

Monthly Report: December 2020

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



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Study has been determined to be exempt by UNR IRB
(IRB#: 1666862-1, 19 October 2020)

General Public Surveys A & B

65% likely to receive COVID-19 vaccine 35% UNLIKELY

A total of 5,349 participants took surveys A and B during the time period of November 25 to December 31st.

Age groups 18-24 and 55+

ARE MOST LIKELY TO RECEIVE VACCINE

with ~70-75% who put "somewhat" to "very likely" in both groups.

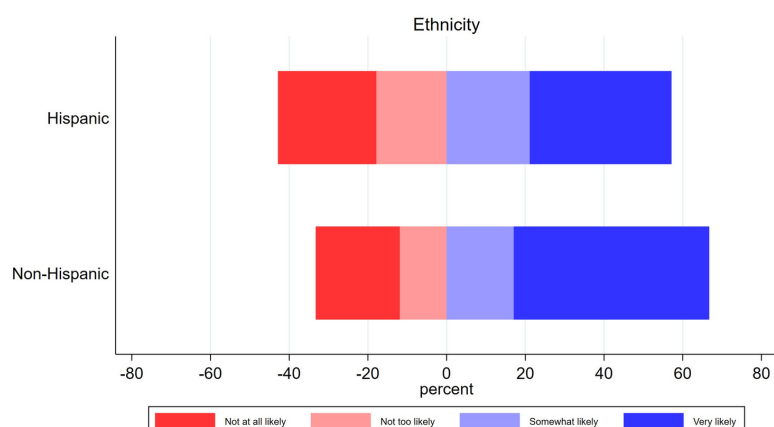
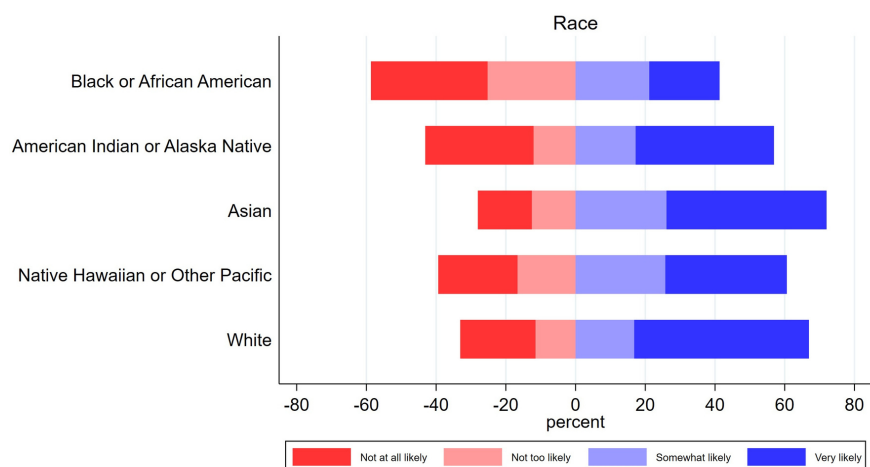
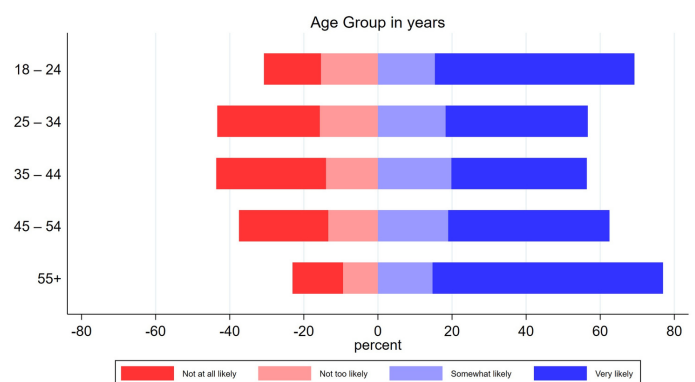
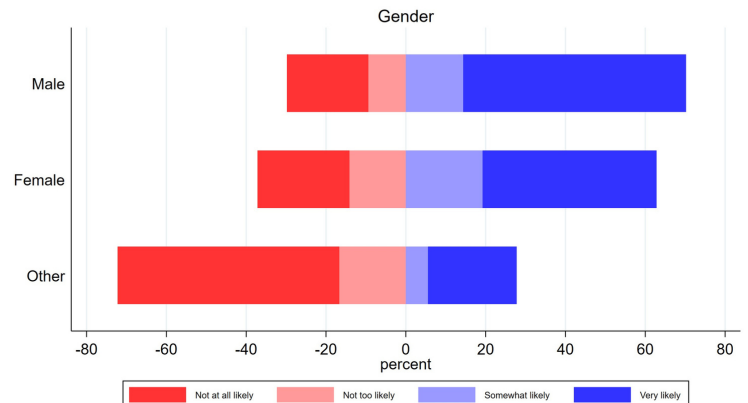
Comparatively, only ~50-60% of age groups 25-54 put "somewhat" to "very likely" to receive the vaccine.

White, Asian and Non-Hispanic identifying participants

ARE MOST LIKELY TO RECEIVE VACCINE

at 65%, 75% and 65%, "somewhat" or "very" likely, respectively.

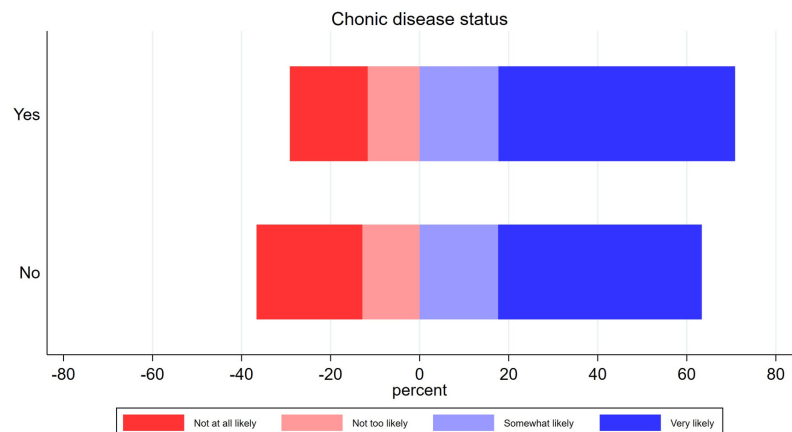
Comparatively, American Indian, Hawaiian, African American/Black and Hispanic respondents are 58%, 60%, 42% and 58% "somewhat" or "very" likely to get vaccine, respectively.



