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EKOS Research Associates Inc.

Survey for the Development of the Childhood Vaccination Campaign

Findings Report

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HEALTH CANADA

Ce rapport est aussi disponible en français

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SUMMARY

In order for vaccination programs to be truly effective in reducing the spread of preventable diseases, such programs require a high level of uptake. Though the vast majority of Canadians are vaccinated against vaccine preventable diseases, there are still individuals across the country who are either under- or un-vaccinated. The information gathered from this survey is intended to inform the direction of an awareness campaign featuring messaging to promote the importance, safety, and effectiveness of vaccines with an overall goal of increasing vaccination rates among children aged 0-6 years in Canada. The primary objective was to understand parents' and expecting parents' current state of awareness, knowledge, attitudes, beliefs, and behaviours with respect to childhood vaccination as well as preferred communications channels.

A national telephone-online hybrid survey was conducted with 1,029 Canadians, including 828 parents of children six or younger who have either shared or the primary responsibility for decision making when it comes to health care. It also includes 201 women who are currently or intending to become pregnant within the next 12 months. The survey was conducted in November with a participation rate of 20 per cent (which is a typical response rate for this kind of survey). No weighting was applied to the sample as no information was available on the target population with regard to gender of parents with health care decision making, or on age. The sample was, however, weighted by region.

Perceptions and Concerns

Trust in recommended childhood vaccinations

Respondents to the survey were informed that recommended childhood vaccinations include routine vaccines to prevent tetanus, diphtheria, pertussis (whooping cough), polio, measles, mumps, rubella, and varicella (chickenpox). They do not include vaccines to prevent influenza (flu) or in specific travel vaccines. Most parents and expecting parents (84 per cent) trust recommended childhood vaccinations. This level of trust is slightly under the reported incidence in a 2015 survey where 89 per cent of parents report that their children's vaccinations were completely up to date¹. There is a significant proportion, however, with only moderate trust in vaccinations (one in ten) and a further five per cent with limited trust.

¹ Government of Canada. Childhood National Immunization Coverage Survey. 2015.

Nearly half of parents and expecting parents said they accept all recommended vaccines and have no doubts or concerns about vaccinating their child. One-third (or one in three) said they accept recommended vaccines, however, they have some minor doubts and concerns about vaccinating their child. Six per cent accept all recommended vaccines but nonetheless have many doubts and concerns. Confirming low trust levels for some, one in ten said they have refused or delayed getting some vaccines for their children.

For most parents and those expecting, concerns about routine childhood vaccines are less apt to be related to effectiveness in preventing potentially deadly diseases, given that nine in ten rate them as effective. Safety is more apt to be a concern since slightly fewer see them as safe, compared with effective, although eight in ten agree they are safe.

In terms of demographic patterns, concentrations of vaccine-hesitant parents are higher than average in British Columbia, and women compared with men. Quebec parents are also more apt to have concerns about safety of vaccines.

Vaccination decision making

Three in four parents have found decisions about vaccinating their child to be relatively easy to make. Over one in ten have found them to be neither easy nor difficult, or outright difficult to make, rising to about four in ten among vaccine-hesitant parents.

One in four parents and expecting parents started thinking about their child's vaccination needs during the pregnancy. One in five started thinking about this issue prior to pregnancy. Three in ten started thinking about vaccinations soon after their child's birth. One in five thought about it at the time when vaccinations were due or over the course of the first check ups.

Most, seven in ten, parents and expecting parents have not experienced a change in their level of concern regarding vaccines over the last year or two. Among those experiencing a change, about equal proportions of just over one in ten say they are either more concerned or less concerned than in previous years. Those who are pregnant or planning to become pregnant are more likely than current parents to say they are more concerned than in previous years. Four in ten parents and expecting parents who reported to have refused or delayed recommended vaccines because of doubts and concerns (also referred to throughout the report as those who are "vaccine-hesitant") also indicated an increase in concern.

Trust in remedies for preventing or treating an illness in children

Trust in a healthy lifestyle as a way to prevent or treat an illness in children rivals trust in vaccines (86 per cent compared with 84 per cent). Antibiotics are a marginally less trusted source (74 per cent). Just over half trust over-the-counter medications. In contrast, slightly over one-third of parents and expecting parent trust vitamins and supplements. Holistic medicine and homeopathic products garner even less trust as a remedy to treat an illness in children, with only about one in four indicating trust. Trust in antibiotics and over the counter medications is lower among parents who are hesitant about vaccines compared with other parents. This same segment, however has higher than average trust when it comes to holistic medicines and vitamins and supplements.

Reasons for Concerns

Parents and expecting parents with some doubts and concerns about vaccinations pointed to a plethora of reasons for their concerns. Roughly one in four are concerned the vaccines can cause allergic reactions, do not trust the pharmaceutical industry, or feel that vaccines can cause side effects and diseases that they are supposed to prevent. More than one in five are concerned because they believe that vaccines contain toxic ingredients. Between one in six and one in eight feel too many vaccines are offered within a short period of time (or in general), that vaccines have not been tested enough, or they have general concerns about side effects, or do not trust the government in vaccine advice. Ten per cent continue to believe that vaccines may cause autism.

Parents and expecting parents identified a primary question they would like to have answered about vaccines for their child. Although no one predominant question emerged, roughly one in ten said they would like to know about side effects and frequency of side effects, or more information about the vaccine schedule, particularly involving multiple vaccines. Fewer than one in ten would like to have questions answered about the effectiveness or necessity of vaccines.

Influencing statements

Parents and expecting parents collectively recalled various messages about vaccines that stood out and shaped their thinking, although three in five said they did not have any single message stand out. Eight per cent said the simple fact that vaccines prevent disease shaped their decision. Six per cent are influenced by the message that vaccines are for the health of the public. Negative messages about vaccines shaped the thinking of a few, including hearing of dangers or risks of vaccinations, and a reported connection to autism.

Parents and expecting parents who have some doubts and concerns about vaccinations were asked to consider a series of twelve statements in terms of likely influence on vaccination decisions. While differentiation between the statements is only marginal, results point to a cluster of four

statements considered more influential to positively influence likelihood to vaccinate, according to roughly two in three respondents. These include “Vaccines give best protection from 14 serious diseases”, “Immunization schedule is designed to protect infants/children”, “No cure for most vaccine preventable diseases”, and “Getting my baby vaccinated protects other children”. About half of parents and expecting parents with doubts and concerns say they would be influenced by a “Doctor saying ‘I did it for my own family and kids’”, a statement that “Vaccines are very safe”, or “Every pediatric hospital in Canada recommends routine vaccination”. Roughly two in five would be influenced by statements that “Serious reactions are rare”, “Public Health Agency of Canada recommends routine vaccination”, or “Scientific studies show no relationship between vaccines and autism”. One in three said they would be influenced by a statistic such as “97% of parents in Canada vaccinate their children”. Only one in four would be influenced by the statement “Getting vaccines is the right thing to do”.

Information

Sources of health information

Survey results highlight strong, but not universal reliance on healthcare professionals as a primary source for information related to their health and the health of their children. Nine in ten cited healthcare providers as a primary source of information, although this slips to eight in ten among parents expressing concerns about effectiveness of vaccines. Just over half said they rely on the Internet. Other prominent sources include friends or family members and pharmacists, each relied upon by about one in three.

Those who go online for health-related information use a variety of online resources, although a key source is parenting and pregnancy websites, used by four in ten of those going online for information. One in five, meanwhile, use online medical websites or Web MD, and slightly fewer use the top ranked results from search engines. About one in eight turn to online chat rooms, forums and social media.

Encouragingly, medical sources – particularly healthcare professionals and government health agencies – rank as the most trusted sources of health-related information. While not unanimous, nine in ten parents and expecting parents express a high degree of trust in these sources. The proportion indicating high trust is significantly lower, however, among vaccine-hesitant parents expressing concerns. Not far down the list, three-quarters place a high degree of trust in Health Canada and the Public Health Agency of Canada, although fewer vaccine-hesitant parents viewed them as trusted sources. Trust of non-medical sources is more varied, although one-third family and friends. Trust in information from the media fared the worst.

Sources of information on childhood vaccines

Two in three parents and expecting parents reported that they have looked for information about vaccines, although this is closer to three in four amount those who are vaccine-hesitant. The vast majority of parents and expecting parents who have searched for information about childhood vaccines began their search well in advance, with almost half initiating their search prior to the birth of their child. Only one in seven waited until it was time to vaccinate.

Once again, the vast majority of parents and expecting parents who looked sought guidance from a healthcare provider (84 per cent). The Internet also ranks as a leading source of information, with roughly two-thirds (64 per cent) saying that they searched online. Three in ten turned to family and friends for advice, and one-quarter relied on books, along with one in six who conferred with a pharmacist. Reliance on family and friends as well as books is significantly higher among vaccine-hesitant parents.

Those who went to the Internet said they relied on a wide array of websites, although most turned to medical resources such as a parenting or pregnancy website (39 per cent), an online medical website (21 per cent), or a Government of Canada website such as Health Canada (12 per cent). Nevertheless, one in ten turned to chat rooms, forums and social media.

Adequacy of Information about Vaccines

Although most parents and expecting parents feel they have enough information to make informed decisions, 16 per cent feel they do not, and this figure rises to four in ten among vaccine-hesitant parents. This is most often because they feel there is too much conflicting information about vaccines, followed by a lack of relevant information, inability to find sources for information or inability to find information from trustworthy sources. Concerns about credibility of sources is more pronounced among vaccine-hesitant parents.

Issues of Interest

Survey results highlight a broad thirst for information about childhood vaccines. Information on the risks of vaccine side effects, suggested vaccination schedules, the severity of vaccine-preventable diseases, and the risks of contracting the actual diseases that childhood vaccines are meant to protect against, top the list according to about nine in ten survey respondents. Eight in ten also expressed interest in learning how vaccines are tested. Only the ingredients found in vaccines are of slightly less interest, although still selected by seven in ten.

Preferred Authority for Addressing Concerns

In terms of sources that parents and expecting parents feel they would turn to if they had concerns about vaccinating their children, healthcare professionals are again cited as by far the most relied upon, although not universal, source of information. Eight in ten indicated they would turn to a healthcare provider. One-quarter would consult a family member, and another one in ten would confer with another parent or the government.

The contract value for the POR project is \$96,354.54 (including HST).

Supplier Name: EKOS Research Associates

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To obtain more information on this study, please e-mail: por-rop@hc-sc.gc.ca

POLITICAL NEUTRALITY CERTIFICATION

This certification is to be submitted with the final report submitted to the Project Authority.

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

Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, standings with the electorate, or ratings of the performance of a political party or its leaders.

Signed by: Susan Galley (Vice President)

1. BACKGROUND AND METHODOLOGY

1.1 BACKGROUND

Immunization, through vaccination, is considered one of the greatest public health achievements of the 20th century, providing a cost-effective tool to control and eliminate life-threatening diseases. However, in order for vaccination programs to be truly effective in reducing the spread of vaccine-preventable diseases, such programs require a high level of uptake. Typically, vaccination rates in Canada have been relatively stable in recent years, though have been below national targets established under the federal, provincial, and territorial Public Health Network. In Canada, only an estimated 85 per cent of children possess the full complement of protective vaccines with some provinces registering as low as 70 per cent. Though the vast majority of Canadians are vaccinated against vaccine-preventable diseases, there are still individuals across the country who are either under- or un-vaccinated.

The information gathered from this survey will help inform the direction of an awareness campaign to vaccine-hesitant parents. This campaign will feature messaging to promote the importance, safety, and effectiveness of childhood vaccines with an overall goal of increasing vaccination rates among children aged zero to six years in Canada. The research, therefore, explores reasons why Canadians refuse or accept vaccines; considered essential to learning how to develop, evaluate and promote effective strategies for vaccination. Gaining a better understanding of Canadians' knowledge, attitudes, and beliefs about vaccination will help in the development of messaging and approaches designed to increase acceptance of childhood vaccination and compliance with vaccine schedules among vaccine-hesitant parents.

