

# COVID-19 State of Vaccine Confidence Insights Report

Report 6 | April 28, 2021 | Date Range: April 12–26, 2021



## Summary

**Findings.** There continues to be strong backlash against the idea of digital vaccine passports and potential vaccine mandates. A growing number of businesses, including colleges and universities, airlines, cruise lines, and sports venues, say that they will require proof of vaccination for entry or services. However, about half of the U.S. population strongly opposes any type of vaccine verification system, with consumers largely divided along party lines. Additionally, coverage of vaccine hesitancy is increasing as the media reports that vaccine supply exceeds demand in some communities and recent data suggests that vaccine demand and coverage may plateau as soon as late April. News and social media coverage of hesitancy, vaccine surplus, and the looming threat of not reaching population immunity may undermine intentions to vaccinate by fostering the perception that controlling COVID-19 is outside one's control.

**Ways to take action.** 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 continue to amplify information about the safety and effectiveness of COVID-19 vaccines.



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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. These are characterized by 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	Positive sentiment
			
<ul style="list-style-type: none"> <li>May lead to vaccine refusals and decreased uptake</li> <li>Wide reach, pervasive</li> </ul>	<ul style="list-style-type: none"> <li>Potential to trigger hesitancy to vaccination</li> <li>Moderate reach, modest dissemination</li> </ul>	<ul style="list-style-type: none"> <li>Concerning, but low risk to vaccine confidence</li> <li>Limited reach, limited dissemination</li> </ul>	<ul style="list-style-type: none"> <li>Could increase vaccine confidence, intent, or motivation</li> <li>Variable reach and dissemination</li> </ul>

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

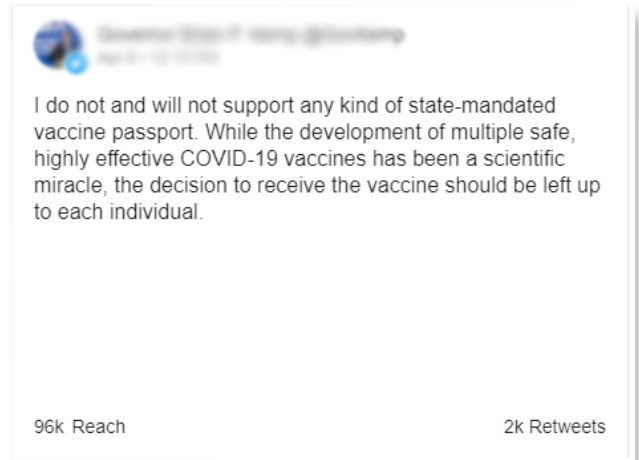
## Major Themes



### Vaccine passports and mandates polarize consumers and politicize the broader vaccination effort.

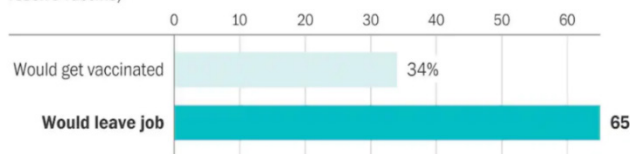
There continues to be strong backlash against the idea of digital vaccine passports and potential vaccine mandates. A growing number of businesses, including colleges and universities, airlines, cruise lines, and sports venues, say that they will require proof of vaccination for entry or services.<sup>1,2</sup> However, about half of the U.S. population strongly opposes any type of vaccine verification system, with consumers divided along party lines.<sup>3,4</sup> Conservative leaders criticize and oppose the passports and have proposed a bill to ban the federal government from requiring such documentation.<sup>5,6</sup> A growing number of states have pre-emptively prohibited proof-of-vaccination systems.<sup>7,8,9</sup>

Consumers who identify as conservative and those in the "wait and see" group are against the idea of vaccine passports or mandates in any situation.<sup>10,11</sup> Meanwhile, among healthcare employees who said they did not intend or had not decided to get vaccinated, more than 80% said they would oppose a vaccine requirement.<sup>12,13</sup> Nearly two-thirds of respondents said they would rather leave their job than get a COVID-19 vaccine.<sup>14,15</sup>



#### Nearly 2 in 3 health-care workers who don't plan to be vaccinated or haven't decided said they would quit rather than get a shot

Q: If your employer required you to get vaccinated against covid-19 in order to continue working, would you get a covid-19 vaccine, or would you leave your job? (Among health-care workers who are not self-employed and do not plan to or have not decided to receive vaccine)



Note: "No opinion" not shown.

