Mpox

Multi-country external situation report n. 37, published 22 September 2024

This situation report provides an update of the weekly mpox epidemiological situation in Africa, and the monthly global epidemiological situation.

KEY FIGURES				
Reporting period: 01 January 2022 – 31 August 2024				
Area	**Number of reported confirmed cases**	**Number of deaths among confirmed cases**	**Number countries reporting cases**	
Global	**106 310**	**234**	**123**	
Reporting period: 01 January 2024 – 15 September 2024				
Area	**Number of reported confirmed cases**	**Number of deaths among confirmed cases**	**Number of reported suspected cases**	**Number of deaths among suspected cases**
Africa	**6201**	**32**	**29 342**	**812**
Democratic Republic of the Congo[1]	**5399**	**25**	**25 757**	**806**
Burundi[2]	**564**	**0**	**1557**	**0**

Highlights

- This situation report provides an update of the weekly mpox epidemiological situation in Africa, and the monthly global epidemiological situation.
- While the global outbreak linked to clade II MPXV is ongoing in most affected countries outside of Africa, outbreaks of clade I MPXV continue to occur in areas known to be endemic for mpox and cases linked to clade Ib MPXV continue to be reported in the eastern provinces of the Democratic Republic of the Congo and in an expanding outbreak in Burundi.
- Stockouts of tests in recent weeks hinder the confirmation of mpox cases in the Democratic Republic of the Congo.
- As of the end of August 2024, 2082 confirmed mpox cases were reported globally, marking the highest number of monthly cases globally since November 2022. Rising trends have been reported in the WHO African, European and Western Pacific regions. Meanwhile, the Region of the Americas has seen a decrease in cases in August 2024 compared to the previous month.
- In the past month, one new country, Gabon, reported their first mpox case.
- Five countries in Africa (Burundi, the Democratic Republic of the Congo, Kenya, Rwanda and Uganda) and two countries outside of Africa (Sweden and Thailand) have reported clade Ib monkeypox virus (MPXV). Available information suggests that sustained community transmission of this strain is ongoing in the Democratic Republic of the Congo and Burundi.
- The report provides operational updates about the WHO global mpox response as of 15 September 2024.
- The special focus of this edition provides an overview of a WHO mpox transmission protocol with aims to investigate mpox outbreaks in a standardized manner, enhancing control efforts and addressing critical knowledge gaps.

[1] In some countries, suspected cases that undergo testing are not removed from the overall count of suspected cases, regardless of whether the test result is positive (confirmed case) or negative (discarded case).

In this edition:

Situation overview

This report provides an update on:

- The mpox epidemiological situation in Africa (including countries in the WHO African Region and some countries of the WHO Eastern Mediterranean Region), as of **15 September 2024**.
- The global mpox epidemiological situation, as of **31 August 2024.** Global surveillance data continues to be collected monthly and August is the last month of complete data available.

The most recent updates of the epidemiological situation can also be found in the WHO mpox surveillance report.

WHO conducted the latest global mpox rapid risk assessment at the beginning of August 2024. Based on information available at the time, the mpox risk was assessed as follows:

- In the eastern Democratic Republic of the Congo and neighbouring countries: **high**.
- In areas of the Democratic Republic of the Congo where mpox is endemic: **high**.
- In Nigeria and other countries of West, Central and East Africa where mpox is endemic: **moderate**.
- In all other countries in Africa and around the world: **moderate**.

Individual-level risk is largely dependent on individual factors such as exposure risk and immune status, regardless of geographic area, epidemiological context, biological sex, gender identity or sexual orientation.

This situation update presents reported confirmed mpox cases and deaths,[2] as described in the WHO case definitions published in the Surveillance, case investigation and contact tracing for mpox interim guidance, as well as reported suspected mpox cases, as defined by the national surveillance systems of the countries that have reported them. The rationale for presenting these suspected cases is to allow the reader a better understanding of mpox epidemiological trends in countries with suboptimal access to testing, such as the Democratic Republic of the Congo.

Note: The indicator of suspected cases should be interpreted with caution, as these are recorded according to varying national case definitions, and in some countries, suspected cases that undergo testing are not removed from the overall count of suspected cases, regardless of whether the test result is positive (confirmed case) or negative (discarded case). In absence of more detailed information, it is currently not possible to correctly subtract confirmed cases from the total suspected cases reported, therefore, the confirmed cases are a subset of suspected cases.

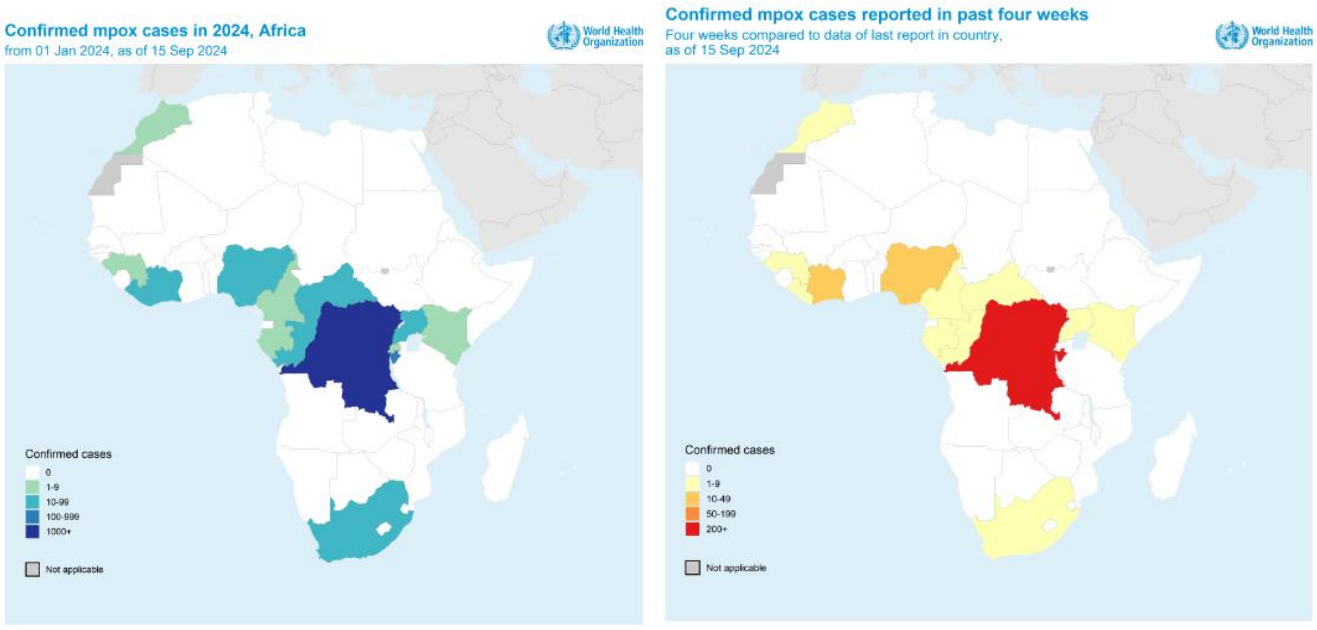
[2] For the WHO European region, both confirmed and probable cases are included within confirmed case counts and detailed case data.

