Factors associated with willingness to receive a COVID-19 vaccine among older adults: An analysis of the Canadian Longitudinal Study on Aging (CLSA)

Presenter:

Moderated by:

Register online:

clsa-elcv.ca/ webinars

June 30, 2021 12-1 PM ET

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Webinars will be broadcast using WebEx.
Further instructions will be sent by email.

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Acknowledgements

Thank you!

All CLSA-COVID-19 PIs, Study Coordinators, Team Members, and Staff Members

All CLSA Participants who enrolled in the CLSA COVID-19 Questionnaire Study

Study Co-Authors
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Overview
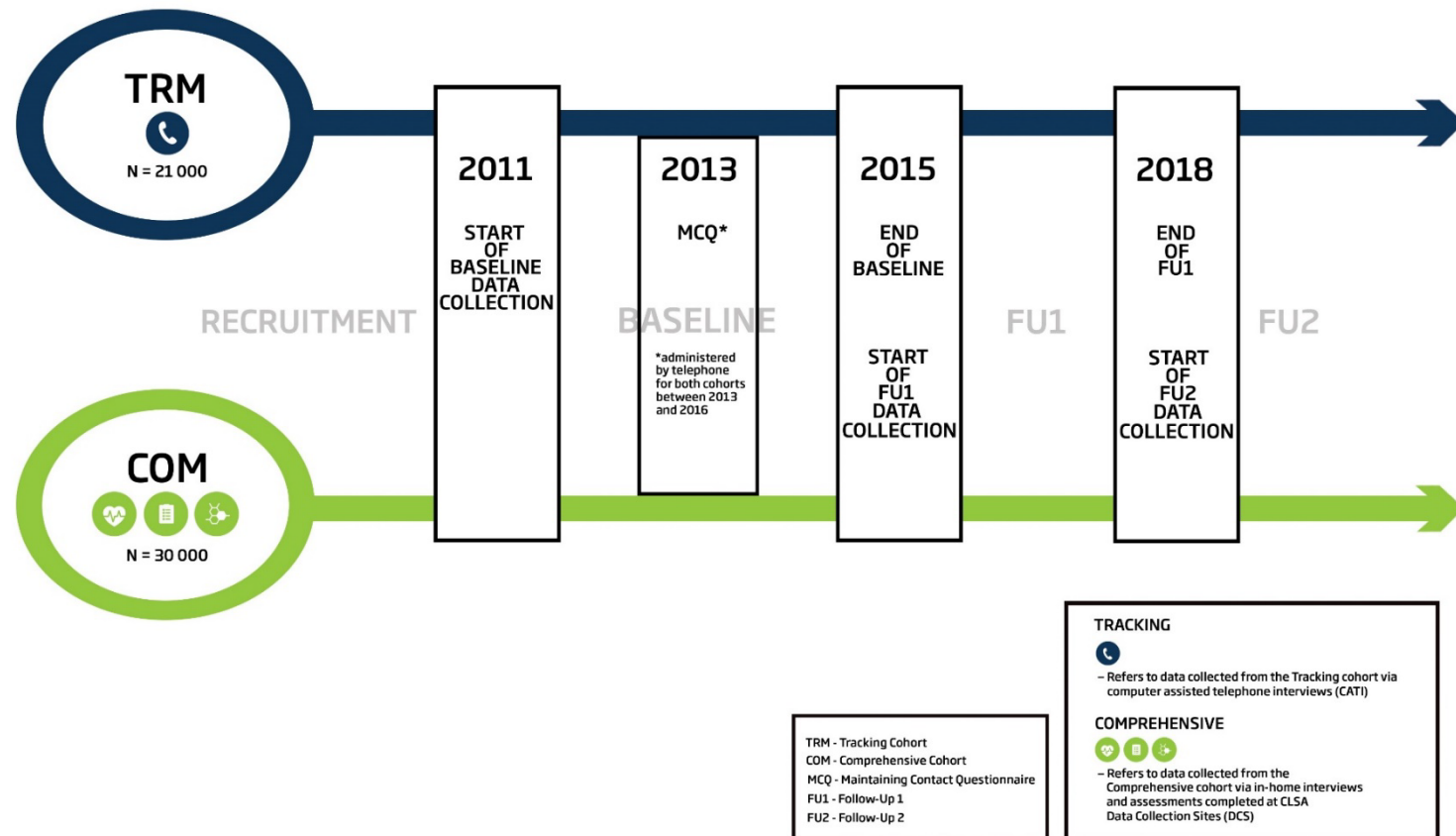
- **CLSA-COVID-19 Questionnaire Study**

- **Analysis of COVID-19 Survey Data on Vaccine Willingness**

- **Current COVID-19 Vaccine Uptake**

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Overview

- **CLSA-COVID-19 Questionnaire Study**

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Core Canadian Longitudinal Study on Aging (CLSA)
Data Collection (pre-COVID-19)

Following 50,000+ participants in Canada aged 45-85 at baseline for 20 years

TRM
N = 21 000

COM
N = 30 000

RECRUITMENT   BASELINE   FU1   FU2

2011
START OF BASELINE DATA COLLECTION

2013
MCQ*

*administered by telephone for both cohorts between 2013 and 2016

2015
END OF BASELINE

START OF FU1 DATA COLLECTION

2018
END OF FU1

START OF FU2 DATA COLLECTION

TRM - Tracking Cohort
COM - Comprehensive Cohort
MCQ - Maintaining Contact Questionnaire
FU1 - Follow-Up 1
FU2 - Follow-Up 2

TRACKING
– Refers to data collected from the Tracking cohort via computer assisted telephone interviews (CATI)

COMPREHENSIVE
– Refers to data collected from the Comprehensive cohort via in-home interviews and assessments completed at CLSA Data Collection Sites (DCS)

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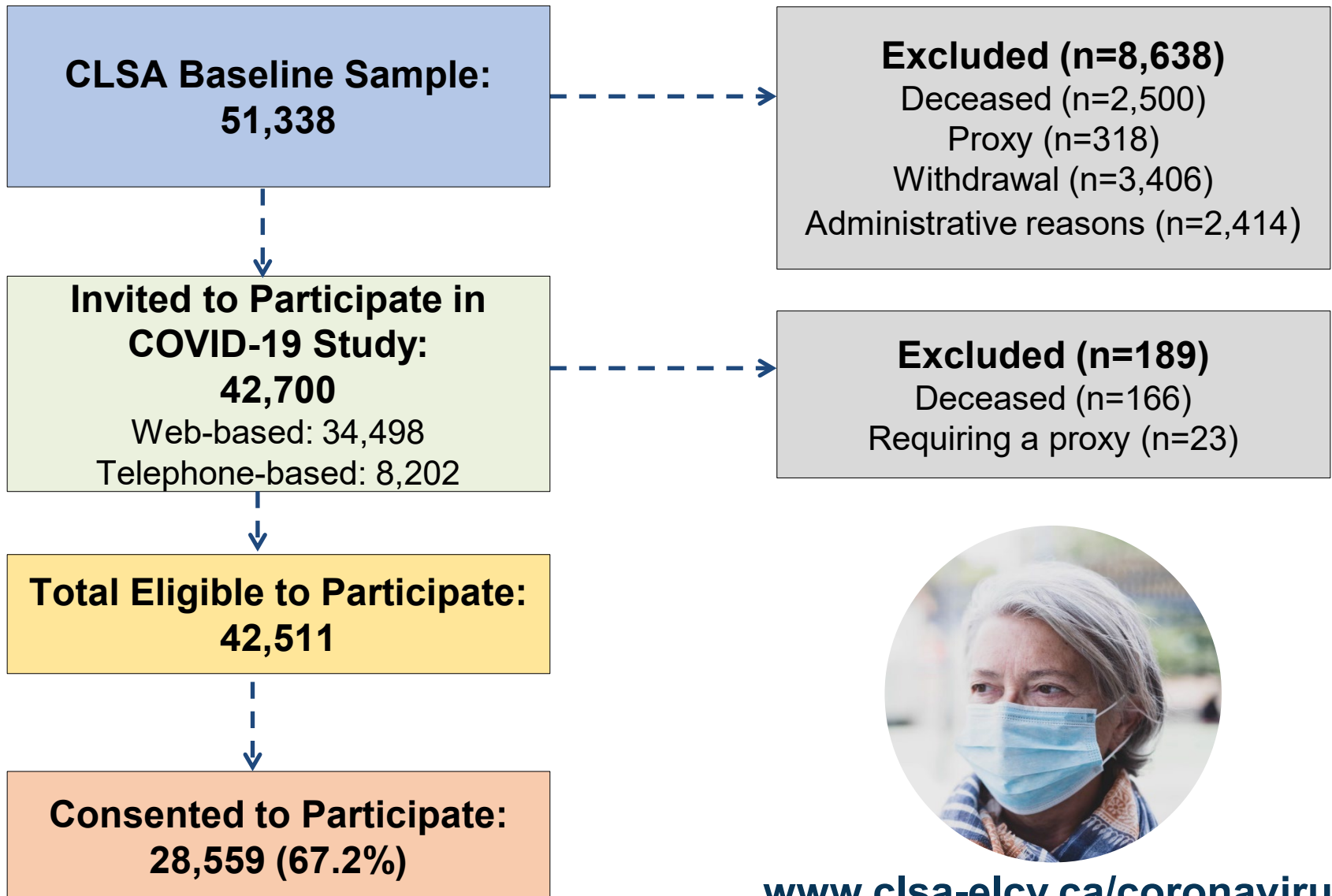
CLSA COVID-19 Questionnaire Study

