



## COVID-19

# Healthcare system preparedness for the next pandemic beyond COVID-19 situation

TUNGKI PRATAMA UMAR<sup>1</sup>, AL KAMAL MUHAMMAD SHAFIUL KADIR<sup>2</sup>, YASMINE ADEL MOHAMMED<sup>3</sup>,  
MOUNIR OULD SETTI<sup>4,5</sup>

<sup>1</sup> Faculty of Medicine, Sriwijaya University, Palembang, Indonesia; <sup>2</sup> Institute of Biological Sciences (IBSc), University of Rajshahi, Bangladesh; <sup>3</sup> Faculty of Medicine, Assiut University, Assiut, Egypt; <sup>4</sup> Institute of Public Health and Clinical Nutrition, University of Eastern Finland, Kuopio, Finland; <sup>5</sup> Global Database Studies, IQVIA, Espoo, Finland

## Keywords

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Dear Editor,

Monkeypox (MPX), first discovered in 1970 and becoming endemic in Africa, is a zoonotic viral disease that has recently caused outbreaks in different regions worldwide since May 2022. Following this situation, MPX has been designated as a Public Health Emergency of International Concern (PHEIC) since 23<sup>rd</sup> July 2022 [1]. The recent epidemic resulted in more than 77,000 MPX confirmed cases across over 100 countries globally until 30<sup>th</sup> October 2022 [2].

In the meanwhile, the world is still struggling with the COVID-19 pandemic, which has caused a significant impact on healthcare services [3]. In a systematic review by Moynihan et al., the authors noted a 37% reduction in overall utilisation of medical care services throughout the COVID-19 pandemic period compared to the pre-pandemic years, as measured by visit (42%), admission (28%), diagnostic testing (31%), and treatment (30%) parameters [4]. This phenomenon could significantly hinder the ability of healthcare systems to overcome new global health problems.

With the dispersion of MPX, public health preparedness must be extended to nonendemic areas. Human resources, testing capacities, and personal protective equipment (PPEs) are needed for quick interventions and emergency responses. All of these requirements must be fulfilled, although it has been severely depleted during the three-year course of the COVID-19 pandemic [1]. Thus, it is vital to determine the readiness of these resources for future pandemics.

Undoubtedly, the COVID-19 pandemic has negatively affected healthcare workers in terms of mental and physical health. Moreover, this pandemic has affected the healthcare systems' financial capacities, which became unable to provide the needed beds, treatments, vaccines, and intensive care units. It is clear that healthcare systems have not yet fully recovered from the COVID-19 pandemic [5]. With the growing threat of infectious diseases, healthcare systems might not be well prepared to face the next pandemic, whether related to the current emergence of MPX or any other infectious agents.

Protecting healthcare providers should be prioritised to combat the alarming threat of future pandemics. Based

on the early scenario of the COVID-19 pandemic, the healthcare system is not well prepared and thus medical personnel support is insufficient. Several countries, including Italy, Spain, United Kingdom, and United States, encountered delays in implementing containment measures and did not anticipate the impact of the pandemic due to inadequate response of stakeholders, according to data from the initial phases of the COVID-19 pandemic [6]. Three main areas of medical personnel support can be identified: harm prevention (primarily through adequate access to PPE, training, and hospital hygiene practice), access to mental health services, and promotion of positivity (using peer support intervention or feedback sessions) [7].

Global leaders and health organizations should share the same vision to improve future pandemic preparedness. As soon as an emerging pathogenic agent is discovered, governments should endorse a comprehensive research approach focusing on in public health and biomedicine [8]. The goal is clear: by gathering better evidence in the early stages of an epidemic, its overall impact could be minimized and its development into a pandemic could be averted. Treatment options, such as antiviral agents, supportive treatments, symptom-specific interventions, and immunization approaches, should be investigated. In the case of MPX, vaccination initiatives may be an essential consideration due to the cross-protection with the currently available smallpox vaccine, such as JYNNEOS<sup>TM</sup> and its ability to limit the spread of the disease while preventing the occurrence of severe disease forms [1]. Considering the relatively slow transmissibility and long incubation period of the monkeypox virus (MPXV), ring vaccination is considered a better option to protect against it than mass vaccination [9]. In addition, investigations on safety of the available therapeutic and immunization approaches should be prioritized.

Due to the pandemic potential of MPX, it is recommended for healthcare professionals to participate in educational activities on the clinical manifestation of MPX cases, universal precaution, and suitable contact tracing. Although the current MPX outbreak has a low mortality rate (< 0.01%) globally, we must still be aware of higher mortality rates in several regions,

such as Eastern Mediterranean (1.38%), Africa (1.5%), and Southeast Asia (3.33%) [2]. To prevent the loss of human resources, as experienced in the early COVID-19 pandemic, the satisfaction of healthcare workers must be monitored and invested into, especially regarding workload and incentives [10].

The global surge of MPX should serve as a red flag for stakeholders to begin meaningful efforts to combat this outbreak through cooperative collaboration. Public awareness should be raised, and governments should enhance their support for research activities, primarily to determine the virus characteristics while investigating the safety and effectiveness of potential therapeutic and preventive strategies [11]. However, the most important intervention is to avert misleading information, which intensifies vaccine hesitancy, reduces vaccination rates, and suppresses public health programs, resulting in substantial loss of life and resources during the current COVID-19 pandemic [12].

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The author declares no conflict of interest.

## Authors' contributions

Manuscript ideation: TPU, AKMSK, and MOS; Reference acquisition: TPU, AKMSK, and YAM; Manuscript drafting: TPU, AKMSK, and YAM; Manuscript revision: TPU and MOS. All authors have read and approved the final version of the manuscript.

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**Correspondence:** Tungki Pratama Umar, Faculty of Medicine, Sriwijaya University, Palembang, Indonesia - E-mail: [tungkipratama@gmail.com](mailto:tungkipratama@gmail.com)

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