Source: Feb. 11-March 7, 2021, Washington Post-KFF poll of 307 health-care workers who are not self-employed and who do not plan to or have not decided to receive vaccine with an error margin of +/- 6.5 percentage points.

High levels of media volume indicate that consumers are confused about potential vaccine passport rules and documentation requirements<sup>16</sup>—even as some private employers require their workers to get vaccines or announce that vaccination is a condition of employment.<sup>17,18,19</sup> The American Civil Liberties Union (ACLU) and others urge caution over vaccine passports, noting that such systems hold potential to exclude members of the population, such as those who are medically underserved and those who are experiencing poverty.<sup>20,21</sup> The ACLU further notes that vaccine passports stand to alienate populations with reason to fear such systems, such as immigrant communities and communities of color.<sup>22,23</sup> A confusing and politicized proof-of-vaccination system could undermine trust in health systems and make already hesitant consumers less likely to get vaccinated<sup>24,25,26</sup>—even as some private employers require their workers to get vaccines or announce that vaccination is a condition of employment.<sup>27,28,29</sup>

### Ways to take action:

- Support research to better understand how proof-of-vaccination systems may contribute to or undermine vaccine confidence and the population's willingness to get vaccinated. Gather information on people's thoughts and feelings toward sharing private health information and on appropriate message framing to explain the rationale for such systems.
- Partner with states and jurisdictions to plan how to create and implement equitable and accessible proof-of-vaccination systems. Conduct [rapid community assessments](#) to learn more about the structural and practical barriers that proof-of-vaccination systems may raise.



## Coverage of vaccine hesitancy and other threats to population immunity increase.

While some U.S. regions are working to address ongoing vaccine access and eligibility issues, others are working to fill empty appointment slots and grappling with vaccine supply exceeding community demand. Reports of unfilled appointments have surfaced across the country, particularly in areas with a noted high degree of hesitancy, such as rural areas.<sup>30,31</sup> Compared to those living in suburban and urban areas, fewer people in rural areas plan to get vaccinated.<sup>32</sup> These reports are borne out by polling data, which show that hesitancy issues are greatest in rural communities.<sup>33,34</sup>

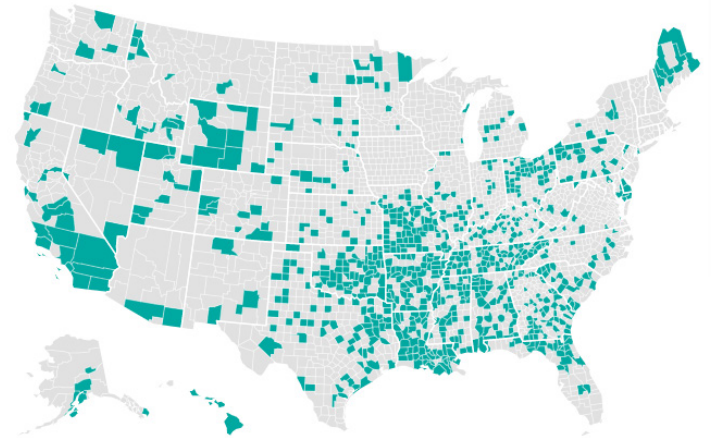
Recent analysis suggests that vaccine demand and coverage may plateau much earlier than expected, even as soon as late April.<sup>35</sup> Such a plateau would indicate hesitancy and low vaccine uptake — both threats to reaching population immunity. The “magic number” needed to reach population immunity is variable and, as of yet undefined.<sup>36,37,38</sup> The lack of clarity leaves interpretation of population immunity milestones open for debate. A subset of state leaders announced that their communities were approaching population immunity due to vaccinations and naturally occurring infections, despite words to the contrary from public health experts.<sup>39,40</sup> Increased coverage of hesitancy, vaccine surplus, and the looming threat of not reaching population immunity stands to undermine intentions to vaccinate by fostering the perception that controlling COVID-19 is outside one’s control.<sup>41</sup>

