

The Adult National Immunization Coverage Survey (aNICS) 2023

Methodological Report

Prepared for the Public Health Agency of Canada

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Ce rapport est aussi disponible en français.



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Supplier Name: Advanis Inc.

October 2023

This report presents the methodological details for The Adult National Immunization Coverage Survey (aNICS) 2023, conducted by Advanis Inc. on behalf of the Public Health Agency of Canada (PHAC). The survey was administered among 12,164 members of the adult Canadian general public, between April 4 and July 26, 2023.

Ce rapport est aussi disponible en français sous le titre: Enquête nationale sur la couverture vaccinale des adultes (ENCVA) 2023 : rapport méthodologique

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1. Executive Summary

1.1 Background

Since 1991, the Public Health Agency of Canada has been monitoring national vaccination coverage for selected adult vaccines. The adult National Immunization Coverage Survey (aNICS) was first conducted in 2001 and has been routinely administered every two years since 2006 until 2016 when it was discontinued. The aNICS was conducted in 2001, 2006, 2008, 2010, 2012, 2014, and 2016. Results from aNICS are used to monitor coverage at the national level for vaccines recommended by the National Advisory Committee on Immunization (NACI), to report vaccination coverage estimates against national coverage goals and to inform vaccination programs and public education strategies. Coverage among the general population aged 18 and older for immunization against seasonal influenza, pneumococcal, hepatitis B, tetanus, pertussis, varicella, herpes zoster (shingles), and human papillomavirus (HPV) was reported for each cycle.

As the most recent cycle of data collection for the aNICS occurred in 2016, there is a need for more recent data on immunization coverage among Canadians. National health surveys such as the Survey on Vaccination during Pregnancy (SVP), the COVID-19 Vaccination Coverage Survey (CVCS), and the Seasonal Influenza (Flu) Vaccination Coverage Survey, all conducted by the Public Health Agency of Canada, provide some prevalence indicators for immunization coverage among adult Canadians. However, these surveillance tools do not provide sufficiently comprehensive data on immunization coverage for all vaccine-preventable diseases of interest at national and/or provincial/territorial levels that are required for ongoing monitoring, nor do they provide sufficient data on vaccine hesitancy and knowledge, attitudes and beliefs (KAB) regarding vaccines. In addition, they do not have the capacity to track immunization coverage and KAB relating to emerging vaccine-preventable diseases that may not have been relevant to tracking in the past, such as polio or monkeypox. And finally, there is a need for a better understanding of the current status of immunization coverage among health care workers (HCWs) that is not supported by these surveys, as well as an understanding of the coverage of immunizations recommended prior to travel. These issues lead to data gaps that have an impact on policy and program development.

1.2 Objectives

The primary objective of this research is to obtain both nationally and provincially/territorially (P/T) representative results for immunization coverage among Canadians aged 18 years and older. Specifically, this research aims to provide data on:

- the immunization status of Canadians aged 18 and older for hepatitis B, tetanus, pertussis, varicella, HPV, shingles, pneumococcal, monkeypox, polio, measles and meningitis, as per the National Advisory Committee on Immunization (NACI)'s recommendations;
- COVID-19 and influenza immunization status; and
- immunization coverage among HCWs, adults with chronic medical conditions, and seniors aged 65 and older.

Secondary objectives of this research are to understand:

- travel-related immunization behaviours of Canadians travelling abroad;
- knowledge, attitudes, and beliefs (KAB) towards immunization, including vaccine hesitancy and sources of information on vaccines; and

barriers and facilitators to immunization.

1.3 Methodology

Data collection started April 4, 2023, and ended July 26, 2023, and was conducted by Advanis.

A sample of 368,059 Canadians aged 18 or older were called by random digit dialing (RDD) and invited to participate in an online survey. A total of 47,668 recruits agreed to participate and received an email or SMS inviting them to take part in the survey or agreed to participate directly on the phone.

Of those invited, 12,333 answered the survey. However, 155 were under 18 years old, 9 lived outside Canada and five were removed from the dataset for giving unintelligible responses. Hence, 12,164 were considered to have completed the survey.

Survey results were weighted by region, gender+ and age group. Recruitment ensured quotas were reached for key sub-populations to ensure statistical relevance and representativeness.

1.4 Contract Value

The contract value for this study was \$296,396.28 (including HST).

1.5 Political Neutrality Requirement

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

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

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Vieslos tout Z

2. Methodology

The Public Health Agency of Canada (PHAC) sought more recent data on immunization coverage among Canadians for all vaccine-preventable diseases of interest at national and/or provincial/territorial levels, an understanding of the current status of immunization coverage among health care workers, adults with chronic medical conditions and seniors, as well as an understanding of the coverage of immunizations recommended prior to travel. PHAC contracted Advanis to conduct the *Adult National Immunization Coverage Survey (aNICS) 2023*. It was initially planned to be a 15-minute online survey and 17-minute phone survey of Canadians 18 years and older.

To reach respondents, Advanis used a two-staged approach where respondents were first recruited by telephone (RDD with both landline and mobile) using a short battery of screener questions approved by Health Canada. During the second stage, the potential respondents were sent a link by SMS or email to an online survey where the core survey data was collected.

Advanis recruited respondents from a list of random telephone numbers that Advanis had verified are in service. This list consisted of approximately 90% mobile numbers and 10% landlines.

During the RDD recruit, respondents were allowed to complete the entire survey directly on the phone if explicitly requested. This was done to improve the response rate for harder to reach populations.

Respondents were recruited to the online survey by either email or SMS (text message), based on their preference stated at the time of the phone recruitment. After the initial invitation, if respondents had not yet completed the survey, they were sent a reminder message. Reminder messages were sent 3, 6 and 9 days after the initial recruitment.

2.1 Survey Questionnaire

The questions for this survey were designed by the Public Health Agency of Canada and supplied to Advanis. The questionnaire was translated into French by Advanis. It contained questions about knowledge and beliefs towards vaccination, vaccine history and vaccination status, travel plans as well as background and demographic information.

The Government of Canada's standards for pre-testing were adhered to, and pretests were conducted in both English and French. The pretest was conducted on April 4, 2023. This led to 27 completed online surveys (15 French, and 12 English). After the pretest it was decided to change the "White European" level at question G3 asking for the racial or ethnic community of the respondent, to "White (e.g., European, Caucasian, etc.)" to avoid any confusion among respondents. At E3a, the "COVID-19 vaccine" level was added, and the expected survey length was adjusted in the introduction. No further changes were made to the survey and the pretest data was retained in the final dataset.

2.2 Sampling and Administration

The target audience for this project included:

- persons 18 years of age and older who are living in Canada;
- health care workers (physicians, nurses, physical and occupational therapists, etc.)¹; and

¹ Health care workers, as defined by the Canadian Institute for Health Information (CIHI): https://www.cihi.ca/en/health-workforce

• people with chronic health conditions².

Overall, 368,059 phone numbers were called and 47,668 people were recruited to participate in the survey. A total of 12,179 responded on the web and 154 preferred to answer directly on the phone for a sum of 12,333 respondents overall. To be noted, 155 were under 18 years old, 9 lived outside Canada and five were removed from the dataset for giving incoherent responses.

Hence, 12,164 (9,721 in English and 2,443 in French) were considered to have completed the survey. The overall response rate for people recruited to participate in the web survey was 25.9%³. The margin of error was +/-0.89% (19 times out of 20 at a 95% confidence interval). The average length of the survey was 14 minutes for the web survey and 25 minutes for the phone survey.

Table 1: Invitations, completed surveys and response rate

Population Group Field Details	Total
Invited	47,668
Screened Out	169
Completed	12,164
Response rate (completed + screened out / invited)	25.9%

The targeted number of completed surveys was 12,000 Canadian adults with a minimum of 600 health care workers and 2,000 respondents with chronic health conditions. There were also targets by province , age group and sex.

Tables 2, 3, 4 and 5 present the number of completed surveys by population groups.

Table 2: Completed surveys for health care workers and people with chronic health conditions

Age groups	Targeted % of Sample	Minimum/Target Sample Size	Number of respondents	% of respondents
Health care workers	5.0%	600	1,267	10.4%
Has chronic health condition	16.7%	2,000	3,674	30.2%

² From the Canada Immunization Guide: https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-3-vaccination-specific-populations/page-7-immunization-persons-with-chronic-diseases.html

³ The response rate is calculated as follows: (completed surveys+ screened out participants)/recruited participants. Phone respondents were included in the response rate.

Table 3: Completed surveys by province

Province	Targeted % of Sample	Minimum Sample Size	Target Sample Size	Number of respondents	% of respondents
NFL	3.3%	380	400	414	3.4%
PEI	3.3%	380	400	394	3.2%
NS	4.2%	450	500	524	4.3%
NB	4.2%	450	500	457	3.8%
QC	20.0%	1,800	2350	2,465	20.3%
ON	29.2%	3,200	3450	3,455	28.4%
MB	4.2%	440	500	508	4.2%
SK	4.2%	440	500	489	4.0%
AB	12.0%	1,200	1400	1,497	12.3%
ВС	14.0%	1,400	1550	1,626	13.4%
NT*	1.2%	100	150	39	0.3%
NU*	1.2%	100	150	101	0.8%
YT	1.2%	100	150	195	1.6%

^{*}In its proposal, Advanis mentioned that targets for territories might not be reached and would do its best effort to get as many respondents as possible.

Table 4: Completed surveys by age groups

Age groups	Targeted % of Sample	Minimum Sample Size	Target Sample Size	Number of respondents	% of respondents
18-26 yrs. *	13.3%	1,100	1,595	918	7.5%
27 to 49 yrs.	37.6%	4,000	4,516	4,664	38.3%
50 to 64 yrs.	25.5%	3,000	3,059	3,896	32.0%
65-79 yrs.	17.9%	1,800	2,144	2,465	20.3%
80+ yrs.	5.7%	200	686	221	1.8%
Total	100.0%		12,000	12,167-	100.0%

^{*}During data collection, it was agreed with PHAC that the number of completed surveys in the 18-26 age group was sufficient given what was feasible in the amount of time required.

Table 5: Completed surveys by sex

Sex	Targeted % of Sample	Minimum Sample Size	Target Sample Size	Number of respondents	% of respondents
Male+	48.8%	5500	6,000	5942	48.8%
Female+	51.2%	5500	6,000	6222	51.2%

2.3 Weighting and Data Cleaning

Overall, 12,164 surveys were completed. A direct weighting approach was used based on 3 variables: region, gender+, and age. The weights are based on the most recent Statistics Canada census information that is publicly available, the 2021 census.

The non-binary, two-spirit/bi-spirit, and other genders population is small, and data aggregation to a two-category gender variable (denoted by the "+" symbol) is often used to protect the confidentiality of responses provided. Non-binary persons, and two-spirit/bi-spirit persons, and persons of other genders were randomly classified as men+ and as women+ (total n = 40) to reflect the categories of the Statistics Canada Census of 2021. This results in two gender categories: "men+" and "women+". The men+ category includes cisgender men, transgender men and 50 % of non-binary person, two-spirit persons, bi-spirit persons and persons of other genders. The women+ category includes cisgender women, transgender women and 50 % of non-binary persons, two-spirit persons, bi-spirit persons and persons of other genders.

