

Monthly Report: February 2021

Determinants of COVID-19 vaccine acceptance among health care providers and citizens in Nevada



Nevada Department of
Health and Human Services
DIVISION OF PUBLIC AND
BEHAVIORAL HEALTH



Investigators:

Dr. Mark Riddle, MD, DrPH
Abrianna Robles, MS3
Aine Gallahue, MS2
Dr. Trudy Larson, MD
COVID19vaccinesurvey@unr.edu

Collaborators:

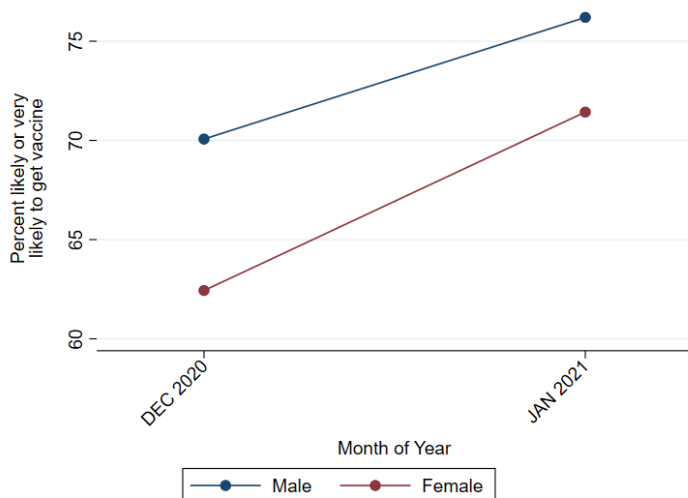
Shannon Bennett, NV Dept. Health and Human Services
Tara Nerida, MPH, Immunize NV
Heidi Parker, Immunize NV
Study has been determined to be exempt by UNR IRB
(IRB#: 1666862-1, 19 October 2020)

General Public - Changes over time

73% likely to receive COVID-19 vaccine 9% INCREASE SINCE DECEMBER

December n = 5,776; January n = 1,407.

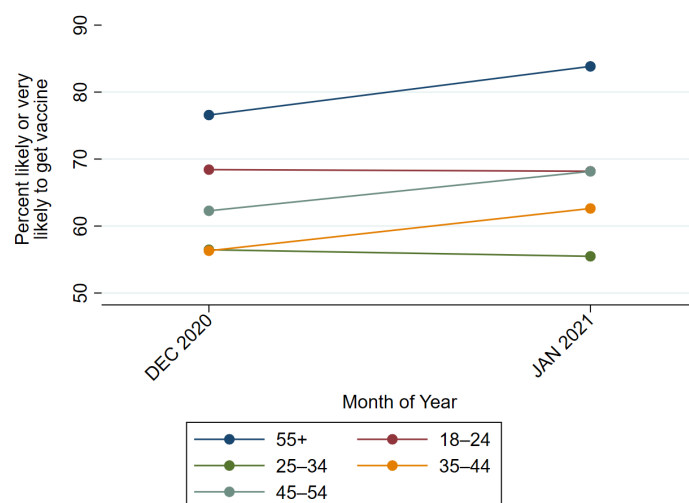
Males slightly more likely than females to receive the vaccine. Dec 1-31 and Jan 1-31



Age group 55+

SAW THE LARGEST INCREASE IN LIKELIHOOD TO GET VACCINE FROM DECEMBER 2020 TO JANUARY 2021

People ages 55+ went from 77% to 85% likely to get the vaccine. Participants ages 35-54 saw a 5% increase in likelihood to get vaccine, and ages 18-34 saw a slight decrease in likelihood to get vaccine.



Overall, most racial and ethnic populations SAW INCREASES IN LIKELIHOOD TO GET VACCINE

White 68% --> 73%

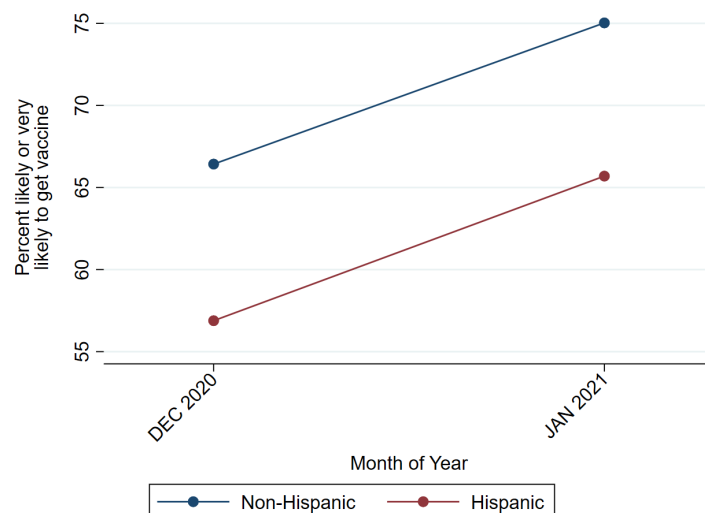
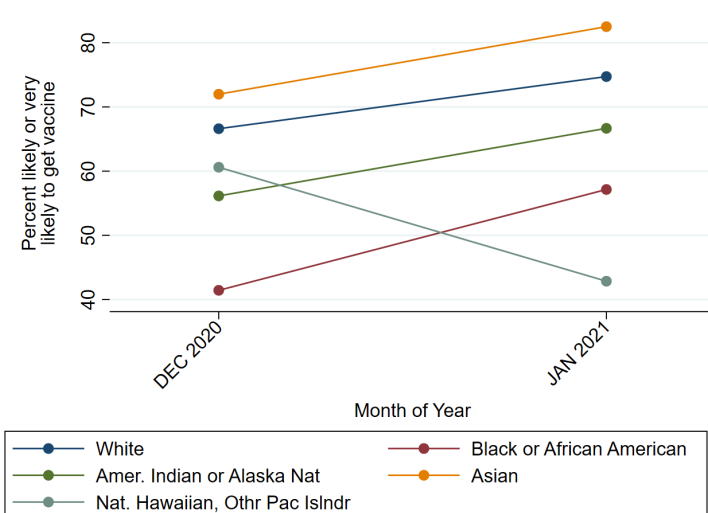
Asian 74% --> 85%

