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Vaccine Acceptability Factors for the General Public and Health Care Professionals in Canada

Executive Summary

Prepared for Health Canada/Public Health Agency of Canada

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October, 2019

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This public opinion research report presents the results of quantitative research conducted by Environics on behalf of Health Canada. The research was conducted with the general population from June 14 to July 4, 2019 and with health care professionals from June 17 to September 9, 2019.

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Executive summary

Background and objectives

The Public Health Agency of Canada identified the need to conduct quantitative research to understand the factors influencing vaccine acceptability among Canadians and health care professionals.

Use of the findings of this research. The research provides current data on the opinions and attitudes of the Canadian population regarding vaccination in general, and for specific vaccines and vaccine-preventable diseases. The results of this research will inform the development of evidence-based vaccine recommendations that include a consideration of acceptability of vaccines and vaccine programs. Results will be used to support the expansion of the mandate of the National Advisory Committee on Immunization (NACI) to include the systematic consideration of programmatic factors (economics, ethics, equity, feasibility, acceptability) in addition to burden of disease and vaccine characteristics.

Methodology

The research comprised two data collection phases:

1. An **online survey of the general public** conducted from June 14 to July 4, 2019, with 2,002 adult Canadians: 1,800 general population interviews, and oversamples of two key target groups: Indigenous peoples and New Canadians (immigrated in past 10 years). The sample was stratified by region, age and gender to ensure it was representative of the general adult Canadian population.
2. An **online survey of health care professionals** with responses collected from June 17 to September 9, 2019, with 591 Canadians of specific health care occupation types (recruited from an online panel and via an open link distributed by professional associations).

A more detailed methodology is presented in Appendix A of the full report.

Contract value

The contract value was \$185,489.50 (HST included).

Key findings

General population

Overview

An almost nine-in-ten majority of Canadians say vaccinations are an accepted health care practice in their household, and vaccines are generally felt to be safe and effective. Relatively few report vaccine reluctance for any age group, and most demonstrate understanding of the value of herd immunity. Confidence in public health authorities for vaccine recommendations is high, and relatively few report barriers to getting vaccinated. However, there is a notable minority who are concerned about the potential for serious side effects, and about four in ten report having some kind of negative experience or reaction (though not usually serious). The

research reveals vaccine effectiveness has the most influence on the acceptability of a vaccine; there is also a high degree of acceptance for newly-approved vaccines if they are recommended by a health care provider.

Perceptions of vaccines

- Broadly speaking, most Canadians hold relatively positive perceptions of vaccines: close to nine in ten agree vaccines are effective, and eight in ten agree they are safe. It is notable, however, that a minority of one in ten agree they do not have to get vaccinated if everyone else does.
- Despite positive overall impressions of vaccine effectiveness and safety, one-quarter (26%) of adults have at least sometimes felt reluctant to personally get a vaccine recommended by a health care professional. Parents are slightly more likely to have experienced reluctance (38% at least sometimes) to have their child receive a recommended vaccine. This does not necessarily mean they would refuse the vaccine, but that they had reservations.
- Canadians are most inclined to express reluctance about receiving varicella (infants – 16%), human papillomavirus HPV (children/adolescents – 18%) and inactivated influenza (adults – 13%) vaccines. However, relatively few feel this way; majorities of nearly two-thirds or more indicate there is no vaccine they would be reluctant to receive, or to have their child receive.
- The main reason given for reluctance is concern about ingredient safety/potential side effects, mentioned by one in five (21%) who identified at least one vaccine they would be reluctant to receive. One in ten each say they don't need the vaccine because they are healthy (10%) or because they are concerned about efficacy (10%).
- Of a list of vaccination benefits provided in the survey, the most important reason for getting vaccinated is self-protection, chosen by four in ten (40%). Two in ten (21%) say it is to eliminate or decrease the rate of disease in society. Small proportions say there are no benefits to vaccination (3%) or are unsure of the most important reason to get vaccinated (4%).
- In addition to the benefits of vaccines, however, many Canadians also identify risks related to vaccination. From the list provided in the survey, four in ten (40%) indicate a concern about the risk of serious side effects of vaccines; around two in ten each are concerned about lack of efficacy (19%) or the ingredients being harmful or toxic (18%). One in seven (14%) worry about vaccines compromising the body's ability to defend itself against disease. A four in ten minority either say there are no risks from vaccination (25%) or are unsure (15%).

Perceptions of diseases

- There is reasonably widespread - but not complete - understanding of the role of vaccines in reducing the risk of disease for those around us. Around seven in ten each agree they (personally) need to be vaccinated to protect others from getting sick (71%) and that they get vaccinated to help protect people with weaker immune systems (68%).
- Infants/children (72%), immunocompromised people (69%) and seniors (65%) are felt to be the groups most in need of vaccination.

