



Public Health  
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publique du Canada

# Mpox Immunization Coverage Survey among 2SLGBTQI+ and Men who have Sex with Men, 2024

Methodological Report

Prepared for the Public Health Agency of Canada

**Supplier name:** Advanis Inc.

**Contract number:** 6D142-23-4971

**Contract value:** \$107,304.80 (including HST)

**Award date:** November 23, 2023

**Delivery date:** February 27, 2024

**Registration number:** POR 093-23

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*Ce rapport est aussi disponible en français.*

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Supplier Name: Advanis Inc.

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This report presents the methodological details for the Mpox Immunization Coverage Survey among 2SLGBTQI+ and men who have sex with men (MSM), conducted by Advanis Inc. on behalf of the Public Health Agency of Canada (PHAC). The survey was administered among 5,885 members of the adult Canadian general public, between December 7th, 2023, and January 29, 2024 (recruitment was paused between December 22<sup>nd</sup> and January 2<sup>nd</sup>).

Ce rapport est aussi disponible en français sous le titre: Enquête sur la couverture vaccinale contre la variole simienne chez les 2SLGBTQI+ et les hommes ayant des rapports sexuels avec des hommes, 2024 : rapport méthodologique

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### **Catalogue Number:**

H14-443/2024E-PDF

### **International Standard Book Number (ISBN):**

978-0-660-70734-1

### **Related publications (registration number: 22-14):**

Catalogue number: H14-443/2024F-PDF (Methodological Report, French)

International Standard Book Number (ISBN): 978-0-660-70735-8 (French)

# 1. Executive Summary

## 1.1 Background

With the emergence of the multi-country outbreak of mpox (formerly referred to as “monkeypox”) in May 2022, Canada launched an unprecedented immunization campaign to help control the spread of the virus<sup>1</sup>. In particular, the vaccination campaign has targeted key, at-risk populations following the National Advisory Committee on Immunization’s (NACI) guidance for prevention among 2SLGBTQI+ and men who have sex with men (MSM) communities, with some variance in the vaccination approach in provinces and territories. In 2023, PHAC commissioned an initial study to determine vaccination coverage estimates among these populations at the national level. Ongoing surveillance information is required to monitor the mpox situation in Canada, to help inform public health vaccination programs and prevention strategy initiatives.

The purpose of this survey was to provide an update in 2023/2024 to the information on mpox vaccine coverage for the 2SLGBTQI+ as well as MSM adult populations, and continue to help understand the knowledge, attitudes, and beliefs concerning mpox vaccines (e.g., vaccine effectiveness, vaccine safety, vaccine relevance). This includes exploring reasons for vaccine hesitancy and vaccine refusal and the impact this has on vaccine. Its purpose was also to identify risk factors for transmission of mpox as well as these populations’ willingness to limit high-risk activities amid the current mpox outbreak.

The survey applied a sex and gender-based analysis plus (SGBA+) lens, considering the multiple identities and contextual factors of 2SLGBTQI+ people or those who are MSM living in Canada<sup>2</sup>.

## 1.2 Objectives

The primary objective of this surveillance survey was to measure mpox immunization coverage-related information for 2SLGBTQI+ and MSM people living in Canada using the enhanced surveillance tool developed for the 2023 survey.

Specifically, this surveillance survey aimed to collect information on:

- Mpox immunization status.
- Intent to get vaccinated for those not yet vaccinated against mpox.
- Reasons for non-vaccination of mpox (including barriers).
- Knowledge, attitudes and beliefs toward mpox vaccines.
- Sources of information on mpox vaccines.
- Socio-demographic characteristics potentially 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 mpox vaccine among these two (2) at-risk populations.

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<sup>1</sup> <https://www.canada.ca/en/public-health/services/diseases/monkeypox.html>

<sup>2</sup> <https://women-gender-equality.canada.ca/en/free-to-be-me/federal-2slgbtqi-plus-action-plan/survey-findings/quick-stats.html>

### **1.3 Methodology**

Data collection started December 7, 2023, and ended January 29, 2024, and was conducted by Advanis.

A sample of 26,891 Canadians aged 18 or older were called through the use of Advanis' General Population Representative Sample (GPRS) and invited to participate in an online survey. To reach members of the 2SLGBTQI+ population, recruitment was completed using targeting information Advanis had profiled within the GPRS database to ensure quota minimums were met. A total of 13,824 recruits agreed to participate and received an email or SMS inviting them to take part in the survey.

Of those invited, 5,886 answered the online survey. However, 1 case was removed from the data due to non-valid or inappropriate verbatim responses. Hence, 5,885 were considered to have completed the survey. Of those, 792 (13.5%) were non-heterosexual members of the 2SLGBTQI+ population, 49 (0.8%) were heterosexual members of the 2SLGBTQI+ population (e.g., a heterosexual transgender person) and 8 (0.1%) were heterosexual men who had male sexual partners in the last 12 months.