- Launched in April 2020 to address concerns about the impact of the COVID-19 pandemic

- Weekly, biweekly, monthly data collection conducted until the end of 2020

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CLSA COVID-19 Questionnaire Study Aims

- COVID-19 Symptoms, Testing, Outcomes
- Risk factors
- Health-care use/access
- Health behaviours

- Public Health measures
- Social factors
- Depression and anxiety
- Economic consequences
- Function and mobility

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Canadian Longitudinal Study on Aging
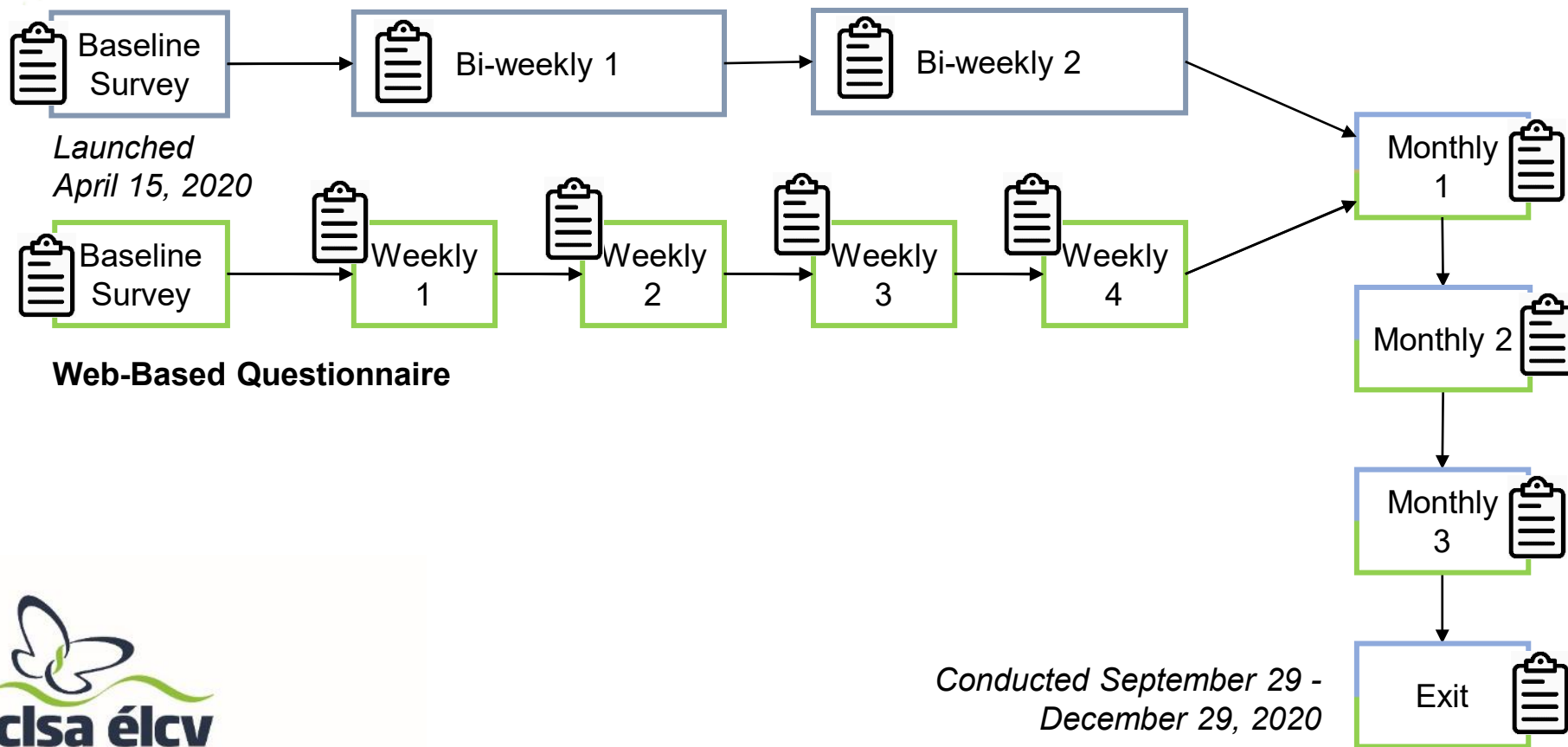Étude longitudinale canadienne sur le vieillissement

CLSA COVID-19 Study Recruitment

CLSA Baseline Sample: 51,338

Excluded (n=8,638)
Deceased (n=2,500)
Proxy (n=318)
Withdrawal (n=3,406)
Administrative reasons (n=2,414)

Invited to Participate in COVID-19 Study: 42,700
Web-based: 34,498
Telephone-based: 8,202

Excluded (n=189)
Deceased (n=166)
Requiring a proxy (n=23)

Total Eligible to Participate: 42,511

Consented to Participate: 28,559 (67.2%)

www.clsa-elcv.ca/coronavirus

CLSA COVID-19 Questionnaire Study

Telephone-Based Questionnaire

Baseline Survey	→	Bi-weekly 1	→	Bi-weekly 2

Launched April 15, 2020

Baseline Survey	→	Weekly 1	→	Weekly 2	→	Weekly 3	→	Weekly 4

Web-Based Questionnaire

Monthly 1

Monthly 2

Monthly 3

Exit

Conducted September 29 - December 29, 2020

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COVID-19 Questionnaire Study Data Dashboard – Baseline Survey Results

www.clsa-elcv.ca/covid-study-results

CLSA COVID-19 Questionnaire Study- Exit Survey Aims

- COVID-19 Health/Outcomes
- COVID-19 Attitudes, Behaviours, Perceptions about the Pandemic, Transmission, and Vaccines
- Impact of COVID-19 Control Policies

- General Physical Health
- Work and Lifestyle
- Health Care Access
- Mental Health

