



# CDC's State of Vaccine Confidence Insights Report

Mpox Outbreak  
Special Report

May 18, 2023

Date Range: November 15, 2022 - February 25, 2023



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

- Consumers and social media users in the LGBTQ+ community are taking proper precautions to prevent mpox (formerly known as monkeypox), including getting vaccinated with JYNNEOS vaccine. While the ACAM2000 vaccine has rarely, if ever, been used in the current mpox outbreak, some are concerned about its side effects.
- Consumers and social media users are concerned about poor access to vaccines in Black and Hispanic/Latino communities.
- Some social media users are confused about the name change from monkeypox to mpox and believe it is part of an agenda to push more vaccines.
- Activism and engagement from the LGBTQ+ community has contributed to an increase in mpox vaccine confidence and uptake.

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

- It is critical that public health supports men who have sex with men, transgender and gender-diverse persons, and [others at increased risk of infection](#) in getting mpox vaccination; increase community engagement and outreach efforts to improve prevention messages; and ensure equitable approaches to mpox testing, treatment, and prevention strategies.
- Work with community organizations and advocacy groups that focus on sexual health, HIV, and sexually transmitted infections (STIs), in addition to members of the LGBTQ+ community, to increase vaccine uptake and identify ways to reduce LGBTQ+ stigmatization related to mpox.
- 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.
- Speak with leaders in the LGBTQ+ community to learn more about how they were able to garner activism and engagement from the community.
- Work with local LGBTQ+ pride event organizers to include messaging about the importance of receiving two doses of mpox vaccines as soon as possible and prior to participating in LGBTQ+ pride events, as appropriate. Partners can also coordinate with event organizers to provide mpox vaccines on-site, where possible.
- Use a [health equity lens](#) when framing information about health disparities.
- Consider [key principles](#) of health communication, such as using person-first language, avoiding unintentional blaming, and using preferred terms for select population groups while recognizing that there isn't always agreement on these terms.
- Consider how communications are developed and look for ways to develop more inclusive health communications products.

# Contents

## 4

[Introduction and Background](#)

## 4

[Theme 1: Consumers and social media users of the LGBTQ+ community are taking proper precautions to prevent mpox, including getting vaccinated with JYNNEOS vaccine; some are concerned about side effects from ACAM2000](#)

## 8

[Theme 2: Some social media users are confused about the name change from monkeypox to mpox and believe it is part of an agenda to push more vaccines](#)

## 9

[Theme 3: Consumers and social media users are concerned about the lack of vaccine access in Black and Hispanic/Latino communities](#)

## 12

[Theme 4: Activism and engagement from the LGBTQ+ community has contributed to an increase in mpox vaccine confidence and uptake](#)

## 14

[References](#)

## 17

[Appendix: Inputs and Sources](#)



# Aims and Methods

By rapidly reviewing and analyzing numerous sources and inputs (see Appendix), the Mpox State of Vaccine Confidence Insights Report emphasizes major themes influencing mpox vaccine hesitancy and uptake. These are characterized by the level and type of threat to vaccine confidence, degree of spread, and directionality. In addition, by examining how consumers think and feel, social processes, and the practical issues around vaccination, the Insights Report seeks to identify emerging issues of misinformation, disinformation, and places where intervention efforts can improve vaccine confidence across the United States.

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

How do you classify this theme/information?			
High risk	Moderate risk	Low risk	Positive sentiment
<ul style="list-style-type: none"> <li>May lead to vaccine refusals and decreased uptake</li> <li>Wide reach, pervasive</li> </ul>	<ul style="list-style-type: none"> <li>Potential to trigger hesitancy to vaccination</li> <li>Moderate reach, modest dissemination</li> </ul>	<ul style="list-style-type: none"> <li>Concerning, but low risk to vaccine confidence</li> <li>Limited reach, limited dissemination</li> </ul>	<ul style="list-style-type: none"> <li>Could increase vaccine confidence, intent, or motivation</li> <li>Variable reach and dissemination</li> </ul>

How has this theme/idea changed over time (since last report or over the course of multiple reports)?		
<b>Increasing</b> Information spreading rapidly	<b>Stable</b> Information remaining constant at prior level	<b>Decreasing</b> Information is not gaining further traction and there has been no indication of additional activity



# Introduction and Background<sup>a</sup>

The first case of mpox (formerly known as monkeypox) of the current outbreak in the United States was identified on May 18, 2022.<sup>1</sup> As of March 7, 2023, there have been 30,225 cases of mpox and 38 deaths in the U.S.<sup>2</sup> Overall, the number of new mpox cases in the U.S. has been declining since a peak in August 2022. There were 846 new cases during the November 15, 2022–February 25, 2023 reporting period, which represent less than 3% of all total cases since the outbreak began.<sup>3</sup>

This report is an update to CDC's [Mpox State of Vaccine Confidence Insights Report](#), which covers the reporting period of May 21–September 20, 2022. Data for this report was specifically gathered to help analyze themes across the U.S. during the mpox outbreak, which has disproportionately affected the LGBTQ+ community. Information about mpox vaccine eligibility, priority populations, and interim clinical guidance can be accessed [here](#).

