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# Childhood Immunization Coverage Survey in Key Populations (KPCICS) – Health Care Worker Parents

*Summary*

**Prepared for Health Canada**

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Canada

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## Summary

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**Supplier name:** EKOS Research Associates Inc.

**Date:** September 2023

This public opinion research report presents the results of an online survey conducted by EKOS Research Associates Inc. on behalf of Health Canada. The research study was conducted with 486 health care workers who are also parents, legal guardians or persons making health care decisions for children under 18, collected between March 30 and June 1, 2023.

Cette publication est aussi disponible en français sous le titre Enquête sur la couverture vaccinale des enfants dans les populations clés (ECVEPC) : Parents travailleurs de la santé

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# EXECUTIVE SUMMARY

## A. BACKGROUND AND OBJECTIVES

Vaccines have proven to be an effective tool to reduce or eliminate diseases. An examination of Canadian cases has shown that routine childhood vaccines have eliminated polio, reduced the observed cases of measles, mumps, rubella, and diphtheria by 99%, and reduced cases of whooping cough by 87%<sup>1</sup>. Surveillance data, however, suggests that vaccine coverage in Canada is uneven.

The childhood National Immunization Coverage Survey (cNICS) measures the immunization status of the general population of children in Canada and collects data on parental knowledge of vaccines and the diseases they prevent. The cNICS helps to determine coverage and changes in update of recommended immunization schedules, provides international organizations with estimates of coverage of specific vaccines, and provides information on parent and guardian knowledge and beliefs about vaccines<sup>2</sup>.

The data produced from the cNICS is limited in the ability to provide information from children in all age ranges, and from key at-risk populations. Further, the COVID-19 pandemic has increased the discussion of vaccines and shifted the knowledge, attitudes and beliefs of some Canadians. The prevalence of vaccine hesitancy and refusal of COVID-19 vaccines for some has resulted in the need to understand the implications on childhood immunization coverage, and any education support needed to promote continued vaccination among children.

The Public Health Agency of Canada (PHAC) intends to address data coverage gaps related to at-risk populations through a new surveillance initiative: the Childhood Immunization Coverage Survey Among Key At-Risk Populations (KPCICS) in Canada. As a result of indications that there has been a high prevalence of vaccine hesitancy for COVID-19 vaccines among health care workers, this study was conducted among health care workers who are parents, legal guardians, or persons most knowledgeable for a child or children aged 17 or younger.

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<sup>1</sup> Public Health Agency of Canada. *Vaccines Work*. October 9, 2019. Online: [Infographic: Vaccines Work - Canada.ca](#)

<sup>2</sup> Statistics Canada. Childhood National Immunization Coverage Survey (CNICS). August 8, 2022. Online: [Childhood National Immunization Coverage Survey \(CNICS\) \(statcan.gc.ca\)](#)

## **Study Objectives**

This survey provides up-to-date childhood vaccine coverage data specific to health care workers who have children. The opinions and views of parents, guardians, or persons most knowledgeable collected will help to inform the following areas:

- Their child's immunization uptake, as well as vaccine hesitancy and vaccine refusal, the reasons for vaccine hesitancy and the impact on routine childhood immunization.
- The unknown effects of the COVID-19 pandemic on concurrent childhood immunizations to determine priorities for vaccine-preventable diseases, with the aim of identifying whether catch-up routine immunization campaigns are required.

Specifically, the surveillance project collected information on:

- Routine childhood and COVID-19 immunizations status;
- Intent to get vaccinated for those not yet vaccinated;
- Reasons for non-vaccination (including barriers);
- Parent/ legal guardian/ other PMK's knowledge, attitudes and beliefs (KAB) toward child's immunization;
- Sources of information on immunization, including routine childhood vaccines and COVID-19 vaccines; and,
- Sociodemographic characteristics that are linked to inequalities in vaccination uptake.

## **B. METHODOLOGY**

The survey sample includes 486 respondents who indicated that they are 18 years of age or older; work or volunteer in health care including in a hospital, a health clinic, a long-term care or nursing home, or in another community setting; and are also a parent or legal guardian or person responsible for health decisions for a child 17 years of age and younger. Eligible parents indicated the number of children 17 years of age and younger that they are a parent, legal guardian or person most knowledgeable for. One child was then randomly selected as the child that the parent would complete the survey about. All analyses provided herein are in regard to immunization experiences relating to the randomly selected child.

The primary sample source used was our in-house *Probit* panel of randomly recruited Canadians. The survey was intended to be administered online among eligible participants recruited from the panel, though a proportion of participants was to be recruited through telephone if the panel source was not sufficient to achieve the intended sample size. Because we did not expect that our in-house panel would be sufficient to complete the number of cases required, we supplemented our in-house panel sample with a nationally representative sample,

including landlines selected through random digit dialing (RDD), as well as cell phone sample in a 30%:70% ratio. The screened sub-sample completed the survey by telephone. Although the original intent was to include 550 respondents in the final sample, we collected 486 but were unable to collect the remaining 64 responses with health care workers (HCWs).

