

CDC's Monkeypox State of Vaccine Confidence Insights Report

October 5, 2022 | Date Range: May 21 – September 20, 2022



Summary

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

- Consumers have concerns and questions about the emergency response to monkeypox, including the availability, safety and effectiveness of the monkeypox vaccine.
- Consumers have foundational questions about monkeypox, including its origin, symptoms, how it spreads and if there is a vaccine for it.
- Consumers are concerned about the spread of monkeypox in the LGBTQ+ community and especially the impact the spread might have on this community, including increased stigma.

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

- Work with community partners and advocacy groups with a focus on sexual health, HIV, and sexually transmitted infections (STIs), and with members of the LGBTQ+ community to identify ways to reduce the stigma around monkeypox virus infection and discontent directed at the LGBTQ+ communities.
- Partner with government and nongovernment groups that have experience working on sexual health, HIV, and STIs to identify best practices for engaging and communicating with the LGBTQ+ community and reducing the stigma associated with monkeypox.
- Collaborate with healthcare workers and community leaders to craft tailored messaging about who is at risk for monkeypox.
- Clinical partners might consider requesting technical assistance from the CDC-funded [National Network of STD Clinical Prevention Training Centers](#) (NNPTC) to create a more inclusive clinical environment.

Publicly available resources to help address the themes identified in this report:

- Your Health (Consumer Basics) - <https://www.cdc.gov/poxvirus/monkeypox/your-health/index.html>
- Data - <https://www.cdc.gov/poxvirus/monkeypox/response/2022/index.html>
- Print Resources - <https://www.cdc.gov/poxvirus/monkeypox/resources/print.html>
- Graphics - <https://www.cdc.gov/poxvirus/monkeypox/resources/graphics.html>
- Social Media - <https://www.cdc.gov/poxvirus/monkeypox/resources/social-media.html>
- Videos - <https://www.cdc.gov/poxvirus/monkeypox/resources/videos.html>
- Reducing Stigma - <https://www.cdc.gov/poxvirus/monkeypox/resources/reducing-stigma.html>
- CDC Vaccine Performance: [The Rates of Monkeypox Cases by Vaccination Status](#)
- Stress and anxiety about monkeypox: [SAMSHA Tips to Reduce Stress and Anxiety](#)
- Vaccine Locator Widgets: [Find Vaccine Now monkeypox vaccine locator](#) and [BHOC Vaccine locator for the monkeypox vaccine](#)
- ASPR: [Monkeypox Vaccine Supply Strategy U.S. MPV Vaccine Supply Strategy as of October 11, 2022 \(hhs.gov\)](#)
- FDA Monkeypox One Pager: [Intradermal JYNNEOS Monkeypox Vaccine Fast Facts \(fda.gov\)](#)
- FDA Monkeypox Vaccine EUA: [Monkeypox Emergency Use Authorizations for Medical Devices | FDA](#)

SPECIAL UPDATE: CDC partners can now report vaccine related 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.

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

Aims and Methods

By rapidly reviewing and analyzing numerous sources and inputs (see [Appendix](#)), the “State of Vaccine Confidence Insights Report” emphasizes major themes influencing vaccine hesitancy and uptake. These are characterized by the level and type of impact on 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.

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^a



Theme 1: Consumers have concerns and questions about the emergency response to monkeypox, including the availability, safety, and effectiveness of monkeypox vaccines.

As cases of monkeypox continued to increase globally during this reporting period, questions and concerns regarding the vaccines and the overall response were also on the rise. A Meltwater analysis found 231,483 mentions of JYNNEOS and 61,135 mentions of ACAM2000 on social media and new stories, with mentions peaking on August 10, 2022.^b On August 9, 2022, the Food and Drug Administration (FDA) announced an emergency use authorization for intradermal administration of JYNNEOS vaccine, which expanded available doses by up to five-fold over the standard subcutaneous route of administration.¹ Inquiries pertaining to the safety of the monkeypox vaccines and their availability have been directed to healthcare professionals and CDC and are being discussed across social media outlets.^{2c} Further questions have arisen about the effectiveness of the smallpox vaccine against monkeypox, including questions about consumers who received the smallpox vaccine as a child.^{3,4,d} Consumers have also become concerned regarding the JYNNEOS vaccine's overall effectiveness and safety, given the spread of misinformation about monkeypox mixed with overall vaccine hesitancy from COVID-19 misinformation.^d

