World Health Organization

MPOX, MULTI-COUNTRY

Date and version of current assessment: 23 February 2025, v3
Date(s) and version(s) of previous assessment(s):

Overall risk and confidence

Overall Public Health risk
Global
Moderate

Confidence in available information
Global
Moderate

Overall global public health risk *	
Clade Ib MPXV	High
Clade Ia MPXV**	Moderate
Clade II MPXV (historically endemic areas)	Moderate
Clade IIb MPXV***	Moderate

Confidence in available information
Moderate
Moderate
Moderate
Moderate

** All mpox outbreaks must be considered in their local context to gain a comprehensive understanding of the epidemiology, modes of transmission, risk factors for severe disease, viral origins and evolution, and relevance of strategies and countermeasures for prevention and control.*

***The situation in **Kinshasa,** however, requires particular attention. The risk associated with the clade Ia MPXV outbreak there is deemed higher than in clade Ia MPXV-endemic areas, with currently no evidence to suggest that clade Ia MPXV and clade Ib MPXV in the Kinshasa context are epidemiologically distinct.*

**** This group represents a very broad geographic area, encompassing countries and regions with diverse health systems and varying response capacities. In certain countries or regional blocs within this group, the risk may vary and/or be assessed as low.*

Note: For MPXV naming conventions and a more detailed description of the risk groups, please refer to Annex 1.

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Overall Global Risk statement

This global rapid risk assessment (RRA) aims to evaluate the current public health risk associated with the 2024 upsurge of mpox in the Democratic Republic of the Congo (DRC) and other countries in Africa, with a focus on updates since the previous RRA in November 2024.

Globally, the monkeypox virus (MPXV) continues to spread, causing both local and extended outbreaks driven by various MPXV clades (Ia, Ib, IIa, and IIb) in various settings. From 1 January 2022 to 31 January 2025, 130 countries and territories across all WHO regions have reported 127 960 confirmed cases, including 281 deaths (case fatality ratio - 0.2%). This marks an increase of four additional reporting countries and territories (Angola, Azerbaijan, Kosovo[1], and Sierra Leone), along with an additional 12 859 confirmed cases and 26 deaths since the last RRA on 10 November 2024.

The African Region continues to experience sustained outbreaks, accounting for 61% of cases reported globally (up from 58% in November 2024) and 72% of deaths (compared to 72% in November 2024) over the past 12 months. The increase in mpox cases in the African Region remains primarily driven by the outbreak in DRC (where both clade Ia MPXV and Ib MPXV are circulating), and the expansion of the clade Ib MPXV outbreak in eastern Africa.

In the Democratic Republic of the Congo (DRC), where only clade I MPXV has been detected, all 26 provinces reported both suspected and confirmed mpox cases between 1 January 2024 and 16 February 2025. The country continues to have the greatest disease burden, accounting for 68% of confirmed cases (15 411 out of 22 618 confirmed cases) and 57% of deaths (43 out 76 deaths) among confirmed cases in Africa during this period. The high mpox burden in the country during this period was driven by the steadily expanding clade Ib MPXV outbreak, which is spreading through sexual and other forms of close physical contact, in non-endemic areas of the country (and recently, some endemic areas), as well as by ongoing clade Ia MPXV outbreaks in historically endemic provinces. Additionally, Kinshasa, the capital, continues to report an outbreak of both clade Ia MPXV and Ib MPXV, with 77% of sequences from there during this period identified as clade Ia MPXV. This outbreak in Kinshasa is predominantly affecting adults, including those within high-risk sexual networks. This highlights the possibility that transmission risk profiles of MPXV clades may vary based on the context and confirms that both clade Ia and clade Ib MPXV are spreading within sexual networks.

Clade Ib MPXV has been spreading in the South Kivu province of the DRC since September 2023. As of 16 February 2025, cases have also been detected in seven other provinces: North Kivu, Kinshasa, Kasai, Tshopo, Tanganyika, Haut-Katanga and Mai-Ndombe. Two of these provinces, Haut-Katanga and Mai-Ndombe, are newly reporting provinces since November 2024. While stable trends in suspected cases have been reported in recent months, it is important to note that under-ascertainment and underreporting of mpox cases persist, particularly due to long-standing limitations in surveillance and diagnostic capacity. These challenges are likely to worsen with the recent escalation of conflict in the eastern part of the country, which is affecting outbreak control efforts. In provinces historically endemic for clade Ia MPXV, outbreaks of clade Ib MPXV have been documented in urban settings, such as Kisangani in Tshopo, and Tshikapa in Kasai. The current outbreaks continue to be driven by human-to-human transmission through close physical contact, including sexual contact. Sexual contact transmission in high-risk networks, including sex workers, contributed to the initial rapid geographic expansion of clade Ib MPXV within the Democratic Republic of the Congo and neighbouring countries. As the outbreak expanded in communities, so did the age groups affected, shifting from an epidemic predominantly affecting adults to one now impacting children as well, reflecting household and community transmission through close physical contact.

Since July 2024, and as of 16 February 2025, mpox due to clade Ib MPXV in eastern DRC has spread to several other countries in the African region, including **Burundi** (3463 confirmed cases, including one death), **Uganda** (2949 confirmed cases, including 21 deaths), **Rwanda** (102 cases, no deaths), **Kenya** (42 cases, including one death), **Zambia** (19 cases, no deaths) **Angola** (two cases, no deaths) and **Zimbabwe** (one case, no deaths). This represents an increase of one additional country (Angola) in the region since November 2024.

In Burundi, a declining trend in confirmed cases per week has been reported since November 2024, with the case count now well below 100 confirmed cases per week, down from over 200 confirmed cases per week in November 2024. The epidemic remains largely concentrated in and around the cities of Bujumbura and the capital Gitega. The age distribution remains bimodal, with the highest incidence among young adults, followed by children under five years of age.

Conversely, in Uganda, the incidence has been increasing rapidly during the same period, surpassing 300 confirmed cases per week (up from about 100 cases per week in November 2024). The outbreak remains concentrated in and around the capital Kampala, and continues to disproportionally affect young adults, with the majority of cases still occurring among adults aged 20 – 39 years.

Kenya, Rwanda, and Zambia, although also experiencing community transmission, have been reporting few, sporadic cases since November 2024. In Zambia, the reporting of community transmission is more recent, and investigations are ongoing to better characterize the outbreak. In Kenya and Rwanda, cases remain predominantly among adults, particularly among long-haul truck drivers, sex workers, and traders who frequently cross borders with affected countries as part of their work, along with their contacts. These groups, often share the demographic characteristics with those at risk of HIV infection and other sexually transmitted infections.

Furthermore, as of 16 February 2025, clade Ib MPXV has also been detected in 14 countries outside Africa, up from five countries reported in November 2024. These cases typically involve individuals with a recent history of international travel to mpox-affected countries where they are exposed and return during the incubation period or the first days after symptoms onset. The countries reporting clade Ib MPXV include the **United Kingdom of Great Britain and Northern Ireland** (nine cases, including six imported cases and three subsequent cases among contacts), **China** (seven cases, including two imported cases and five subsequent cases among contacts), **Germany** (seven cases, including four imported cases and three subsequent cases among contacts), **Thailand** (four cases, all importations), the **United States of America** (four cases, all importations), **Belgium** (three cases, including one imported case and two subsequent cases among contacts), **Qatar** (two cases, one importation and one unlinked case), **Canada** (one case), **France** (one locally infected case linked to travellers), **India** (one case), **Oman** (one case), **Pakistan** (one case), **Sweden** (one imported case), and the **United Arab Emirates** (one case). In addition, as of 16 February 2025, cases have been reported among travelers from countries that have not reported community transmission of clade Ib MPXV, including the United Arab Emirates (UAE) and Tanzania. This is particularly concerning for the UAE, as at least seven cases have been reported in five different countries among travellers from there, while at the time of writing only one imported case (who had a history of travel to Uganda) has been officially reported by the country. The multiple exportations suggest potential undetected community transmission within the UAE that requires further investigation.

The mortality associated with clade Ib MPXV outbreaks has thus far been lower than what has historically been reported for clade Ia MPXV-endemic provinces in DRC. In North and South Kivu, the case fatality ratio (CFR) is 0.2% (44 deaths among 23 662 suspected cases), compared to 0.4% in November 2024. In Burundi, the CFR is 0.03% (one death among 3463 confirmed cases), compared to 0% in November 2024. In Uganda, the CFR is 0.7% (21 deaths among 2949 confirmed cases), compared to 0.2% in November 2024. In Kenya, the CFR is 2.4% (one death among 42 confirmed cases), compared to 5.9% in November 2024. In Rwanda, the CFR is 0% (no death among 102 confirmed cases), remaining unchanged from November 2024. No deaths have been associated with clade Ib MPXV outbreaks in other affected countries. MPXV can be particularly severe among immunocompromised individuals, such as those living with uncontrolled HIV infection, as well as children, pregnant women and their unborn babies. This is especially concerning in sexual networks where HIV prevalence is high and access to HIV prevention and care services remains limited.

The healthcare systems in many affected countries in Africa continue to face challenges in scaling up diagnostic, surveillance, and treatment capacities in response to mpox. As such, case identification, testing, isolation and contact tracing remain largely insufficient, as evidenced by ongoing high incidence in DRC, Burundi and the increase in cases reported from Uganda. The involvement of sex workers and sexual networks in the transmission chains adds another layer of complexity, as these networks are often less visible and more difficult to reach with traditional outbreak response interventions. This requires engagement through specific public health services, including HIV/AIDS and Sexually Transmitted Infections (STI) control programmes.

Given the continued expansion of the clade Ib MPXV outbreak, with significant under-detection, particularly in high-risk groups, and the currently inadequate control capacity, the risk of ongoing national and international spread remains high. Consequently, the overall public health risk in the most-affected countries is considered **high**.

Clade Ia MPXV epidemics in areas of DRC considered endemic for mpox (as defined by the national mpox program, which considered area with notified cases for at least five consecutive years), continue to be driven by a complex mix of zoonotic spillover events and person-to-person transmission. These outbreaks affect both adults and children, with an incidence largely reflecting the underlying population distribution in these areas, though with proportionally lower incidence in individuals over 50 years of age, likely linked to pre-existing immunity from smallpox vaccination. The

reported CFR in these areas from 1 January 2024 to 16 February 2025 has been higher than in non-endemic areas, estimated at 3.6% (1345 deaths among 43 295 suspected cases), compared to 4% reported in November 2024. In these endemic areas, the CFR remains similar to that reported in November 2024, with mortality generally (though not consistently) higher among children under five years of age (4.9%) than in older age groups (3.2% among those aged 5 – 14 years and 2.5% among those over 15 years of age). These estimates are largely based on syndromic surveillance, which is prone to biases due to potential misdiagnoses. Notably, the CFR in Kinshasa, where about 77% of available sequences are of clade Ia MPXV, remains low at about 0.4%, unchanged from November 2024 and similar to the CFR reported in the clade Ib MPXV outbreak in North and South Kivu. This raises questions about whether the higher CFR associated with clade Ia MPXV in endemic provinces is due to the context and vulnerability of the affected population, surveillance limitations, or characteristics of the clade itself. In these endemic provinces, challenges in clinical management are compounded by factors such as malnutrition, co-infections, and barriers to accessing quality health services, among others. Prior to 2024, evidence suggested that clade Ia MPXV outbreaks in the country were primarily caused by multiple zoonotic spillover events, which resulted in relatively short chains of human-to-human transmission. However, through the years, there were anecdotal reports of these chains growing longer, and 2024 data from Kinshasa show that clade Ia MPXV can be efficiently transmitted and sustained in human populations.

In other clade Ia MPXV – endemic countries, particularly the Central African Republic and the Republic of Congo, largely stable trends have been reported since November 2024. However, the emergence of additional cases in more urbanized areas, including Bangui in the Central African Republic and Kinshasa in DRC, has raised concerns about the heightened risk of international spread. This was demonstrated by a recent report from the Republic of Ireland, where a case of mpox due to clade Ia MPXV was detected in a traveler from DRC. This was the first documented human clade Ia MPXV detection outside endemic countries.

The overall public health risk posed by clade Ia MPXV is assessed as **moderate.** While the risk is primarily driven by the higher mortality reported in endemic areas, its potential for regional and global spread is considered more moderate compared to clade Ib MPXV. However, the situation in Kinshasa requires attention, as the risk there is assessed to be higher than in endemic areas, with currently no evidence to suggest that clade Ia and clade Ib MPXV in the Kinshasa context are epidemiologically distinct.

Mpox due to clade II MPXV (both clades IIa and IIb) has been endemic in West and Central Africa. In **Nigeria and other countries of West and Central Africa,** outbreaks were historically thought to be primarily linked to sporadic zoonotic spillover events in rural areas, with some phylogenetic analyses showing evidence of animal-to-human spillover. However, the outbreak that was first detected in Nigeria in 2017 and further led to the multi-country outbreak in 2022 highlighted the significant role of human-to-human transmission of mpox. To date, only clade IIb MPXV has been detected in Nigeria, and transmission is now thought to occur primarily through human-to-human contact.

Among other clade II MPXV – endemic countries, the outbreaks in **Côte d'Ivoire, Ghana and Liberia**, where co-circulation of clade IIa and clade IIb MPXV has been detected, also rose to prominence in late 2024, likely detected following the increase in surveillance activities after the declaration of the public health emergency of international concern (PHEIC). The detection of human cases of mpox due to clade IIa MPXV and its co-circulation with clade IIb MPXV in human populations, represent a new development, since prior to 2024, clade IIa MPXV had only rarely been detected, and even then, almost solely in animal populations. The transmission dynamics in Côte d'Ivoire, Ghana, and Liberia remain unclear since the limited outbreak investigations have yet to fully elucidate the modes of transmission. Nonetheless, preliminary indications from genomic sequencing suggest repeated zoonotic spillover events that may be followed by secondary human-to-human transmission. There is no evidence so far from the available genome sequencing data to suggest sustained human-to-human transmission of clade IIa MPXV. Outbreaks of mpox due to clade IIa MPXV in human populations have also been detected in **Guinea**, thus representing the first detection of clade IIa MPXV outbreaks in humans in four countries in Africa, a phenomenon not previously described before late 2024. Along with all mpox events since 2022, these outbreaks suggest a poorly understood phenomenon of emergence of several MPXV strains in human populations that are entirely susceptible to orthopoxviruses, indicating the potential for additional MPXV strains to emerge in this manner. Overall, the public health risk associated with clade II MPXV in historically endemic areas is considered **moderate**.

Clade IIb MPXV continues to circulate globally as part of the 2022-2025 multi-country mpox outbreak, with the majority of cases continuing to occur within linked sexual networks, particularly among men who have sex with men. The 2022-2025 multi-country outbreak reached its peak around July-August 2022, and incidence declined sharply in most

countries thereafter through a combination of factors including: a) behaviour change in at-risk groups through effective risk communication and community engagement; b) immunity due to infection, particularly among individuals with multiple sexual partners who were at the highest risk of exposure and onward transmission; and c) immunity due to vaccination, in the countries where vaccines were available and accessible.

During 2024 and early 2025, clade IIb MPXV circulation continued to be widely reported. The number of confirmed cases linked to clade IIb MPXV outbreaks globally averaged 855 cases per month over the past 12 months, peaking at just over 1200 cases per month from August to October 2024, followed by a downward trend in cases. Australia, which experienced a large outbreak in 2024, reached its peak in confirmed cases in September 2024, after which there was a decline for the rest of the year. Outbreaks continue to occur, and the virus is circulating in all WHO regions, including in areas that had previously achieved epidemic control.

Given the ongoing transmission and the continued occurrence of outbreaks, the overall public health risk associated with clade IIb MPXV is assessed as **Moderate**.

All countries remain at risk of importation of **all** MPXV clades. While some countries have established robust response mechanisms, such as early detection and exhaustive contact tracing that could help stop further spread, other countries are less prepared and are at a higher risk of silent circulation, especially where stigma and discrimination create barriers to access of diagnostic testing, clinical care services and implementation of prevention and control measures.

Despite significant progress in understanding human-to-human transmission of MPXV during the global outbreak since 2022 and to date in 2025, many knowledge gaps remain. The detailed epidemiology of the ongoing outbreaks in the DRC caused by the different clades, including in endemic areas, remains poorly understood. Transmission dynamics, key drivers, and the potential for spread through different modes of transmission all remain insufficiently studied and documented, including the role of asymptomatic or pauci-symptomatic infections. Additionally, gaps in understanding risk factors for severe disease, immunity following infection, and potential risk of recurrence or reinfection, among others, limit our risk analysis. Furthermore, little is known about animal reservoirs, incidental hosts, risk factors for zoonotic transmission, or the contribution of spillover events, whether in DRC or elsewhere.

In recent months, there have been improvements in access to diagnostics and vaccines through coordinated efforts by WHO and its partners. However, the current available vaccine supply remains limited compared to the current and future potential demand, underscoring the need for a targeted approach to ensure maximum benefit for populations at risk. Specific therapeutics, such as the antiviral tecovirimat, are not widely available in all settings; as studies are still ongoing, the current lack of evidence for the effectiveness in treating mpox limits its use in the countries reporting the highest number of cases.

The public health risk of mpox varies across different areas of Africa and the world. It is assessed based on four different categories, which differ in their geographic distribution, population groups affected, predominant modes of transmission, and the clades most commonly associated with infection in each group.

Given the high likelihood that existing and new MPXV strains will continue to emerge and spread within human populations, and the potential consequences, the **overall public health risk at the global level is assessed as Moderate.**

World Health Organization

Risk questions (assess scenario where no further interventions are implemented)

The below risk questions assess the global public health threat posed by mpox by evaluating its potential likelihood and consequences on human health, its spread, and the sufficiency of current control measures. For further details on the information provided in this table, please refer to the section on Supporting Information that follows.

Risk question Clade Ib MPXV		Assessment		Risk	Rationale
		Likelihood	Consequences		
Risk for human health	Global	Likely	Minor	Moderate	The main affected countries outside of the Democratic Republic of the Congo (DRC) remain Burundi, Kenya, Rwanda, and Uganda, with largely sporadic or travel-related cases continuing to emerge in other countries in Africa and other regions worldwide. The likelihood of ongoing transmission remains high in countries where cases are detected through event-based surveillance but are not formally reported to the WHO under the International Health Regulations (IHR 2005). The clinical presentation of clade Ib MPXV still typically involves lesions on the face, palms of the hands, feet, and other parts of the body. Among adults, the spread through sexual contact has been more than previously documented for clade Ia MPXV, and consequently, there have been more reports of affected individuals presenting with more mucosal lesions, and/or exclusively genital lesions, a pattern not commonly seen previously for clade Ia MPXV. In DRC and Burundi, the affected population predominantly includes young children and young adults, while in Kenya, Rwanda and Uganda, it primarily includes young adults. Clinical management has been symptomatic, and most cases have not required hospitalization or intensive care. In DRC, specific mpox treatment centres offering free-of-charge treatment and isolation have been put in place. However, current capacities are too insufficient for admission of all mpox cases, so those with less severe clinical presentation are isolated and treated at home or in special centres, such as camps for internally displaced persons. The health care of persons with mpox has been put at risk by renewed insecurity in North and South Kivu, as patients have fled treatment centres. In Burundi, all adult mpox cases are admitted for treatment and isolation, while children are admitted only if the illness is severe. In Uganda, cases are admitted for isolation and treatment. However, as admission capacities were overwhelmed when the outbreak in Uganda escalated during December 2024 and January 2025, patients with less severe clinical presentation were, in many instances, isolated and treated at home. In other countries in Africa, cases are typically subjected to hospital isolation as part of a precautionary approach where feasible for smaller outbreaks. The case fatality ratio (CFR) among suspected mpox cases due to clade Ib MPXV in South and North Kivu provinces of DRC is 0.2% based on data from 1 January 2024 to 16 February 2025 (23 662 suspected cases, including 44 deaths). This is a drop from 0.4% reported at the time of the previous rapid risk assessment in November 2024. During the same period (1 January 2024 – 16 February 2025), estimated CFR (among confirmed cases) for other countries experiencing community transmission of clade Ib MPXV has been as follows: • Kenya: 2.4% (42 confirmed cases, including one death), compared to 5.9% in November 2024; • Uganda: 0.7% (2949 confirmed cases, including 21 deaths), compared to 0.2% in November 2024; • Burundi: 0.03% (3463 confirmed cases, including one death), compared to 0% in November 2024; • Rwanda: 0% (102 confirmed cases; no deaths), same as in November 2024;

					• Zambia: 0% (19 confirmed cases; no deaths). Zambia had not reported experiencing community transmission by November 2024. No deaths have been reported in any other countries, either in Africa or elsewhere, that have reported travel-related cases. Factors that might explain the lower fatality in clade Ib MPXV – affected provinces in DRC compared to that reported in endemic areas with clade Ia MPXV circulation, include better surveillance in the affected provinces, resulting in the detection of milder cases and the capacity to confirm cases and deaths (unlike in endemic provinces, where most deaths remain among suspected cases and may be linked to other or concurrent illnesses). Other factors contributing to the lower fatality, include more timely access to care, better quality of care provided at mpox treatment centres, and the deletion (through sustained virus circulation) of a gene that expresses a complement control protein implicated as an MPXV virulence factor in clade Ia MPXV. However, the recent escalation of conflict in South and North Kivu provinces has severely disrupted the mpox response in the region, and the full extent of this disruption will become clearer in coming weeks. In Burundi, early diagnosis and the hospitalization of all cases among adults, as well as children with severe disease, might have contributed to the low fatality during the period under review. The deaths reported in Uganda (and one death in Kenya) have been reported mostly among people living with HIV, many without adequate antiretroviral therapy. These deaths in Uganda and Kenya highlight the risk of poor health outcomes in people living with HIV, as was documented for other clades. In the affected countries, a proportion of cases are linked to sexual contact within connected networks, including sex workers. The HIV prevalence in this population group is higher than the general population, which if untreated, puts them at higher risk of severe disease. Some mpox cases due to clade Ib MPXV have occurred in pregnant women, leading to more severe disease and poor pregnancy outcomes, including fetal loss. This information is being increasingly documented through field-based research. Overall, limited and delayed access to quality healthcare increase morbidity and mortality among affected cases. Rapid access to and provision of high quality symptomatic clinical care remain essential to prevent complications and ensure prompt recovery. No antiviral has been used for the treatment of clade Ib MPXV infection in countries reporting community transmission. **The risk for human health associated with clade Ib MPXV is, therefore, considered Moderate.** *For more information, please refer to the sections covering Epidemiological situation in DRC (clade Ia and clade Ib MPXV), Focus on Burundi and Uganda, and Focus on East Africa (clade Ib MPXV circulation outside DRC, Burundi, and Uganda).*
Risk of geographic spread	Global	Highly likely	Moderate	High	Clade Ib MPXV, estimated to have emerged in South Kivu in September 2023, continues to spread through human-to-human contact, without evidence of zoonotic exposure. As of 16 February 2025), clade Ib MPXV has been identified in eight provinces of DRC (compared to six provinces in November 2024): North Kivu, South Kivu, Tanganyika, and Haut-Katanga in the eastern part of the country – where it is the only strain detected, as well as in Tshopo, Kasai, Mai-Ndombe, and Kinshasa – provinces where clade Ia MPXV is known to be endemic and where co-circulation of clade Ib MPXV has now been reported. Community transmission also has been reported in:

					• Burundi: 3463 cases, including one death, compared to 1863 cases and no deaths in November 2024; • Uganda: 2949 cases, including 21 deaths, compared to 443 cases and one death in November 2024; • Rwanda: 102 cases and no deaths, compared to 37 cases and one death in November 2024; • Kenya: 42 cases, including one death, compared to 17 cases and one death in November 2024; • Zambia: 19 cases and no deaths, compared to only one travel-related case as of November 2024. As of 16 February 2025, Angola (two cases; no deaths), which had not reported clade Ib MPXV at the time of the last rapid risk assessment in November 2024, and Zimbabwe (one case; no deaths), where the situation has remained unchanged, have only reported cases linked to travel. Notably, although the case in Zimbabwe had a history of travel to Tanzania and mpox has been detected among travellers from Tanzania in other countries, at the time of writing, Tanzania has not reported any mpox cases, suggesting likely unreported transmission in the country. Furthermore, as of 16 February 2025, clade Ib MPXV has also been detected in 14 countries outside Africa (compared to five countries in November 2024) among individuals with recent international travel history to mpox-affected countries. The countries outside Africa which have reported travel-linked cases include the United Kingdom of Great Britain and Northern Ireland (nine cases, including six imported cases and three subsequent cases among contacts), China (seven cases, including two imported cases and five subsequent cases among contacts), Germany (seven cases, including four imported cases and three subsequent cases among contacts), Thailand (four cases, all importations), the United States of America (four cases, all importations), Belgium (three cases, including one imported case and two subsequent cases among contacts), Qatar (two cases, one importation and one unlinked case), Canada (one case), France (one case), India (one case), Oman (one case), Pakistan (one case), Sweden (one imported case), and the United Arab Emirates (one case). Overall, DRC has been continuously reporting relatively stable trends of mpox cases, averaging 2000 – 3000 suspected mpox cases per week since the last rapid risk assessment in November 2024. Although varying outbreak sizes have been observed in the high-burden provinces, stable trends have been reported across all these provinces in recent months. The situation in the country remains concerning since circulation of the virus continues at a high level. Furthermore, the recent escalation of armed conflict in the eastern part of the country has profoundly affected the mpox response, resulting in under-ascertainment and underreporting of mpox cases. The highest number of mpox cases in DRC continues to be reported in the South Kivu province, where 600 – 800 suspected cases have been reported per week since November 2024. The initial outbreak in South Kivu occurred predominantly among adults in the Kamituga health zone, with rapid amplification through high-risk sexual networks, including sex workers. However, as clade Ib MPXV spread across South and North Kivu, transmission expanded beyond sexual networks, resulting in an increasing proportion of cases among children. At the provincial level, the highest age-specific incidence continues to be observed among young children and young adults, suggesting that transmission occurs within households in addition to sexual transmission. However, transmission dynamics are highly heterogeneous, with variable age distribution across the provinces. Additionally, there have also been reports of transmission in hospital settings and Internally Displaced Persons' (IDP) camps. These trends remain challenging to interpret due to the lack of robust and consistent testing capacity. Burundi has been reporting declining trends in mpox cases since the last rapid risk assessment in November 2024.- Initially the country reported between 100 and 200 new confirmed cases per week, but this dropped to less than 100

					cases per week at the end of 2024. Cases have been reported in at least 94% (46 out of 49) of health districts, but the epidemic remains largely concentrated in and around the largest city, Bujumbura, and the capital, Gitega. The country also continues to observe a bimodal case distribution, with children under five years of age and young adults 20 – 29 years old disproportionally affected. However, unlike South Kivu, while children under five years of age initially accounted for more cases than young adults 20 – 29 years old, the latter age group has now become the most affected group in the last three months. Household, community, and sexual contact transmission have all been reported, but the contribution of each to the spread remains unclear. In contrast, Uganda has been reporting a continuous increasing trend in mpox cases since the last rapid risk assessment surpassing 300 new confirmed cases per week in recent weeks. Cases have been reported in at least 59.6% (87 out of 146) of districts, but the epidemic remains largely concentrated in and around the capital Kampala. Similar to South Kivu, the start of the outbreak in Uganda was characterized by a high mpox burden in young adults, including sex workers. As the outbreak grew, increasing numbers of infected adolescents were reported by the time of the last rapid risk assessment. However, since then, the majority of cases have remained among adults aged 20 – 29 and 30 – 39 years. Kenya, Rwanda, and Zambia, while also experiencing community transmission, have been reporting few, sporadic cases since the last rapid risk assessment. In Zambia, the reporting of community transmission is more recent, and investigations are ongoing to better characterize the outbreak. In Kenya and Rwanda, cases have been reported predominantly among adults, particularly long-haul truck drivers, sex workers, and traders who frequently cross borders with affected countries, as well as their contacts. This is similar to the epidemiological profiles observed in the initial phases of the outbreak in eastern DRC, Burundi and Uganda, highlighting the risk that these epidemics may continue to spread, if efforts to contain them are not scaled up, potentially leading to more widespread community transmission across various age groups. The relative contribution of each mode of transmission to the overall spread is not always clear and may vary in different settings based on the social interactions and demographics affected in each area. While new geographic clusters and international spread appear to be driven mainly by infection among adults – often with evidence of transmission through sexual contact – the extent to which outbreaks are sustained through different modes of direct or indirect (e.g., via fomites) person-to-person contact remains uncertain. Notably, more recent information available to WHO indicates that genomic sequencing analysis of a partial MPXV sequence from a sample of a recent case in the **Republic of Congo** suggested that the case was infected with clade Ib MPXV. Efforts to support the country in investigating this are underway, and if confirmed, this will be the first detection of clade Ib MPXV ever reported in the **Republic of Congo**. This was reported in the context of a very recent increasing trend in weekly cases in the country, which included the detection of cases with recent travel to DRC. With surveillance limitations, and low disease severity, there is a high probability of under-detection in many areas and among specific demographic groups, particularly high-risk sexual networks and sex workers, who may be a hard-to-reach population, with fewer economic means and at risk of social stigmatization. Due to limited resources and incomplete information shared by persons with mpox, contact tracing activities are sub-optimal, which hinders early case detection and interruption of chains of transmission.