Black or AA 44% --> 67%

American Indian or Alaska Native 59% --> 67%

Native Hawaiian or Pacific Islander 58% --> 43%

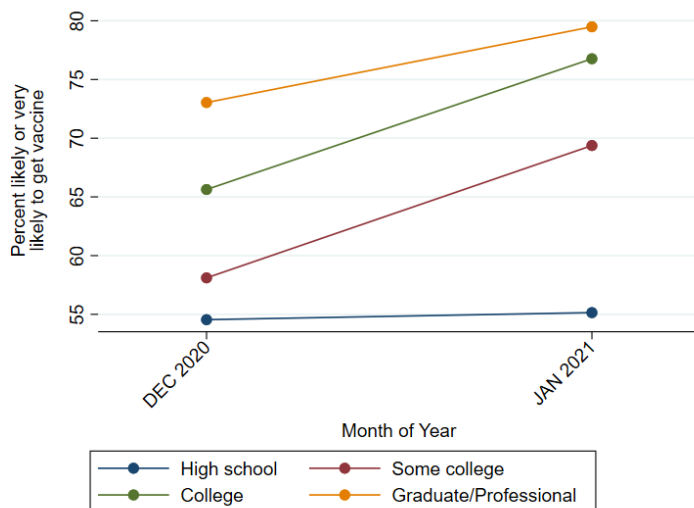
Hispanic 59% --> 66% Non-Hispanic 68% --> 75%



General Public Surveys A & B- Changes over time

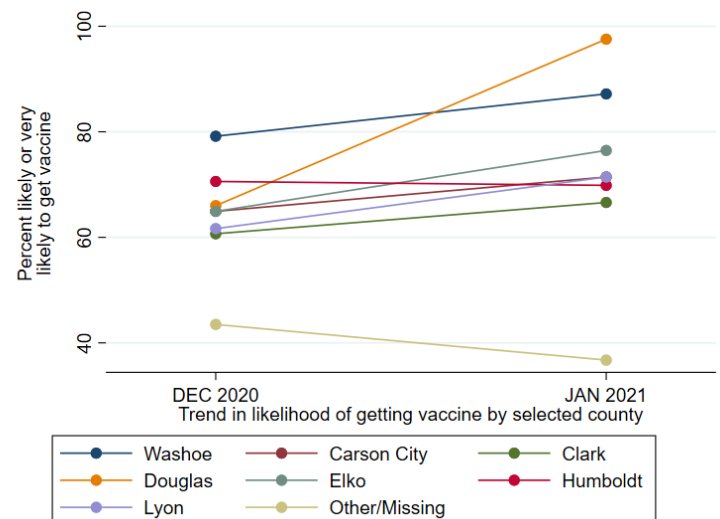
Participants with college education or higher SAW INCREASE IN LIKELIHOOD TO GET THE VACCINE

with ~10% increase in likelihood of receiving the vaccine over the past month. No change in vaccine acceptance among high school educated respondents.



Douglas County SAW LARGEST INCREASE IN VACCINE ACCEPTANCE

Almost 100% of survey participants from Douglas county likely to get vaccine, showing 30% increase from previous report. All other counties, with the exception of Humboldt county, also showed increased acceptance over time.



Vaccination demographics CONSISTENT WITH PREVIOUS SURVEY TRENDS

54 survey respondents received the COVID-19 vaccine since its release. More women than men received the vaccine and more in the 18-24 and 55+ age group. A larger fraction of the vaccinated respondents are Asian, White, American Indian, or Non-Hispanic and more vaccines were received by those in higher education levels.

Demographic characteristics of those who got the vaccine



General Public Surveys A & B

66% likely to receive COVID-19 vaccine 34% UNLIKELY

A total of 7,084 participants took surveys A and B during the time period of December 1st to January 31st.

