

# Mpox

## Global strategic preparedness and response plan



World Health  
Organization



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## About this document

The Mpox global strategic preparedness and response plan (SPRP) is designed to guide public health preparedness and response efforts at the global, regional, and national levels.

The SPRP outlines key activities to support countries experiencing active outbreaks of mpox, or those at high risk of mpox across all regions. Through this plan, WHO and its partners will assist Member States in strengthening surveillance, laboratory capacity, community protection, safe clinical care and vaccination efforts.

These activities, centered on immediate emergency preparedness, readiness, and response, are intended to cover the period from March to August 2025.

This document has been drafted with input from colleagues involved in the mpox response across various partners, response pillars, and at the national, regional and global levels.

*In South Kivu, in the Democratic Republic of Congo, thanks to support from the WHO, samples taken from suspected cases of mpox are now analysed within 24 to 48 hours, compared with around 10 days previously. This is precious time in the race against time to save lives, quickly identify people in contact with patients and break the chain of transmission. DRC: Receiving 50 to 60 Samples to Examine Monkeypox - 12 October 2024. © WHO / Daniel Paluku KAHANDUKYA*



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# Foreword



Mpox has been endemic in parts of Africa for decades, with sporadic outbreaks that attracted limited global attention and low levels of investment in research, vaccines, therapeutics, and other medical tools. In 2022, the first multi-country outbreak of mpox prompted me to declare a public health emergency of international concern (PHEIC) under the International Health Regulations. Thanks to the swift actions of affected communities, public health authorities, and international partners, that outbreak was largely brought under control.

However, in September 2023, a new offshoot of the virus - Clade Ib - emerged in an eastern province of the Democratic Republic of the Congo (DRC). During the first half of 2024 it spread rapidly in DRC and to four neighbouring countries, prompting me to once again declare a PHEIC in August of that year.

We remain in the acute phase of this outbreak, as the number and geographic distribution of cases continue to increase. The response is far from over, and we must sustain and strengthen our efforts. To that end, we are extending the Mpox Global SPRP for six months—to August 2025—introducing adaptations to scale up and refine our response, in particular with a heightened focus on targeted mpox vaccination, with five countries already vaccinating and an additional seven preparing to do so.

The strategy outlined in the initial Mpox Global SPRP remains robust and appropriate. However, implementation has faced considerable challenges. These include gaps in community engagement, varying levels of national ownership and urgency, and an incomplete understanding of local transmission dynamics. Furthermore, the deteriorating security and humanitarian situation at the epicentre of the outbreak in the DRC is impeding response efforts. It is also critical to acknowledge the impact of shifting global health priorities, including the recent withdrawal of key international support, including funding and vaccine donations.

WHO continues to work closely with affected and at-risk countries, alongside partners such as the Africa Centres for Disease Control and Prevention, non-governmental organizations, and civil society. This extension of the Global SPRP provides a comprehensive framework to curb - and where feasible, to stop - human-to-human transmission through coordinated global, regional, and national efforts. The plan emphasizes enhanced surveillance, community-led action, research, and equitable access to and delivery of medical countermeasures, particularly vaccines.

The spread of mpox can be controlled. However, success demands sustained commitment and coordinated action among international agencies, national and local governments, civil society, researchers, manufacturers and Member States.

**Dr Tedros Adhanom Ghebreyesus**

Director-General  
World Health Organization



# Abbreviations

<b>AAM</b>	Access and Allocation Mechanism
<b>Africa CDC</b>	Africa Centres for Disease Control and Prevention
<b>CORC</b>	Collaborative Open Research Consortium
<b>GOARN</b>	Global Outbreak Alert and Response Network
<b>IHR</b>	International Health Regulations (2005)
<b>IMST</b>	incident management support team
<b>IPC</b>	infection prevention and control
<b>MCM</b>	medical countermeasures
<b>MPXV</b>	monkeypox virus
<b>OPXV</b>	orthopoxvirus
<b>PHEIC</b>	public health emergency of international concern
<b>PHSM</b>	public health and social measures
<b>POC</b>	point-of-care
<b>PPE</b>	personal protective equipment
<b>R&amp;D</b>	research and development
<b>RCCE</b>	risk communication and community engagement
<b>RDT</b>	rapid diagnostic test
<b>SAGE</b>	WHO Strategic Advisory Group of Experts on Immunization
<b>TPP</b>	target product profile
<b>WASH</b>	water, sanitation and hygiene
<b>WHO</b>	World Health Organization



# Executive summary

The global mpox outbreak, which began in 2022, has resulted in almost 130 000 confirmed cases reported to the World Health Organization (WHO). The epidemiological landscape of mpox continues to evolve, presenting new transmission patterns and complex public health response challenges. The emergence and spread of clade Ib monkeypox virus (MPXV) is particularly concerning not only for the Democratic Republic of the Congo, which accounts for around 90% of all cases in Africa but also globally. Cases have now been reported in 24 other countries, nine within Africa and the remainder outside the continent, highlighting the rising global risk. Additionally, clade Ia and clade II MPXV continue to circulate in multiple African countries, further complicating response efforts. Under the provisions of the International Health Regulations (2005) (IHR), this escalating situation led to the determination that the event constituted a public health emergency of international concern (PHEIC) on 14 August 2024 and the standing recommendations for mpox to States Parties were extended for an additional 12 months, until 20 August 2025.

Most recently, on 25 February 2025, following the third meeting of the IHR Emergency Committee advising the WHO Director-General on the management of this event, the Director-General, concurring with the advice of the Committee, determined that the upsurge of mpox in Africa continues to constitute a PHEIC, and issued revised temporary recommendations to States Parties accordingly.

The mpox response remains in its acute phase, requiring sustained and intensified efforts. To this end, WHO is extending the Mpox global strategic preparedness and response plan (SPRP) for six months – to August 2025 – introducing adaptations to scale up and refine the global response. In particular, this extended SPRP aims to scale up mpox vaccination efforts to focus on the geographic areas reporting new cases and populations at higher risk of infection according to local contexts, including children, to stop outbreaks of human-to-human transmission.

The core strategy of the SPRP remains robust and appropriate. However, implementation challenges persist, including gaps in community engagement, varying levels of national ownership and urgency, and an incomplete understanding of local transmission dynamics. Additionally, the deteriorating security and humanitarian situation in Eastern Democratic Republic of the Congo poses a growing threat to response efforts. At the same time, shifting global health priorities – including the recent withdrawal of key international support, funding and vaccines – will influence the next phase of the response.



*A 3-week-old girl with mpox at Kavumu Hospital in the Democratic Republic of the Congo faced delayed recovery due to medication shortages, highlighting the facility's overwhelming mpox caseload and resource deficiencies, August 2024. © WHO / Guerchom Ndebo*

The extended SPRP provides a comprehensive framework to guide public health preparedness and response efforts at the global, regional, national and local levels and emphasizes:

- **Rapid detection and response:** Strengthening surveillance, early case detection and contact tracing, with a focus on high-risk areas to contain outbreaks at their source. Adequate and accessible clinical case management to reduce disease severity and mortality.
- **Targeted vaccination efforts:** Prioritizing geographic areas with higher number of new cases and those most at-risk, including household and sexual contacts of recent cases, frontline healthcare workers in areas with active transmission and other vulnerable population groups (e.g. sex workers, immunocompromised individuals) based on local epidemiology to break chains of transmission.
- **Stronger global cooperation to expand vaccine access,** particularly in low- and middle-income countries, and stronger engagement with national and local entities to rapidly deliver vaccine (including to children where relevant), while advancing research and ensuring equitable distribution of diagnostics, therapeutics and other essential health products.
- **Community empowerment,** ensuring that affected populations actively participate in risk communication, stigma reduction and preventive actions.



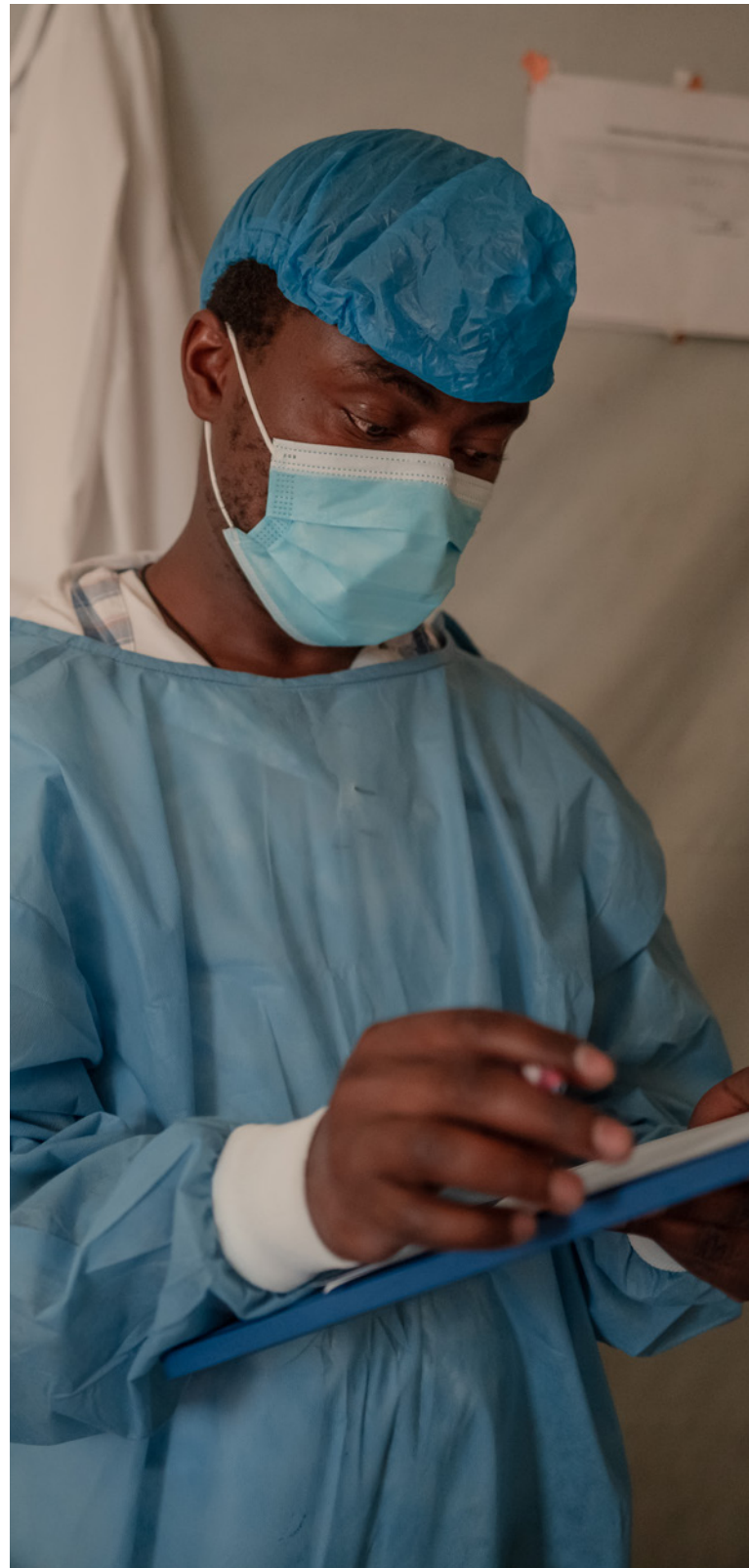


Rooted in the principles of global solidarity, equity and community engagement, the SPRP calls for harmonized strategies, collaborative decision-making and transparent information sharing. WHO, in partnership with the Africa Centres for Disease Control and Prevention (Africa CDC), international agencies and civil society, will continue to provide strategic leadership, work closely with communities affected by or at risk of mpox, facilitate coordinated access to medical countermeasures (MCMs) and support delivery, and drive resource mobilization. At the regional level, WHO and Africa CDC will lead coordinated efforts across Africa, ensuring response strategies align with the specific needs of affected areas.

The effective implementation of SPRP requires sufficient and flexible financial and technical resources, including sustained robust coordination, technical assistance across all levels and operational support. The estimated international funding requirement for March–August 2025 is US\$ 145 million. The assumptions for the next six months of the response are based on the evolving epidemiology of the outbreak and recent trends in use of supplies and other resources.

Based on lessons learned and anticipated operational needs, WHO estimates a funding requirement of US\$ 47 million to support national mpox responses over the next six months. Given the complexities of implementation in high-risk settings, WHO will continue to deploy the remaining balance of existing funds (US\$ 11 million) while mobilizing resources to address the funding gap of US\$ 36 million. This estimate excludes costs associated with the procurement and distribution of vaccines, which remain critical for protecting people at risk in areas with active transmission.

