

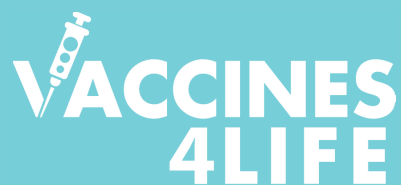


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IDENTIFYING BARRIERS TO ADULT INFLUENZA VACCINATION IN CANADA

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The logo features a stylized syringe icon to the left of the text "VACCINES 4LIFE".

The logo consists of the lowercase letters "ifa" in a stylized, modern font.

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Foreword

Longer lives are one of the biggest success stories in history, yet are rarely celebrated, with media wrongly depicting seniors as a “burden” on health and social care systems. The fact that Canadian seniors now comprise some ~16 percent of the population should not be a concern, but instead a cause for celebration, taking into account the enormous contributions they make to the nation through roles such as caregiving, volunteer work, financial contributions and grandparenting.

Immunization is a critical element of preventative public health actions. Healthy older people, as well as people with chronic conditions such as diabetes, respiratory conditions, and cardiovascular disease, are at high-risk of the life-threatening consequences of vaccine preventable diseases such as influenza and pneumonia. However, influenza, the cause of one in five hospitalizations in older people, is often pushed aside and considered a “minor” health concern by many Canadians, resulting in an overall declining rate of influenza vaccination. There is therefore an urgent need to focus efforts on improving influenza vaccination rates in Canada across the life course, and especially to those most at-risk.

In June 2019, the International Federation on Ageing (IFA) brought together a group of Canadian experts in influenza vaccination and public health, alongside leaders of ageing and at-risk patient organizations to identify opportunities to help build capacity and influence vaccine-related policy across Canada. Barriers such as misinformation, diverse vaccine schedules, limited vaccinator gateways, and cost must be addressed to maximize the return on investment of adult influenza vaccination, resulting in healthier older Canadians.



The fact that Canadian seniors now comprise some ~16 percent of the population should be a cause for celebration, taking into account the enormous contributions they make to the nation.

The identification of barriers to influenza vaccination outlined in this report is the first crucial step to addressing them. It is the IFA's hope that this report is circulated to municipal, provincial / territorial and federal governments, as well as to at-risk patient and ageing organizations.

The IFA supports and helps to build the capacity of stakeholders in Canada to promote the understanding and use of vaccines. It is our hope that knowledge gained through this expert meeting will help to shape future strategies to increase adult vaccination uptake rates for Canadians.

Sincerely,

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Introduction

A life course approach to immunization is a key public health strategy toward a healthy population. Every year, Canadians of all ages experience life-altering consequences due to influenza and its complications. Minimising the risk of infectious disease through vaccination is especially vital for at-risk groups such as older people and people with chronic disease. These groups are at higher risk of morbidity, mortality and prolonged recovery due to underlying frailty and changes in immune function.

Despite a long history of annual influenza campaigns in Canada, uptake rates remain below national coverage rates for at-risk groups.¹ The “Adult Influenza Vaccination: Calling Canadian Patient Organizations to Action” meeting brought together experts from diverse disciplines and sectors, including patient and older adult advocacy organizations, as well as vaccination researchers and public health. The aim of the meeting was to improve and mobilize knowledge on the importance of influenza vaccination for at-risk populations and identify opportunities to help build capacity to influence policy across Canada, working toward equal opportunity.

The various professional and educational backgrounds of leaders and experts who attended the meeting was crucial to determining well-rounded solutions. Delegates agreed that the identification of barriers older Canadians with chronic disease face to influenza vaccination is the first step to addressing them and are described in this report, followed by recommendations and next steps.

Context

Contrary to popular misconceptions, influenza is a serious infectious disease responsible for approximately 12,200 hospitalizations in Canada each year¹ and is the sixth leading cause of death in the country.² Certain populations are particularly “at-risk” to influenza, including older people and those with chronic diseases such as diabetes and heart and lung disease. For these groups, influenza can lead to serious acute complications and longer term diminished functional ability,³⁻⁴ with sixty percent of hospitalizations due to influenza in 2018 occurring among adults over 65 years of age, and 87% of those hospitalised from influenza having more than one comorbid condition.⁵

Functional ability comprises the health-related attributes that enable people to be and do what

they have reason to value. It is made up of the intrinsic capacity of the individual, relevant environmental characteristics, and the interactions between the individual and these characteristics.⁶ The interrelationships just described help inform comprehensive public health policy and are especially important to older Canadians who play central roles such as caregiving, parenting and grandparenting; volunteer work; charitable donors; employees; consumers; citizens and taxpayers.⁷

