Editorial

Rising Threat of Mpox

Muhammad Haroon Hamid[1], Rabiah Mahwish[2]

[1-2] *King Edward Medical University, Lahore*

Mpox (formerly called monkeypox) is a zoonotic disease caused by an orthopoxvirus. Humans can acquire the virus from infected animals through bites or direct contact. However, the large multinational outbreak that began in 2022 has been driven predominantly by human-to-human transmission via close contact, sexual activity, or respiratory droplets. Typical symptoms include fever, headache, lymphadenopathy, and a peculiar rash. The illness usually lasts two to four weeks, with severe cases occurring in immunocompromised individuals and children.[1]

The first outbreak of Mpox outside Africa was identified in May 2022 when clusters of infections were detected among homosexual men in Europe and North America. Within a year, the European Centre for Disease Prevention and Control (ECDC) reported more than 100,000 confirmed cases with over 200 deaths from across more than 120 countries.[2] African Union member states reported more than 24,000 suspected or confirmed infections and over 600 deaths during the year 2024 alone, underscoring the continued threat posed by clade I viruses in central and eastern Africa. The WHO initially declared Mpox a Public Health Emergency of International Concern (PHEIC) in July 2022; a second PHEIC was issued in August 2024 after a novel clade 1b variant emerged.

WHO's December 2025 situation report recorded nearly 48,000 confirmed cases and 201 deaths worldwide between January and October 2025. The Center for Disease Control and Prevention (CDC), USA, has reported that more than 46,000 clade I cases have occurred in Central and Eastern Africa, while clade II viruses continue to circulate at low levels globally. Genomic surveillance indicates that clade I strains are now appearing in Asia, Europe, and the United States through travel-associated infections. Because routine smallpox vaccination ended in 1980, most people lack cross-protective immunity, allowing Mpox to spread widely.[3]

Since 2022, sustained human-to-human transmission has become the dominant pattern. Sexual contact, including encounters linked to large gatherings and dating apps, has been a significant route of spread. A wastewater surveillance study in Slovenia suggested that four out of five infections were probably acquired through sexual transmission. Travel plays a critical role as infected travellers have introduced the virus to countries without previous Mpox cases.

Public health response centers around early detection, case isolation, contact tracing, and targeted vaccination. The WHO recommends ring vaccination with third-generation smallpox vaccines, such as MVA-BN, for high-risk individuals and close contacts. Countries including the United States, Canada, and several European states have stockpiled vaccines and antivirals like tecovirimat. The CDC emphasizes that clade I outbreaks in Africa require strengthened surveillance, expanded laboratory capacity, and equitable access to diagnostics and countermeasures.

Pakistan's National Institutes of Health (NIH) issued an advisory urging people to practise good hygiene and health officials to enhance surveillance. The advisory emphasized the need for vigilance.[4,5] Since September 2025, a number of locally transmitted Mpox cases have been identified in Lahore. The figure reported only from one hospital is 32 confirmed cases with at least one health care worker, four children, and three deaths. Public health teams launched extensive contact tracing to determine whether community transmission was occurring. These accounts highlight the possibility of undetected community spread and the importance of a prompt response.[6,7]

So far Pakistan's Mpox incidence remains low compared with global figures, yet the country faces unique challenges. Limited diagnostic capacity, low public awareness, and stigma associated with sexually transmitted infections can delay case detection. Cross-border travel and labour migration to Gulf countries create opportunities for virus importation. The first locally

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transmitted case underscores the risk of silent community transmission, particularly among immunocompromised individuals. Surveillance should integrate sentinel clinic reporting, laboratory testing, and, where feasible, wastewater monitoring. Hospitals must implement infection prevention and control measures, including designated isolation areas and adequate personal protective equipment for staff. Public messaging should emphasize that Mpox can affect anyone and encourage healthcare-seeking without discrimination.

The authorities should maintain robust case detection through comprehensive surveillance networks, rapid diagnostic testing, and genomic sequencing to identify emerging variants. In Pakistan, training healthcare workers and ensuring the capacity for polymerase chain reaction (PCR) testing in provincial laboratories are critical priorities. Contact tracing should extend to sexual networks and travel contacts. Ring vaccination with third-generation smallpox vaccines could protect high-risk groups, including healthcare workers, immunocompromised patients, and close contacts of cases. Community engagement is essential to improve vaccine uptake and address. Mpox is a global threat; sharing data on cases, genetic sequences, and vaccine stockpiles is vital. Partnerships with the WHO, the Africa CDC, and regional networks can aid resource-limited regions. Pakistan should collaborate with neighbouring countries to monitor travel-associated cases and coordinate responses. Public health messaging must emphasize that Mpox is not confined to any specific group. Stigma can discourage individuals from seeking testing or disclosing symptoms. Community leaders, journalists and health professionals should work together to promote accurate information and compassion.

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