



CAI



# **Mpox Roadmap Using a Syndemic Approach: Improving Awareness of and Access to Mpox Services**

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# Table of Contents

## Background

Purpose of the Roadmap.....	1
What is a Syndemic.....	2
Foundation of the Roadmap.....	3
How Do I Use the Roadmap?.....	4
Social-Ecological Model (SEM).....	5
Syndemic-Informed Recommendations Organized by the SEM.....	6

## Societal/Policy Level

.....9

## Community Level

.....12

## Organizational Level

.....15

## Interpersonal Level

.....20

## References

.....23

## Appendix A.

Mpox Landscape Report Environmental Scan & Communications Activities Findings.....	24
---	----

## Appendix B.

Resources on Mpox.....	25
------------------------	----

# Background

**Mpox (formerly known as monkeypox) is a disease caused by infection with the Orthopoxvirus known as Monkeypox virus. The World Health Organization (WHO) renamed the disease in 2022 to prevent stigmatizing language and align with modern guidelines for naming diseases (CDC, 2025).**

Mpox is spread through close contact with infected people or animals. This includes direct skin-to-skin contact with mpox rash, including sexual transmission, as well as through pregnancy and birth. There are two types of mpox, called Clade I and Clade II. Historically, Clade I has caused more severe illnesses than Clade II. However, Clade II was the source of the global outbreak in 2022. The availability of the Jynneos vaccine, a two-dose vaccine authorized for the prevention of mpox, was associated with a dramatic drop in cases in the fall of 2022; however, cases continue to occur.

For current information on mpox, please visit [www.CDC.gov/mpox](http://www.CDC.gov/mpox).

## Purpose of the Roadmap

This roadmap aims to support public health workers, community leaders, healthcare agencies, and local health departments in identifying strategies that have been effectively used to improve awareness and increase access to mpox services, using a syndemic approach, in their unique communities. Raising awareness of mpox among affected populations and their health care providers and improving access to and uptake of the mpox vaccine, are key strategies for preventing and reducing mpox transmission (Kava et al., 2022).

However, as of November 2024, only 25% of those recommended to receive the mpox vaccine have been fully vaccinated, and vaccine coverage varies widely across public health jurisdictions (CDC, 2024). These gaps highlight that traditional public health approaches alone are insufficient. Instead, a syndemic approach can help address disparities in vaccine uptake and the broader drivers of mpox vulnerability.

## What is a Syndemic?

Syndemics occur when two or more diseases or health conditions cluster and interact within a population because of social and structural factors, leading to an excess burden of disease and continuing health disparities (HHS, 2024). Syndemics arise when:

- Two (or more) diseases or health conditions cluster and interact within a population;
- Social and structural factors allow for diseases or health conditions to cluster; and
- The clustering of disease or health conditions results in disease interaction, either biological, social, or behavioral, leading to an excess burden of disease and continuing health disparities.

Before 2022, mpox was primarily seen in Central and West Africa, with outbreaks in the Democratic Republic of the Congo (DRC) caused by the more severe Clade I variant. When cases appeared in other countries, they were predominantly single events, traced back to a person who had recently traveled to an endemic region (CDC, 2025). The epidemiological profile of the mpox outbreak in the U.S. in 2022 was different in this regard. The outbreaks in Europe and the U.S. were characterized by the less severe Clade IIb variant and spread rapidly across more than 100 countries that were not endemic to the disease (CDC, 2025). Infectious disease experts soon shared that the spread of mpox involved sustained person-to-person transmission, predominantly occurring through close, intimate, and sexual contact.

As more data became available, disparities in mpox incidence were observed, particularly among cases with known demographic information. The majority of mpox cases were identified among cisgender men; gay, bisexual, and other men who have sex with men (GBMSM), transgender, nonbinary, and gender diverse individuals; racial and ethnic minority groups; and people with advanced HIV infection or newly diagnosed with HIV (Kava et al., 2022). Disparities in mpox fatalities were drastic, with a higher proportion of deaths occurring among Black patients than patients of other races (Riser et al., 2023). Of those where housing status was known, 45% of deaths were among people experiencing homelessness, and 93% of deaths were among people with HIV (CDC, 2025).

These data illustrate how overlapping health conditions such as mpox and HIV, and societal and contextual factors including, but not limited to, unstable housing, racism, and access to health care, create a syndemic. Creating a roadmap with a syndemic lens helps to focus prevention and intervention efforts on the root causes of disease transmission and the associated health outcomes, emphasizing social and contextual factors and systemic structural barriers that impact health.

