



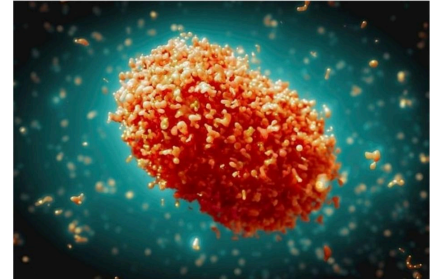
TTMUN'25

FORUM: UNICEF

QUESTION OF: Enhancing infection prevention and control measures in Mpox hotspot countries

INTRODUCTION:

Mpox, formerly known as monkeypox, is a developing human pathogen which has gained significant attention due to its potential for mortality and morbidity. It can cause severe health problems particularly targeting vulnerable populations; young children, pregnant women and immunocompromised individuals. *“This virus was first identified in 1970 in a nine-month-old infant in the Democratic Republic of Congo (DRC), marking the beginning of numerous outbreaks in Central and West Africa, as well as occasional occurrences in Europe and North America”* (Elemuwa et al.) The virus’



(Türk Tabipleri Birliği)

expanding geographical reach is illustrated through clade Ib being detected beyond Africa, including several non-endemic countries. Mpox has multiple clades which refer to different strains of the virus with different genetic characteristics. Clade 1, historically known as the Congo Basin Clade, is one of the most significant due to its higher virulence and transmissibility compared to other clades, such as Clade 2 (formerly the West African Clade). Mpox transmission requires urgent need for global efforts to address the gaps remaining from previous prevention strategies as well as to prevent further outbreaks.

In endemic regions of Africa, Mpox is transmitted through contact with infected animals in the wildlife, infected persons or contaminated materials and cases have been frequently increasing in the Democratic Republic of Congo. WHO is helping affected countries and partners to manage these outbreaks.

DEFINITION OF KEY TERMS:

AAR: after action reviews

DRC: the Democratic Republic of the Congo

HEPR: health emergency prevention, preparedness, response and resilience

HIV: human immunodeficiency virus

IDSR: Integrated Disease Surveillance and Response

IHR: international health regulations

IPC: infection prevention and control

MPXV: monkeypox virus

NGO: non-governmental organization

PHEIC: public health emergency of international concern

RCCE: risk communication and community engagement

UN: United Nations

WHO: World Health Organization

Access to Countermeasures: Refers to easy, sufficient and medically appropriate access to medical countermeasures, such as vaccines, medical equipment, involving broad collaboration in distinct functional areas (such as research and development, provision of health services) integration within national and local health systems including reaching marginalized areas or groups.

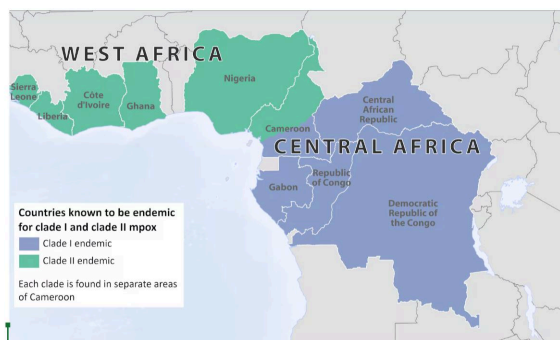
Integrated Health Services: Effective service based on a primary health care approach. Health systems are sorted around the needs of people and communities. They are prepared to respond to health crises through early warning systems and community engagement.

Community Protection: Community centered actions that protect the well-being of the people who are affected while engaging with communities to raise awareness and provide up-to-date information.

BACKGROUND INFORMATION:

Mpox was first detected in humans in the Democratic Republic of the Congo (DRC) in 1970. In the early years after its discovery, mpox outbreaks were sporadic and mostly confined to remote, forested areas where human populations were in close contact with potential animal reservoirs such as rodents

and non-human primates. During the 1970s and 1980s, most reported cases occurred in rural areas of the DRC, with occasional cases occurring in other Central and West African countries such as Cameroon, Nigeria, and Liberia. These early outbreaks were characterized by low rates of human-to-human transmission, with most cases resulting from direct contact with infected animals or contaminated materials such as bedding or clothing.



