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Confronting COVID-19 Vaccine Hesitancy among Nonelderly Adults

Findings from the December 2020 Well-Being and Basic Needs Survey

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As of mid-February 2021, more than 40 million US adults, over 12 percent of the total US population, have received at least one dose of a COVID-19 vaccine, and vaccine sites are administering more than 1.5 million doses (both first and second) daily.[1] Health officials estimate the US will achieve herd immunity when 70 to 90 percent of the population has been vaccinated or previously infected, after which virus transmission will slow significantly.[2] Early data show disparities in vaccination rates, with people of color receiving disproportionately fewer vaccine doses and facing greater barriers navigating the complicated systems for scheduling vaccine appointments and traveling to vaccination sites (Ndugga et al. 2021).[3] Eliminating disparities and reaching herd immunity will require addressing challenges in both vaccine supply (i.e., the limited number of doses and inequitable access to them) and demand (i.e., vaccine hesitancy).

This study explores vaccine hesitancy[4] among nonelderly adults with new data from the Urban Institute's Well-Being and Basic Needs Survey (WBNS), a nationally representative survey of more than 7,500 adults ages 18 to 64 fielded December 8 through 30, 2020.[5] We define vaccine-hesitant adults as those reporting they would probably not or definitely not get a COVID-19 vaccine. We note vaccine hesitancy exists along a continuum (SAGE Working Group 2014), and concerns that people hold at a point in time may change as new information becomes available about the vaccines' effectiveness and potential side effects.

Protecting the population from COVID-19 through vaccination requires understanding who is hesitant, what their concerns about the vaccines are, and who is best positioned to address them. This study examines how vaccine concerns, trust in community sources of information, and connections to the health care system vary by race, ethnicity, and political party affiliation, where some of the starkest differences in vaccine hesitancy are evident. We find the following:

- In December 2020, more than one-third of nonelderly adults reported they would probably not or definitely not get a COVID-19 vaccine. Nearly half of Black adults held this position, compared with about one-third of white and Hispanic/Latinx adults. However, almost two-thirds of Black adults seemed to still be considering their decisions about getting the vaccine.[i]
- Though Black adults reported greater vaccine hesitancy for well-founded historical reasons, white adults are a larger subgroup of the population and, consequently, constituted 59 percent of all vaccine-hesitant nonelderly adults.
- Republicans were nearly twice as likely as Democrats to report they would probably not or definitely not get vaccinated (47 percent versus 25 percent). Differences in hesitancy by political affiliation were largest among white adults, followed by Hispanic/Latinx adults.
- Most vaccine-hesitant adults were concerned about side effects and vaccine effectiveness. However, more than half (57 percent) thought they did not need the vaccine, and 63 percent of vaccine-hesitant Republicans held this view. Other reasons for being hesitant included worrying the vaccines were not tested enough and lacking trust in the vaccines and their proponents.
- About half of vaccine-hesitant adults (51 percent) trusted their health care providers for information about the vaccine. However, variation in how adults interact with the health care system across race, ethnicity, and political party affiliation suggests the need for targeted outreach strategies and tailored efforts by health care providers and other trusted community groups to better inform the public about the vaccines.

Ending the pandemic through vaccination will require overcoming concerns about the vaccines and ensuring equitable access to them.[6] We find perceptions of the risks and benefits of getting vaccinated vary by race, ethnicity, and political party affiliation. A history of racial discrimination, medical abuses, and neglect by the health care system and government has shaped Black adults' hesitancy toward vaccines for COVID-19 and seasonal flu (AHRQ 2020; Institute of Medicine 2003; Quinn et al. 2017; Sparks et al. 2020).[7] Other survey data suggest political differences in hesitancy and perceived COVID-19 risks date back to the early months of the pandemic and may partially relate to media consumption (Ruiz and Bell 2021).[8]

[i] We use "Hispanic/Latinx" throughout this brief to reflect the different ways in which people self-identify. The US Census Bureau uses the term "Hispanic." The terms "white" and "Black" refer to adults who do not identify as Hispanic or Latinx.

Though concerns about the COVID-19 vaccines are complex and multifaceted, most vaccine-hesitant adults worried about side effects or wanted more information about long-term health risks. Clear and accurate information delivered through health care providers and other trusted messengers from the community may help those hesitant about the vaccines understand how their risks compare with the much greater risks of illness and death from COVID-19. More information on successful messaging strategies will be needed, particularly in communities with low take-up rates, as vaccine distribution accelerates.

Results

COVID-19 Vaccine Hesitancy by Race, Ethnicity, and Political Party Affiliation

In December 2020, more than one-third of nonelderly adults reported they would probably not or definitely not get a COVID-19 vaccine. Nearly half of Black adults held this position, compared with about one-third of white and Hispanic/Latinx adults.

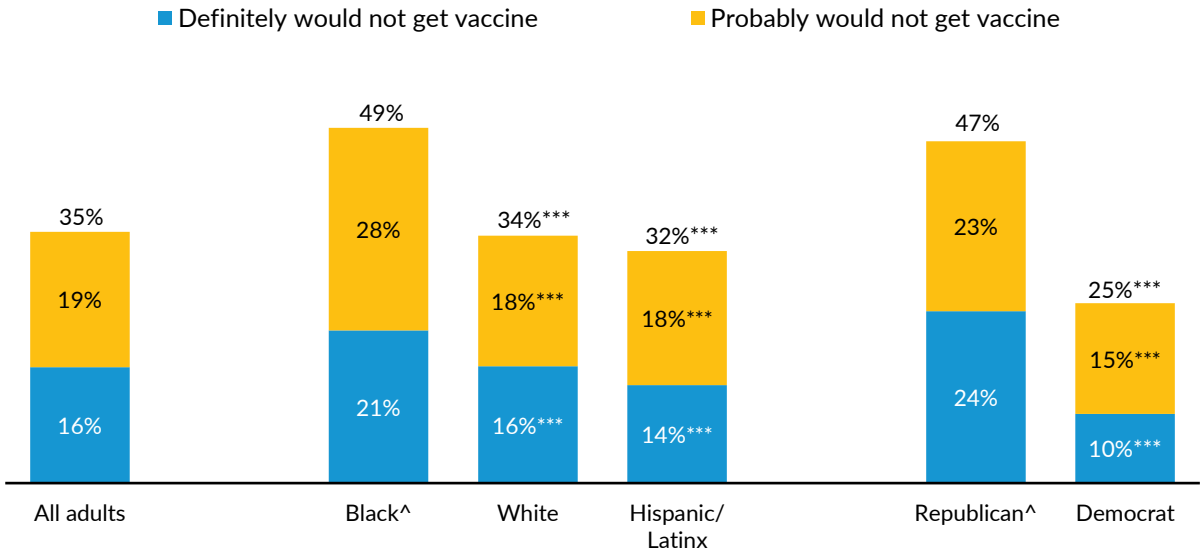
More than one-third of nonelderly adults reported they would probably not (19 percent) or definitely not (16 percent) get a COVID-19 vaccine if it were available for free to everyone who wanted it (figure 1). As shown in appendix table 1, roughly another third of adults would definitely get vaccinated (34 percent), and the remaining third would probably get vaccinated (31 percent).

