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Mpox global emergency: strengthening African leadership

Published **Online** September 20, 2024 https://doi.org/10.1016/S0140-6736(24)02068-3

The resurgence of mpox during 2024 has been declared a continental emergency by the Africa Centres for Disease Control and Prevention (Africa CDC) and a Public Health Emergency of International Concern (PHEIC) by WHO and now affects 15 African countries.[1,2] In Africa between Jan 1, 2024 and Sept 16, 2024, there were 6201 confirmed mpox cases and 32 confirmed deaths, among a much larger number of suspected cases and deaths.[2] Cases of clade 1b mpox causing the current sustained human-to-human transmission are concentrated in Burundi, Central African Republic, Republic of the Congo, DR Congo, Kenya, Rwanda, and Uganda, while cases of clade 1a mpox have been reported from multiple countries across Central Africa associated with spillover events from animal reservoirs.[2] Cases of clade 2 have been reported from Cote d'Ivoire, Liberia, Nigeria, and South Africa.[2] The majority of cases and deaths have been reported in DR Congo, with an outsize toll on children.[2] The epidemiology of mpox continues to evolve and gaps remain in our knowledge; evidence suggests there might be potential transmission from mother to fetus in utero and during breastfeeding.[3,4] Further cases of clade 1 mpox have been reported beyond Africa including single cases in Sweden and Thailand.[5] Calls for global action and response are important, especially for equity and solidarity in sharing countermeasures such as diagnostics and vaccines. However, the mpox outbreak is still at a stage amenable to control and elimination within Africa.

African leadership is pivotal in shaping a coordinated and effective response to the mpox outbreak. We strongly support the ambitions of the single plan and single budget in the Mpox Continental Preparedness and Response Plan for Africa co-led by WHO and Africa CDC.[6] This ambitious plan sets out ten pillars of action with a budget of about US$0·6 billion over 6 months, excluding vaccine costs, and an implementation framework. However, strategic plans are only as good as the speed and extent to which they can be implemented and they require leadership, accountability, and financing. There is already a plethora of generic and mpox specific guidance to inform the response.[7] Strategic and accountable leadership can ensure that responses are contextually relevant, prompt, culturally appropriate, and sustainable.

African leaders at the head of state level must spearhead the implementation of the joint Africa CDC and WHO Mpox Continental Preparedness and Response Plan for Africa[6] and bring all member states, local civil society, industry, public and private sector actors, and international partners together, fostering collaboration across borders and sectors. Health leaders at the ministerial level should prioritise transparent communication, coordinated efforts in resource allocation, and a unified message that emphasises the importance of collective action. All too often, despite public statements, African health systems disproportionately depend on donor funding.[8] Domestic funding should underpin the core of the mpox response complemented by donor assistance. Historically, when African leadership has been empowered by national leaders and international partners, the continent has seen progress in managing health crises, as evidenced during the west African outbreak of Ebola virus disease in 2014–16, when leadership from affected countries and regional bodies had a crucial role in eventually controlling the epidemic.[9] Challenges, lessons, and actions that must be taken to ensure success in the response to mpox in Africa are numerous and some of them are summarised in the table.

Furthermore, there is a need to strengthen discovery and operational research based on inclusive collaborations,[10] including research to understand transmission informed by epidemiology undertaken by local researchers in affected areas and genomic epidemiology in collaboration with specialised laboratories to trace the evolution and spread of mpox. Examples of African-led epidemiological research to understand transmission include the elucidation of the emergence of clade 1 with predominance of APOBEC3-type mutations associated with a propensity for human-to-human transmission[11] and previous work on the clade 2b outbreak in Nigeria that helped identify

the sexual spread of mpox.[12,13] A One Health approach, which considers the interconnectedness of human, animal, and environmental health, is also important.[12] Integrating data across African health systems[14] and ensuring real-time information sharing will be vital to advance understanding of transmission patterns. A data-driven approach will enable more timely and effective interventions, reducing transmission and morbidity. Strengthening health systems to support integrated research is essential, as highlighted by the successes seen in similar approaches during the COVID-19 pandemic.[15]

Ultimately, successfully eliminating human-to-human transmission of mpox in Africa will come down to local public health action. Current actions include activities such as outbreak management in displaced populations and the distribution of newly arrived vaccines focused on children led by the DR Congo Government Ministry of Public Health, Hygiene, and Prevention working with partners including UNICEF,[16] efforts to halt conflicts, and prioritising public health measures in affected regions. The arrival and distribution of vaccines is important. Two vaccines are potentially available, one of which achieved WHO prequalification in September, 2024.[17]

