

2nd Weekly Report on Mpox

Situation Update and Preparedness Report on Mpox



Submitted by
Department of Public Health &
Royal Center for Disease Control
Ministry of Health
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1. Background

Mpox (formerly known as monkeypox) is a viral illness caused by the monkeypox virus, a species of the genus Orthopoxvirus. It was first detected in humans in 1970 in the Democratic Republic of the Congo (DRC). In 2022, the WHO recommended updating its name to "mpox" to reduce stigma and association with monkeys, as the disease can also infect rodents and humans.

Mpox virus variants are referred to as clades. There are two different types of clades, clade I and clade II. Clade I has been circulating in the DRC for years while clade II was responsible for the global outbreak of 2022 which was declared a public health emergency of international concern (PHEIC) in July 2022. It was subsequently declared over in May 2023 after a sustained decline in global cases. Clade 1b virus in the DRC last year which was caused "mainly through sexual networks." This clade is reportedly deadlier and more easily transmitted from person to person.

In 2024, due to the rapid increase in the cases of mpox in the Democratic Republic of Congo and other African regions, DG Dr Tedros Adhanom Ghebreyesus declared mpox as a public health emergency of international concern (PHEIC) under the International Health Regulations (IHR) 2005 on 14th August 2024. This declaration, the second in just two years related to mpox, underscores the severe nature of the current situation and the urgent need for coordinated international action.

The common symptoms of mpox are a skin rash or mucosal lesions which can last 2–4 weeks accompanied by fever, headache, muscle aches, back pain, low energy, and swollen lymph nodes. Mpox can be transmitted to humans through physical contact with someone who is infectious with contaminated materials, or with infected animals. Sexual contact is the most commonly reported mode of transmission (19,102 of 22,801 cases, 83.8%), followed by person-person non-sexual contact (globally, January 2022-June 2024, WHO data).

Identifying mpox can be difficult as other infections and conditions can look similar. It is important to distinguish mpox from chickenpox, measles, bacterial skin infections, scabies, herpes, syphilis, other sexually transmissible infections, and medication-associated allergies. Someone with mpox may also have another sexually transmissible infection such as herpes. Alternatively, a child with suspected mpox may also have chickenpox.

2. Global Situation

- Mpox is considered endemic to countries in central and west Africa. In recent weeks, there has been an unprecedented increase in the number of mpox cases and outbreaks in the WHO African Region. For now, the epidemic curves suggest that the outbreak continues at a low level of transmission in the WHO Region of the Americas, European Region, the Western Pacific, and the South-East Asian Region (Figure 1).
- Mpox has been reported in the Democratic Republic of the Congo (DRC) for over a decade, and the number of cases reported each year has been steadily increasing during that time. As of today, there are more than 15,600 reported cases and 537 deaths in the DRC (WHO).

- Experts believe the true number of cases to be higher as a large proportion of clinically compatible cases have not been tested.
- Burundi, Kenya, Rwanda, and Uganda have each reported their first cases of monkeypox (Figure 2). Cases have been linked to eastern parts of the DRC, and the presence of clade 1b monkeypox virus (MPXV) has been confirmed.
- Last week, the Africa CDC reported that mpox has now been detected in at least 13 African countries. Compared with the same period last year, the agency said cases are up 160 % and deaths have increased by 19%. So far, more than 96% of cases have been reported in DRC Congo.

