



Public Health
Agency of Canada

Agence de la santé
publique du Canada

The Childhood Immunization Coverage Survey in Key Populations (KPCICS): Recent Immigrant Parents - 2023

Report

Prepared for the Public Health Agency of Canada

Supplier name: Advanis Inc.

Contract number: 6D142-22-6282

Contract value: \$145,891.14 (including HST)

Award date: March 2, 2023

Delivery date: February 19, 2024

Registration number: POR 143-22

For more information on this report, please contact Health Canada at:

por-rop@hc-sc.gc.ca

Ce rapport est aussi disponible en français.

Contents

- 1. Executive Summary 4
 - 1.1 Background 4
 - 1.2 Research Use 4
 - 1.3 Methodology 5
 - 1.4 Key Findings 5
 - 1.5 Contract value 6
 - 1.6 Political Neutrality Requirement 6
- 2. Background and Objectives 7
- 3. Methodology 9
 - 3.1 Pilot testing 9
 - 3.2 Sample Planning and Data Collection 9
 - 3.3 Questionnaire 12
 - 3.4 Data Collection 12
 - 3.5 Data Cleaning 13
- 4. Note to Readers 14
- 5. Results 16
 - 5.1 Respondents’ profile 16
 - 5.2 Selected child’s profile 23
 - 5.3 Questionnaire results for general attitudes towards vaccination 25
- 6. Conclusion 47
- Appendix 1: English Questionnaire 48

The Childhood Immunization Coverage Survey in Key Populations (KPCICS): Recent Immigrant Parents - 2023

Report

Prepared for the Public Health Agency of Canada

Supplier Name: Advanis Inc.

January 2024

This report presents the methodological details for The Childhood Immunization Coverage Survey in Key Populations (KPCICS): Recent Immigrant Parents - 2023, conducted by Advanis Inc. on behalf of the Public Health Agency of Canada (PHAC). The survey was administered among 3,323 Canadian parents, 1,076 of them being recent immigrants (10 years or less in Canada), between August 7 and October 5, 2023.

Ce rapport est aussi disponible en français sous le titre: Enquête sur la couverture vaccinale des enfants dans les populations clés (ECVEPC) - Parents immigrants récents - 2023.

This publication may be reproduced for non-commercial purposes only. Prior written permission must be obtained from the Public Health Agency of Canada. For more information on this report, please contact: por-rop@hc-sc.gc.ca

Health Canada, CPAB
200 Eglantine Driveway, Tunney's Pasture
Jeanne Mance Building, AL 1915C
Ottawa, Ontario K1A 0K9

Catalogue Number:

H14-544/2-2024E-PDF

International Standard Book Number (ISBN):

978-0-660-69894-6

Related publications (registration number: 22-14):

Catalogue number: H14-544/2-2024F-PDF (Report, French)

International Standard Book Number (ISBN): 978-0-660-69895-3 (French)

1. Executive Summary

1.1 Background

Surveillance data suggests that vaccine coverage is uneven across Canada. Furthermore, results from existing surveillance tools suggest that certain key at-risk populations are under-surveyed.

New surveillance tools are needed to address data coverage gaps identified for at-risk populations and to inform public health vaccination programs and initiatives. In the effort of addressing vaccine coverage data gaps relating to at-risk populations, the Public Health Agency of Canada (PHAC) sought third party support to develop a new surveillance initiative, the Childhood Immunization Coverage Survey in Key Populations (KPCICS) in Canada.

The core objective of this survey is to provide up-to-date childhood vaccine coverage data (e.g., on measles, diphtheria, tetanus, pertussis, polio, COVID-19) specific to the recent immigrant population. The survey will assess parent/legal guardian/other person most knowledgeable's (PMK; e.g., child's step-parent, adoptive parent, foster parent, sister or brother, grandparent or relative caring for and responsible for health decisions for the child) opinions and views on their child's immunization uptake, as well as vaccine hesitancy and vaccine refusal. This survey will also investigate the reasons for vaccine hesitancy among these populations and the impact this has on routine childhood immunization, for each population.

The second objective is to consider 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.

The surveillance project aims to collect 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/guardian/other PMK's knowledge, attitudes and beliefs (KAB) toward immunization
- Trusted sources of information on immunization, including routine childhood vaccines and COVID-19 vaccines
- Inequalities in vaccination uptake by socio-demographic characteristics

1.2 Research Use

The COVID-19 pandemic has yielded a large shift in Canadians' knowledge, attitudes, and beliefs towards vaccinations, including for these specific populations. For certain populations, recent evidence points that there has been a high prevalence of vaccine hesitancy and refusal for COVID-19 vaccines. Monitoring of parental attitudes is essential to predict expected vaccine uptake and to guide education and awareness efforts to promote vaccination among children issued from these specific populations.

New surveillance tools are needed to fill data coverage gaps identified for at-risk populations and to support the development of public health vaccination programs and initiatives tailored to these populations. With this in mind, the Public Health Agency of Canada (PHAC) sought third party support to implement a new surveillance initiative titled: The Childhood Immunization Coverage Survey in Key Populations (KPCICS) in Canada.

1.3 Methodology

Data collection was completed between August 7 to October 5, 2023. Respondents were offered an online survey through the use of Advanis' General Population Representative Sample (GPRS) and through Random digit dialing (RDD). Advanis sought a probability-based sample of 3,000 Canadian parents/guardians of children and adolescents younger than 18 years old living across Canada.

The target audience for this project were recent immigrants to Canada (10 years or less) who are parents/legal guardian/other persons most knowledgeable (PMK; e.g., child's step-parent, adoptive parent, foster parent, sister or brother, grandparent or relative caring for and responsible for health decisions for the child) for a child(ren) aged 17 years or younger living across the country. The targeted number of completed surveys was 3,000 Canadian parents (including 1,000 from the targeted populations and 2,000 from the general population). Questions within the survey further filtered out responses from anyone under the age of 18 years (S1) and responses for anyone who is not the parent/legal guardian of a child(ren) under the age of 18 (S2). A total of 3,323 responses were obtained (1,076 from the targeted populations, 2,196 from the general population and 51 for which the immigration status information was unavailable) to reach quotas, where possible (Table 1).

Advanis also worked to obtain nationally representative coverage of the following key sub-populations:

- Parents with children in the age groups: 0 months to 4 years, 5-11 years, 12-17 years.
- Parents in specific regions (individual provinces and territories).
- Children of both sexes (50% males, 50% females).

The data was weighted by regional distribution, the child's sex at birth, the child's age, parental education levels (differentiated for parent one, parent two, and single-parent families), parental immigration status (differentiated for parent one, parent two, and single-parent families), and gender identity (gender+¹) of the parent (differentiated for parent one, parent two, and single-parent families), using a dataset provided by Statistics Canada for population counts.

1.4 Key Findings

Most children have been vaccinated at least once in their lifetime (93% for both recent immigrant parents and non-recent immigrant parents). A majority of those who received at least one vaccine also received all the recommended childhood vaccines for their child's age (66% for those with recent immigrant parents and 70% for those with non-recent immigrant parents).

Although most did not encounter obstacles when trying to get vaccinated, difficulty booking time off work or school for a vaccine appointment and a child's fear of needles were the main obstacles mentioned by both recent immigrant and non-recent immigrant parents.

For recent immigrant parents, the main reason not to have their child immunized with one or more recommended childhood vaccines was because the vaccine was not available or recommended in their origin country (18%) and because they did not know that one or more of these vaccines were important

¹ The non-binary, two-spirit/bi-spirit, and other gender population is small, and data aggregation to a two-category gender variable (denoted by the "+" symbol) is often used to protect the confidentiality of responses provided. Non-binary persons, and two-spirit/bi-spirit persons, and persons of other genders are randomly classified as men+ and as women+ in Statistics Canada's data. This results in two gender categories: "men+" and "women+."

for their child to get (17%). For non-recent immigrant parents, the main reasons included not considering it necessary for their child (39%) and concerns about the safety of the vaccine(s) and/ or their side effects (18%).

The main reason for deciding not to get their child vaccinated or for being hesitant towards vaccination was concerns about the safety of the vaccine(s) or their side effects for both recent immigrant and non-recent immigrant parents (64% and 55%, respectively), followed by concerns about the effectiveness of the vaccine(s) (26% for recent immigrant parents and 35% for non-recent immigrant parents) and mistrust in vaccine-related information (15% for recent immigrant parents and 35% for non-recent immigrant parents) .

Regarding the COVID-19 vaccine specifically, among recent immigrant parents, 57% said that their child has received at least one dose of the COVID-19 vaccine, compared to 68% among non-recent immigrant parents.

Non-recent immigrant parents tend to believe in higher proportions than recent immigrant parents that the COVID-19 vaccine is safe (60% vs. 54%).

1.5 Contract value

The contract value for this study was \$145,891.14 (including HST).

1.6 Political Neutrality Requirement

I hereby certify as a Senior Officer of Advanis that the deliverables fully comply with the Government of Canada's political neutrality requirements outlined in the Communications Policy of the Government of Canada and Procedures for Planning and Contracting Public Opinion Research.

Specifically, the deliverables do not contain any reference to electoral voting intentions, political party preferences, standings with the electorate, or ratings of the performance of a political party or its leader.



Nicolas Toutant
Vice President, Research and Evaluation
Advanis
nicolas.toutant@advanis.ca

2. Background and Objectives

Surveillance data suggests that vaccine coverage is uneven across Canada, and surveillance tools suggest that certain key at-risk populations are under-surveyed. The childhood National Immunization Coverage survey (cNICS) is a general population survey that measures routine childhood immunization coverage among children aged 2, 7, 14 and 17 years and COVID-19 vaccine uptake in children ages 14 and 17 years, as well as parental knowledge, attitudes, and beliefs about vaccination. This surveillance tool provides critical information about childhood immunization in Canada. However, it was not designed to sample from all child age ranges or from key at-risk populations.

Consequently, this results in insufficient data regarding routine childhood immunization status and COVID-19 vaccine coverage, and knowledge, attitudes, and behaviors towards vaccination within these specific groups. In turn, this hinders core immunization functions including COVID-19 vaccine and routine immunization surveillance, vaccine confidence, available data, policy, public health guidance, and knowledge mobilization activities.

In addition, the COVID-19 pandemic has yielded a large shift in Canadians' knowledge, attitudes, and beliefs towards vaccinations, including for these specific populations. For certain populations, recent evidence points that there has been a high prevalence of vaccine hesitancy and refusal for COVID-19 vaccines. Monitoring of parental attitudes is essential to predict expected vaccine uptake and to guide education and awareness efforts to promote vaccination among children issued from these specific populations.

New surveillance tools are needed to address data coverage gaps identified for at-risk populations and to inform public health vaccination programs and initiatives. In the effort of addressing vaccine coverage data gaps relating to at-risk populations, the Public Health Agency of Canada (PHAC) is seeking third party support to develop a new surveillance initiative, the Childhood Immunization Coverage Survey in Key Populations (KPCICS) in Canada.

The core objective of this survey is to provide up-to-date childhood vaccine coverage data (e.g., on measles, diphtheria, tetanus, pertussis, polio, COVID-19) specific to the recent immigrant population. The survey will assess parent/legal guardian/other person most knowledgeable's (PMK; e.g., child's step-parent, adoptive parent, foster parent, sister or brother, grandparent or relative caring for and responsible for health decisions for the child) opinions and views on their child's immunization uptake, as well as vaccine hesitancy and vaccine refusal. This survey will also investigate the reasons for vaccine hesitancy among these populations and the impact this has on routine childhood immunization, for each population.

The second objective is to consider 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.

The surveillance project aims to collect 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/guardian/other PMK's knowledge, attitudes and beliefs (KAB) toward immunization
- Trusted sources of information on immunization, including routine childhood vaccines and COVID-19 vaccines
- Inequalities in vaccination uptake by socio-demographic characteristics

To address the objectives of this surveillance project, an online survey was conducted with parents/legal guardians/other PMKs of children aged 0 to 17 years from specific at-risk populations, who live in Canada. The specific audiences included the following key at-risk population. Parents/legal guardians/other PMKs aged 18 years and older, who have a child(ren) aged 0 to 17 years and who identify as recent immigrants, meaning they have been in Canada for 10 years or less.

3. Methodology

3.1 Pilot testing

A pilot test was conducted on March 27, 2023, to make sure the survey questionnaire was well understood by respondents. To do so, telephone interviews were conducted to obtain a better feel of the respondents' understanding of the questions. In total, 40 completed interviews were conducted in both official languages (20 in English and 20 in French). After this pilot, some adjustments were made to questions based on the review of the interview recordings. Among those, minor wording changes were applied to allow for better clarity, some questions were reordered, response levels were added to capture what was seen in the "other (specify)" category, and categories that were not selected by any respondents were removed.

The data collected during the pre-test was retained in the final dataset.

3.2 Sample Planning and Data Collection

This study was completed from August 7 to October 5, 2023. Respondents were offered an online survey through the use of Advanis' General Population Representative Sample (GPRS) and through Random digit dialing (RDD). Advanis sought a probability-based sample of 3,000 Canadian parents/guardians of children and adolescents younger than 18 years old living across Canada.

