

# COVID-19 State of Vaccine Confidence Insights Report

Report 19 | December 14, 2021 | Date Range: October 26, 2021 – November 08, 2021



## Summary

**Findings.** This report identifies several vaccine confidence themes during this reporting period. First, despite positive vaccine uptake trends, high-profile personalities continued to express negative vaccine sentiments which elevated these conversations. Second, consumers continue to worry about side effects of available COVID-19 vaccines. Third, there is continued frustration about CDC revising the definition of “vaccine” and “vaccination”. Fourth, consumers continue to show their support and opposition to the Emergency Use Authorization (EUA) for the Pfizer-BioNTech COVID-19 vaccine for children ages 5 – 11 years old. Fifth, states and localities continue to take legislative action against implementing vaccine requirements. Sixth, social media users expressed their support for the suspension of the Occupational Safety and Health Administration (OSHA) COVID-19 vaccine requirement. Finally, consumers continue to debate the role of infection-acquired immunity in preventing the spread of COVID-19.

**Ways to take action.** Federal, state, and local partners should continue to work together to explain the rationale for updated guidance, respond to gaps in information, and confront misinformation with evidence-based messaging. The goals of these efforts are to increase confidence in COVID-19 vaccines, generate demand, and expand vaccine uptake more broadly. Partner with professional sporting associations and teams to generate vaccine demand and promote uptake by disseminating messages from current and former players about why they got vaccinated, whether they had concerns about the vaccine, and what helped them overcome their concerns. Work with trusted messengers to disseminate messages that educate people on the importance of understanding scientific study limitations and how to interpret the results of peer-reviewed and preprint studies especially when the results appear to run counter to well-established scientific evidence.



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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 influencing COVID-19 vaccine hesitancy and uptake. These are characterized by the level and type of threat to vaccine confidence, degree of spread, and directionality. In addition, 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 improve 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 comprehensively cover 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>

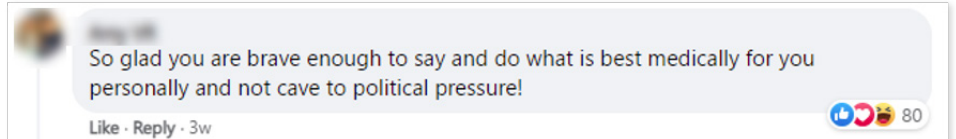
## Major Themes



### Trusted messengers continue to drive online conversations that amplify vaccine concerns and misinformation

Despite positive vaccine uptake trends and expanded eligibility of booster doses to all adults, high-profile personalities continued to elevate negative vaccine sentiments.<sup>a</sup> According to the latest Rasmussen Reports national telephone and online survey, 52% of participants support workers resisting vaccine requirements.<sup>1</sup> While some consumers may resist vaccine requirements, data from individual companies indicates a majority (84% - 91%) of their employees are compliant.<sup>2</sup>

On November 3, 2021, Green Bay Packers quarterback, Aaron Rodgers, tested positive for COVID-19 despite telling reporters in August 2021 that he had 'been immunized'.<sup>3</sup> During an interview on November 5,



2021, Aaron Rodgers claimed he had been immunized against COVID-19 through a homeopathic protocol. He then promoted several pieces of misinformation including unapproved treatments and preventatives as well as vaccine-related fertility concerns.<sup>4</sup> Many social media users discussed this matter and circulated the issues he raised,<sup>5,6,7,8,9,10</sup> and this issue was widely covered by national news outlets, which spread the associated misinformation.<sup>11,12,13,14</sup>

Other news stories about celebrities refusing or getting the COVID-19 vaccine, along with Big Bird's promotion of the COVID-19 vaccines, also led to additional social media conversations about COVID-19 vaccines,<sup>15,16,17,18,19,20,21,22,23</sup> accompanied by consumers' increasing online searches about these stories.<sup>a</sup> President Biden's Twitter account also added to the conversation when he expressed his support for Big Bird getting vaccinated.<sup>24</sup>

#### Ways to act:

- Partner with professional sporting associations and teams to generate vaccine demand and promote uptake by disseminating messages from current and former players about why they got vaccinated, whether they had concerns about the vaccine, and what helped them overcome their concerns.
  - [The NFL Vaccination Strategy is an example of this type of approach.](#)
- Support and perform research that attempts to better understand vaccine confidence and perceptions of vaccine effectiveness, including trusted messengers and sources of information, among groups with low vaccine confidence.
- Create and disseminate messages that promote vaccination and address common vaccine-related information voids when high profile figures, for or against vaccination, cause an increase in new stories and social media conversations. Timing message dissemination in this manner has the potential to also elevate messages that would build vaccine confidence.

