

# COVID-19 State of Vaccine Confidence Insights Report

Report 22 | February 2, 2022 | Date Range: December 21, 2021 – January 10, 2022



## Summary

**Findings.** The first major theme of this report is that consumers continue to express confusion and frustration regarding the updated guidance on the shortened duration for isolation and quarantine and when to receive the booster dose. The second major theme is that consumers continue to express frustrations over long wait times and difficulty getting tested amid the recent spike in COVID-19 cases. A third theme is that consumers have questions about the effectiveness and safety of COVID-19 vaccines for children. The final finding during this report is regarding consumers' concern about the vaccine's impact on menstrual cycles and fertility.

**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 mis/disinformation with evidence-based messaging. These efforts aim to increase confidence in COVID-19 vaccines and expand vaccine uptake more broadly. Efforts should be made to engage and collaborate with vaccine advocates and other trusted messengers to disseminate messages that explain the reasons for the updated guidance and how changing guidance is a normal process as more data is collected. Create and amplify messages that educate people on when they should get tested for COVID-19, the differences in the types of tests, and where they can access tests.

**SPECIAL UPDATE:** The following link contains social media resources such as graphics, language, and social media calendars our partners can use to address the issues raised in this report: <https://centersfordiseasecontrol.sharefile.com/d-sb2a4c1fd4bdb4b5d8d08c2bc04c93c04>



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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 COVID-19 State of Vaccine Confidence Insights Report emphasizes major themes influencing COVID-19 vaccine hesitancy and uptake. Themes 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.

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<sup>a</sup>



### Consumer expressed confusion and outrage regarding updated official guidance related to quarantining and receiving booster doses.

On December 23, the CDC announced that asymptomatic healthcare workers infected with the virus that causes COVID-19 could return to work after seven days with a negative test.<sup>1</sup> Additionally, healthcare workers who are up to date on their COVID-19 vaccines (i.e., have received all recommended COVID-19 vaccine doses, including a booster dose) do not need to quarantine following high-risk exposures. On December 27, the CDC shortened the recommended time for isolation from 10 days to 5 days for those infected with SARS-CoV-2 if asymptomatic, but required mask usage when around others and to avoid travel.<sup>2</sup> On January 4, CDC updated guidance on the recommended COVID-19 isolation period for individuals who are sick or test positive, telling people that if they have access to a COVID-19 test and want to take it, the best approach is to use a rapid test on the fifth day after they initially developed symptoms or tested positive. If they tested negative, then they could shorten their isolation period to 5 full days, if they wear a mask in public and avoid travel and people who are high-risk for 10 days.<sup>3</sup> Recommendations for quarantine after close contact to someone with COVID-19 differ based on a person's vaccination status and prior SARS-CoV-2 infection in the past 90 days.<sup>4</sup>

Many news outlets declared the new guidance as confusing<sup>5,6,7</sup> while others questioned why the guidance did not include a requirement to test negative for COVID-19 on day five.<sup>8,9</sup> The number of consumers seeking clarification on guidance greatly increased during this period.<sup>b,c,d</sup> The heightened frustrations around COVID-19 guidance may further undermine public trust in CDC and government leadership. This can potentially threaten vaccine confidence by increasing skepticism in response to public health messaging.<sup>10,11,12,13</sup> If sources for guidance are no longer viewed as trusted entities, the public may be less likely to follow recommendations for vaccines and booster doses.<sup>14</sup>



#### Perceptions, Concerns, and Threats to Vaccine Confidence

- Some consumers stated that guidance changes were made for economic benefit and as a response to staffing shortages rather than based on science.<sup>d,15,16,17,18</sup>
- Consumers expressed confusion about the guidelines and uncertainty about how they should react to acquiring, exposures to, and symptoms of COVID-19.<sup>b,d,19,20</sup>
- Some social media users stated their belief that changing the quarantine guidelines was to appease corporations, specifically the airline industry.<sup>21,22,23,24</sup>
- Consumers expressed concern that not including recommendations for a negative test in the updated guidance could lead to an increase of COVID-19 cases.<sup>25,26,27,28</sup>
- Many felt the new guidelines were unsafe for patients and healthcare workers.<sup>29,30,31</sup> Some people discussed the discrepancy between federal guidance and statements from other trusted organizations, such as nurses' associations<sup>32,33</sup> and the World Health Organization.<sup>34,35</sup>
- Skeptics interpreted changes in booster dose guidance as evidence that booster doses are ineffective<sup>36,37</sup> or an intentional manipulation designed to increase pharmaceutical profit.<sup>38,39,40,41</sup>

<sup>a</sup>Citations in this report are illustrative examples and are not the total number of instances of the corresponding themes.