This public opinion research was undertaken to inform the campaign's direction, messaging, products, and preferred communications channels and tactics. The primary objective was to understand parents' and expecting parents' current state of awareness, knowledge, attitudes, beliefs, and behaviours with respect to vaccination. Specific objectives of the survey were to:

- assess Canadians' level of awareness and knowledge concerning vaccination;
- better understand Canadians' views and understanding on this topic (including beliefs about vaccine safety, efficacy, and importance);
- determine the information Canadians need and are looking for as it relates to making informed decisions on the topic;

- ▶ explore information on the channels Canadians use and prefer for vaccine-related information or for finding this type of information.

1.2 SURVEY METHODOLOGY

The survey is comprised of 1,029 completed cases, including 833 with children under seven years of age and 201 women who are currently pregnant or planning a pregnancy within the next 12 months². This randomly recruited probability sample would carry with it a margin of error of +/-3.05 per cent. The margin of error is 3.4 per cent for parents of children under seven and 6.9 per cent for expecting parents. The sample source is an in-house *Probit* panel of randomly recruited Canadians. Ten per cent of the sample was collected with cell phone only sample. Fifteen per cent were collected by trained, bilingual interviewers, while the majority were collected through online self-administration.

Probit panellists were selected using a random-digit dial (RDD) landline-cell phone hybrid sample frame. This is the same sample frame and sampling process used to conduct telephone surveys, which are considered to be representative of the population³. Once selected, they are contacted and recruited by telephone and asked to complete a basic profile (i.e. base survey instrument) including a range of demographic information about themselves. They are also asked if they would prefer to complete surveys online or by telephone. All sample members are eligible to participate, including those with cell phones only, those with no Internet access and those who simply prefer to respond by telephone rather than online. This panel represents a fully representative sample of Canadians, from which we can draw random samples and collect data in a more cost conscious and timely manner than would otherwise be possible in a traditional telephone survey. This panel of more than 95,000 individuals can be considered representative of the general public in Canada (meaning that the incidence of a given target population within our panel very closely resembles the public at large) and margins of error can be applied.

Prior to conducting the survey, the instrument was tested with 42 cases (30 in English and 12 cases in French). Additional questions were placed on the pretest version of the questionnaire asking about length, flow, clarity of wording and so on to elicit feedback from respondents. Minimal changes were made as a result of the testing, although a few questions were removed in order to stay within the intended survey length.

² There is an overlap of five respondents who are parents of young children who are also pregnant or expecting to become pregnant within the next 12 months.

³ Canadian Internet Use, Statistics Canada.

The survey was administered between November 20th and December 4th, 2017, using a bilingual questionnaire, installed on a secure web-server controlled by EKOS. The email invitation included a description and purpose of the survey (in both languages) along with a link to the survey website. The survey database was mounted using a Personalized Identification Number (PIN), so only individuals with a PIN were allowed access to the survey (the PIN was included in the email invitation). The questionnaire was prefaced with a brief introduction to the study and rationale for the research. The voluntary and confidential nature of the survey was also emphasized. Survey data collection adhered to all applicable industry standards as set out by the Market Research Intelligence Agency (MRIA), of which EKOS is a Gold Seal member. All invited panel members were informed of their rights under current Privacy legislation, as well as how to obtain a copy of their response and results of the survey.

In this survey, an initial sample of 16,284 was drawn. Based on sample attempted out of completed interviews combined with those found out of scope for the survey, the response rate was 15 per cent⁴. The average length of the interview was 16 minutes.

Respondents were informed in the invitation that all responses are completely confidential and no responses will be linked to individual names.

The database was reviewed following data collection for data quality, outliers, coding requirements, weighting and construction of independent variables, and was used to explore sub-group patterns (e.g., by age, gender and so on) in the analysis. Weighting of the sample was based on population parameters according to the latest Census on age, gender and region of the country.

1.3 NOTE TO READERS

Detailed findings are presented in the sections that follow. Overall results are presented in the main portion of the narrative and are typically supported by graphic or tabular presentation of results. Bulleted text is also used to point out any statistically and substantively significant differences between sub-groups of respondents. If differences are not noted in the report, it can be assumed that they are either not statistically significant⁵ in their variation from the overall result or that the difference was deemed to be substantively too small to be noteworthy. Where there are significant differences between parents of children under the age of seven and

⁴ Of the 16,284, 13,363 were sent by email and 2,921 were attempted by telephone. Excluding 110 found invalid during telephone attempts) the valid sample is 16,174. In completing the 1,029 cases, 1,449 were found to be out of scope for the survey. The combined 2,478 completed or out of scope cases, out of the known valid sample base of 16,174 results in a response rate of 15 per cent using the MRIA response rate calculation formula.

⁵ Chi-square and standard t-tests were applied as applicable. Differences noted were significant at the 95 per cent level.

women who are currently pregnant or planning a pregnancy within the next 12 months (called expecting parents in the report) these differences are described in the main paragraph or in the bulleted text. The programmed survey instrument can be found in Appendix A.

It should be noted that the survey asks a number of questions about behaviours that may have a tendency to exert social desirability pressure for respondents to under-report their attitudes and behaviours related to vaccine hesitancy⁶. The primary purpose of the survey is to provide a baseline against which future changes in awareness, knowledge, attitudes, beliefs and behaviours can be subsequently measured. Results for the proportion of respondents in the sample who either said “don’t know” or did not provide a response are not indicated in the graphic representation of the results in all cases, particularly where they are not sizable (e.g., ten per cent or less). Results may also not total to 100 per cent due to rounding.

1.4 SAMPLE CHARACTERISTICS

The following table presents a sample profile for the baseline survey. This includes demographic characteristics related to employment, education, income, cultural attributes, language, age and region. Each is presented for the full sample of 1,029 parents and expecting parents. It is noteworthy that 82 per cent of survey respondents indicated that they make health care decisions for their child/children jointly. This is higher among male respondents (91 per cent) compared with female respondents (76 per cent). It is also marginally lower among those respondents reporting less education. There are no significant differences in specific regions across the country.

Table 1: Demographic Table

Table 1a: Gender

	Total
<i>n</i> =	1029
Male	38%
Female	62%

⁶ Ivar Krumpal, “Determinants of Social Desirability Bias in Sensitive Surveys: A Literature Review”, *Quality and Quantity*, June 2013, Volume 47, Issue 4, pp. 2025-2047.

Table 1b: Number of children in home (parents only)

	Total
<i>n</i> =	833
1	35%
2	38%
3	14%
4	5%
5 or more	3%

Table 1c: What are the ages of children in the home? (parents only)

	Total
<i>n</i> =	833
Under 12 months	14%
1	17%
2	20%
3	21%
4	23%
5	23%
6	29%
7 or older	29%

Table 1d: Are you pregnant now or are you intending to become pregnant in the next 12 months (expecting parents only)

	Total
<i>n</i> =	201
Currently pregnant	27%
Intending to be pregnant	73%

Table 1e: Is this your first pregnancy? (currently pregnant women)

	Total
<i>n</i> =	56
Yes	61%
No	39%

Table 1f: What trimester are you currently in? (pregnant women)

	Total
<i>n</i> =	56
First (weeks 1-12)	27%
Second (weeks 13-27)	40%
Third (weeks 28 to birth)	34%

Table 1g: Who in your family makes/will make the decisions about health care for the child?

	Total
<i>n</i> =	1029
I do/will	17%
My spouse or partner	1%
Both I and my spouse or partner do (jointly)	82%

Table 1h: Age

	Total
<i>n</i> =	1029
18 to 24	4%
25 to 34	37%
35 to 44	51%
45 or older	8%

Table 1i: Which category best describes your current employment status? Are you...?

	Total
<i>n</i> =	1029
Working full-time (35 or more hours per week)	62%
Working part-time (less than 35 hours per week)	9%
Self-employed	9%
Student attending full time school (not working)	3%
Unemployed, but looking for work	3%
Not in the workforce (e.g. unemployed, but not looking for work, a full-time homemaker or parent)	10%
Parental/maternity leave	2%
Other	1%

Table 1j: What is the highest level of formal education that you have completed to date?

	Total
<i>n</i> =	1029
Grade 8 or less	0%
Some high school	2%
High school diploma or equivalent	9%
Registered Apprenticeship or other trades certificate or diploma	5%
College, CEGEP or other non-university certificate or diploma	22%
University certificate or diploma below bachelors level	5%
Bachelor's degree	33%
Post graduate degree above bachelor's level	23%

Table 1k: What is your marital status?

	Total
<i>n</i> =	1029
Married or partnered/common law	91%
Single	5%
Divorced or separated	3%
Widowed	1%

Table 1l: Which of the following categories best describes your total household income, for all persons in your household, before taxes?

	Total
<i>n</i> =	1029
Under \$20,000	3%
\$20,000 to just under \$40,000	7%
\$40,000 to just under \$60,000	10%
\$60,000 to just under \$80,000	12%
\$80,000 to just under \$100,000	13%
\$100,000 to just under \$120,000	13%
\$120,000 to just under \$150,000	10%
\$150,000 and above	23%
Don't know / No response	8%

Table 1m: Were you born in Canada?

	Total
<i>n</i> =	1029
Yes	82%
No	18%

Table 1n: How many years have you lived in Canada?

	Total
<i>n</i> =	175
Less than 5 years	21%
5-9 years	22%
10-19 years	27%
20-29 years	9%
30 or more years	20%
Don't know / No response	1%

Table 1o: What best describes your ethnic heritage?

	Total
<i>n</i> =	1029
White/European	83%
Black or African American	5%
South Asian	4%
Indigenous	3%
East Asian	3%
Hispanic, Latino, Spanish	2%
Middle Eastern or North African	2%
Other	1%
Don't know / No response	2%

Table 1p: Region (unweighted)

	Total
Atlantic	9%
Quebec	24%
Ontario	34%
Prairies	22%
British Columbia and Territories	11%

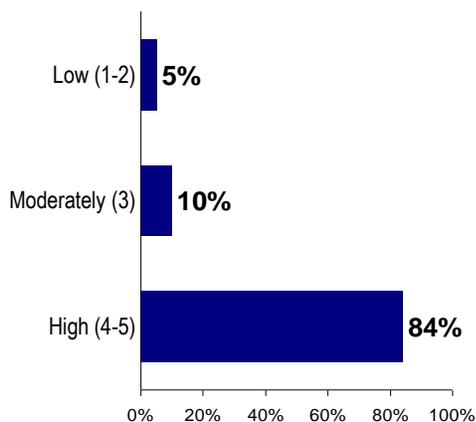
2. PERCEPTIONS AND CONCERNS

2.1 TRUST IN RECOMMENDED CHILDHOOD VACCINATIONS

Most parents and expecting parents (84 per cent) trust the recommended childhood vaccinations. This level of trust is slightly under the reported incidence in a 2015 survey where 89 per cent of parents report that their children’s vaccinations were completely up to date⁷. One in ten (10 per cent), however, place only moderate trust in vaccinations and a further five per cent have limited trust.

Graph 1: Trust in Recommended Childhood Vaccinations

“How much do you trust recommended childhood vaccinations?”



⁷ Government of Canada. *Childhood National Immunization Coverage Survey*. 2015.

Graph 1: Trust in Recommended Childhood Vaccinations

How much do you trust recommended childhood vaccinations?

	Total
<i>n</i> =	1029
Low (1-2)	5%
Moderately (3)	10%
High (4-5)	84%

Childhood Vaccination Campaign, 2017

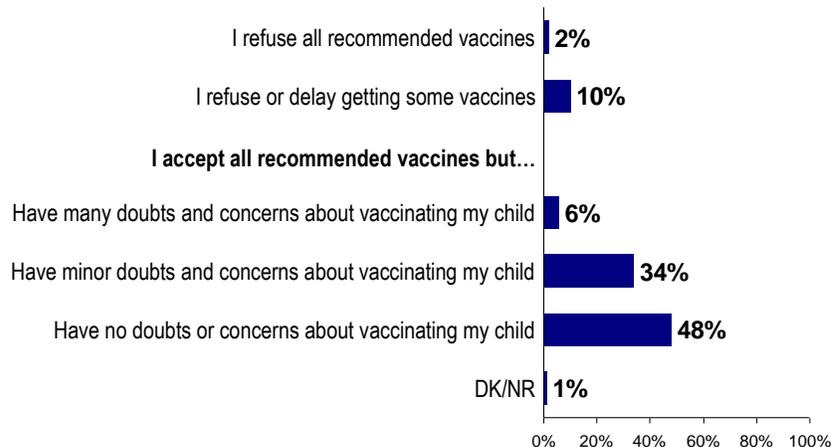
- Those in British Columbia place less trust in recommended vaccinations (13 per cent indicated low trust compared with 5 per cent nationally). Parents in Atlantic Canada and Ontario are more apt to trust vaccinations (92 and 89 per cent, respectively).
- Men are somewhat more likely than women to trust recommended childhood vaccinations (87 versus 82 per cent).
- Trust in vaccinations increases with education; those with university education are more likely to trust recommended vaccinations (89 per cent), while those with high school education have the lowest trust (73 per cent).

