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Preventing Mpox Resurgence by Increasing Vaccine Confidence and Community Immunity Through Community-Based Organization Partnerships

Final Report

June 2024

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Key Terms

CBO	Community-Based Organization
CDC	U.S. Centers for Disease Control and Prevention
CHW/P	Community Health Workers/Promotore(a)s
HAN	Health Alert Network
MSM	Men who have sex with men
NOFO	Notice of Funding Opportunity
RFP	Request for Proposals
SGL	Same-Gender Loving
Syndemic	Clustering of two or more social or health conditions within a population

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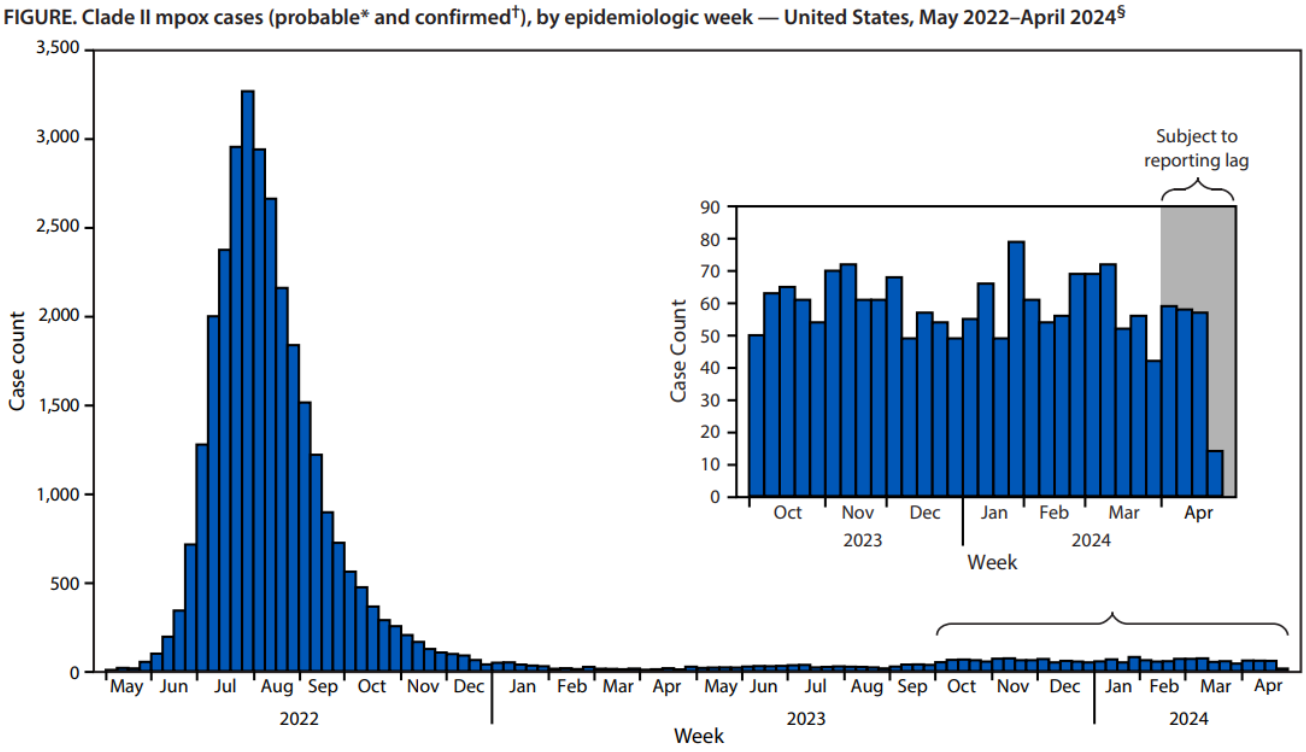
Introduction

Background on Mpox in United States and Impetus for Preventing Mpox Resurgence Project

Mpox (formerly known as monkeypox) is a disease caused by infection by the mpox virus, which is in the same family of viruses that cause smallpox (CDC, 2023a). The disease, while rare, is endemic to regions of West, Central and East Africa, particularly in Democratic Republic of the Congo (WHO, 2023). In late spring of 2022, a global outbreak of mpox began, with a rapid spread of mpox in non-endemic countries. This differed from previous outbreaks as the 2022 outbreak was attributable to sexual contact. Within the United States, the outbreak peaked in August 2022 with approximately 460 cases per day and disproportionately affected gay, bisexual and other men who have sex with men (MSM) and racial and ethnic minority groups (CDC, 2023b) (Figure 1).

Figure 1. Overview of clade II mpox cases in the United States by week, May 2022-April 2024 (Tuttle et al., 2024)



Vaccination with two doses of the JYNNEOS vaccine continued to be promoted as a crucial prevention measure. At the time the request for proposal was issued (June 12, 2023), approximately 1.2 million vaccine doses had been administered, representing approximately 23 percent of the population at greatest risk for mpox (McQuiston et al., 2023). Vaccination coverage was not evenly distributed across population groups as health officials observed racial and ethnic disparities in vaccination coverage. While analysis of mpox case and vaccination data from males in the United States between May and December 2022 indicated that there were slightly higher vaccination rates among males from racial and

ethnic minority groups, these higher rates were not enough to offset the disproportionate mpox incidence in these groups (Kota et al., 2023).

On May 15, 2023, the U.S. Centers for Disease Control and Prevention (CDC) issued an official Health Update via the Health Alert Network (HAN) warning of the risk of resurgence of the mpox outbreak in the coming months. Modeling analyses at the time indicated there was a greater than 35 percent chance of mpox resurgence in most jurisdictions if there were no additional vaccination or sexual behavior adaptations (CDC, 2023c).

As a result, in early summer 2023, CDC issued a notice of funding opportunity (NOFO). The CDC Foundation was the sole eligible recipient due to its established infrastructure, partnerships and expertise to expand current vaccine equity efforts and rapidly implement the described project activities.

In the NOFO, CDC highlighted that the purpose of this award was, "to support a recipient organization in **implementing culturally tailored and responsive public health interventions that will expand and enhance mpox** and other infectious diseases activities**, using a syndemic approach** to ultimately **increase mpox vaccine uptake in communities disproportionately impacted by mpox**."

Syndemics have been defined as epidemics of one or more social or health conditions within a population that interact with one another and that, because of this interaction, exacerbate adverse effects on the health of communities that face systemic, structural and other inequalities (Daskalakis, 2023). While the term was originally coined in the early 1990s by the medical anthropologist Merrill Singer (Mendehall, Newfield & Tsai, 2022), the term and corresponding public health approaches to address syndemics have gained attention more recently, particularly amid the push for health equity and reducing health disparities in the United States.

During a January 2023 webinar hosted by University of California San Francisco Center for AIDS Prevention Studies (CAPS) and Prevention Research Center (PRC), Demetre Daskalakis, MD, MPH, who served as the Deputy Coordinator of the White House's Mpox Response, made a presentation entitled "Syndemic Approach to Prevention and Response" and highlighted the following vital syndemic strategies:

- Address social determinants of health as the top priority to address syndemics, even if aspirational.
- Deliver people-centered services rather than services defined by historical service models and silos.
- Increase investments in STD clinics and harm reduction sites to expand the reach of HIV testing, PrEP/PEP uptake, syringe services and same-day initiation of HIV treatment nationally.
- Increase simultaneous testing of linkage to care and treatment for sexually transmitted infections, mpox, viral hepatitis, mental health, housing, substance use disorders and HIV.
- Increase state and local capacity to detect and respond to infectious disease clusters.

There were two identified strategies CDC included in the program requirements for this funding opportunity:

1. **Implement community engagement strategies.** Develop and implement community engagement strategies to promote mpox vaccination efforts.
2. **Address case and vaccination mpox disparities.** Address health disparities and reduce mpox cases by increasing vaccine confidence, access and uptake in Black and Latino/Hispanic communities, including by administering vaccinations to these communities in convenient and non-stigmatizing ways.

Structure of the Program

Program Design

Based on previous experiences and successes in partnering with Community-Based Organizations (CBOs) to implement public health programming, particularly programming to address racial and ethnic disparities in vaccination, the CDC Foundation opted to use this approach to increase the number of eligible people who receive the mpox vaccine.

Program Purpose

At the inception of this project, the CDC Foundation identified the following overarching goals they hoped to achieve within the populations served by participating CBOs:

- ***Increased availability of accurate information*** about the safety and effectiveness of the mpox vaccine delivered in innovative and culturally appropriate ways.
- ***Increased mpox vaccine confidence, access and uptake*** in communities at higher risk for mpox, including MSM, trans, HIV+ and LGBTQ+ individuals/communities as well as in Black and Latino/Hispanic communities.

Overview of Community-Based Organizations Participating in the Preventing Mpox Resurgence Program

Interested CBOs had approximately one month to develop and submit proposals in response to a request for proposals (RFP) issued by CDC Foundation in June 2023.

Submitted applications were reviewed and scored based on the following criteria:

- Project Description (45 percent)
- Deliverables (20 percent)
- Past Performance and Capabilities (30 percent)
- Administrative Capacity (5 percent)

Additional bonus points (2.5 percent) were awarded if an organization was minority-led, defined as an organization that had 51 percent or more of overall staff, board members and volunteers in all levels of the organization who are people who identify as racial/ethnic minorities. Additional bonus points (2.5 percent) were awarded to jurisdictions where the percentage of population eligible to be vaccinated was below the threshold of 30 percent.

After review and scoring of the proposals submitted to this RFP, 44 CBOs were selected to participate in this project. CBOs were awarded between $25,000 and $100,000 for an up-to eight-month implementation period (September 1, 2023-April 29, 2024).

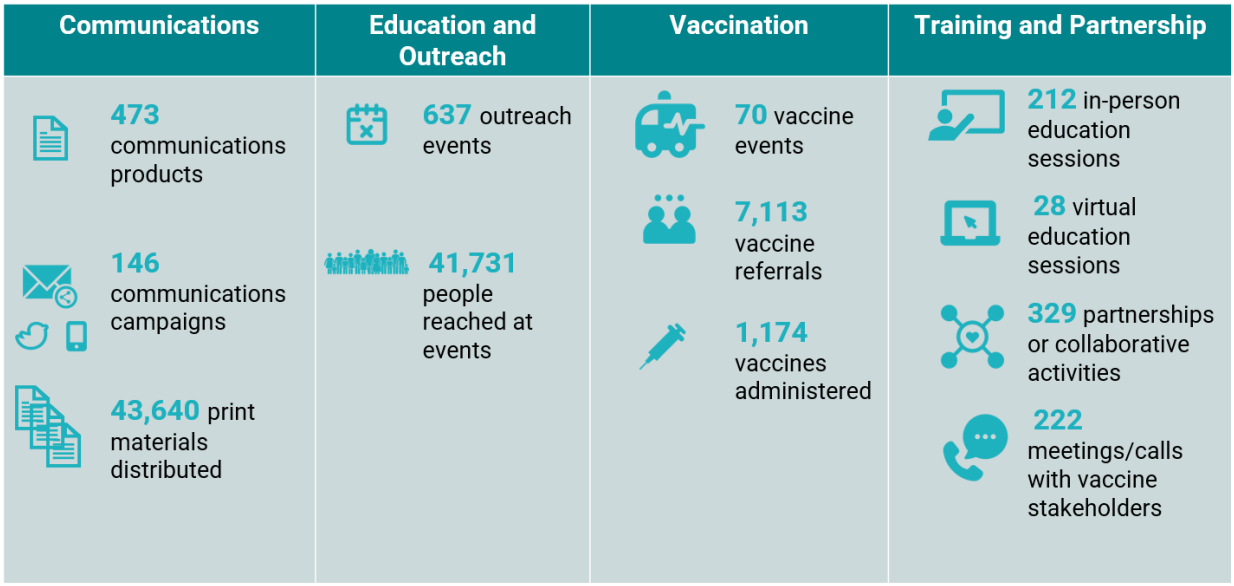
The 44 participating CBOs were subsequently divided into five cohorts each with a designated project officer responsible for grant administration and support. These cohorts met quarterly in cohort calls which aimed to build relationships among CBOs and served as a place for group learning and information sharing.