Epidemiological update

Situation in Africa in 2024[3]

In 2024**, as of 15 September 2024**, 15 countries in Africa have reported 6201 confirmed mpox cases (see Figure 1, left), including 32 deaths (case fatality ratio [CFR] among reported confirmed cases of 0.5%). The three countries reporting the most cases in 2024 are the Democratic Republic of the Congo (5399 confirmed cases, 25 deaths), Burundi (564 confirmed cases, no deaths), and Nigeria (55 confirmed cases, no deaths). In addition to the Democratic Republic of the Congo, confirmed mpox deaths in 2024 have been reported in South Africa (three), Cameroon (two), Central African Republic (one) and Cote d'Ivoire (one). Among the countries reporting mpox in 2024, 14 countries have reported new confirmed cases within the past four weeks (see Figure 1, right). In the past month, one country, Gabon, reported its first case.

Figure 1. Geographic distribution of confirmed mpox cases, by country, Africa, 2024 (left, 1 January – 15 September) and the last four weeks (right, 19 August – 15 September).



Since the beginning of 2024, the number of confirmed mpox cases in Africa has been rising, mainly driven by the outbreaks in the Democratic Republic of the Congo (see Figure 2) which account for around 87% (5399 of 6201 cases) of reported confirmed cases on the continent. Testing capacities continue to be limited in the Democratic Republic of the Congo, where from January to September 2024 around 39% of suspected cases have been tested, with a positivity rate of 54%. Stockouts of testing material in recent weeks hinder the confirmation of mpox cases.

From 1 January to 15 September 2024, a total of 29 342 suspected mpox cases, including both tested and untested cases, and 812 deaths among suspected cases (CFR 2.8%), were reported in Africa (Figure 3). The three countries reporting the most suspected mpox cases in 2024 are the Democratic Republic of the Congo (21 757 suspected cases, 806 deaths), Burundi (1557 suspected cases, no deaths), and Nigeria (935 suspected cases, no deaths). The apparent change in the number of reported cases in the last weeks of the epidemic curves for confirmed and suspected mpox cases in the Democratic Republic of the Congo might be reflecting testing stockouts.

[3] On the African continent there are 47 Member States in the WHO African Region and seven in the Eastern Mediterranean Region.

Figure 2. Epidemic curve of reported confirmed mpox cases in Africa, by reporting country, 1 January 2024 – 15 September 2024

