Mpox Scenario-Based Human Health Risk Assessment for the United States as of 21 October 2024 – Clade I

Currently,* the Center for Outbreak Response Innovation (CORI) judges the mpox clade I Risk to the United States to be in Scenario 1:

	Risk to MSM community	Risk to sex workers	Risk to healthcare workers	Risk to Children	Risk to general public
Scenario 1 – Clade I Surge in Africa	Moderate	Moderate	Low	Low	Low

Our confidence in these risk scores is moderate given the current available information globally.

See the detailed risk assessment beginning on the next page for further information. Appendices and regularly updated situation report including an epi curve available here.

Epidemiological updates of note since the last report on October 7, 2024:

- The DRC has seen continued surges in mpox cases, with 34,030 confirmed or suspected cases and 981 deaths reported in 2024 (CFR of 2.9%).
- There is sustained transmission of clade Ib mpox in Burundi, as of October 21, 2024, there were 2,788 suspected or confirmed cases and no deaths. Children <15 account for 50.6% of the cases.
- Cases of clade Ib continue to be reported in Gabon, Kenya, Rwanda, Republic of the Congo, and Uganda.

Scenarios:

CORI identified 3 key scenarios that may shape the risk of mpox in the US for the upcoming year. These scenarios consider the health risks of clade I, taking into account the differing impacts to various population groups should clade I begin to circulate within the US.

Features that would characterize each scenario include:

- **Scenario 1** – Clade I Surge in Africa: While Clade IIb cases continue to be the only cases detected in the US, clades I and Ib are detected in more countries in Africa and outbreaks surge, thus increasing risk of importing clade I to the US.
- **Scenario 2** – Clade I introduced to US: Clade I is detected in the US, though cases are travel related and there are no large clusters or sustained transmission in the US. Clade IIb continues to be the dominant strain of the virus in the US, continuing to impact the MSM and sex worker populations and healthcare systems are not overwhelmed. Children are at moderate risk because the likelihood of a child coming into contact with mpox has increased with imported cases.
- **Scenario 3** – Clade I Sustained Transmission in US: Clade I is spreading locally and displaying similar transmission and severity characteristics as seen in DRC, including infecting younger children at higher rates, and a higher case fatality risk (CFR), particularly in children. Hospital

systems are now seeing higher numbers of severe cases in multiple age groups. Transmission is still limited to households and intimate contact between sexual partners.

Please note:* *We are evaluating the risks to human health should each scenario occur,* ***not* *the relative risk of any one scenario occurring. This risk assessment will be updated regularly.*

Scenario-Based Human Health Risk Assessment for the US:

Risk Score (this is risk level to human health NOT of scenario occurring**)**					
	Risk to MSM community	**Risk to sex workers**	**Risk to healthcare workers**	**Risk to Children**	**Risk to general public**
Scenario 1 – Clade I Surge in Africa	Moderate	Moderate	Low	Low	Low
Scenario 2- Clade I introduced to the US	Moderate	Moderate	Low	Moderate	Low
Scenario 3 – Clade I Sustained Transmission in US	Moderate-High	Moderate-High	Low	Moderate-High	Low-Moderate

Our **confidence** in these risk scores is **moderate** given the current level and availability of information for each of these factors; historical knowledge from past outbreaks on transmission dynamics; and the availability of vaccination and treatment resources.

Recommendations

While the US is not yet in Scenario 2 (introduction of clade I in the US), recent reports of clade I mpox cases outside of the Democratic Republic of Congo (DRC) and now in Europe indicate the potential for global spread of clade I if measures are not taken to adequately control transmission. The US should be on heightened alert for clade I introduction through travel over the coming weeks and months and should be supporting targeted studies to better understand routes of transmission and disease progression in children.

For all scenarios and to minimize the risk of imported transmission of clade I, CDC and WHO recommend:

- All individuals with an increased risk of infection should receive 2 doses of JYNNEOS vaccine.
- Clinicians should consider mpox when lesions consistent with mpox are observed in a patient, even if an alternate etiology (eg, herpes simplex virus, syphilis) is considered more likely.
- Healthcare professionals should wear all recommended personal protective equipment (PPE) when completing mpox testing.

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