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THE COVID STATES PROJECT:
A 50-STATE COVID-19 SURVEY
REPORT #85: UNVACCINATED OLDER AMERICANS

USA, April 2022

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Report of April 22, 2022, 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

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COVER MEMO

Summary Memo — April 22, 2022

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Note on methods:

Between March 2, 2022, and April 4, 2022, we surveyed 22,234 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.

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Unvaccinated older Americans

In this report, we examine how many older Americans are unvaccinated against COVID-19, and who these unvaccinated individuals are. The risk of hospitalization and death from COVID-19 is far higher for older adults, making vaccination particularly critical in reducing the impact of the pandemic.
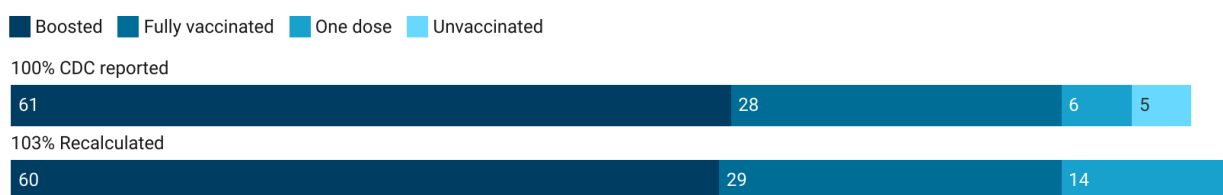
KEY FINDINGS

- 13% of older Americans are completely unvaccinated against COVID-19, while an additional 14% are fully vaccinated but have not received a booster, and 3% report having received a single shot of Moderna or Pfizer.

- The CDC data on vaccination rates are clearly significantly flawed, because they indicate that there are more older Americans who have received at least one dose of vaccine than there are older Americans. This is because they attribute the boosters (and perhaps second shots) that many people have received to being first shots, likely due to poor vaccination record linkage for those individuals. As a result, CDC data likely understate how many people are completely unvaccinated and how many people have received boosters, and overstate the number of individuals who have received only a single dose.

- The unvaccinated and unboosted are disproportionately less educated, lower-income, rural, and Republican.

- The main reasons cited by older Americans for being unvaccinated were worries about side effects and a lack of trust in the process by which the vaccines were developed, similar to concerns we found in an earlier report on the reasons reported by the unvaccinated for their vaccination decision.

- In the open-ended responses, many of the vaccinated but unboosted indicated an openness to getting a booster but cited obstacles or a lack of urgency to do so.

Who are the older Americans who are unvaccinated? This is one of the key questions in terms of the future trajectory of serious illnesses and deaths from COVID. Vaccines were approved first for this age group, and public health efforts have stressed their importance in reducing risk in this group. Age is strongly related to vulnerability to COVID infections, where 75% of deaths from COVID are individuals who were 65 and older, versus a population share of 16.5%. Vaccinations have shown great efficacy at reducing mortality from COVID infection for all ages, including older individuals, by 90+%. Thus, vaccinating older Americans has been the single intervention with the most promise of reducing mortality. Here we ask, first, how many older Americans remain unvaccinated? And who are the older Americans who remain unvaccinated?

How many older Americans are unvaccinated?

The CDC data offer deeply flawed estimates of the vaccination rates of older (65+) Americans. In Figure 1, we offer two perspectives on the CDC data. The first is what the CDC reports as the percentage of older Americans who have had at least one dose of vaccination; the percentage who are "fully vaccinated" but not boosted; and the percentage who are "fully vaccinated" and boosted. To compensate for this issue, the CDC caps their reporting of vaccination rates at 95%; we therefore also include a second percentage, which is based on the raw number of people the CDC reports having been vaccinated as a percentage of the number of older individuals who live in that state.

