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When should we be concerned about Andes virus in Norway?

PERSPECTIVES

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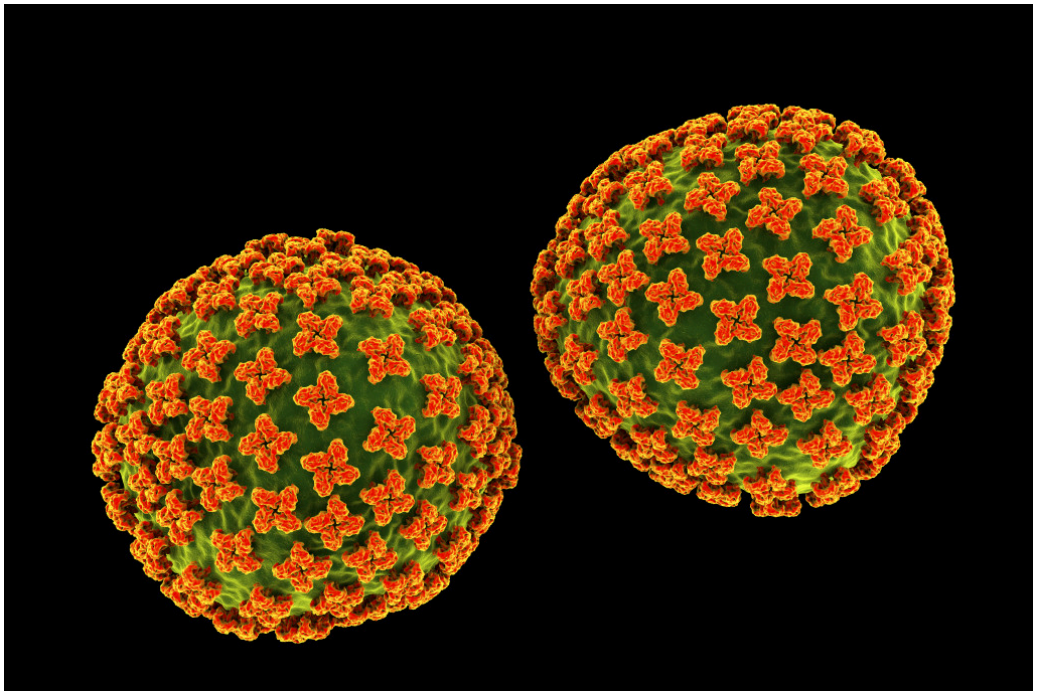
The outbreak of Andes virus on a cruise ship has attracted international attention. Crew members, passengers and other travellers may have introduced the infection into their home countries. Given the long incubation period, preparedness should be strengthened while monitoring the situation.



Hantavirus particles. Illustrative photo: Science Photo Library/NTB

The outbreak of Andes virus on the expedition cruise ship MV Hondius does not signal a new pandemic, as the virus lacks the necessary human-to-human transmissibility. Contact tracing and quarantine will likely bring the outbreak rapidly under control, although new cases may still be identified in the coming weeks.

This incident is a reminder that human mobility plays an important role in the spread of infectious diseases. Today, infections are often transmitted via air travel, but almost 700 years after a ship introduced the Black Death into Norway, maritime transport still contributes to the spread of disease. The COVID-19 outbreak on the expedition vessel MS Roald Amundsen in 2020 highlighted the need for Norwegian ports to have plans in place for managing infectious disease outbreaks on board. Healthcare personnel in primary care and specialist health services throughout the country are key resources in this preparedness.

> ***«This incident is a reminder that human mobility plays an important role in the spread of infectious diseases»***

Hantavirus – from Puumala to Andes

Hantaviruses are a family of zoonotic viruses found worldwide. Rodents are the primary natural reservoirs for hantaviruses, but humans can become infected through exposure to some of these viruses. Nearly all human infections are acquired by inhalation of dust or aerosols contaminated with rodent urine or faeces (1). Andes virus is one of many hantaviruses and the only one known to be capable of human-to-human transmission (2).