The sample source: GPRS

Over the past few years, Advanis has been developing its own proprietary General Population Random Sample (GPRS) using an IVR-to-Web and CATI-to-Web methodology. This sample includes about 600,000 Canadians. We use our proprietary interactive voice response (IVR) system and our in-house CATI call centre to conduct random digit dialing (RDD) to recruit respondents to be part of this sample. This method is probability-based; that is, every recruit has an equal and known chance of being invited to participate. We typically call all the potential respondents to prompt participation. We have found that this ensures a better distribution of the Canadian population. Advanis GPRS leverages a known probabilistic sampling method used by Statistics Canada, called **multi-phase sampling**. This approach involves collecting data from *randomly selected sample units*, and then collecting more data from a randomly selected subsample².

So, unlike using traditional online panel samples, most of which is not randomly recruited (it is known as convenience sample), researchers can calculate the representativeness of the data collected from this sample with associated margins of error and can perform statistical testing on results. Furthermore, and unlike most traditional panel samples, all of Advanis' GPRS sample is **a)** new (the vast majority having been recruited since January 2018), and **b)** not "expert survey takers" since we survey each person no more than 8 times each year (our engagement is to not contact the same respondents within a minimum of a six week period) and do not provide incentives. Therefore, our respondents will not have been contacted by Advanis during the 30 day period for a survey. It is important to note that we *only* use this sample for the public sector and not-for-profit studies. As such, this method offers:

² <https://www150.statcan.gc.ca/n1/edu/power-pouvoir/ch13/prob/5214899-eng.htm>

- One key advantage of CATI surveying (random sampling that supports statistical testing); and
- One key advantage of online panel surveying (much lower cost than CATI).

Advanis leveraged our General Population Random Sample to invite respondents to complete the survey online. All Advanis web surveys are hosted internally by Advanis, and they are online 24 hours a day. Because Advanis fields online surveys in-house, we can employ a rigorous and stringent set of data collection control mechanisms to ensure the highest quality for the data collected including:

- Careful monitoring of response rates during all stages of the fielding process (and with all methods). Actions will be taken to maximize compliance and minimize non-response.

Target audience

The target audience for this project were recent immigrants to Canada (10 years or less) who are parents/legal guardian/other persons most knowledgeable (PMK; e.g., child’s step-parent, adoptive parent, foster parent, sister or brother, grandparent or relative caring for and responsible for health decisions for the child) for a child(ren) aged 17 years or younger living across the country. The targeted number of completed surveys was 3,000 Canadian parents (including 1,000 from the targeted populations and 2,000 from the general population). Questions within the survey further filtered out responses from anyone under the age of 18 years (S1) and responses for anyone who is not the parent/legal guardian of a child(ren) under the age of 18 (S2). A total of 3,323 responses were obtained (1,076 from the targeted populations, 2,196 from the general population and 51 for which the immigration status information was unavailable) to reach quotas, where possible (Table 1).

Advanis also worked to obtain nationally representative coverage of the following key sub-populations:

- Parents with children in the age groups: 0 months to 4 years, 5-11 years, 12-17 years.
- Parents in specific regions (individual provinces and territories).
- Children of both sexes (50% males, 50% females).

As seen in Table 1, these targets were achieved.

Table 1.1 - Number of completed and targeted number

Targeted population	Completed the survey	Minimum targets
Recent immigrant parents	1,076	1,000
General population parents (includes any non-immigrant or any immigrant who has been in Canada for more than 10 years)	2,196	2,000
Total	3,272	3,000

Weighting

For this project, Statistics Canada provided a custom dataset of population counts for the weighting. The dataset provided by Statistics Canada encompassed counts of children based on regional distribution, the child's sex at birth, the child's age, parental education levels (differentiated for parent one, parent two, and single-parent families), parental immigration status (differentiated for parent one, parent two, and single-parent families), and gender identity (gender+³) of the parent (differentiated for parent one, parent two, and single-parent families). This dataset underwent adjustments to form segments tailored for the project's weighting. To achieve this, regions were regrouped into four categories, age groups into three, while education level and immigration status were condensed into two categories each. In total, 193 segments were used for weighting. The file was partitioned as outlined below:

Table 1.2 - Weight categories

Region	Atlantic and Québec Ontario Prairies British Columbia and the Territories
Sex at birth of child	Female Male
Age of child	0-4 years old 5-11 years old 12-17 years old
Highest level of Education	Below bachelor level Bachelor's degree or higher
Immigration status	Non-immigrants and immigrants from before 2011 Recent immigrant (2011 to 2021)
Gender+ of the parent	Men+ Women+

Those with missing information constituted 3.4% of the sample and were grouped in a single weighting scheme. They were weighted to represent the same proportion they had in the sample.

However, some segments within our sample remained unpopulated. These vacant segments were combined based on parental gender where feasible. If this combination was not feasible, they were combined with the higher age group category of the child. This combination impacted only 7 segment groups that were manually combined, leaving 186 segments for the weighting process. Following the creation of these segments, a direct weighting approach was employed to project the sample data onto the population counts.

³ The non-binary, two-spirit/bi-spirit, and other gender population is small, and data aggregation to a two-category gender variable (denoted by the "+" symbol) is often used to protect the confidentiality of responses provided. Non-binary persons, and two-spirit/bi-spirit persons, and persons of other genders are randomly classified as men+ and as women+ in Statistics Canada's data. This results in two gender categories: "men+" and "women+."

3.3 Questionnaire

The survey draft and the French translations were provided by PHAC. Advanis worked with PHAC to refine the questionnaire. This was supported by the pilot testing that provided further insight into the challenges of the questionnaire. The survey was programmed using SurveyBuilder, a software program that is proprietary to Advanis. The surveys were available to be completed online.

The online survey was compatible with both desktop computers and mobile devices (tablets and smartphones). The surveys were housed on a website hosted by Advanis.

The surveys were designed to include multiple-choice questions, single response questions, including scaled, open-ended, and demographic questions. Skip logic was applied throughout, including thank-you messages used for screening out ineligible respondents (not having a child under 18 living in the household, not a legal parent/guardian/PMK or a child 17 years or younger, refusing to provide their children's age). The survey was thoroughly pre-tested to ensure that skip patterns and survey questions were correctly programmed. The survey included the following sections:

- Screeners
- Selection Question - CHILD
- Immunization Coverage - CHILD
- Demographic information – CHILD
- Vaccination-Related Obstacles, Reason and Hesitancy – PARENT/GUARDIAN
- Knowledge, Attitudes and Behaviours – PARENT/GUARDIAN
- General health information - PARENT/GUARDIAN
- Immigration status and year in Canada – PARENT/GUARDIAN
- Demographic Information - PARENT/GUARDIAN

The survey length was just over 12 minutes, exceeding the expected length of 10 minutes.

3.4 Data Collection

Invitations and reminders were sent by SMS or email. All SMS or emails were sent grouped by province to ensure that they were sent out during appropriate hours within each time zone. After sending the initial invitation, a reminder message was sent three days later to applicants who did not complete a survey or who were not screened out of the survey.

In total, 17,447 potential respondents were invited to the studies (valid sample). Of these, 694 were screened out because they did not qualify and 2,412 refused to participate. In total, 10,826 ended up not answering the survey and 192 dropped off at various points. The global response rate to the study was 23.0%⁴. The estimated margin of error was 1.7% at a 95% confidence interval. In total, 3,323 parents answered the survey.

Each survey had a unique number embedded in the hyperlink to eliminate the possibility of duplicate responses from one respondent.

⁴ POR response rate formula: (R) 3323 respondents + 694 screened out / (U) 10826 + (IS) 2604 + (R) 3323 respondents + 694 screened out.

All Advanis Web surveys are hosted internally by Advanis, and we employ a rigorous and stringent set of data collection control mechanisms to ensure the highest quality for the data collected, including:

- Respondents have a unique access code to ensure that only that res can complete the online survey.
- Extensive internal logic checks are programmed directly into the survey to ensure logical responses.
- Web surveys are implemented using Advanis' proprietary software (which is designed to handle complicated survey formats).
- Advanis administered a detailed internal test and an external pre-test to ensure that the survey instrument was working as planned.
- We tested the questionnaire in multiple browsers and provided PHAC with a link so they could do internal testing.

3.5 Data Cleaning

Data cleaning primarily involved creating variables tailored to the distinct populations, facilitating straightforward analysis for each group. Any "Other, specify" comments were carefully reviewed and integrated into existing levels where applicable. Additionally, new categories were introduced to the questions based on specify responses, ensuring that "Other" responses remained under 10%. The following variables were recoded (either with new categories or in existing buckets).

- C4
- C5
- C7
- C8
- C10
- C11
- D3

4. Note to Readers

There are a few limitations to consider in this study:

1. Filtering Impact: The question "Has [child's nickname] ever been vaccinated?" acts as a filter for subsequent questions. Consequently, respondents not indicating their child's vaccination status might limit insights into reasons behind non-vaccination.
2. People who immigrated to Canada in the past few years (last 2 or 3 years) are less prone to answer to survey. This is based on the firm's experience recruiting this group.

Results in the tables include nonresponse levels like "I don't know" and "I prefer not to answer," except in some cases where responses to these levels were 0% are not shown in the report. Results may also not total 100% due to rounding or where multiple responses could be provided. Results with a base of fewer than 30 respondents should be interpreted with caution, and results with a base of fewer than 10 respondents should not be reported. For this reason, results with a base of fewer than 10 are not shown in this report.

When reporting on aggregated categories in this report, the percentage can show a variation of +/- 1% due to rounding.

In the results section, the mention of "parents" includes any parent, legal guardian, or other person most knowledgeable (PMK) regarding their child.

In addition to this report, banner tables were provided to PHAC for the purposes of subgroup analyses. Separate banner table files were created for the following populations:

- Immigrant parents who have been in Canada for 10 years or less
- Non-immigrant or immigrant parents who have been in Canada for more than 10 years - we will refer to them as non-recent immigrant parents throughout the report.
- All survey respondents

For each population group, the banners had the following crosstabs for analysis:

- Banner 1: Region, Age of child, Child's sex.
- Banner 2: Immigration status (recent immigrant of 10 years or less; non-immigrant or immigrant of more than 10 years), Parent highest level of education.
- Banner 3: Recommended vaccines received, Obstacles to getting child vaccinated, Number of COVID-19 doses, Vaccination hesitancy for child for recommended vaccines, Vaccination hesitancy for child for recommended COVID-19 vaccine

This resulted in a total of 9 banner files in each official language.

It is to be noted that "Don't know" and "Prefer not to answer" categories were included in the banners. Percentages are weighted in the banner tables, while individual cell counts are unweighted. Data were rounded so that no decimals were shown and results with a base of 10 or below were suppressed. Some NET variables were requested by the research team and are included in the banners.

Non-response bias

Non-response bias occurs when non-responders differ in a meaningful way from respondents and this difference impacts the information gathered. It is difficult to assess the presence of non-response bias since information about why non-responders did not participate is usually unavailable. That said, one way to gauge the potential impacts of non-response bias is to evaluate if the sample is presentative by comparing the respondents' characteristics and gauge if they reflect known population characteristics. In this case, the data was not available.

Where possible, we can check the distribution of respondents across various demographics (e.g., age and gender) and geographic categories and compare those distributions against known population characteristics. If the variation is fairly small and we have no reason to believe there are other factors impacting respondents' willingness to participate, we can conclude that the likelihood of non-response bias impacting the information gathered in the study is minimal. Several strategies were employed to increase response rates and reduce the effects of non-response bias. This includes:

- Recruiting respondents by telephone, which achieves a higher response rate compared to email invitations.
- Outpulsing a local phone number (rather than a toll-free number) and the name of the study sponsor ("GovCanada"), which increases pick-up rates (reducing call screening).
- Systematically setting the next call date and time based on the outcome of the current call, which ensures that each respondent is called methodically across days of the week and times of the day. Especially for respondents that are difficult to reach, this maximizes the likelihood of reaching them.
- Sending an SMS text message to recruits, which assures a seamless transition from the telephone survey to the online survey, as receipt can be confirmed in real-time and encourages respondents to complete the survey as soon as the call ends.
- Informing the potential respondent of the study sponsor to enhance credibility and reassure the respondent that the call is not a scam.
- Offering the survey in both official languages to maximize ease of completion.

5. Results

5.1 Respondents' profile

The sample of respondents is composed of 3,323 parents or legal guardians or person most knowledgeable of a child(ren) 17 years of age or younger. For the remainder of this report, we will refer to them as parents.

The majority (85%) of recent immigrant parents fall within 35 to 54 years old, with six-in-ten (60%) aged 35 to 44 years and over one-quarter (26%) aged 45 to 54 years. Non-recent immigrant parents largely (89%) fall within the same distribution, with one-half (50%) aged 35 to 44 years and almost two-fifths (39%) aged 45 to 54 years.

Table 2 - Respondent's age group

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
18-24	0%	0%	1%
24-29	1%	0%	3%
30-34	4%	2%	9%
35-44	52%	50%	60%
45-54	36%	39%	26%
55-64	7%	8%	2%
65+	1%	1%	0%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

age_combined - How old are you? (both variables combined).

Overall, recent immigrant parents describe their physical health positively (94%), with 17% reporting their health as "excellent," 43% as "very good," and 34% as "good". Non-recent immigrant parents also describe their physical health positively (90%), with 18% describing their physical health as "excellent," 39% as "very good," and 33% as "good."

Table 3 - Respondent's description of their physical health

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Excellent	18%	18%	17%
Very good	40%	39%	43%
Good	33%	33%	34%
Fair	7%	8%	5%
Poor	2%	2%	1%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

b3 - In general, how would you describe your physical health?

