



CDC's State of Vaccine Confidence Insights Report

Quarter 1 Report

August 21, 2023

Date Range: January 1 – March 31, 2023

SPECIAL UPDATE: CDC partners can now report vaccine-related rumors directly to CDC. To report a rumor, go to wwwn.cdc.gov/dcs/ContactUs/Form. Start the subject line with "Rumors:" and in the question box, give as much information about the rumor as you can, including a description of the rumor, where you heard it, and how many times you have heard it.

**Centers for Disease Control & Prevention,
COVID-19 Response, Vaccine Task Force**
Vaccine Confidence & Demand Team, Insights Unit

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).



Summary

Major, continuing, and emerging themes identified from social media, news, and other sources that may impact vaccine confidence:^a

- Vaccine availability and interest may be negatively impacted amid the end of the COVID-19 Public Health Emergency (PHE), political and legal reactions to COVID-19 vaccination, and widespread inaccurate health information.
- Consumers and social media users were concerned about COVID-19 vaccine side effects following Damar Hamlin's collapse during a football game even though his cardiac arrest was caused by a blow to the chest (commotio cordis).
- Consumers continue to experience pandemic fatigue.
- Consumers and social media users continue to have questions and concerns about COVID-19 vaccination in children.
- Consumers and social media users continue to question the effectiveness, availability, and scheduling of the updated COVID-19 vaccine.

Ways public health and partners can take action to improve vaccine confidence:

- Disseminate resources (such as the [NRC-RIM toolkit](#) or [HHS fact sheet](#)) for individuals explaining how the COVID-19 PHE ending will impact their coverage and access to preventative and curative COVID-19 measures.
- Work with healthcare workers, community leaders, and trusted messengers to dispel any circulating mis- and disinformation related to COVID-19 vaccination.
- Provide easy-to-read clinical findings showing the safety of all U.S approved vaccines. These findings may include vaccine safety relative to reproductive health and possible rare adverse events.
- Promote positive vaccine experiences, safety and the rarity of adverse events from the updated COVID-19 vaccine.
- Continue to amplify messages about how COVID-19 vaccines function.
- Collaborate with trusted messengers to explain the benefits of the updated COVID-19 vaccines while addressing questions, concerns, and inaccurate health information discouraging vaccine uptake.
- Continue to research the effectiveness of the updated COVID-19 vaccine in humans and publish data as soon as it is available.
- Continue to support research into the safety and effectiveness of COVID-19 vaccines.
- Continue to support provider COVID-19 vaccine recommendations for pediatric patients.
- Continue to create communications products emphasizing the importance of COVID-19 vaccines in all children.

For findings and ways to act from our other reports, see previous [Insights Reports](#).

Resources: The following link contains social media resources such as graphics, language, and social media calendars that our partners can use to help educate their constituents and build vaccine confidence by addressing the themes in this report: <https://centersfordiseasecontrol.sharefile.com/d-s214508599eef49878e258b4f8e0759f5>

^aThemes for this report come from an integrated and thematic analysis of the data from the sources listed in the appendix.



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Aims and Methods

By reviewing and analyzing numerous sources and inputs (see [Appendix](#)), the State of Vaccine Confidence Insights Report emphasizes major themes influencing vaccine confidence 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 highlight emerging issues related to the spread of inaccurate health information to help identify 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"> May lead to vaccine refusals and decreased uptake Wide reach, pervasive 	<ul style="list-style-type: none"> Potential to trigger hesitancy to vaccination Moderate reach, modest dissemination 	<ul style="list-style-type: none"> Concerning, but low risk to vaccine confidence Limited reach, limited dissemination 	<ul style="list-style-type: none"> 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)?			
			