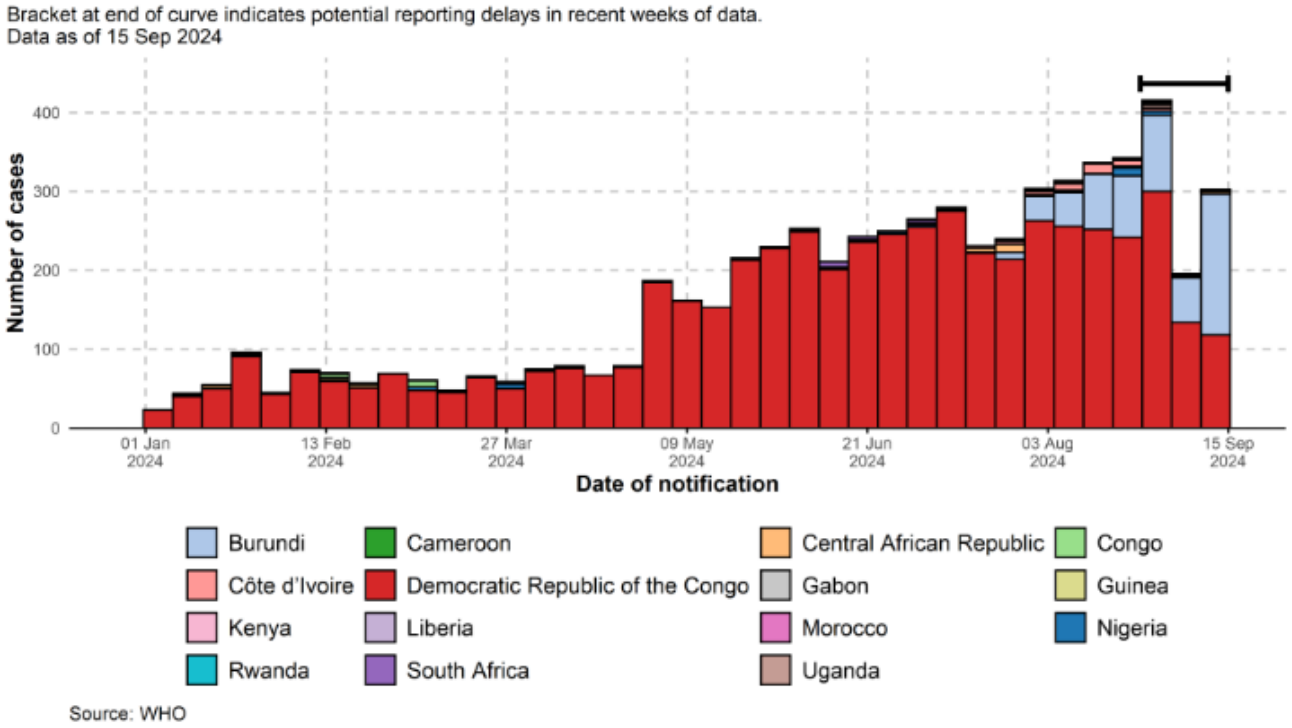
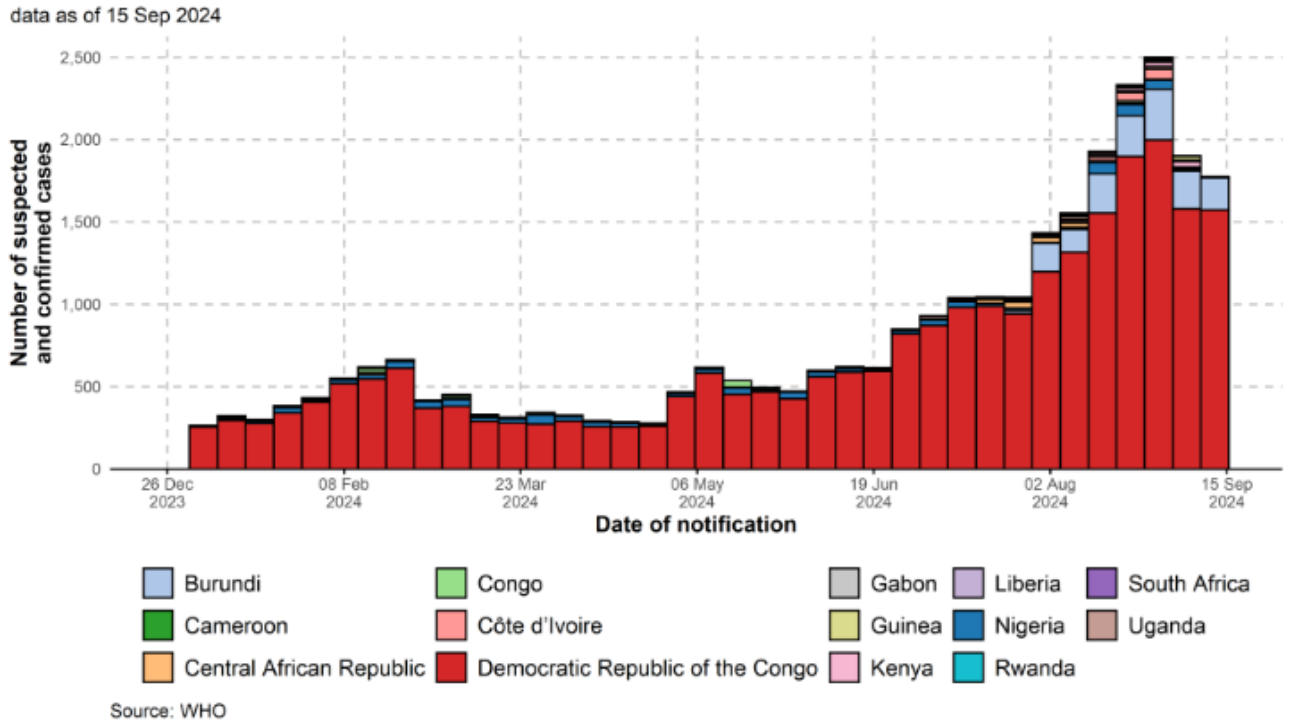


Figure 3. Epidemic curve of reported suspected mpox cases (tested and untested) in Africa, by reporting country, 1 January 2024 – 15 September 2024



Global situation

Mpox surveillance reporting outside of Africa continues on a monthly basis. The most recent complete data are as of the end of **August 2024**, as described in the mpox global surveillance report.

From 1 January 2022 through 31 August 2024, a total of 106 310 laboratory-confirmed cases of mpox, including 234 deaths, were reported to WHO from 123 countries/territories/areas (hereafter 'countries') in all six WHO Regions (Table 1). The global CFR among confirmed cases in this period is 0.2%.

A total of 2082 new cases were reported in August 2024, a 15.6% increase from the preceding month, and the highest number of monthly cases since November 2022. The European and Western Pacific regions show the highest monthly increase in cases in August 2024 compared to July, at 89% and 68% respectively. The Region of the Americas has seen a decline in cases in August. Most cases in August 2024 were reported from the African Region (62.3%), followed by the European Region (13.7%), and the Western Pacific Region (13.2%).

Table 1. Number of cumulative laboratory-confirmed mpox cases and deaths reported to WHO, by WHO Region, from 1 January 2022 through 31 August 2024

WHO Region	Total confirmed cases	Total deaths among confirmed cases	New cases reported in July 2024	New cases reported in August 2024	Monthly change in cases (%)
Region of the Americas	64 879	148	447	207	-54.0
European Region	27 965	9	151	285	89.0
African Region	7662	54	1016	1298	28.0
Western Pacific Region	3979	10	163	274	68.0
South-East Asia Region	956	11	15	16	6.7
Eastern Mediterranean Region	869	2	9	2	-78.0
Total	106 310	234	1801	2082	15.6

In August 2024, 33 of 48 (68.8%) reporting countries showed an increase in cases compared to July 2024. Burundi reported the highest relative increase in the African Region (n = 222 vs nine), Spain reported the highest increase in the European Region (n = 136 vs 20), Argentina reported the highest increase in the Region of the Americas (n = 26 vs five), Australia reported the highest increase in the Western Pacific Region (n = 245 vs 101), and Pakistan reported the highest increase in the South-East Asia Region (one vs zero).The epidemic curves shown in Figure 4 suggest that the outbreak continues at a relatively low level of transmission in the Region of the Americas, the European Region, the South-East Asia Region, the Eastern Mediterranean Region, and the Western Pacific. The African Region, on the other hand, shows sharply rising levels of laboratory-confirmed cases reported and the highest number of cases recorded since the start of global surveillance in 2022.