Mid-Project Achievements and Insights: Monitoring and Evaluation Summary (September 2023-January 2024)

This report is the second in a series of reports that share CBOs accomplishments during their participation in the "Preventing mpox resurgence by increasing vaccine confidence and community immunity through community-based organization partnerships" project. In January 2024, CBOs completed a mid-project, mixed-methods survey to detail their accomplishments towards overarching project goals and provide feedback on their experiences with the project to-date to inform current and future partnerships between CDC Foundation and CBOs. Below is a high-level summary of mid-project report findings. Detailed accomplishments and findings from mid-project reporting can be found in the report entitled "Preventing Mpox Resurgence by Increasing Vaccine Confidence and Community Immunity Through Community Based Organization Partnerships: Mid-Project Report".

Between September 2023 and January 2024, CBOs had made progress towards their respective organizational and overarching program goals in several key areas, including communications, education and outreach, vaccination and training and partnerships (Figure 2).

Figure 2. Overview of accomplishments as reported in mid-project reporting, September 2023-January 2024



CBOs shared rich information on the types of solutions or strategies that had been effective in achieving their goals during the first half of the project. These strategies included providing information in myriad of relevant ways, developing partnerships and collaborations, soliciting and learning from community feedback and providing holistic care that met community members where they were. CBOs weren't without challenges in the first four months of the project and shared that the most common challenges they faced in increasing vaccine confidence, access and uptake were lack of awareness around mpox, misinformation about mpox and mis- and distrust in government. CBOs also shared that community members faced several structural and attitudinal barriers to mpox vaccination that needed to be addressed before folks would be willing or able to seek out vaccination.

Overall, the majority of CBOs stated they received enough support from the CDC Foundation team and that participating in this project had improved their ability to successfully undertake projects related to LGBTQ+ health needs. However, there were some suggestions for improving the structure of the partnership/agreement, some of which were within CDC Foundation's sphere of influence, while others were beyond CDC Foundation's control, but still worth noting and considering for future funding opportunities and partnerships.

This "final" report presents the overall quantitative accomplishments as reported by CBOs in both mid-project and final reporting, while the qualitative results represent new findings from only the final project reporting.

Final Reporting

Impetus for Final Reporting

The purpose of this final reporting was to collect vital information to 1) determine achievement of overarching project goals, including funder guidance on project implementation strategies; and 2) solicit feedback from CBOs on their experiences with the project to date to inform future partnerships with CBOs.

Key learning/evaluation questions to address through this final reporting were as follows:

1. *Did CBOs achieve or contribute to achieving overarching project goals?*
2. *Did CBOs achieve their self-identified goals for the project?*
    a. *What strategies did they use?*
    b. *What barriers are they facing in their efforts?*
3. *Is CDC Foundation providing sufficient and the appropriate support to CBOs?*
    a. *If not, what additional support could be provided for future work with CBOs?*

Final Report Evaluation Methods

Data Collection-Survey

A mixed methods survey comprised of both quantitative questions and open-ended qualitative questions was used to solicit data to answer the key learning/evaluation questions. Survey items designed to capture the following elements were used to answer the first two learning questions:

- Priority populations, key engagement strategies, accomplishments to date related to outreach events, communication products, vaccination support, resources distributed and trainings and partnerships.
- Solutions/lessons learned, successes and barriers to achieving project goals.

Survey items included to solicit feedback on CDC Foundation support included questions about changes in organizational capacity because of this project, adequacy of support and collaboration, most helpful elements of project structure and requested additional support. CBOs were instructed to provided quantitative metrics for the second half of the project (January 1, 2024-April 29, 2024), and provide qualitative responses based on their experiences during that same period.

CBOs completed the survey via the online platform Smartsheet. They were also provided with a Microsoft Word version of the survey to allow easier collaboration among various staff members easier and provide a place where CBOs could work on their reports incrementally as Smartsheet forms does not have a "save" feature.

Data Cleaning and Analysis

Quantitative Cleaning and Analysis

Smartsheet responses were exported into Microsoft Excel for data cleaning. The first step of this process was to extract numerical values from the responses provided by CBOs. For example, in response to question one, which asked CBOs to provide the number and type of outreach events hosted or supported, one CBO provided the following response: "*2 in-person community outreaches, 1 webinar, and 1 Instagram Live*". This response was then entered as "4" for the purpose of data analysis. As a note, we opted to program the survey in Smartsheet to accept these open-ended responses rather than requiring a simple numerical response to better capture the nuances in CBOs implementation experiences and accomplishments.

During this process, unclear responses were flagged for follow-up, in which project officers reached out to CBOs individually to seek clarification. CBOs had approximately two weeks to provide clarification. In the few instances where clarification was not provided, it was considered missing data. Once data were cleaned, simple descriptive analyses to generate frequencies, percentages and means were conducted using SAS version 9.4. Quantitative results presented here generally represent the total accomplishments for the entire project period (September 1, 2023- April 29, 2024) which was calculated by summing the accomplishments from both the mid- and final project reporting.

Qualitative Coding and Analysis

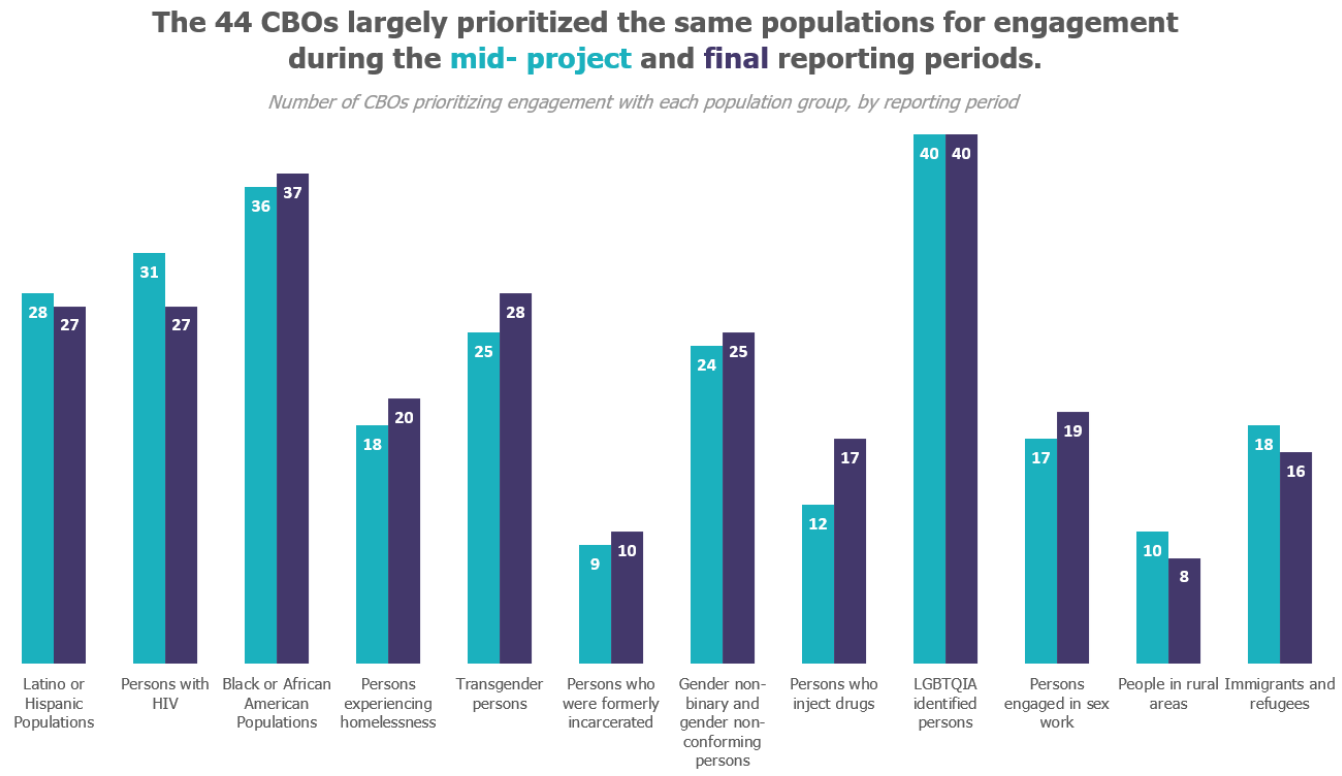
CBO responses were coded by a single qualitative analyst using Excel. The initial codebook, comprised of deductive codes, was developed based on learning/evaluation questions and key concepts from the draft logic model, while additional inductive codes were developed based on themes that emerged from CBO responses. Once coded, the analyst used a thematic analysis approach to identify and interpret themes in CBO responses. The qualitative results are presented for the program as a whole, and only cover the responses provided during the final project reporting. *However, if there is interest in more detailed reporting, for example by cohort, geographic location, populations engaged, or additional analyses such as examining mid and final project qualitative responses together, etc., may be completed for future reporting.*

Learnings from CBO Final Reporting

Key Populations Served

Several populations have been identified as being at greatest risk for contracting mpox based on the initial experiences in the 2022 outbreak, including men who have sex with men (MSM) and LGBTQ+ (lesbian, gay, bisexual, transgender, queer and more), as well as racial and ethnic minority groups who account for more than two-thirds of the cases from the 2022 outbreak (McQuiston et al., 2023). In addition to the listed population groups, additional groups were identified as being at increased risk for contracting mpox infection, including persons experiencing homelessness, people who were formerly incarcerated, persons who inject drugs, persons engaged in sex work and people with HIV. Figure 3 highlights the key populations CBOs were working with at the time of the mid-project and final project reports.

Figure 3. Number of CBOs working with each population group at mid project and final reporting



During the second half of the project, nearly all CBOs (91 percent) worked with LGBTQ+ identifying persons, with Black or African Americans as the second most common population group (84 percent) engaged by CBOs. In comparison to the first half of the project, transgender persons were the third most common population group (64 percent) followed by people with HIV (61 percent) and Latino/Hispanic Populations (61 percent).

The high percentage of CBOs working with persons with HIV aligns with the 2021 data on HIV diagnoses in the United States. These indicate that Black/African American people are most affected by HIV, accounting for 40 percent of all new HIV diagnoses in 2021, followed by Latino/Hispanic persons representing 29 percent of all new diagnoses in 2021 (CDC, 2023d). Additionally, when considering the

most affected sub-populations, Black/African American and Latino/Hispanic gay and bisexual men were identified as being most affected by HIV (CDC, 2023d). Given the high proportion of CBOs working with people with HIV, the factors leading to these disparities in HIV diagnoses, including racism, HIV stigma, discrimination, homophobia, poverty and barriers to care, are factors that CBOs needed to consider in their mpox programming (CDC, 2023d).