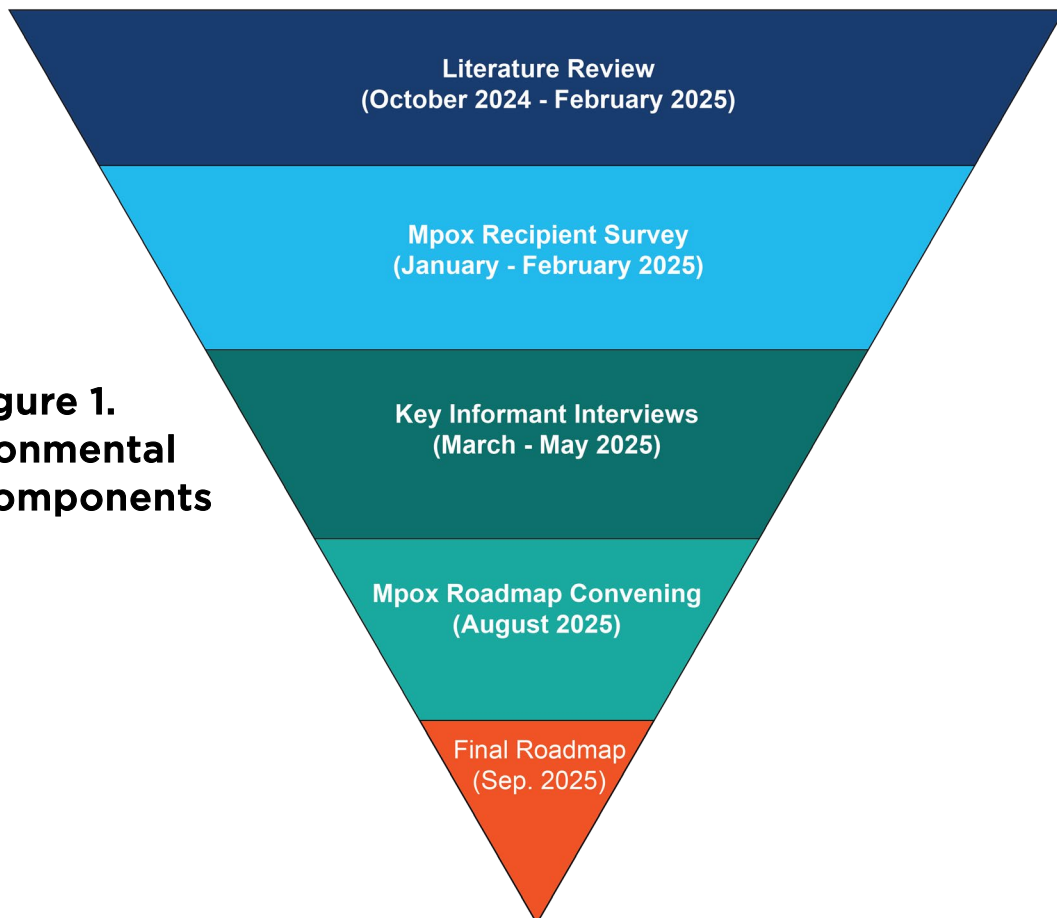
# Background

## Foundation of the Roadmap

Cicatelli Associates Inc. (CAI) was funded for a 1-year supplemental project through the [CDC's STOP STDs cooperative agreement](#) from September 2024 through September 2025. The goal of the project was to identify existing strategies and resources at the U.S. federal, regional, state, and local levels that have been used to address mpox, as well as gaps, and to develop a syndemic approach for future populations at elevated risk. As a foundation to this work, CAI conducted a comprehensive environmental scan, which included three key components:

- **Literature review**, covering seven pre-determined key topic areas
- **National survey (n=29)** of recipients of the CDC-funded Public Health Crisis Response, which provides awards to state and local governments to enhance the ability to respond to public health emergencies rapidly
- **Key informant interviews (n=9)** with community stakeholders and individuals with lived experience (i.e., individuals who worked directly with communities impacted by mpox and individuals who were directly affected by mpox or received mpox prevention services)

Environmental scan findings were shared at an in-person Mpox Roadmap Convening, which brought together public health professionals and community leaders to discuss the mpox epidemic and to further inform the roadmap. The components and timeline of the environmental scan, including the Mpox Roadmap Convening and final draft of the roadmap, are depicted in **Figure 1**.



**Figure 1.**  
**Environmental**  
**Scan Components**

# Background

In August 2025, CAI hosted the Mpox Roadmap Convening, which brought together 14 public health professionals, community leaders, and subject matter experts. The convening was intentionally designed to build on the environmental scan. Participants reviewed the communications initiative results and a CAI-developed landscape report, summarizing the scan's findings. The landscape report was used as a foundation for discussion, reflection, and problem-solving. Both documents can be found in **Appendix A**.

Over the course of the convening, attendees participated in activities that drew out organization-level and community stakeholder perspectives, fostered dialogue, and identified collective solutions. **The insights and recommendations generated through this process, grounded in both the environmental scan and participants' expertise, shaped the syndemic-informed roadmap presented here to guide public health planning and strengthen responses to mpox and future outbreaks.**

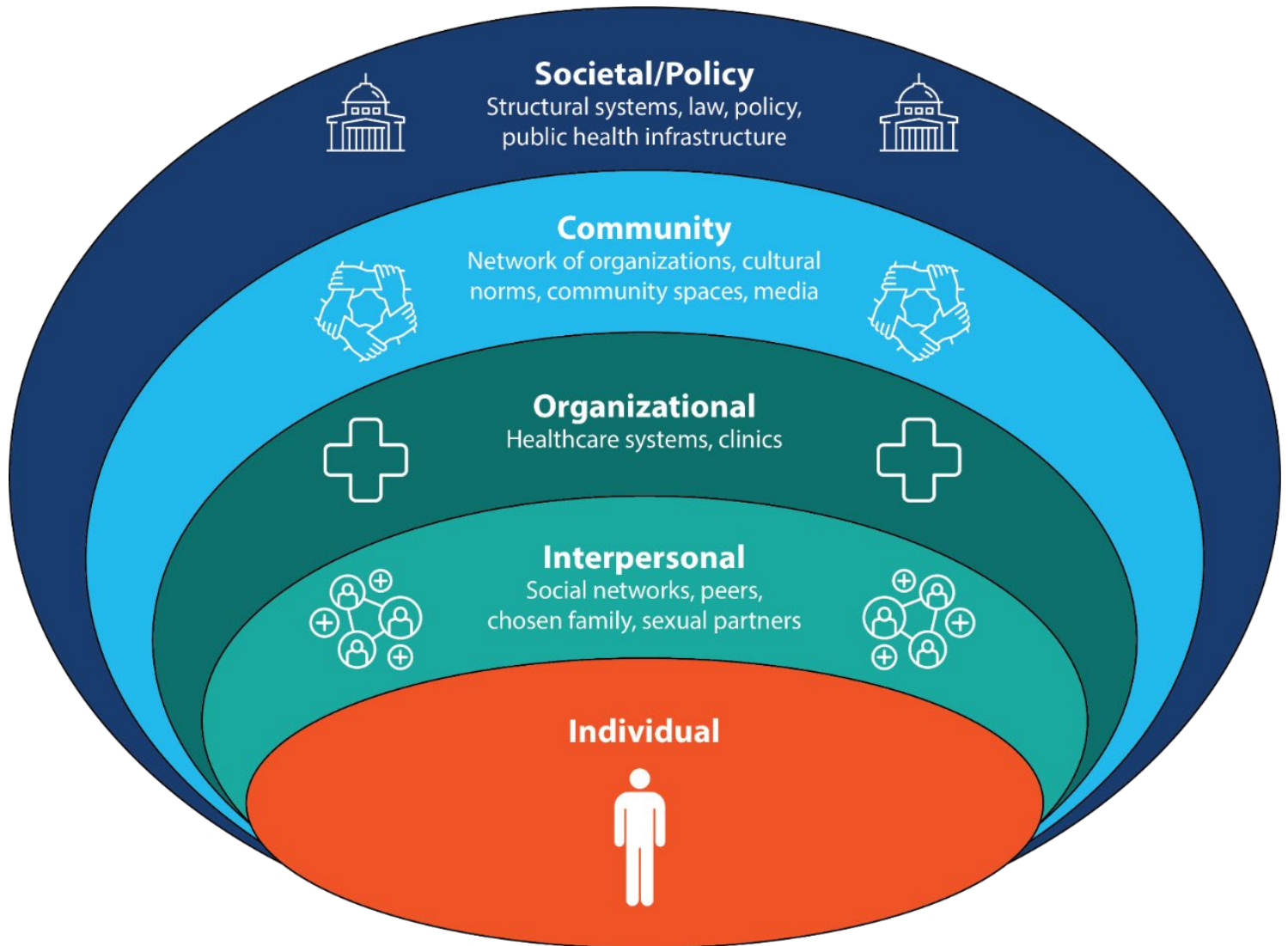
## How Do I Use the Roadmap?