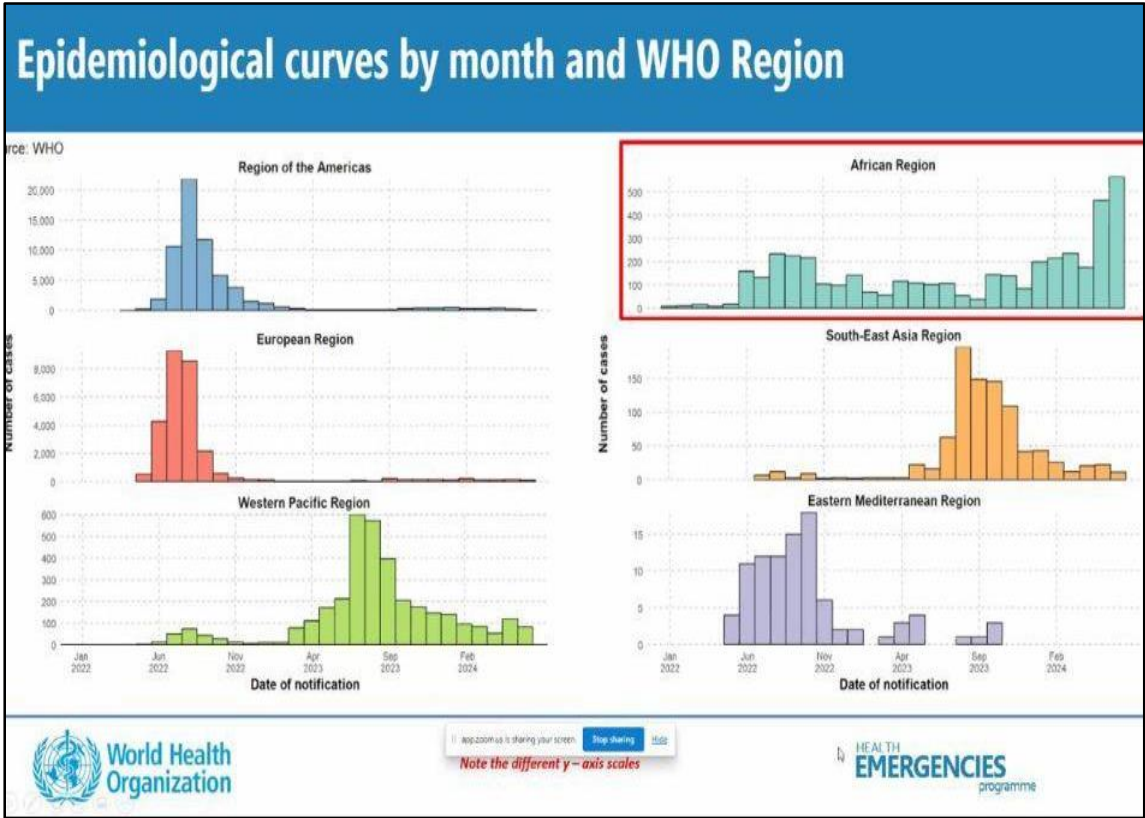


Figure 1. Epidemiological curves by month and WHO region. Source: 1st extraordinary meeting of the Standing Committee on Health Emergency Prevention, Preparedness and Response (SCHEPPR SS1).