Recent immigrant parents report positive descriptions of their mental health, overall (90%), with 26% describing their mental health as “excellent,” 33% as “very good,” and 30% as “good.” Non-recent immigrant parents also describe their mental health positively (83%), with 15% describing their mental health as “excellent,” 37% as “very good,” and 31% as “good.”

Table 4 - Respondent’s description of their mental health

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Excellent	17%	15%	26%
Very good	36%	37%	33%
Good	31%	31%	30%
Fair	13%	14%	8%
Poor	3%	3%	2%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

b4 - In general, how would you describe your mental health?

Overall, recent immigrant parents tend to be most knowledgeable of one (32%) or two (45%) children; about 18% are most knowledgeable of three children. Non-recent immigrant parents are similar: 35% are most knowledgeable of one child, 47% of two children, and 14% of three children.

Table 5 – Number of children for which respondents are a parent/legal guardian/person most knowledgeable of

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
1	34%	35%	32%
2	47%	47%	45%
3	14%	14%	18%
4 or more	5%	4%	5%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

s3 - How many children under the age of 18 are you a parent/legal guardian/person most knowledgeable of?

Over one-half (54%) of recent immigrant parents' sex at birth was male, and over two-fifths (45%) were female.

Among non-recent immigrant parents, over one-half (54%) were female at birth, and under one-half (46%) were male at birth.

Table 6 – Respondent's sex at birth

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Female	53%	54%	45%
Male	47%	46%	54%
Other	0%	0%	0%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a3 - What was your sex at birth?

Over one-half (53%) of recent immigrant parents self-identify as men, and over two-fifths (46%) self-identify as women. Over one-half (54%) of non-recent immigrant parents self-identify as women, and over two-fifths (46%) self-identify as men.

Table 7 – Respondent's gender

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Woman	53%	54%	46%
Man	47%	46%	53%
Non-Binary	0%	0%	0%
Transgender woman	0%	0%	0%
Transgender man	0%	0%	0%
Two-spirit/bi-spirit	0%	0%	0%
Another gender	0%	0%	0%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a8_c - What is your gender? (recoded based on a8 (gender) and a3 (sex at birth) for missing gender values and randomly assigned if values missing at a8 and a3).

Nine-in-ten (90%) recent immigrant parents self-identify as heterosexual and 2% self-identify as bisexual. Over nine-in-ten (92%) non-recent immigrant parents self-identify as heterosexual and 3% self-identify as bisexual.

Table 8 – Respondent’s sexual orientation

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Heterosexual ("straight")	91%	92%	90%
Bisexual	3%	3%	2%
Pansexual	1%	1%	0%
Lesbian	1%	1%	0%
Gay	0%	0%	0%
Asexual	0%	0%	0%
Other, please specify	0%	0%	1%
I prefer not to answer	4%	3%	7%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a9 - What is your sexual orientation?

Over one-fifth (22%) of recent immigrant parents described their racial or ethnic community group as “White,” compared to 74% for non-recent immigrant parents.

Table 9 – Respondent’s racial or ethnic community

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
White (e.g., European, Caucasian)	64%	74%	22%
Black (African, Afro-Caribbean, African descent)	9%	6%	20%
East/Southeast Asian	8%	6%	18%
South Asian (e.g., Afghan, Indian, Pakistani, Bangladeshi, Sri Lankan)	8%	6%	15%
Latino/Latina (e.g., Latin American, Hispanic descent)	5%	4%	10%
Middle Eastern and North African	5%	4%	12%
Indigenous (First Nations, Métis and/or Inuit)	2%	2%	0%
Other, please specify	2%	2%	0%
I prefer not to answer	3%	2%	4%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a10 - Which of the following best describes the racial or ethnic community that you belong to?

Around two-third (66%) of recent immigrant parents have completed university education (12% have a university certificate or diploma below bachelor’s level, 20% have a university bachelor’s degree or equivalent and 34% have a post-graduate degree above bachelor’s level or equivalent). Under one-half (47%) of non-recent immigrant parents have completed university education (13% have a university certificate or diploma below bachelor’s level, 17% have a university bachelor’s degree or equivalent, and 17% have a post-graduate degree above bachelor’s level or equivalent).

Table 10 – Respondent’s highest completed level of formal education

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Less than a high school diploma or equivalent	1%	1%	1%
High school diploma or equivalent	11%	11%	10%
Registered apprenticeship or other trade certificate or diploma	10%	11%	4%
College/CEGEP or other non-university certificate or diploma	26%	28%	17%
University certificate or diploma below bachelor's level	12%	13%	12%
University - bachelor's degree or equivalent	18%	17%	20%
University - post-graduate degree above bachelor's level or equivalent	21%	17%	34%
Other, please specify	0%	0%	0%
I prefer not to answer	1%	1%	2%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a5 - What is the highest level of formal education that you have completed?

One-quarter (25%) of recent immigrant parents have household incomes between \$100,000 and \$150,000, and over three-in-twenty (16%) have household incomes of \$150,000 and above. About 12% have household incomes between \$40,000 and \$60,000, 13% between \$60,000 and \$80,000, and 12% between \$80,000 and \$100,000.

Almost three-tenths (29%) of non-recent immigrant parents have household incomes of \$150,000 and above, and just under one-quarter (24%) have household incomes of \$100,000 to \$150,000. About 8% have household incomes between \$40,000 and \$60,000, 11% between \$60,000 and \$80,000, and 14% between \$80,000 to \$100,000.

Table 11 - Total household income

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Under \$20,000	2%	2%	5%
\$20,000 to just under \$40,000	6%	6%	10%
\$40,000 to just under \$60,000	9%	8%	12%
\$60,000 to just under \$80,000	11%	11%	13%
\$80,000 to just under \$100,000	14%	14%	12%
\$100,000 to just under \$150,000	24%	24%	25%
\$150,000 and above	27%	29%	16%
I don't know	0%	0%	1%
I prefer not to answer	7%	6%	6%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a6 - Please indicate your total household income, before taxes and deductions, for the year ending December 31, 2022.

Nine-in-ten (90%) recent immigrant parents and over eight-in-ten (84%) non-recent immigrant parents report they are not a single parent.

Table 12 – Respondent is a single parent

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
No	85%	84%	90%
Yes	14%	15%	8%
I prefer not to answer	1%	1%	1%
Unweighted Base	3,277	2,158	1,069
Weighted Base	3,277	2,655	572

a13 - Are you a single parent?

*46 respondents of the pre-test could not see this question since it was added after the pre-test, hence the missing data for these cases.

Eight-in-ten (80%) recent immigrant parents report not living in a small community of fewer than 1,000 people. Over nine-in-ten (91%) non-recent immigrant parents report not living in a small community.

Table 13 – Respondent living in a small community

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
No	89%	91%	80%
Yes	7%	6%	11%
I don't know	3%	2%	8%
I prefer not to answer	0%	0%	1%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a11 - Do you live in a community with a population of fewer than 1,000 people?

Almost two-fifths of recent immigrant (39%) and non-recent immigrant (38%) parents reside in Ontario. Over one-quarter of recent immigrant parents (26%) reside in the Prairies, over one-fifth (23%) reside in the Atlantic region and Quebec, and over one-in-ten (12%) reside in British Columbia and the Territories. Among non-recent immigrant parents, three-in-ten (30%) live in the Atlantic region and Quebec, one-fifth (20%) live in the Prairies, and over one-in-ten (13%) live in BC and the Territories.

Table 14 – Respondent's region

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Atlantic & QC	29%	30%	23%
ON	38%	38%	39%
Prairies	21%	20%	26%
BC and Territories	12%	13%	12%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

region_net_3 - Region (Atlantic & Qc, On, Prairies, Bc and Territories).

5.2 Selected child's profile

Among recent immigrant parents, 41% of children are aged 5 to less than 12 years, 24% are between 12 to 17 years, and 24% are between 2 and a half to less than 5 years. Among non-recent immigrant parents, 40% are aged 5 to less than 12 years, 36% are between 12 and 17 years, and 17% are aged 2 and a half to less than 5 years.

Table 15 – Selected child's age group

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Less than 6 months	1%	1%	1%
6 months to less than 2 and a half years	7%	6%	9%
2 and a half years to less than 5 years	18%	17%	24%
5 years to less than 12 years	40%	40%	41%
12 years to 17 years	34%	36%	24%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

selectedchild – Age of the selected child.

About 97% of recent immigrant respondents are the birth parent to the selected child, as are 92% of non-recent immigrant respondents.

Table 16 – Respondent's relationship to child

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Birth parent	93%	92%	97%
Other Relationship	7%	8%	2%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

b1 – What is your relationship to [Child's nickname]?

About 99% of recent immigrants' children live in the respondent's household, as do 97% of non-recent immigrants' children.

Table 17 – Child lives in respondent's household

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
No	2%	3%	1%
Yes	97%	97%	99%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

b5 – Does [Child's nickname] currently live in your household (primary or secondary residence)?

Over one-half of recent (52%) and non-recent immigrants' (51%) children were born male.

Table 18 – Child's sex at birth

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Male	51%	51%	52%
Female	48%	49%	45%
I prefer not to answer	1%	1%	3%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a1 – What was [Child's nickname]'s sex at birth?

Among recent immigrant parents, almost one-quarter (23%) of their children are “White,” over one-fifth (21%) are “Black,” and just under one-fifth (18%) are “East Asian/Southeast Asian,” compared to non-recent immigrant parents, where almost three-quarters (73%) of their children are “White,” under one-in-ten are “East/Southeast Asian,” or “Black” (both 7%).

Table 19 – Child’s racial or ethnic community

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
White (e.g., European, Caucasian)	63%	73%	23%
East/Southeast Asian	9%	7%	18%
Black (African, Afro-Caribbean, African descent)	9%	7%	21%
South Asian (e.g., Afghan, Indian, Pakistani, Bangladeshi, Sri Lankan)	7%	6%	15%
Latino/Latina (e.g., Latin American, Hispanic descent)	6%	5%	9%
Middle Eastern and North African	6%	4%	12%
Indigenous (First Nations, Métis and/or Inuit)	3%	4%	0%
Other, please specify	2%	2%	1%
I don't know	0%	0%	1%
I prefer not to answer	3%	2%	3%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

a2 - Which of the following best describes the racial or ethnic community that [Child’s nickname] belongs to?

5.3 Questionnaire results for general attitudes towards vaccination

Among both recent and non-recent immigrants’ children, over nine-in-ten (both 93%) have been vaccinated at some point in their lives.

Table 20 - Child vaccination status

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
No	5%	5%	6%
Yes	93%	93%	93%
I prefer not to answer	1%	2%	1%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

c1 - Has [Child’s nickname] ever been vaccinated?

Two-thirds (66%) of recent immigrants' children who received at least one vaccine or for which we do not have the information have reportedly received all recommended vaccinations, as have seven-in-ten (70%) non-recent immigrants' children.

Table 21 – Vaccines received by child

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
All	69%	70%	66%
Some	28%	27%	29%
None	0%	0%	0%
I don't know	2%	2%	3%
I prefer not to answer	1%	1%	1%
Unweighted Base	3,198	2,114	1,036
Weighted Base	3,150	2,562	540

c2 - To the best of your knowledge, would you say that [Child's nickname] has received all, some, or none of these recommended vaccines as of today?

Among recent immigrants with children who received “some” or “none” of the vaccines recommended for their age group, almost one-half (48%) answered “don’t know” to the question “Which recommended vaccines their child has not received?.” Over one-quarter (26%) of the recent immigrant parents have reported that their child has not received the seasonal influenza vaccine, approximately one-fifth mentioned their child has not received the human papillomavirus (HPV) vaccine (17%), and the Bacille Calmette-Guérin (BCG) vaccine (16%). Compared to non-recent immigrant parents, almost one-half (47%) mentioned that their child has not received the seasonal influenza vaccine, one-third (33%) mentioned their child has not received the human papillomavirus (HPV) vaccine, and one-quarter (25%) mentioned their child has not received the Bacille Calmette-Guérin (BCG) vaccine.

Table 22 – Vaccines not received by child⁵

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Seasonal influenza (flu)	43%	47%	26%
Human Papillomavirus (HPV)	30%	33%	17%
Bacille Calmette-Guérin (BCG) (*Only recommended in Northwest Territories and Nunavut)	23%	25%	16%
Hepatitis A and B (HAHB) (*Only recommended in Quebec)	16%	17%	12%
Hepatitis B (Hep B or HB)	14%	14%	11%
Rotavirus (Rota)	13%	13%	10%
Pneumococcal (Pneu-C-13 or Pneu-C-10 or Pneu-P-23)	12%	13%	10%
Meningococcal (Men, Men-C-C or Men-C-ACYW-135)	12%	12%	11%
Varicella (Var)	12%	13%	8%
Haemophilus influenzae Type b (Hib)	11%	11%	9%
Polio (IPV)	10%	10%	9%
Measles, Mumps, Rubella, Varicella (MMRV)	9%	9%	8%
Measles, Mumps, Rubella (MMR)	9%	9%	8%
Diphtheria, Tetanus and Pertussis (DTaP, Tdap or Td)	8%	8%	11%
Don't know	33%	29%	48%
Prefer not to answer	5%	5%	4%
Unweighted Base	919	573	334
Weighted Base	938	748	177

c2a - Which of the following recommended vaccines has [Child’s nickname] not received?

⁵ Flu Shot Inquiry: The question regarding whether or not the child has received a flu shot framed within the current immunization status. Responses to this question might yield varied responses due to the annual nature of the flu shot. Some individuals may not consider last year's flu vaccine if they haven't received this year's, introducing potential response variations that will require revision in later cycles of the survey.

