even when the health complications of influenza were outlined it was evident that the price of a vaccine had an impact on behavior.

Vaccination Gateways

Vaccination gateways refers to the place or entry point to be vaccinated such as the pharmacy or General Practitioner (GP) surgery. For older persons in particular there are many personal and environmental factors that may make it difficult to be vaccinated including their mobility or no access to a vaccination center, inadequate transportation, and cultural and language barriers. All these factors are situational and specific but must be addressed through consistent and sometimes innovative approaches to increase access to vaccination.

Access

Access and affordability are concerns among older persons and was the focus of a literature review by Eilers et al (2014). Inadequate mobility or transportation for influenza vaccination and waiting times at the clinic were three key areas that may impact being vaccinated beyond that of self-appraised health status and beliefs about vaccination**vii. Furthermore, a report by CanAGE found that every province and territory needed to make immediate enhancements to the way vaccines are procured and delivered**vviii.

Access and vaccination uptake was addressed in a study that evaluated the impact of pharmacists as additional immunizers in Nova Scotia. Researchers found a unique set of barriers in rural settings and coverage rates increased when pharmacists were additional immunizers^{xxix}.

Cultural and Language Barriers

Alongside the physical barriers to accessing vaccination portals culture and language play an important role. The Canadian ageing population is heterogenous with ethno-cultural variations through which the design

of policies, programs and services to promote adult vaccination must be viewed. Shooshtari, et al (2020) examined how healthy ageing is defined in various ethno-cultural backgrounds and concluded that there are varying perceptions on what constitutes healthy ageing. They concluded that policy and practices must take into consideration cultural nuances xxx.

Pearson et al (2011) analyzed language as a barrier to receiving influenza vaccination among older persons. Individuals solely speaking Spanish were found to have a lower vaccination rate as opposed to those who were comfortable with English speaking health care providers^{xxxi}. Much earlier Rangel et al (1998) found that English language proficiency was an indicator of vaccination^{xxxii}. The studies suggest the importance of recognizing culture and language when addressing adult influenza vaccination.

Health Professional Influences

Numerous studies, report that health professionals are influential in the health-related decisions of patients and consumers – this also includes vaccination.

McIntyre, Zecevic and Diachun (2014) in an Ontario based study identified three moderators that influenced decisions namely general practitioners, intimate relationships, and fear of adverse events^{xxxiii}. These findings are complemented by a community survey that found non-vaccination was due in part to the lack of advice from nurses and doctors. Individuals with a chronic illness or in poorer health were more likely to be immunized as well as those advised by a doctor or nurse^{xxxiv}. Interestingly, respondents were both influenced by their doctors and reminders for follow up on appointments, to reinforce the importance of adult immunization.

Similarly, findings from a cross-sectional survey on the views of older people and influenza vaccine uptake found that health workers and information they conveyed through face-to-face meetings, reminder letters or telephone contact** had a positive influence on the decision to be vaccinated. Improved vaccination uptake rates in older populations were associated with the relationship with a doctor or nurse who was able to explain possible side effects of vaccines. Interestingly, 67% of unvaccinated individuals reported being influenced by national advertising campaigns**vxvi*. These findings suggest that although public health messages and campaigns are important the guidance of health professionals are often critical in informing the decision to be vaccinated.

Uniformly, the literature emphasizes the essential role of health care professionals in advocating for and explaining the importance of vaccination and reinforcing through reminders timely vaccination. While certain assumptions could be made of these findings in the context of the Canadian landscape concerning the role of health care professionals, vaccination, and older people this is insufficient to drive effective policy and will be further discussed in the survey findings.

At-Risk Populations

In Canada, As the population continues to age so does the likelihood of increased burden of disease and pressures on the health and social care systems. Parallel to the process of ageing is the increased prevalence of those with noncommunicable diseases (NCDs) including cardiovascular diseases, cancer, and chronic respiratory diseases. Ageing populations, combined with the risk of NCDs require complex health management and their health is pivotal to ensure that the health and social care system is not burdened.

Understanding the possible barriers to vaccination in at-risk individuals defined by NACI, older people and those with chronic underlying conditions is essential due to the increased probability of severe cases of influenza.

A study undertaken to understand the beliefs and attitudes towards the influenza vaccine in high-risk individuals in Portugal found that respondents do not consider themselves susceptible to the flu. There was a strong belief amongst non-vaccinated individuals that influenza can be prevented in other ways apart from the vaccine. In addition, there was also a lack of understanding among high-risk individuals that the flu could exacerbate underlying health conditions xxxxvii.

