

COVID-19 State of Vaccine Confidence Insights Report

Report 4 | March 29, 2021 | Date Range: March 2 – 15, 2021



Summary

Findings. Following President Biden’s announcement that there will be enough vaccine for every adult by the end of May, many people express a renewed sense of hope and optimism. However, the idea that “hesitancy” is used as an excuse to explain low vaccination rates among communities of color, rather than confronting long-held equity and access issues, is being increasingly highlighted. As a result, structural issues are often being met with individual-level interventions and solutions. Misinformation on social media continues to undermine vaccine confidence; current tactics by tech companies to manage misinformation often do little to combat its spread or address consumer concerns. Recent data suggest that those who do not intend to get vaccinated are also less likely to adhere to safety and mitigation guidelines, further polarizing the fully vaccinated from unvaccinated groups. In addition to vaccination status, conversations about “vaccine passports” are contributing to divisions between these groups. New studies with COVID-19 survivors investigating their immune response to one dose of the current two-dose vaccines raised consumer confusion about whether partial vaccination offers protection against the virus that causes COVID-19.

Recommendations. Federal, state, and local partners should continue to work together to increase transparency, respond to gaps in information, and confront misinformation with evidence-based messaging. The goal of these efforts is to increase confidence in COVID-19 vaccines and expand vaccine uptake more broadly. Efforts should be made to engage and deploy trusted messengers who connect with under-vaccinated groups; investigate community-specific factors contributing to low vaccine uptake; and slow the spread of misinformation while promoting trustworthy sources.



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The findings and conclusions in this report are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).




Aims and Methods

By rapidly reviewing and analyzing numerous sources and inputs (see [Appendix](#)), the biweekly COVID-19 State of Vaccine Confidence Insights Report emphasizes major themes that influence COVID-19 vaccine hesitancy and uptake. This is categorized by their level and type of threat to vaccine confidence, degree of spread, and directionality. By examining how consumers think and feel, social processes, and the practical issues around vaccination, the Insights Report seeks to identify emerging issues of misinformation, disinformation, and places where intervention efforts can positively impact vaccine confidence across the United States.

The information in this report is only a snapshot, and certain populations may be underrepresented. Images and quotes are illustrative examples and are not meant to be comprehensive of all content related to the highlighted themes.

Theme Classification

How do you classify this theme/information?		
High risk	Moderate risk	Low risk
		
<ul style="list-style-type: none"> May lead to vaccine refusals and decreased uptake Wide reach, pervasive 	<ul style="list-style-type: none"> Potential to trigger hesitancy to vaccinate Moderate reach, modest dissemination 	<ul style="list-style-type: none"> Concerning, but low risk to vaccine confidence Limited reach, limited dissemination

How has this theme/idea changed over time (since last report or over the course of multiple reports)?		
		
<p>Increasing Information spreading rapidly</p>	<p>Stable Information remaining constant at prior level</p>	<p>Decreasing Information is not gaining further traction and there has been no indication of additional activity</p>

Major Themes

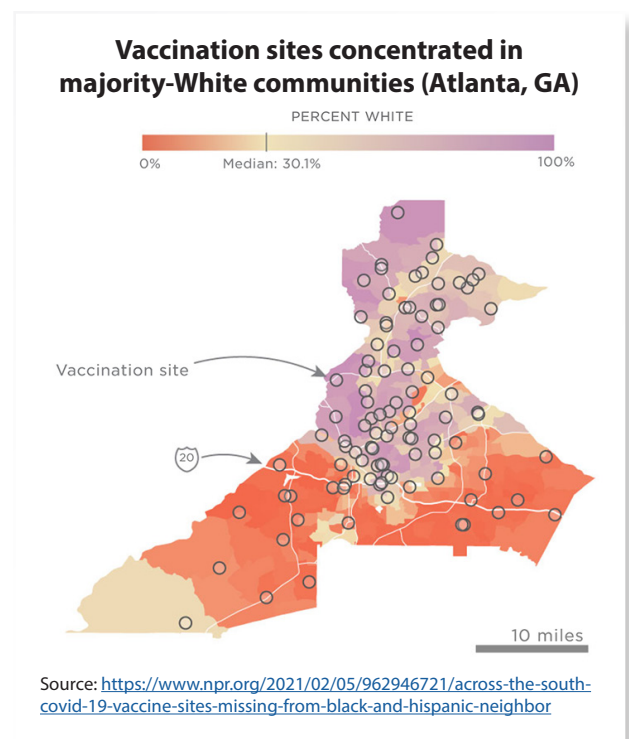


Vaccine hesitancy concerns are disguising structural and practical barriers.