<p>Increasing</p> <p>Information spreading rapidly</p>	<p>Stable</p> <p>Information remaining constant at prior level</p>	<p>Decreasing</p> <p>Information is not gaining further traction and there has been no indication of additional activity</p>	

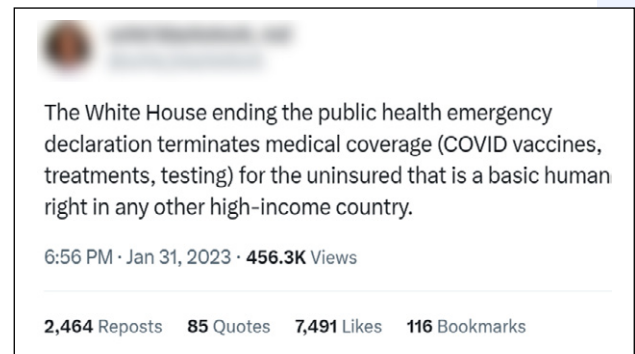


Major Themes That Might Impact Vaccine Confidence^b



Vaccine availability and interest may be negatively impacted amid the end of the COVID-19 Public Health Emergency, political and legal reactions to COVID-19 vaccination, and widespread inaccurate health information

The first quarter of 2023 marked three years since COVID-19 was declared a pandemic by WHO in March 2020 and signaled the beginning of a new phase of the COVID-19 response in the United States. In February 2023, the U.S. Department of Health and Human Services (HHS) announced the planned end of the federal Public Health Emergency (PHE) for COVID-19, which expired on May 11, 2023.¹ The end of the public health emergency presents both challenges and opportunities for vaccine confidence, especially as COVID-19 vaccination shifts from federal procurement to the commercial market, leaving many consumers concerned about potential increased vaccine costs and reduced vaccine availability. In addition, the reporting period can be characterized by continuing political, legislative, and legal efforts in reaction to the COVID-19 public health response,² as well as an increase in vaccine-related inaccurate health information on social media.³



Perceptions, concerns, and threats to vaccine confidence

The end of the COVID-19 Public Health Emergency

- Some social media users expressed concern that the end of the COVID-19 PHE will end COVID-related medical coverage for uninsured individuals.^{4,5}
- Vaccine-skeptical social media influencers contend that all COVID-19 vaccines should no longer be authorized or available following the end of the COVID-19 PHE.^{6,7}
- Some social media users urged individuals to stockpile COVID-19 tests and get additional COVID-19 vaccines before May 11, 2023, fearing that this would be more difficult once the COVID-19 PHE ends.^{8,9}
- Some social media users expressed disapproval, concern, and anxiety about the end of the COVID-19 PHE and felt that the decision will undermine public health.^{10,11,12}
- Some social media users believe choosing to end the COVID-19 PHE in May was an arbitrary date rooted in political gain instead of epidemiological data.^{13,14,15}

^bSocial media posts referenced throughout this report can be found in [this online document](#).



Concerns about the increased cost of Moderna's COVID-19 vaccine

- On March 22, 2023, the CEO of Moderna testified before the Senate Health Committee on the expected 400% increase in price for the company's COVID-19 vaccine when the vaccine is commercialized.¹⁶
- Some social media users expressed the Moderna vaccine price increase would create difficulty in finding additional doses¹⁷ and impede access for uninsured individuals.¹⁸ Moderna has maintained that vaccines will remain accessible to individuals regardless of insurance status, including through patient assistance programs.¹⁹
- Some social media users believe political leaders should focus on investigating claims of vaccine injury from Moderna's COVID-19 vaccine instead of the higher price.^{20,21,22}
- Some social media users and politicians believe Moderna increasing the cost of their vaccine signals corporate greed.^{23,24} This may negatively impact vaccine confidence among consumers who feel that pharmaceutical companies prioritize profit over the public's health.^{25,26}

