What messaging persuades people to get the eventual COVID-19 vaccine?

Civis Analytics | Creative Focus Messaging Test

Fielded August 17, 2020

Overview

Significant investments have been made toward the rapid development of a safe and effective vaccine against SARS-CoV-2 (COVID-19). Even though we are still far from achieving this goal, our research shows once a vaccine is available, there will be a lot of convincing to do, especially in some communities. Roughly a quarter of US adults don't plan to get vaccinated, and this number is even higher among women, those without a college degree, those making less than $75K per year, and those living in rural areas.

It is critical to start understanding baseline intent to vaccinate and how to persuasively communicate about the importance of vaccination now, given the deluge of misinformation about the virus and heightened distrust.

Leveraging a randomized controlled trial framework (the gold standard approach used in clinical trials) and statistical modeling, our **Creative Focus** tool tested the effectiveness of five different messages at driving intent to get vaccinated against COVID-19.

On August 17, 2020, 3,954 survey respondents were divided into six groups: five that saw a message related to COVID-19 vaccination, and one control group that did not see a message. Civis asked respondents in each of the five treatment groups how likely they were to get the eventual COVID-19 vaccine both before and after seeing one of these messages. After data collection, Civis built and ran a statistical model that calculated the impact of each message on support for COVID-19 vaccination, controlling for respondent characteristics.

Message Themes Tested

Each message described the importance of vaccination but emphasized a different reason why.

The *Safety* message aimed to alleviate concerns about the vaccine by highlighting the FDA's extensive testing process, and emphasizing how a shortened timeline would only impact the cost of development, not safety and effectiveness.

The *Economic Recovery* message emphasized the economic devastation caused by COVID-19 and the vaccine's role in an accelerated path to recovery.

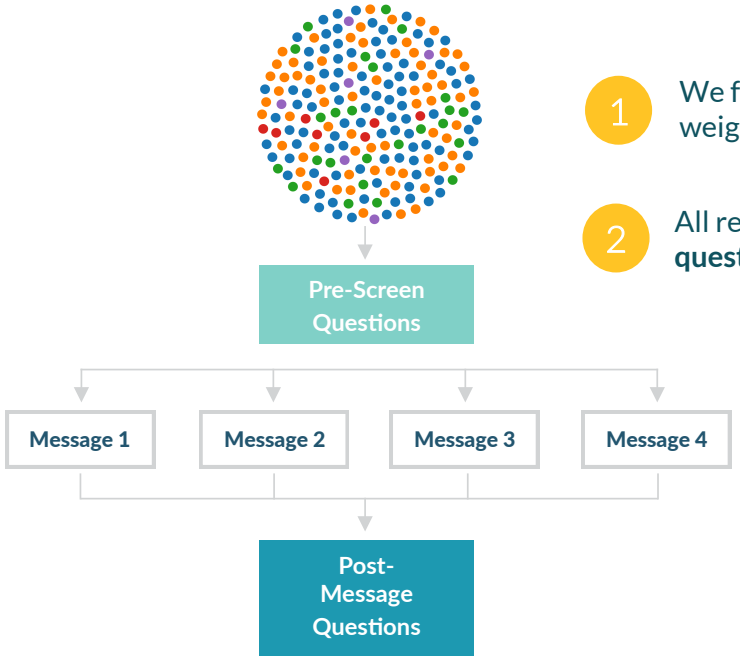
The *Statistics* message leveraged eye-opening data about COVID-19 as a leading cause of death in the US, as well as the prolonged symptoms impacting the quality of life of those who have technically "recovered."

The *Personal Story* message shared the tale of a young, otherwise healthy American who died from COVID-19.

The *Community* message explained herd immunity and emphasized the vaccine's role in making communities healthier for everyone, including those who are unable to get vaccinated.

Civis Creative Focus Methodology

How does Civis's Creative Focus tool work?



1. We find a **representative sample** using our state-of-the-art sampling and weighting correction methods.

2. All respondents were asked demographic and other relevant **Pre-Screen questions**.

3. Respondents were then **randomly split** into treatment and control groups. Those in a treatment group were shown one of the messages.

4. Respondents were then asked **Post-Message questions** to measure message effectiveness on key metrics.

5. After data collection, we run a statistical model that calculates the impact of each message on likelihood to get the COVID-19 vaccination, controlling for respondent characteristics.

Key Findings

How to interpret the next two slides

After data collection, Civis built and ran a statistical model that calculated the impact of each message on support for COVID-19 vaccination, controlling for respondent characteristics.

The model shows us:

- The average change (positive or negative) that each message has on likelihood to vaccinate.
- The probability that each message is the most effective one at increasing likelihood to vaccinate.
- The probability that each message is going to create any amount of backlash (i.e. reduction in likelihood to vaccinate).

Key Findings: Vaccination Likelihood

How did the message perform overall?