A study in Spain found that the presence of major chronic conditions in persons aged 65 years and over was not associated with adherence to vaccination, yet findings suggested primary care physicians play

a large role in the vaccination decision making process for at risk individuals.xxxviii While the focus was limited to the community of Navarre in Spain it does once again reinforce the influence that doctors may have amongst older persons with underlying health conditions and the value of conversations between individuals and health providers.

Experts recommend that both GPs and medical subspecialists play an active role in recommending influenza in older and high-risk patients**xxix*. As can be seen, influenza vaccination is not only important to reduce the potential effects of influenza, but health specialists need to emphasize the importance on health in reducing cardiac disease and other severe long-term complications in all their patients and individuals.

Research on at-risk adult populations in Canada and patterns of vaccination is limited, as are the voices of Canadian seniors in informing vaccine policy. The lack of insight into the vaccination behavior of older people and those with underlying conditions is potentially compromised in the equitable access and delivery of vaccines to those most in need.

Survey Methods

The voices of Canadians are largely absent from policy yet essential to improving adult influenza vaccination rates across Canada. For this reason, *Bringing the Voices of Canadian Seniors Together in the Fight Against Influenza* used quantitative methods to examine the barriers to adult vaccination amongst older persons in Canada.

Survey questions were informed by findings from the systematic literature review and sought to gather new data about older persons' knowledge, views, perceptions of adult influenza vaccination, where they obtained their health information from and whether they understood the difference between influenza vaccines and COVID-19 vaccines. No prior knowledge was necessary for completion of the survey and the pre-screening questions ensured that individuals were part of an at-risk population.

Patient, advocacy, and senior's organizations were the main channels for survey dissemination. Organizations interested in distributing the survey shared a link to access an electronic questionnaire. Participation was voluntary and no personal information was stored for confidentiality reasons. The survey was available for one month electronically to ensure adequate time for response.

Findings

Perceived Risk and Severity of Influenza Self-Appraised Health and Ageist Attitudes Amongst Older Persons

Self-appraised health varied amongst respondents depending upon their vaccination status (83% vaccinated against influenza, 17% not vaccinated). The majority of those not vaccinated reported that the vaccine was not necessary to their health (64%) and that they (17%) were 'healthy.' Some believe that with healthy living and a good diet there was a reduced risk of severe cases of influenza. Surprisingly, 18% are not routinely immunized against influenza.

Consistent with the literature review these findings confirm that vaccination behavior is influenced by self-appraised health. Individuals who are routinely vaccinated against influenza have a higher awareness of the weaker immunity associated with age and this does not alter with being or feeling healthy.

It is important that messaging and influenza campaigns reinforce the importance of life-course immunization and that despite considering yourself 'healthy' influenza can have long-term impacts.

Attitudes and Beliefs About the Severity of Influenza

The beliefs and attitudes manifest in a person's knowledge informs and to some degree impacts decisions about vaccines and vaccination.

The perception of 'risk' that influenza poses to older adults and those with underlying health conditions is

a potential barrier to being immunized against influenza. Forty-two per cent of those surveyed reported understanding the possible consequences of influenza to their health which was the reason for vaccination. Only 15% received an annual influenza shot because they had an underlying health condition and understood the heightened risks of serious complications.

Those surveyed who were not vaccinated appeared to have a poor awareness of vaccines and / or understanding of the health outcomes associated with influenza: 18% believed that the vaccine causes influenza-like symptoms, a similar proportion (18%) felt that they did not know enough about influenza vaccines; and a further 18% were unsure why they were not vaccinated. These findings suggest that some non-vaccinated individuals do not understand the risk of influenza to their health and possible long-term impacts.

In general, there was a sound understanding of the short-term symptoms of influenza: fever (93%), body aches (89%), fatigue (86%), headache (82%), cough (69%), runny or stuffy nose (68%), and sore throat (67%). Diarrhea and vomiting (40%) was the symptom least identified as being associated with influenza. Overall respondents demonstrated a strong understanding of influenza symptoms.

In terms of knowledge about the long-term consequences of influenza 75% of respondents identified pneumonia, and over 50% indicated death. Other consequences identified were 36% sinus and ear infections, 35% inflammation of the heart, 35% brain or muscle tissues, 12% heart attack, 7% worsening of chronic health conditions.

