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America at a glance: COVID-19 Vaccination Among People with Disabilities

April 2021 / Andrew Myers, Catherine Ipsen & Ari Lissau

SUMMARY:

- Overall, 19% of our sample of people with disabilities reported already being vaccinated, 56% wanted to get vaccinated, 10% were unsure, and 15% did not want to be vaccinated.
- Rural residents with disabilities reported higher rates of current vaccination, but higher rates of overall hesitancy, and more barriers to vaccination than urban residents with disabilities.
- Political party affiliation was a significant factor, with more Republicans and Independents expressing vaccine hesitancy than Democrats among those surveyed.
- Among those who were hesitant, 65% indicated that more evidence of vaccine safety would influence them to choose to be vaccinated.

Introduction



COVID-19 has claimed the lives of over half a million Americans.¹ On December 11, 2020, the United States Food and Drug Administration (FDA) issued the first emergency use authorization for a COVID-19 vaccine developed by Pfizer-BioNTech,² and have since authorized two more developed by Moderna³ and Johnson & Johnson.⁴

Many people with disabilities are at higher risk of both contracting COVID-19 and experiencing severe outcomes such as hospitalization and mortality because they are more likely to be older, live in congregate resident facilities, and have chronic health conditions.⁵ Despite this fact, disability status is typically not included in COVID-19 case reports and most state vaccination plans have not considered disability status as a risk factor.⁶

Prior research has described COVID-19 vaccination efforts broadly, and among some sub-populations. For example, adults 65 and older, Democrats, college educated individuals, and urban residents are more likely to indicate wanting a vaccine than younger adults, Republicans, individuals without a college education, and rural residents.⁷ However, there is a lack of focus on how people with disabilities are experiencing COVID-19 vaccination efforts. Addressing this knowledge gap is critical to ensuring that people with disabilities are considered as vaccination efforts progress during the ongoing pandemic and future health crises.

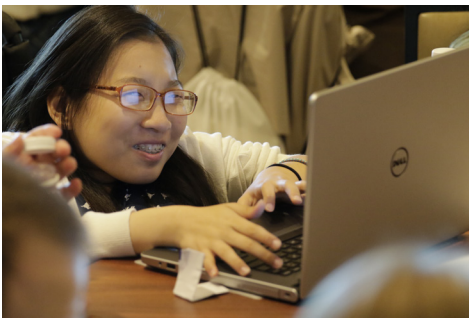
The purpose of this study was to explore how people with disabilities are experiencing COVID-19 vaccination efforts in the United States.



Methods

Data Collection

We used Amazon Mechanical Turk (MTurk) to survey 439 people with disabilities about their experiences with the COVID-19 vaccines and rollout. MTurk is an online marketplace where “requestors” post small tasks for “workers” to complete. Tasks can include anything from programming code, processing photos, or completing surveys. A total of 3,071 individuals were paid \$0.25 for completing a short screening survey. Those who reported having a disability (n = 439) were paid \$3.00 to participate in a survey about COVID-19 vaccination. We conducted the survey between February 11-28, 2021, approximately two months after the Pfizer-BioNTech and Moderna COVID-19 vaccines became available, primarily for high-risk individuals (e.g., healthcare workers, residents



in long-term care facilities, older adults, some minority groups, and individuals with certain health conditions).

Disability

We used two questions from the National Survey of Health and Disability⁸ to recruit people with disabilities aged 18 and over into the study: “Are you limited in any way in any activities because of a physical, mental or emotional problem?” and “Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?”

Health Conditions

We asked participants to indicate if they had any underlying health conditions that the CDC

identified as associated with high risk for severe COVID-19, and recommended for prioritization in vaccination plans.⁹

Rural

We used rural/urban classifications from the Office of Management and Budget (OMB). The OMB classifies urban counties as metropolitan (containing an urban core of 50,000 or more) and rural counties as non-metropolitan (containing an urban core of 49,999 or less). Our sample included 78% urban respondents and 22% rural respondents.

Views of Vaccines

We used a 7-point Likert scale to measure agreement with views about the safety and effectiveness of available COVID-19 vaccines.

