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Vulnerable and Hard-to-reach Populations COVID-19 Immunization Coverage Survey (VHCICS) 2024

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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This report presents the methodological details for the *Vulnerable and Hard-to-reach Populations COVID-19 Immunization Coverage Survey (VHCICS) 2024* conducted by Advanis Inc. on behalf of the Public Health Agency of Canada (PHAC). The survey was administered among 5,862 members of the adult Canadian general public, between January 11 and March 3, 2024.

Ce rapport est aussi disponible en français sous le titre: Enquête sur la couverture vaccinale contre la COVID-19 auprès des populations vulnérables et difficiles à atteindre 2024

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1. Executive Summary

1.1 Background

Surveillance data suggests that vaccine coverage is uneven across Canada. Furthermore, results from existing surveillance tools suggest that some population subgroups are under-surveyed, which results in insufficient data regarding immunization status, knowledge, attitudes, and behaviours towards vaccination within these specific groups. In turn, this hinders core immunization functions including COVID-19 vaccine surveillance, vaccine confidence, available data, policy, public health guidance, and knowledge mobilization activities.

In the effort of addressing COVID-19 coverage gaps relating to vulnerable and hard-to-reach populations, the Public Health Agency of Canada (PHAC) developed the *Vulnerable and Hard-to-reach Populations COVID-19 Immunization Coverage Survey* (VHCICS) surveillance tool. The study was first conducted in 2023.

The purpose of the 2024 VHCICS was to continue to provide information that is currently unavailable regarding COVID-19 immunization coverage and uptake in select vulnerable and hard-to-reach populations.

This surveillance tool is needed to continue to address data coverage gaps identified for these sub-populations and to inform public health vaccination programs and initiatives. It will also inform decisions on prioritizing investments and crucial information funneled through PHAC, as well as federal, provincial, territorial and private partners.

1.2 Objectives

The primary objective of this surveillance project was to maintain a surveillance tool to gain a better understanding of COVID-19 coverage-related information in select vulnerable and hard-to-reach populations.

Specifically, this survey aimed to collect information on:

- COVID-19 immunization status
- Seasonal influenza immunization status
- Intent to get vaccinated for those not yet vaccinated against COVID-19
- Intent to get vaccinated against flu and respiratory syncytial virus (RSV)
- Reasons for non-vaccination (including barriers)
- Knowledge, attitudes and beliefs toward COVID-19 vaccines
- Sources of information on COVID-19 vaccines accessed by respondents
- Socio-demographic characteristics that are linked to inequalities in vaccination uptake

The second survey objective was to document the socioeconomic, cognitive, and motivational factors associated with low uptake of the COVID-19 vaccine in eleven (11) vulnerable and hard-to-reach populations in relation to a general population benchmark sample.

1.3 Methodology

Data collection started on January 11, 2024, and ended on March 3, 2024, and was conducted by Advanis.

The VHCICS contained a benchmark survey that was a probability-based survey of 1,009 Canadians aged 18 or older using Advanis' General Population Representative Sample (GPRS) sample in a multi-phase sampling approach. This approach involved collecting data from randomly selected sample units (GPRS), and then collecting more data from a randomly selected subsample¹.

Advanis then used the same core questions in the questionnaire administered to the general population to survey 11 specialized, vulnerable and hard-to-reach populations, each with a couple of variations according to the target population. Overall, a sample of 5,862 Canadians aged 18 or older was reached using Advanis' GPRS sample. For the specialized groups, recruitment was completed using targeting information Advanis had on profile within the GPRS database to ensure quota minimums were met. Targeting was possible for those in groups A and B, but group C was based on natural fallout of the sample. The results can be extrapolated to general population and to the targeted A and B subpopulations.

The 11 specialized vulnerable and hard-to-reach populations included:

- **Group A:** Specialized populations aged 18 years and older
 - a) people with lower income (less than \$60k per year, per household);
 - b) people with lower education (high school or less); and
 - c) younger adults (aged 18-29 years).

- **Group B:** Specialized populations aged 18 years and older
 - a) urban Indigenous people;
 - b) visible minorities (including Indigenous);
 - c) recent immigrants (adults who have lived in Canada for less than 10 years); and
 - d) people living in rural or remote locations.

- **Group C:** Specialized populations aged 18 years and older
 - a) people who use drugs (i.e., illegal substances excluding alcohol, cannabis or tobacco);
 - b) health care workers (e.g., nurses, doctors, long-term care workers, volunteers);
 - c) industry workers in factory settings (e.g., manufacturing; agriculture, forestry, fishing, food processing; transportation and warehousing); and
 - d) transportation workers, specifically truck drivers.

Participants pulled from Advanis' GPRS sample were recruited for the most part by cell phone and were invited to participate in a Web survey, a small proportion were recruited using landlines (177). Those who agreed to participate received an email or SMS inviting them to take part in the survey.

Survey results were weighted by nested data obtained from Statistics Canada from the 2021 census. The weighting variables included status on gender, education, income, age, population center, visible minority, recent immigrant and Indigenous. The results for 2024 are based on responses from 5,862 Canadians

¹ Statistics Canada (2021). Statistics: Power from Data! – Probability Sampling – Multi-Phase Sampling Approach. <https://www150.statcan.gc.ca/n1/edu/power-pouvoir/ch13/prob/5214899-eng.htm#a7>

across all provinces and territories. Recruitment ensured quotas were reached for key sub-populations to ensure statistical relevance and representativeness.

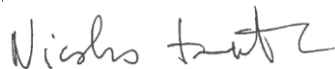
1.4 Contract Value

The contract value for this survey was \$296,072.43 (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 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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2. Methodology

The Public Health Agency of Canada (PHAC) sought to address COVID-19 data coverage gaps relating to vulnerable and hard-to-reach populations. PHAC contracted Advanis to conduct the second iteration of the *Vulnerable and Hard-to-reach Populations COVID-19 Immunization Coverage Survey* (VHCICS), a 10-minute online survey of Canadians 18 years and older. The study used Advanis' proprietary, probability-based General Population Representative Sample (GPRS). The probability-based study was conducted using a two-step approach where respondents were recruited by cell phone or landline to participate in an online web survey. Respondents were invited to participate in the online survey by either email or SMS (text message), based on their preference at the time of recruitment. After the initial invitation, if respondents had not yet completed the survey, they were sent up to two (2) reminder messages. Reminder messages were sent 3 and 6 days after the initial recruitment.

2.1 Survey Design

The questions for this survey were designed by the Public Health Agency of Canada and supplied to Advanis in both English and French. Advanis reviewed the French survey translations. The questionnaire contained core questions about COVID-19, including vaccination status, barriers to vaccination, knowledge attitudes and beliefs related to vaccination, and questions specific to each targeted population group, demographics, and questions about general health. In this iteration of the VHCICS, a few questions were also included for seasonal influenza and intention to receive the respiratory syncytial virus (RSV) vaccine.

The Government of Canada's standards for pre-testing were adhered to. The pretest was conducted in both English and French. The pretest was conducted from January 11th to 14th, 2024. During this pretest, 101 people were recruited by cell phone in English and French. This led to 40 completed online surveys (21 French, and 19 English). After the pretest, minor wording changes were made to the French translation of question C8. Given no significant changes were made after the pre-test, completes were retained in the final dataset and included as part of the total sample size.

Among those completing the survey online, the average survey length was 12 minutes.

2.2 Sampling and Administration

The target audience for this project included specialized population groups, as well as a general population group that serves as benchmark for comparison. Respondents needed to be 18 years of age or older and living in Canada in order to be eligible for the survey.

