How Employers Should Talk About the COVID-19 Vaccine

Civis Analytics

Fielded January 26, 2021

Since Civis Analytics' first COVID-19 vaccine [message test in August 2020](#), there has been remarkable progress on the development and authorization of not just one, but two effective vaccines against SARS-CoV-2 (COVID-19).

It is critical to overcome vaccine hesitancy and ensure that as many people get vaccinated as possible. While we have seen overall intent to get vaccinated go up slightly across the nation in the last few months, there is still a lot of convincing to do, especially in certain communities, many of whom are at the highest risk already. According to recent Civis estimates, roughly a quarter of U.S. adults still say they won't get vaccinated, and this number is even higher among Black Americans, those without a college degree, those making less than $75K a year, and those in rural areas.

Well-designed, rapid experiments, like the one we conducted here, can show us how to persuasively communicate the importance of vaccination to the groups that most need it.

Employers have an important role to play in educating employees, but they must understand the nuances of the audience they are engaging: there is no one-size-fits-all approach. We recommend each business conduct targeted research to understand its employee base; a national audience broken down by key sub-groups provides a starting point in understanding what is persuasive and what may backfire.

Thank you to the U.S. Chamber of Commerce Foundation for its assistance in shaping the various employer approaches we tested.

To further discuss this research -- and the role of message testing in vaccination campaigns -- you can reach me at cson@civisanalytics.com.

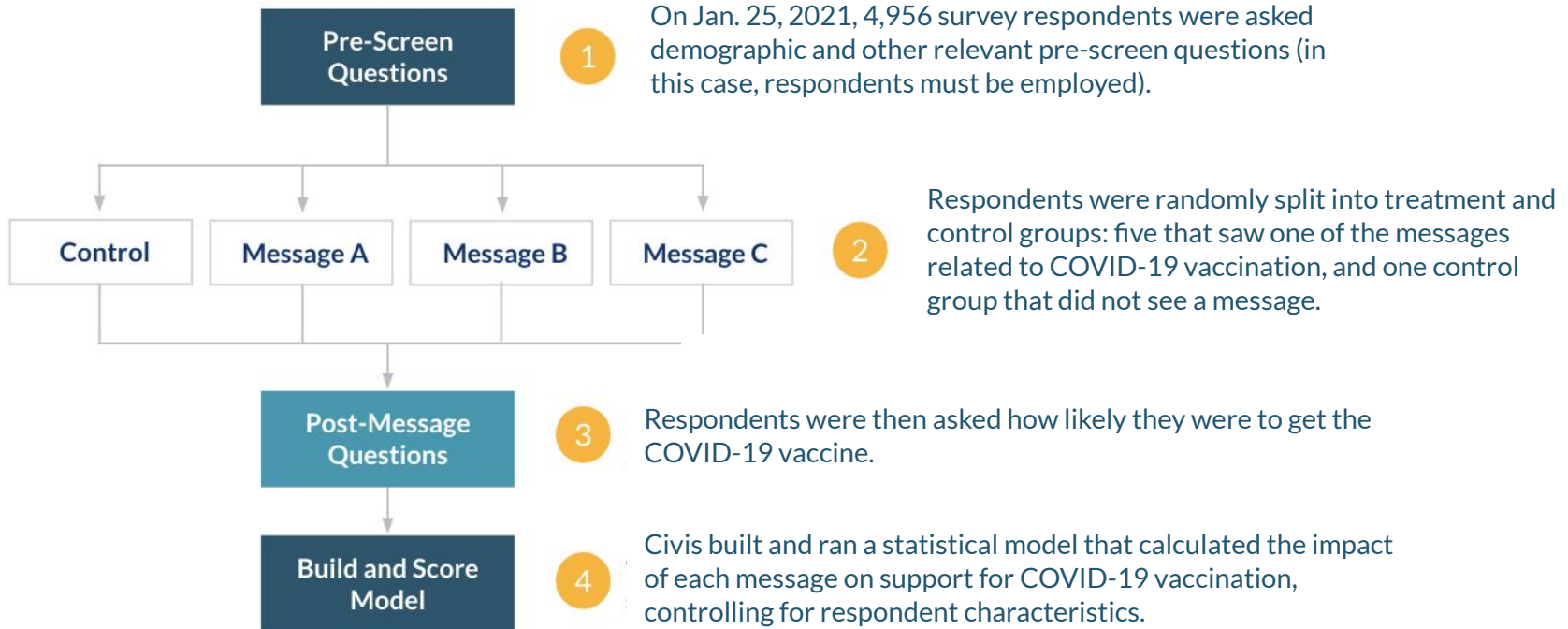*-Crystal Son, MPH, Director of Healthcare Analytics, Civis Analytics*

Current Landscape (according to the latest Civis survey research)

- While intent to vaccine has gone up slightly in 2021, our latest research shows that **42-49%** of the population either **would not** get the vaccine **(26-32%)** or are **unsure (16-17%)**.

- Employers can play an important role in increasing uptake of the vaccine -- overall, they are seen as more trustworthy than the government.

  - When asked whether they trust their employers to deliver accurate information about COVID-19 vaccines, about a third of people said that they *Strongly Agreed*.

  - This was lower than their trust in family / friends and medical experts, higher than their trust in the government and religious leaders, and about the same as their trust in drugmakers / pharmaceutical companies.

- Our research shows that the majority **(59%)** of people believe that employers *should* talk to their employees about the COVID-19 vaccine and encourage them to get vaccinated. This attitude increases with higher age, education and income. Only **43%** of people, however, believe that vaccination should actually be mandated by their employers.

  - Generally, older, more educated, higher-income individuals are more likely to believe that employers should talk to their employees about vaccination.

Methodology

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

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Pre-Screen
Questions
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1 On Jan. 25, 2021, 4,956 survey respondents were asked demographic and other relevant pre-screen questions (in this case, respondents must be employed).

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Control   Message A   Message B   Message C
```

2 Respondents were randomly split into treatment and control groups: five that saw one of the messages related to COVID-19 vaccination, and one control group that did not see a message.

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Post-Message
Questions
```

3 Respondents were then asked how likely they were to get the COVID-19 vaccine.

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Build and Score
Model
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4 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

Civis worked with the U.S. Chamber of Commerce Foundation to align on a set of messages that reflect various employer approaches to vaccine communication. Each message, delivered from the point of view of an employer, described the importance of vaccination but emphasized a different reason for why vaccination is important.

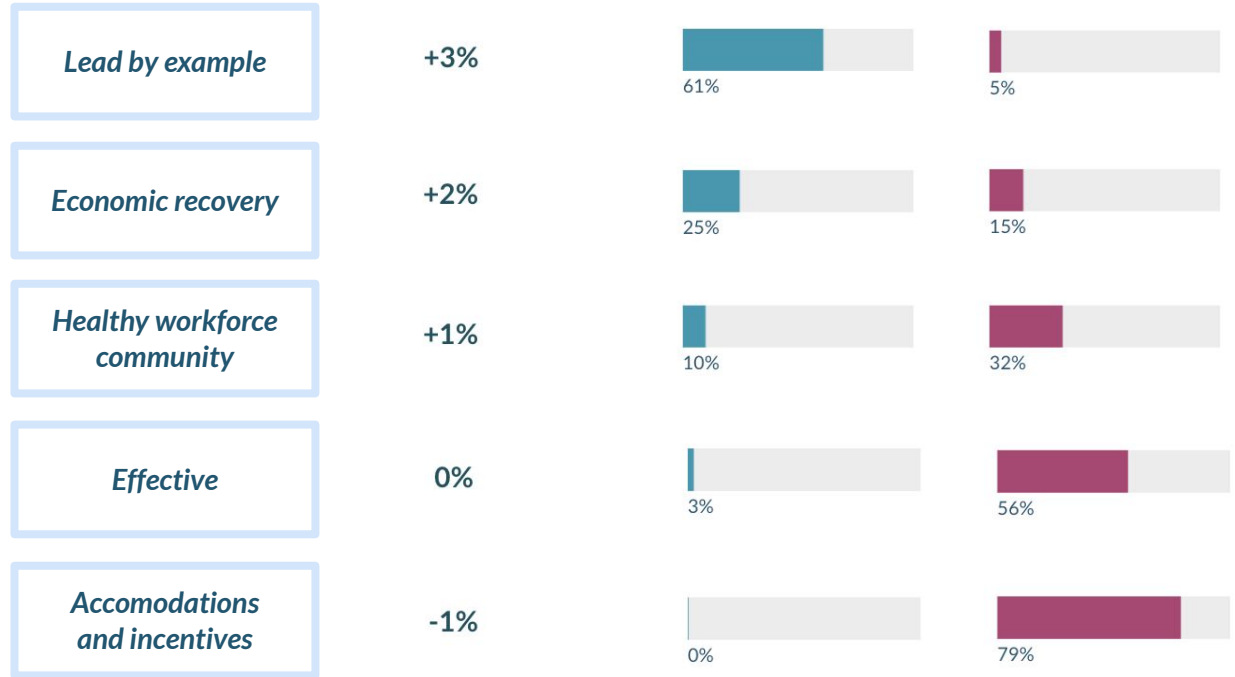| Effective	Economic recovery	Healthy workforce community	Accommodations and incentives	Lead by example
The *Effective* message focused on how both of the COVID vaccines that are currently available to take in the U.S. have been demonstrated to protect against infection, serious illness and death.	The *Economic Recovery* message emphasized the vaccine's role in improving the economy and job security.	The *Healthy Workforce* message emphasized the vaccine's ability to protect co-workers and other community members.	The *Accommodations and Incentives* message highlighted that the vaccine will be free and that employers are considering ways to make the process as easy as possible via education, convenient scheduling, and, in some cases, incentives.	The *Leading by Example* message emphasized company leadership getting vaccinated when they are eligible, in solidarity with the rest of the organization.