Vaccination Barriers

Respondents were asked about barriers they had either experienced or anticipated experiencing when seeking or receiving a COVID-19 vaccine including: difficulty knowing where to go; difficulty scheduling an appointment; distance; transportation; difficulty leaving home; and lack of time.

Vaccination Status and Intent

We asked respondents if they had been vaccinated, intended to become vaccinated, were unsure, or did not want to receive a vaccine. For those who were unsure or did not want the vaccine, we asked about what might influence them to become vaccinated.

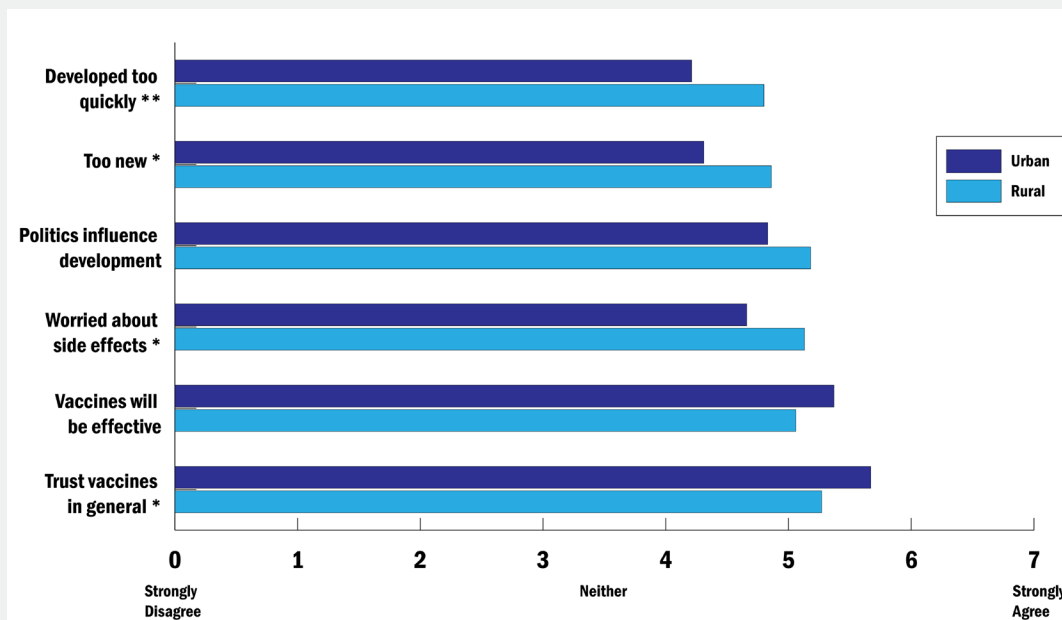
Results

Approximately 95% of respondents answered yes to the question “Are you limited in any way in any activities because of a physical, mental or emotional problem?” and 28% answered yes to the question “Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?”

Respondents identified as male (50%), female (48.5%), and other (1.5%). Approximately 77%

identified as white non-Hispanic and the average age was 38 with a range of 18-75. Respondents had a high school degree or less (14.6%), some college or technical school (22.4%), associate’s or technical degree (10.3%) or bachelor’s degree or higher (52.7%). Respondents were employed full-time (50.5%), part-time (15.5%), laid-off due to COVID (4%), or not employed (30%). Individuals identified their political parties as Democrat (44.2%), Republican (26.2%), Independent (24.6%), and other (5%).

Figure 1:
Average views of COVID-19 vaccines, by rural and urban



Note: Asterisks denote statistically significant differences between groups. *p≤.05, **p≤.01.

Vaccine Views

Figure 1 shows rural and urban differences in level of agreement with statements about vaccine safety and effectiveness.

On average, rural respondents had higher levels of agreement with negative statements about vaccine safety, while urban respondents had higher levels of agreement with positive statements about vaccine effectiveness.

Barriers

Respondents indicated barriers that were or would be a problem for them in terms of getting a vaccination. Figure 2 reports the rates of rural and urban people who indicated a certain barrier was a problem based on a yes or no response. A significantly higher proportion of rural people with

disabilities reported barriers to getting vaccinated compared to urban people with disabilities. Overall, knowing where to go and making an appointment were the top two barriers among both urban and rural residents.

