

The 2022 mpox outbreak highlighted a need for better diagnostic options for future outbreaks and epidemics. This is not just a technical challenge. Designing and implementing an effective and equitable strategy for mpox diagnostics requires technical expertise, low-barrier production pathways from lab to access points, community participation in design and use of the product, education of populations, trust in science, collaborative data collection, review, and application, and more.

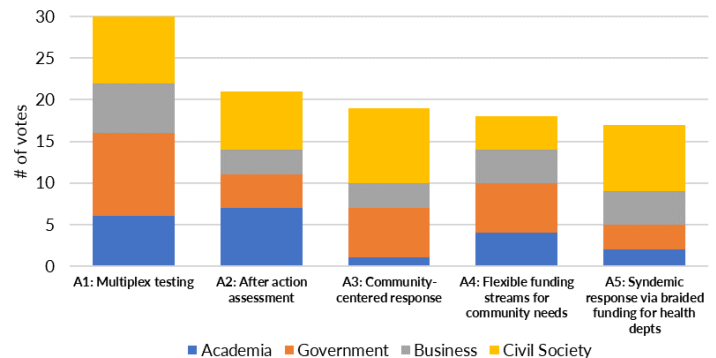
On July 18, 2023, the NYC Pandemic Response Institute and amfAR, the Foundation for AIDS Research, convened more than sixty multisectoral stakeholders for the **National Conference to Advance Equity in Mpox Diagnostics**. Civil Society, Government, Academic, and Business leaders with diagnostic expertise, and people with lived experience with mpox engaged in discussion to identify and rank recommendations for strengthening diagnostics at local and national levels with a commitment to enhancing equitable access to these critical tools. (For more info and list of attending organizations, see [Appendices C/D](#))

This summary is provided to support timely policy action. A detailed report based on findings from the conference discussions will be shared with all key stakeholders for feedback and to inform strategies and actions to improve diagnostics development going forward. Targeted outreach will also be conducted with key stakeholders that did not have the opportunity to participate in the discussion to obtain their perspectives on conference findings and refine priority actions as appropriate.

Overall Priority Actions

A total of 24 proposed actions were identified based on rapid analysis of each discussion round (see [Appendix A](#)). Participants ranked proposed actions by casting votes for the recommendations they felt were high priority. Each participant was able to cast a total of 6 votes. Collectively, 229 votes were cast: 34% representing government, 29% representing civil society, 19% representing academia, and 18% representing business. Figure 1 shows the count of votes by sector for the top five priority actions, based on attendees' self-identified sector during conference registration.

Figure 1. Multisector Ranking Exercise - Top 5 Priority Actions



The following priority actions were identified based on the ranking exercise at the end of the conference.

- A1. Focus on multiplex testing for mpox with multiple assays and testing sites** (e.g. self/home test, clinic-based test, etc.) ensuring equitable access and acceptability. (30 votes)
- A2. Conduct a multisector after-action assessment** (i.e., with civil society, business, academia, government) of the mpox response, including diagnostics, to identify successes and gaps, promote accountability, and improve equity moving forward. (21 votes)
- A3. Center community at all phases of diagnostics** through strategies including voice of customer models, community-led monitoring and accountability mechanisms, strengthening infrastructure for leveraging trusted messengers and informal social networks, and provision of resources to impacted communities and those already working within them. (19 votes)
- A4. Move towards direct provision of community funding, and non-categorical funding streams or funding streams that facilitate integration of services** specific to local communities' needs to promote greater involvement of communities within response, including diagnostics. (18 votes)
- A5. Enable local health departments to implement a syndemic approach to responses** through flexible braided funding streams (e.g., for mental health, sexually transmitted infections, etc.) that break down silos between public health focus areas. (17 votes)

When tallying votes by sector, the **multiplex testing recommendation** is ranked top 2 by community, business, government, and academia. It is the only priority action to make the top 5 for every sector. With regard to this recommendation, participants noted current impediments to achieving it due to reimbursement constraints and complex/unclear regulatory approval requirements.