Nearly half (48 per cent) of parents and expecting parents said they accept all recommended vaccines and have no doubts or concerns about vaccinating their child. However, there is a notable group of parents and expecting parents who accept all recommended vaccines, yet still have doubts and concerns; about one-third (34 per cent) have minor doubts, and another six per cent have many doubts. Some parents and expecting parents have low trust in vaccines, with one in ten (10 per cent) who refuse or delay getting some vaccines and two per cent who refuse all recommended vaccines.

Of those with doubts and concerns who have accepted all recommended vaccines, 84 per cent said they trust vaccines, although 16 per cent indicated only moderate or low trust. Among the 12 per cent who have delayed or refused vaccines for their children, 27 per cent indicated trust in vaccines, but 72 per cent indicated only moderate or low trust.

Graph 2: Incidence of Vaccine Hesitancy

“If you have to place yourself in only one category, which of the following statements most accurately reflects your views on vaccines for your child(ren)?”



Graph 2: Incidence of Vaccine Hesitancy

If you have to place yourself in only one category, which of the following statements most accurately reflects your views on vaccines for your child(ren)?

	Total
<i>n</i> =	1029
I refuse all recommended vaccines	2%
I refuse or delay getting some vaccines	10%
I accept all recommended vaccines but...	
Have many doubts and concerns about vaccinating my child	6%
Have minor doubts and concerns about vaccinating my child	34%
Have no doubts or concerns about vaccinating my child	48%
DK/NR	1%

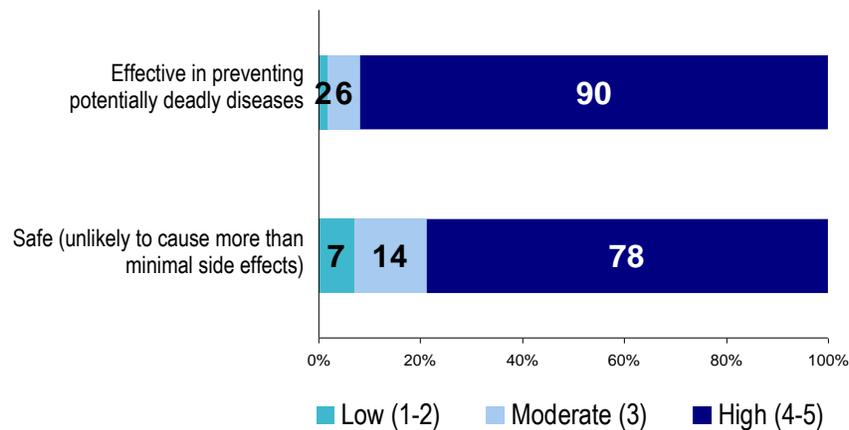
Childhood Vaccination Campaign, 2017

- Those in Ontario and Atlantic are more likely than those in other regions to accept all recommended vaccines with no doubts (55 and 53 per cent, respectively). Respondents in British Columbia are more apt to say they refuse all vaccines (six per cent compared to a national average of two per cent).
- Men are more apt to accept all recommended vaccines (54 per cent versus 44 per cent among women). Women, however, have a greater propensity than men to say they refuse or delay getting some vaccines (12 per cent compared with six per cent among men).
- Consistent with the relationship between trust and education, those with a university education are more likely to accept all recommended vaccinations with no doubts (55 per cent). Respondents with high school education are more apt than other segments to say they accept all recommended vaccines, but have many doubts and concerns (14 per cent compared with 6 per cent overall).
- As expected, those who trust vaccinations and feel they are safe and effective in preventing deadly diseases are more likely to accept all recommended vaccines with no doubts, although even in these segments only 52 to 59 per cent categorize themselves as having no doubts. Those who place lower trust in the recommended vaccinations, and feel they are less safe or effective, are much more apt to refuse or delay vaccines with half or more of those with low trust fitting into the Hesitant Selective category.

For most parents and those expecting, concerns about routine childhood vaccines are less about the effectiveness and more about perceived safety. Nine in ten (90 per cent) feel that routine childhood vaccines are effective in preventing potentially deadly diseases. Comparatively fewer, nearly eight in ten (78 per cent), believe that vaccines are safe and unlikely to cause more than minimal side effects. Fourteen per cent feel that vaccines are moderately safe and seven per cent indicate vaccines have a low level of safety.

Graph 3: Belief in Effectiveness and Safety of Vaccines

“How much or how little would you say that routine childhood vaccines are...?”



n=1029

Childhood Vaccination Campaign, 2017

Graph 3: Belief in Effectiveness and Safety of Vaccines

How much or how little would you say that routine childhood vaccines are...?

	Low (1-2)	Moderately (3)	High (4-5)
n=	1029	1029	1029
Effective in preventing potentially deadly diseases	2%	6%	90%
Safe (unlikely to cause more than minimal side effects)	7%	14%	78%

Childhood Vaccination Campaign, 2017

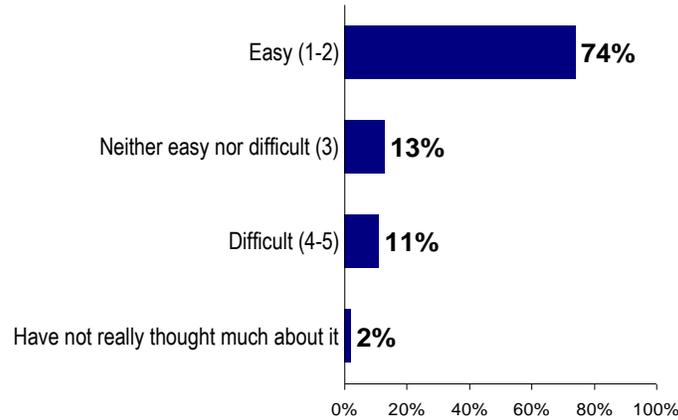
- Again, those in Ontario and Atlantic Canada, along with men, and those with higher education, are more likely to say vaccines are both effective (93 to 95 per cent, respectively) and safe (83 to 89 per cent).
- Parents are more likely to indicate that vaccines are safe (80 per cent), while those expecting are more apt to say that vaccines are moderately safe (72 per cent saying safe and 20 per cent saying moderately safe).
- Those respondents who accept vaccinations and those who trust recommended vaccines are more likely to feel they are both safe (85 to 97 per cent) and effective (97 to 98 per cent) in preventing deadly diseases. Those considered hesitant selective, along with those who generally place lower trust in the recommended vaccinations, are more apt to feel they are less effective (37 to 42 per cent), and in particular (less) safe (71 to 86 per cent), pointing to safety as the biggest source of concern for those who are the most hesitant.

2.2 VACCINATION DECISION MAKING

Although three in four (74 per cent) parents have found decisions about vaccinating their child to be easy to make, just over one in ten (13 per cent) have found them to be neither easy nor difficult, or difficult (11 per cent) to make. Two per cent say that have not thought much about the difficulty of the decision.

Graph 4: Vaccination Decision Making

“How easy or difficult have you found making decisions about vaccinating your child?”



n=828

Childhood Vaccination Campaign, 2017

Graph 4: Vaccination Decision Making

How easy or difficult have you found making decisions about vaccinating your child?

	Total
n=	828
Easy (1-2)	74%
Neither easy nor difficult (3)	13%
Difficult (4-5)	11%
Have not really thought much about it	2%

Childhood Vaccination Campaign, 2017

- Men are more apt to say that the decision was easy (78 per cent compared with 70 per cent of women), women more likely to say it was difficult (15 per cent compared with 8 per cent among men).
- Those considered hesitant selective, have low trust in recommended vaccines, or do not feel vaccinations are safe or effective in preventing deadly diseases are four times more likely to say the decision was difficult, with 40 to 48 per cent describing these decisions as difficult.

A relatively small number of respondents who found it difficult to make a decision on vaccinating their children (n=94) elaborated on the reason they found the decision difficult. One in seven (14 per cent) question the validity of the information they have available, and a similar proportion (13 per cent) feel confused by the apparent conflicting nature of information about vaccines.

Table 2: Source of Difficulty in Making Vaccine-Related Decisions

Why do you say that?

	Total
<i>n</i> =	94
Question validity/source of information, lobbied/unreliable/biased/self serving source, dishonest/withholding vital information	14%
Conflicting/contradicting information, information for and against	13%
Received all the necessary information to make an informed decision, learned what they needed to know, they are well informed/confident in what they know	10%
Societal pressure to vaccinate/not vaccinate, pressure/scare tactics from groups/hospitals/friends	8%
Just cannot help but worry/have doubts, child's life/future relies on their decision	8%
Ingredients vary/change through time, could be toxic/dangerous, additives/adjuvants vary from manufacturer/company	6%
Read/heard of a bad case, fatalities/severe reactions	5%
Timing issues: given too early/young/within a short time period	5%
Did not have enough information, questions not answered, felt uninformed	4%
Worried about side effects/reactions to it	3%
Lack of long term testing, do not know what the effects might be 10 yrs from now/future	3%
Have trust in health care professionals and advice given	3%
Concerns about side effects do not outweigh benefits of the vaccine	2%
Trust Health Canada	1%
Personal experience, witnessed effects in children/themselves	1%
Other	30%
Don't know / No response	13%

For parents, one in three (32 per cent) started thinking about vaccinations soon after their child’s birth. One in four (25 per cent) parents and expecting parents started thinking about their child’s vaccination needs during the pregnancy and one in five (19 per cent) started before the pregnancy. One in ten (10 per cent) parents started thinking about vaccinations over the course of the first few check ups with their baby’s doctor. While roughly one in ten (nine per cent) parents only started thinking about needs when it was time to vaccinate their child, 29 per cent of those expecting responded that they will do so at that time. Fifteen per cent of those expecting say they have not given vaccination needs much thought yet, most likely because most of this segment is either considering a pregnancy or in their first trimester.

Table 3: Timing of Thinking About Vaccination

When did you start thinking about your <child/first child>'s vaccination needs?

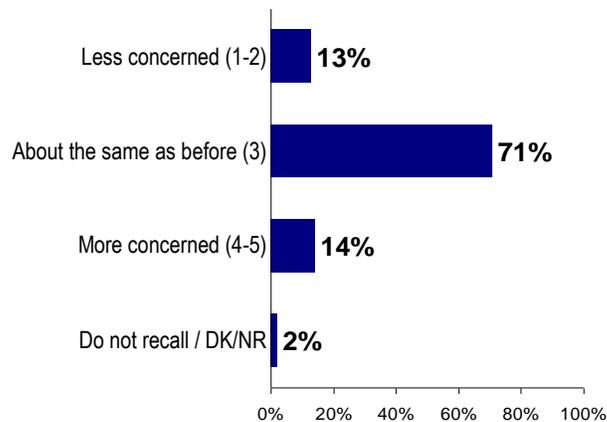
	Total	Parent	Pregnant
<i>n=</i>	884	828	56
Before the pregnancy	19%	19%	27%
During the pregnancy	25%	25%	25%
After prenatal classes	2%	2%	2%
Soon after my child's birth	30%	32%	0%
Over the course of the first few check ups with my baby's doctor	10%	10%	0%
Over the past few years	1%	1%	0%
When it was time to vaccinate	10%	9%	29%
Have not yet really given it much thought	2%	2%	15%
Other	0%	0%	0%
Don't know / No response	1%	1%	2%

- Parents are more apt to say they started thinking about vaccination needs soon after their child’s birth, while those expecting are more likely to say when it is time to vaccinate (29 per cent compared with nine per cent of parents) or that they have not yet given it much thought (15 per cent compared with two per cent of parents).
- Those with university education (29 per cent compared with 21 per cent of those with high school education and 20 per cent of those with college education) are more likely to say they thought about vaccination needs during the pregnancy.

