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# THE COVID STATES PROJECT:
# A 50-STATE COVID-19 SURVEY
# REPORT #47: UPDATE ON COVID-19 VACCINE
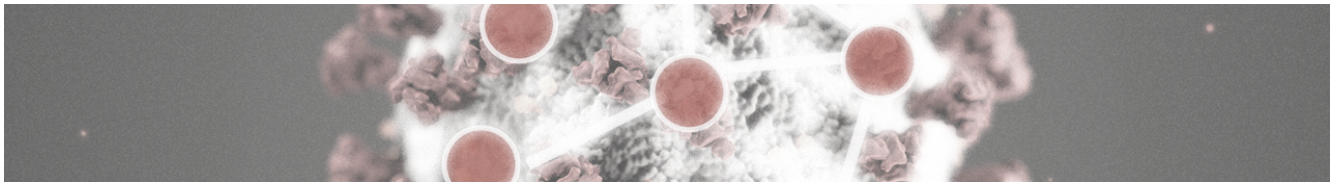# ATTITUDES AMONG HEALTHCARE WORKERS

USA, March 2021

David Lazer, Northeastern University
Katherine Ognyanova, Rutgers University
Jon Green, Northeastern University
Matthew A. Baum, Harvard University
James Druckman, Northwestern University
Adina Gitomer, Northeastern University
Matthew Simonson, Northeastern University
Roy H. Perlis, Harvard Medical School
Mauricio Santillana, Harvard Medical School
Jennifer Lin, Northwestern University
Ata Uslu, Northeastern University
Alexi Quintana, Northeastern University

**Report of March 22, 2021, v.1**

### *The COVID States Project*

*From*: The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States

*A joint project of:*
Northeastern University, Harvard University, Rutgers University, and Northwestern University

*Authors*: David Lazer (Northeastern University); Katherine Ognyanova (Rutgers University); Jon Green (Northeastern University); Matthew A. Baum (Harvard University); James Druckman (Northwestern University); Adina Gitomer (Northeastern University); Matthew Simonson (Northeastern University); Roy H. Perlis (Harvard Medical School); Mauricio Santillana (Harvard Medical School); Jennifer Lin (Northwestern University); Ata Uslu (Northeastern University), and Alexi Quintana (Northeastern University)

# COVER MEMO

**Summary Memo — March 22, 2020**

***The COVID States Project***

***From****: The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States*

**Partners**: Northeastern University, Harvard University/Harvard Medical School,
Rutgers University, and Northwestern University

**Authors**: David Lazer (Northeastern University); Katherine Ognyanova (Rutgers University);
Jon Green (Northeastern University); Matthew A. Baum (Harvard University);
James Druckman (Northwestern University); Adina Gitomer (Northeastern University);
Matthew Simonson (Northeastern University); Roy H. Perlis (Harvard Medical School);
Mauricio Santillana (Harvard Medical School); Jennifer Lin (Northwestern University);
Ata Uslu (Northeastern University), and Alexi Quintana (Northeastern University)

From April 2020 through March 2021, we conducted multiple waves of a large, 50-state survey, some results of which are presented here. You can find previous reports online at covidstates.org.

**Note on methods:**

Between February 5 and March 1, 2021, we surveyed 21,500 individuals across all 50 states plus the District of Columbia. The survey was conducted by PureSpectrum via an online, nonprobability sample, with state-level representative quotas for race/ethnicity, age, and gender (for methodological details on the other waves, see covidstates.org). In addition to balancing on these dimensions, we reweighted our data using demographic characteristics to match the U.S. population with respect to race/ethnicity, age, gender, education, and living in urban, suburban, or rural areas. This was the latest in a series of surveys we have been conducting since April 2020, examining attitudes and behaviors regarding COVID-19 in the United States.

**Contact information**:

For additional information and press requests contact:

- David Lazer at d.lazer@neu.edu
- Katherine Ognyanova at katya.ognyanova@rutgers.edu
- Matthew A. Baum at matthew_baum@hks.harvard.edu
- James Druckman at druckman@northwestern.edu
- Roy H. Perlis at rperlis@mgh.harvard.edu
- Mauricio Santillana at msantill@fas.harvard.edu

Or visit us at www.covidstates.org.