## Major Themes<sup>a</sup>



**Theme 1: Consumers and social media users of the LGBTQ+ community are taking proper precautions to prevent mpox, including getting vaccinated with JYNNEOS vaccine; some are concerned about side effects from ACAM2000**

Mpox is a rare disease caused by infection with the mpox virus. Mpox virus is part of the same family of viruses as variola virus, the virus that causes smallpox. Two vaccines, ACAM2000 and JYNNEOS, may be used to prevent mpox disease. JYNNEOS is a 2-dose vaccine that protects against mpox and smallpox. People need to get both doses of the vaccine for the best protection against mpox. The second dose should be given 4 weeks after the first dose. People are considered fully vaccinated 14 days after receiving the second dose.<sup>4</sup> During the current outbreak, JYNNEOS is the main vaccine being administered in the United States.

ACAM2000 is a vaccine approved for immunization against smallpox prior to the development of the JYNNEOS vaccine. The vaccine is made from a virus called vaccinia, which is a “pox”-type virus related to smallpox but causes milder disease. ACAM2000 cannot cause smallpox; it does not contain the smallpox virus, but rather the “live” vaccinia virus. ACAM2000 can be used to prevent mpox under an Expanded Access Investigational New Drug (EA-IND) protocol; it has rarely, if ever, been used during the current outbreak. Because this vaccine is a live, replicating virus vaccine, it should not be used for persons who are immunocompromised (including those with HIV infection), pregnant, under 12 months old, or who have a history of eczema, cardiac risk factors, eye disease treated with topical steroids, or severe allergic reaction following a previous ACAM2000 dose.<sup>5</sup> For more information, refer to FDA's [ACAM2000 Q&A](#) and CDC's [ACAM2000 interim guidance](#).

Individuals can help protect themselves against mpox by avoiding close, skin-to-skin contact with people who have a rash that looks like mpox, avoiding contact with objects and materials that a person with mpox has used, and washing hands often.<sup>6</sup>

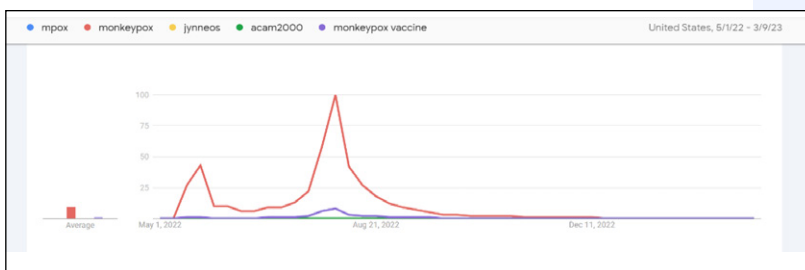
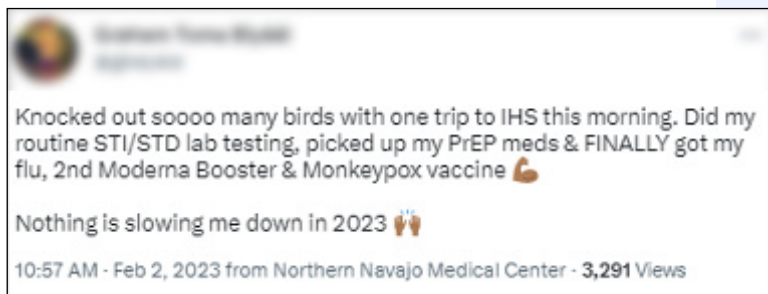
---

<sup>a</sup> Social media posts referenced throughout this report can be found in [this online document](#).



### Perceptions, Concerns, and Threats to Vaccine Confidence

- Google searches and Meltwater mentions for terms “monkeypox,” “mpox,” “jynneos,” and “ACAM2000” decreased significantly to near-zero searches during the reporting period.<sup>b,c</sup>
- During the reporting period (November 15, 2022–February 25, 2023), an average of 2,444 first doses of JYNNEOS and 3,313 second doses were administered weekly in the U.S.<sup>7</sup>
- As of February 28, 2023, 1,198,336 total JYNNEOS vaccine doses were administered in the 57 U.S. jurisdictions reporting data.<sup>7</sup>
- According to an MMWR report published in December 2022, 466 cases of mpox were reported among transgender and gender-diverse adults between May 17 and November 4, 2022, accounting for 1.7% of reported cases among adults. Most of these cases were among transgender women (43.1%) or gender-diverse persons (42.1%), while 14.8% were among transgender men.<sup>8</sup>
- An MMWR published in December 2022 analyzing mpox virus infections found that compared to unvaccinated individuals, individuals who received one JYNNEOS vaccine dose at least 14 days before illness onset had significantly lower odds of hospitalization, fever, headache, malaise, myalgia, and chills.<sup>8</sup>
- Among men aged 18-49 years who are eligible for the JYNNEOS vaccine, the incidence of mpox was considerably higher among unvaccinated persons compared to those who received one or two vaccine doses. Specifically, the incidence among unvaccinated persons was 9.6 times higher than the incidence among persons who had received two vaccine doses, and 7.4 times higher than the incidence among persons who had received only the first dose.<sup>9</sup>
- In comparison to gay, bisexual, and other men who have sex with men (MSM) living in urban areas, MSM living in rural areas were less likely to report modifying their behaviors to decrease mpox exposure, reported lower perceived susceptibility to and severity of mpox, and reported lower intention to get vaccinated for mpox.<sup>10</sup>
- Forty-six percent of U.S. adults intended to get an mpox vaccine if it were recommended to them.<sup>11</sup>
- Sixty-five percent of U.S. adults think it would be extremely/very bad to have mpox.<sup>12</sup>
- Seventy-six percent of U.S. adults say that, if exposed to mpox, they would be likely to take the mpox vaccine, which can be given after exposure.<sup>12</sup>
- Some social media users stated increasing access to the mpox vaccine would decrease cases and deaths.<sup>13</sup>