General Public Surveys A & B

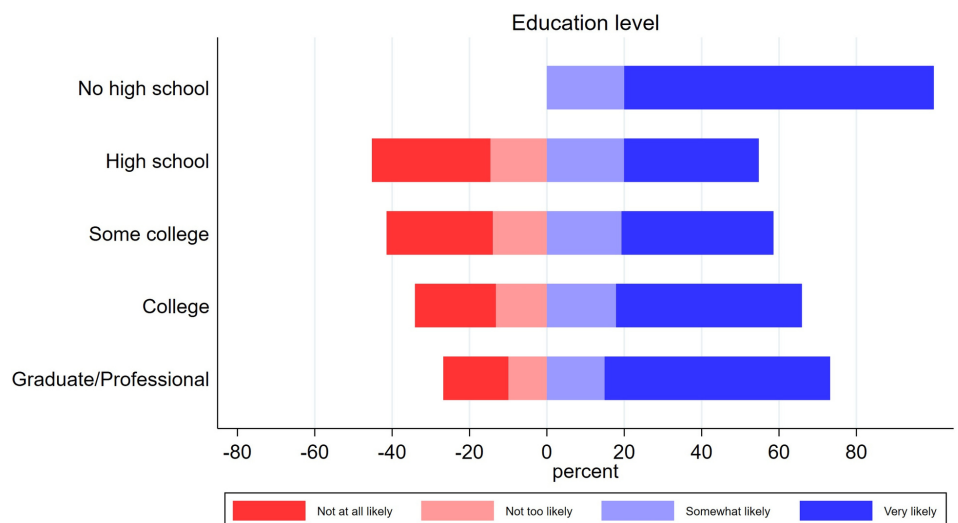
Chronic disease status CORRELATES WITH LIKELINESS TO RECEIVE THE VACCINE

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



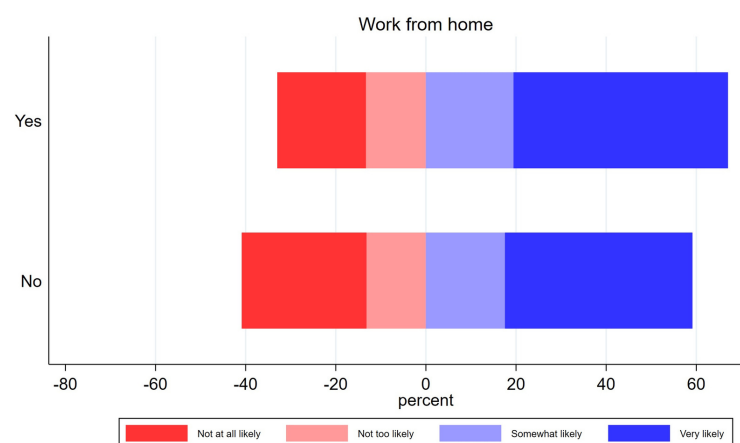
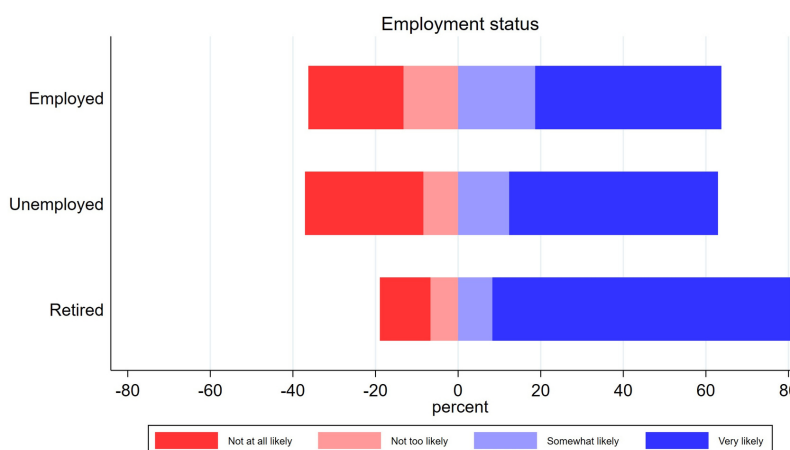
Increased level of education CORRELATES WITH LIKELINESS TO RECEIVE THE VACCINE

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



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

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

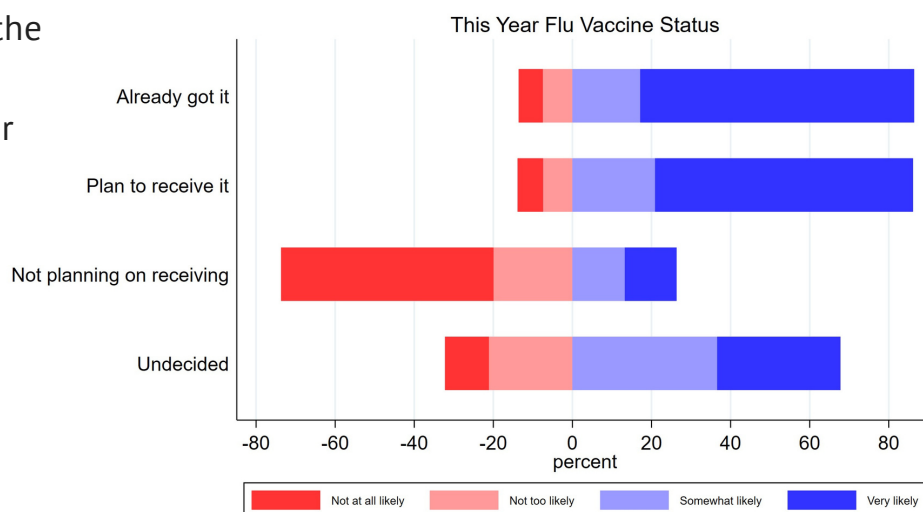
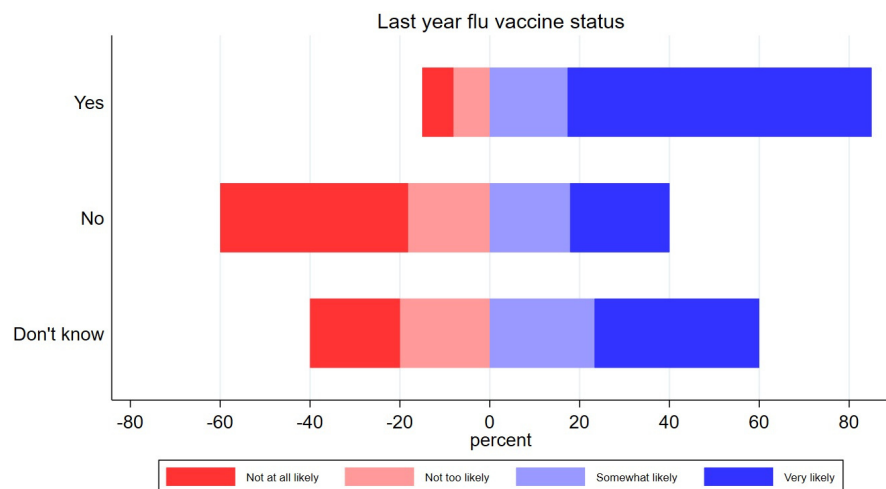