Most (71 per cent) parents and expecting parents have not changed their level of concern regarding vaccines over the last year or two. Among those experiencing a change, about equal proportions said they are either more concerned (14 per cent) or less concerned (13 per cent) than in previous years.

Graph 5: Change in Concern

“Thinking about the last year or two, would you say you are more concerned, less concerned, or feel about the same about vaccines now as you did then?”



n=1020

Childhood Vaccination Campaign, 2017

Graph 5: Change in Concern

Thinking about the last year or two, would you say you are more concerned, less concerned, or feel about the same about vaccines now as you did then?

	Total
n=	1020
Less concerned (1-2)	13%
About the same as before (3)	71%
More concerned (4-5)	14%
Do not recall / DK/NR	2%

Childhood Vaccination Campaign, 2017

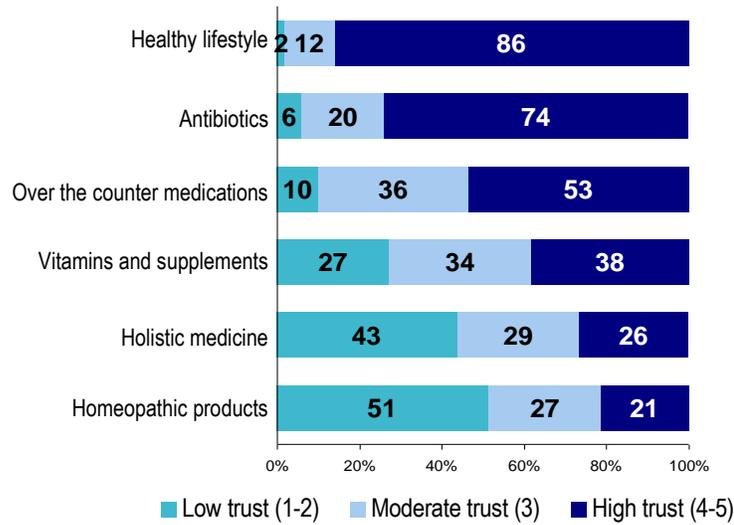
- Men are more apt to feel the same level of concern as before (78 per cent compared with 68 per cent of women), while women are more likely than men to be more concerned over the last year or two (18 per cent of women compared with seven per cent of men).
- Those who are pregnant or planning to become pregnant are more likely than current parents to say they are more concerned than in previous years (23 per cent compared with 11 per cent of parents),.
- Respondents born in Canada tend to feel about the same as before (73 per cent compared with 64 per cent of new Canadians). New Canadians are more likely to say they feel less concerned (18 per cent compared with 12 per cent of those born in Canada) than in the previous few years.
- Hesitant selective vaccinators (29 per cent), along with hesitant acceptors (16 per cent), are more likely than those who accept vaccinations (seven per cent) to be more concerned in the last year or two. Similarly, those with lower trust in vaccinations (32 per cent compared to 10 per cent of those with high trust), and those who feel vaccines are less safe or effective in preventing deadly diseases, are more likely to say they are increasingly concerned in the last year or two.

2.3 TRUST IN REMEDIES FOR PREVENTING OR TREATING AN ILLNESS IN CHILDREN

Most (86 per cent) parents and expecting parents trust in a healthy lifestyle as a way to prevent or treat an illness in children. This reported trust rivals, as reported earlier, trust in vaccines (84 per cent). Antibiotics are a less trusted source (74 per cent), relative to a healthy lifestyle and vaccines. Just over half (53 per cent) trust over-the-counter medications. Just over one-third (38 per cent) of parents and expecting parent trust vitamins and supplements, with nearly as many saying they have moderate (34 per cent) or low (27 per cent) trust in vitamins and supplements. Holistic medicine (26 per cent) and homeopathic products (21 per cent) garner the lowest trust of the rated remedies to treat an illness in children.

Graph 6: Trust in Remedies for Preventing or Treating an Illness in Children

“How much do you trust each of the following remedies for preventing or treating an illness in children?”



n=1029

Childhood Vaccination Campaign, 2017

Graph 6: Trust in Remedies for Preventing or Treating an Illness in Children

How much do you trust each of the following remedies for preventing or treating an illness in children?

	Low Trust (1-2)	Moderate Trust (3)	High Trust (4-5)
n=	1029	1029	1029
Healthy lifestyle	2%	12%	86%
Antibiotics	6%	20%	74%
Over the counter medications	10%	36%	53%
Vitamins and supplements	27	34%	38%
Holistic medicine	43%	29%	26%
Homeopathic products	51%	27%	21%

Childhood Vaccination Campaign, 2017

- Parents and expecting parents who accept vaccinations are more apt to trust antibiotics and over-the-counter medications compared with those more hesitant about vaccines. Hesitant selective vaccinators, along with hesitant acceptors, are more likely to indicate (place) higher trust in vitamins and supplements, holistic medicine, and homeopathic products.
- Similarly, those with trust in vaccinations, and those who feel vaccines are safe or effective in preventing deadly diseases, are more likely to say they trust antibiotics and over-the-counter medications.
- Women, those expecting, and those with lower education are all more apt than their counterparts to trust vitamins and supplements, holistic medicine, and homeopathic products.

2.4 REASONS FOR CONCERNS

Parents and expecting parents with some doubts and concerns about vaccinations pointed to a plethora of reasons for their concerns. Roughly one in four are concerned the vaccines can cause allergic reactions (28 per cent), do not trust the pharmaceutical industry (27 per cent), or feel that vaccines can cause side effects and diseases that they are supposed to prevent (24 per cent). About one in five are concerned that vaccines contain toxic ingredients (22 per cent), or that too many vaccines are offered within a short period of time (17 per cent). One in eight similarly believe that vaccines have not been tested enough (15 per cent), that too many vaccines are needed (13 per cent), have general concerns about side effects (13 per cent), or do not trust the government in vaccine advice (12 per cent). Ten per cent believe that vaccines may cause autism. Other concerns include the feeling that it is important to listen to other concerns or conflicting information (seven per cent) that vaccines are not effective at preventing disease (seven per cent), or that vaccines are not necessary and the body can take care of itself (four per cent). Few (two per cent) have concerns about how vaccines are developed, that each child is different in vaccination needs, or never used or supported specific vaccines. A small number (one per cent each) note other concerns such as that they do not believe in vaccines for philosophical or religious reasons, don't support vaccines for non-life threatening conditions, believe in natural immunity development, or that they require more information.

Table 4: Reasons for Concerns*What are the main reasons you are concerned about vaccinations for your child?*

	Total
<i>n</i> =	420
Vaccines can cause allergic reactions	28%
I don't trust the pharmaceutical industry	27%
Vaccines cause side effects and diseases they are supposed to prevent	24%
I think vaccines contain toxic ingredients	22%
I think too many vaccines are offered in a short period	17%
Vaccines have not been tested enough	15%
I think too many vaccines are needed	13%
General concerns about effects, may cause death in certain cases, need for more accurate/honest information available	13%
I don't trust the government	12%
I believe vaccines may cause autism	10%
Important to be informed/aware, unwise to ignore concerns/doubts, conflicting information	7%
Vaccines are not effective at preventing disease	7%
Vaccines are not necessary - the body can take care of itself	4%
Other concerns about development/manufacturing process	2%
Every child is different	2%
Don't support/Never used specific vaccines	2%
I don't believe in vaccines for philosophical reasons	1%
I don't believe in vaccines for religious reasons	1%
Don't support vaccines for non-life threatening conditions	1%
Natural immunity development	1%
Lack knowledge/Require more information	1%
Other	2%
Don't know / No response	5%

- Parents who have delayed or refused vaccinations for their child are much higher across all of these reasons for concern, compared with the levels registered among the segment of parents who have not delayed.
- Those in British Columbia and the Territories are more apt than those in other provinces to say they do not trust the government regions (23 per cent compared with 12 per cent nationally) or that vaccines may cause autism (18 per cent compared with 10 per cent).

- ▶ The university educated are more likely to be concerned that vaccines can cause allergic reactions (35 per cent compared with 22 per cent of college educated and 16 per cent of those with only high school education).

Parents and expecting parents identified a primary question they would like to have answered about vaccines for their child. Fewer than half (44 per cent) said they do not have any questions. Although no one predominant question arose, roughly one in ten would like to know about side effects and frequency of side effects (11 per cent). Slightly less than one in ten would like to have more information about the vaccine schedule, particularly involving multiple vaccines (eight per cent), have questions about the effectiveness (seven per cent) or necessity (six per cent) of vaccines answered. A multitude of other questions were identified including three per cent who would like to know about long-term testing, why vaccines are not mandatory, risk of severe reactions, and testing procedures.

Table 5: Main question about vaccines

If you had one question that you would like to have answered about vaccines for your child, what would that question be?

	Total
<i>n=</i>	514
Side effects, incidents, statistics/information on how many people are effected	11%
Explanations/understanding more the scheduling/timing of vaccines (why does it have to be those ages, all at the same time, mixing vaccinations, options for scheduling, why so many of them during this time)	8%
Efficacy/effectiveness, how much does it prevent the illness, statistics/information on how effective it is	7%
How necessary is it, what are the consequences if you choose not to	6%
Ingredients/contents (what is in them, why use certain ingredients/amounts of, why not take harmful ingredients out, dosage/amounts)	5%
Long-term testing, future/long-term effects	3%
Why isn't it mandatory	3%
Risks of severe reactions/fatalities/serious illnesses, highest risk vaccines that can cause disease	3%
Testing procedures/methods, who is testing/if it a reliable unbiased scientific source, effective testing/tested enough	3%
How safe they are, are they safe or not	2%
History/changes from province to province/Canada/other countries	2%
List of vaccines available, are there others we can get	2%
Truthfully addressing connections to autism, contradictions to whether it is linked or not	2%
Why people do not get it/reasons behind it	1%
Who profits, how much money is involved, big business pharmaceutical	1%

	Total
<i>n</i> =	514
Why is it difficult to access/Used to be done in schools	1%
How do I convince those who do not vaccinate to vaccinate, need solid arguments of support	1%
Other	4%
I don't have any questions / No response	44%

- Those in Quebec are more likely than residents of other regions to want to know about side effects (24 per cent compared to 11 per cent nationally).
- Hesitant selective vaccinators are more apt to want to know about the ingredients or understanding about the need or timing of multiple vaccines. Hesitant acceptors are more likely to have a primary question about the side effects or long-term testing of vaccines. Those who accept vaccinations are more likely to question why it is not mandatory (although still low, six per cent compared to three per cent overall).

2.5 INFLUENCING STATEMENTS

Although three in five (59 per cent) do not recall one message about vaccines that stood out, parents and expecting parents collectively recall various messages about vaccines that shaped their thinking. Eight per cent said the simple fact that vaccines prevent disease shaped their decision. Six per cent are influenced by the message that vaccines are for the health of the public. Negative messages about vaccines shaped the thinking of a few, including hearing of dangers or risks of vaccinations (four per cent), and a reported connection to autism (three per cent). Three per cent recalled that vaccines eliminate certain diseases or lower mortality rates. Messages such as that the benefits outweigh the risks, anti-vaccination campaigns being exposed as fraudulent, concerns about ingredients, medical evidence for or against, or personal experiences stood out for two per cent of parents and expecting parents.