Although COVID-19 vaccine supplies have increased and states have dramatically expanded eligibility criteria, data indicate that vaccination rates for Black people have not caught up to those of White people. In some states, White people are vaccinated at two to three times the rate of Black people.² Although early polling data reported that Black people were more likely to be vaccine-hesitant, it may be that one year later, vaccine access is a greater threat to vaccine uptake or at least a sizable additional threat.^{3,4} Increasingly, web traffic, social media, and news headlines emphasize that “hesitancy” is used as an excuse to justify low vaccination rates, as a way to avoid confronting long-standing health system-level equity and access issues. Vaccination sites are less common in Black communities and Black Americans face longer driving distances to vaccination sites than their White counterparts.^{5,6} People from White neighborhoods often claim an a larger share of vaccination appointments in Black and Hispanic neighborhoods; in addition, appointment access codes have been misused by people for whom they were not intended.⁷ Lack of internet access and technology also remain a threat to vaccination coverage. Nearly half of all people in the United States without home internet access are people of color, which is especially notable because the majority of appointment-booking systems are online.⁸ Because Black people are overrepresented in frontline and essential jobs, difficulty taking time off work is another compounding problem.^{9,10}

Adults over 65 years, non-U.S.-born people, and people living in rural areas face similar challenges. Deep concerns around infrastructure inequalities and underinvestment have driven some communities to provide access in innovative ways, such as using Meals on Wheels¹¹ to deliver vaccines to homebound older adults, and use of alternative facilities where people might feel comfortable and trust, such as public libraries, community centers, and faith-based organizations.¹² Pop-up clinics and walk-in vaccination clinics that do not require appointments are also used to combat transportation and technology challenges.^{13,14}

“The vaccine rates are low not because people don’t want the vaccine, but because those who want it can’t get it,” said Robert Fullilove, a professor of sociomedical sciences at the Columbia University Medical Center.¹



Short-term recommendations:

- Partner with states and jurisdictions to identify the many factors contributing to low vaccine uptake, including vaccine confidence and structural and practical barriers, among others. Conduct a [rapid community assessment](#) to identify intervention strategies to increase uptake and identify community leaders and trusted messengers to reach communities.
- Clearly explain the rationale underlying which vaccination sites were chosen and how people can access them. States and jurisdictions should partner with local, trusted messengers to better understand specific barriers and develop updated messages accordingly.

Long-term recommendation:

- Invest in research to understand the long-term structural issues and equity concerns impacting underlying vaccination coverage and vaccine access.
- Build case studies to explore the role of alternative vaccination systems, such as mobile vaccination units and other emerging innovations and practices, and their contribution to higher uptake and confidence in COVID-19 vaccines and the adult immunization system.



Current tactics for addressing misinformation online are insufficient.

Combating misinformation on social media platforms continues to be challenging, and tactics to manage misinformation vary across platforms. Some platforms are adding “strike” systems and attaching warning labels to messages,¹⁵ while others are turning off systems to flag anti-vaccine messages.¹⁶ However, many consumers have found ways to evade such measures by using syntax tricks, avoiding the word “vaccine” in their messages, and leveraging “wellness” influencers to share “soft” anti-vaccine messages.¹⁷ Current tactics to combat the spread of misinformation do little to provide people who have genuine concerns and information needs about COVID-19 vaccines with credible sources of information from reliable, evidence-based, and trustworthy sources.¹⁸

In the absence of a national strategy to combat misinformation and disinformation, advocacy organizations and jurisdictions are rising to the challenge. Organizations are leveraging existing health outreach programs and deploying their networks of trusted messengers to address misinformation offline. An example is the Health In-Reach and Research Initiative (HAIR), which is using a network of barbershops and beauty salons to debunk misinformation within the Black community in Maryland.¹⁹ As one of the most trusted sources of healthcare information, healthcare providers are using their status to address misinformation online and promote vaccination to their communities and social media followers. With grassroots campaigns like #ThisIsOurShot²⁰ and #Vaccinate4Love,²¹ providers seek to amplify messages aimed at increasing confidence in COVID-19 vaccines, while quickly and credibly debunking vaccine misinformation and disinformation.