Political, legal, and legislative reactions to COVID-19 vaccination

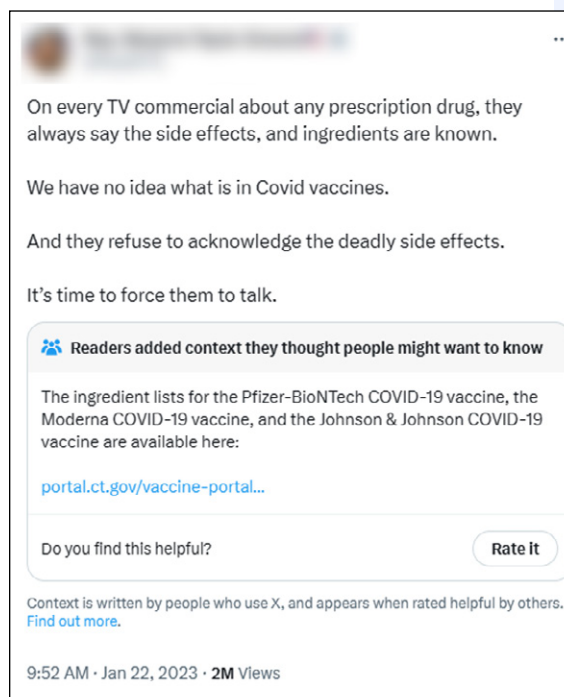
- More than 600 vaccine-related bills have been introduced so far in 2023, eclipsing the total number of bills introduced in 2022 according to the National Conference of State Legislatures.²⁷ Many states are considering legislation that would prohibit or curtail COVID-19 vaccine requirements as well as routine vaccine requirements imposed by schools, employers, and other entities.²⁸ Other bills introduced this session include legislation that would reinstate religious or personal belief exemptions for school entry; establish liability for adverse events following vaccination;²⁸ criminalize the administration of mRNA vaccines;²⁹ and ban individuals who have received a COVID-19 vaccine from donating blood.³⁰
- Some news outlets have published articles claiming the lawsuits and the threat of litigation have limited the ability for public health agencies to enact protective measures against future outbreaks.²
- On February 15, 2023, the Florida Department of Health issued a health alert notifying residents about an increase in Vaccine Adverse Event Reporting System (VAERS) reporting following the state's COVID-19 vaccine rollout.³¹ The safety and effectiveness of COVID-19 vaccines was further called into question by Florida's Surgeon General when sharing the health alert on social media.³² The FDA and CDC subsequently released a joint letter to the Florida Surgeon General, stating that "the claim that the increase of VAERS reports of life-threatening conditions reported from Florida and elsewhere represents an increase of risk caused by the COVID-19 vaccines is incorrect, misleading, and could be harmful to the American public."³³

Florida Department of Health misleads on COVID-19 vaccine safety with erroneous comparison of VAERS reports

Social media ecosystems see an increase in the spread of inaccurate vaccine information

- Just prior to the reporting period, Twitter (currently rebranding to X) announced that it would no longer enforce its policy to label or remove false and misleading COVID-19 claims³⁴ and that previously suspended Twitter accounts would be reinstated, sparking concerns about an increase in misinformation on the platform.³⁵ Recent analysis from Media Matters for America found that between October 1, 2022 and March 31, 2023, anti-vaccine accounts comprised roughly 25% of the top 250 accounts tweeting about COVID-19.³

- New Twitter owner Elon Musk—now the most-followed person on the platform—expressed concern that the updated COVID-19 vaccine does more harm than good.³⁶ Musk, who had spread inaccurate COVID-19 information on Twitter³⁷ prior to acquiring the platform in late 2022, also shared that he experienced “major side effects” after receiving an updated COVID-19 vaccine and that one of his relatives was hospitalized with myocarditis following COVID-19 vaccination.³⁸
- One of the most viral social media posts (and a breakout theme among Internet search queries)^c during the reporting period was a video released by Project Veritas, a partisan activist group with a well-documented history of misleading tactics and content. The video’s allegations that Pfizer was considering experimental mutation of the SARS-CoV-2 virus were subsequently refuted by Pfizer.³⁹ The video was promoted by U.S. Rep. Marjorie Taylor Greene,⁴⁰ whose Twitter account was among those reinstated after previously being suspended for promoting inaccurate COVID-19 information.⁴¹ Although some consumers do not believe the inaccurate information and anti-vaccine rhetoric promoted by Greene,^{42,43} many continue to endorse these views.^{44,45}