Key Findings

Key Findings

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) of each message 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*.
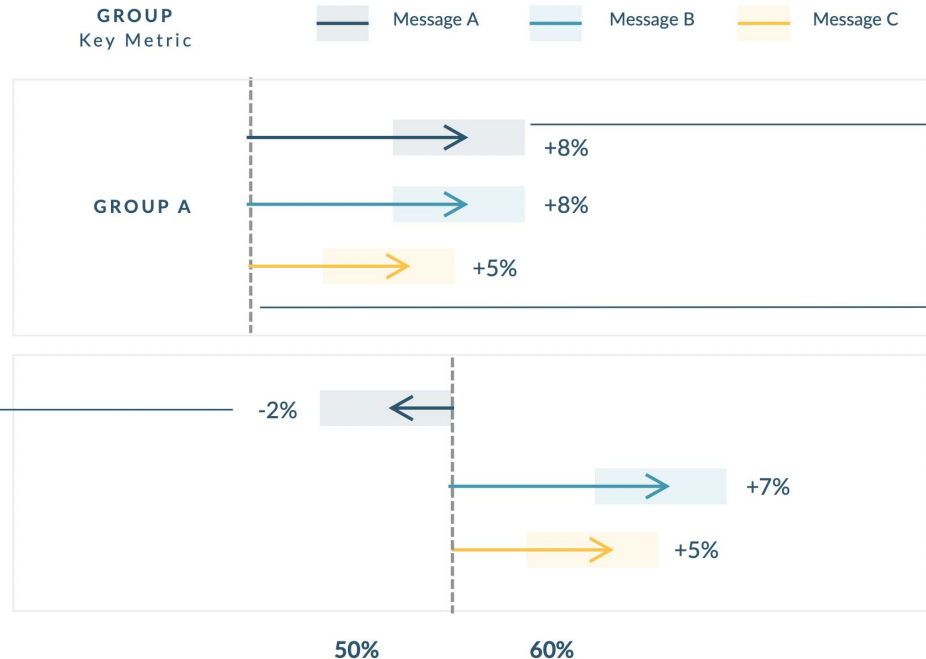
Lead by example	+3%	61%	5%
Economic recovery	+2%	25%	15%
Healthy workforce community	+1%	10%	32%
Effective	0%	3%	56%
Accomodations and incentives	-1%	0%	79%

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.

GROUP
Key Metric

Message A   Message B   Message C

GROUP A

+8%

+8%

+5%

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.
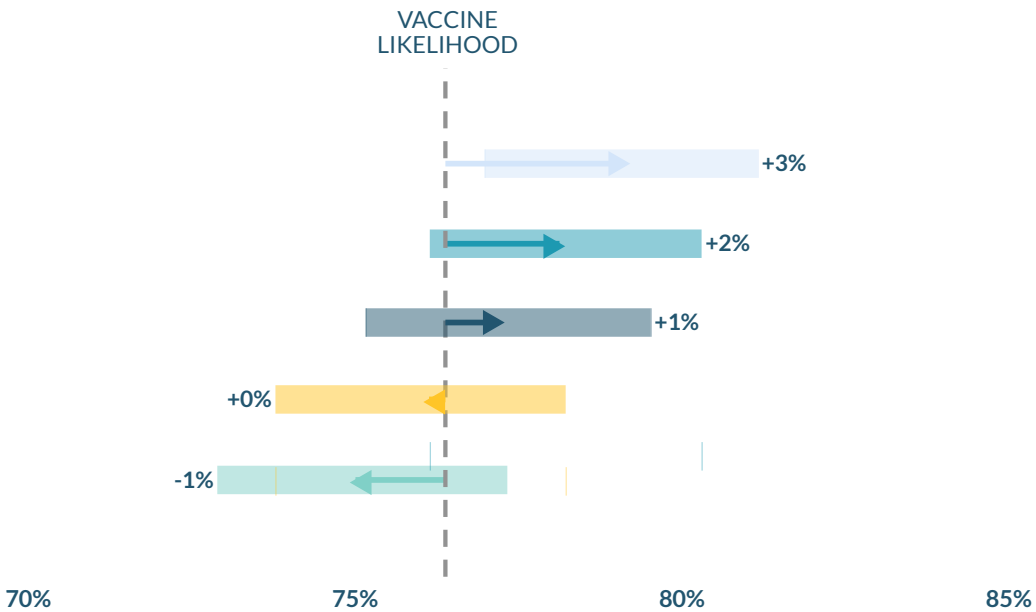
Average treatment effect (ATE)

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

-2%

+7%

+5%

50%   60%

Key Findings

"Leading by Example" increased the average likelihood to take a vaccine for Coronavirus compared to the control group by a statistically significant 3 percent, with no probability for negative backlash.

This was followed by the messages "Economic Recovery" and "Healthy Workforce Community," which were effective only with specific sub-groups. The last two messages, "Effective" and "Accommodations and Incentives," each had a higher probability of decreasing the average likelihood to take a vaccine for Coronavirus.

In addition to these findings overall, there were some differences in message effectiveness for particular sub-groups as well.

LEADING BY EXAMPLE   **ECONOMIC RECOVERY**   **HEALTHY WORKFORCE COMMUNITY**   **EFFECTIVE**   **ACCOMMODATIONS AND INCENTIVES**

VACCINE LIKELIHOOD

+3%
+2%
+1%
+0%
-1%

70%   75%   80%   85%

Shaded areas represent 95% credible interval.

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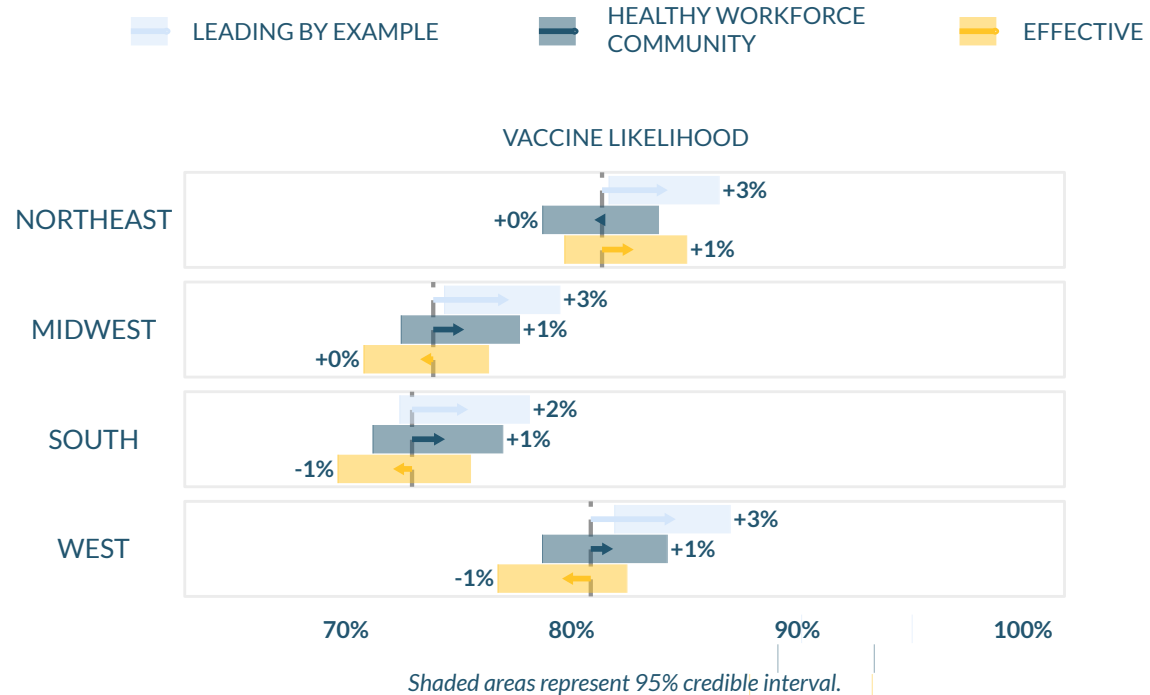
10

Recommendations Based on This Research

- Our results suggest that if an organization's leadership are eligible to get vaccinated, they should be encouraged to do so, and proactively share this with employees.

- In other tests, we've seen messages highlighting vaccine effectiveness are persuasive. To understand why this approach had no discernible impact in this experiment would require deeper exploration, but we believe it has to do with the messenger: employees would trust this particular message more if it were delivered by a medical expert over their employers.

- Employers may want to avoid messages that feature special accommodations and incentives, which backfired among some sub-groups. Because the goal of our test was to identify generalizable insights that most or all employers could find useful, the message we tested did not mention specifics - e.g. it did not mention paid time off or a $5 gift card. It is possible that this message would have been more persuasive if it contained more details, and is worth exploring further.

- Some messages worked or did not work particularly well for specific subgroups. For example, Economic Recovery was an effective message for female-identifying respondents (slide 18). Prior to initiating company-wide communications, we recommend understanding the composition of a workforce and whether it closely resembles the general population or if it is predominantly comprised of one or more subgroups and more tailored messaging is needed.

Treatment Effects by Demographic

REGION

"Leading by Example" remains the most persuasive message, with negligible variations across regions.

LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE

VACCINE LIKELIHOOD

NORTHEAST
+3%
+0%
+1%

MIDWEST
+3%
+1%
+0%

SOUTH
+2%
+1%
-1%

WEST
+3%
+1%
-1%

70%   80%   90%   100%

Shaded areas represent 95% credible interval.

REGION

"Accommodations and Incentives" has slightly higher backlash among employees in the Northeast.
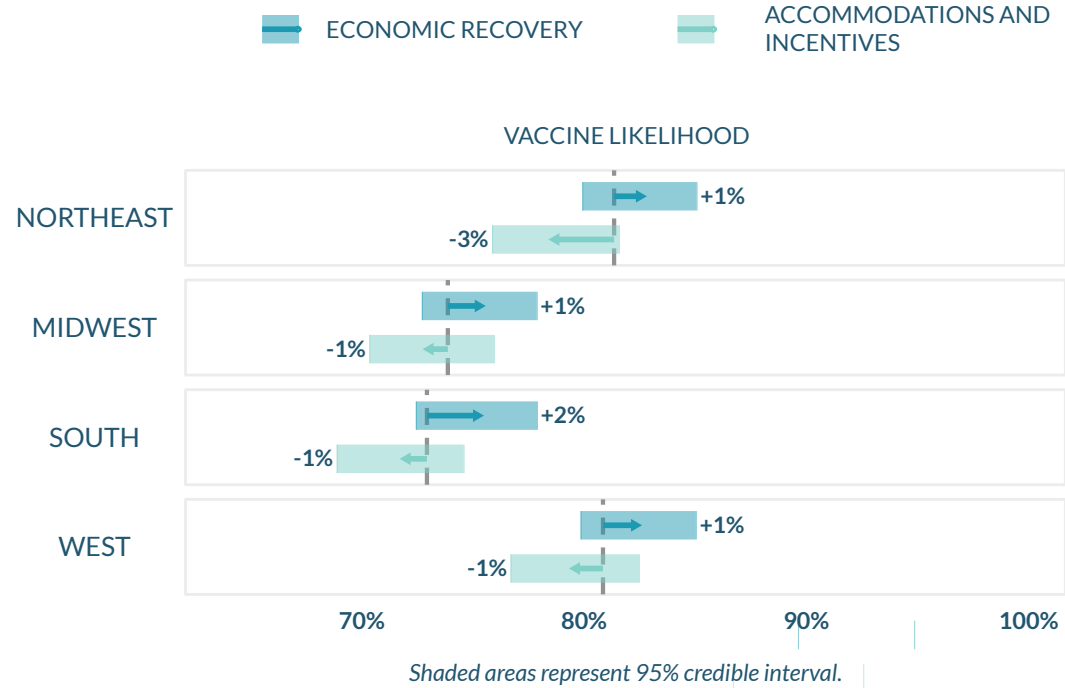
ECONOMIC RECOVERY   ACCOMMODATIONS AND INCENTIVES

VACCINE LIKELIHOOD

NORTHEAST   +1%   -3%

MIDWEST   +1%   -1%

SOUTH   +2%   -1%

WEST   +1%   -1%

70%   80%   90%   100%

Shaded areas represent 95% credible interval.

AGE

"Leading by Example" remains the most persuasive message overall, though "Healthy Workforce Community" may be more effective with younger employees.

VACCINE LIKELIHOOD

LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE

18-34
- +3%
- +2%
- -1%

35-49
- +4%
- +0%
- -1%

50-64
- +1%
- +0%
- +0%

65 OVER
- +3%
- +0%
- +1%

60% 70% 80% 90%
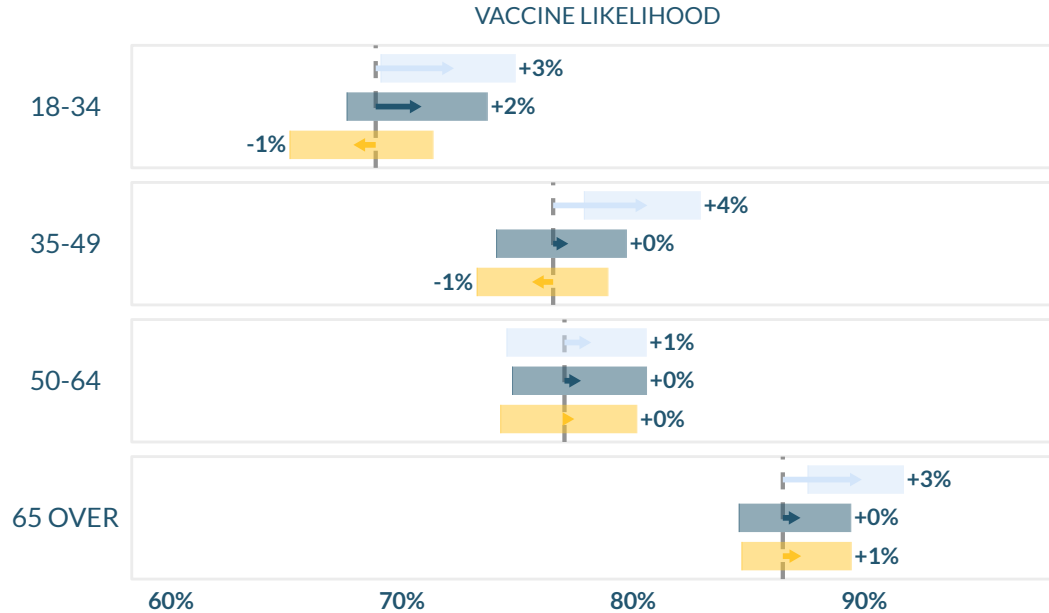
Shaded areas represent 95% credible interval.

AGE

"Economic Recovery" is an effective message among employees aged 50-64.

VACCINE LIKELIHOOD

ECONOMIC RECOVERY   ACCOMMODATIONS AND INCENTIVES

18-34   +2%   -2%
35-49   +1%   -2%
50-64   +3%   -1%
65 OVER   +1%   -1%

60%   70%   80%   90%

Shaded areas represent 95% credible interval.

GENDER

LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE
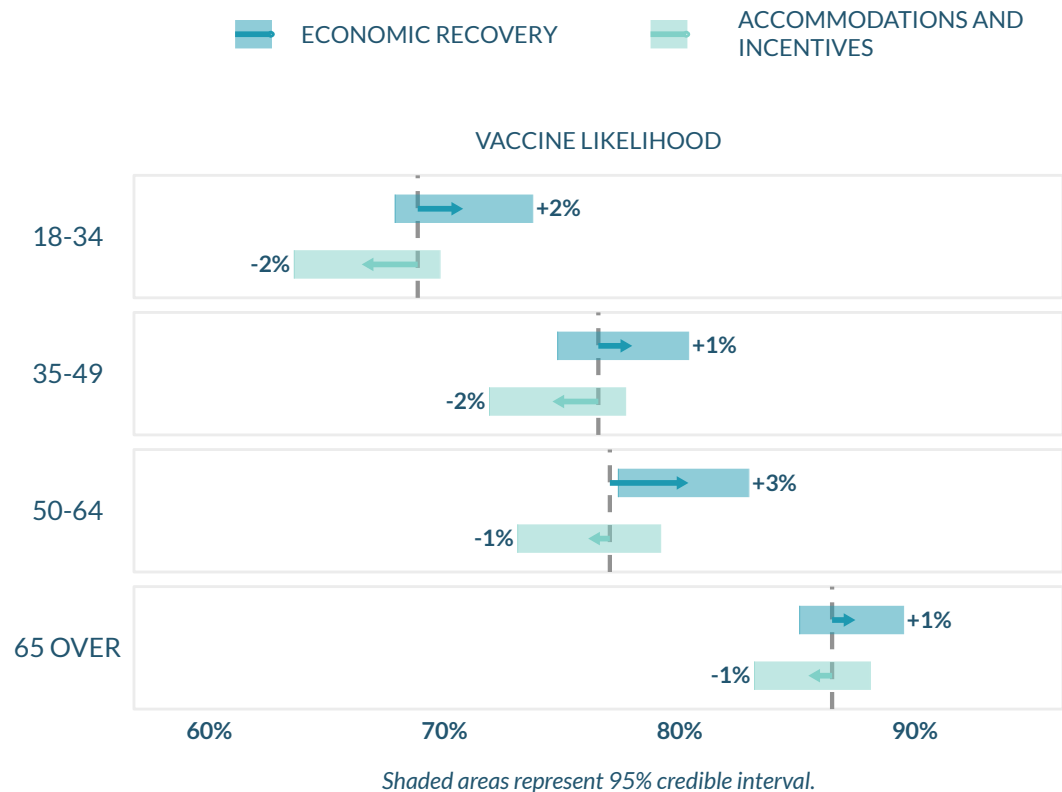
"Leading by Example" is very slightly more effective among female-identifying employees.