					As such, the risk of geographic spread associated with clade Ib MPXV is considered High. *For more information, please refer to the sections covering Epidemiological situation in DRC (clade Ia and clade Ib MPXV), Focus on Burundi and Uganda, and Focus on East Africa (clade Ib MPXV circulation outside DRC, Burundi, and Uganda).*
Risk of insufficient control capacities	Global	Highly likely	Moderate	High	The emergence and rapid spread of clade Ib MPXV in South Kivu and its subsequent expansion to neighbouring provinces and countries underscore the significant challenges these regions face in curtailing the spread of the virus. The affected areas, which had little prior experience with mpox, have struggled to implement effective containment measures. The healthcare systems in affected countries continue to face challenges in scaling up diagnostic, surveillance, and treatment capacities in response to mpox. As such, case identification, testing, isolation and contact tracing remain – in many parts – inadequately supported. Some of the affected areas, like North and South Kivu, are also facing multiple ongoing emergencies, including the recent escalation in conflict between government and rebel forces which has exacerbated pre-existing crises (including other disease outbreaks) and forced a pause in most mpox response activities. The displacement of people in the region, including patients who have been forced to flee from treatment centres to relatively safer areas, poses a heightened risk of mpox spread to areas that had previously been unaffected or had started to bring their outbreaks under control. This ongoing conflict has placed enormous strain on the already weakened health system, with over 4000 injuries and 900 deaths reported in the current conflict, overwhelming health facilities and morgues. Additionally, there have been multiple reports of attacks on health care facilities, including the looting of medical supplies. This situation has left the affected populations even more vulnerable effectively halting most efforts to establish and maintain a robust response to the mpox outbreak in these areas. Mpox outbreak response activities had been ongoing in most other settings, yet they had not been sufficient to contain transmission in many areas, as demonstrated by continued high incidence in DRC and Burundi, as well as the exponential increase in cases reported from Uganda. The global clade IIb MPXV outbreak highlighted the importance of risk communication and community engagement (RCCE) for behaviour change in controlling the outbreak. In the current outbreak, the involvement of sex workers and high-risk sexual networks in the transmission chains introduces additional challenges, as these networks are often less visible and harder to reach with traditional public health interventions, requiring engagement through specific health services and community organizations, including through HIV control programs. Furthermore, due to limited social and behavioural data and research for a better understanding of community concerns/drivers of risky behaviours and lack of sufficient trained and experienced risk communication and community engagement (RCCE) workforce on the ground, RCCE interventions, including messaging, engaging communities and infodemic management, require sustained effort to achieve and maintain effective impact. In addition, with increasing numbers of cases being infected within the community, the lack of adequate space, as well as insufficient infection prevention and control (IPC) measures for isolation in the household have led to exposure and infection of household members. Suboptimal IPC conditions in mpox treatment centres, combined with contact between non-infected family members and cases in these facilities, present a risk of secondary infections, undermining the benefits of these treatment facilities.

					The continued exportation of mpox cases into less-affected neighbouring countries like Kenya and Rwanda has further complicated control efforts. The risk that control capacities will be insufficient to prevent further spread remains high. Cross-border population movement is common in these regions, and while cross-border surveillance activities are in place at several border crossings, not all cases have clear mpox signs and symptoms, making detection challenging. Among countries reporting community transmission of clade Ib MPXV, DRC, Rwanda, and Uganda have begun mpox vaccination activities, targeting mainly frontline and health workers, contacts of cases and other at-risk populations such as sex workers. However, the number of doses administered so far has been too limited to alter the trajectory of the outbreak and these efforts must be urgently scaled up. **Given the factors outlined above, the risk of insufficient control capacities associated with clade Ib MPXV is considered High.** *For more information, please refer to the sections covering Epidemiological situation in DRC (clade Ia and clade Ib MPXV), Focus on Burundi and Uganda, and Focus on East Africa (clade Ib MPXV circulation outside DRC, Burundi, and Uganda).*

Risk question Clade Ia MPXV		Assessment		Risk	Rationale
		Likelihood	Consequences		
Risk for human health	Global	Likely	Moderate	High	**Historically clade Ia MPXV-endemic areas in DRC** Mpox-endemic provinces in the Democratic Republic of the Congo include Equateur, Sankuru, Tshuapa, Tshopo, Nord Ubangi, Bas Uele, Sud-Ubangi, Mongala, Kwilu, Mai-Ndombe and Maniema. In these mpox-endemic provinces of DRC, which account for the majority of mpox cases due to clade Ia MPXV reported globally, the overall CFR among suspected cases from 1 January 2024 to 16 February 2025 is about 3.6% (43 295 suspected cases, including 1345 deaths). This is a drop from 4% reported during the previous rapid risk assessment. In these endemic provinces, the CFR is generally (though not consistently) higher among children under five years of age (4.9%) than in older age groups (3.2% among those aged 5 – 14 years and 2.5% among those over 15 years of age). The clinical presentation of clade Ia MPXV is similar to that of clade Ib MPXV, with lesions on the face, palms of the hands, feet, as well as other parts of the body. Like in areas predominantly affected by clade Ib MPXV, the approach to case management is symptomatic and specific mpox treatment centres offering free-of-charge treatment and isolation have been established. As current capacities are too insufficient for the admission of all mpox cases, those with less severe clinical presentation are often isolated and treated at home. Notably, endemic provinces currently have less diagnostic capacity than most areas predominantly affected by clade Ib MPXV. The majority of deaths of mpox cases are, therefore, among suspected cases, clinically compatible with mpox, but not confirmed by PCR testing. The limited testing and confirmation make it challenging to make mortality

					comparisons between areas and between circulating clades in DRC. The higher reported mortality, compared to what is reported from most areas with predominantly clade Ib MPXV circulation, may be due in part to the differences in affected demographic groups (with young children in the areas predominantly affected by clade Ia MPXV appearing to have a higher mortality than adults), differences in surveillance and case ascertainment in a context of more limited testing capacity, and challenges accessing health care, as well as potential compounding factors such as childhood malnutrition (which is a hypothesis as evidence for a link with malnutrition is lacking), and a higher prevalence of co-infections. Severe outcomes have also been reported among pregnant women with mpox, including an increased risk of miscarriage and stillbirth. Challenges in early diagnosis along with barriers to accessing healthcare and medication further compound the risk. Results from an interim analysis of data from the PALM 007 clinical trial of the mpox antiviral tecovirimat released in August 2024 had already showed that the drug did not lead to improved outcomes overall when used in individuals affected by clade Ia MPXV. An overall mortality of 1.7% among study participants, regardless of whether they received the drug or not, was reported. This CFR is still considerably higher than that seen for clade Ib MPXV. Nonetheless, the mortality seen in both study arms was much lower than that historically reported for mpox due to clade Ia MPXV, indicating that better outcomes among mpox cases can be achieved when cases are hospitalized and provided high-quality supportive care. This study was not powered to assess possible effectiveness in severe versus non-severe cases, in different age groups or in persons with immune deficiencies. However, additional analyses are underway to further understand the observed outcomes, including whether there were any significant differences in clinical outcomes by days of symptoms prior to enrolment, or participant characteristics. Vaccination has started in four endemic provinces (Equateur, Sankuru, Sud Ubangi and Tshopo), targeting mainly frontline workers and contacts of cases. However, the number of doses administered so far has been too limited to change the trajectory of the outbreak and these efforts urgently need to be rapidly scaled up. **Focus on Kinshasa** After brief mpox outbreaks in Kinshasa in 2023 which were contained, the city has experienced an expanding epidemic since August 2024, with nearly 200 confirmed cases reported weekly in recent weeks, predominantly among adults. This is an increase from 40 - 50 confirmed cases per week reported during the last rapid risk assessment. Co-circulation of clades Ia and Ib MPXV continues, with sequencing data indicating that approximately 77% of the cases are due to clade Ia MPXV. Despite that severity and mortality remain low, with 10 deaths reported among 2655 suspected cases (CFR 0.4%), unchanged from the previous rapid risk assessment. This epidemiology in Kinshasa suggests that the severity of mpox due to clade Ia MPXV may be similar to that of mpox due to clade Ib MPXV when transmission occurs in similar settings and population groups. This emphasizes the need for further investigation into the differences in mpox severity based on clade and populations affected. **Historically clade Ia MPXV-endemic countries outside DRC** Countries outside DRC considered to be endemic for clade Ia MPXV include Cameroon, the Central African Republic, Gabon and the Republic of Congo in Central Africa, as well as Sudan and South Sudan in East Africa. Mpox cases due to

					clade Ia MPXV in these countries are reported to occur sporadically, with the Central African Republic (99 cases, including three deaths; CFR 3.0%) and the Republic of Congo (34 cases; no deaths) reporting the highest number mpox cases in this sub-category from 1 January 2024 to 16 February 2025. During this period, the Central African Republic is the only country in this sub-category that has reported deaths among confirmed mpox cases due to clade Ia MPXV (CFR – 3.0%, similar to 2.8% reported during the previous rapid risk assessment in November 2024). One of these deaths involved a woman who was 8 months pregnant and was diagnosed with HIV upon admission. This further highlights the risk of poor health outcomes in people living with uncontrolled HIV, similar to what has been observed with other clades. Considering the uncertainty around the drivers of mortality for mpox due to clade Ia MPXV, the consequence is assessed as Moderate, unlike that of other clades and geographic areas where the consequence is assessed as Minor. **Given the factors outlined above, the overall risk for human health associated with clade Ia MPXV is considered High.** *For more information, please refer to the section covering Focus on Central Africa (clade Ia MPXV circulation outside DRC).*
Risk of geographic spread	Global	Likely	Minor	Moderate	**Historically clade Ia MPXV-endemic areas in DRC** In endemic parts of the country, clade Ia MPXV transmission has been thought to be linked to sporadic zoonotic events followed by secondary human-to-human transmission, which may not sustain the virus within the population. The age and sex distribution of suspected and confirmed mpox cases generally reflects that of the broader population, except for older adults who are significantly less affected. This is, likely due to prior smallpox vaccination or previous exposure to mpox. Since the cessation of smallpox vaccination in the 1980s, immunity in the population has waned over time, leading to a gradual increase in adult mpox cases. With the rising number of cases in more recent years, there has also been a geographical expansion of clade Ia MPXV from provinces considered mpox-endemic to other provinces in the country. This expansion is thought to be partially driven by socio-economic change, including increased population movements across the country, as well as changes in the interaction with wildlife as wild game products also become more widely available through commerce, including by riverboat. However, many factors contributing to this geographic expansion remain poorly understood. Outbreaks occurring in remote rural areas may largely be self-limiting, but exact transmission dynamics are not fully elucidated, especially those following a zoonotic event. It is important to recall that the first documented cluster of cases associated with sexual transmission in DRC occurred in Kwango Province from March to April 2023 among men who have sex with men, with one woman also affected in this cluster. Furthermore, the spread of clade Ia MPXV to Kinshasa, along with indications of specific clusters with sustained growth, including in peri-urban and urban areas, coupled with recent evidence of a higher proportion of APOBEC3-type mutations in clade Ia MPXV sequences, suggests that sustained human-to-human transmission is likely occurring with clade Ia MPXV as well. Despite the longer history of MPXV in these areas, current control measures have not been successful in containing its spread. Surveillance activities are suboptimal, and it is likely that not all cases are detected. Case isolation in health facilities is constrained by the limited available space and lack of support for meals and other commodities, and isolation at home is often under suboptimal infection prevention and control measures which leads to intrahousehold transmission. Moreover, contact tracing activities are not effective and timely to allow early diagnosis and interruption of the chains of transmission.

					Nevertheless, the provinces where clade Ia MPXV has been detected have largely experienced stable trends in recent months. In Equateur province, the province historically most affected by mpox in the country, the trend has been relatively stable since June 2024, with less than 200 suspected cases reported per week. **Focus on Kinshasa** Outbreaks are increasingly being seeded in other parts of the country, including in the capital Kinshasa, where for the first time, sustained human-to-human transmission of clade Ia MPXV was documented in 2024. Unlike the brief mpox outbreaks in Kinshasa in 2023 which were contained, an epidemic which has been expanding since August 2024 has been ongoing in Kinshasa, with close to 200 confirmed cases reported weekly over the last few weeks, predominantly among adults. This is an increase from 40 - 50 confirmed cases per week reported during the last rapid risk assessment in November 2024. Co-circulation of clades Ia and Ib MPXV continues, and sequencing data suggest that about 77% of the cases are due to clade Ia MPXV. Transmission patterns in Kinshasa likely differ from rural areas and appear to also involve sexual contact and sex workers, with proportionally more adults than children affected, similar to what was observed in new clade Ib MPXV outbreaks elsewhere. The epidemic in Kinshasa presents significant risk of spread nationally and internationally, given that it is well connected relative to other parts of the country and is affecting populations linked through sexual networks. This risk of geographic spread was recently highlighted when the Republic of Ireland reported the first case of mpox due clade Ia MPXV outside endemic countries in February 2025. . **Historically clade Ia MPXV-endemic countries outside DRC** Historically endemic countries in Central Africa are Cameroon, the Central African Republic, Gabon and the Republic of Congo, while those in East Africa include Sudan and South Sudan. In all these countries, only clade Ia MPXV has been reported so far, except in Cameroon where both clade Ia MPXV and clade IIb MPXV have long been detected. From 1 January 2024 to 16 February 2025, the Central African Republic reported the largest clade Ia MPXV outbreak (99 cases, including three deaths; CFR 3.0%) outside the DRC, followed by the Republic of Congo (34 cases; no deaths). Although both countries experienced more concerning trends earlier in 2024, they have largely observed more stable trends since the last rapid risk assessment. However, the Republic of Congo has only recently started reporting an increase in weekly cases. Investigations are underway to determine the cause of this increase. Mpox cases due to clade Ia MPXV in these countries have historically been reported to occur sporadically. Clusters often present with one or two initial cases who are ill, and further case investigations to identify additional cases tend to yield very limited data on the origin of the outbreak and likely transmission dynamics. Even in Sudan, where major mpox outbreaks were documented in camps for internally displaced persons from May 2022 to April 2023, surveillance remains limited. This situation has been worsened by the political instability in the country since April 2023. Nonetheless, limited evidence suggests that in these countries, transmission is likely due to repeated zoonotic spillover events followed by limited human-to-human transmission. Recent outbreaks have been reported in urban areas, with clusters of cases in the capitals of the Central African Republic (Bangui) and the Republic of Congo (Brazzaville) in 2024. The emergence of mpox in these highly urban areas, which have international travel links, poses a risk of importing mpox cases from other regions and spreading clade Ia MPXV

					internationally. This risk has already been demonstrated by the exportation of an mpox case from the DRC to the Republic of Ireland. The combination of expanding outbreaks within endemic areas in DRC and the Central African Republic, the presence of clade Ia MPXV outbreaks in urban Kinshasa, including among sexual networks, as well as in the highly urbanized cities of Bangui and Brazzaville, poses an increased risk of geographical spread, albeit lower than that posed by clade Ib MPXV. **The overall risk of geographic spread associated with clade Ia MPXV is, therefore, considered Moderate.** *For more information, please refer to the section covering Focus on Central Africa (clade Ia MPXV circulation outside DRC).*
Risk of insufficient control capacities	Global	Likely	Minor	Moderate	In mpox-endemic areas, the health system faces significant constraints, making it challenging to manage outbreaks effectively. Limited access to healthcare, inadequate disease surveillance, particularly testing capacity, and logistical difficulties contribute to the problem. Despite the frequent occurrence of outbreaks in these regions, the ability to detect, isolate, and treat cases, as well as conduct contact tracing, remains insufficient. The large number of reported mpox cases further strains the response capacity, which is already burdened by other infectious diseases like malaria and measles, competing for limited resources. Socio-economic factors, including poverty, malnutrition, and limited access to healthcare, exacerbate the insufficiency of capacity to control the virus. In DRC, the ongoing mpox response has designated mpox treatment centres which offer free case management in most provinces, but many of these are in poor condition, especially in Equateur province, which is historically the most affected area of DRC. Given these challenges, it is likely that control capacities in endemic areas will remain insufficient to manage future outbreaks effectively, resulting in a high risk of continued and possibly escalating transmission in these areas. Some of the affected provinces in DRC (Equateur, Sankuru, Sud Ubangi and Tshopo) and the Central African Republic have started administering mpox vaccines to priority groups such as frontline workers and contact of cases, but the number of administered doses remains low, compared to the populations at risk in these areas. Regarding zoonotic transmission, targeted interventions are hampered by the lack of understanding of the animal reservoir and drivers for transmission. **Focus on Kinshasa** In Kinshasa, some of the main challenges relate to the implementation of public health measures among key demographic groups affected, including high-risk sexual networks and hard-to-reach populations, compounded by population movement and challenges associated with high population density in an urban environment. In this context, stigma and discrimination also contribute to limiting access to necessary health services. Health authorities have started administering mpox vaccines to priority groups such as frontline workers and contact of cases, but the number of administered doses remains low, compared to the populations at risk in these areas. **Therefore, the risk of insufficient control capacities associated with clade Ia MPXV considered Moderate.** *For more information, please refer to the section covering Focus on Central Africa (clade Ia MPXV circulation outside DRC).*

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Risk question Clade II MPXV (historically endemic areas)		Assessment		Risk	Rationale
		Likelihood	Consequences		
Risk for human health	Global	Likely	Minor	Moderate	**Countries considered clade II MPXV-endemic** remain Cameroon in Central Africa, as well as Benin, Côte d'Ivoire, Ghana, Liberia, Nigeria and Sierra Leone in West Africa. All of these countries except Benin reported cases from 1 January 2024 to 16 February 2025, as follows: Nigeria (242 cases, including one death; CFR 0.4%), Côte d'Ivoire (110 cases, including one death; CFR 0.9%), Liberia (70 cases; no deaths), Sierra Leone (22 cases; no deaths), Ghana (5 cases; no deaths). Mpox cases due to clade II MPXV have historically been reported to be sporadic in these countries, except in Nigeria, where large outbreaks have been reported in recent years. Identified cases typically present with vesiculopustular skin and mucosal eruptions spread throughout the body, face, as well as genitalia, especially in countries with better epidemiological descriptions such as Nigeria. Treatment is mostly symptomatic, while more severe cases are hospitalized. Access and quality of care vary broadly between different settings, as do the case management and case isolation practices. Before 2022, the CFR for mpox due to clade II MPXV in **Nigeria** was estimated at 3.6% (95% CI: 1.7%-6.8%). Since then, CFR has dropped to less than 1%, with one mpox-related death reported in the country since the start of 2024. From 1 January 2024 to 16 February 2025, other deaths among confirmed mpox cases linked to historically clade II MPXV-endemic areas were also reported in **Cameroon**, with two deaths among nine confirmed cases (CFR – 22.2%, compared to 33.3% reported in the last rapid risk assessment and **Côte d'Ivoire**, with one death reported among 110 confirmed cases (CFR – 0.9%, similar to 1.1% reported in the last rapid risk assessment). In these areas, as everywhere, mpox represents a higher risk for those with co-morbidities, especially those with compromised immune systems, such as people with uncontrolled HIV. Viral load testing for people living with HIV is not consistently available, and HIV services, including screening, are not routinely integrated in many countries. Antivirals, like tecovirimat, are not routinely available for the treatment of mpox cases in any of these countries. While Nigeria has received vaccine doses and initiated vaccination efforts targeting mainly frontline workers and contacts of cases, the impact of these interventions is yet to be demonstrated given the small number of persons vaccinated. **The overall risk for human health posed by clade II MPXV is considered Moderate.** *For more information, please refer to the section covering Focus on West Africa (clade II MPXV circulation endemic areas).*
Risk of geographic spread	Global	Likely	Minor	Moderate	**Historically clade II MPXV-endemic countries in Africa** Countries where mpox due to clade II MPXV is considered endemic remain **Cameroon in Central Africa**, as well as **Benin, Côte d'Ivoire, Ghana, Liberia, Nigeria** and **Sierra Leone in West Africa**. All of these countries except Benin reported cases from 1 January 2024 to 16 February 2025, as follows: Nigeria (242 cases, including one death; CFR 0.4%), Côte

					d'Ivoire (110 cases, including one death; CFR 0.9%), Liberia (70 cases; no deaths), Sierra Leone (22 cases; no deaths), Ghana (5 cases; no deaths). Historical descriptions had linked the disease to sporadic zoonotic spillover events, but since the 2017 – 2018 outbreak in Nigeria of clade IIb MPXV, there have been more indications of human-to-human transmission, including sexual and non-sexual contact that led to international spread. Clade IIb MPXV is thought to have emerged from animal populations but has, only been detected in the human population to date. While the majority of cases in these countries had historically been linked to clade IIb MPXV, human cases of mpox due to clade IIa MPXV, previously reported almost solely in animals, have been reported. The cases were reported in Côte d'Ivoire, Ghana, Guinea and Liberia in 2024. In Liberia in particular, and to a much smaller extent in Côte d'Ivoire and Ghana, clade IIa MPXV and clade IIb MPXV are reported to be co-circulating. In these countries, limited outbreak investigations still have not elucidated the modes of transmission, but preliminary indications from genomic sequencing analysis as well as observations of a continued increase in the number of cases (albeit with lower incidence than reported in the last rapid risk assessment in November 2024), across different areas of the countries, affecting mostly adults, suggests repeated zoonotic spillover events followed by secondary human-to-human transmission. Currently, there are no reliable data quantifying the contribution of zoonotic versus human-to-human transmission in any of these countries. Epidemiological information on the groups most at risk of mpox infection also remains inconclusive. Among reported cases in Nigeria, males had constituted about two-thirds of cases in 2024, but social and legal constraints in the country may hinder our understanding of the full extent of transmission among men who have sex with men.. **The risk of geographic spread associated with clade II MPXV is, therefore, considered Moderate.** *For more information, please refer to the section covering Focus on West Africa (clade II MPXV circulation endemic areas).*
Risk of insufficient control capacities	Global	Likely	Minor	Moderate	The situation remains largely unchanged since the last rapid risk assessment. In endemic countries, the capacity to control outbreaks is generally compromised by several challenges, such as limited healthcare infrastructure, underfunded public health systems, and insufficient access to diagnostic and treatment resources. Given the lower mortality of mpox compared to other epidemic-prone diseases in these areas, mpox has not been prioritized. Even though some of these areas have had a long history of mpox, the multiple competing public health priorities drain resources and overwhelm public health infrastructure. The lack of widespread access to vaccination and adequate resources for optimal clinical care further exacerbates the situation, as does the challenge of effectively isolating and treating cases in resource-limited settings. Additionally, the socio-economic conditions in some areas, including poverty and limited education, hinder public health messaging and community engagement efforts, making it difficult to achieve widespread behavioural change needed to control zoonotic as well as human-to-human transmission. As a result, while some control measures are in place, the risk remains moderate due to the potential for systems to be quickly overwhelmed, and the fact that several major urban areas in these countries have reported mpox cases.