Figure 4. Epidemic curves of monthly aggregated laboratory-confirmed cases of mpox reported to WHO, by WHO region, from 1 January 2022 to 31 August 2024*

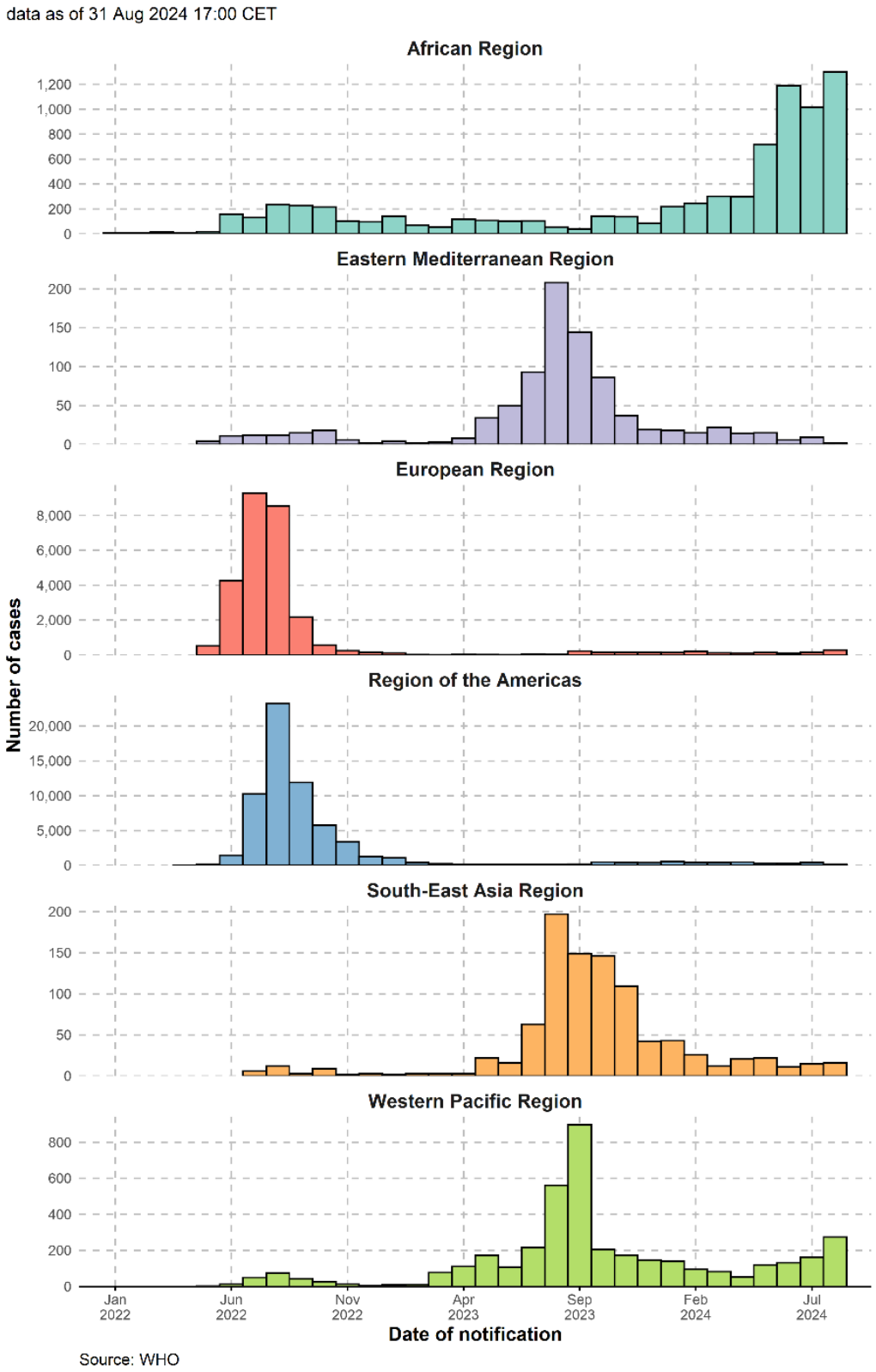
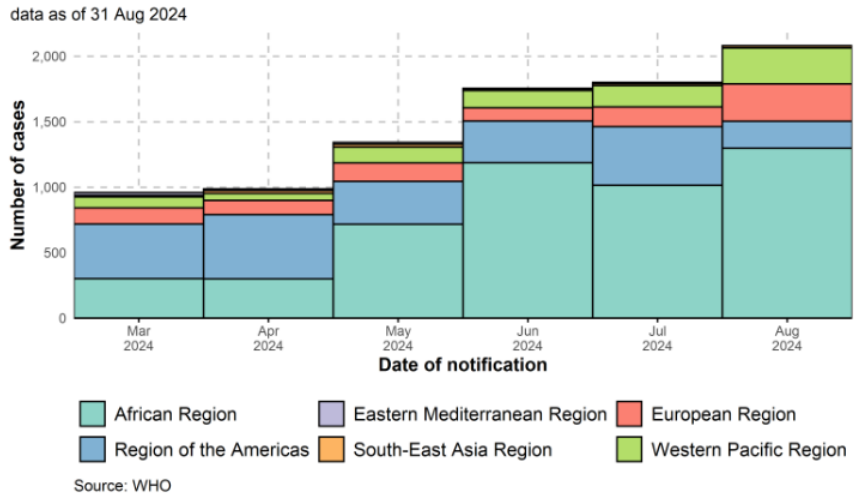


*Figure 4 shows aggregated monthly data, ending on the last day of the month. **Note the different scales of the y-axes.**