Table 6: Single influencing statement about vaccines*Do you recall a single message about vaccines that stood out for you, and shaped your thinking?*

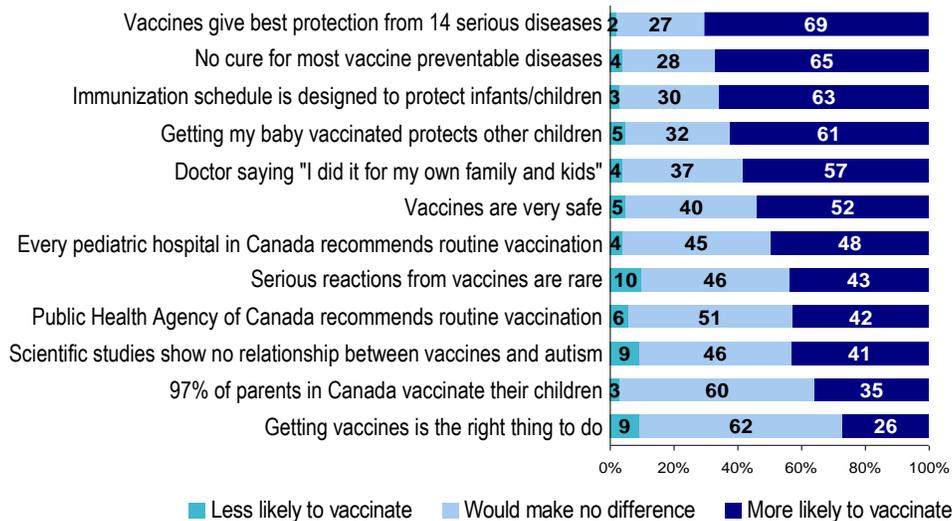
	Total
<i>n</i> =	515
Prevents disease/illness, effective in protecting against disease	8%
Health of the public, herd immunization, help build immunity in communities/public	6%
Hearing of dangers/risks, cases against vaccinations	4%
Connection to autism	3%
Eliminating certain diseases, lower mortality rates, no longer the same health epidemics as in the past, vaccines have changed public health for the better	3%
Benefits outweigh the risks	2%
Anti vaccination campaigns being exposed as fraudulent/untrue	2%
Ingredients toxic, concern about ingredients	2%
Medical/scientific/statistical evidence	2%
Personal experience/story	2%
Scientific evidence against vaccinations, doctors/CDC giving conflicting/opposing information in their favour, discrediting information	2%
Vaccines are safe	1%
Diseases that were eradicated are coming back, new strains/old strains reappearing	1%
Driven by profit, distrust for the involvement of government/pharmaceutical companies	1%
Specific vaccines warnings/information	1%
Mandatory for schools	1%
Trust health care professional's advice	1%
Yes (Other)	4%
No	59%
Don't know / No response	5%

- Hesitant selective vaccinators are more likely to recall negative messages of the dangers/risks (15 per cent compared with four per cent overall), or scientific evidence against vaccinations (13 per cent compared with two per cent overall). Those who accept vaccinations are more apt to recall that vaccinations prevent diseases (12 per cent compared with one per cent of hesitant selective vaccinators and five per cent of hesitant acceptors).

Parents and expecting parents who have some doubts and concerns about vaccinations were asked to consider a series of twelve statements in terms of likely influence on vaccination decisions. While differentiation between the statements is only marginal, a cluster of four statements considered more influential to positively influence likelihood to vaccinate, according to roughly two in three respondents. These include “Vaccines give best protection from 14 serious diseases” (69 per cent), “No cure for most vaccine-preventable diseases” (65 per cent), “Immunization schedule is designed to protect infants/children” (63 per cent), and “Getting my baby vaccinated protects other children” (61 per cent). About half of parents and expecting parents with doubts and concerns said they would be influenced by a “Doctor saying ‘I did it for my own family and kids’” (57 per cent), a statement that “Vaccines are very safe” (52 per cent), or “Every pediatric hospital in Canada recommends routine vaccination” (48 per cent). Roughly two in five would be influenced by statements that “Serious reactions are rare” (43 per cent), “Public Health Agency of Canada recommends routine vaccination” (42 per cent), or “Scientific studies show no relationship between vaccines and autism” (41 per cent). One in three (35 per cent) said they would be influenced by a statistic such as “97% of parents in Canada vaccinate their children”. Only one in four (26 per cent) would be influenced by the statement “Getting vaccines is the right thing to do”.

Graph 7: Influencing Statement

“If you were to decide today on vaccines for your child, which of the following statements would influence your decision...?”



Graph 7: Influencing Statement

If you were to decide today on vaccines for your child, which of the following statements would influence your decision?

	Less likely to vaccinate	Would make no difference	More likely to vaccinate
<i>n</i> =	441	441	441
Vaccines give best protection from 14 serious diseases	2%	27%	69%
No cure for most vaccine preventable diseases	4%	28%	65%
Immunization schedule is designed to protect infants/children	3%	30%	63%
Getting my baby vaccinated protects other children	5%	32%	61%
Doctor saying "I did it for my own family and kids"	4%	37%	57%
Vaccines are very safe	5%	40%	52%
Every pediatric hospital in Canada recommends routine vaccination	4%	45%	48%
Serious reactions from vaccines are rare	10%	46%	43%
Public Health Agency of Canada recommends routine vaccination	6%	51%	42%
Scientific studies show no relationship between vaccines and autism	9%	46%	41%
97% of parents in Canada vaccinate their children	3%	60%	35%
Getting vaccines is the right thing to do	9%	62%	26%

Childhood Vaccination Campaign, 2017

- Expecting parents are more likely than parents to be influenced by the statements:
 - ◇ Vaccines give infants and young children the best protection from 14 serious diseases (78 per cent of those expecting compared with 66 per cent of parents);
 - ◇ 97% of parents in Canada vaccinate their children according to the recommended schedule (45 per cent compared with 31 per cent of parents); and
 - ◇ Getting vaccines is the right thing to do (34 per cent compared with 24 per cent of parents).

- New Canadians are more likely than those born in Canada to be influenced by the statements that 97% of parents in Canada vaccinate their children according to the recommended schedule (49 per cent compared with 31 per cent of those born in Canada) and getting vaccines is the right thing to do (36 per cent compared with 24 per cent of those born in Canada).

- Hesitant acceptors are more apt than hesitant selective or those who accept vaccinations to say they would be more likely to vaccinate for each of the twelve statements.

3. INFORMATION

3.1 SOURCES OF HEALTH INFORMATION

Survey results highlight strong, but not universal reliance on healthcare professionals as a primary source for information related to their health and the health of their children. Nine in ten (89 per cent) cited healthcare providers as a primary source of information. At a significant distance, just over half (55 per cent) turn to the Internet. One-third said they would consult a friend or family member (36 per cent) or a pharmacist (30 per cent). Other recurring responses include printed resources (13 per cent), community resources such as a school or caregiver (seven per cent), and telehealth lines (six per cent).

Table 7: Sources of Health Information

Thinking about the last time you had a question related to your health or your child's health, where did you look for information and/or who did you talk to?

	Total	Parent	Pregnant
<i>n</i> =	1,029	828	201
Healthcare providers (e.g., physician, nurse)	89%	88%	92%
Internet	55%	54%	62%
Family member/friend	36%	32%	52%
Pharmacist	30%	30%	31%
Printed resources (i.e., pamphlet, book, magazine, etc.)	13%	11%	21%
School, caregiver or someone else in community	7%	7%	9%
Telehealth lines, healthlink, infosanté	6%	7%	1%
Health links (combined telephone/internet/mobile apps)	1%	1%	1%
Naturopathic physicians	1%	0%	1%
Religious leader	0%	0%	1%
Other	1%	1%	1%
Don't know / No response	0%	0%	1%

- Expecting parents are comparatively more likely to turn to the Internet (62 per cent, compared to 54 per cent of current parents), friends and family members (52 per cent versus 32 per cent), and printed resources (21 per cent versus 11 per cent).
- Regionally, residents of British Columbia are more likely to depend on the Internet (70 per cent, compared to 55 per cent nationally) and community resources (15 per cent versus seven per cent).

- The likelihood of turning to friends and family seems to decline with age (from 41 per cent among those under the age of 35 to 25 per cent among those aged 45 and over).
- University and college graduates are more likely to search online for health-related information (59 per cent and 55 per cent, respectively, compared to 40 per cent of high school educated).
- Compared to those who accept vaccines, those considered hesitant selective when it comes to vaccines are more likely to rely on printed resources (24 per cent versus 11 per cent).

3.2 PRIMARY ONLINE SOURCES OF HEALTH INFORMATION

A variety of sources are used by parents and expecting parents relying on the Internet to find health-related information. A key source is parenting and pregnancy websites used by four in ten (40 per cent) of those going online for information. One in five use Web MD (21 per cent) and search engines (19 per cent). Other common sources include online chat rooms and forums (15 per cent), social media (12 per cent), and Mayo Clinic (11 per cent).

Table 8: Primary Online Sources of Health Information

Where on the Internet would you usually go?

	Total	Parent	Pregnant
<i>n</i> =	563	440	123
Online parenting/pregnancy websites	40%	34%	60%
Web MD	21%	21%	21%
Google, searches, various sites	19%	20%	13%
Online chat rooms/forums/blogs	15%	12%	23%
Social media	12%	8%	24%
Mayo clinic	11%	13%	6%
Government Of Canada, Health Canada	5%	5%	3%
Scientific website	5%	5%	6%
Provincial health sources/services	4%	5%	1%
Foreign government health sites	3%	4%	2%
Online medical website (which one?)	2%	2%	4%
Various/Multiple sites	2%	2%	1%
Naître et grandir	2%	2%	2%
Government site (general mention)	1%	1%	1%
Passeport Santé	1%	1%	2%

	Total	Parent	Pregnant
<i>n</i> =	563	440	123
Doctissimo	1%	1%	1%
Health Link	1%	1%	0%
Santé Canoe	1%	1%	2%
Info Santé / Other telehealth	1%	2%	0%
Kids health	1%	1%	0%
Ask Dr. Sears	1%	1%	0%
Canadian Paediatric Association	1%	1%	1%
Baby Centre	1%	1%	0%
Various health centre/hospital sites	1%	1%	0%
Corporate website for medications/vaccines	1%	1%	0%
Other	2%	1%	2%
Don't know / No response	11%	11%	8%

- Expecting parents are noticeably more likely to rely on online parenting and pregnancy websites compared to current parents (60 per cent versus 34 per cent, respectively), social media (24 per cent versus eight per cent), and online chat rooms (23 per cent versus 12 per cent).
- Regionally, Web MD is much more likely to be used in Atlantic Canada (40 per cent), while it is virtually unused in Quebec (five per cent). About one in ten Quebec residents use French resources such as Naître et grandir (nine per cent) and PasseportSanté.net (eight per cent).
- Compared to men, women are more likely to turn to parenting and pregnancy websites (46 per cent versus 31 per cent).
- Those under the age of 35, are more likely to use parenting and pregnancy websites (52 per cent, compared to 40 per cent on average)
- Dependence on search engines is greater among the high school educated (40 per cent, compared to 19 per cent on average).

These same respondents were also asked to identify the types of links they prefer to select when using a search engine. More than half selected links associated with medical associations (59 per cent), government organizations (58 per cent), and familiar sources (55 per cent). Four in ten (43 per cent), meanwhile, said they rely on the top ranked results.

Table 9: Search Engine Results

When you use Google, Bing or another search engine to look for health information, which links do you select?

	Total	Parent	Pregnant
<i>n</i> =	563	440	123
Medical associations	59%	59%	57%
Government organizations	58%	59%	52%
Familiar sources	55%	57%	50%
Top ranked results (those that appear as the first choices)	43%	39%	57%
Scientific websites	2%	1%	3%
Sites that seem credible/trustworthy	2%	2%	2%
Various/Multiple sites	1%	1%	0%
Sites that provide the most relevant content	1%	1%	1%
Other	2%	2%	1%
Don't know / No response	2%	3%	1%

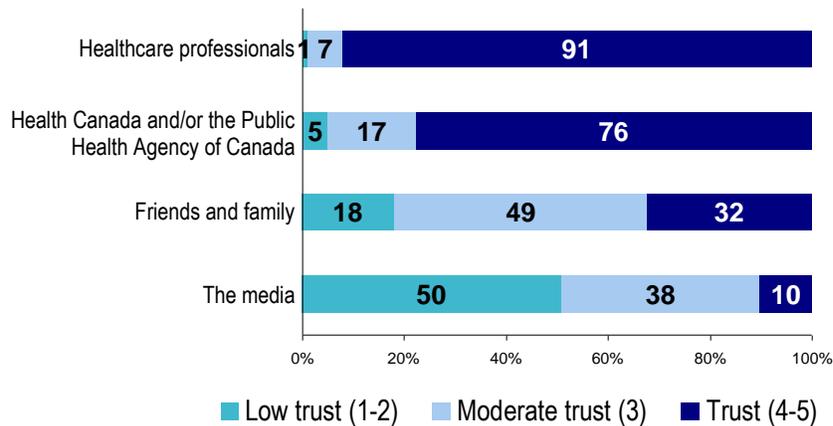
- Compared to others, those with university education are more likely to select websites run by government associations (67 per cent) and medical associations (65 per cent).
- Those who accept vaccination are more apt to click on links to government websites (65 per cent, compared to 47 per cent of hesitant selective respondents).

