(WHO, 2026)
[Chapter 1]

Disease Outbreak News

Mpox: recombinant virus with genomic elements of clades Ib and IIb - Global

14 February 2026

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Situation at a glance

Recombination of monkeypox virus (MPXV) strains has been documented in recent months, with two cases of a recombinant strain comprising clade Ib and IIb MPXV reported. Recombination is a known natural process that can occur when two related viruses infecting the same individual exchange genetic material, producing a new virus. The first case was detected in the United Kingdom of Great Britain and Northern Ireland (hereafter “United Kingdom”), with travel history to a country in South-East Asia, and the second in India, with travel history to a country in the Arabian Peninsula. Detailed analysis of the virus genomes shows that the two individuals fell ill several weeks apart with the same recombinant strain, suggesting that there may be further cases than are currently reported. Both cases had similar clinical presentation to that observed for other clades. Neither patient experienced severe outcomes. Contact tracing for both cases in the reporting countries has been completed; no secondary cases were detected. Based on available information, the overall WHO public health risk assessment for mpox remains unchanged: the risk is assessed as moderate for men who have sex with men with new and/or

multiple partners and for sex workers or others with multiple casual sexual partners, and low for the general population without specific risk factors.

Description of the situation

In December 2025, the United Kingdom detected the first reported case of a clade Ib/IIb MPXV recombinant strain.[5] After classification of this case and posting in a public database as a novel MPXV recombinant strain, a case of mpox detected in India in September 2025 was retrospectively reclassified as a closely-related recombinant strain based on sequencing data. To date, these are the only known cases of this recombinant virus.

Case detected in the United Kingdom of Great Britain and Northern Ireland

The case was identified following testing of a vesicular swab from a traveler who had returned from a country in the Asia Pacific region in October 2025. During laboratory confirmation, the virus was initially typed as clade Ib MPXV by qPCR. Subsequent whole genome sequencing revealed that the MPXV strain identified was distinct from other known clade Ib MPXV strains with phylogenetic analysis indicating that the genome had regions similar to both clade Ib and clade IIb MPXV reference sequences, suggesting that it is an inter-clade recombinant. To confirm this unusual finding, sequencing was repeated on the original extract from the primary sample, a fresh extract from the same primary sample, a second swab collected from the patient at the same time, and a cultured isolate derived from the initial swab. This repeat sequencing yielded identical viral genome sequences from the two clinical swabs and the cultured isolate, supporting the initial findings of a new recombinant strain, and showing that it can replicate and presents potential for onward transmission. This strain is a recombinant MPXV, containing genetic elements from both clade Ib and clade IIb MPXV. A small number of contacts were identified and followed up in the United Kingdom; none developed any clinical features of mpox. Health worker contacts had worn full personal protective equipment (PPE) during provision of medical care to the patient. The authorities of the United Kingdom continue to investigate the significance of this recombinant MPXV strain through phenotypic characterization studies.

Case detected in India

On 13 January 2026, the National IHR Focal Point (NFP) of India notified WHO of a mpox case with an inter-clade recombinant MPXV which was, upon whole-genome sequencing, found to have genomic elements of clades Ib and IIb MPXV.

The recombinant virus was found in samples from a man with mpox who had presented for care in September 2025. The patient had reported recent travel from a country in the Arabian Peninsula, where he resides as an overseas worker.

He developed symptoms on 1 September 2025, while still abroad. After his return to India, real-time PCR confirmed MPXV infection on 11 September 2025. Clade differentiation PCR performed on 15 September 2025 initially identified this virus as clade II MPXV. Initial genomic sequencing analysis suggested features consistent with clade IIb MPXV. However, following the update of the global Nextclade database on 16 December 2025, which included the recombinant clade Ib/IIb MPXV strain reported by the United Kingdom, the virus from the patient in India was reclassified as belonging to the recombinant strain. Recombination analysis demonstrated mosaic patterns containing genomic regions derived from both parent clades.

