Summary

Findings. CDC’s recent announcements of expanded guidance for fully vaccinated people was met with confusion in the news media and among consumers online. Unanswered questions about the implications of new guidance may undermine trust in COVID-19 vaccines and the U.S. vaccination system. To confront lagging vaccination rates, states and jurisdictions are employing novel tactics to reduce remaining access barriers and add incentives to reward vaccination. The overall effect of these novel tactics on vaccine uptake for unvaccinated adolescents and adults is still unknown. Online discussion of incentives is polarized, with some people welcoming the developments and others feeling suspicious of them which could be a threat to vaccine confidence for some. Lastly, consumers are receiving bills for COVID-19 vaccination, even though COVID-19 vaccines are free and are offered regardless of insurance or immigration status.

Ways to take action. Federal, state, and local partners should continue to work together to increase transparency around 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. Communication efforts should be expanded to address concerns and questions about vaccine effectiveness and guidance for fully vaccinated individuals. Additional research could provide a better understanding of the role that incentives play in a person’s motivation and intent to get vaccinated.
Aims and Methods

By rapidly reviewing and analyzing numerous sources and inputs (see Appendix), the biweekly COVID-19 State of Vaccine Confidence Insights Report emphasizes major themes that influence COVID-19 vaccine hesitancy and uptake. This is categorized by their level and type of threat to vaccine confidence, degree of spread, and directionality. By examining how consumers think and feel, social processes, and the practical issues around vaccination, the Insights Report seeks to identify emerging issues of misinformation, disinformation, and places where intervention efforts can positively impact vaccine confidence across the United States.

The information in this report is only a snapshot, and certain populations may be underrepresented. Images and quotes are illustrative examples and are not meant to be comprehensive of all content related to the highlighted themes.

Theme Classification

<table>
<thead>
<tr>
<th>High risk</th>
<th>Moderate risk</th>
<th>Low risk</th>
<th>Positive sentiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>- May lead to vaccine refusals and decreased uptake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Wide reach, pervasive</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Potential to trigger hesitancy to vaccinate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Moderate reach, modest dissemination</td>
<td></td>
<td></td>
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<tr>
<td>- Concerning, but low risk to vaccine confidence</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Limited reach, limited dissemination</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Could increase vaccine confidence, intent, or motivation</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Variable reach and dissemination</td>
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<td></td>
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</tbody>
</table>

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>
</tr>
</thead>
<tbody>
<tr>
<td>Information spreading rapidly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information remaining constant at prior level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information is not gaining further traction and there has been no indication of additional activity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Major Themes**

**Consumers are confused about guidance for fully vaccinated people, which may undermine trust in COVID-19 vaccines and the U.S. vaccination system.**

CDC’s announcement of expanded guidance for fully vaccinated people on April 27, 2021 - which stated that fully vaccinated individuals could stop wearing masks in many outdoor situations - was met with mixed reception in the news media and among some consumers online. While some consumers were happy to see this updated guidance for outdoor mask-wearing, others noted that the guidance could further divide people based on vaccination status. One study, administered prior to any guidance changes, found that removing mask recommendations for vaccinated consumers may increase reluctant consumers’ intent to vaccinate. However, several comments on social media from self-reported unvaccinated people indicated they were unmoved by the guidance, commenting that they had already stopped wearing masks and had returned to pre-pandemic life. Further, consumers speculated online that the April 27, 2021 expanded guidance was only put into place because it reflected typical behavior and was not created as a result of new scientific information, which could lead to growing distrust in government agencies. Some consumers also felt the guidance excluded those who previously had COVID-19. Inquiries to CDC-INFO and comments on CDC social media channels largely echoed this confusion. The majority of inquiries focused on what to do if their household had both vaccinated adults and unvaccinated children, what to do about gatherings between unvaccinated and vaccinated people, and how consumers would know who was and wasn’t fully vaccinated.