### Ways to take action:

- Partner across federal agencies to model and determine explicit vaccination coverage targets for the United States. Measure and update consumers on progress toward coverage goals on an ongoing basis. Clear and transparent coverage goals stand to build trust in the healthcare system, encourage accountability, improve measurement of confidence and demand-building efforts, and promote equitable distribution and uptake of COVID-19 vaccines.
- Continue to feature consumer vaccination stories, including information about personal motivations, challenges, and concerns. Work with partners to identify trusted messengers and influencers who can share their personal stories both on personal and shared platforms. Partner with technology companies to amplify local vaccination stories.
- Amplify messages about how consumers can talk to their friends and family about vaccination. Develop and disseminate tools for consumers and organizations to talk about COVID-19 vaccination online and offline. Engage the COVID-19 Community Corps in mobilizing these messages in their communities.

### Counties With COVID-19 Vaccine Surplus at CVS, Rite-Aid, or Walmart Pharmacies

As of April 5th, 847 counties had at least one appointment available at a local CVS, Rite-Aid or Walmart pharmacy.

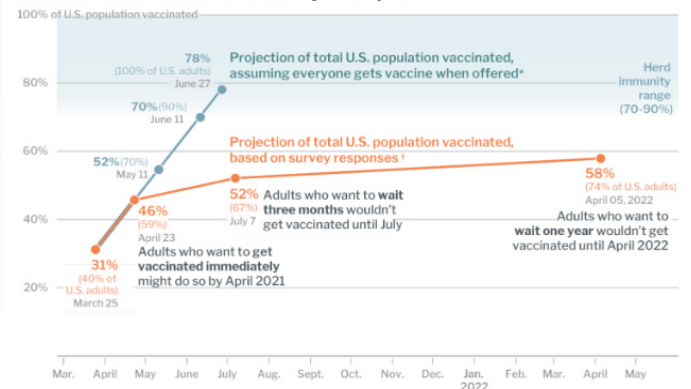


Data reflect CVS, Walmart, and Rite-Aid pharmacies that offer vaccines and reported available vaccine appointments as of April 5, 2021. Note that counties have different eligible populations. Total Population is obtained from United Census Bureau American Community Survey (2019 5-year Estimates).

Source: GoodRx



### How Vaccine Demand Could Plateau by Late April:



\* Assuming vaccinations continue at current rate of 0.6% of adults per day receiving their first dose

† Calculated based on Surgo's nationally representative survey of 1,670 adults in the United States from March 18-March 25, 2021  
Source: Surgo Ventures

Source: <https://static1.squarespace.com/static/5f7671d12c27e40b67ce4400/t/6075bc376125561b742e9ff5/1618328632135/Final+Press+Release-Surgo+Ventures+G-en+Pop+Followup+Survey+%281%29.pdf>