<sup>a</sup>Google Trends



## Consumers continue to worry about side effects and adverse events of available COVID-19 vaccines.

Since the EUA of the Pfizer-BioNTech COVID-19 vaccine in December 2020, previous COVID-19 State of Vaccine Confidence Insights Reports found that individuals expressing hesitation towards the COVID-19 vaccine, or wanting to ‘wait and see’ before getting vaccinated, have often cited the possibility of adverse events and serious long-term side effects as their motivation behind delaying vaccination.<sup>b</sup>

In the period from November 6 to November 8, 2021, searches including the terms “efficacy” and “safety” increased rapidly.<sup>c</sup> Consumers continue to worry about cardiac-related side effects.<sup>d,25,26,27</sup> Many continue to turn to public health officials to clarify, explain, and confirm the benefits of vaccination despite recorded adverse events.<sup>c</sup>

Some social media users are concerned and convinced that COVID-19 vaccines do not prevent transmission between either unvaccinated or vaccinated individuals.<sup>28,29,30</sup> Therefore, consumers are questioning the need for vaccination if it will not stop the spread of COVID-19 in the United States. Questions regarding the possibility and probability of transmission despite vaccination remain common. Public inquiries to CDC-INFO reflect questions about whether vaccinated individuals have the potential to spread fewer viral particles than unvaccinated individuals and if the vaccines prevent infection or stop transmission.

Additionally, through CDC-INFO, some people were requesting sources, statistics, and studies from the CDC and other government agencies that discuss transmission after receiving the vaccine.<sup>d</sup> In response to these content gaps, misinterpreted or misrepresented journal manuscripts and circulating misinformation are guiding consumer opinion, potentially further sowing doubt and confusion regarding COVID-19 transmission.<sup>31,32,33</sup> It is important to address this gap in information and put forward additional, trustworthy, and clear messaging about the risk of transmission after vaccination. You can find examples of resources and graphics at [this CDC website](#).

In response to a perceived rise in breakthrough infections, some social media users are using this to strengthen their opposition to COVID-19 vaccines.<sup>34,35,36</sup> On social media, vocal vaccine deniers are stating that if vaccines decrease in effectiveness over time, then vaccination is useless and unnecessary.<sup>37,38,39</sup> Moreover, social media users are using breakthrough infections resulting from the Delta variant to spread the broader claim that vaccines are ineffective.<sup>40,41,42</sup> Some are making this claim following a widely circulating study that concludes people with breakthrough infections are just as likely as unvaccinated individuals to spread COVID-19 to household contacts.<sup>43,44,45</sup>

### Ways to act:

- Work with healthcare providers, community groups promoting vaccination, and pharmacists to clarify the number of breakthrough infections, hospitalizations, and deaths among vaccinated and unvaccinated populations. Additionally, create and publish easy-to-understand graphics and figures showing these numbers.
- Create and publish easy-to-understand content and graphics reflecting the risk of transmission after vaccination to counter misinformation on this topic. You can find examples of resources and graphics at [this CDC website](#).
- Enlist trusted messengers to communicate scientific findings of side effects and adverse events to vaccine hesitant individuals with a focus on uncommon dissemination channels and innovative messaging.
- Work with trusted messengers to disseminate messages that educate people on the importance of understanding scientific study limitations and how to interpret the results of peer-reviewed and preprint studies especially when the results appear to run counter to well-established scientific evidence.