Commonly asked questions and queries from the public

- What will be affected by the end of the COVID-19 Public Health Emergency?^d
 - **Vaccines will remain available.** Access to COVID-19 vaccines will generally not be affected for now. The U.S. government is currently distributing free [COVID-19 vaccines](#) for all adults and children. To help keep communities safe from COVID-19, HHS remains committed to maximizing continued access to COVID-19 vaccines.
 - **COVID-19 at-home tests may not be covered by insurance.** Insurance providers will no longer be required to waive costs or provide free COVID-19 tests. CDC’s [No Cost COVID-19 Testing Locator](#) can help people find current community and pharmacy partners participating in the [Increasing Community Access to Testing \(ICATT\) program](#).
 - **Treatments will remain available.** Medication to prevent severe COVID-19, [such as Paxlovid](#), will remain available for free while supplies last. After that, the price will be determined by the medication manufacturer and your health insurance coverage. Check with your healthcare provider if you need [early treatment to prevent severe COVID-19](#).
 - **National reporting of COVID-19 may change.** CDC has data for this phase of COVID-19 that will allow an understanding of what’s happening with the virus in the U.S. in near in real-time. Simply put, available data going forward will still allow CDC, local public health officials, and the members of the public to understand COVID-19 dynamics at the community level.⁴⁶

^cGoogle Trends.

^dNote that this information is accurate at the time of reporting but will likely change over the next few months as COVID-19 vaccines become commercially available. Refer to [vaccines.gov](#) for the latest information on COVID-19 vaccine availability.



- Where can individuals find COVID-19 vaccines?^e
 - [Vaccines.gov](https://www.vaccines.gov) helps people find the latest information on COVID-19 vaccine availability at certain providers and pharmacies.⁴⁷

Inaccurate vaccine information themes that may impact vaccine confidence

- Some social media users believe Moderna's COVID-19 vaccine is ineffective and are enraged at the plan to increase the price.^{48,49,50}
- Some social media users believe Moderna can increase the cost of their COVID-19 vaccine because it is not actually a vaccine.^{51,52}
- Some social media users continue to express their belief that politicians and pharmaceutical companies fabricated the COVID-19 pandemic to make money.^{53,54}

Ways public health and partners can take action to improve vaccine confidence

- Disseminate resources (such as the [NRC-RIM toolkit](#) or [HHS fact sheet](#)) for individuals explaining how the COVID-19 PHE ending will impact their coverage and access to preventative and curative COVID-19 measures.
- Work with healthcare workers, community leaders, and trusted messengers to dispel any circulating mis- and disinformation related to COVID-19 vaccination.



Consumers and social media users were concerned about COVID-19 vaccine side effects following Damar Hamlin's collapse during a football game

On January 2, 2023, Buffalo Bills safety Damar Hamlin suffered from cardiac arrest and collapsed during an NFL game.⁵⁵ Hamlin's near-fatal injury immediately became one of the biggest stories in the country, resulting in a surge of conjecture, inaccurate health information, and conspiratorial claims linking his injury to COVID-19 vaccination and fueling consumer concerns about cardiovascular risks posed by COVID-19 vaccination.

Hamlin later indicated that his collapse was unrelated to his vaccination status and was caused by commotio cordis, a rare condition of sudden cardiac arrest that occurs following a severe blow to the chest.

Covid misinformation spikes in wake of Damar Hamlin's on-field collapse

Some of the tweets racked up millions of views, after the Elon Musk-owned company rolled back its covid misinformation policies.

^eCDC-INFO.



Perceptions, concerns, and threats to vaccine confidence

Damar Hamlin's collapse

- Many social media users and consumers attributed Damar Hamlin's collapse to the COVID-19 vaccine.^{56,57} Such claims [are not unique](#) to Hamlin's injury; as noted in the [Q4 2022 Insights report](#), accounts of young athletes and other prominent individuals experiencing heart-related events or unexpected deaths have led some consumers to believe that these events are connected to COVID-19 vaccines.
- Vaccine-skeptical influencers actively engaged in spreading inaccurate information about the cause of Damar Hamlin's cardiac arrest without any evidence.⁵⁸
- Fake accounts posing as medical professionals declared COVID-19 vaccines as dangerous following Hamlin's collapse.⁵⁹
- Political pundits and anti-vaccination doctors claimed that more than 1,500 total cardiac arrests have occurred in athletes since COVID-19 vaccinations began. However, the sources used for this information came from an inaccurate blog post instead of peer-reviewed sources, continuing to undermine trust in the vaccines.⁶⁰
- On Google, queries for "Damar Hamlin," "was Damar Hamlin vaccinated," and "Damar Hamlin COVID vaccine" ranked among the largest increases in search frequency during the reporting period. As of July 2023, "Damar Hamlin" remains the #1 rising search term on Google in 2023.^c
- Many health care professionals and social media users worked to communicate commotio cordis as the cause of Damar Hamlin's cardiac arrest, while showing the rarity of myocarditis as an adverse consequence of mRNA COVID vaccination.^{61,62,63}