News coverage criticizing the above guidance increased with many articles pointing to a lack of information from CDC about the science behind the change and mixed messages from federal, state, and local leaders about masking and the role vaccines play in ending the pandemic. Some public health experts spoke out online, stating that the guidance would decrease confidence in vaccines. They expressed concern that the recommendation for fully vaccinated people to continue wearing masks in certain indoor situations could send the message to consumers that the vaccines are not effective at preventing both illness and the spread of the virus. Some consumers confirmed this sentiment, saying that this corroborated their suspicions that vaccines are not effective.

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If that trust is not there, people won’t agree “to change their lives, take preventive [measures], take vaccines.”

-Dr. Robert Blendon, emeritus professor at the Harvard Chan School

Source: [https://www.npr.org/2021/05/13/996331692/poll-finds-public-health-has-a-trust-problem](https://www.npr.org/2021/05/13/996331692/poll-finds-public-health-has-a-trust-problem)

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On May 13, 2021, CDC announced further expansion of the guidance for fully vaccinated people. This guidance states that they can resume activities they did prior to the pandemic - both indoors and outdoors - without wearing a mask or physically distancing, except where required. News media outlets focused coverage on the challenges of verifying vaccination, as well as concerns about unvaccinated people forgoing masks with requirements lifted. Media outlets also raised questions about how these new guidelines might impact young children, people who are immunocompromised, and those who have been unable to be vaccinated due to access barriers, especially among communities that have been disproportionately affected by COVID-19 such as communities of color. Public health and medical experts also expressed concern that this change was made too soon and the subsequent removal of mask mandates by state and local leaders and businesses may disincentivize vaccination. The dominant online conversation among consumers suggested social divide over the decision, with many vocal vaccine deniers indicating that this change in guidance would not change their intent to get vaccinated.
However, a recent study reported that one-third of conservative-leaning consumers would be more likely to get vaccinated if they were no longer required to wear a mask. Some vaccine endorsers echoed public health and medical expert concerns that this decision was made too soon and expressed concern for children and people with immunocompromising conditions through comments online and through inquiries to CDC-INFO. Several questions emerged from consumers, including:

- How long am I protected by the COVID-19 vaccine? When will I have to wear a mask again?
- How should households with young children or immunocompromised people proceed – should children still wear masks indoors and outdoors?
- What if I already had COVID-19, can I follow these updated mask guidelines without being vaccinated?
- How much protection do the vaccines provide against variants? Should I worry about COVID-19 variants indoors without a mask?
- How can I protect my employees and clients? How should businesses respond to these new guidelines?

Ways to act.

- Expand and disseminate messages regarding the scientific process by which CDC develops guidance, to prevent the spread of mis- and disinformation. Additionally, since the messaging needs of consumers are diverse, consider expanding communication materials that are easy to understand for those with limited English proficiency. Also expand content containing easy-to-understand data that are more scientifically sophisticated; some consumers indicate that plain language content does not provide enough information for them to make an informed decision about vaccination.
- Expand and disseminate messages about the effectiveness of COVID-19 vaccines, specifically explaining what is and is not known about the asymptomatic spread by vaccinated people, cases of illness among fully vaccinated individuals, and what is known about the effectiveness of current vaccines against common variants in the United States.
- Expand and disseminate messages about natural immunity, including information about what is known about length of immunity after COVID-19 illness.
- Expand and disseminate messages about mitigation and safety measures needed for those who have not or are not able to be fully vaccinated, such as young children and people with specific medical conditions.
- Support research to better understand the connection between policy and guidance changes and their effects on vaccine confidence and uptake.
States and jurisdictions are employing novel tactics to increase vaccine uptake, although impact on uptake and confidence is still unknown.