VACCINE LIKELIHOOD

FEMALE
- +3%
- +1%
- +0%

MALE
- +2%
- +1%
- +0%

70%   80%   90%

Shaded areas represent 95% credible interval.
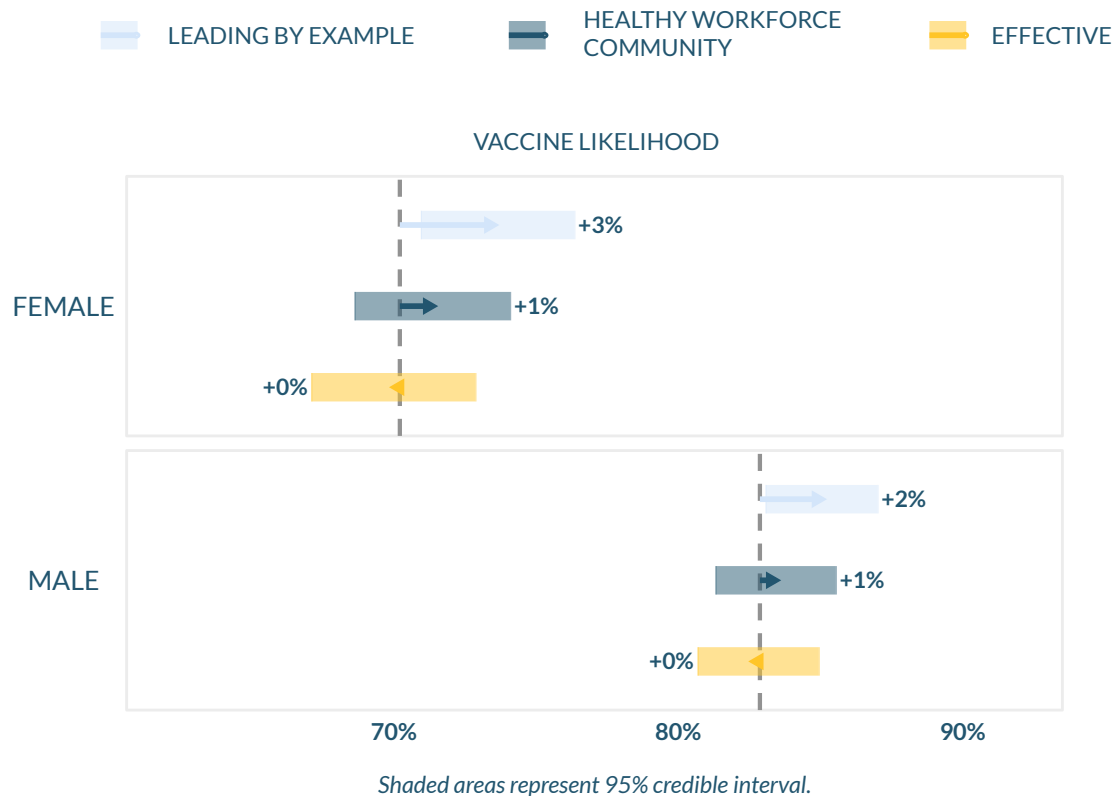
GENDER

Among female-identifying employees, "Economic Recovery" is an effective message and "Accommodations and Incentives" is likely to cause backlash.

ECONOMIC RECOVERY   **ACCOMMODATIONS AND INCENTIVES**

VACCINE LIKELIHOOD

FEMALE

+3%

-3%

MALE

+0%

+0%

60%   70%   80%   90%

Shaded areas represent 95% credible interval.
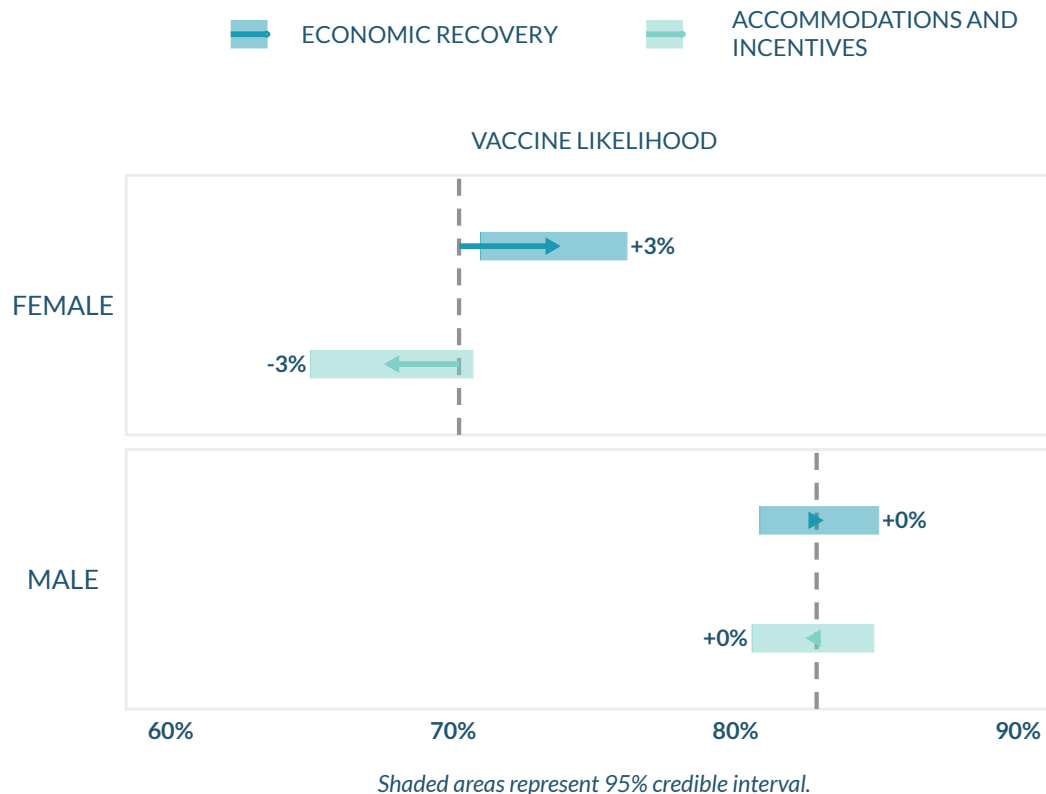
EDUCATION

"Leading by Example" remains the most persuasive message overall, and highlighting the vaccine's effectiveness is more persuasive with college-educated employees.

LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE

VACCINE LIKELIHOOD

LESS THAN COLLEGE DEGREE
- +4%
- +2%
- -2%

COLLEGE DEGREE OR MORE
- +2%
- +0%
- +1%

60%   70%   80%   90%
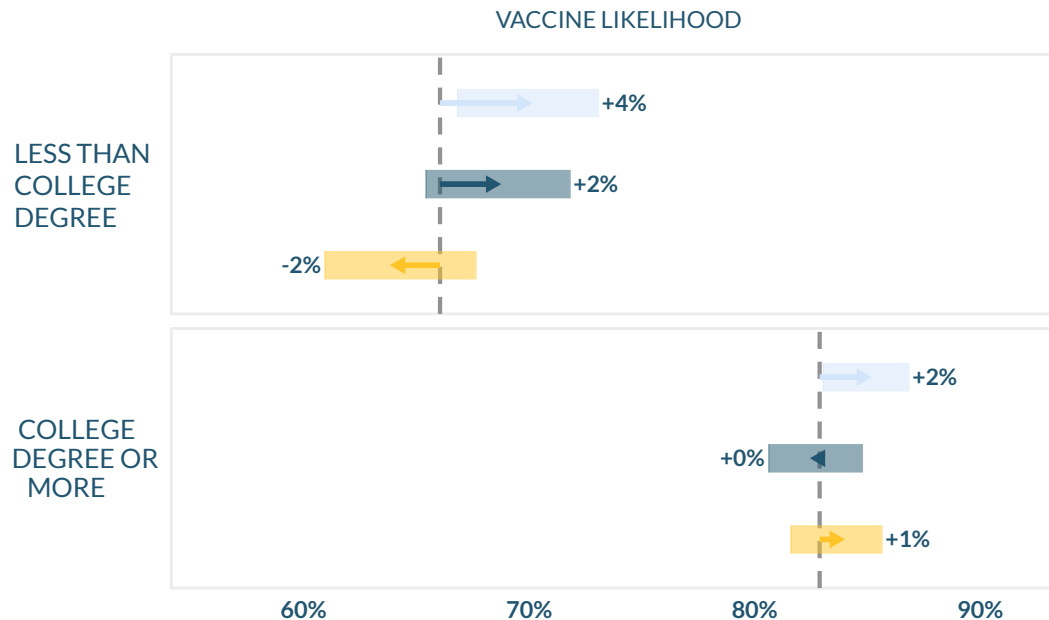
Shaded areas represent 95% credible interval.

EDUCATION

"Economic Recovery" is more effective with college-educated employees.

ECONOMIC RECOVERY   ACCOMMODATIONS AND INCENTIVES

VACCINE LIKELIHOOD

LESS THAN COLLEGE DEGREE

+2%

-1%

COLLEGE DEGREE OR MORE

+2%

-1%

60%   70%   80%   90%

Shaded areas represent 95% credible interval.

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INCOME

"Leading by Example" remains the most persuasive message overall.