3.3 TRUST IN VARIOUS SOURCES OF HEALTH INFORMATION

Results from ratings in a more prompted list of potential sources of health information are consistent with previous findings. Confidence in healthcare professionals is near the strongest, although not unanimous, with nine in ten (91 per cent) expressing a high degree of trust in these individuals. Three-quarters of parents and expecting parents (76 per cent) place a high degree of trust in Health Canada and the Public Health Agency of Canada. Social networks, however, elicit more mixed results, with one-third (32 per cent) rating their trust in family and friends as high, but another one in five (18 per cent) expressing little to no trust in these sources of information. Media is not accorded a high degree of trust, with only one in ten (10 per cent) rating this source with a high degree of trust, while half (50 per cent) indicated low trust in information issued by the media.

Graph 8: Trust in Various Sources of Health Information

“How much trust do you put in each of the following to give you credible health information?”



Graph 8: Trust in Various Sources of Health Information

How much trust do you put in each of the following to give you credible health information?

	Low trust (1-2)	Moderate trust (3)	Trust (4-5)
<i>n</i> =	1024	1024	1024
Healthcare professionals	1%	7%	91%
Health Canada and/or the Public Health Agency of Canada	5%	17%	76%
Friends and family	18%	49%	32%
The media	50%	38%	10%

Childhood Vaccination Campaign, 2017

- Regionally, Quebec residents put comparatively more faith in the media (18 per cent, compared to 10 per cent nationally).
- Trust in Health Canada and the Public Health Agency of Canada seems to rise progressively with educational attainment (from 63 per cent among high school educated to 80 per cent among university graduates).
- Compared to those considered hesitant selective, those who accept vaccination are considerably more likely to express trust in healthcare professionals (96 per cent versus 74 per cent) and Health Canada and the Public Health Agency of Canada (86 per cent versus 48 per cent).

3.4 TIMING OF SEARCH FOR INFORMATION ON CHILDHOOD VACCINES

The vast majority of parents and expecting parents who have searched for information about childhood vaccines began their search well in advance. One in five started to search for information before the pregnancy (19 per cent), and another one-quarter (26 per cent) started their search during the pregnancy. One-quarter (25 per cent) began to look for information soon after the child's birth, and a further one in ten (9 per cent) began this process over the course of the first few check ups with their baby's doctor. Just one in six (16 per cent) waited until it was time to vaccinate.

Table 10: Timing of Search for Information on Childhood Vaccines

When did you start looking for information about childhood vaccines?

	Total	Parent	Pregnant
<i>n</i> =	587	564	23*
Before the pregnancy	19%	19%	18%
During the pregnancy generally	25%	25%	30%
After prenatal classes	1%	1%	0%
Soon after my child's birth	25%	26%	0%
Over the course of the first few check ups with my baby's doctor	9%	9%	0%
When it was time to vaccinate	16%	15%	44%
In the past few years	5%	4%	9%
Have not yet really given it much thought	1%	1%	0%
Other	1%	1%	0%

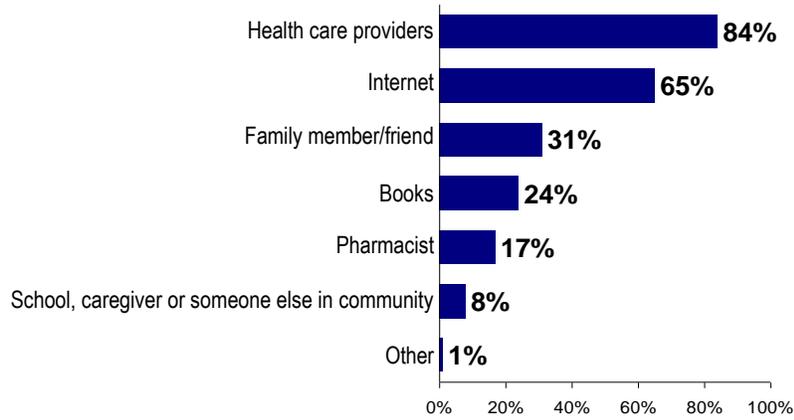
* Sample size is too small to draw conclusions about any significant differences among expecting parents compared with parents.

3.5 SOURCES OF INFORMATION ON CHILDHOOD VACCINES

The vast majority of parents and expecting parents who looked sought guidance from a healthcare provider (84 per cent). The Internet also ranks as a leading source of information, with roughly two-thirds (65 per cent) saying that they searched for this information online. Three in ten (31 per cent) turned to family and friends for advice, while one-quarter (24 per cent) relied on books and one in six (17 per cent) conferred with a pharmacist. Eight per cent sought information with community resources such as a school or caregiver.

Graph 9: Sources of Information on Childhood Vaccines

“Where did you look for information or who did you talk to about childhood vaccines?”



n=667

Childhood Vaccination Campaign, 2017

Graph 9: Sources Information on Childhood Vaccines

Where did you look for information or who did you talk to about childhood vaccines?

	Total
n=	667
Health care providers	84%
Internet	65%
Family member/friend	31%
Books	24%
Pharmacist	17%
School, caregiver or someone else in community	8%
Other	1%

Childhood Vaccination Campaign, 2017

- Hesitant selective respondents are more likely to have consulted friends and family members (54 per cent) and books (46 per cent) compared to those who accept vaccination (20 per cent and 18 per cent, respectively).

Those who went to the Internet said they relied on a wide array of websites, although the most commonly mentioned source was a parenting or pregnancy website (38 per cent). One in six (16 per cent) turned to a Government of Canada website such as Health Canada. Other common responses include chat rooms and forums (12 per cent), Web MD (11 per cent), social media (nine per cent), a provincial government website (nine per cent), scientific websites (nine per cent), and search engines (eight per cent).

Table 11: Internet Sources

Where on the Internet did you go?

	Total	Parent	Pregnant
<i>n</i> =	430	358	72
Online parenting/pregnancy websites	38%	38%	41%
Health Canada, government of Canada	16%	16%	14%
Online chat rooms/forums/blogs	12%	11%	15%
Web MD	11%	11%	11%
Social media (which one?)	9%	5%	25%
Provincial government health site	9%	11%	3%
Scientific websites, medical journals, peer reviewed/academic	9%	9%	7%
Web searches (e.g., Google)	8%	8%	10%
Mayo clinic web site	7%	7%	8%
Various/Multiple sites	5%	6%	3%
International health associations	5%	4%	10%
Online medical website	3%	4%	0%
Government site (general mention)	2%	2%	4%
Baby Centre	2%	2%	0%
Corporate websites for medications/vaccinations	2%	2%	4%
Municipal health sites	2%	2%	3%
Other social media	1%	0%	3%
Online news sites	1%	1%	1%
Naître et grandir	1%	1%	0%
Dr. Sears, Dr. Oz, Dr. Mercola	1%	1%	0%
Canadian Paediatric Society	1%	1%	3%
Other	3%	2%	3%
Don't know / No response	20%	22%	12%

- Expecting parents are more likely to have used social media compared to current parents (25 per cent versus five per cent).
- Regionally, residents of Atlantic Canada are more apt to consult a Government of Canada website (32 per cent, compared to 16 per cent nationally).

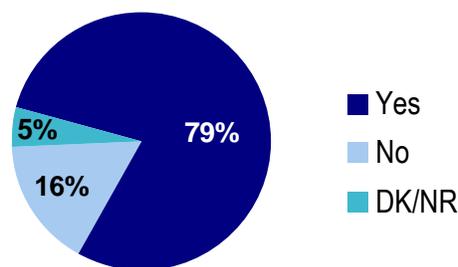
Among the very few who said they used social media to find information on childhood vaccines (n=38), they typically relied on these platforms to find out what others are saying (57 per cent), although nearly one in five (18 per cent) used social media primarily as a means to search for information.

3.6 ADEQUACY OF AVAILABLE INFORMATION ON VACCINES

Although most parents and expecting parents feel they have enough information to make an informed choice (79 per cent), one in six (16 per cent) feel they do not.

Graph 10: Adequacy of Available Information on Vaccines

“Do you feel you have enough information or resources available to make informed decisions about vaccines for your child?”



Graph 10: Adequacy of Available Information on Vaccines

Do you feel you have enough information or resources available to make informed decisions about vaccines for your child?

	Total
n=	1029
Yes	79%
No	16%
DK/NR	5%

Childhood Vaccination Campaign, 2017

- Those with a high school level of education are less apt to say they have enough resources to make an informed decision (67 per cent, compared to 79 per cent on average).
- Fully nine in ten respondents who accept vaccination (93 per cent) feel they have sufficient information, however, just slightly over half of hesitant selective individuals (53 per cent) expressed this level of confidence.

Among those who do not feel they have enough information to make an informed choice, conflicting information about vaccines is often a key reason (46 per cent). Other important reasons include information does not cover what they want to know (31 per cent), not knowing where to find the right information (29 per cent), and information is not from a credible and trustworthy source (25 per cent). Other fairly common reasons include doubts about the availability of information (18 per cent), the overwhelming amount of information available on the Internet (17 per cent), a lack of effort on their part to locate the necessary information (12 per cent), or difficulties in understanding the available information (11 per cent).

Table 12: Information Gap in Decision Making

Why do you feel you don't have enough information to make an informed choice?

	Total
n=	161
There is conflicting information about vaccines	46%
The information does not cover what I want to know	31%
I don't know where to find the right information	29%
The information is not from a credible, trustworthy source	25%
The information just doesn't seem to be out there	18%
There is too much information out there / it is overwhelming	17%
I never really looked very hard for information	12%
The information is too hard to understand, confusing, or too technical	11%

	Total
<i>n</i> =	161
I don't have time to look before the appointments	5%
The information I find is not in my language	1%
Other	2%
Don't know / No response	3%

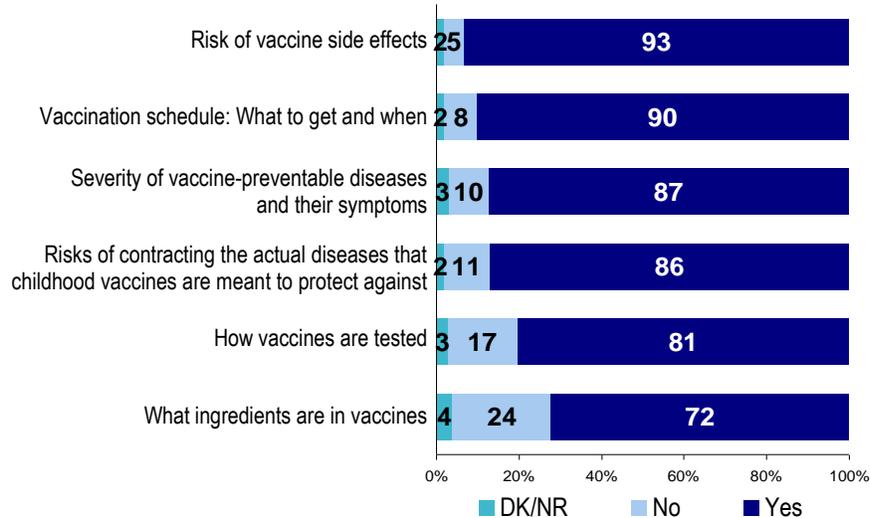
- Expecting parents, compared to current parents, are more likely to indicate not knowing where to find the right information as a key reason (55 per cent versus 20 per cent).

3.7 SPECIFIC RESOURCES WANTED

Survey results highlight a broad thirst for information about childhood vaccines. Selected from a prompted list, nine in ten would like information on the risks of vaccine side effects (93 per cent), suggested vaccination schedules (90 per cent), the severity of vaccine-preventable diseases (87 per cent), and the risks of contracting the actual diseases that childhood vaccines are meant to protect against (86 per cent). Eight in ten (81 per cent) also expressed interest in learning how vaccines are tested. Only the ingredients found in vaccines is of slightly less interest, although still selected by seven in ten (72 per cent).

Graph 11: Specific Resources Wanted

“What information or resources would you like to have available?”



n=1029

Childhood Vaccination Campaign, 2017

Graph 11: Specific Resources Wanted

What information or resources would you like to have available?