States and jurisdictions continue to turn away shipments of COVID-19 vaccines, as the daily average of vaccine doses administered across the United States fell below two million for the first time since early March on May 3, 2021. In an effort to confront lagging vaccination rates and oversupply, states and jurisdictions, federal government, and private businesses have shifted strategies to facilitate, reduce remaining access barriers to, and add incentives to reward vaccination. States and jurisdictions are offering smaller vaccination settings like clinics with walk-in access, providing free transportation, and equipping family doctors in private offices with vaccines. Health departments are converting bars to COVID-19 vaccination sites and offering vaccines at festivals and on beaches. Some states are also offering incentives like alcohol, money to be distributed by lottery, and even sleeping tents and food for people experiencing homelessness. In response to these new tactics, some consumers indicated on social media that they hoped such rewards would spur more people to get vaccinated, while others perceived the incentives to be suspicious and wondered why such large-scale incentives are necessary.

News media coverage suggests that providers are trusted vaccinators, and that familiar and trusted vaccination sites matter. But the impact of other tactics that incentivize behavior are not well-understood. Some polling data support the idea that monetary rewards for vaccination may be a motivating incentive among unvaccinated consumers, but other survey data indicate that financial incentives may have uneven or small positive effects on desired health behavior outcomes. Consumers’ reasons for not getting vaccinated remain mostly unchanged – among those who are unvaccinated, they express distrust in vaccine safety data, are worried about short- and long-term vaccine side effects, and are not certain that COVID-19 is a serious illness. If the main barrier to vaccination is mistrust, it is unknown if the novel tactics will push those who are hesitant towards vaccination.

Ways to act.

- Identify emerging best practices to eliminate barriers in accessing vaccination and promote effective innovations broadly to states and jurisdictions. Conduct rapid community assessments to understand remaining vaccination barriers and ensure that added conveniences, incentives, rewards, and compensation correspond to noted community needs.
- Support research to better understand the effect of incentives and rewards on the intent to vaccinate among consumers who are in the “wait and see” group before getting vaccinated. Examine how incentives and rewards might influence vaccine confidence, especially for those groups who are unvaccinated because they lack trust in the vaccine, vaccinators, or the health vaccination system more broadly.

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Emerging Theme

Consumers are receiving bills for COVID-19 vaccination.

Reports have emerged in the news media of consumers receiving bills from vaccination sites for COVID-19 vaccine administration and then being forced to contest fees with medical clinics or hospitals, even though COVID-19 vaccines are free, regardless of insurance or immigration status. Additionally, some consumers are confused about why they were asked for their insurance information when making a vaccine appointment or arriving for vaccination and are fearful that they will be billed for their COVID-19 vaccination. A recent poll found that concerns about vaccination cost are especially predominant among Hispanic adults who are uninsured or make less than $40,000 per year. The same poll found that over half of Hispanic adults are unvaccinated. One-third of them report being asked for their insurance card when making a vaccination appointment and 52% are unaware that the vaccines are free.

Ways to act:
- Continue to clearly communicate that COVID-19 vaccines are free for all U.S. residents and that all adults and adolescents are eligible, regardless of insurance or immigration status. Partner with trusted local messengers to further amplify this message in multiple languages, especially in Spanish. Expand content to better explain why vaccinators may ask for insurance information, but note that it is not required for vaccination.
- Educate healthcare providers and administrative health personnel that presenting an insurance card may be a barrier to vaccination for some, especially those with lower incomes.


A Rapid State of Vaccine Confidence Insights Report is in progress to better understand the consumer response to authorization and recommendation of Pfizer-BioNTech COVID-19 vaccine for adolescents 12 – 15 years old. This special report will be released following this report.

On May 10, 2021, the Food and Drug Administration (FDA) expanded the emergency use authorization for Pfizer-BioNTech's COVID-19 vaccine to include adolescents 12 – 15 years old, making nearly 17 million more people or 85% of the U.S. population eligible to receive a COVID-19 vaccine. Although many parents were eagerly anticipating this news, others were nervous about the safety of COVID-19 vaccines for children and whether vaccination was necessary, given their belief that the risk of severe COVID-19 illness to children is low. Recent polling data indicate that 29% of parents reported they would get their children vaccinated right away, and 32% said they wanted to wait to see whether the vaccine is safe and effective in children.