We assumed that approximately 125 cases would be completed online based on telephone recruitment, however, 195 of the 486 were completed by telephone in order to maximize the sample of completed cases (179 completed with panel members and 16 completed with members of the general public through RDD sample). Sixty percent of the sample (n=291) was completed online by panel members. Each panel member received one initial email invitation and up to three email reminders. About half of sampled panel members received between one and four follow-up telephone calls, although many received up to nine calls over the course of six weeks.

The *Probit* panel is assembled using an RDD process for sampling from a blended land-line cellphone frame, which provides full coverage of Canadians with telephone access. The distribution of the recruitment process is meant to mirror the actual population in Canada (as defined by Statistics Canada). As such, our more than 120,000 member panel can be considered representative of the general public in Canada (meaning the incidence of a given target population within our panel very closely resembles the public at large) and margins of error can be applied. All households/individuals in the *Probit* panel are contacted by telephone, the nature of the panel is explained in greater detail (as are our privacy policies), and demographic information is collected. At this time, the online/off-line as well as landline/cellphone status is ascertained in order to determine the method of completing surveys (i.e., online, telephone, or mail). Ongoing activities take place several times each year to monitor, maintain, and refresh the panel. These activities include review of data quality and participation rates, and ongoing recruitment of new panel members.

The online survey was conducted between March 30 and June 1, 2023. Appendix A provides details on the characteristics of the sample. The randomly recruited probability sample carries with it a margin of error<sup>3</sup> of +/-4.5%. The margin of error for most segments within the sample for which results were isolated is between +/-5% and +/-9%<sup>4</sup>. Results were not isolated for

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<sup>3</sup> Level of precision associated with each sample segment for which results are isolated in the survey (i.e., results are expected to be within this range of the reported findings, 19 times out of 20).

<sup>4</sup> The margin of error is between 5% and 9% in 23 segments, however, it is between +/-11% and +/-15% in six segments (parents of a child under 5 years of age, parents who are or have been hesitant about routine vaccines, and parents in BC/territories, Alberta, Saskatchewan/Manitoba, and the Atlantic).

segments with fewer than 10 responses to ensure that confidentiality was not compromised, and due to higher imprecision (i.e., margin of error) associated with small sample sizes. The primary sample source was an in-house Probit panel of randomly recruited Canadians<sup>5</sup>. The survey instrument was delivered online as well as by telephone and available in both official languages. The average length of the survey was 13 minutes online and 19 minutes by telephone. The overall response rate for the survey was 24%. [Appendix A](#) presents further details on the methodology for the survey.

The survey sample was weighted based on Statistics Canada 2021 Census population figures for highest level of education among HCWs<sup>6</sup>, as well as provincial/territorial distribution of HCWs using information from the Canadian Institute on Health Information (health-workforce-canada-2017-2021)<sup>7</sup>. The sample is also weighted based on the age and sex at birth of the selected child using Statistics Canada 2021 Census population figures for the general public<sup>8</sup> since no population figures were available for age and gender of children of parents who are HCWs.

## C. KEY FINDINGS

Respondents to the survey were comprised of health care providers who are parents. One in five are allied health workers (21%), a nurse or nurse practitioner (19%), or a community health worker (18%). More than one in 10 (13%) are in an administrative, support or managerial role. Parents in the sample are primarily between 35 and 54 years of age (76%) and three in five (61%) are women.

Health care workers who are parents were asked for their description of their physical and mental health using a five-point scale from poor to excellent. Physical health was rated more strongly than mental health where 91% described their physical health as good to excellent, compared to 80% for mental health.

### ***Childhood Vaccination***

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<sup>5</sup> Probit panellists were selected using a random-digit dial (RDD) landline-cell phone hybrid sample frame.

<sup>6</sup> <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810058501>

<sup>7</sup> <https://www.cihi.ca/en/health-workforce-in-canada-in-focus-including-nurses-and-physicians/go-in-depth-most-recent-data-on>

<sup>8</sup> <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810002301>

Among all parents in the sample, 97% indicated that their child had received at least some of the recommended vaccines for their age, with 66% reporting that they received all of the recommended vaccines. Among the parents indicating that their child had received “some” (but not “all”) of the recommended vaccines for the child’s age, those not received were most commonly the vaccine for influenza (52%), Human Papillomavirus (HPV) vaccine (32%), or the Hepatitis A and B vaccine (30%). One in five children who had received only “some” recommended vaccines for their age group did not receive the rotavirus (22%), chickenpox (21%) or Rubella (21%) vaccines.

The majority of parents (68%) said they did not encounter any obstacles that made it more difficult to get their child vaccinated. Difficulty booking time for the appointment was noted by 10% of parents. Between five and six percent of parents noted a child’s fear of needles, parental opposition or issues with access to health care. Among parents whose child did not receive one or more of the recommended vaccines, more than one in three (37%) said they did not consider one or more of the recommended vaccines to be necessary.