	DK/NR	No	Yes
n=	1029	1029	1029
Risk of vaccine side effects	93%	5%	2%
Vaccination schedule: What to get and when	90%	8%	2%
Severity of vaccine-preventable diseases and their symptoms	87%	10%	3%
Risks of contracting the actual diseases that childhood vaccines are meant to protect against	86%	11%	2%
How vaccines are tested	81%	17%	3%
What ingredients are in vaccines	72%	24%	4%

Childhood Vaccination Campaign, 2017

- Nearly all individuals who accept vaccination want more information on recommended vaccine schedules (96 per cent, compared to just 66 per cent among those considered hesitant selective), while they express comparatively less interest in learning more about how vaccines are tested (75 per cent versus 86 per cent) and vaccine ingredients (63 per cent versus 87 per cent).

3.8 PREFERRED AUTHORITY FOR ADDRESSING CONCERNS ABOUT CHILDHOOD VACCINES

In terms of sources that parents and expecting parents feel they would turn to if they had concerns about vaccinating their children, healthcare professionals are again cited as by far the most relied upon, although not universal, source of information. Eight in ten (85 per cent) indicated they would turn to a healthcare provider. One-quarter (23 per cent) said they would consult a family member, and another one in ten would confer with another parent (11 per cent) or the government (nine per cent).

Table 13: Preferred Authority for Addressing Concerns about Childhood Vaccines

If you were feeling uncomfortable or worried about the decision to vaccinate your child, who would you turn to, other than your spouse/partner?

	Total	Parent	Pregnant
n=	1,029	828	201
A healthcare provider (nurses, doctors, clinic/hospital resources)	85%	85%	87%
A family member	23%	22%	29%
Another parent	11%	10%	17%
Government	9%	10%	7%
Teachers or caregivers	2%	1%	3%
Friends/co workers	2%	3%	1%
Pharmacist	1%	1%	1%
Internet (general)	1%	1%	2%
Naturopath, midwife	1%	1%	1%
Scientific literature	1%	2%	0%
Someone else (Other)	0%	0%	1%
Don't know / No response	2%	2%	2%

- Those under the age of 35 are more likely to say they would turn to a friend or family member (32 per cent, compared to 23 per cent on average).
- Compared to those considered hesitant selective, those who accept vaccination are more likely to say they would consult a healthcare professional (88 per cent versus 71 per cent).

APPENDIX A
SURVEY QUESTIONNAIRE

APPENDIX A: Survey Questionnaire

WINTRO

Web Intro

Thank you for agreeing to complete this survey. All your responses will be kept strictly confidential. A few reminders before beginning...

Please rest assured that your answers are completely confidential (this means that no individual will be associated with the survey's results - rather, they will be rolled up into large categories to protect the confidentiality of each respondent) and that this survey is voluntary.

INSTRUCTIONS

* On each screen, after selecting your answer, click on the "Continue" or "Back" buttons at the bottom of the screen to move forward or backwards in the questionnaire.

* If you leave the survey before completing it, you can return to the survey URL later, and you will be returned to the page where you left off. Your answers up to that point in the survey will be saved.

* If you have any questions about how to complete the survey, please call EKOS at 1-866-211-8881 or email us at online@ekos.com. Thank you in advance for your participation.

* The personal information you provide to Health Canada is collected in accordance with the Privacy Act under the authority of section 4 of the Department of Health Act, and in accordance with the Treasury Board Directive on Privacy Practices. We only collect the information we need to conduct the research project.

* In addition to protecting your personal information, the Privacy Act gives you the right to request access to and correction of your personal information. For more information about these rights, or about our privacy practices, please contact Health Canada's Privacy Coordinator at 613-948-1219 or privacy-vie.privee@hc-sc.gc.ca. You also have the right to file a complaint with the Privacy Commissioner of Canada if you think your personal information has been handled improperly

PINTRO

Phone Intro

Contact info:

Name: _____

Gender: _____

Age Group: _____

Region: _____

Sample type: _____

Hello, my name is ... and I'm calling from EKOS Research Associates. May I speak with _____?

We are conducting a survey with parents of young children and women who are pregnant or planning to become pregnant within the next year. The survey collects opinions about where and how you access health information and information related to children's vaccination. Your participation in the survey is completely voluntary. Your decision on whether or not to participate will not affect any dealings you may have with the Government of Canada. Would you mind if we asked you some questions? All your responses will be kept strictly confidential. May I begin?

This survey is registered with Marketing Research and Intelligence Association's (MRIA) Research Registration System.

The personal information you provide to Health Canada is collected in accordance with the Privacy Act under the authority of section 4 of the Department of Health Act, and in accordance with the Treasury Board Directive on Privacy Practices. We only collect the information we need to conduct the research project.

In addition to protecting your personal information, the Privacy Act gives you the right to request access to and correction of your personal information. For more information about these rights, or about our privacy practices, please contact Health Canada's Privacy Coordinator at 613-948-1219 or privacy-vie.privee@hc-sc.gc.ca. You also have the right to file a complaint with the Privacy Commissioner of Canada if you think your personal information has been handled improperly.

If asked: This survey should take about 15 minutes.

Continue	1
Prefer to complete it online	2
Refuse (THANK & TERMINATE)	9

INTRORF1

Phone only - Prefer to complete it online

Would you be willing to complete the survey online as soon as possible?

IF YES: Please provide us with your email address.

IF NO: THANK AND TERMINATE

Yes (record email) :	1
No THANK AND TERMINATE	2

INTRORF2

Phone only - Prefer to complete it online

An invitation email has been sent, it should be received shortly. Please complete the survey as soon as possible. Thank you for your time and cooperation.

MUST ALWAYS CLICK "CONTINUE" TO RETURN TO INTRODUCTION 1

PRIV

Phone only

This call may be recorded for quality control or training purposes.

QGENDR

[online] Are you...? / ***[phone]***(Record gender based on observation)

Male	1
Female	2
Other	3
Don't know / No response	99

QCHILD

Are you the parent or legal guardian of one or more children who are aged 6 or under? If so, how many?

Yes (please enter number of children) :	77
No	98
No response	99

QCHILDA [1,8]

If... QCHILD = Yes

What are the ages of children in the home?

Select all that apply	
Under 12 months	10
1	1
2	2
3	3
4	4
5	5
6	6
7 or older	7
No response	99

PRG1

If... QCHILD = No (not a parent) or QCHILDA = all child 7 or older

<***Female/Unknown*** : Are you, or is / ***Everything else*** : Is> there someone in your household who is pregnant or intending to become pregnant within the next year?

<i>(Female/Unknown)</i> Yes, I am	1
Yes, someone else in the household	2
No <i>[phone]</i> (THANK & TERMINATE)	3
Don't know / No response <i>[phone]</i> (THANK & TERMINATE)	99

PRG2

If... PRG1 = Yes someone else in the household

Would it be possible to (speak with/refer / refer) the survey to the person in your household who is currently pregnant or intending to become pregnant in the next year?

Return to the start of the survey 1

PRG3A

If... PRG1 = Yes (me)

Are you pregnant now or are you intending to become pregnant in the next 12 months?

Currently pregnant 1
Intending to be pregnant 2

PRG3B

If... PRG3A = Currently pregnant

Is this your first pregnancy?

Yes 1
No 2
Don't know / No response 99

PRG3C

If... PRG3A = Currently pregnant

What trimester are you currently in?

First (weeks 1-12) 1
Second (weeks 13-27) 2
Third (weeks 28 to birth) 3
Don't know / No response 99

RESPTYPE

Calculation that determines respondent type

Parent of child with kid 6 or under 1
Pregnant woman 2
Unknown 9

QDECIDE

Who in your family <Parent : makes / Pregnant : will make> the decisions about health care for the child?

[phone] You *[online]* I <parent : do / pregnant : will 1
[phone] Your spouse or partner *[online]* My spouse or partner 2
[phone] Your spouse or partner and you (jointly) *[online]* My spouse or partner
and I (jointly) 3
Other (please specify) 77

QDECIDEB

If... Parent and my spouse/partner makes decision in QDECIDE

This survey is focused on information, concerns and decision-making about vaccines for children. Ideally, the survey should be completed by the person in the household who is primarily or jointly responsible for health care decisions for children in the household. Would it be possible for this person to complete the survey? *[online]* You can forward the original invitation email to that person.

Continue with primary decision-maker <i>[phone]</i> (ask if prefer to go back to introduction or continue)	1
Return to the introduction	2
<i>[phone]</i> Make appointment for time to interview primary decision-maker	7
Cannot continue with primary decision-maker	9

QA1 [1,8]

Thinking about the last time you had a question related to your health or your child's health, where did you look for information and/or who did you talk to?

READ LIST AND TAKE ALL THAT APPLY

Health care providers (e.g., physician, nurse)	1
Pharmacist	2
School, caregiver or someone else in community	3
Family member/friend <i>[phone]</i> (ask if one of above code above if they are professional in one of above)	4
Internet	5
Printed resources (i.e., pamphlet, book, magazine, etc.)	6
Religious leader	7
Other (please specify)	77
Don't know / No response	99

QA2 [1,5]

If... QA1 = Internet

Where on the Internet would you usually go?

READ LIST AND TAKE ALL THAT APPLY

Online medical website (which one?)	76
Online parenting/pregnancy websites	1
Social media	2
Online chat rooms/forums/blogs	3
Other (please specify)	77
Don't know / No response	99

QA2B [1,5]

If... QA1 = Internet

When you use Google, Bing or another search engine to look for health information, which links do you select?

Top ranked results (those that appear as the first choices)	1
Familiar sources (i.e., parenting sites/networks, known brands, news outlets, etc.)	2
Medical associations	3

Government organizations	4
Other (please specify)	77
Don't know / No response	99

PREQA3

On a scale from 1 to 5 where 1 is no trust at all, 5 is complete trust, and the midpoint 3 is moderate trust, how much trust do you put in each of the following to give you credible health information?

QA3A

Friends and family	
No trust at all 1	1
2	2
Moderate trust 3	3
4	4
Complete trust 5	5
Not applicable (Would not use that source)	98
Don't know/ No response	99

QA3B

Healthcare professional such as doctors and nurses	
No trust at all 1	1
2	2
Moderate trust 3	3
4	4
Complete trust 5	5
Not applicable (Would not use that source)	98
Don't know/ No response	99

QA3C

Health Canada and/or the Public Health Agency of Canada (Federal government departments)	
No trust at all 1	1
2	2
Moderate trust 3	3
4	4
Complete trust 5	5
Not applicable (Would not use that source)	98
Don't know/ No response	99

QA3E

The media (television, radio and newspaper)	
No trust at all 1	1
2	2
Moderate trust 3	3
4	4
Complete trust 5	5
Not applicable (Would not use that source)	98
Don't know/ No response	99

Q1

On a scale of 1 to 5 where 1 is not at all, 5 is completely, and the midpoint 3 is moderately, how much do you trust recommended childhood vaccinations?

[phone] Interviewer Note: Read bolded text. Only read full statement if needed/asked to clarify or define

[all] **(Recommended childhood immunizations include routine vaccines to prevent tetanus, diphtheria, pertussis (whooping cough), polio and measles, mumps, rubella (MMR) as well as haemophilus influenza type B (Hib). They also include recommended vaccines to prevent chicken pox (varicella), but does not include vaccines you get to prevent flu or in advance of travelling.)**

Not at all 1	1
2	2
Moderately 3	3
4	4
Completely 5	5
Don't know / No response	99

Q2 *(categories will reverse order half of the time)*

If you have to place yourself in only one category, which of the following statements **most** accurately reflects your views on vaccines for your child(ren)?

Interviewer note: If respondent picks one as you read, you do not have to read all statements

I refuse all recommended vaccines	11
I refuse or delay getting some vaccines	12
I accept all recommended vaccines but have many doubts and concerns about vaccinating my child	13
I accept all recommended vaccines but have minor doubts and concerns about vaccinating my child	14
I accept all recommended vaccines and have no doubts or concerns about vaccinating my child	15
Don't know / No response	99

PREQ3

On a scale of 1 to 5 where 1 is not at all, 5 is very, and the midpoint 3 is moderately, how much or how little would you say that routine childhood vaccines are:

Q3A

Effective in preventing potentially deadly diseases	
Not at all 1	1
2	2
Moderately 3	3
4	4
Very 5	5
Don't know/ No response	99

Q3B

Safe (unlikely to cause more than minimal side effects)	
Not at all 1	1
2	2
Moderately 3	3
4	4
Very 5	5
Don't know/ No response	99

Q5C [1,14]

If... Parent and Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

What are the main reasons you are concerned about vaccinations for your child?