While the knowledge of short versus long term consequences of influenza varied there appears to be a relatively poorer understanding of the serious functional impact of influenza over an extended period of time. This statement is illustrated by the finding that 43% of respondents suffered from an underlying health condition but only 7% believed that influenza could worsen chronic health conditions.

There is a clear need to develop messages within an array of educational resources that explains the symptoms as well as the long-term consequences of influenza to at risk populations. Influenza must be recognized as distinct from a cold or mild infection, but an illness with various and deadly consequences to health.

Influence of COVID-19 on Influenza Vaccination Behavior

Vaccination behavior in the 2020-2021 influenza season appeared to be influenced by the COVID-19 pandemic. Some respondents on being prompted to have the influenza vaccine in the midst of the pandemic did so as a matter of routine practice.

A large proportion of respondents who did not have the influenza vaccine (64%) believed it was not necessary because movement outside the home was restricted, and there were additional protective precautions such as masks and hand sanitizer. Ten percent reported that the COVID-19 vaccine would protect against influenza and 22% were unsure. This is significant because it suggests that the COVID-19 pandemic has influenced influenza vaccination behavior.

The misperception that COVID-19 vaccines provide protection against influenza vaccines suggests again that individual's knowledge and understanding of the importance of influenza needs to be improved. To overcome barriers of knowledge and misconceptions developing targeted public health campaigns and educational resources is key to improving adult influenza rates across Canada.

Access to Vaccination

Barriers to being vaccinated are many but in the context of understanding those specific to Canadian seniors, they include issues of transportation and mobility, and cultural and language barriers. Although, the survey findings did not find a strong significance of these barriers, they are still evident and could be influencing a larger proportion of the Canadian population.

Accessibility: Transportation and Mobility

Only 9% of those surveyed reported distance to the point of vaccination as a factor in being able to be vaccinated in a timely manner. These findings may also reflect where respondents live, their level of

independence and the ability for pharmacists to administer vaccines. Forty-six per cent lived in urban areas, 35% in a suburb and 18% in a rural area and almost all (95%) attended health related appointments alone.

Almost all respondents (97%) had knowledge of where influenza vaccines are administered and for that smaller population where distance is a barrier or public transportation complex and lengthy multiple access points is essential.

Cultural and Language Barriers

Alongside the physical barriers to accessing vaccination portals there are both cultural and language factors influencing behavior. A small proportion of those not vaccinated were not comfortable receiving the vaccine with an English-speaking health professional. Considering that nearly 25% of the total population in Canada identify themselves as a visible minority group health care professionals who can communicate in different languages is vitally important to building trust and confidence in the broader population.

As the Canadian population continues to age the heterogenous and ethnocultural variations represented in the ageing population also increase. Vaccination portals could be increased by offering services for seasonal influenza vaccination at cultural specific community centres.

Health Professional Influencers and External Influences

Health Professional Influences

Health care professionals are known through numerous studies and findings from the literature review to have an influence on decisions made to vaccinate. Most respondents (81%) obtain information about influenza vaccines from health care professionals including physicians, nurses, and pharmacists. Building honest and respectful relationships with consumers is vital especially if there are concerns about vaccine safety or misconceptions about the benefits and risks of vaccinations.

Health care professionals (including specialists responsible for the care and management of Canadians with underlying medical conditions) can be champions for adult influenza vaccination.

Sources of Information

Understanding where information about influenza vaccines and vaccination is obtained is key to developing effective public health campaigns to reach the greatest number of individuals.

After health care professionals nearly half (49%) of Canadians surveyed gained information from a provincial public health website (49%) and some 22% also accessed the NACI site. Information is best sourced from face-to-face conversations, as well as a number of websites, therefore, it is critical to have a level of accuracy, consistency and facts which are meaningful on which to make decisions.

National Advisory Committee on Immunization

NACI makes recommendations for the use of current vaccines or newly approved for use in humans in Canada, including the identification of groups at risk for vaccine-preventable diseases for whom vaccination should be targeted. Over half of those surveyed (52%) were aware that NACI recommendations included Canadian seniors, but the findings suggest that most did not view being 'older' as being more at-risk of serious complications from vaccine preventable diseases such as influenza.

Comparing the NACI recommendations and the provincial recommendation 81% of respondents were not sure there were differences and 16% believed they were the same. The provincial government responsibilities for not only population-based vaccine recommendations but also procurement and management of the end-to-end campaign to drive influenza (and other) vaccinations is not well understood by the general public including those surveyed.