Nearly half of Black adults (49 percent) and about one-third of white adults (34 percent) and Hispanic/Latinx adults (32 percent) reported they would probably not or definitely not get vaccinated (figure 1). However, differences by race and ethnicity varied across levels of willingness to get vaccinated: 28 percent of Black adults reported they would probably not get the vaccine, compared with 18 percent of white and Hispanic/Latinx adults. Differences by race and ethnicity were smaller among those who would definitely not get vaccinated: 21 percent of Black adults, compared with 16 percent of white adults and 14 percent of Hispanic/Latinx adults. Black adults were also less likely than white and Hispanic/Latinx adults to report they would definitely get a vaccine (17 percent versus 36 percent and 34 percent; appendix table 1). Overall, the results suggest almost two-thirds of Black adults had not made up their minds (i.e., probably would or would not get the vaccine), compared with about half of all adults.

Though we highlight the substantial variation in the likelihood of getting vaccinated by race, ethnicity, and political party affiliation, it also varied by other characteristics. Vaccine hesitancy was relatively higher among women, adults ages 35 to 49, and people without chronic conditions, lacking a four-year college degree, with family incomes below 400 percent of the federal poverty level, or living in rural areas (appendix table 2). These vaccine-hesitancy patterns by demographic and socioeconomic characteristics align with those found in earlier studies (Funk and Tyson 2020; Hamel et al. 2021; Kreps, Prasad, and Brownstein 2020; Sparks et al. 2020; Szilagyi et al. 2020).[9]

FIGURE 1

Hesitancy to Get a COVID-19 Vaccine Varied by Race, Ethnicity, and Political Party Affiliation among Adults Ages 18 to 64 in December 2020



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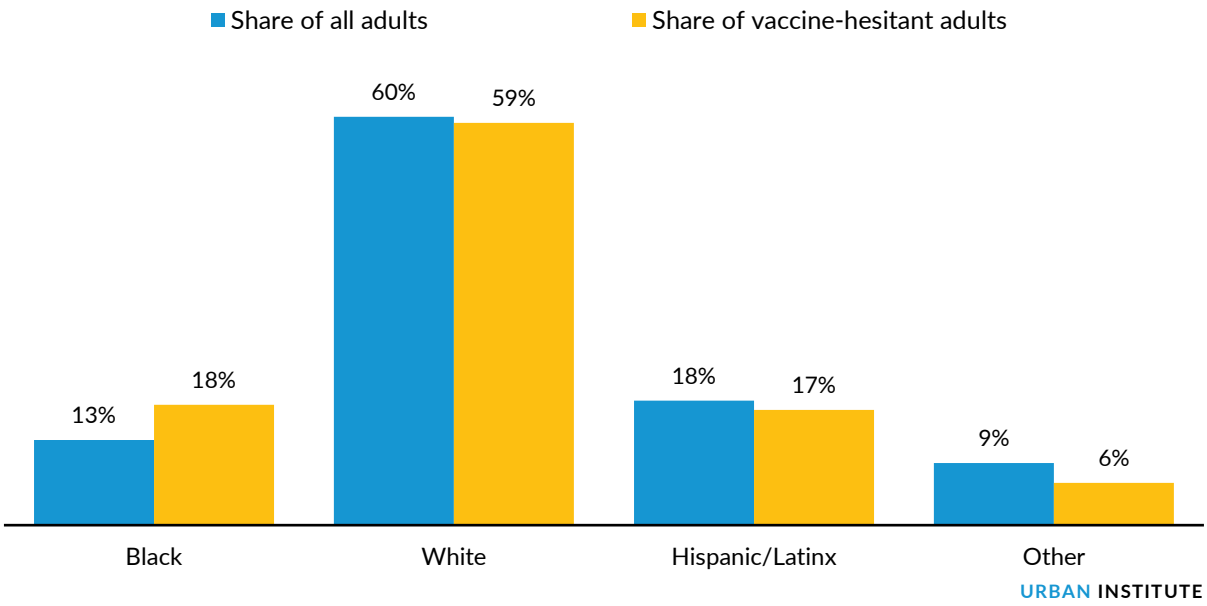
Source: Well-Being and Basic Needs Survey, December 2020.
Notes: Estimates are not shown for non-Hispanic/Latinx adults who are not Black or white or are more than one race and for adults who are independent, affiliated with a third party, or unaffiliated. We define vaccine-hesitant adults as those who would definitely not or probably not get a vaccine. Appendix table 1 shows estimates for all response categories: definitely would, probably would, probably would not, and definitely would not.
*/**/*** Estimate differs significantly from the reference group (^) at the 0.10/0.05/0.01 level, using two-tailed tests.

Though Black adults reported greater vaccine hesitancy for well-founded historical reasons, white adults are a larger subgroup of the population and, consequently, constituted 59 percent of all vaccine-hesitant nonelderly adults.

Figure 2 shows that about 6 in 10 vaccine-hesitant adults were white, roughly the same as their proportion of the full nonelderly adult population. Black adults and Hispanic/Latinx adults each constituted close to 2 in 10 adults hesitant about the vaccines, indicating the importance of outreach to all population groups.

FIGURE 2

Racial and Ethnic Composition of Vaccine-Hesitant Adults Ages 18 to 64 in December 2020



Source: Well-Being and Basic Needs Survey, December 2020.
Notes: We define vaccine-hesitant adults as those who would definitely not or probably not get a vaccine. "Other" includes non-Hispanic/Latinx adults who are not Black or white or are more than one race.

