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Ongoing hMPV outbreaks in China and other Asian countries

Ranjit Sah[1], Shriyansh Srivastava[2,3], Sachin Kumar[3], G.S.N. Koteswara Rao[4], Rachana Mehta[5,6], Aroop Mohanty[7], Sanjit Sah[8,9], Vini Mehta[10], Jack Feehan[11], Vasso Apostolopoulos[11], Alfonso J. Rodriguez-Morales[12,13]

[1]SR Sanjeevani Hospital, Kalyanpur, Siraha 56517, Nepal;
[2]Department of Pharmacy, School of Medical and Allied Sciences, Galgotias University, Greater Noida 203201, India;
[3]Department of Pharmacology, Delhi Pharmaceutical Sciences and Research University (DPSRU), Sector 3 Pushp Vihar, New Delhi 110017, India;
[4]Shobhaben Pratapbhai Patel School of Pharmacy and Technology Management, SVKM's NMIMS, Mumbai, India;
[5]Dr. Lal PathLabs Nepal, Chandol, Kathmandu 44600, Nepal;
[6]Clinical Microbiology, RDC, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana 121004, India;
[7]Associate Professor, Department of Microbiology, AIIMS Gorakhpur, Uttar Pradesh, India;
[8]Department of Medicine, Dr. D. Y. Patil Medical College, Hospital and Research Centre, Dr. D. Y. Patil Vidyapeeth (Deemed-to-be-University), Pimpri, Pune 411018, Maharashtra, India;
[9]Department of Medicine, Korea University, Seoul 02481, South Korea;
[10]Department of Dental Research Cell, Dr. D. Y. Patil Dental College and Hospital, Dr. D. Y. Patil Vidyapeeth, Pimpri, Pune 411018, India;
[11]School of Health and Biomedical Sciences, RMIT University, Bundoora VIC 3083, Australia;
[12]Faculty of Health Sciences, Universidad Científica del Sur, Lima, Peru;
[13]Gilbert and Rose-Marie Chagoury School of Medicine, Lebanese American University, Beirut, Lebanon.

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The recent Human Metapneumovirus (hMPV) outbreak in China, though not caused by a novel virus, has attracted significant attention due to its rising incidence and potential impact. hMPV was reported as a respiratory infectious agent by the family of Paramyxovirus in the year 2001 in the Netherlands that can cause acute respiratory infections (ARIs) in humans of all ages. By 2006, hMPV had been identified in every continent [1, 2]. It is perilous for a subset of the population, such as young children, the aged and those who are medically compromised [3, 4]. hMPV is responsible for 5-7% of all respiratory infections in children admitted to hospitals, while in the general population seeking medical advice, it accounts for about 3% of all respiratory tract infections. The virus shows seasonal patterns and peaks like those associated with the respiratory syncytial virus and influenza, except these patterns are more pronounced in winter and appear less in summer [4]. A study conducted on patients with severe ARIs in Cordoba, Argentina, found that the virus was present in 20.3% of cases, further emphasising its significance as a clinical concern [3]. The disease symptoms can begin with mild fever with cough, considered upper respiratory infection symptoms, then progress to lower forms such as bronchiolitis, hypoxia, pneumonia, and severe respiratory distress [2-4]. Molecular diagnostics, particularly RT–PCR, are used for detecting hMPV; however, multiple serotypes complicate the development of specific assays [5]. February shows high infection rates of hMPV in children under 14, especially in the northern provinces, as reported by the Chinese government. Between 16-22 December 2024, hMPV was responsible for 6.2% of respiratory illnesses and 5.4% of hospitalisations in China, surpassing adenovirus, rhinovirus, and COVID-19. By early

Corresponding authors
Rajit Sah
E-mail: ranjitsah57@gmail.com
Alfonso J. Rodriguez-Morales
E-mail: arodriguezmo@cientifica.edu.pe

January 2025, cases had increased in China, Hong Kong, Kazakhstan, and Malaysia (Figure 1), with the current wave resembling early COVID-19 outbreaks, emphasising the need for caution [6]. China's progress in monitoring unknown pneumonia could aid future respiratory disease surveillance, as multiple viruses are co-circulating.

