

# COVID-19 State of Vaccine Confidence Insights Report

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## Summary

**Findings.** Consumer and media interest in vaccination requirements increased significantly following President Biden's announcement of a COVID-19 action plan to boost vaccination rates on September 9, 2021. Some consumers and news outlets defended the announcement, highlighting that vaccination requirements are not new; some even wished the requirements applied to more people. Other consumers reacted negatively, telling others “#DoNotComply” and claiming that vaccination requirements are authoritarian, illegal, and an attack on their personal freedoms. Some consumers expressed confusion and frustration with the effectiveness of the vaccines to decrease the spread of COVID-19 and protect against severe COVID-19 symptoms. Some social media users and news releases continued to pose questions about the strength of natural immunity or promoted the idea that natural immunity is superior to vaccine-mediated immunity. Social media users expressed disappointment and belief that the United States has not, and will not, contain the COVID-19 outbreak.

**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 goal of these efforts is to increase confidence in COVID-19 vaccines and expand vaccine uptake. Clarify the parameters of the vaccination requirements and testing requirements for the President's COVID-19 action plan. Assist consumers and employers in determining whether the vaccination requirements apply to them, provide more information about getting exemptions and verifying vaccination, and enact weekly testing protocols. Consumers continued to inquire about the payment process after receiving a bill for vaccination or being asked for their insurance.



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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



### Some consumers sought clarity about vaccination requirements, while others planned to resist requirements.

Consumer and media interest in vaccination requirements increased following the September 9, 2021 announcement of President Biden’s COVID-19 action plan to boost vaccination rates.<sup>a,1,2</sup> Reports of states, jurisdictions, and employers’ discussing, planning and implementing vaccination requirements, including requirements for school-aged adolescents, drove interest in requirements.<sup>3,4,5</sup> Many consumers sought clarity about the announcement, questioning who must be vaccinated, especially how President Biden’s executive order to boost vaccination rates relates to federal employees and elected officials.<sup>6,7,8</sup>

Some consumers and news outlets defended the announcement, highlighting that vaccination requirements are not new,<sup>9,10</sup> some even wished the requirements applied to more people.<sup>11,12,13</sup> Additionally, some recent polls showed that support for vaccination requirements is rising, with the majority of consumers surveyed indicating they support these requirements.<sup>14,15,16</sup>

Other consumers reacted negatively, telling others “#DoNotComply” and claiming that vaccination requirements are authoritarian, illegal, and an attack on their personal freedoms.<sup>17,18,19,20,21</sup> Some state and jurisdictional political leaders challenged the President’s plan – questioning the legality of requirements, halting the implementation in some areas, and calling for consumers to not follow requirements,<sup>22,23,24,25,26</sup> despite assurances from some federal leaders that requirements are both “legal and appropriate.”<sup>27,28,29,30,31,32</sup>

Some politicians and consumers expressed concern that these requirements would lead to workers’ resignation or termination, further exacerbating the labor shortage.<sup>33,34,35,36,37,38</sup> This is alongside multiple reports of essential workers resisting requirements.<sup>39,40,41</sup>

In fact, in Florida, fines are now being levied against businesses with proof of vaccination requirements.<sup>42,43,44</sup> Questions of necessity for requirements by some consumers and politicians also arose, especially for people who are working remotely or who previously had a COVID-19 diagnosis.<sup>45,46,47,48</sup> While some consumers felt the required weekly testing was an acceptable alternative to the vaccination requirement,<sup>49</sup> others questioned the feasibility of such testing and perceived it as insufficient to prevent the spread of COVID-19.<sup>50,51,52</sup>

Consumers who are unvaccinated sought ways around the vaccination requirements. Consumers increasingly searched online for information and inquired about exemptions to requirements.<sup>a,b</sup> Religious exemptions were of particular interest,<sup>53,54</sup> with some groups even helping consumers navigate the exemption process.<sup>55</sup> However, reports surfaced across the country of employers denying exemption requests,<sup>56</sup> with some employers placing people on unpaid leave until the employee gets either an exemption or vaccinated.<sup>57</sup> Additionally, news reports increased about people using or selling fake COVID-19 vaccination cards.<sup>58,59,60,61,62</sup>

#### Ways to act:

- Clarify the parameters of the vaccination requirements and testing requirements for the President’s COVID-19 action plan.
- Assist consumers and employers in determining whether the vaccination requirements apply to them, provide more information about getting exemptions and verifying vaccination, and enact weekly testing protocols.
- Disseminate messages about the role of vaccination requirements for other vaccine-preventable diseases, including how they worked, how they have typically been used, and how they have helped reduce the burden of vaccine-preventable diseases.
- Partner with state, jurisdictional, and local health departments to support employers in promoting and adhering to vaccination requirements, including providing communication and outreach tools to increase vaccination confidence and access to vaccination.
- Document and share lessons learned from state and local efforts with vaccine verification systems that are in use.



