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THE COVID STATES PROJECT:
A 50-STATE COVID-19 SURVEY
REPORT #57: SOCIAL MEDIA NEWS CONSUMPTION
AND COVID-19 VACCINATION RATES

USA, July 2021

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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 — July 27, 2021

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From April 2020 through July 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 June 9 and July 7, 2021, we surveyed 20,669 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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Is Facebook “Killing us”? Social media news consumption and COVID-19 vaccination rates

Earlier this month, we witnessed a vigorous back and forth between the White House and Facebook regarding the role of the company in circulating health misinformation. On the White House side, the Surgeon General released an [Advisory](#) declaring misinformation a public health threat to the nation, highlighting, in part, the role of social media. This was followed the next day by a pointed statement by President Biden-- “They’re killing us!” Facebook responded with a blog entry, [Moving Past the Finger Pointing](#), asserting that it was not responsible for the plateauing vaccination rates in the US. The company pointed to the fact that 85% of Facebook users in a large survey by Carnegie Mellon (supported by Facebook) reported being vaccinated or wanting to be vaccinated.

This exchange begs an obvious question: *who has it right?* Answering this question is tricky; but at minimum, rebutting the President’s accusation would require more information than is provided in Facebook’s blog post. For one thing, it fails to compare Facebook users to *non-users*. It also does not provide information on vaccination rates among those Facebook users *who actually get information regarding COVID-19 from Facebook*. As most Americans use Facebook, the vaccination rates among users will inevitably be similar to those of the general population. But only a subset of those users go to Facebook specifically to get news and information about COVID-19. These are the people who the Biden administration worries are at risk of exposure to vaccine misinformation.

Our data suggests that Facebook is a major source of information regarding COVID-19, comparable with CNN or Fox News. Further, we find that **those who are most reliant on Facebook for information have substantially lower vaccination rates than those who rely on other sources**. In fact, Facebook news consumers are less likely to be vaccinated than people who get their COVID-19 information from the often vaccine-skeptical Fox News.

The June/July 2021 survey conducted by the [COVID States Project](#) included a partial battery of questions regarding the sources respondents consulted for news or information on COVID-19 (Facebook, CNN, Fox, MSNBC, the Biden administration, and Newsmax). The results below are based on a non-probability online sample of 20,699 Americans from all 50 states and the District of Columbia.

Figure 1 shows the percentage of respondents who report that they got news about COVID-19 from each of those sources in the 24 hours prior to completing our survey. Respondents had the opportunity to select multiple sources, meaning that the sum of all bars exceeds 100 percent.

Consumption of news about COVID-19

In the last 24 hours, did you get any news or information about COVID-19 from the following sources?

National sample, N = 20,669, Time period: 06/09/2021-07/07/2021

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 1.

Facebook looms large, with 3 in 10 respondents citing it as a source of news or information about COVID-19 in the prior 24 hours. Figure 2 summarizes the self-reported vaccination rate among consumers of COVID-related information from these same sources.

COVID-19 vaccinations among news media consumers

[Percent among respondents who say they got COVID-related news from each source in the past 24 hours]

■ Vaccinated ■ Might get vaccinated ■ Would not get vaccinated

National sample, N = 20,669, Time period: 06/09/2021-07/07/2021

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Figure 2.

Notably, the vaccination rates of people who get COVID news from Facebook are substantially lower than the overall population: 61% of users versus 68% of the eligible US population, and 71% for non-Facebook users. However, of the 31% of respondents who say they used Facebook for news or information about COVID-19 in the 24 hours before taking our survey, about half (16% of the total sample) said that Facebook was the *only* source we asked about from which they received such information. This group is distinct from those who selected Facebook plus at least one other source. Among those who received COVID-19 information from Facebook *but not from the other sources we asked about*, 47% report being vaccinated, while 25% say they do not intend to get vaccinated (see Figure 3).

COVID-19 vaccinations and news consumption patterns (Copy)

[Percent among respondents who say they got COVID-related news from each source in the past 24 hours]

National sample, N = 20,669, Time period: 06/09/2021-07/07/2021

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Figure 3.

Important to note, it is problematic to draw strong conclusions from these patterns, because the demographic composition of audiences may differ quite a lot. For example, it might be the case that people who largely get their news from Facebook come mostly from younger, less vaccinated cohorts. To assess this possibility, we turn to a multivariate logistic regression analysis that accounts for the different demographics of people with different patterns of COVID-19 news consumption. Essentially, this allows us to evaluate how much of the difference between people who get news from Facebook (or other sources) and those who do not is simply due to demographic differences. For more details on how we did this, see [Appendix A](#).

Vaccine status: Will not get vaccinated

The numbers are coefficients from logistic regressions. Estimates presented in red, confidence intervals in gray.
Outcome variable: respondent reports they do not intend to get vaccinated

National sample, N = 20,669, Time period: 06/09/2021-07/07/2021

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Figure 4.