Perceptions, Concerns, and Threats to Vaccine Confidence

- 39% of respondents to an August YouGov poll (N = 997) believe the US government is very or somewhat prepared for another pandemic. Additionally, 65% of the same sample believe the US government is not doing enough in response to the monkeypox outbreak.⁵
- 56% of respondents to a Morning Consult survey (N = 4420) are very or somewhat confident in the CDC's ability to control the spread of the monkeypox virus in the US.⁶
- Consumers are concerned that because the JYNNEOS vaccine was authorized to be administered intradermally, they will experience more physical pain than that of other vaccines.^{7,8,9,17,18}
- Consumers are concerned that because the JYNNEOS vaccine was authorized to be administered intradermally, it will be less effective.^{10,11}
- Some consumers are concerned about the JYNNEOS vaccine being given in smaller doses and the limited safety data currently available.¹²
- Some social media users and public health experts, and the JYNNEOS vaccine manufacturer's CEO suggest intradermal administration could lead to decreased effectiveness and insufficient protection.^{13,14,15,16}
- Consumers are concerned about the safety of the JYNNEOS as it uses a live virus.^{19,20}
- Consumers have inquired about other safety measures to prevent the spread of the monkeypox virus, including masks, social distancing, and other precautions that were put in place during the COVID-19 pandemic.^d
- Consumers are confused about the effectiveness of the smallpox vaccine if they were given the dose as a child.^c
- Early in the outbreak of the monkeypox virus, some media sources misidentified the disease as a form of COVID-19. They are perpetuating the misnomer of "schlong COVID" as a new name for monkeypox in an attempt to discredit the WHO's and public health experts' attempts to destigmatize the name of the virus.^{21,22,d}



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

^bMeltwater

^cCDC-INFO

^dCDC-INFO

Commonly asked questions and queries from the public^e

- Does intradermal administration decrease the effectiveness or safety of the vaccine and what evidence exists to support this recommendation?
 - **Effectiveness:** There are currently no data from clinical trials that have evaluated the effectiveness of JYNNEOS against the monkeypox virus when administered intradermally or subcutaneously. It is also unclear what level of immune response someone is given by the vaccine that provides functional immunity against the monkeypox virus. There is some evidence that intradermal dosing will provide a similar immune response when compared to subcutaneous dosing, at least in the short term.²³
 - **Safety:** [This same article](#) goes on to state, “The FDA label for JYNNEOS describes its safety when it is given subcutaneously to people with HIV and CD4 cell counts of 200 per cubic millimeter or higher. On the basis of current knowledge, intradermal dosing can reasonably be expected to be similarly safe and immunogenic in this population, which is substantially overrepresented among people who have become infected with the monkeypox virus to date.”²⁴
 - Preliminary data released by the CDC on September 28, 2022, also provide cautious optimism as findings show that those who were eligible and did not receive the monkeypox vaccine were about 14 times as likely to become infected than those who did get the monkeypox vaccine. For those vaccinated, protection was seen as early as two weeks after their first vaccine dose. This is an example of real-world effectiveness of modern vaccines in the context of the current monkeypox outbreak.
- Does the smallpox vaccine received in childhood protect against the monkeypox virus?
 - Because the monkeypox virus is closely related to the virus that causes smallpox, the smallpox vaccine might offer some protection from the monkeypox virus. Past data from Africa suggest that the smallpox vaccine is at least 85% effective in preventing monkeypox.²⁵
 - However, it is not known how long a person might be protected following vaccination. Persons with a history of smallpox vaccination (for example, those that were vaccinated as a child and are now adults) should not rely on their childhood vaccination providing full protection against the monkeypox virus.
- Since this vaccine uses a live virus, is there a chance a person can become infected due to vaccination?
 - JYNNEOS is made using a weakened live vaccinia virus and cannot cause monkeypox or any other infectious disease.²⁶
 - ACAM2000 uses a live vaccine virus. ACAM2000 is made using a modified form of a related virus called vaccinia. After administration, the live vaccine virus is shed from the vaccination site and if appropriate care of the vaccination site is not done, it can spread the vaccinia virus to other parts of the body or to other people. Appropriate care of the vaccination site is required until it is completely healed, which may take four weeks or longer. This is particularly relevant if the individual receiving the vaccine comes into direct contact with people who may experience serious complications from vaccinia virus, such as immunocompromised or pregnant people.²⁷
- Does the monkeypox vaccine leave a scar?²⁸
 - **JYNNEOS:** A person is more likely to have redness and swelling at the injection site with intradermal vaccination; there may also be long-term discoloration or scarring at the injection site, especially for people with darker skin. Because of concern that intradermal injections could result in keloid scars (thick, raised scars that can be pink, red, or the same color or darker than the skin around them), the CDC recommends that people who have had keloid scars be given JYNNEOS subcutaneously. People with darker skin (more melanin), especially Black, Latino or Asian people, and people ages 20 to 30 are more likely to develop keloid scars. Vaccinators will ask people whether they have a history of keloid scars, and people who do will be offered a subcutaneous injection. JYNNEOS can also be offered at alternate injection sites, such as deltoid or sub-scapular. When considering these vaccination side effects, it is important to note that becoming infected with the monkeypox virus also has a high potential for scarring and permanent skin changes.²⁹
 - **ACAM2000:** If vaccination is successful, a red and itchy bump forms at the vaccination site in 2 to 5 days. Over the next few days, the bump will become a blister and fill with pus. During the second week, the blister dries up and a scab will form. The scab will fall off after 2 to 4 weeks, leaving a scar. The scar is known as a “take” and is one way a successful vaccination is evaluated. People vaccinated for the first time may have a larger reaction than those being revaccinated.³⁰
- Where can people find the monkeypox vaccine?
 - A person can use this monkeypox vaccine locator by entering their ZIP code to explore nearby healthcare locations providing monkeypox vaccines: <https://mpoxvaxmap.org/>