U.S. vaccination status of 65+ year olds

■ Boosted ■ Fully vaccinated ■ One dose ■ Unvaccinated

100% CDC reported

| 61 | 28 | 6 | 5 |

103% Recalculated

| 60 | 29 | 14 |

Time Period: April 6th, 2022. Note: 1. Fully vaccinated individuals are individuals who received either a single shot of the J&J vaccine or the two shot sequence of the Moderna or Pfizer vaccines. 2. CDC is reporting the boosted rate for just the subset of the population that is "fully" vaccinated. We did mathematical translations so that in this bar chart we are reporting the boosted percentage out of the full 65+ year-olds population.

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 1.

It is notable that the reported number of older Americans who have received at least one shot exceeds 100%. The CDC website indicates that these impossible numbers are likely the result of the misattribution of some second and third shots of a given

individual as being the first shots of another person.[1] Thus, these data are likely overcounting first shots and undercounting second or third shots. Unfortunately, it is impossible to recreate usable estimates of the actual pattern of vaccinations for any subpopulation from the data provided by the CDC because the patterns of the errors in record linkage are unknown. (That is, there might be particular groups where a 2nd or 3rd shot is more or less likely to be counted as a first shot.)

Since understanding these unvaccinated or undervaccinated subpopulations may be critical to understanding who is at risk, we looked instead at data from our 50-state survey examining vaccination rates based on respondents who are 65 and over for each wave of our survey. Because vaccination rates for older Americans have largely plateaued over the last four months, we combine the last two waves of our survey, allowing us to look with more precision at the vaccination rates of subgroups of older Americans.[2]

U.S. vaccination status of 65+ year olds

■ Boosted ■ Fully vaccinated ■ One dose ■ Unvaccinated

Age 65+

| 71 | 14 | 3 | 13 |

N = 7565, Time Period: January and March 2022. Note: Fully vaccinated individuals are individuals who received either a single shot of the J&J vaccine or the two shot sequence of the Moderna or Pfizer vaccines.

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Figure 2.

The COVID States data offer a distinctly different picture of vaccination levels of 65+ year olds than do the CDC data. According to the underlying CDC data, there are no unvaccinated older Americans (in fact, technically, there are negative numbers of unvaccinated individuals). According to the COVID States data, 13% of older Americans are unvaccinated. According to the CDC, there are a lot of older Americans who have gotten only a single shot (14% according to the underlying data); according to COVID States, only 3%. And, according to the CDC data, almost a third of older Americans are unboosted (29%), while in the COVID States data, it is about half this rate (14%).

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[1] From the CDC website: "When possible, CDC links a person's first, second, and booster doses together. However, linking is sometimes not possible because CDC does not receive personally identifiable information about vaccine doses. This can lead to over-estimates of first doses and under-estimates of subsequent doses."

[2] These estimates likely slightly underestimate vaccination rates, since some then-unvaccinated older Americans have certainly been vaccinated in the intervening time. However, because of a plateauing in vaccination rates, this underestimate would likely be quite small.

According to the CDC data, one might conclude that key public health priorities are older Americans: (1) who have had only a single dose, and (2) who are fully vaccinated but not boosted. The unvaccinated would not be a priority because they do not exist.

