COVID-19 Vaccine Attitudes among Nonelderly Adults Who Reported Being Unlikely to Get Vaccinated
A Qualitative Snapshot from the Early Vaccine Rollout

Dulce Gonzalez, Haley Samuel-Jakubos, Brigette Courtot, Clara Alvarez Caraveo, and Joshua Aarons

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With the US supply of COVID-19 vaccines having increased in recent months and demand starting to level off, most states were at or near having more vaccines available than people who want them as of May 2021.¹ Current efforts to expand vaccine access, such as increasing vaccine supply to community health centers and facilitating access through mobile or pop-up vaccination clinics, will be key to ensuring equitable vaccine availability for communities of color and other communities at high risk of exposure to the coronavirus and death from COVID-19 (Artiga, Corallo, and Pham 2020; Corallo, Artiga, and Tolbert 2021; Dubay et al. 2020; Ndugga, Artiga, and Pham 2021).² These efforts will also help the US advance toward herd immunity, meaning between 70 and 85 percent of the population is vaccinated against COVID-19.³ However, doing so requires sustained focus on vaccine confidence, defined as people's trust in recommended vaccines, the providers who administer vaccines, and the vaccine development process.⁴ Confidence in the COVID-19 vaccines has improved since they were first rolled out in December 2020, but about 13 percent of adults in the US still said they would definitely not get a COVID-19 vaccine as of May 2021. Another 12 percent were waiting to see how the vaccines affect people before deciding whether to get vaccinated.⁵
Adults’ decisionmaking about getting the COVID-19 vaccines is complex. Much is known already from polls and survey data about the characteristics of adults reluctant to get a COVID-19 vaccine and their concerns about the vaccines, including worries about side effects and the rapid development process. Here, we add to our earlier work exploring COVID-19 vaccine confidence (Karpman et al. 2021). This brief provides qualitative insights from interviews conducted in February 2021 with 40 nonelderly adults who reported in the Urban Institute’s December 2020 Well-Being and Basic Needs Survey (WBNS) that they would probably or definitely not get a COVID-19 vaccine.

The themes that emerged from our follow-up telephone interviews offer insights into nonelderly adults’ decisionmaking about COVID-19 vaccination during the initial phase of the vaccine rollout. Such themes include the risks and benefits nonelderly adults weigh as they consider getting the vaccine, which sources of information they consult about the vaccines, and who they trust for such information. These themes will be important to consider as the federal government strives to meet its goal of vaccinating 70 percent of US adults by July 2021. Our key findings are as follows:

- As of February 2021, most interviewees who indicated in the WBNS that they were not interested in being vaccinated maintained they were still unlikely to get a COVID-19 vaccine if it were available to them.
- Interviewees were primarily concerned about the short- and long-term side effects of the COVID-19 vaccines and their accelerated development.
- Many interviewees said more information and more time to see how the vaccine works on others could help them change their minds.
- Interviewees mainly relied on television news programs and online news media for information about the vaccines. Many were having difficulty trusting that the COVID-19 vaccines are safe, given the political baggage, misinformation, and seemingly contradictory information surrounding them.
- Friends and family, particularly through social media, were another key source of information about the COVID-19 vaccines. Despite not wanting a vaccine, some interviewees wanted their high-risk loved ones to get vaccinated.
- Health care providers emerged as a trusted source of information about the vaccines. Trust in public health experts was mixed.
Methods

We conducted semistructured telephone interviews with 40 nonelderly adults who participated in the December 2020 WBNS to gain nuanced information on their attitudes toward the COVID-19 vaccines. The Urban Institute’s Institutional Review Board reviewed and approved the study. We assured respondents we would protect their confidentiality by excluding identifying information from our reports. We obtained verbal informed consent from interviewees.