The targeted number of completed surveys was 5,700 Canadian adults. A total of 5,862 responses were obtained (4,599 in English and 1,264 in French) to reach quotas, where possible (Table 1).

Table 1: Geographic sample and completes

Population Groups by Province	Total Completes	Group A Specialized Populations			Group B Specialized Populations				Group C Specialized Populations			
		Low education	Low income	Younger adults	Urban Indigenous	Visible minority (incl. Indigenous)	Recent immigrants	Rural or Remote	Truck Drivers	Drug users	Healthcare workers	Industry workers
Alberta	625	108	213	93	128	263	30	101	17	53	56	51
British Columbia	806	153	313	154	89	291	72	128	14	65	63	35
Manitoba	267	66	102	31	63	107	18	67	10	19	33	14
Saskatchewan	191	37	71	27	32	60	8	45	6	13	21	16
Ontario	1954	311	706	407	122	779	184	283	30	149	182	127
Quebec	1387	139	547	203	44	314	104	237	23	70	142	117
Atlantic	615	82	252	74	42	132	58	186	5	37	81	26
Territories	17	4	5	0	4	9	2	6	1	0	4	0
Total	5862	900	2209	989	524	1955	476	1053	106	406	582	386
Target	5700	900	900	900	400	900	400	400	Natural fallout			

Overall, 15,399 people were recruited to participate in the survey, with 5,862 completing the web survey for a response rate of 38.1%, and a margin of error of +/-1.3% (19 times out of 20 at a 95% confidence interval). The average survey length was 12 minutes. Table 2 provides information on the number of completes and target completes by specialized groups A and B, though group C could not be targeted.

Table 2: Field details by specialized population group

Population Group Field Details	Total Completes	Group A Specialized Populations*			Group B Specialized Populations*			
		Low education	Low income	Younger adults	Urban Indigenous	Visible minority (incl. Indigenous)	Recent immigrants	Rural or Remote
Invited	15,399	3620	6966	4936	1832	6061	3652	3273
Completed	5862	900	2209	989	524	1955	476	1053
Response rate (completed / invited)	38.1%	24.9%	31.7%	20.0%	28.6%	32.3%	13.0%	32.2%
Margin of error	+/-1.3%	+/-3.3%	+/-2.1%	+/-3.1%	+/-4.3%	+/-2.2%	+/-4.5%	+/-3.0%
Survey length (min)**	12.0	12.6	12.6	10.2	11.9	12.5	12.8	11.9

*Note that specialized groups are not exclusive, respondents can fall into multiple groups.

** It is to be noted that some participants were part of multiple subgroups.

2.3 Weighting and Data Cleaning

The VHCICS data is weighted by nested data obtained from Statistics Canada from the 2021 Census. The weighting variables included status on gender, education, income, age, population center, visible minority, recent immigrant status and Indigenous status.

The values attributed to the different weight categories can be found in Appendix A.

Data cleaning involved creating variables for each of the specialized populations, so that analysis can be easily performed for each group. Specialized populations were indicated in a sample variable. In addition to this, response levels in some questions were rebased to the entire population rather than just subpopulations (e.g., for levels that were only shown to Indigenous), so that percentages would accurately reflect those of the whole population and not just those of the subpopulation. Other specify comments were reviewed and back coded into existing levels where required. For some questions, when the “Other” level exceeded 10%, verbatim responses were reviewed and additional categories were added to the questions based on the responses (e.g. C8 and C16). Some variables were derived for reporting purposes (e.g. A1, A10).

Similar to the 2023 iteration of the study, cleaning was again done to correct respondents who selected that they were a drug user, but then in C21 indicated that the drugs used were “cannabis” or “none”. These respondents should not have selected “Yes” to drug use in S9. As such, these cases were back coded out of the drug-related questions, and their S9 response was updated to “No”.

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 survey’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 has also 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 gibberish or don't 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 recoding is reviewed by another team member or technical specialist for accuracy.

3. Non-response Bias

Non-response bias occurs when non-responders differ in a meaningful way from respondents and this difference impacts the information gathered. It is difficult to assess the presence of non-response bias since information about why non-responders did not participate is usually unavailable. That said, one way to gauge the potential impacts of non-response bias is to evaluate if the sample is 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 survey is minimal. This is the case with the current survey.

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

- Recruiting respondents by telephone (cellular).
- 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.
- Sending an SMS text message to recruits, which assures a seamless transition from the telephone survey to the online survey, as receipt can be confirmed in real time and encourages respondents to complete the survey as soon as the call ends.
- Collecting both email address and telephone number for recruitment so that if the email address does bounce, we can contact them via SMS message if they agree.
- Offering the survey in both official languages to maximize ease of completion.

Data banners were created and provided to PHAC. The first set is divided by demographic information including sex at birth, gender, region, and age group. The second set is divided by the overall population sample (i.e., general population vs. targeted population (all combined)), as well as the specific target population groups based on education, income, being part of the indigenous community, living in a rural or urban area, being part or not of a visible minority group, etc. Net variables were also created. For example, Likert scales of 5 or 7 items were simplified to two or three categories (e.g., "agree" and "disagree"). Those nets are presented along with their respective detailed initial categories.

4. Guidelines for Analysis and Release

Any results with an unweighted base size (denominator) of less than 30 should be interpreted with caution.²⁻³ 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 base of less than 10 should be suppressed.

For all estimates based on a denominator size of less than 30 (but 10 or more), the following guidelines for data suppression related to coefficient of variations (CV) should be used when reporting estimates:²

Type of Estimate	CV (in %) ⁴	Guidelines
Acceptable	$CV \leq 15.0$	Estimates can be considered for general unrestricted release. Requires no special notation.
Marginal	$15.0 < CV \leq 35.0$	Estimates can be considered for general unrestricted release but 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.²

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

² 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

³ Statistics Canada. Canadian Community Health Survey User Guide. 2021.

⁴ $CV = (\text{standard error} / \text{coefficient}) * 100$ where the coefficient is either the regression coefficient or the proportion estimate.

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.

Appendices

Appendix A: Weights for the direct weighting method

Definition of weighting variables. All the definitions are based on statistic Canada categories.

- 1- Gender: Men+ includes transgender men and half of the non-binaries. Women+ includes transgender women and half of the non-binaries.
- 2- Education: Low education is high school or less. Not low education includes all others.
- 3- Income: Low income is less than \$60,000. Not low income is \$60,000 or more.
- 4- Age: We have 4 age categories, 18-29, 30-34, 35-54 and 55+.
- 5- Urban or rural / remote: Rural or remote communities are postal codes with "0" as the second character or self-defined as rural or remote. Else are urban.
- 6- Origin: Visible minority or not a visible minority.
- 7- Indigenous: Is indigenous includes First Nation, Métis and Inuit.
- 8- Recent immigrant: Recent immigrant is defined as a resident for less than 10 years.