All questionnaires available online:
www.clsa-elcv.ca/researchers/data-collection

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COVID-19 Exit Survey Participant Demographics

Total sample size: 23,822

Age (years)	N (%)
<55	879 (3.69)
55-64	7049 (29.59)
65-74	8766 (36.80)
≥75	7128 (29.92)

Sex at birth	N (%)
Female	12635 (53.04)

Race	N (%)
White	22177 (93.84)
All other categories	1456 (6.16)

Education	N (%)
Less than secondary school graduation	1082 (4.55)
Secondary school graduation	2331 (9.80)
Some post-secondary education	1704 (7.17)
Post-secondary degree	18662 (78.48)

Income	N (%)
< $20,000	832 (3.72)
$20,000 to < $50,000	4779 (21.36)
$50,000 to < $100,000	8477 (37.89)
$100,000 to < $150,000	4555 (20.36)
$150,000 or more	3731 (16.68)

Urban/Rural	N (%)
Urban	19470 (82.16)
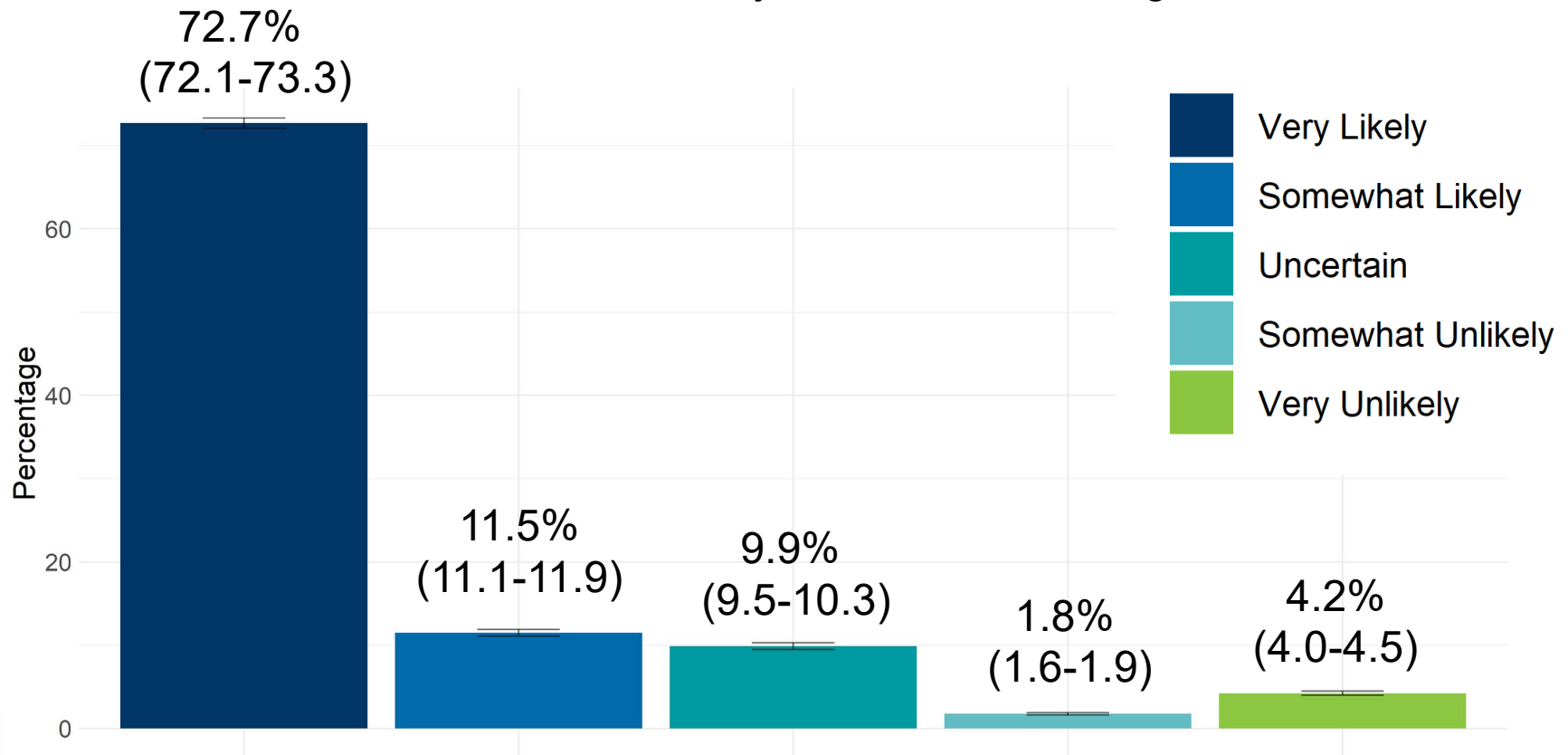
Distribution by Age Group and Sex At Birth
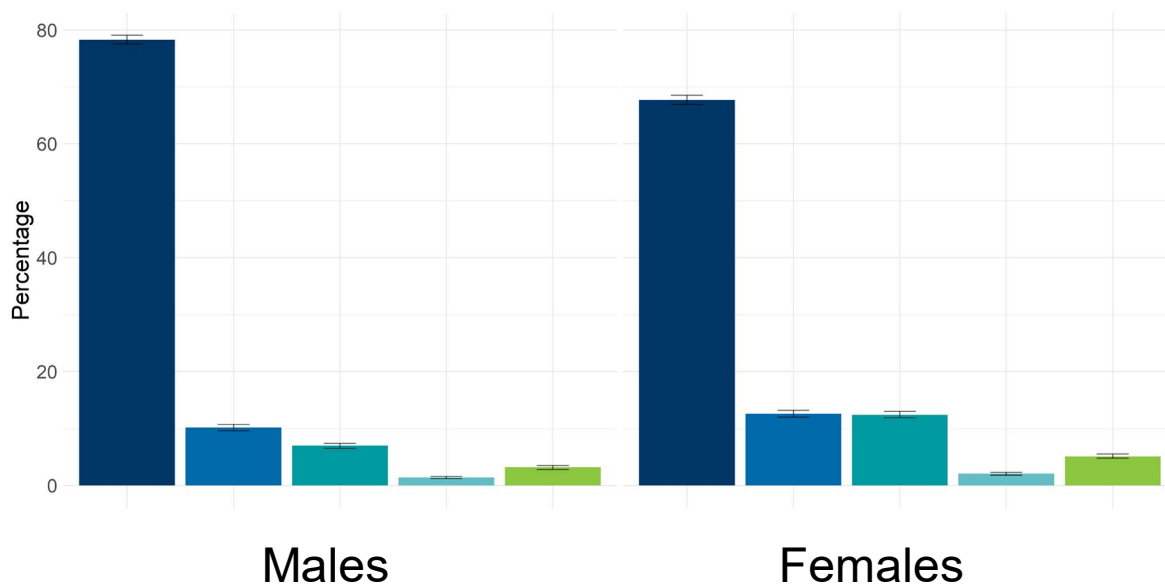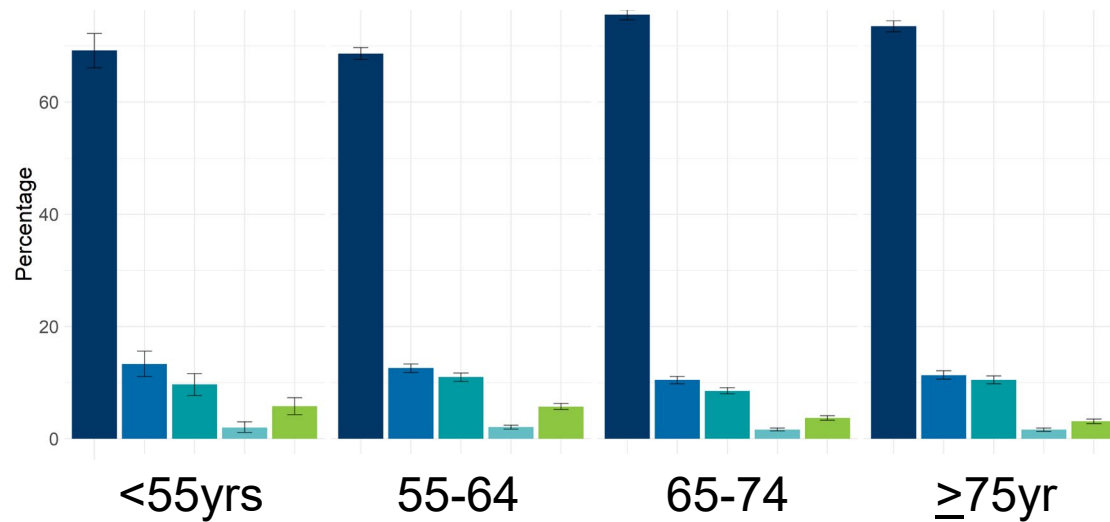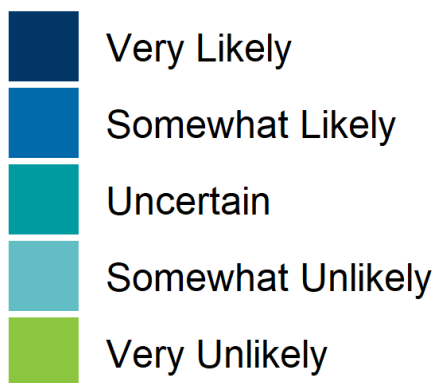
Distribution by Education and Income