Bootstrap weights were generated by drawing random samples with replacement from the primary sampling units; each bootstrap sample generated the same number of responses as the original data set. These weights were calculated using the same method implemented in the direct approach described above. There was no need to reduce the risk to contravening confidentiality, since all the different groups described in the weighting scheme participated in the study. The final number of weights created equals the number of bootstrap samples generated. A total of 500 mean bootstrap weight variables are provided in a separate file.

A review of open-ended responses was also performed as part of the data cleaning. Any "other" responses were recoded into existing categories when appropriate and new categories were created. All original verbatims were kept in the database.

2.4 Quality Control

Advanis employs several quality control measures to ensure success across the entire life cycle of the project. These measures are detailed below.

Survey Programming: Advanis utilizes technology to maximize quality control in survey programming. Having developed a proprietary survey engine tool, Advanis professionals are able to design and program a survey in a browser-based environment, eliminating the need to involve a programmer who is less familiar with the survey subject matter. The survey was thoroughly pre-tested by Advanis' project team members, as well as by non-team members (non-team members provide "fresh eyes" for catching potential errors).

CATI Methodology: The CATI recruit script was programmed on Advanis' proprietary CATI platform with no unforeseen challenges. Advanis was able to leverage its experience for the survey programming and the reminder process to achieve high quality standards. Advanis implemented the following to ensure the highest quality data collection:

- Trained the interviewers to best understand the study's objectives and to ensure that they were able to pronounce and understand the survey wording.
- Detailed call records were kept by the automated CATI system, and were monitored for productivity analysis (i.e., not subject to human error).

- The recruit scripts were pre-tested for best possible flow.
- Our average interviewer employment tenure is very high compared to industry standards, resulting in a team of interviewers who are more experienced and knowledgeable regarding the target audience.
- Advanis' Quality Assurance team listened to the actual recordings of ten percent of completed surveys and compared the responses to those entered by the interviewer, to ensure that responses were properly recorded. This is in addition to the live monitoring done by field supervisors.
- Team Supervisors conduct regular, more formal evaluations with each interviewer, in addition to nightly monitoring of each interviewer on their team.

To ensure high interview quality, our interviewers are trained to use various interviewing techniques. As well as maintaining a professional attitude, our interviewers must also be convincing, read word-for-word, take notes, systematically confirm the information given and listen to the respondent. Advanis has also created internal tools within the survey script for interviewers allowing them to use the phonetic alphabet to confirm email address spelling (e.g., a for alpha, b for bravo, etc.) to help reduce the amount of bounced email addresses. However, should bounced emails occur, Advanis also has developed additional tools that allow for someone to re-listen to the recording and easily adjust to correct the email address.

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

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

Data Handling and Reporting: For the data collected, Advanis develops rules to check the validity of the data. These rules include items such as:

- Time taken to complete the survey
- Checking for verbatims that are incoherent or do not make sense
- And, of course, rigorous checks are completed to ensure the data is accurate and error-free according to the questionnaire logic (skip patterns).

All data cleaning performed on projects are outlined and tracked in an internal spec document so they can be QA'd and signed off on. The original raw data file is never overwritten, so that if an error is discovered in our code, we can quickly and easily rerun things to produce a new data file. Individuals developing code incorporate internal checks in their code (e.g., crosstabs) to ensure the adjustment had the desired effect. In addition, all recordings are reviewed by another team member or technical specialist for accuracy.

3. Non-response Bias and Limitations

Non-response bias occurs when non-responders differ in a meaningful way from respondents and this difference impacts the information gathered. It is difficult to assess the presence of non-response bias since information about why non-responders did not participate is usually unavailable. That said, one way to gauge the potential impacts of non-response bias is to evaluate if the sample is representative by comparing the respondents' characteristics and gauge if they reflect known population characteristics. Where possible, we can check the distribution of respondents across various demographics (e.g., age and gender) and geographic categories and compare those distributions against known population characteristics. If the variation is fairly small and we have no reason to believe there are other factors impacting respondents' willingness to participate, we can conclude that the likelihood of non-response bias impacting the information gathered in the study is minimal. This is the case with the current study.

Several strategies were employed to increase response rates and reduce the effects of non-response bias. This includes:

- Recruiting respondents by telephone.
- Outpulsing a local phone number (rather than a toll-free number) which increases pick-up rates (reducing call screening).
- Systematically setting the next call date and time based on the outcome of the current call, which
 ensures that each respondent is called methodically across days of the week and times of the day.
 Especially for respondents that are difficult to reach, this maximizes the likelihood of reaching
 them.
- Collecting both email address and telephone number for recruitment so that if the email address does bounce, we have the opportunity to contact them via SMS message if they agree.
- Offering the survey in both official languages (English and French) to maximize ease of completion.

4. Guidelines for Analysis and Release

When doing an analysis, it is important to align the analysis plan with the weighting scheme. The weights adjust the data to better reflect the population based on parameters that have been chosen to maximize the level of detail without creating distortions due to extreme weights (an extreme weight will occur when a population group is represented by a proportionally smaller subset of respondents compared to other population groups, thus introducing an important risk of bias due to their specific profile).

For this survey, the basic sociodemographic information that should be used in the analysis of results are:

- Provinces and Territories
- Age: 18-26, 27-49, 50-64, 65-79, and 80+ or any unaltered grouping of theses ranges (i.e., 18 to 49 or 65+)
- •Sex: male or female

Using age groupings other than the ones described above could potentially produce distorted data. As these results would be inaccurate based on how the weights were calculated, we strongly advise not to report any results that are not aligned with these specified categories.

Any results with an unweighted denominator size of less than 30 should not be reported, due to statistical robustness. ⁴⁻⁵ This is due to the increased coefficient of variation and, hence, there are larger confidence intervals around results with smaller bases. Furthermore, for confidentiality purposes, any results with a numerator size of less than less than 5 (i.e., 1 to 4) should be suppressed.

For all estimates based on a denominator size of 30 or more, the following guidelines for data suppression related to coefficient of variations (CV) should be used when reporting estimates:⁶

Type of Estimate	CV (in %) ⁶	Guidelines
Acceptable	CV ≤ 15.0	Estimates can be considered for general unrestricted release.
		Requires no special notation.
Marginal	15.0 < CV ≤	Estimates can be considered for general unrestricted release but
	35.0	should be accompanied by a warning cautioning users of the
		high sampling variability associated with the estimate.
Unacceptable	CV > 35.0	It is recommended to not release estimates of unacceptable
		quality.

Examining the confidence interval of the estimate will provide further indication of the quality of the estimate in terms of the variability. Long confidence intervals indicate less precision in the estimate while smaller confidence intervals indicate greater precision. When assessing the trustworthiness of sample proportions, the confidence intervals of estimates should be taken into account.⁶

4.1 Rounding Guidelines

Users are urged to adhere to the following rounding guidelines for estimates.

- Estimates in the main body of a statistical table are to be rounded to the nearest hundred units using the normal rounding technique. In normal rounding, if the first or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is raised by one. For example, in normal rounding to the nearest 100, if the last two digits are between 00 and 49, they are changed to 00 and the preceding digit (the hundreds digits) is left unchanged. If the last digits are between 50 and 99, they are changed to 00 and the preceding digit is increased by 1.
- Marginal sub-totals and totals in statistical tables are to be derived from their corresponding unrounded components and then are to be rounded themselves to the nearest 100 units using normal rounding.
- Averages, rates and percentages are to be computed from un-rounded components (i.e. numerators and/or denominators) and then are to be rounded themselves to one decimal using normal rounding. In normal rounding to a single digit, if the final or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is increased by 1.
- Under no circumstances are un-rounded estimates to be published or otherwise released by users. Un-rounded estimates imply greater precision than actually exists.

⁴ CDC. National Center for Health Statistics Data Presentation Standards for Proportions. 2017. Available from: https://www.cdc.gov/nchs/data/series/sr 02/sr02 175.pdf

⁵ Statistics Canada. Canadian Community Health Survey User Guide. 2021.

⁶ CV= (standard error / coefficient) * 100 where the coefficient is either the regression coefficient or the proportion estimate.

Appendices

APPENDIX A: WEIGHTS FOR THE DIRECT WEIGHTING METHOD

Weight Category	Unweighted N V	Veighted N	Weight
Newfoundland and Labrador, Women+, 18-34	32	18	.040727
Newfoundland and Labrador, Women+, 35-54	81	28	.047679
Newfoundland and Labrador, Women+, 55+	121	44	.047679
Newfoundland and Labrador, Men+, 18-34	24	18	.054623
Newfoundland and Labrador, Men+, 35-54	66	26	.068489
Newfoundland and Labrador, Men+, 55+	90	40	.077451
Prince Edward Island, Women+, 18-34	35	6	.094725
Prince Edward Island, Women+, 35-54	84	8	.095222
Prince Edward Island, Women+, 55+	121	12	.100058
Prince Edward Island, Men+, 18-34	19	7	.107022
Prince Edward Island, Men+, 35-54	52	7	.128782
Prince Edward Island, Men+, 55+	83	11	.142290
Nova Scotia, Women+, 18-34	35	40	.146357
Nova Scotia, Women+, 35-54	118	50	.184780
Nova Scotia, Women+, 55+	135	80	.187378
Nova Scotia, Men+, 18-34	36	41	.212256
Nova Scotia, Men+, 35-54	75	47	.292459
Nova Scotia, Men+, 55+	125	71	.345811
New Brunswick, Women+, 18-34	59	29	.348601
New Brunswick, Women+, 35-54	88	41	.351677
New Brunswick, Women+, 55+	111	65	.362439
New Brunswick, Men+, 18-34	38	30	.397283
New Brunswick, Men+, 35-54	62	39	.413581
New Brunswick, Men+, 55+	99	59	.426981
Quebec, Women+, 18-34	235	342	.444549
Quebec, Women+, 35-54	580	441	.454142
Quebec, Women+, 55+	475	645	.463384
Quebec, Men+, 18-34	188	350	.486672
Quebec, Men+, 35-54	463	443	.507781
Quebec, Men+, 55+	524	579	.522085
Ontario, Women+, 18-34	296	637	.523617
Ontario, Women+, 35-54	698	775	.562058
Ontario, Women+, 55+	697	1009	.566001
Ontario, Men+, 18-34	355	660	.583432
Ontario, Men+, 35-54	650	726	.591061
Ontario, Men+, 55+	759	889	.591962
Manitoba, Women+, 18-34	31	61	.593974
Manitoba, Women+, 35-54	108	69	.620480
Manitoba, Women+, 55+	122	87	.631109