While most schools have yet to make a decision regarding COVID-19 vaccination requirements for students, a recent survey indicates that, although over half of parents believe that schools should be fully in-person in the fall, 65% oppose requiring COVID-19 vaccination for in-person school attendance. Meanwhile, vocal vaccine deniers circulated misinformation about COVID-19 vaccines and children, amplifying claims that adverse events in children and adolescents occurred after vaccination or during clinical trials, signalling to some that vaccines may not be as safe as the current data indicate.

Three In Ten Parents Of Children Ages 12-15 Say They Will Get Their Child Vaccinated For COVID-19 Right Away Once Vaccine Is Authorized

Once there is a COVID-19 vaccine authorized and available for your child’s age group, do you think you will?

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Total Parents</th>
<th>Parent of child under age 5</th>
<th>Parent of child ages 5-11</th>
<th>Parent of child ages 12-16</th>
<th>Parent of child ages 16-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get them vaccinated right away</td>
<td>29%</td>
<td>24%</td>
<td>27%</td>
<td>30%</td>
<td>31%</td>
</tr>
<tr>
<td>Wait a while to see how it is working</td>
<td>32%</td>
<td>35%</td>
<td>32%</td>
<td>26%</td>
<td>24%</td>
</tr>
<tr>
<td>Only get your child vaccinated if their school requires it</td>
<td>16%</td>
<td>19%</td>
<td>23%</td>
<td>21%</td>
<td>19%</td>
</tr>
<tr>
<td>Definitely not get them vaccinated</td>
<td>15%</td>
<td>14%</td>
<td>19%</td>
<td>23%</td>
<td>24%</td>
</tr>
<tr>
<td>Child is already vaccinated (Y/N)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

NOTE: Asked of parents or guardians of children under 18 years old living in their household. Multiple responses allowed for child age, and if respondent says it depends on which child, they were asked to think about their oldest child. See toplines for full question wording.


Continuing and Evolving Themes

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.\cite{1,2,3,4,5,6,7}

**Viral shedding.** Claims that mRNA COVID-19 vaccines “shed” virus continue to circulate widely on social media platforms,\cite{8} despite being debunked.\cite{9} While the initial misinformation focused on “viral shedding” affecting menstrual cycles, it has now evolved to affecting all unvaccinated people, regardless of gender.\cite{10}

**Adverse events.** High-visibility vocal vaccine deniers continue to misrepresent VAERS data to reduce trust in the safety of recommended COVID-19 vaccines.\cite{11} A mainstream news anchor erroneously claimed that “30 people every day” die from vaccination.\cite{12}

**New ways to act:**
Update and expand CDC’s COVID-19 vaccine myths and frequently asked question webpages to including information on viral shedding, heart inflammation, and adverse events. Disseminate messages promoting the vaccine myths page on social media platforms and through states, jurisdictions, partners, and trusted messengers. Develop and deploy prepared responses for CDC-INFO to address above topics.

**Vaccine series completion.** News media highlights concerns across multiple states that consumers are not returning for their second dose of COVID-19 vaccine.\cite{13,14,15} News media points to consumer concerns about acute side effects after a second dose and a belief that one dose will provide sufficient protection from COVID-19.\cite{16}

**New ways to act:**
- Amplify messages regarding the importance of completing both doses of a 2-dose COVID-19 vaccine, including information regarding the lowered effectiveness that could result from not receiving the second dose. Additionally, develop messages to reassure consumers who have delayed their second dose that completing their vaccination series is important for protection from COVID-19 illness.