<sup>b</sup>Google trends.

<sup>c</sup>Meltwater.





- Individuals in the LGBTQ+ community are using social media to share that they have received the mpox vaccine and have fought against anti-vaccine rhetoric.<sup>14,15,16</sup>
- Members of the LGBTQ+ community are encouraging others to practice safe sex and receive the mpox vaccine to mitigate risk of mpox.<sup>17,18</sup>
- Misinformation and exaggerated claims about mpox on social media may have contributed to inaccurate perceptions about the risks and transmissibility of mpox.<sup>19</sup>
- Some social media users are concerned about the side effects from the ACAM2000 vaccine.<sup>20,21,22</sup>

#### Commonly Asked Questions and Queries from the Public<sup>d</sup>

- Can the mpox vaccine be co-administered with other vaccines?<sup>e</sup>
  - Currently, there are no data on administering JYNNEOS vaccine at the same time as other vaccines. Because JYNNEOS is based on a live, attenuated non-replicating orthopoxvirus, JYNNEOS typically may be administered [without regard to timing](#) of most other vaccines. This includes simultaneous administration of JYNNEOS and other vaccines, including influenza vaccine, on the same day, but at different anatomic sites if possible.<sup>23</sup>
  - People who previously received COVID-19 vaccination (i.e., Moderna, Novavax, or Pfizer-BioNTech) may be given JYNNEOS vaccine without a minimum interval between vaccinations.<sup>23</sup>
  - Those who previously received orthopoxvirus vaccination (either JYNNEOS or ACAM2000), particularly adolescent or young adult males, might consider waiting 4 weeks before receiving a COVID-19 vaccine (i.e. Moderna, Novavax, or Pfizer-BioNTech) because of the observed risk for myocarditis and pericarditis after receipt of ACAM2000 orthopoxvirus vaccine and COVID-19 vaccines (i.e. Moderna, Novavax, or Pfizer-BioNTech) and the unknown risk for myocarditis and pericarditis after JYNNEOS administration.<sup>23</sup>
- Is mpox a sexually transmitted infection?<sup>e</sup>
  - In the current mpox outbreak, the virus is spreading primarily through sexual contact; however, infections have occurred through other exposures, including non-sexual contact with infectious lesions and from contaminated instruments in clinical settings.<sup>24</sup>
- Are there any possible side effects associated with the use of ACAM2000?<sup>e</sup>
  - Yes, health complications can occur after receiving the vaccine, and the risk of experiencing serious side effects must be weighed against the risk of experiencing a potentially fatal smallpox infection. The vaccine may cause serious side effects including myocarditis and pericarditis, which are inflammation and swelling of the heart and surrounding tissues. Based on clinical studies, myocarditis and/or pericarditis occur in 1 in 175 adults who get the vaccine for the first time. Serious health problems can occur in individuals who are immunocompromised, pregnant, or who have cardiac risk factors or skin conditions such as eczema, dermatitis, or psoriasis. More commonly observed side effects include: itching, sore arm, fever, headache, body ache, mild rash and fatigue.<sup>25</sup> For more information, refer to FDA's [ACAM2000 Q&A](#) and CDC's [ACAM2000 interim guidance](#).

---

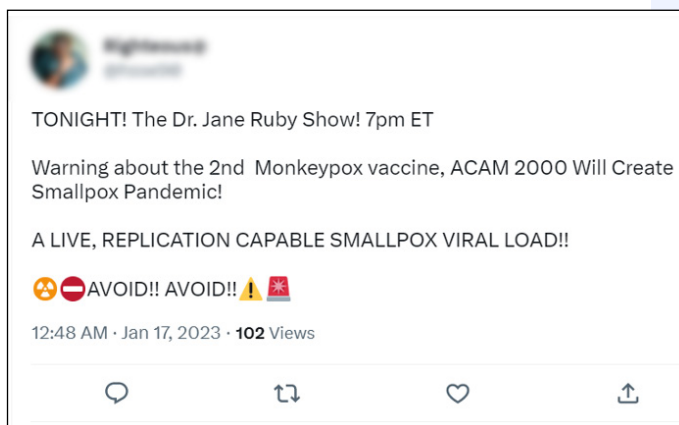
<sup>d</sup> These questions come from online data sources such as social media, news stories, Google trends, and CDC-INFO.