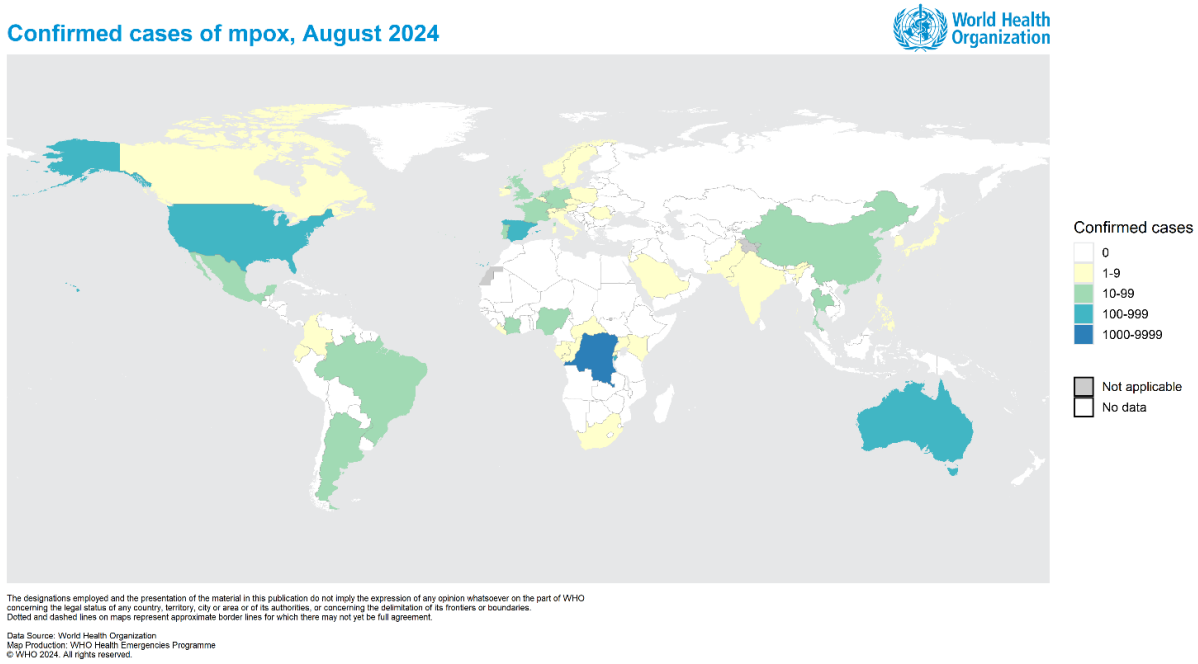
Figure 5 shows that the number of monthly confirmed mpox cases reported globally consistently increased in the last six months (1 March 2024 – 31 August 2024) from 900 to 2000 cases (averaging 1488 cases per month), with most cases reported by the African Region, followed by the Region of the Americas, and the European Region[4].

Figure 5. Epidemic curve of monthly aggregated number of confirmed mpox cases reported. by WHO region, 1 March 2024 – 31 August 2024.



The virus continues to circulate, albeit at different levels, in all WHO regions (Figure 6). The Democratic Republic of the Congo (1013 cases) is the country with the highest number of reported confirmed cases in August 2024, followed by Australia (245 cases), Spain (136 cases) and the United States of America (113 cases).

Figure 6. Geographical distribution of confirmed mpox cases reported by country from 1 to 31 August 2024.



[4] The recent trends in reported cases should be interpreted with caution. WHO continues to encourage all countries to ensure that mpox is a notifiable disease and to report mpox cases, including reporting when no cases have been detected (known as 'zero reporting'). This report does not highlight non-reporting countries. Therefore, it should be noted that an absence of reported cases from a country may be due to the country not reporting, rather than having no cases.