COVID-19 vaccine willingness

- Very Likely
- Somewhat Likely
- Uncertain
- Somewhat Unlikely
- Very Unlikely
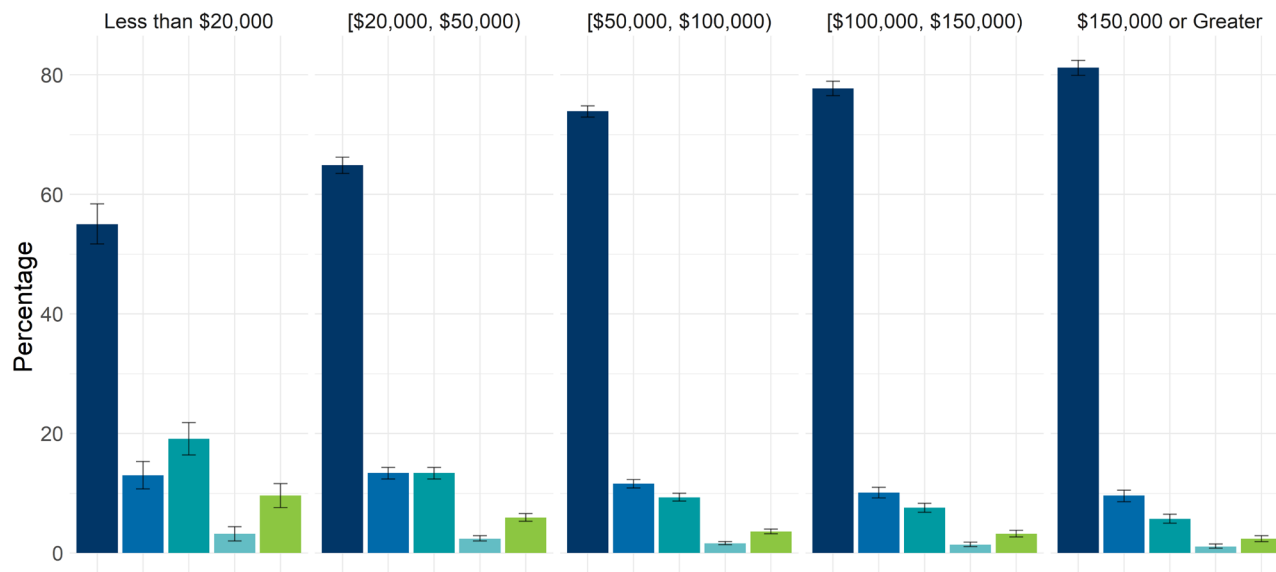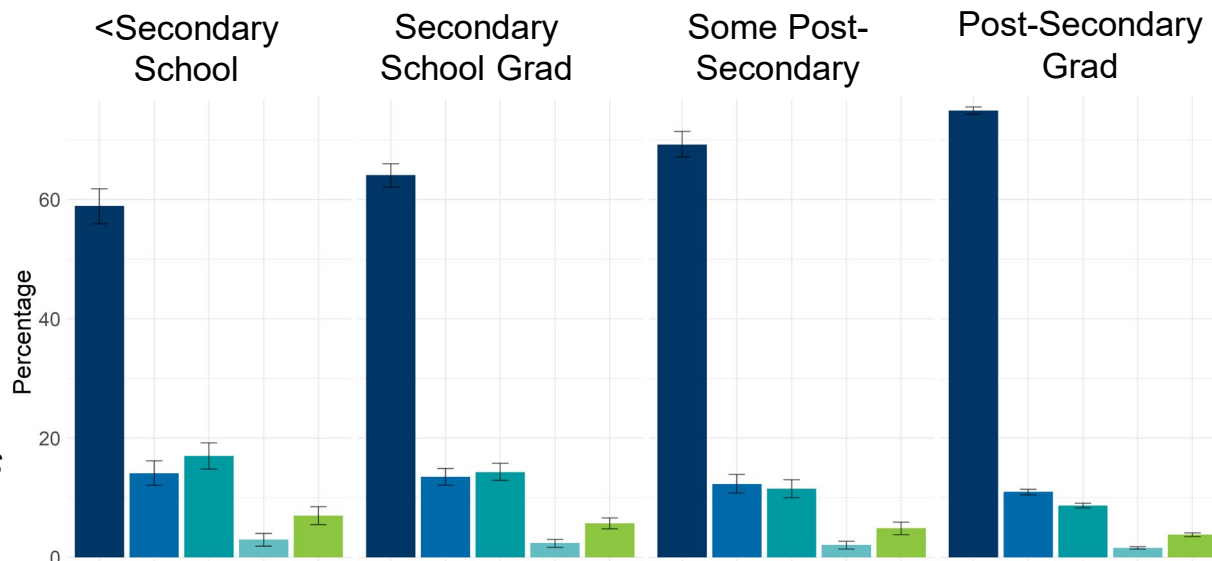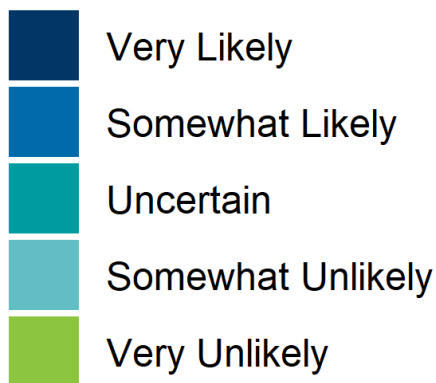
Distribution by Province
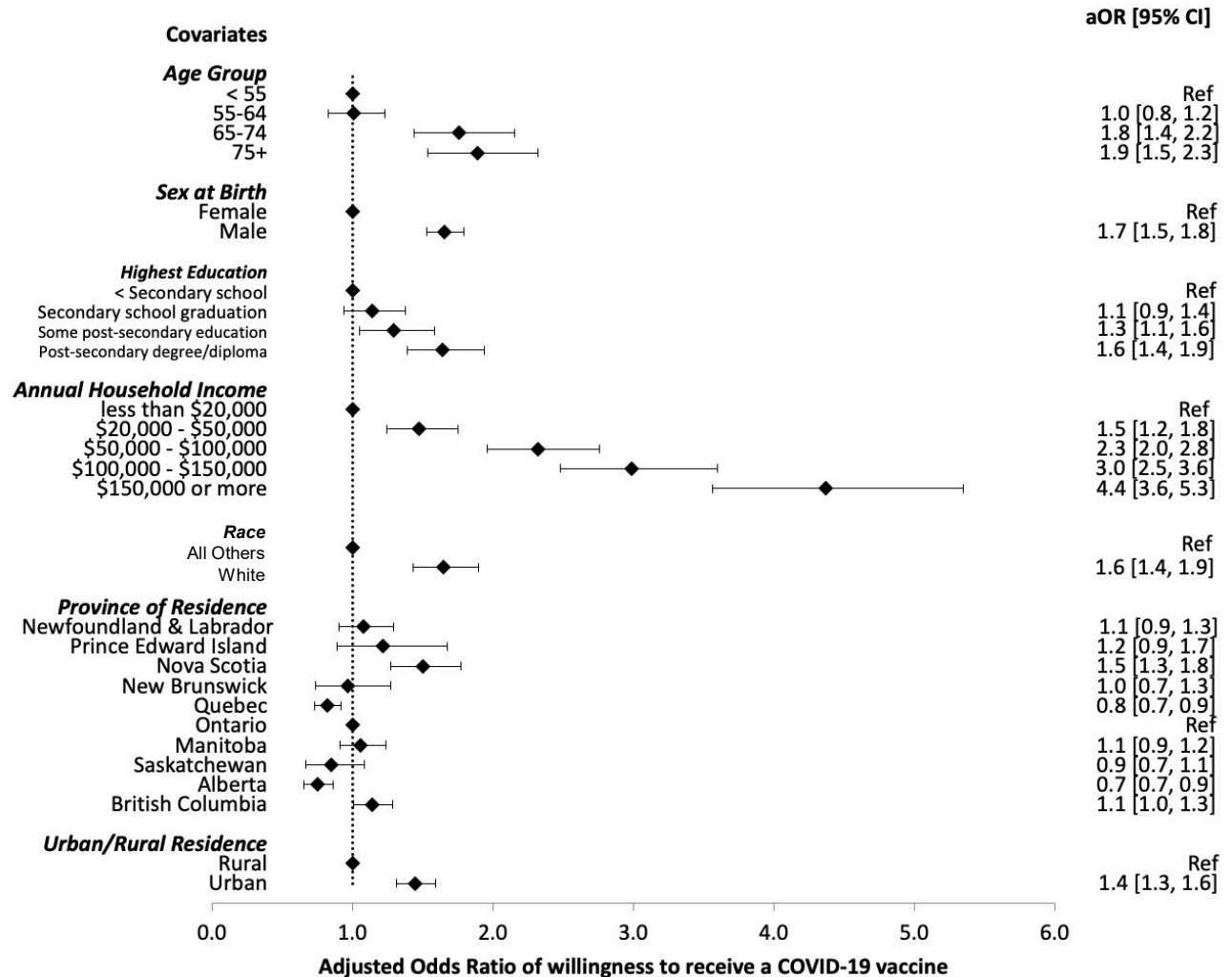