<sup>b</sup>COVID-19 State of Vaccine Confidence Insights Reports

<sup>c</sup>Google Trends

<sup>d</sup>CDC-INFO

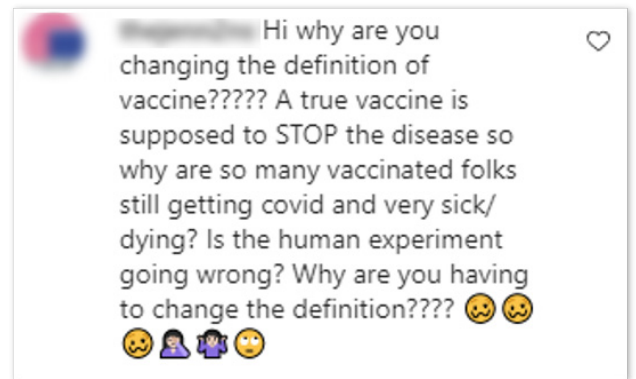
## Emerging Themes



### Consumers express frustration about CDC revising the definition of vaccine

Some consumers have expressed concern following CDC’s updated definitions for “vaccine” and “vaccination”.<sup>46</sup> Prior to September 1, 2021, CDC definitions of “vaccine” and “vaccination” were as follows: “Vaccine: A product that stimulates a person’s immune system to produce immunity to a specific disease, protecting the person from that disease. Vaccines are usually administered through needle injections but can also be administered by mouth or sprayed into the nose. Vaccination: The act of introducing a vaccine into the body to produce immunity to a specific disease.”<sup>47</sup> On September 1, 2021, CDC revised their definitions: “Vaccine: A preparation that is used to stimulate the body’s immune response against diseases. Vaccines are usually administered through needle injections, but some can be administered by mouth or sprayed into the nose. Vaccination: The act of introducing a vaccine into the body to produce protection from a specific disease.”<sup>48</sup>

Although this change happened on September 1, 2021, an e-mail correspondence obtained recently via a Freedom of Information Act (FOIA) request was shared widely online.<sup>49</sup> Some online consumers suggested that the updating of the definition of “vaccines” was a result of breakthrough infections, noting that “true” vaccines should prevent disease, and this new definition indicates that the COVID-19 vaccines are too ineffective to have qualified as vaccines under the prior definition.<sup>50,51</sup> Some instead believe that mRNA COVID-19 vaccines do not qualify as vaccines, and changing the definition eliminates this discrepancy.<sup>52,53,54</sup> However, the aforementioned explanations for updating the definitions are misleading and have since been debunked as continual revision of scientific content is normal, universal, and acceptable.<sup>55</sup>



#### Ways to act:

- Create messages that explain CDC’s rationale behind the necessary and improved “vaccines” definition.
- Engage with scientific associations to disseminate messages about the accuracy of the updated definition of “vaccines”.



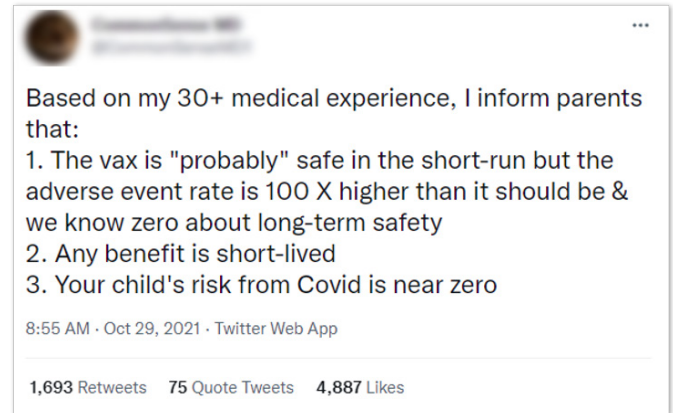
## Update: Consumers continue to show their support and opposition of the Emergency Use Authorization for the Pfizer-BioNTech COVID-19 Vaccine in children ages 5 – 11 years old.