We invited WBNS respondents to participate in phone interviews if they reported they probably or definitely would not get a COVID-19 vaccine and if they consented to be contacted about participating in an interview. We designed other recruitment criteria to ensure variation by census region, political party affiliation, reasons for not wanting a vaccine, and race and ethnicity. Interviews lasted 20 minutes. Two of the 40 interviews were conducted in Spanish, and the remainder were conducted in English. Data collection took place February 5 through 23, 2021, and the interviews covered the following topics:

- knowledge and beliefs about the COVID-19 vaccines
- concerns about the COVID-19 vaccines and the reasons behind those concerns
- what would encourage COVID-19 vaccine uptake (e.g., trusted messengers)
- opinions about and experiences with other vaccines (e.g., flu and childhood vaccines)

Because we collected data in February 2021, during the initial phases of vaccine distribution and before most nonelderly adults were eligible, our interviews primarily focused on understanding initial attitudes and beliefs toward the vaccines, rather than access to them. Phone interviews took place approximately two months after the initial survey, and attitudes toward the vaccines have been rapidly evolving as more people have been vaccinated; some interviewees’ attitudes toward the vaccines may have changed since we spoke to them.

Among the final sample of interviewees, about half said they would probably not get a COVID-19 vaccine (21 interviewees) and half said they would definitely not get a COVID-19 vaccine (19 interviewees). The sample was similarly split between people who identify as or lean Republican (19 interviewees) and who identify as or lean Democrat (19 interviewees). For more details on interviewees’ characteristics, see table 1.
TABLE 1
Select Characteristics of Interviewees Reporting They Would Probably or Definitely Not Get a COVID-19 Vaccine, February 2021

<table>
<thead>
<tr>
<th></th>
<th>Number of interviewees</th>
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<tr>
<td>All</td>
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<tr>
<td><strong>Vaccine attitudes</strong></td>
<td></td>
</tr>
<tr>
<td>Would probably not get vaccine</td>
<td>21</td>
</tr>
<tr>
<td>Would definitely not get vaccine</td>
<td>19</td>
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<tr>
<td><strong>Political party affiliation</strong></td>
<td></td>
</tr>
<tr>
<td>Democrat/leans Democrat</td>
<td>19</td>
</tr>
<tr>
<td>Republican/leans Republican</td>
<td>19</td>
</tr>
<tr>
<td>Other party affiliation</td>
<td>2</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>18 to 39</td>
<td>19</td>
</tr>
<tr>
<td>40 to 59</td>
<td>16</td>
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<tr>
<td>60 to 64</td>
<td>5</td>
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<tr>
<td><strong>Race/ethnicity</strong></td>
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<tr>
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<td>10</td>
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<tr>
<td>White</td>
<td>18</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td>Hispanic/Latinx</td>
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<td><strong>Census region</strong></td>
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<td>Midwest</td>
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</tr>
<tr>
<td>Northeast</td>
<td>12</td>
</tr>
<tr>
<td>South</td>
<td>15</td>
</tr>
<tr>
<td>West</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Characteristics come from Ipsos’s panel profile questions, which Well-Being and Basic Needs Survey (WBNS) respondents complete when they first join the KnowledgePanel, the online probability-based panel from which WBNS respondents are drawn.

Notes: “Other” race includes non-Hispanic/Latinx adults who are not black or white or are more than one race. Black, white, and other adults do not identify as Hispanic/Latinx.

Findings

Below we divide our findings by those related to COVID-19 vaccine intentions and decisionmaking and those related to sources of information on the vaccines. We discuss the risks and benefits nonelderly adults weighed when considering getting vaccinated, which sources of information they consulted about the vaccines, and who they reported trusting for information about the vaccines as of February 2021.

COVID-19 Vaccine Intentions and Decisionmaking

At the time of our interviews in February 2021, COVID-19 vaccine distribution had begun but was largely restricted to certain groups (e.g., health care workers). Most interviewees were firm in their intentions to not get vaccinated. When asked whether they would get a COVID-19 vaccine, interviewees underscored that such a decision was complex, personal, and driven by numerous factors, including concerns about the vaccines’ safety, mistrust in the government or health care system, and wanting more time to pass before getting a vaccine.
As of February 2021, most interviewees who indicated they were not interested in being vaccinated maintained they were still unlikely to get a COVID-19 vaccine if it were available to them. The small number who changed their minds cited various reasons for doing so.

Many interviewees were aware of the groups designated eligible for the COVID-19 vaccines as of February 2021; specifically, they identified health care and other essential workers, older adults, and high-risk individuals with chronic conditions (e.g., obesity and heart conditions) as being prioritized and eligible. Eight interviewees who worked in health care and other essential industries (e.g., as teachers and factory workers) said they had been offered a COVID-19 vaccine. Only five interviewees indicated they had changed their minds since December 2020 and were open to getting or had already received a COVID-19 vaccine. Of the two interviewees who received a vaccine, one did so through his health care–sector employer, and the other did so through a church with surplus doses.