Weighting category	Weight
Men +, Not low education, Not low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.569
Men +, Not low education, Not low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.867
Men +, Not low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.579
Men +, Not low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.772
Men +, Not low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.329
Men +, Not low education, Not low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.603
Men +, Not low education, Not low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.601
Men +, Not low education, Not low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.688
Men +, Not low education, Not low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.325
Men +, Not low education, Not low income, 18-29, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.577
Men +, Not low education, Not low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.096
Men +, Not low education, Not low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.310
Men +, Not low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.760
Men +, Not low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.256
Men +, Not low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.152
Men +, Not low education, Not low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.267
Men +, Not low education, Not low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.567
Men +, Not low education, Not low income, 30-34, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.211

Men +, Not low education, Not low income, 30-34, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.758
Men +, Not low education, Not low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.817
Men +, Not low education, Not low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.606
Men +, Not low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.202
Men +, Not low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	1.067
Men +, Not low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.493
Men +, Not low education, Not low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.445
Men +, Not low education, Not low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.767
Men +, Not low education, Not low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.491
Men +, Not low education, Not low income, 35-54, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.081
Men +, Not low education, Not low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.257
Men +, Not low education, Not low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.807
Men +, Not low education, Not low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.402
Men +, Not low education, Not low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.153
Men +, Not low education, Not low income, 55+, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.749
Men +, Not low education, Not low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.064
Men +, Not low education, Not low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.619
Men +, Not low education, Not low income, 55+, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.060
Men +, Not low education, Not low income, 55+, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.471
Men +, Not low education, Not low income, 55+, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.303
Men +, Not low education, Low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.506
Men +, Not low education, Low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.342
Men +, Not low education, Low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.696
Men +, Not low education, Low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.416
Men +, Not low education, Low income, 18-29, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.287
Men +, Not low education, Low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.030
Men +, Not low education, Low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.098
Men +, Not low education, Low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.044
Men +, Not low education, Low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.125
Men +, Not low education, Low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.348

Men +, Not low education, Low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.387
Men +, Not low education, Low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.246
Men +, Not low education, Low income, 30-34, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.648
Men +, Not low education, Low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.602
Men +, Not low education, Low income, 30-34, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.451
Men +, Not low education, Low income, 30-34, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.032
Men +, Not low education, Low income, 30-34, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.043
Men +, Not low education, Low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.118
Men +, Not low education, Low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.564
Men +, Not low education, Low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.369
Men +, Not low education, Low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.362
Men +, Not low education, Low income, 35-54, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.174
Men +, Not low education, Low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.435
Men +, Not low education, Low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.061
Men +, Not low education, Low income, 35-54, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.238
Men +, Not low education, Low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.525
Men +, Not low education, Low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.125
Men +, Not low education, Low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.368
Men +, Not low education, Low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.151
Men +, Not low education, Low income, 55+, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.139
Men +, Not low education, Low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.617
Men +, Not low education, Low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.112
Men +, Not low education, Low income, 55+, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.165
Men +, Not low education, Low income, 55+, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.261
Men +, Low education, Not low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	4.142
Men +, Low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.855
Men +, Low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	5.745
Men +, Low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	5.929
Men +, Low education, Not low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	3.122
Men +, Low education, Not low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	3.232

Men +, Low education, Not low income, 18-29, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	2.678
Men +, Low education, Not low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	10.604
Men +, Low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.605
Men +, Low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	9.297
Men +, Low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	4.475
Men +, Low education, Not low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	11.246
Men +, Low education, Not low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	13.573
Men +, Low education, Not low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.631
Men +, Low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	3.966
Men +, Low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	2.771
Men +, Low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.323
Men +, Low education, Not low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	12.124
Men +, Low education, Not low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	6.447
Men +, Low education, Not low income, 35-54, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.613
Men +, Low education, Not low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	3.180
Men +, Low education, Not low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	4.835
Men +, Low education, Not low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.011
Men +, Low education, Not low income, 55+, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.125
Men +, Low education, Not low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.523
Men +, Low education, Not low income, 55+, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.490
Men +, Low education, Low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.702
Men +, Low education, Low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.032
Men +, Low education, Low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.728
Men +, Low education, Low income, 18-29, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.491
Men +, Low education, Low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.213
Men +, Low education, Low income, 18-29, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	2.943
Men +, Low education, Low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.461
Men +, Low education, Low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.719
Men +, Low education, Low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.072
Men +, Low education, Low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.280

Men +, Low education, Low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	1.438
Men +, Low education, Low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.972
Men +, Low education, Low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.731
Men +, Low education, Low income, 35-54, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.900
Men +, Low education, Low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.047
Men +, Low education, Low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	2.574
Men +, Low education, Low income, 35-54, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.784
Men +, Low education, Low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.160
Men +, Low education, Low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.302
Men +, Low education, Low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.592
Men +, Low education, Low income, 55+, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.735
Men +, Low education, Low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	2.482
Men +, Low education, Low income, 55+, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.008
Men +, Low education, Low income, 55+, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.966
Women +, Not low education, Not low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	2.422
Women +, Not low education, Not low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	1.306
Women +, Not low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	3.641
Women +, Not low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	1.233
Women +, Not low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.746
Women +, Not low education, Not low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.303
Women +, Not low education, Not low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	2.168
Women +, Not low education, Not low income, 18-29, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.625
Women +, Not low education, Not low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.458
Women +, Not low education, Not low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.784
Women +, Not low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.956
Women +, Not low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.673
Women +, Not low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.810
Women +, Not low education, Not low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.299
Women +, Not low education, Not low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.168
Women +, Not low education, Not low income, 30-34, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.753

Women +, Not low education, Not low income, 30-34, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.424
Women +, Not low education, Not low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.420
Women +, Not low education, Not low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	1.183
Women +, Not low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.914
Women +, Not low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.238
Women +, Not low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.044
Women +, Not low education, Not low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.218
Women +, Not low education, Not low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.371
Women +, Not low education, Not low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.094
Women +, Not low education, Not low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.459
Women +, Not low education, Not low income, 35-54, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.992
Women +, Not low education, Not low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.289
Women +, Not low education, Not low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	1.189
Women +, Not low education, Not low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	2.322
Women +, Not low education, Not low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.157
Women +, Not low education, Not low income, 55+, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.613
Women +, Not low education, Not low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.225
Women +, Not low education, Not low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.582
Women +, Not low education, Not low income, 55+, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.345
Women +, Not low education, Not low income, 55+, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.335
Women +, Not low education, Low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.557
Women +, Not low education, Low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.608
Women +, Not low education, Low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.231
Women +, Not low education, Low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.229
Women +, Not low education, Low income, 18-29, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.029
Women +, Not low education, Low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.052
Women +, Not low education, Low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.041
Women +, Not low education, Low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.231
Women +, Not low education, Low income, 18-29, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.452
Women +, Not low education, Low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.471

Women +, Not low education, Low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.303
Women +, Not low education, Low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.580
Women +, Not low education, Low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.098
Women +, Not low education, Low income, 30-34, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.273
Women +, Not low education, Low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.096
Women +, Not low education, Low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.366
Women +, Not low education, Low income, 30-34, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.483
Women +, Not low education, Low income, 30-34, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.509
Women +, Not low education, Low income, 30-34, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.510
Women +, Not low education, Low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.609
Women +, Not low education, Low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.140
Women +, Not low education, Low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.338
Women +, Not low education, Low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.117
Women +, Not low education, Low income, 35-54, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.050
Women +, Not low education, Low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.111
Women +, Not low education, Low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	0.408
Women +, Not low education, Low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.282
Women +, Not low education, Low income, 35-54, Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.569
Women +, Not low education, Low income, 35-54, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.231
Women +, Not low education, Low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.177
Women +, Not low education, Low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.386
Women +, Not low education, Low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.170
Women +, Not low education, Low income, 55+, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.185
Women +, Not low education, Low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	4.787
Women +, Not low education, Low income, 55+, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	10.697
Women +, Not low education, Low income, 55+, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	6.377
Women +, Low education, Not low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	4.903
Women +, Low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	11.824
Women +, Low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.382
Women +, Low education, Not low income, 18-29, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	4.968