Almost three-quarters of recent (72%) and non-recent immigrant (73%) parents report no obstacles in vaccinating their child. Under one-tenth (in both recent (7%) and non-recent (9%) immigrant parents) report it is difficult to book time off in order to vaccinate their child.

Table 23 – Obstacles in child’s vaccination

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
No obstacles	73%	73%	72%
Difficult to book time off work/ school for a vaccine appointment	9%	9%	7%
My child fears needles	7%	7%	6%
At least one parent opposed it	3%	3%	3%
Not necessary, fear of side effects or mistrust in vaccines	2%	2%	0%
Live in a remote area (limited transportation)	1%	1%	0%
Language barriers (e.g., lack of access to relevant information in my preferred language)	0%	0%	1%
Concerns about racism or discrimination towards your child	0%	0%	1%
Other, please specify	3%	4%	3%
Don't know	3%	2%	4%
Prefer not to answer	2%	1%	4%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

c4_coded - What obstacles if any, have made it more difficult to get [Child’s nickname] vaccinated with one or more of the recommended childhood vaccines?

Among those whose children received only “some” or “none” of the recommended vaccines, under one-quarter (23%) of recent immigrant parents report they do not know why this is the case, and almost one-fifth indicate the vaccine was not available or recommended in their country of origin (18%) and/or they did not know one or more of the recommended vaccines were important for the child to receive (17%).

For non-recent immigrant parents, almost two-fifths (39%) of those whose children are not fully vaccinated did not consider one or more recommended vaccine necessary for their child to receive, and approximately one-fifth (18%) have concerns about the risk of side effects.

Table 24 – Reasons not to have child immunized with one or more recommended childhood vaccines

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
I did not consider it necessary for my child	34%	39%	14%
Concerns about the risk of side effects of vaccines	17%	18%	14%
I did not know that one or more of these vaccines was important for my child to get	15%	15%	17%
Not confident in the effectiveness of vaccines	12%	14%	4%
The vaccine was not available or recommended in my origin country	7%	4%	18%
Not if age / not yet received but planned	5%	5%	7%
Religious or philosophical reasons	2%	3%	1%
My child has or had a pre-existing medical condition	2%	2%	1%
Other, please specify	9%	10%	8%
Don't know	16%	14%	23%
Prefer not to answer	3%	2%	9%
Unweighted Base	864	548	305
Weighted Base	879	708	160

c5_coded - For what reason(s) has [Child's nickname] not been immunized with one or more recommended childhood vaccines? (Shown if C2=2,3).

Among those whose children received “some” or “all” of the recommended vaccines, about two-thirds cite the reason for protecting their child, themselves, or others from disease (66% of recent immigrant parents, and 65% of non-recent immigrant parents). Moreover, about two-fifths of recent and non-recent immigrant parents (both 38%) also cite receiving advice from their doctor or healthcare professional for immunizing their child. Over one-third (34%) of recent immigrant parents say the benefits are more important than the risks, as do over two-fifths (43%) of non-recent immigrant parents.

Table 25 – Reason for having child immunized with one or more recommended childhood vaccines

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
To protect my child, myself or others from disease	65%	65%	66%
Benefits are more important than risks	42%	43%	34%
Advice from my doctor or health care professional	38%	38%	38%
Need it for daycare or school entry	19%	20%	15%
I fear I may regret it later if I don't	7%	7%	7%
I know or knew someone who got a vaccine-preventable disease	5%	5%	4%
Advice from a friend or a family member	3%	3%	3%
Other, please specify	2%	2%	1%
Don't know	2%	2%	3%
Prefer not to answer	1%	1%	1%
Unweighted Base	3,113	2,071	998
Weighted Base	3,062	2,501	517

c7_coded - Why did [Child's nickname] receive one or more recommended childhood immunizations? (Shown if C2=1,2).

Over one-in-ten (13%) recent immigrant parents are or have been hesitant to vaccinate their child with a recommended immunization. About one-fifth (20%) of non-recent immigrant parents are or have also been hesitant to do so.

Table 26 – Parents' hesitancy towards recommended childhood vaccination

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
No	79%	78%	83%
Yes	18%	20%	13%
I don't know	1%	1%	2%
I prefer not to answer	1%	1%	2%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

c9a - Are you or have you been hesitant to vaccinate [Child's nickname] with one or more recommended childhood immunizations?

Among those who are or have been hesitant to vaccinate their child, over six-in-ten (64%) recent immigrant parents and over one-half (55%) of non-recent immigrant parents cite concerns about the safety of the vaccines and/or side effects as a reason. Parents have concerns about the effectiveness of the vaccine (26% of recent immigrant parents, and 35% of non-recent immigrant parents); they also cite mistrust in vaccine-related information (15% of recent immigrant parents, and 35% of non-recent immigrant parents).

Table 27 - Reasons for hesitancy and/or decision to not get child immunized

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Concerns about the safety of the vaccine(s) and/or side effects	56%	55%	64%
Concerns about the effectiveness of the vaccine(s)	33%	35%	26%
Mistrust in vaccine-related information	33%	35%	15%
I wanted to discuss the vaccine(s) with my child's health care practitioner	13%	13%	10%
My child is not at risk for infection	11%	12%	8%
Do/did not know where to get reliable information	6%	6%	6%
My child had a bad experience with previous vaccines	6%	6%	7%
Religions or philosophical reasons	6%	5%	13%
My child had a bad experience with health care providers	2%	2%	1%
Concerns about racism or discrimination	1%	1%	5%
Other, please specify	3%	4%	1%
I don't know	2%	1%	5%
I prefer not to answer	2%	2%	2%
Unweighted Base	572	432	132
Weighted Base	614	529	78

c10_coded - For what reasons were/are you hesitant and/or decided not to get [Child's nickname] immunized for one or more recommended childhood immunizations? (Shown if C9a=Yes).

About 37% of recent immigrant parents, whose child is older than 6 months old and has been vaccinated, mentioned that their child has not received any doses of a Health Canada-approved COVID-19 vaccine. About the same proportion (36%) mentioned that their child has received two doses. Among non-recent immigrant parents, whose child is older than 6 months and has been vaccinated, 30% mentioned that their child has not received any Health Canada-approved COVID-19 vaccines. About 39% mentioned that their child has received two doses.

Table 28 – Number of COVID-19 doses received by child

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
None	31%	30%	37%
At least one dose	66%	68%	57%
1 dose	9%	9%	8%
2 doses	38%	39%	36%
3 doses or more	19%	21%	13%
I don't know	1%	1%	3%
I prefer not to answer	2%	2%	2%
Unweighted Base	3,185	2,109	1,028
Weighted Base	3,129	2,547	534

c3 - How many doses of the Health Canada approved COVID-19 vaccines has [Child's nickname] received?

Approximately six-in-ten recent immigrant parents (60%) and non-recent immigrant parents (62%) whose child is over 6 months old and has received at least one COVID-19 vaccination dose reportedly did so to protect themselves and/or household members against COVID-19 infection. Over one-half (56% for both groups) vaccinated their child against COVID-19 based on public health recommendations, and about one-half did so to prevent the spread of COVID-19 in their community (48% of recent immigrant parents, and 55% of non-recent immigrant parents).

Table 29 – Reasons why child is vaccinated against COVID-19

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
To protect themselves and/or household members against COVID-19 infection	62%	62%	60%
Based on public health recommendations	56%	56%	56%
To prevent the spread of COVID-19 in my community	54%	55%	48%
To help restore a more normal life (e.g., to lift public health measures, participate in extra-curricular activities, travel)	48%	50%	39%
To protect themselves against long COVID	42%	41%	43%
The COVID-19 vaccine was recommended by a health care professional	33%	34%	33%
Other, please specify	1%	1%	0%
I prefer not to answer	1%	1%	1%
Unweighted Base	2,306	1,621	659
Weighted Base	2,065	1,734	305

c8_coded - Why did [Child's nickname] receive a COVID-19 vaccine? (Shown if C3=1 or more AND Child is over 6 months).

About one-half of recent immigrant (52%) and non-recent immigrant (50%) parents are not, or have not been, hesitant to vaccinate their child against COVID-19.

Table 30 - Hesitancy to vaccinate child against COVID-19

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
No	50%	50%	52%
Yes	46%	47%	42%
I don't know	1%	1%	2%
I prefer not to answer	2%	2%	4%
Unweighted Base	3,304	2,188	1,065
Weighted Base	3,297	2,679	567

c9b - Are you or have you been hesitant to vaccinate [Child's nickname] against COVID-19?

Almost one-half (48%) of recent immigrant parents who have been hesitant to vaccinate their child against COVID-19 have concerns that not enough research on the vaccine has been done in children. Almost the same proportion (44%) have concerns about the safety of COVID-19 vaccines and/or side effects. Additionally, almost three-in-ten (29%) have concerns about the effectiveness of COVID-19 vaccines. Almost six-in-ten (57%) non-recent immigrant parents who have been hesitant to vaccinate their child against COVID-19 have concerns about the vaccine's safety and/or side effects. About the same proportion (55%) have concerns that not enough research on the vaccine has been done in children, and approximately 38% have concerns about its effectiveness.

Table 31 - Reasons for hesitation and/or decision to not get child vaccinated against COVID-19

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Concerns about the safety of COVID-19 vaccines and/or side effects	55%	57%	44%
Concerns that not enough research on the vaccine has been done in children	54%	55%	48%
Concerns about the effectiveness of COVID-19 vaccines	37%	38%	29%
Mistrust in COVID-19 vaccine-related information	33%	35%	27%
Do/did not consider it is/was necessary	27%	28%	22%
My child already had a COVID-19 infection	21%	22%	18%
My child is not at risk of getting COVID-19 or at risk of severe infection	20%	21%	16%
I want(ed) to first discuss COVID-19 vaccines with my child's health care practitioner	5%	5%	7%
My child fears needles	4%	4%	4%
Religious or philosophical reasons	3%	3%	7%
My child had a bad experience with previous vaccinations	1%	2%	1%
My child had a bad experience with health care providers	1%	1%	2%
Concerns about racism or discrimination	1%	1%	0%
Other, please specify	3%	3%	3%
Don't know	0%	0%	1%
Prefer not to answer	0%	0%	1%
Unweighted Base	1,362	919	421
Weighted Base	1,521	1,262	237

c11_coded - For what reasons were/are you hesitant and/or decided not to get a COVID-19 vaccine for [Child's nickname]? (Shown if C9b=Yes).

Among recent immigrant and non-recent immigrant parents, about six-in-ten “definitely will” get their child vaccinated with the recommended childhood vaccines in the future (61%, and 60%, respectively). Over one-fifth “probably will” (22% of recent immigrant parents, and 23% of non-recent immigrant parents). Few recent immigrant and non-recent immigrant parents indicated they “probably won’t” get their child vaccinated with the recommended childhood vaccines.

Table 32 - Likelihood of getting child vaccinated with the recommended vaccines in the future (excluding COVID-19 vaccines)

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Definitely will	60%	60%	61%
Probably will	23%	23%	22%
Probably won't	6%	7%	5%
Definitely won't	5%	5%	4%
Not applicable, my child has received all recommended childhood vaccines	2%	2%	1%
I don't know	3%	2%	4%
I prefer not to answer	2%	1%	3%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d1a - Excluding the COVID-19 vaccines, how likely is it that you will get [Child’s nickname] vaccinated with the recommended childhood vaccines in the future?

Among recent immigrant parents with a child aged 6 months or older, 28% “definitely will” vaccinate their child against COVID-19 in the future, 27% “probably will,” and 19% “probably won’t.” Among non-recent immigrant parents, 23% “definitely will” do so, 25% “probably will,” and 21% “probably won’t.”

Table 33 – Likelihood of getting child vaccinated with a COVID-19 vaccine in future

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Definitely will	23%	23%	28%
Probably will	25%	25%	27%
Probably won't	20%	21%	19%
Definitely won't	21%	22%	14%
I don't know	8%	8%	8%
I prefer not to answer	2%	2%	4%
Unweighted Base	3,304	2,188	1,065
Weighted Base	3,297	2,679	567

d1b - How likely is it that you will get [Child’s nickname] vaccinated with a COVID-19 vaccine in the future?

Among recent immigrant parents with a child under 6 months old, 28% “definitely will” vaccinate their child against COVID-19 if it becomes available, 24% “probably won’t” and 20% “definitely won’t.” Results for non-recent immigrant parents are not reportable due to small sample size.

Table 34 – Likelihood of getting child vaccinated with a COVID-19 vaccine in future, if available

	Total	Non-immigrant or in Canada for more than 10 years*	Immigrant of 10 years or less
Definitely will	14%	-	28%
Probably will	28%	-	0%
Probably won't	29%	-	24%
Definitely won't	21%	-	20%
I don't know	0%	-	0%
I prefer not to answer	8%	-	28%
Unweighted Base	19	8	11
Weighted Base	26	18	8

d1c - How likely is it that you will get [Child’s nickname] vaccinated with a COVID-19 vaccine in the future if it becomes available? *Data was suppressed because of the base is below 10.

Among recent immigrant parents, 21% “strongly agree” their views about vaccines have changed since the COVID-19 pandemic, 28% “somewhat agree,” 16% “somewhat disagree,” and 22% “strongly disagree.” Among non-recent immigrant parents, 19% “strongly agree” their views about vaccines have changed since the COVID-19 pandemic, 24% “somewhat agree,” 18% “somewhat disagree,” and 34% “strongly disagree.”