Manitoba, Men+, 18-34	48	64	.636136
Manitoba, Men+, 35-54	85	67	.638626
Manitoba, Men+, 55+	114	77	.660107
Saskatchewan, Women+, 18-34	43	49	.678887
Saskatchewan, Women+, 35-54	87	57	.700497
Saskatchewan, Women+, 55+	125	74	.710578
Saskatchewan, Men+, 18-34	59	50	.723073
Saskatchewan, Men+, 35-54	79	57	.760621
Saskatchewan, Men+, 55+	96	67	.765247
Alberta, Women+, 18-34	135	191	.782352
Alberta, Women+, 35-54	284	243	.788961
Alberta, Women+, 55+	290	248	.793362
Alberta, Men+, 18-34	118	195	.849494
Alberta, Men+, 35-54	310	243	.854036
Alberta, Men+, 55+	360	230	.854336
British Columbia, Women+, 18-34	120	219	.875700
British Columbia, Women+, 35-54	311	275	.883603
British Columbia, Women+, 55+	388	373	.917336
British Columbia, Men+, 18-34	141	226	.955871
British Columbia, Men+, 35-54	285	261	.960059
British Columbia, Men+, 55+	381	334	1.105046
Nunavut, Women+, 18-34	4	2	1.110690
Nunavut, Women+, 35-54	8	2	1.117291
Nunavut, Women+, 55+	8	1	1.131274
Nunavut, Men+, 18-34	4	2	1.132659
Nunavut, Men+, 35-54	5	2	1.141201
Nunavut, Men+, 55+	10	1	1.170854
Northwest Territories, Women+, 18-34	5	2	1.337735
Northwest Territories, Women+, 35-54	16	2	1.357654
Northwest Territories, Women+, 55+	39	2	1.414627
Northwest Territories, Men+, 18-34	4	2	1.448196
Northwest Territories, Men+, 35-54	8	2	1.456594
Northwest Territories, Men+, 55+	29	2	1.604882
Yukon, Women+, 18-34	10	2	1.652110
Yukon, Women+, 35-54	31	2	1.824180
Yukon, Women+, 55+	58	2	1.860501
Yukon, Men+, 18-34	4	2	1.860533
Yukon, Men+, 35-54	41	2	1.961121
Yukon, Men+, 55+	51	2	2.151435

APPENDIX B: QUESTIONNAIRE

PHAC Adult National Immunization Coverage Survey



Government of Canada

Language: English

Section CATI

Show if isCATI (custom: <<current_mode_is("cati")>>)

RefInbound, CBinbound, Int0, RefLL, CBLL, RecruitInt, Refcontactmethod, CBcontactmethod, T1Landline, RefLL1, CBLL1, CATIInt, Refcontact, CBcontact, confirmemail, EndEmail, Refuseemail, confirmsms, Refusesms, SendSMS1, SendSMS2, SendSMS3, SendSMS4, SendSMS10, SendSMS11

Page VOICEMAIL

Page INBOUND

Refinbound Show if Inbound refused (knowninbound = 2) Thank you for your time. Good-bye.

Status Code: 1000

CBinbound Show if Inbound callback (knowninbound = 3)

Arrange callback.

Status Code: 1001

Page RECRUIT TO WER INT	RO Show if not inhound (knowninhound = Not Answered)

IntO S	Show if is Landline (phone source = 1,4)
	ile (phone_source = 2,3)) Wireless number
	s is with Advanis, calling on behalf of the Government of Canada. We are conducting an advanced public health issues. Your answers will help to make informed recommendations to our ent.
speak to	e that results are representative we need to select one individual from your household. Could I please the youngest person who is 18 or over in your household? line (phone_source = 1,4)) Landline number
	s is with Advanis, calling on behalf of the Government of Canada. We are conducting an adv about public health issues. Your answers will help to make informed recommendations to our ent.
	e that results are representative we need to select one individual from your household. Could I please the youngest person who is 18 or over in your household?
O_1	Yes, speaking
O_2	Yes, getting person
O 3	No, refusal

O₄ No, callback

RefLL Show if Landline refusal (Int0 = 3)

Thank you for your time. Good-bye.

Status Code: 1000

CBLL Show if Landline callback (Int0 = 4)

Arrange callback.

Status Code: 1001

RecruitInt Show if is mobile (phone_source = 2,3)

(if is mobile (phone source = 2,3) and Landline speaking (Int0 = 1))

Wireless number

Great, thank you!

Can I send you a text with a link to the study to complete when you have time?

IF REFUSES TO RECEIVE TEXT:

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

IF REFUSES TO RECEIVE EMAIL:

We can do it on the phone if you prefer.

ONLINE SURVEY LENGTH:

If asked; the online survey will take less than 15 minutes depending on your answers.

IF PERSON IS ANGRY ABOUT BEING CALLED:

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

Respondent too busy (refusal/appointment):

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

IF ASKED: Where we got their phone number

We are calling random phone numbers across Canada.

IF CONCERNED ABOUT SCAMMERS

You can verify that this survey is legitimate by going to the Government of Canada website www.canada.ca and in the search field for the website enter Advanis Health. This will list the projects that we have done previously with the Government of Canada.

- Yes Send SMS/text message to current phone number (Show if is mobile (phone source = 2,3))
- O₅ Send SMS/text message to a different number
- O₆ Send email message
- O₁ Continue on the phone
- O₃ Callback later (use sparingly)
- O₂ No Refused (did not agree to email or SMS) *

Levels marked with * are randomized

Refcontactmethod Show if refusedrecruit (RecruitInt = 2)

Thank you for your time. Good-bye.

Status Code: 1000

CBcontactmethod Show if callbackrecruit (RecruitInt = 3)

Arrange callback.

Status Code: 1001

Page CATI INTRO w RECRUIT TO WEB OPTION

Show if is Landline (phone source = 1,4)

RefLL1 Show if CATI Landline Refusal (Int2 = 3)

Thank you for your time. Good-bye.

Status Code: 1000

CBLL1 Show if CATI Landline callback (Int2 = 4)

Arrange callback.

Status Code: 1001

CATIInt Show if is Landline (phone_source = 1,4)

(if is mobile (phone_source = 2,3) and Landline speaking (Int0 = 1))

Wireless number

Great, thank you!

Can I send you a text with a link by SMS to the study to complete when you have time?

IF REFUSES TO RECEIVE TEXT:

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

IF REFUSES TO RECEIVE EMAIL:

We can do it on the phone if you prefer.

ONLINE SURVEY LENGTH:

If asked; the online survey will take less than 15 minutes depending on your answers.

IF PERSON IS ANGRY ABOUT BEING CALLED:

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

Respondent too busy (refusal/appointment):

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

IF ASKED: Where we got their phone number

We are calling random phone numbers across Canada.

(if is mobile (phone_source = 2,3) and Landline getting person OR Wireless ((Int0 = 2) OR (phone_source = 2,3)))

Wireless number

Hello, this is _____ calling from Advanis and the Government of Canada. We are conducting an online study about public health issues. Your answers will help to make informed recommendations to our Government.

Can I send you a text with a link by SMS to the study to complete when you have time?

IF REFUSES TO RECEIVE TEXT:

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

IF REFUSES TO RECEIVE EMAIL:

We can do it on the phone if you prefer.

ONLINE SURVEY LENGTH:

If asked; the online survey will take less than 15 minutes depending on your answers.

IF PERSON IS ANGRY ABOUT BEING CALLED:

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

Respondent too busy (refusal/appointment):

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

IF ASKED: Where we got their phone number

We are calling random phone numbers across Canada.

O 4 Send SMS/text message to current pl	one number (Show i	f is mobile (phone_source = 2,3))
---	--------------------	-----------------------------------

- O₅ Send SMS/text message to a different number
- O₆ Send email
- O₁ Continue on the phone
- O₃ Callback later
- O 2 No Refused (did not agree to email or SMS nor do it on the phone)

Refcontact Show if CATIInt refused (CATIInt = 2)

Thank you for your time. Good-bye.

Status Code: 1000

CBcontact Show if CATIInt1 callback (CATIInt = 3)

Arrange callback.

Status Code: 1001

Section Login page

wcag, LoginTCH, Record

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

wcag Show if OfferWCAG (custom: <<offer_wcag()>>)

Si vous préférez répondre au sondage en français, veuillez cliquer sur français.

You have been invited to participate in the 2023 Adult National Immunization Coverage Survey (aNICS) on behalf of the Public Health Agency of Canada.

The online survey is voluntary and will take less than 15 minutes to complete.

Participation is voluntary and you can withdraw at any time. If you get interrupted while doing the survey, you can click on the same link to pick up right where you left off.

The Public Health Agency of Canada has contracted an independent public opinion research company, Advanis (opens in a new window) (http://advanis.net), to conduct the research on its behalf. Your personal information is treated with the highest standards of confidentiality by Advanis. Survey answers will be grouped with other participant responses, and your personal information will only be used for the purposes stated in the survey. We will not use this information for any purposes other than those consistent with market research requirements and guidelines.

If you have any questions or concerns about the survey, the information we are collecting, or for support, please e-mail: survey+healthphac@advanis.net (mailto:survey+healthphac@advanis.net).

This survey is registered with the Canadian Research Insights Council's (CRIC) Research Verification Service. The project verification number is: 20230308-AD307. Use this link (opens in a new window) (https://www.canadianresearchinsightscouncil.ca/rvs/home/?lang=en) to verify the legitimacy of this survey.

- $_{
 m 1}$ If you require a screen reader or assistive device to complete this survey, check this box to access a compatible version
- O₂ Start Survey

LoginTCH Show if isWebNotWCAG (custom: <<current_mode_is("web")>> and not <<offer_wcag()>>)

You have been invited to participate in the 2023 Adult National Immunization Coverage Survey (aNICS) on behalf of the Public Health Agency of Canada.

The online survey is voluntary and will take less than 15 minutes to complete.

Participation is voluntary and you can withdraw at any time. If you get interrupted while doing the survey, you can click on the same link to pick up right where you left off.

The Public Health Agency of Canada has contracted an independent public opinion research company, Advanis (http://advanis.net), to conduct the research on its behalf. Your personal information is treated with the highest standards of confidentiality by Advanis. Survey answers will be grouped with other participant responses, and your personal information will only be used for the purposes stated in the survey. We will not use this information for any purposes other than those consistent with market research requirements and guidelines.

This survey is registered with the Canadian Research Insights Council's (CRIC) Research Verification Service. The project verification number is: 20230308-AD307 Click here (https://www.canadianresearchinsightscouncil.ca/rvs/home/?lang=en) to verify the legitimacy of this survey.

© 2023 Privacy Policy (https://advanis.net/privacy-policy/english/) CRIC Pledge (https://www.canadianresearchinsightscouncil.ca/wp-content/uploads/2020/09/CRIC-Pledge-to-Canadians.pdf)

Page Record consent

Show if Phone survey ((CATIInt = 1) OR (RecruitInt = 1))

Record

Please be aware that this call may be recorded for quality assurance purposes and that your participation is voluntary. Your responses are confidential and will be grouped with those from other participants. This project also has been registered with the Canadian Research Insights Council.

Section Survey

A1, T1Under18, A2, T1OutsideCanada, A3, A4, A5

Page	Introduction
A1	
How old	are you?
	m: 16, Maximum: 120 years
T1Unde Thank yo	r18 Show if Not Adult NOT (A1 >= 18) ou for your interest. You must be 18 years old to participate in this survey
Status	Code: 501
A2	
In which	province or territory do you reside?
O 1	Newfoundland and Labrador
Ο,	Prince Edward Island
O 3	Nova Scotia
O_4	New Brunswick
O_5	Quebec
O_6	Ontario
O 7	Manitoba
O 8	Saskatchewan
O_9	Alberta
O 10	British Columbia
O 11	Nunavut
O 12	Northwest Territories
O_{13}	Yukon
O ₁₄	I live outside Canada
T1Outsi	deCanada Show if Living outside Canada (A2 = 14)
Thank yo	ou for your interest. This survey is intended for those who live in Canada.
Status	Code: 505
А3	
What wa	as your sex assigned at birth?
O 1	Male
O 2	Female
	Prefer not to answer
<u></u>	Don't know

Α4

Have you been diagnosed with any of the following conditions?