<sup>e</sup> CDC-INFO.



## Identified misinformation themes that may impact vaccine confidence

- Some social media users believe mpox can only spread through sexual contact.<sup>26</sup>
- Some social media users believe vaccination is not the best way to prevent mpox.<sup>27</sup>
- Some social media users believe the ACAM2000 vaccine will cause a smallpox pandemic.<sup>21</sup>
- Some social media users believe that the ACAM2000 vaccine sheds smallpox.<sup>28,f</sup>
- Some organizations are fighting against the misconception that mpox is a “gay” disease.<sup>29</sup>



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

- It is critical that public health supports men who have sex with men, transgender and gender-diverse persons, and [others at increased risk of mpox](#) in getting mpox vaccination; increase community engagement and outreach efforts to improve prevention messages; and ensure equitable approaches to mpox testing, treatment, and prevention strategies.<sup>8</sup>
- Work with community partners and advocacy groups that focus on sexual health, HIV, and STI care and prevention, in addition to members of the LGBTQ+ community, to increase vaccine uptake and identify ways to reduce LGBTQ+ stigmatization due to mpox virus 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 mpox virus and has a free clinical consultation line to answer clinicians’ questions about the mpox virus and STIs.

<sup>f</sup>Note that ACAM2000 is made from a virus called vaccinia, which is a “pox”-type virus related to smallpox but causes milder disease. ACAM2000 cannot cause smallpox; it does not contain the smallpox virus, but rather the “live” vaccinia virus. For this reason, attentively caring for the vaccination site is important to prevent the virus from spreading from the vaccination site to other parts of the body, or to other people.<sup>25</sup>



## Theme 2: Some social media users are confused about the name change from monkeypox to mpox and believe it is part of an agenda to push more vaccines

In August, a group of global experts convened by the World Health Organization (WHO) agreed on new names for monkeypox virus variants, as part of ongoing efforts to align the names of the monkeypox disease, virus, and variants with current best practices. Following a series of consultations with global experts, in November 2022, WHO began using a new preferred term “mpox” as a synonym for monkeypox. Both names will be used simultaneously for one year while “monkeypox” is phased out.<sup>30</sup>

In support of the November 28, 2022 recommendation by WHO<sup>30</sup> and the U.S. Department of Health and Human Services (HHS), CDC adopted “mpox” as the term used to refer to monkeypox disease.<sup>31</sup> According to the WHO’s best practices, changes to disease names should be made with the aim to minimize unnecessary negative impact of names on trade, travel, tourism, or animal welfare, and avoid causing offense to any cultural, social, national, regional, professional, or ethnic groups.

Moving forward, U.S. federal public health agencies, including CDC, will adopt the “mpox” name in correspondence with the medical community and the public. This change from the WHO will enhance the U.S. response to mpox by using a less stigmatizing term.<sup>31</sup>

### Perceptions, Concerns, and Threats to Vaccine Confidence

- When the outbreak of mpox expanded in 2022, racist and stigmatizing language online, in other settings, and in some communities was observed and reported to WHO. In several meetings, public and private, a number of individuals and countries raised concerns and asked WHO to propose a way to change the name moving forward.<sup>30</sup>
- Some social media users believe that the name change was unnecessary.<sup>32,33</sup>
- Some social media users do not understand how the term “monkeypox” was offensive.<sup>34,35,36</sup>
- Some social media users are sarcastically suggesting names other than mpox that are offensive.<sup>37,38,39</sup>
- Some social media users are supportive of the name change and believe it was long overdue.<sup>40,41</sup>
- Some social media users believe vaccine supply is a more pressing issue that should have been addressed before the mpox name change.<sup>42,43</sup>

### Commonly Asked Questions and Queries from the Public

- Why did WHO decide to change the name from monkeypox to mpox?<sup>e</sup>
  - When the outbreak of mpox expanded earlier this year, racist and stigmatizing language online, in other settings, and in some communities was observed and reported to WHO. In several meetings, public and private, a number of individuals and countries raised concerns and asked WHO to propose a way to change the name moving forward.<sup>30</sup>







- When did the name change to “mpox” become effective?<sup>e</sup>
  - Following a series of consultations with global experts, WHO began using a new preferred term “mpox” as a synonym for monkeypox beginning November 28, 2022. Both names will be used simultaneously for one year while “monkeypox” is phased out.
- Will there be a new vaccine developed for mpox?<sup>e</sup>
  - While mpox is the term that will now be used to refer to monkeypox disease,<sup>31</sup> scientists will continue to conduct research on new vaccines irrespective of the name change to mpox.

**Identified misinformation themes that may impact vaccine confidence**

- Some social media users believe the name change was solely for marketing purposes and to push a political agenda.<sup>44,45</sup>
- Some social media users believe the disease is still called “monkeypox” and refuse to use the term “mpox.”<sup>46,47</sup>
- Some social media users believe the new name is an excuse to create and sell more vaccines.<sup>48,49</sup>
- Some social media users believe the new name reflects a government agenda to push toxic vaccines.<sup>50,51</sup>



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

- Partners may use the term “mpox” in all web content, guidance, and communications materials.
- Partners may create informational materials explaining the rationale behind the name change and why it was necessary.
- Partners may provide healthcare workers and community leaders with communication materials to ensure consumers know “mpox” is the new name for “monkeypox,” and not a new disease.

