

RiskTopics

Wuhan Virus (2019 Novel Coronavirus)

The 2019 Novel Coronavirus (2019-nCoV) was first discovered in Wuhan, China. As of January 24, 2020, hundreds of cases have been confirmed in China (including over two dozen deaths), as well as cases in Thailand, Japan, South Korea, Taiwan, Singapore, Vietnam and the United States. This virus raises concerns about a potential pandemic for global businesses and the healthcare industry.

Introduction

2019-nCoV is an acute viral respiratory illness caused by a novel coronavirus. It appeared in Wuhan, Hubei Province, China, in December 2019. The outbreak continues to expand in scope and magnitude¹, spreading to other countries in Asia and the United States. So far, the cases outside China have a connection to travel in Wuhan, either through direct travel or contact with a recent traveler. According to the World Health Organization (WHO), the number of cases of 2019-nCoV continues to rise steadily. Concerns about 2019-nCoV becoming a pandemic threat exist.

As with any emerging disease outbreak, the information on 2019-nCoV is changing rapidly and current references should be monitored periodically for up-to-date information. A list of useful references is included at the end of this document.

Discussion

2019-nCoV is a member of the coronavirus family. While some coronaviruses cause illnesses in humans, many others circulate among animals. These viruses may rarely evolve to infect humans and then spread, as seen with both Middle Eastern Respiratory Syndrome (MERS) and Sudden Acute Respiratory Syndrome (SARS).² Reports of 2019-nCoV first appeared in December 2019 in Wuhan and diagnoses of the illness has increased in recent weeks. A WHO delegation visited Wuhan on January 20-21, 2020, to better understand the response to this virus. A WHO spokesman said, "Much remains to be understood about 2019-nCoV. Not enough is known to draw definitive conclusions about how it is transmitted, clinical features of the disease, its severity, the extent to which it has spread or its source."³

Wuhan serves as a major transportation hub for both domestic and international travel.⁴ The timing of this outbreak is troublesome as it coincides with both the peak of seasonal influenza and the Lunar New Year period when many people travel across China and the globe.

Typical symptoms of 2019-nCoV are fever, cough and shortness of breath, which may progress to pneumonia.⁵ The virus appears to more severely affect people with weakened immune systems, such as children, the elderly and those with chronic diseases such as diabetes, cancer and chronic lung disease.

The virus appears to have originated in an animal market where both raw meats and live animals were sold. The animal in question has not been identified at this time. Chinese officials have confirmed that the disease has been spread from human to human. Another source of transmission is in the healthcare setting, where 14 healthcare workers have been infected.⁶

The U.S. Centers for Disease Control and Prevention (CDC)⁷ and the Canadian Public Health Agency⁸ consider the risk to the general public to be low at this time but continue to reevaluate that stance as information becomes available. In the U.S., the CDC began screening inbound travelers from Wuhan at major international airports in Los Angeles, San Francisco, New York, Chicago and Atlanta. International airports across the globe have begun to implement additional screening measures as well.

Guidance

Global business:

To reduce employee exposure to 2019-nCoV, companies should consider these prudent steps necessary to protect their employees when traveling to affected areas, such as:

- Evaluate options to achieve business objectives using remote collaboration.
- Educate employees about the enhanced precautions suggested by the U.S. CDC.
- Purchase Travel Protection Services for the employee before the trip.
- If the trip is necessary, have the employee:
 - Consult their physician regarding appropriate vaccinations and health concerns before the trip. (NOTE: No vaccination or prophylactic drug therapy for 2019-nCoV exists.)
 - Be prepared to participate in secondary screening in both Wuhan and upon their return.
 - Practice enhanced precautions before, during and after the trip (see box).
 - Avoid public transit or crowded areas wherever possible to prevent close contact with potentially ill people.
 - Work remotely for up to 14 days upon their return from affected areas.
- Ensure cleaning staff use Environmental Protection Agency (EPA)-suggested disinfectants and cleaning methods when dealing with ill employees or visitors while on premises.

Employees who have traveled to any of the areas where outbreaks have occurred (particularly Wuhan or the Hubei Province) should monitor themselves for symptoms for 14 days. If these employees develop symptoms, they should not come to work, seek medical attention immediately and use a surgical mask to minimize possible disease spread. Zurich recommends that they contact their healthcare provider prior to visiting the healthcare facility to report their recent travel and/or contact with others who have traveled to Wuhan or Hubei Province.

