Summary

Findings. The Delta variant continues to drive concerns about the effectiveness of current COVID-19 vaccines. While consumers who are vaccinated expressed concern about their levels of protection, consumers who have refused vaccination and vocal vaccine deniers exploited these concerns to amplify claims that the benefits of vaccination are diminishing. Some consumers felt that their personal rights were being restricted after hearing reports of employers leveraging vaccination mandates or new vaccination requirements being implemented across the country for people going to events or restaurants. Online searches for information about how to acquire exemptions from such requirements and restrictions were on the rise, with medical freedom groups on social media amplifying information about how to navigate exemptions.

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 more broadly. Partners should disseminate messages that leverage available safety and effectiveness data, especially in relation to misinformation and the Delta variant. They should also partner with trusted messengers and healthcare personnel to further amplify these messages. Partners should ensure they are providing ample access to vaccines and taking previously recommended steps to build vaccine confidence before enacting organizational requirements.

Booster Doses. News media coverage and social media conversations about the potential for booster doses was a dominant theme for this report period. Following the White House press briefing on August 18, 2021, announcing an mRNA COVID-19 vaccine booster dose program for adults 18 years and older, a rapid insights report was conducted. Many of the themes, content gaps, and mis- and disinformation identified during this reporting period are reflected in the rapid report. The report is available here.
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

<table>
<thead>
<tr>
<th>High risk</th>
<th>Moderate risk</th>
<th>Low risk</th>
<th>Positive sentiment</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="High risk icon" /></td>
<td><img src="image" alt="Moderate risk icon" /></td>
<td><img src="image" alt="Low risk icon" /></td>
<td><img src="image" alt="Positive sentiment icon" /></td>
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</tbody>
</table>
| ▪ May lead to vaccine refusals and decreased uptake  
▪ Wide reach, pervasive | ▪ Potential to trigger hesitancy to vaccination  
▪ Moderate reach, modest dissemination | ▪ Concerning, but low risk to vaccine confidence  
▪ Limited reach, limited dissemination | ▪ Could increase vaccine confidence, intent, or motivation  
▪ Variable reach and dissemination |

### How has this theme/idea changed over time (since last report or over the course of multiple reports)?

<table>
<thead>
<tr>
<th>Increasing</th>
<th>Stable</th>
<th>Decreasing</th>
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<tbody>
<tr>
<td><img src="image" alt="Increasing icon" /></td>
<td><img src="image" alt="Stable icon" /></td>
<td><img src="image" alt="Decreasing icon" /></td>
</tr>
<tr>
<td>Information spreading rapidly</td>
<td>Information remaining constant at prior level</td>
<td>Information is not gaining further traction and there has been no indication of additional activity</td>
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</tbody>
</table>
Major Themes

Consumers expressed concern over the effectiveness of COVID-19 vaccines in reducing the spread of the Delta variant.

While news media outlets increased their coverage of hospitals approaching or reaching capacity in their intensive care units (ICU) due to COVID-19 caused by the Delta variant, a majority of consumers who are unvaccinated (57%) believed the seriousness of coronavirus in the news was being “exaggerated” according to one recent survey. At the same time, the survey also found that almost one-quarter of vaccinated consumers (24%) felt that news media coverage of the seriousness of COVID-19 was being underestimated.1

Even as vaccine uptake increased across the country, consumers expressed concerns about the effectiveness of vaccines due to increasing reports of breakthrough cases and new research indicating that people who are vaccinated and sick with COVID-19 caused by the Delta variant are similarly contagious to someone who is unvaccinated. In light of this new data, some vocal vaccine deniers and unvaccinated consumers expressed frustration with being blamed for the spread of the Delta variant, as vaccinated consumers increasingly expressed their frustration with people who are unvaccinated and people who deny the severity of the COVID-19 pandemic. These new findings about people who are vaccinated being able to spread COVID-19 caused some consumers who are unvaccinated and vocal vaccine deniers to further amplify misinformation claims that vaccines are not effective. Additional misinformation also spread in an attempt to further discredit vaccines including claims that:

- Vaccines are the reason behind the emergence of variants.
- The surge of COVID-19 caused by the Delta variant is being driven by people with undocumented status entering the United States.
- People who are vaccinated are more at risk for getting sick than people who are unvaccinated, citing breakthrough cases as evidence.

News coverage about Lambda variant and the potential for future variants to evade available vaccines also continued at low levels throughout the reporting period but have not yet appeared to be a cause for concern among consumers in the United States.