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

Identified misinformation themes that may impact vaccine confidence

- Some social media users are saying that the monkeypox virus is a side effect from COVID-19 vaccines.^{31,32,33}
- Some social media users are saying that COVID-19 vaccines weaken the body's immune system, making vaccinated individuals more susceptible to the monkeypox virus.^{34,35}
- Some social media users are saying that the monkeypox virus is being used to scare people now that COVID-19 is endemic.^{36,37}

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

- Work with community partners and advocacy groups that focus on sexual health, HIV and STIs in addition to members of the LGBTQ+ community to identify ways to reduce the stigma of the LGBTQ+ due to monkeypox virus infection and increase uptake of the vaccine.
- Partner with government and nongovernment groups that focus on sexual health, HIV and STIs to identify best practices for engaging and communicating with the LGBTQ+ community and reducing the stigma associated with the monkeypox virus.
- Work with community members to create, test, and disseminate messages that resonate with the populations at risk and clearly explain who is eligible for the vaccine.
- Local and state health departments should consider creating and directing people with questions to web pages that share up-to-date information.



Theme 2: Consumers have foundational questions about the monkeypox virus, including its origin, symptoms, how it spreads, and about the JYNNEOS vaccine.

Consumers have many questions about the monkeypox virus, including its origin,³⁸ symptoms,³⁹ how it spreads,^{40,41} how dangerous the monkeypox virus is, and whether there is a vaccine to prevent it.⁴² After the original case of the monkeypox virus was detected in the United States on May 19, 2022, some social media users shared the disease's origins being in a lab^{43,44} and questioned whether the disease was actually real.^{45,46} The public also has questions about how to tell if someone is infected with or showing symptoms of monkeypox virus infection,^{47,48} who is at risk of monkeypox virus infection,^{49,50} and how effective the smallpox and monkeypox vaccines are at preventing monkeypox virus disease.^{51,52}

The JYNNEOS vaccine is approved for the prevention of smallpox and monkeypox. It is the primary vaccine being used during this outbreak in the US. The ACAM2000 vaccine is an alternative to JYNNEOS. It has been made available for the prevention of monkeypox disease under an Expanded Access Investigational New Drug application (EA-IND) to help protect against smallpox and monkeypox.⁵³ Search queries related to “smallpox vaccine protect against monkeypox” was a breakout rising query between May and August.^f Some social media users are sharing their experiences with receiving the monkeypox vaccine^{54,55,56} while others are concerned about vaccine eligibility,⁵⁷ given preexisting conditions.^{58,59}