Following the initial diagnosis, the patient was hospitalized, did not experience any medical complications, and fully recovered, testing negative for MPXV on 29 September 2025. The case reported no close contacts in India, and no known secondary cases were identified following this introduction of the recombinant clade Ib/IIb MPXV in India.

Full or near-full genome retrieval (>99%) from both the sample and a sample-derived virus isolate enabled phylogenetic analysis showing >99.9% similarity to the recombinant strain detected in the United Kingdom. A total of 34 recombinant tracts were observed in the sequence reported by India, while 28 recombinant tracts were observed in the sequence reported by the United Kingdom; 16 recombinant tracts were common to both strains. This case in India therefore represents the earliest known detection of this recombinant strain globally, having preceded the event reported in the United Kingdom.

Consistent with the case reported in the United Kingdom, clinical presentation was consistent with cases due to clade I or clade II MPXV (non-recombinant MPXV) infection.

Epidemiology

Mpox is an infectious disease caused by the 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 the Democratic Republic of the Congo in 2023,

and subclade Ia encompasses all other strains of clade I that are not Ib. As reported here, there have also been two cases of the clade Ib/IIb recombinant strain, detected in the UK and in India.

Mpox spreads among humans through direct close physical contact with an infected person, including sexual contact. Transmission can also occur through indirect contact (with contaminated materials), through infectious respiratory particles in limited cases, and from mother to child (vertical transmission). Historically mpox was primarily characterized by zoonotic transmission, with outbreaks occurring in tropical rainforest regions of East, Central and West Africa, and occasional exportation of cases to other areas. In the context of zoonotic transmission, which continues to occur in historically endemic areas, MPXV is transmitted to humans through direct contact with infected wild animals (e.g., through hunting, trapping, or petting), and possibly through processing and consuming infected wild game or their body parts and fluids. To date, animal-to-human transmission has always been documented in or linked to known endemic regions of Africa. All other outbreaks in Africa or in other parts of the world are to date presumed to be due to human-to-human transmission, until proven otherwise. Symptoms of mpox in humans include swollen lymph nodes, fever, and a skin rash and/or mucosal lesions that may initially resemble those of other illnesses such as chickenpox (caused by the varicella virus), or sexually transmitted infections such as herpes or syphilis if the rash or lesions appear in the genital or anal region. The ongoing global outbreak has shown that mpox can also present with few lesions, and asymptomatic infection can occur. The contribution of pre- and asymptomatic infection to transmission remains poorly understood.

Public health response

WHO Response:

WHO maintains global mpox surveillance and continues to provide response guidance and support for all countries, including access to diagnostics and vaccines through multi-partner coordination including through the Access and Allocation Mechanism for mpox. WHO and partners are establishing the longer-term International Coordinating Group for mpox vaccine provision (ICG) to further accelerate timely outbreak response and ensure sustainable support for the future. Furthermore, WHO continues to evaluate available rapid diagnostic tests for field use.

Response measures in the United Kingdom:

The United Kingdom Health Security Agency (UKHSA) continues to work closely with the National Health Service England, public health agencies in Scotland, Wales and Northern Ireland, and is monitoring the situation in the United Kingdom and undertaking public health actions in accordance with the Mpox control: UK strategy 2025 to 2026 .

Public health information was made available to health care providers and the public. Contact tracing was completed in line with national guidance. Contacts were given appropriate health advice, offered vaccination, and monitored for symptoms.

All suspected mpox cases in the UK are tested using Orthopoxvirus-generic, MPXV-generic, and MPXV-specific PCR as primary testing, with clade differentiation assays performed on any positive samples. All samples identified as clade Ib, and selected samples identified as clade IIb cases undergo whole genome sequencing through Illumina-based workflows.

Response measures in India:

Public health measures, including contact tracing and monitoring, were implemented to prevent onward transmission. No secondary case was detected.

All suspected mpox cases in India are tested using Orthopoxvirus-generic and MPXV-specific PCR with clade differentiation assays. Positive cases undergo whole genome sequencing through Illumina-based workflows.