Survey results were weighted by age group, gender and sexual orientation. The results are based on responses from 5,885 Canadians across all provinces and territories. Recruitment ensured quotas were reached for key sub-populations to ensure statistical relevance and representativeness.

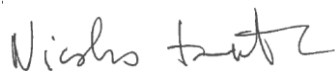
### **1.4 Contract Value**

The contract value for this study was \$107,304.80 (including HST).

### **1.5 Political Neutrality Requirement**

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

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



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## 2. Methodology

The Public Health Agency of Canada (PHAC) sought to gain a better understanding of mpox immunization coverage-related information for 2SLGBTQI+ people and MSM living in Canada. PHAC contracted Advanis to conduct the *2024 Mpox Immunization Coverage Survey among 2SLGBTQI+ and Men who have Sex with men*. It was initially planned to be a 10-minute online survey of Canadians 18 years and older.

The project used Advanis' proprietary General Population Random Sample (GPRS), using an IVR-to-Web and CATI-to-Web methodology to contact potential respondents. This consists of using our proprietary interactive voice response (IVR) system and our in-house CATI call center to conduct random digit dialing (RDD) to recruit respondents to be part of the GPRS sample. This method is probability-based; that is, every recruit has an equal and known chance of being invited to participate. Advanis then used a two-step approach where people who are part of our GPRS sample were recruited by telephone to participate in an online web survey. There can be an unknown bias since not everyone agrees to participate in studies. The inherent potential bias of our GPRS sample is not different than for other random sampling approaches.

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

To reach members of the 2SLGBTQI+ population, recruitment was completed using targeting information Advanis had on profile within the GPRS database to ensure quota minimums were met.

### 2.1 Survey Questionnaire

The questions for this survey were designed by the Public Health Agency of Canada and supplied to Advanis. The questionnaire contained questions about mpox vaccination status, barriers to vaccination, knowledge attitudes and beliefs related to vaccination, demographics, and questions about general health. Most survey questions were only shown to non-heterosexual respondents. Indeed, the questionnaire contained core immunization questions that were only shown to non-heterosexuals or heterosexuals who had sexual partners of the same sex in the last 12 months.

The Government of Canada's standards for pre-testing were adhered to, pretests were conducted in both English and French. The pretest was conducted on December 7, 2023. During this pretest, 112 people were recruited by phone in English and French. This led to 37 completed online surveys (17 French, and 20 English). After the pretest, changes to the survey skip patterns and wording changes were made. A question to assist with identifying appropriate pathways through the survey (regarding general vaccination beliefs) was also added (C18). The pretest data was not retained in the final dataset.

## 2.2 Sampling and Administration

The target audience for this project included:

- 2SLGBTQI+ community members - estimated 4% of Canadian population<sup>3</sup> and;
- Men who have had sex with men (MSM) based on past experiences within the past 12 months (regardless of whether they self-identify as 2SLGBTQI+ or not) - estimated 3.3% of men or 1.7% of the Canadian population<sup>4-5</sup>.

To survey the MSM group, men and women from the general population were invited to participate in the survey to ensure the at-risk population of interest were included in the sample frame. People belonging to the MSM group were identified by their survey responses to screening questions.

Overall, 26,891 phone numbers were called and 13,824 people were recruited to participate in the survey. Of those, 5,886 completed the online survey, but 1 case was removed from the data due to non-valid responses (e.g., a person giving inappropriate verbatim responses). Hence, 5,885 (4,878 in English and 1,007 in French) were considered to have completed the survey for an overall response rate of 42.6%, and a margin of error of +/-1.3% (19 times out of 20 at a 95% confidence interval). The average length of the survey was 8.8 minutes for participants who saw the core immunization section of the survey.

Table 1 provides information on the number of invitations sent according to the information we had in the sample prior to data collection.

**Table 1: Invitations sent by group**

Population Group Field Details	Total	Flagged as LGBTQ*	Not flagged as LGBTQ*
Invited	13,824	964	12,850
Screened Out**	1	n/a	n/a
Completed	5,885	426	5,459
Response rate (completed + screened out / invited)	42.6%	44.5%	42.7%

\*These results are taken from sample values that were available prior to data collection. We used known characteristics from our GPRS sample to identify if potential respondents were LGBTQ or not. This information was only used to target respondents and may not align with survey responses on gender and sexual orientation. This is then different than the 2SLGBTQI+ definition taken from survey responses.

\*\*Screened out participant is the 1 respondent who gave invalid responses in open ends within the survey.