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Legend:
- LEADING BY EXAMPLE
- HEALTHY WORKFORCE COMMUNITY
- EFFECTIVE

VACCINE LIKELIHOOD

OVER 75K
- +2%
- +0%
- +0%

UNDER 75K
- +3%
- +1%
- -1%

60%   70%   80%   90%
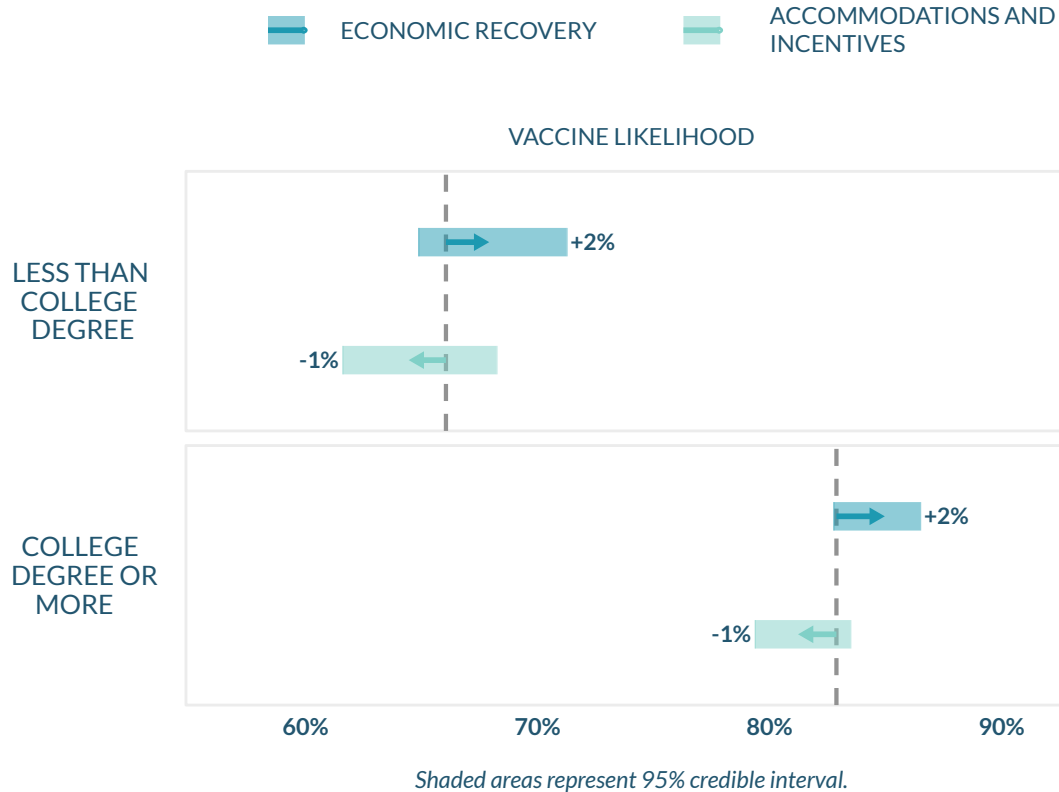
Shaded areas represent 95% credible interval.
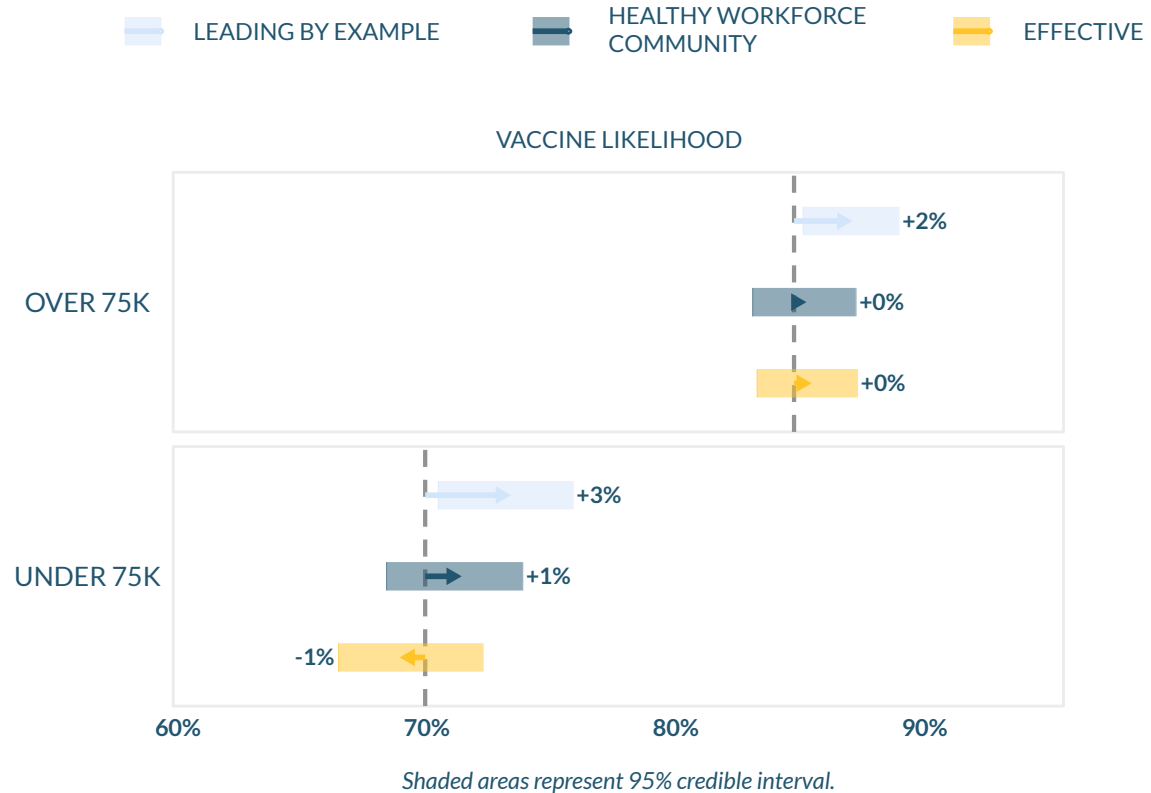
INCOME

"Economic Recovery" is an effective message for employees that make more than $75K/year.

ECONOMIC RECOVERY

ACCOMMODATIONS AND INCENTIVES

VACCINE LIKELIHOOD

OVER 75K

+2%

-1%

UNDER 75K

+2%

-2%

60%   70%   80%   90%

Shaded areas represent 95% credible interval.

RACE

**"Leading by Example"
remains the most
persuasive message
overall.**

LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE

VACCINE LIKELIHOOD

WHITE	Leading by Example	+3%
	Healthy Workforce Community	+1%
	Effective	+0%
BLACK	Leading by Example	+3%
	Healthy Workforce Community	+1%
	Effective	-1%
LATINO	Leading by Example	+3%
	Healthy Workforce Community	+1%
	Effective	+0%
ASIAN	Leading by Example	+2%
	Healthy Workforce Community	+1%
	Effective	+0%
OTHER	Leading by Example	+3%
	Healthy Workforce Community	-2%
	Effective	+1%

60%   70%   80%   90%

Shaded areas represent 95% credible interval.

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RACE

"Economic Recovery" is a more effective message among Latino/Latina employees. "Accommodations and Incentives" is more likely to backfire with Black and Latino/Latina employees.

ECONOMIC RECOVERY   ACCOMMODATIONS AND INCENTIVES

VACCINE LIKELIHOOD

WHITE — +1% / +0%
BLACK — +2% / -3%
LATINO — +4% / -5%
ASIAN — +2% / -2%
OTHER — +0% / -2%

50% 60% 70% 80% 90%

Shaded areas represent 95% credible interval.

24
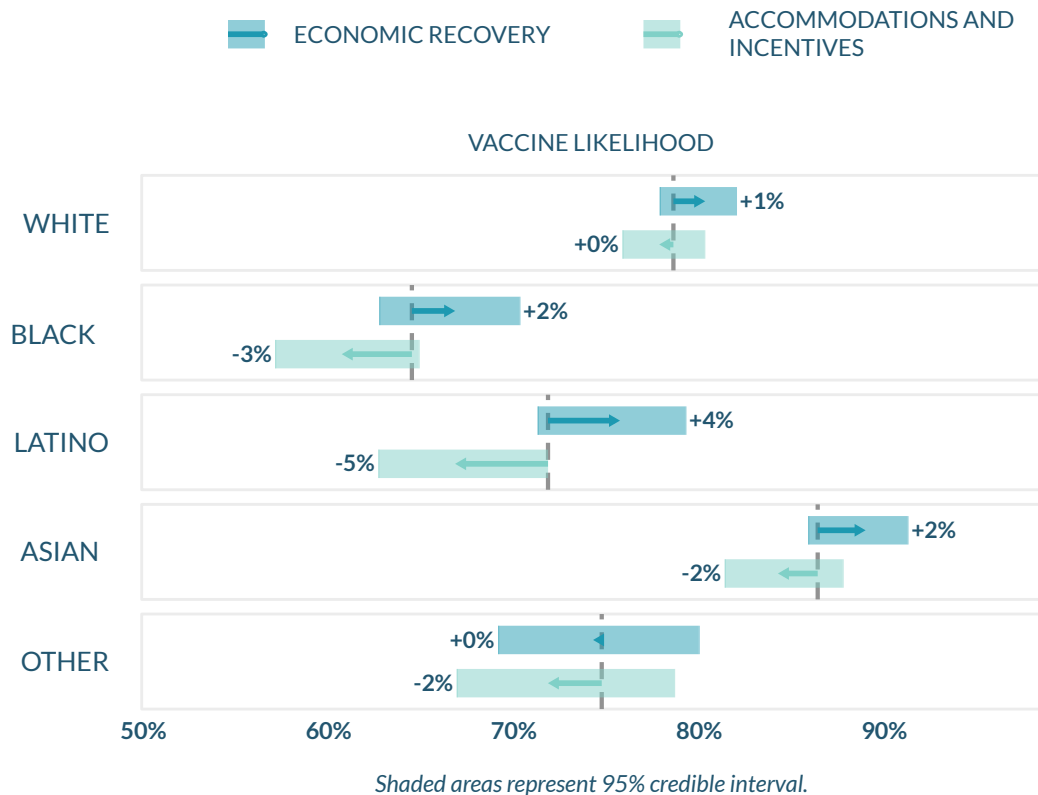
Treatment Effects by Employment

ESSENTIAL WORKERS

LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE

"Leading by Example" remains the most persuasive message.