Vaccination process

- Almost four in ten (38%) report having had some kind of negative post-vaccination experience or reaction, the most common being soreness (28%), followed by fever (15%) or rash (9%). Half (51%) indicate they have had no post-vaccination difficulties.
- Almost four in ten Canadians (37%) identify at least one barrier that makes it difficult or inconvenient to receive vaccinations. These most commonly relate to challenges accessing health care, including long wait times (17%), scheduling issues (13%), limited office hours of their health care provider (11%), or not having a regular health care provider (10%). In addition, being too busy (12%) is a factor for some, and everyday stress is at least somewhat of a barrier to vaccination for one in ten adults without children and two in ten with children under the age of 18.
- By comparison to issues of access, relatively few Canadians (7%) express discomfort with the health care provider who would give them their vaccinations.
- In general, Canadians place a relatively high priority on protecting against vaccine-preventable diseases compared to other health care issues facing them and their families. Eight in ten rate such protection as at least a moderate priority; 14 percent say it is a low priority or not a priority at all when compared to other health issues they face.

Individual/personal factors

- Vaccination is an accepted health care practice for almost nine in ten households (86%). The most common reason given by the minority (7%) for whom it is not an accepted practice is that vaccines are unnecessary, namely because the person is healthy (22%). Smaller proportions say they do not believe in vaccinations, that their immune system is enough to keep them well (13%), or that vaccines include dangerous or unsafe ingredients (13%).
- The results of the survey indicate seven in ten adults (69%) and almost nine in ten (86%) parents of children believe they have needed vaccinations.
- Consistent with the relatively strong level of reported vaccine coverage, around three-quarters (77%) would be at least somewhat likely to get themselves (74%) or their child (83%) vaccinated with a newly approved vaccine when their health care provider recommends it.
- Most Canadians express support for vaccination, even when presented with statements expressing negative views about them. Two-thirds (65%) disagree with the statement that people should not be required to be vaccinated, and over half (55%) of parents disagree with the statement “I do not believe in vaccinating teenagers to protect against sexually transmitted infections.” Over eight in ten (83%) agree people should be vaccinated to prevent the spread of disease in the community (thereby ensuring herd immunity).
- Canadians hold modest perceptions of their efficacy in making vaccine-related decisions. Two-thirds agree (30% strongly agree) that when they think about getting vaccinated, they weigh the benefits and risks to make the best decision. Six in ten Canadians (62%) feel they know enough about vaccination; the remainder are divided between saying they do not know enough or they are not sure.
- Mainstream health care providers are the most trusted source for vaccine information (83% trusted overall, completely trusted by 49%), followed by government public health organizations (72% trusted overall, 31% completely trusted). The information providers least likely to be selected as a trusted source

are alternative health care providers (e.g. naturopaths, homeopaths, acupuncturists, chiropractors) (36% trusted overall, 9% completely trusted) and leaders of cultural or religious groups (15% trusted overall, 5% completely trusted). Three-quarters of Canadians agree overall they are confident public authorities make vaccine recommendations in the best interests of the community.

Conjoint analysis

- The survey included a conjoint analysis to identify on what factors the public relies on to determine vaccine acceptability. Respondents were asked to imagine they were in a doctor's office or clinic and were offered a vaccine that could be given immediately and would not cost them anything. They were then presented with information about two different vaccines and asked which option they would choose to receive for themselves (they could also select neither). The exercise was repeated several times with different vaccine options. The results indicate that, of the four factors tested, vaccine effectiveness (i.e., what proportion of people are protected) has the largest influence on the choice of vaccine between two provided options, followed closely by burden of disease (i.e., whether the vaccine protects against a severe or mild disease) and then susceptibility (i.e., is the disease rare or common). Notably, vaccine safety (i.e., mild side effects in a small or moderate proportion of the population) has the least influence.

Health care professional population

Overview

Strong majorities of health care professionals (HCP) see vaccinations as effective and safe health interventions for their patients. As with the general public, HCPs are most likely to consider effectiveness when deciding on a vaccine recommendation, and HCPs will also take into consideration expert committee recommendations and patient susceptibility. The survey results point to some problems with the vaccine delivery system that may result in Canadians not receiving needed vaccinations. Direct cost to patients may play a role in whether a vaccine is recommended, when that vaccine is not covered by public or private insurance. Majorities of HCPs who administer vaccinations identify at least one of four specific situations as being either a major or moderate barrier to delivery of vaccines in their practices, with the main issues being inadequate reimbursement and storage/handling requirements. The results also indicate HCPs in several professions would benefit if they had greater familiarity with NACI's vaccine guidance and more information about the extent of vaccine testing, which in turn could boost level of confidence in communicating with patients about vaccines, especially in dealing with vaccine reluctance.

Perceptions of vaccines

- Majorities of close to three-quarters or more in each HCP occupational group strongly agree that, in general, vaccines are effective in reducing disease, have benefits outweighing their risks, and are safe. HCPs largely believe the main benefits of vaccinations are protecting people from diseases/saving lives, eradicating or decreasing the rate of diseases, and protecting vulnerable people via herd immunity.
- Reluctance to recommend vaccines is currently low: majorities in all HCP occupations report they have rarely or never been reluctant to recommend a vaccination to a patient for whom it was indicated, and that there are no specific infant, child or adult vaccines they are reluctant to recommend.
- Still, specific vaccines can cause concern for some health care professionals. Among those indicating reluctance to recommend at least one specific age-related vaccine (ranging from 22% of nurses up to 57% of midwives), the ones causing the most concern are rotavirus and varicella (chickenpox) for

infants/children up to age 6, Human papillomavirus (HPV) and varicella (chickenpox) for children/adolescents age 7-17, and Shingles zoster vaccine live (Zostavax), Live attenuated influenza (LAIV) and Shingles recombinant zoster vaccine (Shingrix) for adults.