Table 35 – Respondent’s level of agreement with “In general, my views about vaccines have changed since the COVID-19 pandemic”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	19%	19%	21%
Somewhat agree	25%	24%	28%
Somewhat disagree	18%	18%	16%
Strongly disagree	32%	34%	22%
I don't know	4%	4%	6%
I prefer not to answer	2%	2%	5%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d2_a - In general, my views about vaccines have changed since the COVID-19 pandemic. Please rate your level of agreement with the statements below.

About six-in-ten recent immigrant (58%) and non-recent immigrant (62%) parents “strongly agree” that, before the COVID-19 pandemic, vaccines were safe for children. Over one in four recent immigrant and non-recent immigrant parents “somewhat agree” with this statement (28% for each).

Table 36 – Respondent’s level of agreement with “Before the COVID-19 pandemic, I believed that vaccines were safe for children”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	61%	62%	58%
Somewhat agree	29%	28%	28%
Somewhat disagree	4%	4%	5%
Strongly disagree	3%	3%	3%
I don't know	2%	2%	4%
I prefer not to answer	1%	1%	3%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d2_b - Before the COVID-19 pandemic, I believed that vaccines were safe for children. Please rate your level of agreement with the statements below.

About six-in-ten recent immigrant (60%) and non-recent immigrant (65%) parents “strongly agree” that, before the COVID-19 pandemic, vaccines were effective for children. Approximately one-quarter “somewhat agree” (25% of recent immigrant parents and 27% of non-recent immigrant parents).

Table 37 - Respondent’s level of agreement with “Before the COVID-19 pandemic, I believed that vaccines were effective for children”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	64%	65%	60%
Somewhat agree	27%	27%	25%
Somewhat disagree	4%	3%	6%
Strongly disagree	2%	2%	2%
I don't know	2%	1%	4%
I prefer not to answer	1%	1%	3%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d2_c - Before the COVID-19 pandemic, I believed that vaccines were effective for children. Please rate your level of agreement with the statements below.

Recent immigrant parents (49%) cited they would be most likely to consult healthcare professionals for information on childhood immunization. Also, they indicated they would be most likely to consult the Public Health Agency of Canada or Health Canada (55%); although, they would be also most likely to consult their Ministry of Health (40%), and their local public health unit or clinic (39%). Similarly, non-recent immigrant parents (55%) said they would be most likely to consult healthcare professionals for information on childhood immunization. They mentioned they would be most likely to consult the Public Health Agency of Canada or Health Canada (52%), scientific publications or journals (40%), and their Ministry of Health (38%).

Table 38 – Most likely sources of information to be consulted by parents for childhood immunization

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Health care provider	54%	55%	49%
Public Health Agency of Canada or Health Canada	52%	52%	55%
Scientific publications, journals	39%	40%	32%
Ministry of Health within my province or territory	38%	38%	40%
My local public health unit/clinic	36%	35%	39%
International organizations (e.g., World Health Organization (WHO))	31%	31%	34%
Community nursing stations or clinics	19%	19%	18%
National Advisory Committee on Immunization (NACI)	18%	17%	20%
News/media	13%	13%	15%
Family/friends	13%	12%	17%
Social media (e.g. Twitter, Facebook)	6%	5%	8%
Other, please specify	2%	3%	0%
Don't know	2%	2%	2%
Prefer not to answer	2%	2%	2%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d3_coded - Which of the following sources of information would you be most likely to consult in order to find information about childhood immunization?

Over eight-in-ten recent immigrant parents (82%) and non-recent immigrant parents (86%) think that “In general, vaccines are safe.” About 10% of recent immigrant parents reported they “don’t know.”

Table 39 - True or false: In general, vaccines are safe

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
True	85%	86%	82%
False	5%	6%	3%
I don't know	7%	6%	10%
I prefer not to answer	3%	2%	4%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d4_a - In general, vaccines are safe. To the best of your knowledge, please rate whether the following statements about childhood immunizations are true or false.

Over eight-in-ten (85%) recent immigrant parents and almost nine-in-ten (88%) non-recent immigrant parents think that “in general, vaccines are effective.” Under one-in-ten recent immigrant parents (8%) indicated they “don’t know.”

Table 40 - True or false: In general, vaccines are effective

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
True	87%	88%	85%
False	4%	4%	3%
I don't know	6%	6%	8%
I prefer not to answer	2%	2%	5%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d4_b - In general, vaccines are effective. To the best of your knowledge, please rate whether the following statements about childhood immunizations are true or false.

Over one-half (54%) of recent immigrant parents and six-in-ten (60%) non-recent immigrant parents think that “in general, COVID-19 vaccines are safe.” About three-in-twenty (15%) of recent immigrant parents do not think so, and almost one-quarter (24%) said they “don’t know.” Approximately one-fifth (20%) of non-recent immigrant parents also do not think so, and over three-in-twenty (16%) indicated they “don’t know.”

Table 41 - True or false: In general, COVID-19 vaccines are safe

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
True	59%	60%	54%
False	19%	20%	15%
I don't know	17%	16%	24%
I prefer not to answer	5%	4%	8%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d4_c - In general, COVID-19 vaccines are safe. To the best of your knowledge, please rate whether the following statements about childhood immunizations are true or false.

Almost six-in-ten recent immigrant (56%) and non-recent immigrant (58%) parents think that “in general, COVID-19 vaccinations are effective.” About one-fifth (19%) of recent immigrant parents do not think so, and neither do about one-quarter (24%) of non-recent immigrant parents. Approximately one-fifth of recent immigrant parents (18%) are unsure, as are three-in-twenty (15%) non-recent immigrant parents.

Table 42 - True or false: In general, COVID-19 vaccines are effective

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
True	57%	58%	56%
False	24%	24%	19%
I don't know	16%	15%	18%
I prefer not to answer	4%	3%	7%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d4_d - In general, COVID-19 vaccines are effective. To the best of your knowledge, please rate whether the following statements about childhood immunizations are true or false.

Most recent immigrant parents (93%) agree that vaccines help to protect their child’s health (62% “strongly agree” and 31% “somewhat agree”), while only 5% disagree with this statement (4% “somewhat disagree” and 0% “strongly disagree”).

A similar proportion (92%) of non-recent immigrant parents agree that vaccines help to protect their child’s health (64% “strongly agree” and 28% “somewhat agree”), while only 7% disagree with this statement (4% “somewhat disagree” and 3% “strongly disagree”).

Table 43 – Level of agreement with “In general, vaccines help to protect my child’s health”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	63%	64%	62%
Somewhat agree	29%	28%	31%
Somewhat disagree	4%	4%	4%
Strongly disagree	2%	3%	0%
I don't know	1%	1%	2%
I prefer not to answer	1%	1%	1%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_a - In general, vaccines help to protect my child's health. To the best of your knowledge, please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 67% of recent immigrant parents agree that they are concerned about the potential side effects from vaccines (27% “strongly agree” and 41% “somewhat agree”). Less than one-third (29%) disagree with this statement (18% “somewhat disagree” and 11% “strongly disagree”).

Of non-recent immigrant parents, 58% agree that they are concerned about potential side effects from vaccines (21% “strongly agree” and 36% “somewhat agree”). Four in ten (40%) disagree with this statement (25% “somewhat disagree” and 15% “strongly disagree”).

Table 44 – Level of agreement with “In general, I am concerned about the potential side effects from vaccines”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	22%	21%	27%
Somewhat agree	37%	36%	41%
Somewhat disagree	23%	25%	18%
Strongly disagree	14%	15%	11%
I don't know	2%	2%	2%
I prefer not to answer	1%	1%	2%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_b - In general, I am concerned about the potential side effects from vaccines. Please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 19% of recent immigrant parents agree that the use of alternative practices can eliminate the need for vaccination (6% “strongly agree” and 14% “somewhat agree”), and 57% disagree with this statement (19% “somewhat disagree” and 39% “strongly disagree”).

Of non-recent immigrant parents, 16% agree that the use of alternative practices can eliminate the need for vaccination (4% “strongly agree” and 12% “somewhat agree”). Three quarters (75%) disagree with this statement (20% “somewhat disagree” and 55% “strongly disagree”).

Table 45 – Level of agreement with “Alternative practices, such as homeopathy or naturopathy, can eliminate the need for vaccination”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	4%	4%	6%
Somewhat agree	12%	12%	14%
Somewhat disagree	20%	20%	19%
Strongly disagree	52%	55%	39%
I don't know	10%	8%	19%
I prefer not to answer	2%	1%	4%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_c - In general, the use of alternative practices can eliminate the need for vaccination.: Please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 30% of recent immigrant parents agree that a healthy lifestyle such as healthy nutrition and hygiene can replace the need for vaccination (14% “strongly agree” and 16% “somewhat agree”), and 64% disagree with this statement (26% “somewhat disagree” and 37% “strongly disagree”).

Of non-recent immigrant parents, 24% agree that a healthy lifestyle such as healthy nutrition and hygiene can replace the need for vaccination (8% “strongly agree” and 15% “somewhat agree”). Almost three quarters (73%) disagree with this statement (24% “somewhat disagree” and 49% “strongly disagree”).

Table 46 – Level of agreement with “In general, a healthy lifestyle such as healthy nutrition and hygiene can replace the need for vaccination”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	9%	8%	14%
Somewhat agree	16%	15%	16%
Somewhat disagree	24%	24%	26%
Strongly disagree	47%	49%	37%
I don't know	4%	3%	5%
I prefer not to answer	1%	0%	1%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_d - In general, a healthy lifestyle such as healthy nutrition and hygiene can replace the need for vaccination. Please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 87% of recent immigrant parents agree that having their child vaccinated helps to protect the health of others in their family and/or community (57% “strongly agree” and 30% “somewhat agree”), and only 7% disagree with this statement (5% “somewhat disagree” and 2% “strongly disagree”).

Of non-recent immigrant parents, 84% agree that having their child vaccinated helps to protect the health of others in their family and/or community (58% “strongly agree” and 27% “somewhat agree”), and 13% disagree with this statement (7% “somewhat disagree” and 6% “strongly disagree”).

Table 47 – Level of agreement with “Having my child vaccinated helps to protect the health of others in my family and/or community”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	57%	58%	57%
Somewhat agree	27%	27%	30%
Somewhat disagree	6%	7%	5%
Strongly disagree	6%	6%	2%
I don't know	2%	2%	2%
I prefer not to answer	1%	1%	4%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_e - Having my child vaccinated helps to protect the health of others in my family and/or community. Please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 64% of recent immigrant parents agree that most parents in their community have their children vaccinated with all recommended vaccines (33% “strongly agree” and 32% “somewhat agree”), and only 6% disagree with this statement (5% “somewhat disagree” and 1% “strongly disagree”).

Of non-recent immigrant parents, three quarters (75%) agree that most parents in their community have their children vaccinated with all recommended vaccines (35% “strongly agree” and 40% “somewhat agree”), and only 8% disagree with this statement (7% “somewhat disagree” and 1% “strongly disagree”).

Table 48 – Level of agreement with “Most respondents in my community have their children vaccinated with all recommended vaccines”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	34%	35%	33%
Somewhat agree	39%	40%	32%
Somewhat disagree	6%	7%	5%
Strongly disagree	1%	1%	1%
I don't know	19%	16%	29%
I prefer not to answer	1%	1%	1%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_f - Most parents in my community have their children vaccinated with all recommended vaccines. Please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 37% of recent immigrant parents agree that children receive too many vaccines at the same visit (11% “strongly agree” and 26% “somewhat agree”), and 47% disagree with this statement (27% “somewhat disagree” and 20% “strongly disagree”).

Of non-recent immigrant parents, 33% agree that children receive too many vaccines at the same visit (12% “strongly agree” and 21% “somewhat agree”). More than half (55%) disagree with this statement (34% “somewhat disagree” and 21% “strongly disagree”).

Table 49 – Level of agreement with “Children receive too many vaccines at the same visit”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	12%	12%	11%
Somewhat agree	22%	21%	26%
Somewhat disagree	32%	34%	27%
Strongly disagree	21%	21%	20%
I don't know	12%	11%	14%
I prefer not to answer	1%	1%	3%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_g - Children receive too many vaccines at the same visit. To the best of your knowledge, please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 40% of recent immigrant parents agree that children receive too many vaccines, overall (11% “strongly agree” and 29% “somewhat agree”), and 47% disagree with this statement (24% “somewhat disagree” and 23% “strongly disagree”).

Of non-recent immigrant parents, 31% agree that children receive too many vaccines, overall (11% “strongly agree” and 20% “somewhat agree”), and 59% disagree with this statement (28% “somewhat disagree” and 31% “strongly disagree”).

Table 50 – Level of agreement with “Children receive too many vaccines, overall”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	11%	11%	11%
Somewhat agree	21%	20%	29%
Somewhat disagree	27%	28%	24%
Strongly disagree	29%	31%	23%
I don't know	9%	9%	11%
I prefer not to answer	1%	1%	2%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_h - Children receive too many vaccines, overall. To the best of your knowledge, please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 37% of recent immigrant parents agree that it is better to develop immunity from having a disease rather than from a vaccine (16% “strongly agree” and 21% “somewhat agree”), and half (50%) disagree with this statement (22% “somewhat disagree” and 28% “strongly disagree”).