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					Among these countries, only Nigeria has received vaccine doses and vaccination has finally begun, targeting mainly frontline workers and contacts of cases, but the impact of such interventions is yet to be demonstrated given the small number of persons vaccinated. Regarding zoonotic transmission, targeted interventions are hampered by the lack of understanding of the animal reservoir and drivers for transmission. **The overall risk of insufficient control capacities associated with clade II MPXV is considered Moderate.** *For more information, please refer to the section covering Focus on West Africa (clade II MPXV circulation endemic areas).*

Risk question **Clade IIb MPXV (global outbreak)**		**Assessment**		**Risk**	**Rationale**
		Likelihood	**Consequences**		
Risk for human health	Global	Unlikely	Minor	Low	**Clade IIb MPXV global outbreak** During the ongoing 2022-2025 outbreak which affects many countries experiencing mpox for the first time, clinical manifestations of the disease have varied widely. Cases ranged from asymptomatic or pauci-symptomatic infections to presentation with few lesions (sometimes just one) in localized body areas, including mucosa and genitalia, or many lesions including confluent lesions or full-body rashes and, in some cases, severe multi-organ disease and death. The summary statistics describing these cases have remained largely unchanged from those reported in the rapid risk assessment. Overall, among confirmed cases for whom detailed data are available as of 31 January 2025, 86.9% identified as men who have sex with men and 51.4% reported living with HIV. Only 1% of cases have been reported in children under 18 years of age. Case management often includes symptomatic pain management, and for more severe cases the use of the antiviral tecovirimat when available. Approximately 9% of affected cases required hospitalization, and overall mortality has been about 0.3%, among the lowest recorded CFR estimates for mpox. This may be due to differences in surveillance compared to historical surveillance data, with expanded surveillance and testing, as well as the demographics of the population affected, with most cases affecting young (including adolescents) and middle-aged men. As with other clades, studies and surveillance data analyses on the clade IIb MPXV outbreak have shown that the main risk factor for severe mpox disease and death is a compromised immune system, due either to uncontrolled or advanced HIV disease in key populations or other immunosuppressive conditions, such as advanced diabetes. The highest burden has been among men who have sex with men, particularly those in highly connected sexual networks, with severe cases occurring mostly among those with uncontrolled HIV infection. These population groups have a higher HIV prevalence and adherence to antiretroviral treatment varies between different areas. As such, outbreaks among people with uncontrolled HIV, such as seen in South Africa in 2024 can lead to high case fatality ratio (3 deaths among 25 cases, CFR

					12%). Children and women have accounted for approximately 1% and 3% of the mpox outbreak in these settings, respectively, with very low morbidity and mortality observed overall. Among the 63 pregnant women for whom data were available in the global surveillance system, none have died or reported miscarriage as of January 2025, however, the extent of follow-up following initial diagnosis is unknown. Some of the affected countries have had access to antiviral treatment, through their national regulatory authorities, study protocols, or the compassionate use reserve managed by WHO and have used it for the management of more severe cases. The first cases of resistance to this antiviral have also been reported, potentially impacting its use in the future. Several high-income countries have acquired and distributed vaccines for the most affected group of men who have sex with men during the peak of the outbreak in 2022-2025, which has been shown in observational vaccine effectiveness studies to prevent infection and lower disease severity among breakthrough cases. **The risk for human health associated with clade IIb MPXV is considered Low.** *For more information, please refer to the section covering Focus on global clade IIb MPXV outbreak (clade IIb MPXV circulation outside Africa).*
Risk of geographic spread	Global	Likely	Minor	Moderate	**The spread of clade IIb MPXV** in the 2022 – 2025 outbreak represents the largest recorded outbreak of mpox. During 2024 and early 2025, clade IIb MPXV circulation continued to be reported across the world. The number of confirmed cases linked to clade IIb MPXV outbreaks outside Africa averaged just over 855 cases per month over the past 12 months, peaking at just over 1200 cases per month from August to October 2024, after which there has been a marked downward trend in cases since. Australia, which experienced an unprecedentedly large outbreak in 2024, experienced its peak in confirmed cases reported monthly in September 2024, before observing a downward trend for the rest of the year. This 2022 – 2025 outbreak continues to primarily affect, adult men who have sex with men, who are part of sexual networks with multiple partners. This outbreak was also the first to document and describe the significant role of sexual contact in the transmission of MPXV. Initially thought to be unique to clade IIb MPXV, recent evidence suggests that potentially all MPXV clades can be transmitted through sexual contact. Transmission through sexual contact involves close skin and mucosal contact, as well as exposure to sexual fluids, which have been found to carry the virus. While the clade IIb MPXV outbreak in newly affected countries included women and children, it did not lead to sustained transmission within these groups. The secondary attack rate has been reported to be below 10% for non-sexual contacts, but significantly higher for sexual contacts. Estimating the exact rate of sexual contact transmission has been challenging due to the nature of some multiple sexual partnerships, stigma and discrimination, or reluctance of some individuals to disclose complete information about their sexual contacts. Although outbreaks were eventually brought under control through the involvement of affected communities, behavioural changes (such as reducing the number of sexual partners), isolation of cases, early diagnosis, and preventive vaccination, where available, cases and local outbreaks continue to be reported in many countries, including the outbreak in South Africa mid-2024 and the large outbreak in Australia, indicating that undetected community

					transmission is still occurring. It is unclear if asymptomatic, presymptomatic or pauci-symptomatic transmission might play a role in keeping the virus circulating among men who have sex with men. The route of transmission through anal sex is also thought to play a role in the persistence of transmission but the evidence is not conclusive. This ongoing transmission poses a continuing challenge to controlling and eliminating human-to-human clade IIb MPXV transmission outside Africa. Despite outbreak response activities, contact tracing for mpox in these settings has also not been optimal due to the reluctance of persons with mpox to share information about their sexual contacts, therefore, efforts to interrupt all chains of transmission have not always been successful. While cases among men who have sex with men are likely to continue occurring, current data suggest that transmission is unlikely to spread extensively beyond this particular risk group. This population is nevertheless also at risk of infection with other clades circulating in Africa. **The overall risk of geographic spread associated with clade IIb MPXV is, therefore, considered Moderate.** *For more information, please refer to the section covering Focus on global clade IIb MPXV outbreak (clade IIb MPXV circulation outside Africa).*
Risk of insufficient control capacities	Global	Likely	Minor	Moderate	The ongoing 2022-2025 outbreak highlighted significant gaps in the preparedness and response capacities of countries newly affected by clade II MPXV. Many of these areas had never experienced MPXV before, including countries in Africa, leading to delays in recognition and response. Early in the outbreak, these regions struggled with limited diagnostic capabilities, insufficient contact tracing, and a lack of familiarity with the disease, which allowed the virus to spread rapidly before adequate measures were implemented. Currently, most countries have diagnostic capacities to detect mpox, nevertheless, disease incidence in most settings remains very low and case detection is not always timely. Contact tracing efforts were not always effective in these settings, where most cases were among men who have sex with men who were reluctant to share information about their sexual contacts. While the provision of vaccines and public health guidance helped bring the peak of outbreak under control, several countries still face challenges in maintaining adequate surveillance and eliminating human-to-human transmission of clade IIb MPXV. The ongoing reports of new cases suggest that undetected community transmission continues to occur, indicating that control capacities are not preventing further spread as interest in mpox has waned. Furthermore, severe outcomes have been reported in pregnant women with mpox, including an increased risk of miscarriage and stillbirth. Challenges in early diagnosis, along with barriers to accessing healthcare and medication, further compound the risk. Results from an interim analysis of data from the Study of Tecovirimat for Mpox (STOMP) clinical trial of the mpox antiviral tecovirimat released in December 2024 showed that while the drug is safe, it did not reduce the time to lesion resolution or have an effect on pain among adults with mild to moderate mpox due to clade II MPXV and a low risk of developing severe disease. The design of the study did not allow for conclusions about the efficacy of tecovirimat in participants with, or at elevated risk for, severe mpox due to clade II MPXV. Further analyses of the study data are ongoing. These results are consistent with those of the PALM 007 trial announced earlier in 2024.

					While the risk of insufficient capacity to control outbreaks of clade IIb MPXV appears to be low for most regions with low case numbers, controlled outbreaks and good response capacity, it is not homogeneous across regions. The global probability of lacking control capacity is therefore considered as likely and the risk of having new uncontrolled outbreaks is assessed as moderate, while recognizing that in some regions, the risk is low. *For more information, please refer to the section covering Focus on global clade IIb MPXV outbreak (clade IIb MPXV circulation outside Africa).*

Major actions recommended by the risk assessment team

	Action	Timeframe
☒	Refer the event for review by IHR Emergency Committee for consideration as a PHEIC by DG (Art 12, IHR)	Select.
☐	Immediate activation of ERF response mechanism (IMS) as urgent public health response is required	Not applicable
☐	Recommend setting up of grading call	Not applicable
☐	Immediate support to response,(no grading recommended at this point in time)	Not applicable
☐	Rapidly seek further information and repeat RRA (including field risk assessment)	Not applicable
☒	Support Member State to undertake preparedness measures	Continuous
☒	Continue to closely monitor	Continuous
☐	No further risk assessment required for this event, return to routine activities	Not applicable

WHO Immediate actions at Global level

1. Convening of the IHR (2005) Emergency Committee to review findings of the rapid risk assessment and progress of the response to advise the WHO Director-General on whether this event still constitutes a public health emergency of international concern.
2. Issuing of Temporary Recommendations by the WHO Director-General, if applicable.
3. Finalization and dissemination of the extension to the Mpox Strategic Preparedness and Response Plan and Monitoring and Evaluation Framework.
4. WHO and partners to continue to provide coordination and technical support to countries to:
    - strengthen mpox surveillance, including strengthening the use of diagnostic algorithms, collecting and transporting of samples, and strengthening laboratory capacity to detect all MPXV clades;
    - strengthen case management capacity and improve access to optimized case for patients, as well as strengthen infection prevention and control in treatment structures, congregate settings, and home care settings;
    - strengthen risk communication, community engagement, and infodemic management interventions, based on social behavioural data and community listening;
    - support the strategic allocation, timely delivery, and expedited uptake of medical countermeasures for outbreak response, especially mpox vaccines.

Supporting information

Hazard assessment

Mpox is an infectious disease caused by the monkeypox virus (MPXV), which is part of the genus *Orthopoxvirus*, that includes the variola virus, the causative agent for smallpox. There are two known clades of MPXV: clade I (previously called the Congo Basin clade), which includes subclades Ia and Ib; and clade II (previously called the West Africa clade), which includes subclades IIa and clade IIb. Subclades Ia and Ib were defined after the emergence of subclade Ib in the South Kivu province of DRC in 2023, and subclade Ia is currently considered to encompass all other strains of clade I that are not Ib.[1]

Historically mpox has been primarily characterized by zoonotic transmission, with outbreaks occurring in tropical rainforest regions of East, Central and West Africa, with occasional exportations of cases to other areas. In the context of zoonotic transmission, MPXV is transmitted from animals to humans through direct contact with infected animals (e.g. , hunting, trapping, or petting), and possibly through processing and consuming infected animals or their body parts and fluids.[2] Once the virus has transmitted from animals to humans, it can spread among humans through direct close physical contact with an infected person, indirect contact (contact with contaminated materials), respiratory contact through infectious respiratory particles, and mother-to-child transmission (vertical transmission).[3]

Since May 2022, a multi-country outbreak of mpox due to clade IIb MPXV has affected at least 130 countries and territories worldwide, most of which had never reported mpox before.[4] This outbreak has been sustained by human-to human transmission, mainly through sexual contact.[4] This global event has also brought to light the long-standing and continuing expansion of areas affected by clade I MPXV across Africa, particularly in DRC, where in addition to zoonotic exposure, human-to-human transmission of clade Ib MPXV, including through sexual contact, has been ongoing since September 2023.[1,5]

Symptoms of mpox in humans include swollen lymph nodes, fever, and a skin and/or mucosal rash that may initially be mistaken for other rash illnesses such as chickenpox (caused by the varicella virus), or sexually transmitted infections like herpes or syphilis, if the rash or lesions appear in the genital or anal region. The ongoing 2022-2025 outbreak has shown that mpox can also present with very few lesions, and there have been some reports of asymptomatic infection.[6] There is currently very limited documentation of asymptomatic infection for the other subclades. The contribution of asymptomatic infection to transmission remains poorly understood. Cases of mpox due to clade Ib MPXV and clade IIb MPXV have presented with relatively more mucosal lesions than previously described, with many of these lesions located in the genital or anorectal area, linked to sexual contact transmission.[7]

While ocular, genital and inguinal lesions had already been well described, newly recognized phenomena during the global outbreak include severe rectal pain and inflammation (proctitis), inflammation of the penile glans (balanitis) and urethra (urethritis) and urinary retention, and involvement of the colon, most likely related to contact transmission among men who have sex with men. In the Democratic Republic of the Congo in 2023 and 2024, ulcerative vulvo-vaginal lesions and peritonitis were seen in female patients with confirmed mpox due to clade I MPXV. While encephalitis and sepsis were known to occur, myocarditis[8] and parotitis[9] are now also recognized as rare complications.

Generally, most individuals with mpox in the global outbreak have presented with mild clinical manifestations, often attributed to lower severity associated with clade IIb MPXV. However, the outbreak in South Africa from May to August 2024 illustrated that clade IIb MPXV infection can cause severe disease in nearly all patients when it spreads within networks of persons with weakened immune systems due to a high prevalence of uncontrolled HIV or advanced HIV disease.[10] At the same time, clade I MPXV continues to lead to a more extensive rash and

death in DRC, where cases present with more extensive body rashes and higher case fatality ratio compared to those with clade IIb MPXV infection, possibly linked to a multitude of factors such as potentially higher virulence of the virus, limited access to affordable good quality health services, as well as age and underlying health status of affected individuals. Moreover, limited surveillance capacity and resources in DRC hinder access to care in less severe cases until illness progresses or complications develop.

Research studies on the emergence of mpox in Nigeria in 2017-18, and 2022-25 outbreaks, as well as global mpox surveillance data, have all shown that mpox is more severe and leads to higher mortality among people with suppressed immune systems, whether due to uncontrolled HIV infection or other immunocompromising conditions[11–15] and in individuals with concomitant chickenpox.[14] Malnutrition and other co-infections may also play a role in the higher mortality observed among children in DRC, notably as maintaining good nutrition and hydration is particularly challenging in infants and children with mpox.

The following section of this hazard assessment provides an overview of mpox outbreaks by MPXV subclade. It is not intended to be an exhaustive list of outbreaks in all settings; rather, it highlights the main characteristics of some outbreaks and the affected populations. Although there is no documented difference in the inherent transmissibility of different MPXV strains to date, they are affecting different populations in varying settings, resulting in distinct outbreak dynamics (Figure 1).

Overview of mpox outbreaks by clade

Clade Ia MPXV

Clade Ia MPXV is found primarily in DRC, where it affects endemic provinces and has increasingly been found in previously unaffected provinces in recent years, including the capital Kinshasa since 2023. Sporadic cases continue to be reported in neighboring countries in Central Africa as well, like the Central African Republic and in the Republic of Congo. While in DRC and the Central African Republic, a higher proportion of cases among children are observed, in the Republic of Congo, the majority of cases are adults. Historically, cases have also been reported in East Africa, specifically in Sudan, from 2022 to 2023, and in what is now current-day South Sudan, in 2005.

Previously, genomic sequencing analysis had indicated that clade Ia MPXV typically emerged in human populations through zoonotic exposure, leading to human-to-human transmission. Current epidemiological data and phylogenetic analysis still suggest that many outbreaks of mpox due to clade Ia MPXV result from zoonotic spillover with secondary human-to-human transmission. However, there is emerging evidence of increasing sustained human-to-human transmission of clade Ia MPXV in sexual networks in Kinshasa following importation from endemic parts of DRC. This has not yet been documented in the Central African Republic or in the Republic of Congo, which continue to report facing clade Ia MPXV outbreaks as well.

In addition, the first case of mpox due to clade Ia MPXV has now been reported outside of Africa (in the Republic of Ireland), for which a possible zoonotic mode of transmission remains unconfirmed and direct contact or sexual transmission is not ruled out. This latest event suggests that MPXV strains can increasingly be expected to find their way into human populations on a trajectory towards adaptation to wider human-to-human spread in a global population that remains almost entirely susceptible to orthopoxviruses since the eradication of smallpox, and for which modes of transmission remain little understood.

Clade Ib MPXV

Clade Ib MPXV is predominantly spreading in DRC, and neighboring countries to the east, with community transmission reported in Burundi, Kenya, Rwanda, Uganda and Zambia, and mostly travel-related cases in other countries where it has been reported. No human case has yet been substantively linked to a suspected animal exposure for this clade, and current genomic sequencing data suggest that it is transmitted only through human-to-human contact. In DRC, it has been reported from eight provinces: South Kivu, North Kivu, Kinshasa, Kasai,

Tshopo, Tanganyika, Haut-Katanga and Mai-Ndombe, and it currently drives the fastest expanding outbreaks of any MPXV strain.

Other most affected countries in Africa are Burundi and Uganda, where widespread transmission has been ongoing in recent months, while more limited transmission has been reported in Kenya, Rwanda, and Zambia, where the extent of undetected transmission remains unclear. Angola and Zimbabwe have reported only travel-related cases.

Outside Africa, imported travel-related cases have also been detected (in order of reporting) in Sweden, Thailand, India, Germany, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Canada, Pakistan, Oman, Belgium, China, France, the United Arab Emirates, and Qatar. Limited secondary transmission from these cases has been reported in the United Kingdom of Great Britain and Northern Ireland, Germany, Belgium, China and France.

Imported mpox cases have been among adults who travelled during their incubation periods or with early symptoms and were diagnosed once they arrived in the reporting country. Often, they reported prior sexual contact with a person with known mpox or someone with signs and symptoms suggestive of mpox.

Where initial clusters of mpox due to clade Ib MPXV expand and as the outbreak progresses, transmission patterns appear to evolve, with more spread within households, leading to a progressive shift in age and sex distribution. This results in a rising proportion of cases among children, and a bimodal distribution, with the highest incidence observed among young children and young adults.

The multi-country outbreak of mpox driven by clade IIb MPXV that began in 2022 showed that sexual contact can sustain community transmission of MPXV. Likewise, subclades Ia and Ib are also spreading through sexual contact; much remains to be understood about transmissibility and sustainability of transmission through non-sexual direct physical contact for all clades. In settings where transmission persists, it is likely driven by a combination of sexual, household, and community contact.

Clade IIa MPXV

In 2024, Côte d'Ivoire, Ghana, Guinea, and Liberia reported cases of mpox due to clade IIa MPXV. There is evidence of ongoing transmission of this strain in Côte d'Ivoire and Liberia, with cases dispersed over wide geographical areas. Outbreaks of clade IIa MPXV driven by human-to-human transmission represent a concerning new development, as this clade had only rarely been detected, and even then, almost solely in animal populations. Furthermore, the co-circulation of clade IIa and clade IIb MPXV has been reported for the first time, in Côte d'Ivoire, Ghana, and Liberia.

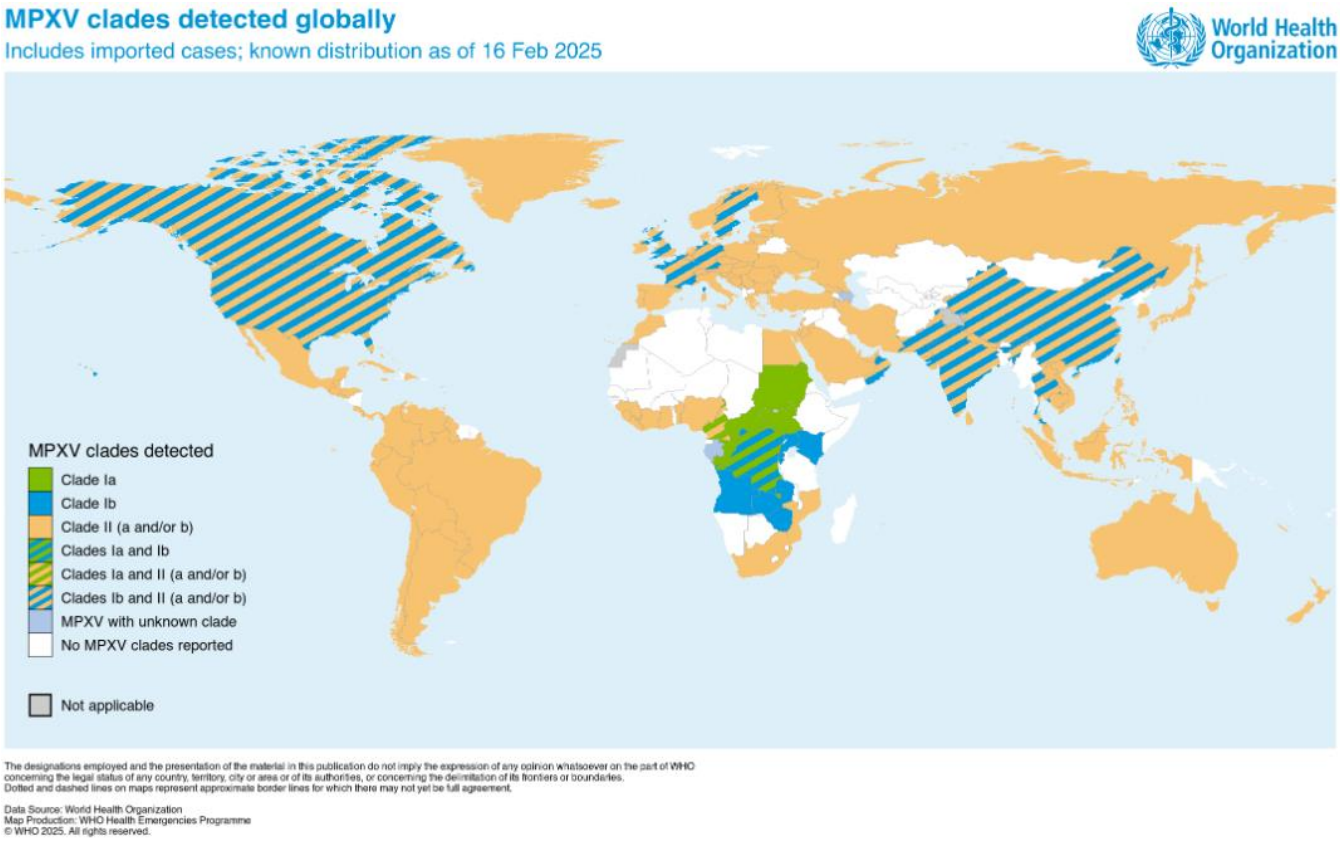
Mpox linked to clade IIa MPXV has been reported in adults and children, with many lacking a known epidemiological link, suggesting ongoing, largely undetected community transmission. Limited epidemiological investigations have constrained our understanding of the modes of transmission in these outbreaks and clade IIa MPXV remains the least described MPXV strain in scientific literature. Nonetheless, preliminary indications from genomic sequencing analysis along with observations of a continued increase in the number of cases across different areas of the countries, affecting mostly adults, suggests repeated zoonotic spillover events followed by secondary human-to-human transmission. While there is no documented evidence of sexual contact transmission for this strain, it is likely that all forms of close contact contribute to its spread, as with other MPXV strains.

Clade IIb MPXV

Most mpox outbreaks in other parts of Western, Northern and Southern Africa and other parts of the world are due to clade IIb MPXV, a continuation of the multi-country outbreak that began in 2022. Most regions report circulation of clade IIb lineage B.1, while lineage A.1 continues to circulate in Nigeria and some countries in the

WHO Eastern Mediterranean Region. The most affected population outside of Africa continues to be men who have sex with men, primarily exposed through sexual contact. In instances where others have been affected, such as women and children, it has not led to sustained transmission, unlike what is being observed for clade I MPXV in the African context. Australia had seen an unprecedented rising trend in cases in 2024, which has been subsiding in recent months while most other reporting countries have indicated ongoing low levels of transmission, mainly in the same population at risk.

Figure 1. Geographic distribution of MPXV clades in human cases reported to WHO, by country, as of 16 February 2025*.



* *Information from sequencing shared via different sources, including open-access databases, peer-reviewed publications, reports, as well as direct communication to WHO.*

Global epidemiological situation

This section is based mainly on mpox global surveillance data, which includes information about confirmed and probable mpox cases and deaths since the beginning of 2022. Currently, this information is collected on a monthly basis and the latest available and complete data are as of ***31 January 2025****. Reporting to the global surveillance system has varied over time and the public health emergency of international concern (PHEIC) declaration in August 2024 might have increased mpox awareness, surveillance and reporting to WHO.*

From 1 January 2022 through 31 January 2025, a total of 127 960 confirmed cases of mpox, including 281 deaths, were reported to WHO from 130 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 3656 new confirmed cases were reported in January 2025, reflecting a 15.9% decline from the previous month. This apparent decline should be interpreted with caution, given likely reporting delays for the most recent data. The majority of cases in January 2025 were reported from the African Region (86.4%), followed by the European Region (6.6%) and the Western Pacific Region (3.7%). The Eastern Mediterranean Region, South-East Asian Region, and the European Region reported a monthly increase in cases for January 2025, compared to

December 2024, with increases of 200%, 60%, and 14% respectively. On the other hand, the Region of the Americas, the Western Pacific Region, and the African Region reported declines in cases in January 2025, by 65%, 22%, and 13% respectively.

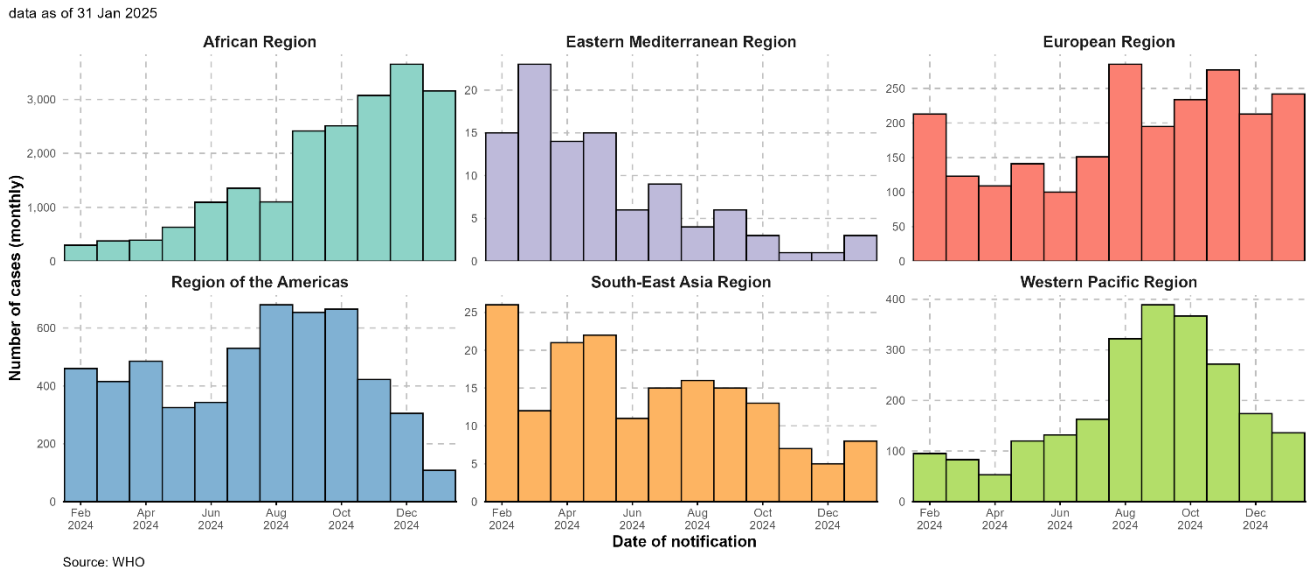
Table 1. Number of cumulative confirmed mpox cases and deaths reported to WHO, by WHO Region, from 1 January 2022 through 31 January 2025.

