

Fostering Herd Health in a Pandemic:

A Look at Public Willingness to Receive a Vaccine for COVID-19

Background

Vaccines are critical to the circumvention of widespread outbreaks of preventable diseases (IAC, 2019). As such, in pandemic situations like the 2019 novel coronavirus (COVID-19), vaccination hesitancy can be detrimental to public health and has the potential to make herd immunity unattainable.

Though a COVID-19 vaccine has yet to be made available, the topic has already received considerable and controversial attention from the public, and it is plausible that not all Americans will receive the vaccine should one become available due to issues of access, concerns regarding the safety of a quickly developed vaccine, or distrust in the manufactures and regulatory agencies of such a vaccine.

Due to the role of public perceptions and behaviors in reducing the spread of COVID-19 through vaccinations, Schnoch-Spana et al. (2020) maintained social, behavioral, and communication science should be at the center of such efforts to aid in delivering timely, evidence-based recommendations for best methods of supporting vaccine delivery and uptake.

Current Study

This study was conducted to examine the U.S. public's perceptions and experiences during the early stages of the COVID-19 pandemic to explain their willingness to receive a COVID-19 vaccine should one become available.

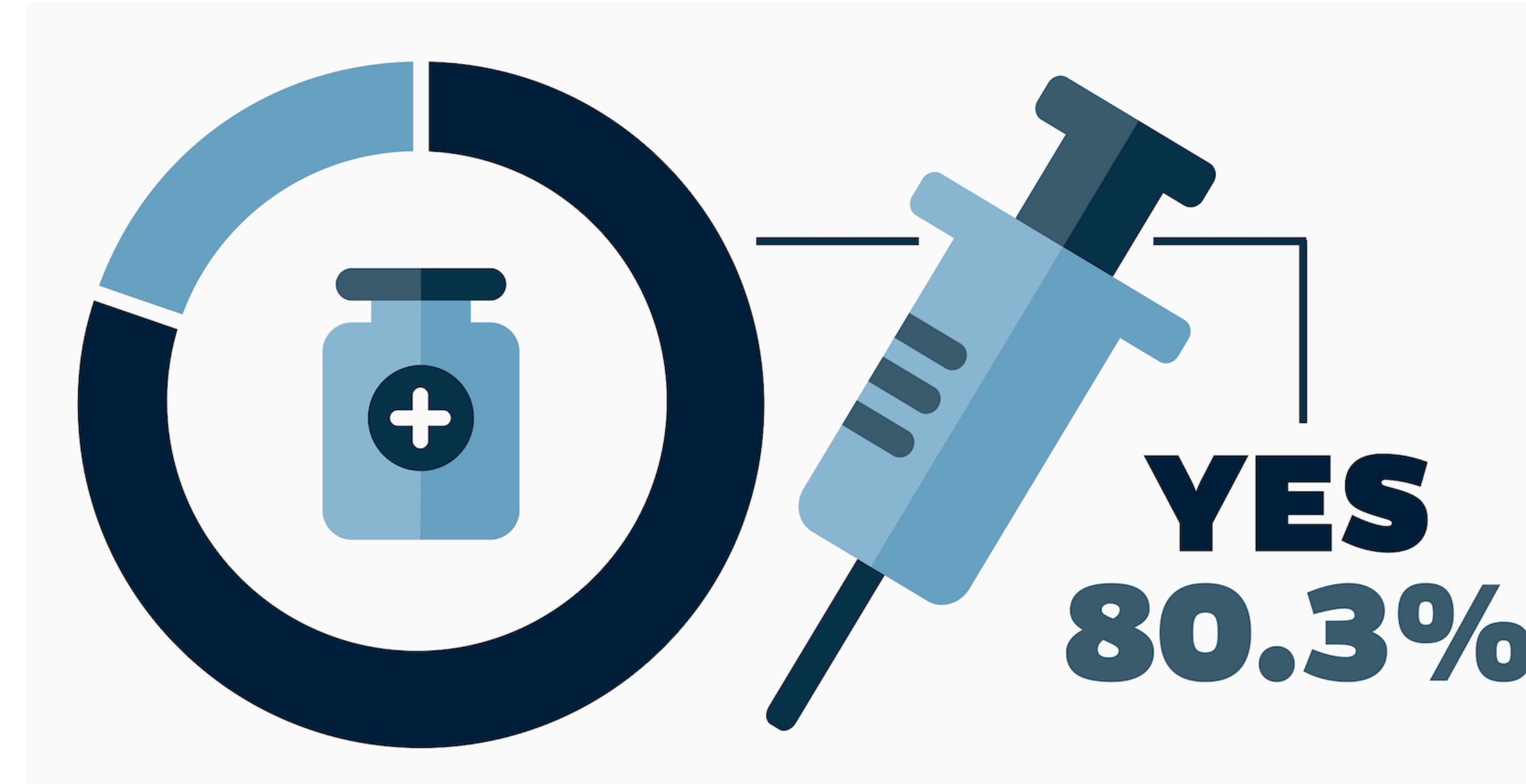
- National survey conducted with U.S. residents age 18 years of age or older.
- Responses collected from 1,512 respondents