VACCINE LIKELIHOOD

NO
- +3% (LEADING BY EXAMPLE)
- +1% (HEALTHY WORKFORCE COMMUNITY)
- +0% (EFFECTIVE)

YES
- +3% (LEADING BY EXAMPLE)
- +1% (HEALTHY WORKFORCE COMMUNITY)
- +0% (EFFECTIVE)

70%   75%   80%   85%

Shaded areas represent 95% credible interval.

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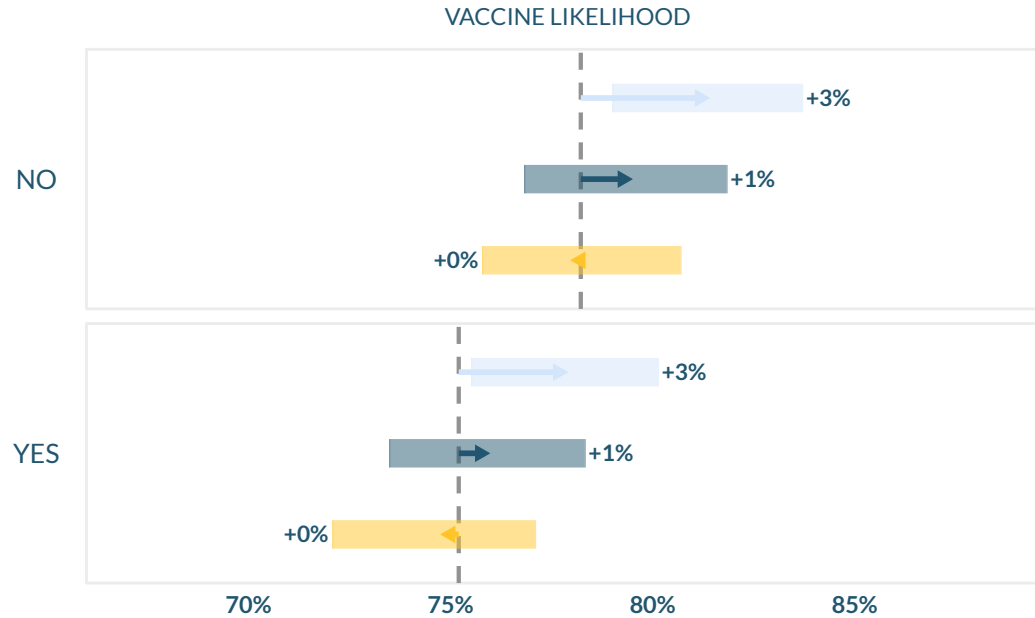
ESSENTIAL WORKERS

ECONOMIC RECOVERY   **ACCOMMODATIONS AND INCENTIVES**

"Economic Recovery" is an effective message amongst non-essential workers.

VACCINE LIKELIHOOD

NO

+3%

-1%

YES

+1%

-2%

65%   70%   75%   80%   85%

Shaded areas represent 95% credible interval.
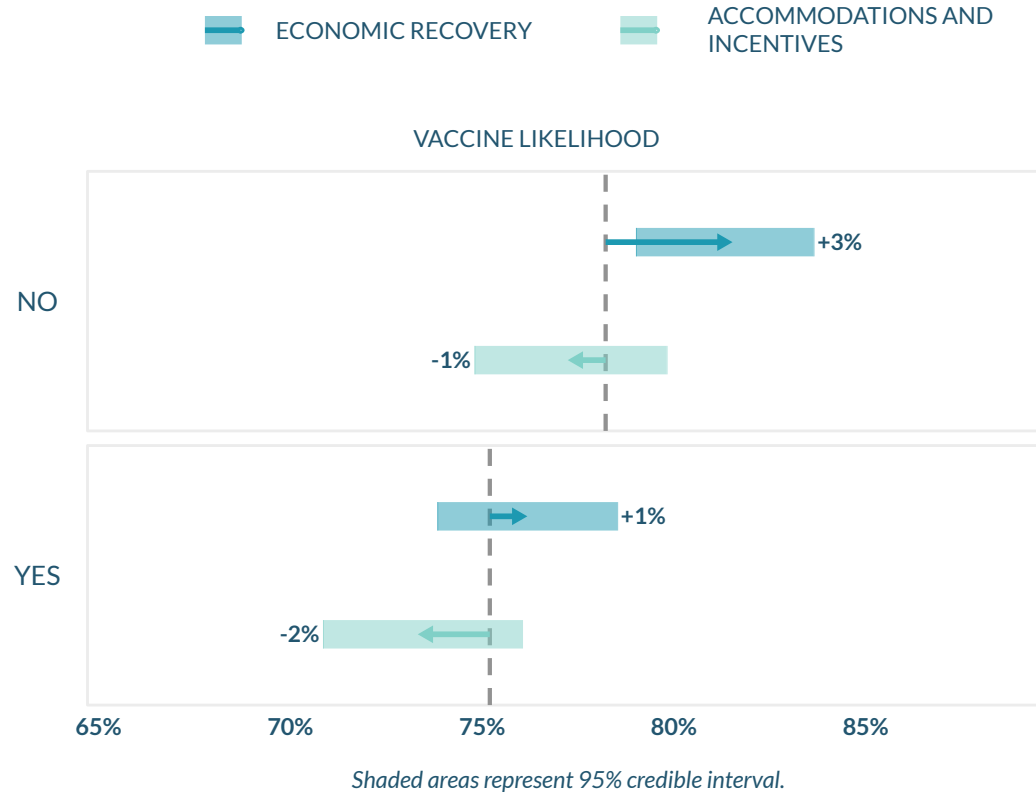
EMPLOYMENT SECTOR

"Leading by Example" remains the most persuasive message.

LEADING BY EXAMPLE

HEALTHY WORKFORCE COMMUNITY

EFFECTIVE

VACCINE LIKELIHOOD

OFFICE TYPE SETTINGS
- +2%
- +1%
- +0%

IT, Real Estate, Government, and Professional Services

HIGH RISK OF EXPOSURE BUT NOT CONSUMER FACING
- +2%
- +2%
- +0%

Food & Agriculture, and Manufacturing

CUSTOMER-FACING VERY PUBLIC SETTINGS, HIGH RISK OF EXPOSURE
- +3%
- +0%
- +0%

Healthcare, Law enforcement, Transportation, Education, Emergency Response, Retail, Childcare and Hospitality

OTHER
- +3%
- +0%
- -1%

Food & Agriculture, and Manufacturing

70%   80%   90%

Shaded areas represent 95% credible interval.

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EMPLOYMENT SECTOR

ECONOMIC RECOVERY   ACCOMMODATIONS AND INCENTIVES

"Economic Recovery" is an effective message for employees that work in public settings around a large number of people.

VACCINE LIKELIHOOD

OFFICE TYPE SETTINGS	+1% / -1%	IT, Real Estate, Government, and Professional Services
HIGH RISK OF EXPOSURE BUT NOT CONSUMER FACING	+0% / +0%	Food & Agriculture, and Manufacturing
CUSTOMER-FACING VERY PUBLIC SETTINGS, HIGH RISK OF EXPOSURE	+3% / -2%	Healthcare, Law enforcement, Transportation, Education, Emergency Response, Retail, Childcare and Hospitality
OTHER	+1% / -2%	Food & Agriculture, and Manufacturing

70%   80%   90%

Shaded areas represent 95% credible interval.

Powered by Civis Creative Focus

WORK ENVIRONMENT

"Leading by Example" remains the most persuasive message.

Legend:
- LEADING BY EXAMPLE
- HEALTHY WORKFORCE COMMUNITY
- EFFECTIVE

VACCINE LIKELIHOOD

INDOORS IN MY OWN SPACE
- +2%
- +1%
- +0%

INDOORS IN A SHARED SPACE
- +3%
- +1%
- +0%

OUTDOORS IN MY OWN SPACE
- +3%
- -1%
- +0%

OUTDOORS IN A SHARED SPACE
- +4%
- +2%
- -1%

60%   70%   80%   90%

Shaded areas represent 95% credible interval.
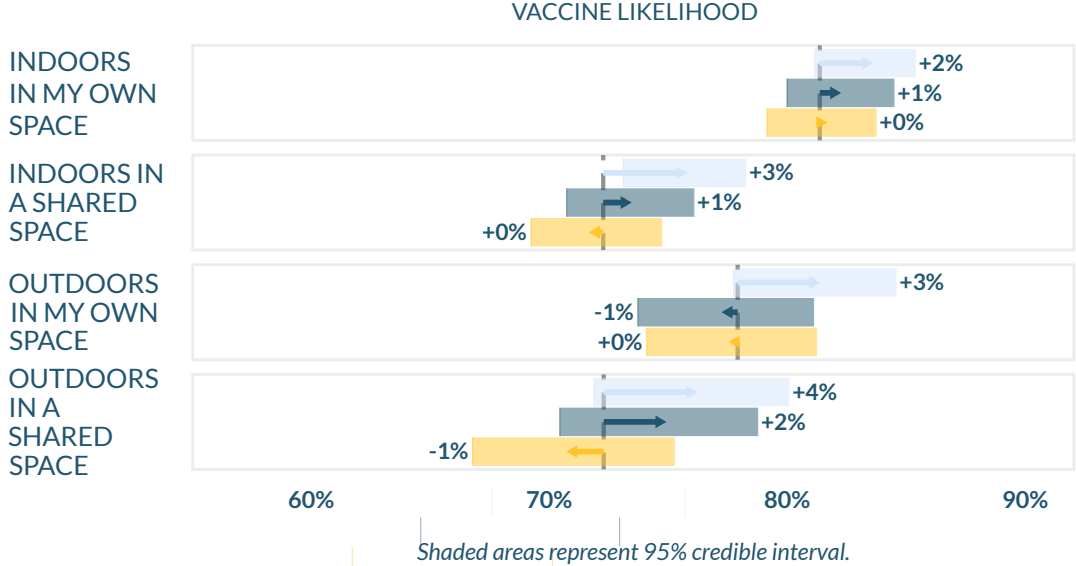
WORK ENVIRONMENT

"Economic Recovery" is more effective with employees that work primarily indoors.