# Update on COVID-19 vaccine attitudes among healthcare workers

This report is an update of our [February report](#) on attitudes and vaccination rates of healthcare workers. The essential patterns are similar, with the obvious exception being the increased rates of vaccination. We focus on vaccination, vaccine resistance, vaccine hesitancy, vaccine access, and vaccine refusal. These are measured as follows:

**Vaccination** status is based on self-reports that someone has "already" been vaccinated. Note that we do not ask whether someone has received one or two doses of a vaccine, or which vaccine they have received.

**Vaccine resistance** is the proportion of individuals in a given category who indicate that they "would not get the COVID-19 vaccine" if/when it is available to them.

**Vaccine hesitancy** is defined as preferring to get the vaccine "after at least some people I know" or "after most people I know."

**Vaccine access** considers those in one of the high priority groups—individuals 65 and older or healthcare workers—who report having the vaccine available to them. This is defined as anyone in this group who says they have already been vaccinated or have a vaccine available to them (regardless of whether they have been vaccinated).

**Vaccine refusal** is when an individual in a high priority group reports having the vaccine available to them, but that they will not get vaccinated.

Vaccination rates are higher among healthcare workers than among non-healthcare workers;[1] however, vaccine resistance (24% for healthcare workers versus 21% for non-healthcare workers) and hesitancy rates (29% versus 31%) are nearly identical (see Figure 1).

Vaccine resistance has remained level since January for both healthcare workers and non-healthcare workers; however, hesitancy has dropped substantially for both groups since January (from 37% to 29% among healthcare workers, and from 41% to 31% for non-healthcare workers). This suggests that as the vaccine campaign moves forward, as one would expect, there has been a gradual shift from those who are vaccine hesitant to being willing to be vaccinated.

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[1] A "healthcare worker" was someone who indicated that they were a "Health or medical professional (e.g. nurse, medical doctor, paramedic)." or a "Staff member in a hospital or a doctor's office (administrative, custodial, etc.)".

## Vaccine preference and work in the healthcare system

[ If you were able to choose when to get a COVID-19 vaccine, would you get it... ]

| | Healthcare worker | Not a healthcare worker |
|---|---|---|
| Already vaccinated | 24% | 13% |
| As soon as possible | 23% | 34% |
| After at least some people I know | 14% | 15% |
| After most people I know | 15% | 16% |
| Would not get the COVID-19 vaccine | 24% | 21% |
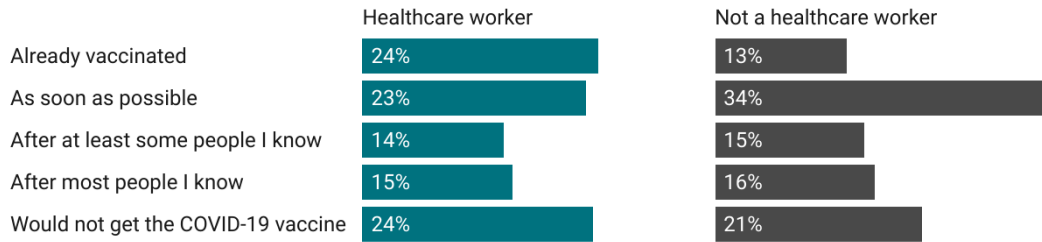
*National sample, N = 21,500, Time period: 02/05/2021-03/01/2021*

Source: The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States (A joint project of: Northeastern University, Harvard University, Rutgers University, and Northwestern University) www.covidstates.org
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**Figure 1.**

Interestingly, the differences in vaccination rates between men and women among healthcare workers from the February report have disappeared; however, vaccine resistance is still substantially lower among men (18%) than women (27%).

Comparing the data to the February report, vaccine resistance has inched up among men, and remained steady among women; however hesitancy has dropped in both genders (from 34% to 29% among men; and from 38% to 30% among women). These results are partially displayed in Figure 2.

## Healthcare worker vaccine preferences by gender

[ If you were able to choose when to get a COVID-19 vaccine, would you get it... ]

| | Total | Male | Female |
|---|---|---|---|
| Already vaccinated | 24% | 24% | 25% |
| As soon as possible | 23% | 30% | 18% |
| After at least some people I know | 14% | 16% | 13% |
| After most people I know | 15% | 13% | 17% |
| Would not get the COVID-19 vaccine | 24% | 18% | 27% |