<sup>a</sup>CDC-INFO

<sup>b</sup>Google Trends



## Consumers are confused, frustrated, and angry with the state of the pandemic and the country’s response to it.

Some consumers expressed confusion and frustration with the effectiveness of the vaccines to decrease the spread of COVID-19 and protect against severe COVID-19 symptoms.<sup>63,64,65,66,67,68,69</sup> Some social media users and vocal vaccine deniers used the perceived low COVID-19 vaccine effectiveness to question the need for vaccine requirements.<sup>70,71,72,73</sup>

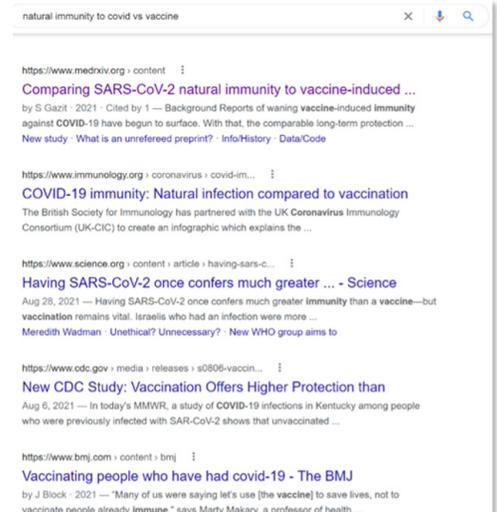
As news outlets and scientific publications continued to report on COVID-19 breakthrough cases, hospitalizations, and deaths,<sup>74,75,76</sup> some consumers expressed their belief that organizations are skewing the numbers to support vaccination.<sup>77,78,79</sup>

Some social media users and news releases continued to pose questions about the strength of natural immunity<sup>c,80,81,82,83,84,85</sup> or promoted the idea that natural immunity is superior to vaccine-mediated immunity.<sup>d,86,87,88,89,90,91,92,93</sup> An Israeli preprint study, which appears as the top result when searching Google with terms related to “natural immunity versus a vaccine,” drove some of this discussion.<sup>d,94,95,96,97,98</sup> Additionally, “natural immunity to covid vs vaccine immunity” appeared as rising search terms several times during this reporting period, mostly on YouTube.<sup>e</sup> More generally, from September 9 to September 15, searches of natural immunity on CDC.gov increased 59% compared to the previous week.<sup>f</sup> This may be related to the White House’s announcement about vaccine requirements.

Social media users expressed disappointment and belief that the United States has not, and will not, contain the COVID-19 outbreak.<sup>99,100,101,102,103,104</sup> Some social media users conveyed their annoyance with people who are not vaccinated because of their role in the continuation of the COVID-19 pandemic.<sup>105,106,107,108,109</sup> Other social media users and vocal vaccine deniers shared their frustration with the perceived low effectiveness of the COVID-19 vaccines and with vaccine requirements because of the belief that consumers who are vaccinated are spreading COVID-19.<sup>110,111,112</sup> A recent poll found that 68% of respondents believe the COVID-19 situation is getting worse, up from 45% of respondents surveyed in July. Most respondents expected the economic and societal disruptions tied to the pandemic to continue beyond the end of this year.<sup>113</sup> This sentiment might have been reinforced when news outlets reported that a director at the World Health Organization (WHO) said COVID-19 is “here to stay with us.”<sup>114,115</sup>

Consumers also reported reduced confidence in public health officials and COVID-19 vaccines. A recent poll found that 37% of U.S. adults believe public health officials falsified the safety of COVID-19 vaccines, up from 32% in early July, while 19% are not sure.<sup>116</sup> Another poll found that 44% of respondents who are unvaccinated reported their most important reason for not getting vaccinated is that they do not trust the vaccine.<sup>117</sup>

During this reporting period, consumers and news outlets increasingly talked about the B.1.621 variant (i.e., Mu variant). With WHO’s announcement that they are monitoring the Mu variant,<sup>118</sup> news outlets began reporting on the new variant.<sup>119,120,121,122,123,124</sup> From September 2 to September 8, “mu variant” was the top search term on CDC.gov.<sup>9</sup>



### Ways to act:

- Disseminate messages to build confidence that the country and the world will successfully manage the pandemic by highlighting what has been accomplished so far. However, consider reframing current messages that suggest community mitigation and vaccination will end the COVID-19 outbreak. Continue communicating what is known and not known about COVID-19 outbreak and mitigation tools.
- Engage trusted and new partners to disseminate and amplify these messages.
- Create messaging explaining the limitations of preprint studies as well as their beneficial role in the scientific process.