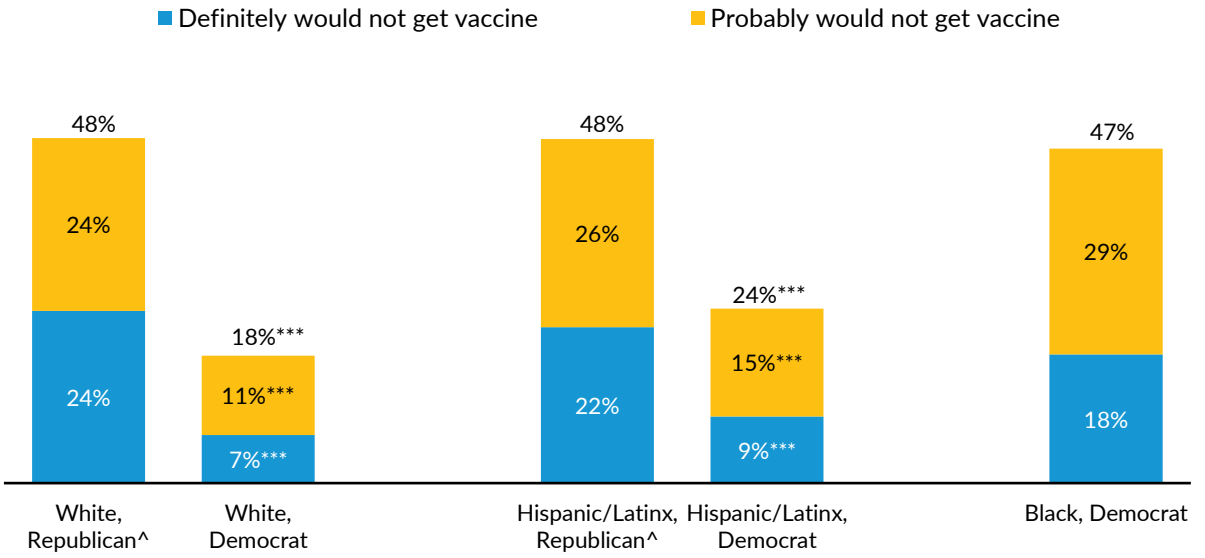
Republicans were nearly twice as likely as Democrats to report they would probably not or definitely not get vaccinated (47 percent versus 25 percent). Differences in hesitancy by political affiliation were largest among white adults, followed by Hispanic/Latinx adults.

Willingness to get vaccinated differed significantly by political party affiliation: 24 percent of adults who identify as Republican or lean Republican (Republicans) would definitely not get a vaccine, compared with 10 percent of adults who identify as Democrats or lean Democratic (Democrats). Another 23 percent of Republicans would probably not get a vaccine, compared with 15 percent of Democrats (figure 1). Adults who are independent, affiliated with a third party, or unaffiliated, who constitute 4 percent of the sample, reported hesitance to get vaccinated at a rate similar to Republicans (appendix table 1).

Partisan gaps in willingness to get vaccinated were widest among white adults: 48 percent of white Republicans reported they would probably not or definitely not get vaccinated, compared with 18 percent of white Democrats (figure 3). Wide gaps in hesitancy by party affiliation were also found among Hispanic/Latinx adults: 48 percent of Republicans and 24 percent of Democrats reported they would not get vaccinated. Close to half (47 percent) of Black Democrats reported they would probably not (29 percent) or definitely not (18 percent) get vaccinated. We lacked sufficient sample size to examine differences in hesitancy by political affiliation among Black adults.[10]

FIGURE 3

Hesitancy to Get a COVID-19 Vaccine Varied by Political Party Affiliation within Racial and Ethnic Groups of Adults Ages 18 to 64 in December 2020



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Source: Well-Being and Basic Needs Survey, December 2020.
Notes: Estimates are not shown for non-Hispanic/Latinx adults who are not Black or white or are more than one race; Black Republicans; and adults who are independent, affiliated with a third party, or unaffiliated. We define vaccine-hesitant adults as those who would definitely not or probably not get a vaccine. Appendix table 1 shows estimates for all response categories: definitely would, probably would, probably would not, and definitely would not.
*/**/*** Estimate differs significantly from the reference group (^) at the 0.10/0.05/0.01 level, using two-tailed tests.

Reasons for Not Getting a COVID-19 Vaccine

Most vaccine-hesitant adults were concerned about side effects and vaccine effectiveness. However, more than half (57 percent) thought they did not need the vaccine, and 63 percent of vaccine-hesitant Republicans held this view. Other reasons for being hesitant included worrying the vaccines were not tested enough and lacking trust in the vaccines and their proponents.

Table 1 shows 90 percent of vaccine-hesitant adults rated concern about side effects as a very or somewhat important reason they would not get vaccinated, and 84 percent rated wanting to know more about how well the vaccines work as important. These shares varied little by race, ethnicity, or political party affiliation. Just over half (57 percent) reported not needing a vaccine was an important reason for not getting it; Republicans were more likely to say not needing a vaccine was an important reason not to get vaccinated than were Democrats (63 percent versus 51 percent), and adults who would definitely not get vaccinated were more likely than adults who would probably not get vaccinated to rank this as important (64 percent versus 52 percent).

TABLE 1

Most Vaccine-Hesitant Adults Ages 18 to 64 Reported Concerns about Side Effects and How Well the Vaccines Work as Important Reasons for Not Getting a COVID-19 Vaccine in December 2020

	Share Reporting the Following as Very or Somewhat Important (%)		
	Concerned about side effects	Want to know more about how well the vaccines work	Do not think they need vaccine
All vaccine-hesitant adults	**90**	**84**	**57**
Willingness to get vaccinated			
Definitely would not^	88	78	64
Probably would not	92***	90***	52***
Race and ethnicity			
Black^	88	81	54
White	91	86	59
Hispanic/Latinx	90	86	58
Political party affiliation			
Republican^	90	84	63
Democrat	90	85	51***

Source: Well-Being and Basic Needs Survey, December 2020.

Notes: Estimates are not shown for non-Hispanic/Latinx adults who are not Black or white or are more than one race and for adults who are independent, affiliated with a third party, or unaffiliated. We define vaccine-hesitant adults as those who would definitely not or probably not get a vaccine.

*/**/*** Estimate differs significantly from the reference group (^) at the 0.10/0.05/0.01 level, using two-tailed tests.

When asked if they had other reasons for not getting a COVID-19 vaccine, 40 percent of vaccine-hesitant adults—more than 1,100 overall—provided a written response.[11] More than one-third of those who provided a written response elaborated on concerns about vaccine safety or side effects.[12] The most common responses in this category were fearing the vaccines would cause long-term illness or death, followed by being worried about having an allergic reaction, not knowing the vaccines' ingredients, and thinking the vaccines would change one's DNA or affect one's fertility. Others reported being unsure about how they would react to the vaccines because of preexisting health conditions or pregnancy; some of these adults pointed to the limited research on the vaccines' effects for their conditions or were waiting for guidance from their health care providers.[13]

One-third of the vaccine-hesitant adults who wrote in responses, including 4 in 10 Black adults, expressed concerns about how the vaccines were developed, which could be related to vaccine safety or effectiveness. This included 17 percent of adults who raised concerns the vaccines were not tested enough and 11 percent who mentioned the vaccines' development or manufacturing was rushed. Smaller shares wanted to see how other vaccine recipients are affected before getting the vaccine, reported general concerns the vaccines are too new, believed political pressure affected the vaccines' development, or questioned how scientists developed vaccines for COVID-19 so quickly but have not found cures for other diseases like cancer and HIV. Several adults were unsure how frequently they would need a vaccine as the virus mutates, which may be a growing concern given that new variants have spread since December.