This roadmap is intended for all people working to address mpox in their community, regardless of background or role. This could include, but is not limited to, clinicians, administrators, program managers, policy experts, community health workers, community members directly impacted by mpox, and other service delivery staff at the federal, state, and local levels. The roadmap is organized using the Social-Ecological Model (SEM), a multi-level framework for understanding the dynamic interplay between individual, interpersonal, community, organizational, and societal factors that influence behavior and health outcomes (SAMHSA, 2019).

**The SEM offers a lens to explore how structural and health-related drivers of mpox operate across levels of influence. In the context of mpox prevention, and particularly efforts to increase awareness and uptake of vaccination services, the SEM helps to identify strategies at each level of influence (Figure 2).** While the fifth level, "Individual", is an important level focusing on factors unique to an individual that influence health outcomes, it is not presented as a stand-alone section in this roadmap. Instead, strategies relevant to individual risk for mpox are embedded across the other levels.

# Background

**Figure 2. Social-Ecological Model**



Some areas of the roadmap are more relevant to specific roles than others. To make this clear, each SEM level includes subheadings for:

- **Primary Roles:** The teams or positions with lead responsibility for achieving that level's objectives.
- **Partner Roles:** The teams or positions that collaborate with the primary roles to support and strengthen implementation.

Each level is further summarized by primary objectives and goals best suited to the Societal/Policy, Community, Organizational, and Interpersonal levels.

# Background

## Syndemic-Informed Recommendations Organized by the SEM

The following sections present syndemic-informed recommendations for mpox prevention and vaccination services organized systematically by the SEM levels. The report begins at the Societal/Policy level, where macro-scale decisions, funding allocations, and systems coordination shape the overall public health response. Then it proceeds through the Community, Organizational, and Interpersonal levels.

Since mpox has disproportionately affected populations already experiencing stigma, structural barriers, and other medical conditions, a syndemic approach is applied throughout the roadmap.

This approach recognizes that mpox risk and outcomes are connected to other health and social challenges; therefore, the recommendations included in each level are framed using a syndemic lens to look beyond mpox occurring in isolation and instead, go further by acknowledging the social environment (e.g., housing instability, stigma) and co-occurring health conditions (e.g., STIs, HIV, viral hepatitis, mental health disorders) that affect populations at risk for mpox.

By framing the epidemic within this broader context, a syndemic approach supports a multi-level, multi-pronged response. This approach integrates different levels of the social and physical environment (i.e., individual, interpersonal, organizational, community, social/policy) to reduce health disparities and improve outcomes across affected populations more effectively. Please see **page 7** for an example scenario that illustrates mpox using a syndemic lens.

# Background



**To visualize this further, consider Vincent, a 30-year-old who lives in an urban area.**

After speaking to a few community health workers who were passing out free merchandise and information at one of the local bars, Vincent is interested in getting the mpox vaccine (**community level**). On a daily basis, Vincent navigates multiple challenges and barriers that intersect and amplify vulnerability.

Vincent is living with HIV and managing depression, two intersecting diagnoses that already require frequent visits to the doctor and medication adherence (**individual level**). This allows Vincent to be familiar with the healthcare system. He also recently lost stable housing and is mostly staying with friends around the city as a result of unaffordable housing in his area (**societal/policy level**).

This has made it difficult to maintain appointments. His minimum-wage job as a food service worker also comes with unpredictable hours which can limit his ability to access clinics during standard work hours.

In addition to these structural barriers, Vincent still feels judgment and shame around his sexual identity and his HIV status when speaking with peers or professionals (**interpersonal level**). Though he has been able to start trusting his HIV doctor, he still hesitates to disclose personal information when seeking care elsewhere (**organizational level**).



When he finally found a clinic offering mpox vaccination appointments that works with his schedule, transportation becomes another barrier since the clinic is all the way downtown.

This situation leaves Vincent feeling stuck in his decision about if, when, and how to get the mpox vaccine, especially since the vaccine is a two-dose series taken a month apart.