DO NOT READ, TAKE ALL THAT APPLY

I don't believe in vaccines for philosophical reasons	1
I don't believe in vaccines for religious reasons	2
Vaccines cause side effects and diseases they are supposed to prevent	3
Vaccines can cause allergic reactions	11
Vaccines are not effective at preventing disease	4
Vaccines are not necessary - the body can take care of itself	5
Vaccines have not been tested enough	6
I don't trust the pharmaceutical industry	7
I don't trust the government	8
I think too many vaccines are needed	9
I think vaccines contain toxic ingredients	10
I think too many vaccines are offered in a short period	12
I believe vaccines may cause autism	13
Other (please specify)	77
Don't know / No response	99

Q7

If... PRG3A not = 2 (not intended to be pregnant)

When did you start thinking about your <[More than one child aged <7] first child / [All other cases] child>'s vaccination needs?

Before the pregnancy	1
During the pregnancy	2
(Parent or 2 nd /3 rd trimester in pregnancy) After prenatal classes	3
<i>(Parent only)</i> Soon after my child's birth	4
<i>(Parent only)</i> Over the course of the first few check ups with my baby's doctor	5
<i>(Parent only)</i> Over the past few years	6
When it was time to vaccinate	8
Have not yet really given it much thought	7
Other (please specify)	77
Don't know / No response	99

Q8

Have you ever looked for information about childhood vaccines?

Yes	1
No	2

Don't recall	3
Don't know / No response	99

Q8B

If... Q8 = Yes and PRG3A not = 2 (not intended to be pregnant)

When did you start looking for information about childhood vaccines?

Before the pregnancy	1
During the pregnancy generally	2
After prenatal classes	3
<i>(Parent only)</i> Soon after my child's birth	4
<i>(Parent only)</i> Over the course of the first few check ups with my baby's doctor	5
When it was time to vaccinate	7
In the past few years	8
Have not yet really given it much thought	6
Other (please specify)	77
Don't know / No response	99

Q8C [1,7]

If... Q8 = Yes

Where did you look for information or who did you talk to about childhood vaccines?

READ LIST AND TAKE ALL THAT APPLY

Health care providers (e.g., physician, nurse)	1
Pharmacist	2
School, caregiver or someone else in community	3
Family member/friend <i>[phone]</i> (ask if one of above code above if they are professional in one of above)	4
Internet	5
Books	6
Other (please specify)	77
Don't know / No response	99

Q8D [1,5]

If... Q8C = Internet

Where on the Internet did you go?

READ LIST AND TAKE ALL THAT APPLY

Online medical website (which one?)	76
Online parenting/pregnancy websites	2
Social media (which one?) <i>Dropdown : Q8DDROP</i>	50
Online chat rooms/forums/blogs	4
Other (please specify)	77
Don't know / No response	99

Q8DDROP [0,1]

Dropdown box used in Q8D social media

(which one?)	99
Facebook	51
Twitter	52

Instagram	53
Pinterest	54
LinkedIn	55
Other	98

Q8E

If... Q8D = Social media

Of the social media platforms or sites you use regularly, what do you typically use them for?

To find out what others are saying, and/or understand others' opinions	1
To search for information	2
To share my own opinions or thoughts	3
To ask for input or recommendations	4
Other (please specify)	77
Don't know / No response	99

Q9

Do you feel you have enough information or resources available to make informed decisions about vaccines for your child?

Yes	1
No	2
Don't know / No response	99

Q9B [1,11]

If... Q9 = No

Why do you feel you don't have enough information to make an informed choice?

DO NOT READ LIST

Select all that apply

The information just doesn't seem to be out there	1
I don't know where to find the right information	2
I never really looked very hard for information	3
I don't have time to look before the appointments	4
The information is not from a credible, trustworthy source	5
The information does not cover what I want to know	6
The information is too hard to understand, confusing, or too technical	7
There is too much information out there / it is overwhelming	8
There is conflicting information about vaccines	10
The information I find is not in my language	9
Other (please specify)	77
Don't know / No response	99

Q9B2

If... Not pregnant

On a scale of 1 to 5 where 1 is very easy, 5 is very difficult and the midpoint 3 is neither easy nor difficult, how easy or difficult have you found making decisions about vaccinating your child?

Very easy decisions 1	1
Easy decisions 2	2
Neither easy nor difficult 3	3
Difficult decisions 4	4
Very difficult decisions 5	5
Have not really thought much about it	98
Don't know / No response	99

Q9B3 [1,3]

If... Q9B2 = Difficult (4,5)

Why do you say that?

Please specify (try to be as specific as you can)	77
Don't know / No response	99

PREQ9C

What information or resources would you like to have available?

[phone] I'm going to read through the list and ask you to give me a "yes" or "no" for each one.

Q9CA

Risks of contracting the actual diseases that childhood vaccines are meant to protect against

Yes	1
No	2
Don't know/ No response	99

Q9CB

Severity of vaccine-preventable diseases and their symptoms

Yes	1
No	2
Don't know/ No response	99

Q9CC

Risk of vaccine side effects

Yes	1
No	2
Don't know/ No response	99

Q9CD

Vaccination schedule: What to get and when

Yes	1
No	2
Don't know/ No response	99

Q9CH

What ingredients are in vaccines

Yes	1
No	2
Don't know/ No response	99

Q9CI

How vaccines are tested

Yes	1
No	2
Don't know/ No response	99

Q9CJ [0,1]

Half sample between Q9CJ and Q10

Other (please specify)

Yes	1
No	2
Don't know/ No response	99

Q10 [1,3]

Half sample between Q9CJ and Q10

If you had one question that you would like to have answered about vaccines for your child, what would that question be?

Specify question - please be as specific as possible	77
I don't have any questions / No response	99

Q11

Thinking about the last year or two, would you say you are more concerned, less concerned, or feel about the same about vaccines now as you did then?

A lot less concerned now	1
Somewhat less concerned now	2
About the same as before	3
Somewhat more concerned now	4
A lot more concerned now	5
Do not recall / Don't know / No response	99

PREQ12

On a scale of 1 to 5 where 1 is not at all, 5 is completely, and the midpoint 3 is moderately, how much do you trust each of the following remedies for preventing or treating an illness in children?

Q12A

Antibiotics	
Not at all 1	1
2	2
Moderately 3	3
4	4
Completely 5	5
Don't know/ No response	99

Q12B

Homeopathic products (alternative remedies made up of substances that come from plants, minerals or animals e.g. homeopathic droplets to relieve teething and colic, etc.)

Not at all 1	1
2	2
Moderately 3	3
4	4
Completely 5	5
Don't know/ No response	99

Q12C

Vitamins and supplements	
Not at all 1	1
2	2
Moderately 3	3
4	4
Completely 5	5
Don't know/ No response	99

Q12D

Over the counter medications (pain medication, etc.)	
Not at all 1	1
2	2
Moderately 3	3
4	4
Completely 5	5
Don't know/ No response	99

Q12E

Holistic medicine (massage, chiropracture, acupuncture, etc.)	
Not at all 1	1
2	2
Moderately 3	3
4	4
Completely 5	5

Don't know/ No response 99

Q12F

Healthy lifestyle (diet, exercise, etc.)

Not at all 1	1
2	2
Moderately 3	3
4	4
Completely 5	5
Don't know/ No response	99

Q13 [1,3]

Half sample

Do you recall a single message about vaccines that stood out for you, and shaped your thinking?

Yes (what was it?)	77
No	2
Don't know / No response	99

Q14 [1,2]

If you were feeling uncomfortable or worried about the decision to vaccinate your child, who would you turn to, other than your spouse/partner?

Select up to 2	
Another parent	1
A family member	2
A health care provider	3
Government	4
Teachers or caregivers	5
Someone else (please specify)	77
Don't know / No response	99

PREQ15

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

If you were to decide today on vaccines for your child, which of the following statements would influence your decision? (read list) Would this statement make a difference in your decision or make no difference? (If difference:) Would it make you more inclined to vaccinate or less inclined?

Q15A

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

Getting my baby vaccinated also protects those children who are too young or too sick to be vaccinated themselves.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15B

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

Vaccines give infants and young children the best protection from 14 serious diseases.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15C

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

The recommended immunization schedule is designed to protect infants and children by providing immunity early in life, before they are exposed to life-threatening diseases.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15D

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

Serious reactions from vaccines are rare.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15E

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

Scientific studies and reviews show no relationship between vaccines and autism.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15F

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

Vaccines are very safe. It can take up to 10 years for a vaccine to be developed and approved for use in Canada.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15G

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

There is no cure for most vaccine preventable diseases. Vaccination is our best protection.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5

Don't know/ No response 99

Q15H

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

Hearing your doctor say "I strongly recommend this vaccine. I did it for my own family and kids"

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15I

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

97% of parents in Canada vaccinate their children according to the recommended schedule.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15J

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

The head of every pediatric hospital in Canada recommends routine vaccination for children.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15K

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

The Public Health Agency of Canada recommends routine vaccination for children.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

Q15L

If... Q2 = 11,12,13,14 (refuse / accept but have some doubts & concerns)

Getting vaccines is the right thing to do.

Less likely to vaccinate	1
Would make no difference	3
More likely to vaccinate	5
Don't know/ No response	99

QDEMO

These last questions are for statistical purposes and all your answers are completely confidential.

QAGE

In what year were you born?

Record year:	77
Don't know / No response	99

QAGE2

If... QAGE = DK/NR

In which of the following age categories do you belong?

18 to 24	1
25 to 34	2
35 to 44	3
45 to 54	4
55 to 64	5
65 or older	6
Don't know / No response	99

QEMP

Which categories best describes your current employment status? Are you...?

Working full-time (35 or more hours per week)	1
Working part-time (less than 35 hours per week)	2
Self-employed	3
Student attending full time school (not working)	4
Unemployed, but looking for work	5
Not in the workforce (e.g. unemployed, but not looking for work, a full-time homemaker or parent)	6
Other (please specify)	77
Don't know / No response	99

QEDUC

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

Grade 8 or less	1
Some high school	2
High school diploma or equivalent	3
Registered Apprenticeship or other trades certificate or diploma	4
College, CEGEP or other non-university certificate or diploma	5
University certificate or diploma below bachelors level	6
Bachelor's degree	7
Post graduate degree above bachelor's level	8
Don't know / No response	99

QMARITAL

What is your marital status?

Married or partnered/common law	1
Single	2
Divorced or separated	3
Widowed	4
Don't know / No response	99

QINCOME

Which of the following categories best describes your total household income, for all persons in your household, before taxes?

Under \$20,000	1
\$20,000 to just under \$40,000	2
\$40,000 to just under \$60,000	3
\$60,000 to just under \$80,000	4
\$80,000 to just under \$100,000	5
\$100,000 to just under \$120,000	6
\$120,000 to just under \$150,000	7
\$150,000 and above	8
Don't know / No response	99

QBORN

Were you born in Canada?

Yes	1
No	2
Don't know / No response	99

QBORNB

If... QBORN = No

How many years have you lived in Canada?

Less than 5 years	1
5-9 years	2
10-19 years	3
20-29 years	4
30 or more years	5
Don't know / No response	99

QETHNIC [1,8]

What best describes your ethnic heritage?

Select all that apply

White/European (for example, German, Irish, English, Italian, French, Polish, etc.)	1
Hispanic, Latino, Spanish (for example, Mexican, Cuban, Salvadoran, Columbian, etc.)	2
Black or African American (for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, etc.)	3

East Asian (for example, Chinese, Filipino, Vietnamese, Korean, etc.)	4
South Asian (for example, East Indian, Pakistani, etc.)	5
Middle Eastern or North African (for example, Lebanese, Iranian, Syrian, Moroccan, Algerian, etc.)	6
Indigenous	7
Other (please specify)	77
Don't know / No response	99

QPOSTC

What are the first 3 digits of your postal code?

Please specify :	1
No response	9

COMM [0,1]

[Online]

Do you have any additional comments?

Yes (please specify)	1
No	2

THNK

Thank you for taking the time to complete this survey, it is greatly appreciated.

THNK2

Screened-out

Unfortunately, your responses indicate that you are ineligible to participate in this survey. Thank you for your time!