Subsequent action in DR Congo and neighbouring countries must be informed by a deep understanding of the drivers of disease spread in each locality and should account for variation in social factors, such as overcrowding and local determinants of stigma. Localised responses allow for tailored interventions that resonate with community behaviours and beliefs, increasing the likelihood of successful implementation. Overcoming barriers to the uptake of internationally recommended and locally driven innovations requires learning from past disease outbreaks, including Ebola virus diease[18] and the COVID-19 pandemic,[19] when innovations often struggled to gain traction due to issues such as mistrust, logistical challenges, and inadequate communication strategies. Strengthening national, regional, and local public health infrastructure, including monitoring, surveillance, rapid testing, diagnosis, and grassroots communication efforts, will be essential (table). Africa CDC's leadership in coordinating efforts through the continental plan[6] and providing technical support is invaluable. Enhancing these local capacities will not only address the immediate threat of mpox but will also contribute to broader health system resilience, reducing preventable mortality now and in the future.[20]

Although progress is being made in diagnostic, medicines, and vaccine manufacturing led by Africa CDC[21] and in specific countries such as Rwanda, Senegal, and South Africa,[22,23] the need to expand local manufacturing for vaccines, diagnostics, and other medical supplies remains the lesson of the COVID-19 pandemic that has only been partly learnt. Enhancing African innovation and manufacturing capacity is essential for the continent's long-term ability to respond to public health emergencies. The COVID-19 pandemic highlighted the vulnerabilities of

	Challenges	Solutions
Inadequate domestic funding for the mpox response and the health system	Current over-reliance on donor funding	The commitment by heads of state in Africa to spend 15% of national budgets on health (as in the 2001 Abuja Declaration) should be implemented and is crucial for health and economic development
Outbreak response infrastructure	Subnational supporting infrastructure essential in every nation to support the progress on establishing some National Public Health Institutes and continental coordination by Africa CDC	Invest in local and district level networks of disease surveillance and diagnostic and response infrastructure, including environmental and animal testing
Technical skills and human resources	Limited availability of skilled public health and laboratory staff at local centres, and insufficient industry expertise	Invest in training and improve staff remuneration and working conditions
Research and science	Greater coordination and funding needed, building on regional and national centres of excellence in pandemic prone infections	Build on infrastructure growth during the COVID-19 pandemic for molecular approaches to diagnosis and strengthen vaccine and other countermeasure research; leverage research infrastructure in other disciplinary areas
Trusted communication	Misinformation or unclear communication limiting disease control activity	Involve local grassroot actors with culturally sensitive approaches; raise awareness of misinformation; use formal and informal networks (eg, Nigeria used football matches to raise Lassa fever awareness)
Local leadership	Weak local leadership and governance systems	Improved governance, transparency, and probity
Robust local and national disease surveillance	Challenges in detecting zoonotic spillover and outbreaks	Better local diagnostic platforms; create robust generic surveillance and alert systems to inform regional and national centres
Data sharing at scale	Multiple disease-specific data collection, analysis, and dissemination systems with no interoperability; incomplete reporting to national agencies and Africa CDC	Establish generic information systems; increase data value chain; ensure timely and seamless reporting to Africa CDC
Purchasing of countermeasures	Distributed sometimes hyperlocal negotiations and contracting to purchase personal protective equipment, medicines, diagnostics, and vaccines	Establish negotiated pooled purchasing for all countermeasures at national or supranational level
African manufacturing of vaccines, consumables, diagnostics, and medicines	Only about 1% of vaccines used in Africa are manufactured locally	Implement African Union and Africa CDC local manufacturing resolutions

Table: **Challenges, lessons, and actions for an effective public health response to the mpox emergency and future pandemics in Africa**

African countries due to over-reliance on external sources for crucial supplies, including vaccines. The ongoing mpox outbreak underlines the need for African governments to rapidly invest in local manufacturing capabilities, particularly for vaccines and essential medical supplies. Such investment should build on efforts by Africa CDC[21] and be backed by a strategy to address legal and regulatory frameworks and technology transfer, secure a market for products, support a sound research base, provide adequate human resources, and establish supply and distribution chains to ensure that Africa can respond more swiftly and independently today and in future health crises.

Fostering innovation within Africa will be instrumental for developing context-specific solutions to disease outbreaks that are more likely to be effective and sustainable. This includes supporting scientific research, developing local manufacturing infrastructure, and creating policies that encourage innovation and investment in the health sector. The lessons learned from COVID-19 must be fully integrated into future planning to ensure that Africa is better prepared for subsequent outbreaks, with a focus on self-reliance and resilience.[24] African leaders need to increase national funding for health care, prevention, research, and for health protection, including specifically for the mpox response.[25] Assistance from global development partners to African governments should come in the form of investment, collaboration, and equitable partnership for sustainable development rather than knee-jerk, crisis-dependent aid.[26]

IA reports funding from the European Union under grant agreement no 101046314 and the UK National Institute for Health and Care Research (NIHR) under grant NF-SI-0616–10037. The views and opinions expressed in this Comment are however those of the authors only and do not necessarily reflect those of the European Union or NIHR; neither the European Union nor NIHR the granting authority can be held responsible for them. JL, CK, and OS declare no competing interests.

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