This example scenario demonstrates how overlapping health conditions, social determinants, and environmental constraints do not occur in isolation when it comes to vaccine access and uptake by individuals who need it the most. A syndemic approach combined with SEM framing acknowledges these are interconnected and overlapping circumstances, and seeks to provide multi-level strategies to address barriers at all levels of experience.

# Background

The recommendations described in the rest of the document do not represent an exhaustive inventory; instead, they reflect strategies that emerged consistently across multiple sources of evidence. These include (1) peer-reviewed research and grey literature documenting interventions that improve awareness of and access to mpox prevention services, (2) implementation evidence from healthcare agencies actively delivering mpox services, and (3) perspectives of community stakeholders working directly with communities impacted by mpox and individuals with lived experience navigating mpox-related care.

Finally, the recommendations were strategically prioritized during the Mpox Roadmap Convening, where attendees engaged in structured discussions informed by the landscape report (**Appendix A**). Consensus centered on strategies that both reflect a syndemic perspective—addressing mpox in the context of co-occurring health and social challenges—and meet standards of practical feasibility for implementation across the nation. To ensure clarity and usability, the roadmap highlights a focused set of achievable strategies at each SEM level, helping stakeholders translate recommendations into coordinated action.

**While the strategies provided in this roadmap are presented in the context of mpox, we hope that much of the guidance can be applied to current and future public health outbreak responses, particularly those that can be transmitted sexually.**

## Note on Language Consideration

Language constantly evolves, often to mitigate stigma and to be respectful, as seen in the recent change from "monkeypox" to "mpox." The terminology for the LGBTQ+ community has also shifted over time to better reflect individual identities. For this publication, we are using preferred terms recommended by the CDC's Health Equity Guiding Principles. We acknowledge that terminology recommended at the time of this publication may not pass the test of time. Despite that, we created this roadmap using language that reflects the highest regard for all communities, especially those who have been historically marginalized.



## Societal/Policy Level

**Primary Roles:** Policy, Jurisdictional Coordination, Outbreak Response Leadership, Data Analytics, Epidemiology & Surveillance, Communication

**Partner Roles:** Medical Services, Community Health, Laboratories, Trusted Messengers

**Primary Objectives:** Establish and maintain a resilient public health infrastructure through health-equity-based policies and flexible, sustained funding, enabling a timely and data-driven response that counters misinformation and effectively addresses the needs of communities at increased risk.

**Provide timely and informative messaging to keep the medical community, public health community, media, and the public informed and prepared.** Develop and widely disseminate guidance on the occurrence and spread of mpox to inform health departments, healthcare organizations, and medical professionals, particularly to the organizations that serve the impacted communities. In addition, ensure that training and capacity-building materials are distributed quickly to prepare medical services staff for mpox identification, testing, treatment, and vaccination services. Provide communication materials, including campaign materials, to facilitate the dissemination of mpox messages in various modalities and for diverse audiences.

### **Syndemic Rationale:**

- Timely, coordinated communication and capacity-building efforts with organizations already serving highly impacted communities can help ensure that mpox prevention is prioritized, while initiating the process to integrate mpox prevention into existing treatment/care protocols for HIV, STIs, and structural barriers to care.

- By equipping medical services and public health professionals with accurate, up-to-date resources on mpox, this strategy supports a syndemic approach that acknowledges how stigma, misinformation, and fragmented care systems can worsen outcomes for communities already disproportionately impacted by multiple, interrelated health conditions.



### **Communication Strategy Consideration**

The Centers for Disease Control and Prevention's (CDC) Crisis and Emergency Risk Communication (CERC) framework outlines essential communication strategies for organizations and leaders during emergencies to build trust, foster public understanding, and guide effective responses by providing timely, accurate, and compassionate information. Core components include: 1) Be first 2) Be right 3) Express empathy 4) Promote action 5) Show respect 6) Demonstrate transparency



# Societal/Policy Level

**Set and define clear, measurable public health outcomes to determine how to focus strategies and efforts to maximize impact and reach for mpox awareness and services.** Setting specific, measurable, attainable, relevant, and timely (SMART) metrics provides data to inform whether interventions and policies are effective and reaching the intended audience (Doran, 1981). It also provides information on differences in mpox cases and vaccine uptake, both demographically and geographically, helping organizations direct efforts to have the greatest impact and identify structural needs and existing barriers among disproportionately affected populations.

## Syndemic Rationale:

- Metrics that track multiple conditions (e.g., mpox, HIV, STI rates) and social determinants (e.g., housing, insurance, income) reveal how epidemics cluster and guide interventions where syndemic burdens are highest.

**Partner with and involve sexual health professionals and people with lived experience early in planning to support efforts for improving awareness about mpox and other sexually transmitted infections.** Engaging with communities and clients about sexually transmitted infections is a specialized skillset, and organizations that provide sexual health services are known to be better prepared for the efforts to engage and serve people at risk for mpox.

## Syndemic Rationale:

- Sexual health professionals are already positioned to address co-occurring HIV and STI epidemics, so involving them early ensures that mpox prevention is delivered alongside broader sexual-health and harm-reduction services.
- People with lived experience bring expertise and relevant perspectives to engage their community effectively.



## Equity Consideration

Hire and/or involve community members, stakeholders, and people with lived experience in positions of decision-making. Involving members of the community and diversifying decision-makers can have a positive impact by empowering individuals to play a role in their community's health outcomes.



## Example from the Field

The CDC engaged multiple organizations early on to distribute the mpox vaccine, including communicable disease departments (e.g., immunization clinics) and sexual health clinics. After working with community partners, such as local bars, it was apparent that the sexual health clinics were more successful in engaging the populations at risk of mpox due to their existing relationships with the clients and community.



# Societal/Policy Level

## **Support flexible funding to facilitate strategic coordination and service delivery during an mpox incident.**

Flexible funding can support organizations to adapt to mpox or any new public health emergency as they arise. Consider the administrative burdens on organizations and streamline where possible, including reporting.