COVID-19 vaccine willingness
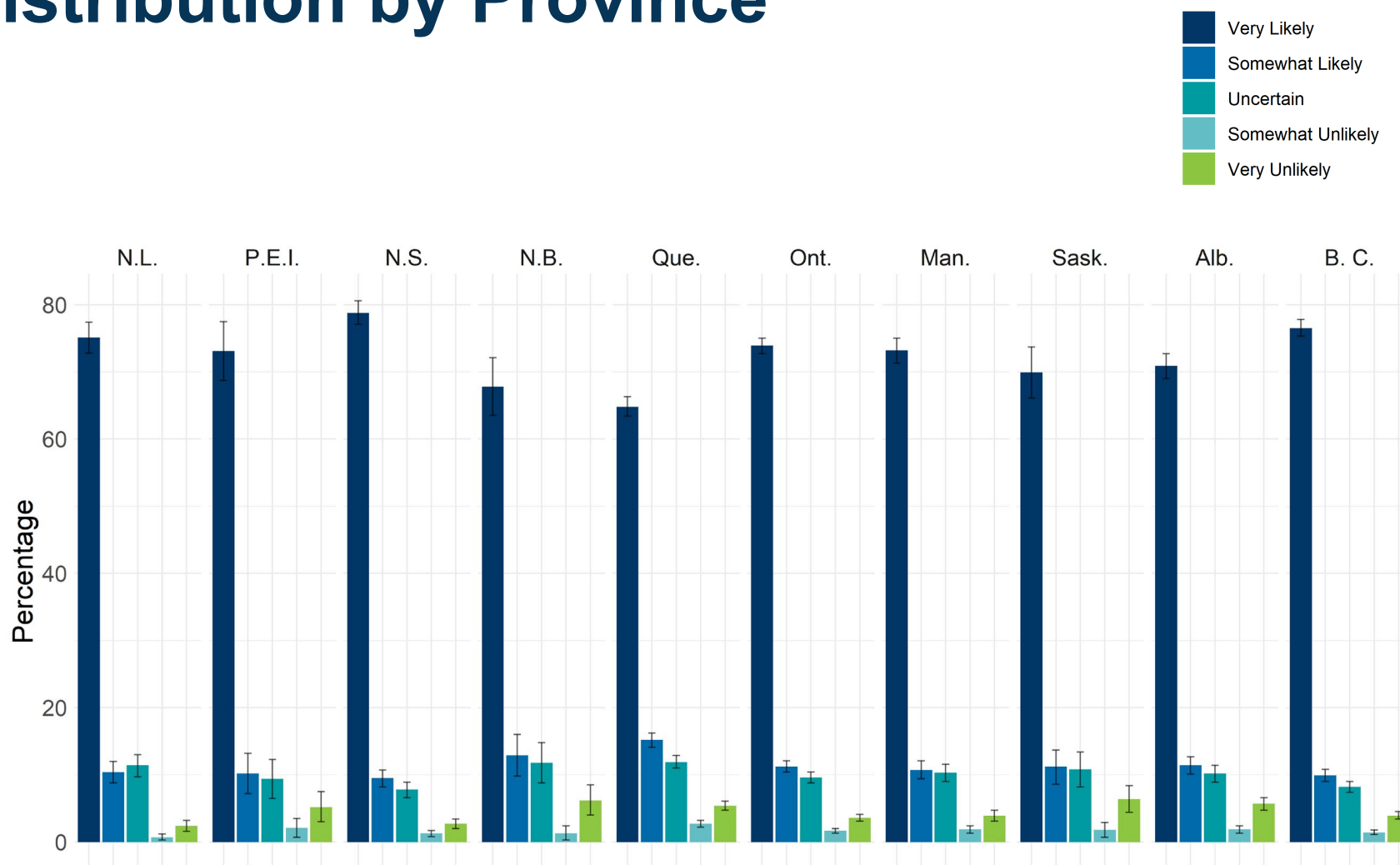
Association between sociodemographic factors and likelihood of choosing to receive a COVID-19 vaccine