Of non-recent immigrant parents, 35% agree that it is better to develop immunity from having a disease rather than from a vaccine (12% “strongly agree” and 22% “somewhat agree”), and 55% disagree with this statement (25% “somewhat disagree” and 30% “strongly disagree”).

Table 51 – Level of agreement with “It is better to develop immunity from having a disease rather than from a vaccine”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	13%	12%	16%
Somewhat agree	22%	22%	21%
Somewhat disagree	25%	25%	22%
Strongly disagree	30%	30%	28%
I don't know	9%	9%	10%
I prefer not to answer	1%	1%	3%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_i - It is better to develop immunity from having a disease rather than from a vaccine. Please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 79% of recent immigrant parents agree that delaying child vaccines causes risks to their health (45% “strongly agree” and 34% “somewhat agree”), and 12% disagree with this statement (8% “somewhat disagree” and 5% “strongly disagree”).

Of non-recent immigrant parents, almost three quarters (73%) agree that delaying child vaccines causes risks to their health (39% “strongly agree” and 34% “somewhat agree”), and 19% disagree with this statement (11% “somewhat disagree” and 8% “strongly disagree”).

Table 52 – Level of agreement with “Delaying child vaccines causes risks to their health”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	40%	39%	45%
Somewhat agree	34%	34%	34%
Somewhat disagree	10%	11%	8%
Strongly disagree	7%	8%	5%
I don't know	8%	8%	7%
I prefer not to answer	1%	1%	1%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_j - Delaying child vaccines causes risks to their health. To the best of your knowledge, please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

A proportion of 79% of recent immigrant parents agree that unvaccinated children are at higher risk of getting some serious diseases, including COVID-19 (47% “strongly agree” and 32% “somewhat agree”), and 13% disagree with this statement (8% “somewhat disagree” and 6% “strongly disagree”).

Of non-recent immigrant parents, almost three quarters (73%) agree that unvaccinated children are at higher risk of getting some serious diseases, including COVID-19 (45% “strongly agree” and 28% “somewhat agree”), and one-fifth (20%) disagree with this statement (10% “somewhat disagree” and 10% “strongly disagree”).

Table 53 – Level of agreement with “Unvaccinated children are at higher risk of getting some serious diseases including COVID-19”

	Total	Non-immigrant or in Canada for more than 10 years	Immigrant of 10 years or less
Strongly agree	45%	45%	47%
Somewhat agree	29%	28%	32%
Somewhat disagree	10%	10%	8%
Strongly disagree	9%	10%	6%
I don't know	5%	5%	5%
I prefer not to answer	2%	2%	3%
Unweighted Base	3,323	2,196	1,076
Weighted Base	3,323	2,697	575

d5_k - Unvaccinated children are at higher risk of getting some serious diseases, including COVID-19.: Please rate the extent to which you agree or disagree with the following statements about childhood immunizations.

6. Conclusion

Most children have been vaccinated at least once in their lifetime (93% for both recent immigrant parents and non-recent immigrant parents). A majority of those who received at least one vaccine also received all the recommended childhood vaccines for their child's age (66% for those with recent immigrant parents and 70% for those with non-recent immigrant parents).

Although most did not encounter obstacles when trying to get vaccinated, difficulty booking time off work or school for a vaccine appointment and a child's fear of needles were the main obstacles mentioned by both recent immigrant and non-recent immigrant parents.

For recent immigrant parents, the main reason not to have their child immunized with one or more recommended childhood vaccines was because the vaccine was not available or recommended in their origin country (18%) and because they did not know that one or more of these vaccines were important for their child to get (17%). For non-recent immigrant parents, the main reasons included not considering it necessary for their child (39%) and concerns about the safety of the vaccine(s) and/ or their side effects (18%).

For recent immigrant parents, the main reasons for deciding not to get their child vaccinated or for being hesitant towards vaccination was concerns about the safety of the vaccine(s) or their side effects for both recent immigrant and non-recent immigrant parents (64% and 55%, respectively), followed by concerns about the effectiveness of the vaccine(s) (26% for recent immigrant parents and 35% for non-recent immigrant parents) and mistrust in vaccine-related information (15% for recent immigrant parents and 35% for non-recent immigrant parents) .

Regarding the COVID-19 vaccine specifically, among recent immigrant parents, 57% said that their child has received at least one dose of the COVID-19 vaccine, compared to 68% among non-recent immigrant parents.

Non-recent immigrant parents tend to believe in higher proportions than recent immigrant parents that the COVID-19 vaccine is safe (60% vs. 54%).

Appendix 1: English Questionnaire

Recent Immigrants

Intro CATI

Hello, this is _____ calling from TellCityHall. We are conducting an online study about emerging public health topics in Canada on behalf of The Public Health Agency of Canada. Can I send you a TEXT with a link to the study to complete when you have time?

IF REFUSE TO RECEIVE TEXT:

I can also send the survey link by EMAIL. Can I send you an email with a link to the survey? We will only send you a message for the purposes of administering this specific survey.

ONLINE SURVEY LENGTH:

If asked; the online survey will take approximately 10 minutes depending on your answers.

IF PERSON IS ANGRY ABOUT BEING CALLED:

We would be happy to put you on our do-not-call list. Thank you for your time today.

Respondent too busy (refusal/appointment):

We will send you the study via text message or email and you can complete it when it's more convenient.

If needed:

You've completed a study for us in the past, and said you might participate in public policy surveys in the future. TellCityHall is a public policy initiative of Advanis, a market and social research company. Tell City Hall is a service that provides survey information to all levels of government and non-profits. All of your responses are completely anonymous and only group results will be reported. The study can be completed on a smartphone, tablet, or computer.

- 4 Yes - Send SMS/text message to current phone number *(Show if is mobile (phone_source = 2,3))*
- 5 Send SMS/text message to a different number
- 6 Send email message
- 3 Callback later (use sparingly)
- 2 No - Refused (did not agree to email or SMS)

Intro Web

Si vous préférez répondre à l'étude en français, veuillez cliquer sur français

This public health study is sponsored by the Public Health Agency of Canada and is focused on knowledge, attitudes and experiences about childhood immunization for key populations. [Advanis \(http://advanis.net\)](http://advanis.net) (opens in a new window) is conducting the research on behalf of the Public Health Agency of Canada. TellCityHall is one of Advanis' data collection methods.

It will take approximately 10 minutes to complete and is voluntary and confidential. Your responses will

not be linked to any personally identifiable information, in an effort to protect your anonymity.

For more information about this survey and how the data will be used, please see below. If you agree to participate in this survey, please click on the following button to continue:

Privacy Statement

Participation in this study is voluntary and you can withdraw at any time without any impact to you. There will be no consequences if you decide not to participate. You may skip questions that you do not feel comfortable answering by clicking “Prefer not to answer”, where applicable. You may also complete the survey in several sessions and from different devices. If you are interrupted while doing the survey, you can click on the same link to pick up right where you left off. Once data has been collected, please note that researchers have no way of knowing which data belongs to which participant. The results from partially completed or abandoned surveys will be deleted.

What You Will Be Asked to Do

You will be asked some demographic questions and questions related to childhood vaccines. Please note that certain questions will be asked at the start of the survey to determine if you are eligible to participate. If you are not eligible to participate, your data will be removed and destroyed.

What are the benefits of participating?

By participating, you are helping to generate data which will help to improve the health and well-being of children from key Canadian populations by providing public health authorities with the information they need to ensure health equity.

Why are we collecting your information?

You will be asked questions, such as age, gender, sexual orientation and ethnicity in order to better understand knowledge, attitudes, and experiences across different key populations. You will also be asked about the first three characters of your postal code to help determine your geographic area for sampling purposes. Your home address cannot be identified through this information. We will not ask you to provide us with any information that could directly identify you, such as name(s), or date of birth and data will be stored on password-protected computers. However, in exceptional circumstances, individual responses in combination with other available information could lead to identifying you. The protection of your personal information is very important to us, and we will make every effort to safeguard it and reduce the risk that you are identified.

It is possible that some questions may be triggering to some people. Risks to participants will be minimized by providing a note before these questions appear. You have the right to skip any questions you are not comfortable answering.

What is the Authority to Collect the Information?

The information you provide to the Public Health Agency of Canada is collected by the Centre for Immunization Surveillance under the authority of section 4 of the Department of Health Act and Section 3 of the Public Health Agency of Canada Act and handled in accordance with the Privacy Act.

Will we use or share your personal information for any other reason?

The survey firm, Advanis, will be responsible for collecting survey data from all participants. Once data collection is complete, Advanis will provide the Public Health Agency of Canada with a dataset that will

not include any individual responses to reduce the risk that you could be identified. All the responses received will be grouped for analysis and presented in grouped form. The dataset will also be available to federal and provincial governments, organizations, and researchers across Canada, if requested. Any reports or publications produced based on this research will use grouped data and will not identify you or link you to these survey results.

Your answers will remain anonymous and the information you provide will be administered according to the requirements of the Privacy Act, the Access to Information Act, and any other pertinent legislation. Click to view our [privacy policy \(http://www.tellcityhall.ca/privacy.html\)](http://www.tellcityhall.ca/privacy.html) (opens in a new window).

What are your rights?

You have a right to complain to the Privacy Commissioner of Canada if you feel your personal information has not been handled properly.

For any questions or concerns about the survey or the information we are collecting, or if you require technical support (including accessibility requirements or to request that the survey be completed over the phone), please e-mail: survey+phacparents@tellcityhall.ca (<mailto:survey+phacparents@tellcityhall.ca>).

For more information about routine and catch-up immunization for infants and children in Canada [click here \(https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information/provincial-territorial-routine-vaccination-programs-infants-children.html\)](https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information/provincial-territorial-routine-vaccination-programs-infants-children.html) (opens in a new window).

This survey is registered with the Canadian Research Insights Council's (CRIC) Research Verification Service. The project verification number is: 20230803-AD830. Click [here \(https://www.canadianresearchinsightscouncil.ca/rvs/home/\)](https://www.canadianresearchinsightscouncil.ca/rvs/home/) (opens in a new window) to verify the legitimacy of this survey.

- ₁ If you require a screen reader or assistive device to complete this survey, check this box to access a compatible version
- ₂ Start Survey

S1

How old are you?

Minimum: 16, Maximum: 120

- ₋₈ I prefer not to answer

S1a Show if Refused age (S1 = I prefer not to answer)

For our analysis of the data, we need to know your age category. Can you tell us your age group?

- 1 Under 18
- 2 18 to 24
- 3 25 to 29
- 4 30 to 34
- 5 35 to 44
- 6 45 to 54
- 7 55 to 64
- 8 65 or older
- 8 I prefer not to answer

Term1 Show if Under18 OR Under18 category OR Refused ((S1) OR (S1a = 1,I prefer not to answer))

Thank you for your interest but for this survey, you must be 18 years of age or older.

Status Code: 501

S2

Are you a parent or legal guardian or person most knowledgeable of a child(ren) **under the age of 18**?

The person most knowledgeable may include the child's step-parent, adoptive parent, foster parent, sister or brother, grandparent or other relative caring and responsible for health decisions for the child.

- 1 Yes
- 0 No
- 8 I prefer not to answer

Term2 Show if Not a parent OR Refused (S2 = 0,I prefer not to answer)

Thank you for your interest, but for this survey, we are looking for people who are parents or legal guardian or the person most knowledgeable of a child under the age of 18.

Status Code: 502

Page Citizenship status

S7

In order to better understand the diversity of the Canadian population, as well as to help achieve greater equity and diversity in public health, we would like to ask you some questions about your general background. We acknowledge that some of these questions may result in uncomfortable feelings.

Which group best defines your citizenship status in Canada?

- 1 Canadian citizen - Born in Canada
- 2 Canadian citizen - Born outside of Canada, and became Canadian citizen
- 3 Permanent resident or landed immigrant (including overseas refugees entering Canada)
- 4 Refugee claimant or asylum seeker (entered Canada under this category but do not have permanent residency status)
- 5 Temporary resident in Canada (e.g., international student, visitor, temporary foreign worker, but excluding current refugee claimants/asylum seekers)
- 8 I prefer not to answer
- 9 I don't know

S8 Show if BecameCitizen OR Landed OR Refugee OR TempResident (S7 = 2,3,4,5)

How many years have you lived in Canada for?

If less than one year, please enter 0

Minimum: 0, Maximum: 90

- 8 I prefer not to answer
- 9 I don't know

B3

In the following questions, we are interested in your general health status.

In general, how would you describe your **physical health**?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor
- 8 I prefer not to answer
- 9 I don't know

B4

In general, how would you describe your **mental health**?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor
- 8 I prefer not to answer
- 9 I don't know

Page Number of children**S3**

You indicated previously that you are a parent or legal guardian or person most knowledgeable of a child(ren) **under the age of 18**.

How many children **under the age of 18** are you a parent/legal guardian/person most knowledgeable of?

- 0 None
- 1 1
- 2 2
- 3 3
- 4 4
- 5 5
- 6 6
- 7 7
- 8 8
- 9 9
- 10 10 or more
- 8 I prefer not to answer

S3b *Show if Refused Number of children (S3 = I prefer not to answer)*

For our analysis of the data, we **need to know** how many children under the age of 18 you are the parent/legal guardian/person most knowledgeable of.

Are you sure you don't want to give this information?

- 1 Yes, I'm sure
- 2 No, I will answer

S3c Show if WillAnswer AND Number not provided ((S3b = 2) AND (S3 = I prefer not to answer))

Term3 Show if NoChildren OR Refused to tell ((S3 = 0) OR (S3b = 1))

Thank you for your interest, but for this survey, we are looking for people who are parents or legal guardian or the person most knowledgeable of a child under the age of 18.