Final budget allocations and resource distribution will be determined through detailed operational planning at regional and country levels, ensuring that strategies and funding are adapted to specific epidemiological and operational contexts. WHO will review and adjust financial requirements on a quarterly basis, in alignment with the evolving situation and ongoing needs assessments at global, regional and country levels.



*Sifa, a health worker, fills out patient forms at the Nyiragongo General Referral Hospital north of Goma in the Democratic Republic of the Congo on 14 August 2024.*

*The hospital includes a treatment centre where mpox patients from the local community and from nearby internally displaced persons (IDP) camps are being treated. © WHO / Guerchom Ndebo*



# 1. Current situation

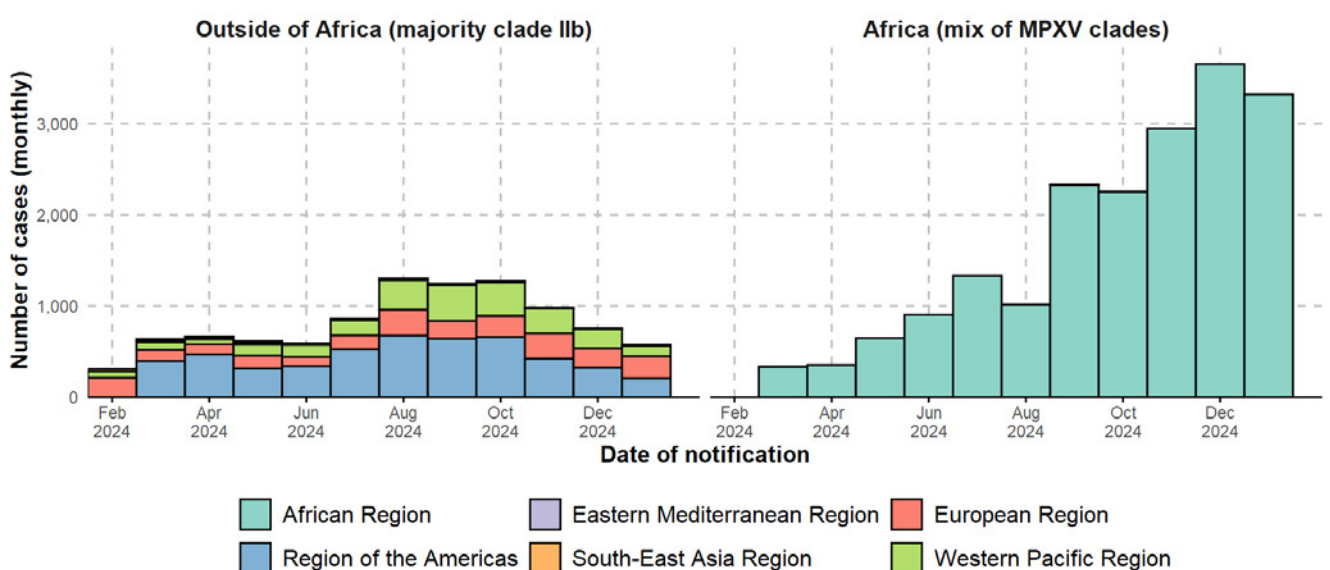
## Epidemiological overview

Since the initial identification of the multi-country outbreak in April 2022, the epidemiological landscape of mpox has continued to evolve, presenting new transmission patterns and challenges for public health responses. Initially the outbreak was dominated by clade IIb MPXV cases, primarily affecting men who have sex with men in non-endemic countries, however it has since expanded with the emergence and spread of clade Ib MPXV in Africa and beyond, impacting other groups including sex workers, heterosexual partners and children. Coupled with declining population immunity following the cessation of routine smallpox immunization, mpox now poses an increasing epidemic threat for all immune naïve populations.

From the beginning of 2022 to the end of January 2025, the global mpox outbreak has resulted in almost 130 000 confirmed cases and more than 283 deaths across 130 countries. More than 30 000 confirmed cases have been reported in 2024 alone, mostly in the African Region. While cases due to clade IIb MPXV have stabilized outside Africa, the continent has experienced a significant surge in clade Ib MPXV cases since the second half of 2024. This surge is driven by the Democratic Republic of the Congo, which accounts for around 90% of all cases in Africa.

Multiple mpox outbreaks are ongoing in the Democratic Republic of the Congo. In mpox endemic provinces, zoonotic transmission of clade Ia MPXV continues to affect all age groups, with a significant number of children given infected. In contrast, clade Ib MPXV emerged in 2023 is transmitting especially in newly affected provinces in the eastern part of the country and appears to be disproportionately affecting young adults and young children. Kinshasa, the capital, is experiencing a co-circulation of clade Ia and Ib MPXV, driven predominantly by sexual contact among adults. The clade Ib epidemic has spread from eastern Democratic Republic of the Congo into neighbouring countries, especially Burundi and Uganda. In Burundi, the outbreak peaked in October 2024 and has been on a declining trend more recently, while in Uganda the number of cases continues to increase at the time of writing, largely driven by transmission among young adults in Kampala and other urban settings. Clusters of cases involving local transmission have been reported in Kenya, Rwanda, South Africa, the United Republic of Tanzania and Zambia, while only sporadic cases have been recorded in Angola, South Sudan and Zimbabwe. Outside of Africa, a total of 15 countries have reported clade Ib cases, mostly linked to travel to countries with ongoing epidemics.

Fig. 1. Trends in global mpox cases by WHO region (as of 28 February 2025)



Source: WHO



Moreover, a strain of clade Ia MPXV, first identified in Kinshasa, which exhibits multiple APOBEC3 like mutations highlighting extended human-to-human transmission, has also been detected in Congo Central, Kwilo and Kwango provinces, as well as in an imported case in Ireland. Together with clade IIb from the global outbreak, clade Ib emerged in South Kivu, this strain represents the third MPXV variant with documented sustained human-to-human transmission.

Observations in recent years indicate that once MPXV enters networks of highly connected individuals, such as men who have sex with men, or sex workers and their clients, its potential for rapid spread significantly increases. Although sexual contact is a highly efficient mode of transmission, the virus also continues to spread through close non-sexual contact, exposure to contaminated objects and environments, and vertical transmission from mother to child.

As the virus continues to circulate across different geographical areas, the profile of affected groups is also shifting. For example, in South Kivu, the initial outbreak of clade Ib MPXV driven by sexual contact between adult sex workers and their clients eventually led to household transmission where multiple children were present, resulting in an increase of cases among children.

Furthermore, clade IIa MPXV, historically thought to be linked to zoonotic transmission in West African countries, has now been detected in new urban areas, with cases among children and adults.

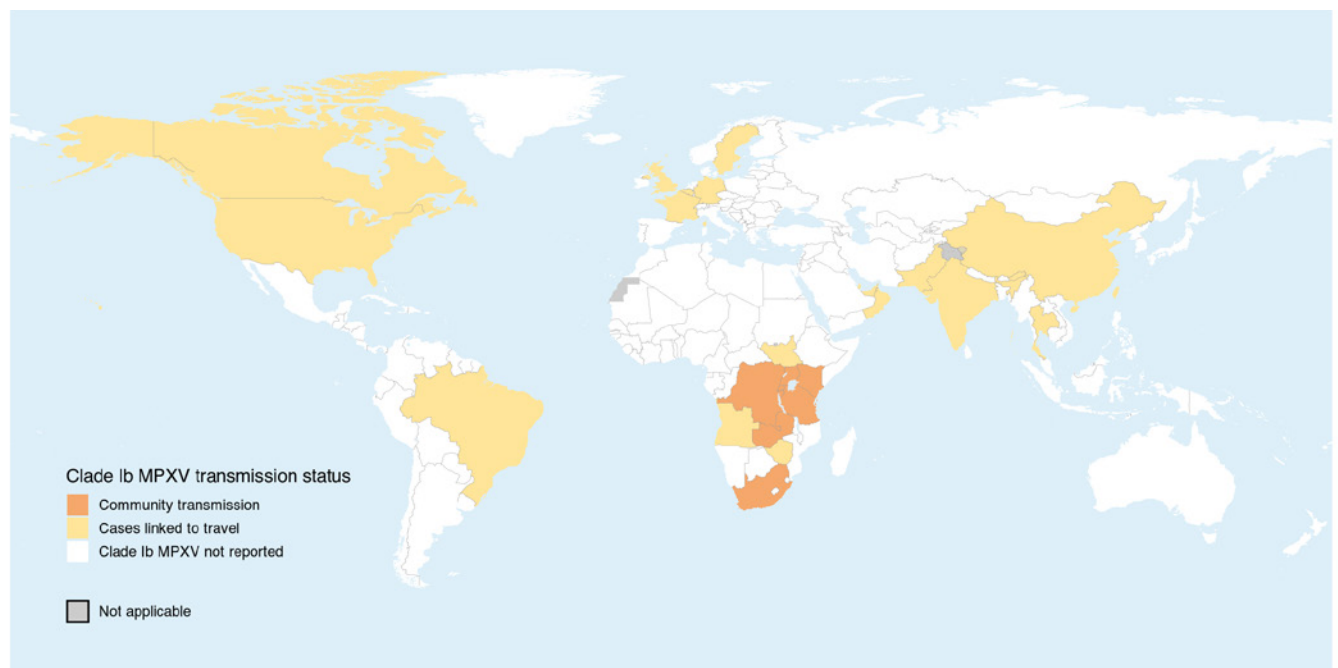
While human-to-human transmission of clade IIa appears to be more limited compared to other sub-clades, its increased incidence and geographic expansion is concerning. This spread highlights the possible increased human-animal interactions in previously unaffected regions and the risk for more sustained human-to-human outbreaks due to this sub-clade as well.

The emergence of new viral strains and their potential for further evolution pose significant challenges for the long-term mpox prevention and control.

Clinical observations of the recent outbreaks of clade Ib and clade Ia MPXV support previous evidence that mpox infections can be particularly severe in vulnerable populations, including children (especially those who are malnourished), immunocompromised individuals and pregnant women and their unborn children.

Limited surveillance and diagnostic capacities persist in certain parts of Africa, complicating the understanding of the true extent of the outbreak and hindering effective response measures. The recent expansion of mpox to new countries in Africa, the high burden in vulnerable populations and persistent circulation in other regions, underscores the need for continued vigilance and a strengthened global response to control and prevent further spread both regionally and globally.

Fig. 2. Global transmission status of clade Ib MPXV from 1 January 2022 to 23 March 2025 ([Global Mpox Trends Dashboard](#))



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Data Source: World Health Organization  
Map Production: WHO Health Emergencies Programme  
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## Risk assessment

This rapid risk assessment – based on mpox disease spread, infection risk factors and the tailored response strategies needed to control outbreaks – evaluates the risk for distinct viral clades. It was conducted by WHO in February 2025, in preparation for the Emergency Committee meeting. Based on the available information, the risk is assessed as follows:

**Clade Ib MPVX: High risk.** Mostly affecting non-endemic areas for mpox in the Democratic Republic of the Congo and neighbouring countries, where mpox is spreading mainly through human-to-human close physical contact, including sexual contact. International spread is predominantly linked to sexual contact.

**Clade Ia MPXV: Moderate risk.** Mostly affecting mpox-endemic areas in the Democratic Republic of the Congo, with sporadic cases reported in other Central and East African countries, where mpox is linked to zoonotic spillover events as well as human-to-human transmission, mainly through close physical contact, including sexual contact. The situation in Kinshasa, which has a co-circulation of clade Ia and Ib, warrants specific focus and is linked to a higher risk of spread.

**Clade II MPXV (historically endemic areas): Moderate risk.**

Nigeria and countries of West and Central Africa where mpox is endemic, affecting children and adults, and is linked to zoonotic spillover events as well as human-to-human transmission, mainly through close physical contact, including sexual contact.

**Clade IIb MPXV: Moderate risk.** Global risk, where outbreaks predominantly affect men who have sex with men and spread predominantly through sexual contact. Countries affected in this group cover a very broad geographic area with diverse health systems and response capacities. In some countries or regional blocs in this group, risk may vary and/or be assessed as low.

*Toussaint gets some fresh air outside the hospital ward where his grandfather is ill with mpox at the Nyiragongo General Referral Hospital, north of Goma in the Democratic Republic of the Congo (DRC) on 14 August 2024.*

*"We've been here for a few days now," he said. "I'm not going home to avoid contaminating others. I'm trying to look after my grandfather while remaining as careful as possible so that I don't get sick too."*

© WHO / Guerchom Ndebo





## Key challenges and lessons

While progress has been made in understanding human-to-human transmission during mpox outbreaks since 2022, knowledge gaps persist in understanding the rapidly evolving epidemiology of mpox in Africa, including in endemic areas, and globally. To ensure robust risk analysis, further research is needed to better understand immunity following infection or vaccination, risk factors for severe disease, and the role of pauci- and asymptomatic infections.