General Public Surveys A & B

Previous & current influenza vaccine reception

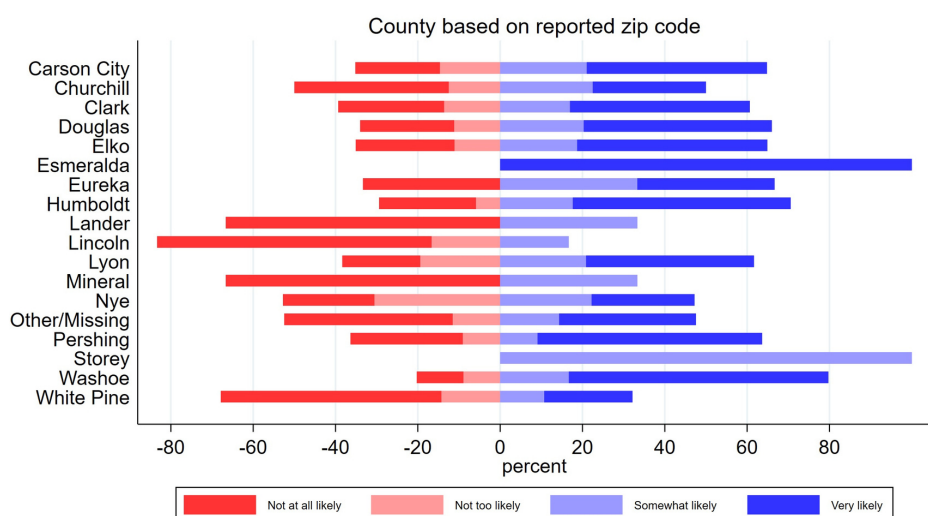
STRONGLY CORRELATED WITH LIKELIHOOD TO RECEIVE COVID VACCINE

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

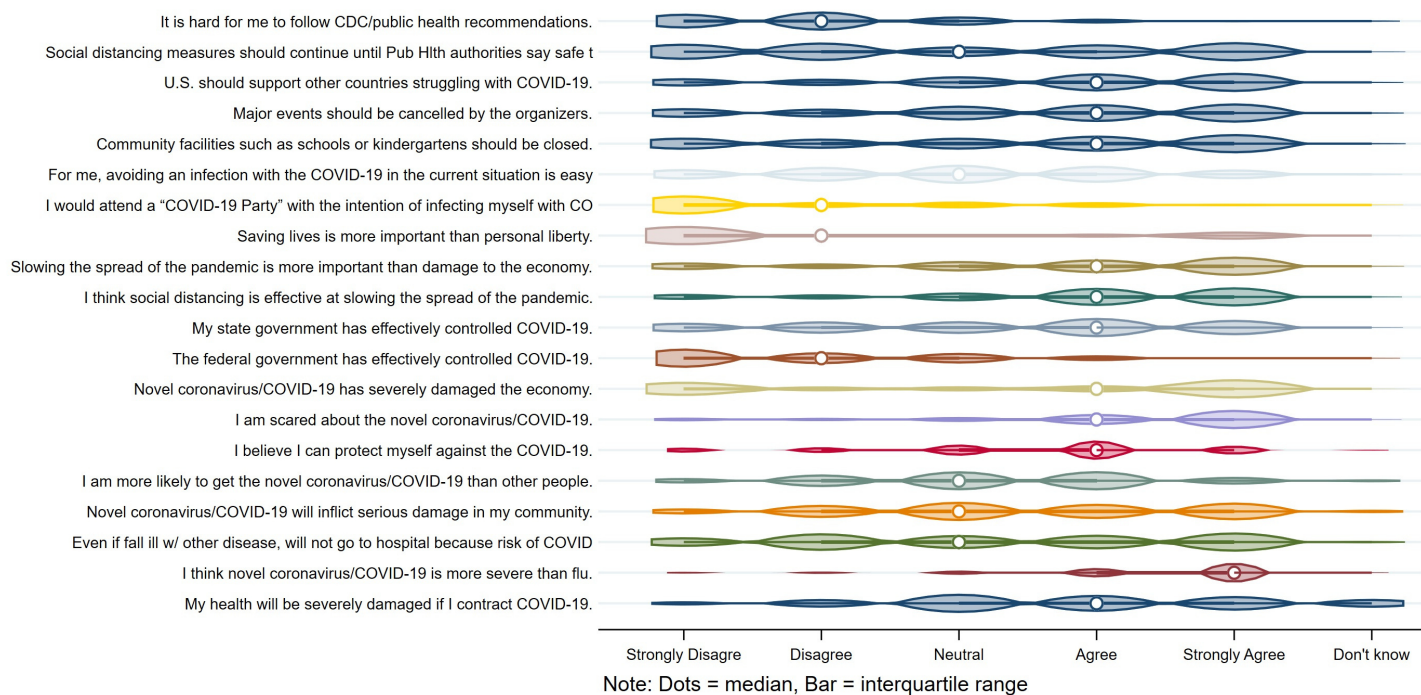
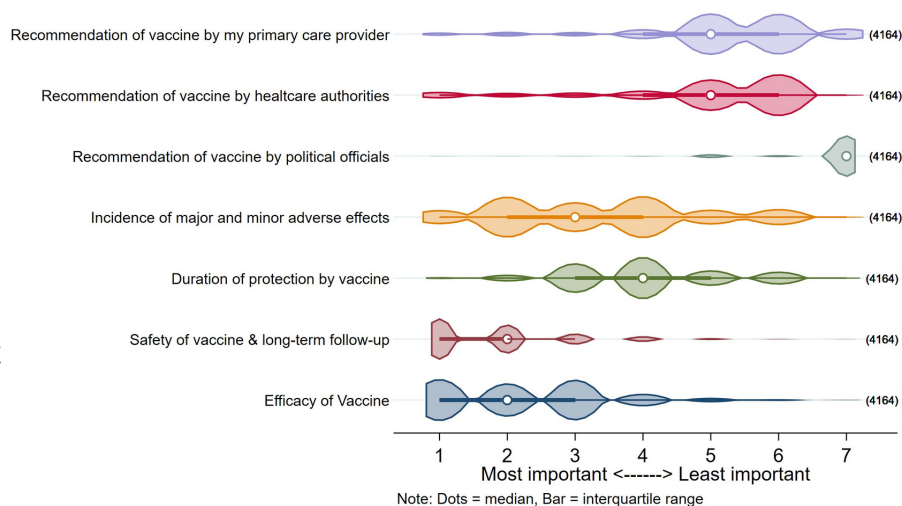
ARE MORE LIKELY TO RECEIVE THE VACCINE than their rural counterparts.