WHO Region	Total confirmed cases	Total deaths among confirmed cases	New cases reported in December 2024	New cases reported in January 2025	Monthly change in cases (%)
Region of the Americas	67 746	151	305	108	-65.0
European Region	29 126	9	213	242	14.0
African Region	23 833	92	3651	3159	-13.0
Western Pacific Region	5365	12	174	136	-22.0
South-East Asia Region	1004	14	6	10	66.7
Eastern Mediterranean Region	886	3	1	3	200.0
Total	127 960	281	4349	3656	-15.9

Figure 2 shows that over the past 12 months (1 February 2024 – 31 January 2025), the number of confirmed mpox cases reported monthly in the WHO African Region has been steadily increasing, while the Eastern Mediterranean and Southeast-Asia Regions have largely observed a decline in the monthly number of cases during the same period. In the European Region, the trend has been relatively stable, while in the Region of the Americas and the Western Pacific, there has been a drop in cases in recent months following a rising trend earlier in 2024.

In the last 12 months, a global average of about 2525 confirmed mpox cases per month has been reported. Most of them were reported by the African Region (20 045 confirmed cases), followed by the Region of the Americas (5392 confirmed cases), and the Western Pacific (2306 confirmed cases). Outside Africa, Brazil reported the highest number of confirmed cases in January 2025 (147 confirmed cases).

Figure 2. Epidemic curves of monthly aggregated number of confirmed mpox cases reported to WHO, by WHO region, 1 February 2024 – 31 January 2025.



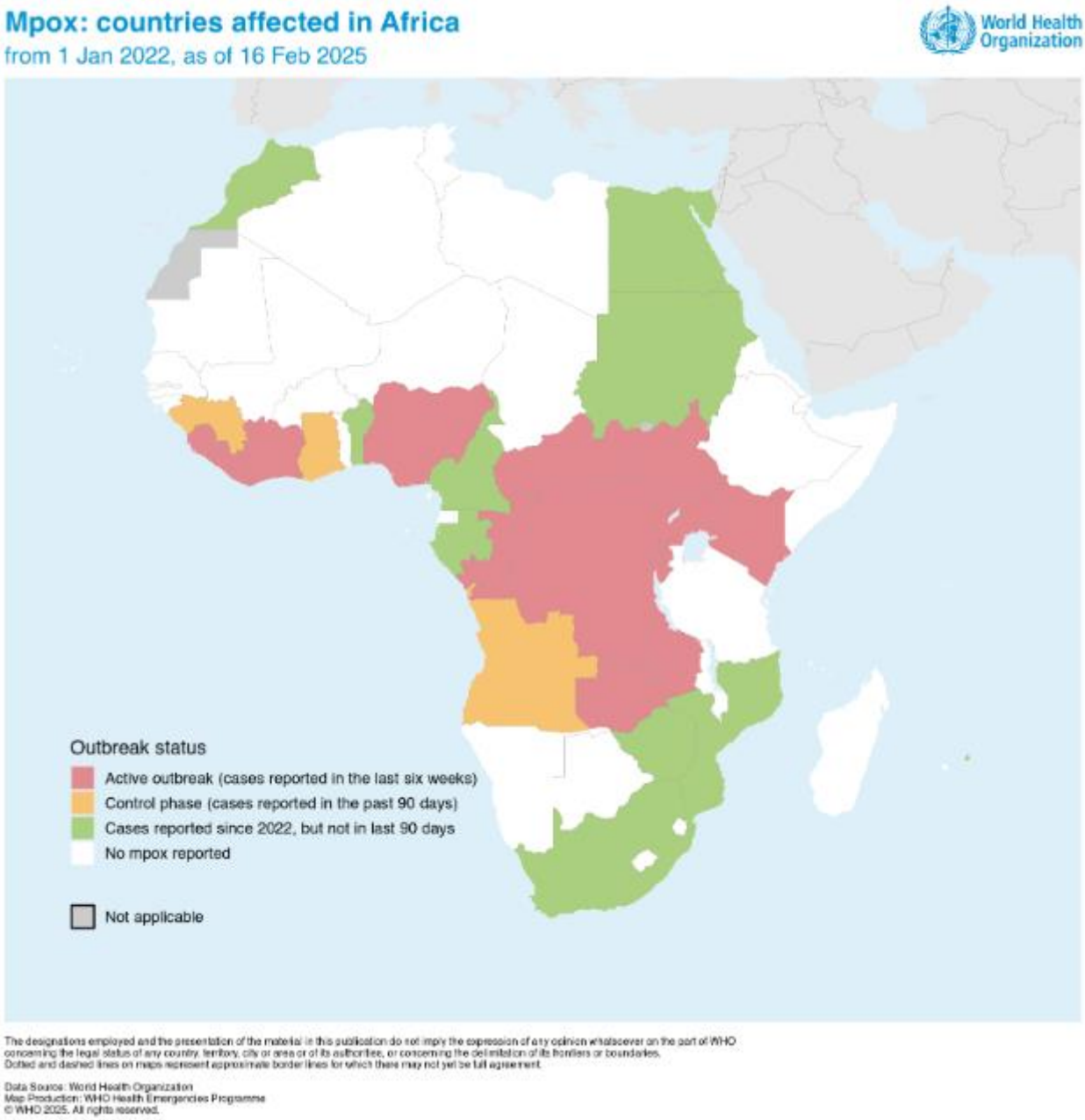
Please note that different Y axis scales have been used for the regional epidemic curves to allow a better overview of the trend in each region.

Epidemiological situation in Africa

In Africa, from 1 January 2024 to 16 February 2025, a total of 22 618 confirmed mpox cases, including 76 deaths (CFR 0.3%), have been reported across 22 countries. DRC remains the most affected country, with 15 411 confirmed cases, including 43 deaths[1] ,followed by Burundi (3463 confirmed cases, including one death) and Uganda (2949 confirmed cases, including 21 deaths). Thirteen countries in Africa have reported mpox cases in the last six weeks (equivalent to two maximum incubation periods of 21 days) and are considered to have active, ongoing outbreaks (Figure 2). Three countries, Angola, Ghana, and Guinea have not reported confirmed cases in the past six weeks and may be considered to have transitioned into the control phase of their mpox outbreak, as defined in the *Strategic framework for enhancing prevention and control of mpox 2024 – 2027*[16], assuming that surveillance is deemed adequate.

[1] The national-level case counts for DRC indicated here are based on the national laboratory database for mpox.

Figure 3. Mpox outbreak status in Africa, by country (1 January 2022 – 16 February 2025).



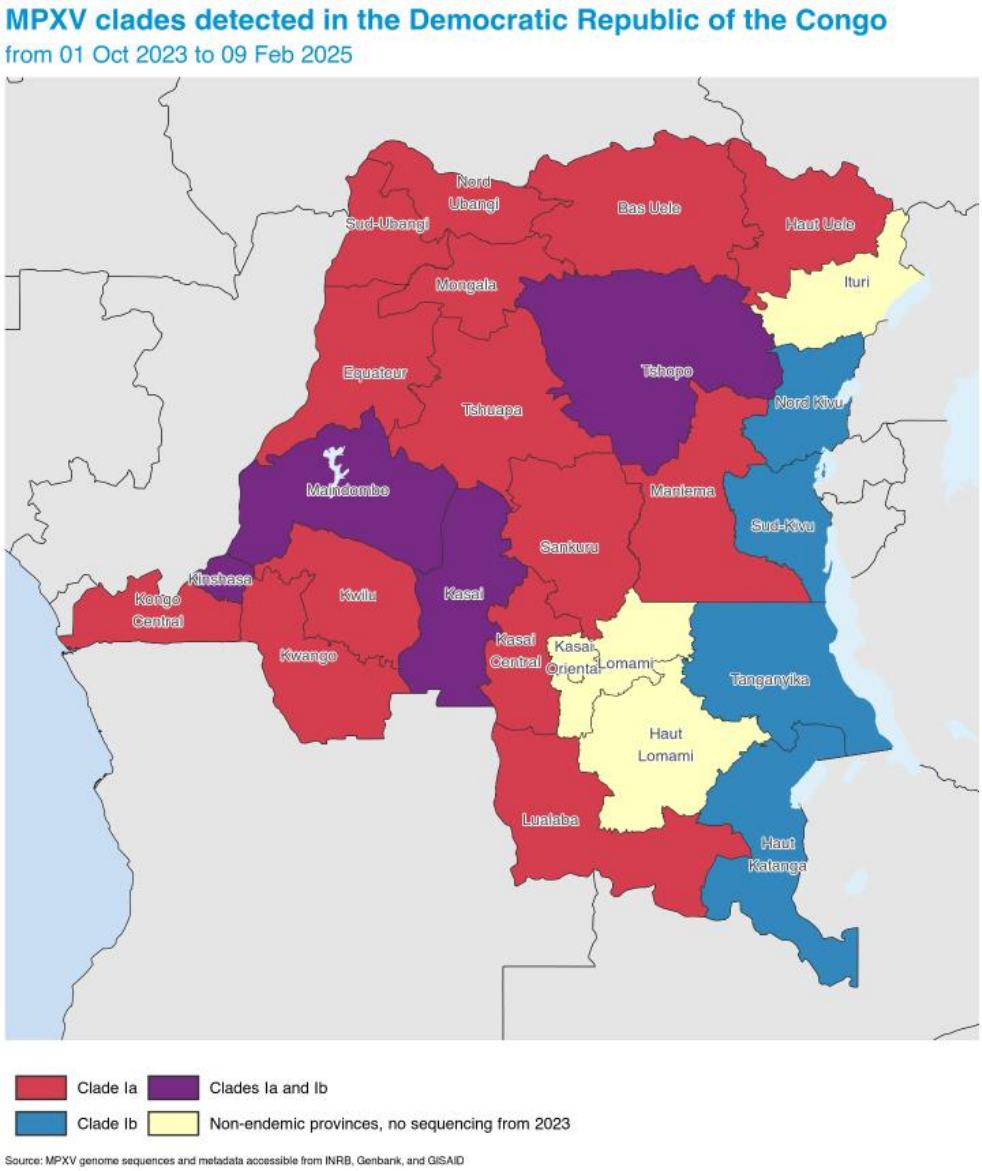
Epidemiological situation in DRC (clade Ia and clade Ib MPXV)

The country continues to face challenges in the laboratory diagnosis of mpox, with only a limited number of testing sites and supplies available to serve the wide geographical area affected. Since the beginning of 2024, approximately a third of suspected mpox cases were tested, and among these, about 60% were found to be positive, as at 16 February 2025. Given the low testing coverage and the variability in testing rates in between areas, information about suspected cases will be presented in this section to further inform our understanding the evolution of the outbreak in the country.

Mpox outbreaks in DRC continue to be driven by both clade Ia and Ib MPXV strains (Figure 4). Most sequenced samples from 1 October 2023 to 16 February 2025 are from the provinces of Kinshasa and South Kivu. Although all provinces in the country have reported confirmed mpox cases during this period, no sequencing has been done for samples from four provinces: Ituri, Kasai Oriental, Lomami, and Haut-Lomami. So far, clade Ib MPXV has been detected in eight provinces, and in half of them, it is co-circulating with clade Ia MPXV. In Kinshasa in particular, sequencing data from the outbreak have revealed increasingly sustained human-to-human transmission of clade

Ia MPXV with high rates of APOBEC3-driven mutations. However, no such indications have been reported so far in the other provinces where clade Ia MPXV is circulating.

Figure 4. Geographic distribution of clade Ia and Ib MPXV in DRC, by province, from 1 October 2023 to 9 February 2025[2].

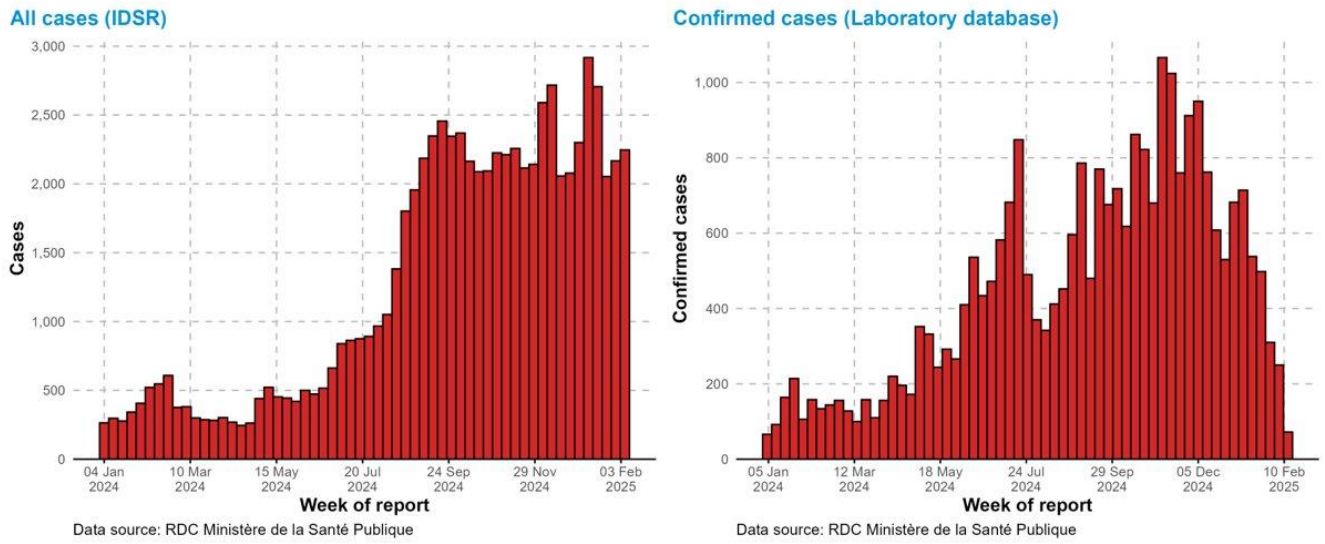


The analysis of the epidemic trend of reported suspected mpox cases (left, Figure 5) shows that although there had been a notable increasing trend through most of 2024, the reported number of weekly suspected cases has remained largely stable within the range of 2000 – 3000 cases since September 2024. That notwithstanding, an overwhelming burden of over 2000 new suspected mpox cases reported per week continues.

The trend in reported confirmed cases, (right, Figure 5) suggests that there has been an ongoing increase in reported weekly cases over time, with early indications of a downward trend in recent weeks. However, the trends in reported confirmed cases should be interpreted with caution, given continuing challenges with testing capacities, and reporting delays for confirmed cases in recent weeks.

[2] This is the most recent complete epidemiological week for which subnational data are available.

Figure 5. Epidemic curve of suspected (left) and confirmed (right) mpox cases reported in DRC, 1 January 2024 – 9 February 2025[3].



Furthermore, national trends should be interpreted in light of the varying epidemic dynamics at the subnational level. An analysis of the epidemic trend of reported suspected mpox cases in the 16 most affected provinces in DRC shows that these provinces have varying outbreak sizes, but for most of them, the trend in recent weeks appears to be relatively stable (Figure 6).

Among the provinces reporting only clade Ib MPXV, South Kivu continues to account for most suspected cases in the country, typically reporting over 600 suspected cases per week. Although there had been a notable increasing trend through most of 2024, the reported number of weekly suspected cases has plateaued, largely stable within the range of 600 – 800 cases since September 2024. As regards North Kivu, the sudden increase in reported cases observed in the province during the initial weeks of 2025 has been attributed to a change in the province's reporting practices, with both the tested and untested suspected cases now included in the overall count of suspected cases, unlike in 2024, when the overall count of suspected cases only included the untested suspected cases.

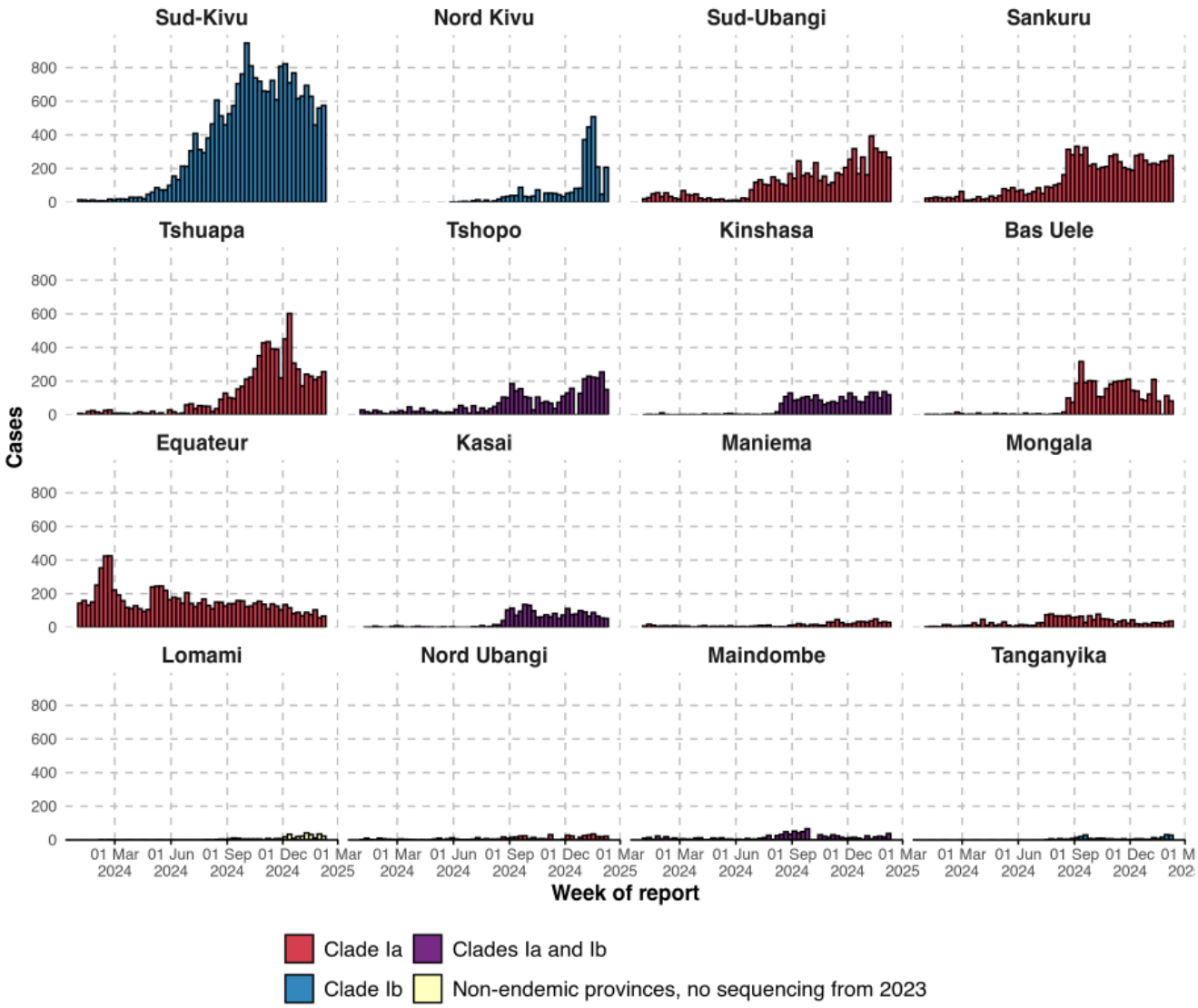
Among the provinces in which only clade Ia MPXV has been detected, Tshuapa had been reporting an increasing trend with very early indications of a downward trend in recent weeks, while the other provinces have been observing more stable trends in recent months. In Equateur province, the province historically most affected by mpox in the country, the trend has been relatively stable since June 2024, with less than 200 suspected cases reported per week.

Among provinces in which clade Ia and clade Ib MPXV are known to be co-circulating, including the capital Kinshasa, the trend of reported suspected cases has also been relatively stable in the past months.

Despite most of the trends appearing stable, the situation in the country remains concerning since circulation of the virus continues at a high level. Furthermore, the recent escalation of armed conflict in the eastern part of the country has profoundly affected the mpox response, resulting in under-ascertainment and underreporting of mpox cases. Any interpretations of recent trends should account for this limitation.

[3] This is the most recent complete epidemiological week for which data on suspected cases are available.

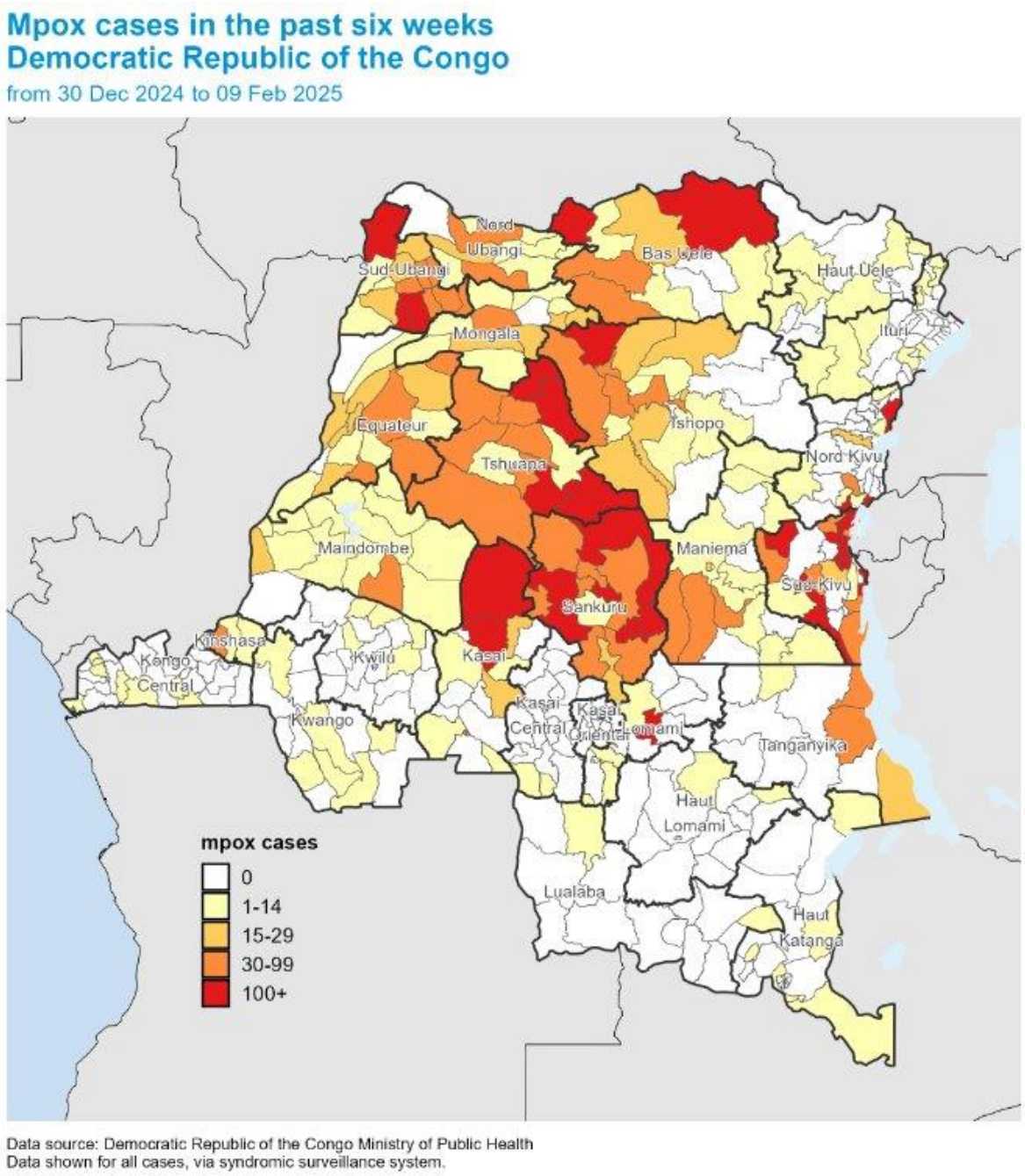
Figure 6. Epidemic curve of reported suspected mpox cases in the most affected provinces of DRC, 1 January 2024 – 9 February 2025[4].



An analysis of the sub-provincial geographic distribution of suspected mpox cases reported in DRC over the last six weeks (Figure 7) shows wide variation between different health zones. The highest number of affected health zones continues to be found in the north-west part of the country, historically considered endemic for mpox, while hotspots that emerged in late 2023 and during 2024 in South Kivu, as well as Kinshasa, continue to observe a high incidence of cases. These latter provinces (South Kivu and Kinshasa) are particularly relevant for the international spread of mpox because they both have international airports, and South Kivu is also highly connected through land borders with Burundi and Rwanda.

[4] This is the most recent complete epidemiological week for which subnational data are available.

Figure 7. Geographic distribution of suspected mpox cases in the past six weeks, by health zone, in DRC, 23 December 2024 – 9 February 2025[5].



While the initial phase of the clade Ib MPXV epidemic in the eastern part of the country was mostly affecting adults and spreading primarily through sexual contact, as clusters expand in the community and the virus spreads in households, the epidemic is now affecting both adults and children, reflecting wider community transmission through close physical contact. This is seen in the evolving age and sex distribution which, in the last six weeks, has seen an increasing proportion of younger age groups affected compared to earlier phases of the epidemic, particularly among confirmed cases (Figure 8).