Age groups 18-24 and 55+

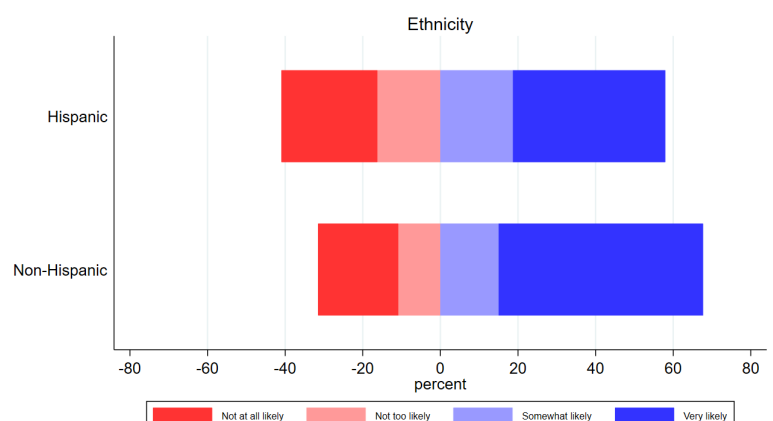
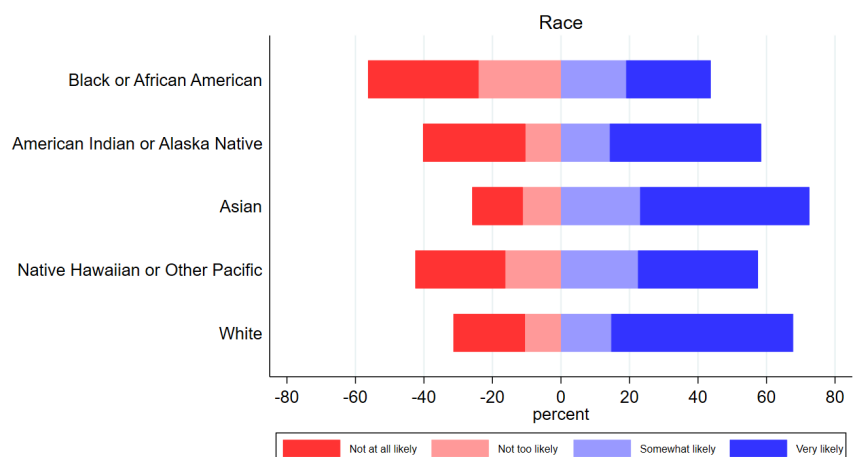
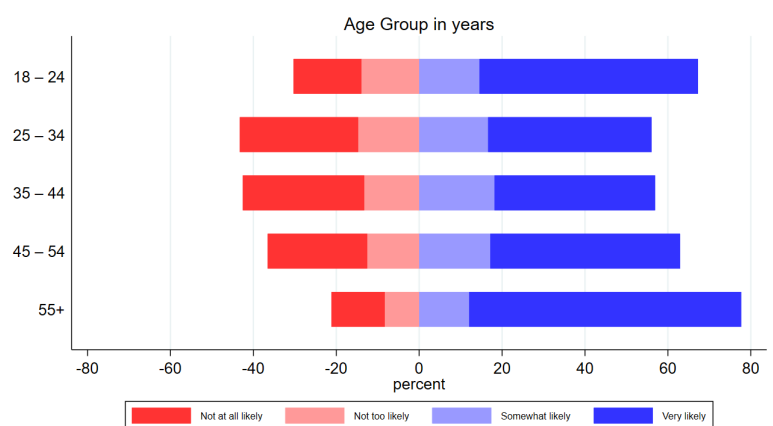
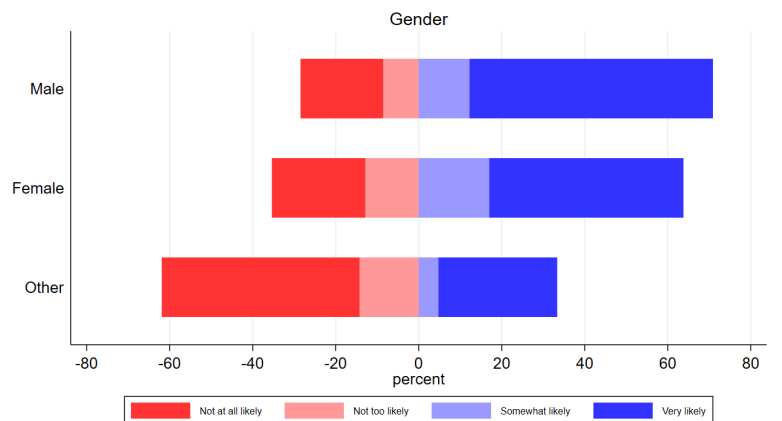
ARE MOST LIKELY TO RECEIVE VACCINE

with 69% and 79% who put "somewhat" to "very likely" in each group, respectively. Comparatively, the rest of the age groups were between 56%-63% likely.

Asian, White and Non-Hispanic identifying participants ARE MOST LIKELY TO RECEIVE VACCINE

at 74%, 68%, and 68%, "somewhat" or "very" likely, respectively.

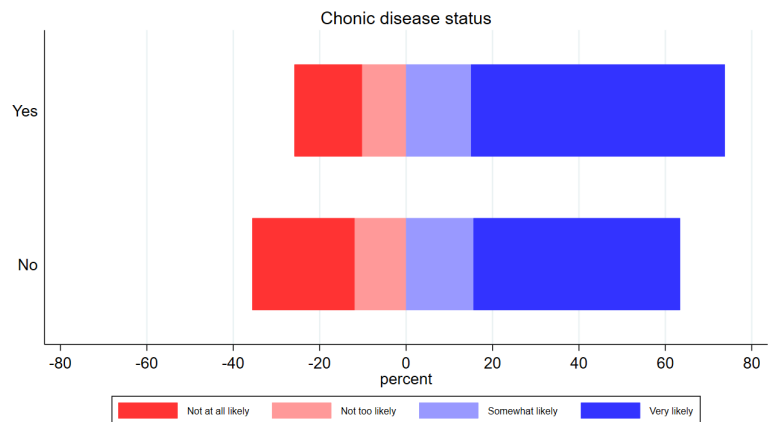
Comparatively, 59% of American Indian, 58% of Hawaiian, 44% of African American/Black and 59% of Hispanic responded "somewhat" or "very" likely to get vaccine.



General Public Surveys A & B

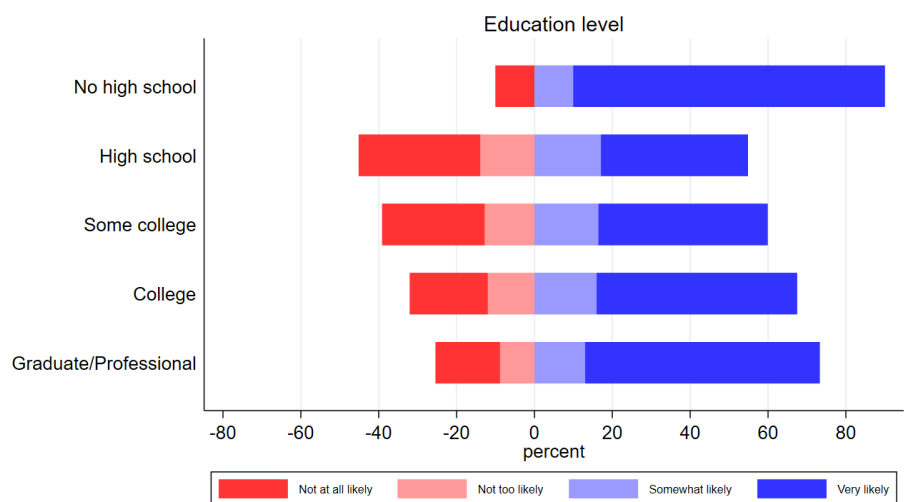
Chronic disease status CORRELATES WITH LIKELINESS TO RECEIVE THE VACCINE

Those who have a chronic disease are 10% more likely to receive the COVID-19 vaccine than those without a chronic disease.