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.

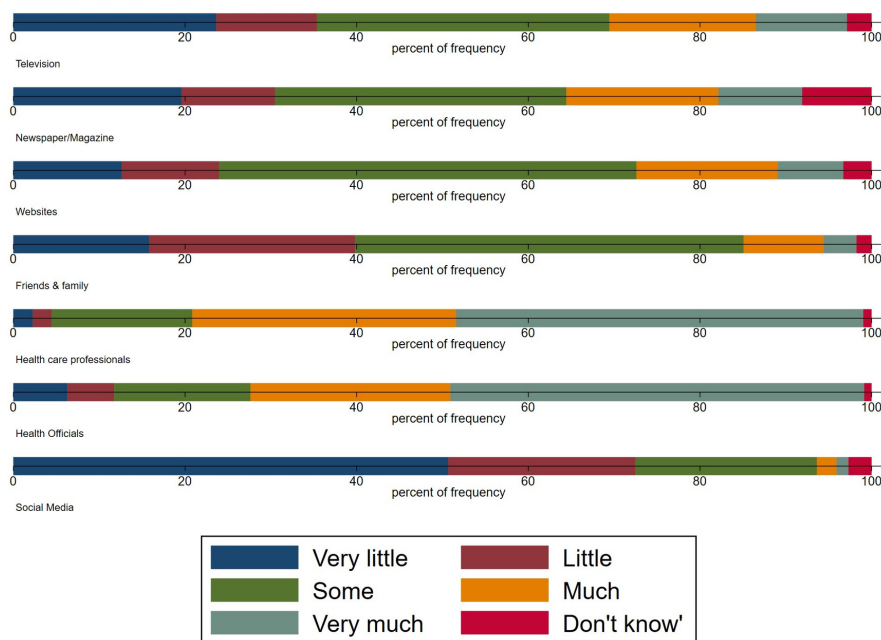


General Public Surveys A & B

Participants most likely to trust

FRIENDS, FAMILY, HEALTH CARE PROFESSIONALS, AND HEALTH OFFICIALS AS SOURCES OF INFORMATION

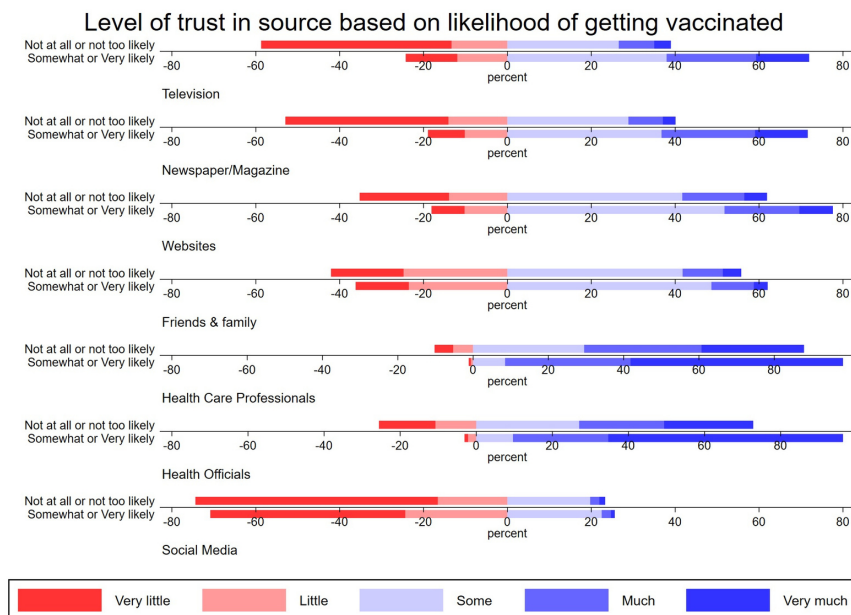
They are least likely to trust social media. Television, newspapers, magazines and websites play an equal role in sources the general public trusts.



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

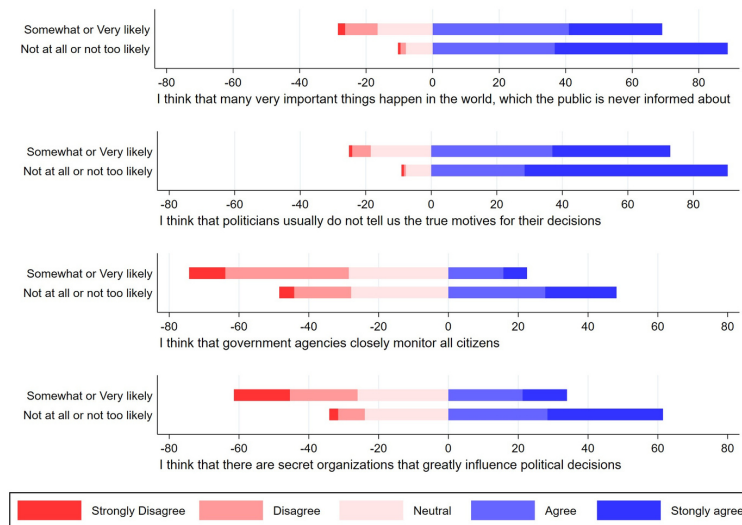
This presents an important discrepancy between the source that participants trust the most, and the likelihood they will get the COVID-19 vaccine