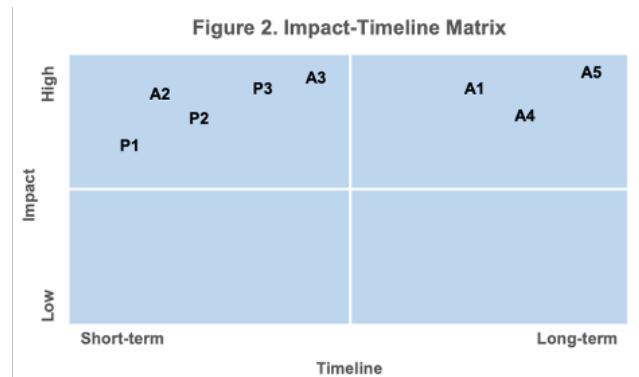
Process Recommendations

The *National Conference to Advance Equity in Mpox Diagnostics* brought together multisector stakeholders for meaningful action-oriented discussion, demonstrating the successful application of this approach for future convenings. Importantly, it also fostered connections and promised ongoing conversations among attendees across sectors moving forward. Based on participant feedback and thematic analysis of discussion, the following are process recommendations:

- P1. The federal government should ask a neutral organization to convene an ongoing public health emergency diagnostics advisory group that includes multisectoral representatives.** Continued discussions will be essential for making progress towards the identified priority actions and ensuring that future work builds on the discussions. Mechanisms for measuring and tracking progress towards priorities identified in this document will also be important.
- P2. The federal government should ask the group named in P1 to convene a similar conference or conferences at the outset of future public health emergencies.** Facilitating the ability to collaboratively identify emerging needs, challenges, and lessons learned in real time can enable the recalibration of response priorities as needed and enable greater equity in the response.
- P3. All levels of government should embrace a multisectoral approach with full community engagement in response to future public health emergencies as demonstrated during the mpox response.** Through the multisector after-action assessment (#2, above), look for specific ways to implement this approach in other emergency contexts.

Impact-Timeline Matrix

Figure 2 depicts PRI’s estimated level of impact and relative timeframe required to implement each of the eight priority recommendations above (A1-5, P1-3). All are varying degrees of high impact based on the multisectoral perspectives we convened. Recommendations that participants felt deserved less focus are ranked in [Appendix A](#).



Conclusion

The recommendations resulting from the convening broadly fall into three categories: 1) community and multisector engagement (A2 & A3, P1, P2, P3), 2) multiplex testing (A1), and 3) legislative/operational changes across public health (A4 & A5).

As stakeholders and interested parties consider next steps, integrating community voices and multisector perspectives (A2 & A3, P1, P2, P3) is both actionable and impactful to response processes in the short term.

Achieving valid and reliable multiplex testing (A1) as well as creating more operational flexibility for community groups and public health agencies (A4, A5) will be more challenging and time-consuming. However, these too can lead to very high impact results based on systemic change in the long term.

Implementation of the full suite of recommendations will significantly improve equity within diagnostic development and distribution for mpox and future outbreaks and epidemics.

Appendices

Appendix A: Ranked List of All Potential Actions

Note: This is a draft snapshot of themes sorted by votes and will be supplanted by a more detailed analysis.