**Strengthened surveillance and detection:** Limited surveillance data from the subnational and local levels, continues to hinder efforts to fully understand the true extent of mpox cases, local transmission dynamics epidemiologic trends and associated morbidity and mortality to inform and adapt response priorities. Integration of mpox into national surveillance systems remains a significant challenge in many settings, and despite substantial improvements, there remains limited diagnostic capacity in the Democratic Republic of the Congo where only about one-third of suspected cases are tested.



**Enhanced community protection:** There continues to be a need for stronger community ownership and engagement to guide response decisions. Stigma and discrimination against individuals and communities affected by mpox reduce the impact of response efforts, complicating case identification, contact tracing, and communication and reducing access to clinical care.



**Safe and scalable care:** Access to quality and free-of-charge care is not available for all mpox cases, especially in African countries. No specific and effective antiviral treatments are yet available for mpox. While mpox can spread within households and healthcare settings where close and prolonged contact is common, infection prevention and control (IPC) programmes remain insufficient and difficult to scale. More support is needed for appropriate, safe and effective home care of patients with uncomplicated mpox, and for proper IPC and water, sanitation and hygiene (WASH) services practices in health facilities to protect health and care workers.



**Equitable access to and delivery of MCMs:** Several barriers to mpox vaccination delivery have been identified, including testing capacity to confirm cases, limited capacity for contact tracing to guide mpox vaccination efforts and vaccination implementation costs. Vaccination has been hindered by competing health priorities, limited field operations capacity and funding to deliver/administer doses, and an unstable funding environment reducing investment in human resources and supply of vaccine. In the Democratic Republic of the Congo, insecurity has affected mpox vaccination planning and implementation.



**Emergency coordination:** There is a need for stronger country engagement, emergency coordination capacities and sense of urgency to respond. Implementation challenges have reduced the speed and efficiency of the response. Operating within a humanitarian response in most-at risk countries, such as the Democratic Republic of the Congo, is needed as the deteriorating security and humanitarian situation will likely impact our collective ability to respond. Incident management teams are responding to competing health priorities and concurrent health emergencies.





## Milestones and achievements

Over the past six months, the SPRP has played a critical role in guiding coordinated response efforts for mpox worldwide and most notably in Africa. These milestones highlight WHO's commitment to enhancing surveillance, empowering communities, improving clinical care, ensuring equitable access to medical tools and strengthening emergency operations.

### Strengthened surveillance and detection

Significant strides have been made in monitoring, detecting and responding to mpox outbreaks through improved data collection and reporting mechanisms. **WHO has consistently provided biweekly epidemiological updates, ensuring timely and transparent data sharing through the [Global Mpox Trends dashboard](#).** Technical assistance and training have been delivered to strengthen case detection, contact tracing and laboratory diagnostics, notably through decentralization of testing capacity, particularly in the Democratic Republic of the Congo with the decentralization of laboratories from nine in September 2024 to 19 by February 2025, and the establishment of a global external quality assessment program for national reference laboratories. An evaluation of rapid diagnostic tests is ongoing.

### Community protection

Empowering communities has remained central to the mpox response, with risk communication and community engagement (RCCE) initiatives playing a vital role in increasing awareness and reducing stigma. **WHO has disseminated scientific updates and public health guidance through webinars, technical coordination meetings and training programmes for community health workers and key affected populations.** Social and behavioural assessments and research are underway to provide data on risk perceptions, attitudes and practices, so that response efforts are tailored to community needs. Additionally, WHO has developed and distributed guidance on public health measures for international travel, border health and mass gatherings.

### Safe and scalable clinical care

Ensuring high-quality, patient-centred clinical care has been a priority, with WHO leading efforts to train healthcare workers, strengthen case management and enhance IPC measures. **Clinical training programmes and webinars have improved healthcare workers' capacity to manage complications, co-infections and patient safety concerns, as well as to implement IPC measures.** WHO has also developed clinical dashboards to track patient outcomes. Technical experts have been deployed to support case management in high-burden settings, co-leading the development and support for treatment centres caring for patients with the most severe forms of disease. **The publication of interim IPC and WASH guidance has further strengthened protocols for home-based care and isolation in resource-limited settings.**

### Access to and delivery of MCMs

WHO has provided comprehensive support for mpox vaccination, from research and development to regulatory approval and delivery, ensuring equitable access to essential health products. **WHO has developed a research priority agenda and fostered collaborative research with key stakeholders.** In collaboration with Africa CDC, Gavi, CEPI, United Nations Children's Fund, and other partners, WHO has **coordinated the multi-partner Access and Allocation Mechanism (AAM)**, which has allocated over 1.1 million vaccine doses to 12 countries and delivered 758 000 doses to seven countries to date. WHO has played a pivotal role in policy development and regulatory support, including **issuing WHO Strategic Advisory Group of Experts on Immunization (SAGE) policy recommendations** and publishing a WHO policy position paper on mpox vaccines. WHO has accelerated regulatory approvals for medical tools, ensuring vaccine quality through the **prequalification of MVA-BN and Emergency Use Listing of LC16m8**, and has provided technical assistance to countries in issuing Emergency Use Authorizations and strengthening vaccine safety monitoring systems. To support country readiness for mpox vaccine delivery, WHO organized a **regional workshop for 17 African countries, to guide development of national vaccination plans.** Additionally, WHO has provided operational guidance, training materials and monitoring tools to track the progress of mpox vaccination efforts in the African region. WHO has also expanded access to diagnostics, with **several mpox diagnostic assays approved through WHO Emergency Use Listing** to ensure reliable and accessible testing. Furthermore, WHO has coordinated the global distribution of essential medical supplies, including personal protective equipment (PPE), swabs and laboratory reagents, with **over 80% of requested supplies delivered to affected regions.**

### Emergency coordination

WHO has convened multisectoral and multi-partner mechanisms, ensuring alignment across agencies and Member States. **Regular inter-agency coordination meetings, IHR Emergency Committee discussions, Global Outbreak Alert and Response Network (GOARN)-supported deployments, and GOARN/Global Health Emergency Corps comprehensive assessment and tracking of over 500 surge deployments, as well as a continental incident management support team (IMST) for Africa co-lead by WHO and Africa CDC** since August 2024 have facilitated a cohesive and adaptive response. The response has also been shaped by operational reviews, including an Intra-Action Review for the African Continent to assess challenges, best practices and areas for improvement. WHO continues to engage in high-level strategic planning, leveraging regional and global networks to maintain an agile and well-coordinated emergency response.



## 2. Strategic objectives

The primary goal of the SPRP is to stop outbreaks of human-to-human transmission of mpox and mitigate their impact on human health through coordinated global, regional and national efforts. This will be achieved by implementing comprehensive surveillance and response strategies, empowering communities to actively participate in outbreak prevention and control, advancing research and ensuring equitable access to and delivery of MCMs, particularly vaccines.

### Rapidly detect and control outbreaks

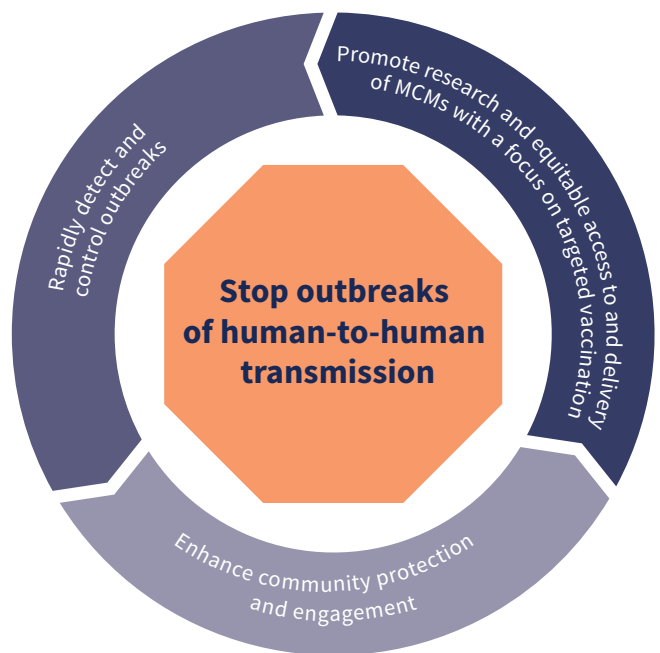
Recognizing the real challenges with security and the humanitarian situation in the Democratic Republic of the Congo, the reduction in international financial and technical support, and competing priorities in affected communities and countries, this phase of the response must focus on rigorously prioritized interventions most likely to control the expanding epidemic with a focus on Eastern Democratic Republic of the Congo and neighbouring countries and the most at-risk populations.

- **Strengthened surveillance and rapid response:** Implement robust and timely surveillance and diagnostic capabilities to enable early detection and prompt response to mpox outbreaks in all settings. This includes strengthening and decentralizing laboratory capacity, enhancing case investigation and contact tracing, implementing event- and indicator-based surveillance, as well as community-based surveillance and promoting the timely reporting of suspected, probable and confirmed mpox cases.
- **Safe and scalable care:** Ensure the provision of safe and effective clinical care for mpox patients, safeguarding both patients and healthcare workers while preventing further transmission. Enhance implementation of IPC and WASH in health facilities, treatment centres and isolation centres and strengthen knowledge of IPC measures amongst health and care workers. This involves establishing clear guidelines for case management, comprehensive care of suspected, probable and confirmed cases, and IPC, as well as ensuring adequate resources and training for healthcare providers.

### Promote research and equitable access to and delivery of MCMs with a focus on targeted vaccination

Guided by a coordinated WHO [research roadmap for mpox](#) developed through a scientific conference in August 2024, WHO promotes research and development to address knowledge gaps and support equitable, public health risk-based access to and timely delivery of diagnostics, vaccines, therapeutics and other essential health products adapted to different delivery contexts. WHO and partners support governments in the following areas:

Fig. 3. Strategic objectives



- **Knowledge generation:** Enhance research and development efforts to address critical knowledge gaps in mpox epidemiology, transmission dynamics, clinical presentation and effectiveness of interventions.
- **MCM development and evaluation:** Accelerate the development, evaluation and regulatory assessment of additional safe, effective, appropriate and affordable mpox vaccines, therapeutics, diagnostics and other essential health products.
- **Public health risk-based access and needs-based allocation:** Advance public health risk-based access to mpox MCMs through transparent and needs-based allocation mechanisms, prioritizing populations and communities at risk, especially those in low- and middle-income countries and in complex humanitarian contexts.
- **Research:** Integrate research into outbreak response activities, enhance coordination and collaboration with local authorities and research institutions, and improve community engagement to ensure effective deployment of MCMs and optimize health outcomes through evidence-based decision-making.
- **Delivery and implementation:** Focus on lowest level geographic areas with new cases and groups at higher risk of exposure. Additional vaccine doses will be needed to support a targeted approach to stop outbreaks, the focus of Phase 1 of the response. It will be important to continue monitoring progress on mpox vaccination in African countries and collect information to inform ongoing supply needs and future vaccination strategies.



## Enhance community protection and engagement

- **Community-centred response:** Empower communities to actively participate in outbreak response and prevention through risk communication, engagement, infodemic management, responding to community feedback, health education and addressing stigma. Foster effective, tailored and sustainable community-led initiatives to promote preventive behaviours and reduce transmission risks. Address wider social and economic impacts of public health interventions through social protection. Strengthen WASH services in congregate settings (e.g. prisons, refugee camps, migrant detention, transitional housing) through partnerships.
- **Risk communication:** Implement targeted RCCE strategies to move the response operations and activities to where they are decentralized into communities, increasing community ownership and leadership from the communities.
- **Tailored interventions:** Taking community dynamics, behaviours and concerns into account, implement precise and equitable public health and social measures (PHSM) tailored to the epidemiological context and transmission patterns in each affected area. This should consider factors such as predominant clades, modes of transmission, gender, equity, persons most at risk and the needs of vulnerable populations
- **One Health: understanding and minimizing zoonotic transmission:** Promote cooperation between human, animal and environmental health sectors to investigate, understand, prevent and address the zoonotic transmission of mpox. Support collaborative research to fill critical knowledge gaps, including mpox ecology, modes and proportions of zoonotic transmission and the development of appropriate diagnostic tools.



*Christivie sits with her 7-month-old son Jeanfete, who is being treated for mpox at Kavumu Hospital in South Kivu, Democratic Republic of the Congo, on 30 August 2024. © WHO / Guerchom Ndebo*



## Guiding principles

Learning the lessons from previous and ongoing mpox epidemics, the COVID-19 pandemic and from the longstanding global HIV response, the following guiding principles underpin the strategic objectives and actions outlined in this plan, ensuring a comprehensive, equitable and collaborative approach to mpox prevention and control.