Short-term recommendation:

- Partner with trusted messengers to deploy hyper-targeted messages for various demographics and social groups about vaccine confidence and address information gaps specific to their communities. Messages should be authentic, and accompanying content and assets should be carefully considered based on target audience, platform, and messenger. Offer ways for people to ask questions and get answers from trusted sources, especially healthcare providers.

Long-term recommendations:

- Work with technology companies to slow the spread of misinformation while also amplifying and promoting credible, evidence-based information and trustworthy sources. Supported by research, use what is known about trusted sources of information to ensure audiences are receiving promotional content from sources they personally trust and already look to for credible advice and information.
- Continue to partner with technology companies and researchers to better understand the interplay of digital media with vaccine confidence, including the consequences of exposure to misinformation, the pathways of misinformation and how it spreads within and across platforms, the role of influencers, and how misinformation impacts health-seeking behavior.
- Develop a network and community of practice for subject matter experts, federal partners, advocacy organizations, institutions of higher education, and states and jurisdictions focused on addressing the COVID-19 infodemic and future health infodemics in the United States.

How anti-vax rhetoric sneaks past Instagram’s content moderation system

Despite supposed efforts to limit the spread of misinformation, social media is still a fount of anti-vax content

By NICOLE KARLIS | MARCH 10, 2021 12:44AM (UTC)





People who are fully vaccinated are more likely to continue to adhere to COVID-19 safety guidance.

Following CDC’s release of [recommendations for fully vaccinated people](#), online conversations increased about continued adherence to COVID-19 safety guidance. Some consumers expressed disapproval, saying they don’t need permission to return to normal and will gather with friends or family regardless of their vaccination status.^{22,23} This opposition was validated by recent polls, which found that people who report they will not get vaccinated were more likely to report never or rarely wearing masks in public and that their immune system is strong enough to manage COVID-19 if they were to get sick.^{i,24} Fully vaccinated people, on the other hand, were more likely to continue wearing masks and limit the size of gatherings.²⁵ [Additionally, people who report that they would get vaccinated expressed more fear of COVID-19 illness, compared to those who would likely not get vaccinated.ⁱ](#)

Such division within the U.S. population is not new—polls continue to indicate that consumers who identify as conservatives are less likely to get vaccinated, with one poll indicating that the proportion of those who do not plan to be vaccinated remains steady despite overall intent to be vaccinated increasing nationally as the number of people wanting to “wait and see” decreases.^{26,27} Engaging trusted messengers, such as primary care providers and community leaders, to reach these consumers will be essential not only to increase vaccine confidence,²⁸ but also to uphold COVID-19 mitigation and safety measures, especially as states are relaxing mitigation measures and mask mandates.²⁹

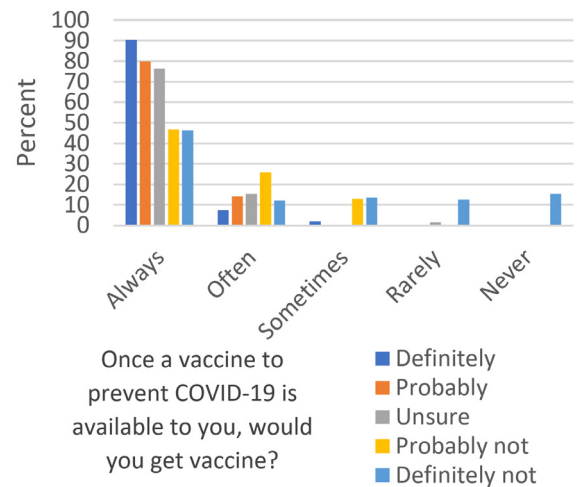
Short-term recommendations:

- Continue to engage and deploy trusted messengers to promote messages about the benefits of COVID-19 vaccination. Specifically highlight the benefits of vaccination over natural immunity and how vaccination allows people to avoid the potential “long COVID” health effects of natural infection.
- Develop specific messages and tools for healthcare providers to use in discussing the benefits of vaccination and the importance of COVID-19 mitigation measures with patients who are uncertain about or leaning toward not getting vaccinated.