Ways to act:

- Disseminate messages about what vaccine effectiveness means, the benefits of vaccination, and that the best way to protect yourself from severe illness, hospitalization, and death from COVID-19 is by getting vaccinated.
- Amplify stories from healthcare personnel about the severity of illness caused by the Delta variant. Remind consumers that it is not too late to begin a primary series of vaccination. Also remind people about the benefits of vaccination.
- Identify partners and organizations in local regions that are experiencing high transmission. Ask them to participate in localized, focused outreach efforts to ensure consumers understand the benefits of vaccination, where to access vaccines, and who to talk to if they have questions or want to discuss vaccination further.
Some consumers expressed concern that vaccine mandates by employers, the government, restaurants, and entertainment venues would limit their freedoms.

Consumers on social media increasingly claimed that COVID-19 vaccine mandates would violate their right to make their own decisions about their medical care and their bodies.33,34 Some social media users discussed how vaccine mandates would impede people’s freedom more generally.35,36,37 Others even adopted the pro-choice slogan, “my body, my choice,” to express these concerns and amplify their message.38,39,40 Individuals continue to state that being asked about their vaccination status violates their rights under HIPPA, despite this being untrue.31,44 Social media users are confused about the purpose of the vaccine mandate and the effectiveness of the vaccine due to reports of breakthrough infections.43,44,45 Consumers have also increasingly searched online for information about specific vaccine mandates, such as vaccine mandates at healthcare providers and within the military.3,5

Political figures also amplified and politicized vaccine mandate concerns by using the repeal or enactment of vaccine mandates in critiques of political rivals46,47,48 and as a part of inter-party criticism.49,50 Some of the political figures used the topic of vaccine mandates to amplify misinformation such as “COVID-19 is not a deadly disease,”51 or “the vaccines cannot be trusted because they are an experimental treatment.”52 Polarization across party lines has also been seen among consumers according to recent polls,53,54,55 which indicated that one’s party greatly influences their stance on vaccine mandates. When asked about vaccine mandates more broadly, another poll found that 75% of Democrats believe the federal government should recommend employers implement a vaccine mandate, while 67% of Republicans say the federal government should not do this.57

At the same time, online searches of medical exemptions, religious objections, fake vaccine cards, and COVID-19 vaccine exemption forms were on the rise.5 Vaccine exemption forms and statement templates are being shared on websites advocating for medical freedom.58 In addition to the websites, social media groups advocating against mandates educated their followers on the vaccine exemptions and employee rights regarding vaccine mandates. They also advocated to use this information to slow vaccine uptake.59,60,61

Finally, people are also reporting losing their vaccination cards6,62,63,64,65 and they are looking for directions on how to get a new one or prove their vaccination status without the vaccination card. Some social media users said they needed to prove vaccination status to enter certain locations66,67,68 while others said they needed it because they are going to get their second dose and want proof of their first dose.69,70

Ways to act:

- Disseminate messages such as the following: “if enough people get vaccinated, we can return closer to pre-pandemic life.” Couple these messages with information about the effectiveness and long-term safety of the COVID-19 vaccine and other vaccines.
- Disseminate messages that amplify the health and financial consequences of not getting vaccinated, such as increased risk of negative health outcomes from COVID-19, increased health insurance premiums, and requirements for frequent COVID-19 testing from employers.
- Engage with partners that are not publicly associated with a political party. Ask them to share messages about the effectiveness and safety of vaccines and the benefits of vaccination. This is especially important as schools re-open, employees return to work, and many facilities return to pre-pandemic capacity.
- Engage partners and influencers to create and amplify messages about the role of vaccination coverage in providing population-level protection and reducing the spread of COVID-19 broadly, especially when following other mitigation measures.
- Ensure that partners are providing ample access to vaccines and taking previously recommended steps71 to build vaccine confidence and offering convenient workplace vaccination. Ensure that considerations such as paid sick leave and supervisor education regarding requirements are part of any roll-out plans for vaccine requirements.
- Provide guidance to individuals about what to do if they lose their vaccination card.