Hantaviruses cause a range of clinical syndromes, broadly divided into two main groups. In Europe and Asia, hantaviruses cause haemorrhagic fever with renal syndrome, whereas in the Americas they cause hantavirus cardiopulmonary syndrome (3). There is some overlap in clinical presentation, and disease severity varies according to viral variant, host factors, the type and degree of exposure, and early access to intensive care (3).

Only one hantavirus is known to be endemic in Norway: Puumala virus, first identified in Puumala, Finland, in the 1980s. This virus causes nephropathia epidemica ('mouse fever'). Typically, 10–40 cases of the virus are reported annually in Norway, but this likely only includes the more severe cases, as individuals with mild and non-specific symptoms are probably not diagnosed (1). Puumala virus usually causes a mild illness, with fever, headache, back and abdominal pain, although some patients experience renal involvement (1). Infection is caused by exposure to virus shed by bank voles and, probably, field voles, for example during outdoor activities, stacking firewood, or removing rodent droppings in holiday cabins (1). Variants of hantavirus found in Asia and other parts of Europe, such as Hantaan, Dobrava and Seoul viruses, cause a more severe form of haemorrhagic fever with renal syndrome than Puumala virus (3).

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Disease caused by Andes virus infection was first described in Argentina and Chile in 1995. Since then, more than 1200 cases have been reported in South America, with an increasing incidence in recent years (4). The rodent *Oligoryzomys longicaudatus* is the natural reservoir of Andes virus and is found only in South America. The incubation period is uncertain but is estimated at 1–6 weeks (3).

Clinical presentation is often non-specific at onset. Patients typically present with fever, marked malaise, fatigue, myalgia, headache, dizziness and gastrointestinal symptoms including nausea, vomiting, diarrhoea or abdominal pain (3). In some cases, this can progress within a few days – typically around one week – to cough, dyspnoea, hypoxia, hypotension, or other signs of rapidly progressive respiratory or circulatory compromise. At this stage, the disease

may present as a severe acute respiratory infection or atypical pneumonia, and patients should be admitted to hospital for close monitoring for rapid clinical deterioration (5).

The fatality rate for Andes virus infection has been reported at 20–50 %, although estimates vary substantially depending on outbreak setting, availability of diagnostics and early access to treatment (3,6). Early diagnosis and organ support in intensive care, including extracorporeal membrane oxygenation (ECMO), can improve outcomes (3). There is no proven antiviral treatment, although experimental treatments may be an option, including the unlicensed influenza drug favipiravir, which has shown promising results in animal studies (7). The bradykinin B2 receptor antagonist icatibant has also been used in some patients with severe Puumala virus (8). There are currently no approved vaccines for Andes virus.

A serious but limited outbreak

As of 3 June 2026, thirteen cases of Andes virus infection have been reported in association with the MV Hondius: eleven laboratory-confirmed and two probable cases, including three deaths (9). The index patient was most likely infected in South America prior to boarding, with subsequent limited transmission on board the vessel (6).

Passengers and crew were evacuated from the ship and are being followed up by national infection control authorities. Given the long incubation period, additional cases may still emerge in the coming weeks. The European Centre for Disease Prevention and Control (ECDC) recommends 42 days' quarantine for everyone who has been on board the MV Hondius (10). Both the ECDC and the Norwegian Institute of Public Health (NIPH) consider the risk to the wider European population to be very low (9, 11).

> ***«Given the long incubation period, additional cases may still emerge in the coming weeks»***

When should Andes virus infection be suspected?

Close contacts of the MV Hondius outbreak are being actively followed up, and any illness in this group is likely to be identified promptly (10). However, the outbreak serves as a reminder that Andes virus can be acquired during travel in South America and imported into Europe. Early clinical suspicion can save lives and help prevent onward transmission. The diagnosis should therefore be considered in patients with compatible clinical features and an epidemiological link (travel to an endemic area within the past 1–6 weeks, or close contact with confirmed or suspected Andes virus) (12).