(Show if CATI) **Read text in between brackets only if necessary** Please select all that apply.

(Show if Web) Please select all that apply.

□ ₁ □ ₂	Sickle cell anemia, thalassemia major, or bleeding disorders Neurologic conditions or neurodevelopmental disorders (e.g. stroke, cerebral palsy, dementia,
	Parkinson's disease, multiple sclerosis, chronic CSF leak, autism, etc.)
□ 3	Asthma or other chronic lung disease (e.g. chronic obstructive pulmonary diseases (COPD), cystic fibrosis, etc.)
\square 4	Chronic kidney, heart, or liver disease
□ 5	Diabetes or other endocrine and metabolic disorders (e.g. thyroid disorders, morbid obesity (BMI 40+), etc.)
☐ ₆	Autoimmune conditions (e.g. systemic lupus erythematosus (SLE), rheumatoid arthritis, Crohn's disease, etc.)
□ ₇	Immune suppression (e.g. chemotherapy, radiation, steroid use, organ transplant, congenital immunodeficiency, HIV/AIDS, stem cell transplant, etc.)
□ 8	Cancer
9	Cochlear implant
☐ ₁₀	Other medical condition(s) (Please specify):
☐ ₁₁	None (Exclusive)
□ -8	Prefer not to answer
□ ₋₉	Don't know
A 5	
Do you o	or have you ever smoked (tobacco)?
(Show if	CATI) IF NEEDED: This includes smoking cigarettes (not including e-cigarettes), cigars, or a pipe.
(Show if	Web) This includes smoking cigarettes (not including e-cigarettes), cigars, or a pipe.
O_1	I smoke daily or almost daily
O_2	I smoke less than daily, but at least once a week
O_3	I smoke less than weekly, but at least once a month
O 4	I smoke less than monthly
O_5	I don't smoke at all
8	Prefer not to answer
\Box	Don't know

Section Participant Background

G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G14

Page Background

G1

(Show if CATI) We would like to ask you a few questions that will better help us to understand health care decisions among Canadians from different parts of the country, diverse backgrounds, and differing lifestyles.

Please be assured that all the information collected throughout this survey is completely anonymous and will be kept confidential.

Do you live in an urban or rural area?

IF NEEDED: An urban area is a city, town, or village with a population of 1000 people or more, while a rural area is any other area of lower population.

(Show if Web) We would like to ask you a few questions that will better help us to understand health care decisions among Canadians from different parts of the country, diverse backgrounds, and differing lifestyles.

Please be assured that all the information collected throughout this survey is completely anonymous and will be kept confidential.

Do you live in an urban or rural area?

An urban area is a city, town, or village with a population of 1000 people or more, while a rural area is any other area of lower population.

O_1	Urban
O_2	Rural
□ -8	Prefer not to answer
9- 🔲	Don't know

G2

What is your gender?

(Show if CATI) IF NEEDED: Gender refers to your current gender which may be different from sex assigned at birth and may be different from what is indicated on legal documents.

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

O_1	Man
O_2	Woman
Оз	Other gender (please specify):
_8	Prefer not to answer
و۔ 🗖	Don't know

G3

What is your racial/ethnic background?

(Show if CATI) Please select all that apply to you.

Read text in between brackets only if necessary

IF NEEDED: We recognize this list of racial or ethnic identifiers may not exactly match how you would describe yourself.

(Show if Web) Please select all that apply to you.

We reco	ognize this list of racial or ethnic identifiers may not exactly match how you would describe yourself.
	Black (African, Afro-Caribbean, African descent)
	East/Southeast Asian (e.g., Chinese, Korean, Japanese, Taiwanese, Filipino, Vietnamese, Cambodian, Thai, Indonesian, other East/Southeast Asian descent)
\square ₃	Indigenous (First Nations, Métis and/or Inuit)
	Latino/Latina (e.g., Latin American, Hispanic descent)
□ 5	Middle Eastern and North African (e.g., Arab, Algerian, Egyptian, West Asian descent (e.g., Iranian, Israeli, Lebanese, Turkish, Kurdish, etc.))
\square 6	South Asian (e.g., Afghan, Indian, Pakistani, Bangladeshi, Sri Lankan, etc.)
\square 7	White (e.g. European, Caucasian, etc.)
□ 8	Other (please specify):
□ -8	Prefer not to answer
9- 🔲	Don't know
G4	Show if Indigenous (G3_3 = 1)
Do you	identify as First Nations, Métis and/or Inuit?
	f CATI) Read text in between brackets only if necessary select all that apply.
(Show i	f Web) Please select all that apply.
	First Nations (includes status and non-status individuals)
\square 2	Métis
\square ₃	Inuit
□ -8	Prefer not to answer
9- 🗖	Don't know
G5	
Which §	group best defines your citizenship status in Canada?
(Show i	f CATI) Read text in between brackets only if necessary
O 1	Canadian citizen by birth (born in Canada or born outside Canada with at least one of your parents being Canadian)
O_2	Canadian citizen by naturalization (Canadian citizen by naturalization refers to a person who was

not born a Canadian citizen, but was granted Canadian citizenship under the Citizenship Act)

O 3	Permanent resident/landed immigrant
O 4	Other (Refugee claimant/asylum seekers, temporary resident in Canada (e.g., international student,
4	temporary foreign worker, etc.))
8	Prefer not to answer
□ -9	Don't know
G6	Show if Citizenship Not by Birth (G5 = 2,3,4)
How lor	ng have you been living in Canada?
(Show ij	CATI) If less than a year, please enter 0.
(Show ij	Web) If less than a year, please enter 0.
Minimu	m: 1, Maximum: 100
	year(s)
-8	Prefer not to answer
□ ₋₉	Don't know
G7	
What is	the highest level of formal education you have completed?
O_1	Grade 8 or less/Secondaire II in Québec or less
O_2	Some high school
O_3	High school/Secondary school/École secondaire diploma or equivalent
O 4	Registered apprenticeship or other trade certificate or diploma
O_5	College/CEGEP or other non-university certificate or diploma
O_6	University certificate or diploma below bachelor's level
O 7	University – bachelor's degree
O 8	University – post-graduate degree above bachelor's level
О 9	Other (please specify):
□ -8	Prefer not to answer
□ -9	Don't know
G8	
Which o	of the following categories best describes your current employment status? Are you
O_1	Working full-time, that is, 35 or more hours per week
O_2	Working part-time, that is, less than 35 hours per week
O 3	Self-employed
O 4	Unemployed, but looking for work
O ₅	A student attending school full-time or part time
O 6	Retired
O 7	Not in the workforce (e.g., full-time homemaker, unemployed, not looking for work)
) 8	Other (please specify):
☐ ₋₈	Prefer not to answer
و۔ 🗖	Don't know

G9

Are you currently working in any of the following sectors? Include paid and unpaid/volunteer work.

(Show if CATI) **Read text in between brackets only if necessary** Please select all that apply.

(Show if Web) Please select all that apply.

	Health care worker [e.g. health care provider (e.g., physician, nurse, occupational/physical therapist,
	etc.), employees/staff who work, study, or volunteer in hospitals, long-term care, nursing home, and group home or community settings]
	Laboratory worker (e.g. people who work in a medical, research or industrial laboratory)
\square 3	Child care or educational setting (e.g. school teacher, daycare worker, etc.)
\square 4	Exposed to animals or their materials (e.g. veterinarian)
□ 5	Emergency services worker (e.g. police, fire fighter, EMT)
□ ₆	Providing services within a closed setting [(e.g. Humanitarian relief and overseas refugee worker crew on a ship or aircraft), providing essential community service (e.g. waste management), worker in a shelter for the homeless, military personnel, worker in a correction facility]
\square 7	I don't work in any of the above sectors (Exclusive)
□ -8	Prefer not to answer
9- 🗖	Don't know

G10

(Show if CATI) Can you tell us your total household income, before taxes and deductions, for the year ending December 31, 2022?

IF NECESSARY:

Your total household income is the total amount of money earned by everyone in your home. Income can come from various sources such as from work, investments, pensions, or government. Examples include Employment Insurance, Social Assistance, Child Tax Benefit, and other income such as child support, spousal support (alimony) and rental income.

(Show if Web) Please indicate your total household income, before taxes and deductions, for the year ending December 31, 2022.

Your total household income is the total amount of money earned by everyone in your home. Income can come from various sources such as from work, investments, pensions, or government. Examples include Employment Insurance, Social Assistance, Child Tax Benefit, and other income such as child support, spousal support (alimony) and rental income.

O_1	Under \$40,000
O_2	\$40,000 to \$79,999
O 3	\$80,000 to \$99,999
O 4	\$100,000 to \$149,999
O 5	\$150,000 and above
8	Prefer not to answer
و۔ 🗖	Don't know

G14

Do you identify as a person with disability?

(Show if CATI) IF NECESSARY: A person with a disability is a person who has a long-term or recurring impairment (such as vision, hearing, mobility, flexibility, dexterity, pain, learning, developmental, memory or mental health-related) which limits their daily activities inside or outside the home (such as at school, work, or in the community in general).

(Show if Web) A person with a disability is a person who has a long-term or recurring impairment (such as vision, hearing, mobility, flexibility, dexterity, pain, learning, developmental, memory or mental health-related) which limits their daily activities inside or outside the home (such as at school, work, or in the community in general).

O_1	Yes
O_0	No
□ -8	Prefer not to answer
□ .。	Don't know

Section Knowledge and Beliefs

2 F1

Page Knowledge and Beliefs

F2

(Show if CATI) In this section we will ask you about your knowledge of and perspectives on vaccines.

Please indicate whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following statements.

IF NECESSARY:

People have many perspectives on vaccines and their effectiveness or necessity. We would like to gain a better understanding of the viewpoints of Canadians on vaccines.

(Show if Web) In this section we will ask you about your knowledge of and perspectives on vaccines.

People have many perspectives on vaccines and their effectiveness or necessity. We would like to gain a better understanding of the viewpoints of Canadians on vaccines. Please indicate whether you agree with the following statements.