An important way to maintain and improve functional ability and prevent declines in capacity amongst older people and those with chronic diseases is through influenza vaccination as an essential element of a broader public health strategy. To illustrate, a study by Nichol et al., (1999) found that older people with chronic lung disease who were vaccinated against influenza were less likely to be hospitalized and had a lower risk of mortality.⁸ Similarly, influenza vaccination has shown to reduce hospitalization of people with diabetes by up to 79%.⁹

Canadian public health officials and organizations in all provinces and territories recommend and campaign for influenza vaccination annually.¹ The National Advisory Committee on Immunization (NACI) recommends that Canadians aged six months and older receive the seasonal influenza vaccine,

From 2013 to 2014, the proportion of older Canadians and those with a chronic medical condition who were not vaccinated against influenza reached 36.2% and 28%, respectively.¹

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with particular attention to at-risk populations.¹ The influenza vaccine is publicly funded in all provinces (with the exception of Quebec) for people aged 65 years and older, and in all provinces and territories for those with diabetes and other immune compromising conditions.¹⁰

Despite national annual influenza campaigns, vaccination uptake rates are below national target rates amongst older people and adults

with chronic diseases.¹ From 2013 to 2014, the proportion of older Canadians and those with a chronic medical condition who were not vaccinated against influenza reached 36.2% and 28%, respectively,¹ with the low vaccination uptake rates among at-risk groups continuing without an evidence-based explanation.

Considering Canada's growing ageing population, increasing prevalence of diabetes (~2.3 million Canadians)¹¹ and trend of adults with heart and lung diseases (the second leading cause of death)¹² the decline in influenza vaccination rates should be on the agenda of every provincial and territorial government and a priority for all patient and ageing organisations.

Barriers to Adult Influenza Vaccination

The importance of influenza vaccination, while not under debate by public health authorities (as illustrated in the NACI recommendations) is not viewed the same way by general and at-risk populations. This report highlights barriers that may impact the current poor uptake rates of influenza vaccination and concludes with recommendations around a multisectoral, multidisciplinary approach to changing the status quo.

Lack of a national vaccination schedule

Canada's health care is publicly funded by 13 provincial and territorial health insurance plans, with the provincial and territorial governments accountable for the "management, organization and delivery of health care services for their residents."¹³ In Canada, the NACI reviews evidence on the effectiveness of vaccines and sets recommendations for all provinces and territories. Despite this process which is universal in nature, the publicly funded vaccine schedules across provinces and territories vary, which may in part be explained through health budget estimates and differing population priorities.

Figure 1. Provincial and Territorial Influenza Vaccination Schedules for Healthy Adults¹⁵

BC	AB	SK	MB	ON	QC	NB	NS	PE	NL	YT	NT	NU
Annually for adults aged 65+ years	Annually for all adults	Annually for all adults	Annually for all adults	Annually for all adults	Annually for adults aged 75+ years	Annually for adults aged 65+ years	Annually for all adults	Annually for all adults	Annually for all adults	Annually for all adults	Annually for all adults	Annually for all adults

While it is recognised that provinces and territories have jurisdictional responsibility for the health portfolio variations in eligibility, the incumbent, out-of-pocket cost of influenza vaccination for particular age groups in Quebec, British Columbia and New Brunswick (Figure 1) are of concern.¹⁴

Lack of and inconsistent messaging

The complex nature of vaccines and vaccine schedules has been known to lead to varying and inconsistent messages from health care professionals (including diabetologists, pulmonologists, and physicians), patient organizations, ageing organizations and the general public on adult influenza vaccination.

Messaging on the importance of influenza vaccination of older adults needs prioritizing during every point of care, particularly during regular visits with primary care providers. Studies show that health care professionals, while being more knowledgeable about the impact of influenza, may fail to promote the influenza vaccine or even recommend against it due to their own misconceptions¹⁵ with research by Nowak et al., (2015) concluding that approximately 65% of physicians failed to discuss the importance of the influenza vaccine with their patients.¹⁶ Health care professionals often face challenges in providing messaging on the importance of the influenza vaccine due to lack of time and competing priorities. Diabetologists, for example, whose patients are at higher risk influenza complications have varied foci, including dental, vision and foot care, leaving influenza low or even absent from the agenda.¹⁷

Patient and ageing organizations representing millions of people at-risk to influenza are important advocates for vaccination, yet messaging is sparse at best. Asthma Canada, however, sets the standard of good practice in conducting surveys with both patients and health care providers to determine current attitudes towards influenza vaccination and in doing so, implementing awareness-raising activities.¹⁸ Key messages promoted by Asthma Canada include *people with asthma are more likely to develop pneumonia after contracting influenza than those who do not have asthma* and recommends risk minimisation by receiving the influenza vaccine.¹⁹ The Canadian Association for Retired Persons (CARP), Canada's largest advocacy association for older Canadians, also surveyed members to determine views towards influenza vaccination and found that over 70% believe that more information is required about adult vaccinations.²⁰

There is a need for stakeholders to simplify the language of health information as well as frame messages to older people, adults with chronic disease, healthcare providers, clinicians, and government, in a clear, consistent, interesting and understandable manner.