Following the EUA of COVID-19 vaccines for children ages 5 – 11 years, some consumers, especially parents, continue to question the necessity and safety of COVID-19 vaccination in children.<sup>56,57,58</sup> Many continue to cite low case numbers and deaths, along with the possibility of harmful side effects and adverse events to negate the urgency of pediatric vaccination.<sup>59,60,61,62,63</sup> Despite this, many parents are excited and relieved at the prospect of vaccinating their children between the ages of 5 – 11 years.<sup>64,65,66,67</sup> Vocal vaccine opponents continue to claim that childhood vaccine requirements limit personal liberty and limit parental choices.<sup>68</sup>

Interest in pediatric vaccination increased during this reporting period. Searches for terms “5-11” and “vaccine mandate” spiked around the date of the FDA EUA for pediatric vaccination and publication of CDC guidance.<sup>e</sup> In addition, Google trends also showed consumers increasingly searched for vaccination sites and clinics near them following the EUA and CDC recommendation.<sup>d</sup> Following the EUA, some states, cities, and school districts are experiencing alternating support as well as backlash from parents and politicians as they consider adding the COVID-19 vaccine to their immunization requirements.<sup>69,70,71,72,73,74,75</sup>

Despite growing interest in childhood COVID-19 vaccination, a recent Kaiser Family Foundation (KFF) (n=219) poll found that parents are uneasy about childhood vaccination for a wide range of reasons:<sup>76</sup>

76% of parents are very or somewhat concerned about unknown long-term effects, while 71% are concerned their child might experience serious side effects. The same poll showed parents are hesitant to vaccinate their children due to fear of potential impacts on the child's fertility, and concerns about access to vaccination sites and quality of the site. Additionally, parents are concerned about needing to take time off should their child experience side effects following vaccination.<sup>77</sup>



### Ways to act:

- Refer to previous [Rapid Report – Announcement of Pediatric COVID-19 Vaccines for Children ages 5-11 years old](#)
- Using plain language and trusted messengers, disseminate findings from these two recent MMWR reports
  - [COVID-19 Vaccine Safety in Adolescents Aged 12–17 Years — United States, December 14, 2020–July 16, 2021](#)
  - [Trends in COVID-19 Cases, Emergency Department Visits, and Hospital Admissions Among Children and Adolescents Aged 0–17 Years — United States, August 2020–August 2021](#)

<sup>e</sup>Google Trends

## Continuing and Evolving Themes

The themes below have been noted in previous reports and continue to undermine vaccine confidence. The information highlighted below focuses on what is new or different from previous reports. For additional context and previous recommendations on these themes, see previous [Insights Reports](#).

**States and localities continue to take legislative action against vaccine requirements.** Some states have banned all vaccine requirements, which prohibits a private business to compel or take an adverse action against a person in order to compel them to provide proof of vaccination.<sup>78,79</sup> Additionally, other states are providing an option for exemptions or will permit employers to allow workers to opt out of vaccine requirements.<sup>80,81</sup>

### New ways to act:

- Engage with local trusted messengers from the geographical regions where legislation was passed or proposed that would ban vaccine requirements and emphasize the importance of vaccination
- Partner with state and local public health authorities to provide periodic, clear messaging to the public on the current status of vaccine requirements

**Consumers expressed their support for the suspension of the Occupational Safety and Health Administration (OSHA) COVID-19 vaccine requirement.** The Occupational Safety and Health Administration (OSHA) is suspending enforcement of the Biden administration's COVID-19 vaccine requirement for large private businesses after a federal appeals court upheld a stay on it last week.<sup>82</sup> Some social media users expressed their support for this ruling.<sup>83,84,85</sup> However, the White House urged businesses to continue implementing the guidance for COVID-19 vaccines and testing.<sup>86</sup>

**Consumers continue to debate the role infection-acquired immunity has in preventing the spread of COVID-19.** As reported in previous COVID-19 State of Vaccine Confidence Insights Reports, social media users continue to discuss the effectiveness of infection-acquired immunity compared to vaccine-acquired immunity.<sup>f.87,88,89</sup> News outlets and social media users are sharing a recent study<sup>90</sup> that they claim to support this belief.<sup>f.91,92,93</sup>