ECONOMIC RECOVERY

ACCOMMODATIONS AND INCENTIVES

VACCINE LIKELIHOOD

INDOORS IN MY OWN SPACE
+2%
-1%

INDOORS IN A SHARED SPACE
+2%
-1%

OUTDOORS IN MY OWN SPACE
+1%
-1%

OUTDOORS IN A SHARED SPACE
-1%
-2%

60%   70%   80%   90%

Shaded areas represent 95% credible interval.
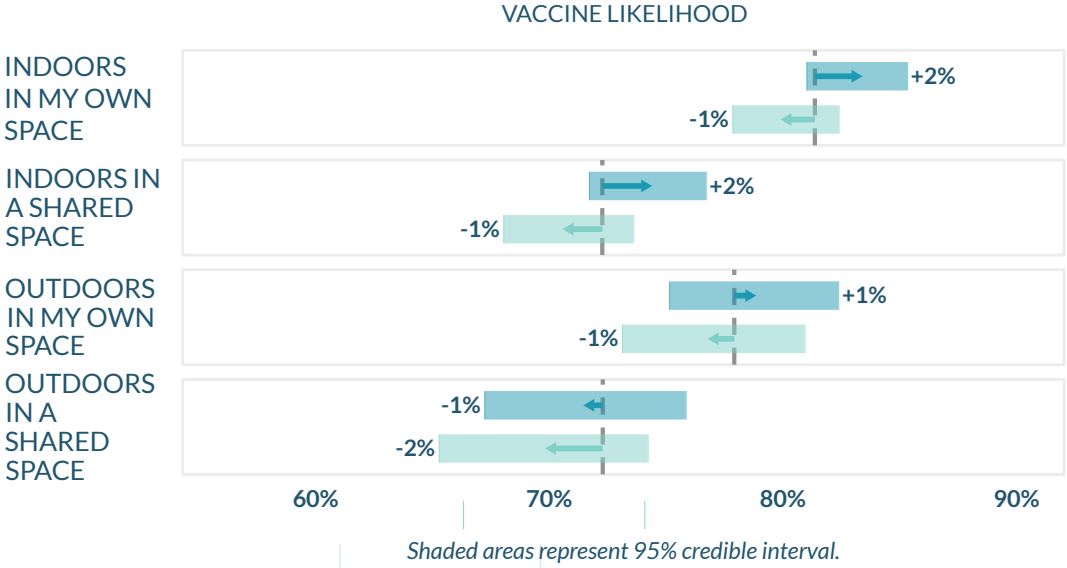
EMPLOYER SIZE

"Leading by Example" remains the most persuasive message, but is more effective with employees at small and mid-sized companies.
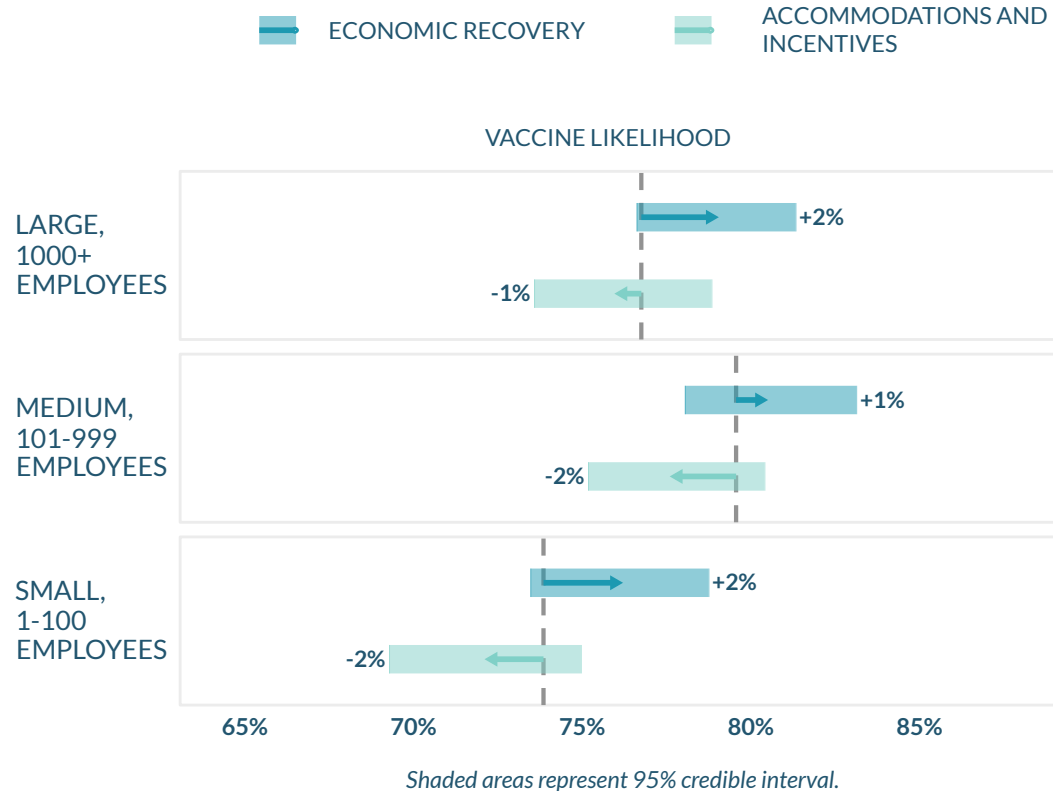

LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE

VACCINE LIKELIHOOD

LARGE, 1000+ EMPLOYEES
- +2%
- +1%
- +0%

MEDIUM, 101-999 EMPLOYEES
- +3%
- +1%
- +1%

SMALL, 1-100 EMPLOYEES
- +3%
- +0%
- -1%

65%   70%   75%   80%   85%   90%

Shaded areas represent 95% credible interval.

Powered by Civis Creative Focus

EMPLOYER SIZE

"Economic Recovery" is an effective message for employees at large companies.

ECONOMIC RECOVERY   ACCOMMODATIONS AND INCENTIVES

VACCINE LIKELIHOOD

LARGE, 1000+ EMPLOYEES	+2%
	-1%
MEDIUM, 101-999 EMPLOYEES	+1%
	-2%
SMALL, 1-100 EMPLOYEES	+2%
	-2%

65%   70%   75%   80%   85%

Shaded areas represent 95% credible interval.

Treatment Effects by COVID-19 Impact

COVID DIAGNOSIS

LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE

"Leading by Example" remains the most persuasive message.