Thus, there is a need for stakeholders to simplify the language of health information as well as frame messages to older people, adults with chronic disease, healthcare providers, clinicians, and government, in a clear, consistent, interesting and understandable manner.

Message reminders notifying adults of the importance of receiving the influenza vaccine each year are also key to improving uptake rates, however a lack

thereof have lead to decreased attention paid to immunization.²¹ Digital technologies should be leveraged to mobilize clear messages on the importance influenza vaccination to at-risk groups as well as remind these individuals to be vaccinated each year.

Access and availability to more effective vaccines

When it comes to adult immunization in Canada, it is crucial that older adults, whose immune systems weaken with age, have access to more effective vaccines. For example, NACI recommends the high-dose inactivated trivalent influenza vaccine should be used over the standard dose inactivated influenza vaccine for adults aged 65 years and older, as it “contains three influenza strains that are predicted for the upcoming influenza season

(...) and contains four times the amount of dose of the standard dose influenza vaccine.”⁴ The high-dose influenza vaccine has been demonstrated in research by DiazGranados et al. (2014) to be 24% more effective in preventing influenza for seniors than the standard-dose influenza vaccine.

Consistent with these findings, evidence from a systematic review and meta-analysis by Lee et al.

When it comes to adult immunization in Canada, it is crucial that older adults, whose immune systems weaken with age, have access to more effective vaccines.

(2018), which included approximately 2.7 million subjects who received high-dose influenza vaccine, demonstrated that the high-dose vaccine was more effective than the standard dose vaccine at decreasing clinical outcomes associated with influenza infection in older people. Additionally, research by Shay et al., (2017) found the high dose vaccine was more effective in preventing deaths due to influenza for people aged 65 and older. Saskatchewan, Manitoba, Nova Scotia, Prince Edward Island and Northwest Territories are the only provinces to fund this vaccine for residents in long-term care facilities, and since 2018, Ontario has funded the high-dose vaccine for people over 65.⁴

Pharmacies have the potential to play a key role in decreasing barriers to accessing the influenza vaccine and are an increasingly important vaccine gateway.

Pharmacies have the potential to play a key role in decreasing barriers to accessing the influenza vaccine and are an increasingly important vaccine gateway. In 2013, pharmacists in Nova Scotia became authorized to administer the standard-dose influenza vaccine, increasing coverage from 36.4 to 41.7%, with coverage highest amongst older people. Six provinces

offer and encourage older people to receive the standard-dose influenza vaccine through pharmacies, whereas Quebec, North West Territories, Nunavut and Yukon do not.

However, the story changes when discussing the high-dose influenza vaccine. Although available in Ontario for all seniors aged 65 and older, the high dose influenza vaccine is only available through primary care providers and not through the pharmacy. This is an important barrier considering the important role pharmacies can play in increasing access to accessing the influenza vaccine. This also may translate to an equity issue when considering seniors are unable to access the vaccine most effective for their age at the same location other age groups can receive the standard-dose vaccine.

Lack of comprehensive influenza surveillance and vaccination data

Public health surveillance, “the systemic collection and analysis of health data needed for the planning, implementing and evaluating of public health measures” is crucial to improving influenza vaccination uptake rates.²⁸ In Canada, the national influenza surveillance system, FluWatch, aims to achieve

this, however, faces difficulties due to differences between regions, provinces and territories. The “lack of integrated surveillance databases for information capture and transfer in many jurisdictions” results in gaps in data.²⁹

National immunization registries in other countries such as Singapore (through the collection of data from an e-Health system) have proven beneficial to promoting effective and cost-efficient disease prevention and control.³⁰ However, national immunization registries such as this may not be realistic for all countries. Over the past 20 years, there has been a concerted call for a National Immunization Records System in Canada³¹ however to date, provincial and federal governments have not been receptive to this initiative, which in large part affects the ability to measure the impact of a national vaccination program.