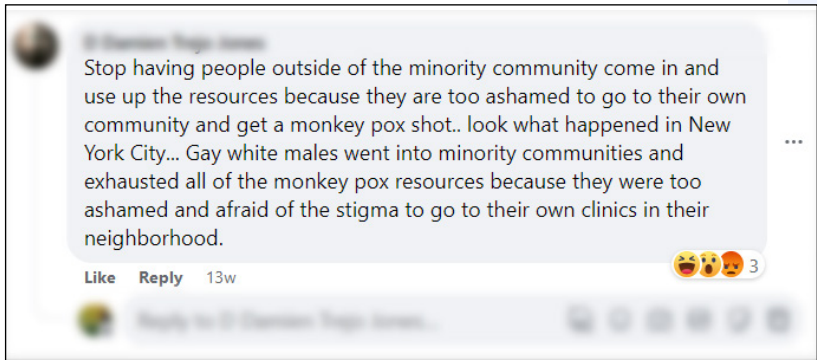
**Theme 3: Consumers and social media users are concerned about poor access to vaccines in Black and Hispanic/Latino communities**

Mpox cases are disproportionately higher among Black and Hispanic/Latino MSM and, in smaller numbers, Black and Hispanic/Latina women.<sup>52</sup> As of March 1, 2023, 33.1% of mpox cases have occurred among Black individuals, and 31.2% have occurred among Hispanic/Latino individuals. Many social, geographic, political, economic, and environmental factors create challenges to health equity and vaccine access. Some of these factors include racism, gaps in healthcare access, lack of trust because of past medical racism and experimentation, and stigma when accessing medical care.<sup>53</sup>



### Perceptions, Concerns, and Threats to Vaccine Confidence

- An MMWR published in December 2022 showed that during May 22, 2022–September 3, 2022, 68.2% of vaccinated mpox patients and 49.9% of unvaccinated mpox patients were White, whereas Black individuals comprised 12.4% and 30.9% of vaccinated and unvaccinated mpox patients, respectively.<sup>54</sup>
  - The authors note that “the predominance of White persons among vaccinated mpox patients compared with unvaccinated patients reflects the ongoing racial and ethnic disparities in receipt of the JYNNEOS vaccine nationwide and could indicate differential access to or acceptance of the vaccine,” also adding that “disparities in access to health care and additional treatment options could also have played a role in decreasing the severity of illness in vaccinated White persons.”<sup>54</sup>
- An MMWR published in January 2023 found that between May 11 and November 7, 2022 a total of 769 mpox cases were identified in cisgender women aged 15 years or older, accounting for 2.7% of all reported mpox cases. Of these cases with available data, 44% were in non-Hispanic Black women, 25% in non-Hispanic White women, and 23% in Hispanic/Latina women.<sup>55</sup>
  - The ongoing mpox epidemic has disproportionately affected Black and Hispanic/Latina women, who make up a higher percentage of mpox cases than their share of the U.S. population. This disparity is consistent with overall mpox cases in the U.S. and emphasizes the importance of continued public health efforts to provide education on mpox prevention and ensure equitable access to mpox vaccines, testing, and treatment.<sup>55</sup>
- Some social media users are frustrated that some individuals outside of racial/ethnic minority communities, due to stigma in their own communities, are depleting the mpox vaccine supply in under-resourced communities.<sup>56</sup>
- Nonprofit organizations dedicated to LGBTQ+ acceptance, such as Gay & Lesbian Alliance Against Defamation (GLAAD) and Human Rights Campaign, have used social media to highlight disparities in vaccine distribution and access, especially those faced by Black communities and other racial/ethnic minority groups.<sup>57,58</sup>
  - However, it is worth noting that community engagement and total interactions on these posts are low.
- Some individuals in the LGBTQ+ community believe the Biden administration is doing whatever is in their power to help address mpox infection rates in disproportionately affected groups,<sup>59</sup> while others are more reluctant to applaud the U.S. government for their efforts.<sup>60</sup>
- Some social media users believe stigma around sexual health and healthcare inequities contribute to low vaccination rates in Black and Hispanic/Latino communities.<sup>61,62</sup>





- Black or African American people represented one-third of all new mpox cases from May 2022 (when the first cases of the outbreak were found) until the end of January 2023 (when the public health emergency ended), but only represented one-tenth of all vaccine recipients for the virus during that time.<sup>63</sup> Data from a [recent Morbidity and Mortality Weekly Report](#) indicate that 33 (87%) of the 38 mpox-associated deaths in the U.S. between May 10, 2022 and March 7, 2023 occurred in Black or African American persons.
  - Hispanic and Latino people made up 20% of those who received at least one dose of the JYNNEOS vaccine, but accounted for 31.2% of all mpox cases.<sup>53</sup>

