

State of Vaccine Confidence Insights Report

Report 28 | October 10, 2022

Date Range: May 3 – May 31, 2022



Summary

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

Consumers continue to express their concerns about actual and potential COVID-19 vaccine side effects.

Continuing and evolving themes that may impact vaccine confidence:

- Consumers continue to express their lack of concern about COVID-19 despite rising cases and over 1 million dead Americans.
- Parents continue to express concern and hesitation regarding COVID-19 vaccination for children.

Emerging Misinformation Theme Affecting Vaccine Confidence:

- Consumers have questions about the relationship between COVID-19 vaccines and monkeypox.

Ways public health and partners can take action.

- Clarify the benefits of COVID-19 vaccines, including boosters, in preventing severe disease.
- Work with community members and trusted messengers to create and disseminate messages that explain that some side effects are normal and expected. If a vaccinated individual gets COVID-19, vaccination will increase the chances that it is a mild case.
- Develop and amplify messages explaining why vaccines are still important in the COVID-19 prevention response.
- Disseminate messages about community-level risk and corresponding COVID-19 mitigation measures.
- Encourage local health departments, public health experts, and healthcare workers to explain the absence of association between COVID-19 vaccines and monkeypox.
- Utilize proper risk communication strategies when communicating about monkeypox, including tailored communication with trusted messengers that explain both what is known and what is not known about the spread and outcomes of monkeypox infection.

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 address the issues raised in this report: <https://centersfordiseasecontrol.sharefile.com/d-s085b6a2566b04a23bc3f142f2006199f>

SPECIAL UPDATE: CDC partners can now report vaccine rumors directly to CDC. To report a rumor, go to: www.cdc.gov/report-rumors and 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.

- 3 [Major Theme Impacting Vaccine Confidence](#),
- 4 [Consumers continue to express their concerns about actual and potential COVID-19 vaccine side effects.](#)
- 5 [Continuing and Evolving Themes Impacting Vaccine Confidence](#)
- 5 [Concern about COVID-19 despite rising cases and 1 million dead Americans.](#)

- 7 [Parents continue to express concern and hesitation regarding COVID-19 vaccination in children.](#)
- 9 [Emerging Misinformation Theme Affecting Vaccine Confidence](#)
- 9 [Consumers have questions about the relationship between COVID-19 vaccines and monkeypox.](#)
- 10 [Appendix: Inputs and Sources](#)

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).





CS000000-A | 10/7/22




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

Aims and Methods

By rapidly reviewing and analyzing numerous sources and inputs (see Appendix), the COVID-19 State of Vaccine Confidence Insights Report emphasizes major themes influencing COVID-19 vaccine hesitancy and uptake. 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, the social processes, and the practical issues around vaccination, the Insights Report seeks to identify emerging issues of misinformation, disinformation, and places where intervention efforts can improve vaccine confidence across the United States.

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

How do you classify this theme/information?			
High risk	Moderate risk	Low risk	Positive sentiment
			
<ul style="list-style-type: none"> 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 Theme Impacting Vaccine Confidence^{a,b}

Consumers continue to express their concerns about actual and potential COVID-19 vaccine side effects.

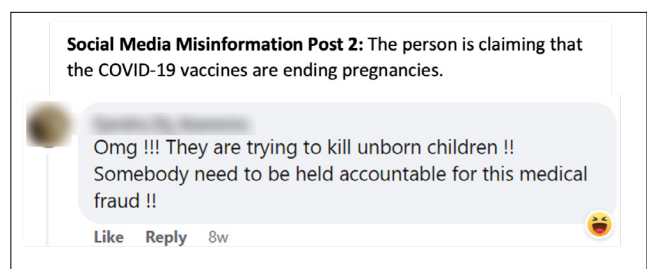
Although some side effects from COVID-19 vaccines are normal and expected,¹ concern about adverse events and long-term effects from the vaccine keep many from seeking COVID-19 vaccination.^{2,3} On May 5, 2022, the FDA limited the authorized use of the Janssen COVID-19 Vaccine to individuals ages 18 years and older for whom other authorized or approved COVID-19 vaccines are not accessible or clinically appropriate, and to individuals ages 18 years and older who elect to receive the Janssen COVID-19 vaccine because they would otherwise not receive a COVID-19 vaccine.⁴ This decision spurred online conversations discussing the perceived lack of effectiveness of all COVID-19 vaccines, further discouraging vaccine uptake.^{5,6,7}