About one in seven adults (14 percent) who wrote in responses reported not needing a vaccine because they have already been infected with the virus, are in a low-risk group, believe people of a similar age or health status have high rates of survival or recovery from COVID-19 (typically defined by respondents as being above 98 or 99 percent), prefer to have their body fight the infection naturally rather than with a vaccine, and think the risks from COVID-19 are no worse than those from the flu. Responses related to not needing a vaccine were nearly twice as common among Republicans as among Democrats and more common among white adults than Black adults.

Fourteen percent of adults who wrote in a response reported lacking trust in the vaccines; the government or specific politicians, officials, or agencies; pharmaceutical companies; or other sources. Black adults reported this lack of trust more frequently than white adults (18 percent versus 12 percent). Several Black adults mentioned the unethical US Public Health Service syphilis study at the Tuskegee Institute or the government being dishonest or indifferent about their well-being.[14]

Five percent of vaccine-hesitant adults who wrote in a response stated COVID-19 was a hoax or the government or pharmaceutical companies had sinister or conspiratorial motives (e.g., that the vaccines would be used to implant a microchip to track people's movements or be used for population control). A similar share opposed vaccines or medication in general. White adults and Republicans were most likely to refer to the pandemic or vaccines as part of a hoax or conspiracy, but these beliefs accounted for only 6 percent of these groups' responses. Republicans were also more likely than Democrats to mention religious objections or freedom of choice. Only a few adults mentioned cost, fear of needles, or that other people should be prioritized.

Trusted Community Sources and Connections to the Health Care System

About half of vaccine-hesitant adults trusted their health care providers for information about the vaccine. However, variation in how adults interact with the health care system across race, ethnicity, and political affiliation suggests the need for targeted outreach strategies and tailored efforts by health care providers and other trusted community groups to better inform the public about the vaccines.

Among all vaccine-hesitant adults, 51 percent reported they would strongly or somewhat trust their usual doctor or health care provider for information about the vaccines, compared with 89 percent of adults who were not hesitant about the vaccines (table 2).[15] About 50 percent of vaccine-hesitant adults of each racial and ethnic group and political party affiliation trusted their usual providers. However, this rate was lower for Hispanic/Latinx adults than white adults.

TABLE 2

Vaccine-Hesitant Adults Ages 18 to 64 Trusted Health Care Providers More than Other Community Sources for Information about a COVID-19 Vaccine in December 2020

	Share Who Trust the Following Sources (%)			
	Usual doctor or health care provider	**State or local public health officials**	**Religious leaders in community**	**Elected officials in community**
Vaccine-hesitant adults^	51	32	22	13
Adults who are not vaccine-hesitant	89***	77***	30***	39***
Among vaccine-hesitant adults				
Race and ethnicity				
Black^	49	40	25	17
White	55	29***	21	10**
Hispanic/Latinx	43+++	32*	23	16++
Political party affiliation				
Republican^	54	27	25	11
Democrat	51	41***	19***	17***

Source: Well-Being and Basic Needs Survey, December 2020.

Notes: Data represent shares of respondents who strongly or somewhat trust each source. Adults were asked about trust in their usual doctor or health care provider even if they did not report a usual source of health care. Estimates are not shown for non-Hispanic/Latinx adults who are not Black or white or are more than one race and for adults who are independent, affiliated with a third party, or unaffiliated. We define vaccine-hesitant adults as those who would definitely not or probably not get a vaccine.

*/**/*** Estimate differs significantly from the reference group (^) at the 0.10/0.05/0.01 level, using two-tailed tests.

+/++/+++ Estimate for Hispanic/Latinx adults differs from estimate for white adults at the 0.10/0.05/0.01 level, using two-tailed tests.

Compared with their trust in health care providers, vaccine-hesitant adults were less likely to trust state and local health officials and other community leaders. Vaccine-hesitant Black adults were more likely than white and Hispanic/Latinx adults to trust state or local public health officials (40 percent versus 29 percent and 32 percent), and Democrats trusted this source more than Republicans (41 percent versus 27 percent). Trust in elected community officials was greater among Black adults and Hispanic/Latinx adults than among white adults and higher among Democrats than Republicans. Republicans were more likely than Democrats to trust religious leaders in their communities (25 percent versus 19 percent).

Given their relatively high trust in health care providers, understanding how vaccine-hesitant adults interact with the health care system can inform vaccine outreach efforts. More than three-quarters of vaccine-hesitant adults (76 percent) reported having a usual source of health care,[16] and 85 percent had some form of health insurance, but these rates varied by race, ethnicity, and political affiliation (table 3).

TABLE 3

Most Vaccine-Hesitant Adults Ages 18 to 64 Had Health Insurance and a Usual Source of Care in December 2020, but Connections to the Health Care System Varied by Race, Ethnicity, and Political Party Affiliation

	Share with a usual source of care (%)	Shares with the Following Health Insurance Coverage (%)			
		Employer	Public	Nongroup or nonspecified	Uninsured
All vaccine-hesitant adults	**76**	**54**	**20**	**11**	**15**
Race and ethnicity					
Black^	73	51	28	7	14
White	79*	59*	16***	12***	13
Hispanic/Latinx	71+++	43**+++	21	12	24**++
Political party affiliation					
Republican^	80	62	15	11	13
Democrat	74**	46***	26***	11	18**

Source: Well-Being and Basic Needs Survey, December 2020.

Notes: Estimates are not shown for non-Hispanic/Latinx adults who are not Black or white or are more than one race and for adults who are independent, affiliated with a third party, or unaffiliated. We define vaccine-hesitant adults as those who would definitely not or probably not get a vaccine.

*/**/*** Estimate differs significantly from the reference group (^) at the 0.10/0.05/0.01 level, using two-tailed tests.

+/++/+++ Estimate for Hispanic/Latinx adults differs from estimate for white adults at the 0.10/0.05/0.01 levels, using two-tailed tests.

