

1 **EDITORIALS**

2 **Ongoing hMPV outbreaks in China and other Asian countries**

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4 **Running title: Ongoing hMPV outbreaks**

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6 Ranjit Sah¹, Shriyansh Srivastava^{2,3}, Sachin Kumar³, G.S.N. Koteswara Rao⁴, Rachana Mehta^{5,6},
7 Aroop Mohanty⁷, Sanjit Sah^{8,9,10}, Vini Mehta¹¹, Jack Feehan¹², Vasso Apostolopoulos¹², Alfonso J.
8 Rodriguez-Morales.^{13,14}

9 ¹SR Sanjeevani Hospital, Kalyanpur, Siraha 56517, Nepal;

10 ²Department of Pharmacy, School of Medical and Allied Sciences, Galgotias University,
11 Greater Noida 203201, India;

12 ³Department of Pharmacology, Delhi Pharmaceutical Sciences and Research University (DPSRU),
13 Sector 3 Pushp Vihar, New Delhi 110017, India;

14 ⁴Shobhaben Pratapbhai Patel School of Pharmacy and Technology Management, SVKM's NMIMS,
15 Mumbai, India;

16 ⁵Dr. Lal PathLabs Nepal, Chandol, Kathmandu 44600, Nepal;

17 ⁶Clinical Microbiology, RDC, Manav Rachna International Institute of Research and Studies,
18 Faridabad, Haryana 121004, India;

19 ⁷Associate Professor, Department of Microbiology, AIIMS Gorakhpur, Uttar Pradesh, India;

20 ⁸Department of Medicine, Dr. D. Y. Patil Medical College, Hospital and Research Centre, Dr. D. Y.
21 Patil Vidyapeeth (Deemed-to-be-University), Pimpri, Pune 411018, Maharashtra, India;

22 ⁹Department of Public Health Dentistry, Dr. D.Y. Patil Dental College and Hospital, Dr. D.Y. Patil
23 Vidyapeeth, Pune 411018, Maharashtra, India;

24 ¹⁰Department of Medicine, Korea Universti, Seoul 02481, South Korea.

25 ¹¹Department of Dental Research Cell, Dr. D. Y. Patil Dental College and Hospital, Dr. D. Y. Patil
26 Vidyapeeth, Pimpri, Pune 411018, India;

27 ¹²School of Health and Biomedical Sciences, RMIT University, Bundoora VIC 3083, Australia;

28 ¹³Faculty of Health Sciences, Universidad Científica del Sur, Lima, Peru;

29 ¹⁴Gilbert and Rose-Marie Chagoury School of Medicine, Lebanese American University, Beirut,
30 Lebanon.

31

32 *Corresponding authors*

33 Rajit Sah

34 E-mail: ranjitsah57@gmail.com,

35 Alfonso J. Rodriguez-Morales

36 E-mail: arodriguezmo@cientifica.edu.pe

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38 The recent Human Metapneumovirus (hMPV) outbreak in China, though not caused by a novel
39 virus, has attracted significant attention due to its rising incidence and potential impact. hMPV was
40 reported as a respiratory infectious agent by the family of Paramyxovirus in the year 2001 in the
41 Netherlands that can cause acute respiratory infections (ARIs) in humans of all ages. By 2006,
42 hMPV had been identified in every continent [1, 2]. It is perilous for a subset of the population,
43 such as young children, the aged and those who are medically compromised [3, 4]. hMPV is
44 responsible for 5-7% of all respiratory infections in children admitted to hospitals, while in the
45 general population seeking medical advice, it accounts for about 3% of all respiratory tract
46 infections. The virus shows seasonal patterns and peaks like those associated with the respiratory
47 syncytial virus and influenza, except these patterns are more pronounced in winter and appear less
48 in summer [4]. A study conducted on patients with severe ARIs in Cordoba, Argentina, found that
49 the virus was present in 20.3% of cases, further emphasising its significance as a clinical concern
50 [3]. The disease symptoms can begin with mild fever with cough, considered upper respiratory
51 infection symptoms, then progress to lower forms such as bronchiolitis, hypoxia, pneumonia, and
52 severe respiratory distress [2-4]. Molecular diagnostics, particularly RT-PCR, are used for detecting
53 hMPV; however, multiple serotypes complicate the development of specific assays [5]. February
54 shows high infection rates of hMPV in children under 14, especially in the northern provinces, as
55 reported by the Chinese government. Between 16-22 December 2024, hMPV was responsible for
56 6.2% of respiratory illnesses and 5.4% of hospitalisations in China, surpassing adenovirus,
57 rhinovirus, and COVID-19. By early January 2025, cases had increased in China, Hong Kong,
58 Kazakhstan, and Malaysia (Figure 1), with the current wave resembling early COVID-19 outbreaks,
59 emphasising the need for caution [6]. China's progress in monitoring unknown pneumonia could aid
60 future respiratory disease surveillance, as multiple viruses are co-circulating.