### **Syndemic Rationale:**

- Adaptable funding mechanisms support a whole-person health strategy that is responsive to intersecting health issues. For example, they can support integrating mpox services alongside HIV testing, PrEP services, and mental-health counseling.

## **Consider policies and strategies that support communities by recognizing and mitigating the social determinants of health.**

Identify the socioeconomic and structural inequities that disproportionately affect specific communities, thereby exacerbating health disparities and limiting access to care. Poverty, housing, health care access, stigma, discriminatory practices, and medical mistrust are just a few barriers to care

to be considered when developing and disseminating guidance and policies. Consider how to mitigate the numerous and existing barriers, such as cost, vaccine access, language, lack of health insurance, transportation, and childcare.

### **Syndemic Rationale:**

- Syndemic approaches address co-occurring health conditions (e.g., HIV, STIs, mental health conditions) and social conditions (e.g., housing, income, insurance, and structural discrimination) to strengthen overall community resilience.



### **Example from the Field**

New York state declared a state of emergency to mobilize a centralized and coordinated response. The NY State Commissioner of Health also used the Imminent Threat to Public Health declaration to add mpox to the list of STIs, which allowed local health departments diagnose, treat and offer preventative services to those at risk of exposure, allowing minors to consent without parental authorization (Alvarez, 2023).



## **Questions to Consider**

Competing priorities and limited resources will always be our reality.

- *How do we work within those constraints?*
- *Can your department leverage funding or resources from another vaccine program or organization serving the same population you are prioritizing?*
- *If the priority is vaccinating as many people as possible with limited vaccine supply, can you ensure everyone gets at least the first dose?*



# Community Level

**Primary Roles:** Community Health, Community-Based Organizations (CBOs), Social and Behavioral Science Research, Communication

**Partner Roles:** Jurisdictional Coordination, Medical Services, Infection Prevention and Disease Control

**Primary Objectives:** Build relationships with community partners and understand the cultural norms within priority populations and characteristics of community spaces in order to conduct culturally responsive outreach. Leverage diverse communication channels (e.g., social media) to address communication gaps and reach certain groups (e.g., Spanish language radio).

**Use a mix of general and targeted social media messages to reach populations at risk for mpox.** Social media played a significant role in raising awareness and knowledge during the mpox outbreak in 2022. Leveraging social media can address communication gaps and reach populations at increased risk. Be mindful of your audience when choosing the dissemination channel. For example, the messages shared on a gay dating site can be more explicit and direct when discussing sexual behaviors. However, if sharing messages in a public area (e.g., a bus stop), consider messages that are appropriate for multiple audiences to reduce the potential for stigma, while using visual cues (e.g., rainbow colors, same-sex couples) to engage the priority population of interest.

Ensure messaging is translated into multiple languages and disseminated through well-known platforms and accounts to reach the relevant audience. Collaborate with content creators who are widespread with and trusted by your priority populations. Collaboration can range from simply sharing the most up-to-date information with content creators to paying them to promote your messages.



## Syndemic Rationale:

- Normalizing sexual health messaging in public areas supports people seeking care for mpox and other syndemic conditions
- Social media can address overlapping epidemics—such as HIV, STIs, substance use, and mental health—by linking mpox messaging with information on HIV prevention (PrEP), STI screening, and harm-reduction resources.



# Community Level

**Conduct community-centered outreach in social media and other community spaces to build trust.** Community-centered outreach is one of the most effective strategies for engaging with priority populations and increasing access to health services. Conducting culturally-responsive outreach will vary by community and setting. It can range from holding town halls and webinars to answer questions to hosting vaccine clinics at bars, drag shows, or food banks. Build trust within the community by hosting town halls and listening sessions, so they have access to the most up-to-date information and can ask questions freely.

For example, the CDC held a listening session with bathhouse and sex club owners during which the CDC provided the latest mpox data, answered participant questions, and asked them what they needed. This shows communities that public health leaders care, and in exchange, public

health workers can learn what is happening on the ground. Recognize that individuals may be hesitant to engage with the health care system for a variety of reasons, including fear of judgment, immigration status, and historical discrimination or mistreatment.

### Syndemic Rationale:

- Building trust with community members reduces barriers to care for people simultaneously affected by mpox, HIV, STIs, mental-health conditions, and substance use, where stigma and medical mistrust overlap.
- Culturally responsive outreach ensures that information about multiple health services—mpox vaccines, HIV testing, mental-health support—is delivered in ways that respect cultural norms and address historic inequities.

*“And this year, we have a community that is not going to come to the clinic, going to be afraid. We’ve got to go out to the communities. With that outreach element, we can bring information, we can bring brochures, we can do workshops, we can take it to the churches, we can take it to the places where we think people are going to be open to the conversation. And then we talk about the different vaccines that exist, you know.” - Community Stakeholder*



### Examples of Partnerships with Non-Traditional Community Organizations from the 2022 Mpox Outbreak

- Libraries
- Adult bookstores
- Bars/clubs
- Needle exchange sites/syringe service programs
- Bathhouses
- Religious events unique to community
- Food banks
- Soup kitchens
- Local festivals
- Covid vaccination clinics
- Homeless shelters



# Community Level

## **Partner with non-traditional community organizations to increase mpox vaccine awareness.**

Collaborating with non-traditional organizations can help establish meaningful relationships and build trust with the same population you are trying to reach. For example, it may be helpful to partner with libraries to engage people experiencing homelessness with information on where to receive mpox vaccinations or to serve as a vaccine location. Early and ongoing collaboration with community-based organizations, especially those serving populations with or at risk of HIV and other syndemic conditions, helps build trust and shared understanding. Foster transparency and open communication to ensure information flows freely and supports shared decision-making. By honoring commitments and supporting partners, we create a strong foundation for mutual growth, sustainable impact, and cost-effective outcomes.

### **Syndemic Rationale:**

- Partnerships with non-traditional partners can help engage populations with or at risk of syndemic conditions to support them with information on multiple interconnected health needs.