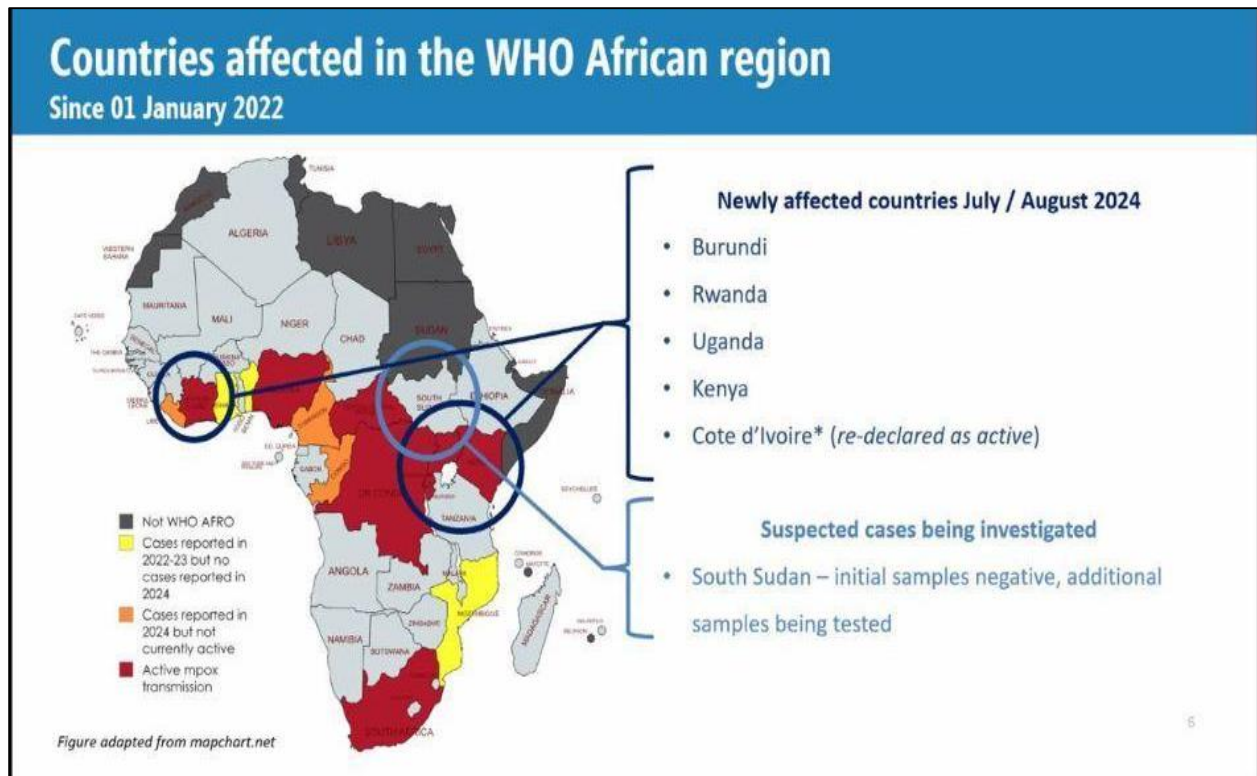


Figure 2. Countries affected by mpox in the WHO African region

- Sweden's public health agency reported the first case of a contagious new variant of mpox outside the African continent on 15th August (BBC). The Swedish public health agency said Clade 1 was likely to be linked to "a higher risk of a more severe course of the disease and higher mortality".

3. Regional Situation

- In the WHO South-East Asia Region, a total of 942 laboratory-confirmed mpox cases, including 11 deaths, have been reported since 14 July 2022 (Figure 5). The cases are reported in India, Indonesia, Nepal, Sri Lanka and Thailand. All deaths were reported from Thailand. It is believed that the prominent strain of mpox virus in these countries is Clade 2, which is less severe compared to the Clade 1 strain found in Central Africa.
- In epidemiological weeks 30 (22 July 2024 to 28 July 2024) and 31 (29 July 2024 to 04 August 2024), 5 new mpox cases were reported from Thailand.