- The main factors causing vaccine recommendation reluctance are perceived lack of effectiveness, availability of alternative treatments, lack of public funding and concerns about safety/side effects. Lack of familiarity with the vaccine also plays a role.
- Many HCPs (from 18% of midwives to 67% of pediatricians) see no drawbacks to vaccines, but lack of efficacy, potential for side effects, toxicity and expense to patients concern some.
- Only small proportions are concerned about multiple vaccinations at a single visit, either for the possibility of overwhelming the immune system (ranging from 1% to 28% of HCPs) or a reduction in efficacy (0% to 10%).

Perceptions of diseases

- The most important disease-focused factors in HCP vaccine recommendation are disease severity (84% to 95% very important), ease of contracting the disease (75% to 88% very important), and likelihood of the disease returning or spreading (66% to 91% very important).
- Majorities in all occupations (from 54% of pharmacists to 65% of nurses and pediatricians) think vaccine-preventable diseases are becoming more common in Canada.
- Strong majorities of HCPs believe it is very important for people in all vulnerable groups to be vaccinated, but there is less consensus when it comes to the vaccination of healthy adults age 18 to 64 (from 26% of midwives to 64% of obstetrician-gynecologists - OB-GYN).

Vaccination process

- Half or more of HCPs in most occupational groups (except for OB-GYN) both discuss and administer vaccinations; majorities of family physicians and pharmacists deliver vaccination-related care to both children and adults, as do half of midwives. Eight in ten pediatricians only deal with children's vaccinations. Just over half of nurses, and eight in ten OB-GYN, only deliver vaccination services to adults.
- Majorities of family physicians (84%), nurses (64%), OB-GYN (80%), midwives (51%) and pediatricians (84%) have six or more years of vaccination-related experience; four in ten pharmacists (41%) have six or more years of experience.
- Majorities of HCPs (62% to 85%) would recommend a newly approved vaccines to at least some eligible patients; six in ten (59%) pediatricians would recommend to all.
- HCPs are most likely to consider vaccine effectiveness in making a decision about recommending a newly approved vaccine (52% to 74%). Whether or not an expert committee has recommended it (28% to 68%) and patient susceptibility to the disease (28% to 46%) are also notable factors when deciding whether to recommend a new vaccine.
- Lack of efficacy (14% to 36%), negative side effects (27% to 38%) and cost to patients (11% to 36%) are considerations that could potentially prevent vaccine recommendation.

Individual/personal factors

- Majorities of HCPs who administer vaccinations identify at least one of four specific situations as being either a major or moderate barrier to delivery of vaccines in their practices (56% to 72%, with the sole exception being pediatricians – 38%). Inadequate reimbursement is at least a moderate barrier to administering vaccinations for close to half (46%) of family physicians, two-thirds (64%) of pharmacists and approximately one-third of midwives (37%) and nurses (33%). For half of midwives (49%), storage and handling is also a notable barrier.
- Majorities of nine in ten or more in all occupations agree vaccination is well-accepted by Canadians and that people should be vaccinated to ensure community protection. Only small minorities of two in ten or less in all occupations agree to some extent administering STI vaccines could increase the likelihood adolescents would engage in unprotected sexual activity, and very few (10% to 18%) in most occupations (other than just over half of midwives) agree people should not be required to get vaccinated.
- At least eight in ten in all HCP occupations indicate they received a flu shot in the 2018/2019 influenza season, with the exception of midwives (six in ten).
- Strong majorities in all occupations (78% to 94%) think it is a very important role to give patients advice and information about vaccination. However, level of self-assessed familiarity with the current National Advisory Committee on Immunization (NACI) vaccine guidance for vaccination in Canada varies by occupation (at least somewhat familiar: 64% of midwives, 65% if nurses, 77% OB-GYN, 85% pharmacists, 93% family physicians, 96% pediatricians).
- Confidence in ability to communicate with patients about vaccinations tends to outstrip familiarity with NACI vaccine guidance. Two-thirds or more majorities in all professions are at least somewhat confident in their ability to undertake vaccine-related communications, such as recommending vaccines to patients (90% to 100%), effectively providing information on benefits and risks (84% to 98%), answering patient questions (81% to 100%) and address the concerns of vaccine-hesitant patients (67% to 93%). However, it is notable that fewer than half of family physicians (37%), pharmacists (38%), nurses (33%) and OB-GYN (37%) are *very* confident they could address the concerns of vaccine-hesitant patients, and only six percent of midwives are very confident they could do this.
- In general, HCPs trust authoritative science-based vaccine information sources. NACI, government public health organizations and peer-reviewed journals are the most trusted vaccination information sources; pharmaceutical companies are the least likely to be completely trusted across all professions.

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