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Google Trends
SEMrush
Google Trends
CDC-INFO
Emerging Themes

**Parents expressed concern, confusion, and frustration as children return to school.**

With K-12 schools and institutions of higher education either already in session or about to open, the safety and well-being of students, faculty, and staff—as well as of their families and communities—once again is the subject of debate. This debate threatens to harden the views of consumers who are unvaccinated and erode vaccine confidence generally. While some parents continue to favor reopening K-12 schools in person and at capacity, parental views regarding appropriate mitigation strategies and mask or vaccine mandates track with political affiliation and vaccination status. Anxious parents of young children are impatient that COVID-19 vaccines are not yet authorized for children younger than 12 years old. They are also slightly more likely to favor school mask requirements than those whose children are eligible to be vaccinated.

Vocal vaccine deniers continued to amplify misinformation on social media about supposed dangers that masking and vaccination pose for children. This is fueling conflict between COVID-19 skeptics and parents and school administrators who support masks, vaccination, and other mitigation strategies. Clashes over masks in schools suggest that vaccination mandates, especially for younger children, will be difficult to implement, especially given that some politicians, faith leaders, and school administrators are already coaching skeptical parents on how to circumvent mask and vaccine requirements.

**Ways to act:**

- Develop and disseminate messages about the risk of COVID-19 for children. Highlight the increasing case numbers among children and the increasing number of children hospitalized with severe COVID-19. Remind consumers about the role that children play in spreading the virus.
- Continue to amplify messages that vaccination for children 12 years and older is the best way to protect them from illness, clarifying that the risk for severe COVID-19 or complication caused by illness is higher than the risk of an adverse event from vaccination.
- Partner with school administrators and support them to promote messages about the benefits of vaccination or connect them to other trusted messengers. Also, help them promote mitigation measures for children, parents, school staff, and the broader community. Remind them to connect unvaccinated staff and families to vaccination information and events.
Consumers expressed frustration and confusion about updated guidance for fully vaccinated individuals.

CDC’s update to the Interim Public Health Recommendations for Fully Vaccinated People generated confusion and exasperation among many consumers.\(^{88,89,90}\) Initial confusion about the updated guidance—particularly around when and where indoor masking for vaccinated individuals would be required—drove social media users to express frustration both with the updated guidance and with unvaccinated consumers. Many people saw consumers who are unvaccinated as responsible for the Delta surge and associated return of restrictions.\(^{91,92,93}\)

The reimposition of mitigation strategies that equally affected people who are vaccinated and unvaccinated was amplified on both news media and social media.\(^{94,95,96,97}\) This, in turn, spawned opinion pieces chiding the frustrated for their pettiness and warning that openly shaming people who are unvaccinated could depress vaccine acceptance by driving some in the “moveable middle” into outright vaccine refusal.\(^{98,99,100}\)

Renewed political and social clashes over mitigation measures could have further undermined vaccine confidence. Mask skeptics and vocal vaccine deniers seized upon the uncertainties that inform CDC’s updated guidance to disparage vaccines, sow doubt about the efficacy of vaccination, and create suspicion about the motives of public and private entities advocating vaccination.\(^{101,102,103}\)

Ways to act:

- Disseminate messages that provide clarity around guidance for people who are fully vaccinated. Remind people that both being vaccinated and wearing masks in public places can help protect people who are too young to be vaccinated, unable to be vaccinated, or at high risk for serious illness.
- Continue to amplify messages that asymptomatic or mild breakthrough cases of COVID-19 are expected and are a normal occurrence with many vaccines, such as influenza vaccination. Reassure consumers that even high numbers of breakthrough infections align with projected vaccine effectiveness and that breakthrough cases are likely much less severe than they would have been had the person not been vaccinated.
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.

**Fertility and reproductive health concerns.** Consumers continued to express concern that the COVID-19 vaccine will harm their reproductive health and fertility. The concerns persisted despite the American College of Obstetrics and Gynecology and the Society for Maternal-Fetal Medicine recommending that pregnant and breastfeeding persons be vaccinated. Multiple news outlets continued debunking misinformation that vaccines cause infertility or negative reproductive outcomes. Despite this, concerns persisted.

**Natural immunity.** Some consumers and political leaders continued to express frustration that recommendations for vaccinations and guidance for people who are fully vaccinated didn't include information about natural immunity. Vocal vaccine deniers also promoted unsubstantiated claims that natural immunity provides superior protection compared to vaccines, despite the new data CDC shared indicating that vaccination may provide more protection.

**New ways to act:**
- Disseminate messages about risk of reinfection and the benefits of vaccination specifically for those who have previously had COVID-19.
- Partner with healthcare providers to proactively have conversations with previously infected patients about the benefits of vaccination.