Women +, Low education, Not low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.666
Women +, Low education, Not low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Recent immigrants	2.586
Women +, Low education, Not low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	3.105
Women +, Low education, Not low income, 18-29, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.421
Women +, Low education, Not low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	4.228
Women +, Low education, Not low income, 30-34, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	11.340
Women +, Low education, Not low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	13.012
Women +, Low education, Not low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.576
Women +, Low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	2.741
Women +, Low education, Not low income, 35-54, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.625
Women +, Low education, Not low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	2.566
Women +, Low education, Not low income, 35-54, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	3.661
Women +, Low education, Not low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	31.031
Women +, Low education, Not low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.168
Women +, Low education, Not low income, 55+, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	4.437
Women +, Low education, Not low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	4.669
Women +, Low education, Not low income, 55+, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.745
Women +, Low education, Low income, 18-29, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.318
Women +, Low education, Low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	1.918
Women +, Low education, Low income, 18-29, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.744
Women +, Low education, Low income, 18-29, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.007
Women +, Low education, Low income, 18-29, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.168
Women +, Low education, Low income, 18-29, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.582
Women +, Low education, Low income, 30-34, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.211
Women +, Low education, Low income, 30-34, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.595
Women +, Low education, Low income, 30-34, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.800
Women +, Low education, Low income, 35-54, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.508
Women +, Low education, Low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.552
Women +, Low education, Low income, 35-54, Not Rural or Remote, Visible minority, Not Indigenous, Recent immigrants	0.998
Women +, Low education, Low income, 35-54, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.561

Women +, Low education, Low income, 35-54, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	3.812
Women +, Low education, Low income, 35-54, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	2.234
Women +, Low education, Low income, 55+, Not Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	0.670
Women +, Low education, Low income, 55+, Not Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	0.919
Women +, Low education, Low income, 55+, Not Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	1.129
Women +, Low education, Low income, 55+, Rural or Remote, Not Visible minority, Not Indigenous, Not Recent immigrants	1.866
Women +, Low education, Low income, 55+, Rural or Remote, Visible minority, Not Indigenous, Not Recent immigrants	4.287
Women +, Low education, Low income, 55+, Rural or Remote, Visible minority, Indigenous, Not Recent immigrants	0.816

Appendix B: Questionnaire

VHCICS survey 2024

Government of Canada (Non-protected)



Languages: English, French

Page Consent Form

wcag

Invitation to Participate

You have been invited to participate in a public health, knowledge, attitudes and experiences survey which is being conducted among key Canadian populations. The Public Health Agency of Canada has contracted an independent public opinion research company, [Advanis \(https://advanis.net\)](https://advanis.net) (TellCityHall is one of Advanis' data collection methods), to conduct the research on the Public Health Agency of Canada's behalf.

The online survey is voluntary and will take approximately 10 minutes to complete.

If you agree to participate in this survey, please click on the following button to continue:

Participation in this study is voluntary and you can withdraw at any time. There will be no consequences if you decide not to participate. Your decision to participate does not waive your right to legal recourse in the event of research-related harm. You may skip questions that you do not feel comfortable answering by clicking "Prefer not to answer", where applicable. You may also complete the survey in several sessions and from different devices. If you get interrupted while doing the survey, you can click on the same link to pick up right where you left off. Once data has been collected, please note that researchers have no way of knowing which data belongs to which participant. The results from partially completed or abandoned surveys will be deleted.

What You Will Be Asked to Do

You will be asked to complete a survey to answer some demographic questions and questions related to the COVID-19 vaccines. Please note that certain questions will be asked at the start of the survey to determine if you are eligible to participate. If you are not eligible to participate, your data will be removed and destroyed.

Why are we collecting your information?

The aim of this survey is to gain knowledge about knowledge, attitudes, and experiences related to public health topics in Canada.

You will be asked questions, such as age, gender, and ethnicity in order to better understand knowledge, attitudes, and experiences across different key populations. You will also be asked about the first three characters of your postal code to help determine your geographic area for sampling

purposes. Your home address cannot be identified with this information. We will not ask you to provide us with any information that could directly identify you, such as name(s), or full date of birth, and data will be stored on password-protected computers. However, in exceptional circumstances, individual responses in combination with other available information could lead to identifying you. The protection of your personal information is very important to us and we will make every effort to safeguard it and reduce the risk that you are identified.

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

What is the Authority to Collect the Information?

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

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

The survey firm, [Advanis \(https://advanis.net\)](https://advanis.net), will be responsible for collecting survey data from all participants. Once data collection is complete, Advanis will provide the Public Health Agency of Canada with a dataset that will not include any individual responses to reduce the risk that you could be identified. All the responses received will be grouped for analysis and presented in grouped form. The dataset will also be available to federal and provincial governments, Indigenous governments and organizations, and researchers across Canada, if requested. Any reports or publications produced based on this research will use grouped data and will not identify you or link you to these survey results.

What are your rights?

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

If you have any questions or concerns about the survey or the information we are collecting, please e-mail: survey+vhcics@tellcityhall.ca (<mailto:survey+vhcics@tellcityhall.ca>).

For technical support with the survey, accessibility requirements, or to request to complete the survey over the phone you can contact survey+vhcics@tellcityhall.ca (<mailto:survey+vhcics@tellcityhall.ca>).

For more information about COVID-19 vaccination: <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html> (<https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html>).

The Public Health Agency of Canada has contracted an independent public opinion research company, [Advanis \(https://advanis.net\)](https://advanis.net), to conduct the research on PHAC's behalf. This project has

been registered with the Canadian Research Insights Council's (CRIC) under number: 20240111-AD569. [CRIC website \(https://www.canadianresearchinsightscouncil.ca/rvs/home/\)](https://www.canadianresearchinsightscouncil.ca/rvs/home/).

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

Section Screeners and Community

Page Screeners

C18

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

Physical health relates to the condition of your body, including whether you have an illness, injury or a health condition.

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

C19

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

Mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community.

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

C13

In the **past 12 months**, have you experienced difficulties accessing any publicly funded health care services you need in your area?

Public health care includes a combination of programs, services and policies that protect and promote the health of all Canadians. For example, this includes access to hospitals, physicians and diagnostics, including immunization without paying out-of-pocket.

- 1 Yes
- 0 No
- 8 Prefer not to answer
- 9 Don't know

C14 Show if (Experienced difficulties (C13 = 1))

What type of difficulties have you experienced?

Please select all that apply

- 1 Difficulty getting an appointment/long appointment wait times *
- 2 Service not available in my area *
- 3 Service not available at time required *
- 4 Limited transportation *
- 5 Limited walk-in appointments *
- 6 Did not know where to go *
- 7 Unable to leave house due to general health deterioration *
- 8 Language barriers *
- 9 No access to a family doctor
- 10 Other
- 8 Prefer not to answer
- 9 Don't know

*Levels marked with * are randomized*

S1

In what year were you born?

Minimum: 1923, Maximum: 2023

Year of birth _____

- 8 Prefer not to answer

S1a Show if (YoB Prefer not to answer (S1 = Prefer not to answer))

To ensure you are eligible for this survey, we need to know your age category.

Can you tell us your age group?

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

T2 Show if (Under 18 ((S1 > 2005) OR (S1a = 1)))

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



ADVANIS

(<http://www.advanis.ca>) and our public policy service



TellCityHall

(<http://tellcityhall.ca/>)

Status Code: 506

T3 Show if (Refused Age (S1a = Prefer not to answer))

Thank you for your interest but for this survey we need to know your age in order to compile the results for analysis.



ADVANIS

(<http://www.advanis.ca>) and our public policy service

Status Code: 507

S2

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

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

S3

Please indicate your total household income, before taxes and deductions, for the year ending December 31, 2023. Your **total household income** consists of the total amount of money earned by **all household members**.

- 1 Less than \$60,000
- 2 \$60,000 or more

S4int

In order to better understand the diversity of the Canadian population, as well as to help achieve greater equity and diversity in public health, we would like to ask you a few questions about your general background.