### Coordination and coherence

Effective mpox prevention and control require harmonized strategies, clear roles and collaborative efforts across all levels of governance and among all stakeholders, including:

- **Harmonized strategies:** Develop and implement multi-sectoral mpox strategies, plans, and guidance that are aligned across global, regional, national, and subnational levels to ensure all stakeholders work toward common objectives.
- **Clear roles and responsibilities:** Define clear roles and responsibilities for all actors involved in the mpox response, leveraging the strengths, mandates and expertise of stakeholders across different sectors to promote efficient resource allocation, effective intervention implementation and enhanced coordination toward shared strategic goals.
- **Collaborative decision-making:** Foster collaborative decision-making processes that involve all relevant stakeholders, including affected communities, ensuring decisions are informed by diverse perspectives and responsive to the needs of those most affected.
- **Information sharing and communication:** Facilitate timely, transparent, consistent, and coordinated sharing of information and data across all levels of the response, enabling effective monitoring, evaluation, learning, decision-making, and accountability.
- **Joint action and timely resource mobilization:** Encourage joint action and prompt resource mobilization aligned with research and response priorities at all levels, leveraging existing resources efficiently and securing additional support from international partners.
- **Country-driven and country-engaged:** Ensure all stakeholders commit to supporting affected countries by coordinating engagements, aligning efforts under “one plan – one budget”, and responding to nationally or sub-nationally identified needs.
- **Coordination for longer term planning:** Engage stakeholders to establish and maintain coherent multisectoral and multi-stakeholder planning to implement the global [Strategic framework for enhancing prevention and control of mpox \(2024–2027\)](#) with a goal to eliminate human-to-human transmission of mpox wherever feasible.

### Equity and solidarity

Ensuring equitable access to mpox-related services is essential for addressing health disparities and prioritizing the needs of the most vulnerable populations, including:

- **Equitable access to services:** Ensure individuals at highest risk of infection and severe outcomes have equitable access to mpox prevention, testing, treatment, and care services, regardless of background or circumstances, by addressing barriers to access and promoting inclusivity.
- **Prioritizing populations at highest risk of infection:** Recognize and prioritize, in resource allocation and interventions, the needs of populations at higher risk of exposure, severe mpox illness, and complications, according to [SAGE recommendations](#).
- **Addressing disparities:** Actively work to understand, track, and reduce health disparities related to mpox, both within and between countries, through targeted interventions and strengthened health systems.
- **Maximizing public health benefits:** Ensure access to optimized PHSM to reduce transmission risks and enhance safety, particularly in areas where vaccines and therapeutics are not yet available or equitably distributed.

### Community-centric and rights-based approach

Empowering communities and upholding human rights are crucial to ensuring that mpox interventions are inclusive, effective, and responsive to the needs of those most affected, including:

- **Active community involvement:** Engage communities in the planning and decision-making processes for mpox prevention and control, ensuring interventions are designed with direct input from those affected.
- **Capacity building and support:** Strengthen the capacity of community-led organizations by providing resources, training, and support to enable effective local mpox prevention and response efforts.
- **Ensuring equity and non-discrimination:** Ensure all individuals, regardless of background or circumstances, have equitable access to mpox-related services, while actively combating stigma and discrimination.
- **Community-led outreach and education:** Empower communities to lead outreach, education, and peer support initiatives, leveraging local knowledge and networks to effectively reach marginalized and underserved populations.





### 3. Response strategy

#### Strengthened surveillance and detection

An effective mpox response relies on robust surveillance and detection mechanisms that enable the early identification and swift containment of outbreaks. This strategy emphasizes a multi-faceted approach that integrates existing surveillance systems, enhances diagnostic capacity and uses advanced technologies to monitor and respond to the evolving epidemiological landscape.

##### Key actions

- **Integration with existing surveillance systems:** Strengthen mpox surveillance by incorporating it into existing disease surveillance platforms, such as the Integrated Disease Surveillance and Response system in the African Region. Encourage countries to include mpox in their list of notifiable diseases and implement event- and indicator- based surveillance systems. This approach optimizes resource utilization and ensures streamlined data collection, analysis and reporting.
- **Enhance contact tracing:** Contact tracing capabilities form a critical pillar of this strategy. Tailor guidelines and standard operating procedures to improve contact identification, management, and follow-up, including partner notification approaches for vulnerable groups. Contact tracing is an integral part of the targeted vaccination strategy to offer timely post-exposure vaccination to eligible contacts of cases (ideally during the first four days following exposure) and to identify individuals, groups or geographic areas at risk who could benefit from pre-exposure vaccination.
- **Cross-border collaboration and information sharing:** Enhance collaboration and information sharing across borders, including border communities, to facilitate the early detection and coordinated response to mpox outbreaks. This includes establishing cross-border surveillance mechanisms and regular data exchange protocols, particularly in regions with high cross- border population mobility and interactions.
- **Laboratory capacity enhancement:** Strengthen and expand laboratory infrastructure, particularly in underserved areas, by upgrading existing facilities and establishing new ones. Provide comprehensive training to laboratory personnel to ensure accurate diagnostics and maintain high standards of quality assurance and biosafety and biosecurity. Improve and streamline sample referral networks with WHO collaborating centres and reference laboratories, ensuring national staff are trained in specimen transport and shipment in accordance with IATA Dangerous Goods Regulations.
- **Expansion of diagnostic testing:** Increase access to safe and scalable mpox diagnostic testing, particularly in remote and underserved areas. Mpox Global strategic preparedness and response plan by establishing efficient sample referral networks and specimen transport. Evaluate and integrate newly developed rapid diagnostic tests (RDTs). Ensure that testing results are shared with the patients in a timely manner and integrated into national surveillance systems to facilitate real-time identification of cases and monitoring of disease trends and to guide timely interventions.
- **Integration of genomic sequencing:** Incorporate genomic sequencing into routine mpox surveillance, with specific national and subnational sequencing strategies, to enable the rapid identification of new viral strains and track the spread of the virus. Foster collaboration and data sharing among national and international laboratories to support global genomic surveillance efforts, ensuring intellectual property rights are respected.
- **Public health intelligence and analytics:** Establish systems to integrate and analyze data from multiple sources – including event-based, community-based, epidemiological, laboratory, and clinical data – to improve coordination between animal, human and environmental surveillance under the One Health approach. Leverage advanced analytics and modeling techniques to complement field studies, forecast outbreaks, identify risk factors, assess the impact of different intervention strategies and evaluate intervention effectiveness. Promote digitalization and the use of electronic platforms to enhance the efficiency of data collection and management.

*Dieu Merci Assumani, laboratory technician, and Willy Lulihoshi, medical biologist and head of the mpox laboratory in Bukavu, in the Democratic Republic of the Congo, receive a sample taken at the mpox treatment centre in Lwiro, transported with WHO support. October 2024. © WHO / Daniel Paluku KAHANDUKYA*







## Enhanced community protection

Effective control and prevention of mpox fundamentally depend on the active engagement and protection of communities. This strategy focuses on empowering and equipping communities through localized and tailored risk communication, meaningful participation, reducing stigma and ensuring equitable, public health risk-based access to vaccines and public health measures, including WASH services. By prioritizing community involvement and culturally sensitive, age- and gender-appropriate approaches, the strategy aims to build resilience, enhance trust and sustain response efforts.

### Key actions

- Community engagement and participation:** Actively engage and support affected communities, especially those with lived experiences of mpox or those at higher risk, in the design, implementation and evaluation of mpox prevention and control interventions. Strengthen mechanisms for ongoing dialogue and feedback to ensure community perspectives shape and guide the response. Ensure community-led decision-making structures are in place, enabling local actors, civil society and community-based organizations to take ownership of prevention and response activities. Provide technical support to community-led initiatives, including peer education, outreach and psychosocial support services, particularly for those requiring isolation and affected households.
- Targeted risk communication:** Utilize real-time social listening to monitor public perceptions, misinformation and barriers to engagement. Develop culturally appropriate, stigma-free messaging that resonates with diverse communities, including those at higher risk. Leverage trusted community actors (e.g. religious leaders, teachers, youth groups and traditional healers) to co-create and disseminate risk communication materials. Enhance multi-channel communication strategies, including radio, social media, community networks and in-person engagements, ensuring accessibility for low-literacy and non-digital populations. Implement proactive strategies to counter misinformation and disinformation by working with social media platforms, fact-checking organizations and community groups to ensure credible, science-based information reaches the public.
- Community-based early detection and service delivery:** Empower and train community volunteers and health workers to identify suspected cases early and report them promptly to the national mpox surveillance system, ensuring linkage to care. Develop a community-based surveillance strategy tailored to specific settings and populations, particularly those in vulnerable situations. Train the community health workforce on case definitions and home care practices to contain and control outbreaks at the earliest stage.
- Addressing stigma and discrimination:** Implement comprehensive strategies to combat stigma and discrimination associated with mpox, particularly related to sexual orientation, gender identity and HIV status. Train healthcare workers and community leaders on stigma reduction, promote positive messaging, and advocate for policies that protect the rights of affected individuals. Ensure the response is community-shaped and respects the dignity and rights of all individuals.
- PHSM:** Implement PHSM to reduce transmission risks by both reducing exposures and making exposures safer should they occur. These measures, including personal protection, social adjustments and international travel and trade measures, must be relevant, evidence-informed, equitable and context-specific. Continuously monitor, evaluate and adjust PHSM policies based on changes in epidemiological patterns, healthcare capacity and community acceptance, while minimizing unintended negative consequences.
- Health education and promotion:** Conduct comprehensive and participatory health education and promotion activities to increase knowledge and awareness about mpox, promote preventive behaviours and encourage early healthcare-seeking. Tailor messages to different age groups, cultural contexts, and risk profiles, ensuring they are accessible and relevant to the target audience.
- Community IPC and WASH measures:** Implement IPC measures, including strategies for promotion of and access to hand hygiene and ensure basic WASH services in high-risk settings, such as households with suspected cases, congregate settings, IDP camps and refugee camps. Ensure continuity of school services by providing guidance and supporting compliance with IPC standards. Conduct assessments of WASH availability and develop improvement plans to rapidly strengthen hand hygiene, safe water access, sanitation and safe waste disposal. Prioritize actions which will improve and sustain access within the timescale of the outbreak and beyond. Establish partnerships for coordinated assessment and implementation of WASH and IPC measures, with strategies for monitoring and evaluation to ensure effective practices.
- Cross-border and mass gathering surveillance:** Strengthen cross-border surveillance and management of suspected cases in the context of international travel, including at points of entry and during mass gatherings. Apply a public health risk-based approach to travel and mass gatherings, providing targeted information and implementing appropriate public health measures to mitigate mpox transmission risks, while avoiding unnecessary restrictions on travel and trade.
- Prevention of transmission between animals and humans:** Implement comprehensive measures to prevent transmission between humans and animals by educating communities on the risks of wildlife interactions, promoting safe practices such as proper handling and cooking of bushmeat, and avoiding contact with potentially infected animals, as well as the risk of spillback from humans to animals. Support research to better understand transmission dynamics and identify effective interventions to disrupt the spillover cycle.



## Safe and scalable care

Providing high-quality clinical care for all mpox patients is crucial for mitigating the impact of outbreak and ensuring critical health system services continue to be available in the setting of an mpox outbreak. This strategy focuses on enhancing healthcare infrastructure, ensuring the availability of essential medicines and supplies, protecting health and care workers and integrating mental health and psychosocial support. By optimizing clinical care pathways and maintaining essential health services, the strategy aims to deliver comprehensive care that meets the diverse needs of affected populations.

### Key actions

- **Development of scalable care pathways:** Establish adaptable care pathways covering the entire patient journey from initial presentation to recovery. These pathways should be tailored to specific patient populations, care settings, and the unique challenges posed by mpox, ensuring timely and appropriate care, including HIV testing, appropriate nutritional support and comprehensive management of suspected cases. Ensure availability of evidence-based guidance on optimized supportive care to reduce mortality. Ensure that healthcare workers are trained and equipped for mpox detection, case management and appropriate referral, including for congenital mpox. Configure services to deliver person-centered care, including the provision of home-based care where appropriate.
- **Ensuring availability of essential medicines and supplies:** Maintain and manage adequate stockpiles of essential medicines, supplies, and investigational products needed for mpox treatment and supportive care. Optimize supply chain management to ensure the equitable and timely distribution of these resources to all healthcare facilities, especially in underserved areas. Ensure healthcare workers are equipped with essential PPE, sampling materials and mpox PCR testing supplies.
- **Strengthening healthcare infrastructure:** Enhance the capacity and resilience of healthcare facilities to manage mpox cases by expanding isolation facilities and ensuring the availability of essential medical equipment. Support local decisions on structure of services, including how to triage and provide person-centred care in the context of existing health services. Ensure access to safe WASH services, healthcare waste management and electricity to support infection prevention and control measures. Strengthen mpox care as part of integrated healthcare services, including in IDP and refugee camps, and high-density areas.
- **Protection of health and care workers and patients:** Implement robust IPC measures in all healthcare settings to minimize the risk of mpox transmission. Establish screening, triage and isolation processes in all care settings. Provide additional training for health and care workers on IPC measures and ensure the availability of necessary supplies, including PPE, WASH services and safe healthcare waste disposal.

