

Frequently Asked Questions: Human metapneumovirus (HMPV)

1. What is human metapneumovirus (HMPV)?

Human metapneumovirus (HMPV) is a respiratory virus belonging to the Paramyxoviridae family. First identified in 2001, evidence suggests it has been circulating for decades. HMPV is closely related to respiratory syncytial virus (RSV) and primarily causes upper and lower respiratory tract infections. While it often circulates seasonally during winter and early spring, in South Africa, it has been detected all year round without a defined seasonal pattern.

2. Who can get HMPV, and who is at most risk for severe illness?

HMPV is ubiquitous, and most people will contract it at some point in their lifetime. While the disease is typically mild, the following groups are at higher risk of severe illness: young children, particularly infants and those born prematurely, older adults, people with chronic conditions, such as asthma, chronic obstructive pulmonary disease (COPD), or any other lung disease. Individuals with weakened immune systems are also most likely to experience more severe symptoms.

3. How is HMPV transmitted?

HMPV, like many respiratory viruses is primarily transmitted through respiratory droplets (coughs or sneezes) and close physical contact, such as in households, schools, or healthcare settings, making it highly contagious in crowded settings. Additionally, it can spread by coming into close contact with contaminated objects or surfaces followed by touching the eyes, nose, or mouth.

4. What are the signs and symptoms of HMPV infection?

The common symptoms of HMPV infection include mild upper respiratory tract (cold-like) symptoms such as cough, runny nose, nasal congestion, possibly a fever, and sore throat. In severe cases, especially in high-risk groups, HMPV can cause bronchitis, bronchiolitis or pneumonia, leading to difficulty breathing. The typical incubation period is 3 to 6 days, and with

mild illness, the symptoms should improve after 3-5 days, but the duration of the illness can vary based on the severity.

5. How is HMPV diagnosed?

HMPV can be confirmed by taking a swab from the nose or throat and sending the sample to a laboratory for testing. Reverse transcription-PCR (RT-PCR) is utilised for the diagnosis of HMPV. There are other methods that have been used to diagnose HMPV such as direct detection of viral antigens in respiratory secretions using immunofluorescence or enzyme immunoassay. Testing is typically reserved for severe cases requiring specific management.

6. How is HMPV treated?

Specific antiviral treatments are not available. Most cases are mild and can be managed at home with rest and hydration. Should symptoms not resolve in 3-5 days or symptoms become severe (difficulty breathing, fever not settling), people should seek care at a clinic or general practitioner. More severe illness would be managed supportively with admission to hospital for monitoring, supplementary oxygen and fluids as needed.

7. How can HMPV be prevented?

As for all respiratory infections, people are advised to stay at home until symptoms resolve to prevent the spread of infection. Other basic hygiene should be applied, including:

- Wash their hands often with soap and water
- Avoid touching their eyes, nose, or mouth with unwashed hands
- Avoid close contact with people who are sick
- Cover mouth and nose when coughing and sneezing
- Avoid sharing their cups and eating utensils with others
- Refrain from hugging and kissing others
- Stay at home when sick to recover from illness

8. Is there a vaccine for HMPV?

There is no vaccine for HMPV currently available. Vaccines for HMPV are in development, as well as a combination vaccine for HMPV and respiratory syncytial virus (RSV), and are expected in the next few years.

9. Are there similarities between this outbreak and the early stages of COVID-19?

Unlike SARS-CoV-2, HMPV is a known circulating virus, and most people have some immunity. SARS-CoV-2 caused a global pandemic due to its novelty and the lack of pre-existing immunity, which allowed the virus to spread rapidly.

10. Is HMPV similar to COVID-19?

The HMPV and SARS-CoV-2 (COVID-19 virus) are not closely related, but both viruses cause respiratory disease in people of all ages. Symptoms commonly associated with HMPV include cough, fever, nasal congestion, and shortness of breath. These are also the symptoms shown by people infected with the SARS-CoV-2. Both viruses are most likely spread from an infected person to others through secretions from coughing and sneezing and close personal contact. They also spread by touching objects or surfaces that have the viruses on them and then touching the mouth, nose, or eyes.

11. How does HMPV compare to other respiratory viruses like influenza and RSV?

HMPV, like influenza and RSV, causes respiratory symptoms such as cough, fever, and nasal congestion. Vulnerable populations are also similar. HMPV is typically detected less commonly among patients presenting for care with respiratory illness compared to influenza or RSV, but this can vary depending on the time of year.

12. What measures are in place to monitor HMPV in South Africa?

The National Institute for Communicable Diseases (NICD) conducts robust surveillance of respiratory pathogens and has laboratory capabilities for testing HMPV. In addition, partnerships set up with the private sector during the COVID-19 pandemic will facilitate a rapid response if needed.

13. Who can I contact for more information?

For more details, contact the NICD Communications team at <https://www.nicd.ac.za/general-enquiries/>