	AVERAGE TREATMENT EFFECTS	BEST MESSAGE PROBABILITY	BACKLASH PROBABILITY
 Personal Story	+5%	71%	1%
 Statistics	+4%	27%	4%
 Safety	+0%	1%	45%

Key Findings: Vaccination Likelihood

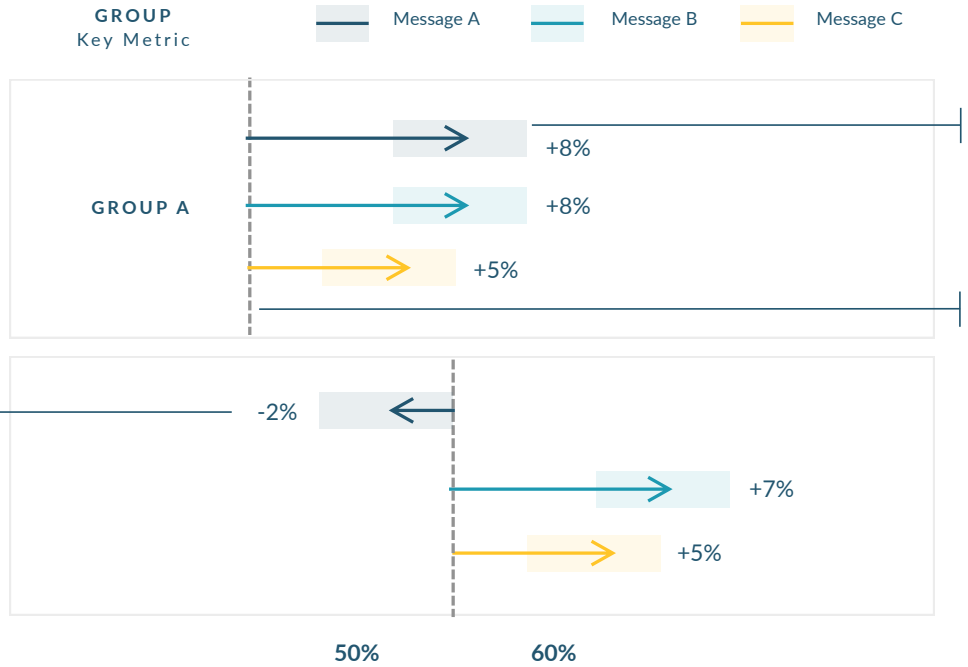
How did the message perform overall?

	AVERAGE TREATMENT EFFECTS	BEST MESSAGE PROBABILITY	BACKLASH PROBABILITY
 Economic	0%	0%	57%
 Community	-1%	0%	69%

How to Interpret Charts on the Following Slides

How do I interpret the results?

For each survey question, we can determine the average effect each treatment has on the respondents by comparing their answers to the control group's answers.



Average treatment effect (ATE)

The incremental gain over the control group. An ATE can be positive or negative. Backlash is a negative reaction to a message.

Shaded areas

Represent the margin of error, or a likely range of outcomes. If a shaded area does not cross the dotted line, the finding is statistically significant.

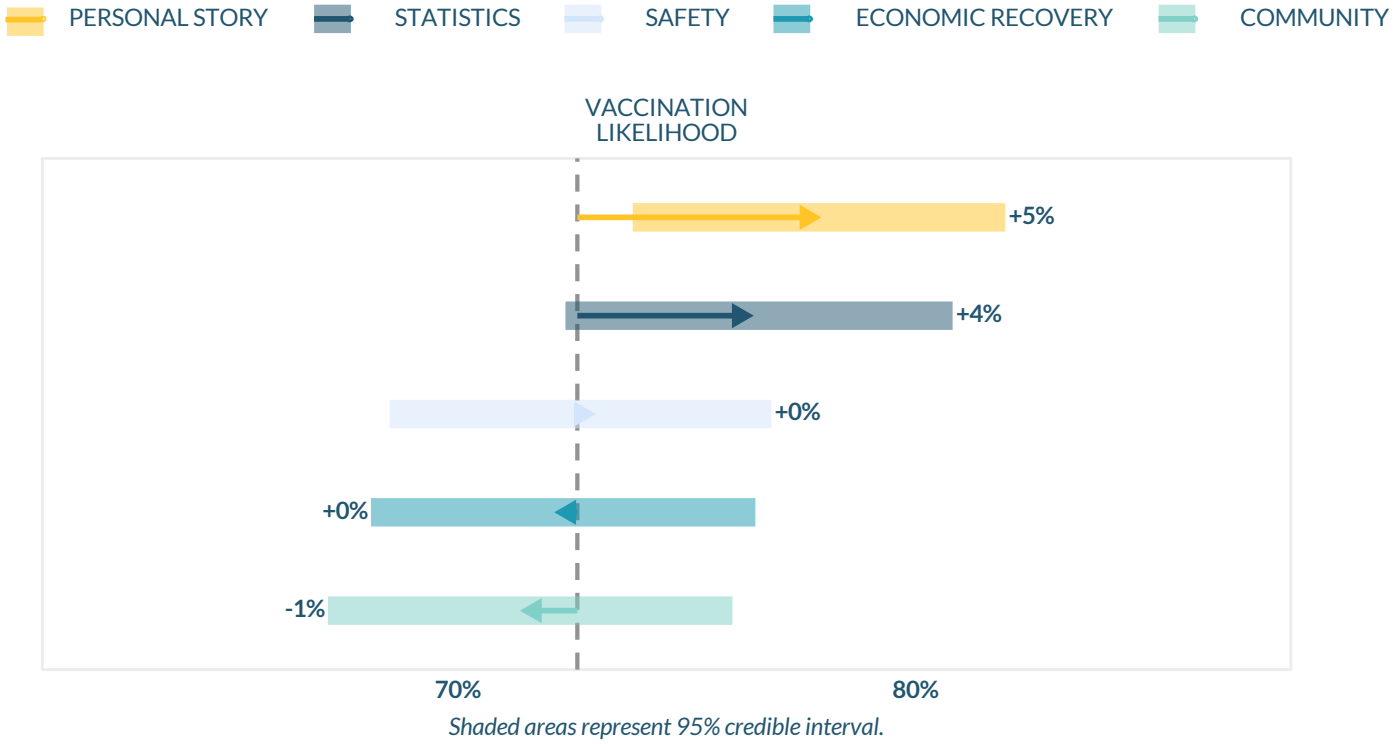
Dashed line

Represents the control baseline that ATEs are compared against. These baselines are how the control group answered, so will change depending on the question being asked.