Myocarditis, strokes, and blood clots

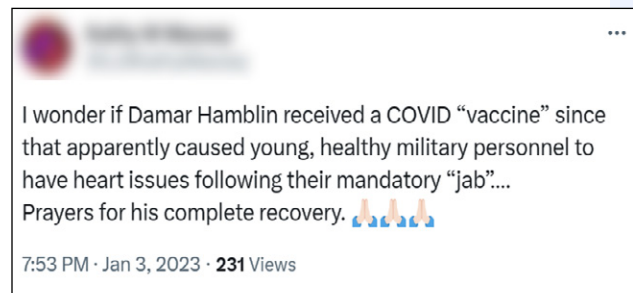
- Consumers expressed concern about the risk of myocarditis after vaccination in adolescents.^d
- "Causes of myocarditis," "myocarditis," and "COVID-19 vaccine statistics," and "cures for myocarditis" were all searches that increased in this reporting period.^c
- Consumers and social media users expressed concerns over the possibility of severe vaccine side effects including myocarditis, strokes, and blood clots.^{64,65,66,67}
- Some social media users believe that updated COVID-19 vaccines may create a heightened risk of severe adverse reaction in adolescents.^{68,69}
- Fears that the vaccines would cause the consumer to die suddenly spread rapidly across social media and became a prominent talking point among anti-vaxxers.^{70,71} Consumers and social media users accused vaccine manufacturers of ignoring the dangers and releasing vaccines that were unsafe for consumer use.⁷²

'Doctor' who claimed he gave Damar Hamlin COVID-19 booster last week wasn't real

- CDC and FDA investigated a potential increased risk of stroke associated with Pfizer-BioNTech's updated COVID-19 vaccine in adults ≥ 65 years old after a preliminary safety signal was detected in one safety monitoring system, the Vaccine Safety Datalink (VSD).^{73,74,75} Other safety monitoring systems have not observed similar signals, and the current evidence does not support the existence of a safety issue.⁷⁵ FDA and CDC will continue to evaluate data as they are available and update the public as needed.⁷⁶
- Some consumers with a personal or family history of blood clots stated that they were more hesitant to receive the COVID-19 vaccines due to concerns of experiencing an adverse reaction.^d

Commonly asked questions and queries from the public

- Was Damar Hamlin's cardiac arrest caused by the COVID-19 vaccines?
 - After an extensive investigation, medical professionals have determined that Damar Hamlin suffered from a rare heart condition called commotio cordis, which creates an irregular heartbeat. Damar Hamlin was tackled at a point in his cardiac cycle that triggered ventricular fibrillation leading to cardiac arrest. Damar Hamlin's COVID-19 vaccination status was unrelated to his injury.⁶¹
- Do the risks of myocarditis and pericarditis outweigh the benefits of the COVID-19 vaccines?
 - The [benefits of COVID-19 vaccination](#) outweigh the known and potential risks. The risks for myocarditis and pericarditis are very low and occur in rare circumstances.⁷² Moreover, the risk of myocarditis from SARS-CoV-2 infection is [seven times greater](#) than the risk associated with COVID-19 vaccination. Myocarditis has been observed most frequently in adolescent and young adult males within 7 days after receiving the second dose of an mRNA COVID-19 vaccine, but is still a rare occurrence.⁷⁶ To date, an increased risk of stroke in adults 65 years and older has not been validated.⁷⁶ CDC and FDA investigated a potential increased risk of stroke associated with Pfizer-BioNTech's updated COVID-19 vaccine in adults ≥ 65 years old after a preliminary safety signal was detected in one safety monitoring system, the Vaccine Safety Datalink (VSD). Other safety monitoring systems have not observed similar signals, and the current evidence does not support the existence of a safety issue.⁷⁵ FDA and CDC will continue to evaluate data as they are available and update the public as needed.⁷⁶
- Are COVID-19 vaccines safe and effective?
 - The CDC resource on [Ensuring COVID-19 Vaccine Safety in the U.S.](#) relays information on the effectiveness of COVID-19 vaccines at providing protection from serious illness, hospitalization, and death. Vaccination remains the safest strategy for avoiding severe outcomes of infection.⁷⁸ Serious side effects that could cause a long-term health problem are extremely rare following any vaccination, including COVID-19 vaccination.⁷⁹ CDC, FDA, and other federal agencies continue to monitor the safety of COVID-19 vaccines.
- What are the side effects of the updated (bivalent) COVID-19 vaccines?
 - Reactions reported after getting an updated COVID-19 vaccine were similar to those after the two-dose or single-dose primary shots. Most side effects were mild to moderate. The most commonly reported side effects were fever, headache, fatigue and pain at the injection site.⁸⁰