However, COVID States data tell a very different story. In terms of preventing mortality, the COVID States data suggest the presence of a high-risk population who are entirely unvaccinated, as well as a sizable (but much smaller than what the CDC data state) group who are fully vaccinated but not boosted. Those who have received only a single shot are a significantly smaller priority, numerically.
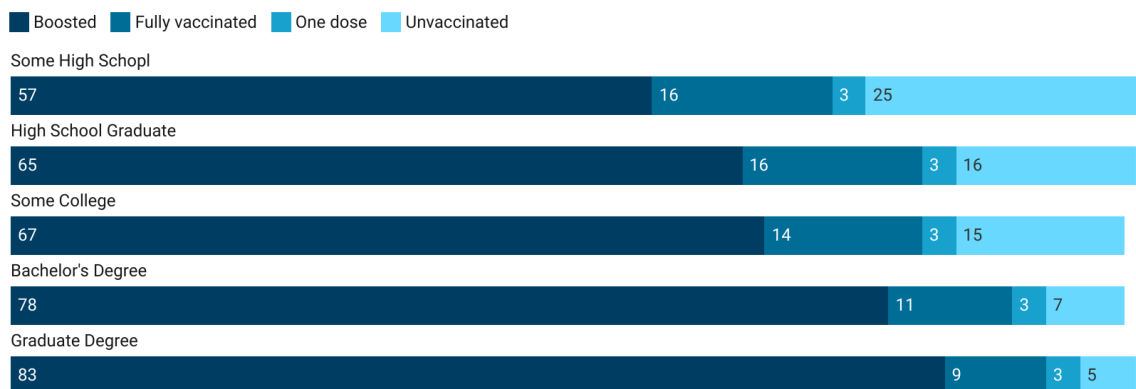
It is important to note the limitations of our data collection, especially for older Americans, some of whom are unlikely to participate in a survey.[3] These issues will be inherent in any survey-based approach to estimate vaccination rates in hard-to-reach populations. We do anticipate that it is likely that for those individuals who are reached, predictors of vaccination will be roughly consistent with what we would find in the general population.

Who are the unvaccinated 65+ year olds?

Below, we examine vaccination rates among older Americans along various demographic strata (income, education, race, and political partisanship).

Education

Vaccination status of 65+ by education

Boosted   Fully vaccinated   One dose   Unvaccinated

Some High Schopl

| 57 | 16 | 3 | 25 |

High School Graduate

| 65 | 16 | 3 | 16 |

Some College

| 67 | 14 | 3 | 15 |

Bachelor's Degree

| 78 | 11 | 3 | 7 |

Graduate Degree

| 83 | 9 | 3 | 5 |

N = 7565, Time Period: January and March 2022. Note: Fully vaccinated individuals are individuals who received either a single shot of the J&J vaccine or the two shot sequence of the Moderna or Pfizer vaccines.

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Figure 3.

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[3] For example, all surveys would have difficulty in getting responses from institutionalized individuals. Reweighting strategies cannot fully correct for resulting potential biases.

There is a strong relationship between education and vaccination levels among older Americans, just as there is among younger individuals. For each level of education attainment, vaccination levels increase – ranging from 25% unvaccinated among those with some high school to only 5% for those with a graduate degree.

Income

There is a similarly strong relationship between income and vaccination levels, with 21% of those who earn less than $25,000 who are unvaccinated, and only 5% of those who earn more than $100,000.

Vaccination status of 65+ by income

■ Boosted ■ Fully vaccinated ■ One dose ■ Unvaccinated

under 25k

| 60 | 16 | 3 | 21 |

over 25k under 50k

| 70 | 14 | 3 | 13 |

over 50k under 75k

| 74 | 14 | 11 |

over 75k under 100k

| 77 | 12 | 3 | 8 |

over 100k

| 83 | 9 | 3 | 5 |

N = 7565, Time Period: January and March 2022. Note: Fully vaccinated individuals are individuals who received either a single shot of the J&J vaccine or the two shot sequence of the Moderna or Pfizer vaccines.
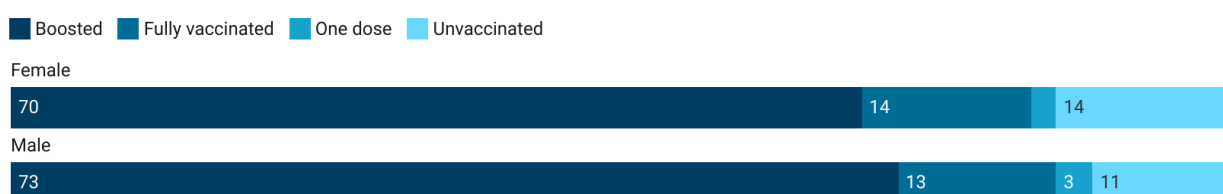
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Figure 4.