Please click the arrow below to continue.

S4

Which of the following best describes the racial or ethnic community that you belong to? We recognize this list of racial or ethnic identifiers may not exactly match how you would describe yourself.

Please select all that apply to you.

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

S5 Show if (isIndigenous (S4_3 = 1))

Do you identify as First Nations, Métis and/or Inuit?

Please select all that apply.

- 1 First Nations (includes status and non-status individuals)
- 2 Métis
- 3 Inuit
- 8 Prefer not to answer

S6a

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

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

-
- 8 Prefer not to answer
 - 9 Don't know

S6

Do you live in an urban or rural or remote area?

An **urban area** is a city, town or village with a population of 1,000 people or more.

A **rural area** is defined as an area with less than 1,000 inhabitants and a population density less than 400 people per square kilometer. Rural areas can include:

- small towns, villages and other populated places with less than 1,000 population according to the current census
- rural areas of census metropolitan areas and census agglomerations that may contain estate lots, as well as agricultural, undeveloped and non-developable lands
- agricultural lands
- remote and wilderness areas.

- ₁ Urban
- ₂ Rural or remote
- ₋₈ Prefer not to answer
- ₋₉ Don't know

S7a Show if (is NOT Indigenous NOT (S4_3 = 1))

Which group best defines your citizenship status in Canada?

- ₁ Canadian citizen - Born in Canada
- ₂ Canadian citizen - Born outside of Canada, and became Canadian citizen
- ₃ Permanent resident or landed immigrant (including overseas refugees entering Canada)
- ₄ A claimant (Foreign National entered Canada under this category who are awaiting an Immigration and Refugee Board decision or have been found in need of protection (Protected Person))
- ₅ Temporary Resident in Canada (e.g., international student, visitor, temporary foreign worker, but excluding current refugee claimants/asylum seekers)
- ₋₈ Prefer not to answer
- ₋₉ Don't know

S7b Show if (Canadian by naturalization OR Permanent resident (S7a = 2,3))

In what year did you first come to Canada to live?

Minimum: 1923, Maximum: 2024

Enter year of arrival: _____

- ₋₈ Prefer not to say
- ₋₉ Don't know

S8

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

Select all that apply

- 1 Healthcare worker (e.g. physician, nurse, occupational or physical therapist, traditional healer, employees or staff who work, study, or volunteer in hospitals, long-term care, nursing home, and community settings, laboratory worker in medical laboratory)
- 2 Industry workers in factory settings (e.g., manufacturing; agriculture, forestry, fishing, food processing, warehousing)
- 3 Truck driver / delivery driver
- 4 Laboratory worker (e.g., research or industrial, except laboratory worker in medical laboratory)
- 5 Child care or educational setting (e.g., school teacher, daycare worker)
- 6 Emergency services worker (e.g., police, fire fighter, Emergency Medical Technician (EMT))
- 7 Worker in an institution (e.g., facility for developmentally challenged, correctional facility)
- 9 I don't work in any of the above sectors *(Exclusive)*
- 10 None of the above, I am retired *(Exclusive)*
- 8 Prefer not to answer
- 9 Don't know

C12

In the **past 12 months**, how would you describe the **quality** of the publicly funded health care services available to you?

Public health care includes a combination of programs, services and policies that protect and promote the health of all Canadians. For example, this includes access to hospitals, physicians and diagnostics, including immunization without paying out-of-pocket.

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

C20 Show if (Indigenous CDN (S4_3 = 1))

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

Spiritual health may include one's connection with the self, society (others), nature, and God.

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

S9

In the **past 12 months**, have you used any drugs (excluding cannabis, tobacco and/or alcohol)?

Please consider any illegal drugs or any drugs that you have taken for reasons other than why they are recommended/prescribed (e.g., for the experience, the feeling they caused, to get high).

- 1 Yes
- 0 No
- 8 Prefer not to answer
- 9 Don't know

S9b Show if (Drug user (S9 = 1))

During the **past 12 months**, how often have you used any drugs (excluding cannabis, tobacco and/or alcohol)?

Please consider any illegal drugs or any drugs that you have taken for reasons other than why they are recommended/prescribed (e.g., for the experience, the feeling they caused, to get high).

- 1 Once or twice
- 2 3 to 11 times a year
- 3 Monthly
- 4 Weekly
- 5 Daily or almost daily
- 8 Prefer not to answer
- 9 Don't know

Section A: COVID-19 Vaccination

Page Section A

A0

What is your perception of vaccination ?

- ₁ I am generally **opposed** to vaccination
- ₂ I am generally **uncertain** about vaccination
- ₃ I am generally **in favor** of vaccination

A1

How many doses of the Health Canada approved COVID-19 vaccines have you received?

The following COVID-19 vaccines have been authorized for use in Canada: Moderna Spikevax®, Pfizer-BioNTech Comirnaty®, and Novavax Nuvaxovid™. Previously, AstraZeneca Vaxzevria, Johnson & Johnson Janssen, and Medicago Covifenz® were authorized for use in Canada for adults 18 years of age and older but are no longer available in Canada.

- ₀ None
- ₁ 1 dose
- ₂ 2 doses
- ₃ 3 doses
- ₄ 4 doses
- ₅ 5 or more doses
- ₋₈ Prefer not to answer
- ₋₉ Don't know

A11 Show if (At least one dose OR Don't know OR Prefer not to answer (A1 = 1,2,3,4,5, Prefer not to answer, Don't know))

From September 1, 2023 to now, have you received a COVID-19 vaccine ?

Moderna Spikevax ® XBB.1.5 and Pfizer-BioNTech Comirnaty ® Omicron XBB.1.5 are currently authorized and available for use in Canada for individuals 6 months of age and older, regardless of whether they have previously received a COVID-19 vaccine. Novavax Nuvaxovid™ XBB.1.5 is also authorized for use for individuals 12 years and older .

- ₁ Yes
- ₂ No
- ₃ No, but I have booked an appointment to get my fall 2023 COVID-19 vaccine
- ₋₈ Prefer not to answer
- ₋₉ Don't know

A3 Show if (1 to 5 doses (A1 = 1,2,3,4,5))

What were your **reasons for receiving** an approved COVID-19 vaccine?

Please select all that apply.

- 1 To protect myself or family or household members from infection *
- 2 Based on public health recommendations *
- 3 I was directly involved in the pandemic response in a healthcare setting (e.g., working in testing and assessments, emergency departments and delivery room, critical care units) *
- 4 It was required for my job or for school *
- 5 To prevent the spread of COVID-19 in my community *
- 6 To reduce the stress on the public health care system *
- 7 I am at risk for more severe outcomes from infection because of a health condition and/or disability *
- 8 The vaccine was recommended by a health care professional *
- 9 I was encouraged to get vaccinated by family members, colleagues or friends *
- 10 The vaccine was available and offered *
- 13 Other
- 8 Prefer not to answer
- .9 Don't know

*Levels marked with * are randomized*

A6 Show if (No dose OR Don't know OR Prefer not to answer (A1 = 0, Prefer not to answer, Don't know))

For what reasons have you **not received** an approved vaccine against COVID-19?

Please select all that apply.