1. Focus on multiplex testing for mpox with multiple assays and testing sites (e.g. self/home test, clinic-based test, etc.) ensuring equitable access and acceptability. (30 votes)
2. Conduct a multisector after-action assessment (i.e., with civil society, business, academia, government) of the mpox response, including diagnostics, to identify successes and gaps, promote accountability, and improve equity moving forward. (21 votes)
3. Center community at all phases of diagnostics through strategies including voice of customer models, community-led monitoring and accountability mechanisms, strengthening infrastructure for leveraging trusted messengers and informal social networks, and provision of resources to impacted communities and those already working within them. (19 votes)
4. Move towards direct provision of community funding, and non-categorical funding streams or funding streams that facilitate integration of services specific to local communities' needs to promote greater involvement of communities within response, including diagnostics. (18 votes)
5. Enable local health departments to implement a syndemic approach to responses through flexible braided funding streams (e.g. for mental health, sexually transmitted infections, etc.) that break down silos between public health focus areas. (17 votes)
6. Develop sustainable, interoperable data systems between all sectors that collect syndemic data and mechanisms for legally sharing that data with follow through of effective use. (15 votes)
7. Optimize wastewater surveillance and other existing data systems to capture monitoring gaps and establish a system of responding with targeted testing pop ups concurrent with local infrastructure investment. (15 votes)
8. Democratize and streamline access to well characterized specimen samples and development of laboratory developed tests. (13 votes)
9. Leverage implementation science, incorporating a health economics lens, to determine measurable impact and outcomes of public health interventions, and value proposition. (11 votes)
10. Define a monetary value for negative tests to build a financial incentive for diagnostics within the payer system. (10 votes)
11. Facilitate a pathway to declare emergency use authorizations (EUAs) earlier during an outbreak to speed diagnostics development. (8 votes)
12. Push forward systemic change and cultural shift internally in agencies through uncomfortable conversations about what is going wrong, calling out when marginalized communities are being ignored as assets, and concretely finding ways to prioritize disproportionately impacted groups. (8 votes)
13. Conduct targeted education campaigns based on the community/population being served. (8 votes)
14. Begin localized lab preparedness on the top pathogens that are likely to reach pandemic stage, rather than waiting for an emergency. (7 votes)
15. Strengthen clinician awareness of existing community services, and relationship building with the communities they serve. (6 votes)
16. Show up for the community: build transparency and hold time and space to address community concerns, questions, and build overall trust. (6 votes)
17. Deploy a local health department staff member into community-based organizations to provide resource support for coordination, appointment confirmation, administration, etc. (3 votes)
18. Develop bidirectional and diversified referral pathways between healthcare and other syndemic service providers (CBOs) to increase access to care in trusted non-clinical settings. (3 votes)
19. Establish a cross-sector communication system to understand real-time testing demand (especially in high burden areas) and facilitate quicker decision-making. (2 votes)
20. Improve the alignment of federal, state, and city education campaigns, communications, and guidelines in an emergency response (including payment systems). (2 votes)
21. Set testing regulations outside of the FDA (convene panel of experts) and do so by disease and testing context. (2 votes)
22. Leverage non-government funded entities to create external pressure on local systems for accountability and following through on improvement plans. (2 votes)
23. Collaboratively develop draft care protocols with CDC, Infectious Disease Society of America, and other partners and train non-physicians on interim care guidelines to expand the capacity of the healthcare system. (2 votes)
24. Shift data ownership to being community owned and approach data collection and communication in ways that gradually build trust, working together with all sectors. (1 vote)



Appendix B: Top 5 Priority Actions by Sector

The below tables summarize the top 5 priority actions by sector. Results demonstrate strong convergence across sectors. Actions that did not make the Overall Top 5 are indicated in **red** in the below tables.

CIVIL SOCIETY (66 TOTAL VOTES CAST)

- Center community at all phases of diagnostics** through strategies including voice of customer models, community-led monitoring and accountability mechanisms, strengthening infrastructure for leveraging trusted messengers and informal social networks, and provision of resources to impacted communities and those already working within them. (9 votes)
- Focus on multiplex testing for mpox with multiple assays and testing sites** (e.g., self/home test, clinic-based test, etc.) ensuring equitable access and acceptability. (8 votes)
- Enable local health departments to implement a syndemic approach to responses** through flexible braided funding streams (e.g., for mental health, sexually transmitted infections, etc.) and break down silos between public health focus areas. (8 votes)
- Conduct a multisector after-action assessment of the mpox response to identify successes and gaps, promote accountability, and improve equity** moving forward, with a focus on diagnostics. (7 votes)
- Push forward systemic change and cultural shift internally in agencies through uncomfortable conversations about what is going wrong, calling out when marginalized communities are being ignored as assets, and concretely finding ways to prioritize disproportionately impacted groups.** (5 votes)