Key Findings: Vaccination Likelihood

"Personal Story" increased the average likelihood to take a vaccine for Coronavirus compared to the control group by 5 percent, which is significant for a text test. There was little to no probability for backlash.

The messages "Safety," "Economic Recovery," and "Community" had no effect or a negative effect on the average likelihood to take a vaccine for Coronavirus. They all, however, had a high backlash probability, and are therefore not recommended.



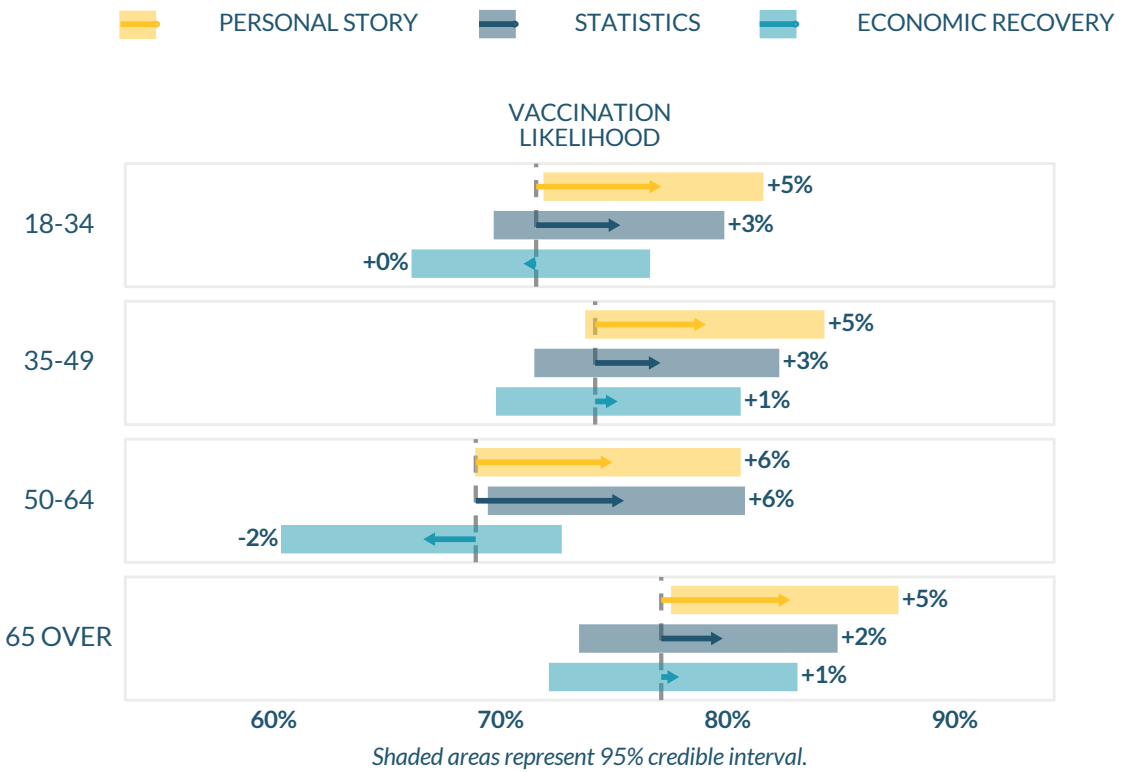
Shaded areas represent 95% credible interval.

Treatment Effects by Subgroup

AGE

Baseline likelihood to vaccinate varies somewhat by age. Those least likely to vaccinate fall in the 50-64 age group, while those most likely to vaccinate are those at the highest risk (65+).