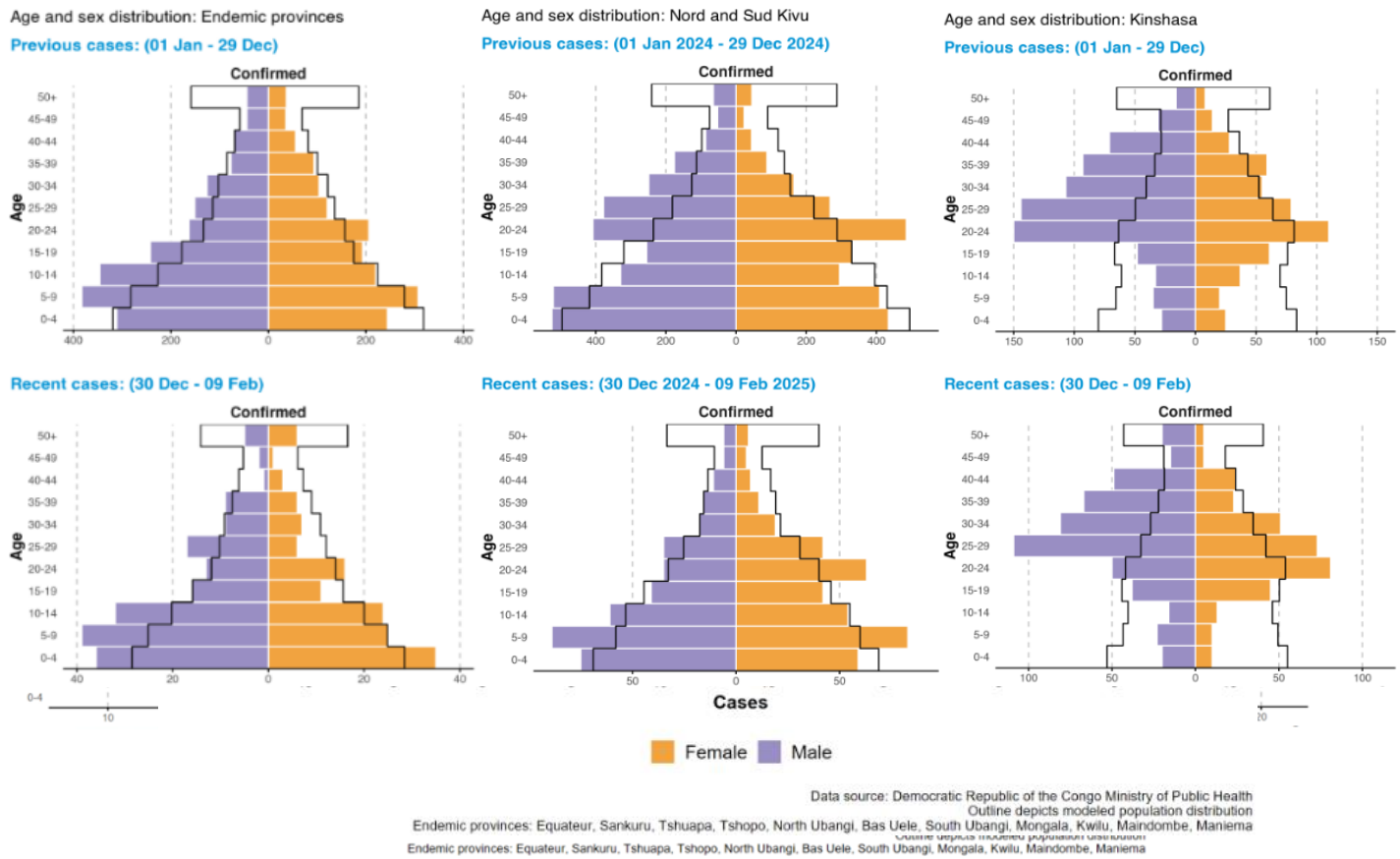
The age and sex distribution of confirmed mpox cases in mpox-endemic provinces (reporting mpox cases for five consecutive years) in DRC, where outbreaks are predominantly driven by clade Ia MPXV, has more closely approximated the age-sex distribution of the general population over time (left, Figure 8). While children have

[5] This is the most recent complete epidemiological week for which subnational data are available.

historically been reported to be the most affected in these provinces, this has largely reflected the underlying population structure. Notably, there is a proportionally lower incidence in those over 50 years of age, likely linked to pre-existing immunity from smallpox vaccination.

In Kinshasa, where clade Ia and Ib MPXV are co-circulating, the majority of cases continue to remain among young adults (Figure 8). While further investigation is warranted, this appears to corroborate recent indications of sustained human-to-human transmission of clade Ia MPXV in sexual networks, and may suggest a growing importance of sexual contact transmission.

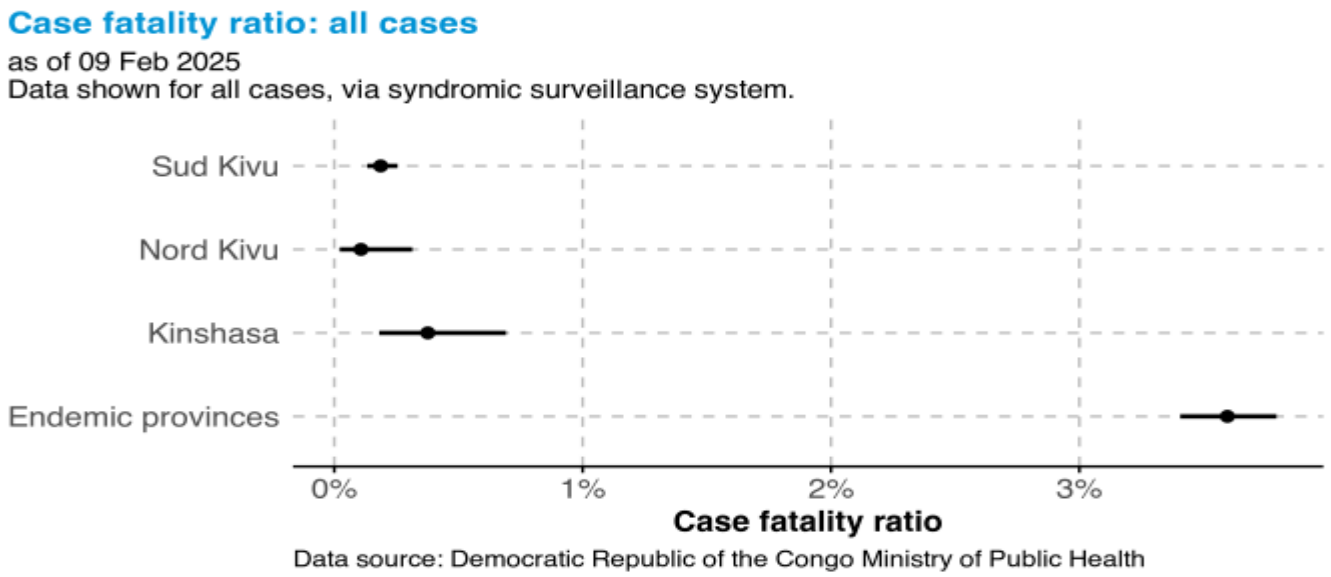
Figure 8. Age and sex distribution of confirmed mpox cases in the endemic provinces, South and North Kivu provinces, and Kinshasa, in DRC, 1 January 2024 – 9 February 2025[6].



Data on the CFR of all suspected cases reported in the country in 2024 suggest a difference in the CFR estimate for endemic provinces (3.6%) affected mainly by clade Ia MPXV, and the CFR estimates for Kinshasa (~0.4%) where both subclades are circulating, and South Kivu (0.2%) and North Kivu (0.1%) where clade Ib MPXV is circulating (Figure 9)[7]. It is currently unclear if this difference in case fatality ratio is due to the viral clade or differences in factors such as population vulnerability, healthcare access, demographic characteristics, and case reporting, among others. Of note, the majority of deaths in endemic provinces are reported among suspected (clinically compatible) cases, owing to limited access to diagnostic testing in some remote areas.

[6] This is the most recent complete epidemiological week for which subnational data are available.
[7] Please note the overlapping confidence intervals of the CFR estimates for Kinshasa, North Kivu and South Kivu

Figure 9. Mpox case fatality ratio estimates for suspected mpox cases in South and North Kivu provinces, Kinshasa, and the endemic provinces, in DRC, 1 January 2024 – 9 February 2025[8].



Epidemiological situation in other countries reporting cases of mpox due to clade Ib MPXV

The clade Ib MPXV outbreak has been expanding from eastern DRC into neighboring countries, with community transmission reported in Burundi. Kenya, Rwanda, Uganda, and Zambia, and travel-related cases in all other countries in which it has been reported so far, as summarized in Table 2 below. In some countries with travel-related cases, limited transmission linked to these first introductions of clade Ib MPXV has been documented, without widespread transmission reported.

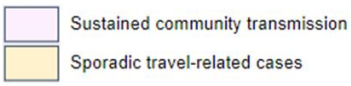
Table 2. Confirmed mpox cases and deaths linked to clade Ib MPXV outbreaks reported to WHO, by country*, as of 17 February 2025.

N.	Country	Confirmed cases	Confirmed deaths	Date of country notification to WHO	Distribution/Source
1	**Burundi**	3463	1	25 July 2024	Largely concentrated in and around the capitals, Bujumbura and Gitega
2	**Uganda**	2949	21	24 July 2024	Multiple districts, but largely concentrated in and around the capital, Kampala
3	**Rwanda**	102	0	24 July 2024	Multiple districts, including capital, Kigali
4	**Kenya**	42	1	30 July 2024	Multiple counties (including capital Nairobi) along the major transport corridor from the coast to Uganda and Tanzania
5	**Zambia**	19	0	8 October 2024	Multiple provinces, including the capital Lusaka
6	**United Kingdom and Northern Ireland**	9	0	30 October 2024	One case with history of travel to East Africa in October 2024 and three subsequent cases among household contacts
				29 November 2024	One case with history of travel to Uganda in November 2024
				19 January 2025	One case with a history of travel to Uganda in January 2025
				25 January 2025	One case with a history of travel to Uganda in January 2025
				30 January 2025	One case with a history of travel to Uganda from December 2024 to January 2025
				5 February 2025	One case with a history of travel to Uganda from December 2024 to January 2025

[8] This is the most recent complete epidemiological week for which subnational data are available.

7	**China**	7	0	3 January 2025	One case with history of travel to DRC and five subsequent cases among close contacts
				21 January 2025	One case with a history of travel to the United Arab Emirates
8	**Germany**	7	0	18 October 2024	One case with history of travel to Rwanda in September 2024
				13 December 2024	One case with history of travel to East Africa in November 2024 and three subsequent cases among household contacts
				19 December 2024	One case with history of travel to East Africa in November 2024
				9 January 2025	One case with history of travel to East Africa from December 2024 to January 2025
9	**Thailand**	4	0	22 August 2024	One case with history of travel to DRC
				18 January 2025	One case with a history of travel to the United Arab Emirates
				21 January 2025	One case with a history of travel to the United Arab Emirates and a link to the preceding notified case
				25 January 2025	One case with a history of travel to the United Arab Emirates
10	**United States of America**	4	0	18 November 2024	One case with history of travel to East Africa
				14 January 2025	One case with history of travel to East Africa
				7 February 2025	One case with history of travel to East Africa
				12 February 2025	One case with history of travel to East Africa
11	**Belgium**	3	0	18 December 2024	One case with history of travel to Central Africa and two subsequent cases among family contacts
12	**Angola**	2	0	16 November 2024	One case linked to a traveler returning from DRC and one subsequent case among household contacts
13	**Qatar**	2	0	17 February 2025	One case with history of travel to Uganda and another case with no known travel link
14	**Zimbabwe**	1	0	18 October 2024	One case with history of travel to Tanzania
15	**Sweden**	1	0	15 August 2024	One case with history of travel to East Africa
16	**India**	1	0	1 October 2024	One case with history of travel to the United Arab Emirates
17	**Canada**	1	0	22 November 2024	One case with history of travel to East Africa
18	**Pakistan**	1	0	1 December 2024	One case with history of travel to the United Arab Emirates
19	**Oman**	1	0	10 December 2024	One case with history of travel to the United Arab Emirates
20	**France**	1	0	7 January 2025	One case linked to contact with travelers returning from an affected country in Central Africa
21	**United Arab Emirates**	1	0	7 February 2025	One case with history of travel to Uganda

*The Democratic Republic of the Congo is not included in Table 2.



Note:

- *Although the United Arab Emirates has reported detection of only one case, at least seven cases have been reported in other countries among travelers from the United Arab Emirates, suggesting likely community transmission in-country. No cases of mpox due to clade Ib MPXV have been reported by Tanzania so far, despite reports of mpox cases among individuals travelling from there, suggesting likely community transmission in-country.*

Focus on Burundi and Uganda

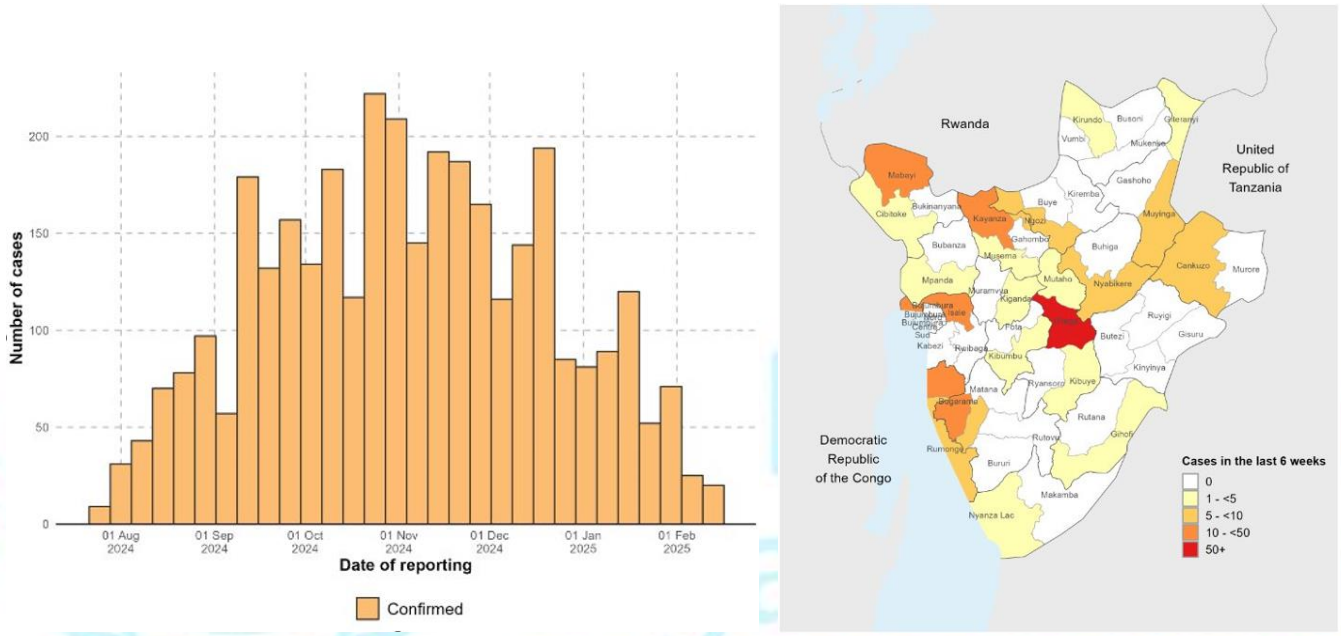
Burundi

From the start of the mpox outbreak in July 2024 to 16 February 2025, Burundi has reported 3463 confirmed mpox cases, including one death (CFR 0.03%). The country is experiencing community transmission, and the

national case count had been ranging between 100 and 200 new confirmed cases per week (Figure 10) before a recent drop to less than 100 cases per week at the end of 2024.

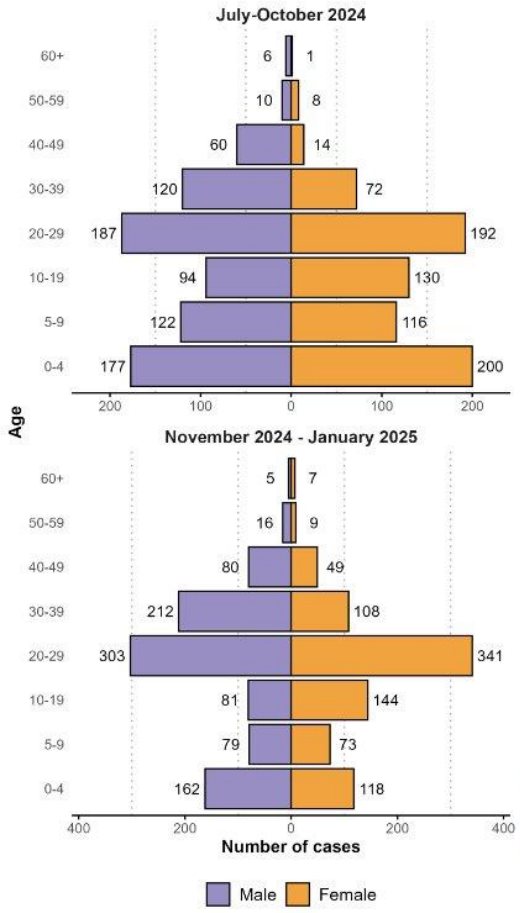
Cases have been reported in at least 94% (46 out of 49) of health districts, but the epidemic remains largely concentrated in and around the largest city, Bujumbura, and the capital, Gitega. Almost all suspected mpox cases are tested, and the test positivity rate is approximately 51%. Only clade Ib MPXV, related to the strains circulating in South Kivu, has been detected in the country, and current evidence suggests exclusive human-to-human transmission of the virus.

Figure 10. Epidemic curve of weekly number of confirmed mpox cases, by reporting epidemiological week, and geographic distribution of confirmed mpox cases by health district in the last six weeks (6 January – 16 February 2025) in Burundi.



The age and sex distribution follows a bimodal pattern, with higher incidence observed among young children under five years of age and among young adults 20-29 years old. Notably, in recent months, the 20 – 29 years age group has surpassed the under-five-age group as the most affected age group in the country (Figure 11). Transmission through household, community, and sexual contact has all been reported as contributing to the spread of mpox, though the relative contributions of each mode of transmission remain unclear.

Figure 11. Age and sex distribution of confirmed mpox cases earlier in the outbreak (upper) and in more recent months (lower), Burundi, as of 16 February 2025[9].



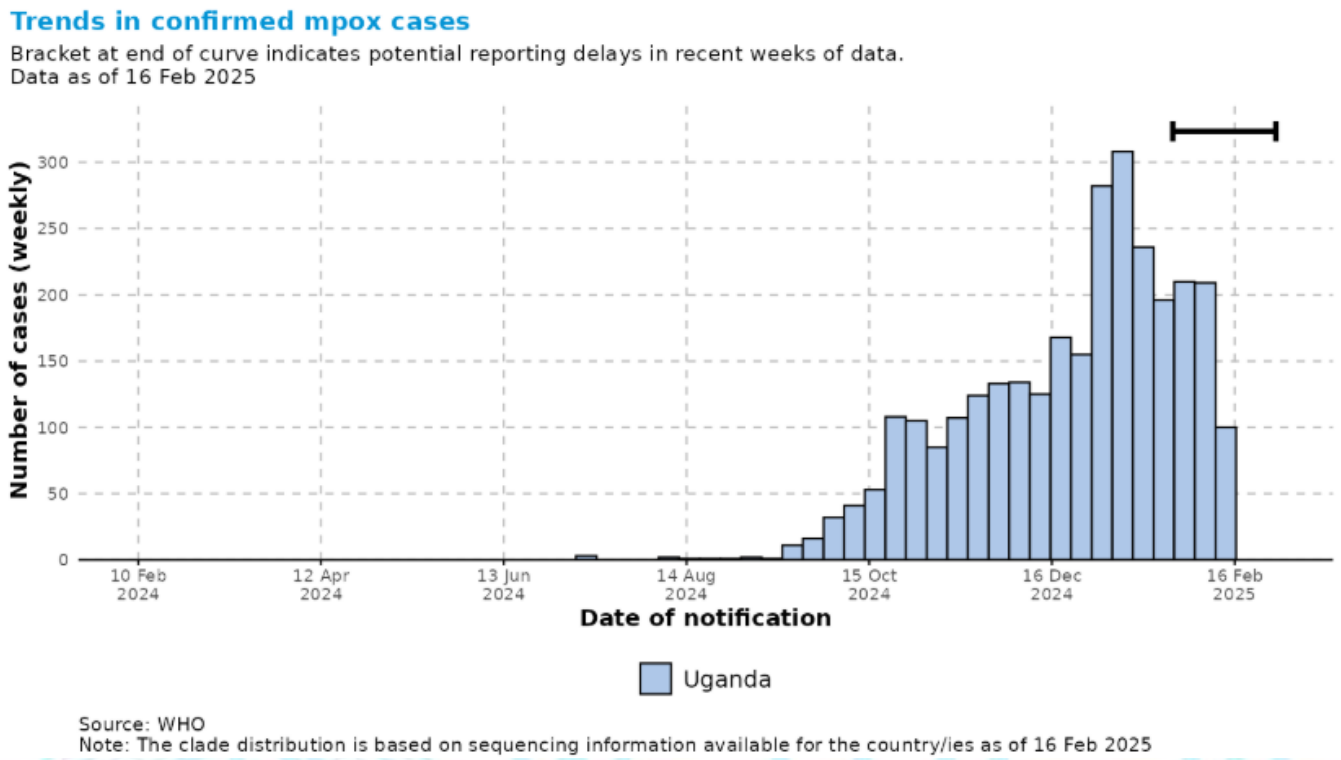
Uganda

From the start of the outbreak in July 2024 to 16 February 2025, the country has reported 2949 confirmed mpox cases, including 21 deaths (CFR 0.7%). The country is experiencing community transmission, and the weekly national case count has been increasing steadily over time (Figure 12). The apparent decline in case counts in recent weeks has been attributed to reduced surveillance and diagnostic capacity since the end of January 2025 in the face of sudden unexpected resource constraints. Uganda has reported the second-highest number of laboratory-confirmed cases in the past six weeks (1259 confirmed cases) in Africa, which constitute over a third of all confirmed cases on the continent during this period. The country continues to observe an escalation in the outbreak as DRC and Burundi report stable and declining trends respectively in recent months[10].

[9] While making comparisons between age groups, please note that two of them, the under-five-years age group and the 5 – 9 age group, are five-year age bands, while all the rest are 10-year age bands.

[10] Comparisons with other countries should be interpreted with caution, given the contextual differences between countries in elements of their respective mpox responses like diagnostic and disease surveillance reporting capacity.

Figure 12. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in Uganda, 1 January 2024 – 16 February 2025.



Cases have been reported in at least 59.6% (87 out of 146) of districts in the country, but the epidemic remains largely concentrated in and around Kampala, the capital. So far, only clade Ib MPXV, linked to the outbreak in eastern Democratic Republic of the Congo, has been detected in the country, and current evidence still suggests exclusive human-to-human transmission of the virus. Household, community, and sexual contact transmission have all been reported to contribute to the spread of mpox in the country. While the relative contributions of each to mpox spread are unclear, sexual contact transmission continues to be implicated as a major amplifier of disease spread, especially in networks of sex workers and their clients.

As of 16 February 2025, the country had reported more deaths than any other country experiencing clade Ib MPXV circulation, with the exception of DRC. Reports from the country indicate that majority (60%) of the deaths have been reported among persons living with HIV, both among those on antiretroviral treatment (ART) and those who were ART – naïve, highlighting the risk of poor health outcomes in this key population.

For detailed descriptions of other MPXV outbreaks in Africa outside DRC, Burundi and Uganda, please refer to Annex 2.

Global clade IIb MPXV outbreak (clade IIb MPXV circulation outside Africa)

The summary statistics for cases of mpox due to clade IIb MPXV outside Africa remain largely unchanged from those reported in the rapid risk assessment of November 2024.

As of 31 January 2025, among confirmed cases, with detailed data available, 86.9% identified as men who have sex with men and 51.4% reported living with HIV. Only 1% of cases have been reported in children under 18 years.

Approximately 9% of affected cases required hospitalization, and overall mortality has been about 0.3%, which is among the lowest CFR estimates recorded for mpox. This may be due to differences in surveillance compared to historical surveillance data, with expanded surveillance and testing, as well as the demographics of the population affected, with most cases affecting young (including adolescents) and middle-aged men.

As with other clades, studies and surveillance data analyses on the clade IIb MPXV outbreak have shown that the main risk factor for severe mpox disease and death is a compromised immune system, due either to uncontrolled or advanced HIV disease in key populations or other immunosuppressive conditions, such as advanced diabetes. The highest burden has been among men who have sex with men, particularly those in highly connected sexual networks, with severe cases occurring mostly among those with uncontrolled HIV infection. These population groups have a higher HIV prevalence and adherence to antiretroviral treatment varies between different areas. As such, outbreaks among people with uncontrolled HIV, such as sees in South Africa in 2024, can lead to high case fatality ratio (3 deaths among 25 cases, CFR 12.0%).

About 1% of the mpox outbreak cases have been children, and around 3% have been women, and overall, they have shown very low morbidity and mortality. As of January 2025, none of the 63 pregnant women in the global surveillance system had died or reported a miscarriage. However, the extent of follow-up after their initial diagnosis is unknown.

Exposure assessment

Modes of transmission and exposure settings

While human-to-human mpox transmission is possible through skin-to-skin contact, skin-to-mucosal contact, fomites, and infectious respiratory particles, epidemiological and surveillance data from the global 2022-2025 outbreak in newly affected countries show that transmission of clade IIb MPXV has been sustained mainly through sexual contact.[4] From 1 January 2022 to 31 January 2025, sexual contact was the most reported route of transmission (88.0%; 20 095 of 22 839 cases) for cases where information was available. Sexual contact includes skin-to-skin and skin-to-mucosal contact, as well as contact with semen or vaginal fluids during sex. Studies have detected the presence of virus in semen[17], vaginal fluid[18] and anorectal swabs,[19–21] indicating that transmission through this type of contact may be multifaceted. [4] This pattern of transmission has been consistent since the beginning of this outbreak. The presence of live virus in anal swabs up to four days before symptom onset suggest some contribution of asymptomatic and/or presymptomatic transmission which may in part explain the rapid spread of the global outbreak in the second and third quarters of 2022.[22]

Exposure to clade II MPXV can also occur through contact with infectious respiratory particles or contaminated objects or particles from objects, including clothing, bedding or towels used by someone with mpox. Transmission via infectious respiratory particles appears to typically require prolonged face-to-face interactions, which may place household members and other individuals in close physical contact or in the same confined space at higher risk. Health workers are also at risk when infection prevention and control measures – use of personal protective equipment (PPE), safe handling of sharps, and rigorous hand hygiene – are inadequate.[23] Conclusive evidence clearly describing this mode of transmission is lacking. Gatherings and events can facilitate the transmission of the MPXV, especially in settings with high attendee density and mobility, or close physical interactions such as in sex-on-premises venues. Although not previously described, these events highly contributed to the distribution of the virus especially at the beginning of the multi-country outbreak in 2022.[24]

Evidence from the Democratic Republic of the Congo has demonstrated that transmission through sexual contact also occurs for clade I MPXV.[25,26] More recently, this type of contact has been the driver of sustained community transmission in the absence of zoonotic exposure in the eastern part of the country, in South and North Kivu[27], where clade Ib MPXV has been circulating in the human population since late 2023[1,5]. This includes transmission in newly described locations, such as bars, where the clients of sex workers have been documented to have acquired mpox. The risk of exposure to this strain through heterosexual or same-sex contact is currently high in this highly connected border area with frequent cross-border exchanges and population movements. The inclusion of heterosexual commercial sexual networks suggests cases may be more likely to go undetected in these key populations, including sex workers and their clients, who may be harder to reach through traditional means, with fewer economic resources and social stigmatization. Notably, while sexual contact appears to be a major mode of transmission for clade Ib MPXV in the currently affected areas, transmission through all other types of contact continues to occur and as the outbreaks expand and the virus enters more households, there is a shift in transmission dynamics towards an increasing proportion of household and community transmission.

The eastern part of the Democratic Republic of the Congo is highly connected through land with neighbouring countries and through an international airport to other countries. There is evidence of people who acquired mpox and travelled during their incubation period, or even during the initial phase of the disease, including through air travel or across land borders, as has occurred for Burundi, Kenya, Rwanda, Uganda and a rising number of countries in Africa and around the world.