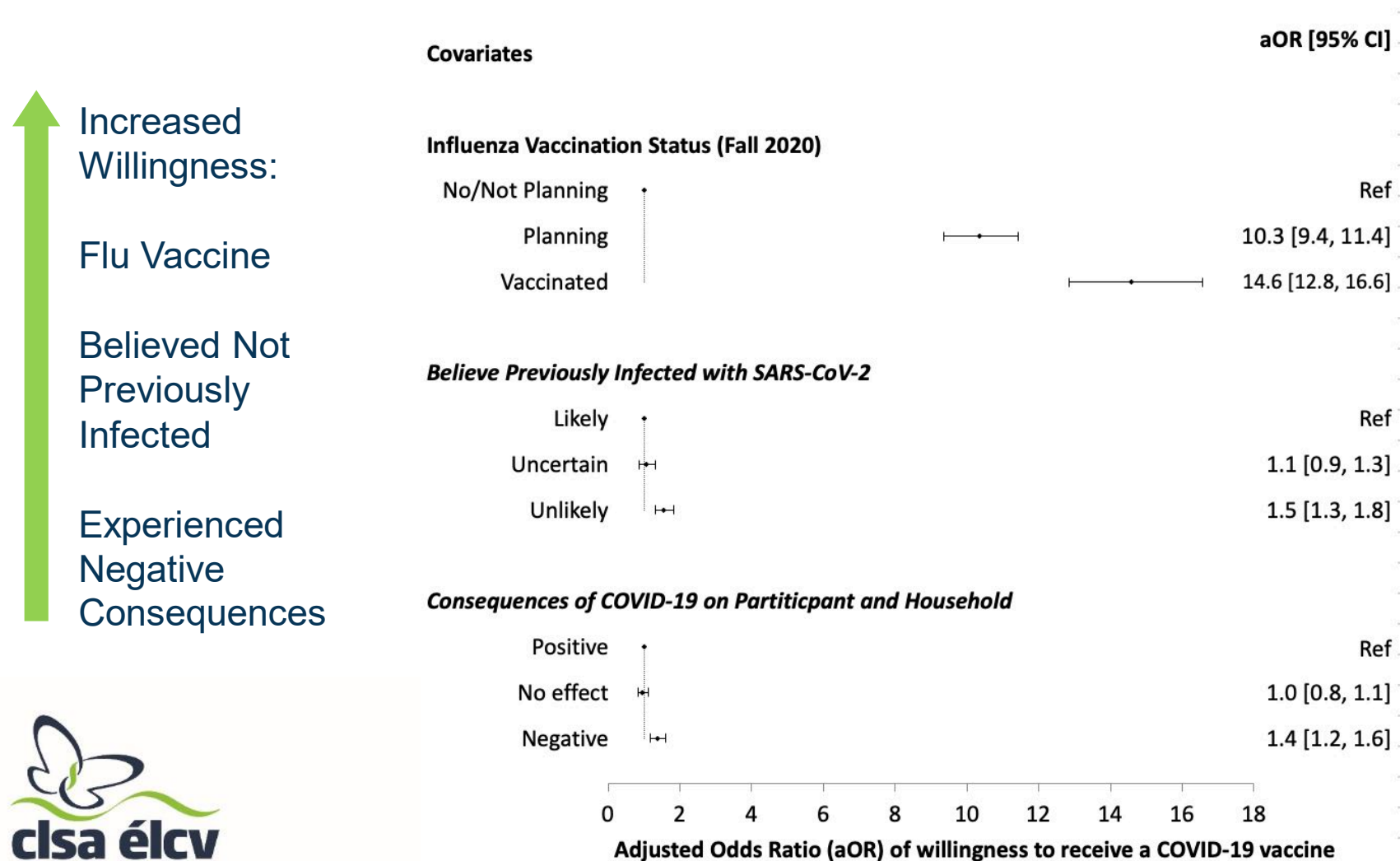ORs and 95% CIs are drawn from a logistic regression model

Increased Willingness:

Ages: 65+
Sex: Males
Edu: Higher
Income: Higher
Race: White
Residence: Urban

Covariates / **aOR [95% CI]**

Age Group
- < 55 — Ref
- 55-64 — 1.0 [0.8, 1.2]
- 65-74 — 1.8 [1.4, 2.2]
- 75+ — 1.9 [1.5, 2.3]

Sex at Birth
- Female — Ref
- Male — 1.7 [1.5, 1.8]

Highest Education
- < Secondary school — Ref
- Secondary school graduation — 1.1 [0.9, 1.4]
- Some post-secondary education — 1.3 [1.1, 1.6]
- Post-secondary degree/diploma — 1.6 [1.4, 1.9]

Annual Household Income
- less than $20,000 — Ref
- $20,000 - $50,000 — 1.5 [1.2, 1.8]
- $50,000 - $100,000 — 2.3 [2.0, 2.8]
- $100,000 - $150,000 — 3.0 [2.5, 3.6]
- $150,000 or more — 4.4 [3.6, 5.3]

Race
- All Others — Ref
- White — 1.6 [1.4, 1.9]

Province of Residence
- Newfoundland & Labrador — 1.1 [0.9, 1.3]
- Prince Edward Island — 1.2 [0.9, 1.7]
- Nova Scotia — 1.5 [1.3, 1.8]
- New Brunswick — 1.0 [0.7, 1.3]
- Quebec — 0.8 [0.7, 0.9]
- Ontario — Ref
- Manitoba — 1.1 [0.9, 1.2]
- Saskatchewan — 0.9 [0.7, 1.1]
- Alberta — 0.7 [0.7, 0.9]
- British Columbia — 1.1 [1.0, 1.3]

Urban/Rural Residence
- Rural — Ref
- Urban — 1.4 [1.3, 1.6]

**Adjusted Odds Ratio of willingness to receive a COVID-19 vaccine**

Are other factors associated with COVID-19 vaccine willingness? ORs and 95% CIs are drawn from a logistic regression model controlled for all demographic factors
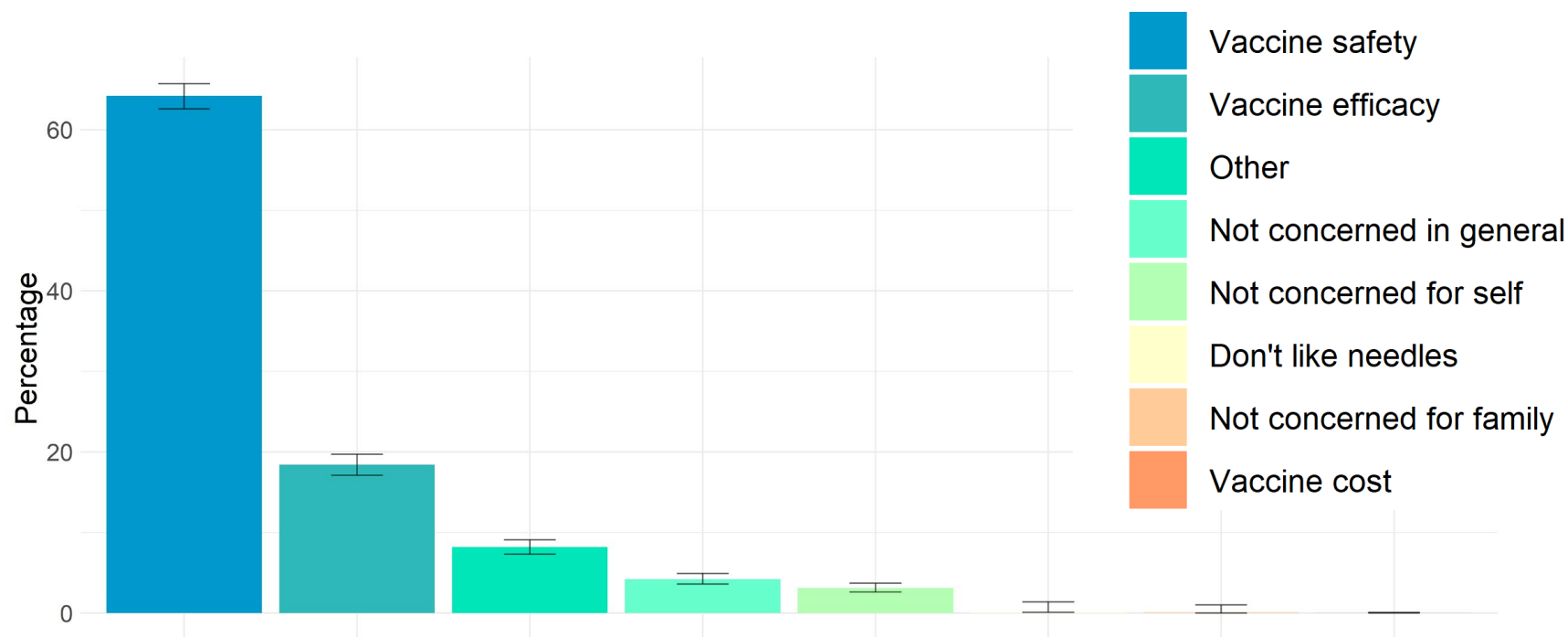
Increased Willingness:

Flu Vaccine

Believed Not Previously Infected

Experienced Negative Consequences

Covariates

aOR [95% CI]

Influenza Vaccination Status (Fall 2020)

No/Not Planning	Ref
Planning	10.3 [9.4, 11.4]
Vaccinated	14.6 [12.8, 16.6]

Believe Previously Infected with SARS-CoV-2

Likely	Ref
Uncertain	1.1 [0.9, 1.3]
Unlikely	1.5 [1.3, 1.8]

Consequences of COVID-19 on Particpant and Household

Positive	Ref
No effect	1.0 [0.8, 1.1]
Negative	1.4 [1.2, 1.6]

0 2 4 6 8 10 12 14 16 18

Adjusted Odds Ratio (aOR) of willingness to receive a COVID-19 vaccine

Primary Reasons for Vaccine Willingness: Protecting Self, Protecting Family and Contributing to Ending Outbreaks

n=19,963 (84.1%)
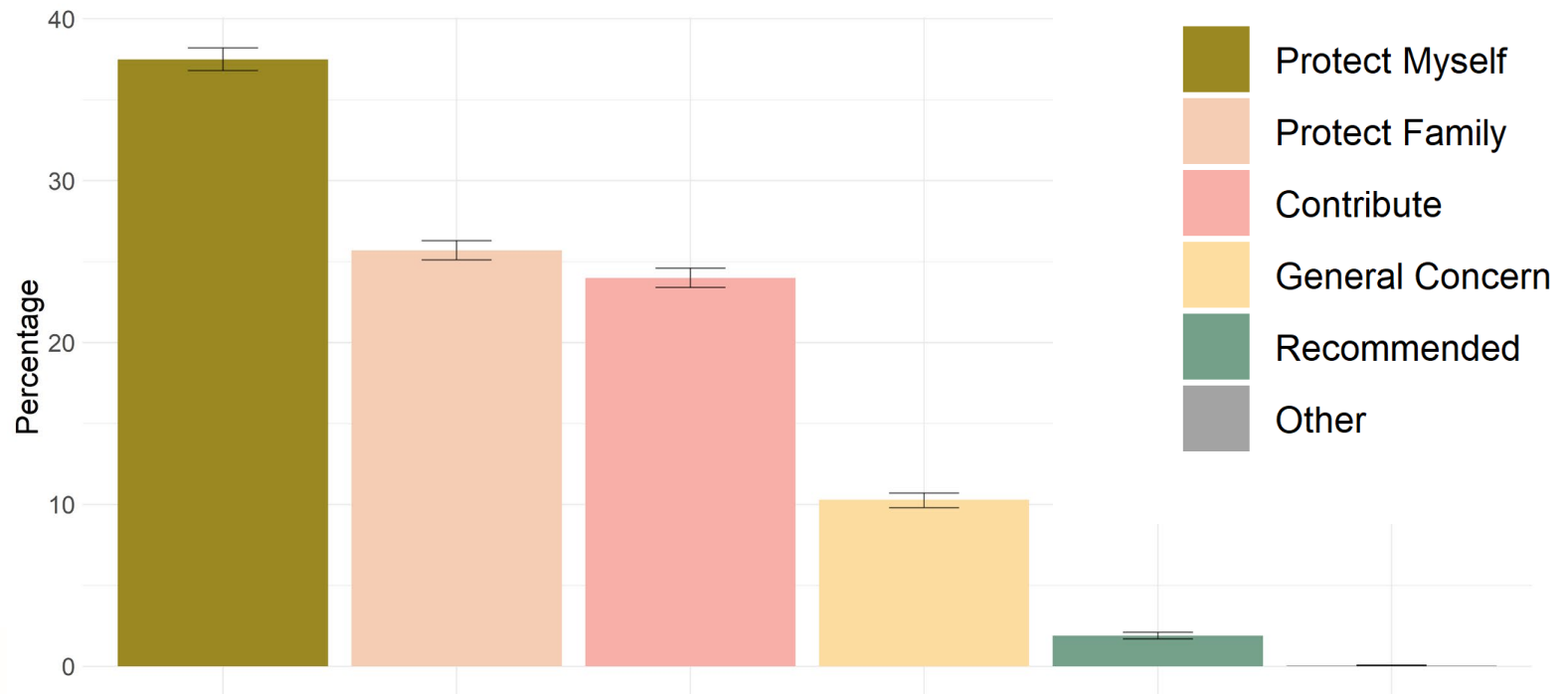
Majority of Those Unwilling to Receive COVID-19 Vaccine Primarily Concerned about Vaccine Safety

n=3,684 (15.9%)

Preliminary Results
Basta et al. Submitted 2021

Strengths

Limitations

- **Largest survey among Canadian adults to date**
- **Drawn from an established national cohort**

- **Based on self-reported willingness only**
- **No data on uptake**

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Current Progress on COVID-19 Vaccine Uptake