No clear patterns emerged in the characteristics of interviewees who changed their minds. Their political affiliations were mixed, as was their reluctance (that is, some would “probably not” and some would “definitely not” get a vaccine). The reasons interviewees changed their minds included having seen how the vaccines work on others, losing a loved one to COVID-19, having the vaccines be strongly encouraged by their employers or their health care professionals, and a change in the federal administration to one perceived as more inclusive of communities of color. Some interviewees said a confluence of factors changed their minds. One interviewee decided to get vaccinated because the benefits outweighed the risks, and no evidence of serious side effects had emerged:

“I was [skeptical] about it because it was too fast. I didn’t know if it would be safe to have it. Thinking about it now, I would rather have some protection rather than none from the COVID infection. I’d rather take it and risk the side effects that I might have rather than to get the COVID. I haven’t heard any serious side effects. So, if that many people have had it and I haven’t heard of side effects, it would be safe to take it.”

Interviewees’ top reasons for not wanting a COVID-19 vaccine included concern about short- and long-term side effects, concern the vaccines were developed too quickly, and belief that the vaccine is not necessary.

Interviewees often had multiple reasons for not wanting to get a COVID-19 vaccine. Most commonly, they were worried about potential short- and long-term side effects. Some mentioned they had not seen enough studies on the vaccines’ long-term effects. Interviewees often mentioned hearing about the short-term side effects associated with the COVID-19 vaccine, mainly flu-like symptoms, fatigue, and sore arms. However, several also mentioned hearing about rare but adverse side effects, such as fainting, facial paralysis, and death, which often further discouraged interviewees. One interviewee still unwilling to be vaccinated mentioned that the word “vaccine” had for him become inextricable from the side effects:

“I guess the only thing that really kind of sticks out in my mind is every time I hear the word ‘vaccine,’ I remember the nurse that they put on TV that got the shot and she passed out. That doesn’t change my opinion or anything, but any time we say the word ‘vaccine,’ that’s the image that pops into my mind.”
Additionally, a few interviewees were particularly worried about how the vaccine would interact with their health conditions and medications. One interviewee shared the following:

“I also want to know what the long-term effects of the ingredients are for people such as myself who have preexisting conditions that also have to take medications for those preexisting conditions. There is a real lack of data—long-term data—that can show my physician, [who] can tell me and educate me regarding it.”

Another key concern was that COVID-19 vaccine development was too rushed, leaving interviewees with doubts about the vaccines’ safety. Some mentioned that vaccines often spend years in clinical trials and are scrutinized heavily by regulators, and they perceived that the COVID-19 vaccines had not gone through this same rigorous review. Many interviewees preferred to wait to see how the vaccine worked for others first before considering it for themselves. As one interviewee shared:

“We know that it will eliminate the virus, but we do not yet know the second-order effects of taking the vaccines. There is a lot of speculation with respect to the effects, so I don’t know if it’s true or false. It would be prudent to wait and see what the side effects are and then make a decision about getting vaccinated.”

A few interviewees did not believe a COVID-19 vaccine was necessary for them and often explained this decision as an individual risk-benefit calculation. These interviewees felt getting a vaccine imposed a greater risk than contracting COVID-19. Some mentioned they were healthy or young and did not see a need to get vaccinated because they perceived themselves to be at low risk for serious illness from COVID-19. One 23-year-old interviewee said she would rather prioritize higher-risk groups before getting vaccinated. A few interviewees mentioned they were already taking precautions to prevent the spread of the coronavirus, such as handwashing and wearing masks. Other, less common reasons for not believing the vaccines were necessary were not believing in vaccines in general, believing the risks of getting COVID-19 had been exaggerated, and believing a vaccine is unnecessary if one has already had COVID-19. As one respondent shared, “I have the antibodies. It showed that I had had it [COVID-19] at one point...I know it’s different for everybody, but I’ve had colds worse than that. I was somewhat asymptomatic. I just don’t feel at risk.”

Historical racism in the US health care system and mistrust in the government deterred a few interviewees from wanting to get a COVID-19 vaccine.