## Emerging Themes



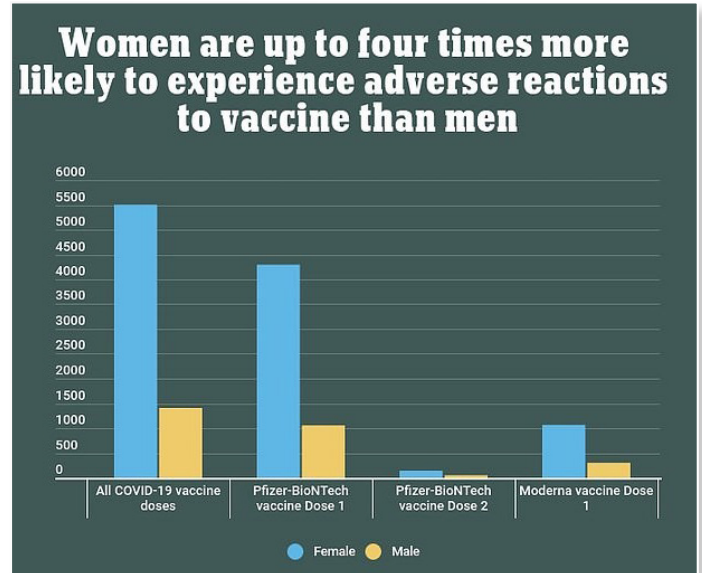
### Women are experiencing unique and increased side effects after vaccination.

There are a growing number of media reports of women being more likely to experience side effects and experiencing different side effects than men.<sup>42</sup> More reports of headaches, fatigue, dizziness, and rashes at the site of infection were made for women than men, according to data in the Vaccine Adverse Event Reporting System (VAERS).<sup>43</sup> This sex difference could be the result of a disproportionate number of women reporting to VAERS (differential reporting), biological differences, or even gender bias in clinical trials.<sup>44,45</sup> Following vaccination, a subset of women report experiencing atypical menstruation, including changes in timing and nature of menstruation.<sup>46</sup> Such reports have been co-opted and incorporated into misinformation narratives that warn of a link between COVID-19 vaccination and infertility.<sup>47,48</sup>

Of the reported cases of CVST following vaccination with J&J/Janssen COVID-19 Vaccine, nearly all occurred in women of reproductive age.<sup>49</sup> Therefore, some experts have suggested reserving the J&J/Janssen COVID-19 Vaccine for men only and that the adverse events may be linked to hormonal differences.<sup>50,51</sup> Others argue that doing so would be premature while researchers continue to examine the issue.<sup>52</sup>

#### Ways to take action:

- Conduct further research on women’s health needs and COVID-19 vaccines, including irregular menstrual cycles following vaccination. Empower healthcare professionals to relay information about vaccine safety to patients; strengthen their capacity to have empathetic vaccine conversations. Offer healthcare providers and trusted advocates content prioritized for female patients concerned about vaccine safety and effectiveness.
- Partner with healthcare professionals to address misinformation clearly and transparently about COVID-19 vaccines, fertility, and reproductive health — especially those healthcare professionals who provide care to women.



Source: [COVID vaccine: Women report more side effects than men. Here's why. \(usatoday.com\)](https://www.usatoday.com/story/health/2021/04/28/covid-vaccine-women-report-more-side-effects-than-men/7000000002/)

## Emerging Themes (cont.)



### Attention to side effects and potential adverse events for all COVID-19 vaccines is increasing.

In the United States, consumers continue to report experiencing side effects and potential adverse events for all three COVID-19 vaccines.<sup>53,54</sup> As these reports continue, especially in light of the J&J/Janssen COVID-19 Vaccine pause, vocal vaccine deniers are seeking to amplify concerns about side effects and cast doubt on vaccine safety.<sup>55,56</sup>

#### Ways to take action:

- Share clear, complete, and accurate messages about COVID-19 vaccine safety to build trust in the vaccines, healthcare professionals, and the health system. Provide regular updates on what is known and unknown about the safety and side effects of COVID-19 vaccines, as well as the broad benefits of vaccination.