- Data were collected in March, 2020 through third-party recruiting company, Qualtrics.
- A researcher-developed questionnaire was used to assess willingness to receive a vaccine, attitudes toward vaccines, health concerns, trust in science, and prior vaccine behaviors.

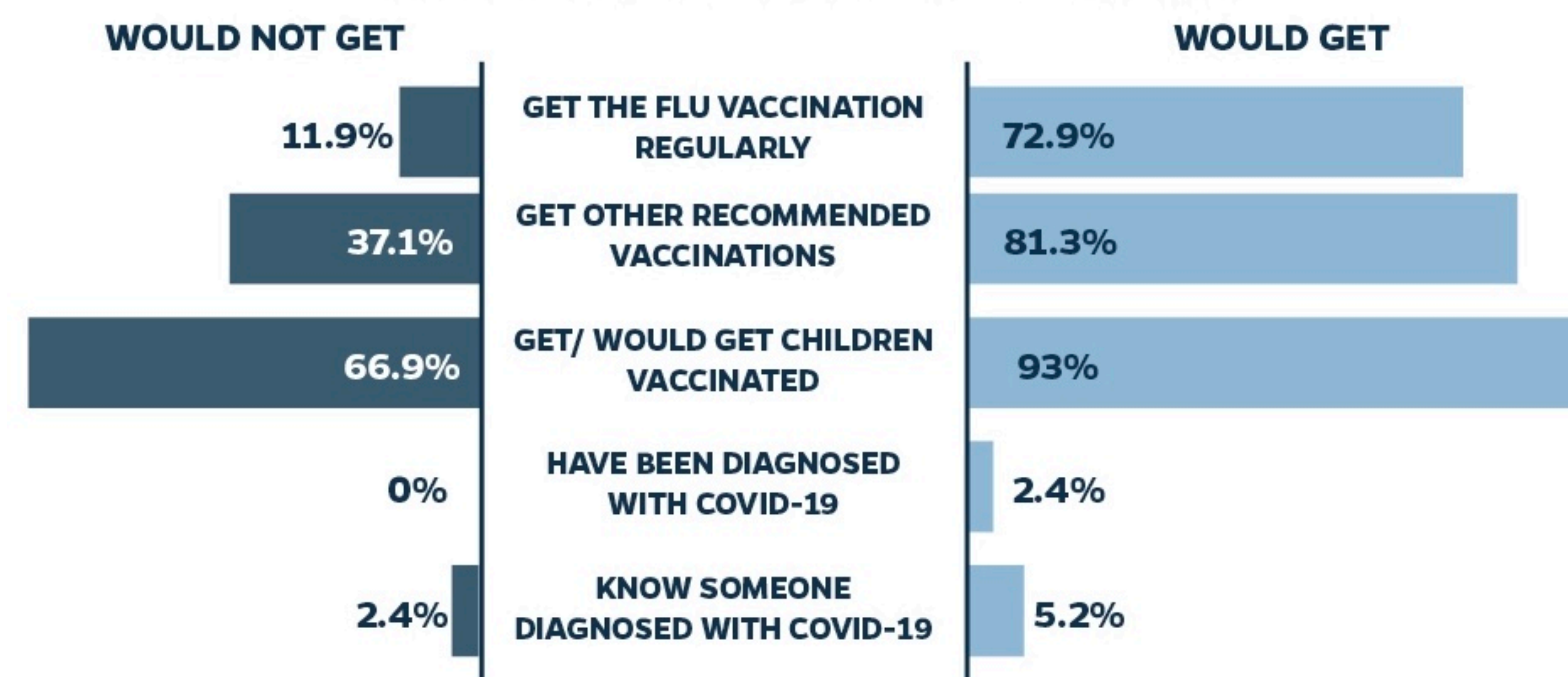
- Data were weighted on demographics based on the 2010 U.S. Census data (Baker et al., 2013).
- Data analysis consisted of descriptive statistics and binary logistic regression.