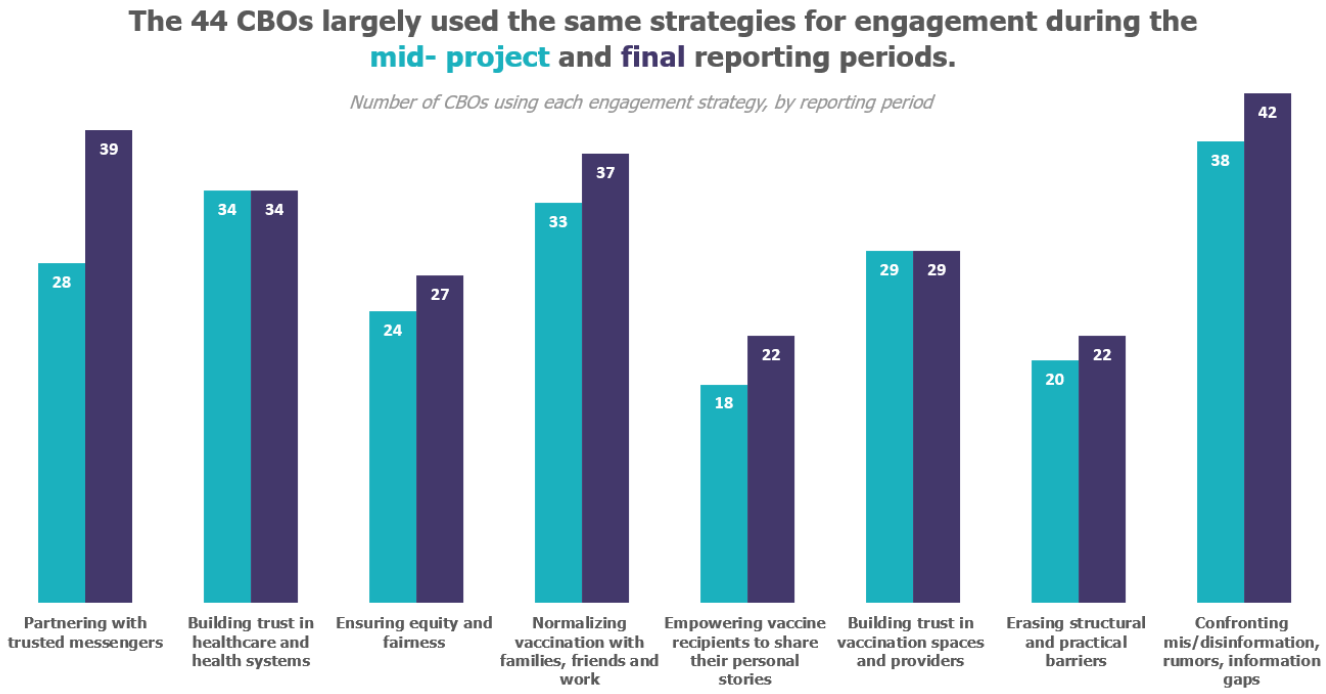
In open ended questions on changes in priority populations and engagement strategies, two CBOs specifically outlined shifts in their priority populations and corresponding outreach and engagement strategies during the second half of the project period. However, the majority of CBOs (95 percent) did not report shifting populations and responded by sharing which populations they were focused on supporting and what outreach and engagement strategies they used with these groups.

CBOs continued to focus on engaging the same populations at greatest risk for mpox. However, one CBO shared that they shifted to include additional population groups including African American, Latino/Hispanic, and LGBTQ+ Asian communities as they had partner organizations who had relationships with these populations that could be leveraged for outreach and engagement.

Approaches and Achievements

During this project period, CBOs leveraged a wide variety of strategies to advance their individual goals and objectives under the broad umbrella of preventing mpox resurgence by increasing vaccine confidence and community immunity (Figure 4). The most commonly used strategies were: **1) confronting mis/disinformation, rumors and information gaps** by presenting and promoting clear and transparent science, ongoing dialogue, and community feedback (95 percent of CBOs); **2) partnering with trusted messengers** by working with leaders who belong to priority populations, healthcare professionals, teachers and community and government leaders (89 percent of CBOs) and **3) normalizing vaccination with families, friends and work** to increase and normalize family and peer trust in vaccines and the vaccine development process (84 percent of CBOs).

Figure 4. Engagement strategies used by CBOs during mid-project and final reporting periods.



CBOs shared a variety of outreach and engagement approaches used to generate interest and/or motivation in mpox education, testing or vaccination during the second half of the project period.

One CBO shared that their model is built on the following pillars, which aptly sum up the general strategies that CBOs had most success in using to engage and support their priority populations: *"minimize barriers, value lived experience, meet people where they are."* Underlying these pillars is also a deep sense of trust that CBOs shared was essential for successful engagement with their communities, as well as for developing partnerships. These partnerships are instrumental in expanding opportunities for outreach and engagement with communities.

To minimize barriers, CBOs shared that they ensured availability of mpox and mpox vaccination information in multiple languages, provided vaccine incentives to address financial barriers and/or other pressing needs and offered multiple vaccines at once to avoid stigma/fears of being outed for seeking mpox vaccination. They also shared that CBOs sought to get feedback, both formally and informally on project activities from community members with lived experiences, and that this ensured that activities and campaigns were well suited to the needs and priorities of the communities they hoped to reach. For example, one CBO shared that community members shared that there was a need to "showcase what it looked like to be infected with mpox to support risk knowledge and willingness to vaccinate for mpox," and they adjusted their messaging accordingly.

CBOs most often elaborated on strategies that could be classified as "meeting people where they are," both literally in choosing outreach, education and vaccination locations that are convenient to people,

but also figuratively in providing holistic information and services that address each person's set of needs.

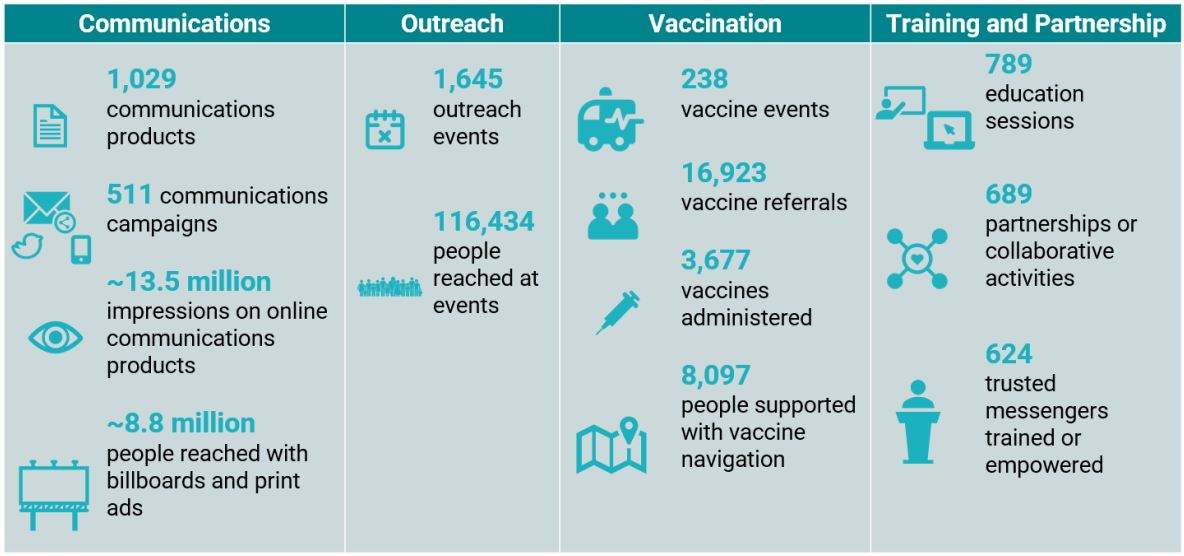
Beyond this, CBOs also shared that both in-person outreach strategies, such as working with Community Health Workers/Promotores or other trusted messengers and online approaches using social media and advertising on dating sites such as Grindr, were effective means of conducting outreach.

Among those that specifically noted a shift in strategy, one of the main changes was around communication approaches. For example, one CBO shifted to using Instagram as the platform for their social media campaign as this was better suited for the younger audience they were trying to reach. Another outlined the shift in their mpox campaign focus to better meet the needs of sub-genres within the same gender loving (SGL) community. Other CBOs shared their changes in outreach approaches to improve engagement, including increasing Spanish-speaking staff at events to better engage monolingual Spanish speakers, changing location of outreach events to better meet folks where they regularly frequent, incorporating mpox education into existing one-on-one counseling sessions and leveraging information in Spanish and English in safer sex kits to start conversations about mpox during outreach activities.

Successes

CBOs were asked to share the successes they experienced during the project period that resulted in improvement of mpox vaccine confidence, demand, availability and access in their communities, via an open-ended question. This question was asked in addition to the close-ended question on engagement strategies to gain insight into the nuances of program implementation among CBOs, as categories of engagement strategies were quite broad and could encompass a wide variety of activities and approaches. These differing approaches may have had varying success in achieving individual CBO and overall project goals. Successes fall into the following themes: **building partnerships, providing information, and vaccination.**

Figure 5. Accomplishments in key domains during the Preventing Mpox Resurgence Project, September 2023- May 2024



Partnerships

CBOs most often mentioned partnerships as a success and reported developing new or strengthening existing partnerships with a variety of different individuals and institutions. CBOs mentioned partnering with other CBOs to host events or disseminate information among populations that look to them as trusted messengers. A robust partner network was explained as being useful to *"amplify messaging, leverage resources and coordinate vaccination efforts."*

CBOs also highlighted the importance of partnering with entities that were able to provide mpox vaccine when that was an out-of-scope service for a given CBO. Partners that supported vaccination efforts included clinics, pharmacies and local health departments.

Quantitatively, CBOs reported hosting 689 partnerships or collaborative activities and training or empowering 624 trusted messengers to support vaccine education and delivery.

Providing Information

CBOs also frequently talked about success in terms of providing information to community members in a way that was salient to individuals. CBOs reported successes in providing information on mpox disease and vaccination through several channels, including social media, outreach events with CBO partners and individual conversations as part of regularly HIV/STI testing or provision of other healthcare services. Partnerships were again highlighted as being essential for successful provision of information to community members. One CBO described this as follows:

> *"When multiple organizations simultaneously delivered prevention and vaccination messaging for MPOX, it significantly heightened awareness within our communities. This underscores the importance of partnerships. We believe that the simultaneous delivery of key messaging by various organizations generated a sense of urgency among community members to seek information and get vaccinated. Having multiple organizations responsible for delivering the messaging did enhance the campaign's impact."*

Respondents also highlighted the importance of this information being culturally sensitive, provided in the appropriate language and being shared by or having endorsement from community leaders to increase the community's receptiveness to this messaging. This is reflected in the 624 trusted messengers that were trained or empowered during the project period.

Key Outreach Accomplishments

1,645 outreach events

116,434 people reached at events

The high number of CBOs sharing success around provision of information connects with the high number of outreach events CBOs carried out throughout the entire project; 1,645 events with an estimated 116,434 people reached at these events.

CBOs reported developing 1,029 different communication products and conducting 511 communication campaigns over the course of the project.

Key Training Accomplishments

789 education sessions

624 trusted messengers trained or empowered

Due to inconsistencies in how CBOs reported the estimated number of people reached through communications campaigns (ranging from views to click-throughs to impressions) an estimate on this number for the entire project period is not available. During the second half of the project, there were an estimated 838,461 people reached through online communication campaigns, approximately 13.5 million impressions on online communications products and approximately 8.8 million people reached with billboards or print advertisements.

CBOs also reported 789 total education sessions where information on mpox was provided throughout the project, the majority (549) happening in the second half of the project.

Key Communications Accomplishments

1,029 communications products

511 communications campaigns

~13.5 million impressions on online communications products

~8.8 million people reached with billboards and print ads

Vaccination

Key Vaccination Accomplishments

238 vaccine events

16,923 vaccine referrals

3,677 vaccines administered

8,097 people supported with vaccine navigation

Another success shared by CBOs was that of vaccine provision. When talking about vaccination successes, they often emphasized the importance of partnering with other entities to be able to provide vaccination or participate in events that community members already attended, as well as the promising approach of offering multiple vaccines at the same time so that individuals do not have to "out" themselves by explicitly and solely seeking out the mpox vaccine.