- Why is CDC recommending COVID-19 vaccines for children if myocarditis is a potential adverse event?
 - The known risks of COVID-19 illness and its related, possibly severe complications, such as long-term health problems, hospitalization, and even death, far outweigh the potential risks of having a rare adverse reaction to vaccination, including the possible risk of myocarditis or pericarditis.⁷⁷

Inaccurate vaccine information themes that may impact vaccine confidence

- Some social media users believe that the symptoms following COVID-19 vaccination are more severe than the symptoms of COVID-19 infection.⁸¹
- Some social media users believe the updated COVID-19 vaccines will cause severe adverse events including heart attack, ischemic stroke, and other claims made by the popular anti-vaccine film *Died Suddenly*.^{60,66,67,82,83}

Ways public health and partners can take action to improve vaccine confidence

- Address any lingering questions and concerns that the public may have about Damar Hamlin's collapse (as well as similar narratives regarding other athletes or celebrities) and continue to share accurate information with the public when available.
- Provide easy-to-read clinical findings demonstrating the safety of all U.S approved vaccines and the rarity of potential adverse events.
- Promote positive vaccine experiences, emphasize vaccine safety, and communicate the rarity of severe adverse events from the updated COVID-19 vaccines.

Continuing and Evolving Themes



Consumers continue to experience pandemic fatigue

Consumer concerns about the safety of COVID-19 vaccines for the elderly, immunocompromised, and those with high-risk conditions continue to play a role in vaccine hesitancy among these groups.⁸⁴ Vaccination uptake for the updated (bivalent) COVID-19 vaccine—initially recommended in September 2022—remains low when compared to completion of the primary series.⁸⁵ As of May 2023, 84.3% of adults and 32.9% of children have completed their COVID-19 vaccine primary series; however, only 29% of adults and 7.2% of children have received the updated COVID-19 vaccine and are considered up to date in their protection against COVID-19.⁸⁶ Low trust in medical institutions, government, and masking effectiveness, decreased use of non-pharmaceutical interventions, and perceived COVID-19 ineffectiveness may be contributing to pandemic fatigue.^{87,88,89,90} Lastly, both politicians and social media users continue to assert the COVID-19 pandemic is over.^{91,92,93}

COVID vaccine fatigue: Study explores why many are refusing booster shots

COVID burnout may be very real as declining vaccinations reflect a lack of trust, researchers found

By **Melissa Rudy** · Fox News



Ways public health and partners can take action to improve vaccine confidence

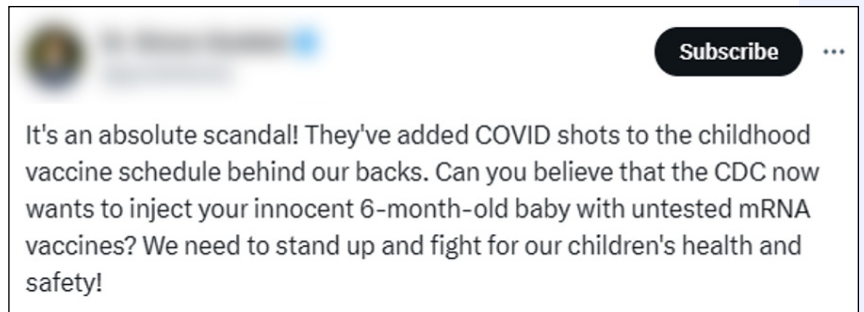
- Continue to amplify messages about how COVID-19 vaccines function.
- Collaborate with trusted messengers to explain the benefits of the updated COVID-19 vaccines while addressing questions, concerns, and inaccurate health information discouraging vaccine uptake.
- Continue to research the safety and effectiveness of the updated COVID-19 vaccine in humans and publish data as soon as it is available.