General Public Surveys A & B

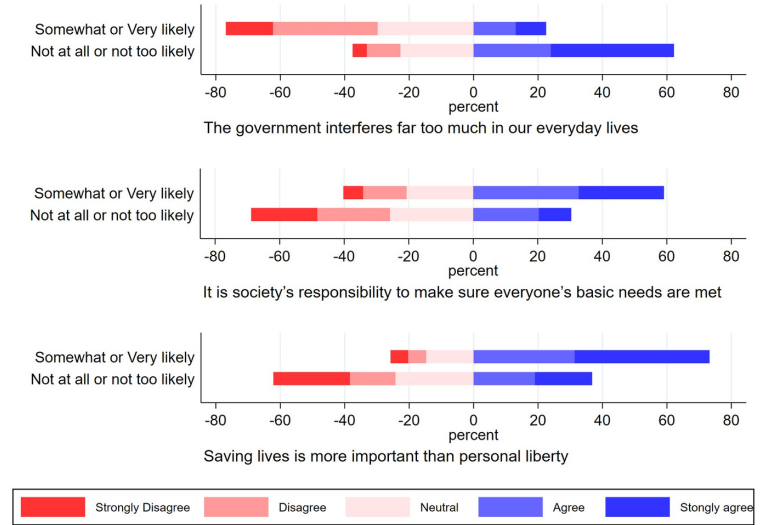
Conspiracy theory belief systems

CORRELATED WITH DECREASED LIKELIHOOD OF RECEIVING COVID VACCINE



Individualistic value systems

CORRELATED WITH DECREASED LIKELIHOOD OF RECEIVING COVID VACCINE

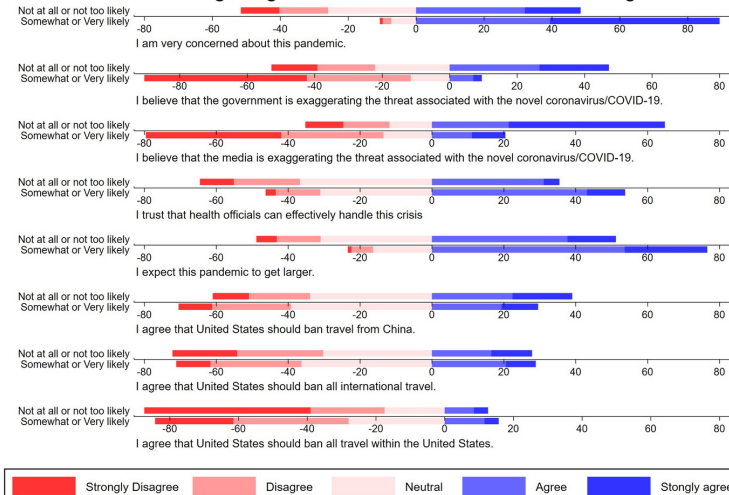


Reactance and outrage to new information

CORRELATED WITH DECREASED LIKELIHOOD OF RECEIVING COVID VACCINE

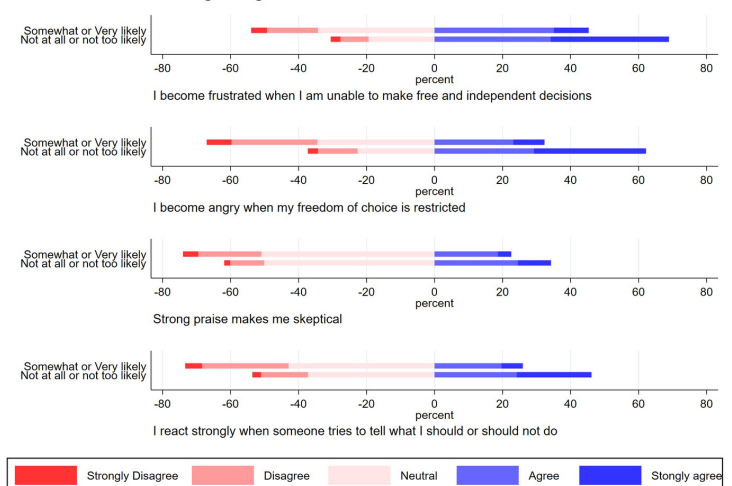
OUTRAGE

Likelihood of getting vaccine based on measures of outrage



REACTANCE

Likelihood of getting vaccine based on measures of reactance

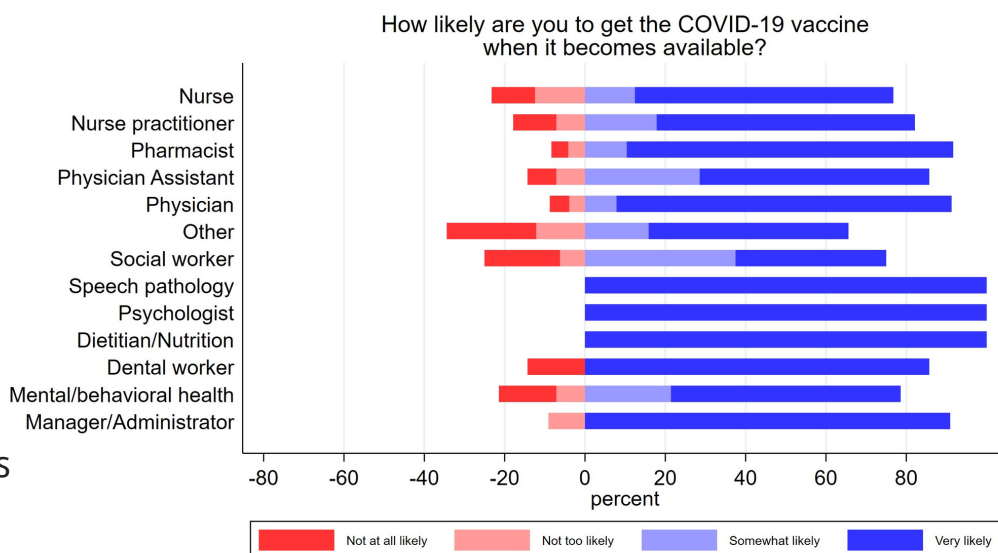


Healthcare Providers / Trainees

A total of 994 took our HCP/trainee survey from
November 25 to December 31st

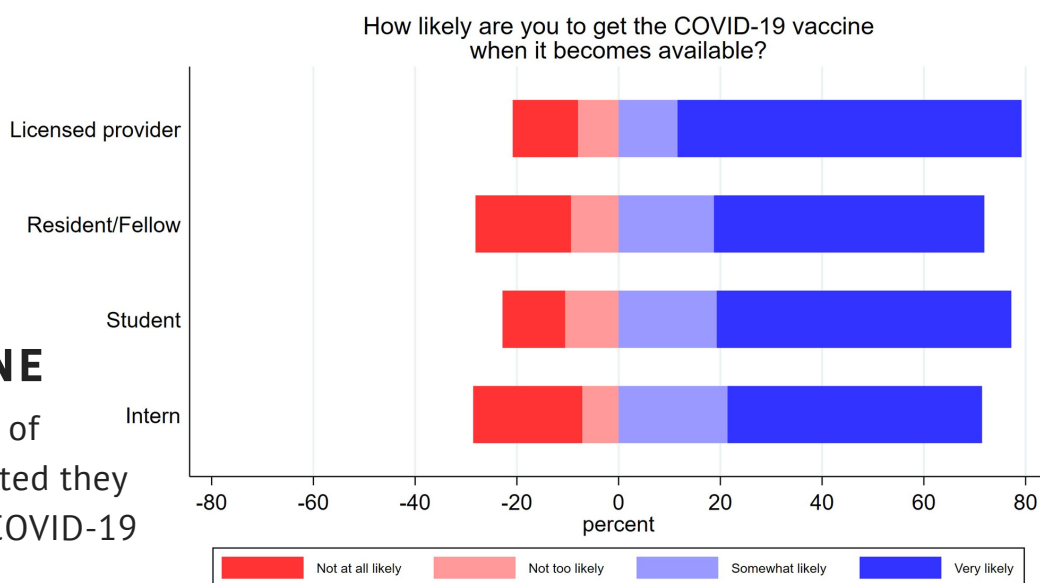
77% of HCP LIKELY TO RECEIVE VACCINE

Nurses are less likely to receive vaccine than other healthcare providers (23% of nurses stated they would be unlikely to receive the COVID-19 vaccine).