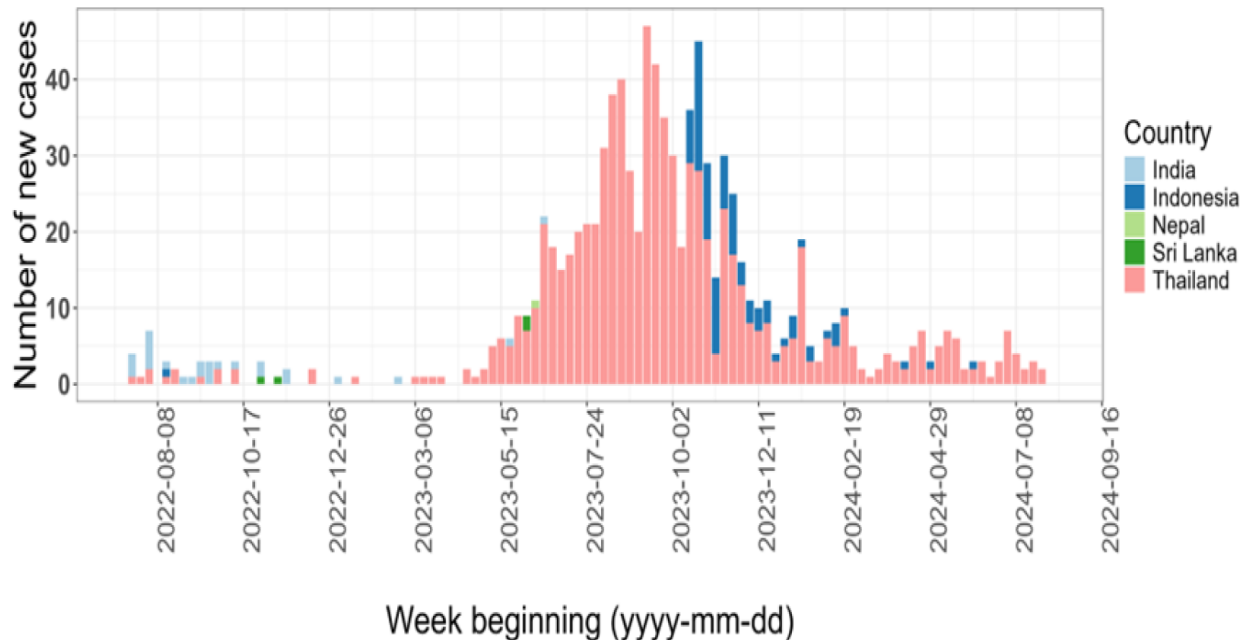


Figure 3. Number of mpox cases reported in WHO South-East Asia Region by date of notification* (14 July 2022 – 4 August 2024). Source- WHO South-East Asia Region Epidemiological Bulletin, 4 August 2024

- On 16th August, Pakistan reported three cases and one case on 19th August of the mpox virus of the clade 2 variant. No cases of the clade 1b strain of the disease have been diagnosed in the country to date.
- On 21st August, Thailand detected one mpox case with a travel history to Africa last week. He has undergone a test to determine whether the case was a Clade 1 variant, with the result expected by Friday. Authorities are also monitoring 43 people in the country who may come into contact with the patient.
- On 21st August, the Philippines reported the first mpox cases since December 2023. It has been confirmed as the mild Clade 2 variant. However, the patient does not have a travel history suggesting the circulation of the virus in the community.

4. National Preparedness

1. Health Emergency Operation Center

Upon the declaration of mpox as PHEIC, the MoH's Health Emergency Operation Center (HEOC) has been activated 15th August 2024. The HEOC is currently in the ALERT phase. On the same day of HEOC activation, all health centres were notified and asked to remain vigilant of the situation (as a part of IHR 2005 requirements). In order to further guide the preparedness and response efforts, the Technical Advisory Group (TAG) for Health Emergencies has been revived and we are set to have the first TAG meeting tomorrow.

At the Ministry level, we initiated a morning briefing session at the Department of Public Health to brief the department and discuss the next steps. The HEOC Secretariat/ Health Emergencies Programme is also collaborating closely with WHO and other development partners for more updates and technical guidance.

2. Surveillance

i. Points of entry- Airport

- Since 16th of August, we have started with the inflight announcement for the incoming airlines with the support of the Department of Air Transport and both airlines. Passengers coming from the affected countries are asked to self-report to the Airport Health Office for health assessment.
- As of 21st August 2024, there were 1382 incoming passengers in 32 flights. However, none of the passengers reported to have either signs/symptoms nor have travel history to the affected countries (Annexure 1).

ii. Points of entry- Ground crossing

- Since there is a possibility of having travelers coming through the ground crossing, we have communicated with the Department of Immigration to help us MoH in surveillance efforts. If any travelers are coming from affected countries through ground crossing namely Samtse, Phuentsholing, Gelephu and Samdrup Jongkhar, the Immigration officials will immediately notify health personnel.

iii. Mpox as a notifiable disease

- The Royal Centers for Disease Control will list Mpox as one of the notifiable diseases under National Early Warning, Alert Response Surveillance and Information System (NEWARSIS) and explore the possibility of including it into the alert system in collaboration with GovTech.

3. Travel Advisory

- Considering the risk of transmission of mpox during the travel, we have shared a travel advisory with the MoFAET since 16th August 2024 for the wider dissemination of the information. It was also updated on the MoH website.

4. Risk Communication & Community Engagement (HPRCD)

- The Health Promotion and Risk Communication Division, in collaboration with the Emergency Programme has activated the Ministry's website and social media page to disseminate the real-time information to heighten awareness and alertness about the mpox. The Division has developed education materials on mpox covering the disease

etiology, mode of transmission, and preventive measure in the forms of infographics and shared through the mainstream as well on social media outlets.