Perceptions, Concerns, and Threats to Vaccine Confidence

- Hepatitis.** Some consumers are concerned that rising hepatitis cases in children are caused by COVID-19 vaccines.^{8,9,10} Although CDC includes COVID-19 vaccination in its potential cause hypothesis, COVID-19 vaccines have been ruled out because many children were too young to be eligible for vaccination at the time of rising cases.^{11,12}
- Myocarditis.** Although COVID-19 vaccine-related myocarditis is much lower for children than teens,¹³ personal anecdotes¹⁴ and reports of hospitalization¹⁵ following myocarditis continue to negatively impact vaccine confidence.^{16,17,18} CDC and its partners are actively monitoring reports of myocarditis and pericarditis after COVID-19 vaccination and CDC gives regular public updates about the risks of myocarditis and pericarditis after mRNA vaccination, predominantly in adolescents and young adult males within several days after COVID-19 vaccination.¹⁹
- One CDC study found that “the incidence of cardiac outcomes after mRNA COVID-19 vaccination was highest for males aged 12–17 years after the second vaccine dose; however, within this demographic group, the risk for cardiac outcomes was 1.8–5.6 times as high after SARS-CoV-2 infection than after the second vaccine dose.”²⁰ Another study “found that the risk for cardiac complications was significantly higher after SARS-CoV-2 infection than after mRNA COVID-19 vaccination for both males and females in all age groups.”²¹
- Vaccine-acquired Immune Deficiency Syndrome and HIV.** Online rumors continue to spread stating that COVID-19 vaccines cause vaccine-acquired immune deficiency syndrome (VAIDS) and HIV.^{22,23,24} The [State of Vaccine Confidence Report #24](#) detailed the evolution of the VAIDS narrative to concerns about HIV. Social media users are further bolstering this false claim, using it as a rationale to resist vaccination.^{25,26} However, there is no association between COVID-19 vaccines and risk for HIV infection.²⁷
- Impaired Immunity.** Some social media users are sharing a pre-print manuscript of a study that has not been peer-reviewed²⁸ claiming that mRNA vaccines harm long-term immunity.^{29,30} Due to this and other safety concerns, some social media users are claiming vaccines do more harm than infection-induced immunity.^{31,32} CDC maintains COVID-19 vaccination causes a more predictable immune response than infection with the virus that causes COVID-19. Getting a COVID-19 vaccine gives most people a high level of protection against COVID-19-related complications, hospitalizations, and deaths.³³



Fertility, reproductive health, and lactation. Some consumers are hesitant to get the COVID-19 vaccine due to fear of long-term effects on fertility,^{34,35} lactation,³⁶ and pregnancy.^{37,38} Additionally, social media users are concerned about the effects vaccine can have on fetuses.^{39,40,41} Many studies have shown that COVID-19 vaccines are safe for people who would like to have a baby and carry no long-term effects on female reproductive systems.^{42,43,44}



^aCitations in this report are illustrative examples and are not the total number of instances of the corresponding themes

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

Identified misinformation themes that may impact vaccine confidence^c

- Some consumers believe that the COVID-19 side effects listed in released Pfizer documents⁴⁵ prove Pfizer lied about the number of Pfizer-BioNTech COVID-19 vaccine-related adverse events,⁴⁶ engaged in fraudulent and dishonest vaccine research,^{47,48} and this vaccine has negative impacts on fertility, pregnancy, and lactation.^{49,50}