*Healthcare workers, N = 2345, Time period: 02/05/2021-03/01/2021*

Source: The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States (A joint project of: Northeastern University, Harvard University, Rutgers University, and Northwestern University) www.covidstates.org
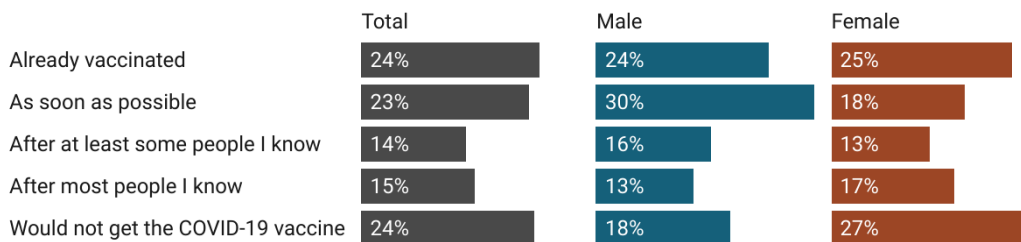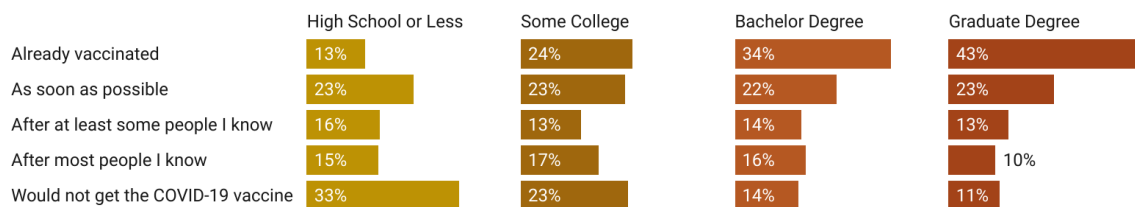・Created with Datawrapper

**Figure 2.**

There are still enormous differences in vaccination rates across education levels (see Figure 3). Essentially, vaccination rates across all education levels have doubled since our last survey (in December/January, as summarized in our [February report](#)), and healthcare workers with a graduate degree have been vaccinated at 4 times the rate of those workers with a high school degree or less (43% versus 13%).

Conversely, vaccine resistance is far higher among healthcare workers with less education – 33% of workers with a high school or less education are vaccine resistant, versus only 11% of those with a graduate degree.

Vaccine resistance has been fairly steady across education levels, but hesitancy has especially dropped among the less educated (from 41% to 31% for high school or less, compared with 26% to 23% for those with graduate degrees).

## Healthcare worker vaccine preferences by education level

[ If you were able to choose when to get a COVID-19 vaccine, would you get it... ]

| | High School or Less | Some College | Bachelor Degree | Graduate Degree |
|---|---|---|---|---|
| Already vaccinated | 13% | 24% | 34% | 43% |
| As soon as possible | 23% | 23% | 22% | 23% |
| After at least some people I know | 16% | 13% | 14% | 13% |
| After most people I know | 15% | 17% | 16% | 10% |
| Would not get the COVID-19 vaccine | 33% | 23% | 14% | 11% |

*Healthcare workers, N = 2345, Time period: 02/05/2021-03/01/2021*

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**Figure 3.**

Similarly, as we found in our earlier report, there is a strong income gradient with respect to vaccination levels (see Figure 4). For instance, 37% of those who earn more than $150k have been vaccinated, while only 15% of those who earn under 25k have been. Further, vaccine resistance is negatively related to income level, with 32% of those in the lowest income bracket being resistant, versus 13% of those in the highest bracket. As with education, vaccine resistance has been fairly steady across waves, but hesitancy has generally dropped, with no systematic relationship to income.

## Healthcare worker vaccine preferences by income

Healthcare workers, N = 2345, Time period: 02/05/2021-03/01/2021

| | Under 25K | 25K to under 50K | 50K to under 75K | 75K to under 100K | 100K to under 150K | Over 150K |
|---|---|---|---|---|---|---|
| Already vaccinated | 15% | 22% | 26% | 32% | 34% | 37% |
| As soon as possible | 24% | 23% | 22% | 19% | 20% | 30% |
| After at least some people I know | 15% | 12% | 15% | 17% | 19% | 10% |
| After most people I know | 14% | 19% | 14% | 15% | 14% | 11% |
| Would not get the COVID-19 vaccine | 32% | 23% | 23% | 17% | 13% | 13% |

