# Infectious Disease Preparedness for Homeless Populations: Recommendations from a Community-Academic Partnership

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**ABSTRACT:**

Background: People experiencing homelessness are at increased risk of infectious disease transmission due to congregate living conditions, barriers to healthcare, and excess burden of underlying chronic disease.

Objectives: We are a multisectoral community-academic partnership working to address the intersecting crises of homelessness and health disparities in Tippecanoe County, Indiana. We offer key recommendations for infectious disease preparedness and risk mitigation for homeless populations based on our ongoing community-based participatory research and lessons learned through COVID-19 response and Monkeypox preparations.

Lessons Learned: Infectious disease preparedness and response in homeless populations requires strong local partnerships; ongoing training and support for staff and volunteers of homeless shelters and service agencies; tailored outreach, education, and communication with people experiencing homelessness; and standardize processes for creating, disseminating, enforcing, and evaluating public health policies in homeless shelters. Consistency and open communication are key to a successful community-academic partnership.

Conclusions: Community-academic partnerships are critical to effective infectious disease preparedness in homeless populations. The lessons learned from community-based participatory research with homeless communities and multisectoral partners on the frontline can improve future outbreak and pandemic response for people experiencing homelessness and other vulnerable communities in the US.

**KEYWORDS:** Infectious disease preparedness, COVID-19, Monkeypox, Homelessness, Community-academic partnerships, Health disparities

## Background

People experiencing homelessness are at increased risk of infectious disease transmission due to excess burden of underlying chronic disease, barriers to healthcare access, and shelter-based congregate living conditions with highly transient populations.[1–3] Studies on infectious disease outbreaks in homeless populations including tuberculosis, influenza, SARS, and COVID-19 have demonstrated that people experiencing homelessness face unique challenges and vulnerabilities during public health emergencies, and yet are often overlooked in pandemic and outbreak response.[1,4–8]

On August 4, 2022, the US Secretary of Health and Human Services declared Mpox a national public health emergency. The Mpox virus is transmitted through close contact with an infected person or with material contaminated with the virus, and as such, people living in congregate shelter settings are at increased risk of infection.[9,10] The majority of cases thus far (98%) have been among men who have sex with men (MSM), and in 95% of cases transmission was suspected to have occurred through sexual activity.[11] Among people experiencing homelessness, estimates of high proportions of LGBT-identifying people especially among homeless youth,[12] high rates of sexual violence,[13,14] high rates of engagement in sex work, or "survival sex," which includes the exchange of sex for food or shelter,[15] and excess burden of underlying chronic disease exacerbate their risk of Mpox transmission.

The Centers for Disease Control and Prevention (CDC), US Department of Housing and Urban Development (HUD), and the National Health Care for the Homeless Council have issued general guidance on infectious disease outbreak preparedness, as well as information on ways to reduce Mpox transmission in congregate living settings, including isolation recommendations, disinfection procedures for laundry and surfaces, and personal protective

equipment (PPE) needs for staff, volunteers, and residents.[16–18] Nonetheless, frontline homelessness service providers hold context-specific knowledge on the unique needs and challenges of homeless communities and can share valuable lessons for improved response for people experiencing homelessness. While Mpox is a completely different disease than COVID-19, many of the key issues experienced by homeless populations and the organizations who serve them during the pandemic, including infrastructure needs, communication and misinformation challenges, and persistent barriers to healthcare, are relevant for any pathogen. Mpox has not been declared a pandemic, but the potential for panic and stigma is a concern that could contribute to the misinformation and discrimination that are all too commonly experienced by homeless communities in the US.

These and other key concerns in homeless communities are mitigable through proactive, adaptable strategies, which in reality are always applicable in homeless shelter settings because of the constant risk of infectious disease transmission. The objective of this report is to describe a community-academic partnership on homelessness and health, and our lessons learned during COVID-19 and Mpox preparations on infectious disease preparedness and addressing public health crises in homeless populations.