Transmissibility and infection control

Human-to-human transmission of Andes virus is rare and appears to occur mainly following close or prolonged contact with an infected person. The risk is highest in households, intimate relationships, health and care settings, and other closed environments involving close contact (13,14). Large outbreaks appear to be driven by superspreading events, in which a small number of cases account for a disproportionate number of secondary infections, while most cases result in little or no onward transmission (12).

The infectious period has not been definitively established. Transmission risk is believed to be highest around symptom onset and in the early phase of illness, although transmission shortly before symptom onset cannot be ruled out (14–17). Overall, this suggests a need for targeted interventions aimed at suspected or confirmed cases and close contacts, rather than population-wide measures. Where Andes virus is suspected or confirmed, infectious disease specialists, microbiology laboratories and infection control authorities, including district medical officers and NIPH, should be involved at an early stage.

> ***«Overall, this suggests a need for targeted interventions aimed at suspected or confirmed cases and close contacts, rather than population-wide measures»***

In the specialist health service, clinically suspected and confirmed cases should be managed through enhanced airborne precautions (2). In primary care, the priority is to recognise risk, minimise further exposure and promptly involve the relevant specialists and public health authorities. Where Andes virus infection is suspected, patients should, where possible, wear a face mask and be isolated. Healthcare personnel should follow guidance from NIPH and local infection prevention and control procedures, and should have a low threshold for using respiratory protective equipment during close patient contact, specimen collection, aerosol-generating procedures, or when symptoms are pronounced (2).

Diagnosis

Diagnostic testing for suspected Andes virus infection should be discussed with the local microbiology laboratory and NIPH before specimens are collected, handled or transported (2,18). Relevant information includes the patient's clinical status, travel route, rodent or environmental exposures, close contact with people who were ill, and date of symptom onset.

Testing should primarily be considered in individuals with clinical findings compatible with hantavirus infection and a relevant travel, exposure or contact history (3,18). Asymptomatic contacts should not be tested as a matter of

routine, although testing may be considered as part of structured outbreak management or contact tracing activities (18).

Diagnosis is based primarily on polymerase chain reaction (PCR) and serology. In acute infection, PCR is particularly important because viral RNA is usually detectable before seroconversion. Hantavirus serology may be cross-reactive, and positive results should therefore be interpreted in the context of the clinical presentation, travel history and possible exposure (18).

A negative PCR result soon after exposure does not rule out subsequent development of disease, and a negative test early in the course of illness does not rule out infection if clinical and epidemiological suspicion is high (18). Where suspicion persists, further follow-up should be considered in consultation with an infectious disease specialist, a microbiologist and NIPH.

Vigilance and preparedness

The Andes virus outbreak on the MV Hondius is not a cause for widespread concern in Norway. However, it should serve as a reminder that rare but serious imported infections can present in unexpected settings, including emergency departments and clinics, or entry points to Norway such as ports and airports.

> ***«Rare but serious imported infections can present in unexpected settings, including emergency departments and clinics, or entry points to Norway such as ports and airports»***

Experience from the 2013–16 Ebola outbreak in West Africa strengthened Norway's preparedness for viral haemorrhagic fevers and other serious imported infections. The ongoing Ebola situation in the Democratic Republic of the Congo and Uganda, which the WHO declared an international public health crisis in May 2026, underscores the continued importance of preparedness. Many of the same core principles apply to suspected Andes virus infection: early clinical suspicion, prompt testing and diagnosis, appropriate isolation, timely reporting through the relevant channels, and close collaboration between clinicians, microbiologists and infection control authorities.

In clinical practice, we routinely ask about travel, exposure and close contacts when serious infectious diseases or antimicrobial-resistant organisms are suspected. The same vigilance is required when patients present with features suggestive of atypical pneumonia following a hike in Chile, or with acute pulmonary oedema after a cruise. Preparedness begins at the first clinical encounter, with careful history-taking, awareness of warning signs, measures to prevent further transmission and early involvement of relevant specialists.

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