Similar to other countries, data collection in Canada is not disaggregated by age groups beyond 65 years which is a growing and concerning gap in research and policy development. While logistical hurdles remain challenging, provinces and territories must determine efficacious and realistic methods of accessing existing data on influenza and vaccination across the life course to gain a better understanding of where low coverage exists, and thus, where efforts should be focused.

Canada also faces challenges in data collection related to influenza such as lack of data on whether a death or health complication is due to influenza infection or a co-occurring health issue. For example, deaths registered as caused by myocardial infarction may have actually been caused by influenza,³² as well as many falls amongst older people resulting in fractures.³³ Improved data on the disease pathways and outcomes can help to emphasize the burden of influenza and thus, the importance of vaccination.

While logistical hurdles remain challenging, provinces and territories must determine efficacious and realistic methods of accessing existing data on influenza and vaccination across the life course to gain a better understanding of where low coverage exists, and thus, where efforts should be focused.

Inequity

As previously mentioned, older Canadians are eligible to receive certain vaccines at a certain age depending upon where they reside. This inequity relates certainly to jurisdictional responsibilities and should be of serious concern for all health care professionals and decision makers. Further disparities in access to healthcare services in Canada are common for marginalized groups such as older people, the LGBTQ community, and Indigenous peoples. Systemic barriers and implicit biases within and outside of the healthcare system for marginalized groups create additional barriers which in turn have substantial and detrimental impacts on their health and well being.

Further disparities in access to healthcare services in Canada are common for marginalized groups such as older people, the LGBTQ community, and Indigenous peoples.

LGBTQ identified individuals, for example, face stigma in healthcare which may be even more pronounced for older LGBTQ people who have lived through important changes in LGBTQ human rights that can significantly impact interaction with the healthcare system. Due to these experiences, their healthcare seeking occurs more during a crisis as opposed to for preventative measures such as vaccination.³⁴

Discrimination on the basis of age also has negative effects on healthy ageing. The notion of the younger population being more “worthy” of healthcare services³⁵ is not valid yet rather speaks to the tension that may exist when priorities need to be made. In the context of vaccination, where there is a finite amount of funds, ageist beliefs and behaviours may result in the prioritization of childhood vaccination, yet a life course approach to vaccination has the ability to stimulate the conversation across generations.

Rural and remote communities in Canada too, face difficulties in access to influenza vaccination. This may be due to a lack of physicians in rural areas able to deliver the vaccine;³⁶ or reluctance to seek healthcare due to insufficient public transport.³⁷ Nunavut, for example, has struggled throughout

the years with large outbreaks of vaccine preventable diseases due to lack of access and health care providers.³⁸

Influenza vaccination coverage in Canada also varies by ethnicity. In 2009, First Nations communities in Canada were 6.5 times more likely to be admitted to an intensive care unit due to influenza than non-First Nations.³⁹ Possible explanations for the higher rates of infection amongst Indigenous peoples include poorer immunologic responses due to environmental factors and delayed vaccination.⁴⁰ Boggild et al. (2011) reported that successful strategies targeted to Indigenous communities first involved consultations with the community and leadership. Implementing “vaccination campaigns, in a culturally sensitive and appropriate manner with community engagement under the direction of Aboriginal peoples and key stakeholders should be a priority.”³⁹

To summarize, strategies to increase influenza vaccination amongst older people and people with chronic disease in Canada must use a health equity lens to ensure there is equitable coverage and access to vaccines, with particular attention to marginalized groups such as older people, LGBTQ, remote communities, and Indigenous peoples.

Conclusion

The ability for Canadians to age healthily is of paramount importance in modern society where older people make such important economic and social contributions. Influenza vaccination uptake rates amongst older people and adults with a chronic disease are far below public health recommendations and as such often have life-altering consequences on an otherwise generally healthy person.

The key barriers to influenza vaccination older people and people with chronic disease in Canada face are diverse; however, critical to identify and address using a multisectoral, multidisciplinary approach.

The key barriers to influenza vaccination older people and people with chronic disease in Canada face are diverse; however, critical to identify and address using a multisectoral, multidisciplinary approach. Resulting from the “Adult Influenza Vaccination: Calling Canadian Patient Organizations to Action” expert meeting, it was agreed by meeting delegates that:

1. Canadians are faced with complex and mixed messages regarding influenza vaccination that often leads to the spread of misinformation. There is a need for clear, consistent, evidence-based messaging on influenza vaccination targeting the general population and importantly, older people and other at-risk groups.
2. Strategies to increase influenza vaccination uptake rates amongst older people and at-risk populations must be aligned with Canada's health equity principles.

Subpopulations, including those who live in rural and remote settings, migrants, the LGBTQ community, and Indigenous peoples often face systemic barriers and implicit biases within and outside of the healthcare system.