In quantitative questions, CBOs shared that, across the entire project period, they had reached 8,097 people with vaccine navigation support, provided 16,923 vaccine referrals, 4,293 vaccine incentives and were able to (or had partners who were able to) provide 3,677 vaccines across 238 vaccination events. As a reminder, project funds were not allowed to be used to purchase or administer vaccines.

Additional Successes

Several CBOs mentioned experiencing success when mpox messaging and vaccination approaches were integrated into existing events that were designed to provide care and resources beyond those specific to mpox. This also included distribution of 46,761 mpox or safer sex kits during the overall project period, including 38,185 in the second half of the project alone. Additionally, one CBO shared that as part of their mpox prevention activities, they were able to identify 11 cases of syphilis and link them to the proper care.

Lessons Learned

CBOs were also asked to describe solutions or lessons learned that could inform future vaccine uptake and promotion efforts or health promotion efforts within their communities more generally.

Solutions or lessons learned can be summarized as follows:

Providing Information

Many CBOs shared lessons learned that centered on the design and dissemination of information intended to educate populations at greatest risk for mpox infection to ultimately promote vaccine confidence, access and uptake.

- **Social Media**
  - Several CBOs shared that social media was a successful platform for developing and sharing mpox related messaging.
- **In-Person Outreach**
  - CBOs emphasized increased in-person outreach as a key solution/strategy. For some this outreach was done at bars or raves, while for other groups, churches or community-only events were at better location to engage in meaningful outreach.
  - CBOs highlighted that direct outreach by staff members who are also members of the priority populations was most effective.
- **Community Engagement and Feedback**
  - Several CBOs highlighted the value of community in developing and sharing information related to mpox.
- **Messages**
  - CBOs shared that they experienced success when using materials and messages that have been tailored to the particular populations they intended to reach with their messaging, ensuring that these are culturally sensitive and locally relevant.
  - CBOs also highlighted how messaging needs to remain flexible to address the changing context of the mpox outbreak and emerging trends/resources. One CBO explained this as follows: *"We adjusted our latest messages on vaccine effectiveness to show candor about possible post-vaccination infections and to give assurances that receiving two doses remains highly effective in preventing serious illness."*
  - CBOs also shared that education and communication efforts could benefit from additional segmentation and tailoring, highlighting how the broad population groups most at risk for mpox are not monoliths. For example, one CBO shared: *"Approaches, for example, could differ among persons immersed in ethnic/racial minority ballroom culture*

versus those involved in leather subculture versus queer youth into gaming or cosplay," while another shared that *"Edgier content is possible on dating sites, while educating broader audiences should happen on the largest platforms."*

- **Trust**
  - CBOs highlighted that building and maintaining trust is crucial to being able to successfully provide information to community members. CBOs shared a few strategies that they found helpful in building trust, which included making repeat appearances at the same location and working with community health workers.

Partnership and Collaboration

CBO partners repeatedly shared that partnership and engagement with community members and leaders was a crucial solution/approach to achieving project goals. One CBO shared:

> *"Collaborative partnerships with healthcare providers, CBOs, and government agencies ensured resource sharing, consistent messaging, and wider outreach, making them essential for future projects."*

In particular, several CBOs emphasized the importance of building partnerships with individuals and institutions that can provide vaccination services so that referrals could be made to trusted partners for vaccination. This is of particular importance, given the disconnect CBOs expressed between individuals' willingness to receive mpox vaccination information and failure to get vaccinated.

Feedback

Another commonly mentioned lesson learned or approach to programming that CBOs mentioned was the value of feedback and dialog with partners and community members. Having these mechanisms for feedback was noted as being critical for making programmatic adjustments, as well as, more foundationally, being useful to build trust with priority populations. One CBO shared that:

> *"Having a system that collects feedback and improves in real-time is important as we engage with the community. This allows us to reduce unnecessary harm and maximize impact in the interventions or projects that we undertake."*

Integrated Programming and Holistic Care

A few CBOs also emphasized the importance of ensuring that activities were person-centered rather than centered upon mpox, which can manifest in myriad ways. One CBO shared that they provided *"incentives or rewards that are meaningful and relevant to the target population to motivate vaccine uptake."* And that they *"tailor incentives to address specific needs and preferences identified within the community, such as gift cards or community resources."* Another CBO shared that they found success

in *"leveraging community events and co-locating and bundling sexual health services, resources, and vaccination incentives."*

CBOs also shared that consideration of vaccination strategies can also be a way of demonstrating care and consideration for priority populations. A few specifically mentioned that they found success in providing multiple vaccines at the same time to both meet community members' health needs, as well as help avoid folks "outing" themselves by seeking out a vaccine that is associated with a specific, often marginalized, population group.

The idea of providing support beyond mpox information and vaccination highlights a growing awareness of the value of "syndemic strategies," namely *"delivering people-centered services rather than services by historical service models and silos"* (Daskalakis, 2023). While CBOs aren't necessarily using this language to speak about their activities, they are employing these types of strategies organically and in response to the needs of the community members. This is of particular relevance given the funder's specific mention of employing a syndemic approach as part of project activities.

Challenges

CBOs also shared some of the challenges they experienced during project implementation. This included decreased urgency and interest from community members, due to decreasing number of mpox cases and corresponding low media coverage. Another CBO shared that they had to cancel five planned vaccine events due to the city's focus on measles prevention during the project period, while another shared challenges with reduced vaccination events due to lack of local availability of the mpox vaccine. Another shared issues related to partner capacity that impeded their ability to host vaccine clinics. A few CBOs shared challenges related to partnerships and competing priorities amongst folks they had intended to partner with that impeded their ability to carry out vaccination events as they'd originally planned.

While many CBOs expressed success in partnering with community leaders, some found that key leaders in their communities did not have the correct information or messaging and were thus negatively impacting vaccine confidence and access within their communities. More broadly, several CBOs expressed challenges with persistent misinformation, namely the idea that mpox was no longer around, and stigma, both of which were seen as negatively impacting vaccine confidence and uptake. Concerns around stigma also manifested themselves as in some particularly conservative areas as people did not want to go to the clinics where mpox vaccines were being offered for fear of outing themselves.

Another challenge, particularly among CBOs working with Latino/Hispanic populations, was the inability to hire individuals from the priority population, namely undocumented individuals.

A few CBOs mentioned challenges related to the short implementation timeline, which resulted in having to ramp up activities and partnerships very quickly, leading to negative impacts on CBOs' work. One CBO shared that, *"gaining trust is a long process that has to be rushed in this project."*

Finally, a few CBOs continued to highlight that free vaccines were hard to locate in more suburban and rural areas.

Common Factors that Contributed to Disparities in Vaccine Uptake

Top three barriers CBOs experienced in working to improve mpox vaccine access and confidence during the second half of the project:

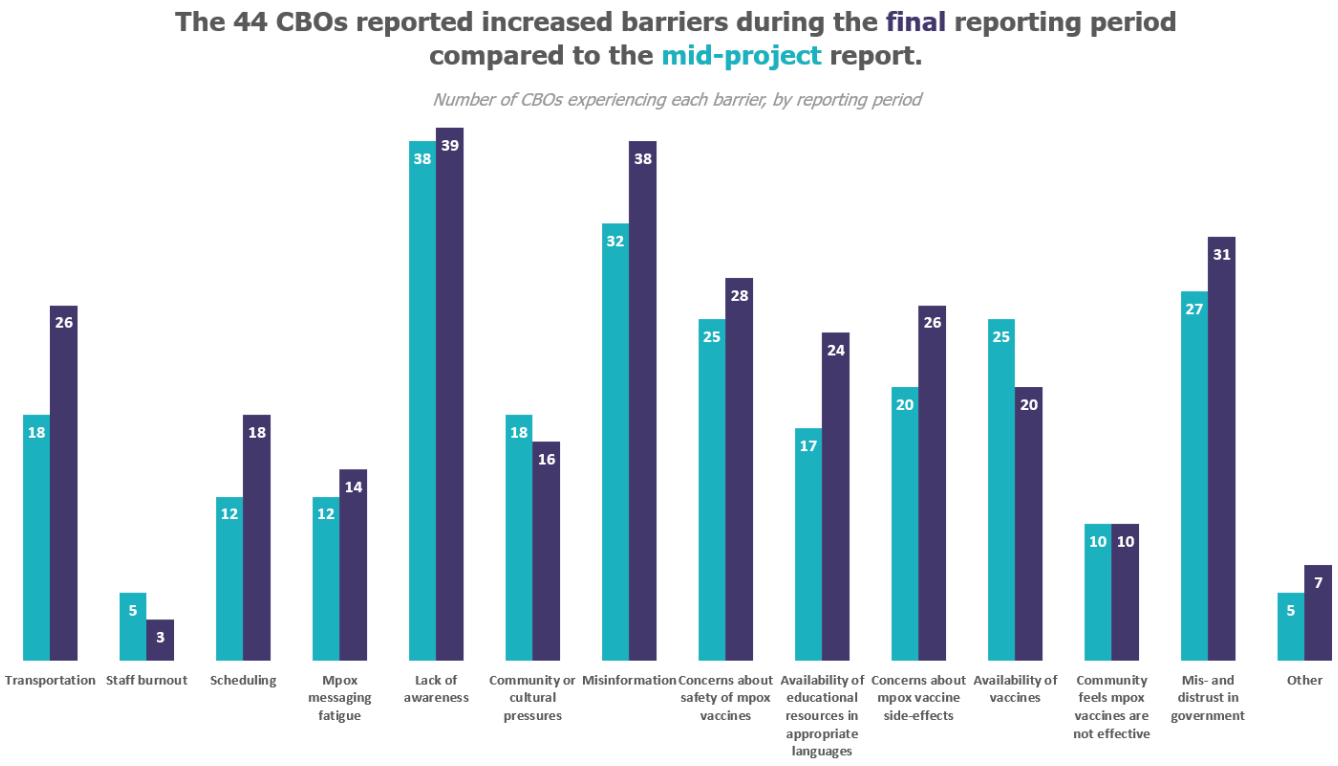
1. Lack of awareness (89%)
2. Misinformation (86%)
3. Mis and Distrust in Government (70%)

Figure 6. Top barriers reported by CBOs- January 1, 2024- April 29, 2024

CBOs were provided with a list of possible barriers to mpox vaccine confidence and access that were developed a-priori based on similar CDC Foundation projects designed to promote vaccine confidence, access and uptake among similar populations. The CBOs were asked to identify which, if any, of these barriers they had experienced. CBO responses are presented in figure 7. The top three barriers to improving mpox vaccine confidence and access among all 44 participating CBOs during the second half of the project were: ***lack of awareness (89 percent), misinformation (86 percent) and mis- and distrust in government (70 percent)*** **(Figure 6).**

Additionally, there was a general increase in the number of CBOs reporting having experienced barriers, with the largest increases seen in transportation, availability of educational resources in relevant languages, scheduling and concerns about side effects (Figure 7). There were, however, fewer CBOs reporting staff burnout and community or cultural pressures during the second half of the project.

Figure 7. Number of CBOs experiencing each barrier at mid and final project reporting



CBOs also had an open-ended question that asked them to identify any changes in disparities in vaccine uptake.

CBOs had mixed perceptions on changes in mpox disparities among their communities. About 25 percent mentioned decreases in vaccination disparities, about 11 percent noted increased disparities or challenges with vaccination for mpox, about 20 percent mentioned that they hadn't noticed any changes and 11 percent noted that they aren't involved in any vaccination specific efforts, so they didn't have insight into vaccination disparities. Among those who had seen decreased vaccination disparities, some of the indicators of decreased disparities included: increased mpox and mpox vaccine awareness, increased information seeking around mpox, changes in attitudes towards mpox and mpox vaccination and observed changes in mpox vaccine uptake.