Interns, Residents, Fellows LESS LIKELY TO RECEIVE VACCINE

29% of interns and 28% of residents/fellows indicated they are unlikely to receive COVID-19 vaccine.



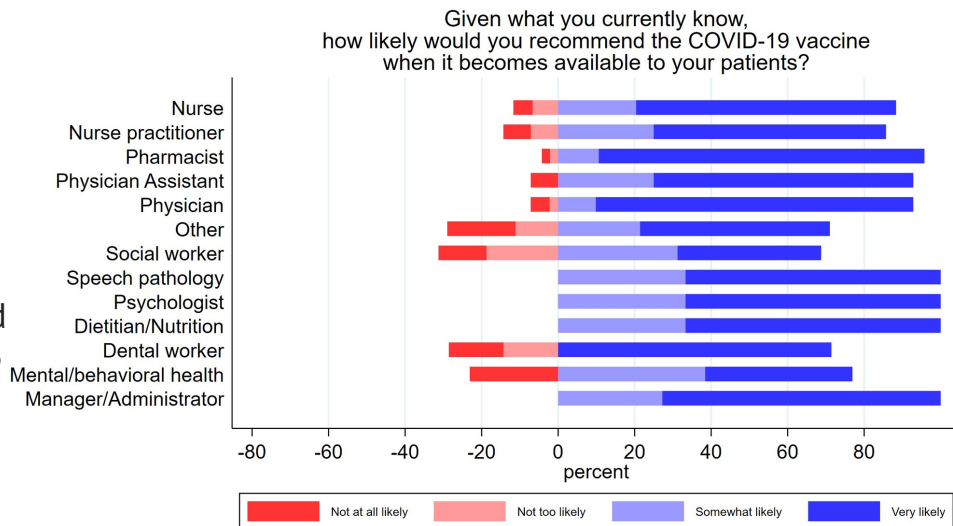
Current season flu vaccination status CORRELATES WITH LIKELINESS TO RECEIVE AND RECOMMEND COVID-19 VACCINE

63% of HCP that are not planning to receive flu vaccine are also unlikely to recommend vaccine to their patients. 74% of HCP that did not get the flu vaccine this season are also unlikely to receive the COVID-19 vaccine themselves this year.

Healthcare Providers / Trainees

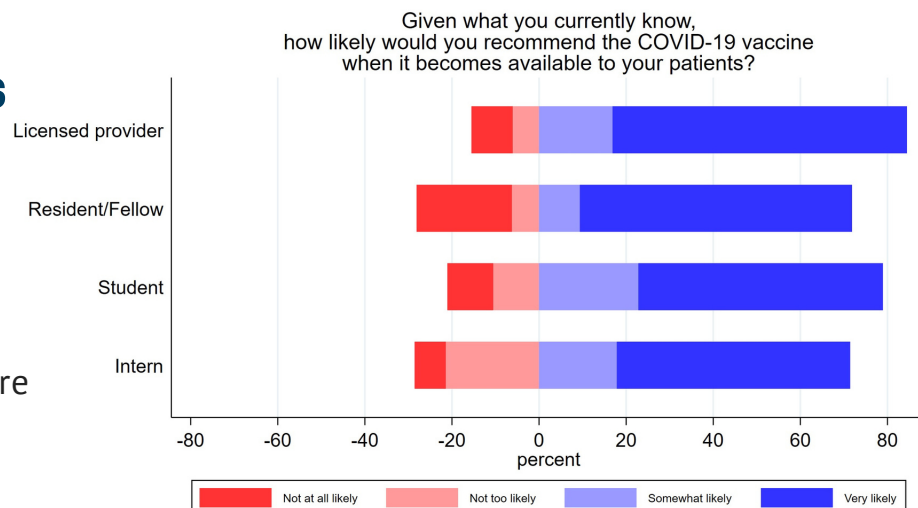
83% of HCP LIKELY TO RECOMMEND VACCINE TO PATIENTS

Social workers, dental HCP, and mental/behavioural health HCP are less likely to recommend vaccine to patients (31%, 29%, and 23% respectively).

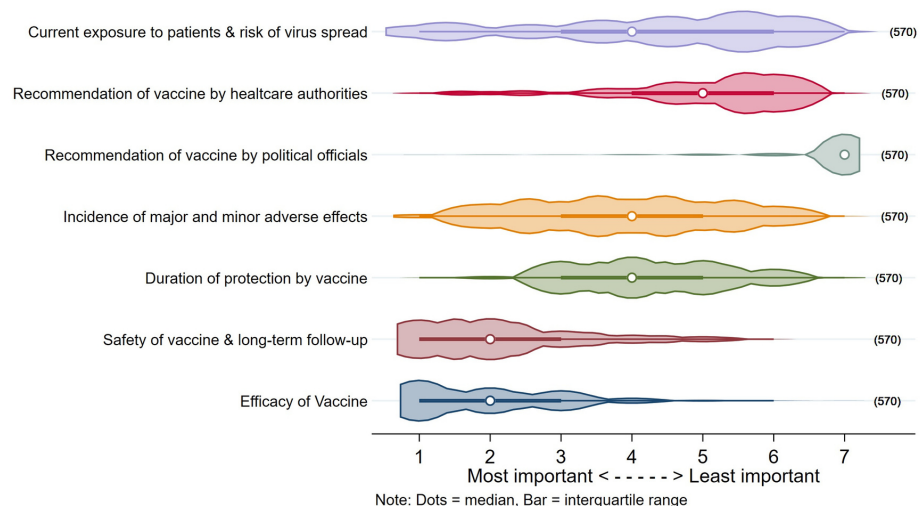


Interns and Residents/Fellows LESS LIKELY TO RECOMMEND VACCINE TO PATIENTS

29% of interns and 28% of residents/fellows indicated they are unlikely to recommend vaccine to patients.



EFFICACY & SAFETY MOST IMPORTANT FACTORS IN RECOMMENDATION



Final Recommendations & Supplemental Data

This report highlights the preliminary results since our launch on November 25 through December 31, 2020.