<sup>b</sup>Google Trends

<sup>c</sup>SEMrush

<sup>d</sup>[CDC-INFO](https://www.cdc.gov/covid-19)

**Content Gaps and Information Voids**

- Are healthcare workers putting themselves and their patients at risk by reducing the length of quarantine?
  - CDC's recommendations follows the latest evidence to enhance healthcare worker and patient protection while also addressing adverse impacts of the surge in Omicron cases on healthcare systems.<sup>42</sup>
- What do you do if you test positive or have close contact with someone who tested positive for COVID-19?
  - CDC's quarantine guidance is located on the [CDC's Quarantine and Isolation webpage](#).
- If cases are rising, why is the quarantine guidance for a reduced amount of time?
  - CDC's quarantine guidance is based on the latest evidence to enhance healthcare worker and patient protection while also addressing adverse impacts of the surge in Omicron cases on healthcare systems.<sup>43,44</sup>
- Why is CDC not recommending a negative test to end the isolation period?
  - Tests for the virus that causes COVID-19 are best used early in the course of illness to diagnose COVID-19 and are not authorized by the U.S. Food and Drug Administration (FDA) to evaluate the duration of infectiousness.<sup>45</sup>
- If CDC is recommending a shorter period (from 6 months to 5 months after a primary series of mRNA COVID-19 vaccines, and from 2 months to 1 month after a primary dose of Janssen COVID-19 vaccine) between booster doses, does that mean the vaccine is not working?
  - COVID-19 vaccines work well to prevent severe illness, hospitalization, and death. However, public health experts noted a reduction in protection over time and particularly against newly emerging SARS-CoV-2 virus variants.<sup>46</sup>

**Misinformation Themes**

- CDC is making guidance decisions based on economic and political gain<sup>47,48,49,50</sup> and, as a result, is no longer a credible source of information.<sup>51,52,53,54</sup>
- Increased COVID-19 cases prove that quarantining, isolating, and booster doses are ineffective mitigation strategies.<sup>55,56,57</sup>
- CDC booster dose guidance directly contradicts the WHO's assertion that booster doses are ineffective.<sup>58,59,60,61</sup>

**Ways to Take Action**

- Create and disseminate messages that educate the public on the changes in the guidance for healthcare workers and fully vaccinated asymptomatic people.
- Engage and collaborate with vaccine advocates and other trusted messengers to disseminate messages that explain the reasons for the updated guidance and how changing guidance is a normal process as more data is collected.
- Continue to disseminate and amplify messages about the benefits and limitations of COVID-19 testing.
- Continue to disseminate information about the demonstrated benefits of booster doses in preventing severe illness and hospitalization from Delta and Omicron variants.

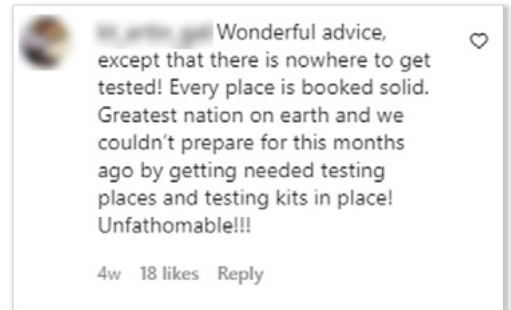


## Consumers express frustrations over long wait times and difficulty getting tested

There were reports of a national shortage of COVID-19 tests possibly driven by a combination of a surge in cases of the Omicron variant and increased demand for COVID-19 testing, including for holiday season travel.<sup>62,63,64</sup> The existing surge in demand for testing and delays in results could undermine trust in the government and public health institutions that authorize and distribute vaccines.<sup>65,66</sup> In addition, frustrations over test shortages,<sup>67,68</sup> the public's outrage at price gouging,<sup>69,70,71</sup> and conflicting updated guidelines<sup>72</sup> may weaken vaccine confidence as this could create the perception to some that the government and public health agencies are ineffective in addressing the COVID-19 pandemic.<sup>73,74</sup>

### Perceptions, Concerns, and Threats to Vaccine Confidence

- Online consumers expressed a lack of confidence in the government's ability to control the COVID-19 pandemic<sup>75,76,77,78</sup> and questioned the accuracy of reported COVID-19 cases.<sup>79</sup>
- Several online users questioned the reliability of rapid tests for the Omicron variant amid growing evidence that tests may provide false negative results.<sup>80,81,82,83</sup>
- There were concerns that the COVID-19 testing shortage negatively impacted people's ability to take sick leave after testing positive<sup>84,85,86</sup> or be prescribed alternative therapeutics.<sup>87</sup>
- Some social media users expressed fear that the long lines for COVID-19 testing increased exposure to the virus.<sup>88,89</sup>