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

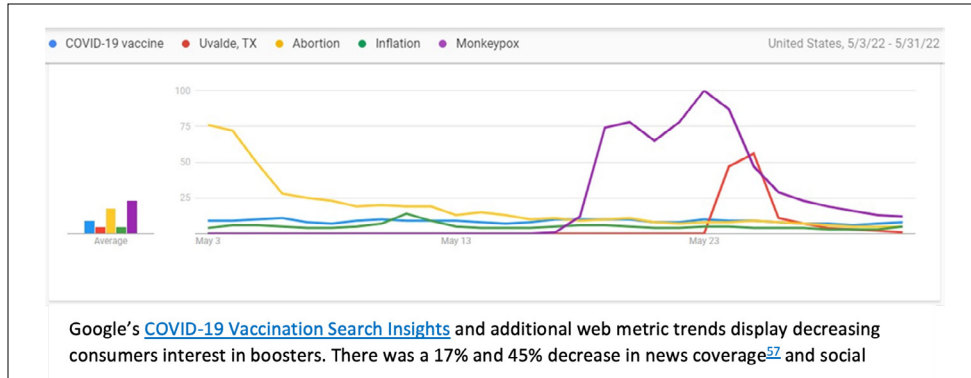
- Clarify the benefits of COVID-19 vaccines, including boosters, in preventing severe disease.
- Work with community members and trusted messengers to create and disseminate messages that explain that some side effects are normal and expected. If a vaccinated individual gets COVID-19, vaccination will increase the chances that it is a mild case.
- Disseminate messages debunking circulating misinformation when the misinformation persists or it has a high potential to impact vaccination uptake in your community. Craft messages that use these [evidence-based messaging strategies](#) such as:
 - For XYZ to occur, these are the plausible biological mechanisms that would be required, and this is why that is not likely.
 - It is not possible for the vaccines to cause XYZ because of this reason.
 - We looked into XYZ by reviewing DATA SOURCE A and DATA SOURCE B, and we didn't find it.
 - We know what could cause XYZ and it is CAUSE, not the vaccine.
 - There is no evidence that XYZ is true.
- Encourage healthcare workers and public health officials to be transparent about possible vaccine side effects (myocarditis, fever, body aches, etc.). Similarly, create communications materials showing the lack of evidence that COVID-19 vaccines are associated with AIDS, hepatitis, impaired immunity, and long-term effects on fertility, pregnancy, and lactation.

^cAll social media posts that are used as citations in the identified misinformation sections for this report can be found [online through this link](#).

Continuing and Evolving Themes Impacting Vaccine Confidence

The themes below have been noted in previous reports and continue to undermine vaccine confidence. The information highlighted below focuses on what is new or different from previous reports. For additional context and previous recommendations on these themes, see previous [Insights Reports](#).

Consumers continue to express their lack of concern about COVID-19 despite rising cases and 1 million dead Americans.



CDC's COVID Data Tracker⁵¹ indicates a peak of approximately 157,329 daily new infections during this reporting period on May 31, 2022. Although current cases are a fraction of the peak daily new infection during the Omicron wave (daily cases exceeded 800,000),⁵² CDC COVID-19 Community Levels for more than 55% of the population were in a 'medium' or 'high' designation.⁵³

Online discussions of current vaccine efficacy against dominant variants may be due to reports of waning COVID-19 vaccine-acquired immunity,^{54,55} breakthrough infection and death,⁵⁶ and research supporting such claims.⁵⁷ Despite increasing numbers of cases⁵⁸ and domestic COVID-19-attributed deaths surpassing 1 million individuals,^d general consumer awareness and concern regarding SARS-CoV-2 is at the lowest point since July 2021. Google searches related to the COVID-19 vaccine during this reporting period remained low relative to other topics such as Uvalde, TX, and monkeypox.^e According to a Meltwater trends analysis, there was a 17% decrease in news coverage and 45% decrease in social media mentions of COVID-19 vaccines.^f Recent polling indicates fewer than a third of domestic consumers report being "somewhat" or "very" worried about contracting COVID-19.⁵⁹

Additionally, sources indicate vaccine uptake plateauing,^g as of May 31, 2022, COVID Data Tracker reported that 77.9% of people had received at least one shot⁶⁰ and 66.7% were fully vaccinated.⁶¹ Reported intention to vaccinate maintains a similarly consistent cadence since approximately August 2021.^{c,62,63}

The FDA⁶⁴ and CDC⁶⁵ strengthened recommendations and expansion of booster eligibility. This did not positively impact Google searches, which showed a decreasing interest in booster information, from a recent peak at the end of March 2022.^{66,67}

Perceptions, Concerns, and Threats to Vaccine Confidence

- Competing national events,⁶⁸ continued rollback of mitigation measures,⁶⁹ and consistently decreasing coverage from social media, news media, and political sources^{70,71,72} may lessen the frequency and impact of COVID-19-specific information for consumers.