Gender

We find only small differences in vaccination levels by gender, with 86% of women at least partially vaccinated, and 89% of men.

Vaccination status of 65+ by gender

■ Boosted ■ Fully vaccinated ■ One dose ■ Unvaccinated

Female

| 70 | 14 | 14 |

Male

| 73 | 13 | 3 | 11 |

N = 7565, Time Period: January and March 2022. Note: Fully vaccinated individuals are individuals who received either a single shot of the J&J vaccine or the two shot sequence of the Moderna or Pfizer vaccines.
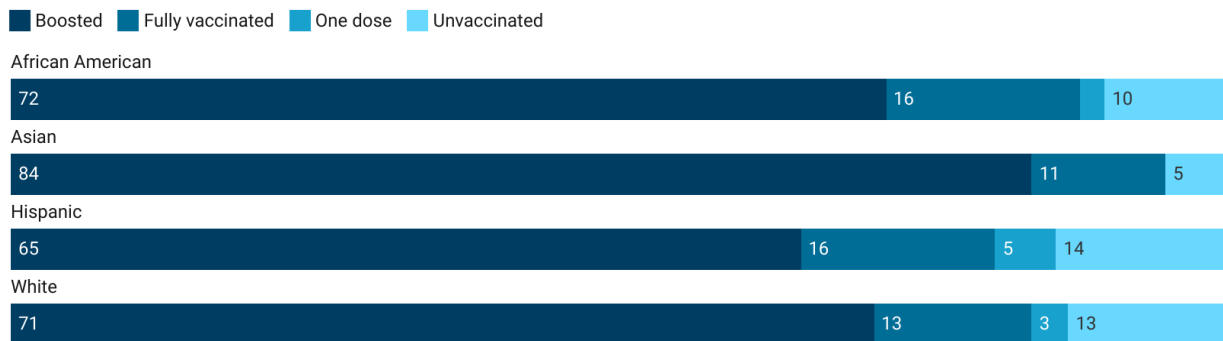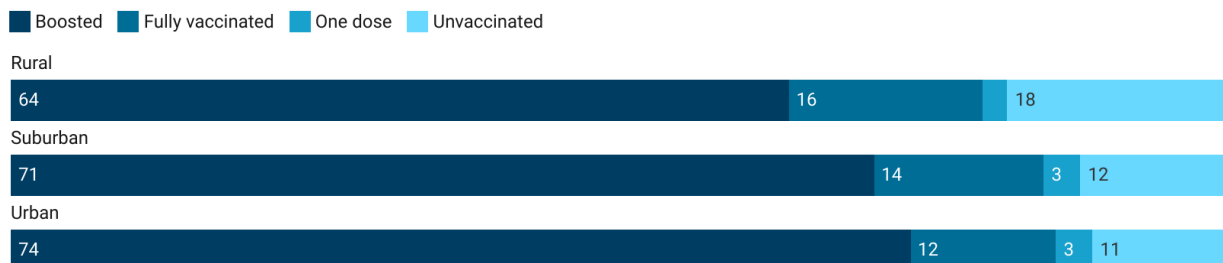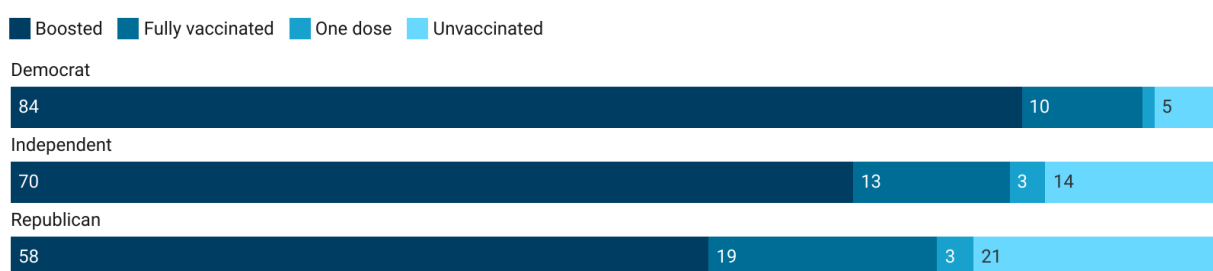
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Figure 5.