- 1. In general, vaccines are safe
- 2. In general, vaccines are effective
- 3. Public health guidance recommends vaccination even for diseases that are not common anymore
- 4. Alternative medicine is a good substitute for vaccination
- 5. It is not necessary to get vaccinated if everybody else is vaccinated
- 6. Getting vaccinated can also protect people with a weaker immune system
- O₁ Strongly agree
- O₂ Somewhat agree

O₃ Somewhat disagree O₄ Strongly disagree □₃ Prefer not to answer □₃ Don't know	
F1 What are your most trusted sources of information about vaccines?	
Show if CATI) Read text in between brackets only if necessary Please select all that apply.	
Show if Web) Please select all that apply.	
Health care providers Family/Friends My local public health unit/clinic Public Health Agency of Canada/Health Canada Community nursing stations or clinics News/media/social media National Advisory Committee on Immunization (NACI) International sources (e.g., World Health Organization (WHO)) Scientific publications, journals Other (please specify): Prefer not to answer Don't know	
Section Immunization History 319, B21a, B20, B21b, hintsec2, B1, B3, B5, B7, B8, B10, B10a, B12, B14, B16, B17a, B17b, B17c	
Page Hesitancy/Reluctance to Vaccinate	
319	
Show if CATI) In this section we would like to ask you about any hesitancy or reluctance you may have had regarding vaccination.	
Excluding COVID-19 and flu vaccines, were you ever reluctant or hesitant to get vaccinated as an adult against any disease?	
F NECESSARY: Vaccine hesitancy refers to a delay in acceptance or refusal of a vaccine despite availability.	
Show if Web) In this section we would like to ask you about any hesitancy or reluctance you may have had regarding vaccination. Vaccine hesitancy refers to a delay in acceptance or refusal of a vaccine despite availability.	
Excluding COVID-19 and flu vaccines, were you ever reluctant or hesitant to get vaccinated as an adult against any disease?	
O ₁ Yes	

□ -8	Prefer not to answer
9- 🔲	Don't know
B21a	Show if Ever Reluctant vaccination (B19 = 1)
	ere you reluctant or hesitant to get vaccinated?
vviiy vv	ere you reductant or mesitant to get vaccinated:
(Show i	f CATI) Please select all that apply.
(Show i	f Web) Please select all that apply.
	I have a fear of needles *
	I am not at risk of getting infected or at risk of severe infection *
□ 3	I wanted to first discuss the vaccine(s) with my health care practitioner *
	I am concerned that not enough research on the vaccine has been done *
□ 5	I am concerned about the effectiveness of vaccination *
	I am concerned about the safety of vaccination and/or side effects *
\Box_7	I had a bad experience or reaction with a previous vaccination *
□ ₈	I did not know where to get reliable information *
9	I did not think it was necessary *
☐ ₁₀	Religious or philosophical reasons *
□ ₁₁	I had a bad experience with healthcare providers *
☐ ₁₂	Other (please specify):
8	Prefer not to answer
9	Don't know
-	marked with * are randomized
B20	60/40 40 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Excludii	ng COVID-19 and flu vaccines, as an adult, did you ever refuse to get vaccinated against any disease?
O_1	Yes
O 0	No
_8	Prefer not to answer
و۔ 🗖	Don't know
B21b	Show if Ever Refused vaccination (B20 = 1)
Why did	d you refuse to get vaccinated?
(Show i	f CATI) Please select all that apply.
(Show i	f Web) Please select all that apply.
	I did not think it was necessary *
	I did not think the vaccine was safe and I was concerned about side effects *
□ 3	I did not think the vaccine was effective *
	Religious or philosophical reasons *
☐ ₅	I had a lack of trust in the government and/or pharmaceutical companies *
	I was opposed to vaccines *

□ ₇	Other (please specify):
□ -8	Prefer not to answer
9- 🔲	Don't know
Levels marked with * are randomized	

Page History of Vaccination

hintsec2

We would like to ask you some questions about your history of **vaccination**. Remember that all the information you provide is completely anonymous and will be kept confidential.

Page Hepatitis B Vaccination

В1

(Show if CATI) Have you ever been vaccinated against hepatitis B?

IF NECESSARY:

Hepatitis B is a serious liver disease caused by the hepatitis B virus. It can cause short-term illness that leads to loss of appetite, vomiting, tiredness, jaundice, and pain in the muscles, joints, and stomach. It can also cause long-term illness that leads to liver damage, liver cancer, and death.

The hepatitis B vaccine can be received individually or in combination with hepatitis A vaccine, in a vaccine called Twinrix.

(Show if Web) **Hepatitis B** is a serious liver disease caused by the hepatitis B virus. It can cause short-term illness that leads to loss of appetite, vomiting, tiredness, jaundice, and pain in the muscles, joints, and stomach. It can also cause long-term illness that leads to liver damage, liver cancer, and death.

Have you ever been vaccinated against hepatitis B?

The hepatitis B vaccine can be received individually or in combination with hepatitis A vaccine, in a vaccine called Twinrix.

O_1	Yes
O 0	No
□ -8	Prefer not to answer
و۔ 🔲	Don't know

Page Tetanus Vaccination

B3

(Show if CATI) Have you been vaccinated against tetanus, either alone or in combination with another vaccine, in the last 10 years?

IF NECESSARY:

Tetanus, also known as lockjaw, is caused by bacteria in wounds such as cuts, burns, and bites. A person infected with the tetanus bacteria experiences painful muscle contractions that begin in the neck and then continue down to involve the muscles of the whole body. It can lead to "locking" of the jaw so the patient cannot open his or her mouth or swallow, hence the popular name, "lockjaw."

Tetanus vaccine is usually given in combination with vaccines for diphtheria and/or pertussis (also known as

whooping cough).

(Show if Web) **Tetanus**, also known as lockjaw, is caused by bacteria in wounds such as cuts, burns, and bites. A person infected with the tetanus bacteria experiences painful muscle contractions that begin in the neck and then continue down to involve the muscles of the whole body. It can lead to "locking" of the jaw so the patient cannot open his or her mouth or swallow, hence the popular name, "lockjaw."

Have you been vaccinated against tetanus, either alone or in combination with another vaccine, in the last 10 years?

Tetanus vaccine is usually given in combination with vaccines for diphtheria and/or pertussis (also known as whooping cough).

O_1	Yes
O 0	No
8	Prefer not to answer
	Don't know

Page Pertussis (Whooping Cough) Vaccination:

B5

(Show if CATI) Have you ever been vaccinated against pertussis (whooping cough) as an adult, that is, 18 years of age or older?

IF NECESSARY:

Pertussis (whooping cough) causes prolonged coughing spells that can make it hard to eat, drink, or breathe. These coughing spells can last for weeks and can lead to pneumonia, seizures (that is, jerking and staring spells), brain damage, and death. Pertussis or whooping cough can affect people of all ages, but it is most severe in young children.

The Public Health Agency of Canada recommends that one dose of Tdap vaccine should be provided to all adults 18 years of age and older, and that one dose of Tdap vaccine should be administered in every pregnancy, ideally between 27 and 32 weeks of gestation.

The pertussis (whooping cough) vaccine is usually given in combination with vaccines for diphtheria and/or tetanus (also known as lockjaw).

(Show if Web) **Pertussis** (whooping cough) causes prolonged coughing spells that can make it hard to eat, drink, or breathe. These coughing spells can last for weeks and can lead to pneumonia, seizures (that is, jerking and staring spells), brain damage, and death. Pertussis or whooping cough can affect people of all ages, but it is most severe in young children.

The Public Health Agency of Canada recommends that one dose of Tdap vaccine should be provided to all adults 18 years of age and older, and that one dose of Tdap vaccine should be administered in every pregnancy, ideally between 27 and 32 weeks of gestation.

Have you ever been vaccinated against pertussis (whooping cough) as an adult, that is, 18 years of age or older? The pertussis (whooping cough) vaccine is usually given in combination with vaccines for diphtheria and/or tetanus (also known as lockjaw).

O_1	Yes
O 0	No

-8 -9	Prefer not to answer Don't know		
Page V	aricella (Chickenpox) Vaccination	Show if Age under 50 (A1 < 50)	
B7 (Show if	CATI) Have you ever been vaccinated against vario	ella (chickenpox)?	
followed quickly th pose seri	ox, also known as varicella, is a common childhoo by a rash of red spots that may be itchy and event	d disease caused by a virus. It starts with a fever and is tually turn into blisters. The virus spreads easily and nickenpox recover completely. However, severe cases can ults, or anyone with a weakened immune system.	
(Show if Web) Chickenpox , also known as varicella, is a common childhood disease caused by a virus. It starts with a fever and is followed by a rash of red spots that may be itchy and eventually turn into blisters. The virus spreads easily and quickly through personal contact. Most children who get chickenpox recover completely. However, severe cases can pose serious health risks, especially for newborn babies, adults, or anyone with a weakened immune system.			
-	ever been vaccinated against varicella (chickenpoine has been available in Canada only since 1999.)?	
O ₁ O ₀ -8 -9	\bigcirc 0 No \bigcirc Prefer not to answer		
	Show if Not Immunized Varicella (B7 = 0,Prefer not ever contracted varicella (chickenpox)?	to answer,Don't know)	
O ₁ O ₂ O ₃	Yes, as a child (before the age of 18) Yes, as an adult (at 18 years of age or older) No Prefer not to answer Don't know		

Page Human Papillomavirus (HPV) Vaccination

B10

(Show if CATI) Have you ever been vaccinated against human papillomavirus, or HPV?

IF NECESSARY:

HPV is the name of a virus that causes a very common group of infections that are primarily sexually transmitted. Some of these are mild and will go away on their own, but some can lead to more serious consequences such as cervical or anal cancer and, rarely, head and neck lesions, such as throat cancer.

A vaccine for HPV has been available in Canada only since 2006.

(Show if Web) **HPV** is the name of a virus that causes a very common group of infections that are primarily sexually transmitted. Some of these are mild and will go away on their own, but some can lead to more serious consequences such as cervical or anal cancer and, rarely, head and neck lesions, such as throat cancer.

Have you ever been vaccinated against human papillomavirus, or HPV? A vaccine for HPV has been available in Canada only since 2006.

O_1	Yes
O 0	No
□ -8	Prefer not to answer
9- 🔲	Don't know
	Show if Immunized HPV (B10 = 1) were you when you received your most recent dose of HPV vaccine?
Minimun	n: 9, Maximum: 100
	years
□ -8	Prefer not to answer
9- 🗖	Don't know
Daga C	bingles Vessination of the 40 (44 - 50)

Page Shingles Vaccination

Show if Age over 49 (A1 >= 50)

B12

(Show if CATI) Have you ever received at least one dose of the shingles vaccine, which may have been called Shingrix or Zostavax?

IF NECESSARY:

Shingles, also known as herpes zoster (ZOSS-ter), is a painful rash with blisters. People get shingles when the virus that causes chicken pox, varicella zoster, is reactivated in their body. Although any person who has had chickenpox can get shingles, most people who do so are older than 50 or have a weakened immune system.

(Show if Web) **Shingles**, also known as herpes zoster (ZOSS-ter), is a painful rash with blisters. People get shingles when the virus that causes chicken pox, varicella zoster, is reactivated in their body. Although any person who has had chickenpox can get shingles, most people who do so are older than 50 or have a weakened immune system.

Have you ever received at least one dose of the shingles vaccine, which may have been called Shingrix or Zostavax?

O_1	Yes
O 0	No
□ -8	Prefer not to answer
Q9	Don't know

Page Pneumococcal Vaccination Show if Vulnerable to Pneumonia ((A1 >= 65) OR ((A1 >= 50) AND (A2 = 11)) OR ((A1 >= 18) AND (A1 <= 64) AND (A4_1 = 1 OR A4_2 = 1 OR A4_3 = 1 OR A4_4 = 1 OR A4_5 = 1 OR A4_6 = 1 OR A4_7 = 1 OR A4_8 = 1 OR A4_9 = 1)) OR (A5 = 1,2,3))

B14

(Show if CATI) Have you ever received the pneumococcal vaccine (vaccine against pneumonia) as an adult, that is, 18 years of age or older?

IF NECESSARY:

The **pneumococcal** vaccine protects against the complications from bacterial pneumonia.

(Show if Web) The **pneumococcal** vaccine protects against the complications from bacterial pneumonia.

Have you ever received the pneumococcal vaccine (vaccine against pneumonia) as an adult, that is, 18 years of age or older?