Transmission settings in the countries with historical mpox transmission (parts of the Democratic Republic of the Congo and other countries in East, West and Central Africa where mpox is endemic) have historically included community, household, camps for Internally Displaced Persons (IDPs), prisons, and healthcare settings.

Additionally, in these settings, transmission may occur through contact with live or dead animals or consumption of insufficiently cooked contaminated meat, which can happen both in the open air and the household.

Concerningly, there have been some indications from 2024 – 2025 data of Kinshasa that show that clade Ia MPXV transmission there also appears to involve sexual contact, including with sex workers, with proportionally more adults than children affected in recent weeks, similar to what was seen in new clade Ib MPXV outbreaks elsewhere.

Socio-behavioural dimensions

After the number of cases reported weekly in the global outbreak peaked in July – August 2022, the epidemic gradually subsided in most countries. Reasons for such a decline include sexual behaviour changes such as a reduction in the number of sex partners, avoiding sexual contact with new or unknown people, discussing mpox more openly with partners and more widely amongst affected populations; protective immunity from prior infection (or network saturation) within the most interconnected members of the affected sexual networks; and vaccination. A survey conducted among affected communities in the USA in August 2022 found that approximately half of the respondents had reduced their number of sexual partners, one-time sexual encounters, and use of dating apps because of the mpox outbreak.[28] Similar findings resulted from a survey conducted by WHO among men who have sex with men, trans- and gender-diverse people, and sex workers in 23 countries in Europe and the Americas, in collaboration with geo-social networking applications and civil society organizations.[29] Among the 16 875 participants who completed the survey, 51% reported changing their sexual behaviour because of mpox between May and December 2022; of them, 93% reduced their number of partners, 88% avoided group sex, 85% avoided sex clubs or saunas, 56% had open conversations about mpox, 54% avoided using drugs in sexual contexts.[29] For these reasons, the decline in cases generally began before widespread vaccination was implemented. The use of vaccines then accelerated this decline. Globally, the reduced force of infection likely also helped lower the incidence of cases, even in areas where vaccines were not available.

Viral genome sequencing

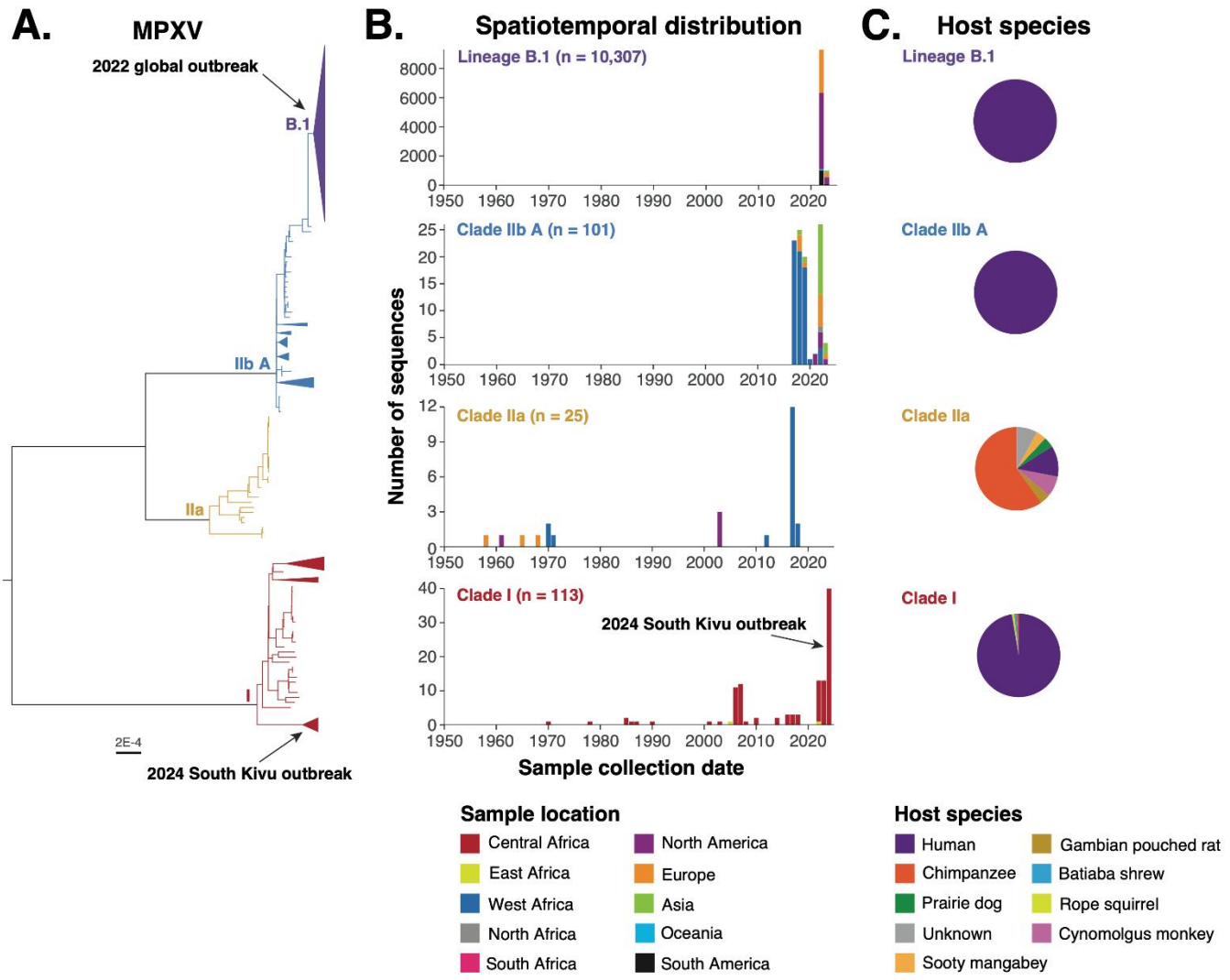
Figure 13 provides an overview of the sampling dates, locations, and host species for MPXV genetic sequences across the major virus clades. This summary is based on sequence data available in GISAID and GenBank as of 11 August 2024.[30]

Whereas most clade Ia MPXV sequences have come from human specimens, clade Ia MPXV infections appear to have been initially mainly acquired through zoonotic transmission[31] with limited onward human-to-human transmission occurring predominantly in close-contact household settings. The lack of sustained human-to-human transmission of clade Ia MPXV is reflected in a low level of APOBEC3-like mutations.[32] Furthermore, the repeated spillover from animals results in genetic diversity amongst clade Ia MPXV viruses in human cases, with multiple co-circulating phylogenetic branches in individual provinces of DRC, including within the same timeframe.[31] However, human-to-human transmission of clade Ia MPXV through sexual contact was first reported in an isolated cluster in Kenge, Kwango Province, in DRC.[25] This was followed by the detection of a larger ongoing clade Ia MPXV outbreak within Kinshasa associated with human-to-human transmission, evidenced by the presence of an APOBEC3-like mutational signature.[33] This outbreak lineage has subsequently been detected in several other provinces within the DRC, including Kwilu, Kwango, and Kongo-Central.

Clade IIa genome sequences collected in 2024 from Côte d'Ivoire, Liberia and Ghana are available in public databases. These sequences cluster within the clade IIa MPXV phylogenetic tree, and even amongst more closely related sequences, there is no evidence of APOBEC3 mutagenesis. This supports the hypothesis that majority of mpox cases due to clade IIa MPXV in West Africa during 2024 were acquired through independent zoonotic transmissions. The clustering of a small number of clade IIa MPXV genomes may suggest human-to-human transmission. However, there is no evidence of sustained human-to-human transmission of clade IIa MPXV within these genome sequences.

The current clade Ib MPXV outbreak likely originated from a single spillover from an unknown animal reservoir.[5] Clade Ib MPXV has undergone sustained human-to-human transmission since at least September 2023.[1] This is supported by the presence of an APOBEC3-like signature in the mutations seen in clade Ib MPXV sequences and supported by epidemiological analyses. Analysis of available genome sequencing data supports co-circulation of multiple, ongoing transmission chains of clade Ib MPXV.[34] Similar to clade Ia MPXV, there are clade Ib MPXV genomes from Kasaï, Tanganyika and Tshopo provinces linked to Kinshasa.

Figure 13. Spatiotemporal and host species distributions of MPXV sequences (worldwide, 1958–2024). [30] **.**



Zoonotic transmission

Animal-to-human transmission can occur through various modes , such as direct contact with infected animals, via bites, scratches, or direct contact with the animal's body fluids, or consumption of insufficiently cooked infected meat from wild animals (bushmeat) leading to new outbreaks in some locations.[35] Presumed zoonotic transmission has been occurring at least since the 1970s in areas of West, Central and East Africa. However, there remains uncertainty about the natural history of the MPXV, and further research is needed to identify reservoirs and better understand how the virus circulates in nature.[35] A variety of mammals, including but not limited to rodent species such as rope or sun squirrels and dormice, as well as non-human primates, are known to be susceptible to the virus.[36] The unregulated wildlife trade, including the sale of live wildlife animals of meat and other products, can potentially lead to both domestic and international spread of zoonotic diseases such as mpox. Not all infected animals will display visible signs of MPXV infection, such as a rash.

In general, there is a risk of viral spill-back from humans to animals, with the potential for the formation of a novel animal reservoir. Despite reports during the 2022 – 2025 multi-country outbreak of possible transmission from humans to animals concerning pet dogs in France and Brazil, spillover events have not been confirmed nor reported to result in sustained transmission in either species.[37,38] Further epidemiological investigation, research and studies at the human-animal-environmental interface are needed to better elucidate the sources and modes of interspecies spread of MPXV in different rural and urban contexts in countries in Africa and beyond.

Context assessment

Surveillance and reporting

At the beginning of the outbreak in May 2022, WHO, in collaboration with national and international partners set up a global mpox surveillance system, used by Member States (MS) to report probable and confirmed mpox cases and deaths. After the PHEIC declaration on 14 August 2024, it was extended to collect information about suspected cases for countries in Africa. The system has two components to collect information in a standardized manner: i) aggregated number of cases by country over time, which aims to be complete and timely; and ii) detailed case-based data for each reported case, which can be less timely and complete. This surveillance has allowed the WHO to monitor the spread of the virus and to describe the main epidemiological, clinical, and outcome characteristics of mpox cases. All the analyzed surveillance data are shared publicly through the Global mpox trends report, currently updated weekly for countries in Africa and monthly for countries in other regions.[7] However, the quality of information is not homogenous. The aggregate number of cases and deaths is complete for most countries, but case-based information coverage is very low for the African and Eastern-Mediterranean regions.

The PHEIC declaration has once again increased attention and awareness about mpox and had an impact on surveillance data reporting to the global level through the WHO regional offices. Additionally, the joint WHO – Africa Centres for Disease Control and Prevention (Africa CDC) continental response in Africa has supported several countries in improving their surveillance capacities, including case detection and reporting, and this is likely to have contributed to the increase in number of reported mpox cases and reporting countries on the continent.

Laboratory and diagnostics

The primary diagnostic test for MPXV infection is polymerase chain reaction (PCR) testing of lesion material (skin rash such as papules, pustules, vesicles, crusts, or mucosa). In the absence of lesion material, other specimens such as oropharyngeal or, for the cases exposed through anal sex, anorectal swabs can be used, particularly when the case does not present with visible lesions. Serology, testing for the presence of antibodies in the blood, can be used for retrospective case classification in specific circumstances, provided that the country has a proven capacity for orthopoxvirus serology, which requires very specific expertise and is not widely available.

PCR for MPXV is now available in most countries, and where not available, sample shipment mechanisms have been established. Testing has been largely restricted to symptomatic patients with typical lesions and contacts of confirmed cases with prodromal symptoms. During the outbreak, many countries have also performed genomic sequencing for PCR-positive mpox specimens and MPXV genomic data have been shared on publicly accessible platforms.[39,40] The analysis of these data has allowed monitoring of the spread of different lineages and virus evolution. However, the number of tests available and access to PCR testing for suspected cases is not homogenous throughout all regions. Currently, no antigen rapid diagnostics tests are validated for mpox, and decentralization of PCR testing has started in many African countries. In the DRC, testing using GeneXpert machines began in early 2024, in an effort to increase the number of suspected cases being tested and improve access to patient care. The decentralization strategy in DRC has brought the number of laboratories capable of testing for mpox from two laboratories in December 2023, to 12 laboratories in mid-2024 and 19 laboratories in February 2025. Implementation of the strategy continues with the aim to extend laboratory capacity for mpox diagnosis to all 26 provinces in the country.

Notably, a large stretch of sequence present in other clade I MPXV genomes has been reported to be absent in clade Ib MPXV, which could lead to failure of the clade I MPXV-specific real-time PCR recommended by the United States Centers for Disease Control and Prevention (US CDC). However, MPXV-specific or orthopoxvirus generic targets will detect this new strain of MPXV. The latest WHO guidance document *Diagnostic testing and testing*

strategies for mpox: interim guidance (12 November 2024) provides updated guidance, including on testing for clade Ib MPXV and testing strategies.

WHO has supported equitable access to testing throughout the mpox response and has advocated for the development and evaluation of much-needed tests for MPXV detection. WHO has released a publication from an expert consultation to develop two target product profiles (TPPs) for MPXV diagnostics within health care settings and laboratories (TPP1) and detecting orthopoxvirus antigen(s), that are amenable to decentralized use, including in the community (TPP2).[41] Furthermore, as part of ongoing efforts to expand quality-assured testing options available for countries, the WHO has listed three mpox in vitro diagnostics under its Emergency Use Listing (EUL) procedure: the *Alinity m MPXV assay* manufactured by Abbott Molecular Inc., *the cobas MPXV assay* developed by Roche Molecular Systems, Inc., and *Xpert Mpox* manufactured by Cepheid.

Clinical management

Clinical case management for mpox primarily consists of symptomatic and optimized supportive treatment, including the use of antipyretics to reduce fever and analgesia for pain relief, and optimization of care for comorbidities which frequently include malnutrition, coinfections, and immunosuppression. The purpose of supportive care, which consists of mainly skin care, eye care, nutrition, and pain management, is to prevent and manage complications and avert long-term sequelae. Monitoring of lesions is standard for mild cases, and antibiotic treatment is used to handle secondary bacterial infections if present.

In most cases during the 2022 – 2025 mpox outbreak, clinical management consists of symptomatic care (particularly pain management, fluids, nutrition, and skin care), as well as antiviral treatment in countries where it is available under research protocols. Supportive care includes ensuring nutritional support where needed and may require attending to co-infections, such as chickenpox or measles in children especially in endemic settings, as well as management of treated or untreated HIV or other sexually transmitted infections. Clinical reports have described severe mpox among people living with uncontrolled HIV (CD4 less than 200) or with advanced HIV disease. In the context of people living with HIV diagnosed with mpox, knowledge gaps remain on when to start antiretroviral therapy if the person is not previously on treatment, given the possibility of immune reconstitution inflammatory syndrome (IRIS).

Tecovirimat is a potential therapeutic option for mpox based on extensive work for smallpox preparedness.[42–44] The use of antivirals, such as tecovirimat, is encouraged within the context of Randomized Clinical Trials (RCT), or if not possible, within carefully observed and recorded treatment programmes for emergency or compassionate use, which contribute evidence on safety and clinical outcomes. This allows for the collection of standardized clinical and outcome data, which is essential to rapidly increase the evidence generation on efficacy and safety.[45] Three countries received Tecovirimat under MEURI in the first round of Expression of interest (EOI). For the second round, there are two other countries that have expressed interest and follow-up activities are ongoing to confirm if they can be included.

Several independent clinical trials of tecovirimat for treatment of mpox were initiated, in addition to a RCT in the DRC which was planned prior to the global outbreak. In addition, the antiviral tecovirimat has been used under expanded access and investigation protocols. Preliminary data show it can be used for people living with HIV as well as those who are HIV-negative.[46] In most locations around the world, people with mpox do not have access to clinical trials to receive tecovirimat, as clinical trials are complex and geographically focused. The decline in reported cases after the peak of the outbreak made recruitment of study participants more challenging, and investigators considered merging data for greater study power.

The PALM007 study in DRC finally completed recruitment in July 2024 and results did not show improved outcomes when used in individuals affected by clade Ia MPXV, with an overall CFR of 1.7% among study

participants, regardless of whether they received the drug or not. Nonetheless, the CFR seen in both study arms was much lower than that historically reported for mpox due to clade Ia MPXV, showing that better outcomes among mpox cases can be achieved when they are hospitalized and provided high-quality supportive care. This study was not powered to evaluate possible effectiveness in severe vs non-severe cases, across different age groups, or in persons with immune deficiencies. However, additional analyses are underway to better understand outcomes observed in the study, including whether there were any significant differences in clinical outcomes by days of symptoms prior to enrolment, or participant characteristics.

Furthermore, results from an interim analysis of data from the Study of Tecovirimat for Mpox (STOMP) clinical trial of the mpox antiviral tecovirimat released in December 2024, showed that while the drug is safe, it did not reduce the time to lesion resolution or have an effect on pain among adults with mild to moderate mpox due to clade II MPXV and a low risk of developing severe disease. The design of the study did not allow for conclusions about the efficacy of tecovirimat in participants with, or at elevated risk for, severe mpox caused by clade II MPXV. Further analyses of the study data are ongoing. These results are consistent with those of the PALM 007 trial announced earlier in 2024.

Infection prevention and control (IPC)

Most MPXV transmission in the global outbreak has occurred through close person-to-person contact, including sexual contact. Transmission through contact with contaminated objects, fabrics, and surfaces has also been reported. Close and prolonged conversational contact with a symptomatic mpox case, (particularly where there are visible mouth ulcers) presents risks for transmission . Data from the 2022 – 2025 global outbreak revealed modes and settings of transmission of mpox not previously reported, including through sharps injuries in health care settings[47,48] and outbreaks linked to tattoo parlours.[49,50] Thus, attention is needed to address the prevention of infection in these settings. The most common route of transmission in health facilities early in the 2022 - 2025 global outbreak was through sharps injuries sustained during specimen collection from patients with symptoms[51] and possible fomite contact.[52] In the early stages of the global outbreak, few occupational exposures to mpox among health care workers were reported[48,51,52], mostly through needlestick injuries or exposure to a contaminated environment, and such occupational exposures were considered preventable.[53,54] More recently, there have been growing concerns around the implementation of IPC measures in mpox treatment centers and the consequential risk of nosocomial and health worker infections. Many healthcare settings in low-resource contexts lack the knowledge and means to implement IPC measures in the context of mpox management. In field-based evaluations of IPC for mpox in DRC in December 2023, the following findings were reported: i) awareness of the disease and knowledge of case definitions in a hospital setting were limited; ii) provision of PPE supplies was unreliable and erratic and waste management practices were found to be poor; and iii) decontamination protocols for hands and surfaces were not well known. As the outbreak continue to evolve, these IPC gaps in the health system remain significant challenges in DRC.

Similarly, challenges in implementing IPC practices have been noted in several countries in the African region experiencing outbreaks, including a lack national guidelines, lack of subnational and facility-level IPC practitioners with IPC expertise and gaps in water sanitation and hygiene (WASH) services within health facilities. Assessments have also identified gaps in training of health and care workers, lack of screening for mpox in health facilities and inadequate isolation capacity, insufficient access to PPE, insufficient resources and low compliance with hand hygiene standards. These findings are expected to be typical in resource-constrained environments in similar settings.

Over the course of the more recent outbreaks in 2024 there are new challenges with transmission in the community, such as in overcrowded household and congregate settings (e.g. prisons, camps), especially in the

camps for internally displaced persons (IDP) in DRC, elevating the importance of, and challenges with, implementing IPC measures and WASH services in these settings to mitigate transmission.

Risk Communication and Community Engagement (RCCE)

Evidence-based and tailored risk communication and community engagement (RCCE) strategies are a crucial part of mpox response worldwide. RCCE strategies and interventions played a key role in slowing transmission and stopping outbreaks in several countries. They have proven essential for creating more community-centred and equitable programmes that have fostered trust and helped to reduce the stigma and discrimination associated to mpox.[29] Furthermore, targeted RCCE interventions have been a critical in mitigating and managing transmission among higher-risk groups, who often face ongoing stigma and discrimination when seeking health services due to their sexual orientation and/or preference.

Since May 2022, WHO has implemented a substantial set of RCCE interventions and activities at global, regional and national levels, with the goal of informing and empowering communities to better protect themselves from mpox. These activities have focused on building public awareness, combating misinformation, stigma and discrimination, promoting preventative behaviours including vaccination, where available, ensuring that response interventions apply sensitive and non-stigmatizing action, such as reinforcing care pathways and working with trusted partners as brokers with MSM communities. As mpox transmission and the virus itself have evolved, affecting new populations and countries, RCCE strategies and interventions have evolved to ensure those most affected have the information and ability to take protective action.

Since the declaration of the second mpox PHEIC in August 2024, WHO has further strengthened RCCE support to regions and countries, prioritizing support for identified vulnerable populations affected by mpox transmission, such as sex workers and those living in IDP camps and camp-like settings, as well as the households of those with mpox, including children, in DRC, Burundi and Uganda and other priority countries.

Ensuring that we continue to listen to and work with those most affected by mpox, including those with lived experience of the disease, remains a priority. Informal community reference groups representing communities at high risk of mpox have been consulted and given the opportunity to contribute to the development and implementation of RCCE strategies, tools and approaches. Community leadership and participation have been crucial in delivering effective RCCE strategies that have provided timely, consistent, credible, and actionable messaging to at-risk and affected populations throughout the course of the response, especially within the last three months.

While significant steps have been made to inform and engage the disparate groups most at risk from mpox disease, there remain several associated risks for different groups in different settings. These include a lack of awareness of mpox as a significant threat among other emergencies, lack of access to trusted and reliable information, knowledge gaps, mis- and disinformation, traditional beliefs, a lack of trust in health authorities among some populations and a risk of non-compliance with protective behaviours, including isolation recommendations.

Stigma and discrimination towards key populations globally are among the primary barriers for effective RCCE. In the global outbreak (clade IIb MPXV), stigma towards mpox has intersected with broader stigma towards LGBTQ+ communities (homophobia and transphobia) and people living with HIV, contributing to misinformation, and likely affecting health seeking behaviour. In several African settings, it remains challenging to discuss key populations at risk, modes of transmission, and settings or venues where activities involving sex may pose a risk to participants.

For settings in Africa where mpox remains endemic or where mpox has recently spread, lack of awareness and resources for training, particularly among newly affected key populations, and lack of specific data on transmission dynamics of mpox make it essential to have focused, segmented, and effective RCCE interventions for an effective overall response. Furthermore, in the context of several communities in Africa, local perception,

traditional health and care practices and beliefs about mpox (symptoms, means of transmission and treatment) along with mis- and disinformation, have reinforced the threat for populations at risk, mostly in rural areas. This is where in communities, risk behaviour regarding handling of animals and bushmeat may also lead to exposure; there is likewise a need to raise awareness of sexual contact transmission of mpox recently revealed as one of the dimensions to be focused on for sustainable disease control. Strong cultural commitment to specific trapping, handling, and consumption practices regarding animal products on the one hand, and reluctance to mention and address sexual contact as a risk factor in urban and other settings where there is high mobility among commercial sex workers and limited acceptance of same-sex contact, remain gaps to be bridged by strong and robust RCCE interventions.

Six months since the declaration of the PHEIC, there is still an urgent need for a deeper understanding of vulnerable groups through the consistent collection and use of social, behavioral and community data and evidence, which has been limited or fragmented so far despite significant efforts to improve the quality of evidence. Information and data are particularly needed regarding what behaviors or variables are driving transmission in different populations and or settings. These include sex workers, those living in camps and camp-like settings, people with weakened immune systems, such as those living with HIV, local health workers, indigenous populations, and children. Likewise, co-design and co-implementation of interventions with target communities at identified hotspots, including camps for migrants, refugees and IDPs, needs to be scaled up.

A key enabling factor would be to ensure the systematic flow of information. This is especially important in regions with high cross-border movement or migration. Cross-border mpox transmission requires coordinated RCCE efforts across countries, which can be complex due to differing health policies, languages, communication strategies and levels of RCCE resource allocation.

Finally, enhancing the skills of community health workers in RCCE and community-based surveillance – key aspects of recent initiatives in DRC and Uganda – needs to be expanded in both critical humanitarian contexts and challenging urban hotspots. This will support community action and ownership of behaviour change efforts and help to address the shortage of trained RCCE personnel on the ground.

Vaccines and Immunization

During this outbreak, there have been important advancements in regulatory approval of mpox vaccines, related acceleration of work from vaccine manufacturers towards further approvals from regulatory agencies and further assessment by WHO, and concerted efforts to improve access. WHO issued immunization guidance in June 2022, updated and endorsed by the WHO Strategic Advisory Group of Experts (SAGE) in November 2022.[55] Robust guidance was again issued by SAGE in March 2024 for use of mpox vaccines during outbreaks, accompanied by a call to action for research in Africa. WHO SAGE advice endorsed by the Director-General was published as a WHO vaccine position paper on 23 August 2024.[56] On 7 August 2024, the Director-General of the WHO announced that he had triggered the process towards Emergency Use Listing (EUL) for mpox vaccines in light of the escalating mpox situation in DRC and mpox outbreak expansion in the African Region. The EUL is an emergency use authorization process, specifically developed to expedite the availability of medical products like vaccines that are needed in public health emergency situations. Granting of an EUL accelerates vaccine access for low-income countries which have not yet issued their own national regulatory approval and has the potential to result in scale up of supply through third party procurement by partners such as Gavi and UNICEF.

Three vaccines are currently authorized in various countries for the prevention of mpox: MVA-BN, LC16m8-KMB, and ACAM2000. These vaccines differ significantly in terms of dose-scheduling, route of administration, precautions, warnings, and contraindications. MVA-BN, a non-replicating live vaccine, has the least safety-related use constraints. The WHO recommends vaccination for individuals at high risk of exposure, including men who

have sex with men and sex workers, in the context of the ongoing global outbreak. Other key groups at risk include healthcare workers with repeated exposure, such as clinical laboratory and healthcare personnel, involved in diagnostic testing or clinical care for mpox cases, and outbreak response team members as defined by national policy.[55] Mass vaccination is not currently recommended for mpox.

Initial results from the use of the MVA-BN vaccine are promising:[56–58] the effectiveness of pre-exposure vaccination was 76% (95% CI: 64–88) for a one-dose schedule and 82% (95%CI: 72–92) for a two-dose schedule; for post-exposure vaccination, effectiveness was estimated to be 20% (95%CI: -24–65). [57,59–61] No real-world effectiveness data are yet available for the LC16m8 or ACAM2000 vaccines. Information on vaccine effectiveness in specific groups, such as people living with HIV, and duration of immunity due to vaccination, are currently unknown. Stakeholders are strongly encouraged to conduct studies with standardized data collection to assess the effectiveness of these vaccines during the implementation of vaccination programs. The duration of immunity remains uncertain. For vaccines with moderate effectiveness, breakthrough cases can be expected, particularly where coverage is high in groups at risk, and this can be misunderstood or misinterpreted.