- 1 I did not want to get vaccinated against COVID-19 (*Exclusive*)
- 2 I recently was infected and believe I am adequately protected by natural immunity *
- 3 I feel/felt that the vaccine does not provide much protection, as you can still get COVID-19 even if vaccinated *
- 4 I don't think I am at risk of severe effects from infection *
- 5 I don't think the vaccine works *
- 6 I have concerns about the safety and/or vaccine side effects *
- 7 I had a bad experience or reaction to previous vaccination (e.g., severe vaccine adverse effects like an anaphylactic reaction) *
- 8 I heard or read negative media (e.g., on social media, blogs, forums) about vaccines *
- 9 I did not know where to find true or reliable information about vaccines *
- 10 I have concerns about the frequency of injections and vaccine schedules *
- 11 Religious or spiritual reasons *
- 12 I am not aware of any Indigenous organizations that may offer more information on vaccinations * (*Show if Indigenous CDN (S4_3 = 1)*)
- 13 I want to discuss COVID-19 vaccination with my health care practitioner *

- 14 Other
- 8 Prefer not to answer
- .9 Don't know

Levels marked with * are randomized

A4 Show if (1 to 5 doses OR zero dose AND Not opposed to COVID vaccine (((A1 = 0) AND (A0 != 1)) OR (A1 = 1,2,3,4,5)))

What obstacles, if any, have **prevented you** from getting vaccinated against COVID-19?

Please select all that apply.

- 1 No obstacles encountered (Exclusive)
- 2 Difficulty in booking time off work or school for a vaccine appointment *
- 3 Limited transportation *
- 4 Long distances to vaccination distribution sites * (Show if S6a OR S6 Rural Remote ((custom: <<is_rural_fsa('S6a')>>) OR (S6 = 2)))
- 5 Unable to navigate online appointment platform *
- 6 I didn't know how or where to get an approved vaccine *
- 7 Limited or unreliable internet access or lack of technology equipment *
- 8 Information was difficult to understand (e.g., vaccine safety, effectiveness) *
- 9 Language barriers (e.g., information not in my preferred language) *
- 10 Lack of vaccination locations that are welcoming and/or accessible *
- 11 Limited access to Indigenous organizations that offer information or support * (Show if Indigenous CDN (S4_3 = 1))
- 12 Other
- 8 Prefer not to answer
- .9 Don't know

Levels marked with * are randomized

A5 Show if (1 to 5 doses OR zero dose AND Not opposed to COVID vaccine (((A1 = 0) AND (A0 != 1)) OR (A1 = 1,2,3,4,5)))

Are you or were you hesitant to get vaccinated against COVID-19?

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

- 1 Yes, I am hesitant to get vaccinated against COVID-19 vaccine
- 2 Yes, I **was** hesitant to get vaccinated against COVID-19 vaccine
- 3 No
- 8 Prefer not to answer
- .9 Don't know

A7a Show if (Not opposed to COVID vaccine (A0 != 1))

Do you plan to get vaccinated against COVID-19 in the future?

- 1 Yes
- 0 No
- 8 Prefer not to answer
- 9 Don't know

A7b Show if (Do not plan to get vaccinated against COVID (A7a = 0))

For what reason(s) do you **not plan** to receive a COVID-19 vaccine in the future?

Please select all that apply

- 1 I do not want to get vaccinated (Exclusive)
- 2 I recently was infected and believe I am adequately protected by natural immunity *
- 3 I feel that the COVID-19 vaccine does not provide protection, as you can still get COVID-19 even if vaccinated *
- 4 I don't think I am at risk of severe effects from infection *
- 5 I don't think the vaccine works *
- 6 I have concerns about the safety and/or vaccine side effects *
- 7 I had a bad experience or reaction to previous vaccination (e.g., severe vaccine adverse effects like an anaphylactic reaction) *
- 8 I heard or read negative media (e.g., on social media, blogs, forums) about vaccines *
- 9 I do not know where to find true or reliable information about vaccines *
- 10 I have concerns about the frequency of injections and vaccine schedules *
- 11 I am not aware of any Indigenous organizations that may offer more information on vaccinations * (Show if Indigenous CDN (S4_3 = 1))
- 12 I want to discuss COVID-19 vaccination with my health care practitioner *
- 13 I am tired of hearing about vaccination or of having to get vaccinated *
- 14 Other
- 8 Prefer not to answer
- 9 Don't know

Levels marked with * are randomized

A8 Show if (1 to 5 doses OR zero dose AND Not opposed to COVID vaccine (((A1 = 0) AND (A0 != 1)) OR (A1 = 1,2,3,4,5)))

How has your likelihood of getting vaccinated against COVID-19 changed **compared to the year before**?

- 1 I am **more likely** to get vaccinated against COVID-19
- 2 I am **less likely** to get vaccinated against COVID-19
- 3 There has been **no change** in my likelihood of getting vaccinated against COVID-19
- 8 Prefer not to answer
- 9 Don't know

A10

How satisfied or dissatisfied are you with the availability of COVID-19 vaccines in your area?

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Somewhat dissatisfied
- 5 Very dissatisfied
- 8 Prefer not to answer
- 9 Don't know

A12

We now have a few questions about other vaccines.

From September 1st 2023 to now, have you received the seasonal Influenza vaccine (also known as the flu shot)?

- 1 Yes
- 0 No
- 8 Prefer not to answer
- 9 Don't know

A12b Show if (Did not get Influenza vaccine OR Don't know OR Prefer not to answer (A12 = 0, Prefer not to answer, Don't know))

How likely is it that you will get the seasonal Influenza vaccine between **now and June 2024**?

Would you say you:

- 1 Will definitely get one
- 2 Will probably get one
- 3 Will probably not get one
- 4 Will definitely not get one
- 8 Prefer not to answer
- 9 Don't know

A13

Respiratory syncytial virus or RSV is a common respiratory virus that usually causes mild cold-like symptoms. Infants and older adults are more likely to develop severe RSV and need hospitalization.

If a RSV vaccine was recommended for you and free of charge, how likely would you be to receive it?

- 1 Definitely would

- 2 Probably would
- 3 Probably would not
- 4 Definitely would not
- .8 Prefer not to answer
- .9 Don't know

Section B: Knowledge, Attitudes, and Beliefs

Page Section B

B1

Which of the following sources of information would you be most likely to consult in order to find information on approved COVID-19 vaccines?

Please select up to three (3) of the provided sources in order of importance to you.

- ___ I do not consult information on COVID-19 vaccines or have no preference on source of information *(Exclusive)*
- ___ Health care workers (e.g., doctors, nurses) *
- ___ Family, friends or colleagues *
- ___ Medical associations (e.g., Canadian Public Health Association) *
- ___ My local public health clinic/Local Community Services Centre (including their websites) *
- ___ Ministry of Health within my province or territory (including their websites) *
- ___ Public Health Agency of Canada or Health Canada (including their websites) *
- ___ Social media (e.g., Facebook, Instagram, Twitter, TikTok, Snapchat) *
- ___ News or media sources (e.g., television, online (websites, blogs)) *
- ___ Online search engines (e.g., Google) *
- ___ Community leaders (e.g., community advocates, community activists, academic institutions) *
- ___ Religious or spiritual leaders (e.g., Elders, imams, priests, rabbis) *
- ___ Indigenous organizations or Friendship Centres (e.g., First Nations Health Authority) * *(Show if Indigenous CDN (S4_3 = 1))*
- ___ Politicians (e.g., municipal, provincial/territorial, federal) *
- ___ School officials (e.g., teachers, professors, educators) *
- ___ Scientific journals/publications *
- ___ National Advisory Committee on Immunization (NACI) *
- ___ International health authorities (e.g., World Health Organization (WHO), Centers for Disease Control and Prevention (CDC)) *
- ___ Other
- .8 Prefer not to answer
- .9 Don't know

*Levels marked with * are randomized*

B2

Canadians have many viewpoints on approved vaccines and their effectiveness or necessity.

Please indicate the extent to which you agree or disagree with the following statements.