(CDC)

With improved surveillance and reporting mechanisms in the 1990s and 2000s, there was a noticeable increase in reported cases, particularly in West Africa. This increase was likely due to a variety of factors, including better disease recognition, ecological changes such as deforestation, and increased human interactions with wildlife that facilitated the spread of the virus from animals to humans. The West African clade of mpox, which causes less severe disease than the Central African clade, became more prominent during this period. Despite these regional outbreaks, mpox remained primarily

confined to Africa until an outbreak in the United States in 2003 highlighted its potential to spread beyond endemic areas.

In North America, the United States emerged as the primary hotspot for mpox, with a significant share of global cases by mid-2023. The spread was accelerated by high urban densities and large social gatherings, primarily affecting MSM communities. U.S. authorities implemented targeted vaccination campaigns and ramped up epidemiological surveillance. Canada, on the other hand, recorded fewer cases due to rigorous monitoring and close coordination among public health services. Both countries leveraged their robust healthcare infrastructures to limit the severity of infections, maintaining a fatality rate below 1% thanks to widespread access to treatments and vaccines (Beer and Rao)

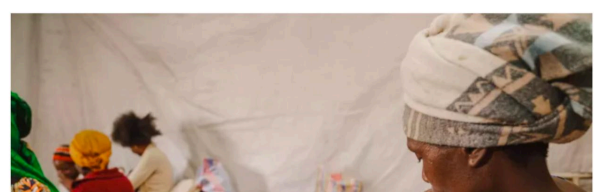
Europe was the first continent hit by the outbreak, with a surge in cases in Spain, the United Kingdom, and Germany. The transmission was facilitated by high international mobility and the population density of major cities. Authorities in these countries swiftly implemented control measures, such as mass testing, contact tracing, and targeted vaccination campaigns. Spain took the lead in proactive vaccination, while the United Kingdom focused on close monitoring of infection clusters. In Germany, the response centered on raising awareness within high-risk communities. The entire region benefited from well-equipped healthcare systems, which helped limit severe complications and maintain a low fatality rate.

In Asia, India responded quickly following the emergence of its first cases in late 2022. The detection of initial cases prompted the government to tighten border controls, particularly at airports and ports. Containment measures were immediately deployed to prevent broader community spread. Simultaneously, research programs were launched to better understand the local specifics of virus transmission and anticipate potential evolutions. Other Asian countries, such as Japan and South Korea, adopted similar approaches but recorded far fewer cases due to pre-existing surveillance systems and rapid anticipation. (Beer and Rao), (Olalekan et al.)

Morocco, on the other hand, opted for a more proactive strategy by quarantining suspected cases and establishing strict epidemiological monitoring. Close collaboration with international organizations enabled the efficient coordination of prevention and control efforts. However, in other parts of Africa, insufficient healthcare infrastructure and delayed responses exacerbated complications, including secondary bacterial infections and severe symptoms.

These divergent responses to mpox underscore a critical need for flexibility and international cooperation regarding the containment of the virus. It is about developing specific local approaches, enhancing both monitoring systems and response capabilities, and ensuring equitable access to vaccines and treatments that will reduce the future burden of outbreaks. Reinforcing regional partnerships, underpinned by information and resource sharing, is at the heart of building international resilience against this threat.

KINSHASA/DAKAR, 16 August 2024 – Thousands of children in the Democratic Republic of the Congo (DRC) and neighbouring countries are at significant risk of contracting the mpox virus as cases



of a new, more deadly, variant continue to surge, UNICEF warned today.

Since the start of the year, an estimated 8,772 children have contracted the disease in the DRC – more than half of the country’s 15,664 total reported cases – according to the latest available data. A total of 548 people have died, an estimated 463 of those were children. (“Children at Significant Risk from Surging Mpox Outbreak in the Democratic Republic of the Congo - UNICEF”)

CURRENT SITUATION:

Democratic Republic of the Congo (DRC): As of August 2024, the DRC has reported over 16,800 suspected mpox cases and 570 deaths. The outbreak has affected all provinces, including the capital, Kinshasa. Factors such as ongoing conflicts, displacement, and limited healthcare access have exacerbated the situation, particularly in eastern regions like North Kivu. (European Centre for Disease Prevention and Control)

Spread to Neighboring Countries: The virus has extended to at least 15 African nations, including Burundi, Kenya, Rwanda, and Uganda. In August 2024, the World Health Organization (WHO) declared the epidemic a Public Health Emergency of International Concern, underscoring the global threat posed by this outbreak.