A few interviewees specifically said the Tuskegee syphilis study led to their mistrust in the health care system. One shared the following:

“When it comes to my family, because we know the history of the experiments when it came to Tuskegee and it came to African Americans in this country, we know. So, if we were to just...say, ‘Okay, well, let me go and get the [COVID-19] vaccine,’ without really considering the history of it. It would be hard for me to go and get it with ignoring that—that would be concerning to me.”
Some interviewees expressed mistrust in government generally; one mentioned that she trusted the Biden administration less than the Trump administration:

"Under former President Trump, I would’ve believed a little bit better the safety of especially the American-made vaccines...Under the current administration, I would not trust it. Definitely under President Biden, I wouldn’t trust it at all."

In contrast, a Black interviewee who changed her mind about getting a COVID-19 vaccine and had received one noted the Biden administration was key to that decision: "I feel like the current president [Biden] and his administration are actively including people of color into getting the vaccine...I just didn’t trust the vaccine as far as if it was coming under [the Trump] administration."

Very few interviewees mentioned conspiracy theories as reasons for not wanting to get vaccinated. Those who did felt the vaccines were developed for drug companies’ financial gain, that the vaccines have a tracking device, or that the vaccines contain harmful materials such as poison.

Most interviewees believed vaccines protect against serious diseases and had opted to get other vaccines. However, many of these interviewees still would not get a COVID-19 vaccine.

Many respondents mentioned getting childhood vaccines as a testament to their belief in the effectiveness of vaccines. As adults, though, some had forgone recommended vaccines, most notably the flu vaccine. A few mentioned being reluctant to get the human papillomavirus and the pneumonia vaccines. These interviewees were primarily concerned about side effects such as pain at the injection site, flu-like symptoms (for flu vaccines), and, in some cases, allergic reactions. Other reasons the interviewees opted against recommended vaccines included inconvenience, personal choice, or because they considered themselves healthy and at low risk for illness. One interviewee described how the choice to get a COVID-19 vaccine related to his choice to get other recommended vaccines:

"The coronavirus [vaccine], I don't know. The others, like the flu [vaccine]? Yes, because I have taken the flu vaccine every year. I believe in other [vaccines] because everyone has taken them and there are not side effects...But a vaccine that was produced quickly and is experimental that hasn't been tried and true? No."

Many interviewees wanted more information about the COVID-19 vaccines and for more time to pass before deciding whether to get vaccinated. A few mentioned that a mandate to get a vaccine might sway them.

Some interviewees expressed that they had received sufficient information on the vaccine that was accessible and easy to understand. However, many stressed that they needed additional information to help them decide whether to get vaccinated. On the other hand, some mentioned that nothing else could convince them to change their minds about vaccination. One respondent shared, "I don't think I have enough information. I'm glad that I am not in line next to have to decide to take it or not. I don't feel like I know enough about it at all." Another interviewee wanted material that clearly outlines the risks and benefits of getting a COVID-19 vaccine:
“What I would like is a doctor’s office-style brochure telling me, this is the risks of taking it. This is the benefits of taking it. This is how many times you have to get a booster. This is your risk of getting COVID afterwards. I would like to see something like that I could hold in my hands and look at and evaluate.”

Seven interviewees were open to getting vaccinated if it were mandated. Of those, most said they would get the vaccine if it were required for travel. Still, some of these interviewees expressed they would not be happy with such mandates. One respondent shared the following:

“If we want to take family vacations, we’re going to be forced to [get a vaccine] at some point maybe...And again, I wouldn’t be doing it because I have to have it. Again, if they’re going to get between me and being able to live, well again, I’d [get vaccinated] kicking and screaming.”

Sources of Information on COVID-19 Vaccines

Interviewees relied on diverse sources to obtain information on the COVID-19 vaccines and had varied opinions on which sources they could trust. Interviewees cited sources of information including television news programs and online news publications, friends and family, social media platforms, public health officials, and health care providers. However, only some of these sources were viewed as reliable messengers. When asked about these sources’ specific content and tone, many interviewees suggested they encouraged vaccination. However, some interviewees also encountered mixed messaging, including discouragement of vaccination.