The targeted number of completed surveys was 5,800 Canadian adults. More specifically, it was 800 respondents from the 2SLGBTQI+ population (but which might also include MSM) and 5,000 from the general public which include a subgroup of MSM men. In total, 5,885 responses were obtained (4,878 in English and 1,007 in French) and 1,274 answered the core immunization section of the survey. These 1,274 include anyone who could not be included in **any** of these categories:

- heterosexual
- never had a sexual experience with a person of the same sex, and

<sup>3</sup> <https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2021062-eng.htm>

<sup>4</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7085112/>

<sup>5</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7085112/#R25>

- did not receive a vaccine for mpox since June 2022.

Respondents refusing to give an answer on whether they had received the mpox vaccine or if they had sexual experiences with a person of the same sex did not see the core immunization section of the survey.

Table 2 presents the number of completed surveys by population groups.

**Table 2: Completed surveys by population groups**

Population Group	Number of respondents	Proportion (%)	Margin of error
2SLGBTQI+ and not heterosexual	803	13.6%	+/-3.5%
2SLGBTQI+ and heterosexual*	49	0.8%	--
Heterosexual cisgender men	2,322	39.5%	+/-2.0%
Heterosexual cisgender women	2,495	42.4%	+/-2.0%
Information not available**	216	3.7%	--
Total	5,885	100%	+/-1.3%

\*Includes people who are heterosexual but are considered 2SLGBTQI+ because of their gender (e.g., a transgender, heterosexual person).

\*\* These respondents did not provide a response when asked to give their gender or sexual orientation.

Among the 852 2SLGBTQI+, 352 (41.2 %) were flagged as LGBTQ in our sample prior to data collection. Among the 244 present in the constructed variable *MSM behaviour* (men and transgender men who had had a male sexual partner in the previous 12 months) respondents, 119 (48.8 %) were flagged as LGBTQ.

Among the 422 present in the constructed variable *MSM communication* (men and transgender men who self-identify as men who have sex with men (regardless of behaviour in the previous 12 months) and heterosexual men who have had a sexual experience with someone of the same-sex in the previous 12 months), 160 (37.9 %) were flagged as LGBTQ.

### 2.3 Weighting and Data Cleaning

For this project, data was gathered for gender, sexual orientation and age. A request to statistics Canada was made to have access to population estimation on those 3 variables. Those estimations are from the Canadian Community Health Survey (CCHS) for the years of 2019 to 2021. Even with Statistics Canada's precision, data about heterosexual men having sexual relations with other men is unavailable. That means, a weighting scheme that includes that level of precision in terms of behaviour is impossible and data cannot be weighted based on the MSM definitions<sup>6</sup>.

A direct weighting approach was used for 2SLGBTQI+ sample vs not part of 2SLGBTQI+ . The data was weighted by age group (less than 35 years and 35+ years) and by the following population groups:

- Heterosexual men+
- Homosexual men+

<sup>6</sup> The variable 'MSM Behaviour' is an aggregate variable to describe men and transgender men who had had a male sexual partner in the previous 12 months (as identified at Q4b). The variable 'MSM Communication' is an aggregate variable to describe men and transgender men who self-identify as men who have sex with men (regardless of behaviour in the previous 12 months) and heterosexual men who have had a sexual experience with someone of the same-sex in the previous 12 months.



- Bisexual, pansexual or other sexual orientation men+
- Non responses for sexual orientation men+
- Heterosexual women+
- Homosexual women+
- Bisexual, pansexual or other sexual orientation women+
- Non responses for sexual orientation women+

The non-binary, two-spirit/bi-spirit, and other genders population is small, and data aggregation to a two-category gender variable (denoted by the “+” symbol) is often used to protect the confidentiality of responses provided. Non-binary persons, and two-spirit/bi-spirit persons, and persons of other genders were randomly classified as men+ and as women+ (total  $n = 102$ ) to reflect the categories of the Statistics Canada CCHS. This results in two gender categories: "men+" and "women+". The men+ category includes cisgender men, transgender men and about 50 % of persons of other genders. The women+ category includes cisgender women, transgender women and about 50 % of persons of other genders.

Respondents who did not provide information on their gender were recoded based on their sex at birth into one of the two gender categories (men+ or women+). Those who did not provide information for their sexual orientation were included in the “non-response” category of the weighting scheme ( $n = 208$ ).

Data cleaning involved creating variables for each of the specialized populations, so that analysis can be easily performed for each group. “Other, specify” comments were reviewed and back coded into existing levels where required (for questions s3).

We were not able to conduct non-response adjustments since the non-respondent’s information is unknown. No data was available to do such a correction. There were no extreme weights.