1. In general, vaccines are effective. *
2. In general, vaccines are safe. *
3. COVID-19 vaccines are safe. *
4. COVID-19 vaccines are effective. *
5. You cannot get a COVID-19 infection from a COVID-19 vaccine. *
6. The benefits of a COVID-19 vaccine outweigh the risk of any possible side effects. *
7. Vaccination is a safer way to build immunity against COVID-19 than contracting COVID-19. *
8. I believe that I need to be vaccinated against COVID-19 even if I previously acquired a COVID-19 infection. *
9. COVID-19 vaccines do not alter my DNA. *
10. Public health measures are an important strategy to prevent and/or reduce the spread of COVID-19 (e.g., physical distancing, wearing a mask). *
11. COVID-19 vaccination should be a requirement in school settings and/or any setting with a large group of people. *
12. I have access to enough trustworthy information about COVID-19 vaccines to make an informed decision. *
13. Additional doses of a COVID-19 vaccine are important in order to stay protected against COVID-19. *

*Levels marked with * are randomized*

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree
- 8 Prefer not to answer
- 9 Don't know

B3

How would you rate your level of vaccine fatigue?

That is, the feeling of being tired of hearing about vaccination or of having to get vaccinated.

- 1 Very high fatigue
- 2 High fatigue
- 3 Moderate fatigue
- 4 Low fatigue
- 5 I am not fatigued
- 8 Prefer not to answer
- 9 Don't know

Section C: Sociodemographics

Page Section C

DemInt

Finally, we have some questions for statistical purposes.
Please click the arrow below to continue.

C1

What was your sex at birth?

- 1 Male
- 2 Female

C2

What is your gender?

Gender refers to an individual's personal and social identity as a man, woman or a person who is not exclusively a man or a woman, for example, non-binary, agender, gender fluid, queer, or Two-Spirit .

- 1 Woman (cis-gender women or transgender women)
- 2 Man (cis-gender men or transgender men)
- 3 Another gender, please specify: _____
- 8 Prefer not to answer

C3

What is your province or territory of residence?

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

C4

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

- 1 Employed full-time (working 35 or more hours per week)
- 2 Employed part-time (working less than 35 hours per week)
- 3 Student attending school full-time or part-time
- 5 Self-employed
- 4 Unemployed, but looking for work
- 6 Unemployed, but not looking for work
- 7 Retired
- 8 Other
- 8 Prefer not to answer

S3b

Which of the following categories best describes your household income for the year ending December 31, 2023? Your **total household income** consists of the total amount of money earned by **all household members**.

- 1 Under \$20,000 *(Show if Low income (S3 = 1))*
- 2 \$20,000 to \$39,999 *(Show if Low income (S3 = 1))*
- 3 \$40,000 to \$59,999 *(Show if Low income (S3 = 1))*
- 4 \$60,000 to \$79,999 *(Show if Not low income (S3 = 2))*
- 5 \$80,000 to \$99,999 *(Show if Not low income (S3 = 2))*
- 6 \$100,000 to \$149,999 *(Show if Not low income (S3 = 2))*
- 7 \$150,000 or more *(Show if Not low income (S3 = 2))*
- 8 Prefer not to answer
- 9 Don't know

C5 Show if *(Canadian by naturalization OR Permanent resident (S7a = 2,3))*

In what country were you born?

Begin typing in the box to find the country, or scroll down and select the '+' to expand the categories and find the country.

- 2 USA|United States of America
- 3 Mexico|Mexico
- 4 Caribbean / Central America|Bahama Islands, The
- 5 Caribbean / Central America|Barbados
- 6 Caribbean / Central America|Cayman Islands
- 7 Caribbean / Central America|Costa Rica
- 8 Caribbean / Central America|Cuba

- 9 Caribbean / Central America|Dominica
- 10 Caribbean / Central America|Dominican Republic
- 11 Caribbean / Central America|El Salvador
- 12 Caribbean / Central America|Grenada
- 13 Caribbean / Central America|Guadeloupe
- 14 Caribbean / Central America|Guatemala
- 15 Caribbean / Central America|Haiti
- 16 Caribbean / Central America|Honduras
- 17 Caribbean / Central America|Jamaica
- 18 Caribbean / Central America|Martinique
- 19 Caribbean / Central America|Nicaragua
- 20 Caribbean / Central America|Panama, Republic of
- 21 Caribbean / Central America|Saint Lucia
- 22 Caribbean / Central America|St. Kitts-Nevis
- 23 Caribbean / Central America|St. Vincent and the Grenadines
- 24 Caribbean / Central America|Trinidad & Tobago, Republic of
- 25 Brazil|Brazil
- 26 Other South America|Argentina
- 27 Other South America|Bolivia
- 28 Other South America|Chile
- 29 Other South America|Colombia
- 30 Other South America|Ecuador
- 31 Other South America|Guyana
- 32 Other South America|Paraguay
- 33 Other South America|Peru
- 34 Other South America|Uruguay
- 35 Other South America|Venezuela
- 36 France|France
- 48 United Kingdom|England
- 54 United Kingdom|Northern Ireland
- 56 United Kingdom|Scotland
- 58 United Kingdom|Wales
- 37 East Europe|Belarus
- 38 East Europe|Bulgaria
- 39 East Europe|Czech Republic
- 40 East Europe|Hungary
- 41 East Europe|Moldova
- 42 East Europe|Poland
- 43 East Europe|Romania
- 44 East Europe|Russia
- 45 East Europe|Slovak Republic
- 46 East Europe|Ukraine
- 47 North Europe|Denmark
- 49 North Europe|Estonia

- 50 North Europe|Finland
- 51 North Europe|Ireland, Republic of
- 52 North Europe|Latvia
- 53 North Europe|Lithuania
- 55 North Europe|Norway
- 57 North Europe|Sweden
- 59 South Europe|Albania
- 60 South Europe|Bosnia-Hercegovina
- 61 South Europe|Croatia
- 62 South Europe|Gibraltar
- 63 South Europe|Greece
- 64 South Europe|Italy
- 65 South Europe|Kosovo, Republic of
- 66 South Europe|Macedonia, FYR
- 67 South Europe|Malta
- 68 South Europe|Montenegro, Republic of
- 69 South Europe|Portugal
- 70 South Europe|Serbia, Republic Of
- 71 South Europe|Spain
- 72 West Europe|Austria
- 73 West Europe|Belgium
- 74 West Europe|Germany, Federal Republic of
- 76 West Europe|Luxembourg
- 77 West Europe|Netherlands Antilles, The
- 78 West Europe|Netherlands, The
- 79 West Europe|Switzerland
- 80 North Africa|Algeria
- 81 North Africa|Egypt
- 82 North Africa|Libya
- 83 North Africa|Morocco
- 84 North Africa|Sudan, Democratic Republic of
- 85 North Africa|Tunisia
- 86 West Africa|Benin, Republic of
- 87 West Africa|Burkina-Faso
- 88 West Africa|Gambia
- 89 West Africa|Ghana
- 90 West Africa|Ivory Coast, Republic of
- 91 West Africa|Liberia
- 92 West Africa|Mali, Republic of
- 93 West Africa|Nigeria
- 94 West Africa|Senegal
- 95 West Africa|Sierra Leone
- 96 West Africa|Somali Republic
- 97 West Africa|South Africa, Republic Of

