COVID-19 State of Vaccine Confidence Insights Report

Report 16 | **October 15, 2021** | Date Range: September 14 – 27, 2021

Summary

Findings. President Biden's September 9, 2021 call for COVID-19 vaccine requirements continued to drive social media conversations, news articles, and responses from politicians opposed to the requirements. In summary, there continues to be vocal opposition among a segment of social media users to the announcement and general workplace vaccine requirements. The US Food and Drug Administration's (FDA) Vaccines and Related Biological Products Advisory Committee (VRBPAC) voted on September 17, 2021, to approve the administration of COVID-19 vaccine booster doses. On September 24, CDC's Advisory Committee on Immunization Practices (ACIP) also approved the administration of COVID-19 vaccine booster doses. On September 20, 2021, Pfizer and BioNTech announced they submitted data to the FDA on COVID-19 vaccine trial data in children ages 5 to 11 years. This announcement was accompanied by increased consumer interest in vaccinating children including when they will be available and safety and efficacy data. Finally, consumers continued to exhibit interest in safety and efficacy data on booster doses and where they could find them.

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. Employers should provide periodic updates to employees on how vaccination requirements have helped reduce the spread of COVID-19 in the workplace. Public health organizations should create and disseminate public health messaging that presents data on the safety and efficacy of other childhood vaccines for kids ages 5 to 11 years and the COVID-19 vaccine in children 12 years and older. Professional associations and public health organizations should develop materials and tools for healthcare providers to share with their patients about the benefits of receiving a booster dose and when and how to get a booster dose. These communications should include information addressing concerns about the risks of severe side effects.

Contents

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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), tthe 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**
▪ 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)?		
Increasing Information spreading rapidly	**Stable** Information remaining constant at prior level	**Decreasing** Information is not gaining further traction and there has been no indication of additional activity

Major Themes

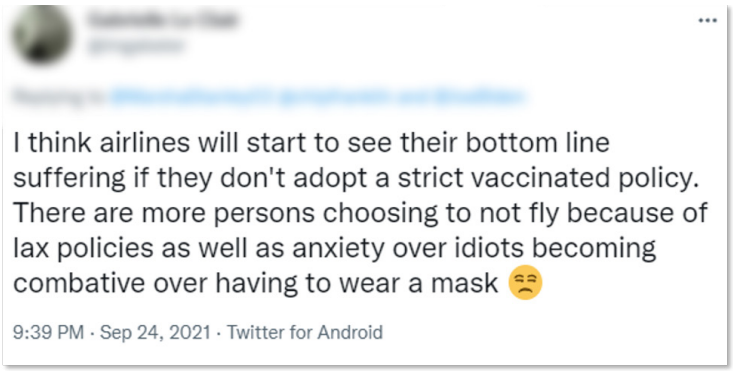
Social media users continued to voice their concerns about President Biden's vaccine requirement announcement and general workplace vaccine requirements.

The President's September 9, 2021, national COVID-19 vaccine requirement announcement continued to drive social media conversations, news articles, and responses from politicians. Polls continue to show the President's vaccine requirements and any vaccine requirements for certain occupations have resulted in divided public approval with vocal opposition among some consumers and some vocal support.[1,2,3,4,5] Social media users continue to express their frustration[6,7,8,9] and support[10,11,12,13] for the President's vaccine requirements and any other vaccine requirements.

Individuals, organizations, and state politicians opposed to the President's vaccine requirements or any workplace vaccine requirements continue to file lawsuits to stop their implementation.[14,15,16,17,18,19] Courts have ruled in favor of employer and school vaccine requirements.[20,21] However, at least one court ruling blocked a vaccine requirement for medical workers at their job because the employer's policy did not have a religious exemption.[22]

Some employers halted implementing vaccine requirements until they receive additional guidance from the federal government or pending court cases.[23,24] News outlets reported that employees have resigned or have been terminated instead of getting vaccinated; however, when reported, this included generally less than two percent of employees.[25,26,27,28,29,30] Additionally, Google searches related to nurses refusing the COVID-19 vaccine increased.[a] News outlets also reported that companies and states are developing mobile phone applications to confirm vaccination status, indicating that implementation of vaccine requirements are underway.[31,32,33,34,35]

Individuals contacted CDC to learn what medical conditions qualify for a vaccine medical exemption or where they could get the necessary medical or religious exemption forms.[b] Individuals continue to use Google to search for more information related to exemptions.a Similarly, news outlets reported on different religions and religious sects' willingness to support religious exemptions to the COVID-19 vaccine.[36,37,38]