^dTanaq Social Listening Report

^e[Google Trends](#)

^f[Meltwater](#)

^gHHS CET Wave 63

- Consumers question the effectiveness of COVID-19 vaccines⁷³ as stories of breakthrough infections persist.^{74,75} Moreover, reports of vaccines' decreased efficacy against new dominant variants⁷⁶ and waning vaccine immunity^{77,78} appear to negatively impact consumer confidence in COVID-19 vaccines⁷⁹ and pharmaceutical brands.⁸⁰
- Online consumers continue to question whether testing⁸¹ and wastewater surveillance methods are effective or accurate.^{82,83}

Commonly asked questions and queries from the public^h

- With reports of high rates of cases and previous infection,^{84,85} is it still necessary to receive a primary series of a COVID-19 vaccine or a booster dose?
 - COVID-19 vaccines are effective at protecting you from severe outcomes and death from the virus that causes COVID-19, even if you have had COVID-19 in the past.⁸⁶ Vaccination is an important tool to help us get back to normal.⁸⁷
- Should masks still be worn in indoor public places?⁸⁸
 - When making decisions about community-level and individual-level prevention strategies, health officials, stakeholders and individuals might consider using the CDC's COVID-19 Community Levels approaches within their local context. Layered prevention strategies, such as staying up to date with vaccines, screening and testing in high-risk settings, improving ventilation, and wearing masks, can help limit severe disease and reduce the potential for strain on the healthcare system. CDC recommends using county [COVID-19 Community Levels](#) to help determine which COVID-19 prevention measures to use for individuals and communities. COVID-19 Community Levels do not apply in healthcare settings like hospitals and nursing homes. Healthcare settings are recommended to continue to follow CDC's infection prevention and control recommendations for healthcare workers.⁸⁹
- Should masks^{90,91} and vaccines^{92,93} still be utilized as personal mitigation measures when traveling?
 - COVID-19 vaccines help your body develop protection from the virus that causes COVID-19. Although vaccinated people sometimes get infected with the virus that causes COVID-19, [staying up to date](#) on COVID-19 vaccines significantly lowers the risk of getting very sick, being hospitalized, or dying from COVID-19. CDC recommends that everyone who is eligible get a booster and [stay up to date on their COVID-19 vaccines](#), especially [people with weakened immune systems](#).⁹⁴
 - Layered prevention strategies — like staying up to date with vaccines and wearing masks — can help prevent COVID-19 and reduce the potential for strain on the healthcare system. Wear a mask with the best fit, protection, and comfort for you.⁹⁵
 - Mask use recommendations are available [here](#).

Identified misinformation themes that may impact vaccine confidence

- Some consumers believe that natural immunity is superior to vaccine-induced immunity despite the health risks associated with getting SARS-CoV-2.⁹⁶
- Some social media users state that the efficacy of the Pfizer vaccine is only between 1 and 12 percent at preventing illness⁹⁷ while leaving out the additional context that the vaccine-acquired immunity decreases with time, the vaccines are less effective against some variants of SARS-CoV-2, and, most importantly, the vaccine provides protection against severe illness.⁹⁸
- Some social media users believe SARS-CoV-2 is the same as influenza.⁹⁹
- Some social media users believe COVID-19 vaccines are causing a surge in the number of COVID-19 cases.¹⁰⁰