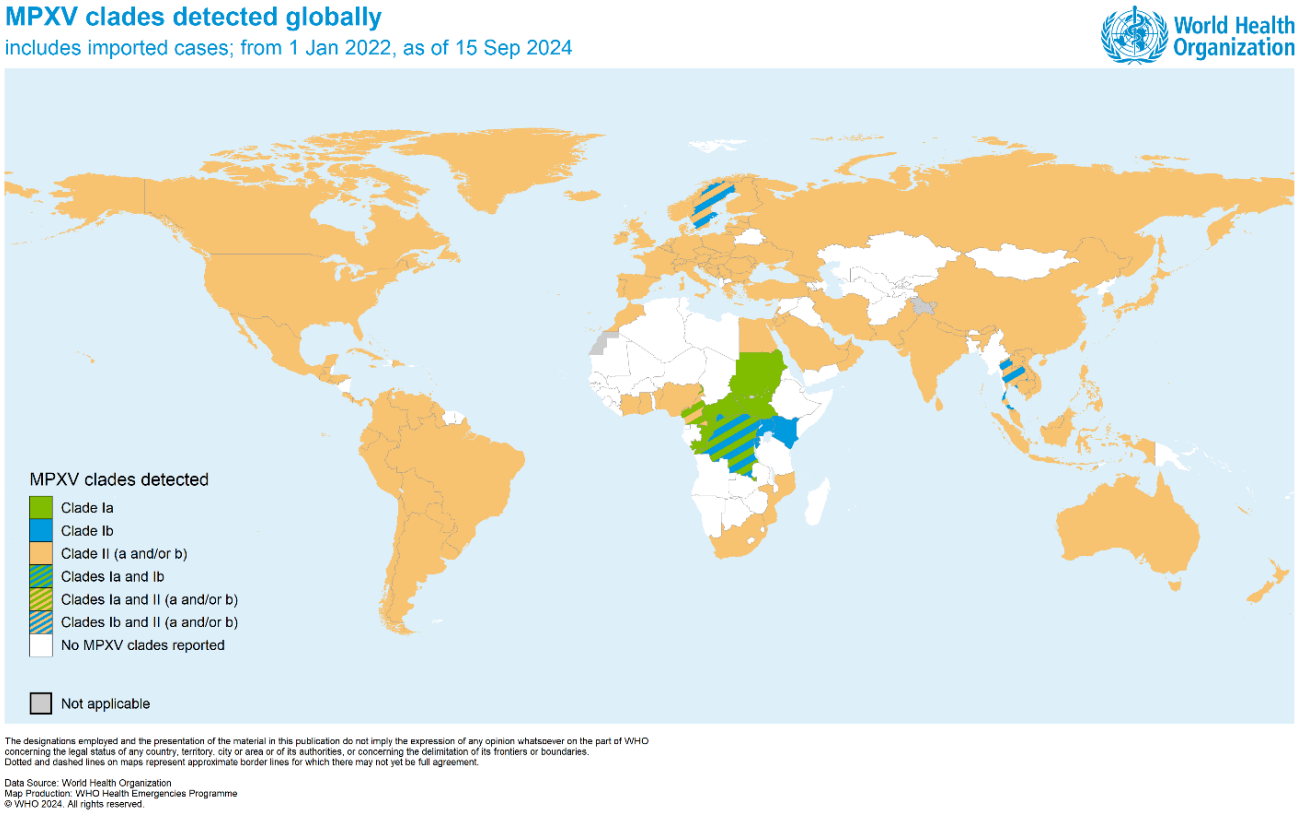
Global monkeypox virus distribution

As of 15 September 2024, the distribution of reported MPXV clades globally is as shown in the map below (Figure 7). This information is compiled from sequencing conducted and shared via different sources including open access databases, peer-reviewed publications, reports, as well as direct communication to WHO, including through its Technical Advisory Group on Virus Evolution.

To date, almost all countries outside of Africa have detected only clade IIb MPXV; only Sweden and Thailand have detected one case each of clade Ib in travelers from Africa. In Africa, all viral clades have been detected: countries in western, northern and southern Africa have reported clade II MPXV; countries in central and eastern Africa have reported clade I MPXV; and Cameroon has reported both, clade I in the eastern part of the country and clade II in the western part.

To date, clade Ib MPXV in Africa has been detected in the Democratic Republic of the Congo (in South Kivu, North Kivu and Kinshasa provinces), Burundi, Kenya, Rwanda, and Uganda.

Figure 7. Geographic distribution of MPXV clades by country, as of 15 September 2024.



Globally, a relatively small number of MPXV-positive clinical specimens from mpox cases have been sequenced, and especially in African countries, such that the map shown in Figure 7 might not fully capture the distribution of MPXV in all settings.

Table 2 shows the number of confirmed mpox cases and deaths detected in countries where clade Ib has been detected. In this table, the number of cases for the Democratic Republic of the Congo includes those in the provinces of South and North Kivu, where clade Ib is predominantly circulating, and at least four confirmed cases in Kinshasa. In the other countries in eastern Africa, clade Ib is the only detected MPXV strain to date, while in Sweden and Thailand the predominant circulating clade is IIb, and only one case of clade Ib has been detected in each. Among all countries, only the Democratic Republic of the Congo has reported deaths among people with confirmed mpox linked to the outbreak due to clade Ib MPXV.

Table 2: List of countries that have detected confirmed cases of mpox linked to clade Ib MPXV and the distribution of these cases on the national territory, as of 15 September 2024.

Country	Number reported confirmed cases	Number of deaths among reported confirmed cases	Geographic distribution
Democratic Republic of the Congo	Around 3500	22	Mainly South and North Kivu, with at least four cases in Kinshasa
Burundi	564	0	Most health districts
Uganda	11	0	Multiple districts, including capital
Kenya	5	0	Multiple counties, including capital, Points of Entry (PoE) with Tanzania & PoE with Uganda
Rwanda	6	0	Three in capital; three in border district
Sweden	1	0	Travel history to Africa
Thailand	1	0	Travel history to Africa

Global operational updates

The WHO health emergency prevention, preparedness, response and resilience (HEPR) framework underpins both the Strategic Framework for enhancing prevention and control of mpox (2024-2027) and the current emergency response to the mpox Public Health Emergency of International Concern (PHEIC).

Aligned with the HEPR framework, the WHO Global Strategic Preparedness and Response Plan (SPRP) for mpox focuses on strengthening five core components—the **5Cs**:

1. **Emergency coordination:** Efficient coordination for timely crisis response.
2. **Collaborative surveillance:** Real-time data integration for early threat detection.
3. **Community protection:** Engaging communities in prevention and resilience-building measures.
4. **Safe and scalable care:** Equipping health systems to provide essential care with scalable capacity.
5. **Access to and delivery of countermeasures:** Ensuring equitable distribution of medical countermeasures.

This section provides an overview of the main global updates on the WHO mpox response.

1. Emergency coordination

WHO is developing an Operational Planning Guidance that will supplement the Strategic Preparedness and Response Plan (SPRP). This will provide practical guidance and a collation of resources that may be used by national authorities in their context-specific planning and response for the current mpox outbreak.

WHO has provided briefings on the latest epidemiological situation, risk assessment and plans to partners, experts, advisory groups and committees, including: Member States through their representatives; the interim Medical Countermeasures Network (i-MCM-Net) partners forum; operational partners; donors; technical networks; communities of practice; and others.

2. Collaborative surveillance

Updated surveillance tools

The French translations of the updated mpox Case Investigation Form (CIF) and minimum dataset Case Reporting Form (CRF) have been finalized and can be accessed here.

Epidemiological data on mpox are updated weekly, and the latest data can be accessed on the WHO mpox surveillance report here.

Mpox transmission protocol

WHO has finalized and distributed to regional offices and partners an mpox transmission study protocol to support standardized field investigations of ongoing mpox outbreaks. An overview of this product is provided in the special focus section below.