Vaccine-hesitant white adults were more likely than such Black adults and Hispanic/Latinx adults to have a usual source of care (79 percent versus 73 percent and 71 percent) and to be covered by employer-sponsored health insurance (59 percent versus 51 percent and 43 percent). More than one in four vaccine-hesitant Black adults (28 percent) reported having coverage through Medicaid or other public insurance, compared with 16 percent of white adults. Nearly one in four vaccine-hesitant Hispanic/Latinx adults was uninsured (24 percent), compared with 14 percent and 13 percent of vaccine-hesitant Black and white adults. Relative to Democrats, Republicans were more likely to have a usual source of care and employer-sponsored coverage and less likely to have public coverage or to be uninsured.

Discussion

As of December 2020, more than one-third of adults reported not wanting to get a COVID-19 vaccine, including 19 percent who said they would probably not get vaccinated and 16 percent who said they would definitely not get vaccinated. Consistent with other surveys and polls,[17] we find vaccine hesitancy is relatively high among Black adults, but many have not made up their minds. Despite these relatively high vaccine hesitancy rates among Black adults, white adults are a much larger subgroup of the nonelderly adult population and, therefore, constitute 59 percent of the vaccine-hesitant group. Republicans were nearly twice as likely as Democrats to report they would not get vaccinated, and these partisan differences were most pronounced among white adults, followed by Hispanic/Latinx adults.

Perceptions of Risks and Benefits from Vaccines

Nearly all vaccine-hesitant adults said concerns about the safety and effectiveness of the vaccines were important reasons they would not get vaccinated. More than half believed they did not need the vaccine. After a year of conflicting and highly politicized messaging about the virus's risks from elected officials and media across the political spectrum, Republicans were more likely than Democrats to believe they did not need a vaccine. Written responses reflected deep concerns about safety and whether vaccines were sufficiently tested. Many respondents believed vaccine development (dubbed Operation Warp Speed) was rushed and wanted to see how the vaccines affected other recipients. Among adults who provided written responses, Black adults were more likely than others to raise concerns about the vaccines being adequately tested and mention lack of trust in the vaccines and the people or entities that developed them. These concerns are grounded in a history of medical abuses, including the Tuskegee syphilis study and other unethical medical experimentation, the use of Henrietta Lacks' cells in medical research without consent, and involuntary sterilizations, as well as persistent racial disparities in treatment by the health care system and government (AHRQ 2020; Institute of Medicine 2003; Sparks et al. 2020).[18] Such disparities have continued during the COVID-19 pandemic, during which Black people and other people of color have suffered disproportionate exposure and harm (Azar et al. 2020; Dubay et al. 2020; Escobar et al. 2020).[19]

Republicans were more likely to mention not needing the vaccine, including perceiving being at low risk of severe illness from COVID-19. Though some adults described vaccines as part of a hoax or conspiracy, these responses were uncommon. This does not necessarily imply misinformation is an unimportant determinant of vaccine hesitancy, but the survey results suggest most adults were weighing a trade-off between their perceived risks from the vaccines and perceived risks from the virus—a cost-benefit decision explicitly mentioned by several respondents.

These findings underscore the importance of providing clear and accurate information comparing the risks of long-term illness and death from COVID-19 with the much lower risks of an adverse reaction to the vaccines, particularly for younger and healthier adults, and the benefits of getting vaccinated to protect oneself and other people in households and communities (Blackburn et al. 2021; Carfi, Bernabei, and Landi 2020; del Rio, Collins, and Malani 2020; Gee et al. 2021; Shimabukuro 2021; Tenforde et al. 2020). Transparency in reporting adverse reactions and greater visibility of information gathered from long-term monitoring for the vaccines' safety and effectiveness, including for diverse populations and people with different types of health conditions, can help adults make informed decisions. Health officials and their community partners can also assuage concerns about new vaccine technologies and the vaccines' fast development by educating the public about how the vaccines work, the years of research that allowed them to be developed quickly, and the rigorous testing protocols used to assess their safety.

Engaging Health Care Providers as Trusted Messengers for Vaccine Outreach

Messaging about the vaccines' risks and benefits will be most effective if delivered through trusted sources, whether in the media, government, communities, or social networks. Trusted sources will not be uniform across or within communities, and people may trust multiple sources for different types of information. For instance, some entities may be trusted for their scientific expertise, and others may help amplify messages from health officials, connect residents to information and resources, or facilitate vaccine access. Though research on evidence-based strategies to address vaccine hesitancy is limited, a systematic review predating the pandemic found interventions that employed multiple strategies and applied dialogue-based approaches effectively increased vaccine uptake and underscored the need for tailored approaches for different populations and concerns (Jarrett et al. 2015).

Within communities, doctors and other health care providers are among the most trusted sources of information on COVID-19 vaccines across racial and ethnic groups and political affiliations. However, different groups of vaccine-hesitant adults interact with the health care system differently. Our findings suggest Medicaid programs and managed-care plans can play an important role in vaccination by working with providers to reach a significant share of vaccine-hesitant adults, including Black adults, who are disproportionately insured with public coverage (NORC at the University of Chicago 2020). Early experiences with COVID-19 vaccine distribution also highlight the key role of providers closely connected to the community in enhancing trust and access.[20] Additionally, though most vaccine-hesitant adults had a usual source of care and health insurance, nearly one-quarter of Hispanic/Latinx adults were uninsured. This suggests it will be important to support outreach conducted by safety net providers and other community- and immigrant-serving organizations.

In response to reports of inequitable distribution of the vaccines for more vulnerable people, the Biden administration has begun shipping vaccine doses to federally qualified health centers.[21] In addition to expanding access and complementing distribution through long-term care facilities, large hospitals and health care systems, pharmacies, mass and mobile vaccination sites, and other locations, engaging more primary care providers in distribution may also help overcome vaccine hesitancy.[22] However, data on health care providers' engagement in vaccine outreach efforts and the availability of funding to support provider-led outreach are limited, and strategies for reaching vulnerable populations vary in their levels of detail across state vaccination plans (Michaud et al. 2020).

Reimbursement for vaccine administration may affect the time and resources providers can devote to outreach and patient counseling.[23] For instance, Medicare payment rates for COVID-19 vaccine administration "recognize the costs involved in administering the vaccine, including the additional resources involved with required public health reporting, conducting important outreach and patient education, and spending additional time with patients answering any questions they may have about the vaccine."[24] But for providers vaccinating nonelderly patients, most of whom are not covered by Medicare, reimbursement rates will differ across states and insurance types, including between Medicaid fee-for-service and managed-care plans (Schwartz et al. 2020). To ensure equitable vaccine access, Medicaid vaccine administration payments must be high enough to create incentives

for outreach and to allow providers the time to discuss the vaccines and their risks and benefits with patients.[25] Along with time and funding to support patient engagement, providers must be equipped with culturally appropriate communication tools and approaches that help them address patients' concerns and mistrust, including partnerships with community-based groups (Opel, Lo, and Peek 2021).