## ***Example from the Field***

In Detroit, a collaboration of providers, health departments, and CBOs was formed to provide vaccine services to community spaces frequented by the LGBTQ+ community and the Black and African American community. Staff from the Detroit Department of Health used their trusted, personal connections to establish partnerships with bar owners, churches, local entertainers, event promoters, and DJs, to offer mpox education and vaccines. They hosted late-night pop-up clinics at bars, clubs and community events, and hosted mobile vaccination events in popular spots for cruising, sex work, and the unhoused population. These efforts helped to remove logistical barriers and help destigmatize the vaccine.



## **Equity Consideration**

Communities are intersectional, and people belong to many communities at one time. Outside partners need to show up to community spaces and events consistently to adequately build trust, rather than attending events only when they need the community.



# Organizational Level

**Primary Roles:** Medical Clinics, Infection Prevention and Disease Control, Pharmacies, Community-based organizations (CBOs)

**Partner Roles:** Policy, Trusted Messengers, Media

**Primary Objectives:** Provide testing, treatment, and vaccination services to people at risk of mpox and ensure the services are accessible, equitable, and acceptable to all members of the community at risk for mpox.

**Bundle and integrate mpox services within existing clinical services and infrastructure, particularly HIV and sexual health services.** Mpox is a syndemic with other sexual health conditions and mpox services can be incorporated into existing HIV and sexual health services infrastructure (e.g., DoxyPep, PrEP, STI testing/treatment, and other sexual health services). In addition, offering multiple vaccines at a vaccination event can support uptake of all vaccines. For example, Colorado saw a rise in both meningitis and mpox in a few communities. In a joint partnership, the Denver Department of Public Health & Environment and the Colorado Department of Public Health & Environment began offering the meningococcal and mpox vaccines alongside the COVID-19 vaccine, which supported uptake of both vaccines (Metzger, 2025). Integrated services and care can remove barriers and support clients by meeting them where they are.

### **Syndemic Rationale:**

- Coordinated services create a single, trusted touchpoint for receiving mpox and other related health services.

**Leverage complementary funding streams to support mpox and related syndemic services.** Complementary funding, also known as braided funding, can allow agencies to integrate services for unexpected public health events nimbly. Organizations can do this by securing and managing multiple funding sources and creating a coordinated funding plan that supports sustainability across programs, including for mpox services. For example, Alameda County supported and encouraged agencies to use braided funding to support their status-neutral and HIV service programs, as it would be more responsive to the comprehensive needs of their residents living with and most impacted by HIV and STIs.

### **Syndemic Rationale:**

- Complementary funding, or braided funding, makes it easier to expand immunizations, sexual health services, and other clinical services alongside mpox services, ensuring agencies can meet the needs of clients experiencing multiple syndemic conditions simultaneously.



# Organizational Level

## Analyze data on an ongoing basis to inform and modify mpox strategies and reach clients at risk of mpox.

Collecting and analyzing data over the course of an mpox outbreak provides an overview of trends as they change over time and can inform what interventions are needed and for whom. Ongoing data collection also helps organizations pivot mpox activities and focus resources to areas of need.

### Syndemic Rationale:

- Routine analysis that includes mpox, HIV, STI, and mental-health indicators identifies where multiple conditions cluster, guiding resource allocation to communities experiencing the heaviest combined burdens.



## Questions to Consider

Early and ongoing data collection helps to quickly measure knowledge, awareness and behaviors related to an outbreak and can be used to guide activities including communications, interventions, and more.

- *What do people know, think and believe about mpox?*
- *How are they accessing services?*
- *What are they willing to do and not do?*

Collecting this data can help agencies become aware of information people are looking for, or why people might be avoiding certain services.

**To improve access to mpox services, implement a variety of strategies that overcome logistical, structural, and social barriers.** Offer flexible, non-standard hours, including evenings and weekends, to accommodate people with diverse schedules. Walk-in hours also support people with unpredictable schedules. Consider removing geographical restrictions on services, especially for individuals who frequently relocate or reside in areas where they cannot or do not wish to access services locally.

To reach individuals who may not seek mpox services in clinical settings, host mobile clinics and pop-up events in culturally relevant locations. For the 2022 mpox outbreak, this included LGBTQ+ affirming spaces (e.g., bars, Pride events) and predominantly Black and African American and Latino/Hispanic neighborhoods. Offer scheduling services in a variety of modalities. Online scheduling might be accessible for some community members, but it also provides hotlines to ensure that individuals with limited internet access or low technology literacy are not excluded.

### Syndemic Rationale:

- Removing barriers like limited clinic hours, transportation needs, and technology gaps simultaneously improves access to mpox vaccination and to HIV, STI, and other sexual health services for communities facing overlapping disparities.
- Providing services in culturally relevant spaces helps deliver accessible, non-judgmental, and integrated sexual health services directly to impacted communities to mitigate the virus and the underlying social determinants that fuel health inequities.

# Organizational Level

**Leverage technology and implement follow-up practices to ensure people return for their second mpox vaccine appointment.** According to CDC guidelines, two doses of the mpox vaccine are recommended to provide stronger protection (Dalton, 2023). If vaccinating on site, schedule clients for their second vaccination before they leave. Take advantage of technologies that make getting a second vaccine easier, such as QR codes, portal messages, and other tools. If using events in the community, consider scheduling a second event a month later to get many participants their second vaccination.

## Syndemic Rationale:

- Innovative follow-up systems can facilitate receiving the final vaccine and encourage retention in care. Other vaccines and chronic disease management (e.g., HIV PrEP refills, hepatitis B vaccination), helps reinforce comprehensive preventive care.



**Implement strategies that build trust and foster effective communication and outreach for mpox services.**

Advertise in public spaces like community centers, public transportation hubs, and culturally relevant locations. Develop mpox materials in multiple languages to reach diverse communities where English might not be the preferred language. Leverage trusted community connections, such as LGBTQ+-affirming clinics, HIV specialists, and local community leaders, to help design and promote communications strategies for mpox services.