3. Community protection

- Coordination across technical areas for community protection, including risk communication and community engagement (RCCE) and infodemic management, community-based services, community infection prevention and control (IPC) and water, sanitation and hygiene (WASH), home-based care, managing risks of transmission between animals and humans, border health and mass gatherings, and vaccination.
- Continued coordination of and responsive technical support to regions and countries through 3-level and bilateral calls.
- Review and reissuance of public health advice and guidance for protecting health and well-being of key populations, including public health advice for sex workers, public health advice for people living in displacement camps, and public health advice for people with mpox who can receive care at home.

- Development of essential supplies list for home care, schools and community healthcare workers with UNICEF.
- Development of interim public health advice for mpox-related prevention and control measures in school settings.
- Development of interim guidance on strengthening community detection and response during outbreaks. This is being done jointly with the International Federation of Red Cross and Red Crescent Societies (IFRC), with contributions from global community-based surveillance partners involved in an interagency community of practice on community-based surveillance.
- Development of a training package for community health workers on integrated community health services such as RCCE, community-based detection and reporting, community IPC and WASH, mental health and psychosocial support, home and community care, and community service delivery coordination and management.
- High level multi-partner and civil society engagement and advocacy, including through the multi-partner Community Protection Partners Network, informal community reference groups, and the HIVE platform (multi-partner engagement).
- Development of a technical brief on safe return to school.

4. Safe and scalable care

IPC-WASH

WHO is supporting mpox response through strategic, technical, and country-level efforts, including establishing weekly 3-level coordination meetings with the affected countries, engagement with the IPC in Public Health Emergencies Working Group, and development of technical and operational guidance based on requests of Member States. These include an operational guide for home care and isolation in resource limited settings, a screening tool for health facilities, an IPC & WASH supplies list for health facilities, and an mpox IPC and WASH rapid assessment tool for healthcare facilities which has now been disseminated to affected countries and used in assessments. In the North Kivu province of the Democratic Republic of the Congo, 79 health facilities (including 12 mobile clinics in camps for internally displaced persons) were assessed using the tool, and improvement plans are being developed to address the gaps identified. Further efforts around screening and inpatient surveillance are being established.

Case management

WHO is working with the Africa Centres for Disease Control and Prevention at the continental level and co-leading regional strategic, technical and operational activities.

WHO is working with countries in the scale-up of clinical mpox pathways that emphasize decentralized care for early recognition and early testing, and referral pathways for high-risk and more ill patients. This includes options for home care for mild cases in non-high-risk groups, when proper IPC can be done at home and daily follow-up can be carried out.

Updates of clinical and IPC guidelines are ongoing, and clinical tools for screening and assisting with differential diagnosis will soon be published.

The WHO Global Clinical Platform is supporting countries in the real-time collection of health facility/treatment centre metrics such as bed occupancy and clinical evolution of cases.

Essential medicine and supply lists have been developed with a quantification tool to help anticipate needs for treatment centres.

An EPI-WIN webinar on clinical care was held 18 September 2024, with experts sharing their experiences and lessons learned. The event attracted over 2000 participants. A webinar series will start next week to go deeper into clinical care topics to support safe and scalable clinical care.

5. Access to and delivery of countermeasures

Prequalification and Emergency Use Listing of vaccines and diagnostics

As reported previously, WHO announced the prequalification of MVA-BN vaccine on 13 September 2024 for use in adults aged 18 years and over. On 19 September, the European Medicines Agency issued new recommendations extending the indication for MVA-BN vaccines to adolescents aged 12 to 17 years. This recommendation was based on the interim results of a study that compared the immune response (production of virus-specific antibodies) in 315 adolescents compared to the response in 211 adults.

The assessment of LC16 vaccine for Emergency Use Listing is in progress. A Technical Advisory Group meeting will be held by the end of September 2024. Submission of data by the manufacturer of ACAM2000 is also expected by the end of September.

The WHO Global Advisory Committee on Vaccine Safety met on 20 September to review available safety data on mpox vaccines and country preparedness for safety monitoring among other topics. A report of the meeting will be made available.

As of 18 September, six diagnostics manufacturers have expressed their interest in EUL assessment. On 17 September, WHO received the first regulatory data and information on diagnostics from a manufacturer for EUL assessment.

Special focus

WHO mpox transmission protocol

WHO has developed a study protocol to investigate modes of transmission of mpox during an outbreak. This protocol will serve as a template for Member States and partners to investigate mpox outbreaks in a standardized manner, enhancing control efforts and addressing critical knowledge gaps.

The primary objectives of the transmission study are to describe infection transmission parameters, elucidate modes of infection, and identify risk factors for infection for person-to-person transmission in community settings (including in health facilities) and explore the contribution of zoonotic transmission in settings where mpox is endemic. Additional objectives include the characterization of risk factors for severe disease outcomes such as hospitalization, intensive care unit admission, and death.

Designed to be used in the context of enhanced surveillance activities, the protocol outlines a prospective case-ascertained study involving suspected, probable, and confirmed mpox cases and their contacts. It includes three optional components for specific objectives: a serological study to detect asymptomatic and mildly symptomatic infections, a case-control study to explore potential risk factors among cases without known epidemiological links, and an animal sampling component for documented zoonotic exposure. The protocol should be carefully reviewed and adapted as needed with selection of optional modules to include according to the local context. Following local adaptation in partnership with key partners and stakeholders, a costed implementation plan should be developed to set the path for successful resource mobilization and implementation.

The participation of persons with mpox, their contacts and selected individuals as controls in the study is entirely voluntary and requires their informed consent, with ethics considerations such as confidentiality and secure data storage emphasized. Local ethics review or exemption is necessary for the local implementation of the protocol.

By providing a standardized framework, the protocol enables similar investigations across different settings, allowing for more comparable analysis and ultimately increased statistical power. Recent outbreaks, notably involving MPXV clade I in the Democratic Republic of the Congo and neighbouring countries, highlight the urgency of better understanding mpox transmission dynamics in different contexts. This protocol aims to support national authorities and partners to rapidly gather critical information to improve outbreak control capabilities and complement existing surveillance efforts, contributing to better prevention and control measures.