The primary reason stated by parents for immunizing their child is to protect their child themselves, and others from disease (76%). More than half indicated that the benefits are more important than the risks (56%) or that they received advice from their doctor or health care professional (54%).

Thirteen percent of all parents said that they are or have been hesitant in the past about their child receiving one or more of the recommended vaccines. Among these parents, 68% have concerns about the safety of the vaccine or side effects, 35% mistrust vaccine related information, and 33% have concerns about the effectiveness of the vaccine.

### ***COVID-19 Vaccination***

Seven in 10 parents indicated that their child has received a COVID-19 vaccine; including 7% who received one dose, 35% received two doses, and 28% with three or more doses. Parents reported a multitude of reasons for vaccinating their child against COVID-19, including to protect themselves and/or household members against COVID-19 infection and/or severe outcomes (72%). Nearly six in 10 said their child received a COVID-19 vaccine based on public health recommendations (59%) or to prevent the spread of COVID-19 in their community (57%). Half of parents said their child received a COVID-19 vaccine to protect themselves against long COVID (50%). Slightly fewer than half indicated it was to help restore a more normal life (47%) and more than one in three (38%) said it was because the COVID-19 vaccine was recommended by a health care professional. Over one in three parents (37%) are or have been hesitant to vaccinate their child against COVID-19; the majority indicated this is because of concerns that

not enough research on the vaccine has been done on children (69%), or for concerns of the safety of the vaccine and/or side effects (56%).

### ***Views about Vaccination***

Prior to the COVID-19 pandemic, 95% of parents who are health care workers believed that vaccines were safe and effective for children. In general, 29% of parents agree that their views about vaccines have changed since the pandemic. However, the vast majority continue to believe it is true that childhood vaccines are effective (94%) or safe (93%). Nine in 10 (89%) parents will continue to get their child vaccinated with the recommended childhood routine vaccines in the future, while much fewer (59%) will get their child vaccinated with the COVID-19 vaccine.

Parents were asked to react to a battery of positive and negative statements about childhood immunizations. In terms of reactions to positive statements, 95% of parents agree that vaccines help protect their child's health and 92% of parents agree that having their child vaccinated protects others in the family and community. More than eight in 10 (83%) parents also agree that unvaccinated children are at higher risk of getting some serious diseases, including COVID-19. More than three in four (77%) parents agree that delaying childhood vaccines causes risk to their child's health and the same proportion (77%) believe that most parents have their child vaccinated.

When considering negative statements, 85% of parents disagree that the use of alternative practices such as homeopathy or naturopathy can eliminate the need for vaccination. About the same proportion (82%) disagree that a healthy lifestyle can replace the need for vaccination, although 14% agree. While eight in 10 parents (79%) also disagree that children receive too many vaccinations overall, one in five (18%) agree with this view. Just over seven in 10 (73%) parents disagree that it is better to develop immunity from having a disease rather than from a vaccine; however, close to one in four (21%) agree. About the same proportion of parents agree that children receive too many vaccines at the same visit (24%).

### ***Sources of Childhood Immunization Information***

Most parents said they would be most likely to consult the Public Health Agency of Canada or Health Canada (72%), or health care providers (71%) in order to find information about childhood immunization. Half or more would consult their local public health unit or clinic (59%), scientific publications and journals (58%), the Ministry of Health within their province or territory (54%), or international organizations (50%), and the National Advisory Committee on Immunization (NACI) was mentioned by 42%. More than one in three (39%) parents would



consult with community nursing stations or clinics. Other sources include the news or media (16%), family and friends (16%) or social media (6%).

## **D. NOTE TO READERS**

Detailed findings are presented in the sections that follow. Overall results are presented in the main portion of the narrative and are typically supported by graphic or tabular presentation of results. The programmed survey instrument can be found in Appendix B.

It should be noted that the survey asks a number of questions about behaviours that may have a tendency to exert pressure to respond in a socially desirable way for respondents to under-report their attitudes and behaviours related to vaccine hesitancy<sup>9</sup>. Results for the proportion of respondents in the sample who either said “don’t know” or did not provide a response are not indicated in the graphic representation of the results of survey questions where multiple responses were possible, particularly where they are not sizable (i.e., 10% or less). Results may also not total 100% due to rounding or where multiple responses could be provided.

## **E. CONTRACT VALUE**

The contract value for the POR project is \$58,640.02 (including HST).

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<sup>9</sup> Ivar Krumpal, “Determinants of Social Desirability Bias in Sensitive Surveys: A Literature Review”, *Quality and Quantity*, June 2013, Volume 47, Issue 4, pp. 2025-2047.

## **F. POLITICAL NEUTRALITY CERTIFICATION**

I hereby certify as Senior Officer of EKOS Research Associates Inc. that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in the Policy on Communications and Federal Identity and the Directive on the Management of Communications. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, standings with the electorate, or ratings of the performance of a political party or its leaders.

Signed by:



Susan Galley (Vice President)