Race

As we have found in prior reports, Asian respondents stand out as having substantially higher vaccination levels, with only 5% not vaccinated; there is a smaller range among other racial/ethnic groups, 10% for African Americans, 14% for Hispanics, and 13% for Whites.

Vaccination status of 65+ by race

■ Boosted ■ Fully vaccinated ■ One dose ■ Unvaccinated

African American

72	16	10

Asian

84	11	5

Hispanic

65	16	5	14

White

71	13	3	13

N = 7565, Time Period: January and March 2022. Note: Fully vaccinated individuals are individuals who received either a single shot of the J&J vaccine or the two shot sequence of the Moderna or Pfizer vaccines.

Figure 6.

Urbanicity

There are substantial urban/suburban/rural divides, with rural older Americans being least likely to be vaccinated (18% unvaccinated) and least likely to be boosted (only 64%, versus 74% for urban respondents and 71% for suburban). Urban and suburban older Americans are roughly equally likely to be vaccinated (11% unvaccinated for urban respondents and 12% for suburban).

Vaccination status of 65+ by urbanity

■ Boosted ■ Fully vaccinated ■ One dose ■ Unvaccinated

Rural

64	16	18

Suburban

71	14	3	12

Urban

74	12	3	11

N = 7565, Time Period: January and March 2022. Note: Fully vaccinated individuals are individuals who received either a single shot of the J&J vaccine or the two shot sequence of the Moderna or Pfizer vaccines.

Figure 7.

Party

As with younger individuals, there are very large differences in vaccination levels by partisanship. Only 5% of Democratic respondents reported not being vaccinated. Roughly three times as many Independents (14%) and 4 times as many Republicans (21%) report not being vaccinated. Republicans who received their first two shots are also significantly less likely to be boosted, where there are twice as many Republicans who have received two shots (19%) but have not received a booster as Democrats (10%).

Vaccination status of 65+ by partisanship

Legend: Boosted | Fully vaccinated | One dose | Unvaccinated

Democrat
| 84 | | 10 | 5 |

Independent
| 70 | | 13 | 3 | 14 |

Republican
| 58 | | 19 | 3 | 21 |

N = 7565, Time Period: January and March 2022. Note: Fully vaccinated individuals are individuals who received either a single shot of the J&J vaccine or the two shot sequence of the Moderna or Pfizer vaccines.

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Figure 8.

Reasons for not getting vaccinated

Among the unvaccinated: Following our earlier report on the reasons provided by the unvaccinated to not receive vaccinations, we asked respondents why they had not gotten vaccinated. The word cloud from their responses provides a sense of their major concerns, where the size of each word reflects the frequency with which it appeared in respondents' explanations.

Two themes emerged as dominant:

There is an enormous concern regarding side effects. Respondents repeatedly identified concerns regarding side effects. Typical comments included: "I am really afraid of the side effects because several people that have gotten the shot were very sick with side effects." "I am afraid of long term side effects of it." "I don't trust it to not have side effects. Plus I have diabetes and kidney disease and am at high risk."
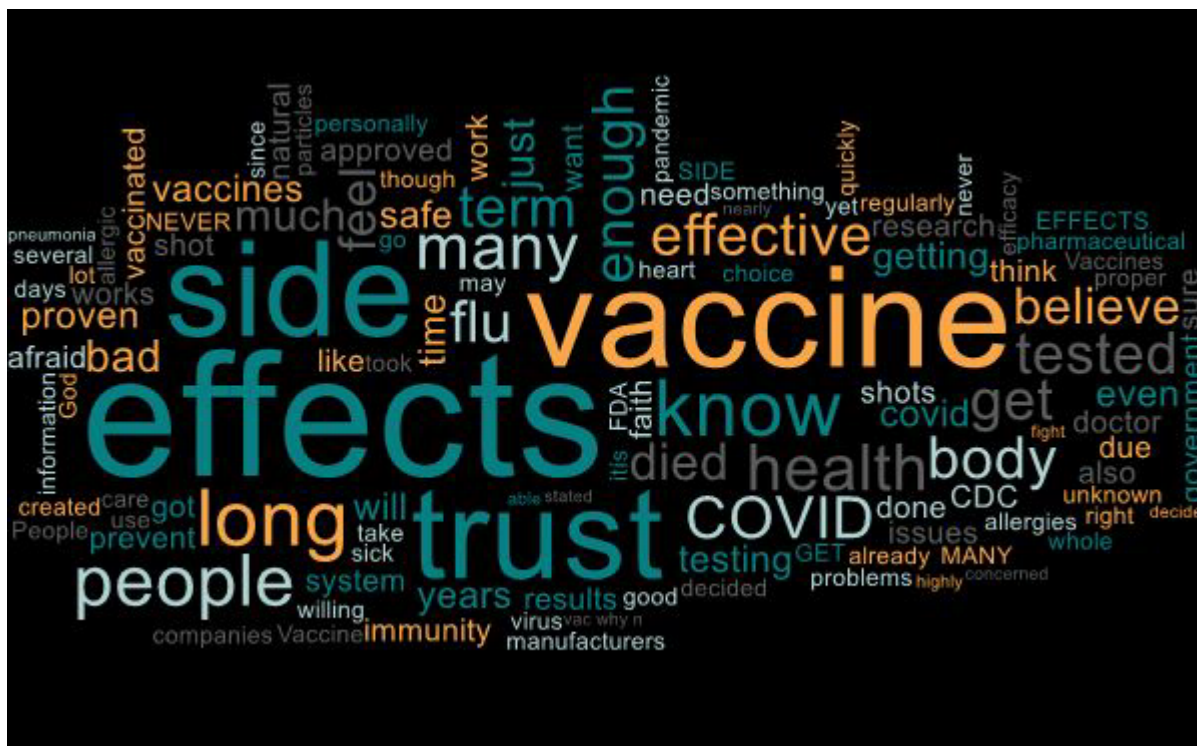
Figure 9.

Figure 10.

Trust looms large. Generally, this reflects a lack of trust in the institutions and the process by which the vaccine was produced. Typical comments include: "Lack of trust of federal and state governments, lack of trust of CDC, Dr Fauci, big pharma, medical model." "Don't trust what's in it and what will happen to your body in a year." "Don't trust it because it was created too quickly. Not sure it even works." "Don't trust the pharmaceutical companies that developed the vaccine." "I do not trust the way this was handled by our government. I believe one size does not fit all, I do not believe the data was accurately collected. I have no faith in this administration." "Don't trust the pharmaceutical companies. Don't trust the shot, it is an unproven substance. We do not know the long term hazards."

We also asked the fully vaccinated but unboosted why they had not received a booster. Their responses are captured by the word cloud in Figure 10.

A fair number of individuals indicated they were not yet eligible for a booster but would get it when they were ("enough time has not passed, when it'll be time for it, I will do so"). Trust is cited far less often as a concern among the vaccinated unboosted, though it is still a factor. Side effects, while also mentioned, were referenced far less by these individuals as a concern; for example, 6 respondents cited bad side effects from their first round of vaccination ("Side effects that I encountered with the Pfizer vaccine.").

Convenience and urgency were much more important. "Get" and "time" are frequently used, often reflecting a desire to get the booster, but referenced obstacles or a lack of urgency to getting a booster: "I am too weak to leave my house. I really would like to get it." "Not accessible." "Haven't found time." Many indicated an intention to get it soon, or when it was convenient: "Will get it when I go in for my annual check up."

Finally, many indicated a belief that 2 shots were enough: "I believe getting two shots was enough." "Did not feel it was necessary."