- **Understanding mpox disease in context:** Clear and systematic descriptions of mpox disease and the determinants of patient outcomes are needed to target interventions to improve care quality. This involves strengthening tools and collaborations for collection and shared analysis of clinical data to complement epidemiological insights. Every effort should be made to integrate care where appropriate, notably for people living with immune-compromising conditions, for example, ensuring that people with mpox are also offered HIV tests.
- **Integration of mental health and psychosocial support:** Incorporate mental health and psychosocial support services into mpox clinical care pathways to address the psychological and social impact of the disease. Prioritize support for vulnerable populations and those experiencing stigma and discrimination, ensuring their mental health needs are met through comprehensive care packages and peer support networks.
- **Maintenance of essential health and social services:** Ensure the continuity of essential health and social services during mpox outbreaks by adapting service delivery models and mobilizing additional resources. This includes maintaining critical health programmes such as HIV and sexually transmitted infection prevention, maternal and child health including the integrated management of childhood illnesses and nutritional screening, chronic disease management and protection of the recovery and the strengthening of the essential programme on immunization including the supplementary vaccination efforts and outbreak responses to other vaccine preventable diseases while responding to the increased demand for mpox-related care. Additionally, support schools to continue operating while adhering to mpox IPC standards.

*Patients at Kavumu Hospital in South Kivu, Democratic Republic of the Congo, on 31 August 2024. Staff reported that the health facility was overwhelmed with mpox patients and lacked adequate medicines and protective equipment for healthcare workers. August 2024. © WHO / Guerchom Ndebo*





## Equitable access to medical countermeasures

Ensuring equitable access to and delivery of MCMs is critical for the effective control and mitigation of mpox outbreaks. This strategy emphasizes the importance of coordinated research, scalable manufacturing, innovative financing and market shaping and efficient distribution systems to guarantee that diagnostics, vaccines, and therapeutics and other health products are appropriate and accessible to populations at-risk, particularly in low-resource settings..

### Research and development (R&D)

R&D supporting innovation is essential to advancing the global response to mpox by aligning research efforts with outbreak control goals. By fostering collaboration among researchers, public health officials, and stakeholders from affected regions, the R&D strategy aims assess experimental candidate MCMs (not licensed ones) and to document if they are indeed safe and effective. It also aims to generate data to address knowledge gaps.

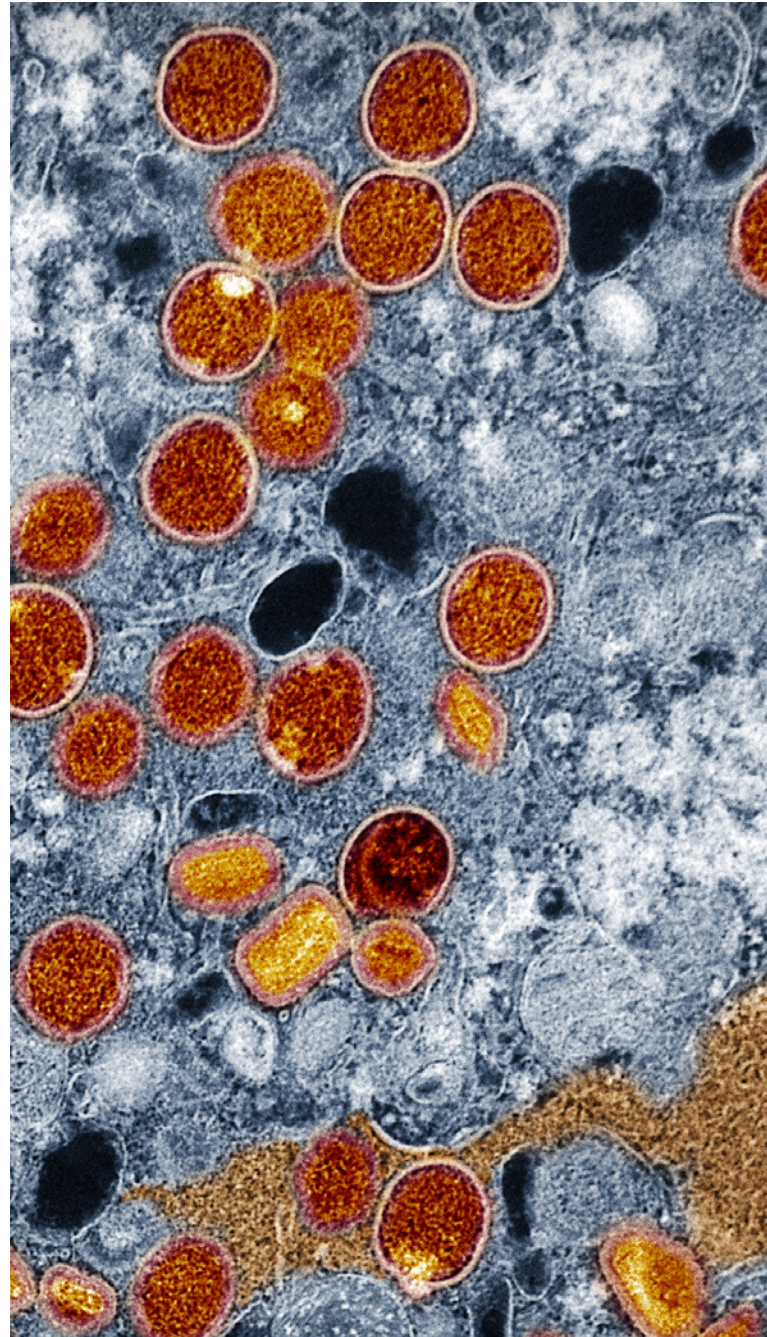
#### Key actions

- Identification of research priorities under the coordinated research roadmap (R&D Blueprint):** Develop and maintain a dynamic mpox R&D agenda that aligns with outbreak response goals in a collaborative manner and with researchers and Ministries of Health of the affected countries in the driving seat.
- Use a viral family approach:** By prioritizing research on entire Poxviridae Family as opposed to a handful of individual pathogens, the strategy bolsters the capability to respond efficiently to unforeseen clades, zoonotic transmissions and unknown threats such as 'Pathogen X.' It also emphasizes the need for prompt identification and characterization of emerging threats, the streamlining of global R&D efforts, via collaborative and efficient research roadmaps and the integration of research into outbreak and pandemic response.
- Collaborative Open Research Consortium (CORC) for the Poxviridae Family:** A key action for improving global research collaboration and, advancing research preparedness and response to epidemics and pandemics includes establishing a CORC for each Family. The CORC for the Poxviridae was established and is hosted by the INRB (Democratic Republic of the Congo and the University of Witwatersrand in South Africa). This CORC aims to leverage scientific advancements and global collaboration to ensure rapid, equitable and effective research and development. This CORC constitutes a network of international research consortia focused on priority Families, Priority pathogens and Prototype pathogens. This concept builds on WHO's scientific framework for pandemic research preparedness and leverages global scientific expertise to enhance our collective ability to detect, prevent and respond to emerging pathogen threats. This CORC aims to promote collaborative approaches to: (i) assess and characterize the diversity of pathogens in the Family, their evolution and potential for zoonotic spillover events; (ii) promote targeted basic research, and (iii) support the R&D of MCMs.
- Collaborate:** The widespread geographic distribution of the pathogen, known to circulate across diverse nations and regions globally, underscores the pivotal role of global initiatives in linking national and regional research actions. Significantly, the strategy advocates for decentralized collaborative approaches and supporting research efforts in areas critical for pandemic research preparedness. This comprehensive approach aims to foster international collaboration by establishing:
  - a global framework for researchers, developers, policymakers, funders;
  - manufacturers, and institutions, fostering a collaborative space to advance research;
  - across the Poxviridae Families, as well as R&D for Priority and Prototype pathogens.





- Clinical trial infrastructure and research deployment capacity:** Outbreaks often occur in areas where these do not exist, thus efforts aiming to facilitate the development of research capability are needed. Those efforts must include technology sharing and transfer and access to funding sources to bring those resources to at-risk locations. Building infrastructure for simple clinical trials integrated into outbreak response and ensuring efficient research deployment of MCMs. WHO Independent Expert Groups provide advice on which candidate MCMs should be given priority for evaluation in the context of an outbreak.
- Robust methods for research are needed:** Harmonization of research protocols and tools are being made to standardize viral assays, animal models, reagents and CORE protocols for clinical evaluation to streamline research during epidemics. This proactive approach facilitates the agreement on clinical trial designs and the selection of investigational products and candidates to prioritize in clinical trials during an outbreak. In the context of epidemics and pandemics, the WHO R&D Blueprint for Epidemics and other stakeholders collaboratively co-sponsor clinical trials integrated into the outbreak response for MCMs with Ministries of Health. Valid and rigorous observational effectiveness studies are also needed, especially during an epidemic or outbreak, to advance evidence-based programmatic and policy decisions.
- Accelerating evaluation and deployment of MCMs in the context of epidemics:** In the context of outbreaks, the aim is to provide a blueprint that contributes to the rapid start of simple trials integrated into initial outbreak response (randomized trials or randomization during deployment). It also incorporates elements to facilitate the rapid deployment of candidate MCMs (as expanded access/compassionate use) if evidence is available/ is emerging that they are efficacious and safe. The availability of candidate MCMs is one of the essential steps to evaluate candidate MCMs and generate data required for regulatory review, eventual licensure, and policy recommendations, considering the limited timespan to evaluate clinical efficacy and effectiveness during outbreaks.



Colorized transmission electron micrograph of mpox virus particles (red and yellow) found within infected VERO E6 cells (blue). © NIAID



## Diagnostics

Testing for the presence of the MPXV should be conducted in appropriately equipped laboratories by staff trained in technical and safety procedures, following a risk-based approach and under proper biosafety conditions. The recommended specimen type for confirming MPXV infection in suspected cases is lesion material, which provides the highest sensitivity and reliability for detecting the virus. While alternative specimen types, such as oropharyngeal swabs, may be collected from individuals who are contacts of suspected or confirmed mpox cases, these may lack sensitivity, particularly in pre-symptomatic cases. If a rash or mucosal disease develops, testing should be repeated on lesion material. The following diagnostic options are available:

- **PCR testing:** PCR testing on skin lesion material is the gold standard for MPXV diagnosis. Validated, commercially available PCR test kits exist, with no current manufacturing capacity issues, ensuring sufficient supply. These PCR tests are critical for detecting MPXV by targeting conserved orthopoxvirus (OPXV) or MPXV genes, minimizing the risk of sequence variants or gene dropouts.
- **Point-of-care (POC) testing:** Near-patient POC PCR-based solutions are available and widely used and have been instrumental to build national laboratory networks in affected countries. Ongoing evaluations with results expected by mid-2025, aim to identify more effective and accessible POC solutions, including antigen RDTs.
- **Antigen-based RDTs:** While antigen RDTs are available, they have shown insufficient accuracy in past evaluations. As a result, they are not recommended as a primary diagnostic tool. Ongoing additional evaluations will determine their potential role.
- **Serology:** Setting up serology for MPXV is challenging in reference laboratories, and antibody RDTs claiming to distinguish MPXV-specific antibodies are likely unreliable. Therefore, serology is not currently recommended for routine diagnosis.

WHO has released target product profiles (TPPs) for tests used in mpox diagnosis, outlining key targets for test developers. These TPPs are intended to guide the development of diagnostic tools that maximize public health benefits and impact, ensuring that effective diagnostics are available and accessible worldwide.

## Vaccines

Continuing development of mpox vaccines and research on their use in different contexts are essential components of the global outbreak response:

- **MVA-BN:** A non-replicating vaccine indicated for smallpox and mpox prevention, prequalified by WHO in September 2024 with extension for use from 12 years of age in October 2024, authorized in the Democratic Republic of Congo for emergency use for children 1 year and above.
- **LC16m8:** A minimally replicating vaccine authorized in Japan for smallpox and mpox prevention, approved for use in the Democratic Republic of Congo in June 2024 and listed by WHO under the Emergency Use Listing mechanism in November 2024.
- **ACAM2000:** A replicating vaccine indicated for smallpox, with emergency use authorization for mpox in the United States of America.

Vaccines in clinical studies include, amongst others:

- Next-generation mRNA vaccines designed to provide broad protection against mpox and related OPXVs. These vaccines have shown promising preclinical results, with robust immune responses and complete protection in challenge studies and currently in phase 1 and 2 trials.