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

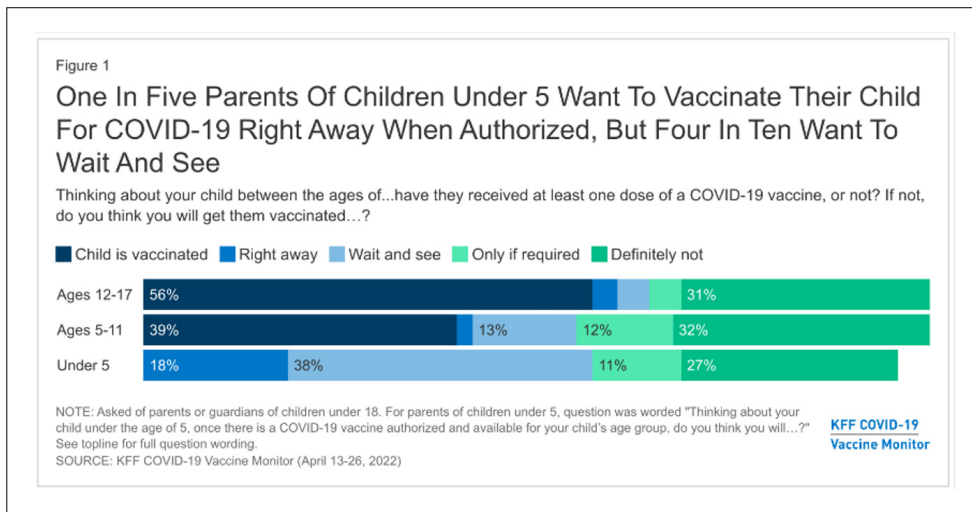
- Develop and amplify messages explaining why vaccines are still important in the COVID-19 prevention response.
- Disseminate messages about community-level risk and corresponding COVID-19 mitigation measures.
- Continue to encourage vaccinations and staying up to date with vaccine boosters by suggesting employers offer time off to get vaccines and recover from side effects.
- Monitor and update the public on the COVID-19 vaccines' effectiveness against variants and communicate any concerns in real time.
- Create messages that encourage people who are vaccinated to support their friends and family to get the COVID-19 vaccines.

^hThese questions come from online data sources such as social media, news stories, Google Trends, and CDC-INFO

Parents continue to express concern and hesitation regarding COVID-19 vaccination in children.

As of June 18, 2022, everyone 6 months and older is recommended to get a Moderna or Pfizer-BioNTech COVID-19 vaccine. On May 17, 2022, the FDA amended the emergency use authorization for the Pfizer-BioNTech COVID-19 Vaccine, authorizing a single booster dose for children ages 5-11 years at least five months after completion of a primary series with the same vaccine.¹⁰¹ The FDA committee that reviews and evaluates data concerning the safety, effectiveness, and appropriate use of vaccines, VRBPAC (Vaccines and Related Biological Products Advisory Committee), meet on June 14–15, 2022 to discuss the emergency use authorization of COVID-19 vaccines in this age.¹⁰² On June 17, 2022, the Advisory Committee on Immunization Practices (ACIP) issued interim recommendations for use of the Moderna COVID-19 vaccine in children ages 6 months to 5

years and the Pfizer COVID-19 vaccine for use in children ages 6 months to 4 years.¹⁰³ Some parents have expressed enthusiasm and relief about childhood vaccination.^{104,105,106} However, a recent Kaiser Family Foundation (KFF) poll found that only 18% of parents with children younger than 5 years will get their child vaccinated right away, while 38% say they plan to wait and see how the vaccine is working for others, 27% say they will definitely not get their child vaccinated, and 11% say they will only do so if they are required.^{107,108}



Perceptions, Concerns, and Threats to Vaccine Confidence

- Concerns about side effects, such as myocarditis, may negatively impact vaccine uptake.^{109,110}
- Some consumers believe vaccines are unnecessary because COVID-19 rarely affects this group.^{111,112}
- Some believe infection-induced immunity protects children better than vaccines.^{113,114}
- Some social media users do not think there is enough data to support vaccination against COVID-19 in children.^{115,116,117}
- With cases of hepatitis in children rising globally, some believe they are caused by COVID-19 vaccines.^{118,119,120}
- Some are concerned that immunity from vaccines decreases rapidly in adolescents.^{122,123}