Consumers and social media users continue to have questions and concerns about COVID-19 vaccination in children

Research continues to support evidence that COVID-19 vaccines are safe and effective for children.⁹⁴ In an effort to provide guidance and maintain population protection, COVID-19 vaccines have been added to the recommended childhood vaccination schedule.^{95,96} In response, some parents and vaccine skeptics took to social media to express their anger and opposition to this

decision due to their concerns about vaccine safety as well as the misperception that COVID-19 vaccines would now be required for children.^{97,98,99} According to Google Trends analysis, search interest related to the childhood immunization schedule was actually eclipsed by search interest in the World Health Organization's updated vaccination recommendations, which categorized children and adolescents as low risk and therefore lower priority for additional COVID-19 booster doses.^{100,101} Some vaccine-skeptical consumers felt WHO's revised guidelines confirmed their previously held beliefs that vaccinating children against COVID-19 was not supported by science or evidence-based policy.^{102,103}



Ways public health and partners can take action to improve vaccine confidence

- Continue to support research into the safety and effectiveness of COVID-19 vaccines.
- Continue to support provider COVID-19 vaccine recommendations for pediatric patients.
- Continue to create communications products emphasizing the importance of COVID-19 vaccines in all children.



Consumers have questions and concerns about the FDA's proposed plan for annual COVID-19 booster doses

Social media and Google Trends data indicate that consumers continue to have questions about whether newer COVID-19 vaccines would be made available to replace the current bivalent formulations and how often they should vaccinate against COVID-19.^{104,c} As part of an effort to simplify COVID-19 vaccination guidelines, in January 2023 the FDA outlined their proposed plan to make COVID-19 booster doses available annually each fall, similar to the approach used for influenza vaccines.¹⁰⁵ This recommendation was questioned by some social media users and vaccine experts, who expressed uncertainty as to whether annual COVID-19 vaccination is appropriate based on the available data.^{105,106} Other users who are vulnerable to COVID-19 voiced dissatisfaction with the plan, indicating that they would prefer having an option to receive a COVID-19 booster dose more frequently than once per year.¹⁰⁷ Some consumers with low vaccine confidence took to social media to discourage others from receiving additional COVID-19 vaccines, feeling that annual COVID-19 vaccination is the next step in a long-term plan motivated by profit and social control.^{108,109} The reporting period also saw consumers sharing positive experiences with receiving an updated COVID-19 booster dose as a way to counteract anti-vaccine rhetoric on social media.^{110,111}

Ways public health and partners can take action to improve vaccine confidence

- Create or disseminate materials communicating information about the current and future guidelines regarding the availability and timing for receiving an updated COVID-19 dose.
- Partner with healthcare workers and local community leaders to craft and disseminate messages about reasons eligible individuals should receive the updated COVID-19 vaccine.
- Create venues or mechanisms to hear and respond to communities' questions and concerns, such as town halls, hotlines, and social media.

Other Continuing and Evolving Themes

Lab leak theory

On February 26, 2023, the U.S. Department of Energy stated with "low confidence" that they now believe that the COVID-19 pandemic was caused by a laboratory leak in Wuhan, China.¹¹² Soon after, the U.S. House Select Subcommittee

on the Coronavirus Pandemic held a hearing on "Investigating the Origins of COVID-19" on March 8, 2023.¹¹³ These news stories reignited debate about the hypothesized origins of the virus, as many social media users believe that COVID-19 originated from a laboratory in Wuhan, China,^{114,115,116} while many public health experts have asserted SARS-CoV-2 has zoonotic origins.^{117,118,119} (It should also

Lab Leak Most Likely Caused Pandemic, Energy Dept. Says

The conclusion, which was made with "low confidence," came as America's intelligence agencies remained divided over the origins of the coronavirus.



be noted that these theories are not necessarily mutually exclusive.) Government agencies remain divided on this issue, with two agencies (including the Department of Energy) indicating support for the lab leak hypothesis, four agencies concluding that COVID-19 emerged through natural transmission from animals to humans, and two agencies that are still undecided.¹¹² Discussions about the origins of SARS-CoV-2 are likely to reinforce vaccine skepticism and distrust of public health among individuals with low vaccine confidence, so it is important to frame these discussions with appropriate context whenever possible.