O_1	Yes
O 0	No
-8	Prefer not to answe
□ _a	Don't know

Page Mpox Vaccination

B16

(Show if CATI) Have you been vaccinated against mpox (monkeypox) as an adult, that is, 18 years of age or older?

IF NECESSARY:

Mpox (monkeypox) is a viral disease. The virus enters the body through broken skin, the respiratory tract, or the mucous membranes (e.g., eyes, nose, or mouth).

Signs and symptoms of mpox can typically include lesions or sores on your skin, including in your mouth, genitals, or peri-anal area, fever, and swollen lymph nodes. The number of lesions varies, and you can be contagious from onset of first symptoms until scabs have fallen off and the skin is healed.

In Canada, the vaccine used for protection against mpox is called IMVAMUNE and is currently only available to adults.

(Show if Web) **Mpox** (monkeypox) is a viral disease. The virus enters the body through broken skin, the respiratory tract, or the mucous membranes (e.g., eyes, nose, or mouth).

Signs and symptoms of mpox can typically include lesions or sores on your skin, including in your mouth, genitals, or peri-anal area, fever, and swollen lymph nodes. The number of lesions varies, and you can be contagious from onset of first symptoms until scabs have fallen off and the skin is healed.

Have you been vaccinated against mpox (monkeypox) **as an adult**, that is, 18 years of age or older? In Canada, the vaccine used for protection against mpox is called IMVAMUNE and is currently only available to adults.

O_1	Yes
O_0	No
	Prefer not to answer

□ _ Don't knov

Page Polio Vaccination

B17a

(Show if CATI) Have you ever been vaccinated against polio?

IF NECESSARY:

Polio (short for poliomyelitis) is a highly contagious viral illness that can spread easily from person to person. The polio virus can invade the central nervous system and cause paralysis or death. There is no cure for polio, but it is preventable through safe and effective vaccination. Polio is most common in children under the age of 5, although anyone who has not been immunized can also get polio.

The polio vaccine is usually given to infants, with a follow up booster given between 4 and 6 years old.

(Show if Web) **Polio** (short for poliomyelitis) is a highly contagious viral illness that can spread easily from person to person. The polio virus can invade the central nervous system and cause paralysis or death. There is no cure for polio, but it is preventable through safe and effective vaccination. Polio is most common in children under the age of 5, although anyone who has not been immunized can also get polio.

Have you ever been vaccinated against polio?

The polio vaccine is usually given to infants, with a follow up booster given between 4 and 6 years old.

O_1	Yes
O 0	No
8	Prefer not to answer
	Don't know

Page Measles Vaccination

B17b

(Show if CATI) Have you ever been vaccinated against measles?

IF NECESSARY:

Measles is a highly contagious, serious disease caused by a virus. Measles symptoms begin with a fever, runny nose, cough, and red eyes. After a few days, a red blotchy rash will appear on the face and spreads down the body. Measles can lead to complications such as ear infections, lung infections (pneumonia), inflammation of the brain (encephalitis), hearing loss, seizures, permanent brain damage (subacute sclerosing panencephalitis) or death. Measles in pregnancy can lead to premature delivery, low birth weight, and miscarriage. The measles vaccine is usually given at 12 to 15 months, with a follow up booster given at 18 months of age but no later than school entry age.

(Show if Web) **Measles** is a highly contagious, serious disease caused by a virus. Measles symptoms begin with a fever, runny nose, cough, and red eyes. After a few days, a red blotchy rash will appear on the face and spreads down the body. Measles can lead to complications such as ear infections, lung infections (pneumonia), inflammation of the brain (encephalitis), hearing loss, seizures, permanent brain damage (subacute sclerosing panencephalitis) or death. Measles in pregnancy can lead to premature delivery, low birth weight, and miscarriage.

Have you ever been vaccinated against measles?

The measles vaccine is usually given at 12 to 15 months, with a follow up booster given at 18 months of age but no later than school entry age.

O_1	Yes
O 0	No
-8	Prefer not to answer
Q ₋₉	Don't know

Page Meningitis Vaccination

B17c

(Show if CATI) Have you ever been vaccinated against meningitis?

IF NECESSARY:

Meningitis is an inflammation of the meninges (the lining of the brain and spinal cord). There are many types of meningitis. It can be caused by viruses, bacteria, fungus, or other organisms. Invasive meningococcal disease is a serious bacterial infection caused by the bacterium Neisseria meningitidis. The bacteria can invade the body causing serious illness, like meningitis. It can also cause septicemia — an infection of the bloodstream.

Meningococcal vaccines are usually given to infants, with further immunization at 12 years of age.

(Show if Web) **Meningitis** is an inflammation of the meninges (the lining of the brain and spinal cord). There are many types of meningitis. It can be caused by viruses, bacteria, fungus, or other organisms. Invasive meningococcal disease is a serious bacterial infection caused by the bacterium Neisseria meningitidis. The bacteria can invade the body causing serious illness, like meningitis. It can also cause septicemia – an infection of the bloodstream.

Have you ever been vaccinated against meningitis?

Meningococcal vaccines are usually given to infants, with further immunization at 12 years of age.

O_1	Yes
O 0	No
8	Prefer not to answer
	Don't know

Section Pneumococcal Vaccination at risk

B17d

Page Intention to seek vaccination

B17d Show if Not Immunized to some virus ((B1 = 0,Prefer not to answer,Don't know) OR (B3 = 0,Prefer not to answer,Don't know) OR (B5 = 0,Prefer not to answer,Don't know) OR (B7 = 0,Prefer not to answer,Don't know) OR (B10 = 0,Prefer not to answer,Don't know) OR (B12 = 0,Prefer not to answer,Don't know) OR (B14 = 0,Prefer not to answer,Don't know) OR (B16 = 0,Prefer not to answer,Don't know) OR (B17a = 0,Prefer not to answer,Don't know)) OR (B17b = 0,Prefer not to answer,Don't know))

(Show if CATI) Next, we would like to ask you some questions about your intention to seek vaccination. Remember that all the information you provide is completely anonymous and will be kept confidential.

How likely are you to get the following if it were recommended to you by a health care provider?

(Show if Web) Next, we would like to ask you some questions about your intention to seek vaccination. Remember that all the information you provide is completely anonymous and will be kept confidential.

How likely are you to get the following if it were recommended to you by a health care provider?

1.	Hepatitis B vaccine	(Show if Not Immunized HepatitisB (B1 = 0,Prefer not to answer,Don't know),
2.	•	(Show if Not Immunized TreputitisB (B1 = 0,Prefer not to answer,Don't know))
3.	Pertussis (whooping cou answer,Don't know))	
4.	Varicella (chickenpox) va know))	accine (Show if Not Immunized Varicella (B7 = 0,Prefer not to answer,Don't
5.	Human Papillomavirus (answer,Don't know))	HPV) vaccine (Show if Not Immunized HPV (B10 = 0,Prefer not to
6.	Shingles vaccine	(Show if Not Immunized Shingles (B12 = 0,Prefer not to answer,Don't know))
7.	Pneumococcal (pneumo to answer, Don't know))	onia) vaccine (Show if Not Immunized Pneumococcal (B14 = 0,Prefer not
8.	Mpox (monkeypox) vaca answer, Don't know))	Cine (Show if Not Immunized Monkeypox (B16 = 0,Prefer not to
9.		Not Immunized Polio (B17a = 0,Prefer not to answer,Don't know))
10.		(Show if Not Immunized Measles (B17b = 0,Prefer not to answer,Don't know)
11.	Meningitis vaccine <i>know))</i>	(Show if Not Immunized Meningitis (B17c = 0,Prefer not to answer,Don't
O_1	Very likely	
O 2	Somewhat likely	
O 3	Somewhat unlikely	
O 4	Very unlikely	
□ ₋₈	Refused	
8 9	Don't know	

Section Reasons for vaccination and obstacles

B18, B22

Page Reasons for Vaccination Show if Immunized for something ((B1 = 1) OR (B3 = 1) OR (B5 = 1) OR (B7 = 1) OR (B10 = 1) OR (B12 = 1) OR (B14 = 1) OR (B16 = 1) OR (B17a = 1) OR (B17b = 1) OR (B17c = 1))

B18

It is important to understand why Canadians choose to get vaccinated and what motivates people to seek a vaccine.

Excluding COVID-19 and flu vaccines, why did you get vaccinated?

(Show if CATI) Please select all that apply.

(Show if Web) Please select all that apply.

	To protect myself and/or household members *
	Based on public health recommendations *
□ 3	Based on health care provider recommendations *
\Box	Recommended in an immunization campaign *

□ 5	The vaccine was available and free *
	Other (please specify):
□ ₋₈	Prefer not to answer
<u></u>	Don't know
Levels ma	rked with * are randomized
Page O	Obstacles to Vaccination Show if Not Immunized to some virus ((B1 = 0,Prefer not to
(B7 = 0,Pr answer,D (B17a = 0	on't know) OR (B3 = 0,Prefer not to answer,Don't know) OR (B5 = 0,Prefer not to answer,Don't know) OR refer not to answer,Don't know) OR (B10 = 0,Prefer not to answer,Don't know) OR (B12 = 0,Prefer not to on't know) OR (B14 = 0,Prefer not to answer,Don't know) OR (B16 = 0,Prefer not to answer,Don't know) OR (P16 = 0,Prefer not to answer,Don't know) OR (P17c = 0,Prefer not to answer,Don't know) OR (P17c = 0,Prefer not to answer,Don't know) OR (P17c = 0,Prefer not to answer,Don't know)
B22	
	ction we would like to ask you about any obstacles you may have encountered to getting vaccinated. An s something beyond your control that prevented you from getting a vaccine.
What obs	tacles have prevented you from getting vaccinated?
(Show if C	CATI) Please select all that apply.
(Show if V	Veb) Please select all that apply.
	No obstacles (Exclusive)
	Difficulties booking time off work/school for a vaccine appointment *
\square 3	Living in a remote area (limited transportation) *
	I don't know how or where to get vaccinated *
□ 5	Language barrier (e.g., lack of access to relevant information in my preferred language) *
\square 6	Cost of the vaccine *
\square 7	Concerns about of racism or discrimination *
□ 8	Other (please specify):
□ -8	Prefer not to answer
□ ₋₉	Don't know
Levels ma	rked with * are randomized
Sectio	on Influenza (Flu) Vaccination

C1, C2, C3, C4, C5, C6, C7, C8

Page Influenza vaccination history

C1

(Show if CATI) The next few questions are about the flu shot, that is, the influenza vaccine.

Prior to the COVID-19 pandemic (that is, before March 2020), how often did you receive the flu shot?

IF NECESSARY:

Seasonal influenza, or "the flu", is a respiratory illness that affects millions of Canadians each year, primarily during the winter months. The flu typically starts with a headache, chills, and cough, followed rapidly by fever, loss of

appetite, muscle aches and fatigue, running nose, sneezing, watery eyes and throat irritation. Nausea, vomiting and diarrhea may also occur, especially in children.

(Show if Web) The next few questions are about the flu shot, that is, the influenza vaccine.

Seasonal influenza, or "the flu", is a respiratory illness that affects millions of Canadians each year, primarily during the winter months. The flu typically starts with a headache, chills, and cough, followed rapidly by fever, loss of appetite, muscle aches and fatigue, running nose, sneezing, watery eyes and throat irritation. Nausea, vomiting and diarrhea may also occur, especially in children.