61 In the first week of January 2025, India also reported five cases of hMPV. But this is an
62 independent outbreak. Bengaluru reported its first two instances in infants aged 3- and 8-months,

63 which were soon followed by a case in Ahmedabad of a 2-month-old infant and two cases in Tamil
64 Nadu. Although Indian health officials note no unusual increase in the rate of respiratory infections,
65 research is still required to track hMPV as the situation is unusually suspicious [7]. The Indian
66 Ministry of Health and Family Welfare assured the public through media channels that adequate
67 resources are available to tackle such viruses, with WHO updates being promptly communicated.
68 Although no specific antiviral treatments or vaccines are currently available, preventive measures
69 such as maintaining hygiene and managing co-morbidities remain critical in controlling hMPV
70 infections [5]. Reinfections are common but tend to exhibit less severe symptoms. Given hMPV's
71 significant yet under-recognised burden, further research is crucial to enhance diagnostic
72 capabilities, understand its pathogenesis, and develop effective preventive strategies [4,5].
73 Although the current hMPV outbreak is not linked to a more dangerous strain, the rising number of
74 cases, especially in densely populated regions like China and India, emphasises the growing
75 pressure on healthcare systems. Also, considering that some cases of hMPV may be complicated
76 and even fatal [8,9]. As such, there is an urgent need for enhanced surveillance and preventive
77 measures. Ensuring effective monitoring and timely responses will be essential to minimising the
78 public health risks associated with the outbreak. Public health authorities and researchers must
79 prioritise hMPV surveillance, investigating its seasonal patterns and transmission dynamics to
80 reduce its global impact.
81 To protect against hMPV, individuals should follow key preventive measures recommended by the
82 CDC. Regular handwashing with soap for at least 20 seconds is crucial, as is avoiding touching the
83 face with unwashed hands. It's also important to maintain distance from people who are sick, cover
84 the mouth when coughing or sneezing to prevent the spread of droplets and stay home if feeling
85 unwell to reduce the risk of transmission. By implementing these guidelines, individuals can help
86 reduce the spread of hMPV and protect themselves and others from infection. The ongoing outbreak
87 is a reminder that even viruses not classified as particularly dangerous can still strain healthcare
88 systems and pose significant public health challenges [10]. Proactive measures, timely surveillance,
89 and targeted prevention strategies will be critical in managing and mitigating the impact of hMPV
90 on a global scale.

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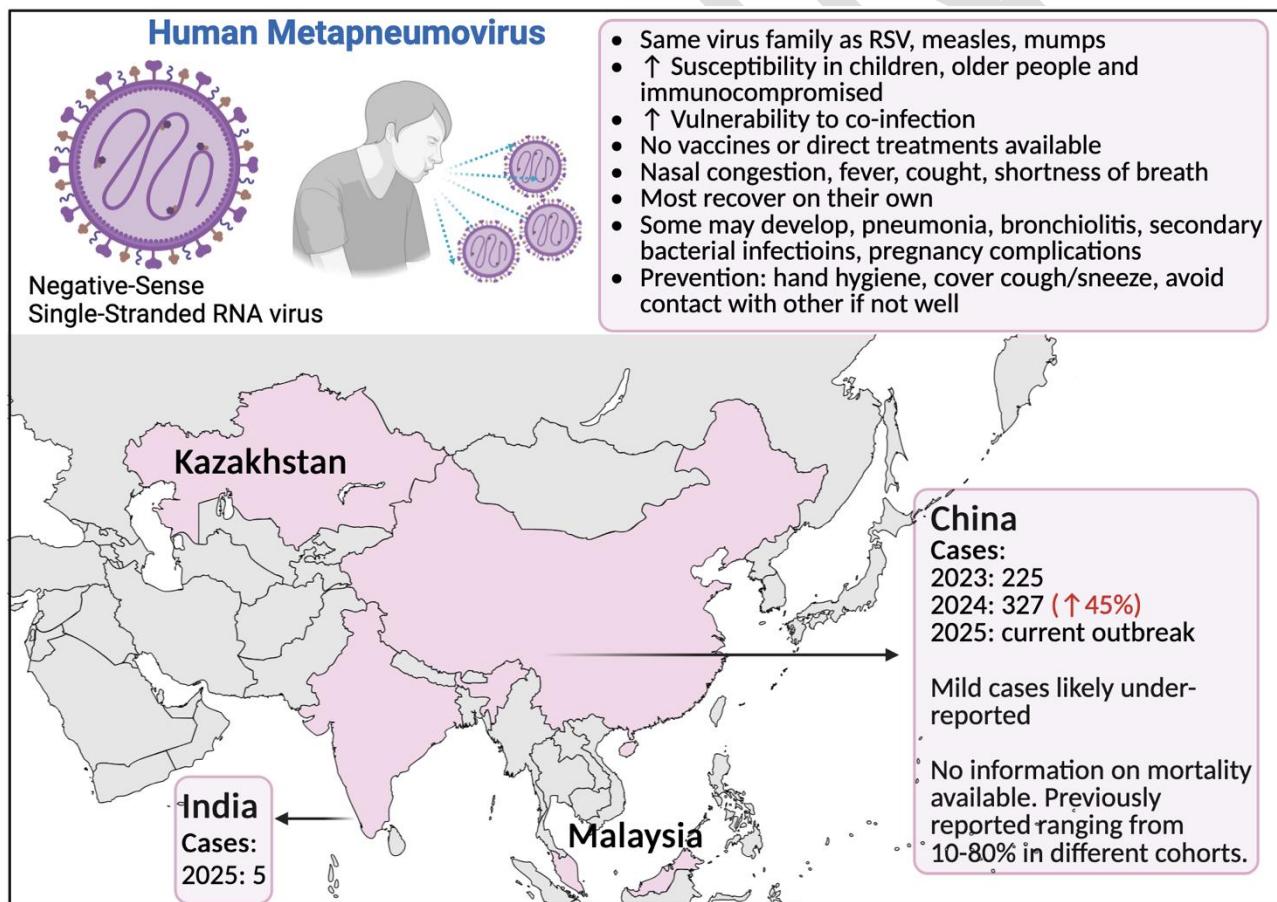
96 **CONFLICT OF INTEREST**

97 None

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



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