<sup>c</sup>CDC-INFO

<sup>d</sup>SEMrush

<sup>e</sup>Google Trends

<sup>f</sup>CDC website metrics

<sup>g</sup>SEMrush

## 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 earlier reports. For additional context and previous recommendations on these themes, see previous [Insights Reports](#).

**Brand Preferences.** News coverage and online conversations about the Moderna COVID-19 vaccine increased, mostly driven by reports of high efficacy against the Delta variant<sup>125,126,127</sup> and speculation on when it might receive full FDA approval.<sup>128,129</sup> Some consumers expressed a desire to receive the Moderna vaccine for a booster dose if it becomes available, even if they received a different brand for their primary series,<sup>130</sup> despite limited data available on Moderna boosters to promote their necessity.<sup>131,132,133,134</sup> Meanwhile, news outlets and some social media users discussed reports of deaths resulting from contaminated Moderna COVID-19 vaccines, leading to its recall in Japan.<sup>135,136,137,138</sup>

**Fertility.** Consumers continued to show concern about the potential impact of COVID-19 vaccines on reproductive health on social media.<sup>139,140,141,142</sup> Concerns about the effects of vaccination on male fertility specifically increased after claims by a celebrity grew widespread. Scientists and public health professionals quickly debunked the assertion.<sup>143,144,145,146,147</sup>

**Alternative treatments.** Ivermectin continued to dominate discussions on social media and misinformation outlets while consumers interested in the benefits of azithromycin on COVID-19 appeared to increase.<sup>148,149,150,151</sup> Advocates of natural cures continue to promote combinations of diet, exercise, vitamins, zinc, and other over-the-counter supplements as ways to both prevent and cure COVID-19.<sup>152,153,154,155,156</sup>

**Cost.** Consumers continued to inquire about the payment process after receiving a bill for vaccination or being asked for their insurance.<sup>h,157</sup> This has surprised and disheartened consumers because they understood vaccinations to be administered free of charge.

**Booster doses.** Consumers continued to discuss the necessity and timeline of the booster dose program in the United States,<sup>157,158,159,160,161,162</sup> with one recent poll finding that consumer who are vaccinated desire booster doses.<sup>163</sup> The resignation of two Food and Drug Administration officials caught media attention and indicated the politicization of the vaccine authorization and approval process for some consumers.<sup>164,165,166,167</sup>



<sup>h</sup>CDC-INFO

## Appendix: Inputs and Sources

Type	Input	Cadence	Sources	Tactics for Utilization
<b>Social Media Listening &amp; Media Monitoring</b>	Communication Surveillance Report	Daily on 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>
	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>
	Office of the Associate Director of Communication (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 on 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>
<b>Direct Reports</b>	CDC-INFO Metrics	Weekly	<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>
	Vaccine Task Force (VTF) Media Requests	Weekly	<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	<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	<ul style="list-style-type: none"> <li>Harris Poll, PEW research, Gallup Poll, KFF</li> <li>New data related to vaccine hesitancy</li> </ul>	<ul style="list-style-type: none"> <li>Identify socio-behavior indicators related to motivation and intention to vaccinate</li> </ul>
	Literature Review	Weekly	<ul style="list-style-type: none"> <li>PubMed, LitCovid, ProQuest Central</li> <li>New data related to vaccine hesitancy</li> </ul>	<ul style="list-style-type: none"> <li>Identify current vaccination intention</li> <li>Identify barriers to vaccination</li> </ul>
<b>Third Party Reports</b>	Tanaq Social Listening +Media Monitoring Report	Weekly	<ul style="list-style-type: none"> <li>Meltwater</li> <li>Sprout Social</li> <li>First Draft</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>
	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>
	First Draft News Vaccine Misinformation Insights Report	Monthly	<ul style="list-style-type: none"> <li>Proprietary methods</li> </ul>	<ul style="list-style-type: none"> <li>Media trends analysis</li> <li>Emerging threats and data deficits</li> <li>Online vaccine narratives</li> </ul>
	Project VCTR	Weekly	<ul style="list-style-type: none"> <li><a href="#">Proprietary methods</a></li> </ul>	<ul style="list-style-type: none"> <li>National and regional trends in negative attitudes toward vaccination</li> <li>Conversations around Legislation</li> </ul>
	Virality Project	Weekly	<ul style="list-style-type: none"> <li>Proprietary methods</li> </ul>	<ul style="list-style-type: none"> <li>Mis- and disinformation trends related to COVID-19 vaccine</li> </ul>