Vaccination Status and Intent

Respondents indicated if they had already been vaccinated (19%), intended to be vaccinated (56%), were unsure about whether they wanted to be vaccinated (10%), or did not want to be vaccinated (15%).

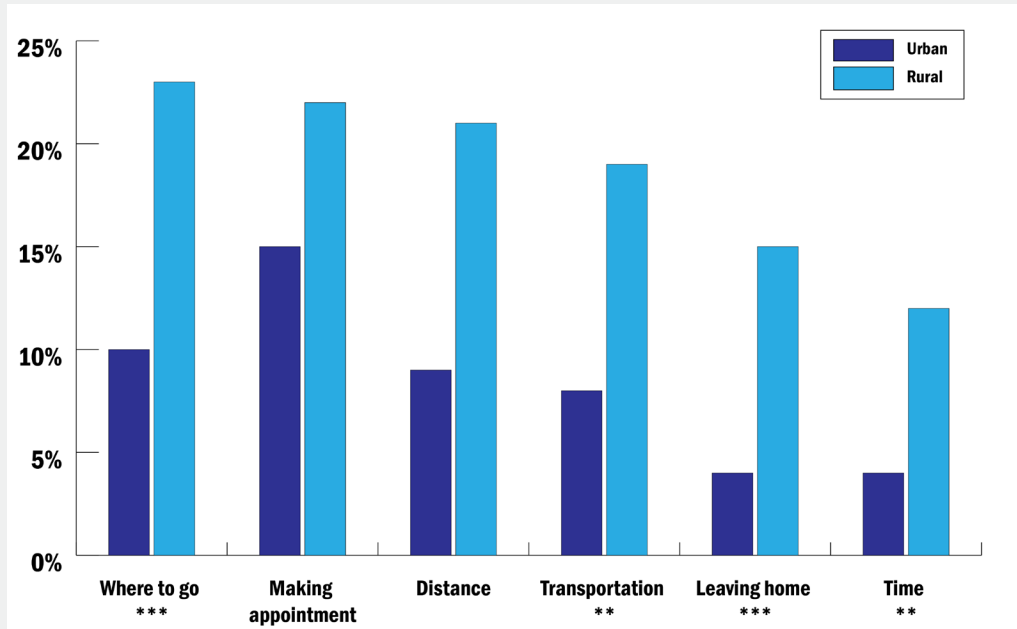
Figure 3 shows how these rates vary across different gender, race, education, health, geography, and political groups.

Some differences were statistically significantly different:

- Women were more likely to not want a vaccine than men
- White, non-Hispanic individuals were less likely to already be vaccinated and more likely to

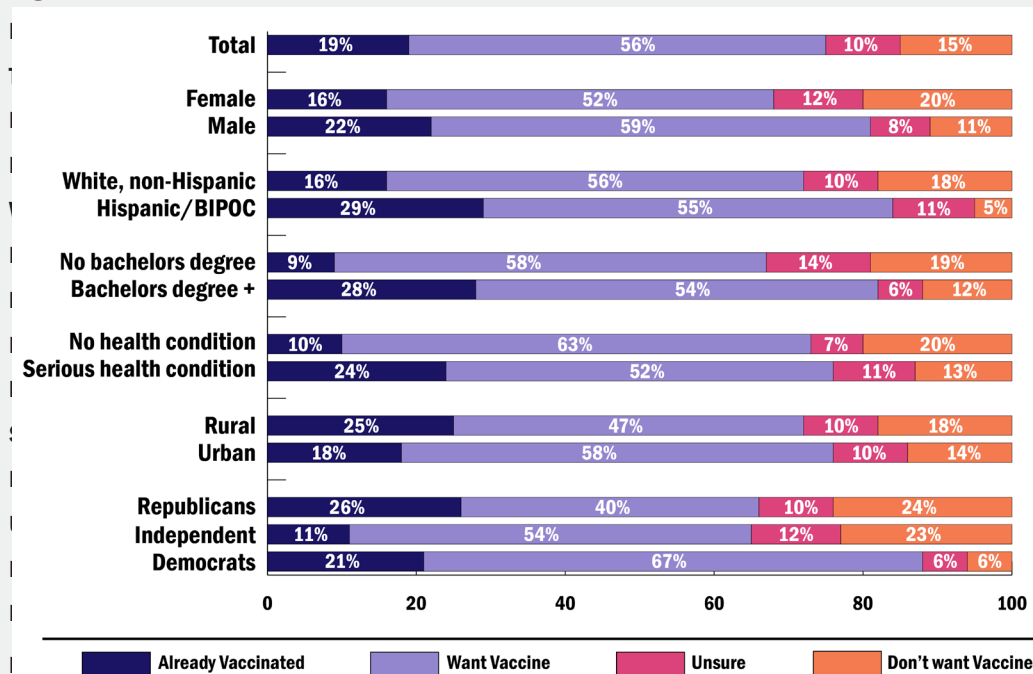
- not want to be vaccinated than Hispanics and Black, Indigenous, and people of color (BIPOC)
- Individuals with health conditions were more likely to already be vaccinated