Ongoing research studies aim to generate additional evidence on critical aspects such as duration of protection and optimal dosing schedules, routes of administration, safety in special populations, including in infants, children and pregnant women and the effectiveness of vaccines in this outbreak context, including the effectiveness against different mpox clades and post-exposure vaccine effectiveness.

Additional vaccine candidates are being developed to facilitate delivery and scale up production. The current outbreak presents an opportunity to evaluate new vaccines, which, if proven effective and safe, could ensure supply security, and provide more evidence to expand vaccination efforts.

Research continues to focus on developing pan-OPXV vaccines that could provide broad protection against multiple related viruses, offering flexibility for future outbreaks. Additionally, long-term studies are being conducted to monitor the durability of immune responses and determine the need for booster doses, which will be critical in shaping future vaccination strategies and policies.

Scaling up global production and distribution to meet demand, particularly in low- and middle-income countries, is vital. A better understanding of mpox transmission patterns will help to inform future mpox vaccination policies and strategies. Accelerating regulatory evaluations for both new and existing vaccines is also essential to ensure their availability when needed.





## Therapeutics

There is currently no approved therapeutic specifically for mpox. Multiple trials are underway to evaluate the efficacy and safety of tecovirimat in patients with clades I and II, but preliminary results suggest little or no effect on the primary endpoint. Therefore, the priority is to ensure that mpox patients receive the highest standard of supportive care while the scientific community continues to evaluate additional candidate therapeutics.

To support these efforts, WHO has published a draft TPP for mpox therapeutics, outlining the preferred and minimal acceptable characteristics for new treatments. This document guides developers in aligning their products with global needs.

WHO has also released the CORE protocol, an international, adaptive, multi-country, randomized controlled trial framework designed to accelerate the evaluation of therapeutic agents by enabling their testing across diverse geographical and clinical settings under a standardized protocol.

Additionally, WHO has developed the Atlas of mpox, a tool aimed at standardizing the clinical characterization of mpox lesions across various populations. This resource is crucial for ensuring consistency in clinical trials and the evaluation of treatment outcomes. It aids researchers in the uniform collection of clinical data, including HIV status, contributing to a more accurate understanding of disease progression and therapeutic efficacy.

In the absence of proven effective therapeutics, optimizing the standard of supportive care remains essential. The collection of standardized clinical data using the WHO Global Clinical Platform further supports clinical characterization and management, enabling the global sharing of critical data to enhance treatment protocols and outcomes.

## Access, allocation and supply chain coordination

Effective allocation and supply chain coordination are crucial to ensuring that the available supply of mpox countermeasures is used in a way that maximizes public health impact, particularly as supply dynamics evolve. This approach includes establishing pre-defined lists of essential commodities and standards, regularly updated based on emerging data. Coordinated demand forecasting will focus on the needs of at-risk populations, while market shaping and supply efforts – through procurement and donations – will require careful coordination to meet public health goals, especially in low-resource settings. Transparent, needs-based allocation frameworks (based on epidemiological data) will guide resource distribution, incorporating ethics principles and public health priorities. Robust logistics systems, including strategic stockpiles, will ensure efficient delivery and adherence to appropriate standards. These measures will help create a responsive and resilient supply chain to support the global mpox response.

### Key actions

- Continue to improve access using the WHO operationalized multi-partner AAM for mpox MCMs:** Coordinate available donations and supplies and strategically allocate them to control the mpox outbreak. This ensures equitable allocation and delivery of millions of mpox vaccine doses to many countries in the African region and is a significant step towards a coordinated and targeted use of vaccines in response to mpox outbreaks. Partners should continue to provide support to countries to implement targeted vaccination with the available doses in the countries.
- Establishment of disease commodity package standards:** Develop pre-defined lists of essential mpox supplies and associated technical standards. Formulate evidence-based policies for the use of these countermeasures and establish mechanisms for rapid updates based on emerging data. Conduct coordinated market assessments to inform equitable access strategies as needed.
- Collaborative and transparent demand forecasting and planning:** Facilitate the sharing of information and coordinate demand forecasting for MCMs, focusing on risk-based demand analysis and generating aggregated forecasts across multiple regions. These efforts should prioritize the needs of at-risk and marginalized populations.
- Transparency on supply pledges and availability and market shaping plans:** Enhance decision-making and collaboration across various supply sources for MCMs, including procurement and donations. Maintain open communication channels, ensure compliance with standards through sound specifications and leverage market-shaping advantages to secure affordable and equitable access to countermeasures, particularly for low-income countries.



- **Transparent needs-based allocation:** Promote fair and transparent mechanisms for the allocation of MCMs during the mpox emergency. Develop adaptable, needs-based allocation frameworks that prioritize public health goals and ethical considerations, in consultation with regional entities and countries. Establish a global allocation process that manages conflicts of interest and ensures efficient, transparent resource distribution.
- **Logistics and distribution:** Strengthen logistics and distribution systems to ensure the availability, integrity and efficient distribution of MCMs. This includes establishing strategic stockpiles, coordinating transportation and cold chain capacity, streamlining export and import processes, supporting country readiness and monitoring supply chains for quality assurance. Develop a cooperative network of health emergency supply chain actors to support the effective distribution of countermeasures.
- **Streamline regulatory frameworks and support national policy development:** Expedite the review and approval of mpox MCMs by enhancing regulatory processes. Strengthen national regulatory capabilities, provide technical assistance and establish agile regulatory requirements for emergencies. Collaborate with national regulatory authorities and advocate for and support National Immunization Technical Advisory Groups in updating and developing existing mpox vaccination policies to ensure timely delivery, including children.

## Vaccine delivery

### Key actions

- **For the next six months, the focus will be on a targeted Phase 1 vaccination strategy adapted to community and programmatic circumstances** – with the aim to stop outbreaks and interrupt chains of transmission and a focus on people at high risk of exposure in areas with the highest number of new cases, as per [WHO SAGE recommendations](#).
- **Country readiness and implementation:** Ensure development or update of national mpox vaccination policies and regulatory approvals to facilitate vaccination of those at highest risk of mpox, including children who are at risk based on local epidemiology. National mpox vaccine plans will help to identify optimal vaccination strategies for deployment of mpox vaccines. Microplanning for vaccine delivery must consider the challenges faced by vaccination teams and communities, particularly in regions with complex socio-political dynamics, economic instability, and ongoing conflicts. It's key to strengthen vaccine delivery systems everywhere and, ensure that people at highest risk of mpox in hard-to-reach, remote and underserved areas benefit from an integrated set of interventions including vaccination. Building public trust in mpox vaccines through effective communication and community engagement is crucial for achieving high vaccination coverage.
- **Accelerate and adapt implementation:** Countries should, as per their national mpox vaccination plans, include the use of innovative delivery strategies (e.g. pop-up vaccination, mobile teams) together with strong community engagement and targeted risk communication for ensuring successful vaccination efforts. There is a need to acknowledge the challenges faced in the local programmatic circumstances and adapt vaccination strategies accordingly, while also learning from the experience of the five African countries that have already begun mpox vaccination.
- **Mobilize vaccine supply and availability of additional doses and consider dose-sparing strategies:** To further improve access to vaccines, countries with mpox vaccine reserves are encouraged to make additional doses available through coordinated partner mechanisms to affected regions. In supply-constrained outbreak situations, affected countries can consider dose-sparing strategies of MVA-BN (single dose or fractional dosing) per [WHO SAGE recommendations](#). Manufacturers should consider upgrading production capacity and review access and pricing policies to ensure vaccines are accessible and affordable in low- and middle-income countries in a timely manner for immediate and future vaccine needs.



## Maximizing the impact of vaccines to interrupt transmission

In response to the mpox outbreak, enhancing control strategies through strategic targeted vaccination is crucial. Implementing high-impact vaccination strategies can help limit outbreak expansion by focusing on areas with the highest number of new cases and in those individuals at the highest risk of exposure, based on local epidemiology, thereby, reducing overall transmission. Vaccination plans should build on recommendations of the National Immunization Technical Advisory Groups (NITAGs), and the [WHO position paper for smallpox and mpox \(2024\)](#).

### Target groups for mpox vaccination in outbreak response

As per the [WHO SAGE recommendations](#) for use of mpox vaccines for outbreak response, vaccination should be considered for the following high-risk groups:

- **Based on local epidemiology, members of a geographically defined area or community (e.g. village), including children, with a documented high risk of exposure to mpox.**
- **Contacts of persons with mpox** (individuals who have had direct skin-to-skin physical contact with the case or their bodily fluids or contact with contaminated materials such as clothes or bedding). Contacts include individuals who during the infectious period had direct physical contact (non sexual or sexual) with a case or their body fluids or, have been in close proximity to a symptomatic person. Those include for example children, others in the household or in congregate settings (e.g. prisons, schools, health facilities or residential facilities).
- **Health workers** at risk of repeated exposure, including **clinical laboratory and health care personnel performing diagnostic testing for mpox or providing care and outbreak response team members.**
- **Other groups at risk** depending on the local epidemiological situation, including but not limited to sex workers, gay, bisexual or other men who have sex with men with multiple sexual partners or other individuals with multiple casual sexual partners.

**This SPRP covering the next six months of operations will focus on Phase 1 of the vaccination strategy to stop mpox outbreaks wherever they appear.**

### Phased mpox vaccination strategy

**Phase 1 – stop outbreaks:** This phase aims to stop outbreaks and interrupt chains of human-to-human transmission by targeting lowest level geographic areas with the highest number of new cases and in those, the individuals at high risk of exposure or infection, as per [WHO SAGE recommendations](#). This targeted approach focuses on the lowest administrative division of geographic areas where cases are occurring while at the same time identifying people or groups at high risk of contracting mpox and/or contributing to onward spread. Technical partners will support countries affected to adapt their Phase 1 strategy to best suit their national and local epidemiological contexts. **The objective is to interrupt human-to-human transmission.**

**Phase 2 – future protection:** Phase 2 aims to increase population immunity in areas at risk of outbreak expansion or future outbreaks. It will be an expansion of Phase 1, however, the development of recommendations for broader preventive mpox vaccination requires additional data, both on modes of transmission and on at-risk populations, as well as on vaccine performance. This phase is resource-intensive and will require more doses of vaccine.

This phased approach ensures that vaccination efforts are prioritized and tailored to stopping the outbreak, guided by improved national surveillance data, with the flexibility to scale up as vaccine availability increases. The strategy also emphasizes the importance of robust community engagement and security considerations, which are critical to the success of vaccination in challenging environments.



## Emergency coordination

Effective coordination is essential for a swift and impactful response to the mpox outbreak. This strategy emphasizes the establishment of robust coordination mechanisms at all levels to ensure seamless collaboration among stakeholders, efficient resource allocation, and rapid adaptation to changing circumstances. By fostering strong partnerships and maintaining clear communication, the strategy aims to maximize the effectiveness of response efforts, ensuring that all actions are timely, evidence-based and well-coordinated.

### Key actions

- **Establishment of response coordination mechanisms:** Create dedicated incident management support teams at global, regional, and national levels. These teams, including representatives from key partners, including civil society will coordinate activities, align governance levels and facilitate joint decision-making processes.
- **Enhanced communication and collaboration:** Maintain open communication channels with Member States, relevant committees and partners. Encourage collaboration among stakeholders across response pillars, ensuring timely information exchange and rapid resource mobilization.
- **Development of evidence-based response strategies:** Conduct comprehensive assessments, including operational readiness assessments of countries, accounting for the epidemiological situation, transmission patterns and social-behavioural data to inform effective response strategies. Develop flexible, multisectoral emergency response plans that can be quickly adjusted as the situation evolves.
- **Mobilization adequate financial and human resources for implementing response plans:** Establish scalable mechanisms to inform the mobilization of allocation of financial and human resources for implementing response plans. Ensure funding is readily available and can be quickly disbursed to address resource gaps and ensure equitable distribution.
- **Operational support and logistics:** Provide robust operational support, ensuring the safety and security of response personnel, implementing protective measures, and maintaining key infrastructure. Ensure the efficient procurement and distribution of essential supplies.
- **Safeguarding operations from sexual exploitation, abuse and harassment:** Collaborate with inter-agency committees to integrate protection from sexual exploitation, abuse, and harassment into all operations. Implement a risk-based approach focusing on prevention, accessible reporting mechanisms, victim support services and strong leadership accountability.
- **Continuous monitoring, review and reporting:** Implement continuous monitoring and evaluation systems to track progress and impact. Use data to inform decision-making, ensuring accountability and transparency. Regularly review strategies to assess effectiveness, adapt as needed, and ensure the response remains relevant.
- **Operational risk management:** Develop a robust risk management framework to identify and mitigate risks related to response delivery, safeguarding, ethics, financial stewardship, partnerships, and reputation. Conduct an Operational Risk and Response Analysis and integrate risk response plans into ongoing monitoring activities.