## 2.4. Quality Control

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

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

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

- Trained the interviewers to best understand the study’s objectives and to ensure that they were able to pronounce and understand the survey wording.
- Detailed call records were kept by the automated CATI system, and were monitored for productivity analysis (i.e., not subject to human error).
- The recruit scripts were pre-tested for best possible flow.
- Our average interviewer employment tenure is very high compared to industry standards,

resulting in a team of interviewers who are more experienced and knowledgeable regarding the target audience.

- Advanis' Quality Assurance team listened to the actual recordings of ten percent of completed surveys and compared the responses to those entered by the interviewer, to ensure that responses were properly recorded. This is in addition to the live monitoring done by field supervisors.
- Team Supervisors conduct regular, more formal evaluations with each interviewer, in addition to nightly monitoring of each interviewer on their team.

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

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

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

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

- Time taken to complete the survey
- Checking for verbatims that are 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 recordings are 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 study is minimal. This is the case with the current study.

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

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

### 4. Guidelines for Analysis and Release

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

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

- Age group
  - 18 to 34 years
  - 35+ years
  -
- Gender+
  - Women+
  - Men+
- 2SLGBTQ+
  - Part of the 2SLGBTQ+
  - Not part of the 2SLGBTQ+

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

The banners provided include the groupings specified above and some net categories as requested by the research team to facilitate data interpretation. It is to be noted that data was not weighted based on the full gender breakdown by sexual orientation but grouped in a binary category (gender+). This implies that any analysis done on a more precise gender definition or combination of gender and sexual orientation (like the MSM definitions) needs to be interpreted with caution because it is not generalizable and cannot be extrapolated to the population. The 2SLGBTQ+ community is defined as non-cisgendered or non-heterosexual individuals as it is self-declared in the survey. Respondents that refused to answer both gender and sexual orientation questions are not classified as part of the 2SLGBTQI+ community.

Results for question S4a and S4b (see appendix B) and any variable created using responses to those questions should also be interpreted with caution. Indeed, social desirability bias might have affected responses, and any analysis must be mindful of its potential impact on the results.

Any results with an unweighted base size (denominator) of less than 30 (but 10 or more) should be interpreted with caution.<sup>7-8</sup> 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 30 or more, the following guidelines for data suppression related to coefficient of variations (CV) should be used when reporting estimates:<sup>8</sup>

Type of Estimate	CV (in %) <sup>9</sup>	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.<sup>7</sup>

#### 4.1 Rounding Guidelines

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

<sup>7</sup> 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](https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf)

<sup>8</sup> Statistics Canada. Canadian Community Health Survey User Guide. 2021.

<sup>9</sup>  $CV = (\text{standard error} / \text{coefficient}) * 100$  where the coefficient is either the regression coefficient or the proportion estimate.

- 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 un-rounded components and then are to be rounded themselves to the nearest 100 units using normal rounding.
- Averages, rates and percentages are to be computed from un-rounded components (i.e. numerators and/or denominators) and then are to be rounded themselves to one decimal using normal rounding. In normal rounding to a single digit, if the final or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is increased by 1.
- Under no circumstances are un-rounded estimates to be published or otherwise released by users. Un-rounded estimates imply greater precision than actually exists.

## Appendices

### Appendix A: Weights

**Table 3: The weights**

age_w	gender_w	sexorientation_w	Count	Min	Max	Average	Sum
18 to 34 years old	Men +	Heterosexual	828	0.948	0.948	0.948	785
		Gay or lesbian	121	0.202	0.202	0.202	24
		Pansexual, bisexual or other	131	0.198	0.198	0.198	26
		Don't know or Prefer not to answer	47	0.173	0.173	0.173	8
	Women +	Heterosexual	768	0.945	0.945	0.945	726
		Gay or lesbian	52	0.266	0.266	0.266	14
		Pansexual, bisexual or other	231	0.314	0.314	0.314	72
		Don't know or Prefer not to answer	32	0.359	0.359	0.359	12
35 years old or over	Men +	Heterosexual	1529	1.279	1.279	1.279	1956
		Gay or lesbian	101	0.391	0.391	0.391	40
		Pansexual, bisexual or other	37	0.388	0.388	0.388	14
		Don't know or Prefer not to answer	68	0.479	0.479	0.479	33
	Women +	Heterosexual	1760	1.188	1.188	1.188	2090
		Gay or lesbian	65	0.304	0.304	0.304	20
		Pansexual, bisexual or other	54	0.487	0.487	0.487	26
		Don't know or Prefer not to answer	61	0.646	0.646	0.646	39

## Appendix B: Questionnaire

# Mpox Immunization Coverage among 2SLGBTQI+ and MSM 2023-24



Languages: English, French

## Section Login page

### Page Consent

#### wcag

Si vous préférez répondre à l'étude en français, veuillez cliquer sur français dans le coin supérieur droit de l'écran.