Additional strategies and funding will be needed to reach the 15 percent of vaccine-hesitant adults who are uninsured and the 24 percent who do not have a usual source of care. In addition to distributing vaccines through community health centers, as noted above, protecting and expanding health insurance coverage and improving access to care during the pandemic could also be key to advancing vaccination efforts. It will also be important to raise providers' and consumers' awareness that the vaccines are available to uninsured patients without cost sharing, because of funding available through the Provider Relief Fund established by the Coronavirus Aid, Relief, and Economic Security, or CARES, Act.

Data and Methods

This brief draws on data from a nationally representative sample of 7,737 adults ages 18 to 64 who participated in the December 2020 round of the Urban Institute's Well-Being and Basic Needs Survey. The WBNS is an internet-based survey designed to monitor changes in individual and family well-being as policymakers consider changes to federal safety net programs. For each round of the WBNS, we draw a stratified random sample (including a large oversample of adults in low-income households) from the KnowledgePanel, a probability-based internet panel maintained by Ipsos that includes households with and without internet access. Survey weights adjust for unequal selection probabilities and are poststratified to the characteristics of nonelderly adults based on benchmarks from the Current Population Survey and American Community Survey. Participants can complete the survey in English or Spanish. For further information on the survey design and content, see Karpman, Zuckerman, and Gonzalez (2018).[26]

Appendix Tables

APPENDIX TABLE 1

Willingness to Get a Coronavirus Vaccine among Adults Ages 18 to 64, Overall and by Race, Ethnicity, and Political Party Affiliation, December 2020

Percent

	Definitely would not	Probably would not	Probably would	Definitely would
All adults	**16**	**19**	**31**	**34**
Race and ethnicity				
Black^	21	28	34	17
White	16***	18***	29**	36***
Hispanic/Latinx	14***	18***	34	34***
Other	13***	10***	38	38***
Political party affiliation				
Republican^	24	23	28	24
Democratic	10***	15***	33***	42***
Independent, third party, or unaffiliated	24	20	35**	19*
Race and ethnicity and political party affiliation				
White, Republican^	24	24	28	23
White, Democrat	7***	11***	29	53***
Hispanic/Latinx, Republican^	22	26	27	25
Hispanic/Latinx, Democrat	9***	15***	36	39***
Black, Democrat	18	29	35	17

Source: Well-Being and Basic Needs Survey, December 2020.

Note: "Other" includes non-Hispanic/Latinx adults who are not Black or white or are more than one race. Estimates are not shown for the 0.5 percent of adults who did not report willingness to get a vaccine, and the share who did not report willingness varies across racial and ethnic groups and political party affiliation. Estimates are also not shown for Black Republicans because of insufficient sample size.

*/**/*** Estimate differs significantly from the reference group (^) at the 0.10/0.05/0.01 level, using two-tailed tests.

APPENDIX TABLE 2

Willingness to Get a Coronavirus Vaccine among Adults Ages 18 to 64, Overall and by Selected Characteristics, December 2020

Percent

	Definitely would not	Probably would not	Probably would	Definitely would
All adults	**16**	**19**	**31**	**34**
Gender				
Female^	17	20	33	29
Male	15**	17***	30**	38***
Age				
18–34^	16	19	30	35
35–49	18	21	31	30***
50–64	14*	17	33	36
Presence of chronic conditions				
One or more conditions^	15	17	31	36
No chronic conditions	16	20***	32	31***
Educational attainment				
High school degree or less^	22	22	32	24
Some college	17***	20	32	31***
College degree or more	9***	14***	30	47***
Family income				
Below 200% of FPL^	21	20	31	28
200–400% of FPL	18	23	32	27
At or above 400% of FPL	12***	15***	31	41***
Urban-rural residence				
Rural area^	22	24	30	24
Urban area	15***	18***	31	35***

Source: Well-Being and Basic Needs Survey, December 2020.

Note: FPL is federal poverty level. Estimates are not shown for the 0.5 percent of adults who did not report willingness to get a vaccine.

*/**/*** Estimate differs significantly from the reference group (^) at the 0.10/0.05/0.01 level, using two-tailed tests.

Notes

1 "COVID Data Tracker," Centers for Disease Control and Prevention, accessed February 17, 2021, https://covid.cdc.gov/covid-data-tracker/#vaccinations; and "Tracking the COVID Vaccine: Doses, People Vaccinated by State," *Washington Post*, accessed February 17, 2021, https://www.washingtonpost.com/graphics/2020/health/covid-vaccine-states-distribution-doses/.

2 Donald G. McNeil Jr., "How Much Herd Immunity Is Enough?" *New York Times*, December 24, 2020, https://www.nytimes.com/2020/12/24/health/herd-immunity-covid-coronavirus.html.

3 Hannah Recht and Lauren Weber, "Black Americans Are Getting Vaccinated at Lower Rates Than White Americans," *Kaiser Health News*, January 17, 2021, https://khn.org/news/article/black-americans-are-getting-vaccinated-at-lower-rates-than-white-americans/; and Abby Goodnough and Jan Hoffman, "The Wealthy Are Getting More Vaccinations, Even in Poorer Neighborhoods," *New York Times*, February 4, 2021, https://www.nytimes.com/2021/02/02/health/white-people-covid-vaccines-minorities.html.

4 SAGE Working Group (2014) includes the following commonly used definition of vaccine hesitancy: "Vaccine hesitancy refers to the delay in acceptance or refusal of vaccines despite availability of vaccination services.

Vaccine hesitancy is complex and context specific, varying across time, place, and vaccines. It is influenced by factors such as complacency, convenience, and confidence."

[5] Though our findings echo those of earlier studies, the WBNS can further guide vaccination outreach efforts for several reasons: its large sample size enables more precise estimates for subgroups of vaccine-hesitant adults; it includes information from more than 1,100 vaccine-hesitant adults on other reasons for not getting vaccinated provided in their own words; and, it provides detailed information on adults' characteristics and well-being, including their health insurance coverage and interactions with the health care system.

[6] Joshua Aarons, Eva H. Allen, and Jennifer M. Haley, "Data Are Essential to Prioritizing Racial and Ethnic Equity in COVID-19 Vaccination," *Urban Wire* (blog), Urban Institute, February 5, 2021, https://www.urban.org/urban-wire/data-are-essential-prioritizing-racial-and-ethnic-equity-covid-19-vaccination.