*In Bukavu, in the Democratic Republic of Congo, Willy Lulihoshi, medical biologist and head of the laboratory, receives 50 to 60 mpox samples a day for analysis. A total of 1785 samples have been tested since June 2024, when his laboratory was fully equipped to carry out these analyses. October 2024.*

*"Now, thanks to the equipment provided by WHO, we can deliver a result within 24 hours," Willy Lulihoshi said. © WHO / Daniel Paluku KAHANDUKYA*





## 4. Concept of operations

The concept of operations outlines the implementation and adaptation of the mpox response strategy at global, regional and country levels. The approach is designed to be flexible, allowing for rapid adjustments to the evolving epidemiological landscape and specific needs of different regions and countries.

This ensures that the global response is coordinated while being tailored to local contexts and the intensity of mpox transmission.

At the core of the mpox response is a comprehensive, integrated approach that ensures coordination across multiple pillars, bringing together collaborative surveillance, community engagement, safe and scalable care, access to and delivery of MCMs and emergency coordination. This approach is not only about addressing individual elements of the response in isolation but about ensuring that each component is interconnected and contributes to a holistic and streamlined effort. A well-coordinated, multi-pillar response is essential to preventing further spread of mpox, protecting communities and ensuring that public health systems can function effectively even in the face of complex challenges.

To ensure a coordinated and effective response to the ongoing mpox outbreak, WHO will continue to work through integrated IMSTs at the global, regional and country levels as needed. These teams facilitate regular communication between incident managers across different geographical levels and ensure close operational coordination with national governments, partners, and stakeholders. These IMSTs play a critical role in implementing the comprehensive, integrated approach by ensuring coordination across multiple technical pillars – including epidemiological surveillance and laboratory support, immunization, clinical management and IPC, RCCE and operations support and logistics – while facilitating timely information sharing and data management across these areas.

At all levels, emergency response is part and parcel of the broader global strategic approach to mpox prevention, control and elimination of human-to-human transmission. Further guidance on basic principles, epidemiological contexts, outbreak definitions, emergency coordination, staging of integrated response interventions and monitoring of response operations is available in the [WHO strategic framework for enhancing prevention and control of mpox \(2024–2027\)](#).

### Global level

At the global level, WHO, in collaboration with its partners, will continue to lead and coordinate the mpox response through a comprehensive approach that includes strategic leadership in support of national response efforts, and efficient access to MCMs. The Global Mpox IMST, guided by the IHR Emergency Committee, and supported by emergency partnership networks, will ensure a unified and effective global response.

- **Global leadership and coordination:** WHO and its partners established inter-agency coordination of the global response through the IMST under the Director-General's leadership. Regular meetings with key technical and operational partners provide updates, share information and make strategic decisions necessary to manage the outbreak effectively.
- **Emergency Committee and strategic guidance:** The WHO Director-General, in consultation with the IHR Emergency Committee, issued temporary recommendations and extended the standing54 recommendations for mpox to guide global and national response efforts, ensuring a coordinated international response.
- **i-MCM-Net for Mpox:** WHO will continue to leverage the i-MCM-Net to enhance collaboration among existing MCM networks and partnerships, facilitating the coordinated development, manufacturing, distribution, and delivery of critical countermeasures during outbreaks.
- **WHO R&D blueprint for epidemics:** WHO will update the R&D roadmap, fostering collaborative research to address critical knowledge gaps and maximize the impact of interventions. The implementation of the roadmap through collaborative research will be supported through close collaboration with the Global Research Collaboration for Infectious Disease Preparedness.
- **WHO SAGE:** SAGE advises the Director-General on overall global mpox vaccination policies and strategies, and links with other health interventions. The WHO vaccine position paper on smallpox and mpox vaccines was published in August 2024, summarizing the available evidence on vaccine safety, effectiveness and recommendations for use in different populations. The WHO SAGE and its Smallpox and Mpox Vaccines Working Group continue to monitor developments closely and update the recommendations as needed.
- **Coordination with Global Health Cluster and Inter-Agency Standing Committee:** In humanitarian settings, WHO works closely with the Global Health Cluster and the Inter-Agency Standing Committee to integrate mpox response efforts into broader health and emergency response strategies. This coordination will ensure that vulnerable populations in complex humanitarian contexts receive timely and effective care.
- **Financing coordination:** Financing coordination will be implemented for donors and financing institutions to support the mobilization and advise on equitable and effective allocation of resources, aligning financial strategies with operational priorities to strengthen the overall response.
- **Leverage emergency partners and networks:** WHO will collaborate with a broad range of emergency partners and networks to enhance coordination across key areas such as surveillance, community protection, clinical care and rapid response.





## Regional level

At the regional level, WHO and Africa CDC will continue to collaborate to spearhead coordination of mpox response efforts across the African continent, tailoring strategies to the unique challenges and transmission patterns in each region. WHO regional offices will establish IMSTs to lead preparedness and response activities, working in close alignment with global strategies to ensure a coherent response.

- **Joint Africa CDC and WHO coordination “continental mpox IMST”:** The WHO regional offices for Africa and for the Eastern Mediterranean, in collaboration with Africa CDC, co-lead the coordination of response efforts across Africa, ensuring alignment with regional needs and challenges.
- **Other regional and subregional coordination mechanisms:** WHO and partners continue to rely on regional IMSTs to manage preparedness and response activities, aiming to ensure that regional and subregional strategies are consistent with global strategies.

## Country level

Country-level operations are categorized based on specific epidemiological contexts, including regions with **active outbreaks**, areas with **endemic transmission** and **all other countries** at risk of imported cases or community transmission.

### Active outbreaks

- **Key areas:** Mostly affecting new non-endemic areas for mpox in the Democratic Republic of the Congo and neighbouring countries, where mpox is spreading mainly through human-to-human close physical contact, including sexual contact.
- **Risk level:** High, with challenges in control measures due to rapid transmission and vulnerable populations. Focus on understanding local transmission and adapt response strategies based on affected population.
- **Key actions:** Intensify surveillance and detection, decentralize laboratory capacity, offer quality and free of charge care for cases, mobilize and support community-level actions and prioritize targeted vaccination at the lowest administration level, with a focus on geographic areas with the highest number of new cases and in those, individuals at high risk of infection.

*WHO delivers 14 tonnes of emergency supplies for mpox response in the Democratic Republic of the Congo, September 2024. © WHO / Junior Diatezua*

## Endemic transmission

- **Key areas:** Areas of in the Democratic Republic of the Congo and other countries in West, Central and East where mpox is considered endemic and cases are due to both zoonotic spillover events as well as human to human transmission, through close physical contact, including sexual contact.
- **Risk level:** Moderate, depending on region, with ongoing transmission challenges. Focus on understanding local mpox epidemiology for more effective response activities.
- **Key actions:** Strengthen surveillance and active case finding, enhance healthcare infrastructure including diagnostic capacity, provide quality and free-of-charge clinical care, engage affected communities, ensure effective risk communication, prevention and protection for at-risk populations.

## All other countries

- **Key areas:** Countries outside endemic regions with moderate risk.
- **Risk level:** Moderate, with a focus on preventing resurgence through surveillance and preparedness.
- **Key actions:** Strengthen surveillance and detection, increase awareness and risk communication involving affected communities and collaborate with international partners.

This concept of operations provides a comprehensive framework for a coordinated, flexible and scalable response to the mpox outbreak, ensuring that all levels of governance work together to manage and control the spread of the virus effectively.





## 5. Resource requirements

The effective implementation of the SPRP requires adequate and sustained resources to support the activities outlined in the response strategy. This section details the key resource requirements for the second six months of operations (March–August 2025), which are crucial to stopping acute outbreaks of human-to-human transmission.

The estimated resource requirements provide an initial funding envelope for international support to national mpox responses, aligned with the strategies outlined in the SPRP, and the WHO component of that support. The following key assumptions have been made for planning purposes:

### Coordination and technical assistance

Resource estimates include establishing and operating joint IMSTs for coordination and technical assistance across all levels, consistent with the concept of operations:

- Global (WHO and partners);
- Africa region (WHO, Africa CDC and partners);
- Countries with active outbreaks:
  - Subnational field hubs in zones of active and at-risk of transmission x 15;
- Countries with endemic transmission;
- Countries at risk of importation;
- Other regions.

### Operations support and supplies

The estimated resource requirements include operational support and supplies to be provided in assistance to national responses. For planning purposes, the case load is expected to be around 1000 confirmed and probable cases per week and 1600 suspected

cases per week based on the current trends. This is about half the expected case load that was used for planning purposes in the first six months.

The following costing assumptions have been made for each 1000 cases per week:

- **Number of PCR tests:** 800 per week;
- **Number of genomic sequencing tests:** 50 samples per week (5% of confirmed cases per week assuming of test positivity rate of 50%);
- **Number of vaccinations:** 20 000 per week (based on vaccinating approximately 20 contacts per case);
- **Number of cases treated at home:** 800 per week;
- **Number of cases treated in hospitals:** 200 per week.

### Estimated resource requirements

Table 1 summarizes the estimated resource requirements for the second six months of operations, covering the continuation of IMSTs for coordination and technical assistance across all levels, as well as operational support and supplies to control acute mpox outbreaks.

The operational support and supplies focus on Phase 1 of the vaccination strategy aimed at stopping outbreaks of human-to-human transmission with targeted vaccination. The cost of supplying vaccines is excluded from this estimate. Costs for PCR tests and medical supplies are included, while additional MCMs such as RDTs and therapeutics, which may become available through ongoing R&D efforts, are not included.

The estimated costs above cover the expenses of key operational partners. Further operational planning at the regional, and national levels will further refine resource requirements based on specific contexts, clarify specific partner roles and responsibilities and determine individual partner funding requirements.

**Table 1. Estimated resource requirement for total international support to national mpox response including WHO's requirement (US\$ millions)**

Response strategy	Coordination and technical assistance	Operational support and supplies	Total international support	WHO Support (as a component of international support)
Collaborative surveillance	6	21	27	11
Community protection	4	51	55	9
Safe and scalable care	4	18	22	8
Access to and delivery of countermeasures	7.5	-	7.5	11
Emergency coordination	11	22.5	33.5	8
<b>Total</b>	<b>32.5</b>	<b>112.5</b>	<b>145</b>	<b>47</b>



The extended 6-month response will maintain a focus on controlling acute outbreaks of human-to-human transmission while adapting to both ongoing and emerging challenges. The estimates for international support total US\$ 145 million for the period of March–August 2025 as compared to US\$ 290 million for the first six months of the response. The assumptions for the next six months of the response are based on recent trends in supply utilization and evolving epidemiology. Vaccination delivery was planned under Community Protection in 2024 and under Access to Countermeasures in 2025 causing a shift in requirements across these two pillars. Planning assumptions estimated resource requirements, and regional and country operational plans and budgets will be reviewed quarterly and adjusted based on the evolving epidemiological situation.

For the initial 6-month response phase, WHO appealed for US\$ 87 million to support response efforts. Taking into consideration the implementation challenges in complex and increasingly high-risk settings, **WHO will continue to implement US\$ 11 million of funding already provided leaving a funding gap of US\$ 36 million.**

Based on lessons learned and anticipated needs, WHO projects a requirement of US\$ 47 million to support national mpox responses over the next six months, aligned with the [WHO Health Emergencies Programme Annual Appeal](#) which may need to be adjusted for future operational implementation challenges. Additionally, this estimate of WHO support does not include costs associated with the procurement and distribution of vaccines, which remain critical for protecting people at risk, health workers and frontline workers in areas with active transmission.



*Tresor, a health worker, checks on 2-year-old Ibrahim, who is being treated for mpox, at the Nyiragongo General Referral Hospital, north of Goma in the Democratic Republic of the Congo on 14 August 2024.*  
© WHO / Guerchom Ndebo



# 6. Monitoring and evaluation

## Monitoring framework

The [SPRP monitoring and evaluation framework](#), also referred to as the Framework, are critical components of the SPRP, ensuring that response efforts are effective, timely and adaptable to changing circumstances. The Framework is designed to track the progress of response activities, providing continuous feedback to inform decision-making at all levels. The Framework was updated in December 2024. It suggests reporting indicators for monitoring of the global response to the mpox PHEIC. The purpose of this is to:

- understand global and country-level actions towards meeting the SPRP strategic objectives;
- document WHO support to Member States, in the form of quantifiable indicators and milestones.

The scope of this Framework corresponds with the timeframe of the mpox SPRP until August 2025. This Framework is a collaborative initiative driven by WHO's global and regional IMSTs and interfaces with other existing regional reporting frameworks. The country-level indicators identified for reporting in this Framework are aligned with those in the mpox continental preparedness and response plan for Africa. It also interfaces with temporary recommendations, issued by the WHO Director-General in relation to the PHEIC, and following the advice offered by the IHR Emergency Committee regarding the upsurge of mpox 2024.