*Interviewees most commonly learned information about the COVID-19 vaccines through television and online news media. However, they did not consider these sources reliable or trustworthy.*

Interviewees felt television and internet news sources were sensationalist, offered contradictory messaging, or had immediately politicized getting vaccinated, all of which discounted their credibility. Moreover, a few participants noted that news programs generally have a political slant, which made these interviewees skeptical about the vaccine-related information they hear on the programs. One interviewee wanted objective news sources but did not perceive that those were available, saying, "Whether it’s Fox trying to push a certain point of view or ABC or CNN trying to push a certain point of view, I want the news."

Several interviewees described hearing messaging that encouraged vaccination. These messages typically highlighted that vaccines are necessary to build immunity to COVID-19, to stop the spread of the coronavirus, and to keep the community healthy. Some mentioned hearing that vaccines are also necessary to prevent serious illness from coronavirus variants. One person noted the following:

"On the radio they interviewed a doctor who was talking about the vaccine. She recommended people take the vaccine. When she was asked about whether people who had COVID-19 should get the vaccine, she said yes, because the virus can mutate."
Friends and family, particularly through social media, were another key source of information about the COVID-19 vaccines, but interviewees questioned the veracity of the information they provide. Many knew someone who had been vaccinated against COVID-19.

Many interviewees learned information about the COVID-19 vaccines through friends and family on social media, mainly Facebook. Many could identify friends or family members who had already gotten a COVID-19 vaccine, and many indicated that friends and relatives held mixed opinions on whether they would get vaccinated. Interviewees noted their family and friends who had been vaccinated work in essential jobs, are older, or have a chronic health condition that qualifies them for a vaccine. Many interviewees said they were unlikely to get a COVID-19 vaccine despite knowing someone who had. Still, some wanted their high-risk relatives to get vaccinated, including elderly relatives and those with chronic health conditions.

Many interviewees questioned the trustworthiness of social media generally as a source for information about the vaccines. Some of these interviewees described having difficulty verifying information from these sources, because they could not discern whether the information they saw, such as videos of people experiencing adverse side effects after vaccination, were real or fabricated. One interviewee noted that they had not found information to explain or refute the negative side effects of the vaccines they saw on social media:

“Yesterday I received a video from a family member that said people can develop neurological issues when they receive the vaccines, but I don’t know if that was true or false. There is no group of scientists or doctors who can tell us it is false. All those videos come out and people are silent, and the medical community is silent.”

Health care providers emerged as a trusted source of information about the vaccines. Trust in public health officials and experts was mixed. Other entities such as elected officials and employers were not common sources of information.

Respondents found health care providers (e.g., primary care providers, specialists, and pharmacists) to be key and reliable sources of information about the COVID-19 vaccines. Some interviewees had spoken to a health care provider about the vaccines, and others said they might be more inclined to get vaccinated if a health care provider recommended it. A few were willing to get the vaccine if their provider recommended it specifically because of an underlying condition or other high-risk characteristic (e.g., older age). As one respondent said, "I trust [my doctor] emphatically. If he can get educated and his questions are answered to his satisfaction and I know he will educate me, then I will get it." Another interviewee noted that his father, despite being against the vaccine, would get vaccinated because of health conditions and on the recommendation of his physician:

“My father has a heart valve and he’s on his second heart valve... So with his condition and preexisting conditions, if he were to get [a COVID-19 vaccine], he possibly would have more complications of the flu than the normal person would. So again, as much as he hates to [get a COVID-19 vaccine], he’s going to do it, because again, he enjoys being with us and that’s the reason. He listens to what his doctors say... He doesn’t listen to what I say, but he listens to what his doctors say."
Trust in public health officials and experts was mixed. Several respondents pointed to local and national public health agencies and officials, including the Centers for Disease Control and Prevention and Dr. Anthony Fauci, director of the US National Institute of Allergy and Infectious Diseases, as trustworthy sources for factual information on the vaccines. One respondent reported trusting the Centers for Disease Control and Prevention for both its ability to “separate the myths from facts” and its reputation as a credible source. However, some interviewees said they did not trust public health officials based on their early handling of the pandemic, shedding light on how inconsistent information at the onset of the pandemic may have lasting effects on the vaccine rollout and overall trust in the vaccines. One interviewee said the following:

“I listen to news conferences with someone like Fauci, and I’ll be honest, I don’t trust anything that comes out of their mouths because they’ve changed what they say so many times, I don’t think they even know what they are doing. One time we need masks, and then we don’t need masks. It changes so often that I don’t know what to trust.”