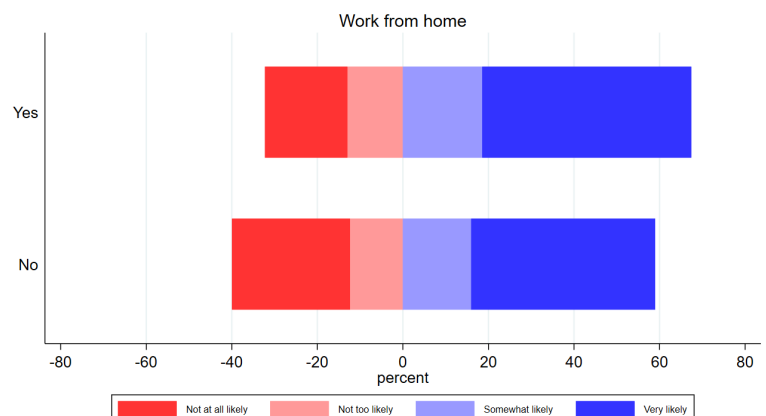
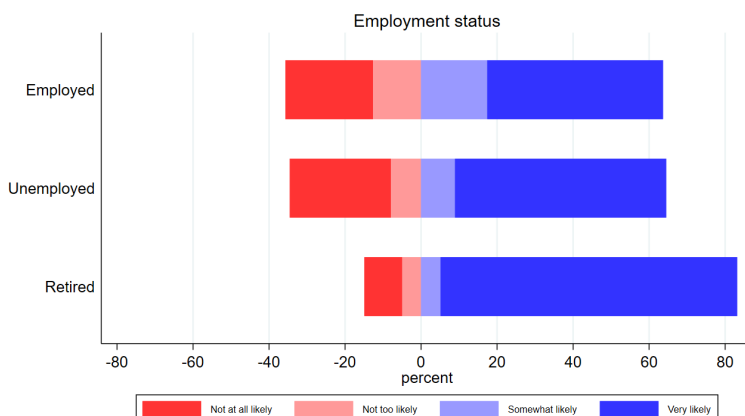
Increased level of education CORRELATES WITH LIKELINESS TO RECEIVE THE VACCINE

with at least 5% increased likelihood with each increasing degree of education after high school.



Retired and WFH population ARE MORE LIKELY TO RECEIVE THE COVID-19 VACCINE

than their employed/unemployed and non-work from home counterparts.

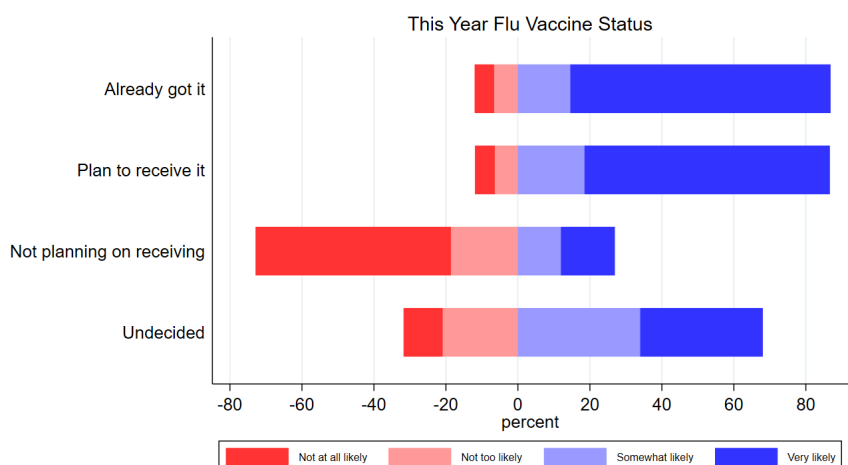
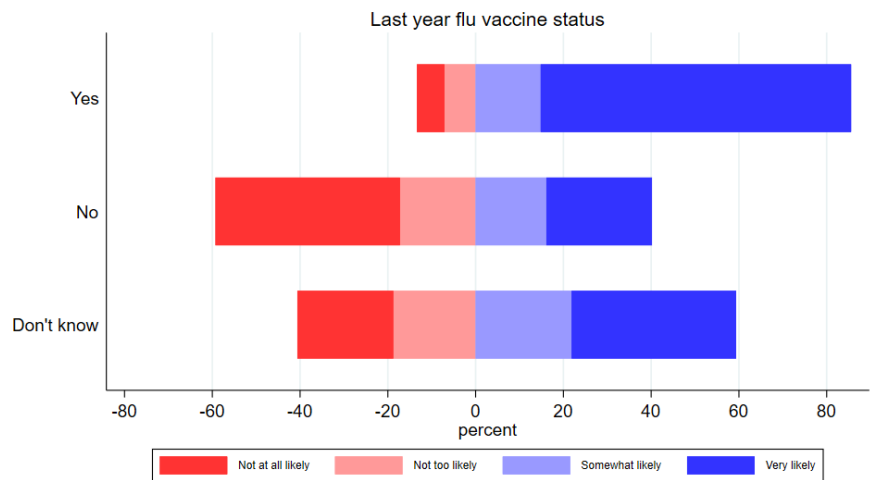