In the context of the global outbreak, several countries very rapidly deployed vaccines where it was already available, contributing to the rapid global outbreak response. Other countries and joint entities such as the European Union and the Pan American Health Organization (PAHO) Revolving Fund rapidly put in place mechanisms to secure and deploy vaccines as soon as feasible. Vaccination was offered for post-exposure preventive vaccination to groups at risk, such as those recently in contact with a person with mpox, or for primary preventive vaccination to key affected groups[11]. Prior to the declaration of the second PHEIC for mpox, most African countries had not deployed any vaccine outside of limited research studies. By June 2024, Nigeria and DRC with support from partners and WHO had authorized the emergency use of mpox vaccines to address their outbreaks.

In order to overcome regulatory hurdles slowing vaccine deployment in other low-income settings, WHO issued a notice of prequalification for the MVA-BN vaccine in September 2024, and this was followed by Emergency Use Listing for the LC16m8 vaccine on 18 November 2024. Furthermore, to improve access, the interim Medical Countermeasures Network (i-MCM-Net) initiative coordinated by WHO has operationalized the multi-partners Access and Allocation Mechanism (AAM) for mpox medical countermeasures, to coordinate available donations and supplies and strategically allocate them to control the mpox outbreak. In 2024, almost 6 million doses of mpox vaccine were mobilized globally, of which nearly 2.5 million doses through the AAM. In the two allocation rounds, through the AAM, 1 137 300 mpox doses were allocated to 12 countries from the African region: (Angola, Central African Republic, Côte d'Ivoire, DRC, Guinea, Kenya, Liberia, Nigeria, Rwanda, Sierra Leone, South Africa, and Uganda). To date, more than 750 000 vaccines have been delivered to seven countries (Central African Republic, Côte d'Ivoire, DRC, Liberia, Nigeria, Rwanda, and Uganda), among which more than 650 000 doses delivered to the DRC. In addition, 361 400 doses (311 400 MVA-BN doses and 50 000 LC16m8 doses) were delivered to three countries (DRC, Nigeria, Rwanda) through bilateral agreements. The access to vaccines by affected countries using the AAM mechanism is a significant step towards a coordinated and targeted use of vaccines in response to mpox outbreaks. Partners continue to provide support to countries to implement targeted vaccination with the available doses in the country. The mpox AAM provides a blueprint for coordinating the medical countermeasures value chain to be ready for future epidemic responses. Much more needs to be done to continue and sustain support for vaccination at the country level for people at risk, and to strengthen capacity to monitor and adjust vaccination programs as needed.

[11] Some countries have indicated vaccine deployment from their own reserves without providing detailed information unless contacted directly by WHO

One Health

There are significant knowledge gaps in our understanding of the MPXV animal reservoirs, interspecies transmission patterns (including in wildlife and domestic mammals), and behavioural risk factors for zoonotic transmission. Addressing these gaps is crucial for directing preventive measures better. While some epidemiological and ecological investigations are underway, particularly in central African countries and in Nigeria, research on animal infections remains underfunded and limited. Due to the time lag between exposure to a potentially infected animal and the onset of mpox symptoms, the identification and sampling of the animal remain extremely difficult. In addition, collaboration at the local levels between the human, animal, and environment sectors is not well-established in many countries, but essential for a comprehensive response. The communication and speed of information sharing is suboptimal with significant delay in publicly sharing findings of MPXV within other sectors.

DRC has a passive animal surveillance system in place, which includes mpox as a notifiable disease, and collects data on suspected and confirmed MPXV in animals, in line with national surveillance guidelines From the start of the response, several suspected animal cases have been reported, but none of those sampled has tested positive for MPXV. Linking animal and human mpox cases has proven to be very challenging, but genomic sequencing is adding valuable insights for a better understanding of the role of zoonotic spillover events in the evolving epidemiology of mpox.

Border Health and Points of Entry (PoEs)

There are several considerations for activities concerning PoEs and cross-border mobility. First, in order to inform readiness and response operations in neighbouring countries, it is crucial to understand the travel history of confirmed cases and population mobility patterns between endemic and neighbouring countries. Secondly, RCCE materials should be positioned at relevant locations in high-risk areas such as PoEs, travel clinics, and communities adjoining land borders to ensure that travellers arriving from/going to endemic areas and border communities are aware of the signs and symptoms of mpox, how to protect themselves and others, and how to access care. Thirdly, officials in relevant PoEs should be trained to identify signs and symptoms of mpox; report, manage and refer suspected cases; and implement recommended IPC practices. Lastly, WASH facilities and IPC supplies should be provided, in particular, at land borders in high-risk areas.

In line with the WHO Director-General's standing recommendations on mpox (issued in August 2023 and extended for a year in August 2024), countries should focus on strengthening cross-border collaboration for surveillance and management of suspected cases and on the provision of advice and information to travellers. Countries should refrain from implementing travel and trade restrictions.

ANNEXES

Annex 1: Naming conventions for MPXV and description of risk groups

After consultations with experts, countries, and the general public, WHO has adopted the name "mpox" for the disease, which in 2024 became the preferred term in English.[62] "Monkeypox" remains a synonym, to match historic information, and the virus causing the disease is the monkeypox virus (MPXV).

MPXV clades were also renamed in 2022, with nomenclature of a Roman numeral for each clade, with lowercase Latin characters for subclades; the Congo Basin clade became clade I and the West African clade became clade II.[63] Each of the clades has two subclades, Ia and Ib for clade I, and IIa and IIb for clade II. Subclades Ia and Ib were defined after the emergence of subclade Ib in the South Kivu province of DRC in 2023, and subclade Ia is currently considered to encompass all other strains of clade I that are not Ib.[1,5]

In this assessment, based on transmission dynamics (population affected, modes of transmission, spillover to other groups), geographical spread (clade distribution, incidence, potential zoonotic spillover), risk factors for infection and severe disease, as well as public health infrastructure for response strategies needed to control outbreaks, the risk has been assessed for the following groups:

- **Clade Ib MPXV: Currently mostly affecting non-endemic areas for mpox in DRC and neighbouring countries,** affecting all adults and children, and spreading through close physical contact, including sexual contact. For clade Ib MPXV, international spread is predominantly linked to sexual contact. The geographic expansion of clade Ib MPXV outbreaks in East Africa and beyond, with several countries outside East Africa and in other regions of the world increasingly reporting cases linked to travel to the region, illustrates the still-rising risk of spread of clade Ib MPXV across the globe.
- **Clade Ia MPXV: Currently mostly affecting mpox-endemic areas in DRC[12]**, with sporadic cases reported in other Central and Eastern[13] African countries, where the outbreak is linked to zoonotic spillover events as well as human-to-human transmission through close physical contact, including sexual contact.
- **Clade II MPXV in historically endemic areas: Currently mostly affecting Nigeria and countries of West and Central Africa where mpox is endemic**, with outbreaks often characterized by low incidence and low mortality, affecting adults and children, and linked to zoonotic spillover events as well as human-to-human transmission through close physical contact, including sexual contact.
- **Clade IIb MPXV global epidemic** in which outbreaks continue to spread primarily among adult men who have sex with men in connected sexual networks. This population is also at risk should clade I MPXV enter and transmit in these networks.

[12] endemic provinces in the country are defined as those reporting mpox cases for at least five years consecutively.

[13] Countries considered endemic for clade Ia MPXV in East Africa include Sudan and South Sudan

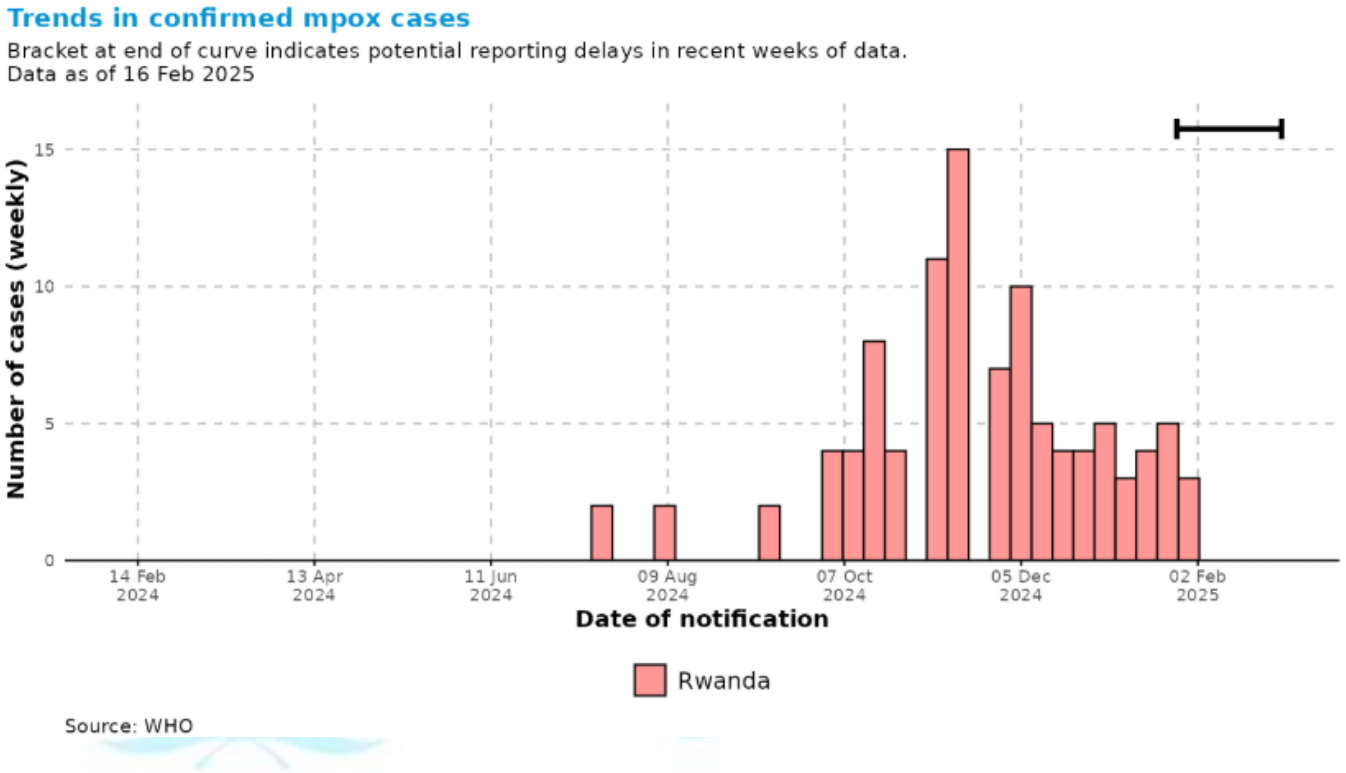
Annex 2: Descriptions of mpox outbreaks in Africa outside DRC, Burundi, and Uganda

Focus on East Africa (clade Ib MPXV circulation outside DRC, Burundi, and Uganda)

Rwanda

From the start of the outbreak in July 2024 to 16 February 2025, Rwanda has reported a total of 102 confirmed mpox cases and no deaths. The country is experiencing community transmission, but has been reporting far fewer cases than DRC, Burundi, and Uganda (Figure 14).

Figure 14. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in Rwanda, 1 January 2024 – 16 February 2025.

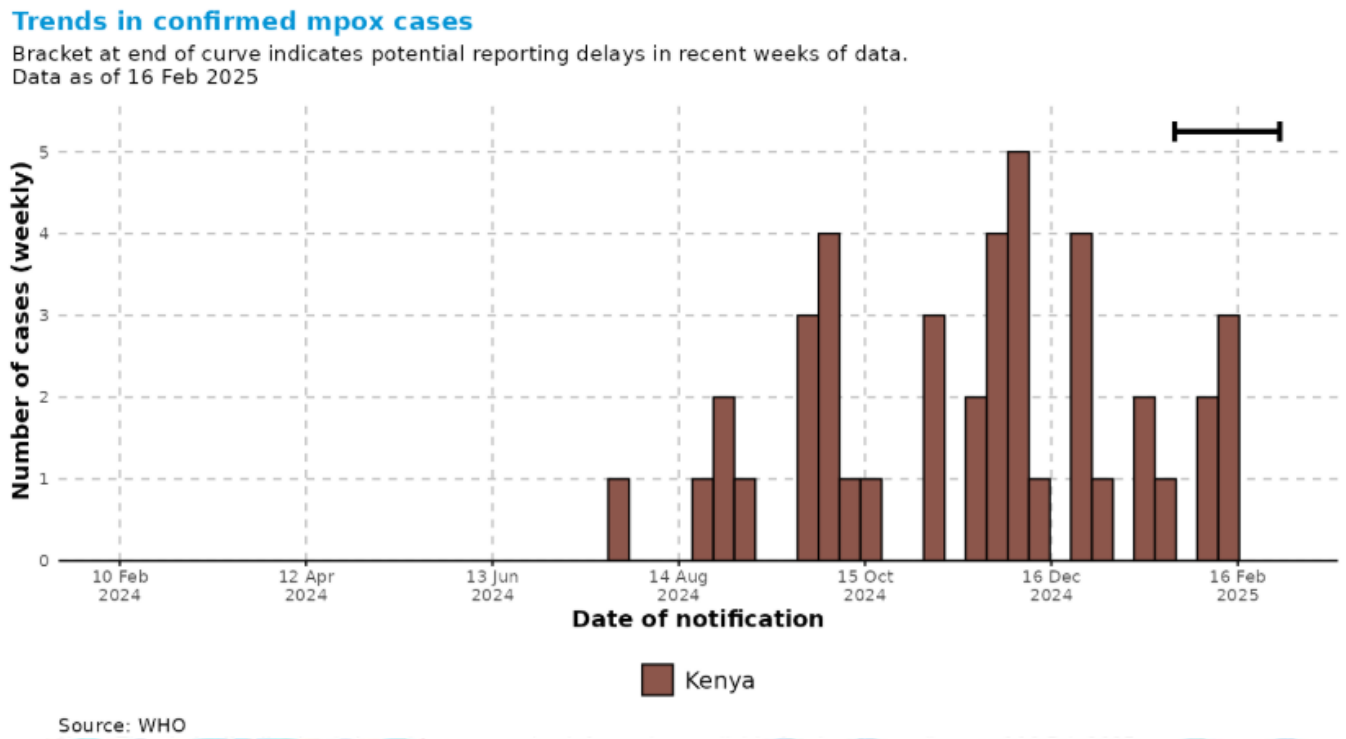


So far, only clade Ib MPXV, linked to the outbreak in eastern DRC, has been detected in the country, and current evidence still suggests exclusive human-to-human transmission of the virus. Although the relative contributions of household, community, and sexual contact transmission to disease spread remain unclear, sexual contact transmission has been implicated as a major amplifier of disease spread. The limited available data (largely from early in the outbreak) indicate that most cases have been reported among truck drivers, sex workers, traders who frequently cross the border with DRC, and their contacts.

Kenya

From the start of the outbreak in July 2024 to 16 February 2025, Kenya has reported a total of 42 confirmed mpox cases, including one death (CFR 2.4%), from 25.5% (12 out of 47) of counties in the country, including the capital, Nairobi (Figure 15). The death was reported in an immunocompromised adult living with HIV, highlighting the risk of poor health outcomes in this key population. The country is experiencing community transmission, but like Rwanda, has been reporting far fewer cases than DRC, Burundi, and Uganda (Figure 15).

Figure 15. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in Kenya, 1 January 2024 – 16 February 2025.



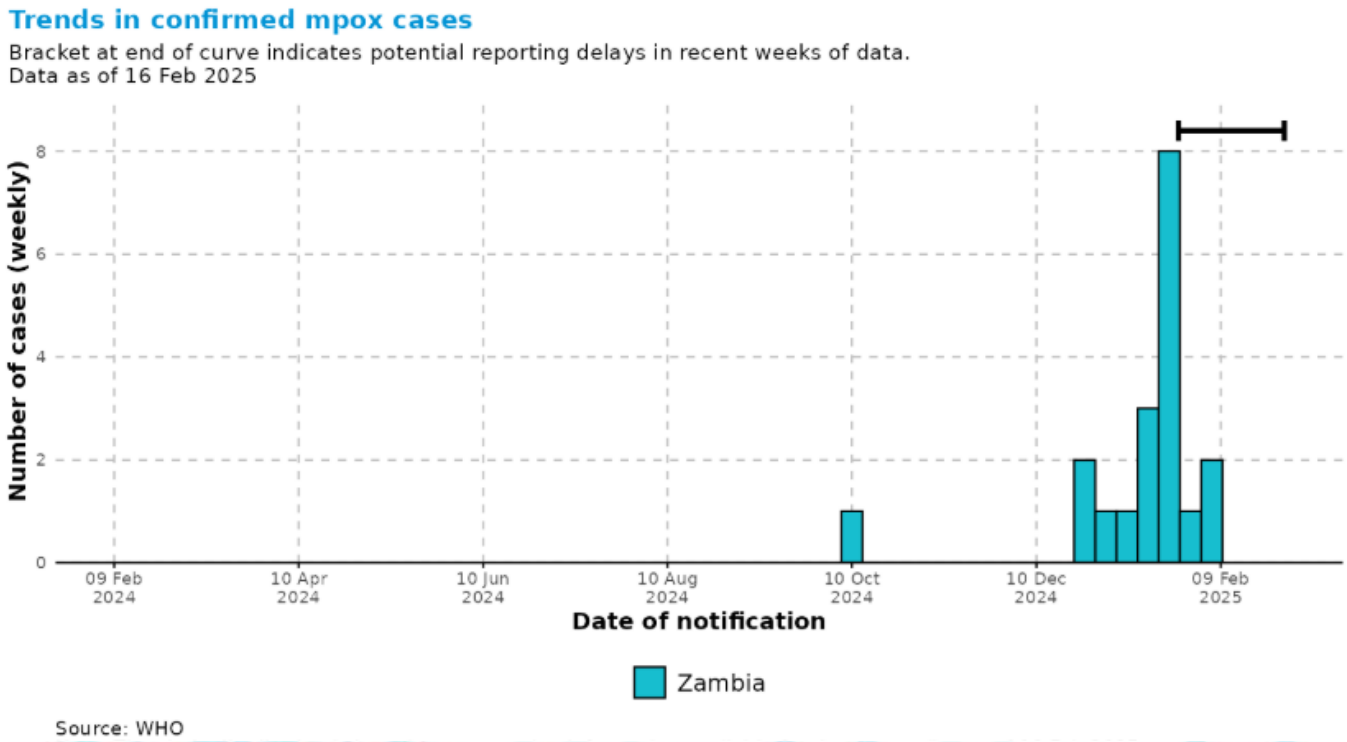
So far, only clade Ib MPXV, linked to the outbreak in eastern DRC, has been detected in the country, and current evidence still suggests that transmission of the virus is occurring exclusively through human-to-human contact. Most cases have involved long-haul truck drivers, sex workers and their contacts. The affected counties, including the capital Nairobi, all lie along the major road transport corridor running from the country's coastline and across the country to neighbouring Uganda and Tanzania. This transport corridor is well-known route for transportation of goods from Mombasa, the largest port in Kenya (and the wider eastern Africa) to several countries in the eastern African region.

The involvement of sex workers is a notable new development that emerged in the time since the last rapid risk assessment in November 2024. However, there have not been any reports of the intense amplification of mpox transmission through sex worker networks so far that was observed in Uganda.

Zambia

By 16 February 2025, Zambia had reported a total of 19 confirmed mpox cases, not only from provinces neighbouring DRC, but also the capital, Lusaka. By the time of the last rapid risk assessment in November 2024, Zambia had only reported one travel-related case. However, at the end of 2024/beginning of 2025, the country started the transition to community transmission (Figure 16) when it started reporting cases in different parts of the country without any identified epidemiological link, including among children.

Figure 16. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in Zambia, 1 January 2024 – 16 February 2025.



So far, only clade Ib MPXV, linked to the outbreak in eastern DRC, has been detected in the country. At this stage, very limited data are available and are not sufficient to characterize the outbreak further.

Focus on Central Africa (clade Ia MPXV circulation in endemic areas outside DRC)

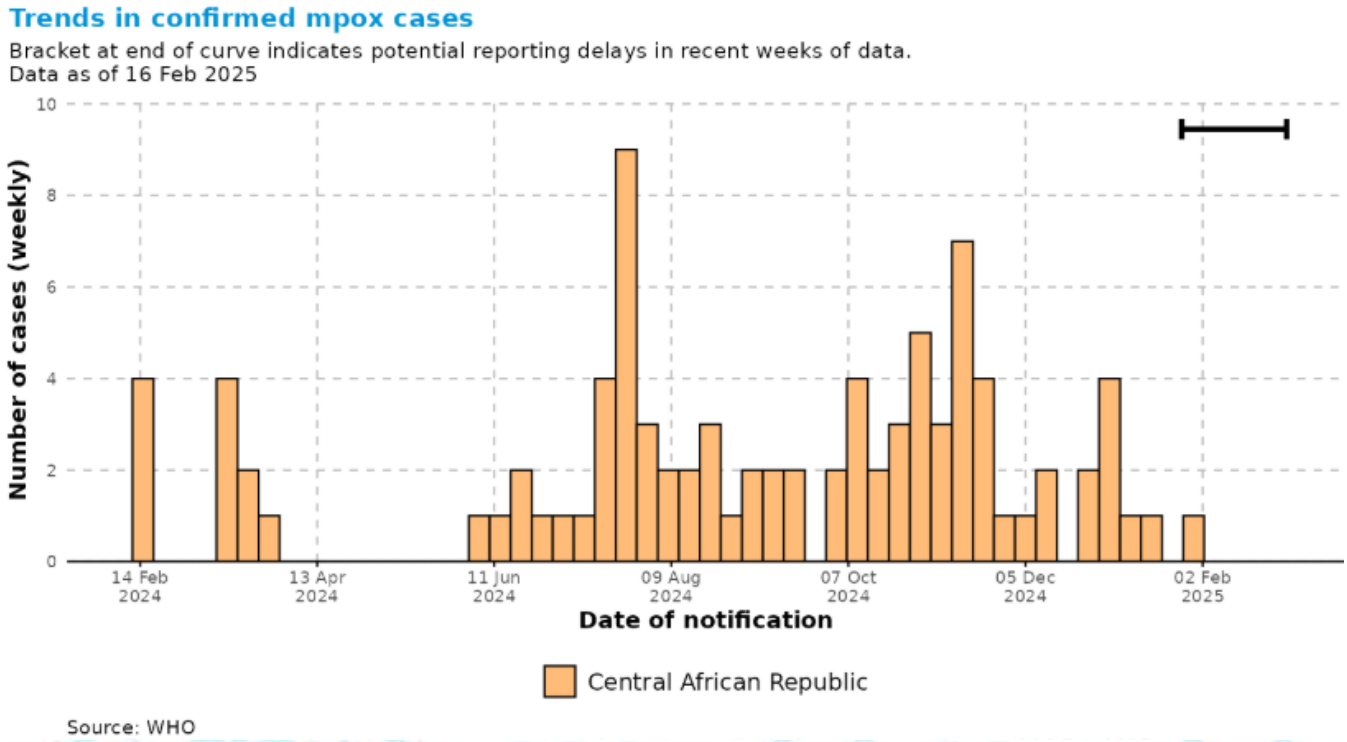
Central African Republic

From 1 January 2024 to 16 February 2025, 99 confirmed mpox cases, including three deaths (CFR 3.0%), have been reported in at least 45.7% (16 out of 35) of health districts in the Central African Republic. The country is endemic for clade Ia MPXV, and so far, this is the only clade that has been detected in the country. Historically, cases of mpox due to clade Ia MPXV have only sporadically been reported in the country, marked by low mortality. However, in 2024, the country reported the largest clade Ia MPXV outbreak outside of DRC. Although more concerning trends in confirmed cases per week were observed from July to November 2024, relatively fewer confirmed cases have been reported per week since then (Figure 17). To date, the epicentre of the outbreak remains Mbaïki, a forested area in which the local population is in close contact with wildlife and spends extended periods of time in the forests.

During this period, cases have been predominantly children, with most cases (about 27% of all cases) under five years of age, followed by those aged from five to nine years old (about 18.5%), and those aged 15 to 19 years old (about 18.5%). About two-thirds of cases were male. An analysis of occupations of confirmed cases reveals that most cases are students/pupils (32%), non-school-going children (21%), miners (20%), and farmers (14%).

The transmission dynamics in the Central African Republic remain unclear since the limited outbreak investigations still have not definitively elucidated the modes of transmission. Nonetheless, the constellation of preliminary indications from genomic sequencing analysis, analyses of work/occupation, and observations of a continued increase in the number of cases across different areas of the country, suggests repeated zoonotic spillover events followed by secondary human-to-human transmission.

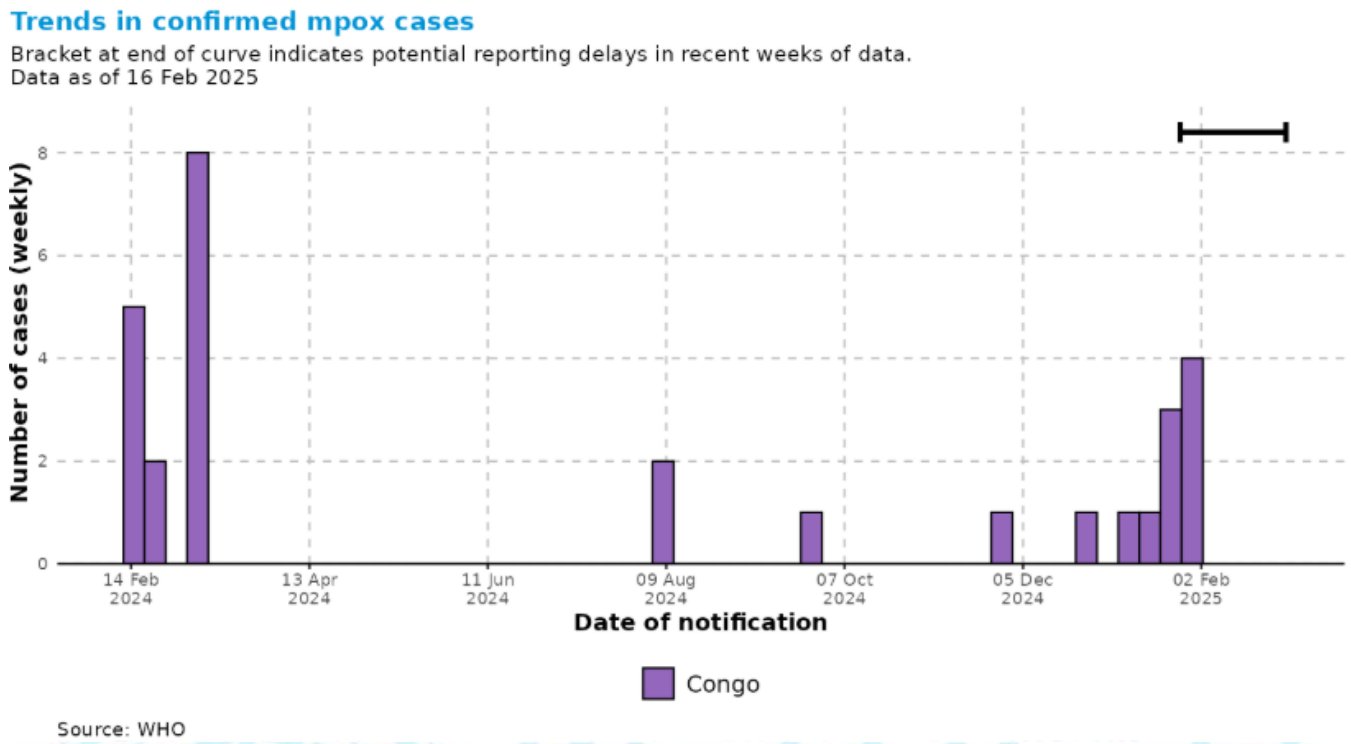
Figure 17. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in the Central African Republic, 1 January 2024 – 16 February 2025.