*Healthcare workers, N = 2345, Time period: 02/05/2021-03/01/2021*

Source: The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States (A joint project of: Northeastern University, Harvard University, Rutgers University, and Northwestern University) www.covidstates.org
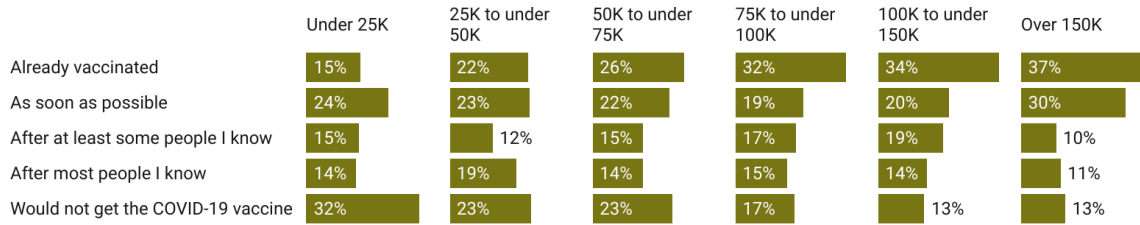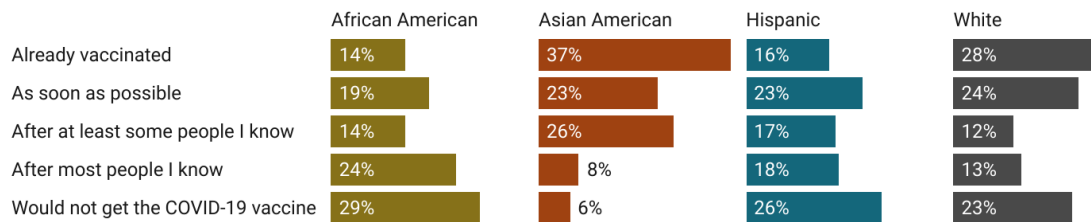 • Created with Datawrapper

**Figure 4.**

There are large racial and ethnic gaps in vaccination rates and resistance (see Figure 5). 37% of Asian Americans and 28% of White respondents are already vaccinated, as compared to 16% for Hispanic and 14% of African American respondents. Asian American respondents have by far the lowest levels of vaccine resistance.

We note that the increase in vaccinate rates is far higher among White (13% to 28%) and Asian American (19% to 37%) respondents than African American (12% to 14%) and Hispanic (10% to 16%). We note, though, that despite our efforts to oversample racial and ethnic minorities, the numbers are fairly small in the subsample of healthcare workers, given that they make up just 10% of our larger sample.

## Healthcare worker vaccine preferences by race and ethnicity

[ If you were able to choose when to get a COVID-19 vaccine, would you get it... ]

| | African American | Asian American | Hispanic | White |
|---|---|---|---|---|
| Already vaccinated | 14% | 37% | 16% | 28% |
| As soon as possible | 19% | 23% | 23% | 24% |
| After at least some people I know | 14% | 26% | 17% | 12% |
| After most people I know | 24% | 8% | 18% | 13% |
| Would not get the COVID-19 vaccine | 29% | 6% | 26% | 23% |

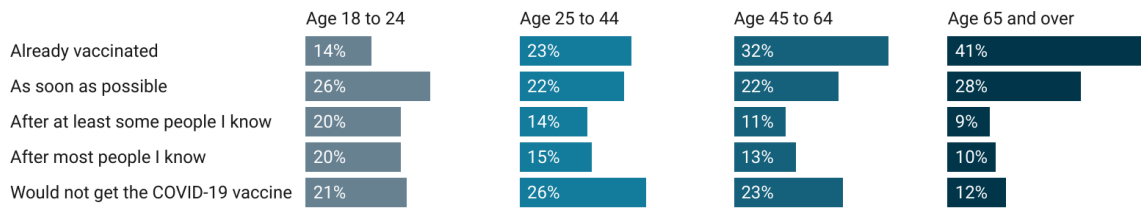*Healthcare workers, N = 2345, Time period: 02/05/2021-03/01/2021*

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**Figure 5.**

Vaccine resistance is also quite steady across racial and ethnicity groups. While hesitancy has dropped the most among Asian American (from 44% to 34%) and White (35% to 25%) respondents, and less among African American (42% to 38%) respondents, hesitancy has actually increased slightly among Hispanic respondents in our sample (from 32% to 35%).