## Methods

We write as a multisectoral community-academic partnership working to address the intersecting crises of homelessness and health disparities in Tippecanoe County, Indiana. Members of our group, the Homeless Health and Wellness Committee (HAWC), represent a community-based homelessness service agency, local health department, community hospital, paramedic quick response team, and university. The objective of HAWC is to understand and address the

multidirectional health needs of people experiencing homelessness and to coordinate community partner efforts to better meet these needs.

The partnership began in early 2020 when a local transitional housing agency opened a large homelessness engagement center with day and night shelters, a soup kitchen, shower and laundry facilities, and spaces for community partner organizations, such as mental health providers and a paramedic quick response team, to bring their services on-site. As part of the organization's efforts to coordinate health and wellness initiatives and partnerships at the center, a staff member became certified as a community health worker (CHW), and faculty at a neighboring university were engaged in February 2020 to support CHW training and capacity-building for health-related programming. Soon thereafter began the COVID-19 pandemic, which created unprecedented challenges for this new homelessness engagement center and homeless shelters all over the country. Together, leadership from the organization, the local health department, and a public health faculty member from the university initiated a community-based participatory research study to engage new community and academic partners, as well as members of the homeless community in understanding and addressing the multilevel pandemic-related challenges affecting people experiencing homelessness. Since April 2020, this group of community and academic partners (HAWC) began meeting weekly via Zoom to discuss the study, ongoing findings, resulting actions, interventions, and new questions for further inquiry.

Our ongoing community-based participatory research has examined the impacts of COVID-19 and consequent organizational-, community-, and policy-level pandemic response on people experiencing homelessness.[6–8] Our findings highlighted specific challenges that disproportionately affected this uniquely vulnerable population, and key lessons learned from COVID risk and impact mitigation strategies. Through our partnership and ongoing research, we

have identified multilevel factors associated with poor health outcomes in this population and translated these findings into innovative community-based interventions. For example, one of our first initiatives was to hire and train two additional CHWs with knowledge of the community to build relationships and trust with shelter guests, provide health education at the shelter, conduct health assessments, help clients acquire health insurance and other benefits, schedule healthcare appointments, and navigate the health system. These CHWs were instrumental throughout the COVID-19 pandemic in providing education, dispelling misinformation, addressing vaccine hesitancy, conducting rapid testing in the shelter, and helping shelter guests acquire their stimulus checks. In addition to building capacity for the organization, these CHWs were trained in community-based research and research ethics (using a validated manual),[19] and became integral research partners. Their established presence and trust among the community allowed for more meaningful engagement with the population, including tailored and appropriate recruitment, informed consent, and data collection practices. The CHWs were also part of data analysis sessions that enabled more nuanced discussions to contextualize the study findings, as well as ensured that findings were consistently disseminated back to the community.

In addition to discussing the research, HAWC has continued to meet weekly for the past 3 years to discuss health programming and the evolving health needs of this homeless community, often welcoming new community and academic partners as the need for diverse perspectives and expertise continues to grow beyond the pandemic. On August 3, 2022, HAWC convened for a "COVID Debrief" with the purpose of creating a strategic plan for public health crisis response for the homeless community based on key lessons and successful strategies throughout the pandemic. However, we unexpectedly found ourselves facing a new public health challenge, Mpox. On July 28, 2022 three cases of Mpox in Tippecanoe County were confirmed

by the Indiana Department of Health.[20] Due to the potential of this disease to disproportionately impact people experiencing homelessness, our COVID Debrief instead became a strategic plan for Mpox preparation and risk mitigation. Recognizing that our lessons learned are applicable to infectious diseases more broadly, herein we offer key recommendations on infectious disease preparedness and addressing public health crises in homeless populations. All HAWC partners were present during the meeting and contributed to the recommendations below.

## Lessons Learned and Key Recommendations

### 1. Establish and/or strengthen partnerships with the local health department, community hospitals, and hotels.

A strong partnership with the local health department (LHD) ensures a constant, reliable source of up-to-date information, guidance, and provision of available resources including testing, vaccinations, and PPE.[21] This is particularly important for communicable diseases like COVID-19 and Mpox, for which rapid access to testing and treatment is necessary to prevent outbreaks among people experiencing homelessness. The LHD can lead coordination of multi-agency planning and response to reduce redundancies and increase consistency of messaging to homeless individuals. While LHDs should ideally be responsible for forging relationships with community-based organizations and homeless shelters, in practice it is often bidirectional relationship-building that is most successful. For example, in our experience, having weekly discussions on the HAWC calls and inviting LHD staff to the shelter for townhalls and informal drop-ins allowed for increased trust and rapport with homeless clients and shelter staff, which is key to effective communication and to prevent misinformation and panic.