[7] Dan Royles, "Years of Medical Abuse Make Black Americans Less Likely to Trust the Coronavirus Vaccines," *Washington Post*, December 15, 2020, https://www.washingtonpost.com/outlook/2020/12/15/years-medical-abuse-make-black-americans-less-likely-trust-covid-vaccine/.

[8] Lydia Saad, "US Readiness to Get COVID-19 Vaccine Steadies at 65%," Gallup, January 12, 2021, https://news.gallup.com/poll/328415/readiness-covid-vaccine-steadies.aspx; and "Axios/Ipsos Coronavirus Index," Axios, accessed February 19, 2021, , https://www.axios.com/tag/axios-ipsos-coronavirus-index/.

[9] Megan Brennan, "Willingness to Get COVID-19 Vaccine Ticks Up to 63% in US," Gallup, December 8, 2020, https://news.gallup.com/poll/327425/willingness-covid-vaccine-ticks.aspx; and "Many Remain Doubtful about Getting COVID-19 Vaccine," Associated Press and NORC at the University of Chicago, December 9, 2020, https://apnorc.org/projects/many-remain-doubtful-about-getting-covid-19-vaccine/.

[10] We do not show estimates for Black Republicans because of insufficient sample size, but these adults also reported vaccine hesitancy at high rates.

[11] Compared with the full sample of vaccine-hesitant adults, vaccine-hesitant adults who wrote in a response were slightly more likely than average to be ages 50 to 64, women, white, and Republican.

[12] Some written responses were coded to multiple categories (e.g., if a person reported lack of trust, concern about side effects, and the need to see more testing data in a single response).

[13] "Interim Clinical Considerations for Use of mRNA COVID-19 Vaccines Currently Authorized in the United States," Centers for Disease Control and Prevention, accessed February 19, 2021, https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html.

[14] The US Public Health Service syphilis study at the Tuskegee Institute was an unethical medical study conducted between 1932 and 1972. The people who conducted the study intentionally misled Black men who participated about the study's purpose and withheld their medical treatment for syphilis after penicillin became the accepted treatment for the disease. For more information, see "US Public Health Service Syphilis Study at Tuskegee," Centers for Disease Control and Prevention, accessed February 17, 2021, https://www.cdc.gov/tuskegee/index.html.

[15] Respondents were asked about their trust in usual doctors or health care providers, even if they did not report a usual source of health care in the survey. Data from the Urban Institute's March 2020 Health Reform Monitoring Survey indicate most adults without a usual source of care go to a clinic or health center, doctor's office or health maintenance organization, or urgent care clinic most often when they are sick or need advice about their health.

[16] Among adults who reported having a usual source of care, 1 percent said their usual source of care was a hospital emergency room.

[17] Other surveys and polls have found persistent differences in COVID-19 vaccine hesitancy by race and ethnicity. Common themes from these studies are concerns about side effects and how quickly vaccines were brought to market; mistrust in government; higher trust in health care providers for information about the vaccine; and varying factors that influence decisionmaking, such as exposure risks and concerns, flu vaccine uptake, social pressure, and experiences with discrimination (Funk and Tyson 2020; Hamel et al. 2021; Kreps, Prasad, and Brownstein 2021; Sparks et al. 2020; Szilagyi et al. 2020).

[18] Royles, "Years of Medical Abuse Make Black Americans Less Likely to Trust the Coronavirus Vaccines," *Washington Post*.

[19] "COVID-19 Hospitalization and Death by Race/Ethnicity," Centers for Disease Control and Prevention, February 12, 2021, https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html; Soo Rin Kim, Matthew Van, Laura Bronner, and Grace Manthey, "Which Cities Have the Biggest Racial Gaps in COVID-19 Testing Access?" *FiveThirtyEight*, July 22, 2020, https://fivethirtyeight.com/features/white-neighborhoods-have-more-access-to-covid-19-testing-sites/; and John Eligon and Audra D. S. Burch, "Questions of Bias in COVID-19 Treatment Add to the Mourning for Black Families," *New York Times*, May 20, 2020, https://www.nytimes.com/2020/05/10/us/coronavirus-african-americans-bias.html.

[20] Ellie Rushing, "Massive Turnout at Black Doctors COVID-19 Consortium Walk-Up Site, with Thousands Being Vaccinated at 24-Hour Clinic," *Philadelphia Inquirer*, February 19, 2021, https://www.inquirer.com/health/coronavirus/liacouras-center-walk-up-vaccination-site-covid-19-20210219.html.

[21] Carl O'Donnell and Manas Mishra, "US to Start Sending COVID-19 Vaccines Directly to Community Health Centers," *Reuters*, February 9, 2021, https://www.reuters.com/article/us-healh-coronavirus-usa-vaccine/u-s-to-start-sending-covid-19-vaccines-directly-to-community-health-centers-idUSKBN2A92LC.

[22] Reed Abelson, "Primary Care Doctors Are Left Out of the Vaccine Rollout," *New York Times*, February 10, 2021, https://www.nytimes.com/2021/02/10/health/covid-doctors-vaccine.html.

[23] Jacob Wallace, Jason L. Schwartz, and Walter A. Orenstein, "Promoting Equitable Access to COVID-19 Vaccines – The Role of Medicaid," *Health Affairs Blog*, September 15, 2020, https://www.healthaffairs.org/do/10.1377/hblog20200910.575538/full/.

[24] "Medicare COVID-19 Vaccine Shot Payment," Centers for Medicare & Medicaid Services, accessed February 17, 2021, https://www.cms.gov/medicare/covid-19/medicare-covid-19-vaccine-shot-payment.

[25] Wallace, Schwartz, and Orenstein, "Promoting Equitable Access to COVID-19 Vaccines – The Role of Medicaid," *Health Affairs Blog*.

[26] The 2020 WBNS survey instrument is available at https://www.urban.org/policy-centers/health-policy-center/projects/well-being-and-basic-needs-survey.

References

AHRQ (Agency for Healthcare Research and Quality). 2020. *2019 Healthcare Quality and Disparities Report.* Rockville, MD: AHRQ.

Azar, Kristen M. J., Zijun Shen, Robert J. Romanelli, Stephen H. Lockhart, Kelly Smits, Sarah Robinson, Stephanie Brown, and Alice R. Pressman. 2020. "Disparities in Outcomes among COVID-19 Patients in a Large Health Care System in California." *Health Affairs* 39 (7): 1253–62. https://doi.org/10.1377/hlthaff.2020.00598.

Blackburn, Justin, Constantin T. Yiannoutsos, Aaron E. Carroll, Paul K. Halverson, and Nir Menachemi. 2021. "Infection Fatality Ratios for COVID-19 among Noninstitutionalized Persons 12 and Older: Results of a Random-Sample Prevalence Study." *Annals of Internal Medicine* 174 (1): 135–36.