If employees traveling in China or other areas of Asia where 2019-nCoV disease has been reported begin to note symptoms or feel ill, they should seek medical care locally before returning home to help minimize the chances of disease spread. Travel protection services may assist in identifying appropriate medical providers and in providing other assistance to the traveler.

Healthcare:

As this is a rapidly evolving public health issue, information about the scope of clinical illness associated with 2019-nCoV is limited. In addition, there is no vaccine or specific treatment for 2019-nCoV infection. Hence, care is supportive with symptom management.

Per guidance from the U.S. CDC, the clinical criteria for a 2019-nCoV patient under investigation (PUI) is based on what is known about previous coronavirus outbreaks (i.e., MERS-CoV and SARS-CoV). The CDC plans to update guidance as additional information becomes available⁵. The CDC refers healthcare providers to the guidance for evaluating and reporting a PUI for 2019-nCoV to the criteria for MERS-CoV.¹⁰

Enhanced precautions

When visiting affected areas, travelers should practice enhanced precautions, including:

- Avoid contact with animals (alive or dead).
- Ensure meat is thoroughly cooked before consumption.
- Practice good personal hygiene (particularly hand washing) and respiratory etiquette.
- Avoid contact with individuals who are ill.
- Delay travel to the region if you have a weak immune system or have underlying health issues.

Travelers are also advised to monitor their health and seek immediate medical attention if any respiratory symptoms occur.⁹

For patients presenting with fever and acute respiratory illness, healthcare providers, particularly in the emergency department, urgent care, and primary care clinics, should obtain a detailed travel history and any known contact with a 2019-nCoV case.

Immediately notify infection control personnel at your facility and your local or state health department in the event of a PUI for 2019-nCoV.

Patients meeting the following criteria should be evaluated as a 2019-nCoV PUI:

1. Fever and symptoms of lower respiratory illness (e.g., cough, shortness of breath) in the last 14 days before symptom onset with a history of travel to/from Wuhan City, China or close contact with a person who is under investigation for 2019-nCoV while that person was ill.
2. Fever or symptoms of lower respiratory illness (e.g., cough, shortness of breath) in the last 14 days before symptom onset and close contact with an ill laboratory-confirmed 2019-nCoV patient.

From an infection control standpoint, there is more to learn about the modes of transmission for 2019-nCoV. Therefore, the CDC recommends a cautious approach to PUIs. Place surgical masks on symptomatic patients immediately and place them in an airborne infection isolation room, if available. Staff should follow standard precautions, contact precautions, airborne precautions and use eye protection (e.g., goggles or a face shield). Airborne precautions should be followed when performing aerosol-generating procedures, which have been associated with increased risk of transmission of SARS-CoV and MERS-CoV, including: tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, and bronchoscopy.

There is limited information on the recommended duration for keeping patients in isolation precautions or the duration a room should remain empty after a PUI vacates it. Duration of precautions should be determined on a case-by-case basis in consultation with your local health department.

Healthcare facilities should reinforce strict adherence to hand hygiene guidelines among staff, visitors and patients. Masks and hand hygiene products should be available at all ports of entry to health systems (hospitals, physician offices, clinics).

CDC will assist local and state health departments with the collection and storage of specimens, as testing for 2019-nCoV is only being conducted at CDC. Testing for other respiratory pathogens – e.g., influenza, respiratory syncytial virus (RSV) – should be conducted as clinically indicated.

Consult with your infection control personnel and local health department on proper environmental hygiene with use of EPA-registered disinfectants that have microbicidal activity against the pathogens most likely to contaminate the patient-care environment. There is no disinfectant efficacy test currently available for 2019-nCoV.

Conclusion

World health organizations are activating to prevent the spread of the coronavirus 2019-nCoV. Companies need to take action to limit employee exposure to this potentially deadly virus. While limiting travel may hamper efforts to achieve business objectives, taking action to protect employees and prevent the spread of this illness supports risk management efforts. Likewise, healthcare facilities should be proactive by educating staff, applying universal precautions and taking steps to actively recognize and treat patients who show signs of 2019-nCoV infection.

As with any emerging disease outbreak, the information on 2019-nCoV is rapidly changing and current references should be monitored frequently for up-to-date information.

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