Perceptions, concerns, and threats to vaccine confidence

- A national University of Pennsylvania poll administered from July 12-18, 2022, found that 66% (N = 1,580) are not sure or do not believe there is a vaccine for the monkeypox virus.⁶⁰
- A July YouGov poll (N = 1,481) found that the share of US Americans who are somewhat or very concerned about a monkeypox epidemic in the US has risen from 34% to 45% since late May. The share who are very concerned increased from 7% to 13% in the July poll.⁶¹
- A Morning Consult survey (N = 1,621),⁶² and a Annenberg Public Policy Center survey⁶³ poll found that between 50-60% of respondents are concerned about monkeypox.
 - 64% of respondents to a Morning Consult Survey who identified as gay men were concerned about the monkeypox virus.
 - 38% of all respondents to a Morning Consult Survey wanted to get the monkeypox vaccine, and 58% of respondents who identified as gay men wanted to get the monkeypox vaccine.
- A recent MMWR⁶⁴ reported that 29% of the respondents to the annual American Men's Internet Survey (AMIS) unsuccessfully tried to get the vaccine, while 19% have received at least one dose. According to the MMWR, the sample included “a convenience sample of cisgender men in the United States who report sex with another man during the 12 months preceding the survey.”
- A POZ poll (N = 217) showed that 68% of respondents are concerned about contracting the monkeypox virus, while 33% of respondents are not.⁶⁵ POZ serves the community of people living with and those affected by HIV, although these findings might not reflect the opinions and experiences of all persons with HIV and the LGBTQ+ community.
- Some social media users are concerned about vaccine eligibility, especially if they have eczema or psoriasis.^{66,67,68}

Commonly asked questions and queries from the public

- What is the origin of the monkeypox virus, and what is the origin of this monkeypox virus outbreak?^{69,70}
 - Since early May 2022, cases of the monkeypox virus have been reported from countries where the disease is not endemic and continue to be reported in several endemic countries. Most confirmed cases with travel history reported travel to countries in Europe and North America rather than West or Central Africa, where the monkeypox virus is endemic. This is the first time that many monkeypox cases and clusters have been reported concurrently in non-endemic and endemic countries in widely disparate geographical areas.
 - Most reported cases so far have been identified through sexual health or other health services in primary or secondary healthcare facilities and have involved mainly, but not exclusively, gay, bisexual, and other men who have sex with men.⁷¹
- How is monkeypox transmitted?⁷²
 - The monkeypox virus is often transmitted through close, sustained physical contact, almost exclusively associated with sexual contact in the current outbreak.⁷³

^fGoogle Trends

- The monkeypox virus can spread to anyone through close, personal, skin-to-skin contact, including:
 - Direct contact with monkeypox rash, scabs, or body fluids from a person with monkeypox.
 - Touching objects, fabrics (clothing, bedding, or towels), and surfaces that have been used by someone with the monkeypox virus.
 - Contact with respiratory secretions.⁷⁴
- How is monkeypox infection treated?⁷⁵
 - There are no treatments specifically for monkeypox virus infections. However, because of genetic similarities in the viruses, antiviral drugs used to treat smallpox may be used to treat monkeypox infections.⁷⁶
- Can someone get monkeypox or smallpox from the vaccine since this vaccine uses a live virus?⁷⁷
 - The virus used in the vaccines is not derived from either the monkeypox or smallpox virus. They are made using vaccinia virus.⁷⁸
 - Although live attenuated vaccines replicate, they usually do not cause disease such as that caused by the wild form of the organism. When a live, attenuated vaccine does cause disease, it is usually much milder than the natural disease and is considered an adverse reaction to the vaccine.⁷⁹
- Is there a monkeypox vaccine?^{80,81}
 - Yes, the JYNNEOS vaccine is approved for the prevention of smallpox and monkeypox, and the ACAM2000 vaccine has been made available for the prevention of monkeypox disease under an EA-IND to help protect against smallpox and has been made available to prevent monkeypox.⁸²
- Where can I find the monkeypox vaccine?⁹
 - The Department of Health and Human Services (HHS) has been shipping doses of JYNNEOS vaccine to jurisdictions as part of an enhanced national vaccination strategy since late June. This strategy is intended to help limit the spread of monkeypox in communities where transmission is highest and with populations most at risk.
 - If you think you may be eligible for vaccination, contact a healthcare provider or your local health department. They can help you determine if you should get vaccinated.⁸³ A new community-developed monkeypox vaccine locator tool developed by Building Healthy Online Communities (BHOC) with public and private partners is available at MPOXvaxmap.org.⁸⁴

8/12/22 I do not need any information about covid. I have already been vaccinated. I would like some information about monkeypox. I am 59, I had the smallpox vaccine in the mid 60's and had the chickenpox virus in the late 60's. Does that provide any sort of protection against monkeypox?