5. Laboratory

- The RCDC initially acquired RT-PCR test kits for Mpox detection in July 2022, following its declaration as a PHEIC. However, these test kits have expired. Consequently, on August 19th 2024, the RCDC formally submitted a request to the World Health Organization (WHO) country office for RT-PCR test kits specifically for Mpox detection.
- RCDC is collaborating with WHO to identify reference laboratories (WHO collaborating centers) for the shipment of samples for genomic sequencing, should positive cases be detected. Furthermore, the RCDC has also developed interim guidance for the sample collection, storage, and shipment, which will be distributed to all healthcare centers. RCDC is also exploring the feasibility of instituting testing capacities in the regional PCR testing laboratories especially at the PoE.

6. Vaccine

There are three vaccines available against mpox:

- MVA-BN (Modified Vaccinia Ankara-Bavarian Nordic)
- LC16
- ACAM2000

a. MVA-BN Vaccine

Pre-Exposure Effectiveness: If the vaccine is provided before the infection, the effectiveness of the vaccine is as follows:

- 1-dose schedule: 76% effectiveness
- 2-dose schedule: 82% effectiveness

Post-Exposure Effectiveness: If the vaccine is provided after the infection, the effectiveness of the vaccine is as follows:

- Estimated at 20% effectiveness (95% CI: -24–65)

b. Populations to be Considered for Vaccination

- Members of geographically defined areas or communities with a documented high risk of exposure to mpox, including children in those communities.
 - Sex workers; gay, bisexual, or other men who have sex with men (MSM) who have multiple sexual partners; or other individuals with multiple casual sexual partners.

- Health workers at risk of repeated exposure, clinical laboratory personnel, and healthcare workers performing diagnostic testing for mpox or providing care.
- Outbreak response team members
- Contacts of persons with mpox

Mass vaccination is not recommended for mpox at this time. Post-exposure preventive vaccination (PEPV) is recommended for contacts of cases, ideally within four days of first exposure (and up to 14 days in the absence of symptoms).

c. IHR Emergency Committee Recommendations

As per the IHR Emergency Committee meeting held on 19th August 2024, the followings were deliberated:

- **EUL Process:** The Emergency Use Listing (EUL) process is ongoing. Until the products are officially listed, WHO, UN agencies, or Gavi will not be able to procure vaccines from countries.
- **Bilateral Procurement:** Since the two vaccines, LC16 KMB and MVA, are approved by regulatory authorities in Japan and the USA (both WHO-approved regulatory authorities), countries can procure these vaccines bilaterally.
- **LC16 KMB Vaccine:** The Japanese government is donating some stocks of the LC16 KMB vaccine. For donations or procurements, countries are advised to initiate discussions directly with the Japanese government.
- **MVA Vaccine:** For the MVA vaccine, countries need to contact the manufacturers directly.

The Ministry is currently communicating and exploring with UNICEF and WHO regarding the vaccine procurement and its requirements.

7. Next Steps

At the national level, immediate measures have been taken to prevent and control the spread of mpox. The Ministry's HEOC has been activated and is currently in the **ALERT** phase to monitor the situation. HEOC will assist in coordinating response efforts, ensuring rapid decision-making, and efficient resource allocation in the event that the situation worsens. Depending on the evolving situation, the phase of HEOC will be determined to step down or step up to the **RESPONSE** phase, with the guidance from the TAG.

The DoPH and the RCDC will enhance surveillance systems to promptly identify and report new cases, with a special focus on points of entry (POEs). Special messages are being developed for travellers and the general public for their safety, and they will be communicated regularly. Additionally, we will also undertake other efforts to raise awareness and educate the population on preventive measures.

Based on the evolving situation and specific needs, the Ministry will focus on strengthening health infrastructure. This includes equipping isolation facilities, ensuring the availability of vaccines and immunization services, enhancing laboratory and diagnostic capacities, providing personal protective equipment (PPE), and conducting comprehensive training for healthcare workers in infection prevention and control, case investigation, and case management.

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