Renewed debate about masking

The reporting period included renewed debate about the effectiveness of mask wearing in reducing the transmission of COVID-19 following the publication of a meta-analysis review by Cochrane Library. Initial editorial commentary¹¹³ of the Cochrane review coupled with inaccurate statements from one of its lead authors¹¹⁴ resulted in confusion among the public and led many to assert that masks don't work, a claim which is not supported by the review itself.¹¹⁵ Cochrane Library subsequently released a statement in an effort to reduce the widespread misinterpretation of these findings.¹¹⁶

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Note: omitted numbers are social media citations, which can be found in [this online document](#).

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Appendix: Inputs and Sources

Social Media Listening & Media Monitoring Data Sources

Input	Cadence	Sources	Tactics for Utilization
Communication Surveillance Report	Daily on weekdays	<ul style="list-style-type: none"> Google news Meltwater CrowdTangle Native platform searches 	<ul style="list-style-type: none"> Share of voice topic analysis to identify themes Emerging topics
Meltwater	Daily	<ul style="list-style-type: none"> Facebook, Twitter, Instagram Blogs News media Online forums 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Sprout Social Native OADC (Office of the Associate Director of Communication) account analytics 	<ul style="list-style-type: none"> Analyze # of posts, topics Success of messages, # of impressions, reach, # engagements
OADC Channel Comment Analysis	Daily on weekdays	<ul style="list-style-type: none"> Native platform searches 	<ul style="list-style-type: none"> Sentiment analysis Identify message gaps/voids

Direct Report Data Sources

Input	Cadence	Sources	Tactics for Utilization
CDC-INFO Metrics	Weekly	<ul style="list-style-type: none"> CDC-INFO inquiry line list Prepared response (PR) usage report 	<ul style="list-style-type: none"> Cross-compare PR usage with inquiry theme analysis Sentiment analysis Identify information gaps/voids
VTF Media Requests	Weekly	<ul style="list-style-type: none"> Media request line list 	<ul style="list-style-type: none"> Leading indicator for news coverage Identify information gaps/voids
Web Metrics	Weekly	<ul style="list-style-type: none"> Top pages Google search queries Top FAQs Referring domains 	<ul style="list-style-type: none"> Identify information gaps/voids, Identify keywords/search terms, changes in web traffic



Research and Literature Data Sources

Input	Cadence	Sources	Tactics for Utilization
Poll Review	Weekly	<ul style="list-style-type: none"> ▪ Harris Poll, PEW research, Gallup Poll, KFF, Annenberg Public Policy Center ▪ New data related to vaccine hesitancy 	<ul style="list-style-type: none"> ▪ Identify socio-behavior indicators related to motivation and intention to vaccinate
Literature Review	Weekly	<ul style="list-style-type: none"> ▪ PubMed, LitCovid, ProQuest Central, Altmetric ▪ New data related to vaccine hesitancy 	<ul style="list-style-type: none"> ▪ Identify current vaccination intention ▪ Identify barriers to vaccination

Third Party Report Data Sources

Input	Cadence	Sources	Tactics for Utilization
Tanaq Social Listening +Media Monitoring Report	Weekly	<ul style="list-style-type: none"> ▪ Meltwater ▪ Sprout Social ▪ First Draft ▪ Native platform searches 	<ul style="list-style-type: none"> ▪ Trending topics ▪ Demographic and geographic conversation monitoring
Washington St. Louis iHeard	Weekly	<ul style="list-style-type: none"> ▪ Proprietary methods 	<ul style="list-style-type: none"> ▪ Survey results ▪ Emerging threats and data deficits ▪ Vaccine narratives
Project VCTR	Weekly	<ul style="list-style-type: none"> ▪ Proprietary methods 	<ul style="list-style-type: none"> ▪ National and regional trends in negative attitudes toward vaccination ▪ Conversations around Legislation