### Content Gaps and Information Voids:

- Who should get tested for COVID-19?
  - Anyone with COVID-19 symptoms or who has been in close contact with someone with COVID-19 should be tested regardless of vaccination status.<sup>90,91</sup>
- How are rapid home COVID-19 tests different from PCR tests?
  - An in-depth explanation of the differences in tests for COVID-19 infection can be found on [CDC's COVID-19 Testing: What You Need to Know](#).
- Which COVID-19 test is better, viral or antibody tests?
  - Viral tests and antibody tests provide different types of information.
  - Viral tests tell you [if you have a SARS-CoV-2 infection](#) at the time of the test and use samples that come from the nose or mouth.
  - Antibody tests use blood samples and tell if someone had a prior infection.
  - Antibody testing is not currently recommended to determine.<sup>92</sup>
    - If you have a current infection.
    - If you have immunity to the virus following COVID-19 vaccination.
    - Whether you need to get vaccinated if you are not fully vaccinated.
    - Whether you need to quarantine after a known or suspected exposure to COVID-19.
- Where can I get an at-home COVID-19 test?
  - Call or visit a local pharmacy, healthcare provider, or public health department to see if they have available COVID-19 testing kits.<sup>93</sup> You can order four free at-home tests online at [COVIDTests.gov](#).

### Misinformation Themes

- The COVID-19 antigen tests were made to produce false-positive results to drive up case counts.<sup>94,95,96</sup>

### Ways to Take Action

- Partner with public health departments and non-profits to distribute free or affordable COVID-19 tests to the general public.
- Create and amplify messages that educate people on when they should get tested for COVID-19, the differences in the types of tests, and where they can access tests.



## Continuing and Emerging 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](#).



### Consumers continued to have concerns about the effectiveness and safety of COVID-19 vaccines for children.

Parents and caregivers continue to have questions about the COVID-19 vaccine for children, including safety, long-term side effects, and effectiveness. Web searches for “COVID vaccine side effects in children” rose by 150% during this reporting period. Although debunked, a viral video falsely claiming mRNA vaccines cause permanent damage to vital organs in children continues to be circulated online by vaccine opponents. Consumers spreading misinformation that children are not at risk for severe COVID-19 illness, despite increasing hospitalization rates,<sup>97</sup> is likely to adversely impact vaccine confidence. However, safety monitoring has identified an elevated risk for myocarditis after mRNA COVID-19 vaccination, particularly in males ages 12–29 years after the 2<sup>nd</sup> dose.<sup>98</sup> A more in-depth review of this theme is in a previous [State of Vaccine Confidence Insights’ Rapid Report – Announcement of Pediatric COVID-19 Vaccines for Children ages 5–11 years old](#).

#### Perceptions, Concerns, and Threats to Vaccine Confidence

- Social media users continue to cite concern for serious side effects and unknown long-term outcomes, like fertility and heart problems.<sup>99,100,101,102</sup>
- Many consumers suggest authorization for vaccines in children should wait until long-term studies have been completed.<sup>103,104</sup>
- Consumers continue to express the belief that children do not need to be vaccinated due to mild symptoms and lower risk of severe infections.<sup>105,106,107,108</sup>
- Studies show a rural-urban vaccination gap, with pediatricians in rural areas less likely than urban pediatricians to recommend COVID-19 vaccinations for children.<sup>109</sup>

#### Content Gaps and Information Voids

- When will vaccines for children under 5 years be authorized or approved?
  - The U.S. currently does not have an FDA-authorized or approved COVID-19 vaccine available for populations younger than 5 years old. Some sources indicate a COVID-19 vaccine for use in children younger than 5 years old may be available within the next few months.<sup>110</sup>
- Is Omicron causing more severe illness in children compared to other strains?
  - Evidence from a recent MMWR indicates that for children 17 years and younger, “hospital severity indicators, including length of stay and ICU admission, were similar to and lower, respectively, during the Omicron period compared with those during previous high-transmission periods.”<sup>111</sup> However, more data are needed to know if Omicron infections cause more severe illness or death than infection with other variants.<sup>112</sup>
- How do parents and caregivers distinguish between typical vaccine site injection reactions and serious side effects or adverse reactions?
  - CDC has an online resource that details common side effects and provides information as to when a parent should seek medical care for adverse reactions after vaccination.<sup>113</sup>
- What should a healthcare professional do if the wrong dose of the COVID-19 vaccine was administered to a child?
  - Providers, patients, and parents should report vaccine administration errors to the Vaccine Adverse Events Reporting System. To know what to do regarding the need for revaccination, providers should refer to the COVID-19 Vaccine Administration Errors Revaccination Guidance.

