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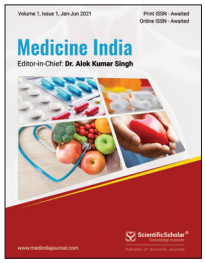

Letter to the Editor

Learning from COVID-19: Building better preparedness for human metapneumovirus outbreaks

MD. Faisal Ahmed[1]

[1]Department of Behavioral Science, Bangladesh Institute of Innovative Health Research, Dhaka, Bangladesh

***Corresponding author:**
MD. Faisal Ahmed,
Department of Behavioral Science, Bangladesh Institute of Innovative Health Research, Dhaka, Bangladesh.

faisal.biihr@gmail.com

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Dear Editor,

The recent surge in human metapneumovirus (HMPV) infections across South Asia, including China, India, and now Bangladesh, underscores the pressing need to enhance our preparedness for respiratory viruses. Drawing from the global experience with COVID-19, it is crucial to implement comprehensive measures to mitigate the impact of such respiratory viruses.

HMPV was first discovered in 2001, and it is a respiratory virus producing mild influenza-like illness, cough, fever, and nasal congestion.[1] It commonly manifests in minor symptoms, yet it can cause serious conditions, especially in infants, the elderly, or individuals. Transmission occurs through respiratory droplets, direct contact with an infected person, and contact with contaminated objects, and as of writing, there is no known antiviral cure or vaccine for HMPV.[1,2]

In December 2024, China reported a significant increase in HMPV infections, leading to overwhelmed hospitals and raising global health concerns.[3] Subsequently, India detected cases in Karnataka through routine surveillance, with health authorities emphasizing that there is no cause for alarm and that the situation is being closely monitored.[4-6] As of January 12, 2025, Bangladesh has reported its first HMPV case, signaling the virus's regional spread.[7] Given these developments, Bangladesh must act swiftly and effectively to address the HMPV threat.

Some of the insights that can be learned from the COVID-19 pandemic are helpful in combating future similar disease outbreaks. It is the most valuable lesson to be learned, one of which relates to the need for early detection and monitoring.[8,9] The COVID-19 pandemic demonstrated how surveillance contributes to early identification of cases, efficient containment of the disease, and minimal likelihood of genomic spread.[8,9] For example, India, through the Indian Council of Medical Research, has been active in terms of case identification of HMPV, which shows that constant surveillance pays off.[9] Bangladesh should improve its surveillance system for detecting and reporting such respiratory disorders by including both the public and private healthcare sector and increasing the monitoring for HMPV symptoms which would help identify potential cases at an early stage.

It is equally crucial to emphasize the requirement for clear public communication. In the context of COVID-19, it was crucial to provide accurate information about the virus and how it spreads, its signs, and measures to avoid infection to avoid confusion and influence people's behavior.[10,11] Communication measures, including the use of face shields, handwashing, and covering the mouth and nose with a tissue or elbow, reduced transmission.[10] Bangladesh can develop and implement a nationwide campaign aimed at creating awareness of HMPV, thereby emphasizing the need to practice preventive measures such as washing hands, mask-wearing, and maintaining physical distance when sick. Effective and proper communication will ensure that people put

in the right measures, hence minimizing the transfer of the virus.

Another critical insight that has emerged from COVID-19 is the need for healthcare system readiness. COVID-19 highlighted the weaknesses in numerous healthcare frameworks, particularly regarding excessive case volumes.[12] Preparation of healthcare institutions and, most importantly, the preparation of hospitals that will be able to cope with the influx of patients is important here. Hospitals in Bangladesh should have adequate stocks of essential commodities such as PPEs and mechanical ventilators, and there should be preparedness and training among healthcare professionals. There is a need to ensure preparedness and readiness by conducting drills and allocating resources frequently to avoid overstretching healthcare facilities during a surge in cases of HMPV.

Last but not least, it is so important to cooperate with other countries, and the COVID-19 pandemic is a strict proof of this necessity. Infectious diseases are best tackled with international cooperation hence the need to follow a standard management procedure.[13,14] When collaborating, transferring, and exchanging knowledge globally, countries are in a better position to effectively address issues that transcend national borders. Bangladesh should involve governments of neighboring countries and international organizations like the World Health Organization to exchange information, resources, and coping experiences of the HMPV epidemic. This will enhance the synergy and coordination in preparedness by various counties in different regions.

The HMPV case in Bangladesh is a clear signal that respiratory viruses are still around and can infect people. In Bangladesh, this means embracing the directions set by COVID-19 in terms of detection, communication, healthcare preparedness, and cooperation across borders to avoid future fatalities and protect the health of citizens.

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