**Vaccine mandates.** As more institutions of higher education (IHEs) announce vaccine mandates for students, the American College Health Association issued a recommendation that IHEs make COVID-19 vaccination a requirement for on-campus students this fall.\cite{17} Additionally, a new poll indicated that more than 60% of companies plan to require employees to prove they have been vaccinated.\cite{18} While some IHEs and employers cannot require vaccination with vaccines available under emergency use authorization, news coverage of Pfizer-BioNTech likely seeking full FDA approval for their vaccine as soon as fall could increase the number of vaccine mandates across the United States.\cite{19}
Continuing and Evolving Themes (cont.)

- **Proof of vaccination.** A recent poll, prior to any shift in guidance for fully vaccinated people, found that consumers are divided over whether they believe businesses should require proof of vaccination for services. Favor and opposition of these systems varied by activity, with those in favor more likely to have already been vaccinated or be planning to be vaccinated, and those more likely to be opposed not planning to be vaccinated. Additionally, news coverage regarding fake vaccination cards increased during this period, with reports of boxes of fake cards being seized by law enforcement, business owners being charged with selling fake vaccination cards, and the FBI issuing a warning that fines and imprisonment are possible penalties for forging or falsifying vaccination cards.

<table>
<thead>
<tr>
<th>Americans’ Preferences for Proof of Vaccination to Participate in Activities Based on COVID-19</th>
<th>% Who favor businesses requiring people to show proof of COVID-19 vaccination in order to do each over the next several months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccination status</td>
<td>Travel by airplane, Go to events with large crowds, Go to your worksite to do your job, Stay in a hotel, Dine in at a restaurant</td>
</tr>
<tr>
<td>Have been/Will be vaccinated</td>
<td>74 %, 71 %, 59 %, 56 %, 52 %</td>
</tr>
<tr>
<td>Will not get vaccinated</td>
<td>8 %, 7 %, 6 %, 6 %, 5 %</td>
</tr>
<tr>
<td>Worry about getting COVID-19</td>
<td>77 %, 72 %, 66 %, 59 %, 55 %</td>
</tr>
<tr>
<td>Very/Somewhat worried</td>
<td>49 %, 48 %, 36 %, 37 %, 34 %</td>
</tr>
<tr>
<td>Not too/Not at all worried</td>
<td></td>
</tr>
</tbody>
</table>

*Among those employed full or part time.

- **Essential workers.** New media reports of police officers refusing vaccination emerged across the country. Additionally, a report emerged that subway and bus workers had the lowest vaccination rate of workers within the New York Metropolitan Transportation Authority (MTA), even though 93% of MTA workers who died from COVID-19 were subway and bus workers.

- **Young adults.** A suggestion by a popular podcaster that young, otherwise healthy young adults don’t need to get vaccinated spread broadly across social media. As the reports were quickly fact-checked, vocal vaccine deniers commented online that the podcaster’s claims were speaking “the truth” but were being unfairly represented by media that is biased towards positively framing only vaccine advocates and not vaccine skeptics. At the same time, reports have emerged across the United States of younger people beginning to experience serious illness and school-based outbreaks.
## Appendix: Inputs and Sources

<table>
<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, 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 COVID-19 Post Metrics         | Weekly           | • Sprout Social  
• Native OADC account analytics | • Analyze # of posts, topics  
• Success of messages, # of impressions, reach, # engagements |
|                           | OADC Channel Comment Analysis              | Daily, weekdays  | • Native platform searches | • Sentiment analysis  
• Identify message gaps/voids |
| **Direct Reports**        | CDC-INFO Metrics                           | Weekly, Mondays  | • 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, Mondays  | • Media request line list | • Leading indicator for news coverage  
• Identify information gaps/voids |
|                           | Web Metrics                                | Weekly, Wednesdays | • 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, Mondays  | • 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, Mondays  | • 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 |
|                           | FEMA Social Listening Report               | Daily            | • Hootsuite  
• Brandwatch  
• CrowdTangle  
• Meltwater | • Trends/sentiment analysis  
• National and global news analysis |
|                           | 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 |
|                           | Virality Project                           | Weekly           | • Proprietary methods | • Mis- and disinformation trends related to COVID-19 vaccine |