General Public Surveys A & B

Previous & current influenza vaccine reception

STRONGLY CORRELATED WITH LIKELIHOOD TO RECEIVE COVID VACCINE

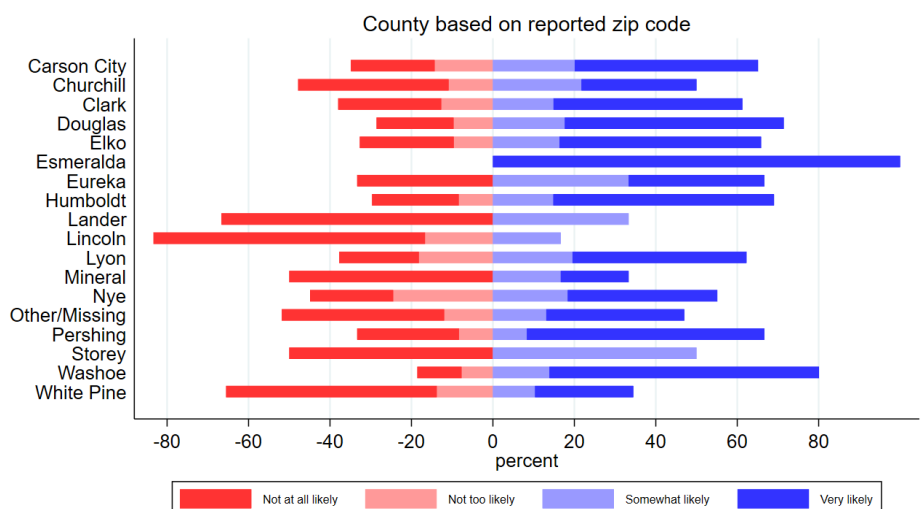
Those who are not planning on receiving flu shot this year, and those who have not received it in the past are less likely to receive the COVID-19 vaccine than those who did receive the flu shot this year or last year.



Participants from metropolitan NV counties

ARE MORE LIKELY TO RECEIVE THE VACCINE

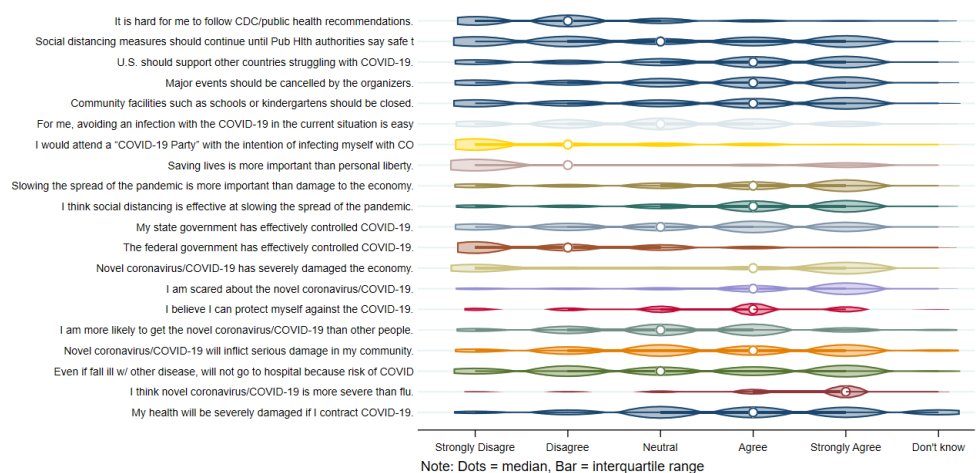
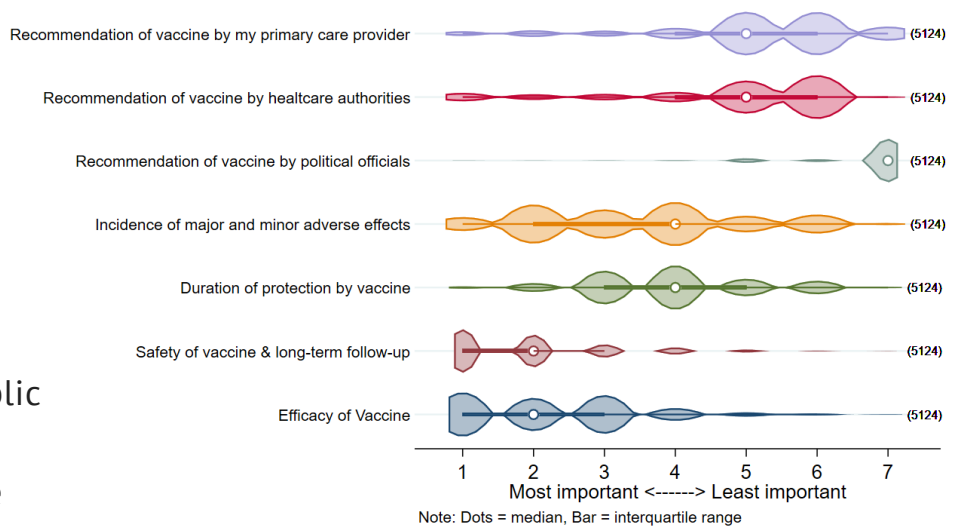
than their rural counterparts.



General Public Surveys A & B

Efficacy, safety, and major/minor adverse effects ARE MOST IMPORTANT FACTORS IN RECEIVING COVID VACCINE

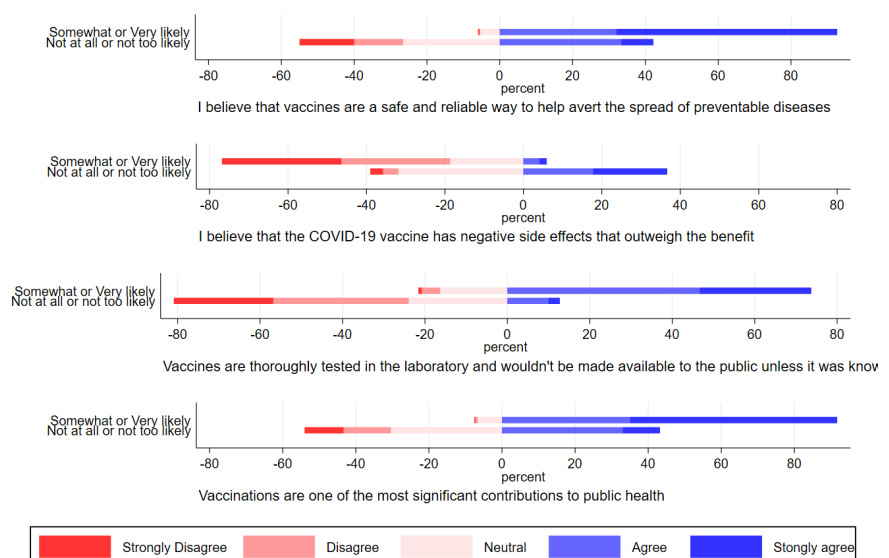
Participants in both general public surveys indicated that efficacy, safety, and major/minor adverse effects are of most concern when receiving the vaccine.