Long-term recommendations:

- Bolster research to better understand vaccine motivations within diverse demographics and across a range of political leanings. Include rapid message testing, visual testing, and channel/platform questions to plan optimal online placement of messages to help agencies, partners, and trusted messengers achieve vaccine confidence and increase vaccine uptake.

Over the past week, how often have you worn a mask when in public?



Source: Unpublished data. For methods and previous Omnibus data, please see Nguyen KH, Srivastav A, Razzaghi H, et al. COVID-19 Vaccination Intent, Perceptions, and Reasons for Not Vaccinating Among Groups Prioritized for Early Vaccination — United States, September and December 2020. *MMWR Morb Mortal Wkly Rep* 2021;70:217–222. DOI: <http://dx.doi.org/10.15585/mmwr.mm7006e3>

ⁱ Unpublished data. For methods and previous Omnibus data, please see Nguyen KH, Srivastav A, Razzaghi H, et al. COVID-19 Vaccination Intent, Perceptions, and Reasons for Not Vaccinating Among Groups Prioritized for Early Vaccination — United States, September and December 2020. *MMWR Morb Mortal Wkly Rep* 2021;70:217–222. DOI: <http://dx.doi.org/10.15585/mmwr.mm7006e3>

Emerging Themes



Vaccine status and “vaccine passports” are contributing to division and polarization.

As [practical issues](#) with vaccination continue, especially for communities of color and other medically underserved populations, online conversations point to vaccination status and access to specific brands of vaccine as new ways to segment and divide the population.³⁰ Discussions of “vaccine passports” or “green passes” in the media have further exacerbated concerns of “immune-privilege,” with some consumers pointing out the potential of these strategies to further marginalize communities that encounter structural and practical barriers to vaccination.^{31,32} The travel and hospitality industry is perceived as encouraging the concept of vaccine passports in an effort to reassure consumers, boost pandemic-depressed travel bookings, and curb global quarantine requirements.³³ However, some feel that a passport would enable those who are fully vaccinated to do things that the unvaccinated cannot,³⁴ contributing to increased polarization within the population. At the same time, others believe that vaccine passports and postvaccination guidance are infringing on their liberties and rights and are equivalent to government-issued mandates.³⁵



Short-term recommendations:

- Continue to promote messages about current travel guidance; highlight that requiring proof of vaccination status is not currently a part of any travel or safety recommendations.
- Partner with states and jurisdictions and private industry to communicate clearly and often about interstate and international travel requirements.

Long-term recommendation:

- Investigate the intersection of vaccination coverage and the spread of virus across multiple modes of travel to inform whether “vaccine passports” have utility for interrupting viral transmission on a global scale. Additionally, evaluate the spread of virus variants to better understand the extent to which variants might blunt the effect of vaccines—meaning even vaccinated people can get sick. Communicate findings to the public.



Newly released data create confusion about whether partial vaccination offers protection against the virus that causes COVID-19.

New studies investigating the immune response after a single dose of mRNA vaccines (Pfizer-BioNTech and Moderna) indicate that for those who have previously been infected with SARS-CoV-2, a single dose may provide adequate protection against the virus that causes COVID-19.^{36,37} At the same time, consumers report struggling to complete their two-dose series within the recommended time interval due to appointment administration issues, weather events, or general time constraints.^{ii,iii} The public is confused about the extent to which the second mRNA vaccine dose is important for vaccine effectiveness or offers additional protection from virus variants, and how partial vaccination affects population immunity.