Commonly asked questions and queries from the public

- Should children under the age of 5 years still wear masks?ⁱ
 - Wearing a well-fitting mask or respirator consistently and correctly reduces the risk of spreading the virus that causes COVID-19. At a high COVID-19 Community Level, universal indoor masking in schools and ECE programs is recommended, as it is in the community at-large. Schools with students at risk for getting very sick with COVID-19 must make reasonable modifications or accommodations when necessary to ensure that all students, including those with disabilities, are able to access in-person learning. Because mask use is not recommended for children ages younger than 2 years and may be difficult for very young children or for some children with disabilities who cannot safely wear a mask, ECE programs and K-12 schools may need to consider other prevention strategies—such as improving ventilation and avoiding crowding—when the COVID-19 Community Level is medium or high or in response to an outbreak. K-12 schools or ECE programs may choose to implement universal indoor mask use to meet the needs of the families they serve, which could include people at risk for getting very sick with COVID-19.¹²⁴
- Is the COVID-19 vaccine the cause of recent hepatitis cases in children?^d
 - There is no evidence that COVID-19 vaccine causes hepatitis.¹²⁵ CDC continues to examine possible causes, including testing for and ruling out some of the viruses that commonly cause hepatitis (hepatitis A, B, C, D, and E). Adenovirus has been detected in nearly half of the children and continues to be investigated as a candidate for the underlying cause. Further laboratory tests are being conducted to look more closely at the virus genome and other potential pathogens, such as

SARS-CoV-2. In addition, CDC is communicating with key medical groups and continues to provide updated reporting and laboratory guidance for clinicians who may identify hepatitis of unknown cause in children.¹²⁶

- When will vaccines be available for children ages 5 years and younger?^d
 - As of June 18, 2022, everyone ages 6 months and older is recommended to get a Moderna or Pfizer-BioNTech COVID-19 vaccine.¹²⁷

Identified misinformation themes that may impact vaccine confidence

- Some social media users believe authorizing vaccines in children is only a ploy for pharmaceutical companies to make money.¹²⁸
- Some social media users claim that COVID-19 cases in children are always mild.^{129,130,131} w

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

- Encourage primary care providers and other medical professionals who care for children to explain the benefits of COVID-19 vaccination to parents and guardians.
- Develop communications materials detailing the benefits of vaccination compared to infection-induced immunity.
- Clarify the absence of an association between hepatitis and COVID-19 vaccines.

Emerging Misinformation Theme Affecting Vaccine Confidence

Consumers have questions about the relationship between COVID-19 vaccines and monkeypox.

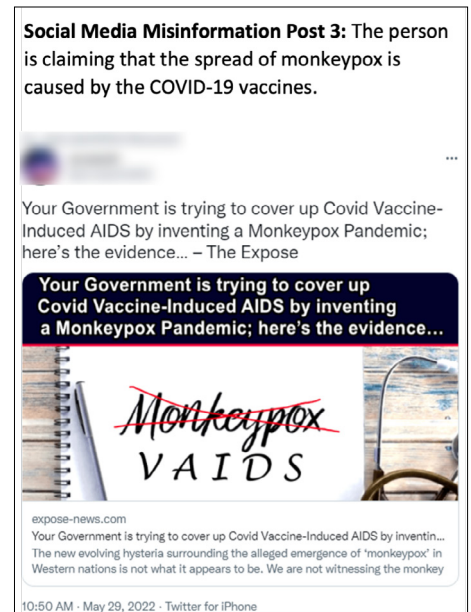
On May 18, 2022, a U.S. resident tested positive for monkeypox after returning to the United States from Canada.¹³² As of September 14, 2022, the CDC reports 24,846 confirmed cases of monkeypox with cases in every state.¹³³ Monkeypox virus is a completely different virus than the viruses that cause COVID-19 or measles.¹³⁴

Perceptions, Concerns, and Threats to Vaccine Confidence

- Some consumers believe there is a link between COVID-19 vaccines and monkeypox.^{135,136}