International Cases: Isolated cases have been detected outside Africa. For instance, Sweden reported a case in August 2024 involving an individual who had traveled to an affected African region.

Challenges in Infection Prevention and Control:

Challenges in infection prevention and control include inadequate healthcare infrastructure in affected regions, which is further strained by concurrent health crises and conflicts, hampering effective responses; significant vaccine accessibility issues, such as a shortage of mpox vaccines in Africa, where the WHO estimates a need for at least 3 million doses for the DRC and 7 million for the rest of the continent, coupled with logistical and supply limitations that impede vaccination campaigns; and public awareness challenges, where misinformation and fear of stigmatization lead to underreporting and delayed treatment, thereby increasing the risk of transmission.

Recent Developments:

Sierra Leone: In January 2025, Sierra Leone declared a state of emergency after confirming two mpox cases within four days. Both cases lacked known contact with infected individuals or animals, indicating potential community transmission.

China: In January 2025, Chinese health authorities reported a cluster of cases caused by the clade Ib strain, originating from an individual with travel history to the DRC. This highlights the strain's potential for international spread.

The WHO has developed surveillance case definitions for the current outbreak in non-endemic countries.

- *“Further public health investigations are ongoing in non-endemic countries that have identified cases, including extensive case finding and contact tracing, laboratory investigation, clinical management and isolation provided with supportive care.*
- *Genomic sequencing, where available, have been undertaken to determine the monkeypox virus clade(s) in this outbreak*
- *Vaccination for monkeypox, where available, is being deployed to manage close contacts, such as health workers. WHO is convening experts to discuss recommendations on vaccination.” (World Health Organization)*

MAJOR PARTIES INVOLVED:

The successful enhancement of infection prevention and control (IPC) measures in Mpox hotspot countries requires the collaboration of diverse stakeholders with specific responsibilities.

World Health Organization (WHO):

The WHO plays a critical role as a global coordinator and advisor in the fight against Mpox. Its contributions include:

Guidelines and Technical Support: Issuing evidence-based recommendations for IPC protocols and vaccination strategies.

Global Monitoring and Reporting: Tracking Mpox case trends and patterns to guide international responses.

Capacity Building: Supporting hotspot countries in strengthening their health systems.

International Non-Governmental Organizations (NGOs):

Organizations such as Médecins Sans Frontières (MSF), the International Red Cross, and UNICEF are instrumental in providing on-the-ground support. Their roles include:

Emergency Healthcare Services: Delivering treatment and implementing IPC measures in outbreak areas.

Resource Provision: Supplying personal protective equipment (PPE), diagnostic tools, and vaccines.

Community Education: Promoting awareness about Mpox transmission and prevention.

These efforts are often challenged by logistical barriers, such as reaching remote or conflict-affected regions, and reliance on donor funding.

Bavarian Nordic:

Producer of the JYNNEOS vaccine. Vaccine manufacturers are vital in providing vaccines to control the spread of the virus. They must meet the global demand for Mpox vaccines while collaborating with governments to ensure access in resource-limited settings.