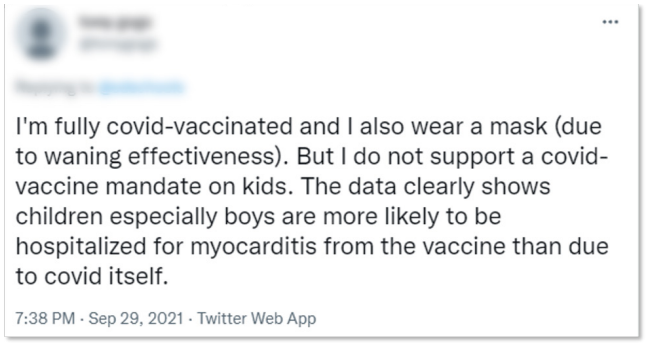
Stories of other countries adopting air travel vaccine requirements may have driven social media discussions about the implementation similar requirements in the United States where consumers expressed their support and fear of such air travel policy.[39,40,41]

Ways to act:

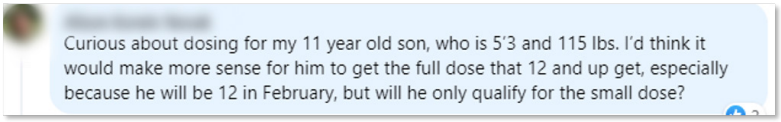
- Periodically update employees on how vaccination requirements have helped reduce the spread of COVID-19 in the workplace.
- Provide guidance on implementing vaccination requirements, including guidance on what qualifies as a medical exemption.
- Partner with state, jurisdictional, and local health departments to support employers in addressing employee concerns related to vaccine requirements.
- Continue to promote the benefits of vaccination that extend beyond the workplace (i.e., protection of family, vulnerable populations, those with underlying health conditions).
- Document and share lessons learned from employers who successfully implemented vaccine requirements in the workplace.

[a] Google Trends
[b] CDC-INFO

Consumers showed an increased interest in vaccinating children under 12 years old.



On September 20, 2021, Pfizer and BioNTech announced they submitted data from the clinical trial of their Pfizer-BioNTech COVID-19 vaccine in children ages 5 to 11 years to the US Food and Drug Administration (FDA).[42] After this announcement, online searches related to COVID-19 vaccines for children under 12 years old increased to the highest level compared to any other reporting period.[c] Since the announcement and subsequent news stories[43,44,45] conversations about the need for children ages 5 to 11 years to get the COVID-19 vaccine have increased. Social media users questioned the necessity of vaccinations for this age range for several reasons, including the lack of long-term vaccine safety data for children,[46,47,48,49] the less serious illness in children with COVID-19 when compared to adults,[50,51,52] and the perceived lack of vaccine effectiveness in children due to perceived lack of effectiveness in adults.[53,54] Moreover, others stated children ages 5 to 11 years should not be given the COVID-19 vaccine due to safety concerns, especially because of reports of myocarditis, vaccine-induced strokes, blood clots in infants breastfeeding from vaccinated people, and multisystem inflammatory syndrome in children (MIS-C).[55,56,57,58,59]



Some social media users wanted additional information about the difference in the COVID-19 vaccine dose or concentration children ages 5 to 11 years would receive compared to the COVID-19 vaccine adults currently receive.[60,61,62]

Other social media users and parents are eager to know when the FDA will approve COVD-19 vaccines for children, with some saying they would get their kids vaccinated as soon as the Pfizer-BioNTech COVID-19 vaccine receives Emergency Use Authorization.[d,63,64,65,66] On the other hand, one national poll found that US adults were largely unconvinced that COVID-19 vaccines were necessary and appropriate for children ages 5 to 11 years.[67]

Ways to act:

- Create and disseminate messaging that presents data on the safety and efficacy of other childhood vaccines for kids ages 5 to 11 years and the COVID-19 vaccine in children 12 years and older.
- Upon FDA granting an Emergency Use Authorization of COVID-19 vaccinations for children ages 5 to 11 years, create and disseminate messages related to how the doses differ from adults and if child height and weight affects vaccination.
- Engage trusted and new partners to disseminate and amplify these messages particularly pediatricians and professional associations serving pediatricians.

[c] Google Trends
[d] CDC-INFO

Consumers continue to exhibit interest in information about receiving booster doses.

A recent poll found that the majority of US adults who are vaccinated desire a booster dose.[68] Recent CDC website traffic data similarly indicate that searches related to 'boosters' increased compared to the previous 7-day period. Rising inquiries into the location and proximity of COVID-19 vaccination sites and potential side effects of the COVID-19 vaccine may imply an interest in uptake.[e] News sources and social media platforms also displayed elevated mentions of booster doses.[f] CDC's recommendation for booster doses may have increased interest in booster doses.