Commonly asked questions and queries from the public

- Who is at risk for monkeypox?^d
 - Data suggest that gay, bisexual, and other men who have sex with men make up the majority of cases in the 2022 monkeypox outbreak. However, monkeypox can spread to anyone through close, personal, often skin-to-skin contact. Anyone who has been in close contact with someone who has monkeypox is at risk.¹³⁷
- How do I know if I have monkeypox?^d
 - People with monkeypox can get a rash that may be located on or near the genitals (penis, testicles, labia, and vagina) or anus (butthole) and could be on other areas like the hands, feet, chest, face, or mouth.
 - The rash will go through several stages, including scabs, before healing.
 - The rash can initially look like pimples or blisters and may be painful or itchy.
 - Other symptoms of monkeypox can include:
 - Fever
 - Chills
 - Swollen lymph nodes
 - Exhaustion
 - Muscle aches and backache
 - Headache
 - Respiratory symptoms (e.g., sore throat, nasal congestion, or cough)
 - You may experience all or only a few symptoms
 - Sometimes people have flu-like symptoms before the rash.
 - Some people get a rash first, followed by other symptoms.
 - Others only experience a rash.¹³⁸
- Are there any travel restrictions due to monkeypox? ^d
 - Recommendation for travelers:¹³⁹
 - If you have monkeypox symptoms or had close contact with someone who has monkeypox, talk to your healthcare provider. If you have symptoms, do not travel until you confirm that you do not have monkeypox.
 - If you have monkeypox and must travel:
 - Make sure that you do not have fever or respiratory symptoms such as sore throat, nasal congestion, or cough.
 - Cover your rash and wear a well-fitting mask.
 - Take additional steps to [prevent spread to others](#).
 - Visit <https://www.cdc.gov/poxvirus/monkeypox/travel/index.html> for the most up to date information.
- Is there a monkeypox vaccine? If so, will everyone need it?
 - Two vaccines may be used for the prevention of monkeypox disease:
 - JYNNEOS vaccine is approved for the prevention of monkeypox disease.
 - ACAM2000 vaccine was made available for use against monkeypox under an Expanded Access Investigational New Drug (EA-IND) protocol.¹⁴⁰
 - CDC recommends that the monkeypox vaccine be given within 4 days from the date of exposure in order to prevent onset of the disease. If given between 4–14 days after the date of exposure, vaccination may reduce the symptoms of disease, but may not prevent the disease.¹⁴¹



- Monkeypox PrEP should be offered to people with the highest potential for exposure to monkeypox such as:¹⁴²
- Gay, bisexual, and other men who have sex with men, transgender or nonbinary people who in the past 6 months have had
 - » A new diagnosis of one or more nationally reportable sexually transmitted diseases (i.e., acute HIV, chancroid, chlamydia, gonorrhea, or syphilis)
 - » More than one sex partner
- People who have had any of the following in the past 6 months:
 - » Sex at a commercial sex venue
 - » Sex in association with a large public event in a geographic area where monkeypox transmission is occurring
- Sexual partners of people with the above risks
- People who anticipate experiencing the above risks

Identified misinformation themes that may impact vaccine confidence

- Some social media users believe COVID-19 vaccines weaken the body's immune system, making vaccinated individuals more susceptible to monkeypox.^{143,144}
- Some social media users believe monkeypox is caused by COVID-19 vaccines.^{145,146}
- Some social media users believe monkeypox is being used to scare people now that COVID-19 is not seen as a threat.^{147,148}
- Some social media users believe pharmaceutical companies are attempting to create a monkeypox pandemic to increase company profits.^{149,150}

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

- Encourage local health departments, public health experts, and healthcare workers to explain the absence of association between COVID-19 vaccines and monkeypox.
- Utilize proper risk communication strategies when communicating about monkeypox, including creating tailored, effective communication with trusted messengers that explain both what is known and what is not known about the spread and outcomes of monkeypox infection.¹⁵¹
- Create and disseminate graphics through trusted messengers that show the difference in the structure of the virus particles and virions for the virus that causes monkeypox and the virus that causes COVID-19.

Appendix: Inputs and Sources

Type	Input	Cadence	Sources	Tactics for Utilization
Social Media Listening & Media Monitoring	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 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 Reports	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	Poll Review	Weekly	<ul style="list-style-type: none"> • Harris Poll, PEW research, Gallup Poll, KFF • 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 Reports	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
	CrowdTangle content insights report	Biweekly	<ul style="list-style-type: none"> • Facebook 	<ul style="list-style-type: none"> • Top pages (voices), groups • General trends/sentiment analysis • News analysis through posts
	University of 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
	Virality Project	Weekly	<ul style="list-style-type: none"> • Proprietary methods 	<ul style="list-style-type: none"> • Mis- and disinformation trends related to COVID-19 vaccine