Trends in COVID-19 Vaccination in the United States

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Background

As of May 13th, 2021, at least 151 million adult Americans had received at least one dose of the COVID-19 vaccine, and more than 116 million were fully vaccinated.1 There are three vaccines currently authorized for use in the United States: Pfizer-BioNTech, Moderna, and Johnson & Johnson / Janssen.2 While the vaccination uptake has increased substantially in recent months, significant challenges remain, including public mistrust and inequitable access.

Previous studies show that demographic factors are associated with attitudes toward and access to the COVID-19 vaccine.3-4 Understanding these demographic factors is key to a successful vaccination effort. The burden of the pandemic has disproportionately fallen on specific groups, such as communities of color and low-income households. This policy brief provides an update on the socio-demographic factors associated with receiving at least one dose of the COVID-19 vaccine and ease of receiving the vaccine.
Methods

The Edward J. Bloustein School of Planning and Public Policy at Rutgers University conducted the COVID-19 Impact National Survey in collaboration with Qualtrics. The data were collected between April 7 and 12, 2021, from a diverse national sample of 1,500 respondents. Estimates using the entire survey have a margin of sampling error (MOSE) of +/- 2.5 percentage points, MOSEs are larger in analyses of subgroups (Appendix 1). The survey was conducted on-line. Qualtrics used available e-mail lists to reach a diverse sample and the final sample was weighted to match the national population using data from the Census Bureau’s 2019 U.S. American Community Survey on gender, age, education, race, and region.\(^5\) The study was approved by the Institutional Review Board, Rutgers University - New Brunswick. The survey asked whether respondents had already received at least one dose of the COVID-19 vaccine. If respondents had received at least one dose of the COVID-19 vaccine, they were asked about ease of vaccine access. Demographic data was collected on each respondent.

Results

Just over half of all survey respondents (50.7%) had received at least one dose of the COVID-19 vaccine.

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**Figure 1.** Vaccination Status (Received at least one dose of the COVID-19 Vaccine).
A higher percentage of adults aged 60 and above had received at least one dose of the vaccines.

![Figure 2: Vaccination Status (Received at least one dose of the COVID-19 Vaccine) by Age Group](image)

A higher percentage of non-Hispanic Whites (55.7%) had received at least one dose of the vaccine as compared to non-Hispanic Blacks (38.9%) and Hispanics/Latinos (43.2%).

![Figure 3: Vaccination Status (Received at least one dose of the COVID-19 Vaccine) by Race/Ethnicity](image)
Vaccination rates increased with income, with those earning $90,000 and above vaccinated at twice the rate of those earning less than $10,000.

**Figure 4:** Vaccination Status (Received at least one dose of the COVID-19 Vaccine) by Income Level

Vaccination rates increased with educational attainment. More than 60% of the respondents with a Bachelor’s degree received at least one dose of the vaccine, as compared to less than 40% of those with a high school diploma or less.

**Figure 5:** Vaccination Status (Received at least one dose of the COVID-19 Vaccine) by Education Level
Among those with health insurance, 55.6% reported having at least one dose of the vaccine as compared to 30.6% of those without insurance.

![Figure 6: Health Insurance Status by Vaccination Status](image)

A higher percentage of those with a disability (61.6%) have received at least one dose of the COVID-19 vaccine, as compared to those without a disability (48.1%).

![Figure 7: Vaccination Status by Disability Status](image)
A higher percentage of Heterosexuals adults have received at least one dose of the COVID-19 Vaccine (52%), as compared to sexual minorities. Among those, 42.1% identifying as Homosexual, 41.3% identifying as Bisexual, Pansexual, or Queer, and 47.7% identifying as Asexual or Other reported receiving at least one dose of the COVID-19 vaccine.

![Figure 8: Vaccination Status (Received at least one dose of the COVID-19 Vaccine) by Sexual Orientation](image)

About 80% of the vaccinated respondents thought that their vaccination sites were well run and safe and 58.3% agreed that the way vaccinations were scheduled was fair to everyone.

![Figure 9: Vaccine Access, Ease, Safety, and Fairness of COVID-19 Vaccine Scheduling.](image)
A higher percentage of Hispanic/Latino respondents (53.2%) found it difficult to schedule their COVID-19 Vaccine, compared to non-Hispanic Black (31.2%) and non-Hispanic White (36.8%) respondents.

![Figure 10: Vaccine Access - Difficulty of Scheduling COVID-19 Vaccine by Race/Ethnicity.](image)

A higher percentage of men (37.5%) indicated that they had been assisted in receiving the COVID-19 Vaccine by someone involved in vaccine distribution, as compared to women (30.5%).

![Figure 11: Vaccine Access - Help from someone involved in COVID-19 Vaccine Distribution by Gender](image)
Conclusion

The health disparities made evident to date by the COVID-19 crisis are mirrored in the vaccination effort.\textsuperscript{7,9} We found that about half of the respondents have received at least one dose of the COVID-19 vaccine, which is comparable with the vaccination rate reported by the Centers for Disease Control and Prevention during the same timeframe\textsuperscript{10}. Several studies have demonstrated that non-Hispanic Black and Hispanic/Latino Americans report both lower acceptance and lower receipt of the COVID-19 vaccine than non-Hispanic White Americans,\textsuperscript{10-11} most likely due to issues related to social determinants of health.\textsuperscript{12-13} Communities of color may also experience inequities in access to the COVID-19 vaccine, mainly due to a lack of pharmacies, providers, and access to reliable transportation located conveniently within those communities.\textsuperscript{14-15} Consistent with other reports, in our survey, non-Hispanic Black and Hispanic/Latino respondents reported lower vaccination rates than non-Hispanic White respondents.\textsuperscript{9} Hispanic respondents reported the highest difficulty in scheduling their COVID-19 vaccine. Income is an important determinant of receiving at least one dose of the COVID-19 vaccine, which is consistent with other reports. Those with more education demonstrated higher rates of vaccine receipt as compared to those with lower educational attainment. For example, those with graduate or professional education received the vaccine at nearly twice the rate of those with a high school education or less. To date, there has been limited data about COVID-19 vaccination rates in the LGBTQ community. We found that LGBTQ populations reported lower rates of having received the vaccine than non-LGBTQ individuals.

References


10. Yueng J. 11 US states have already vaccinated 50% of adults with at least one dose of vaccine, CDC data shows. CNN. Retrieved 25 May 2021, from: https://www.cnn.com/world/live-news/coronavirus-pandemic-vaccine-updates-04-12-21/h_50e529f1be570e01bd20d8723199717f


Appendix 1

Gender:
Female 51%
Male 49%
(+/- 5%)

Age:
18-34 30.5%
35-54 34.4%
55+ 35.2%
(+/- 5%)

Education:
HS diploma/GED or less 40.8%
Some college (no degree) 20.9%
Associate’s degree or higher 38.3%
(+/- 10%)

Race:
Non-Hispanic White 62.3%
Non-Hispanic Black 12.4%
Hispanic 17.3%
Asian 5.4%
Other Race 2.6%
(+/- 5%)

HH Income:
$0-$50K 40.03%
$50K-$100K 32.56%
$100K+ 27.41%
(+/- 5%)

Region:
Midwest 21.33%
Northeast 18.02%
South 37.27%
West 23.38%
(+/- 5%)
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Funding Information

This policy brief was developed with support from the Healthy Community Grant, Edward J. Bloustein School of Planning and Public Policy, Rutgers University- New Brunswick

Suggested Citation


Conflict of Interest

None.