#### Misinformation Themes

- COVID-19 vaccines are killing, permanently damaging, or disabling children.
- COVID-19 vaccines are still experimental, and pharmaceutical companies will not release the final safety data for several decades.
- The risk of adverse events from COVID-19 vaccination are more severe than the potential impact of COVID-19 illness.

**Ways to Take Action**

- Utilize and promote motivators to vaccinate children, such as protection of family members not yet eligible for vaccines and the ability to continue in-person school learning and activities.
- Develop and disseminate messages about the potential risk of severe COVID-19 illness in children and how vaccination can help reduce that risk.
- Develop plain language messages using findings from these two recent MMWR reports to educate people on the safety of the vaccine for children and the risk of severe COVID-19 illness in children:
  - [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](#)
  - [COVID-19 Vaccine Safety in Adolescents Aged 12–17 Years — United States, December 14, 2020–July 16, 2021](#)



## Consumers expressed concern about the vaccines' impact on menstrual cycles and fertility

The release of a study analyzing the association between menstrual cycle length and COVID-19 vaccination<sup>114</sup> renewed discussions about the impact of COVID-19 vaccination on reproductive systems and fertility. Similarly, online conversations surrounding the association between COVID-19 vaccination and menstruation increased by more than 300% during the current reporting time frame.<sup>e</sup> Inconsistent and confusing messaging surrounding the impact of COVID-19 vaccines on functions of reproductive systems may adversely affect vaccine confidence.

### Perceptions, Concerns, and Threats to Vaccine Confidence

- News outlets<sup>115,116</sup> and online consumers discussed<sup>117,118</sup> the findings of a recent study that indicated there were very limited, short term changes in menstrual cycle length or timing (less than one day) associated with COVID-19 vaccination.<sup>119</sup>
- Consumers expressed apprehension about the safety of the COVID-19 vaccines for women of all reproductive age and pregnant people including, but not limited to, irregular menstrual cycles,<sup>120</sup> spontaneous abortion,<sup>121</sup> and unknown long-term side effects.<sup>122</sup>
- Some consumers believe vaccines also impact other reproductive system functions besides the menstrual cycle.<sup>123</sup>

### Content Gaps and Information Voids

- Are COVID-19 vaccines safe for those already pregnant or thinking about becoming pregnant?
  - COVID-19 vaccination is recommended for people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future, as well as their partners.<sup>124,125</sup>
- Is there safety monitoring for children exposed to the COVID-19 vaccine in utero?
  - CDC and FDA continue to monitor COVID-19 vaccines and other vaccines for safety when given during pregnancy.<sup>126,127</sup>
    - Early data from three [safety monitoring systems](#) did not find any safety concerns for people who received an mRNA COVID-19 vaccine late in pregnancy or for their babies.<sup>128,129</sup>
    - Scientists have not found an increased risk for miscarriage among people who received an mRNA COVID-19 vaccine just before and during early pregnancy (before 20 weeks of pregnancy).<sup>130,131,132</sup>
    - The monitoring of COVID-19 vaccination during pregnancy is ongoing. CDC will continue to follow people vaccinated during all trimesters of pregnancy to better understand effects on pregnancy and babies.<sup>133</sup>

### Misinformation Themes

- Consumers are reporting severe adverse events into VAERs (e.g., spontaneous abortion,<sup>134</sup> changes in the quality and quantity of menstrual bleeding),<sup>135</sup> however, the CDC is ignoring these adverse events.<sup>136</sup>
- If COVID-19 vaccines impact menstrual cycles, then vaccines also negatively impact other aspects of reproductive systems, including the health of fetuses.<sup>137</sup>

### Ways to Take Action

- Given the high rate of unintended pregnancies and circulating misinformation related to fertility, tailor messages to the broader population of women of reproductive age, and partner with health care providers (e.g., midwives, OBGYNs) and pregnancy or pregnant influencers to disseminate these messages.
- Partner with websites and organizations that host fertility- or pregnancy-related support groups or discussion boards to identify and address information gaps.
- Disseminate messages through trusted messengers related to the following topics:<sup>138</sup>
  - That no safety concerns have been identified for people who received an mRNA COVID-19 vaccine late in pregnancy or for their babies.
  - There is not an increased risk of miscarriages.
  - CDC continues to monitor the safety of COVID-19 vaccinations in pregnancy.
- Continue to disseminate messages about the risks of COVID-19 in pregnancy for both the pregnant person and the fetus/infant that the vaccines are effective and protect the mom and baby against harm.

<sup>e</sup>Meltwater



## Appendix 1: 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>
	OADC (Office of the Associate Director of Communication) 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>
	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, Altmetric</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>