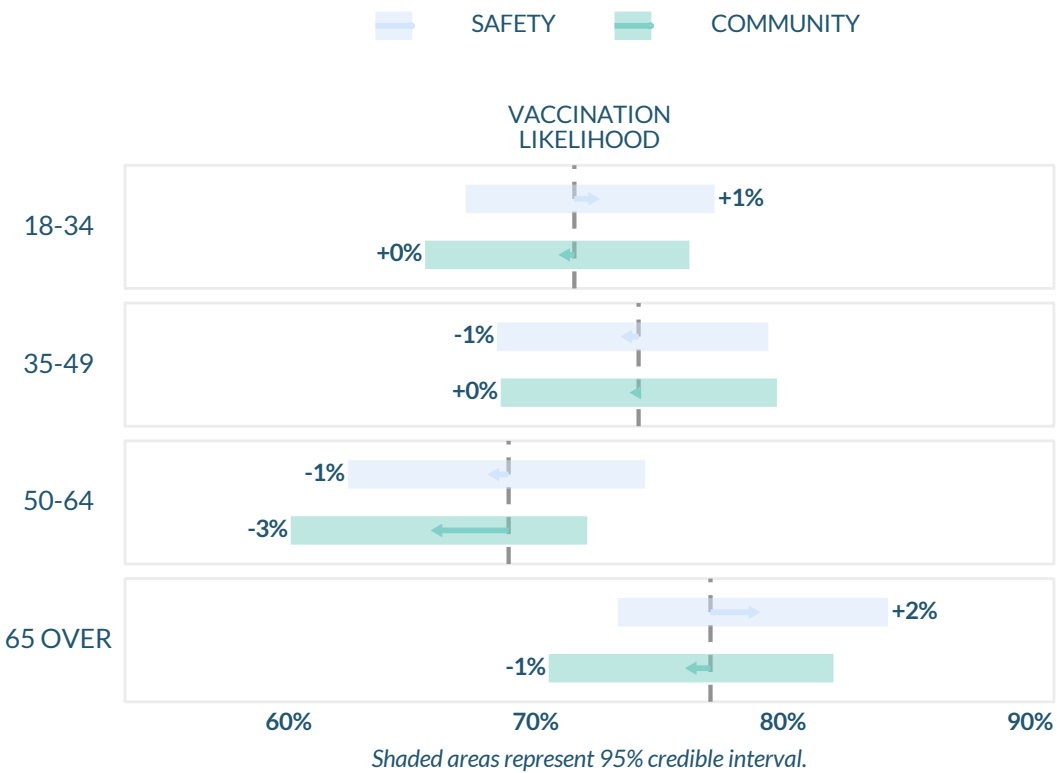
The only message that statistically performs well for all groups is “Personal Story,” while “Statistics” has a significant impact on the 50-64 group.



Shaded areas represent 95% credible interval.

AGE

When broken down by age, the impact of both “Safety” and “Community” messages have no discernable impact on the likelihood to vaccinate.

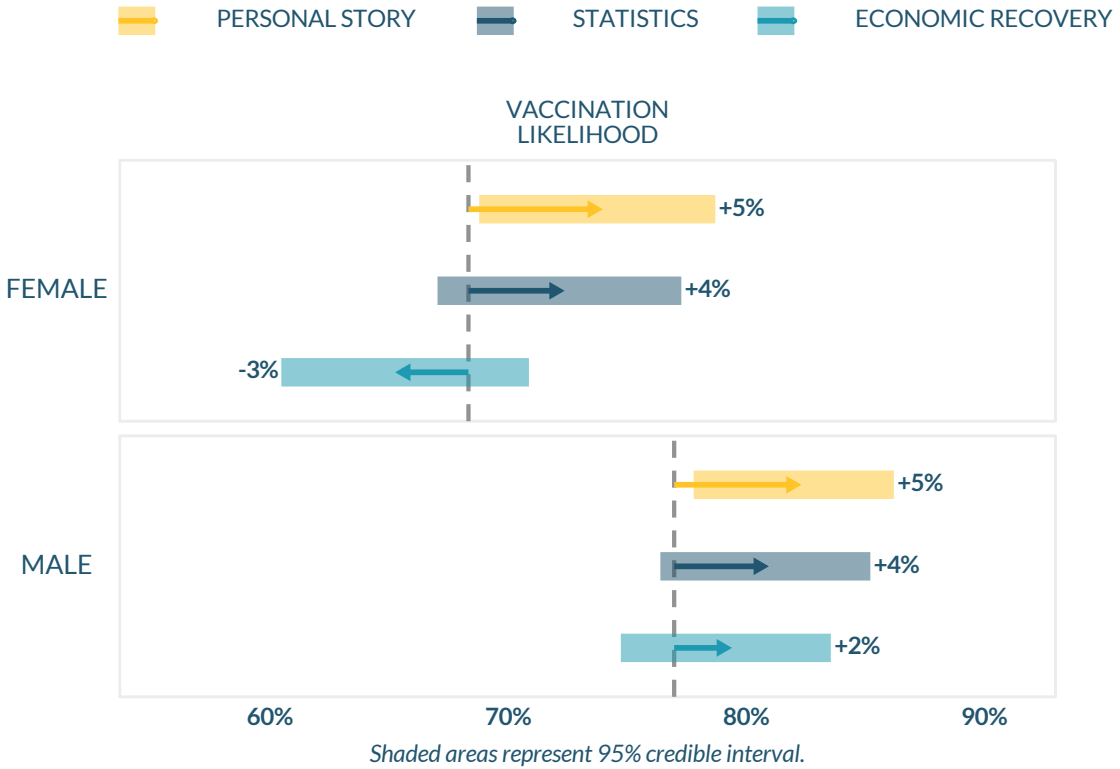


Shaded areas represent 95% credible interval.

GENDER

Women are significantly less likely to say they plan to get a COVID-19 vaccine when it is available.

