

**Survey of Healthcare Providers' Views and Experiences
with Vaccine Hesitancy
Executive Summary**

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Executive summary

Background and objectives

The Public Health Agency of Canada (PHAC) identified the need for public opinion research to understand healthcare providers' (HCP) perspectives of, and experiences with, vaccine delay/refusal at a time when the number of Canadians who are delaying/refusing immunization is increasing. The research was needed to understand how HCPs communicate with patients about vaccination, how the rate of hesitancy is changing over time and what tools and resources HCPs are aware of/utilize.

Specifically, the aims of the research are to:

- Assess HCPs' knowledge, attitudes and beliefs on: vaccine effectiveness & safety;
- Assess HCPs' experience with vaccine hesitancy and parental concerns;
- Assess what documents, tools or other resources HCP currently use to find information on vaccines and messages/strategies to encourage hesitant patients to accept vaccines;
- Identify HCPs' awareness, use and perception of PHAC products on immunization; and
- Determine whether HCPs have unmet needs for addressing vaccine hesitancy.

Methodology

To address the research objectives, an online survey was conducted with 2,004 healthcare providers who provide vaccines or advice on vaccines. Five separate groups of healthcare providers were surveyed between November 21, 2017 – January 25, 2018:

- General practitioners, family doctors (n=535);
- Midwives (n=297);
- Nurses (n=493);
- Pharmacists (n=601); and
- Specialists (Obstetrician/Gynecologists & Paediatricians - n=78)

The online survey was conducted using the mdBriefCase online panel of healthcare providers and the mailing list of the Canadian Association of Midwives (CAM). Respondents to the survey were each paid a \$25 incentive for their participation. Sampling targets were used with the aim of capturing a roughly representative sample of each profession within each region of the country. The sample was randomly drawn from a large and diverse opt-in panel of HCPs; however, because it is not a probability sample, the results cannot be extrapolated to the actual HCP population and no margin of sampling error can be calculated. Due to disparities in how each type of HCP provides vaccines and the regulatory/professional frameworks for doing so for different types of HCPs in different regions in Canada, no direct statistical comparisons are made between professions and no attempt is made to provide an 'overall' measure for HCPs in Canada.

Cost of research

The cost of this research was \$138,312.00 (HST included).

Key findings

The following presents the key findings of the research, first in terms of the overall themes, followed by a brief summary of each individual healthcare profession.

HCP's experience with patient vaccine hesitancy

- The scope of each health professions' focus on vaccination varies, which is evident in how long they have been administering or providing advice on vaccines, how often they do so, and the patient types they see. Family physicians and nurses tend to manage vaccines for patients of all types and ages while midwives, specialists and pharmacists work with more narrowly defined patient types. Family physicians, nurses and specialists have generally been involved with vaccination for longer and do it more frequently than midwives and pharmacists.
- HCPs appear to be encountering vaccine hesitancy in their practices on a regular basis. The consensus is that patients express reluctance "some of the time", with a small proportion of HCP respondents who say it happens more often than that. HCP experiences with outright refusals or requests for alternative schedules are much rarer.
- There are mixed views about whether there has been a shift in the frequency of vaccine reluctance, refusals, alternative schedule requests and patients mentioning incorrect vaccine information over the past five years, but the largest proportion within each HCP type (roughly 50 percent or more) have not perceived any change. The exception is specialists, who are most likely to feel these occurrences have increased. Similarly, HCP respondents generally believe that patient expressions of support for vaccination and their knowledge of the topic, have remained the same compared to five years ago.
- In the past year, HCPs heard a wide variety of reasons from patients as to why they did not want themselves or their family members vaccinated. The main reasons revolve around vaccine safety, including concerns about specific vaccine ingredients, concerns about possible long-term effects and knowing someone who had an adverse reaction to a vaccine. HCP respondents most often encountered patient reluctance around the MMR/MMVR, varicella, HPV, rotavirus and herpes zoster vaccines.
- HCP respondents are widely concerned about patient vaccine reluctance, with at least eight in ten or more who say it is at least somewhat of an issue facing public health.

HCP's knowledge/attitudes/beliefs about vaccine effectiveness & safety

- There is a broad and strong consensus among HCPs that vaccines in use in Canada are safe and effective, that they trust the recommendations of the National Advisory Committee on Immunization (NACI) and that the vaccine regulatory system in Canada is working effectively. Most HCP respondents also strongly disagree with negatively-worded statements about vaccines, including concerns that the HPV vaccine could lead to unprotected sex and about the lower effectiveness and safety of administering multiple vaccines at a single visit.
- Just over one in ten family physicians, nurses, pharmacist and specialists say there is at least one vaccine they are reluctant to recommend. Reported vaccine reluctance is higher among midwives (34%).
- As would be expected, each HCP type describes themselves as most comfortable understanding and applying vaccine recommendations among the patient groups with which they have the most experience; this means that family physicians and nurses are more comfortable with a broader range of

patients than are specialists, pharmacists and midwives. All HCP types are least comfortable with vaccine recommendations for immunocompromised patients.