Prior to the COVID-19 pander	nic (that is hefore N	March 2020) how often	did you receive the flu shot?
FIIOI LO LITE COVID-13 DATIGET	iic ttiiat is, belole i	viai cii 2020). How oiteii	ulu vou leceive the hu shot:

O_1	Every flu season
O_2	Most flu seasons
O_3	Some flu seasons
O_4	Never
8	Prefer not to answer
- 9	Don't know
C2	
Did you	get the flu shot during the last flu season, that is, between September 1st, 2022 and March 31st, 2023?
O_1	Yes
O 0	No
□ -8	Prefer not to answer
- 9	Don't know
Page	Influenza vaccination history Show if Flu vaccination yes OR no (C2 = 0,1)
C3	
	ou hesitant to get the flu shot the last flu season, that is, between September 1st, 2022 and March 31st,
O 1	Yes
O 0	No
8	Prefer not to answer
- 9	Don't know
C 4	Show if Not immunized flu last season (C2 = 0)
Did you	refuse to get the flu shot the last flu season, that is, between September 1st, 2022 and March 31st, 2023?
O 1	Yes
O 0	No
□ -8	Prefer not to answer
و۔ 🗖	Don't know

C5 Show if Ever Reluctant Refused Flu vaccination ((C3 = 1) OR (C4 = 1))

(if Refused get flu shot last season (C4 = 1)) Why did you refuse to get the flu shot during the last flu season that is, between September 1st, 2022 and March 31st, 2023?

(if Hesitant get flu shot last season (C3 = 1)) Why were you hesitant to get the flu shot during the last flu season that is, between September 1st, 2022 and March 31st, 2023?

(if Default) Why were you hesitant to get the flu shot during the last flu season that is, between September 1st, 2022 and March 31st, 2023?

(Show if CATI) Please select all that apply.

(Show if Web) Please select all that apply.

\square 1	I am not at risk of getting the flu or at risk of severe infection *		
	I wanted to first discuss the flu vaccine with my health care practitioner *		
□ 3	I was concerned about the effectiveness of the flu vaccine *		
	I had concerns about the safety of the flu vaccine and/or side effects *		
□ 5	I had a bad experience with previous vaccines *		
\Box 6	I did not know where to get reliable information *		
□ ₇	Religious or philosophical reasons *		
□ 8	I had a bad experience with healthcare providers *		
9	Concerns about racism or discrimination *		
□ 10	Other (please specify):		
□ -8	Prefer not to answer		
_ -9	Don't know		
Levels marked with * are randomized			

Page Influenza vaccination history

C6

Did the COVID-19 pandemic affect your decision to get the flu shot during the last flu season, that is, between September 1st, 2022 to March 31st, 2023?

- ${\rm O}_{\,1}$ Yes, it motivated me to get the flu shot
- O₂ Yes, it made me not want to get the flu shot
- O₃ No, it did not impact my decision one way or the other
- Prefer not to answer
- ☐ _a Don't know

C7

How likely are you to get the flu shot during the next flu season, that is, between September 1st, 2023 and March 31st, 2024?

- O₁ Very likely
- O₂ Somewhat likely
- O₃ Somewhat unlikely
- O₄ Very unlikely
- □ -8 Prefer not to answer

☐ _9 Don t know	Q ₋₉	Don't know
-----------------	-----------------	------------

C8

(Show if CATI) We would like to understand your perspectives regarding the flu shot. Please indicate whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following statements.

(Show if Web) We would like to understand your perspectives regarding the flu shot. Please indicate whether you agree with the following statements.

- 1. In general, the flu shot is safe
- 2. In general, the flu shot is not effective
- 3. You can get the flu from the flu shot
- 4. The benefits from the flu shot are greater than the risk of its side effects
- O ₁ Strongly agree
- O₂ Somewhat agree
- O₃ Somewhat disagree
- O₄ Strongly disagree
- Prefer not to answer
- ☐ _a Don't know

Section COVID-19 Vaccination

D1, D2, D3, D4, D5, D6, D7, D8, D9, D10

Page Covid-19 vaccination status

D1

(Show if CATI) The next few questions are about your experiences with COVID-19 and the vaccines available as protection against the virus.

Have you received at least one dose of a COVID-19 vaccine that has been authorized for use among adults in Canada?

IF NECESSARY:

COVID-19 is a new disease caused by the coronavirus (SARS-CoV-2) that was first identified in December 2019. COVID-19 was declared a global pandemic in March 2020.

The vaccines that are currently authorized for use among adults in Canada include AstraZeneca's Vaxzevria, Moderna's Spikevax, Pfizer-BioNTech's Comirnaty, Johnson & Johnson's Janssen, Novavax's Nuvaxovid, and Medicago Covifenz (as of February 14, 2023).

(Show if Web) The next few questions are about your experiences with COVID-19 and the vaccines available as protection against the virus.

COVID-19 is a new disease caused by the coronavirus (SARS-CoV-2) that was first identified in December 2019. COVID-19 was declared a global pandemic in March 2020.

Have you received at least one dose of a COVID-19 vaccine that has been authorized for use among adults in Canada?

The vaccines that are currently authorized for use among adults in Canada include AstraZeneca's Vaxzevria,

	a s Spikevax, Prizer-BioN Fech's Commaty, Johnson & Johnson's Janssen, Novavax's Nuvaxovid, and go Covifenz (as of February 14, 2023).
O ₁ O ₀ O ₋₈ O ₋₉	Yes No Prefer not to answer Don't know
Page (Covid-19 vaccination status Show if Immunized Covid19 (D1 = 1)
D2	
How ma	ny doses of the COVID-19 vaccines have you received so far?
Vaccines	CATI) IF NEEDED: Please only consider vaccines approved by Health Canada when answering this question. s approved by Health Canada [as of February 14, 2023] are: AstraZeneca Vaxzevria; Moderna Spikevax; Pfizer-BioNTech Comirnaty; Janssen Jcovden (Johnson & Johnson); Novavax Nuvaxovid; and Medicago Covifenz
(Show if	Web) Please only consider vaccines approved by Health Canada when answering this question.
Vaccines	s approved by Health Canada [as of February 14, 2023] are: AstraZeneca Vaxzevria; Moderna Spikevax; Pfizer-BioNTech Comirnaty; Janssen Jcovden (Johnson & Johnson); Novavax Nuvaxovid; and Medicago Covifenz
O_1	One (1) dose
O 2	Two (2) doses
O ₃	Three (3) doses Four (4) or more
□ ₋₈	Prefer not to answer
9-9	Don't know
D3	Show if One Dose Covid19 vaccine (D2 = 1)
Was you	r vaccine Johnson and Johnson's Janssen?
O_1	Yes

O₀ No

<u>-9</u>

Prefer not to answer Don't know

D4

Why did you get the COVID-19 vaccine?

(Show if CATI) Please select all that apply.

(Show if	Web) Please select all that apply.
1 2 3 3 4 4 5 5	To protect myself and/or household members against COVID-19 infection * Based on public health recommendations * To prevent the spread of COVID-19 in my community * The COVID-19 vaccine was recommended by a health care professional * To help restore a more normal life (e.g. to lift public health measures, participate in extracurricular activities, travel, etc.) * Other (please specify): Prefer not to answer
 	Don't know
-	arked with * are randomized
Page (Covid-19 vaccination status
D5	
Were yo	u hesitant or reluctant to get the COVID-19 vaccine?
Ο 1	Yes
O_0	No
□ -8	Prefer not to answer
9- 🔲	Don't know
	Show if Not immunized Covid19 (D1 = 0) refuse to get the COVID-19 vaccine?
O_1	Yes
O_0	No
8	Prefer not to answer
□ ₋₉	Don't know
(if Refus (if Hesita	Show if Hesitant OR refused covid19 vaccine ((D5 = 1) OR (D6 = 1)) ed covid19 vaccine (D6 = 1)) Why did you refuse to get vaccinated against COVID-19? ant covid19 vaccine (D5 = 1)) Why were you hesitant to get vaccinated against COVID-19? Why were you hesitant to get vaccinated against COVID-19?
(Show if	CATI) Please select all that apply.
(Show if	Web) Please select all that apply.
□ ₁ □ ₂ □ ₃	Do/did not think I am at risk of getting COVID-19 or at risk of severe effects from infection * I want/wanted to first discuss COVID-19 vaccines with my health care practitioner * Concerns that not enough research on the vaccine has been done *

□ 4	Concerns about the effectiveness of COVID-19 vaccines *
□ 5	Concerns about the safety of COVID-19 vaccines and/or side effects *
\square 6	Lack of trust in the government *
□ 7	Bad experience or reaction with previous vaccination *
□ 8	Do/did not know where to get reliable information *
و 🗖	I already had a COVID-19 infection *
□ 10	Religious or philosophical reasons *
□ 11	I had a bad experience with healthcare providers *
□ 12	I anticipated racism or discrimination during my vaccine appointment *
□ 13	Other (please specify):
□ -8	Prefer not to answer
	Don't know
-	narked with * are randomized
D8	Show if Not immunized Covid19 (D1 = 0)
What o	bstacles have prevented you from getting vaccinated against COVID-19?
(Show i	f CATI) Please select all that apply.
(Show i	f Web) Please select all that apply.
	No obstacle(s) (Exclusive)
	Difficulties booking time off work/school for a vaccine appointment
\square_3	Live in a remote area (limited transportation)
	No reliable internet access
□ ₅	Language barrier (e.g., lack of access to relevant information in my preferred language)
	Concerns of racism or discrimination
\Box_7	Other (please specify):
- /	Prefer not to answer
。 	Don't know
D9 OR ((D2	Show if Intention getting vaccine against covid19 (((D2 = 1) AND (D3 = 0,Prefer not to answer,Don't know)) $r = 2$ OR (D3 = 1)) OR (D1 = 0,Prefer not to answer,Don't know))
(if Not i	mmunized DontKnow PreferNotToAnswer Covid19 (D1 = 0,Prefer not to answer ,Don't know)) How likely
-	to get vaccinated against COVID-19 in the future?
	dose AND Not Johnson Johnson vaccine ((D2 = 1) AND (D3 = 0,Prefer not to answer,Don't know))) How likely
	to get a second dose of the COVID-19 vaccine in the future? dose OR Johnson Johnson vaccine ((D2 = 2) OR (D3 = 1))) How likely are you to get a booster (additional)
-	a COVID-19 vaccine in the future?
	ult) How likely are you to get a booster (additional) dose of a COVID-19 vaccine in the future?
O_1	Very likely
O 2	Somewhat likely
O ₃	Somewhat unlikely
O ₄	Very unlikely
□ ₋₈	Prefer not to answer
8 □	Don't know

D10

(Show if CATI) The COVID-19 pandemic has had a significant impact on the lives of all Canadians and has led to significant discussion about the virus and the public health measures implemented to handle the pandemic.

Please indicate whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following statements.

(Show if Web) The COVID-19 pandemic has had a significant impact on the lives of all Canadians and has led to significant discussion about the virus and the public health measures implemented to handle the pandemic.

Please indicate whether you agree with the following statements.