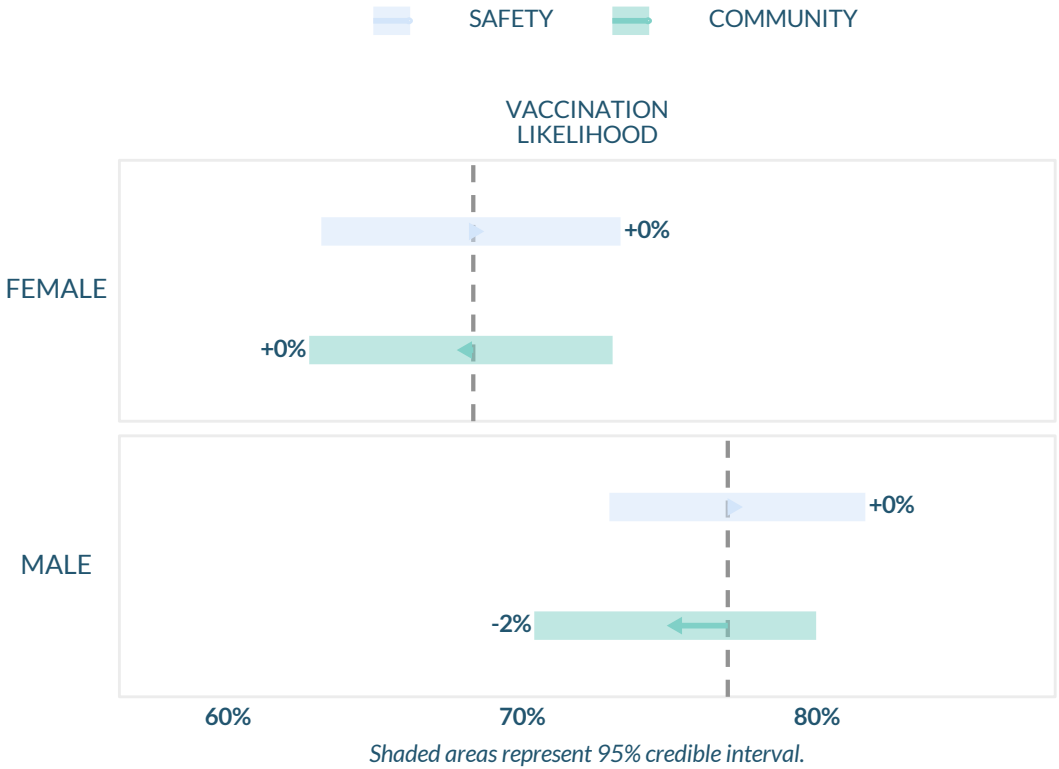
Both men and women are swayed by the “Personal Story” message by +5 percentage points.



Shaded areas represent 95% credible interval.

GENDER

When broken down by gender, the impact of both “Safety” and “Community” messages have no discernable impact on likelihood to vaccinate.

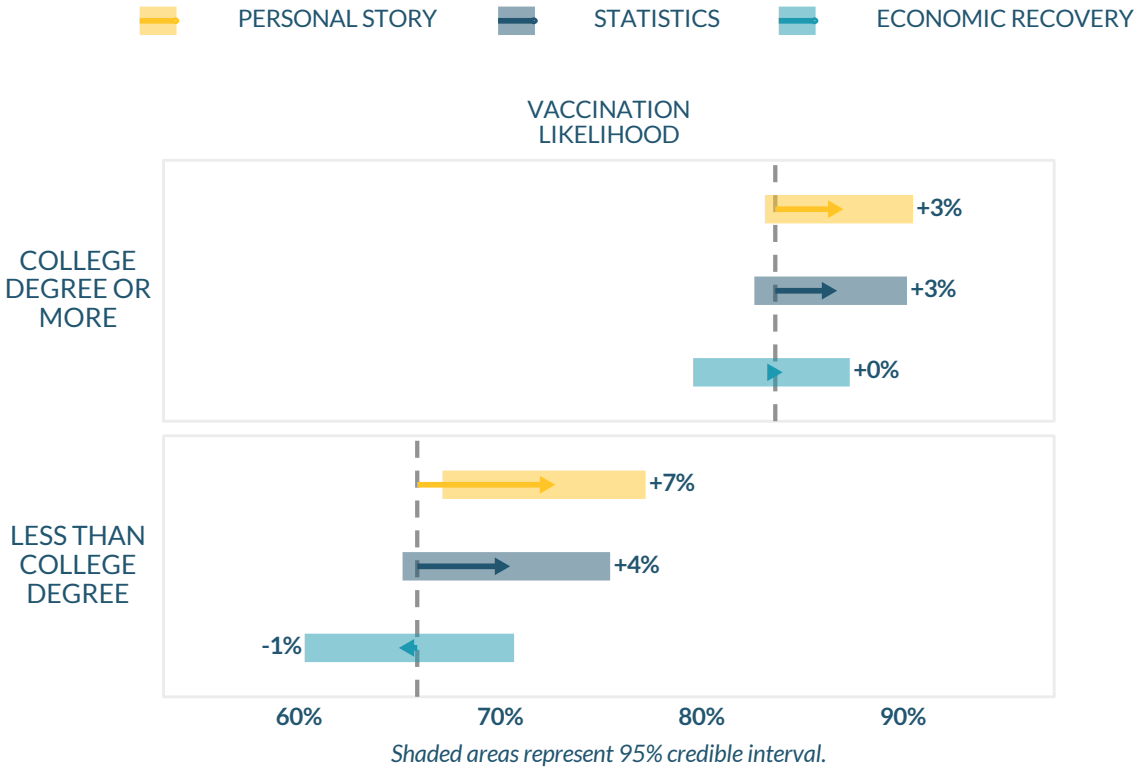


Shaded areas represent 95% credible interval.

EDUCATION

Those with less than a college education are significantly less likely to say they plan to get a COVID-19 vaccine when it is available.