VACCINE LIKELIHOOD

NOT SURE
- +5%
- +0%
- +0%

NO, DID NOT HAVE COVID
- +3%
- +1%
- +0%

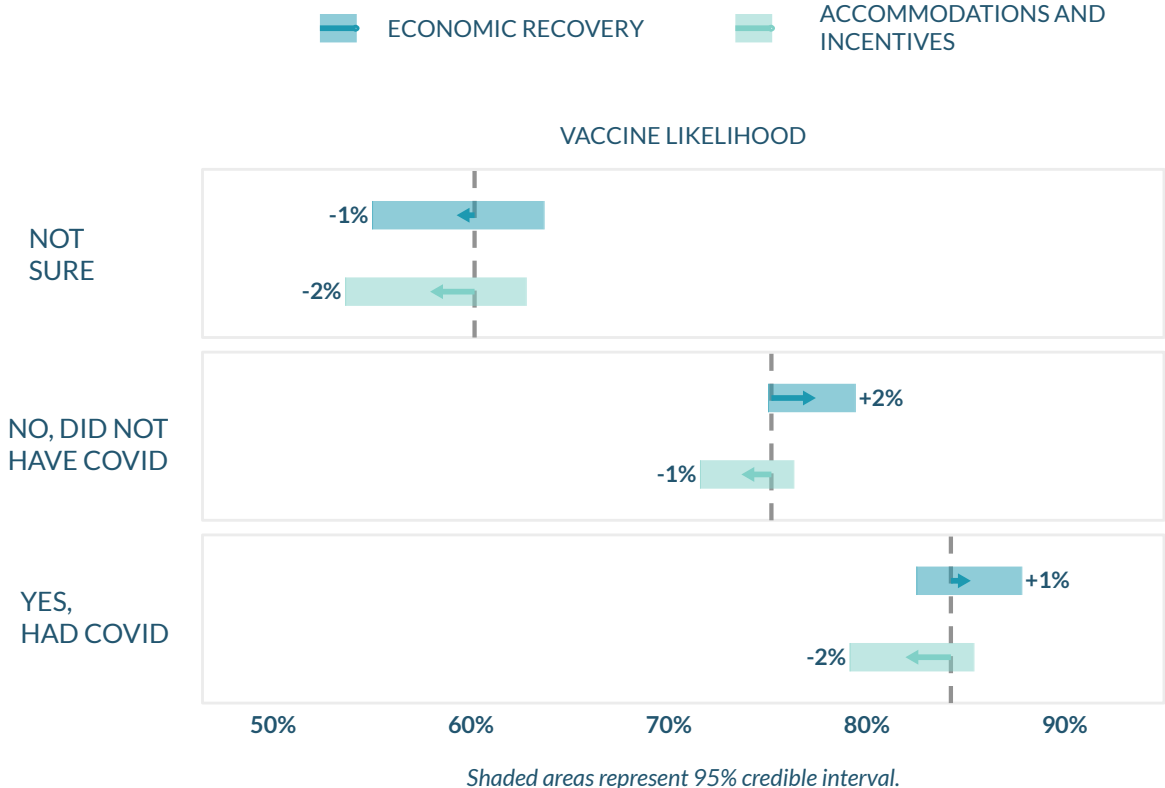YES, HAD COVID
- +3%
- +0%
- +0%

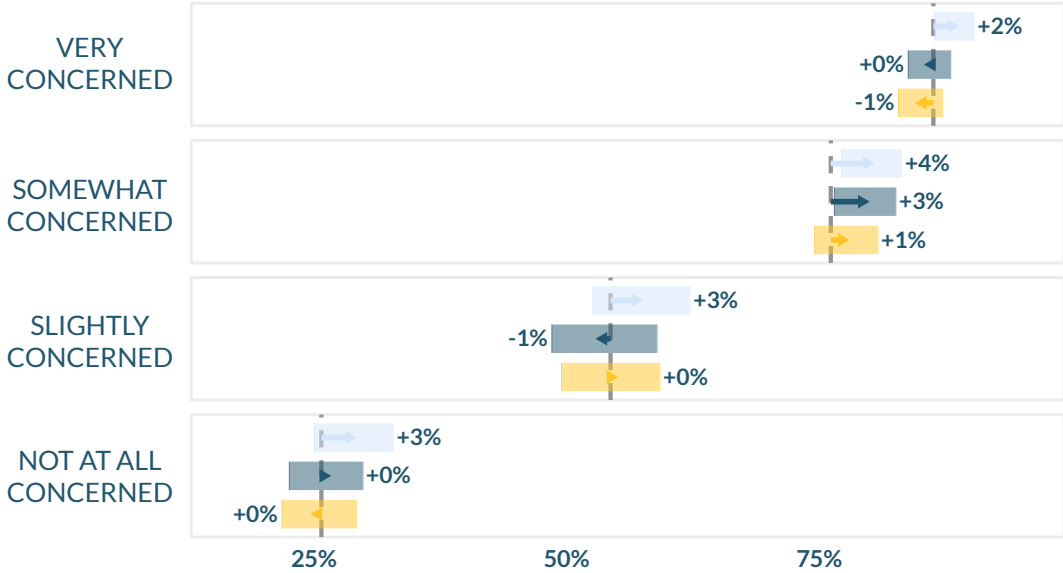50%   60%   70%   80%   90%
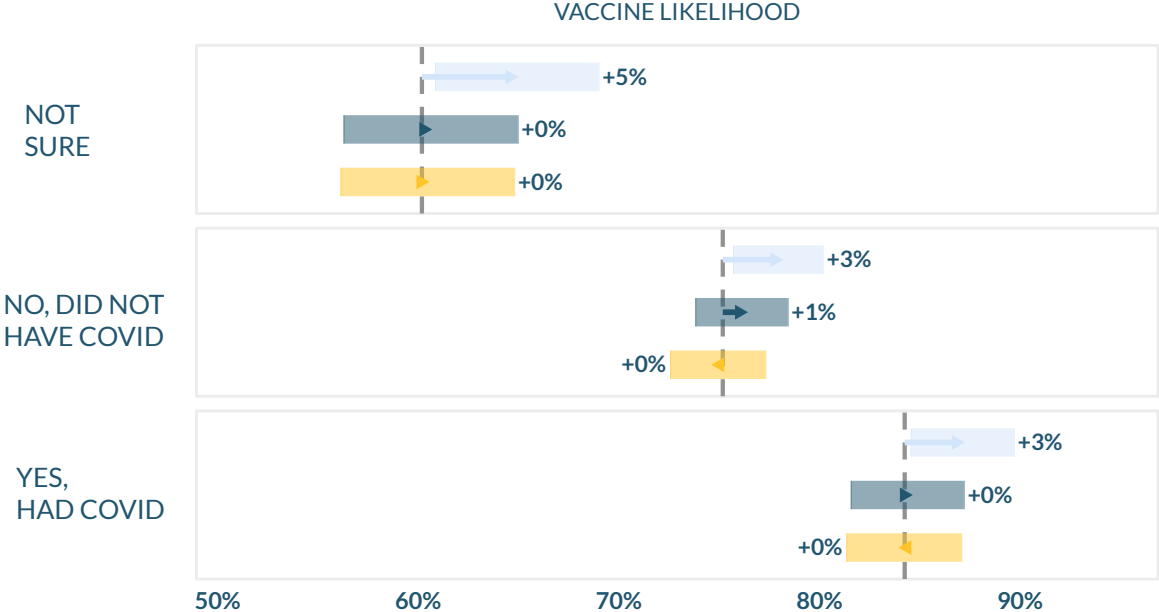
Shaded areas represent 95% credible interval.

COVID DIAGNOSIS

"Economic Recovery" is an effective message among employees who have not been diagnosed with COVID-19.

Shaded areas represent 95% credible interval.

COVID CONCERN LEVEL

"Leading by Example" remains the most persuasive message, and is more impactful among individuals who are more concerned about COVID-19.
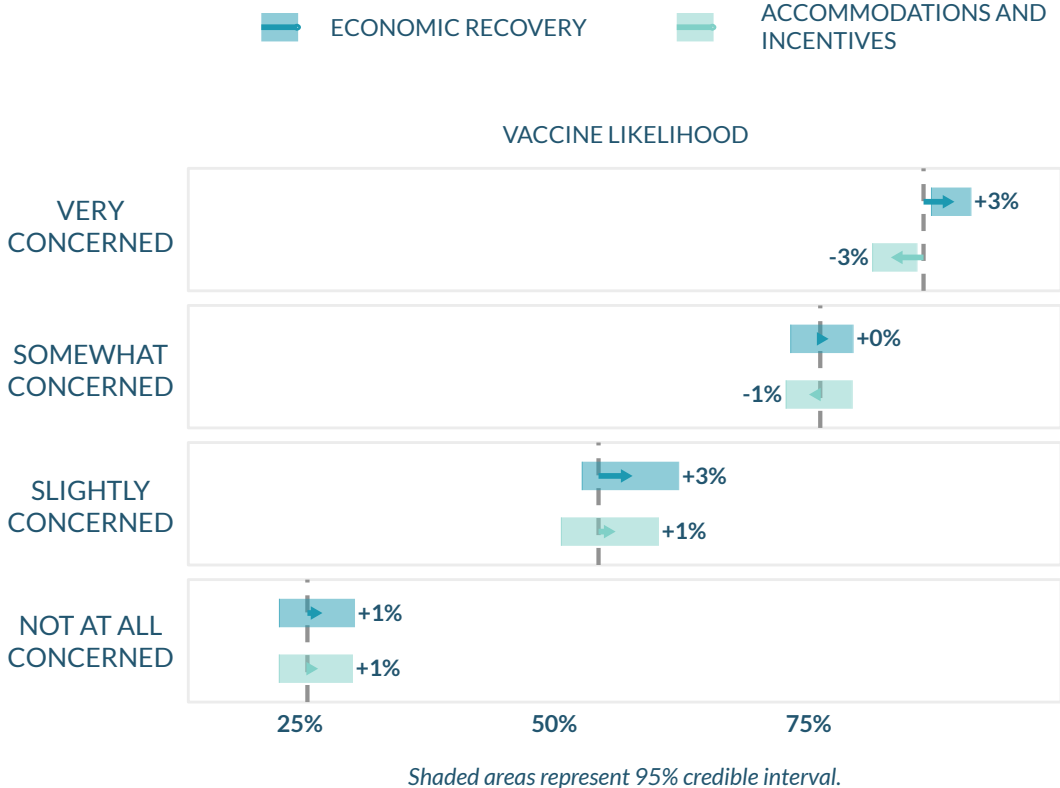
LEADING BY EXAMPLE   HEALTHY WORKFORCE COMMUNITY   EFFECTIVE

VERY CONCERNED
- +2%
- +0%
- -1%

SOMEWHAT CONCERNED
- +4%
- +3%
- +1%

SLIGHTLY CONCERNED
- +3%
- -1%
- +0%

NOT AT ALL CONCERNED
- +3%
- +0%
- +0%

25%   50%   75%

Shaded areas represent 95% credible interval.

COVID CONCERN LEVEL

➡ **ECONOMIC RECOVERY**   ➡ **ACCOMMODATIONS AND INCENTIVES**

Among those most concerned about COVID-19, "Economic Recovery" is a persuasive message, and "Accommodations and Incentives" backfires.

VACCINE LIKELIHOOD

VERY CONCERNED
+3%
-3%

SOMEWHAT CONCERNED
+0%
-1%

SLIGHTLY CONCERNED
+3%
+1%

NOT AT ALL CONCERNED
+1%
+1%

25%   50%   75%

Shaded areas represent 95% credible interval.

Other relevant research

August 2020: [Initial test on hypothetical COVID-19 vaccines](#)

October 2019: [HPV vaccine message test](#)

March 2019: [Understanding clinical trial recruitment strategies](#)

November 2018: [Flu vaccine message test](#)

November 2018: [Understanding retail clinic patients](#)

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

www.civisanalytics.com

hello@civisanalytics.com