Vaccine status: Already vaccinated

The numbers are coefficients from logistic regressions. Estimates are presented in red, confidence intervals in gray.
Outcome variable: respondent reports they have received at least one dose of the COVID-19 vaccine.

National sample, N = 20,669, Time period: 06/09/2021-07/07/2021

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 5.

Even after accounting for demographic and other differences, we *still* find that getting COVID-related news from Facebook – especially *exclusively* from Facebook – is associated with lower vaccination levels and higher levels of vaccine resistance (see Fig.4 and 5 above).

Strikingly, the vaccination odds for those who rely exclusively on Facebook are even lower than those of audience members who rely exclusively on Fox News. Vaccine resistance is also higher among those groups on Facebook compared to Fox News. The only information source that we examine with lower levels of vaccination and higher levels of vaccine resistance is Newsmax (which, however, is used by considerably fewer Americans).

Finally, we examined the relationship between using Facebook (and other news sources) and affirmatively believing in widely circulating misinformation. Figure 6 shows the percentage of respondents believing one or more of the four false claims that we asked about. We find a similar pattern: those who rely exclusively on Facebook have relatively high levels of beliefs in misinformation (with 22% believing at least one false claim), below Newsmax (37%), and only slightly ahead of Fox news (21%). Those who relied on multiple sources of information, but not those three, had a far lower level of beliefs in misinformation, at 7%.

COVID-19 misperceptions by news source

Respondents who said one or more of the following false statements were accurate:

1. *The COVID-19 vaccines will alter people's DNA.*
2. *The COVID-19 vaccines contain microchips that could track people.*
3. *The COVID-19 vaccines contain the lung tissue of aborted fetuses.*
4. *The COVID-19 vaccines can cause infertility, making it more difficult to get pregnant.*

[Percent among respondents who said they got COVID-related news from each source in the past 24 hours]

Chart: National sample, N = 20,669, Time period: 06/09/2021-07/07/2021 • 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 6.

All that said, we still cannot definitively conclude that Facebook has *caused* individuals not to get vaccinated. People who rely heavily on Facebook may differ from the rest of the population in ways that are not captured in this analysis. For example, and unsurprisingly, we find that people with greater reliance on Facebook are less trusting of the news media more generally and other institutions, from government agencies to science. Only 37% of the people who reported only getting news from Facebook the preceding 24 hours report trusting the news media “some” or “a lot”; compared to 47% for everyone else. The greater reliance on Facebook as a source is thus likely caused at least in part by a lack of trust in the media. However, it is also possible that more exposure to Facebook *causes* a reduced trust in the media, in which case Facebook might be an *indirect* cause of vaccine hesitancy. We cannot disentangle that causal knot here. Doing so would require (at least) an analysis of the sequence of exposure and attitude change.

While we cannot confidently say whether or not Facebook is actually “killing us”, as President Biden asserted, it is nonetheless clear that the platform offers an informational milieu that is associated with lower trust in institutions, lower vaccination rates, and greater acceptance of misinformation. This, in turn, highlights the importance of research evaluating what people see on social media over time, and how that is related to subsequent changes in attitudes and behaviors.

Note: We note the donation of \$10,000 of ad credits from Facebook to the COVID States Project to recruit subjects. The resulting data were not included in the above analyses.

Appendix A: Regression results

Here, we offer additional information supplementing the analyses shared in this report, as well as in our Monkey Cage post about Facebook and COVID-19 vaccination rates.

Figures 4 and 5 on p.7 present results from logistic regressions with identical independent variables, estimating the probability of saying one will not get vaccinated or has already received at least one vaccine dose, respectively. The vertical reference lines at zero indicate no effect; coefficients whose confidence intervals touch that line are not statistically distinguishable from zero. Coefficients that are to the right of the line are associated with a higher marginal probability of observing the outcome. For instance, as an otherwise-identical respondent moves from the youngest age group (18-24 years old) to the oldest age group (65 and over), the odds of being vaccinated increase and the odds of saying one does not intend to get vaccinated decrease.

The key independent variables of interest in these models are COVID news sources, based on an item that asked the respondent to indicate which of six sources, if any, they had used for COVID news or information in the previous 24 hours. These sources are CNN, Fox News, MSNBC, Facebook, Newsmax, and the Biden Administration. For modeling purposes, we construct a categorical variable with separate categories for selecting single sources; a category for selecting multiple sources where at least one was Facebook, Fox, or Newsmax; a category for selecting multiple sources, none of which were Facebook, Fox, or Newsmax, and a final category for those who did not select any of these sources. For the purposes of modeling, we use the category representing multiple sources, none of Facebook, Fox, or Newsmax as the reference category.

We include a variety of additional independent variables which are associated with vaccine attitudes and uptake. These include geographic region and context, age group, race, gender, education, household income, parental status, and partisan identification. Continuous variables (partisan identification and income) are recoded to represent the percentage of the maximum value, putting them on 0-1 scales such that coefficients are associated with the marginal change in log-odds of observing the outcome when moving from the minimum to maximum value.