CBOs also shared strategies and approaches they had used to address mpox vaccination disparities during the second half of the project period which could broadly be grouped into two categories:

1) **Reducing barriers to vaccination.** CBOs mentioned providing vaccines in locations that were accessible to the community members they were trying to reach, taking approaches to reduce stigma, including education and offering multiple vaccinations at events so folks wouldn't have to "out" themselves by seeking out mpox vaccination, canvasing known locations to connect with community members and having community health advocates at vaccination sites/clinics to help navigate the vaccination process.

2) **Tailored communication approaches that CBOs used to reduce disparities**. CBOs mentioned working with trusted messengers, including community leaders who passed along these messages. More specifically, CBOs mentioned using familial networks to disseminate messaging among the Latino/Hispanic population and using social media to reach MSM. A couple of CBOs noted that external factors, such as an increase in mpox cases and external media coverage, contributed to reducing mpox vaccination disparities.

Some CBOs also shared factors that contributed to continuing mpox vaccination disparities, including:

- vaccine hesitancy
- limited access to healthcare
- misinformation
- stigma
- transportation challenges
- systemic inequalities

Overarching Project Goals

Goal 1. Increasing availability of accurate information about the safety and effectiveness of the mpox vaccine delivered in innovative and culturally appropriate ways.

All CBOs (100 percent) expressed confidence in their achievement of the goal of "increasing availability of accurate information about the safety and effectiveness of the mpox vaccine delivered in innovative and culturally appropriate ways." CBOs shared that they felt confident in and knew they had achieved

their goal as evidenced by a variety of accomplishments including vaccine referrals, vaccine administration, including returning for a second dose, increased receptiveness to education and increased confidence among community health workers (CHWs).

A few CBOs shared that this goal was particularly relevant and essential to achieving the overall intended program impact (reducing mpox morbidity and mortality) as, prior to implementing this work, there was a relative dearth of information on mpox within the priority communities, and that lack of information, rather than specific dis-information was the greater issue.

Providing this information in multiple languages, most frequently English and Spanish, was essential for ensuring messages were accessible to traditionally underserved groups. CBOs provided this information in a variety of formats, most often via social media, outreach events and through integrated mpox messaging in pre-established one-on-one counseling sessions. One CBO even used creative storytelling and developed a youth-led, community-centric podcast to provide mpox information to their target audience. CBOs also highlighted that it was important to provide the information they had developed using a variety of channels/mechanisms to ensure it was effectively reaching the various segments of the populations they intended to reach. Additionally, CBOs expressed that taking this messaging to places where community members already go was important to ensure that there were not any barriers to accessing this information. Many CBOs highlighted the importance of partnering with others to most effectively develop and disseminate this information with the priority populations they were trying to reach.

Providing this tailored and culturally sensitive information was understood to be of utmost importance in protecting community members against mpox. One CBO describe this as follows:

> *"By empowering individuals with knowledge, we have facilitated informed decision-making regarding vaccination, ultimately contributing to improved vaccine uptake rates."*

A few CBOs also shared their plans to leverage work in this area moving forward. Two specifically mentioned using materials developed for this project in future efforts, while another shared plans to use the approach used during this campaign, in which materials were continuously adjusted to meet community needs, for future awareness efforts.

Goal 2: Increased mpox vaccine confidence, access and uptake in at-risk communities including MSM, trans, HIV+ and LGBTQ+ individuals/communities as well as in Black and Latino/Hispanic communities.

The majority (approximately 66 percent) of CBOs expressed that they had achieved the overarching program goal of increased mpox vaccine confidence, access and uptake in at-risk communities including MSM, trans, HIV+ and LGBTQ+ individuals/communities as well as in Black and Latino/Hispanic

communities. A few CBOs provided their logic for affirming that they had achieved this goal, which included increases in number of mpox vaccines provided during the second half of the project, seeing decreased disparities in the rates of vaccine uptake between white and Black/African American individuals, high levels of engagement on digital marketing advertisements and, for some CBOs, through direct feedback on increased vaccine confidence obtained via surveys and focus group discussions.

One of the key strategies CBOs used to achieve this goal was partnership. Some CBOs partnered with healthcare providers to provide mpox vaccination, while others partnered with other CBOs and community leaders to build trust with the populations they hoped to reach or to learn how and where to best carry out project activities to successfully reach the folks they hoped to serve. As with the mid-project report, CBOs again shared that meeting people "where they were" was crucial to achieving this goal, referring to the way CBOs provided outreach, education and vaccination services at convenient locations for community members where they already live, learn, work and age.

One CBO shared:

> *"Many people in these groups may have not been able to be vaccinated if it were not for our program and program activities according to feedback from our participants."*

Communication strategies were again highlighted as being thoughtfully designed and crucial to achieving this programmatic goal. CBOs highlighted the importance of community engagement and voice in the development and delivery of these messages. One CBO summarized this as follows:

> *"We are extremely proud that most of the people participating in this project if not all were of the target population from the photographer, models, project coordinator, partners etc. We believe that approach of "by us for us" worked in our favor."*

CBOs frequently cited working with trusted messengers to share these culturally resonant messages. Sometimes trusted messengers shared information via social media campaigns and at other times at strategically selected outreach events. In situations where counselors were seen as trusted messengers, they were able to engage clients in personalized conversations where they could have their questions promptly addressed, which *"expedites clients' connection to the vaccine, making it easily accessible."*

CBOs also ensured that communications products were available and accessible to their priority populations by developing materials in multiple languages, most often English and Spanish, but also languages such as Bengali, Punjabi, Urdu and Arabic.

A couple of CBOs also highlighted the importance of working to address systems or policy-level issues that contribute to disparities in mpox and mpox vaccination outcomes. One CBO described this by saying:

> *"[we] advocated for policy changes and systemic interventions to address these underlying factors. This involved advocating for equitable vaccine distribution, improving access to healthcare services, and addressing social determinants of health that impact vaccination rates."*

Despite feeling as though they had achieved this goal, some CBOs still experienced challenges, particularly related to vaccine uptake. One CBO felt as though this lower uptake was attributable to limited vaccine availability in their area and the complexity of the two-dose structure.

Other CBOs shared that they felt they had partially achieved the goal or made significant progress in some areas such as vaccine confidence but were unable to improve access or uptake. Overall lack of vaccine availability served as a barrier for some, while others had challenges in increasing vaccine confidence due to mistrust in medical and government systems. However, despite these challenges, there was a general sentiment that progress was being made. One CBO stated:

> *"Goals are accomplished one person, one conversation, one test, one vaccination at a time."*

Additionally, a couple of CBOs shared that they didn't feel as though they could comment on improved attitudes (such as improved vaccine confidence).

Among those who did not feel as though they had achieved this goal, lack of access to the vaccine, particularly in rural areas, as well as mistrust in government and medical systems were key barriers.

One CBO shared:

> *"Many clients expressed feelings that the government is up to something given the amount of vaccines folks are being asked to get. There is also a lot of historical trauma that we needed to unpack with our clients to move them towards building more trust with our medical system."*

CBO Perspectives on Impact of Commercialization of the JYNNEOS Vaccine

On April 1, 2024, Bavarian Nordic, the manufacturer of the JYNNEOS mpox vaccine commercially launched the JYNNEOS vaccine, making it commercially available in the United States (CDC, 2024). CBOs were asked to provide their perspectives on the impact that this would have or had already had on access to vaccination among the communities they serve.

CBOs were relatively spilt on their thoughts on how commercialization of the JYNNEOS vaccine would impact mpox prevention efforts, with similar numbers of CBOs indicating anticipated positive impacts and anticipated negatives, and a smaller portion of CBOs sharing both positive and negative anticipated impacts from commercialization. A few CBOs didn't anticipate any impacts on vaccine availability. Anticipated positives of commercialization included:

- More robust vaccine supply
- Increased access to the vaccine
    - Easier access in underserved communities due to availability at local pharmacies
    - Could increase the proximity of vaccine and testing sites
    - Vaccines provided at more locations (pharmacies, clinics, other healthcare facilities)
    - Clinics and hospitals may be incentivized to provide the vaccine
- Heightened awareness
- Could reduce stigma if people could get during routine healthcare appointments
- Reduce issues among people who have transportation barriers as it may now be offered within their community

CBO's anticipated negative impacts of commercialization included:

- Persistence of structural barriers including transportation, language differences and lack of healthcare information
- Costs for vaccination may become prohibitive to clients/those seeking vaccination
- For non-profits, the cost to administer vaccines may become prohibitive
- Insurance requirements may become confusing and discourage community members from vaccination
- Overall reduced availability of free vaccines
- Distrust or lack of familiarity with traditional healthcare venues may discourage community members from getting vaccines in these locations

Some CBOs offered suggestions on how to address the potential negative impacts of commercialization and maximize the potential benefits. One CBO summed this up as follows:

> *"Continued advocacy for affordability, accessibility, and education will be crucial in mitigating potential barriers and maximizing the positive impact of Jynneos availability on our com=munity's health."*

It is important to note that one CBO's response seemed to indicate that they thought that the commercial vaccine was a NEW vaccine, not the same vaccine that was already being offered.

Continued Mpox Work Beyond the Project Period

Most CBOs had plans to or were exploring opportunities to promote mpox vaccine confidence, access and uptake beyond the funding period. Four CBOs shared that they didn't have plans to continue mpox work. One shared that this was due to not having funds to continue the same level of effort, while another shared that their current focus is on other health issues and programs where funding has already been secured. They explained this as follows:

> *"The decision-making process regarding program continuation involves careful consideration of community needs, feasibility, and sustainability. While MPOX vaccination remains a critical public health priority, other factors, such as shifting community priorities, emerging health threats, and evolving funding landscapes, influence our decision-making."*

Many CBOs were exploring opportunities for additional mpox work and were actively seeking funding to support additional mpox work. CBOs also outlined their plans for continued mpox work that was not contingent upon securing additional funding. Several CBOs shared that the mpox campaign would continue to be on their website and would remain available for community members to access. Other CBOs shared how they would continue to provide mpox vaccine referrals or for healthcare centers, that they hoped to continue to provide mpox vaccination but that they would no longer be able to provide vaccine incentives. A few CBOs planned on integrating mpox vaccination promotional activities into existing programs like sexual healthcare programming.

A few CBOs had already managed to secure additional funding at the time of the final project report (early May 2024), many of which were intended to support vaccination efforts during the upcoming pride season. One CBO specifically attributed their involvement in this project as the reason they were able to secure additional funding.

Perspectives on CDC Foundation Partnership and Support

Impact of Prevent Mpox Resurgence Project on CBOs' Capacity to Address LGBTQ+ Health Concerns

CBOs were also asked about the project's impact on their ability to address the unique health challenges faced by their community, in particular, preventing the resurgence of mpox, and how they might leverage this capacity for future activities. All 44 CBOs felt as though the project had increased their organization's capacity. One CBO summarized their involvement in this project: *"[the project] allowed us to build the infrastructure needed for public health campaigns particularly ones around vaccination."*

For many CBOs, participating in this funding opportunity allowed them to *"expand and solidify partnerships with others in the community to be the go-to resource regarding health concerns."* One CBO also noted that having this wider network of partners would prove useful for future outbreak response.