To receive a copy of the protocol, please send an email to emergency-surveillance@who.int and mpox@who.int.

Mpox resources

Strategic planning and global support

- WHO Mpox global strategic preparedness and response plan. Updated 6 September 2024. Available at: https://www.who.int/publications/m/item/mpox-global-strategic-preparedness-and-response-plan
- Mpox Continental Preparedness and Response Plan for Africa: https://africacdc.org/download/mpox-continental-preparedness-and-response-plan-for-africa/
- WHO appeal: mpox public health emergency 2024, 27 August 2024. Available at: https://www.who.int/publications/m/item/who-appeal--mpox-public-health-emergency-2024
- Strategic framework for enhancing prevention and control of mpox (2024-2027). May 2024. Available at: https://www.who.int/publications/i/item/9789240092907

International Health Regulations Emergency Committee, Review Committee and recommendations of the Director-General

- First meeting of the International Health Regulations (2005) Emergency Committee regarding the upsurge of mpox 2024, 19 August 2024. Available at: https://www.who.int/news/item/19-08-2024-first-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-upsurge-of-mpox-2024
- Extension of the standing recommendations for mpox issued by the Director-General of the World health organization (WHO) in accordance with the International Health Regulations (2005) (IHR), 21 August 2024. Extension of the standing recommendations for mpox issued by the Director-General of the World health organization (WHO) in accordance with the International Health Regulations (2005) (IHR)
- Standing recommendations for mpox issued by the Director-General of the World Health Organization (WHO) in accordance with the International Health Regulations (2005) (IHR), 21 August 2023. Available at: https://www.who.int/publications/m/item/standing-recommendations-for-mpox-issued-by-the-director-general-of-the-world-health-organization-(who)-in-accordance-with-the-international-health-regulations-(2005)-(ihr)

Regional mpox bulletin

- WHO Africa Regional Office, Regional Mpox Bulletin: 13 September 2024. Available at: https://www.afro.who.int/publications/regional-mpox-bulletin-13-september-2024

Surveillance

- Surveillance, case investigation and contact tracing for mpox: Interim guidance, 20 March 2024. Available at: https://www.who.int/publications/i/item/WHO-MPX-Surveillance-2024.1
- Mpox Case Investigation Form (CIF) and minimum dataset Case Reporting Form (CRF), 5 September 2024. Available at: https://www.who.int/publications/m/item/monkeypox-minimum-dataset-case-reporting-form-(crf)
- WHO Go.Data: Managing complex data in outbreaks. Available at: https://www.who.int/tools/godata
- Technical Guidelines for Integrated Disease Surveillance and Response in the African Region: Third edition, March 2019. Available at: https://www.afro.who.int/publications/technical-guidelines-integrated-disease-surveillance-and-response-african-region-third

Laboratory and diagnostics

- Diagnostic testing for the monkeypox virus (MPXV): interim guidance, 10 May 2024. Available at: https://www.who.int/publications/i/item/WHO-MPX-Laboratory-2024.1
- Genomic epidemiology of mpox viruses across clades. Available at: https://nextstrain.org/mpox/all-clades
- WHO Biohub System. Available at: https://www.who.int/initiatives/who-biohub

- WHO Guidance on regulations for the transport of infectious substances 2023 – 2024, 13 June 2024. Available at: https://www.who.int/publications/i/item/789240089525
- Mpox Q&A on mpox testing for health workers, 11 December 2023. Available at: https://www.who.int/news-room/questions-and-answers/item/testing-for-mpox--health-workers

Clinical management and infection, prevention and control

- Clinical characterization of mpox including monitoring the use of therapeutic interventions: statistical analysis plan, 13 October 2023. Available at: https://www.who.int/publications/i/item/WHO-MPX-Clinical-Analytic_plan-2023.1
- The WHO Global Clinical Platform for mpox. Available at: https://www.who.int/tools/global-clinical-platform/monkeypox
- Atlas of mpox lesions: a tool for clinical researchers, 28 April 2023. Available at: https://apps.who.int/iris/bitstream/handle/10665/366569/WHO-MPX-Clinical-Lesions-2023.1-eng.pdf
- Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022. Available at: https://www.who.int/publications/i/item/WHO-MPX-Clinical-and-IPC-2022.1
- Emergency use of unproven clinical interventions outside clinical trials: ethical considerations, 12 April 2022. Available at: https://www.who.int/publications/i/item/9789240041745
- WHO 5 moments for hand hygiene. Available at: https://www.who.int/campaigns/world-hand-hygiene-day

Vaccination

- WHO prequalifies mpox vaccine. 13 September 2024. Available at News brief.
- Smallpox and mpox (orthopoxviruses): WHO position paper, August 2024. Available at: https://www.who.int/publications/i/item/who-wer-9934-429-456
- Meeting of the Strategic Advisory Group of Experts on Immunization (SAGE), 11 – 13 March 2024: conclusions and recommendations. Available at: https://iris.who.int/handle/10665/376934
- WHO Vaccines and immunization for monkeypox: Interim guidance, 16 November 2022. https://apps.who.int/iris/bitstream/handle/10665/364527/WHO-MPX-Immunization-2022.3-eng.pdf

Risk communication and community engagement and public health advice

- Mpox Q&A, 17 August 2024. Available at: https://www.who.int/news-room/questions-and-answers/item/mpox
- Mpox Factsheet, 26 August 2024. Available at: https://www.who.int/news-room/fact-sheets/detail/mpox
- Risk communication and community engagement readiness and response toolkit: mpox, 23 April 2024. Available at: https://www.who.int/publications/i/item/9789240091559
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Disclaimer: Caution must be taken when interpreting all data presented, and differences between information products published by WHO, national public health authorities, and other sources using different inclusion criteria and different data cut-off times are to be expected. While steps are taken to ensure accuracy and reliability, all data are subject to continuous verification and change. All counts are subject to variations in case detection, definitions, laboratory testing, and reporting strategies between countries, states and territories.