Finally, the Framework is a complement to other existing financial monitoring, stakeholder coordination and feedback mechanisms. The Framework is designed to track the progress of response activities in real-time, providing continuous feedback to inform decision-making at all levels.

## Methodology

The Framework uses a combination of country-level indicators and WHO milestones to provide an overview of response actions and progress towards the three strategic objectives.

### Data collection

There are a few primary sources of information for this Framework, drawing upon data from the country, regional and global levels as needed. A consolidated, modular approach to data collection will be introduced to allow for flexibility in the timing and level of detail gathered, whilst addressing the need for information across different topical areas.

### Data management and validation

Data will be validated by the data source focal points and then logically checked by WHO. All data are subject to continuous verification by WHO (with the exception of data provided by third-party sites, which are not validated by WHO) and may change based on retrospective updates or reviews.

## Country-level indicators analysis and reporting

The country-level indicators set out in the Framework for country and global monitoring align with the strategic objectives of the SPRP and were selected based on their usefulness to provide a periodic situational snapshot about country, regional or global conditions and inform operational response actions.

Twelve core country-level indicators were identified, building on evidence informed by country experience and lessons learned from response, to avoid undue reporting burden. The core indicators will be reported on by WHO under the SPRP and will focus on countries with active clade 1b outbreaks, while considering others based on the evolving situation.

### Core indicators

- 1.1:** Percentage of new alerts investigated in a week (new suspect, probable, confirmed or discarded cases reported) out of total alerts for the same week;
- 1.2:** Percentage of new (confirmed and probable) cases who are known contacts;
- 1.3:** Proportion of affected international borders in the country with functional cross border coordination mechanisms in place;
- 1.4:** Number of laboratories with functional capacity to conduct mpox testing;
- 2.1:** Percentage of individuals in high-risk areas who report practicing recommended measures to protect themselves from mpox;
- 2.2:** Community groups representing high-risk populations have received training, financial resources, and/or supplies to facilitate community outreach and engagement;
- 3.1:** Percentage of healthcare facilities in mpox affected areas with staff trained on mpox case management;
- 3.2:** Percentage of priority healthcare facilities that demonstrated improvement by at least one level in the IPC and WASH healthcare facility rapid assessment tool from the baseline, measured on a quarterly basis;
- 4.1:** Percentage of at-risk, target populations (e.g. healthcare workers, close contacts of people with mpox) vaccinated against mpox;
- 4.2:** Mpox related pre-defined lists of essential commodities (MCM) and technical standards have been established;
- 5.1:** Percentage of funds secured against required national budget for mpox prevention and response activities since the determination of the PHEIC on 19 August 2024;
- 5.2:** Functional coordination structures established at national and mpox affected subnational levels.





A reference library of indicators and compendium are annexed. The compendium is a consolidation of the methodological notes of the indicators to serve countries.

The monitoring of core country-level indicators relies on regular reporting of data and information. Completeness and geographic coverage may vary if there are delays in data collection or sharing. To help mitigate this, several indicators were selected based on data availability through existing global platforms and reporting tools so that data collection can be consistent and timely.

### WHO milestones

Milestones are activities or products that mark measurable contributions to the 5Cs, and ultimately progress towards achieving the strategic objectives. WHO headquarter and regional office implementing units will report on milestones, with data collected on a quarterly basis facilitated through the WHO HQ IMST.

### Limitations

There are some limitations to monitoring the technical implementation of the SPRP. One limitation resides in the global coverage of the Framework, which makes it more challenging to collate and validate data that are collected at the country level. To mitigate this challenge, the data collection process is decentralized and some roles are delegated to the regional level, including the regional WHO IMST and an internal WHO M&E network.

## Reporting and accountability

Effective reporting and accountability mechanisms are essential for transparency and trust in the mpox response. Key elements include:

- **Real-time dashboards:** Implement real-time dashboards to visualize key metrics and provide decision-makers with up-to-date information on the outbreak status and response effectiveness. These dashboards will be accessible to WHO, regional offices, national governments and partners to support coordinated action.
- **Regular reporting to stakeholders:** Provide regular reports on response progress to key stakeholders, including WHO leadership, regional offices, national governments, donors and partners such as community organizations. These reports will cover performance indicators, outcomes, impact, challenges, and any adjustments made during the response.
- **Public accountability:** Ensure public accountability by sharing key findings and updates with the public. This includes publishing summary reports, conducting press briefings and

engaging with the media to communicate response progress and impact. Transparency in reporting will help build public trust and support.

- **Adaptive management:** Use insights gained from monitoring and evaluation to inform adaptive management of the response strategy. This includes making data-driven decisions to modify interventions, allocate resources more effectively, and address emerging challenges, ensuring the response remains flexible and responsive to the evolving situation.

## Evaluation framework

The Framework is designed to assess the overall impact of the mpox response strategy, identifying successes, challenges and lessons learned. Key elements include:

- **Outcome and impact assessments:** Conduct assessments to evaluate the response's effectiveness in achieving strategic objectives, focusing on outcomes such as reducing mpox transmission and preventing spread of mpox to additional areas, morbidity and mortality rates, and improving access to healthcare services. Impact assessments will also consider the broader social and economic effects of the response.
- **Mid-term and final evaluations:** Perform mid-term and final evaluations to provide a comprehensive analysis of the response strategy's implementation and outcomes. The mid-term evaluation will identify necessary course corrections, while the final evaluation will assess the strategy's overall success in controlling the mpox outbreak.
- **Intra-action and after-action reviews:** Organize intra-action reviews during the response to capture real-time feedback and make immediate improvements. After-action reviews will be conducted post-response to document lessons learned, best practices and areas for improvement. These reviews will involve stakeholders at all levels, including affected communities.
- **Community feedback mechanisms:** Establish mechanisms for collecting and incorporating community feedback into the evaluation process. This can include surveys, focus groups and community consultations to gather input on the effectiveness of public health messaging, access to services and overall satisfaction with response efforts. Community feedback will be integral to ensuring that the response aligns with the needs and expectations of affected populations.



## Temporary recommendations issued by the WHO Director-General in the context of the public health emergency of international concern

In response to the escalating mpox situation, the WHO Director-General has convened three meetings of the International Health Regulations (2005) (IHR) Emergency Committee on 14 August 2024, 22 November 2024, and most recently on 25 February 2025. Following each meeting, the Committee advised the WHO Director-General that the upsurge of mpox constitutes a public health emergency of international concern (PHEIC). The Director-General concurred with the Committee's advice and, under the provisions of the IHR, issued sets of temporary recommendations to States Parties experiencing transmission of monkeypox virus (MPXV).

The temporary recommendations issued in February 2025 are to be implemented alongside the standing recommendations issued in August 2023, which were extended until 20 August 2025. Temporary recommendations, as issued in February 2025, encompass:

- **Emergency coordination:** Secure political commitment, engagement, and adequate resource allocation to intensify mpox prevention and response efforts for the lowest administrative and operational level reporting mpox cases in the prior four weeks (referred to as “hotpots”). Establish or enhance national and local emergency prevention and response coordination arrangements as recommended in the WHO Mpox Global Strategic Preparedness and Response Plan 2024 and its upcoming iteration, and in line with the WHO Strategic Framework for Enhancing Prevention and Control of Mpox 2024–2027 to maintain. Establish or enhance coordination among all partners and stakeholders engaged in or supporting mpox prevention and response activities through cooperation, including by introducing accountability mechanisms. Establish a mechanism to monitor the effectiveness of mpox prevention and response measures implemented at lower administrative levels so that such measures can be adjusted as needed. Strengthen coordination and response mechanisms, particularly in humanitarian and conflict-affected areas, by engaging local and national authorities and implementing partners to ensure integrated mpox surveillance and care delivery in support of vulnerable populations, especially in areas with population displacement and inadequate access to essential services.
- **Collaborative surveillance and laboratory diagnostics:** Enhance mpox surveillance by increasing the sensitivity of the approaches adopted and ensuring comprehensive geographic coverage. Expand access to accurate, affordable, and available diagnostics to test for mpox, including through strengthening arrangements for the transport of samples, the decentralization of testing, and arrangements to differentiate MPXV clades and conduct genomic sequencing. Identify, monitor, and support the contacts of persons with suspected, clinically diagnosed, or laboratory-confirmed mpox to prevent onward transmission. Scale up efforts to thoroughly investigate cases and outbreaks of mpox to better understand the modes of transmission and transmission risk and prevent its onward transmission to contacts and communities. Report to WHO suspected, probable, and confirmed cases of mpox in a timely manner and on a weekly basis.
- **Safe and scalable care:** Provide clinical, nutritional, and psychosocial support for patients with mpox, including, where appropriate and possible, isolation in care centers and access to materials and guidance for home-based care. Develop and implement a plan to expand access to optimized supportive clinical care for all patients with mpox, including children, patients living with HIV, and pregnant women, ensuring prompt identification and effective management of endemic co-infections such as malaria, chickenpox, or measles. Offer HIV tests to adult patients who do not know their HIV status and to children as appropriate, provide testing and treatment for other sexually transmitted infections among cases linked to sexual contact, and ensure referral to HIV and STI treatment and care services when indicated. Strengthen the capacity, knowledge, and skills of health and care workers in clinical and infection prevention and control pathways, including screening, diagnosis, isolation, environmental cleaning, and discharge of patients, as well as post-discharge follow-up for suspected and confirmed mpox cases, while ensuring the provision of personal protective equipment. Enhance infection prevention and control measures and the availability of water, sanitation, hygiene, and waste management services and infrastructure in healthcare facilities and treatment centers to ensure quality healthcare service delivery and the protection of health and care workers and patients.
- **International traffic:** Establish or strengthen cross-border collaboration arrangements for surveillance, management and support of suspected cases and contacts of mpox, and for the provision of information to travellers and conveyance operators, without resorting to travel and trade restrictions that unnecessarily impact local, regional or national economies.



- Vaccination:** Prepare for and implement the integrated targeted use of vaccine for “Phase 1-Stop the outbreak” (as defined in the WHO Mpox global strategic preparedness and response plan (2024) and its upcoming iteration) through identification of the lowest administrative level reporting cases (hotspots) to interrupt sustained community transmission. Develop and implement plans for vaccination in the context of an integrated response at the lowest administrative level reporting cases for people at high risk of exposure (e.g. contacts of cases of all ages, including sexual contacts, health and care workers, key populations, and other groups at risk in endemic and non-endemic areas). This entails a targeted integrated response, including active surveillance and contact tracing; agile adaptation of immunization strategies and plans to the local context including the availability of vaccines and supplies; proactive community engagement to generate and sustain demand for and trust in vaccination; close monitoring of mpox vaccination activities and coverage, and the collection of data during vaccination activities according to implementable research protocols.
- Community protection:** Strengthen risk communication and community engagement systems with affected communities and local workforces for outbreak prevention, response, and vaccination strategies, particularly at the lowest administrative levels reporting cases, through training, mapping high-risk and vulnerable populations, social listening, community feedback, and managing misinformation. This includes effectively communicating uncertainties regarding the natural history of mpox, providing updated information on mpox and the efficacy of vaccines, addressing uncertainties about the duration of protection following vaccination, and sharing relevant information about clinical trials to which the local population may have access, as appropriate. Address stigma and discrimination of any kind through meaningful community engagement, particularly within health services and during risk communication activities. Promote and implement infection prevention and control measures and ensure access to basic water, sanitation, hygiene, and waste management services in household settings, congregate settings such as prisons, internally displaced persons and refugee camps, schools, points of entry, and cross-border transit areas.
- Governance and financing:** Galvanize and scale up national funding and explore external opportunities for targeted funding of mpox prevention, readiness, and response activities, advocate for the release of available funds, and take steps to identify potential new funding partners for emergency response. Integrate mpox prevention and response measures, including enhanced surveillance, into existing programmes for the prevention, control, and treatment of other endemic diseases, particularly HIV, sexually transmitted infections, malaria, tuberculosis, other vaccine-preventable diseases including COVID-19, and non-communicable diseases, ensuring that activities are mutually beneficial and contribute to improved health outcomes overall.
- Addressing research gaps:** Invest in addressing outstanding knowledge gaps and generating evidence during and after outbreaks, as defined in A Coordinated Research Roadmap – Mpox Virus: Immediate Research Next Steps to Contribute to Outbreak Control (2024). Invest in field studies to better understand animal hosts and zoonotic spillover in areas where MPXV is circulating, in coordination with the animal health sector and One Health partners. Strengthen and expand the use of genomic sequencing to characterize the epidemiology and transmission chains of MPXV to better inform control measures.
- Reporting:** Report quarterly to WHO on the status of, and challenges related to the implementation of these temporary recommendations, using a standardized tool and channels that will be made available by WHO.

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