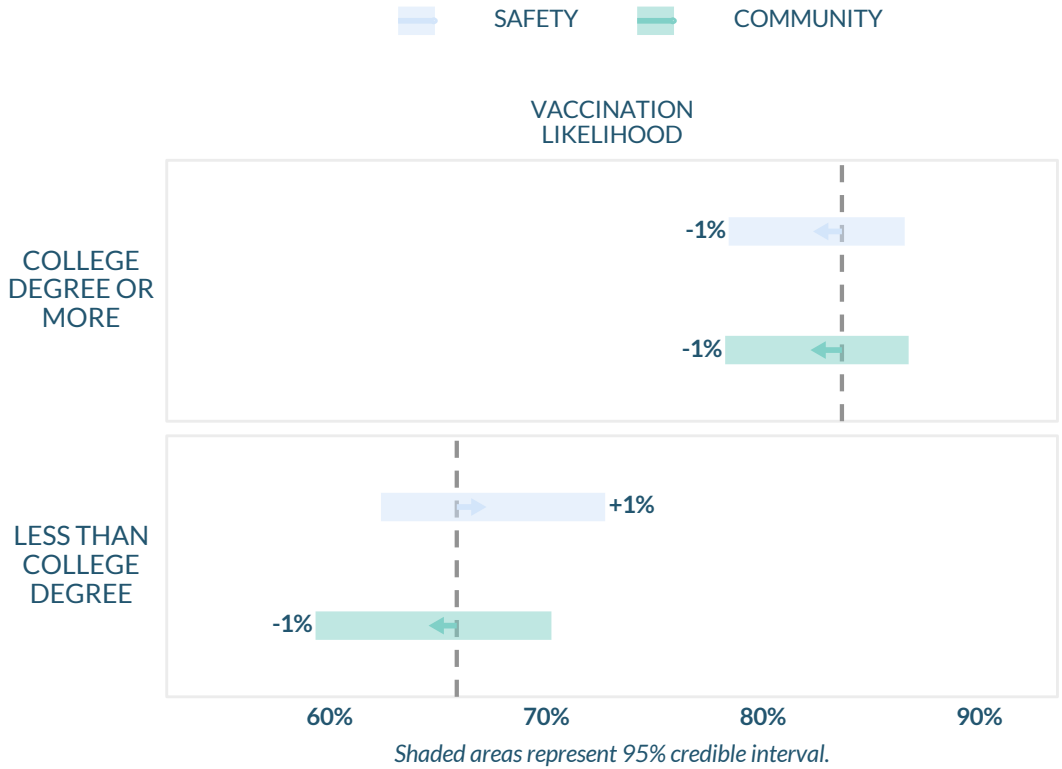
However, the “Personal Story” message has one of the highest impacts on vaccination likelihood for this group, increasing likelihood by 7 percentage points.



Shaded areas represent 95% credible interval.

EDUCATION

When broken down by education, both the “Safety” and “Community” messages have no discernable impact on the likelihood to vaccinate.

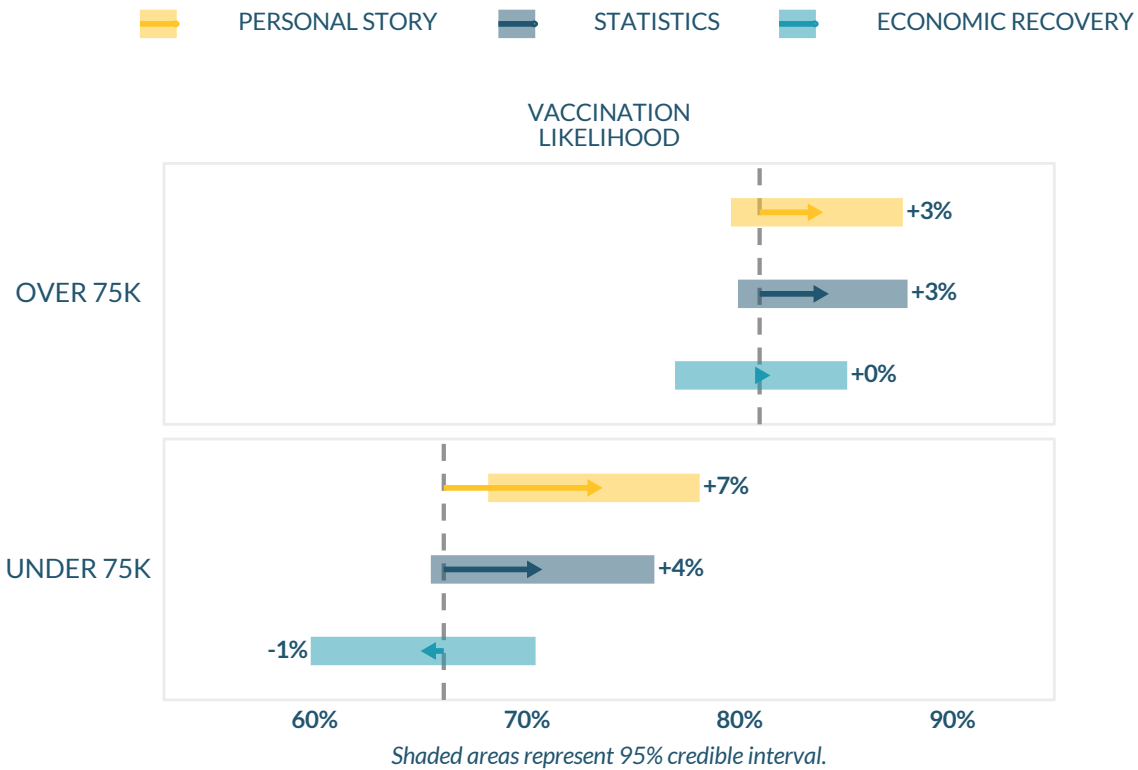


Shaded areas represent 95% credible interval.