Short-term recommendations:

- Deliver clear and transparent messages around the need for the second dose of mRNA vaccines and implications for vaccine efficacy; clearly communicate what is known and not known about partial vaccination.
- Ensure that vaccine administration systems and in-clinic logistics support scheduling a second dose appointment easily and/or automatically. Partner with vaccination providers to ensure that second dose appointments are scheduled during the patient waiting period or when first dose appointments are scheduled.

ii Social Listening Team. *COVID-19 Interagency Social Listening Report*. Washington, DC, Federal Emergency Management Agency; March 4, 2021.

iii Social Listening Team. *COVID-19 Interagency Social Listening Report*. Washington, DC, Federal Emergency Management Agency; February 10, 2021.

Continuing and Evolving Themes

Themes below have been noted in Reports 1, 2, and 3 and continue to undermine vaccine confidence. For additional context and previous recommendations on these themes see *Insights Report 1* (February 12, 2021)^{iv}, *Insights Report 2* (March 1, 2021)^v, and *Insights Report 3* (March 15, 2021).^{vi}

- Adverse events and side effects.** Conversations about vaccine safety increased during this report period, with top headlines focused on the pause in the use of AstraZeneca COVID-19 vaccine abroad due to concerns about reported blood clots,³⁸ newly reported deaths following vaccination,^{39,40} and concerns about mRNA vaccines causing tumor growth.⁴¹ While none of these adverse events are directly linked to vaccination, and despite the number of people who have been vaccinated with mostly common side effects, vocal vaccine deniers continue to leverage these stories to stoke fears that the vaccines are unsafe. *New recommendations:*

- Continue to promote messages about the safety and benefits of COVID-19 vaccination, the rigors of FDA authorization, and long-established safety systems used to monitor adverse events and negative side effects.
- Be prepared for questions about how the U.S. vaccine monitoring systems compare to those of other countries—specifically, how causality is assessed and how recommendations are made—which may be prompted by potentially discordant conclusions reached or recommendations made by other health systems in assessing vaccine safety signals.

- Vaccine brand preference.** Consumers continue to seek out specific brands of COVID-19 vaccine and are cancelling vaccination appointments to wait for the brand or dosing schedule they prefer, with increased demand for Johnson & Johnson’s Janssen COVID-19 vaccine.⁴² Current systems, including VaccineFinder, allow consumers to search for vaccination appointments by brand, despite CDC messaging focused on getting the first vaccine offered and available. *New recommendations:*

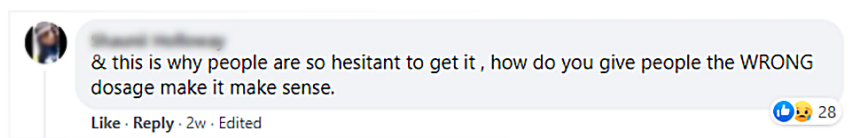
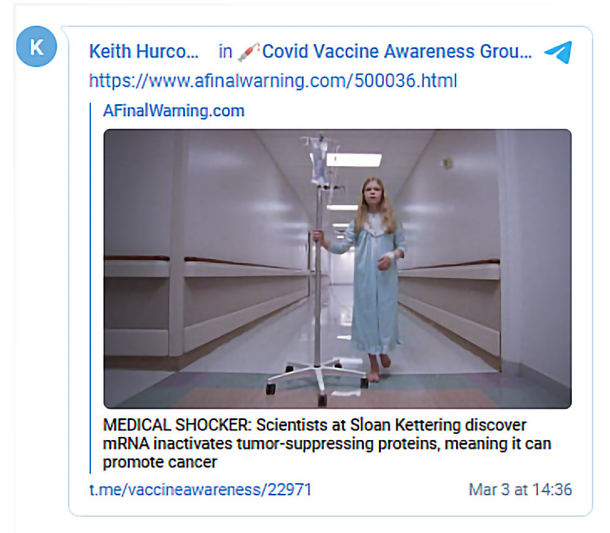
- Review current vaccine administration systems to better align vaccine brand availability with CDC messages stating no preference between the three authorized vaccines.^{43,44}
- Continue to promote messages that all three vaccines are safe and effective. Create messages and develop guidance for consumers emphasizing that whichever vaccine you are offered is the one you should accept and receive.