Percentage of eligible population (12+) vaccinated with at least one dose

75.3% of all those aged 12+

89.7%
82.9%
72.5%
76.9%
71.7%
69.8%
74.9%
76.0%
80.4%
78.6%
80.1%
77.6%
80.9%

% of population

0   10   20   30   40   50   60   70   80   90   100

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www.ctvnews.ca/health/coronavirus/coronavirus-vaccination-tracker-how-many-people-in-canada-have-received-shots-1.5247509
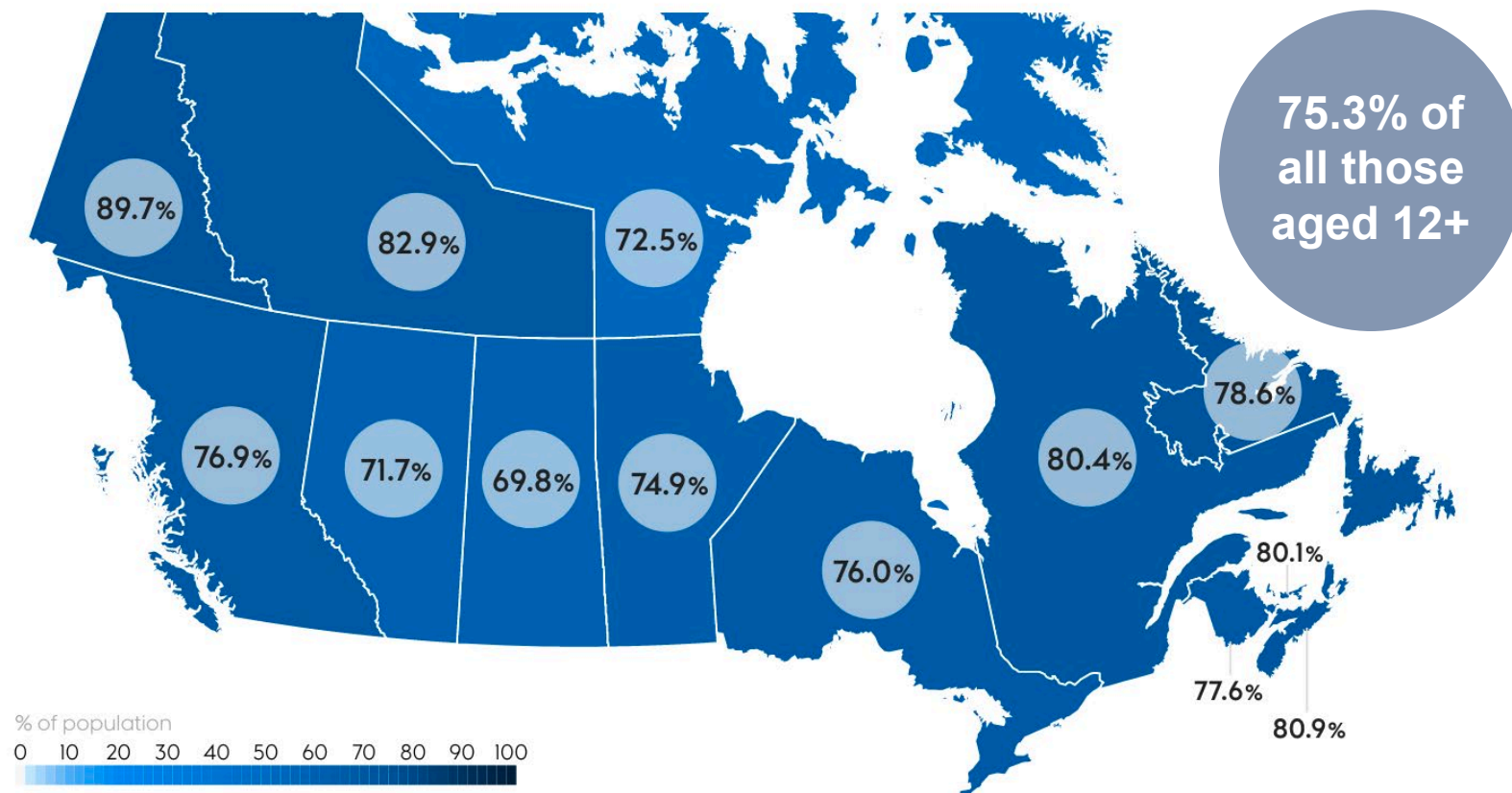
COVID-19 Vaccine Uptake by Age Group

Percentage of eligible population vaccinated with at least one dose (June 19, 2021)
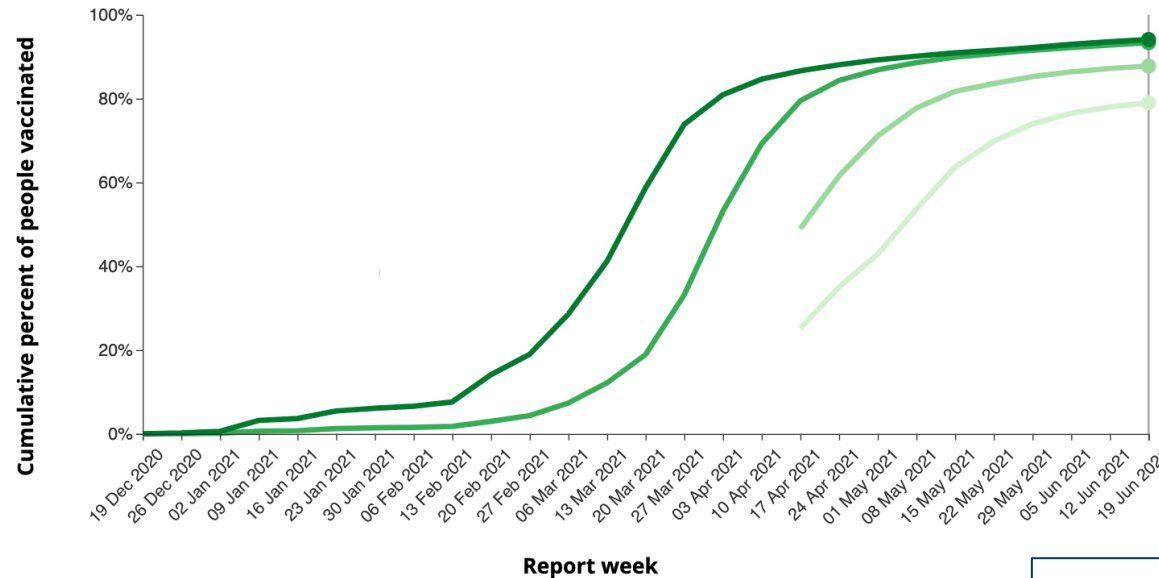
Legend:
- 50 to 59: 79.03%
- 60 to 69: 87.77%
- 70 to 79: 93.32%
- 80+: 94.09%

**CLSA COVID-19
Exit Survey
Very or Somewhat Likely (+Uncertain)**

	Very or Somewhat Likely	(+Uncertain)
50 to 59:	73.79%	(84.38%)
60 to 69:	84.38%	(93.79%)
70 to 79:	86.57%	(95.59%)
80+:	83.09%	(94.68%)

health-infobase.canada.ca/covid-19/vaccination-coverage/

Engaging in Effective Communication about COVID-19 Vaccines

1. Approach Empathetically and Establish Trust

2. Encourage Questions

3. Listen and Understand Reasons for Concern

4. Share Personal Stories & Seek out Evidence from Trusted Sources

5. Provide a Strong Recommendation to Get Vaccinated, Motivated by Concern and Caring

6. Offer Support to Overcome Barriers, Perhaps Help Schedule an Appointment or Arrange Transportation

Resources: https://immunize.ca/covid-19; https://www.cdc.gov/vaccines/covid-19/hcp/engaging-patients.html; https://covid19vaccinescommunicationprinciples.org/wp-content/uploads/2020/11/vaccine-principles_v16.pdf

Icons: The Noun Project

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Summary

- The CLSA COVID-19 Questionnaire Study presented an excellent opportunity to investigate COVID-19 vaccine willingness in a large, robust sample of >23,000 adults across Canada

- COVID-19 vaccine willingness among adults aged 50+ was high even prior to vaccine introduction: 84.1%

- Females, 50-64 year olds, those who self-identified with a race other than white, those with lower educational attainment and lower reported income, and living in rural areas less likely to get COVID-19 vaccine, however…

- Not receiving flu vaccine, having had COVID-19 previously, and not having experience negative impacts were all associated with decreased willingness even after controlling for demographics

- Opportunities exist to address primary concerns including safety concerns. These results can help inform targeted outreach programs to improve COVID-19 vaccine uptake.

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CLSA Network of Collaborating Institutions

CLSA COVID-19 Questionnaire Study Funding Acknowledgement

- McMaster Institute for Research on Aging, McMaster University
- Juravinski Research Institute
- Nova Scotia COVID-19 Health Research Coalition Public Health Agency of Canada

Contact:
Data inquiries: access@clsa-elcv.ca
General inquiries: info@clsa-elcv.ca

CLSA is funded by the Government of Canada through CIHR and CFI, and provincial governments and universities

www.clsa-elcv.ca

COVID-19 Data Release

COVID-19 Questionnaire Study

- Baseline Questionnaire
- Weekly Questionnaire
- Biweekly Questionnaire
- Monthly Questionnaire
- Exit Questionnaire

Next data access application deadline:
Wednesday, September 8, 2021

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www.clsa-elcv.ca/access

Thank you!

Questions?