Figure 2: Barriers to COVID-19 vaccinations, by rural and urban



Note: Asterisks denote statistically significant differences between groups. **p≤.01, ***p≤.001.

Figure 3: Vaccination status and intent

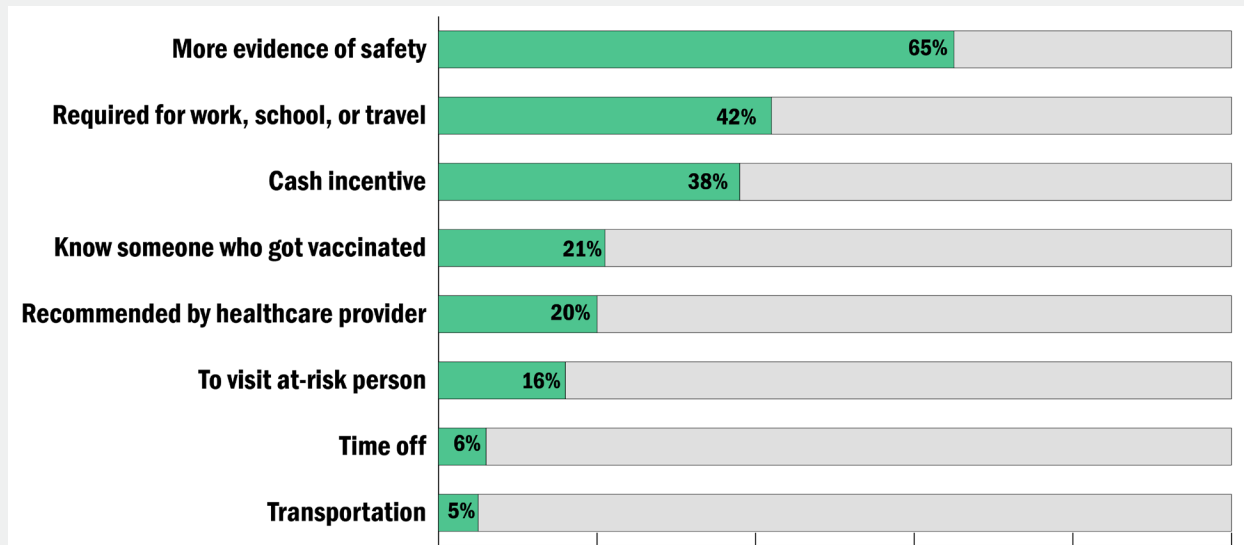


- Rural respondents were less likely to want a vaccine than urban
- Democrats were much more likely to already be vaccinated or want the vaccine than Republicans and, similarly, Independents were less likely to want the vaccine in line with Republicans

Understanding Vaccination Hesitancy

Overall, 25% of respondents (n = 110) indicated they were either unsure about getting the vaccine or did not want to be vaccinated. We wanted to learn more about these individuals to identify reasons why some individuals may be hesitant to be vaccinated against COVID-19, and identify potential strategies for improving information and addressing barriers faced by people with disabilities. Figure 4 reports which strategies respondents endorsed from a list of choices.