General public survey:
5349 PARTICIPANTS

Health care provider survey:
994 PARTICIPANTS

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 currently are at 65% and need to improve.
2. Knowledge and attitudes about vaccine safety and efficacy in addition to personal values and beliefs are important drivers of vaccine acceptance.
3. Overall, health care providers are strongly supportive of recommending vaccines to their patients and this is important, as one of the strongest influences of getting vaccines is a recommendation by any individual's health care provider.

IMPORTANT CAVEATS

INCREASE RESPONSE FROM THE FOLLOWING POPULATIONS:

1. **Participants in the 18-34 age range.** These two age groups currently only make up about 16% of responses by age group.
2. **Participants with only high school education.** Participants with some college, college, and graduate level educations make up more than 85% of our responses.
3. **Non-white & Hispanic populations.** Participants who identify as white and non-Hispanic make up greater than 80% of our responses.
4. **Rural counties.** Washoe and Clark County make up roughly 68% of our respondents, increase responses from other counties.

Final Recommendations & Supplemental Data

General Public Supplemental Data

	N=3,479	N=1,870	N=5,349
SURVEY			
A	1,699 (48.8%)	1,013 (54.2%)	2,712 (50.7%)
B	1,780 (51.2%)	857 (45.8%)	2,637 (49.3%)
GNDR			
Male	1,225 (35.2%)	520 (27.8%)	1,745 (32.6%)
Female	2,244 (64.5%)	1,328 (71.0%)	3,572 (66.8%)
Other	5 (0.1%)	13 (0.7%)	18 (0.3%)
Missing	5 (0.1%)	9 (0.5%)	14 (0.3%)
AGE			
18 – 24	81 (2.3%)	36 (1.9%)	117 (2.2%)
25 – 34	440 (12.6%)	337 (18.0%)	777 (14.5%)
35 – 44	739 (21.2%)	572 (30.6%)	1,311 (24.5%)
45 – 54	843 (24.2%)	506 (27.1%)	1,349 (25.2%)
55+	1,372 (39.4%)	411 (22.0%)	1,783 (33.3%)
Missing	4 (0.1%)	8 (0.4%)	12 (0.2%)
EDUCATION LEVEL			
No high school	5 (0.1%)	0 (0.0%)	5 (0.1%)
High school	236 (6.8%)	195 (10.4%)	431 (8.1%)
Some college	862 (24.8%)	610 (32.6%)	1,472 (27.5%)
College	1,243 (35.7%)	643 (34.4%)	1,886 (35.3%)
Graduate/Professional	1,123 (32.3%)	411 (22.0%)	1,534 (28.7%)
Missing	10 (0.3%)	11 (0.6%)	21 (0.4%)
RACE			
Black or African American	121 (3.5%)	172 (9.2%)	293 (5.5%)
American Indian or Alaska Native	33 (0.9%)	25 (1.3%)	58 (1.1%)
Asian	149 (4.3%)	58 (3.1%)	207 (3.9%)
Native Hawaiian or Other Pacific Islander	40 (1.1%)	26 (1.4%)	66 (1.2%)
White	3,050 (87.7%)	1,507 (80.6%)	4,557 (85.2%)
Missing	86 (2.5%)	82 (4.4%)	168 (3.1%)
ETHNICITY			
Hispanic	384 (11.0%)	288 (15.4%)	672 (12.6%)
Non-Hispanic	2,894 (83.2%)	1,443 (77.2%)	4,337 (81.1%)
Missing	201 (5.8%)	139 (7.4%)	340 (6.4%)
EMPLOYMENT STATUS			
Employed	3,014 (86.6%)	1,714 (91.7%)	4,728 (88.4%)
Unemployed	112 (3.2%)	66 (3.5%)	178 (3.3%)
Retired	351 (10.1%)	82 (4.4%)	433 (8.1%)
Missing	2 (0.1%)	8 (0.4%)	10 (0.2%)
WORK FROM HOME			
Yes	1,851 (53.2%)	911 (48.7%)	2,762 (51.6%)
No	1,156 (33.2%)	799 (42.7%)	1,955 (36.5%)
Missing	472 (13.6%)	160 (8.6%)	632 (11.8%)

Final Recommendations & Supplemental Data

General Public Supplemental Data

COUNTY			
Carson City	385 (11.1%)	209 (11.2%)	594 (11.1%)
Churchill	20 (0.6%)	20 (1.1%)	40 (0.7%)
Clark	1,491 (42.9%)	967 (51.7%)	2,458 (46.0%)
Douglas	130 (3.7%)	67 (3.6%)	197 (3.7%)
Elko	111 (3.2%)	60 (3.2%)	171 (3.2%)
Esmeralda	1 (0.0%)	0 (0.0%)	1 (0.0%)
Eureka	2 (0.1%)	1 (0.1%)	3 (0.1%)
Humboldt	12 (0.3%)	5 (0.3%)	17 (0.3%)
Lander	1 (0.0%)	2 (0.1%)	3 (0.1%)
Lincoln	1 (0.0%)	5 (0.3%)	6 (0.1%)
Lyon	127 (3.7%)	79 (4.2%)	206 (3.9%)
Mineral	1 (0.0%)	2 (0.1%)	3 (0.1%)
Nye	17 (0.5%)	19 (1.0%)	36 (0.7%)
Other/Missing	136 (3.9%)	150 (8.0%)	286 (5.3%)
Pershing	7 (0.2%)	4 (0.2%)	11 (0.2%)
Storey	1 (0.0%)	0 (0.0%)	1 (0.0%)
Washoe	1,027 (29.5%)	261 (14.0%)	1,288 (24.1%)
White Pine	9 (0.3%)	19 (1.0%)	28 (0.5%)
GOT LAST YEAR'S INFLUENZA VACCINE			
Yes	2,519 (72.4%)	445 (23.8%)	2,964 (55.4%)
No	941 (27.0%)	1,411 (75.5%)	2,352 (44.0%)
Don't know	18 (0.5%)	12 (0.6%)	30 (0.6%)
Missing	1 (0.0%)	2 (0.1%)	3 (0.1%)
GOT THIS YEAR'S INFLUENZA VACCINE			
Already got it	2,308 (66.3%)	363 (19.4%)	2,671 (49.9%)
Plan to receive it	441 (12.7%)	71 (3.8%)	512 (9.6%)
Not planning on receiving	467 (13.4%)	1,307 (69.9%)	1,774 (33.2%)
Undecided	263 (7.6%)	125 (6.7%)	388 (7.3%)
Missing	0 (0.0%)	4 (0.2%)	4 (0.1%)
SICK WITH COVID			
Yes, confirmed	188 (5.4%)	159 (8.5%)	347 (6.5%)
Yes, but not yet confirmed	79 (2.3%)	82 (4.4%)	161 (3.0%)
No	2,764 (79.4%)	1,283 (68.6%)	4,047 (75.7%)
Don't Know	444 (12.8%)	343 (18.3%)	787 (14.7%)
Missing	4 (0.1%)	3 (0.2%)	7 (0.1%)
SOMEONE IN NETWORK SICK WITH COVID			
Yes, confirmed	2,112 (60.7%)	1,155 (61.8%)	3,267 (61.1%)
Yes, but not yet confirmed	71 (2.0%)	46 (2.5%)	117 (2.2%)
No	1,170 (33.6%)	572 (30.6%)	1,742 (32.6%)
Don't Know	124 (3.6%)	93 (5.0%)	217 (4.1%)
Missing	2 (0.1%)	4 (0.2%)	6 (0.1%)