Collaboration and consistent communication with local community hospitals is also essential to ensure smooth testing referral processes and to avoid the discharging of positive cases from hospitals directly to homeless shelters (a common issue our community experienced during COVID-19). Similarly, partnerships with local hotels/motels are important to address the lack of non-congregate isolation spaces at homeless shelters, particularly in the case of Mpox with isolation periods of up to four weeks. In contexts where these relationships with hospitals or hotels are non-existent, the LHD can play a key role in facilitating communication between these entities and homelessness service agencies.

**2. Provide adequate, ongoing training and support for staff and volunteers of homeless shelters and service agencies.**

Our previous research findings revealed key communication issues between shelter staff and guests, which until addressed, led to poor understanding and low compliance of COVID-related safety measures.[6,7] In our experience, high staff turnover rates during the pandemic and scrambling to fill positions in an understaffed shelter also resulted in limited onboarding training that led to suboptimal communication and competencies of shelter staff in engaging this vulnerable population. Evidence-based training for shelter staff and other homelessness service providers on implicit bias, cultural competency, effective communication, conflict resolution, mental health and substance abuse, and infection control measures could allow for better communication skills, strategies, and improved ability to meet the unique needs of people experiencing homelessness.[22] While many of these trainings are not specific to infectious disease outbreaks, having these skills in place is critical to effective outbreak response, and thus should be emphasized as part of preparedness. Beyond onboarding training, providing forums to share

information and ask questions, including peer-led "train-the-trainer" interventions, helps ensure that every staff member and volunteer understands the mission of the homelessness service agency, the rationale and procedures for infection control measures being implemented, and appropriate language and messaging they should use to communicate with homeless shelter guests. Ongoing training and support for staff is also key to preventing burnout, compassion fatigue, and subsequent issues that were common throughout the COVID-19 pandemic.[23]

**3. Conduct tailored outreach, education, and communication with people experiencing homelessness.**

Our ongoing work has revealed key literacy and health education gaps in this homeless community that led to poor knowledge and misinformation surrounding COVID-19, exacerbated by a mistrust of medical providers and a lack of reliable information sources.[6,7] Furthermore, much of the COVID-19 informational materials made available by public health authorities early on in the pandemic included messaging that disregarded the unique needs and context of people experiencing homelessness (e.g. 'stay-at-home' guidance). People experiencing homelessness require tailored outreach, engagement, and education. We found that posters and pamphlets posted throughout the shelter were inadequate ways of communicating information throughout the pandemic. Instead, brief daily announcements around mealtimes at the shelter, informal conversations with shelter guests, and encouragement of peer-to-peer communication were most effective. In our experience, hiring and deploying community health workers, individuals with lived experience or knowledge of the community, could be key to public health response in homeless populations by providing education, testing, access to vaccines, and navigation of healthcare and social welfare programs.[7] These and other kinds of trusted outreach workers can

deliver tailored education and messaging around emerging infectious diseases and rationale for new or changing public health related policies in ways that facilitate understanding and compliance by people experiencing homelessness.

**4. Standardize processes for creating, disseminating, enforcing, and evaluating public health policies in homeless shelters.**

The unpredictable and ever-evolving nature of public health crises means that policies and procedures in homeless shelter settings are also constantly needing to evolve. Standardizing the process of creating, disseminating, and enforcing these policies is critical to their adoption and success. In our experience, having a designated staff member at a homeless shelter (health and wellness director) communicate with core leadership and relevant experts (such as LHD) for guidance and to decide on necessary policy changes, and having that same person be the one to communicate it to staff can ensure consistent messaging and minimize confusion. Daily check-ins with all shelter staff and volunteers, ideally at the start of each shift, to communicate any new information or policies facilitates their rapid dissemination and routine reinforcement.