You have been invited to participate in a public health study of knowledge, attitudes and experiences about public health and sexual health issues. The Public Health Agency of Canada has contracted an independent public opinion research company, [Advanis \(http://advanis.net\)](http://advanis.net) (opens in a new window), to conduct the research on the Public Health Agency of Canada's behalf. TellCityHall is one of Advanis' data collection methods.

The online survey will take approximately 10 minutes to complete and is voluntary and confidential. Your responses will not be linked to any personally identifiable information, in an effort to protect your anonymity.

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

#### Privacy Statement

Participation in this study is voluntary and you can withdraw at any time without any impact to you. There will be no consequences if you decide not to participate. You may skip questions that you do not feel comfortable answering by clicking "Prefer not to answer", where applicable. You may also complete the survey in several sessions and from different devices. If you 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 questions about yourself (e.g., age, gender) and related to the mpox and 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.

### **What are the benefits of participating?**

By participating, you are helping to generate data which will help to improve the health and well-being of 2SLGBTQI+ people and men who have sex with men (MSM) by providing public health authorities with the information they need to ensure health equity.

### **Why are we collecting your information?**

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

You will be asked questions, such as age, gender, sexual orientation and ethnicity in order to better understand knowledge, attitudes, and experiences across different key populations. 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. Protection of your personal information is very important to us, and we will make every effort to safeguard it and reduce the risk that you are identified.

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

### **What is the Authority to Collect the Information?**

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

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

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

Your answers will not be attributed to you and the information you provide will be administered



according to the requirements of the Privacy Act, the Access to Information Act, and any other pertinent legislation. [Click to view Advanis' privacy policy \(http://www.tellcityhall.ca/privacy.html\)](http://www.tellcityhall.ca/privacy.html).

### 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+healthphac202324@tellcityhall.ca](mailto:survey+healthphac202324@tellcityhall.ca) (<mailto:survey+healthphac202324@tellcityhall.ca>).

For technical support with the survey, accessibility requirements, or to request to complete the survey over the phone you can e-mail: [survey+healthphac202324@tellcityhall.ca](mailto:survey+healthphac202324@tellcityhall.ca) (<mailto:survey+healthphac202324@tellcityhall.ca>).

For more information about [mpox vaccination \(https://www.canada.ca/en/public-health/services/diseases/mpox.html\)](https://www.canada.ca/en/public-health/services/diseases/mpox.html) (opens in a new window).

This survey is registered with the Canadian Research Insights Council's (CRIC) Research Verification Service. The project verification number is: 20231129-AD195. [Click here \(https://www.canadianresearchinsightscouncil.ca/rvs/home/\)](https://www.canadianresearchinsightscouncil.ca/rvs/home/) to verify the legitimacy of this survey.

## Section Survey Questions

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### Page Introduction

**S1**

How old are you?

Minimum: 0, Maximum: 100

\_\_\_\_\_ years

-8 I prefer not to answer

**T1NotAdult** *Show if (Not Adult (S1))*

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

Status Code: 501

**S1a** Show if (Did not provide age (S1 = I 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 I prefer not to answer

**T1Under18** Show if (Under18 or not answer (S1a = 1,I prefer not to answer))

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

Status Code: 501

**S2**

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 female; my sex assigned at birth is the same as my current gender)
- 2 Man (cis-gender male; my sex assigned at birth is the same as my current gender)
- 3 Transgender woman
- 4 Transgender man
- 5 Another gender
- 8 I prefer not to answer

## Page General Perceived Physical Health

**B1**

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

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

- 1 Excellent

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

## B2

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

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

## Page Mpox Knowledge

### B3

Mpox (formerly referred to as “monkeypox”), is a disease caused by a virus that can make people sick with a fever, headache, muscle aches, swollen lymph nodes, exhaustion and a rash or blisters on the body that typically lasts 2 to 4 weeks.

Mpox is spread from person-to-person, including during intimate contact and sex and is more common in certain communities.

Before today, to what extent have you seen, read or heard about mpox?

- 1 A lot
- 2 Some
- 3 A little
- 4 Not at all
- 8 I prefer not to answer
- 9 I don't know

## Section Mpox Infection

### Page Mpox Knowledge

**B4** Show if (Aware Mpox (B3 = 1,2,3))

Have you ever had **mpox**?

- <sub>1</sub> Yes, confirmed by lab test results
- <sub>2</sub> Unsure, I had symptoms but did not consult a health care provider
- <sub>3</sub> No
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

**C12a** Show if (Aware Mpox (B3 = 1,2,3))

How concerned are you about getting mpox?