Final Recommendations & Supplemental Data

Health Care Provider Supplemental Data

	N=826	N=168	N=994
GNDR			
Male	258 (31.2%)	41 (24.4%)	299 (30.1%)
Female	562 (68.0%)	123 (73.2%)	685 (68.9%)
Other	0 (0.0%)	1 (0.6%)	1 (0.1%)
Missing	6 (0.7%)	3 (1.8%)	9 (0.9%)
AGE			
18 – 24	16 (1.9%)	6 (3.6%)	22 (2.2%)
25 – 34	109 (13.2%)	25 (14.9%)	134 (13.5%)
35 – 44	188 (22.8%)	51 (30.4%)	239 (24.0%)
45 – 54	205 (24.8%)	51 (30.4%)	256 (25.8%)
55+	303 (36.7%)	32 (19.0%)	335 (33.7%)
Missing	5 (0.6%)	3 (1.8%)	8 (0.8%)
TYPE OF PROVIDER			
Nurse	212 (25.7%)	28 (16.7%)	240 (24.1%)
Nurse practitioner	24 (2.9%)	4 (2.4%)	28 (2.8%)
Pharmacist	45 (5.4%)	2 (1.2%)	47 (4.7%)
Physician Assistant	26 (3.1%)	2 (1.2%)	28 (2.8%)
Physician	207 (25.1%)	16 (9.5%)	223 (22.4%)
Other	255 (30.9%)	104 (61.9%)	359 (36.1%)
Social worker	11 (1.3%)	5 (3.0%)	16 (1.6%)
Speech pathology	3 (0.4%)	0 (0.0%)	3 (0.3%)
Psychologist	9 (1.1%)	0 (0.0%)	9 (0.9%)
Dietitian/Nutrition	3 (0.4%)	0 (0.0%)	3 (0.3%)
Dental worker	5 (0.6%)	2 (1.2%)	7 (0.7%)
Mental/behavioral health	10 (1.2%)	3 (1.8%)	13 (1.3%)
Manager/Administrator	11 (1.3%)	0 (0.0%)	11 (1.1%)
Missing	5 (0.6%)	2 (1.2%)	7 (0.7%)
TRAINING STATUS			
Licensed provider	626 (75.8%)	115 (68.5%)	741 (74.5%)
Resident/Fellow	23 (2.8%)	9 (5.4%)	32 (3.2%)
Student	45 (5.4%)	12 (7.1%)	57 (5.7%)
Intern	20 (2.4%)	8 (4.8%)	28 (2.8%)
Missing	112 (13.6%)	24 (14.3%)	136 (13.7%)
RACE			
Black or African American	40 (4.8%)	22 (13.1%)	62 (6.2%)
American Indian or Alaska Native	10 (1.2%)	2 (1.2%)	12 (1.2%)
Asian	72 (8.7%)	10 (6.0%)	82 (8.2%)
Native Hawaiian or Other Pacific Islander	6 (0.7%)	3 (1.8%)	9 (0.9%)
White	678 (82.1%)	120 (71.4%)	798 (80.3%)
Missing	20 (2.4%)	11 (6.5%)	31 (3.1%)
ETHNICITY			
Hispanic	85 (10.3%)	19 (11.3%)	104 (10.5%)
Non-Hispanic	700 (84.7%)	135 (80.4%)	835 (84.0%)
Missing	41 (5.0%)	14 (8.3%)	55 (5.5%)

Final Recommendations & Supplemental Data

Health Care Provider Supplemental Data

COUNTY			
Carson City	22 (2.7%)	8 (4.8%)	30 (3.0%)
Churchill	3 (0.4%)	0 (0.0%)	3 (0.3%)
Clark	362 (43.8%)	97 (57.7%)	459 (46.2%)
Douglas	26 (3.1%)	7 (4.2%)	33 (3.3%)
Elko	33 (4.0%)	6 (3.6%)	39 (3.9%)
Humboldt	2 (0.2%)	1 (0.6%)	3 (0.3%)
Lander	1 (0.1%)	0 (0.0%)	1 (0.1%)
Lincoln	5 (0.6%)	0 (0.0%)	5 (0.5%)
Lyon	11 (1.3%)	3 (1.8%)	14 (1.4%)
Mineral	0 (0.0%)	1 (0.6%)	1 (0.1%)
Nye	4 (0.5%)	0 (0.0%)	4 (0.4%)
Other/Missing	50 (6.1%)	21 (12.5%)	71 (7.1%)
Washoe	304 (36.8%)	24 (14.3%)	328 (33.0%)
White Pine	3 (0.4%)	0 (0.0%)	3 (0.3%)
GOT LAST YEAR'S FLU VACCINE			
Yes	731 (88.5%)	73 (43.5%)	804 (80.9%)
No	90 (10.9%)	92 (54.8%)	182 (18.3%)
Don't know	2 (0.2%)	1 (0.6%)	3 (0.3%)
Missing	3 (0.4%)	2 (1.2%)	5 (0.5%)
GOT THIS YEAR'S FLU VACCINE			
Already got it	699 (84.6%)	61 (36.3%)	760 (76.5%)
Plan to receive it	48 (5.8%)	6 (3.6%)	54 (5.4%)
Not planning on receiving	55 (6.7%)	94 (56.0%)	149 (15.0%)
Undecided	24 (2.9%)	6 (3.6%)	30 (3.0%)
Missing	0 (0.0%)	1 (0.6%)	1 (0.1%)
WILL YOU GET COVID VACCINE WHEN AVAILABLE			
Somewhat or Very likely	755 (91.4%)	16 (9.5%)	771 (77.6%)
Not at all or not too likely	69 (8.4%)	152 (90.5%)	221 (22.2%)
Missing	2 (0.2%)	0 (0.0%)	2 (0.2%)