## Healthcare worker vaccine preferences by age group

[ If you were able to choose when to get a COVID-19 vaccine, would you get it... ]

| | Age 18 to 24 | Age 25 to 44 | Age 45 to 64 | Age 65 and over |
|---|---|---|---|---|
| Already vaccinated | 14% | 23% | 32% | 41% |
| As soon as possible | 26% | 22% | 22% | 28% |
| After at least some people I know | 20% | 14% | 11% | 9% |
| After most people I know | 20% | 15% | 13% | 10% |
| Would not get the COVID-19 vaccine | 21% | 26% | 23% | 12% |

*Healthcare workers, N = 2345, Time period: 02/05/2021-03/01/2021*

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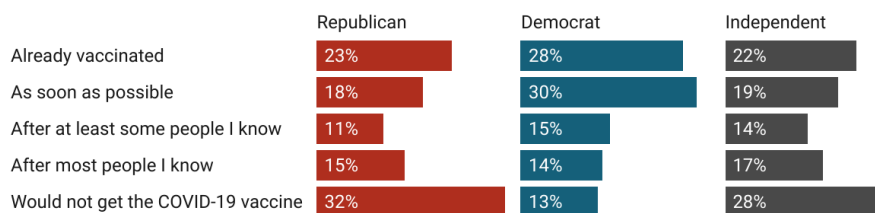 • Created with Datawrapper

**Figure 6.**

Unsurprisingly, we see a strong age gradient in vaccination rates, where the oldest cohort of workers has been vaccinated at almost three times the rate of the youngest (41% for 65 and older, versus 14% for 18 to 24), which corresponds to policies prioritizing this age group for vaccination. These results are shown in Figure 6.

There are similar partisan gaps to what we found in our February report. Democrats are the most vaccinated group of healthcare workers, at 28%; Republicans and Independents lag behind, at 23% and 22%, respectively (see Figure 7). Vaccine resistance rates are virtually unchanged, with slight increases among Republicans (up 2 points to 32%) and Independents (up 4 points, to 28%). All partisan groups have had significant drops in vaccine hesitancy (down from 35% to 26% among Republicans; 36% to 29% among Democrats; and 42% to 31% among Independents).

## Healthcare worker vaccine preferences by party

[ If you were able to choose when to get a COVID-19 vaccine, would you get it... ]

| | Republican | Democrat | Independent |
|---|---|---|---|
| Already vaccinated | 23% | 28% | 22% |
| As soon as possible | 18% | 30% | 19% |
| After at least some people I know | 11% | 15% | 14% |
| After most people I know | 15% | 14% | 17% |
| Would not get the COVID-19 vaccine | 32% | 13% | 28% |

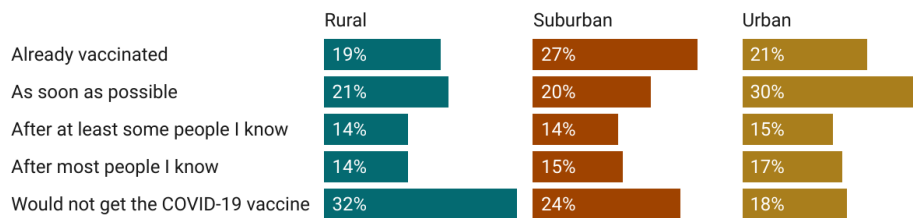*Healthcare workers, N = 2345, Time period: 02/05/2021-03/01/2021*

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**Figure 7.**

As per Figure 8, vaccination rates are somewhat higher among suburban respondents (27%) than rural (19%) or urban (21%). However, urban respondents have the lowest vaccine resistance (18%), suburban respondents have the next lowest (24%), and rural respondents have by far the highest (32%). Vaccine resistance did not change significantly in any categories (increased by 2 points in rural, decreased by 3 in suburban, and held steady in urban areas). Hesitancy dropped roughly evenly across the board (7 points in rural areas; 5 points in suburban and urban areas).

## Healthcare worker vaccine preferences by residential area

[ If you were able to choose when to get a COVID-19 vaccine, would you get it... ]

| | Rural | Suburban | Urban |
|---|---|---|---|
| Already vaccinated | 19% | 27% | 21% |
| As soon as possible | 21% | 20% | 30% |
| After at least some people I know | 14% | 14% | 15% |
| After most people I know | 14% | 15% | 17% |
| Would not get the COVID-19 vaccine | 32% | 24% | 18% |

*Healthcare workers, N = 2345, Time period: 02/05/2021-03/01/2021*

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**Figure 8.**