

Mpox outbreak: A new pandemic threat

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Mpox virus (MPV), formerly known as monkeypox, is a double-stranded enveloped DNA virus belonging to the genus Orthopoxvirus. Characteristic symptoms include a rash on the extremities, face, chest, anus, or genitals, accompanied by fever, chills, lymphadenopathy, lethargy, myalgia, and respiratory symptoms.¹ Its variants and their transmission have been listed in the table 01.

Mpox was discovered in 1958, with human cases first reported in the Democratic Republic of Congo in 1970. A 2003 outbreak in the US, linked to imported infected mammals, marked its first appearance outside the continent of Africa. Sporadic cases emerged globally in travellers in 2018 and 2019. The disease saw a significant surge in 2022, with a disproportionate impact on men who have sex with men (MSM). The 2020 data from the Democratic Republic of Congo indicates the severity of the disease in the region with 6216 cases and 222 fatalities.¹

According to CDC Data, as of 06 August 2024, the total number of pox cases reported rose to 99,518 cases, out of which 207 mortalities have been confirmed so far, with 7 cases reported in Pakistan with no mortality.² A clear upward trend in cumulative cases across all regions indicates a global increase in MPX cases over this period. Figure 01.² The first mpox case in Pakistan appeared on 16 August 2024 as the patient recently returned from a Gulf country; if the patient had a new variant or the previous 2022 clade remains unclear.³ Another case of pox was identified in Islamabad, Pakistan. According to Dr Nasim Akhtar, the focal person at PIMS hospital, a 47-year-old man with symptoms consistent with pox was confirmed and has been shifted to a special ward.⁴

Prevention involves avoiding close skin-to-skin contact and beforehand. There is no specific treatment for pox available, but different antiviral agents used to treat general pox are prescribed for pox conditions, including

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Table-1: Mpox: Severity and Transmission modes.

Variant	Severity	Origin	Transmission
Clade I	More severe	Central Africa	Contact with infected wild animals, skin and sexual contact, bodily fluids and vertically from mother
Clade II (IIA & IIB)	Less severe	West Africa	

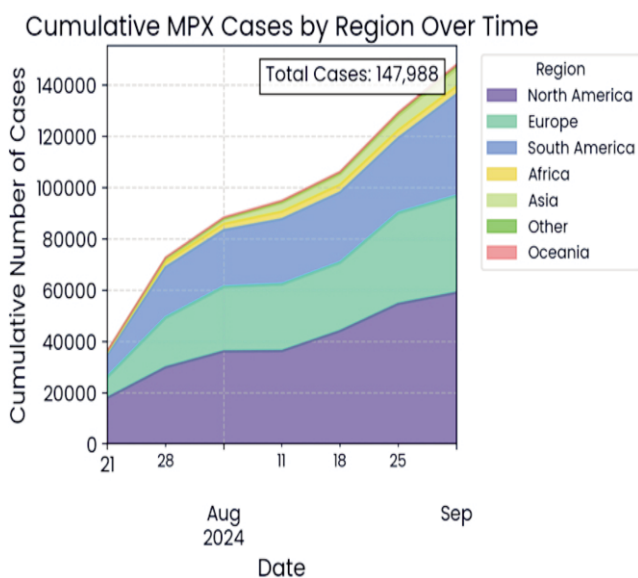


Figure-1: Cumulative Mpox Cases by Region over Time.

tecovirimat or ST-246(TPOXX); brincidofovir (Tembexa), cidofovir (Vistide). Moreover, intravenous vaccinia immune globulin (VIGIV) may be given for mpox and other pox-related viruses during an outbreak. Two doses encompass the protection plan. After the first dose, the second dose is received after four weeks. Two weeks after the second dose, maximum protection is ensured.⁵

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MSH: Drafting and data extraction.