Identified misinformation themes that may impact vaccine confidence

- Some social media users are saying that the monkeypox virus was created and released to increase pharmaceutical company profits.^{85,86}
- Some social media users are saying that the monkeypox virus was created and released to distract people from the failures of the current presidential administration or from COVID-19 vaccine side effects.^{87,88}
- Some social media users are saying that the monkeypox virus was created and released to decrease the global population.^{89,90,91}
- Some social media users are saying that the COVID-19 vaccine makes people more susceptible to monkeypox.⁹²
- Some social media users are saying that the monkeypox virus is a side effect of the COVID-19 vaccines.^{93,94}
- Some social media users are saying that the monkeypox virus evolution is a result of gain of function research.^{95,96,97}

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

- Work with community partners and trusted messengers to create and disseminate communications materials highlighting the difference between the COVID-19 pandemic and global monkeypox outbreaks.
- Collaborate with healthcare workers and community leaders to craft tailored messaging about who is at risk for the monkeypox virus.
- Advertise and offer a variety of vaccines at vaccination sites when offering the monkeypox vaccine.
- Work with community partners and trusted messengers to create messages that clarify vaccine eligibility requirements and provide information on vaccination site locations.
- Establish mobile clinics and information booths to provide accurate information and answer questions from the community face to face.
- Work with community partners and trusted messengers to ensure scientific updates are readily available to the community in multiple mediums.



Theme 3: Consumers are concerned about the spread of the monkeypox virus in the LGBTQ+ community and especially the impact the spread might have on this community, including increased stigma.

From the beginning of the global monkeypox virus outbreak in Europe, most cases have been detected primarily among gay, bisexual, and other men who have sex with men (MSM).⁹⁸ In the United States, CDC has reported that MSM make up the majority, but not all of cases in the current monkeypox virus outbreak.^{99,100} Some studies show that targeted health campaigns are necessary to address health inequities.^{101,102} However, many social media users are concerned that public health officials are increasing stigma toward the LGBTQ+ community by over-emphasizing the association between LGBTQ+ populations and the monkeypox virus without addressing knowledge gaps surrounding transmission, symptoms, and all at-risk groups.^{103,104} Additionally, addressing stigma early in the monkeypox virus outbreak is important to prevent a sense of complacency in other populations who may not pay attention to guidance if they believe the monkeypox virus does not affect them.¹⁰⁵ To some, the stigmatization of MSM,^{106,107} inaction from federal and state governments,^{108,109} and indifference from the public^{110,111} is reminiscent of the HIV pandemic.^{112,113}

Perceptions, concerns, and threats to vaccine confidence

- A July Morning Consult survey found that 64% (n = 64) of respondents who identified as a gay man and 60% (n = 107) who identified as a gay or bisexual man were very or somewhat concerned about the monkeypox virus.¹¹⁴
 - The same survey found that 89% (n = 90) of respondents who identified as a gay man and 75% (n = 137) who identified as a gay or bisexual man have seen, read, or heard a lot or some about an outbreak of the monkeypox virus in the US.
 - This survey found that 75% (n = 76) of respondents who identified as a gay man and 71% (n = 129) who identified as a gay or bisexual man were very or somewhat confident in CDC's ability to control the spread of the monkeypox virus in the US.
 - This survey also found that 58% (n = 59) of respondents who identified as a gay man and 55% (n = 99) who identified as a gay or bisexual man would get a monkeypox vaccine.
- Consumers and advocacy groups are concerned that the monkeypox virus will increase stigma towards the LGBTQ+ communities.¹¹⁵
- Some are concerned about the disproportionate impact of the monkeypox virus on Black and Latino LGBTQ+ communities,^{116,117} especially as news articles report on the disproportionate number of cases in these communities coupled with lower vaccine uptake.^{118,119,120,121}
- Some consumers perpetuate stigma against LGBTQ+ communities when discussing the spread and risk of getting the monkeypox virus.^{122,123}
- Although some news articles and opinion pieces the debate of the classification of the monkeypox virus as an STI, some believe this debate is a distraction or irrelevant,^{124,125,126} it continues to drive stigmatizing online conversations.^{127,128}
- To some, the stigmatization of the LGBTQ+ communities, perceived inaction from federal and state governments, and indifference from the public is reminiscent of the beginning of the US response to the HIV epidemic in the 1980s.^{129,130}