Preparedness for patient communications

- In general, HCP respondents consider themselves at least somewhat prepared to personally address patients' vaccine concerns, although only a minority feel very prepared.
- The messages that HCPs feel have been most effective in helping vaccine hesitant patients become more comfortable with vaccinations fall into three broad themes: providing information, research and evidence; reinforcing the effectiveness of the vaccines (e.g., disease prevention and other benefits); and, addressing safety concerns. Relatively few say they have effectively used messages focused on dispelling existing myths.
- HCP respondents' degree of comfort providing vaccine advice to patients where language barriers exist is mixed: half or fewer describe themselves as at least somewhat comfortable in this role. There does appear to be a gap in vaccine resources for patients who do not speak Canada's official languages. While most HCPs outside midwives believe they have adequate access to information resources that help them address patient concerns about vaccination, only a minority of each HCP type say they have adequate access to resources to support patients who speak a language other than English or French.

Information sources

- Of the options presented, the Canadian Immunization Guide (CIG) is universally preferred by all HCP types for updating their own vaccine knowledge, followed closely by statements from NACI (provincial/territorial protocols and guidance documents were not provided as an option). Medical journals, conferences and professional association newsletters are also commonly used, but the extent varies by HCP group. There is room to grow the use of CIG's email updates, which are currently used by only a small subset of HCP respondents. The main barrier is a lack of awareness of this subscription service.
- Aside from the CIG, the next most widely known and used PHAC product is 'A Parent's Guide to Vaccination' among nurses and midwives specifically. Frequency of use of other PHAC resources is low.
- HCPs typically display printed health promotional materials in waiting and exam rooms, while nurses and midwives are among the most likely to give them directly to patients. When it comes to vaccine information specifically, printed resources are more widely used than digital ones, although the former tend to be used with patients, while the latter are more commonly for HCPs own information. A majority of HCPs outside midwives do send patients home with printed materials about vaccination.
- HCP respondents' suggestions for how PHAC can assist them in addressing patient vaccine reluctance revolve around three key themes: raising the profile of the issue, educating and informing the public and providing access to printed materials.

With these broad findings in mind, the following paragraphs highlight unique aspects of the experiences and opinions of each HCP type.

Family physicians

Family physicians have the broadest scope in terms of the patients they see and the vaccines they provide; they are the most likely to be providing vaccines and/or advice at least a few times a week (78%). While half say that patient vaccine hesitancy is unchanged from five years ago, the remainder are twice as likely to say this behaviour has increased (33%) than decreased (17%). Notably, they are not as likely as nurses, pharmacists and specialists to feel they have adequate access to information resources to help them address patient vaccine concerns. Family physicians are also least likely to use social media to learn and/or share information about health issues including vaccination.

Nurses

Like family physicians, nurses see a diverse group of patients and are almost as frequently engaged in providing vaccines and/or advice. Their experiences with patient vaccine hesitancy and their own personal beliefs about vaccine safety and efficacy also generally mirror those of family physicians. Where nurses stand out is in their greater use of both printed and digital informational materials, including being by far the most likely to send home printed materials about vaccination with patients. They are most likely to know about PHAC resources and to make use of them, to subscribe to CIG email updates and to be familiar with the *CANImmunize* app. Finally, they are more likely than others to say they have adequate resources for patients where there is a language barrier (although only 36% say they do).

Pharmacists

As a group, pharmacists report a more limited scope for administering vaccines (mostly adults, seniors, and to a lesser extent, children), have been doing so for less time than most other HCPs and do it less frequently (and in Quebec, pharmacists are not allowed to vaccinate). Perhaps for this reason, relatively few (27%) feel very prepared to handle patient concerns (although this is on par with family physicians). Pharmacists have a positive view of vaccine safety, efficacy and regulation, but are less likely than other HCP types to strongly disagree with negative statements about vaccines (e.g., that administering multiple vaccines at a single visit could reduce their efficacy or overwhelm the immune system). They are not, however, any more reluctant to recommend vaccines. Pharmacists are relatively more likely to use digital vaccine resources, especially online resources or web portals. Given their typical workspace, they are less likely to hang general health promotional posters in their office, clinic or waiting room or to give such materials to a patient.

Specialists

For this study, specialists included obstetricians/gynaecologists and paediatricians. Thus, their practice with respect to vaccines is focused on pregnant women, infants and children. With the caveat that low numbers of specialists responded to the survey (n=78), they are the most likely to report that patient vaccine reluctance (55%, n=42) and mentions of incorrect vaccine information (52%, n=40) are happening more often than five years ago; substantial minorities also perceive more outright refusals and alternative schedule requests than before. Likely as a result, they are far more likely than others to see vaccine reluctance as a significant public health issue. At the same time, specialists are among the most likely to feel very prepared to address patient vaccine concerns (on par with nurses).

Midwives

Midwives administer and/or provide advice on vaccines almost exclusively for pregnant women and infants, and the frequency with which they do this is the lowest of the HCP types. They are more likely to report experiencing patient vaccine hesitation in all its forms, including reluctance, refusal and requesting an alternative schedule. They are the most likely to report hearing patient concerns about the long-term effects of vaccines, specific ingredients (such as mercury) and to say their patients are reluctant about *all* infant vaccines (50%). It is possible that they may attract more vaccine hesitant patients (parents).

Midwives are consistently less likely to hold positive views about vaccines (and most likely to say they are not sure about safety, efficacy etc). They are also most likely to have concerns about administering multiple vaccines at a single visit and to be themselves reluctant to recommend at least one vaccine (most often citing the adult HPV or infant varicella vaccines). Midwives are the least likely of all HCPs to say they are 'very prepared' to address patient vaccine concerns. They are also the least likely to feel they have adequate information resources to help them address patient concerns about vaccines.

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