CBOs also shared that participating in this opportunity also provided CBOs the opportunity to further establish their reputation within the community and build trust within new population groups, for example, a few CBOs had not previously worked with LGBTQ+ populations and this project *"helped establish [them as an] ally."*

A few CBOs noted how this project served as motivation for their work and *"pushed the program to rise to the challenge,"* or *"demonstrated to the team that they had capabilities to achieve much more."*

This funding also provided CBOs the opportunity to build internal capacity and infrastructure in several areas. Some of the commonly mentioned areas included development of communications campaigns, community outreach and engagement approaches and how to access and collect public health information. CBOs also highlighted how the experience and increased capacity gained as part of this work could be leveraged for future efforts. One CBO summarized this as follows:

> *"We plan to leverage our strengthened capacity for future activities and funding opportunities by integrating the successful strategies and lessons learned during this project into broader health outreach programs."*

Most CBOs were in the process of looking for additional funding that could support mpox prevention or similar health education/vaccine promotion type of projects, stating that they *"will use data collected in this program to attract other collaborators or funders to continue this work."* One CBO had already secured additional funding through state and national funding sources (Substance Abuse and Mental Health Services Administration and a state department of health). More generally, some CBOs shared that the skills their staff built as part of the work funded by this program could be leveraged for other similar type programs, for example, HIV and STD prevention programming or vaccine promotion among hard-to-reach populations for other vaccines. A couple of CBOs intended to use the work from this project for publication or presentation.

Looking forward, CBOs also highlighted how they intended to continue to build partnerships with other CBOs and community members to both address mpox and other community health concerns.

Support and Collaboration to Implement and Sustain LGBTQ+ Health Improvement Initiatives

Nearly all CBOs (95 percent) indicated they received adequate support and collaboration in implementing and sustaining their LGBTQ+ health improvement initiatives as part of this project. One CBO even shared: *"Without the CDC Foundation Preventing Mpox Resurgence Project, [we] would simply not be working with the LGBTQ+ community nor promoting mpox vaccination at all.* "

When asked about what elements were the most helpful, project officer (PO) support and cohort calls were the most frequently cited resource. POs were described as responsive, supportive and organized. Cohort calls were also frequently mentioned as one of the most helpful resources, providing opportunities to learn from other CBOs, receive feedback from knowledgeable peers on ideas for implementation approaches, provide a safe space for discussion and create a sense of camaraderie among CBOs working in this space. Given that CBOs had generally only interacted with other CBOs in their assigned cohort, it was not surprising that CBOs also found the partnership panel, in which representatives from three different CBOs, San Francisco AIDS Foundation, Yakima Neighborhood Health Services and Project New Yorker shared their approaches to partnership and community engagement, helpful as it provided additional *"models used to gather community input, planning activities, sample visual materials, messaging, and how the grantees managed and incorporated community feedback."*

CBOs also expressed the value of the generally flexible administrative structure of the award that allowed for innovation and creativity, ultimately allowing work to be more community-led. Resource sharing, including research from the Remesh messaging testing and outreach materials from the CDC website, was also useful to CBOs (National Coalition of STD Directors, 2022).

Requests for Additional Support and Suggested Changes to Programming

Among those who indicated they had received enough support, as well as those who did not, there were recommendations for additional support or changes to the project structure to assist CBOs in achieving the goals they had outlined for this project. CBOs also provided valuable feedback on additional support that would have better supported them in achieving their outlined goals for this project.

CBOs expressed that the project period was too short and should be extended. Some CBOs cited a missed opportunity to continue efforts during the upcoming pride season, while others mentioned rising mpox cases and the upcoming Olympics, which they felt was a risk for spread of the deadlier clade 1.

One CBO recommended improved communication around processes for survey review. Another expressed that it would have been helpful for the CDC Foundation to request compliance documents earlier in the grant period, sharing that, *"This was a missed opportunity to learn from the compliance division - there were some policies our agency was lacking or unaware of, and we could have benefited from an overview of new rulings and had an opportunity to fine-tune our agency policies."*

CBOs also expressed difficulty with some of the administrative and reporting structures of the program, including inconsistencies in reporting and administrative requirements across CDC Foundation projects, a general perception that the administrative burdens associated with the funding *"posed a considerable challenge for our organization, given our limited size and capacity."*

However, it is important to note that most CBOs that provided feedback on the administrative and reporting structure found these systems and processes easy to navigate. One CBO shared, *"From the contracting, project support and invoicing, everything went smoothly, and we had no issues or barriers, allowing us to focus on implementing the project."* Another shared that they *"appreciated having been able to choose our own reporting frequency and the use of Smartsheet to make reporting less burdensome."*

Given this feedback, the CDC Foundation would benefit from additional review of their administrative and reporting processes, if possible, alongside grantees from this project to better identify what particular components were challenging so additional ways could be explored to obtain this information in a less cumbersome manner.

Additionally, one CBO also noted that greater flexibility in budgeting, particularly around purchase of food and other incentives to meet community members' needs, would be helpful in further building trust with community members.

One CBO requested additional training to better equip and support outreach staff, while another suggested that having educational resources such as flyers available in additional languages, like Ukrainian, would be helpful.

Brief Assessment of Program Accomplishments

We anticipated that the following changes would take place in CBO understanding, resources and programming because of participating in the Preventing Mpox Resurgence Project (identified as short-term outcomes in the program logic model):

- **CBOs better understand their community's perceptions and experiences related to 1) mpox and 2) mpox vaccination, and more generally, vaccination and other community health concerns.**
- **CBOs have increased capacity to effectively deliver mpox prevention and response activities, particularly engagement among priority populations, integrated into a wider syndemic approach to addressing community health needs.**
- **CBOs have more resources/a wider network to leverage in reaching priority populations with mpox prevention and response resources, as well as other community health needs as part of a syndemic approach to meeting community health needs.**
- **Increased availability of accurate information about the safety and effectiveness of the mpox vaccine and, more generally, mpox.**
- **Reduced barriers to vaccination among populations at greatest risk for mpox.**

We anticipated that the following changes in community member perceptions, beliefs and actions would take place because of CBOs participating in the Preventing Mpox Resurgence Project (identified as medium-term outcomes in the program logic model:

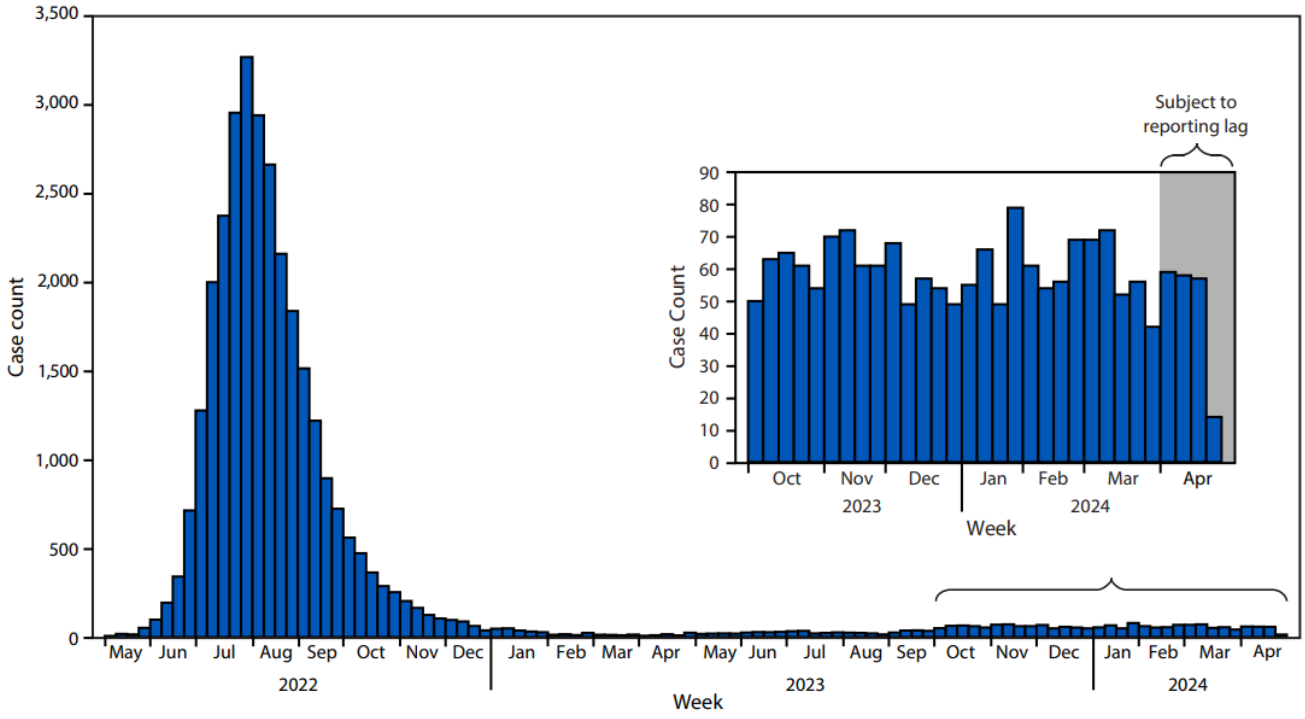
- **Community Members have increased trust in CBOs and willingness to listen to and act on mpox messaging from CBOs.**

- **Community members have increased awareness of others in their community who have received the mpox vaccine.**
- **Community members have increased awareness of mpox vaccine and its benefits.**
- **Increased confidence in mpox vaccine among identified populations with inequitable mpox vaccination coverage.**
- **Increased confidence in mpox vaccine among identified populations with inequitable mpox vaccination coverage.**
- **Reduced stigma around mpox vaccination.**
- **Increased vaccine uptake among identified populations with inequitable mpox vaccination coverage.**

Based on the aforementioned accomplishments, outlined both quantitatively and qualitatively, this program was able to achieve both short- and medium-term outcomes.

Looking at external data, namely data collected by CDC as part of the National Notifiable Disease Surveillance System, we see that during the project period, mpox transmission of clade II mpox remained low in the United States, with an average of 59 reported cases per week. While we cannot directly attribute the lack of an mpox resurgence within the United States to the Preventing Mpox Resurgence Project as this was not the purpose of the evaluation, we can say that participating CBOs have contributed toward this accomplishment.

Figure 8. Clade II mpox cases (probable and confirmed), by epidemiologic week- US, May 2022-April 2024 (Tuttle et al., 2024)



Additionally, CDC analysis of the most recent mpox case data indicate that compared to the cases reported from May 10, 2022–September 30, 2023, the cases reported from October 2023 onward

represent a 7-percentage point decline among Black persons (from 32 percent to 35 percent), while they increased 3 percent among Latino/Hispanic persons (31 percent to 34 percent) (CDC, 2023b).

Implications for Practice: Considerations for Moving Forward

Identified Strengths

While CBOs experienced challenges, they demonstrably have moved the needle towards improving mpox-related health outcomes in their community. This is not surprising given the previous success experienced in employing a CBO partnership model. For example, during the COVID-19 pandemic, public health partnerships with CBOs were able to bring positive change to communities (Yasmin et al., 2022) and can be useful for reducing mistrust and improving medical literacy among the populations they serve (Stults et al., 2022).

Here are several of the **self-identified strengths CBOs** outlined in the final reporting:

- *Providing culturally relevant information on mpox to various communities.*
- *Willingness and ability to adapt programming to community feedback.*
- *Ability to build trusting and meaningful relationships with members of the communities they seek to serve.*

CBOs also provided valuable feedback on the **strengths of the CDC Foundation** in their provision of support. Key themes that emerged from CBO feedback were that the Foundation was able to provide timely, responsive support to CBOs, and that the cohort model, in which CBOs gathered regularly with others working towards similar goals for peer learning exchanges in the form of a quarterly cohort call, was a useful model for supporting CBOs.

Areas for Improvement in Future Vaccination Promotion Work

Based on CBOs' description of accomplishments and identified persistent barriers, helping community members move from receptivity to receiving (mpox) information to vaccination emerged as an area where CBOs could strengthen their efforts for future vaccine promotion work. This includes building on the work CBOs have already begun in addressing attitudinal barriers to mpox vaccination, and vaccination more broadly. Efforts to address attitudinal barriers, often rooted in longstanding experiences of systemic and interpersonal racism, discrimination and stigma, take time and intentional effort to address. CBOs are well positioned to address these barriers as they have demonstrated the ability to build and maintain community trust and would benefit from additional time and funding to enable them to continue to leverage this trust to promote vaccine uptake. CBOs themselves recognized this limitation within their work, with several CBOs requesting a no-cost extension to continue project efforts, based on the foundation of trust they'd established or expanded on during this project.