INCOME

Those who make less than $75k are significantly less likely to say they plan to get a COVID-19 vaccine when it is available.

However, the “Personal Story” message has one of the highest impacts on likelihood to vaccinate for this group, increasing likelihood by 7 percentage points.



Shaded areas represent 95% credible interval.

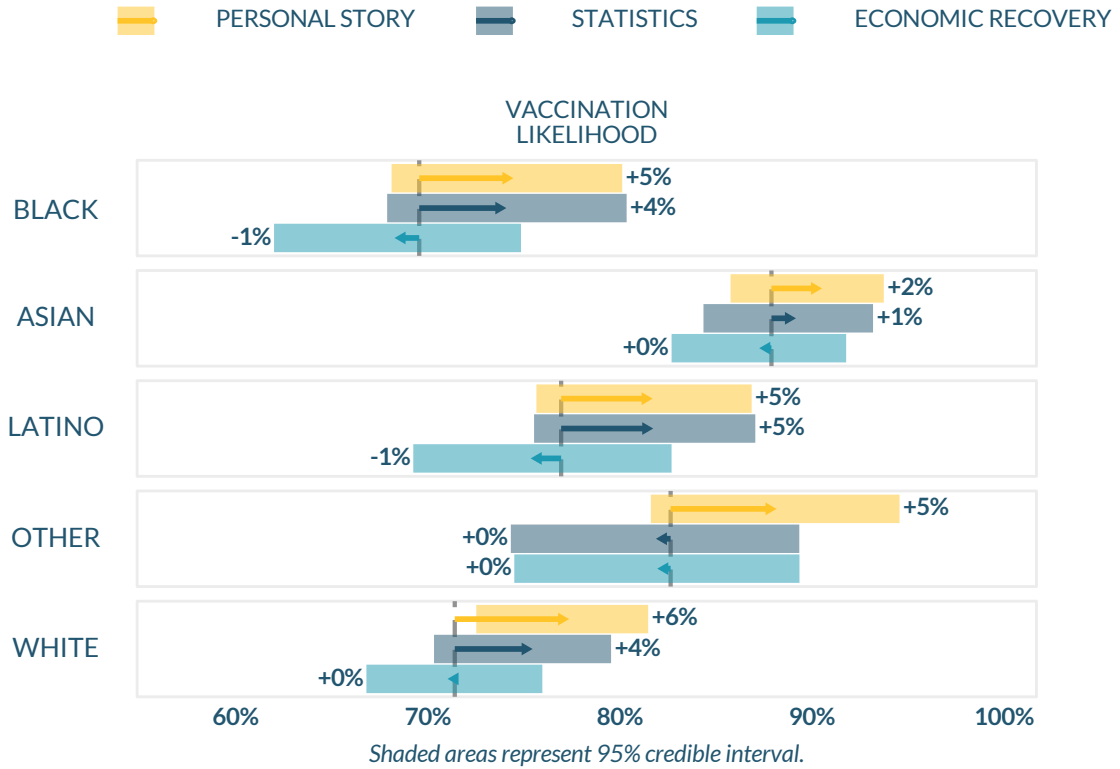
INCOME

When broken down by income, both the “Safety” and “Community” messages have no discernable impact on likelihood to vaccinate.

RACE

Black and white respondents are significantly less likely to say they plan to get a COVID-19 vaccine when it is available.

The “Personal Story” message has a significant impact on vaccination likelihood for white respondents, increasing likelihood by 6 percentage points.



Shaded areas represent 95% credible interval.

RACE

When broken down by race, both the “Safety” and “Community” messages have no discernable impact on likelihood to vaccinate.

URBANICITY

Rural respondents are significantly less likely to say they plan to get a COVID-19 vaccine when it is available.

The “Personal Story” message has a significant impact on vaccination likelihood for rural and urban respondents, increasing likelihood by 5-8 percentage points.

Shaded areas represent 95% credible interval.

URBANICITY

When broken down by urbanicity, both the “Safety” and “Community” messages have no discernable impact on the likelihood to vaccinate.