### Commonly Asked Questions and Queries from the Public

- Why were Black and Hispanic/Latino communities disproportionately affected by the mpox outbreak?<sup>e</sup>
  - Many social, geographic, political, economic, and environmental factors create challenges to health equity and vaccination access. Some of these factors include:<sup>52</sup>
    - Literacy, education, income, and wealth gaps
    - Job access and working conditions
    - Racism and discrimination
    - Misinformation
    - Gaps in healthcare access
    - Transportation and neighborhood conditions
    - Lack of trust because of past medical racism and experimentation
    - Perceived or actual stigma when accessing medical care

### Ways public health and partners can take action

CDC's [Health Equity Guiding Principles for Inclusive Communication](#) emphasizes the importance of addressing all people inclusively and respectfully. These principles are intended to help public health professionals ensure their communication products and strategies adapt to the specific cultural, linguistic, environmental, and historical situation of each population or audience of focus. CDC encourages all public health professionals and partners at the federal, state, and local levels to apply these principles across their public health communication work. This means:

- Using a [health equity lens](#) when framing information about health disparities.
- Considering the [key principles](#) of health communication, such as using person-first language and avoiding unintentional blaming.
- Using preferred terms for select population groups while recognizing that there isn't always agreement on these terms.
- Considering how communications are developed and look for ways to develop more inclusive health communications products.
- Exploring other resources and references related to health equity communications.<sup>64</sup>

In addition, CDC's [Mpox Equity and Anti-Stigma Toolkit](#) provides background, strategies, actions, and resources to increase the number and effectiveness of prevention strategies that advance health equity among populations most affected by mpox, including vaccination efforts.



## Theme 4: Activism and engagement from the LGBTQ+ community has contributed to an increase in mpox vaccine confidence and uptake

The mpox virus has disproportionately affected the LGBTQ+ community in the current outbreak, with the highest incidence rates being among Black and Hispanic/Latino MSM.<sup>52</sup> Public health efforts are focused on increasing awareness of mpox among the LGBTQ+ community with the goal of reducing transmission through behavioral change and increasing vaccine uptake, confidence, and knowledge of the mpox vaccines.<sup>65,66,67</sup> The LGBTQ+ community has played an active role in bringing awareness to others within the community and striving to increase vaccine confidence and access to those who are most at risk for the disease.<sup>68,69</sup> Influencers and social media played an important role in reaching those who were most at risk in the LGBTQ+ community, while also showing support for the mpox vaccines.<sup>70,66</sup>

**What happened to monkeypox? LGBTQ community appears to have quashed spread for now**

### Perceptions, Concerns, and Threats to Vaccine Confidence

- Public health experts and LGBTQ+ community members have suggested that the most significant contributor to successful mpox vaccination uptake was the activism and engagement from the community itself in promoting the efficacy, safety, and availability of the vaccine.<sup>68,71,72</sup>
- Community members felt that they were more prepared than others due to their past experiences with the HIV/AIDS crisis.<sup>73,74,70</sup>
- Other co-morbidities, such as HIV infection, increased the risk of mortality among LGBTQ+ members.<sup>75</sup> Public health experts believe that the desire among community members to protect each other has encouraged vaccination among vaccine hesitant individuals.<sup>66,68</sup>
- The LGBTQ+ community led effective equity outreach programs ensuring that as many members as possible in the community had access to the mpox vaccines.<sup>72</sup>
- Campaigns such as GLAAD's "Facts and Vax" initiative have been used in providing accurate and important information about the mpox vaccines to LGBTQ+ people from racial and ethnic minority groups.<sup>66</sup>
- Some news outlets and experts believe that the rapid deployment of vaccines to communities facing higher risk of mpox exposure, in tandem with an aggressive public awareness campaign, were highly successful in curtailing mpox and leading to a high uptake of the mpox vaccines among the LGBTQ+ community.<sup>69,70,74</sup>

### Watch Eight Influencers Mobilize Black Gay Men to Fight Monkeypox

GLAAD's #FactsAndVax campaign on Instagram Reels enlists Black influencers to educate about mpox. [VIDEOS]

December 29, 2022 · By Trent Straube



### Ways public health and partners can take action

- Partners may speak with leaders in the LGBTQ+ community to learn more about how they were able to garner activism and engagement from the community.
- Partners may ensure the LGBTQ+ community is well-prepared for any potential future rise in cases and continue to encourage vaccination.
- Partners may educate the public by highlighting the work being done by LGBTQ+ serving organizations and communities on a regular basis.
- Partners may work with local LGBTQ+ pride event organizers to include messaging about the importance of receiving two doses of mpox vaccines as soon as possible and prior to participating in LGBTQ+ pride events, as appropriate. Partners can also coordinate with event organizers to provide mpox vaccines on-site, where possible.
- Public health partners may continue to support and utilize effective mpox vaccination campaigns.





# References

Note: omitted numbers are social media citations, which can be accessed [here](#).