- <sub>1</sub> Not at all concerned
- <sub>2</sub> A little concerned
- <sub>3</sub> Moderately concerned
- <sub>4</sub> Very concerned
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

### Page Health threats

**C13**

On a scale from 0 = none to 5 = very high, how would you rate the **current** health threat of the following viruses to the Canadian population?

1. COVID-19 (SARS CoV-2) \*
2. Mpox \* (Show if Aware Mpox (B3 = 1,2,3))
3. Seasonal influenza (Flu) \*
4. HIV \*

*Levels marked with \* are randomized*

- <sub>0</sub> None
- <sub>1</sub> Very low
- <sub>2</sub> Low
- <sub>3</sub> Moderate
- <sub>4</sub> High
- <sub>5</sub> Very high

- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

## Page Sexual Identity

### S3

What is your sexual orientation?

- <sub>1</sub> Gay
- <sub>2</sub> Lesbian
- <sub>3</sub> Bisexual or Pansexual
- <sub>4</sub> Heterosexual ("straight")
- <sub>5</sub> Other sexual orientation (please specify):  
\_\_\_\_\_
- <sub>-8</sub> I prefer not to answer

**S4a** Show if (Is Heterosexual OR Other (S3 = 4,5))

In the **past 12 months**, have you had a sexual experience with a person of the same sex?

- <sub>1</sub> Yes
- <sub>0</sub> No
- <sub>-8</sub> I prefer not to answer

**S4b** Show if (Not Heterosexual OR Same sex experience ((S3 = 1,2,3,5,I prefer not to answer) OR (S4a = 1)))

For the following question, please select the most accurate response option.

In the **past 12 months**, my sexual partner(s) was / have been:

- <sub>1</sub> Exclusively men
- <sub>2</sub> Exclusively women
- <sub>3</sub> Both men and women
- <sub>4</sub> Non-binary persons
- <sub>5</sub> None of the above
- <sub>-8</sub> I prefer not to answer

## Section Immunization Coverage

### Page Mpox Immunization

**C18** Show if (Broader Section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0))))

What is your perception of vaccination?

- <sub>3</sub> I am generally opposed to vaccination
- <sub>2</sub> I am generally uncertain about vaccination
- <sub>1</sub> I am generally in favour of vaccination

**C2** Show if (Broader Section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0))))

Have you ever received a smallpox vaccine?

*The smallpox vaccine provides protection against mpox. The smallpox vaccine was only offered to Canadians until 1971. Canadians born in 1972 or later have not been routinely immunized against smallpox. Some countries routinely immunized against smallpox after 1971.*

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

**C1** Show if (Broader Section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)))) AND (Aware Mpox (B3 = 1,2,3))

Are you aware that a vaccine against mpox is currently available in Canada?

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

## Page Mpox Immunization

**C3** Show if (Broader Section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)))) AND (Aware Mpox Vaccine (C1 = 1))

Have you received a vaccine for mpox since June 2022?

*Imvamune® is the approved vaccine for mpox in Canada. On June 10, 2022, the National Advisory Committee on Immunization (NACI) provided recommendation for the use of Imvamune® against mpox in Canada.*

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

**C3a** Show if (Broader Section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)))) AND (Aware Mpox Vaccine (C1 = 1)) AND (Recieved Mpox Vaccine (C3 = 1))

How many doses of the mpox vaccine did you receive?

- 1 1 dose
- 2 2 doses
- 8 I prefer not to answer
- 9 I don't know

**C9** Show if (Broader Section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)))) AND (Aware Mpox Vaccine (C1 = 1)) AND (One mpox or dk (C3a = 1, I prefer not to answer, I don't know))

How likely are you to get vaccinated against mpox now?

- 1 Very likely
- 2 Somewhat likely
- 3 Somewhat unlikely
- 4 Very unlikely
- 8 I prefer not to answer
- 9 I don't know

## Section Immunization Coverage continued

### Page Obstacles to Getting Vaccinated

**C5a** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (Yes or No Mpox Vaccine and Not AntiVaccine OR Mpox Vaccinated and AntiVaccine (((C3 = 0,1) AND (C18 = 1,2)) OR ((C3 = 1) AND (C18 = 3))))

What obstacles, if any, have made it difficult to get vaccinated against mpox?