Another area that could be strengthened in future vaccination promotion efforts is addressing structural barriers to vaccination such as cost, transportation and timing and location of services. Several CBOs were working to address these barriers as part of the preventing mpox resurgence project. However, additional financial support from funders is essential to enable CBOs to incorporate programming elements that address these barriers in future efforts and ensure that the community members at greatest risk for disease can access vaccination in a timely manner.

Conclusions

From September 2023 to May 2024, CBOs participating in the Preventing Mpox Resurgence by Increasing Vaccine Confidence and Community Immunity Through Community Based Organization Partnerships Project made significant progress towards the overarching goals of 1) increased availability of accurate information about the safety and effectiveness of the mpox vaccine delivered in innovative and culturally appropriate ways and 2) increased mpox vaccine confidence, access and uptake in at-risk communities including MSM, trans, HIV+, and LGBTQ+ individuals/communities as well as in Black and Latino/Hispanic communities. CBOs attributed progress towards these overarching goals to using multi-modal strategies including providing tailored information in myriad of relevant ways, developing partnerships and collaborations, soliciting and learning from community feedback and providing holistic care that met community members where they were. These approaches have utility beyond mpox and can be applied to other priority health concerns in the communities that CBOs work with. Despite the progress CBOs made during the project period, there did face challenges in improving mpox vaccine confidence, access and uptake. The most commonly reported challenges were lack of awareness around mpox, misinformation about mpox and mis- and distrust in government. Again, these challenges, while perhaps more pronounced due to the original framing of mpox and resulting stigmatization of LGBTQ+ communities, are not unique to mpox and should be consider when designing future responses to outbreaks among populations that have been marginalized.

While not directly attributable to CBO activities during the project period (September 2023-May 2024), it is important to note that there was not a resurgence of mpox during the project period, and reported cases remained well below the August 2022 peak of 460 cases per day. Additionally, during the project period, preliminary reports also indicate that there was a 7-percentage point decline in mpox cases among Black persons (from 32 percent to 25 percent), while they increased 3 percent among Latino/Hispanic persons (31 percent to 34 percent) (CDC, 2023b).

The approaches used by CBOs as part of the Preventing Mpox Resurgence Project show promise for addressing both mpox and other infectious disease outbreaks among marginalized communities and should continue to be examined to further glean how to best to rapidly design and implement community-based initiatives.

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Appendix 1. Final Report Form

Preventing Mpox Resurgence Mid-Project Report

Quarterly reporting requires CBOs to summarize data across a four-month period.

The final project report is due: May 10th, 2024, by 5 PM PT and will cover activities implemented from January 1 – April 29, 2024.

Overview and Objectives:

CDC's Preventing Mpox Resurgence project aims to leverage partnerships with Community Based Organizations (CBOs) to support efforts **to increase mpox vaccination coverage among those at highest risk for mpox**, including persons with HIV, LGBTQ+ and communities of color. Program partners are working to achieve this long-term goal through short term outcomes, such as:

- Increased availability of accurate information about the safety and effectiveness of the mpox vaccine delivered in innovative and culturally appropriate ways.
- Increased mpox vaccine confidence, access, and uptake in at-risk communities including MSM, trans, HIV+, and LGBTQ+ individuals/communities as well as in Black and Hispanic communities.
- Increased capacity among CBOs to tailor mpox prevention strategies to support emerging public health emergencies.
- Increased resources and programmatic technical assistance to reach target populations.
- Increased opportunity for CBOs to develop relationships among other CBOs, medical, public health, and other public and private stakeholders.

Instructions:

Organizations should provide updates on **activities conducted between January 1 and April 29**. For each measure, please provide **unique counts where applicable**. It is okay if there is nothing new to report for certain measures.

Before completing the report, **read the instructions and familiarize yourself with all the key terms and definitions** below. It is good practice to refer to the definitions as you enter data to ensure accuracy and consistency.

To avoid reporting delays, make timely requests for data needed to accurately complete this form and provide estimates where indicated.

You may use this form to document your answers while you compile needed information, or collaborate with others, however, ***please be sure to submit via the Smartsheet Form as well.***

Plan to spend about 30 - 40 minutes to complete this report.

Key Terms and Definitions:

Campaign - two or more communication products that build on each other through related information, usually connected via a branded slogan or hashtag, and are shared with the public through various communication channels over a determined amount of time
Click through- when a person on social media clicks on an advertisement
Communication outlet - any source or vehicle accessible to the individuals outside the program that is used to broadcast, publish, store, and/or deliver educational or outreach information or data
Communication product - messages and content related to Mpox and/or influenza vaccination developed to engage a specific audience and distributed via one or more communication outlets.
Educational- any interaction or written/audiovisual product intended or serving to provide knowledge, instruction, training, or supervised practice
Impression- when a person on social media sees an advertisement
Partner - an outside individual or group who agrees to provide short-term or long-term support
Partnership - a mutually beneficial relationship that outlines specified and joint responsibilities involving close cooperation on vaccine-related education and/or outreach
Priority populations - adults in racial or ethnic populations experiencing disparities in vaccine uptake, or other groups of focus, disproportionately affected by disparities in mpox vaccine uptake or mpox incidence and prevalence including transgender persons, gender non-binary and gender non-conforming persons, LGBTQIA identified persons, and people in rural areas, persons with HIV, persons experiencing homelessness, person who were formerly incarcerated, persons who inject drugs, persons engaged in sex work, immigrants and refugees, etc.
Reach - number of individuals who have been exposed to messaging from campaigns
Strategy - a plan of action or protocol designed to achieve an overarching goal
Technical assistance- advice, assistance, or training to support program development, implementation, and/or evaluation
Vaccination event - an accessible, often publicized, time and place where individuals can obtain a Mpox or influenza vaccine (including mobile clinics)
Video completion- when a person begins a video and the video is played to the end

Pre-Report Details:

A. Select the **name of the organization** that carried out the activities included in this report.
B. Select the **first month of the quarter in which your organization implemented the activities** shared in this report.
C. Select the **year in which your organization implemented activities** shared in this report.
D. Select which priority populations you worked with on this project. ***Select all that apply***

Latino or Hispanic Populations	**Persons with HIV**
Black or African American Populations	**Persons experiencing homelessness**
Transgender persons	**Persons who were formerly incarcerated**
Gender non-binary and gender non-confirming persons	**Persons who inject drugs**
LGBTQ+ identified persons	**Persons engaged in sex work**

People in rural areas	**Immigrants and refugees**

Report Details

Quantitative Questions – Programmatic

We have tried to include metrics here that will represent the majority of activities that CBOs are engaged in. However, this may not capture all the activities your CBO is conducting/all the individuals reached by your CBOs efforts. If you are tracking any metrics that do not fit well into the below categories, please report them in the final programmatic open-ended question, Question 28.

Reminder: This report should cover activities implemented from January 1 – April 29, 2024. Responses should provide a total number for the fourth-month period.

Additional Guidance:

- If activities had a bilingual component, please indicate which language, e.g., 5 mpox presentations, 3 English, 2 Spanish.
- Where possible/known please provide general demographic information for number of people reached, vaccinated etc. as this will help us better understand if priority populations are being reached.
- If you have any questions about metrics throughout the report (e.g., terms and definitions for undefined metrics), please contact the CDC Foundation team. We're here to support and we want to ensure we have the most accurate data.

Outreach Events

	# and type of outreach events hosted or supported (e.g., 2 townhalls, 1 PrEP Rally. (Please do not include trainings here, save for separate question)
	Estimated number of people reached through outreach events or activities (e.g., community health fairs, door-to-door canvasing, etc.)

Communication Products

**Note: if you are unsure what qualifies as a communication product after reviewing the definition in Key Terms of Definitions above, please don't hesitate to reach out to your program officer. While we can't include every example of a communication product, we hope you will use your best judgement.*

	# and type of communication products developed and disseminated to promote vaccines/address stigma and/or misinformation (e.g., 2 billboards, Spanish; 1 direct mailer to religious leaders, available in English and Spanish, may also include but not limited to palm cards, door-hangers, brochures, event flyers, one-pagers, tip-sheet)

	# and type of communications campaigns promoting vaccination/addressing mis-dis information etc. (e.g., 1 social media campaign)
	Estimated number of people reached through communications products or campaigns, broken down by campaign or product if multiple campaigns or products and how you are tracking this (e.g., 500 click throughs on Grindr, 20 video completions, 1,000 impressions on Instagram)

Vaccination Support

	# of vaccine referrals
	# of vaccine incentives provided (e.g., 50 $25 gift cards)
	# of individuals reached with vaccine navigation support & type of support provided (e.g., 50 people transportation, 25 people translation services) Note- This does not include vaccine referrals which are captured in Q7
	# of mpox vaccinations administered at any vaccination site or event that your organization supported through your outreach efforts and partnerships. *Note: These events may be in partnership with clinicians, local and state health departments, pharmacies, etc. where your organization worked to increase access, confidence, and demand for mpox vaccination.*
	# of vaccination events

Resources Distributed

	# of mpox or safer sex kits developed and distributed to priority populations

Trainings/Competencies

	# of trusted messengers trained, empowered etc.
	Type of trusted messengers trained/empowered. **Select all that apply** • Community Health Worker • Promotoras • Clinicians • Peer Navigators • Community Leader • Other (Please specify)
	# of mpox education (information sessions) presentations conducted, modality (in person vs. Virtual) and intended audience *(e.g., 1 in-person training on mpox vaccine efficacy to clergy; 1 virtual presentation to local CBOs on preventing stigma)*
	# of trainings conducted for trusted messengers

Partnerships

	# of partnerships or collaborative activities between providers and community organizations

Open-Ended Questions- Programmatic

Q17: Have you seen changes in disparities in mpox vaccine uptake during the project period? If so, please describe what type of changes you have seen and any thoughts you have on what has led to these changes, whether attributable to your project activities or not.

Q18: Please describe any changes in priority populations and/or outreach and engagement strategies that were successful in generating interest or motivation in mpox education, testing, or vaccination with priority population(s) during the second half of the project period. *If you are using different strategies for different populations, please be sure to note this here.* **Note: This is YOUR unique definition of success.**

Q19: Which of the following engagement strategies or messages did your CBO use to reach the priority population and increase vaccine confidence**. *Select all that apply.***

	Partnering with trusted messengers: Working with leaders who belong to the priority populations, healthcare professionals, teachers, community and government leaders.
	Building trust in healthcare and health systems: Linkages to nurses, doctors, pharmacists, and other community health providers.
	Ensuring equity and fairness: Perception of equity, fairness, and transparency in vaccine distribution and access
	Normalizing vaccination with families, friends, and work: Increase and normalize family and peer trust in vaccines and the vaccine development process
	Empowering vaccine recipients to share their personal stories and reasons for vaccination within their circles of influence.
	Building trust in vaccination spaces and providers: Ability to vaccinate in trusted, safe, known spaces with trusted healthcare providers
	Erasing structural and practical barriers - Creating technology access, transportation and mobility access, and childcare supports
	Confronting mis/disinformation, rumors, info gaps - Present and promote clear and transparent science, ongoing dialogue, and community feedback

Q20: Describe lessons learned during project implementation that could inform vaccine confidence, access, and/or uptake efforts in future projects/activities.