- 98 West Africa|Togo, Republic of
- 99 Other Africa|Angola
- 100 Other Africa|Burundi
- 101 Other Africa|Cameroon, Republic of
- 102 Other Africa|Chad, Republic of
- 103 Other Africa|Congo, Democratic Republic of
- 104 Other Africa|Djibouti, Republic of
- 105 Other Africa|Ethiopia
- 106 Other Africa|Gabon Republic
- 107 Other Africa|Guinea, Republic of
- 108 Other Africa|Kenya
- 109 Other Africa|Madagascar
- 110 Other Africa|Mauritius
- 111 Other Africa|Namibia
- 112 Other Africa|Reunion
- 113 Other Africa|Rwanda
- 114 Other Africa|Tanzania, United Republic Of
- 115 Other Africa|Uganda
- 116 Other Africa|Zambia
- 117 Other Africa|Zimbabwe
- 118 Central/South Asia|Afghanistan
- 119 Central/South Asia|Bangladesh
- 120 Central/South Asia|Bhutan
- 121 Central/South Asia|Kazakhstan
- 122 Central/South Asia|Kyrgyzstan
- 123 Central/South Asia|Nepal
- 124 Central/South Asia|Sri Lanka
- 125 Central/South Asia|Uzbekistan
- 126 India|India
- 127 Iran|Iran
- 128 East/South East Asia|Brunei
- 129 East/South East Asia|Hong Kong
- 131 East/South East Asia|Indonesia, Republic of
- 132 East/South East Asia|Japan
- 133 East/South East Asia|Macao SAR
- 134 East/South East Asia|Malaysia
- 135 East/South East Asia|Mongolia, People's Republic of
- 136 East/South East Asia|Singapore
- 137 East/South East Asia|Taiwan
- 138 East/South East Asia|Thailand
- 139 East/South East Asia|Vietnam, Socialist Republic of
- 141 China|China, People's Republic of
- 142 Korea|Korea, Republic Of (South)
- 143 Pakistan|Pakistan

- 144 Philippines|Philippines
- 145 West Asia|Armenia
- 146 West Asia|Azerbaijan
- 147 West Asia|Bahrain
- 148 West Asia|Georgia
- 149 West Asia|Iraq
- 150 West Asia|Israel
- 151 West Asia|Jordan
- 152 West Asia|Kuwait
- 153 West Asia|Lebanon
- 154 West Asia|Oman
- 155 West Asia|Palestinian Authority (Gaza/West Bank)
- 156 West Asia|Qatar
- 157 West Asia|Saudi Arabia
- 158 West Asia|Syria
- 159 West Asia|Turkey
- 160 West Asia|United Arab Emirates
- 161 West Asia|Yemen, Republic of
- 162 Oceania|Australia
- 163 Oceania|Fiji
- 164 Oceania|New Caledonia
- 165 Oceania|New Zealand
- 166 Other|Other (specify): _____
- 999 Prefer not to say

C6

How would you describe your sense of belonging to your local community?

- 1 Very weak
- 2 Somewhat weak
- 3 Somewhat strong
- 4 Very strong
- 8 Prefer not to answer
- 9 Don't know

C17

Which language(s) do you primarily speak in your daily life (either at home, work, school or other)?

Please select all that apply.

- 1 English
- 2 French

- 3 Indigenous language, please specify: _____
- 4 Other language, please specify: _____
- 8 Prefer not to answer

C8 Show if (Health Care Workers (S8_1 = 1))

What type of health care worker are you? Include paid and unpaid/volunteer work.

Please select all that apply

- 1 Physician (e.g., family physician/general practitioner (GP), specialist physician)
- 2 Nurse (RN, LPN, or RN) or nurse practitioner at a hospital, clinic, or nursing station
- 3 Allied health (e.g., MAs, tech, CNAs)
- 4 Other hospital or nursing station staff
- 5 Physician at a long-term care facility
- 6 Long-term care or home care nurse
- 7 Personal support worker at a long-term care facility or home care
- 8 Group home worker
- 9 Laboratory worker
- 10 Mental health professionals
- 11 First responders
- 12 Admin/support/managers
- 14 Pharmacist
- 13 Other, (please specify): _____
- 8 Prefer not to answer
- 9 Don't know

C9 Show if (Industry Workers AND NOT Unemployed or Retired ((S8_2 = 1) AND (C4 = 1,2,3,5,8)))

What type of industry are you working in?

- 1 Agriculture, forestry, fishing and hunting
- 2 Construction
- 3 Manufacturing
- 4 Mining, quarrying and oil or gas extraction
- 5 Utilities
- 6 Warehousing
- 7 Transportation (excluding truck transportation)
- 8 Other
- 8 Prefer not to answer

C15 Show if (Urban Indigenous OR Recent immigrant OR Visible Minority ((S7b between 1 and 9) OR (S4_3 = 1) OR (S4_1 = 1 OR S4_2 = 1 OR S4_3 = 1 OR S4_4 = 1 OR S4_5 = 1 OR S4_6 = 1 OR S4_7 = 1)))

In the **past 12 months**, have you encountered any instances of racism, discrimination?

- 1 Yes
- 0 No
- 8 Prefer not to answer
- 9 Don't know

C16 Show if (Racism or discrimination (C15 = 1))

Where did the racism or discrimination occur?

Please select all that apply

- 1 At home
- 2 At my workplace
- 3 At school
- 4 In a healthcare setting (e.g., hospital, clinic, care facility, nursing station)
- 5 In a public service setting or at a government agency
- 6 In a social setting
- 7 Other, please specify: _____
- 8 Prefer not to answer
- 9 Don't know

C21 Show if (Drug user (S9 = 1))

Please consider any drugs that you may have taken for reasons other than why they are recommended/prescribed (e.g., for the experience, the feeling they caused, to get high) or any illegal drugs. Please **exclude** cannabis, tobacco and/or alcohol.

In the **past 12 months**, have you used any of the drugs listed below?

Please select all that apply.

- 1 Illegal stimulants (e.g., cocaine, crack, methamphetamine, ecstasy or MDMA)
- 2 Illegal opioids (e.g., heroin, non-pharmaceutical fentanyl)
- 3 Illegal hallucinogens/dissociatives (LSD, psilocybin, PCP, magic mushrooms, mescaline, ketamine, DXM, angel dust)
- 4 Prescription opioids (Oxycodone, Dilaudid®, morphine, codeine, Demerol, Tylenol #3®, Fentanyl, Tramadol)
- 5 Prescription stimulants – ADHD medications (Ritalin®, Concerta®, Adderall®, Dexedrine®)
- 6 Prescription sedatives/tranquilizers (e.g., diazepam (Valium®), lorazepam (Ativan®), alprazolam (Xanax®), clonazepam (Rivotril®))
- 7 Other, please specify _____

- 8 I do not use drugs for reasons other than why they are recommended/prescribed for me, or illegal drugs (*Exclusive*)
- .8 Prefer not to answer
- .9 Don't know

Section Recruit End

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EndTCH

(if Indigenous CDN (S4_3 = 1))

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 valuable and insightful information about COVID-19 immunization in urban Indigenous and away from home communities across Canada.

The First Peoples Wellness Circle (FPWC) (<https://fpwc.ca/>) is a national not-for-profit corporation governed and managed by Indigenous Leaders and exists to improve the lives of Canada's First Peoples by addressing healing, wellness and other mental health challenges. Call 1-833-311-FPWC (3792)

Hope for Wellness Helpline is available 24/7 to all Indigenous people across Canada.

<https://www.hopeforwellness.ca/> (<https://www.hopeforwellness.ca/>) Telephone and online counselling are available in English and French. Additional languages can be requested.

<https://www.hopeforwellness.ca/> (<https://www.hopeforwellness.ca/>) Call the toll-free Help Line: 1-855-242-3310 or connect to the online chat at [hopeforwellness.ca](https://www.hopeforwellness.ca/) (<https://www.hopeforwellness.ca/>)

(if Default)

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 valuable and insightful information about COVID-19 immunization coverage in Canada.

Status Code: -1