INTERNATIONAL DOCUMENTS:

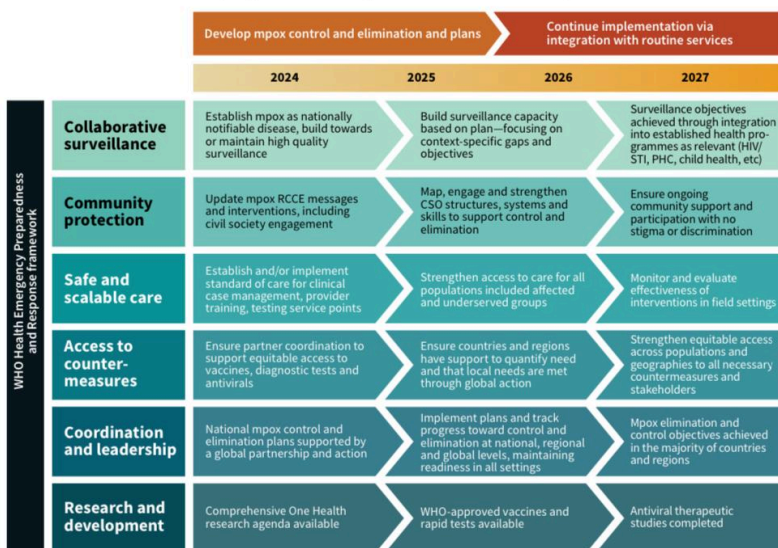
<https://iris.who.int/bitstream/handle/10665/376839/9789240092907-eng.pdf>

https://www.researchgate.net/profile/Morufu-Raimi/publication/384916958_Conquering_Mpox_A_Comprehensive_Public_Health_Strategy_for_Addressing_Mpox_and_Poxvirus_Infections_in_Nigeria_-_Understanding_Global_Trends_Transmission_Dynamics_and_Effective_Prevention_and_Control_M/links/670ee3627797480e894be6b9/Conquering-Mpox-A-Comprehensive-Public-Health-Strategy-for-Addressing-Mpox-and-Poxvirus-Infections-in-Nigeria-Understanding-Global-Trends-Transmission-Dynamics-and-Effective-Prevention-and-Control.pdf

<https://www.mdpi.com/1999-4915/16/11/1737#app1-viruses-16-01737>

<https://www.folkhalsomyndigheten.se/the-public-health-agency-of-sweden/communicable-disease-control/disease-information-about-mpox/one-case-of-mpox-clade-i-reported-in-sweden/>

Illustrative timeline for progress towards mpox control and elimination, 2024–2027



SOLUTION

ALTERNATIVES:

- Community leadership Mpox programmes and services should be guided by well sourced community engagement and leadership.
- Equity and human rights All people at risk of exposure to mpox should have access to stigma-free, non-discriminatory, safe and confidential services, within a

continuing global effort to expand access to WHO-recommended tests, treatments and vaccines.

- **Context-specific collaboration and integration**

Based on the epidemiology, preferences, needs and capacities of affected communities, mpox surveillance, prevention, diagnosis, treatment and care should be integrated with existing programmes and services in health and congregate settings, including community-based services and close coordination with One Health programmes and stakeholders.

- **Commitment to continuous learning**

Stakeholders ensure findings from ongoing evaluation and applied research should be ensured to enhance programmes and improve outcomes for all patients and communities. Strengthen policies and procedures to collaborate on and advance equitable development, maintenance, and deployment of emergency reserves, nationally and internationally (WHO and Member States).

- **Maintain and develop access and allocation mechanisms for deployment of products through emergency or compassionate use, research protocols and other procurement mechanisms, before and after new products should be prequalified, as appropriate (WHO, academic, development, and commercial partners, civil society and non-government organizations).**

- **Collaborate on assessment and procurement of tests, vaccines, and therapeutics to expand access to all countries through existing or new channels (WHO, UN agencies, global health partners including FIND, CEPI, Gavi, Global Fund and others, and communities).**

- **Establish and maintain key partnerships with other agencies and entities to support and implement initiatives for access to countermeasures for smallpox and mpox (WHO, Member States, development partners, and communities).**

- **Support progress towards WHO prequalification as appropriate to global health circumstances and needs (WHO, National Regulatory authorities, and commercial partners).**

- **Consider programmes, approaches and avenues to integrate and decentralize testing, vaccines and therapeutics as appropriate into health programmes and services at every level to advance access (Health authorities at all levels, health service providers, community services and civil society).**

UNICEF's response to the mpox outbreak focuses on an approach to break active transmission of the disease, preventing secondary harm to the children and supporting preparedness by;

- **Coordination:** Supporting health and education authorities in planning and implementing response strategies.
- **Risk communication:** Engaging communities, addressing stigma, and building trust through training of frontline workers and building feedback loops.
- **Infection control:** Enhancing infection prevention in homes, communities, schools, and health facilities by supplying hygiene materials and training parents, community leaders, and teachers.
- **Vaccination:** Supporting vaccine delivery and roll-out by providing training, supplies, logistics, and cold chain management, while also maintaining essential routine childhood vaccinations.