1. Dawson, L., Moss, K., Michaud, J., & Kates, J. (2022, July 27). *Key questions about the current U.S. monkeypox outbreak*. KFF. <https://www.kff.org/other/issue-brief/key-questions-about-the-current-u-s-monkeypox-outbreak/>
2. Centers for Disease Control and Prevention. (2023, April 26). *2022 Outbreak Cases and Data*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/response/2022/index.html>
3. Centers for Disease Control and Prevention. (2023, April 26). *U.S. Mpox Case Trends Reported to CDC*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/response/2022/mpx-trends.html>
4. Centers for Disease Control and Prevention. (2023, April 25). *Mpox Vaccination Basics*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/vaccines/index.html>
5. Centers for Disease Control and Prevention. (2022, October 21). *ACAM2000 Vaccine*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/interim-considerations/acam2000-vaccine.html>
6. Centers for Disease Control and Prevention. (2022, October 31). *How to Protect Yourself*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/prevention/protect-yourself.html>
7. Centers for Disease Control and Prevention. (2023, April 25). *Mpox Vaccine Administration in the U.S.* U.S. Department of Health and Human Services. [https://www.cdc.gov/poxvirus/mpox/response/2022/vaccines\\_data.html](https://www.cdc.gov/poxvirus/mpox/response/2022/vaccines_data.html)
8. Blackburn, D., Roth, N. M., Gold, J. A. W., Pao, L. Z., Olansky, E., Torrone, E. A., McClung, R. P., Ellington, S. R., Delaney, K. P., Carnes, N., & Dawson, P. (2022). Epidemiologic and clinical features of mpox in transgender and gender-diverse adults - United States, May-November 2022. *MMWR. Morbidity and Mortality Weekly Report*, 71(5152), 1605–1609. <https://doi.org/10.15585/mmwr.mm715152a1>
9. Payne, A. B., Ray, L. C., Cole, M. M., Canning, M., Houck, K., Shah, H. J., Farrar, J. L., Lewis, N. M., Fothergill, A., White, E. B., Feldstein, L. R., Roper, L. E., Lee, F., Kriss, J. L., Sims, E., Spicknall, I. H., Nakazawa, Y., Gundlapalli, A. V., Shimabukuro, T., ... Payne, D. C. (2022). Reduced risk for mpox after receipt of 1 or 2 doses of JYNNEOS vaccine compared with risk among unvaccinated persons - 43 U.S. jurisdictions, July 31-October 1, 2022. *MMWR. Morbidity and Mortality Weekly Report*, 71(49), 1560–1564. <https://doi.org/10.15585/mmwr.mm7149a5>
10. Owens, C., & Hubach, R. D. (2023). Rural-urban differences in monkeypox behaviors and attitudes among men who have sex with men in the United States. *The Journal of Rural Health*, 39(2), 508–515. <https://doi.org/10.1111/jrh.12726>
11. Winters, M., Malik, A. A., & Omer, S. B. (2022). Attitudes towards Monkeypox vaccination and predictors of vaccination intentions among the US general public. *PloS One*, 17(12), e0278622. <https://doi.org/10.1371/journal.pone.0278622>



12. Maroni, E. (2022, November 17). *What U.S. adults know and believe about polio and the bivalent COVID booster*. The Annenberg Public Policy Center of the University of Pennsylvania. <https://www.annenbergpublicpolicycenter.org/what-u-s-adults-know-and-believe-about-polio-and-the-bivalent-covid-booster/>
23. Centers for Disease Control and Prevention. (2022, December 22). *JYNNEOS Vaccine*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/interim-considerations/jynneos-vaccine.html>
24. Centers for Disease Control and Prevention. (2023, February 2). *How It Spreads*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/if-sick/transmission.html>
25. U.S. Food and Drug Administration. (2022, August 19). *ACAM2000 (Smallpox Vaccine) Questions and Answers*. U.S. Department of Health and Human Services. <https://www.fda.gov/vaccines-blood-biologics/vaccines/acam2000-smallpox-vaccine-questions-and-answers>
30. World Health Organization. (2022, November 28). *WHO recommends new name for monkeypox disease* [News release]. <https://www.who.int/news/item/28-11-2022-who-recommends-new-name-for-monkeypox-disease>
31. Centers for Disease Control and Prevention. (2022, November 28). *CDC Changes Monkeypox Terminology to Mpox*. U.S. Department of Health and Human Services. [https://www.cdc.gov/nchhstp/dear\\_colleague/2022/dcl-changes-monkeypox-terminology.html](https://www.cdc.gov/nchhstp/dear_colleague/2022/dcl-changes-monkeypox-terminology.html)
52. Centers for Disease Control and Prevention. (2023, March 16). *Mpox Equity and Anti-Stigma Toolkit*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/resources/toolkits/equity.html>
53. Centers for Disease Control and Prevention. (2023, April 26). *Mpox Cases by Age and Gender and Race and Ethnicity*. U.S. Department of Health and Human Services. <https://www.cdc.gov/poxvirus/mpox/response/2022/demographics.html>
54. Farrar, J. L., Lewis, N. M., Houck, K., Canning, M., Fothergill, A., Payne, A. B., Cohen, A. L., Vance, J., Brassil, B., Youngkin, E., Glenn, B., Mangla, A., Kupferman, N., Saunders, K., Meza, C., Nims, D., Soliva, S., Blouse, B., Henderson, T., ... Mpox Cases in Vaccinated Persons Team. (2022). Demographic and clinical characteristics of mpox in persons who had previously received 1 dose of JYNNEOS vaccine and in unvaccinated persons - 29 U.S. jurisdictions, May 22-September 3, 2022. *MMWR Morbidity and Mortality Weekly Report*, 71(5152), 1610–1615. <https://doi.org/10.15585/mmwr.mm715152a2>
55. Oakley, L. P., Hufstetler, K., O’Shea, J., Sharpe, J. D., McArdle, C., Neelam, V., Roth, N. M., Olsen, E. O., Wolf, M., Pao, L. Z., Gold, J. A. W., Davis, K. M., Perella, D., Epstein, S., Lash, M. K., Samson, O., Pavlick, J., Feldpausch, A., Wallace, J., ... CDC Mpox Analytics Team. (2023). Mpox cases among cisgender women and pregnant persons - United States, May 11-November 7, 2022. *MMWR Morbidity and Mortality Weekly Report*, 72(1), 9–14. <https://doi.org/10.15585/mmwr.mm7201a2>
63. Human Rights Campaign. (2023, February 28). *(In)equity in the U.S. mpox response: trends and disparities in national data*. <https://hrc-prod-requests.s3-us-west-2.amazonaws.com/assets/InEquity-in-the-US-Mpox-Response-Trends-and-Disparities-in-National-Data-Mpox-Brief22823.pdf>