It is important that all Canadians are provided with or directed to information that is specific to the province in which they reside, and public health messaging target and distributed through channels that are reliable and accessible.

Perceptions on Policy

In contrast to older industrialized countries with a single harmonized countrywide schedule Canada has a system in which each province and territory defines its own schedule. Professional associations have called for change to rectify the decades-old inequity to improve the health and safety of all Canadians, but the resistance remains.

This lack of unified policy often leaves consumers confused as to what vaccines are available to them and at what cost and where are they administered. For example, standard dose influenza vaccines are available free of cost for at-risk individuals across provinces, yet the availability of enhanced vaccines are offered only in some provinces and in others at an additional cost.

The overwhelming majority of respondents (82%) believe that vaccine effectiveness should be prioritized by their provincial government which speaks to lives placed at risk in some provinces when older people have to pay out-of-pocket to have the NACI recommended vaccines.

The health of all Canadians must be a priority to both federal and provincial governments to ensure fairness and equity to all.

Recommendations

Although vaccination is one of the most effective public health interventions of modern times against infectious diseases, influenza immunization rates among Canadian seniors are consistently below the National Advisory Committee Immunization target of 80%^{xl}.

The views of Canadian seniors are aligned and reflect the substantive literature review concerning barriers and perceptions regarding influenza vaccination. It is only through a collaborative sustained and targeted approach with clear and measurable actions that influenza rates of older Canadians will improve and potentially into less burden on the health and social care systems.

Based on the findings of the IFA has compiled the following recommendations:

- 1. Prioritization and implementation of a life-course approach to immunization as a key pillar of expanded prevention strategies will save lives of all Canadians and most especially help maintain and improve the health and well-being of those who are highest risk including seniors.
- 2. The confluence of the aggressive coronavirus pandemic which has led to the 'lockdowns' and isolation of those most vulnerable and the influenza season has created a dangerous cocktail for the development of accurate, timely and targeted public health messages. There is evidence "message confusion" which must be addressed by all levels of government in a way that reaches the most atrisk populations.
- 3. Influenza immunization campaigns (message content, format, and distribution channels) must consider the varying social determinants of the at-risk populations in their development, monitoring and evaluation. These must be accessible to civil society in a way that conveys them as champions.
- 4. Reliable up-to-date evidence-based information on influenza and influenza vaccination must be consistent and accessible through various professional groups and channels including specialists such as diabetologist, cardiologist, respirologists whose patient populations represent those at high risk of life altering complications.
- 5. Existing and innovative new infrastructure for immunization must go beyond the traditional pathways to facilitate and increase access to influenza vaccination services, including but not limited to pharmacies and other appropriate facilities including primary healthcare.
- 6. Health promotion and prevention requires collective efforts across sectors and disciplines. Given the overarching goal of patient and seniors organization a platform of knowledge sharing, and exchange should be established to routinely discuss strategies to actively work against the spread of misinformation.

Conclusion

Although vaccination is one of the most effective public health interventions of modern times against infectious diseases, influenza immunization rates among Canadian seniors are consistently below the National Advisory Committee Immunization target of 80%^{xii}. Despite vaccines becoming an essential public health action and a human right, many seniors experience barriers and are denied this right.

Bringing the Voices of Canadian Seniors Together in the Fight Against Influenza sought to better understand the barriers facing Canadian seniors to influenza vaccination through both a literature review and survey. The information collected provides a clear roadmap of changes that need to be undertaken to improve adult influenza vaccination uptake rates across Canada.

Action needs to be taken to prioritize the importance of a life-course approach to immunization as a key pillar of expanded prevention strategies that will save lives, especially amongst those most at-risk. Accompanying the importance of prioritization of a life-course approach to immunization is the need to improve infrastructure to immunization and development of strong influenza immunization campaigns.

It is evident from the survey that the COVID-19 pandemic has led to "message confusion" leading individuals to believe that the lockdowns and use of masks decreases their chances of contracting influenza. There is also evidence that individuals believe that COVID-19 vaccines will protect them against influenza. Influenza immunization campaigns must consider this and the varying social determinants of at-risk populations and develop message content, format and distribution channels that makes this important information accessible.

Bringing the Voices of Canadian Seniors Together in the Fight Against Influenza for the first time sought to incorporate the largely absent voices of Canadian seniors into policy. The project identifies actions that need to be undertaken to improve adult influenza vaccination rates across Canada.

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