Belief in general vaccine benefits CORRELATED WITH INCREASED LIKELIHOOD TO RECEIVE COVID-19 VACCINE

For example, participants that believe vaccines are a safe & reliable way to help avert the spread of preventable diseases are more than 2x more likely to receive the vaccine than those who do not.

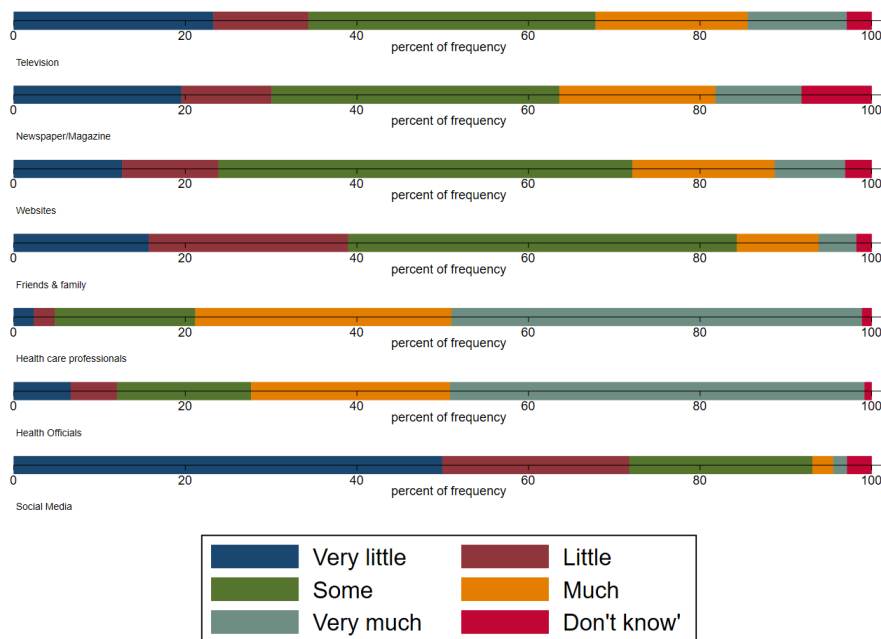
Likelihood of getting vaccine based on general vaccine attitudes



General Public Surveys A & B

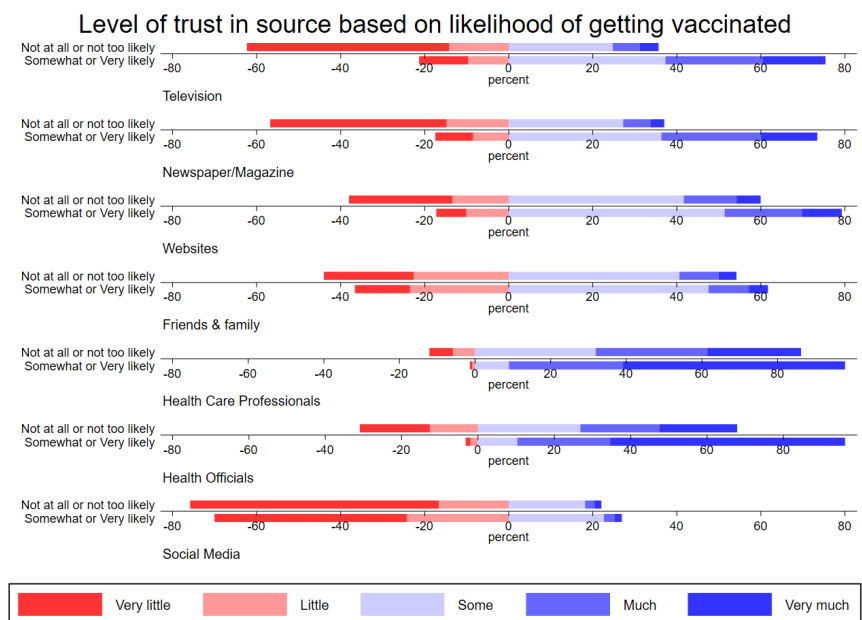
Participants most likely to trust HEALTH CARE PROFESSIONALS, AND HEALTH OFFICIALS AS SOURCES OF INFORMATION

They are least likely to trust social media. Friends & family, television, newspapers, magazines and websites play an equal role in sources the general public trusts.



Participants who trust friends & family for information are less likely to receive the COVID vaccine THAN THOSE WHO TRUST HEALTH CARE PROFESSIONALS AND HEALTH CARE OFFICIALS

This is data significant because Friends & Family are the third most trusted source, however, this source is associated with increased vaccine hesitancy.



Final Recommendations & Supplemental Data

This report highlights the latest set of results as of January 31, 2021, as well as the changes in attitudes over time from December 2020 to January 2021.

SUMMARY CONCLUSIONS

1. According to public health experts, we need to achieve 75-80% vaccination rates in our community to develop effective community immunity (herd protection). We have improved from 64% in December to 73% in January.
2. Knowledge and attitudes about vaccine safety, efficacy, and major and minor adverse effects are important drivers of vaccine acceptance.
3. Those who have already received the vaccine are consistent with the populations in our survey responses, which indicates that our data may be predictive of which groups are more likely to be vaccinated.

IMPORTANT CAVEATS

INCREASE RESPONSE FROM THE FOLLOWING POPULATIONS:

1. **Overall survey response rate.** Response rate was higher in December 2020 (5,677 responses) than in January (1,407). This skews our data, therefore it is important have consistent response rates across each month to report accurate trends.
2. **Participants in the 18-34 age range.** These two age groups currently make up <5% of responses by age group.
3. **Participants with only high school education.** Participants with some college, college, and graduate level educations make up more than 85% of our responses.
4. **Non-white & Hispanic populations.** Participants who identify as white and non-Hispanic make up greater than 80% of our responses.
5. **Rural counties.** Washoe and Clark County make up roughly 68% of our respondents, increase responses from other counties.
6. **Vaccinated population.** As vaccines are distributed it is important to survey the vaccinated population to determine what factors influenced their vaccine uptake and compare to pre-vaccine trends.