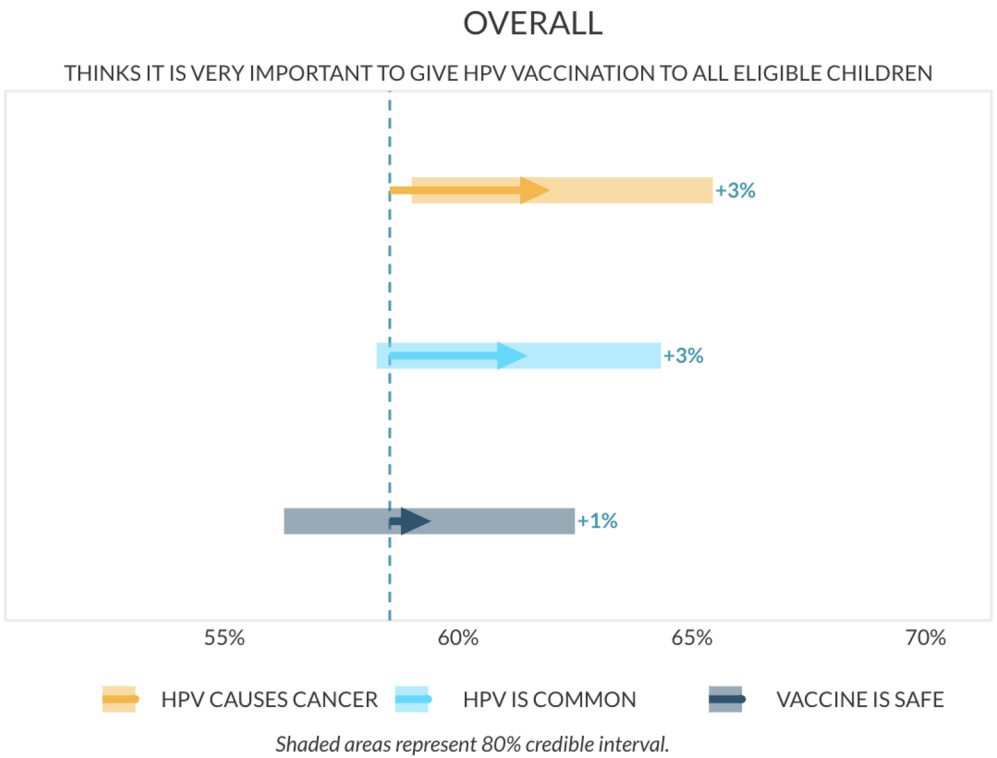
Shaded areas represent 95% credible interval.

Comparison to previous vaccine research

2019 HPV vaccine study (here)

In 2019, we ran a similar experiment on messaging in support of the HPV vaccine.

Safety messaging was also ineffective at increasing support for HPV vaccination. We found that it can even potentially cause negative backlash, or a net decrease in support.



2018 Flu vaccine study (here)

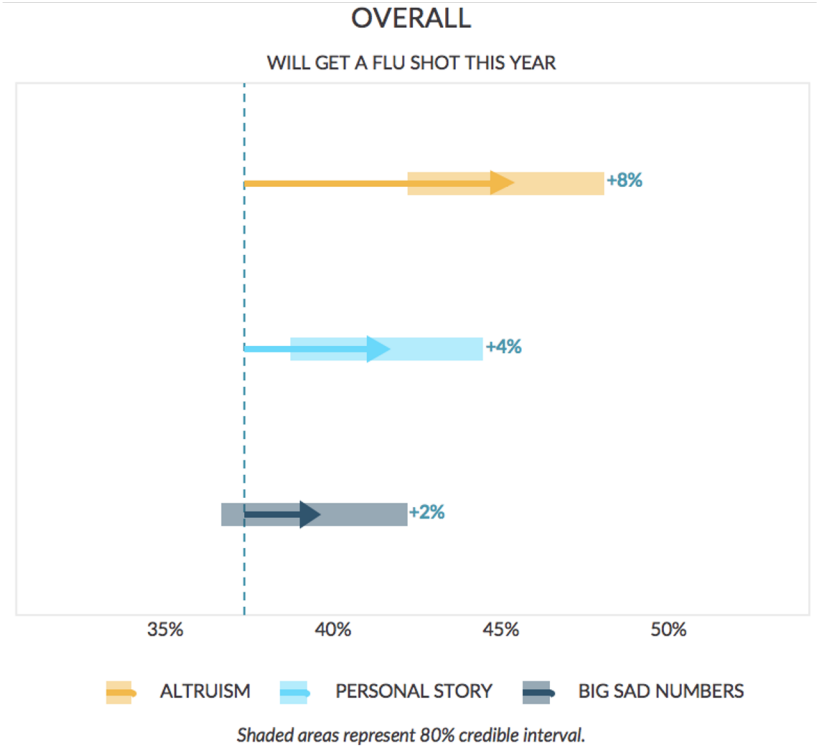
In 2018, we ran a similar experiment on messaging in support of the flu shot.

Differences:

- A message focusing on community (here we called it “altruism”) was most effective for the flu shot, contrasting with our findings around COVID-19 vaccination (where this approach was ineffective).

Similarities:

- Focusing on a personal story also increased likelihood to get the flu shot.



Glossary

Average Treatment Effect (ATE) *The difference in probability of endorsing the dependent variable between treatment and control groups.*

Baseline *The probability of endorsing the dependent variable in the control group.*

Backlash *A negative treatment effect.*

Backlash Probability *The probability of a treatment effect is negative (does not sum to 1). The probability is computed using statistical modeling.*

Best Message Probability *The probability a treatment has the largest treatment effect (sums to 1). This probability is computed using statistical modeling.*

Credible Interval *The probability the 'true' treatment effect is within this interval. If the interval width is e.g. 95% , then 95% of the time the true treatment effect given the priors and data. The larger the interval, the more uncertainty an estimate has. The width of the interval decreases as the sample size increases.*

A confidence interval is a similar indicator of uncertainty, but is less interpretable: If this study is repeated many times, e.g. 95% of the intervals will contain the 'true' treatment effect.

Thank you

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