Status Code: 503

Page Child selection

B2

We now have some questions about your child(ren) who is(are) under 18 years of age.

How old is each child, **starting with the oldest child?**

Wait for the respondent to say age and then select appropriate level. DO NOT READ AGE BUCKETS UNLESS NEEDED.

1. 1st child
2. 2nd child *(Show if 2 or more children (S3 = 2,3,4,5,6,7,8,9,10))*
3. 3rd child *(Show if 3 or more children (S3 = 3,4,5,6,7,8,9,10))*
4. 4th child *(Show if 4 or more children (S3 = 4,5,6,7,8,9,10))*
5. 5th child *(Show if 5 or more children (S3 = 5,6,7,8,9,10))*
6. 6th child *(Show if 6 or more children (S3 = 6,7,8,9,10))*
7. 7th child *(Show if 7 or more children (S3 = 7,8,9,10))*
8. 8th child *(Show if 8 or more children (S3 = 8,9,10))*
9. 9th child *(Show if 9 or more children (S3 = 9,10))*
10. 10th child *(Show if 10 children (S3 = 10))*

- 1 under 6 months
- 2 6 months to less than 2 and a half years
- 3 2 and a half years to less than 5 years
- 4 5 years to less than 12 years

- 5 12 years to less than 18 years

Page Introduction

B0

During the survey we would like to ask you about your child who is **[under 6 months / 6 months to less than 2 and a half years / 2 and a half years to less than 5 years / 5 years to less than 12 years / 12 years to less than 18 years]** old. If you have more than one child in this age group, please think of the **[youngest / oldest]**.

In order to simplify your responses for the rest of the survey, please provide their initial(s) or a nickname which will be used to refer to this child throughout the survey. This information will not be kept or associated with any of your responses. It will only be used for you as a reference as you are completing this survey.

Please do not use your child's full name

B1

What is your relationship to <<B0.text>>?

- 1 Birth parent
- 2 Step-parent
- 3 Adoptive parent
- 4 Foster parent
- 5 Sister or brother
- 6 Grandparent
- 7 Other relative
- 8 Unrelated
- 8 I prefer not to answer

B5

Does <<B0.text>> currently live in your household (primary or secondary residence)?

- 1 Yes
- 0 No
- 8 I prefer not to answer

B2ageunder6months *Show if Selected Child Under6months (SelectedChild = 1)*

What is the exact age of <<B0.text>>?

- 1 1 month
- 2 2 months
- 3 3 months
- 4 4 months
- 5 5 months
- 8 I prefer not to answer

B2age6monthslessthan2half *Show if 6monthslessthan2half (SelectedChild = 2)*

What is the exact age of <<B0.text>>?

- 1 6 months
- 2 7 months
- 3 8 months
- 4 9 months
- 5 10 months
- 6 11 months
- 7 1 year old
- 8 2 years old
- 8 I prefer not to answer

B2age2halflessthan5 *Show if 2halflessthan5 (SelectedChild = 3)*

What is the exact age of <<B0.text>>?

- 1 2 years old
- 2 3 years old
- 3 4 years old
- 8 I prefer not to answer

B2ageChild5to11 *Show if Child5to11 (SelectedChild = 4)*

What is the exact age of <<B0.text>>?

- 1 5 years old
- 2 6 years old
- 3 7 years old
- 4 8 years old
- 5 9 years old
- 6 10 years old
- 7 11 years old
- 8 I prefer not to answer

B2ageChild12to17 *Show if Child12to17 (SelectedChild = 5)*

What is the exact age of <<B0.text>>?

- 1 12 years old
- 2 13 years old
- 3 14 years old
- 4 15 years old
- 5 16 years old
- 6 17 years old
- 8 I prefer not to answer

Page Immunization Coverage

C1

The next set of questions are about public health topics relating to children. For these questions, please **only** consider health experiences that apply to <<B0.text>>.

Has <<B0.text>> ever been vaccinated?

Refers to recommended childhood vaccines as well as COVID-19 vaccines.

- 1 Yes
- 0 No
- 8 I prefer not to answer
- 9 I don't know

Page Immunization Coverage *Show if Child is vaccinated OR Dont know OR Pref not to answer (C1 = 1,I prefer not to answer,I don't know)*

C2

(if Selected Child Under6months (SelectedChild = 1)) The following immunizations are recommended in Canada for children under 6 months:

- Diphtheria, Tetanus and Pertussis (DTaP, Tdap or Td)
- Haemophilus influenzae Type b (Hib)
- Hepatitis B (Hep B or HB)
- Meningococcal (Men, Men-C-C)
- Pneumococcal (Pneu-C-13 or Pneu-C-10)
- Polio (IPV)
- Rotavirus (Rota)
- Bacille Calmette-Guérin (BCG) (*Only recommended in Northwest Territories and Nunavut)

(if 6monthslessthan2half (SelectedChild = 2)) The following immunizations are recommended in Canada for children 6 months to less than 2 and a half years:

- Diphtheria, Tetanus and Pertussis (DTaP, Tdap or Td)
- Haemophilus influenzae Type b (Hib)
- Hepatitis B (Hep B or HB)
- Hepatitis A and B (HAHB) (*Only recommended in Quebec)
- Meningococcal (Men, Men-C-C)
- Pneumococcal (Pneu-C-13 or Pneu-C-10)
- Polio (IPV)
- Rotavirus (Rota)
- Bacille Calmette-Guérin (BCG) (*Only recommended in Northwest Territories and Nunavut)
- Measles, Mumps, Rubella (MMR)
- Measles, Mumps, Rubella, Varicella (MMRV)
- Varicella (Var)
- Seasonal influenza (flu)

(if 2halflessthan5 (SelectedChild = 3)) The following immunizations are recommended in Canada for children 2 and a half years to less than 5 years:

- Diphtheria, Tetanus and Pertussis (DTaP, Tdap or Td)
- Haemophilus influenzae Type b (Hib)
- Hepatitis B (Hep B or HB)
- Hepatitis A and B (HAHB) (*Only recommended in Quebec)
- Meningococcal (Men, Men-C-C)
- Pneumococcal (Pneu-C-13 or Pneu-C-10 or Pneu-P-23)
- Polio (IPV)
- Rotavirus (Rota)
- Bacille Calmette-Guérin (BCG) (*Only recommended in Northwest Territories and Nunavut)
- Measles, Mumps, Rubella (MMR)
- Measles, Mumps, Rubella, Varicella (MMRV)
- Varicella (Var)
- Seasonal influenza (flu)

(if Child5to11 (SelectedChild = 4)) The following immunizations are recommended in Canada for children 5 years to less than 12 years:

- Diphtheria, Tetanus and Pertussis (DTaP, Tdap or Td)
- Haemophilus influenzae Type b (Hib)
- Hepatitis B (Hep B or HB)
- Hepatitis A and B (HAHB) (*Only recommended in Quebec)
- Meningococcal (Men, Men-C-C or Men-C-ACYW-135)
- Pneumococcal (Pneu-C-13 or Pneu-C-10 or Pneu-P-23)
- Polio (IPV)
- Rotavirus (Rota)
- Bacille Calmette-Guérin (BCG) (*Only recommended in Northwest Territories and Nunavut)
- Measles, Mumps, Rubella (MMR)
- Measles, Mumps, Rubella, Varicella (MMRV)
- Varicella (Var)
- Human Papillomavirus (HPV)
- Seasonal influenza (flu)

(if Child12to17 (SelectedChild = 5)) The following immunizations are recommended in Canada for children 12 years to less than 18 years:

- Diphtheria, Tetanus and Pertussis (DTaP, Tdap or Td)
- Haemophilus influenzae Type b (Hib)
- Hepatitis B (Hep B or HB)
- Hepatitis A and B (HAHB) (*Only recommended in Quebec)
- Meningococcal (Men, Men-C-C or Men-C-ACYW-135)
- Pneumococcal (Pneu-C-13 or Pneu-C-10 or Pneu-P-23)
- Polio (IPV)
- Rotavirus (Rota)
- Bacille Calmette-Guérin (BCG) (*Only recommended in Northwest Territories and Nunavut)
- Measles, Mumps, Rubella (MMR)
- Measles, Mumps, Rubella, Varicella (MMRV)
- Varicella (Var)
- Human Papillomavirus (HPV)
- Seasonal influenza (flu)

More information can be found here: <https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information/provincial-territorial-routine-vaccination-programs-infants-children.html> (<https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information/provincial-territorial-routine-vaccination-programs-infants-children.html>)

To the best of your knowledge, would you say that <<B0.text>> has received all, some, or none of these recommended vaccines as of today?

- 1 All
- 2 Some
- 3 None
- 8 I prefer not to answer
- 9 I don't know

C2a Show if C2 Not All (C2 = 2,3,I don't know)

Which of the following recommended vaccines has <<B0.text>> not received?

More information can be found here: <https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information/provincial-territorial-routine-vaccination-programs-infants-children.html> (<https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information/provincial-territorial-routine-vaccination-programs-infants-children.html>)

Select all that apply

- 1 Diphtheria, Tetanus and Pertussis (DTaP, Tdap or Td)
- 2 Haemophilus influenzae Type b (Hib) (Show if All Age Group vaccines ((SelectedChild = 1) OR (SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 3 Hepatitis B (Hep B or HB) (Show if All Age Group vaccines ((SelectedChild = 1) OR (SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 4 Hepatitis A and B (HAHB) (*Only recommended in Quebec) (Show if 6m to 17 Group vaccines ((SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 5 Meningococcal (Men, Men-C-C or Men-C-ACYW-135) (Show if All Age Group vaccines ((SelectedChild = 1) OR (SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 6 Pneumococcal (Pneu-C-13 or Pneu-C-10 or Pneu-P-23) (Show if All Age Group vaccines ((SelectedChild = 1) OR (SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 7 Polio (IPV) (Show if All Age Group vaccines ((SelectedChild = 1) OR (SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 8 Rotavirus (Rota) (Show if All Age Group vaccines ((SelectedChild = 1) OR (SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 9 Bacille Calmette-Guérin (BCG) (*Only recommended in Northwest Territories and Nunavut) (Show if All Age Group vaccines ((SelectedChild = 1) OR (SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 10 Measles, Mumps, Rubella (MMR) (Show if 6m to 17 Group vaccines ((SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 11 Measles, Mumps, Rubella, Varicella (MMRV) (Show if 6m to 17 Group vaccines ((SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 12 Varicella (Var) (Show if 6m to 17 Group vaccines ((SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))

- 13 Human Papillomavirus (HPV) (Show if 5 to 17 Group vaccines ((SelectedChild = 4) OR (SelectedChild = 5)))
- 14 Seasonal influenza (flu) (Show if 6m to 17 Group vaccines ((SelectedChild = 2) OR (SelectedChild = 3) OR (SelectedChild = 4) OR (SelectedChild = 5)))
- 8 I prefer not to answer
- 9 Don't know

Page Vaccination-Related Obstacles, Reasons & Hesitancy

C4

What obstacles if any, have made it more difficult to get <<B0.text>> vaccinated with one or more of the recommended childhood vaccines?

Please select all that apply.

- 1 No obstacles (Exclusive)
- 2 Difficult to book time off work/ school for a vaccine appointment *
- 3 Live in a remote area (limited transportation) *
- 4 Language barriers (e.g., lack of access to relevant information in my preferred language) *
- 5 Concerns about racism or discrimination towards your child *
- 6 My child fears needles *
- 7 At least one parent opposed it *
- 8 Other, please specify : _____
- 8 I prefer not to answer
- 9 I don't know

*Levels marked with * are randomized*

C5 Show if Child received none or some vaccines (C2 = 2,3)

For what reason(s) has <<B0.text>> not been immunized with **one or more** recommended childhood vaccines?

Please exclude COVID-19 vaccines.

Please select all that apply.

- 1 I did not know that one or more of these vaccines was important for my child to get *
- 2 I did not consider it necessary for my child *
- 3 Concerns about the risk of side effects of vaccines *
- 4 Not confident in the effectiveness of vaccines *
- 5 Religious or philosophical reasons *
- 6 My child has or had a pre-existing medical condition *
- 7 The vaccine was not available or recommended in my origin country *
- 8 Other, please specify : _____
- 8 I prefer not to answer
- 9 I don't know

*Levels marked with * are randomized*

C7 Show if Child received all or some vaccines (C2 = 1,2)

Why did <<B0.text>> receive one or more recommended childhood immunizations?

Please **exclude** COVID-19 vaccines.

Please select all that apply.

- ₁ Advice from my doctor or health care professional *
- ₂ Advice from a friend or a family member *
- ₃ To protect my child, myself or others from disease *
- ₄ Benefits are more important than risks *
- ₅ I know or knew someone who got a vaccine-preventable disease *
- ₆ I fear I may regret it later if I don't *
- ₇ Need it for daycare or school entry *
- ₈ Other, please specify : _____
- ₋₈ I prefer not to answer
- ₋₉ I don't know

Levels marked with * are randomized

C9a

Are you or have you been hesitant to vaccinate <<B0.text>> with **one or more** recommended childhood immunizations?

Please **exclude** COVID-19 vaccines.

Vaccine hesitancy refers to a reluctance or delay in acceptance or refusal of vaccines despite availability..