Additionally, evaluating the impact of public health challenges like Mpox, and the consequent responses and policies on homeless populations is essential. Tracking data, such as case counts, deaths, and qualitative firsthand narratives of people experiencing homelessness, can not only inform better practices but also keep local, state, and federal officials updated and accountable so that they can be part of the solution. COVID-19 cases and deaths among people experiencing homelessness were grossly under-reported, and federal reports disregarded both the complexities that made those counts inaccurate, as well as the enormous range of other impacts

these communities faced.[8,24,25] Remaining vigilant and vocal about the impacts of public health crises in homeless communities is critical to informing effective action and policy.

**5. Consistency and open communication are key to a successful community-academic partnership.**

In establishing and sustaining our community-academic partnership from COVID-19 response to Mpox response, we have learned invaluable lessons about the importance of consistency and open communication. The decision to meet weekly via zoom was made in order to rapidly implement decisions and processes developed as a result of our research and to keep all partners on the same page. What we realized over time is that these weekly calls also became a consistent space to introduce new ideas, new partners, and discuss evolving needs and changing priorities over the course of the pandemic and beyond. To this day, HAWC meets every Friday at 9am, and anyone working on homelessness and health in our community is welcome to join when they are able to. Sometimes only a few people join and the meetings serve as very brief check-ins, sometimes all partners join and we meet for over an hour, depending on needs and happenings in the community. The weekly calls allow for open, transparent communication and create opportunities to have potentially difficult conversations about challenges faced by the community where everyone can weigh in and offer collective solutions.

Open communication also allows for all partners to be present and mindful of each others' needs and ensure that the partnership remains mutually beneficial for all members. For example, on one weekly call while academic partners were discussing COVID-related study findings and next steps for future grant funding, a community partner from the homeless shelter mentioned that their current pressing need was really around the nutrition of their shelter guests.

This led to the engagement of new academic partners with expertise in food security and nutrition science, new community partners including a food pantry and dietitians from a local hospital, and a funded proposal for a pilot award to design a Healthy Eating program at the shelter. A truly multisectoral partnership means that there are very different needs, strengths, expertise and priorities across our members, and as such, consistent communication and transparency are essential to its sustainability and impact.

## Conclusions

This report offers key recommendations for infectious disease preparedness in homeless populations based on lessons learned by a multisectoral community-academic partnership during COVID-19 pandemic response and Mpox preparations. Other homelessness councils have also shared lessons learned from COVID-19,[14] much of which aligns with our own experiences on the frontlines in Indiana. Our recommendations contribute context-specific insights based on ongoing community-based participatory research and a 3-year partnership that has been sustained through and beyond an unprecedented public health crisis.

Homeless communities were uniquely and disproportionately affected by the COVID-19 pandemic. While Mpox and future emerging infectious diseases have the potential to also disproportionately impact homeless populations, we now have the tools and strategies to appropriately manage and prevent another public health emergency. There is no need to reinvent wheels or repeat the panic and scrambling that occurred among most homeless communities in 2020. Community-academic partnerships are critical to effective infectious disease preparedness in homeless populations. The lessons learned from community-based participatory research with homeless communities and multisectoral partners on the frontline can and should inform future

outbreak and pandemic response to protect people experiencing homelessness and other vulnerable communities in the US.

**List of abbreviations**

CDC: Centers for Disease Control and Prevention

HAWC: Homeless Health and Wellness Committee

HUD: US Department of Housing and Urban Development

LHD: Local health department

MSM: Men who have sex with men

PPE: Personal protective equipment

**Declarations**

Ethics approval and consent to participate: No data from human subjects is included in the manuscript.

Competing interests: NMR is a member of the board of directors of a non-profit homelessness service organization in Indiana. JH, MD, and JL are employees of a non-profit homelessness service organization in Indiana. AB, GP, GL are employees of the Tippecanoe County Health Department. The content is solely the responsibility of the authors and does not necessarily represent the official views of their respective organizations.

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