In the first week of January 2025, India also reported five cases of hMPV. But this is an independent outbreak. Bengaluru reported its first two instances in infants aged 3- and 8-months, which were soon followed by a case in Ahmedabad of a 2-month-old infant and two cases in Tamil Nadu. Although Indian health officials note no unusual increase in the rate of respiratory infections, research is still required to track hMPV as the situation is unusually suspicious [7]. The Indian Ministry of Health and Family Welfare assured the public through media channels that adequate resources are available to tackle such viruses, with WHO updates being promptly communicated. Although no specific antiviral treatments or vaccines are currently available, preventive measures such as maintaining hygiene and managing co-morbidities remain critical in controlling hMPV infections [5]. Reinfections are common but tend to exhibit less severe symptoms. Given hMPV's significant yet under-recognised burden, further research is crucial to enhance diagnostic capabilities, understand its pathogenesis, and develop effective preventive strategies [4, 5].

Although the current hMPV outbreak is not linked to a more dangerous strain, the rising number of cases, especially in densely populated regions like China and India, emphasises the growing pressure on healthcare systems. Also, considering that some cases of hMPV may be complicated and even fatal [8, 9]. As such, there is an urgent need for enhanced surveillance and preventive measures. Ensuring effective monitoring and timely responses will be essential to minimising the public health risks associated with the outbreak. Public health authorities and researchers must prioritise hMPV surveillance, investigating its seasonal patterns and transmission dynamics to reduce its global impact.

To protect against hMPV, individuals should follow key preventive measures recommended by the CDC. Regular handwashing with soap for at least 20 seconds is crucial, as is avoiding touching the face with unwashed hands. It's also important to maintain distance from people who are sick, cover the mouth when coughing or sneezing to prevent the spread of droplets and stay home if feeling unwell to reduce the risk of transmission. By implementing these guidelines, individuals

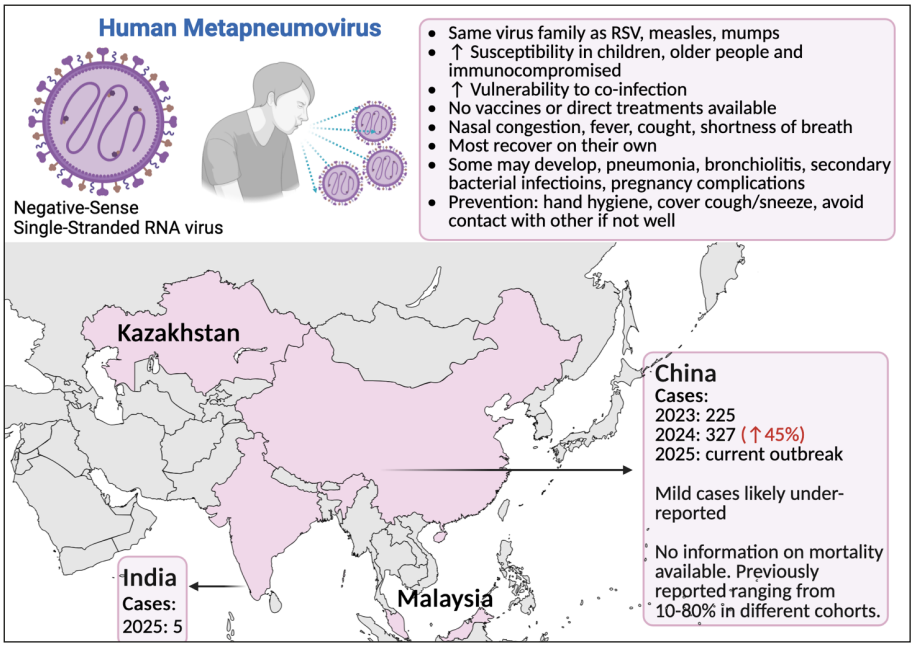

Figure 1
Current outbreak of human metapneumovirus in China, India, Malaysia, Hong Kong and Kazakhstan.

can help reduce the spread of hMPV and protect themselves and others from infection. The ongoing outbreak is a reminder that even viruses not classified as particularly dangerous can still strain healthcare systems and pose significant public health challenges [10]. Proactive measures, timely surveillance, and targeted prevention strategies will be critical in managing and mitigating the impact of hMPV on a global scale.

Conflict of interest
None

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