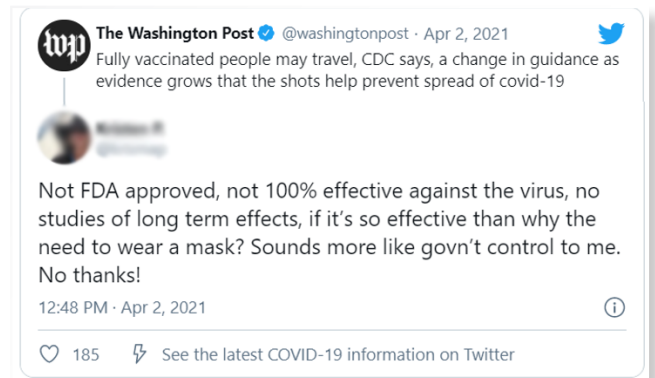


### Consumers are receiving mixed messages about asymptomatic spread after vaccination.

After mixed messaging on whether fully vaccinated people carry the virus causing COVID, CDC clarified that further research, CDC clarified that more research is needed to fully understand the role of vaccinated people and COVID-19 cases.<sup>57,58</sup> Such messaging further muddles guidance for fully vaccinated people, especially in regard to testing, activities and travel with children, and asymptomatic spread. Both vaccinated and unvaccinated people are questioning whether they can spread the virus that causes COVID-19 and what safety measures are still necessary following vaccination.<sup>59</sup>

#### Ways to take action:

- Clearly explain and expand guidance around COVID-19 testing guidance clearly and thoroughly for vaccinated people, especially considering breakthrough cases.
- Regularly update the public about asymptomatic spread of the virus that causes COVID-19 among fully vaccinated people as more information becomes available.



## Continuing and Evolving Themes

Themes below have been noted in Reports 1 through 5 and continue to undermine vaccine confidence. For additional context and previous recommendations on these themes, see previous Insights Reports.<sup>a,b,c,d,e</sup>

- **Equity and access issues.** Barriers to vaccination persist among non-English-speaking and immigrant populations. Barriers include site-specific identification requirements (e.g., driver's licenses, Social Security numbers, health insurance cards) and lack of interpreters for consumers not fluent in English. Although everyone can receive a COVID-19 vaccine regardless of immigration status, there are reports of people without identification being turned away from sites.<sup>60,61</sup> *New ways to take action:*
  - Share clear messages widely that all people can receive a COVID-19 vaccine, regardless of immigration status. Deploy trusted messengers to amplify this message for people with unauthorized or undocumented status and for non-US-born people.
- **Variants and breakthrough cases.** There continue to be breakthrough cases of COVID-19 in vaccinated people throughout the United States.<sup>62,63</sup> As research seeks to determine the role of variants in breakthrough cases, vaccine companies are exploring the possibility of COVID-19 booster vaccines for vaccine variants.<sup>64</sup> *New ways to take action:*
  - Share clear, complete, and accurate messages about COVID-19 virus variants, breakthrough cases, and actions that consumers need to take to promote health and safety.
- **Travel.** Consumers are confused about [CDC's updated travel guidance](#)<sup>65,66</sup> which discourages nonessential travel but states that fully vaccinated people can travel at low risk to themselves and others.<sup>67</sup> Confusion about family travel persists as parents are unsure how to travel with unvaccinated children or if it is safe to do so.<sup>68</sup> *New ways to take action:*
  - Clearly explain guidance around the risks and safety precautions still needed for fully vaccinated adults. Expand the guidance to explain the risk and safety considerations for fully vaccinated adults traveling with unvaccinated children.
- **Generation Z.** COVID-19 vaccination uptake and interest continue to lag among Generation Z young adults, and vaccine messaging geared toward this demographic from state or federal public health officials and broadcast to social media is generally lacking. There is a dearth of innovative content developed outside of official public health channels that prioritizes and considers the unique needs of this demographic.<sup>69,70</sup> Develop tailored content and disseminate through messengers that Gen Z trusts.

## Appendix: Inputs and Sources

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

a 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.  
 b 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.  
 c 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.  
 d Insights Unit, *Vaccinate with Confidence Team. State of vaccine confidence report: Report 4.* Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.  
 e Insights Unit, *Vaccinate with Confidence Team. State of vaccine confidence report: Report 5.* Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.