BUSINESS (42 TOTAL VOTES CAST)

- Focus on multiplex testing for mpox with multiple assays and testing sites** (e.g., self/home test, clinic-based test, etc.) ensuring equitable access and acceptability. (6 votes)
- Democratize and streamline access to well characterized specimen samples and laboratory developed tests.** (5 votes)
- Move towards **direct provision of community funding, and non-categorical funding streams or funding streams that facilitate integration of services** specific to local communities' needs to promote greater involvement of communities within response, including diagnostics. (4 votes)
- Enable local health departments to implement a syndemic approach to responses** through flexible braided funding streams (e.g., for mental health, sexually transmitted infections, etc.) and break down silos between public health focus areas. (4 votes)
- Define a monetary value for negative tests to build a financial incentive for diagnostics within the payer system.** (4 votes)

GOVERNMENT (78 TOTAL VOTES CAST)

- Focus on multiplex testing for mpox with multiple assays and testing sites** (e.g., self/home test, clinic-based test, etc.) ensuring equitable access and acceptability. (10 votes)
- Leverage implementation science, incorporating a health economics lens, to determine measurable impact and outcomes of public health interventions, including diagnostics, and value proposition.** (8 votes)
- Democratize and streamline access to well characterized specimen samples and laboratory developed tests.** (7 votes)
- Develop sustainable, interoperable data systems between all sectors that collect syndemic data and mechanisms for legally sharing that data with follow through of effective use.** (6 votes)
- Move towards **direct provision of community funding, and non-categorical funding streams or funding streams that facilitate integration of services** specific to local communities' needs to promote greater involvement of communities within response, including diagnostics. (6 votes)

ACADEMIA (43 TOTAL VOTES CAST)

- Conduct a multisector after-action assessment of the mpox response to identify successes and gaps, promote accountability, and improve equity** moving forward, with a focus on diagnostics. (7 votes)
- Focus on multiplex testing for mpox with multiple assays and testing sites** (e.g., self/home test, clinic-based test, etc.) ensuring equitable access and acceptability. (6 votes)
- Develop sustainable, interoperable data systems between all sectors that collect syndemic data and mechanisms for legally sharing that data with follow through of effective use.** (4 votes)
- Optimize wastewater surveillance and other existing data systems to capture monitoring gaps and establish a system of responding with targeted testing pop ups concurrent with local infrastructure investment.** (4 votes)
- Move towards **direct provision of community funding, and non-categorical funding streams or funding streams that facilitate integration of services** specific to local communities' needs to promote greater involvement of communities within response, including diagnostics. (4 votes)

Appendix C: List of Attending Organizations (Alphabetical)

AIDS United	J. Saint Lore Publishing
amfAR, The Foundation for AIDS Research	Montgomery County Department of Health and Human Services / PHS
BioMerieux	National Black Justice Coalition
bioperfectus Technologies	NYC Department of Health and Mental Hygiene (DOHMH)
Callen-Lorde Community Health Center	NYC DOHMH Public Health Lab
CDC	NYC Pandemic Response Institute
CDC – Division of STD Prevention	NYS Department of Health, Office of Health Equity and Human Rights
Cepheid	O'Neill Institute/Georgetown Law
Chicago Department of Public Health	Positive Impact Health Centers
Columbia Technology Ventures	PrEP4All
Columbia University	Quest Diagnostics
Columbia University Irving Medical Center	Roche Diagnostics
Community Advocates	Seegene USA, Inc.
CUE Health	Thacker & Thompson MD
CUNY Graduate School of Public Health & Health Policy	Treatment Action Group
DC Health	University of Chicago
DC Public Health Laboratory	Wadsworth Center/NYSDOH
Equality Texas	White House Office of Science and Technology Policy
FDA	White House National Mpox Response Team
FDA/CDRH/OPEQ/Office of In vitro Diagnostics and Radiological Health/Division of Microbiology Devices	White House
Harvard University	Whitman-Walker Health
HealthHIV	
HIV Medicine Association	
Hologic	
Housing Works	
Human Rights Campaign	
Icahn School of Medicine at Mount Sinai	
ICAP at Columbia University	