64. Centers for Disease Control and Prevention. (2023, August 2). *Health Equity Guiding Principles for Inclusive Communication*. U.S. Department of Health and Human Services. [https://www.cdc.gov/healthcommunication/Health\\_Equity.html](https://www.cdc.gov/healthcommunication/Health_Equity.html)
65. Philpott, D., Hughes, C. M., Alroy, K. A., Kerins, J. L., Pavlick, J., Asbel, L., Crawley, A., Newman, A. P., Spencer, H., Feldpausch, A., Cogswell, K., Davis, K. R., Chen, J., Henderson, T., Murphy, K., Barnes, M., Hopkins, B., Fill, M.-M. A., Mangla, A. T., ... CDC Multinational Monkeypox Response Team. (2022). Epidemiologic and clinical characteristics of Monkeypox cases - United States, May 17-July 22, 2022. *MMWR Morbidity and Mortality Weekly Report*, 71(32), 1018–1022. <https://doi.org/10.15585/mmwr.mm7132e3>
66. Aaron, D. (2022, December 9). *GLAAD launches 'Facts and Vax' campaign, continues focus on mpox in LGBTQ communities of color*. GLAAD. <https://www.glaad.org/blog/glaad-launches-facts-and-vax-campaign-continues-focus-mpox-lgbtq-communities-color-1>
67. Delaney, K. P., Sanchez, T., Hannah, M., Edwards, O. W., Carpino, T., Agnew-Brune, C., Renfro, K., Kachur, R., Carnes, N., DiNunno, E. A., Lansky, A., Ethier, K., Sullivan, P., Baral, S., & Oster, A. M. (2022). Strategies adopted by gay, bisexual, and other men who have sex with men to prevent Monkeypox virus transmission - United States, August 2022. *MMWR Morbidity and Mortality Weekly Report*, 71(35). <https://doi.org/10.15585/mmwr.mm7135e1>
68. Catherman, C. (2022, November 15). What happened to monkeypox? LGBTQ community appears to have quashed spread for now. *Yahoo News*. <https://news.yahoo.com/happened-monkeypox-lgbtq-community-appears-005500687.html>
69. Salzman, S. (2023, February 2). A public health success story: How the mpox crisis was controlled within 6 months. *ABC News*. <https://abcnews.go.com/Health/public-health-success-story-mpox-crisis-controlled-6/story?id=96848750>
70. Lichfield, G., & McKenna, M. (2022, December 22). The bittersweet defeat of mpox. *Wired*. <https://www.wired.com/story/the-bittersweet-defeat-of-mpox/>
72. Straube, T. (2022, December 29). *Watch eight influencers mobilize Black gay men to fight Monkeypox*. POZ. <https://www.poz.com/article/watch-eight-influencers-mobilize-black-gay-men-fight-monkeypox-mpox-glaad-lgbtq-hiv>
74. Nirappil, F. (2022, December 30). How the monkeypox outbreak revealed the path for vanquishing viruses. *Washington Post*. <https://www.washingtonpost.com/health/2022/12/30/monkeypox-how-to-defeat-virus/>
75. Geddes, L. (2023, February 28). *Mpox: Why things just got more dangerous for people with undiagnosed and advanced HIV*. Gavi. <https://www.gavi.org/vaccineswork/mpox-why-things-just-got-more-dangerous-people-undiagnosed-and-advanced-hiv>



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

## Direct Report Data Sources

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



### Research and Literature Data Sources

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

### Third Party Report Data Sources

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