

Mpox: Africa's PHECS and WHO's PHEIC

Infectious disease outbreaks have featured prominently at an international level over the past few decades. These include Ebola, influenza, more recently COVID-19 and now mpox. The Africa Centres for Disease Control and Prevention (Africa CDC), under its mandate to address significant public health threats, declared mpox a public health emergency of continental security (PHECS) on 13 August 2024. Through this mandate, as established by the executive council of the African Union (AU) Assembly, Africa CDC is empowered to co-ordinate responses to epidemics by mobilising African leaders, governments and relevant agencies.^[1] A day after the PHECS was announced, the World Health Organization (WHO)'s Director-General declared mpox a public health emergency of international concern (PHEIC) under the International Health Regulations (2005) (IHR). This was based on the upsurge of mpox in the Democratic Republic of the Congo (DRC) and an increasing number of countries on the continent.^[2]

Nine criteria are considered by Africa CDC when making a decision on a PHECS. The first is severity of the disease. High rates of severe morbidity and mortality can trigger a PHECS declaration. The potential for severe outcomes is also a critical factor, particularly in vulnerable populations, e.g. immunocompromised people and children. The second criterion is transmission dynamics. There could be a significant threat to public health where the disease is spreading across multiple regions or countries. In addition, modes of transmission and the potential for further spread play a role in the determination of a PHECS. The third consideration is impact on health systems. A PHECS is justified where the outbreak strains the healthcare system and overwhelms healthcare facilities, i.e. shortage of beds, supplies, personnel and disruption to essential services such as routine immunisation and maternal care. Vaccine and treatment availability is the fourth criterion. A critical consideration is whether available vaccines and treatments can be deployed to control the outbreak. Important here is ensuring equitable access to these interventions across the affected regions. Fifthly, public health risk is taken into account. A significant concern is the risk of spread beyond the continent. The readiness of public health infrastructure regarding systems to detect, report and respond to the outbreak is also evaluated. The sixth consideration is economic and social impact. Economic disruption, where the outbreak's impact on economies, including trade, travel and broader economic stability, are examined. Regarding social disruption, the potential for social unrest, displacement or significant societal disruptions that could result from the outbreak are weighed up. The seventh criterion is public concern and fear. High levels of public concern or fear, in particular where they could lead to behaviours that exacerbate the outbreak, e.g. stigma and avoidance of healthcare, influence the determination of a PHECS. The spread of misinformation and communication challenges such as the lack of public understanding about the outbreak may make a stronger co-ordinated response necessary. Global health security is the eighth consideration. Here alignment with IHR necessitates co-ordination with global health entities such as the WHO for consistency in response efforts and compliance with the regulations. Collaborative response needs are also taken into account, in particular if the outbreak requires significant international collaboration or resources. A PHECS may be declared to facilitate this. The last criterion is political and governance considerations. Consultation with national

and regional governments to ensure their support and alignment in the response is important when a decision on a PHECS is made. The need for emergency resources is also considered, especially if proclaiming a PHECS allows for the unlocking of resources required, such as funding, personnel or emergency powers.^[1]

There are four criteria, two of which must be met for an outbreak to be declared a PHEIC by the WHO: there must be potential for serious public health impact; it needs to be unusual or unexpected; there must be a significant risk of international spread; and it must carry significant risk of travel or trade restrictions.^[3,4] This is the second mpox PHEIC determination by the WHO in 2 years. Mpox, a zoonotic disease caused by an orthopoxvirus, was first detected in humans in the DRC in 1970.^[2] According to reports, transmission currently seems to be mostly human to human.^[5] It is endemic to countries in central and West Africa. One of the main reasons for declaration of the PHEIC was the emergence and rapid spread of a new virus strain in the DRC, clade 1b. It appears to be spreading mainly through sexual networks. Its detection in countries neighbouring the DRC has been of particular concern.^[2] A mix of clade I and clade II cases is being reported in multiple countries across the continent.^[5] A total of 40 874 cases and 1 512 deaths have been reported across 15 AU member states since 2022. Of these, there were 17 541 cases and 517 deaths reported from 13 AU member states in 2024 alone. Of note is that there has been a 160% increase in the number of cases and a 19% increase in the number of deaths in 2024 compared with the same period in 2023, and a 79% increase in the number of cases in 2023 compared with 2022.^[1]

Africa CDC announced the PHECS so that a stronger international response could be co-ordinated, resources mobilised, surveillance enhanced, research and development accelerated and global solidarity fostered. This is important because a major challenge in response efforts is the limited availability of mpox vaccines and the many impediments to their roll-out. Currently, 10 million doses are needed on the continent, and only 200 000 are available.

^[5] Considering the recent experience regarding vaccine inequity, vaccine hesitancy and lack of vaccine confidence on the continent during COVID-19, this key hurdle to implementation of the vaccine programme will need to be tackled as a matter of urgency.

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