**Ivermectin.** Despite a variety of health authorities, public figures, and news outlets debunking, some social media users, politicians, celebrities, and websites continue to spread the false claim that Ivermectin is a safe and effective treatment for COVID-19 and claim that its benefits are being suppressed. These claims persist despite news articles reporting an increase in calls to Poison Control Centers related to Ivermectin.

**New ways to act:**
- Continue to amplify messages about the role of vaccination and proven treatments together being necessary to manage the COVID-19 pandemic.
- Disseminate messages about what is known about the safety and side effects of Ivermectin. Remind people to discuss any medication with a doctor before taking it to protect against potential adverse reactions. Additionally, amplify available information about authorized and approved treatments that have been proven effective in treating COVID-19.

**Polyethylene glycol.** Vocal vaccine deniers highlighted vaccine ingredient polyethylene glycol claiming that this ingredient was linked to anaphylactic shock and could be leveraged to avoid vaccination or gain an official exemption. Consumers increasingly searched online and called CDC-INFO to learn more about polyethylene glycol and the potential for an allergic reaction.

**New ways to act:**
- Continue to amplify messages about the safety of the ingredients of COVID-19 vaccines. Highlight where one can access information about vaccine ingredients. If possible, specifically address concerns about polyethylene glycol.
- Continue to disseminate messages about the safety of COVID-19 vaccination, highlighting that allergic reactions are rare and that people who are concerned should talk to their healthcare provider.

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* CDC-Info
* CDC-INFO
* GoogleTrends
### Appendix: Inputs and Sources

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<thead>
<tr>
<th>Type</th>
<th>Input</th>
<th>Cadence</th>
<th>Sources</th>
<th>Tactics for Utilization</th>
</tr>
</thead>
</table>
| Social Media Listening & Media Monitoring | Communication Surveillance Report                                      | Daily on weekdays               | • Google news  
• Meltwater  
• CrowdTangle  
• Native platform searches                                                                 | • Share of voice topic analysis to identify themes  
• Emerging topics                                                                        |
|                               | Meltwater                                                            | Daily                           | • Facebook, Twitter, Instagram  
• Blogs  
• News media  
• Online forums                                                                 | • Share of voice topic analysis  
• Emerging theme topics  
• Identify high reach/velocity topics                                                   |
|                               | OADC Channel Comment Analysis                                       | Daily on weekdays               | • Native platform searches                                                                       | • Sentiment analysis  
• Identify message gaps/voids                                                            |
| Direct Reports                | CDC-INFO Metrics                                                    | Weekly                          | • CDC-INFO inquiry line list  
• Prepared response (PR) usage report                                                      | • Cross-compare PR usage with inquiry theme analysis  
• Sentiment analysis  
• Identify information gaps/voids                                                        |
|                               | VTF Media Requests                                                  | Weekly                          | • Media request line list                                                                       | • Leading indicator for news coverage  
• Identify information gaps/voids                                                        |
|                               | Web Metrics                                                         | Weekly                          | • Top pages  
• Google search queries  
• Top FAQs  
• Referring domains                                                                   | • Identify information gaps/voids  
• Identify keywords/search terms, changes in web traffic                                 |
| Research                      | Poll Review                                                         | Weekly                          | • Harris Poll, PEW research, Gallup Poll, KFF  
• New data related to vaccine hesitancy                                                  | • Identify socio-behavior indicators related to motivation and intention to vaccinate |
|                               | Literature Review                                                   | Weekly                          | • PubMed, LitCovid, ProQuest Central  
• New data related to vaccine hesitancy                                                  | • Identify current vaccination intention  
• Identify barriers to vaccination                                                       |
| Third Party Reports           | Tanaq Social Listening +Media Monitoring Report                     | Weekly                          | • Meltwater  
• Sprout Social  
• First Draft  
• Native platform searches                                                               | • Trending topics  
• Demographic and geographic conversation monitoring                                       |
|                               | CrowdTangle content insights report                                 | Biweekly                         | • Facebook                                                                                       | • Top pages (voices), groups  
• General trends/sentiment analysis  
• News analysis through posts                                                           |
|                               | First Draft News Vaccine Misinformation Insights Report              | Monthly                         | • Proprietary methods                                                                           | • Media trends analysis  
• Emerging threats and data deficits  
• Online vaccine narratives                                                             |
|                               | Project VCTR                                                        | Weekly                          | * Proprietary methods                                                                          | * National and regional trends in negative attitudes toward vaccination  
• Conversations around Legislation                                                       |