3. Coalitions are integral to building a cohesive voice that raises the awareness and influences action to respond to low influenza vaccine uptake by collaborating and utilizing strengths across disciplines and sectors.
4. In Canada, it is crucial that older adults and at-risk populations have access to more effective vaccines.
5. Evidence must be improved on the burden of influenza among older adults and at-risk populations to improve communication to the general population, advocacy organizations, health care professionals, public health officials, and government.
6. Provinces and territories are urged to examine efficacious and realistic methods of accessing existing data on vaccination uptake across the life course to inform and improve policies and practices.

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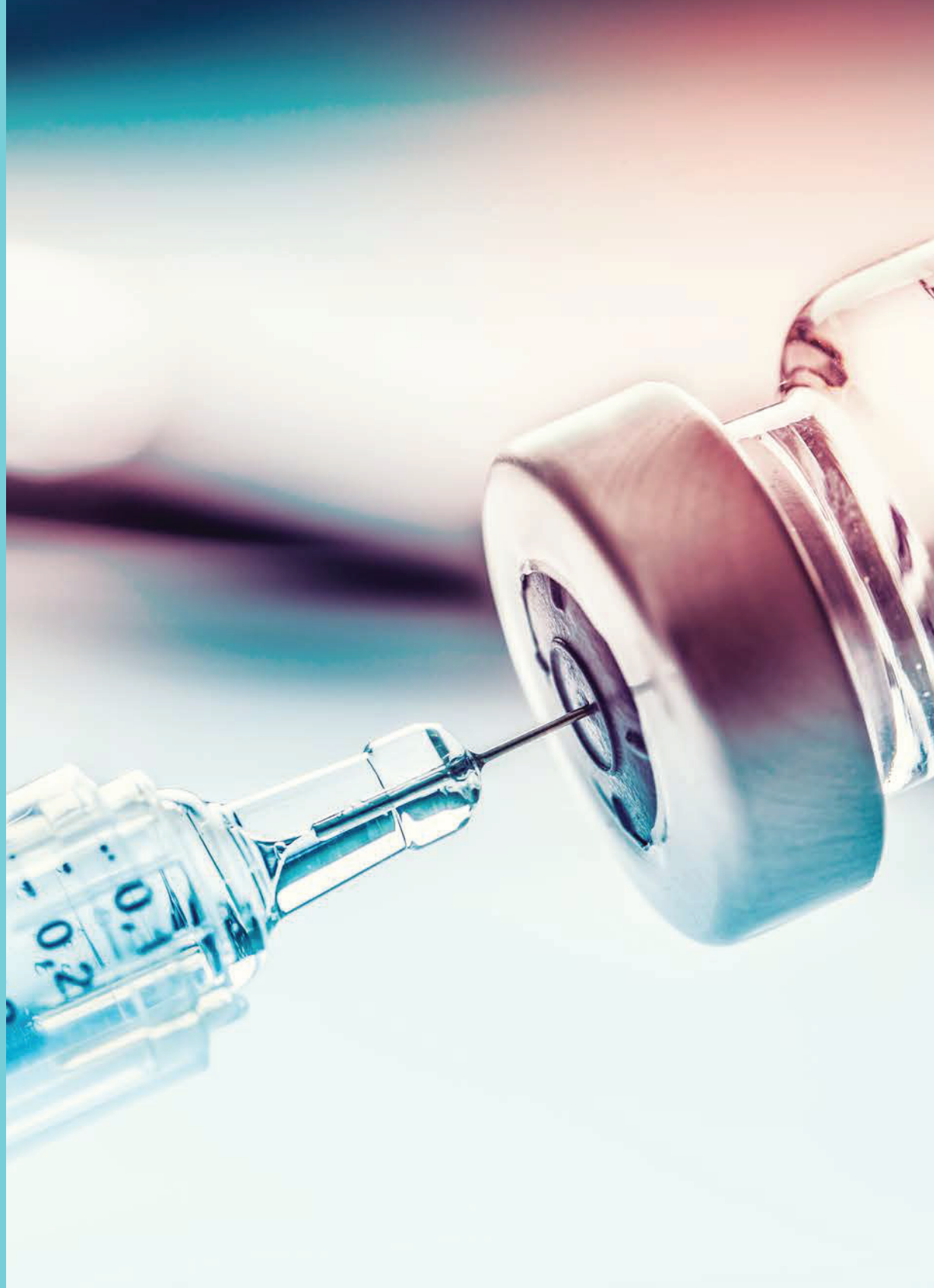
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