WHO risk assessment

Mpox outbreaks must be considered in their local context, with meaningful involvement of affected communities, to ensure an in-depth understanding of the epidemiology, modes of transmission, risk factors for severe disease, viral reservoir and evolution, and relevance of strategic approaches and countermeasures for prevention and control.

Multiple strains of MPXV are circulating through interconnected sexual networks across many countries and settings. Co-infection with different strains, that could lead to emergence of recombinant virus strains, while rare, can be expected. The case in India was infected with the same recombinant Ib/IIb MPXV strain detected in the United Kingdom. Symptom onset in the case reported in India occurred more than two months earlier than the case in the United Kingdom, and the great degree of similarity between their sequences suggests a common evolutionary history. This information has two important implications: i) the origin of the recombinant strain remains unknown; and ii) transmission of this recombinant virus already involves at least four countries in three WHO regions, and is therefore likely to be more widespread than currently documented.

For the cases in the United Kingdom and India, the initial clade differentiation PCR results indicated clade Ib and IIb MPXV, respectively. Thus, clade differentiation PCR assays alone may not reliably identify recombinant MPXV strains, and genomic sequencing is likely to be required for their detection.

Due to the small number of cases found to date, conclusions about transmissibility or clinical characterization of mpox due to recombinant strains would be premature, and it remains essential to maintain vigilance regarding this development.

In light of the limited information available on this recombinant MPXV strain, the overall WHO public health risk assessment for mpox remains unchanged: the risk is assessed as moderate for men who have sex with men with new and/or multiple partners and for sex workers or others with multiple casual sexual partners, and low for the general population without specific risk factors.

All countries should remain alert to the possibility of MPXV genetic recombination. The public health risk posed by any newly detected recombinant strain should be assessed on a case-by-case basis, considering available epidemiological, clinical and genomic information.

WHO advice

Based on the information available, WHO recommends maintaining epidemiological surveillance, laboratory and genomic sequencing capacity for mpox, case management, infection prevention and control (IPC) measures, vaccination for people at risk, locally relevant risk communication and community engagement, and public health guidance for mpox.

All recommendations are made in the context of ongoing transmission of clades Ib and IIb MPXV in key populations at risk in all WHO regions, including undetected or pre- and asymptomatic infections, as well as unreported cases. They additionally apply to settings where clades Ia and IIa MPXV continue to spread through a mix of zoonotic and human-to-human contact. There is likely to be wider circulation of this emerging recombinant strain of MPXV since at least September 2025 than reflected by the two cases documented and linked to four countries in three WHO regions.

WHO advises Member States to:

- **maintain mpox surveillance and rapid reporting, including prompt IHR notification of any unusual events and imported cases in line with the WHO Standing Recommendations issued under the IHR (2005) and extended to August 2026;**

- **continue to carry out genomic sequencing of all laboratory specimens from confirmed cases in early outbreak settings, and a representative sample of at least 10% of laboratory specimens from confirmed cases in settings experiencing community transmission, as per WHO guidance;**
- **carry out targeted sample characterization for specific situations of interest, especially for cases who report recent travel to locations with clade I MPXV circulation or to locations which provide opportunities for sex tourism, prioritizing sequencing for cases in key populations at risk and for imported, unusual, or severe cases, and sharing sequences rapidly in public databases;**
- **ensure quality case management and robust IPC practices and strengthen vaccination strategies, including ensuring access to mpox vaccines for key populations at risk;**
- **continue to advance integration of HIV/STI and mpox health services to ensure early HIV testing and care for any person with suspected or confirmed mpox and rapid initiation or resumption of antiretroviral therapy in people living with HIV as needed for any person with mpox;**
- **strive to eliminate human-to-human transmission of mpox where MPXV circulation remains low and ensure the maintenance of capacity for prompt outbreak response;**
- **continue to provide information to travelers who may be at risk.**

WHO recommends that no restrictions be applied for travel to, or trade with, the countries named in this report, based on the information available on the event reported here.

Further information

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