## Appendix: Inputs and Sources

Type	Input	Cadence	Sources	Tactics for Utilization
<b>Social Media Listening &amp; Media Monitoring</b>	<a href="#">Communication Surveillance Report</a>	Daily on weekdays	<ul style="list-style-type: none"> <li>• <a href="#">Google news</a></li> <li>• <a href="#">Meltwater</a></li> <li>• <a href="#">CrowdTangle</a></li> <li>• <a href="#">Native platform searches</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Share of voice topic analysis to identify themes</a></li> <li>• <a href="#">Emerging topics</a></li> </ul>
	<a href="#">Meltwater</a>	Daily	<ul style="list-style-type: none"> <li>• <a href="#">Facebook, Twitter, Instagram</a></li> <li>• <a href="#">Blogs</a></li> <li>• <a href="#">News media</a></li> <li>• <a href="#">Online forums</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Share of voice topic analysis</a></li> <li>• <a href="#">Emerging theme topics</a></li> <li>• <a href="#">Identify high reach/velocity topics</a></li> </ul>
	<a href="#">OADC (Office of the Associate Director of Communication) Channel COVID-19 Post metrics</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">Sprout Social</a></li> <li>• <a href="#">Native OADC account analytics</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Analyze # of posts, topics</a></li> <li>• <a href="#">Success of messages, # of impressions, reach, # engagements</a></li> </ul>
	<a href="#">OADC Channel Comment Analysis</a>	Daily on weekdays	<ul style="list-style-type: none"> <li>• <a href="#">Native platform searches</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Sentiment analysis</a></li> <li>• <a href="#">Identify message gaps/voids</a></li> </ul>
<b>Direct Reports</b>	<a href="#">CDC-INFO Metrics</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">CDC-INFO inquiry line list</a></li> <li>• <a href="#">Prepared response (PR) usage report</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Cross-compare PR usage with inquiry theme analysis</a></li> <li>• <a href="#">Sentiment analysis</a></li> <li>• <a href="#">Identify information gaps/voids</a></li> </ul>
	<a href="#">VTF Media Requests</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">Media request line list</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Leading indicator for news coverage</a></li> <li>• <a href="#">Identify information gaps/voids</a></li> </ul>
	<a href="#">Web Metrics</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">Top pages</a></li> <li>• <a href="#">Google search queries</a></li> <li>• <a href="#">Top FAQs</a></li> <li>• <a href="#">Referring domains</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Identify information gaps/voids</a></li> <li>• <a href="#">Identify keywords/search terms, changes in web traffic</a></li> </ul>
<b>Research</b>	<a href="#">Poll Review</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">Harris Poll, PEW research, Gallup Poll, KFF</a></li> <li>• <a href="#">New data related to vaccine hesitancy</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Identify socio-behavior indicators related to motivation and intention to vaccinate</a></li> </ul>
	<a href="#">Literature Review</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">PubMed, LitCovid, ProQuest Central</a></li> <li>• <a href="#">Altmetric</a></li> <li>• <a href="#">New data related to vaccine hesitancy</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Identify current vaccination intention</a></li> <li>• <a href="#">Identify barriers to vaccination</a></li> </ul>
<b>Third Party Reports</b>	<a href="#">Tanaq Social Listening +Media Monitoring Report</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">Meltwater</a></li> <li>• <a href="#">Sprout Social</a></li> <li>• <a href="#">First Draft</a></li> <li>• <a href="#">Native platform searches</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Trending topics</a></li> <li>• <a href="#">Demographic and geographic conversation monitoring</a></li> </ul>
	<a href="#">CrowdTangle content insights report</a>	Biweekly	<ul style="list-style-type: none"> <li>• <a href="#">Facebook</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Top pages (voices), groups</a></li> <li>• <a href="#">General trends/sentiment analysis</a></li> <li>• <a href="#">News analysis through posts</a></li> </ul>
	<a href="#">First Draft News Vaccine Misinformation Insights Report</a>	Monthly	<ul style="list-style-type: none"> <li>• <a href="#">Proprietary methods</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Media trends analysis</a></li> <li>• <a href="#">Emerging threats and data deficits</a></li> <li>• <a href="#">Online vaccine narratives</a></li> </ul>
	<a href="#">Project VCTR</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">Proprietary methods</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">National and regional trends in negative attitudes toward vaccination</a></li> <li>• <a href="#">Conversations around Legislation</a></li> </ul>
	<a href="#">Virality Project</a>	Weekly	<ul style="list-style-type: none"> <li>• <a href="#">Proprietary methods</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Mis- and disinformation trends related to COVID-19 vaccine</a></li> </ul>