Few interviewees mentioned hearing information about the vaccines from community organizations or employers. One interviewee described his mother’s experience receiving vaccine information from her employer, a hospital:

“[The hospital indicated] we’re not requiring it yet, but because we’re health care workers and we’re on the front lines, we highly suggest that you do get it. However...if you’ve ever had a strong reaction in the past, if you’re allergic to any of the ingredients, or if you meet any of this list of criteria, you should not get it because it is untested, or it could cause adverse effects if you have this whole list of other issues.”

Discussion

Recent polls indicate people’s willingness to get vaccinated against COVID-19 has shifted since the first COVID-19 vaccine was approved for use in the US in December 2020, and increasing numbers of people report they will definitely or probably get vaccinated. But in May 2021, one-third of US adults were still very unsure or opposed to getting a COVID-19 vaccine. Vaccine confidence also dipped recently, following a pause in administration of the Johnson and Johnson vaccine. Additionally, some adults are forgoing their second doses of the Moderna and Pfizer vaccines, sometimes because of worries about the associated side effects. Together, these developments suggest it may be difficult for the US to promptly progress toward herd immunity against COVID-19.

Among our sample of 40 respondents who said they would definitely or probably not get a COVID-19 vaccine when surveyed in December 2020, very few had changed their minds about getting vaccinated when we interviewed them two months later. Some reported that no additional information or messenger would convince them to get vaccinated. However, most interviewees expressed that something could sway them to get a vaccine, such as more time to see how the vaccines work on others, more information from a health care provider, or a mandate. Interviewees articulated trying to make the best choice for themselves by weighing their individual risk perceptions for contracting the virus against their perceptions of the vaccines’ safety. And many were having
difficulty trusting that the COVID-19 vaccines are safe, given the political baggage, misinformation, and seemingly contradictory information surrounding them.

Consistent with other research (Karpman and Zuckerman 2021), we find health care providers are a trusted source of information about the COVID-19 vaccines. Though primary care doctors were not the main vaccine administrators during initial phases of the vaccine rollout,12 officials at the Centers for Disease Control and Prevention urged states in mid-April 2021 to expand vaccine supply to primary care providers (CDC 2021). Disseminating information about the vaccines—and administering vaccines—through health care providers could be key to broadening vaccine access and improving vaccine uptake.13 Some states are starting to actively engage primary care providers in their COVID-19 vaccine distribution. Michigan and New Mexico are encouraging their primary care providers to sign up as vaccine administrators, and New Mexico also created an online portal for primary care physicians to enroll as vaccine administrators.14 Maryland’s Primary Care COVID-19 Vaccination Program has been expanded to provide more vaccines to primary care providers, and participating practices are encouraged to identify and reach out to patients who have not yet been vaccinated, particularly communities of color and communities at high-risk for contracting COVID-19.15

Findings from our interviews support research showing that side effects are a top concern among adults reluctant to get a COVID-19 vaccine (Karpman et al. 2021).16 As such, providing information in various formats that clearly outline risks, benefits, and side effects will be important. Having those resources actively dispel misinformation and clearly explain why some people may have experienced adverse side effects could assuage fears about the vaccines.

Many interviewees believed they do not need a vaccine or would rather continue practicing their current safety protocols rather than risk side effects from the vaccines. Nevertheless, some interviewees against getting the vaccine expressed wanting their high-risk or older loved ones to get vaccinated. As such, it will be important for primary care and other health care providers to communicate clearly to patients that the vaccine is not just for people at risk for severe illness from COVID-19 and that getting vaccinated will protect their loved ones and themselves.

COVID-19 vaccine confidence is a moving target, and the perspectives captured in these interviews from February 2021 reflect only a snapshot in time. Since then, eligibility for the vaccines has expanded to all adults and more people have been vaccinated. As more people see close friends and family get vaccinated, not just those at high risk for severe illness, perspectives on COVID-19 vaccination may change.

Notes


7 For more information about the WBNS, see Karpman, Zuckerman, and Gonzalez (2018). For the December 2020 WBNS questionnaire, see https://www.urban.org/sites/default/files/2021/02/16/wbns_2020_questionnaire.pdf.


References


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