

## Letter to the Editor

**Cite this article:** Saif A and Yaseen MO (2022) Re-emergence of monkeypox virus and public health preparedness in Pakistan. *Disaster Med Public Health Prep* **16**: 2262–2263. doi: <https://doi.org/10.1017/dmp.2022.164>.

First published online: 27 June 2022

### Keywords:

monkeypox; health care; Pakistan; public health; infectious disease

### Corresponding author:

Arifa Saif, E-mail: [arifa.saif@hotmail.com](mailto:arifa.saif@hotmail.com)

For ages, novel fatal zoonotic viruses have posed a threat to global health security, with epidemic potential and high mortality rates. Like smallpox, the monkeypox virus belongs to *orthopoxvirus* genus of *Poxviridae* family, yet it remained an underappreciated worldwide public health hazard. Since its discovery, monkeypox was endemic to Central and Western African countries until 2003, when the first human monkeypox case outside of Africa was discovered.<sup>1</sup> Recently, the monkeypox outbreak in 18 non-African countries with a total of 103 confirmed and 106 suspected cases is causing a lot of perturbation around the globe. To date, no deaths have been reported in the recent multi-country outbreak of this disease. In the wake of World Health Organization's advisory regarding the surge of monkeypox cases in non-endemic countries, the top health authority of Pakistan, National Institute of Health (NIH), issued an alert to provincial and national health bodies, directing to increase the surveillance of the outbreak.<sup>2</sup>

Unlike past experience, the infected individuals in this recent outbreak have no known travel links to the endemic area and the cases have primarily, but not solely, been reported among homosexual men seeking care in primary and secondary sexual health-care facilities.<sup>3</sup> Historically, the smallpox vaccine has shown cross-protective immunity against monkeypox; however, Pakistan discontinued smallpox vaccination since 1980 when WHO declared the world free from smallpox.<sup>4</sup> The risk of outbreak in Pakistan is even more troubling because diagnostic tests for monkeypox are not currently available in the country. Thus, the following pertinent measures are direly needed to prevent the spread of monkeypox virus.

- Provision of public health guidance on how the disease spreads, its symptoms, preventive measures, and what to do in the event of a suspected or confirmed infectious case through the channels targeting the suspected population. This should be paired with community participation targeted at the most vulnerable populations, as well as collaboration with health-care professionals to address potential rumors and disinformation in a timely manner.<sup>5</sup> Health information and guidance should be provided without any stigmatization.
- Standard contact and droplet precautions like hand hygiene, proper handling of contaminated medical equipment, laundry, trash, cleaning, and disinfection of physical surfaces should be used by health personnel caring for patients with suspected or confirmed monkeypox infection.
- Upon confirmation of presence of disease in the country, public health emergency and control teams should be established to monitor and manage the response.
- Rather than relying on passive disease notification by medical personnel, surveillance should be an active search. Increased surveillance and case identification of monkeypox are important tools for understanding the ever-changing epidemiology of this resurgent disease.<sup>1</sup>
- As monkeypox infection does not spread rapidly, prompt isolation and vaccination of close contacts as post-exposure prophylaxis or pre-exposure immunization for health-care professionals should be prioritized to contain the outbreak as demonstrated by Smallpox Eradication Program of World Health Organization (WHO) in 1966.<sup>6</sup>

Pakistan is still trying to cope with the challenges of coronavirus disease 2019 (COVID-19) in this critical politico-economic situation. The fragile health-care system, lack of capacity to curb lethal infections, and limited resources can lead to another health and economic crisis in the upcoming days. Due to the ecological vacuum created by the growing number of individuals without poxvirus immunity after the smallpox vaccination program was terminated, a susceptible population is more prone to secondary epidemic cycles. Amid such difficulties, it is crucial for Pakistan to proactively plan ahead of time to avoid any catastrophic circumstances.

**Conflicts of interest.** The authors declare that there is no conflict of interest.

## References

1. Bunge EM, Hoet B, Chen L, *et al.* The changing epidemiology of human monkeypox—a potential threat? A systematic review. *PLoS Negl Trop Dis.* 2022;16(2):e0010141.
2. Dawn. Health authorities told to remain vigilant against monkeypox. Accessed 2022. <https://www.dawn.com/news/1691126>

3. **World Health Organization.** Multi-country monkeypox outbreak in non-endemic countries. 2022. Accessed July 10, 2022. <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON385>
4. **Petersen E, Abubakar I, Ihekweazu C, et al.** Monkeypox—enhancing public health preparedness for an emerging lethal human zoonotic epidemic threat in the wake of the smallpox post-eradication era. *Int J Infect Dis.* 2019;78:78-84.
5. **Health Protection Surveillance Centre.** Human monkeypox infection - guidance for clinicians and public health. 2022. Accessed July 10, 2022. <https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Monkeypox%20Clinicians%20Public%20Health.pdf>
6. **Lane JM.** Mass vaccination and surveillance/containment in the eradication of smallpox. *Curr Top Microbiol Immunol.* 2006;304:17-29.