Supplemental Data

	DECEMBER 2020	JANUARY 2021	Total
Likelihood of getting COVID-19 vaccine	N=5,677	N=1,407	N=7,084
Somewhat or Very likely	3,427 (64.7%)	857 (73.1%)	4,284 (66.3%)
Not at all or not too likely	1,866 (35.3%)	316 (26.9%)	2,182 (33.7%)
GENDER			
Male	1,809 (32.8%)	459 (34.7%)	2,268 (33.1%)
Female	3,692 (66.9%)	857 (64.8%)	4,549 (66.5%)
Other	20 (0.4%)	6 (0.5%)	26 (0.4%)
AGE			
18 – 24	132 (2.4%)	60 (4.5%)	192 (2.8%)
25 – 34	815 (14.8%)	184 (13.9%)	999 (14.6%)
35 – 44	1,369 (24.8%)	234 (17.7%)	1,603 (23.4%)
45 – 54	1,390 (25.2%)	224 (16.9%)	1,614 (23.6%)
55+	1,817 (32.9%)	622 (47.0%)	2,439 (35.6%)
EDUCATION LEVEL			
No high school	7 (0.1%)	8 (0.6%)	15 (0.2%)
High school	440 (8.0%)	144 (10.9%)	584 (8.5%)
Some college	1,510 (27.4%)	359 (27.1%)	1,869 (27.3%)
College	1,942 (35.2%)	439 (33.1%)	2,381 (34.8%)
Graduate/Professional	1,613 (29.3%)	375 (28.3%)	1,988 (29.1%)
RACE			
Black or African American	313 (5.8%)	55 (4.3%)	368 (5.6%)
American Indian or Alaska Native	60 (1.1%)	23 (1.8%)	83 (1.3%)
Asian	236 (4.4%)	55 (4.3%)	291 (4.4%)
Native Hawaiian or Other Pacific Islander	72 (1.3%)	17 (1.3%)	89 (1.3%)
White	4,670 (87.3%)	1,129 (88.3%)	5,799 (87.5%)
ETHNICITY			
Hispanic	705 (13.6%)	167 (13.6%)	872 (13.6%)
Non-Hispanic	4,475 (86.4%)	1,061 (86.4%)	5,536 (86.4%)
EMPLOYMENT			
Employed	4,904 (88.9%)	718 (54.4%)	5,622 (82.2%)
Unemployed	190 (3.4%)	247 (18.7%)	437 (6.4%)
Retired	423 (7.7%)	355 (26.9%)	778 (11.4%)
WORK FROM HOME			
Yes	2,807 (57.5%)	221 (31.1%)	3,028 (54.2%)

Supplemental Data

No	2,072 (42.5%)	490 (68.9%)	2,562 (45.8%)
COUNTY			
Carson City	613 (10.8%)	30 (2.1%)	643 (9.1%)
Churchill	40 (0.7%)	7 (0.5%)	47 (0.7%)
Clark	2,561 (45.1%)	590 (41.9%)	3,151 (44.5%)
Douglas	200 (3.5%)	41 (2.9%)	241 (3.4%)
Elko	190 (3.3%)	39 (2.8%)	229 (3.2%)
Esmeralda	1 (0.0%)	0 (0.0%)	1 (0.0%)
Eureka	3 (0.1%)	0 (0.0%)	3 (0.0%)
Humboldt	18 (0.3%)	147 (10.4%)	165 (2.3%)
Lander	4 (0.1%)	0 (0.0%)	4 (0.1%)
Lincoln	6 (0.1%)	0 (0.0%)	6 (0.1%)
Lyon	211 (3.7%)	14 (1.0%)	225 (3.2%)
Mineral	3 (0.1%)	5 (0.4%)	8 (0.1%)
Nye	36 (0.6%)	13 (0.9%)	49 (0.7%)
Other/Missing	456 (8.0%)	158 (11.2%)	614 (8.7%)
Pershing	11 (0.2%)	1 (0.1%)	12 (0.2%)
Storey	1 (0.0%)	1 (0.1%)	2 (0.0%)
Washoe	1,295 (22.8%)	360 (25.6%)	1,655 (23.4%)
White Pine	28 (0.5%)	1 (0.1%)	29 (0.4%)
GOT FLU VACCINE LAST YEAR			
Yes	2,925 (55.0%)	756 (60.9%)	3,681 (56.1%)
No	2,362 (44.4%)	480 (38.7%)	2,842 (43.3%)
Don't know	30 (0.6%)	5 (0.4%)	35 (0.5%)
GOT FLU VACCINE THIS YEAR			
Already got it	2,634 (49.5%)	690 (55.7%)	3,324 (50.7%)
Plan to receive it	509 (9.6%)	110 (8.9%)	619 (9.4%)
Not planning on receiving	1,780 (33.5%)	377 (30.4%)	2,157 (32.9%)
Undecided	393 (7.4%)	62 (5.0%)	455 (6.9%)
SICK WITH COVID			
Yes, confirmed	347 (6.6%)	102 (8.3%)	449 (6.9%)
Yes, but not yet confirmed	160 (3.0%)	39 (3.2%)	199 (3.1%)
No	4,000 (75.6%)	948 (77.3%)	4,948 (75.9%)
Don't Know	784 (14.8%)	138 (11.2%)	922 (14.1%)
SOMEONE IN NETWORK SICK WITH COVID			
Yes, confirmed	3,239 (61.2%)	744 (60.5%)	3,983 (61.1%)
Yes, but not yet confirmed	117 (2.2%)	24 (2.0%)	141 (2.2%)
No	1,721 (32.5%)	429 (34.9%)	2,150 (33.0%)
Don't Know	216 (4.1%)	32 (2.6%)	248 (3.8%)