Select all that apply

- <sub>12</sub> I have not encountered any obstacles (Exclusive)
- <sub>1</sub> Not knowing where I could go to get vaccinated \*
- <sub>2</sub> Eligibility for mpox vaccine was unclear to me \*
- <sub>3</sub> Difficulty in getting an appointment/ long wait times \*
- <sub>4</sub> Difficulty getting access to health care providers/ public health vaccination sites \*
- <sub>5</sub> The vaccine was unavailable in my area when I wanted/needed it \*
- <sub>6</sub> I could not travel to a vaccine site \*
- <sub>7</sub> I am worried about others finding out I got vaccinated \*
- <sub>8</sub> Language barriers (e.g., information not in my preferred language) \*
- <sub>9</sub> Other
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

Levels marked with \* are randomized

**C6** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (Yes or No Mpox Vaccine and Not AntiVaccine OR Mpox Vaccinated and AntiVaccine (((C3 = 0,1) AND (C18 = 1,2)) OR ((C3 = 1) AND (C18 = 3))))

Are you or were you hesitant to get vaccinated against mpox?

- <sub>1</sub> Yes, I **am** hesitant to get vaccinated against mpox
- <sub>2</sub> Yes, I **was** hesitant to get vaccinated against mpox
- <sub>0</sub> No
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know



## Page Intention to Vaccinate

**C7** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (Hesitant OR Oppose Vaccine AND No Mpox Vaccine ((C6 = 1,2) OR ((C3 = 0) AND (C18 = 3))))

For what reason(s) have you hesitated or refused to get vaccinated against mpox?

Select all that apply

- 1 Not recommended by my health care provider \*
- 2 I don't think the mpox vaccine is safe \*
- 3 I don't think the mpox vaccine works \*
- 4 I don't trust vaccination in general \*
- 5 I don't see the need for it because the health risks of mpox are low \*
- 6 I don't think I'm at risk of getting mpox \*
- 7 I had a bad experience or reaction to a previous vaccination \*
- 8 Philosophical, religious, or spiritual reasons \*
- 9 Experienced discrimination within the public health care system \*
- 10 I am worried about others finding out I got vaccinated for mpox \*
- 11 I have had too many vaccines recently and do not want to get vaccinated \*
- 12 Other
- 8 I prefer not to answer
- 9 I don't know

Levels marked with \* are randomized

**C10a** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (C10a conditions ((B3 = 4, I prefer not to answer, I don't know) OR (C1 = 0, I prefer not to answer, I don't know)))

On June 10, 2022, the National Advisory Committee on Immunization (NACI) provided recommendation for the use of Imvamune® against mpox in Canada. The vaccine requires two doses, given 28 days apart, for full protection.

How likely are you to get vaccinated against mpox in the future?

- 1 Very likely
- 2 Somewhat likely
- 3 Somewhat unlikely
- 4 Very unlikely
- 8 I prefer not to answer
- 9 I don't know

## Page Knowledge, Attitudes and Beliefs

**C12b** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (Yes mpox vax (C3 = 1))

Prior to receiving the mpox vaccine, how concerned were you about getting mpox?

- <sub>1</sub> Not at all concerned
- <sub>2</sub> A little concerned
- <sub>3</sub> Moderately concerned
- <sub>4</sub> Very concerned
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

**C4** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (Not Generally Opposed to Vaccines (C18 = 1,2))

We now have a couple questions about COVID-19 vaccines.

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 Medicigo Covifenz® were authorized for use in Canada for adults 18 years of age and older but are no longer available in Canada.*

- <sub>1</sub> 1 dose
- <sub>2</sub> 2 doses
- <sub>3</sub> 3 doses
- <sub>4</sub> 4 doses
- <sub>5</sub> 5 or more doses
- <sub>6</sub> None
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

**C4a** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (At Least 1 COVID Vaccine Dose OR DK PNA (C4 = 1,2,3,4,5,I prefer not to answer,I 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.

- <sub>1</sub> Yes
- <sub>2</sub> No
- <sub>3</sub> No, but I have booked an appointment to get my fall 2023 COVID-19 vaccine
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

**C8** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (Not Generally Opposed to Vaccines (C18 = 1,2))

Are you or have you been hesitant to get vaccinated against **COVID-19**?

- <sub>1</sub> Yes, I **am** hesitant to get vaccinated against COVID-19
- <sub>2</sub> Yes, I **was** hesitant to get vaccinated against COVID-19
- <sub>0</sub> No
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

**C14a** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer))))

In the **past 12 months**, how many sexual partners have you had?

*Please consider any partner(s) you have engaged in vaginal, anal or oral sex with. If you have not had any sexual partners in the past 12 months, please type 0.*

Minimum: 0, Maximum: 99

\_\_\_\_\_ number of sexual partners

- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

**C14b** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer)))) AND (Aware Mpox (B3 = 1,2,3))

People may have changed some of their practices in response to the mpox outbreak which began in Canada.

In the **past 12 months**, how have the following things changed for you, if at all?