- ₁ Yes
- ₀ No
- ₋₈ I prefer not to answer
- ₋₉ I don't know

C10 Show if Hesitancy to immunize child (C9a = 1)

For what reasons were/are you hesitant and/or decided not to get <<B0.text>> immunized for **one or more** recommended childhood immunizations?

(Show if CATI) Please **exclude** COVID-19 vaccines.

Please select all that apply

- 1 My child is not at risk for infection *
- 2 I wanted to discuss the vaccine(s) with my child's health care practitioner *
- 3 Concerns about the effectiveness of the vaccine(s) *
- 4 Concerns about the safety of the vaccine(s) and/or side effects *
- 5 My child had a bad experience with previous vaccines *
- 6 Do/did not know where to get reliable information *
- 7 Religions or philosophical reasons *
- 8 My child had a bad experience with health care providers *
- 9 Concerns about racism or discrimination *
- 10 Mistrust in vaccine-related information *
- 11 Other, please specify : _____
- 8 I prefer not to answer
- 9 I don't know

*Levels marked with * are randomized*

C3 Show if Child 6months or older AND vaccinated ((SelectedChild > 1) AND (C1 = 1,I prefer not to answer,I don't know))

How many doses of the Health Canada approved COVID-19 vaccines has <<B0.text>> received?

Moderna Spikevax and Pfizer-BioNTech Comirnaty are approved vaccines for use in children aged 6 months and older; and Novavax Nuvaxovid is an approved vaccine for use in children of age 12 years and older

- 1 None
- 2 1 dose
- 3 2 doses
- 4 3 doses or more
- 8 I prefer not to answer
- 9 I don't know

C8 Show if 6months or older AND received COVID doses ((C3 = 2,3,4) AND (SelectedChild > 1))

Why did <<B0.text>> receive a COVID-19 vaccine?

Please select all that apply.

- 1 To protect themselves and/or household members against COVID-19 infection *
- 2 To protect themselves against long COVID (also known as “post-acute COVID-19”; refers to either lingering or new physical and mental health symptoms experienced 4 or more weeks after COVID-19 infection) *
- 3 Based on public health recommendations *
- 4 To prevent the spread of COVID-19 in my community *
- 5 The COVID-19 vaccine was recommended by a health care professional *
- 7 To help restore a more normal life (e.g., to lift public health measures, participate in extra-curricular activities, travel) *
- 6 Other, please specify : _____
- 8 I prefer not to answer
- 9 I don't know

*Levels marked with * are randomized*

C9b Show if Selected Child 6months or older (SelectedChild > 1)

Are you or have you been hesitant to vaccinate <<B0.text>> against COVID-19?

Vaccine hesitancy refers to a reluctance or delay in acceptance or refusal of vaccines despite availability.

- 1 Yes
- 0 No
- 8 I prefer not to answer
- 9 I don't know

C11 Show if Hesitancy to immunize child COVID19 (C9b = 1)

For what reasons were/are you hesitant and/or decided not to get a COVID-19 vaccine for <<B0.text>>?

Please select all that apply

- 1 My child fears needles *
- 2 Do/did not consider it is/was necessary *
- 3 My child is not at risk of getting COVID-19 or at risk of severe infection *
- 4 I want(ed) to first discuss COVID-19 vaccines with my child’s health care practitioner *
- 5 Concerns that not enough research on the vaccine has been done in children *
- 6 Concerns about the effectiveness of COVID-19 vaccines *
- 7 Concerns about the safety of COVID-19 vaccines and/or side effects *
- 8 My child had a bad experience with previous vaccinations *
- 9 My child already had a COVID-19 infection *
- 10 Religious or philosophical reasons *
- 11 My child had a bad experience with health care providers *
- 12 Concerns about racism or discrimination *

- 13 Mistrust in COVID-19 vaccine-related information *
- 14 Other, please specify : _____
(Exclusive)
- 8 I prefer not to answer
- 9 I don't know

Levels marked with * are randomized

Page Knowledge, Attitudes and Beliefs

D1a

We are interested in understanding how the COVID-19 pandemic has influenced your perspective on recommended childhood vaccines.

Excluding the COVID-19 vaccines, how likely is it that you will get <<B0.text>> vaccinated with the recommended childhood vaccines **in the future**?

- 1 Definitely will
- 2 Probably will
- 3 Probably won't
- 4 Definitely won't
- 5 Not applicable, my child has received all recommended childhood vaccines (Exclusive;
Show if Child is 12 to 18 (SelectedChild = 5))
- 8 I prefer not to answer
- 9 I don't know

D1b Show if Selected Child 6months or older (SelectedChild > 1)

How likely is it that you will get <<B0.text>> vaccinated with a **COVID-19** vaccine **in the future**?

Currently, Moderna Spikevax and Pfizer-BioNTech Comirnaty are approved vaccines for use in children aged 6 months and older; and Novavax Nuvaxovid is an approved vaccine for use in children of age 12 years and older in Canada.

- 1 Definitely will
- 2 Probably will
- 3 Probably won't
- 4 Definitely won't
- 8 I prefer not to answer
- 9 I don't know

D1c Show if Selected Child Under6months (SelectedChild = 1)

How likely is it that you will get <<B0.text>> vaccinated with a **COVID-19** vaccine **in the future** if it becomes available?

- 1 Definitely will
- 2 Probably will
- 3 Probably won't
- 4 Definitely won't
- 8 I prefer not to answer
- 9 I don't know

D2

Please rate your level of agreement with the statements below:

1. In general, my views about vaccines have changed since the COVID-19 pandemic.
2. Before the COVID-19 pandemic, I believed that vaccines were **safe** for children.
3. Before the COVID-19 pandemic, I believed that vaccines were **effective** for children.

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree
- 8 I prefer not to answer
- 9 I don't know

D3

Which of the following sources of information would you be most likely to consult in order to find information about childhood immunization?

Please select all that apply.

- 1 Health care providers *
- 2 Family/friends *
- 3 Social media (e.g. Twitter, Facebook) *
- 4 My local public health unit/clinic *
- 5 Ministry of Health within my province or territory *
- 6 Public Health Agency of Canada or Health Canada *
- 7 Community nursing stations or clinics *
- 8 News/media *
- 9 Scientific publications, journals *
- 10 National Advisory Committee on Immunization (NACI) *
- 11 International organizations (e.g., World Health Organization (WHO)) *

- ₁₂ Other, please specify : _____
- ₋₈ I prefer not to answer
- ₋₉ I don't know

*Levels marked with * are randomized*

D4

To the best of your knowledge, please rate whether the following statements about childhood immunizations are true or false.

1. In general, vaccines are safe. *
2. In general, vaccines are effective. *
3. In general, COVID-19 vaccines are safe. *
4. In general, COVID-19 vaccines are effective. *

*Levels marked with * are randomized*

- ₁ True
- ₂ False
- ₋₈ I prefer not to answer
- ₋₉ I don't know

D5

To the best of your knowledge, please rate the extent to which you agree or disagree with the following statements about childhood immunizations:

1. In general, vaccines help to protect my child's health. *
2. In general, I am concerned about the potential side effects from vaccines. *
3. In general, the use of alternative practices, such as homeopathy or naturopathy, can eliminate the need for vaccination. *
4. In general, a healthy lifestyle such as healthy nutrition and hygiene can replace the need for vaccination. *
5. Having my child vaccinated helps to protect the health of others in my family and/or community. *
6. Most parents in my community have their children vaccinated with all recommended vaccines. *
7. Children receive too many vaccines at the same visit. *
8. Children receive too many vaccines, overall. *
9. It is better to develop immunity from having a disease rather than from a vaccine. *
10. Delaying child vaccines causes risks to their health. *
11. Unvaccinated children are at higher risk of getting some serious diseases, including COVID-19. *

Levels marked with * are randomized

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree
- 8 I prefer not to answer
- 9 I don't know

Page Sociodemographic

introSocioDemo

In order to better understand the diversity of the Canadian population, as well as to help achieve greater equity and diversity in public health, we would like to ask you a few questions about your child's general background. We acknowledge that some of these questions might result in uncomfortable feelings.

For these questions, please consider <<B0.text>>.

A1

What was <<B0.text>>'s sex at birth?

- 1 Female
- 2 Male
- 8 I prefer not to answer
- 9 I don't know

A2

Which of the following best describes the racial or ethnic community that <<B0.text>> belongs to? We recognize this list of racial or ethnic identifiers may not exactly match how you would describe <<B0.text>>.

Select all that apply

- 1 Black (African, Afro-Caribbean, African descent)
- 2 East/Southeast Asian (e.g., Chinese, Korean, Japanese, Taiwanese, Filipino, Vietnamese, Cambodian, Thai, Indonesian, other East/Southeast Asian descent)
- 3 Indigenous (First Nations, Métis and/or Inuit) *(Show if Other citizenship status NOT (S8))*
- 4 Latino/Latina (e.g., Latin American, Hispanic descent)
- 5 Middle Eastern and North African (e.g., Arab, Algerian, Egyptian, West Asian descent (e.g. Iranian, Israeli, Lebanese, Turkish, Kurdish))
- 6 South Asian (e.g., Afghan, Indian, Pakistani, Bangladeshi, Sri Lankan)
- 7 White (e.g., European, Caucasian)
- 8 Other, please specify : _____
- 8 I prefer not to answer
- 9 I don't know

A3

We would now like to ask you a few questions about your general background.

What was **your** sex at birth?

- 1 Female
- 2 Male
- 3 Other
- 8 I prefer not to answer

A8

What is your gender?

Gender refers to your current gender which may be different from sex assigned at birth and may be different from what is indicated on legal documents.

- 1 Woman
- 2 Man
- 3 Non-binary
- 4 Transgender woman
- 5 Transgender man
- 6 Two-spirit/bi-spirit
- 7 Another gender
- 8 I prefer not to answer

A9

What is your sexual orientation?

- 5 Heterosexual (“straight”)
- 1 Gay
- 2 Lesbian
- 3 Bisexual
- 4 Asexual
- 6 Pansexual
- 7 Other, please specify : _____
- 8 I prefer not to answer

A10

Our racial and ethnic identities may shape how we are treated by different individuals and institutions.

Which of the following best describes the racial or ethnic community that **you** belong to?

Select all that apply

- 1 Black (African, Afro-Caribbean, African descent)
- 2 East/Southeast Asian (e.g., Chinese, Korean, Japanese, Taiwanese, Filipino, Vietnamese, Cambodian, Thai, Indonesian, other East/Southeast Asian descent)
- 3 Indigenous (First Nations, Métis and/or Inuit) *(Show if Other citizenship status NOT (S8))*
- 4 Latino/Latina (e.g., Latin American, Hispanic descent)
- 5 Middle Eastern and North African (e.g., Arab, Algerian, Egyptian, West Asian descent (e.g. Iranian, Israeli, Lebanese, Turkish, Kurdish))
- 6 South Asian (e.g., Afghan, Indian, Pakistani, Bangladeshi, Sri Lankan)
- 7 White (e.g., European, Caucasian)
- 8 Other, please specify : _____
- 8 I prefer not to answer

A5

What is the highest level of formal education that you have completed?

- 1 Less than a high school diploma or equivalent
- 2 High school diploma or equivalent
- 3 Registered apprenticeship or other trade certificate or diploma
- 4 College/CEGEP or other non-university certificate or diploma
- 5 University certificate or diploma below bachelor’s level
- 6 University – bachelor’s degree or equivalent
- 7 University – post-graduate degree above bachelor’s level or equivalent
- 8 Other, please specify : _____
- 8 I prefer not to answer

A6

Please indicate your **total household income**, before taxes and deductions, for the year ending December 31, 2022.

Your total household income consists of the total amount of money earned by all household members.

- 1 Under \$20,000
- 2 \$20,000 to just under \$40,000
- 3 \$40,000 to just under \$60,000
- 4 \$60,000 to just under \$80,000
- 5 \$80,000 to just under \$100,000
- 6 \$100,000 to just under \$150,000
- 7 \$150,000 and above
- 8 I prefer not to answer
- 9 I don't know

A13

Are you a single parent?

- 1 Yes
- 0 No
- 8 I prefer not to answer

A11

Do you live in a community with a population of fewer than 1,000 people?

- 1 Yes
- 0 No
- 8 I prefer not to answer
- 9 I don't know

A7

So we can classify responses based on where people live, please enter the first three digits of your postal code.

Note that we cannot identify your address from this information since the first three digits of your postal code are not residence-specific.

- 8 I prefer not to answer
- 9 I don't know

A12 Show if Did not provide OR invalid FSA ((A7 = I prefer not to answer,I don't know) OR (RegionValue))
In which province or territory do you reside?

- 1 Newfoundland and Labrador
- 2 Prince Edward Island
- 3 Nova Scotia
- 4 New Brunswick
- 5 Quebec
- 6 Ontario
- 7 Manitoba
- 8 Saskatchewan
- 9 Alberta
- 10 British Columbia
- 11 Nunavut
- 12 Northwest Territories
- 13 Yukon
- 14 I live outside of Canada

WebEndTCH Show if isWeb (custom: <<current_mode_is("web")>>)

This is the end of the survey. On behalf of the Public Health Agency of Canada, we would like to thank you for participating in this survey. Your responses will provide invaluable and insightful information about childhood immunization coverage in Canada.

Wellness Together Canada (<https://www.wellnesstogether.ca/en-CA/about>) offers free live counselling through Homewood Health, 24 hours a day. To speak to someone, call 1-866-585-0445.

(<http://www.advanis.ca>)

Status Code: -1