## Syndemic Rationale:

- Trust-building and culturally tailored communication address the compounded stigma and historical medical mistreatment that affect people at risk for mpox, HIV, and STIs, increasing uptake of all related health services.



## *Example from the Field*

LA County Department of Public Health, Vaccine Preventable Disease Control Program partnered with UCLA to collaborate with event organizers and sent mobile vaccine teams to pop up at LGBTQ+ outreach events and high-risk events (e.g., sex parties, pool parties) to provide sexual health and vaccination services.



# Organizational Level

**Consider how to mitigate fear and medical mistrust among individuals accessing mpox services.** The 2022 mpox outbreak was compounded by fears stemming from the COVID-19 outbreak, including mistrust and hesitancy around vaccine uptake. Consider fears and misinformation stemming from past outbreaks and historic traumas, including the HIV/AIDS epidemic. Leverage relationships with trusted community organizations to disseminate messaging and address misinformation. Facilitate an environment that is affirming to LGBTQ+ clients, Black or African American populations, Latino/Hispanic populations, young adults, people with HIV, and any other community disproportionately impacted by mpox. This includes trauma-informed care, ongoing training, and capacity-building to ensure that all clients feel respected while receiving services.

## Syndemic Rationale:

- Recognizing and working to mitigate medical mistrust improves willingness to engage in care not only for mpox but also for HIV, STI testing, mental-health treatment, and other preventive services that share some of the same structural barriers.



*“We had to train specifically for how to talk to the LGBT community to tell them you need to ask about their pronouns, you need to ask about their preferred name. You have to be careful with these specific questions.” – Community Stakeholder*



# Organizational Level

## **Provide comprehensive training and capacity-building programs about mpox for clinical and nonclinical staff.**

Provide ongoing training to healthcare providers to improve their comfort and knowledge in taking a client's sexual history and discussing mpox and sexual health. This will also ensure providers continue to view mpox as an important health priority. Partner with state and local health departments that can provide relevant training and resources. Prioritize trainings that incorporate cultural competency and trauma-informed approaches. Hire and retain multilingual/multicultural staff and ensure all educational materials are available in multiple languages and acceptable to different communities. Provide written reminders (e.g., emails, newsletters) to health care providers to keep mpox in their differential diagnoses. Mpox continues to be misdiagnosed because some health care providers are not aware that cases of mpox continue to circulate in the US. Please see **Appendix B** for a list of available training and capacity-building resources.

### **Syndemic Rationale:**

- Culturally responsive, trauma-informed training prepares staff to address interconnected issues, in order to reduce stigma, correct misinformation, assuage fear, and ensure clients receive comprehensive care.



## **Mitigating Fear and Medical Mistrust Using Trauma-Informed Care Approaches**

Organizations or programs that are trauma-informed maintain a strengths-based culture that supports clients by responding to the lasting, adverse effects of experiencing traumatic events. A trauma-informed care approach integrates the Substance Abuse and Mental Health Services Administration's (SAMHSA's) 6 guiding principles and helps those impacted by trauma while actively resisting re-traumatization:

- 1) Safety*
- 2) Peer Support*
- 3) Trustworthiness and Transparency*
- 4) Collaboration and Mutuality*
- 5) Cultural and Historical, & Gender Issues*
- 6) Empowerment, Voice and Choice*

*For more information, please visit:*

*<https://www.samhsa.gov/mental-health/trauma-violence/trauma-informed-approaches-programs>*



# Interpersonal Level

**Primary Roles:** Social and Behavioral Science Research, Trusted Messengers, Community Health Workers/Patient Navigators, Medical Services

**Partner Roles:** Community-Based Organizations (CBOs), Community Health, Outbreak Response Communication

**Primary Objectives:** Build trust among individuals and their chosen healthcare settings and social circles; combat misinformation by amplifying the voices of authentic, trusted messengers

**Trusted messengers can influence health-seeking behaviors.** Individuals' social networks, such as peers, chosen family, sexual partners, and other close relationships, can influence their engagement with mpox-related services. Trusted messengers effectively bridge the gap between official health guidance and affected communities and are essential for combating misinformation. Hearing information from trusted messengers can increase awareness and support health-seeking behaviors using the power of their relationship-building and unique information channels.

### Syndemic Rationale:

- Trusted peers can encourage health-seeking behaviors such as HIV testing, PrEP use, STI screening, mental-health care, and mpox vaccination, reducing the combined impact of these intertwined health conditions.

*“When I put my face [on social media] it’s because people, they can get more related. They can see it’s an actual person who is giving you the information instead [of] a model with just information.”*  
– Community Stakeholder



### Use personal stories to normalize seeking mpox services and care.

Personal stories that were shared on social media, especially those detailing symptoms, recovery, and experiences with accessing services helped others recognize their own susceptibility to mpox. Personal vaccination stories also helped to increase vaccine uptake. Storytelling from trusted messengers and community members can be a powerful tool for normalizing care-seeking behavior and encouraging others to access services.

### Syndemic Rationale:

- Personal narratives reduce stigma and fear not just for mpox but also for HIV, STIs, and other sensitive health issues, motivating individuals to engage in comprehensive sexual-health and mental-health care.



# Interpersonal Level

**Trusted spaces can facilitate safe, affirming interactions and create a supportive environment for patients.** Patient navigators, community health workers, and trusted CBOs can support individuals in seeking mpox services and in receiving wraparound services (e.g., housing assistance, mental health care, primary care). Elevating spaces such as HIV specialty clinics or LGBTQ-friendly clinics can support patients in seeking care in an affirming, non-stigmatizing environment.

## Syndemic Rationale:

- Affirming spaces help people feel safe seeking care for mpox while also supporting engagement in HIV prevention, STI treatment, and mental-health services—key steps in breaking the cycle of overlapping health disparities.