Carfi, Angelo, Roberto Bernabei, and Francesco Landi. 2020. "Persistent Symptoms in Patients after Acute COVID-19." *JAMA* 324 (6): 603–05. https://doi.org/10.1001/jama.2020.12603.

del Rio, Carlos, Lauren F. Collins, and Preeti Malani. 2020. "Long-Term Health Consequences of COVID-19." *JAMA* 324 (17): 1723–24. https://doi.org/10.1001/jama.2020.19719.

Dubay, Lisa, Joshua Aarons, Steven Brown, and Genevieve M. Kenney. 2020. *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families.* Washington, DC: Urban Institute.

Escobar, Gabriel J., Alyce S. Adams, Vincent X Liu, Lauren Soltesz, Yi-Fen Irene Chen, Stephen M. Parodi, G. Thomas Ray, et al. 2020. "Racial Disparities in COVID-19 Testing and Outcomes." *Annals of Internal Medicine*. https://doi.org/10.7326/M20-6979.

Funk, Cary, and Alec Tyson. 2020. *Intent to Get a COVID-19 Vaccine Rises to 60% as Confidence in Research and Development Process Increases*. Washington, DC: Pew Research Center.

Gee, Julianne, Paige Marquez, John Su, Geoffrey M. Calvert, Ruiling Liu, Tanya Myers, Narayan Nair, et al. 2021. "First Month of COVID-19 Vaccine Safety Monitoring — United States, December 14, 2020–January 13, 2021." *Morbidity and Mortality Weekly Report* ePub. http://dx.doi.org/10.15585/mmwr.mm7008e3.

Hamel, Liz, Ashley Kirzinger, Lunna Lopes, Audrey Kearney, Grace Sparks, and Mollyann Brodie. 2021. *KFF COVID-19 Vaccine Monitor: January 2021.* San Francisco: Henry J. Kaiser Family Foundation.

Institute of Medicine. 2003. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.* Washington, DC: National Academies Press.

Jarrett, Caitlin, Rose Wilson, Maureen O'Leary, Elisabeth Eckersberger, Heid J. Larson, and the SAGE Working Group on Vaccine Hesitancy. 2015. "Strategies for Addressing Vaccine Hesitancy – A Systematic Review." *Vaccine* 33: 4180–90. https://doi.org/10.1016/j.vaccine.2015.04.040.

Karpman, Michael, Stephen Zuckerman, and Dulce Gonzalez. 2018. "The Well-Being and Basic Needs Survey: A New Data Source for Monitoring the Health and Well-Being of Individuals and Families." Washington, DC: Urban Institute.

Kreps, Sarah, Sandip Prasad, and John S. Brownstein. 2020. "Factors Associated with US Adults' Likelihood of Accepting COVID-19 Vaccination." *JAMA Network Open* 3 (10) :e2025594. https://doi.org/10.1001/jamanetworkopen.2020.25594.

Michaud, Josh, Jennifer Kates, Rachel Dolan, and Jennifer Tolbert. 2020. "States Are Getting Ready to Distribute COVID-19 Vaccines. What Do Their Plans Tell Us So Far?" San Francisco: Henry J. Kaiser Family Foundation.

Ndugga, Nambi, Olivia Pham, Latoya Hill, Samantha Artiga, and Salem Mengistu. 2021. "Latest Data on COVID-19 Vaccinations by Race/Ethnicity." San Francisco: Henry J. Kaiser Family Foundation.

NORC at the University of Chicago (NORC at the University of Chicago, Medicaid MCO Learning Hub). 2020. "Focus on a COVID-19 Vaccination: The Role of Medicaid Managed Care Organizations." Chicago: NORC at the University of Chicago, Medicaid MCO Learning Hub.

Opel, Douglas J., Bernard Lo, and Monica E. Peek. 2021. "Addressing Mistrust about COVID-19 Vaccines among Patients of Color." *Annals of Internal Medicine* https://doi.org/10.7326/M21-0055.

Quinn, Sandra Crouse, Amelia Jamison, Vicki S. Freimuth, Ji An, Gregory R. Hancock, and Donald Musa. 2017. "Exploring Racial Influences on Flu Vaccine Attitudes and Behavior: Results of a National Survey of White and African American Adults." *Vaccine* 35: 1167–74. https://dx.doi.org/10.1016%2Fj.vaccine.2016.12.046.

Ruiz, Jeanette B., and Robert A. Bell. 2021. "Predictors of Intention to Vaccinate against COVID-19: Results of a Nationwide Survey." *Vaccine* 39: 1080–86. https://doi.org/10.1016/j.vaccine.2021.01.010.

SAGE Working Group. 2014. *Report of the SAGE Working Group on Vaccine Hesitancy*. Geneva, Switzerland: World Health Organization.

Schwartz, Karyn, Meredith Freed, Juliette Cubanski, Rachel Dolan, Karen Pollitz, Josh Michaud, Jennifer Kates, and Tricia Neuman. 2020. "Vaccine Coverage, Pricing, and Reimbursement in the US." San Francisco: Henry J. Kaiser Family Foundation.

Shimabukuro, Tom. 2021. "Allergic Reactions Including Anaphylaxis after Receipt of the First Dose of Moderna COVID-19 Vaccine – United States, December 21, 2020–January 10, 2021." *Morbidity and Mortality Weekly Report* 70 (4): 125–29. http://dx.doi.org/10.15585/mmwr.mm7004e1.

Sparks, Steven, Allison De Jong, Christine Filer, and Gary Langer. 2020. *Coronavirus Vaccine Hesitancy in Black and Latinx Communities*. Carmel, NY: Langer Research Associates and COVID Collaborative.

Szilagyi, Peter G., Kyla Thomas, Megha D. Shah, Nathalie Vizueta, Yan Cui, Sitaram Vangala, and Arie Kapteyn. 2020. "National Trends in US Public's Likelihood of Getting a COVID-19 Vaccine – April 1 to December 8, 2020." *JAMA* 325 (4): 396–98. https://doi.org/10.1001/jama.2020.26419.

Tenforde, Mark W., Sara S. Kim, Christopher J. Lindsell, Erica Billing Rose, Nathan I. Shapiro, D. Clark Files, Kevin W. Gibbs, et al. 2020. "Symptom Duration and Risk Factors for Delayed Return to Usual Health among Outpatients with COVID-19 in a Multistate Health Care Systems Network – United States, March–June 2020." *Morbidity and Mortality Weekly Report* 69 (30): 993–98. http://dx.doi.org/10.15585/mmwr.mm6930e1.

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