Supplemental Data

Likelihood of getting COVID-19 vaccine when it becomes available	Somewhat or Very likely	Not at all or not too likely	Total
	N=4,336	N=2,185	N=6,521
GENDER			
Male	1,542 (35.6%)	619 (28.3%)	2,161 (33.1%)
Female	2,779 (64.1%)	1,541 (70.5%)	4,320 (66.2%)
Other	7 (0.2%)	13 (0.6%)	20 (0.3%)
Missing	8 (0.2%)	12 (0.5%)	20 (0.3%)
AGE			
18 – 24	111 (2.6%)	50 (2.3%)	161 (2.5%)
25 – 34	526 (12.1%)	406 (18.6%)	932 (14.3%)
35 – 44	868 (20.0%)	649 (29.7%)	1,517 (23.3%)
45 – 54	980 (22.6%)	569 (26.0%)	1,549 (23.8%)
55+	1,844 (42.5%)	502 (23.0%)	2,346 (36.0%)
Missing	7 (0.2%)	9 (0.4%)	16 (0.2%)
EDUCATION LEVEL			
No high school	9 (0.2%)	1 (0.0%)	10 (0.2%)
High school	311 (7.2%)	256 (11.7%)	567 (8.7%)
Some college	1,084 (25.0%)	708 (32.4%)	1,792 (27.5%)
College	1,547 (35.7%)	734 (33.6%)	2,281 (35.0%)
Graduate/Professional	1,371 (31.6%)	475 (21.7%)	1,846 (28.3%)
Missing	14 (0.3%)	11 (0.5%)	25 (0.4%)
RACE			
Black or African American	149 (3.4%)	192 (8.8%)	341 (5.2%)
American Indian or Alaska Native	45 (1.0%)	31 (1.4%)	76 (1.2%)
Asian	182 (4.2%)	65 (3.0%)	247 (3.8%)
Native Hawaiian or Other Pacific Islander	46 (1.1%)	34 (1.6%)	80 (1.2%)
White	3,804 (87.7%)	1,762 (80.6%)	5,566 (85.4%)
Missing	110 (2.5%)	101 (4.6%)	211 (3.2%)
ETHNICITY			
Hispanic	474 (10.9%)	335 (15.3%)	809 (12.4%)
Non-Hispanic	3,603 (83.1%)	1,678 (76.8%)	5,281 (81.0%)
Missing	259 (6.0%)	172 (7.9%)	431 (6.6%)
EMPLOYMENT			
Employed	3,416 (78.8%)	1,915 (87.6%)	5,331 (81.8%)
Unemployed	267 (6.2%)	143 (6.5%)	410 (6.3%)
Retired	647 (14.9%)	116 (5.3%)	763 (11.7%)
Missing	6 (0.1%)	11 (0.5%)	17 (0.3%)

Supplemental Data

WORK FROM HOME			
Yes	1,999 (46.1%)	956 (43.8%)	2,955 (45.3%)
No	1,408 (32.5%)	954 (43.7%)	2,362 (36.2%)
Missing	929 (21.4%)	275 (12.6%)	1,204 (18.5%)
COUNTY			
Carson City	405 (9.3%)	217 (9.9%)	622 (9.5%)
Churchill	23 (0.5%)	22 (1.0%)	45 (0.7%)
Clark	1,840 (42.4%)	1,141 (52.2%)	2,981 (45.7%)
Douglas	170 (3.9%)	68 (3.1%)	238 (3.6%)
Elko	137 (3.2%)	68 (3.1%)	205 (3.1%)
Esmeralda	1 (0.0%)	0 (0.0%)	1 (0.0%)
Eureka	2 (0.0%)	1 (0.0%)	3 (0.0%)
Humboldt	107 (2.5%)	46 (2.1%)	153 (2.3%)
Lander	1 (0.0%)	2 (0.1%)	3 (0.0%)
Lincoln	1 (0.0%)	5 (0.2%)	6 (0.1%)
Lyon	137 (3.2%)	83 (3.8%)	220 (3.4%)
Mineral	2 (0.0%)	3 (0.1%)	5 (0.1%)
Nye	27 (0.6%)	22 (1.0%)	49 (0.8%)
Other/Missing	165 (3.8%)	182 (8.3%)	347 (5.3%)
Pershing	8 (0.2%)	4 (0.2%)	12 (0.2%)
Storey	1 (0.0%)	1 (0.0%)	2 (0.0%)
Washoe	1,299 (30.0%)	301 (13.8%)	1,600 (24.5%)
White Pine	10 (0.2%)	19 (0.9%)	29 (0.4%)
GOT FLU VACCINE LAST YEAR			
Yes	3,179 (73.3%)	497 (22.7%)	3,676 (56.4%)
No	1,134 (26.2%)	1,673 (76.6%)	2,807 (43.0%)
Don't know	19 (0.4%)	13 (0.6%)	32 (0.5%)
Missing	4 (0.1%)	2 (0.1%)	6 (0.1%)
GOT FLU VACCINE THIS YEAR			
Already got it	2,915 (67.2%)	403 (18.4%)	3,318 (50.9%)
Plan to receive it	538 (12.4%)	74 (3.4%)	612 (9.4%)
Not planning on receiving	577 (13.3%)	1,563 (71.5%)	2,140 (32.8%)
Undecided	302 (7.0%)	141 (6.5%)	443 (6.8%)
Missing	4 (0.1%)	4 (0.2%)	8 (0.1%)
SICK WITH COVID			
Yes, confirmed	243 (5.6%)	201 (9.2%)	444 (6.8%)
Yes, but not yet confirmed	94 (2.2%)	106 (4.9%)	200 (3.1%)
No	3,464 (79.9%)	1,479 (67.7%)	4,943 (75.8%)
Don't Know	530 (12.2%)	395 (18.1%)	925 (14.2%)
Missing	5 (0.1%)	4 (0.2%)	9 (0.1%)
SOMEONE IN NETWORK SICK WITH COVID			
Yes, confirmed	2,618 (60.4%)	1,345 (61.6%)	3,963 (60.8%)
Yes, but not yet confirmed	83 (1.9%)	58 (2.7%)	141 (2.2%)
No	1,492 (34.4%)	669 (30.6%)	2,161 (33.1%)
Don't Know	140 (3.2%)	108 (4.9%)	248 (3.8%)
Missing	3 (0.1%)	5 (0.2%)	8 (0.1%)