Republic of Congo

From 1 January 2024 to 16 February 2025, 33 confirmed mpox cases and no deaths have been reported in at least 10 health districts across five administrative departments the Republic of Congo. The country is endemic for clade Ia MPXV, and so far, this is the only clade that has conclusively been reported. Historically, cases of mpox due to clade Ia MPXV have only sporadically been reported in the country, marked by low mortality, a trend which continued for most of this period only to change in the most recent weeks when a rise in weekly confirmed cases was reported (Figure 18). Investigations are still underway to ascertain the cause of this recent rise in cases. Notably, as this rapid risk assessment was being finalized, more recent information became available to WHO that genomic sequencing analysis of a partial MPXV sequence from a sample of a recent case suggested that the case was infected with clade Ib MPXV. Efforts to support the country in investigating this are underway, and if it is confirmed, this will be the first reported detection of clade Ib MPXV in the country. This was reported in the context of the recent rising trend in weekly cases, which included detection of cases with recent history of travel to DRC.

Figure 18. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in the Republic of Congo, 1 January 2024 – 16 February 2025.



In contrast to DRC and the Central African Republic, majority of cases are among adults, with about 60% of cases aged 20 – 40 years of age and 27% of cases aged five to 14 years old. Males constitute about two-thirds of cases.

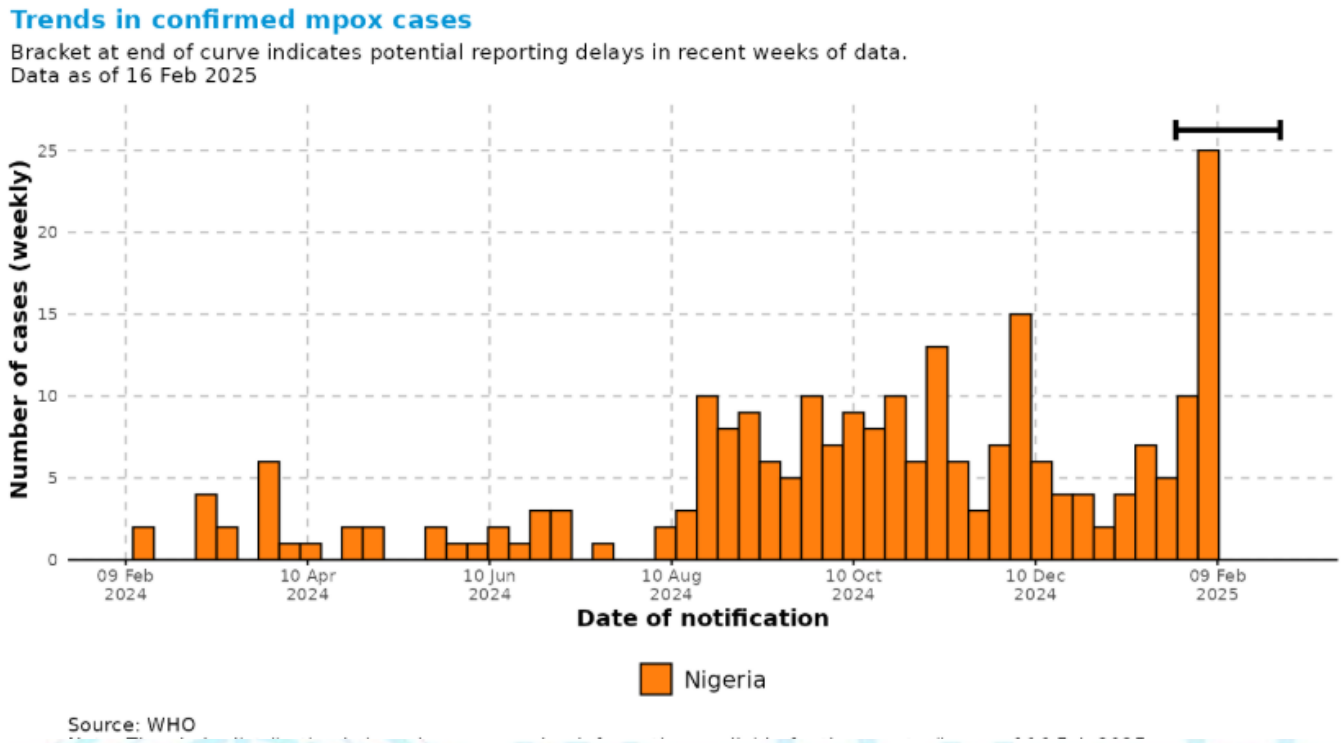
The transmission dynamics in the Republic of Congo remain unclear since the limited outbreak investigations still have not definitively elucidated the modes of transmission. Nonetheless, it is thought that in similar fashion to the Central African Republic, the country is experiencing repeated zoonotic spillover events followed by secondary human-to-human transmission.

Focus on West Africa (clade II MPXV circulation in endemic areas)

Nigeria

Nigeria has continuously reported mpox cases since the start of the clade IIb MPXV outbreak in the country in 2017. From 1 January to 16 February 2025, the country reported 242 confirmed mpox cases, including one death (CFR 0.4%). This case count is relatively low compared to the peak of the outbreak in 2022 when 762 confirmed cases were reported. Nevertheless, in 2024, the country surpassed its case count for 2023 and consistently reported confirmed cases every week during the second half of 2024. A closer look at this trend though reveals that there was an increase in the number of confirmed weekly reported cases immediately following the PHEIC declaration in August 2024 (Figure 19), likely owing to improved surveillance at that time, suggesting that the under-ascertainment of cases in the country had been underestimating the level of MPXV circulation. Notably, in recent weeks, there has been a surge in cases in recent weeks, but further information on reasons for this emerging trend was not available at the time this document was being finalized.

Figure 19. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in the Nigeria, 1 January 2024 – 16 February 2025.



From 1 January 2024 to 16 February 2025, over 2000 suspected mpox cases were reported from all 36 states and the Federal Capital Territory (FCT). Upon testing, about 10% were positive for MPXV (comparable to the test positivity rate during the last rapid risk assessment in November 2024). There has been one reported death among confirmed cases during this period, but further information on this death was not available at the time this document was being finalized. A total of 31 states and the FCT have reported at least one confirmed case (compared to 29 states and the FCT during the last rapid risk assessment in November 2024). Genomic sequencing analysis has revealed only clade IIb MPXV infection. Co-infection with varicella zoster virus (VZV) was reported in at least 70 cases, and no co-infection with HIV was detected during the period. Clade IIb MPXV remains the only strain reported in the country.

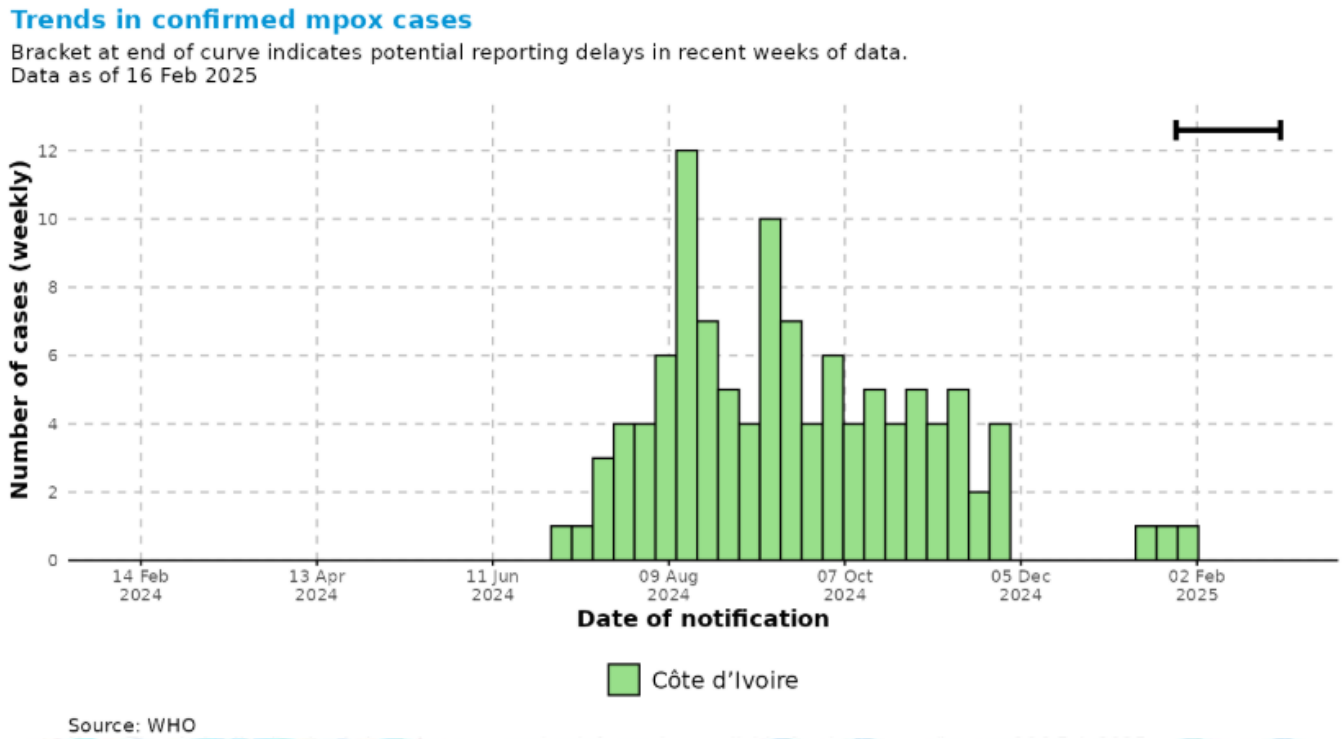
About two-thirds (63%) of cases are male and about 20% of cases are among children under five years of age. This predominance of children under five years of age among cases is a relatively new development that emerged in 2024. Prior to 2024, cases had been reported primarily among adults. It remains unclear why this demographic shift happened in 2024.

Despite the country's history of MPXV, particularly from 2017, prevailing modes of transmission have not been well elucidated.

Côte d'Ivoire

While Côte d'Ivoire had historically reported mpox before (one confirmed case in 1971 and another confirmed case in 1981), it did not report cases during the multi-country outbreak in 2022. However, it experienced a large outbreak in the second half 2024 in the country, reporting the second-highest number of confirmed cases in West Africa, after Nigeria (Figure 20).

Figure 20. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in Côte d'Ivoire, 1 January 2024 – 16 February 2025.



The country reported its first mpox case in June 2024 and as of 16 February 2025, 110 confirmed cases, including one death (CFR 0.9%), have been reported. Although more concerning trends in confirmed cases per week were observed from June to September 2024, relatively stable trends have been reported per week since then, with even fewer confirmed cases in 2025 (Figure 20).

Co-circulation of clade IIa and clade IIb MPXV has been reported in the country. This is a new development in the time since the last rapid risk assessment in November 2024, at which point only clade IIa MPXV had been detected in the country. Côte d'Ivoire is one of only three countries (the other countries being Ghana and Liberia) to ever report co-circulation of clade IIa and clade IIb MPXV.

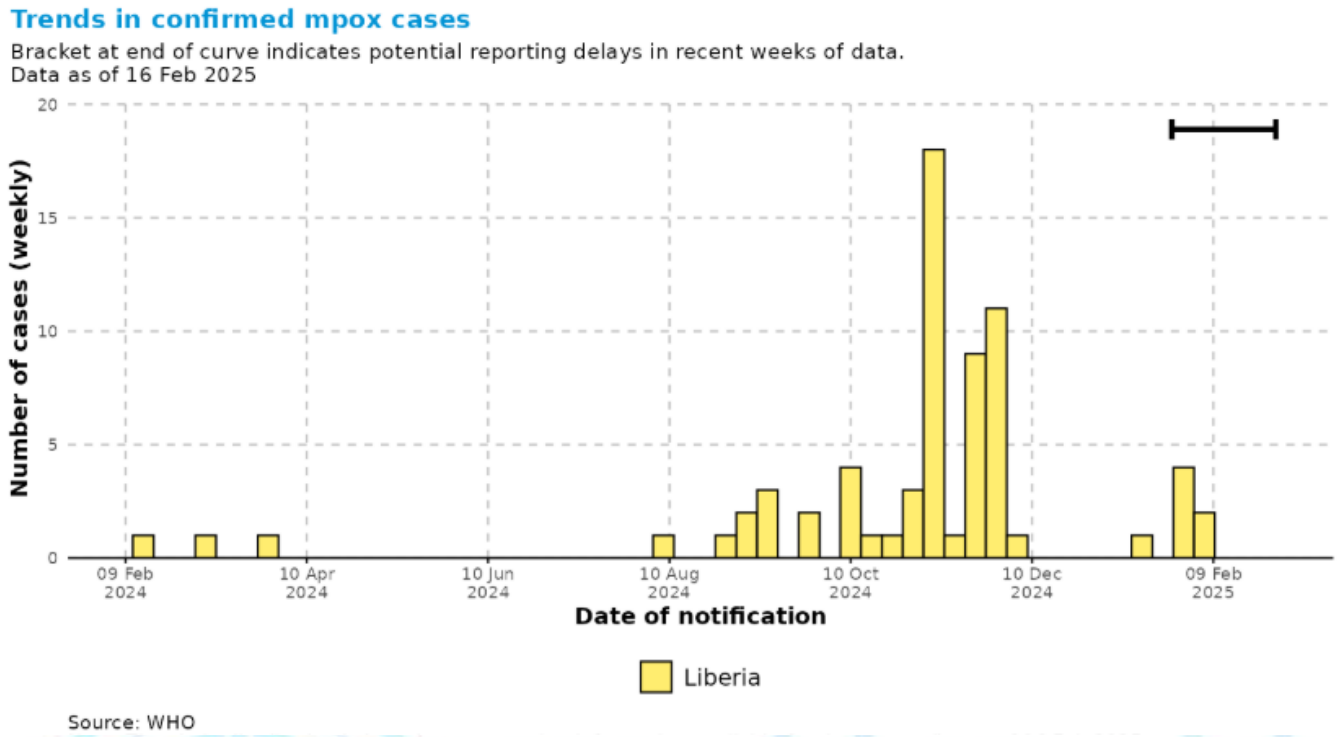
Furthermore, human outbreaks of clade IIa MPXV remain a relatively new and rare phenomenon. Côte d'Ivoire remains one of four countries, along with Ghana, Guinea and Liberia, to report the first clade IIa MPXV outbreaks in human populations since the outbreak triggered by prairie dogs in the United States of America in 2003.

The transmission dynamics in Côte d'Ivoire remain unclear since the limited outbreak investigations still have not elucidated the modes of transmission. Nonetheless, preliminary indications from genomic sequencing analysis along with observations of a continued emergence of new cases (albeit with lower incidence than reported in the last rapid risk assessment in November 2024), across different areas of the countries, affecting mostly adults, suggests repeated zoonotic spillover events followed by secondary human-to-human transmission.

Liberia

From 1 January 2024 to 16 February 2025, 70 confirmed cases and no deaths have been reported in Liberia. The outbreak peaked in November 2024, before apparently coming to an abrupt halt for about two months before additional new cases were detected in mid – January 2025 (Figure 21). Information received by WHO indicates that the apparent two-month hiatus in cases was not due to the success of containment measures, rather, it was due to an unplanned pause in most response activities across the country owing to extreme resource constraints faced by response teams.

Figure 21. Epidemic curve of weekly number of confirmed mpox cases by reporting epidemiological week, in Liberia, 1 January 2024 – 16 February 2025.



Co-circulation of clade IIa and clade IIb MPXV continues to be reported in the country. Liberia is one of only three countries (the other countries being Côte d'Ivoire and Ghana) to ever report co-circulation of clade IIa and clade IIb MPXV.

Furthermore, human outbreaks of clade IIa MPXV with human-to-human transmission remain a new and rare phenomenon. Liberia is one of four countries, along with Côte d'Ivoire, Ghana and Guinea, to report the first clade IIa MPXV outbreaks in human populations, since the zoonotic (animal-to-human) outbreak of mpox triggered by infected pet prairie dogs in the United States of America in 2003.

The transmission dynamics in Liberia remain unclear since the limited outbreak investigations still have not definitively elucidated the modes of transmission. Nonetheless, it is thought that in similar fashion to Côte d'Ivoire, the country is experiencing repeated zoonotic spillover events followed by some extent of secondary human-to-human transmission.

World Health Organization

Annex 3: WHO external products on mpox

External Product		Date	Content
Disease Outbreak News (DON)	Monkeypox - United Kingdom of Great Britain and Northern Ireland	16 May 2022	
	Multi-country monkeypox outbreak in non-endemic countries	21 May 2022	
	Multi-country monkeypox outbreak in non-endemic countries: Update	29 May 2022	
	Multi-country monkeypox outbreak: situation update	4 June 2022	
	Multi-country monkeypox outbreak: situation update	10 June 2022	
	Multi-country monkeypox outbreak: situation update	17 June 2022	
	Multi-country monkeypox outbreak: situation update	27 June 2022	
	Mpox (monkeypox)- Democratic Republic of the Congo	23 November 2023	Report of rising case counts in endemic areas and expansion of outbreaks to previously unaffected areas. Report of sexual contact transmission of clade I MPXV among sex workers and among men who have sex with men.
	Mpox - Democratic Republic of the Congo	14 June 2024	Reporting of the expansion of the mpox outbreak at national level, especially in the eastern part of the country where transmission if lead by sexual contact.
	Mpox – South Africa	9 July 2024	Epidemiological update of the 2024 outbreak, not travel related, transmitted through sexual contact, mainly men who have sex with men, most of whom living with HIV.
	Mpox – African Region	22 August 2024	Update on geographical expansion of mpox in Africa.
	Mpox – Sweden	30 August 2024	Report of first case of mpox due to clade Ib MPXV in Sweden. This represented the first case of mpox due to clade Ib MPXV reported outside Africa
Epidemiological report	Global Mpox Trends	Latest 19 February 2025	Surveillance report update weekly based on data reported by Member States to WHO
Public Situation Report (SitRep)	External situation report #1	06 July 2022	Epidemiological update, new guidance documents and updates on WHO advice
	External situation report #2	25 July 2022	Epidemiological update, second Emergency committee meeting and updates on WHO advice
	External situation report #3	10 August 2022	Epidemiological update, updated advice on surveillance and laboratory
	External situation report #4	24 August 2022	Epidemiological update, infection among health workers and updates on guidance documents
	External situation report #5	7 September 2022	Epidemiological update, new guidance documents and updates on WHO advice
	External situation report #6	21 September 2022	Epidemiological update, regional distribution of the cases by age and by gender, and updates on WHO advice
	External situation report #7	5 October 2022	Epidemiological update, standardized case and death definitions, One Health, updates on infodemic, and WHO advice on gatherings.
	External situation report #8	19 October 2022	Epidemiological update, update on IPC, clinical care, therapeutics and vaccines, risk communication and advice for gatherings. Situation update in AFRO, Sudan and Gulf countries
	External situation report #9	2 November 2022	Epidemiological update, updates on clinical care, therapeutics, and key recommendations of third IHR EC meetings. Situation update in PAHO.
	External situation report #10	15 November 2022	Epidemiological update, updates on clinical care, therapeutics, vaccination and key recommendations of third IHR EC meetings. Situation update from SEARO.

	External situation report #11	1 December 2022	Epidemiological update, new disease name, mpox cases in females, HIV and mpox, updates on clinical, therapeutics and revised strategy for RCCE. Situation update from WPRO.
	External situation report #12	14 December 2022	Epidemiological update, sexual health and mpox, and a summary of the country missions to Nigeria and Central African Republic.
	External situation report #13	5 January 2023	Epidemiological update, focus on congregate settings, and updates from RCCE. Situation update from PAHO.
	External situation report #14	19 January 2023	Epidemiological update, focus on genomic sequencing of MPXV and clinical and public health links between HIV and mpox. Situation update from AFRO.
	External situation report #15	2 February 2023	Epidemiological update, focus on intersection between mopx and STIs and HIV among mpox cases from surveillance data. Situation update from EURO.
	External situation report #16	16 February 2023	Epidemiological update, recommendations of 4th Emergency committee meeting and focus on the human-animal-interface of mpox. Situation update from EMRO.
	External situation report #17	2 March 2023	Epidemiological update and vaccines for mpox. Situation update from SEARO.
	External situation report #18	16 March 2023	Epidemiological update, deaths dues to mpox, focus on clinical presentation of mpox and management of severe mpoc. Situation update from WPRO.
	External situation report #19	30 March 2023	Epidemiological update, summary of mpox in people living with HIV and focus on animal reservoir of MPXV in Nigeria. Situation update from AFRO.
	External situation report #20	13 April 2023	Epidemiological update and focus on elimination of mpox. Situation update from EURO.
	External situation report #21	27 April 2023	Epidemiological update, focus on incubation period of mpox and social media campaign to inform, prevent and reduce stigma. Situation update from EMRO.
	External situation report #22	11 May 2023	Epidemiological update and global rapid risk assessment. Situation update from WPRO.
	External situation report #23	26 May 2023	Epidemiological update, focus on mpox reinfections and mpox cases among vaccinated persons. Situation update from SEARO.
	External situation report #24	10 June 2023	Epidemiological update and advice on how to stay safe during pride month. Situation update from PAHO.
	External situation report #25	24 June 2023	Epidemiological update and recommendations for the care of pregnant individuals with mpox.
	External situation report #26	13 July 2023	Epidemiological update, summary of the WHO control and elimination strategy for mpox, and situation update from DRC.
	External situation report #27	14 August 2023	Epidemiological update, recommended IPC measures to control mpox transmission to Health and Care workers
	External situation report #28	19 September 2023	Epidemiological update, long-term risk assessment, animal surveillance study wildlife in Nigeria and mpox standing recommendations.
	External situation report #29	20 October 2023	Epidemiological update, mpox among children and adolescents, and an overview of mpox event-based surveillance (EBS)
	External situation report #30	25 November 2023	Epidemiological update and Disease Outbreak News about the mpox situation in DRC
	External situation report #31	22 December 2023	Epidemiological update and WHO mission to DRC
	External situation report #32	30 April 2024	Epidemiological update, WHO SAGE recommendations on mpox vaccines in outbreak settings and revisions to the interim guidance on Diagnostic testing for the monkeypox virus
	External situation report #33	31 May 2024	Epidemiological update, WHO Strategic framework for enhancing prevention and

			control of mpox and WHO Advisory Committee on Variola Virus Research
	External situation report #34	28 June 2024	Epidemiological update, spotlight on the mpox situation in South Africa and important updates on the mpox vaccines
	External situation report #35	12 August 2024	Epidemiological update and expansion of the outbreak in the African Region
	External situation report #36	14 September 2024	Epidemiological update for Africa and operational updates
	External situation report #37	22 September 2024	Epidemiological update for Africa and global, operational updates and mpox transmission protocol
	External situation report #38	28 September 2024	Epidemiological update for Africa, Democratic Republic of the Congo, Burundi and operational updates
	External situation report #39	6 October 2024	Epidemiological update for Africa and North Kivu, and operational updates
	External situation report #40	13 October 2024	Epidemiological update for Africa, Zambia, Ghana, Central African Republic, Nigeria and operational updates
	External situation report #41	26 October 2024	Epidemiological update for Africa, mpox literature repository, WHO interim guidance for mpox in schools and operational updates
	External situation report #42	9 November 2024	Epidemiology update for Africa and operational updates
	External Situation Report #43	9 December 2024	Epidemiological update for global situation, Africa, Democratic Republic of the Congo, clade Ib MPXV-affected countries, Canada, United States of America, United Kingdom, and global operational updates.
	External Situation Report #44	23 December 2024	Epidemiological update for global situation, Africa, Democratic Republic of the Congo, clade Ib MPXV-affected countries, Pakistan, Oman, and global operational updates.
	External Situation Report #45	11 January 2025	Epidemiological update for Africa, Democratic Republic of the Congo, clade Ib MPXV-affected countries, Germany, Belgium, China, France, Kosovo[1], Tanzania and global operational updates.
	External Situation Report #46	28 January 2025	Epidemiological update for global situation, Africa, Democratic Republic of the Congo, clade Ib MPXV-affected countries, Azerbaijan, and global operational updates.
	External Situation Report #47	13 February 2025	Epidemiological update for Africa, Democratic Republic of the Congo, clade Ib MPXV-affected countries, United Arab Emirates, and global operational updates.
Mpox factsheet	Mpox (monkeypox)	26 August 2024	Most updated information about the disease, including observations from the 2022-2024 outbreak
Online training	Open WHO courses on mpox	January 2020 January 2022 July 2023	Mpox: introduction. OpenWHO online training 2020. https://openwho.org/courses/monkeypox-introduction • Mpox: intermediate training. OpenWHO online training 2022 https://openwho.org/courses/monkeypox-intermediate • Mpox: the global outbreak. OpenWHO online training 2023 https://openwho.org/courses/monkeypox-global-outbreak-2023

In addition to these materials listed above, WHO Headquarters, and Regional Offices have produced and maintain comprehensive resources for technical guidance for national authorities and health professionals, public health

advice for individuals and communities and training courses which are accessible in the situation reports and on the respective WHO and regional office websites. These can be found in each situation report.

[1] All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

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