- **Case management:** Ensuring mpox isolation centres accommodate children and women with family-based care, providing nutritional support, medical supplies, and rapid diagnostic testing.
- **Mental health support:** Offering targeted mental health and psychosocial support to children and caregivers and addressing stigma and discrimination.
- **Essential services:** Ensuring continued access to essential services, including social, protection, and health services, and keeping schools safely open, particularly in vulnerable communities. (“UNICEF Global Mpox Preparedness and Response for Children (September 2024 – February 2025) - Democratic Republic of the Congo”)

Works Cited

Beer, Ellen M., and V. Bhargavi Rao. “A Systematic Review of the Epidemiology of Human Monkeypox Outbreaks and Implications for Outbreak Strategy.” *PLOS Neglected*

Tropical Diseases, vol. 13, no. 10, 16 Oct. 2019, p. e0007791,

<https://doi.org/10.1371/journal.pntd.0007791>.

CDC. “About Mpox.” *Mpox*, 2024, www.cdc.gov/mpox/about/index.html.

“Children at Significant Risk from Surging Mpox Outbreak in the Democratic Republic of the Congo - UNICEF.” *Unicef.org*, 2024,

www.unicef.org/press-releases/children-significant-risk-surging-mpox-outbreak-democratic-republic-congo-unicef.

Elemuwa, Christopher Ononiwu, et al. *Conquering Mpox: A Comprehensive Public Health*

Strategy for Addressing Mpox and Poxvirus Infections in Nigeria – Understanding Global Trends, Transmission Dynamics, and Effective Prevention and Control

Measures in Nigeria. (Preprint). 14 Oct. 2024,

<https://doi.org/10.2196/preprints.67534>. Accessed 13 Jan. 2025.

European Centre for Disease Prevention and Control. “Epidemiological Update – Week

36/2024: Mpox due to Monkeypox Virus Clade I.” *European Centre for Disease Prevention and Control*, 9 Sept. 2024,

www.ecdc.europa.eu/en/news-events/mpox-epidemiological-update-week-36-2024-clade-i.

Olalekan, Raimi Morufu, et al. “The Roles of All Tiers of Government and Development

Partners in Environmental Conservation of Natural Resource: A Case Study in

Nigeria.” *MOJ Ecology & Environmental Sciences*, vol. 4, no. 3, 22 May 2019,

<https://doi.org/10.15406/mojes.2019.04.00142>. Accessed 20 Aug. 2021.

Rigby, Jennifer. “Mpox Vaccines Likely Months Away Even as WHO, Africa CDC Discuss

Emergency.” *Reuters*, 14 Aug. 2024,

www.reuters.com/business/healthcare-pharmaceuticals/mpox-vaccines-likely-months-away-even-who-africa-cdc-discuss-emergency-2024-08-14/.

Türk Tabipleri Birliđi. “Mpox Yeniden Dünyanın Gündeminde.” *Türk Tabipleri Birliđi*, 2016, www.ttb.org.tr/haber_goster.php?Guid=c8967a88-5ae8-11ef-bf03-6dc18247dd7d. Accessed 14 Jan. 2025.

“UNICEF Global Mpox Preparedness and Response for Children (September 2024 – February 2025) - Democratic Republic of the Congo.” *ReliefWeb*, 18 Sept. 2024, reliefweb.int/report/democratic-republic-congo/unicef-global-mpox-preparedness-and-response-children-september-2024-february-2025.

World Health Organization. “Multi-Country Monkeypox Outbreak in Non-Endemic Countries.” *Www.who.int*, 21 May 2022, www.who.int/emergencies/disease-outbreak-news/item/2022-DON385.