Some consumers, including healthcare workers, expressed confusion and that they felt betrayal at being left out of approved groups eligible to receive booster doses when CDC's Advisory Committee on Immunization Practices (ACIP) panel voted to recommend boosters for all the FDA-approved groups except those with increased risk of getting COVID-19 due to occupational or institutional setting exposure.[g,69] CDC recommended booster doses for individuals 18 to 64 years of age whose occupational or institutional setting puts them at higher risk for COVID-19 exposure and transmission.[70] Some consumers and healthcare providers (HCPs) asked questions about getting a booster dose if they got the Johnson & Johnson's Janssen COVID-19 vaccine or the Moderna COVID-19 vaccine and if patients skipped a dose of the primary series of vaccines.[e,71]

Polls indicate that a majority of previously vaccinated consumers would receive a booster dose when available.[72] However, some consumers are concerned that apparent variations in booster dose because of conflicting recommendations imply a lack of unity among scientists,[73,74] limited transparency in the vaccine authorization process,[75,76] disregard for what some consider safety signals,[77] and insufficient research of vaccines with any potential long term side effects.[78,79,80,81] Consumers reported a misalignment between vaccine authorizing systems and retail-level distribution, as booster doses have been available before FDA and CDC recommendations in some locations.[e]

Some misinformation and disinformation themes continued in this reporting period. These include arguments that the need for booster doses implies that the primary series of COVID-19 vaccines are ineffective,[82,83] and claims that vaccines fatally harm more people than they save.[84,85]

Ways to act:

- Expand local guidance for fully vaccinated individuals to include booster doses and corresponding vaccination status. In addition, explain what nonpharmaceutical interventions they will and will not need to follow after receiving a booster dose.
- Develop or adapt pre-existing materials and tools for healthcare providers to share with their patients about the benefits of receiving a booster dose and when and how to get a booster dose. In addition, include information addressing concerns about the risks of severe side effects.

[e] Google Trends
[f] Meltwater
[g] CDC-INFO

Emerging Themes

Consumers concerned about possible interactions between COVID-19 vaccination, booster doses and other vaccines or health conditions are seeking answers and reassurance.

Consumers are concerned about possible interactions between COVID-19 vaccines and other vaccines or health conditions.[86,87,88] Consumer searches of "flu shot and booster" have been high[h] while internal search data show that visitors to CDC.gov are performing similar searches on the site.[Internal] Meanwhile, there have been CDC-INFO requests by consumers and healthcare professionals with questions about vaccine interactions and spacing, with a handful of queries expressing mild skepticism about updated guidance allowing COVID-19 and flu vaccines to be co-administered.[i] Additionally, some consumers are concerned about a possible connection between COVID-19 vaccination and the onset of shingles and potential interactions between the COVID-19, HPV, and shingles vaccines.[89,90]

Ways to act:

- Create and disseminate messages on the known safety data of interactions between vaccines, and, if available, specifically about the COVID-19 vaccines.
- Partner with medical and professional associations to create, disseminate and educate providers about available interaction data and communicate that this is a concern people have.

[h]Google Trends
[i]CDC-INFO

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.*

Consumer interest shifts from vaccine effectiveness and breakthrough infections to infection-induced immunity.

Apprehension about vaccine effectiveness and breakthrough infections in vaccinated individuals led to renewed discussions about the superiority of infection-induced immunity, or so-called "natural immunity." Some consumers believe they should be exempt from vaccine requirements and public health requirements if they previously had COVID-19.[91,92] At the same time, news reports and social media users continue to amplify claims of ambiguous or discredited studies purporting that infection-induced immunity is vastly more effective than vaccination.[93,94,95,96] Nevertheless, news outlets present questions about the relationship between infection-induced immunity versus vaccine-induced immunity and its role as an overall strategy to quell the pandemic.[97]

Consumers continue to express concern about the impact the COVID-19 vaccines have on reproductive health.

Following a focus on male sexual health issues in the previous reporting period,[98,99] social media users resumed talking about female reproductive health concerns amid persistent fears and continuing reports of vaginal bleeding following COVID-19 vaccination.[100,101,102,103,104,105,106]

Misinformation about COVID-19 vaccines continues to spread, grows more threatening.

Social media users skeptical of vaccines and conspiracy theorists have been sharing false claims that breastfeeding infants are routinely dying because their mothers received mRNA COVID-19 vaccines.[107,108,109,110,111,112] This has fueled outrage and anger directed at government and public health officials.[113,114] Additionally, vocal vaccine deniers have amplified sources spreading misinformation and accompanying false claims about vaccine side effects and adverse events.[j,115,116] Similar reporting and public comments are increasing fear and further eroding confidence in COVID-19 vaccines.[117,118,119,120,121]

[j]Google Trends

Appendix: Inputs and Sources

Type	Input	Cadence	Sources	Tactics for Utilization
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 (Office of the Associate Director of Communication) 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 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
	Virality Project	Weekly	▪ Proprietary methods	▪ Mis- and disinformation trends related to COVID-19 vaccine