Q21: Please share successes your CBO experienced that resulted in improvement of mpox vaccine confidence, demand, availability, and access in your community. **This is YOUR unique definition of success.** *For example, please share successful strategies adapting activities to reach adults whose insurance does not cover all mpox vaccine costs through community outreach, trusted messenger engagement, educational materials, awareness activities, and partnerships.*

Q22: Now that Jynneos is commercially available, do you anticipate (or have you already seen) that this will impact access to vaccination, either positively (increasing access) or negatively (creating additional barriers, for example among those who are uninsured or underinsured), or both among your community members? Please explain your response**.**

Q23: Please select the barrier(s) partners have experienced to improve mpox vaccine confidence and access in their communities ***Select all that apply.***

	Transportation		Staff burnout
	Scheduling		Mpox messaging fatigue
	lack of awareness		Community or cultural pressures
	Misinformation		Concerns about safety of mpox vaccines
	Availability of educational resources in appropriate languages for the community		Concerns about mpox vaccine side effects
	Availability of vaccines		Community feels mpox vaccines are not effective
	Mis- and distrust in government		Other- Please write in below

Q24: Do you feel as though your CBO has achieved the overarching program goal of "*Increased availability of accurate information about the safety and effectiveness of the mpox vaccine delivered in innovative and culturally appropriate ways."* Please describe why or why not.

Q25: Do you feel as though your CBO has achieved the overarching program goal of "*Increased mpox vaccine confidence, access, and uptake in at-risk communities including MSM, trans, HIV+, and LGBTQ+ individuals/communities as well as in Black and Hispanic communities."* **Please describe why or why not.**

Q26: Do you have any plans to, or are you exploring opportunities to continue activities to promote mpox vaccine confidence, access, and uptake beyond the current funding period? This could include securing additional funding specific to mpox or braiding in mpox vaccination work into your existing programming.

Q27: Please share any information on project implementation you want the CDC Foundation team to know about. This could include any areas of the budget that were unable to be spent and why, key project metrics that you were tracking that were not captured above, any deviations from your initial planned activities, challenges faced, etc.

Open-Ended Questions- CDC Foundation and Preventing Mpox Resurgence Project Feedback

We are grateful for your feedback and thank you for taking the time to help us improve our support to you and other grantees.

Q28: Do you feel as though your involvement in this project has impacted your organization's capacity to address the unique health challenges faced by your community, and, in particular preventing resurgence of mpox? Please explain why or why not.

> **Q28 (a):** If yes, do you have plans to leverage this capacity for future activities/funding opportunities? If so, how?

Q29 Do you feel as though your CBO has received adequate support and collaboration from CDC Foundation in implementing and sustaining your community health improvement initiatives? Why or why not?

> **Q29 (a)** If yes, what elements have been most helpful to you? Is there any additional support that would have better supported your CBO in achieving the goals you'd outlined for this project?
>
> **Q29 (b)** If no, what additional support from CDC/CDC Foundation would have been beneficial to your CBO in achieving the goals you'd outlined for this project?

Q30: Please share any additional information that you would like the CDC Foundation Team to know. This could include feedback on your participation in this funding opportunity, suggestions for improvement on administrative processes, reporting requirements, payment structure, etc.

Thank you so much for your time.

Appendix 2. Quantitative Data Tables

Priority populations that CBOs worked with, by project period	September 2023- January 2024	January 2024-May 2024
	n=44	n=44
Priority Populations	***# (%)***	***# (%)***
Black or African American Populations	36 (82)	37 (84)
Gender non-binary and gender non-conforming persons	24 (54)	25 (57)
Immigrants and refugees	18 (41)	16 (36)
Latino or Hispanic Populations	28 (64)	27 (61)
LGBTQIA identified persons	40 (91)	40 (91)
People in rural areas	10 (23)	8 (18)
Persons engaged in sex work	17 (39)	19 (43)
Persons experiencing homelessness	18 (41)	20 (45)
Persons with HIV	31 (70)	27 (61)
Persons who inject drugs	12 (27)	17 (39)
Persons who were formerly incarcerated	9 (20)	10 (23)
Transgender persons	25 (57)	28 (64)

Engagement strategies used by CBOs, by project period	September 2023- January 2024	January 2024-May 2024
	n=44	n=44
Engagement Strategies	***# (%)***	***# (%)***
Building trust in healthcare and health systems	34 (77)	34 (77)
Building trust in vaccination spaces and providers	29 (66)	29 (66)
Confronting mis/disinformation, rumors, info gap	38 (86)	42 (95)
Empowering vaccine recipients to share their personal stories and reasons for vaccination	18 (41)	22 (50)
Ensuring equity and fairness	24 (54)	27 (61)
Erasing structural and practical barriers	40 (45)	22 (50)
Normalizing vaccination with families, friends, and work	33 (75)	37 (84)
Partnering with trusted messengers	28 (64)	39 (89)

Barriers to improving mpox vaccination confidence and access as reported by CBOs, by project period	September 2023-January 2024	January 2024-May 2024
	n=44	n=44
Barriers	*# (%)*	*# (%)*
Availability of educational resources in appropriate language	17 (39)	24 (55)
Availability of vaccines	25 (57)	20 (47)
Community feels mpox vaccines are not effective	10 (23)	10 (23)
Community or cultural pressures	18 (41)	16 (36)
Concerns about mpox vaccine side-effects	20 (45)	26 (59)
Concerns about safety of mpox vaccines	25 (57)	28 (65)
Lack of awareness	38 (86)	39 (89)
Mis- and distrust in government	27 (61)	31 (70)
Misinformation	32 (73)	38 (86)
Mpox messaging fatigue	12 (27)	14 (32)
Scheduling	12 (27)	18 (41)
Staff burnout	5 (11)	3 (7)
Transportation	18 (41)	26 (59)
Other	5 (11)	7 (16)

CBO outreach accomplishments, by project period	September 2023-January 2024	January 2024-May 2024	September 2023- May 2024
	n=44	n=44	n=44
Outreach events hosted	637	1,008	1,645
Estimated number of people reached by outreach events	41,731	74,703	116,434

CBO communications accomplishments, by project period	September 2023-January 2024	January 2024-May 2024	September 2023- May 2024
	n=44	n=44	n=44
Number of communications products developed	473	556	1,029
Number of communication campaigns	146	365	511
Estimated number of people reached through online communications campaigns	N/A	838,461	N/A
Estimated number of impressions on online communication products	N/A	13,495,090	N/A
Estimated number of views on websites or videos	N/A	273,552	N/A

Estimated number of people reached through print materials, newsletters, or email blasts	N/A	148,863	N/A
Estimated number people reached via billboards	N/A	8,824,172	N/A

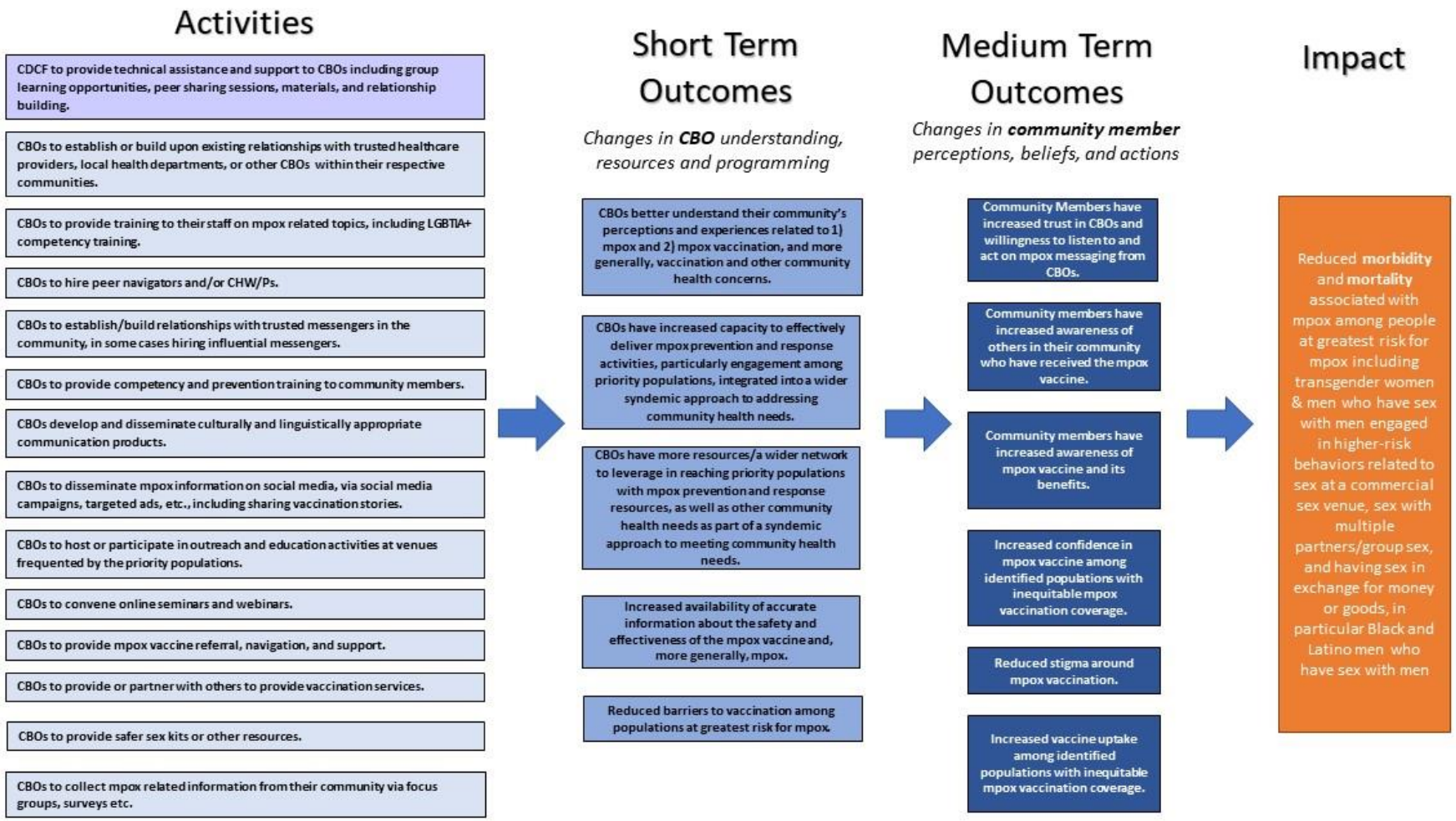
CBO vaccination accomplishments, by project period	September 2023-January 2024	January 2024-May 2024	September 2023- May 2024
	n=44	n=44	n=44
People reached with vaccine navigation support	3,814	4,283	8,097
Number of vaccine referrals	7,113	9,810	16,923
Number of vaccine incentives	675	3,618	4,293
Number of vaccines administered	1,174	2,503	3,677
Number of vaccination events	70	168	238

CBO resource distribution accomplishments, by project period	September 2023-January 2024	January 2024-May 2024	September 2023- May 2024
	n=44	n=44	n=44
Number of mpox or safer sex kits developed and distributed	8,576	38,185	46,761
Number of print mpox materials/resources were distributed including palm cards, door- hangers, brochures, event flyers, one-pagers, tip-sheets	43,640	N/A	N/A

CBO training accomplishments, by project period	September 2023-January 2024	January 2024-May 2024	September 2023- May 2024
	n=44	n=44	n=44
Number of trusted messengers trained/empowered	229	395	624
Number of trainings for trusted messengers	N/A	116	N/A
Number of peer navigators trained to promote mpox	313	N/A	N/A
Number of mpox education presentations	240	549	789

CBO partnership accomplishments, by project period	September 2023-January 2024	January 2024-May 2024	September 2023- May 2024
	n=44	n=44	n=44
Number of partnerships or collaborative activities	329	369	698
Number of trusted influential/trusted messengers supporting vaccine education and delivery hired/recruited	228	N/A	N/A
Number of meetings/calls with other vaccine stakeholders	222	N/A	N/A

Appendix 3. Program Logic Model



Assumptions/Context: Vaccines will be available (continue to be produced), Policy environment at national, state and local levels allows for implementation of planned project activities