Commonly asked questions and queries from the public

- Why is the monkeypox virus spreading mainly in the LGBTQ+ Community?
 - Multiple outbreaks have demonstrated that infectious diseases occur at different rates because of social, economic, and environmental factors, not biological ones. Pathogens do not intentionally discriminate on the basis of identity, such as race, gender, or sexual orientation—societies do—and monkeypox is no different. There are several potential reasons the current outbreak is to date concentrated among MSM. One is that all outbreaks begin somewhere. They enter social networks and propagate based on characteristics of the pathogen, the host, and the way people in the initial affected network live, work, travel, or play.¹³¹
- How can public health agencies and health communicators talk about the spread of the monkeypox virus without contributing to stigmatization of the LGBTQ+ community?
 - It is important to reach any disproportionately affected community with non-alarmist, fact-based messaging about monkeypox that provides people with tools they can use to protect themselves and others.¹³²



- When focusing messages to the LGBTQ+ community, use targeted channels that directly reach these audiences, such as specific websites, dating apps, or media programs.¹³³
- When creating and disseminating messages, reiterate that anyone can get the monkeypox virus, though the majority of cases have been reported among MSM. Also, note that CDC has released data showing that cisgender women, transgender women, transgender men, and gender diverse people have been diagnosed with monkeypox.
- To help make messages resonate, use relatable or personal stories that depict people “like me” from the intended audience.¹³⁴

Identified misinformation themes that may impact vaccine confidence

- Some social media users are saying that only MSM can be infected with the monkeypox virus.^{135,136,137}
- Some social media users are saying that the monkeypox virus can only be sexually transmitted.^{138,139,140}
- Some social media users are saying that children being diagnosed with the monkeypox virus is evidence of widespread sexual molestation of children by MSM.¹⁴¹
- Some social media users are saying that advocating for or enforcing abstinence is the best way to deal with the spread of the monkeypox virus.^{142,143,144} Others are stating their belief that forced quarantine of exposed or all MSM is the best way to deal with the spread of the monkeypox virus.^{145,146}

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

- Partner with advocacy groups and members of the LGBTQ+ community to identify ways to reduce the stigma around LGBTQ+ and monkeypox infection.
- Clinical partners might consider getting technical assistance from the CDC-funded [National Network of STD Clinical Prevention Training Centers](#) (NNPTC) to create a more inclusive clinical environment.
 - The NNPTC also offers regular clinical update webinars on the monkeypox virus and has a free [clinical consultation line](#) to answer clinicians’ questions about the monkeypox virus and STIs.
- Partner with government and nongovernment groups that focus on the HIV epidemic to identify best practices for engaging and communicating with the LGBTQ+ community and reducing stigma from the general population.
- Create messages that are inclusive of the diversity of the LGBTQ+ community and especially those who do not identify as MSM but still at a high risk for getting monkeypox.
- Create and disseminate messages that highlight the work being done by members of the LGBTQ+ community to increase vaccination uptake and prevent the spread of the monkeypox virus.

Appendix: Inputs and Sources

Social Media Listening & Media Monitoring Data Sources

<u>Input</u>	<u>Cadence</u>	<u>Sources</u>	<u>Tactics for Utilization</u>
<u>Communication Surveillance Report</u>	<u>Daily on weekdays</u>	<ul style="list-style-type: none"> ▪ <u>Google news</u> ▪ <u>Meltwater</u> ▪ <u>CrowdTangle</u> ▪ <u>Native platform searches</u> 	<ul style="list-style-type: none"> ▪ <u>Share of voice topic analysis to identify themes</u> ▪ <u>Emerging topics</u>
<u>Meltwater</u>	<u>Daily</u>	<ul style="list-style-type: none"> ▪ <u>Facebook, Twitter, Instagram</u> ▪ <u>Blogs</u> ▪ <u>News media</u> ▪ <u>Online forums</u> 	<ul style="list-style-type: none"> ▪ <u>Share of voice topic analysis</u> ▪ <u>Emerging theme topics</u> ▪ <u>Identify high reach/velocity topics</u>
<u>OADC (Office of the Associate Director of Communication) Channel COVID-19 Post metrics</u>	<u>Weekly</u>	<ul style="list-style-type: none"> ▪ <u>Sprout Social</u> ▪ <u>Native OADC (Office of the Associate Director of Communication) account analytics</u> 	<ul style="list-style-type: none"> ▪ <u>Analyze # of posts, topics</u> ▪ <u>Success of messages, # of impressions, reach, # engagements</u>
<u>OADC Channel Comment Analysis</u>	<u>Daily on weekdays</u>	<ul style="list-style-type: none"> ▪ <u>Native platform searches</u> 	<ul style="list-style-type: none"> ▪ <u>Sentiment analysis</u> ▪ <u>Identify message gaps/voids</u>

Direct Report Data Sources

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

Research and Literature Data Sources

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

Third Party Report Data Sources

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