- 1. In general, COVID-19 vaccines are safe
- 2. In general, COVID-19 vaccines are effective
- 3. Additional COVID-19 vaccine doses are important to continue to protect from the virus
- 4. Vaccination is a safer way to build immunity against COVID-19 than getting infected
- 5. It is recommended to be vaccinated against COVID-19 even after infection
- 6. Public health measures are important to prevent and/or reduce the spread of COVID-19
- 7. I have access to enough trustworthy information about COVID-19 vaccines to make an informed decision
- O₁ Strongly agree
- O₂ Somewhat agree
- O₃ Somewhat disagree
- O₄ Strongly disagree
- ☐ -8 Prefer not to answer
- ☐ _a Don't know

Section Travel Immunization

E1, E2, E2w, E3, E3a, E4

Page Travel Immunization

E1

(Show if CATI) The next few questions are about your recent travel experiences. Many countries require or strongly recommend receiving specific vaccinations or certain preventive medication prior to arrival.

Have you travelled outside Canada in the past five (5) years (since 2018)?

IF NEEDED: This includes travel for personal or professional reasons.

We are interested in your travel immunization and health behaviours so that we can better understand how Canadians adapt to travel requirements across the globe.

(Show if Web) The next few questions are about your recent travel experiences. Many countries require or strongly recommend receiving specific vaccinations or certain preventive medication prior to arrival. We are interested in your travel immunization and health behaviours so that we can better understand how Canadians adapt to travel requirements across the globe.

Have you travelled outside Canada in the past five (5) years (since 2018)?

This incl	udes travel for personal or professional reasons.
O_1	Yes
O_0	No
_ ₋₈	Prefer not to answer
ە- ــ وـ ــ	Don't know
5	
Page '	Travel Immunization Show if Travelled outside Canada (E1 = 1)
2	Show if Not WCAG survey OR IsCATI (NOT (wcag = 1) OR (custom: < <current is("cati")="" mode="">>))</current>
	ountry did you visit in your most recent trip outside Canada?
VVIIICII C	ountry did you visit in your most recent trip outside Canada:
O ₁₆₇	TREE_QUESTION
O_2	USA United States of America
O_3	Mexico Mexico
O 4	Caribbean/Central America Bahama Islands, The
O_5	Caribbean/Central America Barbados
O_6	Caribbean/Central America Cayman Islands
O 7	Caribbean/Central America Costa Rica
O 8	Caribbean/Central America Cuba
O 9	Caribbean/Central America Dominica
O 10	Caribbean/Central America Dominican Republic
O 11	Caribbean/Central America El Salvador
O 12	Caribbean/Central America Grenada
O 13	Caribbean/Central America Guadeloupe
O 14	Caribbean/Central America Guatemala
O 15	Caribbean/Central America Haiti
O 16	Caribbean/Central America Honduras
O 17	Caribbean/ Central America Jamaica
O 18	Caribbean/Central America Martinique
O 19	Caribbean/Central America Nicaragua
O_{20}	Caribbean/Central America Panama, Republic of
O_{21}	Caribbean/Central America Saint Lucia
O_{22}	Caribbean/ Central America St. Kitts-Nevis
O_{23}	Caribbean/Central America St. Vincent and the Grenadines
O 24	Caribbean/Central America Trinidad & Tobago, Republic of
O_{25}	Brazil Brazil
O_{26}	Other South America Argentina
O 27	Other South America Bolivia
O 28	Other South America Chile
O 29	Other South America Colombia
O_{30}	Other South America Ecuador

Other South America | Guyana

 O_{31}

- Other South America | Paraguay
- Other South America | Peru
- Other South America | Uruguay
- O₃₅ Other South America | Venezuela
- O ₃₆ France | France
- O₃₇ East Europe | Belarus
- O₃₈ East Europe | Bulgaria
- O₃₉ East Europe | Czech Republic
- O 40 East Europe | Hungary
- O₄₁ East Europe | Moldova
- O₄₂ East Europe | Poland
- O₄₃ East Europe | Romania
- O 44 East Europe | Russia
- O 45 East Europe|Slovak Republic
- O 46 East Europe | Ukraine
- O 47 North Europe | Denmark
- O 48 North Europe | England
- O 49 North Europe | Estonia
- O 50 North Europe | Finland
- O 51 North Europe | Ireland, Republic of
- O 52 North Europe | Latvia
- O 53 North Europe | Lithuania
- O 54 North Europe | Northern Ireland
- O 55 North Europe | Norway
- O 56 North Europe | Scotland
- O 57 North Europe | Sweden
- O 58 North Europe | Wales
- O 59 South Europe | Albania
- O 60 South Europe | Bosnia-Hercegovina
- O 61 South Europe | Croatia
- O 62 South Europe | Gibraltar
- O 63 South Europe | Greece
- O 64 South Europe | Italy
- O 65 South Europe | Kosovo, Republic of
- O 66 South Europe | Macedonia, FYR
- O 67 South Europe | Malta
- O 68 South Europe | Montenegro, Republic of
- O 69 South Europe | Portugal
- O 70 South Europe | Serbia, Republic Of
- O 71 South Europe | Spain
- O 72 West Europe | Austria
- O 73 West Europe | Belgium
- O 74 West Europe | Germany, Federal Republic of
- O 76 West Europe | Luxembourg

- O 77 West Europe | Netherlands Antilles, The
- O 78 West Europe | Netherlands, The
- O 79 West Europe | Switzerland
- O₈₀ North Africa | Algeria
- O₈₁ North Africa | Egypt
- O₈₂ North Africa | Libya
- O 83 North Africa | Morocco
- O 84 North Africa | Sudan, Democratic Republic of
- O 85 North Africa | Tunisia
- O 86 West Africa | Benin, Republic of
- O 87 West Africa | Burkina-Faso
- O 88 West Africa | Gambia
- O₈₉ West Africa | Ghana
- O 90 West Africa | Ivory Coast, Republic of
- O 91 West Africa | Liberia
- O 92 West Africa | Mali, Republic of
- O₉₃ West Africa | Nigeria
- O 94 West Africa | Senegal
- O 95 West Africa | Sierra Leone
- O 96 West Africa | Somali Republic
- O 97 West Africa | South Africa, Republic Of
- O 98 West Africa | Togo, Republic of
- Other Africa | Angola
- O 100 Other Africa | Burundi
- Other Africa | Cameroon, Republic of
- O 102 Other Africa | Chad, Republic of
- O 103 Other Africa | Congo, Democratic Republic of
- O 104 Other Africa | Djibouti, Republic of
- O 105 Other Africa | Ethiopia
- O 106 Other Africa | Gabon Republic
- O 107 Other Africa | Guinea, Republic of
- O 108 Other Africa | Kenya
- O 109 Other Africa | Madagascar
- O ₁₁₀ Other Africa | Mauritius
- O 1111 Other Africa | Namibia
- O 112 Other Africa | Reunion
- O ₁₁₃ Other Africa | Rwanda
- O ₁₁₄ Other Africa | Tanzania, United Republic Of
- O 115 Other Africa | Uganda
- O 116 Other Africa | Zambia
- O ₁₁₇ Other Africa | Zimbabwe
- O 118 Central/South Asia | Afghanistan
- O 119 Central/South Asia | Bangladesh
- O 120 Central/South Asia | Bhutan

- O 121 Central/South Asia | Kazakhstan
- O 122 Central/South Asia | Kyrgyzstan
- O 123 Central/South Asia | Nepal
- O 124 Central/South Asia | Sri Lanka
- O 125 Central/South Asia | Uzbekistan
- O₁₂₆ India India
- O₁₂₇ Iran|Iran
- O 128 East/South East Asia | Brunei
- O 129 East/South East Asia | Hong Kong
- O 130 East/South East Asia | Hong Kong SAR
- O 131 East/South East Asia | Indonesia, Republic of
- O 132 East/South East Asia | Japan
- O ₁₃₃ East/South East Asia | Macao SAR
- O 134 East/South East Asia | Malaysia
- O 135 East/South East Asia | Mongolia, People's Republic of
- O ₁₃₆ East/South East Asia | Singapore
- O 137 East/South East Asia | Taiwan
- O 138 East/South East Asia | Thailand
- O 139 East/South East Asia | Vietnam, Socialist Republic of
- O 141 China | China, People's Republic of
- O 142 Korea | Korea, Republic Of (South)
- O ₁₄₃ Pakistan | Pakistan
- O ₁₄₄ Philippines | Philippines
- O 145 West Asia | Armenia
- O 146 West Asia | Azerbaijan
- O 147 West Asia | Bahrain
- O 148 West Asia | Georgia
- O 149 West Asia | Iraq
- O 150 West Asia | Israel
- O 151 West Asia | Jordan
- O 152 West Asia | Kuwait
- O 153 West Asia | Lebanon
- O 154 West Asia | Oman
- O 155 West Asia | Palestinian Authority (Gaza)
- O 156 West Asia | Qatar
- O 157 West Asia | Saudi Arabia
- O 158 West Asia | Syria
- O ₁₅₉ West Asia | Turkey
- O 160 West Asia | United Arab Emirates
- O 161 West Asia | Yemen, Republic of
- O ₁₆₂ Oceania | Australia
- O ₁₆₃ Oceania | Fiji
- O ₁₆₄ Oceania | New Caledonia
- O ₁₆₅ Oceania | New Zealand

O_{166}	Other Other (specify):
□ -8	Prefer not to answer
9- 🔲	Don't know
E2w	Show if WCAG survey (wcag = 1)
Which o	country did you visit in your most recent trip outside Canada?
	f Web) Please do not enter personally identifying information (e.g., name, email address, phone number,
mailing	address), as anything you enter may be shared with the sponsor of this research.
	Prefer not to answer
8 	Don't know
E3	Show if Specified Country Visited ((E2 != Prefer not to answer ,Don't know) AND (E2w != Prefer not to
answer	,Don't know))
Did you	get vaccinated for the purpose of this trip?
O_1	Yes
O_0	No
□ -8	Prefer not to answer
□ ₋₉	Don't know
E3a	Show if Received travel vaccination (E3 = 1)
Which o	of the following vaccinations did you receive for the purpose of this trip?
(Show ij	f CATI) Please select all that apply.
(Show ij	f Web) Please select all that apply.
	Yellow fever vaccine
	Hepatitis A vaccine
\square 3	Japanese encephalitis vaccine
\square 4	Rabies vaccine
□ 5	Typhoid vaccine
\Box 6	Bacille Calmette-Guérin (BCG) vaccine
□ ₇	Cholera and traveller's diarrhea vaccine
□ ₈	Meningococcoal vaccine
☐ ₁₀	COVID-19 vaccine
ء و 🗖	Other, please specify:
_ 3	Prefer not to answer
	Don't know

Page Travel Immunization

F4

Do you plan to seek advice about travel vaccination from your health care provider or a travel clinic before your next trip outside Canada or the US?

()		Yes

O₀ No

☐ _8 Prefer not to answer

☐ -a Don't know

Section Survey End

H1, WebEndTCH, CATIEnd

Page End of Survey

H1

Finally, would you be willing to participate in this study again in the future?

O₁ Yes

O₀ No

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

This is the end of the survey. On behalf of the Public Health Agency of Canada, we would like to thank you for your participation. Your responses will provide invaluable insight into immunization coverage in Canada.

The Public Health Agency of Canada has contracted an independent public opinion research company, Advanis (opens in a new window) (http://advanis.net), to conduct the research on its behalf.



(http://www.advanis.ca)

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Status Code: -1

CATIEnd Show if isCATI (custom: <<current_mode_is("cati")>>)

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