1. Number of sex partners \* (Show if More than 1 partner (C14a > 1))

2. Having group sex \* (Show if More than 1 partner (C14a > 1))
3. Use of condoms \* (Show if 1 or more partner (C14a >= 1))
4. One-time sexual encounters \* (Show if 1 or more partner (C14a >= 1))
5. Attending sex-on-premises venues or events (e.g., sex parties, bath houses) \*
6. Sex with partners met through dating apps or at sex venues \*
7. Chemsex (illicit drug use before or during sexual intercourse)
8. Binge drinking (excessive drinking on one occasion)

Levels marked with \* are randomized

- 1 Increased
- 2 Decreased
- 3 No change
- 8 I prefer not to answer
- 9 I don't know

**C16** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer))))

Which of the following sources of information would you be most likely to consult in order to find information on the **mpox vaccine (Imvamune®)** ?

Select all that apply

- 1 Health care providers \*
- 2 Family/friends \*
- 3 My local public health unit/clinic (including their websites) \*
- 4 Ministry of Health within my province or territory (including their websites) \*
- 5 Public Health Agency of Canada or Health Canada (including their websites) \*
- 6 2SLGBTQI+ organizations \*
- 7 Scientific publications, journals \*
- 8 National Advisory Committee on Immunization (NACI) \*
- 9 International health authorities (e.g., World Health Organization (WHO)) \*
- 10 News or media
- 11 Social media (e.g., Facebook, Twitter)
- 12 Other
- 13 I do not seek information on immunization (Exclusive)
- 8 I prefer not to answer
- 9 I don't know

Levels marked with \* are randomized

**C17** Show if (Narrower section conditions (NOT ((S2 = 2) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S2 = 1) AND (S3 = 4) AND (S4a = 0)) AND NOT ((S3 = 4) AND (S4a = I prefer not to answer))))

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

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

1. Vaccines are an effective way to protect my partner, family or community against mpox. \*
2. The mpox vaccine is effective in providing protection against mpox when given **before exposure** to a probable or confirmed case of mpox. \*
3. The mpox vaccine is effective in providing protection against mpox when given **after exposure** to a probable or confirmed case of mpox \*
4. I feel confident that I can protect myself from getting mpox by getting a vaccine. \*
5. In general, vaccines are safe. \*
6. In general, vaccines are effective. \*

*Levels marked with \* are randomized*

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

## Section Sociodemographics

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### Page Demographics

#### A1

We would like to ask you a few questions about your general background. We acknowledge that some of these questions may result in uncomfortable feelings.

What was your sex at birth?

- <sub>1</sub> Male
- <sub>2</sub> Female

#### A2

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

- <sub>1</sub> Less than a high school diploma or equivalent
- <sub>2</sub> High school diploma or equivalent
- <sub>3</sub> Registered apprenticeship or other trade certificate or diploma
- <sub>4</sub> College/CEGEP or other non-university certificate or diploma
- <sub>5</sub> University certificate or diploma below bachelor's level

- <sub>6</sub> University – bachelor’s degree or equivalent
- <sub>7</sub> University – post-graduate degree above bachelor’s level or equivalent
- <sub>8</sub> Other (please specify): \_\_\_\_\_
- <sub>-8</sub> I prefer not to answer
- <sub>-9</sub> I don't know

**A3**

Please indicate your total household income, before taxes and deductions, for the year ending December 31, 2022. Your total household income consists of the total amount of money earned by all household members.

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

**A4**

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

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

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

**A6**

Do you live in an urban or rural area?

*An urban area is a city, town or village with a population of 1,000 people or more, while a rural area is any other area of lower population.*

- 1 Urban
- 2 Rural
- 8 I prefer not to answer
- 9 I don't know

**A7**

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

*Note that we cannot identify your address from this information since the first three digits of your postal code can only designate a geographical unit.*

*Please do not enter personally identifying information (e.g., name, email address, phone number, mailing address).*

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

**A8** Show if (No FSA provided (A7 = I prefer not to answer, I don't know))

In which province or territory do you reside?

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

14 I live outside of Canada



## Section Survey End

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### Page End Page

**WebEndTCH** Show if (Not indigenous (A4\_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 participating in this survey. Your responses will provide invaluable and insightful information about public health and sexual health topics in Canada.

Wellness Together Canada offers free live counselling through Homewood Health, 24 hours a day. To speak to someone, call 1-866-585-0445.

Status Code: -1

**WebEndIndigenous** Show if (Is indigenous (A4\_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 immunization in Indigenous communities across Canada.

**The First Peoples Wellness Circle (FPWC)** 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 (<https://www.hopeforwellness.ca/>) is available 24/7 to all Indigenous people across Canada. Telephone and online counselling are available in English and French. Additional languages can be requested.

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

Status Code: -1