Participants with lived experience of mpox also attended.



Appendix D: Conference Background

Diagnostic tools play a critical role in controlling the spread of infectious disease, but their policies, development, and deployment are complex. The 2022 mpox outbreak highlighted a need for better diagnostic options to prevent the proliferation of future domestic outbreaks. Designing and implementing an effective and equitable diagnostic strategy for mpox diagnostics requires trust in science, community participation, whole of society education, data collection, low barrier production pathways from lab to access points, and more.

On July 18, 2023, the NYC Pandemic Response Institute and amfAR, the Foundation for AIDS Research, convened the National Conference to Advance Equity in Mpox Diagnostics to discuss how to improve the development, accessibility, acceptability, and data utility of disease diagnostics to achieve more rapid, widespread, and equitable access to testing, and improve decision making for policy makers and providers. Attendees included civil society, government, and business stakeholders committed to collaboratively identifying actionable multisector recommendations for strengthening diagnostics at local and national levels.

The conference builds upon rich ongoing discourse and work on mpox including the United States Government Mpox Research Gathering in March 2023; the National Institute of Health (NIH) Rapid Acceleration of Diagnostics (RADx) Tech program; the National Academies of Sciences, Engineering and Medicine (NASEM) Workshop on the Future of the Nation's Laboratory Systems for Health Emergency Response in March 2023, and the NASEM Hackathon: Tech & Media Solutions to Reduce Sexually Transmitted Infections (STIs) in June 2023.

Benefits: Fostering Collaborative Action through Multisector and Multidomain Engagement

- **Diverse perspectives:** The conference yielded meaningful action- and partnership-oriented discussion across sectors and fostered connections among stakeholders who may not typically have opportunities to engage with each other. Importantly, the convening gave voice to individuals with lived experience of mpox, serving to ground discussions in the real human impact of this domestic outbreak and the critical importance of addressing issues of equity and access. Attendees represented a wide array of organizations including local health departments, federal agencies, private labs, community-based organizations, etc. As with all convenings, notably some stakeholders were missing such as the Center for Medicare and Medicaid (CMS), private insurers, and pharmacies. With ongoing outreach we hope to involve those who were unable to attend or missed in the planning stage.
- **Conference structure:** The conference was centered around three key rounds of discussion: (1) design and development (2) accessibility, acceptability and data use, and (3) pathways to holistic care. Participants were assigned to small groups with a diverse mix of government, civil society, and business stakeholders for each round. Participants shifted to new groups for each discussion round, enabling greater engagement with other attendees. Each group was tasked with shortlisting clear, specific actions per round that provide a way forward based on discussion of successes, challenges, and opportunities. A rapid analysis was conducted at the conclusion of each discussion round to identify proposed actions. Attendees then participated in a ranking exercise, which resulted in the identification of the top five recommendations based on individual votes. The top priority actions are summarized in this preliminary findings document. A subsequent report with detailed findings from stakeholder discussions will also be developed and disseminated to conference attendees.
- **Model for collaboration:** With continued engagement and refinement, this system for bringing diverse multisector and multidomain stakeholders together for the purpose of shared learning, relationship building, and identification of priority actions for a targeted focus area can serve as a model for routine activities and future public health emergencies. Furthermore, the mpox response offers a tremendous opportunity to shift how sectors function together on a systemic level to address syndemic needs.