- Prioritization and eligibility.** As states expand eligibility criteria, some consumers report feeling guilt about their ability to get vaccinated because of inequities that exist⁴⁵ or because they feel like their personal comorbidity is being broadcast and stigmatized.⁴⁶

- Pregnancy and fertility.** New studies have found COVID-19 antibodies in breastmilk after vaccination, which may increase confidence in vaccines for new parents hoping to protect their babies.⁴⁷ However, a report found that surrogacy agencies are receiving calls from clients requesting that surrogates be unvaccinated.⁴⁸

- Vaccine administration errors.** Reports of vaccine administration errors in the news media, such as incorrect dosages⁴⁹ and vaccines administered with empty syringes,⁵⁰ could lead to reduced confidence in COVID-19 vaccines. *New recommendations:*

- Promote vaccination trainings and tools for current and proposed future vaccinators to ensure proper vaccine storage, handling, and administration.
- Continue to highlight vaccination coverage numbers and low numbers of safety and administration issues.



iv Insights Unit, Vaccinate with Confidence Team. *State of vaccine confidence report: Report 1*. Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.

v Insights Unit, Vaccinate with Confidence Team. *State of vaccine confidence report: Report 2*. Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.

vi Insights Unit, Vaccinate with Confidence Team. *State of vaccine confidence report: Report 3*. Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.

Appendix: Inputs and Sources

Type	Input	Cadence	Sources	Tactics for Utilization
Mixed Methods	Communication Surveillance Report	Daily, weekdays	<ul style="list-style-type: none"> Google news Meltwater CrowdTangle Native platform searches 	<ul style="list-style-type: none"> Share of voice topic analysis to identify themes Emerging topics
	Tanaq Social Listening +Media Monitoring Report	Weekly	<ul style="list-style-type: none"> Meltwater Muck Rack Sprout Social First Draft Stronger Native platform searches 	<ul style="list-style-type: none"> Trending topics Demographic and geographic conversation monitoring
	Meltwater	Daily	<ul style="list-style-type: none"> Facebook, Twitter, Instagram Blogs News media Online forums 	<ul style="list-style-type: none"> Share of voice topic analysis Emerging theme topics Identify high reach/velocity topics
Social Media Listening	OADC Channel COVID-19 Post metrics	Weekly	<ul style="list-style-type: none"> Sprout Social Native OADC account analytics 	<ul style="list-style-type: none"> Analyze # of posts, topics Success of messages, # of impressions, reach, # of engagements
	OADC Channel Comment Analysis	Daily, weekdays	<ul style="list-style-type: none"> Native platform searches 	<ul style="list-style-type: none"> Sentiment analysis Identify message gaps/voids
	CrowdTangle content insights report	Biweekly	<ul style="list-style-type: none"> Facebook 	<ul style="list-style-type: none"> Top pages (voices), groups General trends/sentiment analysis News analysis through posts
	FEMA Social Listening Report	Daily	<ul style="list-style-type: none"> Hootsuite Brandwatch CrowdTangle Meltwater 	<ul style="list-style-type: none"> Trends/sentiment analysis National and global news analysis
Direct Reports	CDC-INFO Metrics	Weekly, Mondays	<ul style="list-style-type: none"> CDC-INFO inquiry line list Prepared response (PR) usage report 	<ul style="list-style-type: none"> Cross-compare PR usage with inquiry theme analysis Sentiment analysis Identify information gaps/voids
	VTF Media Requests	Weekly, Mondays	<ul style="list-style-type: none"> Media request line list 	<ul style="list-style-type: none"> Leading indicator for news coverage Identify information gaps/voids
	Web Metrics	Weekly, Wednesdays	<ul style="list-style-type: none"> Top pages Google search queries Top FAQs Referring domains 	<ul style="list-style-type: none"> Identify information gaps/voids, identify keywords/search terms, changes in web traffic
Research	Poll Review	Weekly, Mondays	<ul style="list-style-type: none"> Harris Poll, PEW research, Gallup Poll, KFF New data related to vaccine hesitancy 	<ul style="list-style-type: none"> Identify socio-behavior indicators related to motivation and intention to vaccinate
	Literature Review	Weekly, Mondays	<ul style="list-style-type: none"> PubMed, LitCovid, ProQuest Central New data related to vaccine hesitancy 	<ul style="list-style-type: none"> Identify current vaccination intention Identify barriers to vaccination