*“I think I’m talking about my privilege because I’m going to the clinic. It’s a clinic for LGBT community, so as soon I come in, I feel safe. I feel very comfortable to talk to my providers. That’s where I receive my care all the time.”*  
– Community Stakeholder



## Example from the Field

Queer Kentucky, a Kentucky publishing and activist organization advancing Queer culture and health through storytelling, education, and action, partnered with trusted social media and community influencers to deliver mpox health information. To combat medical mistrust, the trusted social media and community influencers delivered CDC mpox information directly to their communities.



## Equity Consideration

Promoting welcoming and safe interactions is essential for mpox service uptake. Consider the format of your messaging and communication. For example, to lower the chances of health literacy acting as a barrier, host and create spaces where people can have open communication in local terms and not through medical jargon to discuss mpox. This can look like hosting a social media live Q&A or an in-person “Meet the Doctor” event where people can talk to a medical professional in a casual setting.



# Interpersonal Level

**Trusted messengers play an essential role in public health messaging.** There is no substitute for their authentic voice and the trust they have built with their community. Health organizations looking to use a syndemic approach might be eager to rely on their credibility and their reach in communities they struggle to engage, but an authentic partnership requires respecting their autonomy and their boundaries.

Here are some considerations:



**Respect their voice:** A trusted messenger's credibility is their greatest asset. Make sure the talking points and tone feel authentic, culturally resonant, and affirming. They can decline or push back against any health messaging that is stigmatizing, harmful, or misaligned with the trust they have built.



**Consider what kind of support the trusted messenger would like to lend:** Would they prefer to endorse the messaging and strategy of the health organization? Or would they prefer a partnership in which they lend their expertise from the very start? Do they expect compensation? What would the usage rights look like? These are details to be negotiated when establishing the partnership.



**Establish boundaries:** No one is entitled to the support of trusted messengers. They need to be explicit about their availability and capacity. Promoting health messages can have an emotional toll, especially when the subject involves trauma and stigma. Personal stories can be powerful, but they have a right to privacy. Trusted messengers need to be sure they take care of themselves and seek support to prevent burnout.



**Ethical considerations:** Individuals may seek advice from trusted messengers who are not qualified to respond. Trusted messengers need a plan to refer individuals to appropriate resources for the support they need.

# References

1. Centers for Disease Control and Prevention. (2025, December 18). About mpox. <https://www.cdc.gov/mpox/about/index.html>
2. Dalton, A. F. (2023). Estimated effectiveness of JYNNEOS vaccine in preventing mpox: A multijurisdictional case-control study — United States, August 19, 2022–March 31, 2023. MMWR. Morbidity and Mortality Weekly Report, 72, Article mm7220a3. <https://doi.org/10.15585/mmwr.mm7220a3>
3. Doran, G. T. (1981). There's a SMART way to write management's goals and objectives. Management Review, 70(11), 35–36. <https://community.mis.temple.edu/mis0855002fall2015/files/2015/10/S.M.A.R.T-Way-Management-Review.pdf>
4. Kava, C. M., et al. (2022). Epidemiologic features of the monkeypox outbreak and the public health response — United States, May 17–October 6, 2022. MMWR. Morbidity and Mortality Weekly Report, 71(45), 1449–1456. <https://doi.org/10.15585/mmwr.mm7145a4>
5. Metzger, M. (2025, August 13). *Mpox roadmap convening: Strategies and challenges discussion*.
6. Minhaj, F. S. (2025, April 15). Mpox vaccine work group [PowerPoint slides]. Advisory Committee on Immunization Practices (ACIP) Meeting, Atlanta, GA, United States. Centers for Disease Control and Prevention. <https://www.cdc.gov/acip/downloads/slides-2025-04-15-16/01-minhaj-Mpox-508.pdf>
7. Riser, A. P., et al. (2023). Epidemiologic and clinical features of mpox-associated deaths — United States, May 10, 2022–March 7, 2023. MMWR. Morbidity and Mortality Weekly Report, 72(15), 404–410. <https://doi.org/10.15585/mmwr.mm7215a5>
8. Substance Abuse and Mental Health Services Administration. (2019). A guide to SAMHSA's strategic prevention framework. <https://www.samhsa.gov/sites/default/files/20190620-samhsa-strategic-prevention-framework-guide.pdf>
9. U.S. Department of Health and Human Services. (2024, April 29). Defining the term “syndemic”. HIV.gov. <https://www.hiv.gov/blog/defining-the-term-syndemic>

# Appendix A: Mpox Landscape Report Environmental Scan & Communications Activities Findings

To view the Mpox Landscape Report, please visit this link:

<https://caiglobal.org/wp-content/uploads/2025/12/Mpox-Landscape-Report-2025.pdf>

To view the results of the Mpox Communications Activities Initiative, please visit this link:

<https://caiglobal.org/wp-content/uploads/2025/12/Mpox-Communication-Activities-Summary-2025.pdf>

## Appendix B: Resources on Mpox

1. American Academy of Dermatology Association: [Mpox resource center](#)
2. Clinical Considerations for Use of Vaccine for Mpox Prevention: <https://www.cdc.gov/mpox/hcp/vaccine-considerations/vaccination-overview.html>
3. JYNNEOS Coverage Fact Sheet: <https://www.cdc.gov/mpox/media/pdfs/2024/10/JYNNEOS-Coverage-Fact-Sheet-10-24.pdf>
4. Mpox Resources for Health Care Providers: <https://www.cdc.gov/mpox/site.html#hcp>
5. Mpox Toolkits Via CDC Stacks: <https://stacks.cdc.gov/gsearch?terms=mpox+toolkits&collection=>
6. University of Washington, mpox curriculum: [Mpox - STD Lessons - National STD Curriculum](#)
7. World Health Organization: [Mpox](#)
8. World Health Organization: [Mpox Outbreak Toolbox](#)