Figure 4: Strategies for vaccination promotion



Discussion

Interestingly, we found that Hispanic and BIPOC individuals were more willing to get a vaccine than white, non-Hispanic adults. This is contrary to other findings showing that Hispanic adults and Black adults are less likely to want to be vaccinated.⁷ Our findings may suggest that disability status influences observed differences among racial groups, however, we cannot be sure using these data alone. Additionally, in our sample, we found that Hispanic and BIPOC individuals were more willing to get a vaccine than white, non-Hispanic adults, which is also different from other studies.⁷

Overall, rural respondents indicated slightly more skepticism of the COVID-19 vaccines, and accordingly, more hesitancy to be vaccinated. They also reported significantly more barriers to vaccination, but also higher rates of current vaccination. This may be attributed to the fact that rural residents are typically older and report

higher rates of chronic disease¹⁰ which may have placed them at a higher priority in most state vaccination plans. Additionally, rural vaccination programs have reported more success getting individuals who want the vaccine vaccinated.¹¹ This could be attributed to fewer administrative barriers (i.e. less bureaucracy for managing a smaller population) and relying on word of mouth and personal contact.¹² Additionally, there may simply be less demand and thus it may be easier for individuals who want the vaccine to get it.

Like other research, our results indicate that women were less likely to want to be vaccinated than men.¹³ Additionally, we found that political affiliation mattered in COVID-19 vaccine hesitancy. In general, Republicans and Independents were much less likely to want a vaccine relative to Democrats and any other sub-group, such as those based on gender, race, education, health, or geography.⁷

Recommendations

One of the primary reasons for conducting this research was to understand how to improve vaccination rates among people with disabilities. This is impacted by both perceived logistical barriers to getting a vaccine, and hesitancy



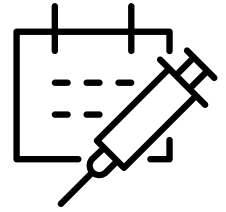
based on views about safety and effectiveness. While some barriers are hard to overcome, the two most significant barriers were related to confusion about where to go for a vaccine and how to make an

appointment. Both of these barriers are directly related to the clarity and ease of public health protocols. When states have variable, confusing, or conflicting vaccine rollouts across local public health systems, this can introduce a high degree of confusion and mixed messaging. Developing clear and consistent communication strategies and protocols is important for reaching specific populations.

While views about vaccine safety may be challenging to address, respondents endorsed some strategies that might influence their decision-making. These can be divided into persuasive and punitive strategies. Persuasive strategies focus on stronger evidence about vaccine safety, cash incentives, and recommendations from trusted individuals (such as people you know or healthcare providers). Punitive strategies include vaccine requirements for work, school, or travel. While punitive strategies may impact overall vaccination rates, they run the risk of further polarizing public discourse and promoting distrust among influential sub-populations.

Limitations

MTurk respondents tend to be younger, more educated, less racially diverse, and report higher rates of psychological disability compared to the general population of individuals with disabilities. For example, the demographics made it difficult to explore trends among adults aged 65 and over due to small sample size. Further, participants must have access to the internet and ability to use MTurk which may bias these results. These findings also are strictly cross-sectional, which limits our ability to determine causal relationships. Finally, these data were collected when the only two available vaccines required two doses. This meant that individuals had to make two separate visits approximately 3-4 weeks apart, which may be difficult for many people with disabilities living in remote places. However, the Johnson & Johnson vaccine only requires one dose which may alleviate some of the barriers observed in this study. Future research should explore how different vaccination schedules may impact vaccine access.



Conclusion

These findings may help inform the development of vaccination plans and promotion campaigns in the current pandemic and future health crises. While some groups face significant barriers to vaccination and express some hesitancy, many of these issues can be addressed. These strategies may focus on improving understanding of the safety of COVID-19 vaccines and streamlining logistical processes for vaccination.



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Images

Unless otherwise noted, all photos are from Healthy Community Living (www.HealthyCommunityLiving.org) under which people from around the country have sent in photos of “Real People, Real Places” that have to do with living with disability in America.

Suggested Citation

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Research and Training Center
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For Additional Information

Research and Training Center on Disability in Rural Communities

The University of Montana Rural Institute for Inclusive Communities

35 N. Corbin Hall, Missoula, MT 59812-7056

(888) 268-2743 or (800) 732-0323

rtc rural@mso.umt.edu | rtc.ruralinstitute.umt.edu

Prepared by Lauren Smith

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