Results

The majority of respondents (80.3%) would get a vaccine for COVID-19 if one were to become available. Most respondents (82.9%) also believed that a vaccine for COVID-19 would be available within the next 12 to 18 months.



EXPERIENCES OF RESPONDENTS WHO WOULD AND WOULD NOT GET THE COVID-19 VACCINE:



Logistic Regression of Hypothesis Generation

Variable	B	SE	Wald	df	p	Odds ratio Exp(B)
Vaccine Attitudes	.73	.10	58.79	1	.000	2.01
Health Concerns	.44	.06	52.87	1	.000	1.55
Trust in Science	.15	.13	1.17	1	.279	1.16
Get Flu Vaccine	2.40	.21	133.67	1	.000	11.04
Get Other Vaccines	.76	.18	17.17	1	.000	2.14

Note. $\alpha = .05$

Conclusions

Descriptive

- Those who would get a COVID-19 vaccine had more positive attitudes toward vaccines in general, had a greater degree of health concerns about COVID-19, and had more trust in science than those who would not get a vaccine for COVID-19.
- The percentages of those who get the flu shot, get other recommended vaccines, have been diagnosed with COVID-19, and know someone who has been diagnosed with COVID-19 were greater among those who would get a COVID-19 vaccine than those who would not.

Predictive

- Getting the flu shot and other recommended vaccines, general attitude toward vaccines, and degree of COVID-19 related health concerns were significant predictors of whether respondents would or would not receive a COVID-19 vaccine should one become available.
- Those who get the flu vaccine were 11 times more likely to fall in the category of being willing to receive a new COVID-19 than those who do not get the flu vaccine.

Recommendations

- In the early stages of a pandemic, communication messages about a new vaccine may be tailored in a fashion similar to those regarding pre-existing vaccines.
- Such messages should be designed to highlight the importance of vaccinations in alleviating the COVID-19 health concerns of the public.
- Now, in the later stages of COVID-19, further research is needed to reexamine the influence of public trust in science on their willingness to receive a COVID-19 vaccine.
- Considering the political climate surrounding COVID-19, trust in political leaders and other sources of information should also be examined.

References

Immunization Action Coalition. (2019, September). *How vaccines work*. <https://vaccineinformation.org/how-vaccines-work/>

Schoch-Spana, M., Brunson, E., Long, R., Ravi, S., Ruth, A., & Trotochaud, M. (2020). *The public's role in COVID-19 vaccination: Planning recommendations informed by design thinking and the social, behavioral, and communication sciences*. Johns Hopkins Center for Health Security. https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2020/200709-The-Publics-Role-in-COVID-19-Vaccination.pdf

World Health Organization (2020). *Ten threats to global health in 2019*. <https://www.who.int/news-room/feature-stories/ten-threats-to-global-health-in-2019>