



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Contents lists available at ScienceDirect

American Journal of Infection Control

journal homepage: www.ajicjournal.org

Brief Report

An update on the 2019-nCoV outbreak

Mohammad Ammad Ud Din MD*, Leela Krishna Teja Boppana MD

Internal Medicine Department, Rochester General Hospital, Rochester, NY



Key Words:

Coronavirus
SARS
MERS
Novel virus
Viral pneumonia
Pandemic

Cases of 2019-nCoV are now being reported in different regions around the globe, concerning for a possible SARS like epidemic that infected for than 8000 people in 2002-03. Though, major health authorities are still working on understanding the virus and its transmission, here we present a brief report regarding the 2019-nCoV outbreak and what is known so far.

© 2020 Association for Professionals in Infection Control and Epidemiology, Inc. Published by Elsevier Inc. All rights reserved.

Less than a month has passed since the World Health organization (WHO) was first alerted regarding a mysterious viral respiratory illness spreading across the city of Wuhan in the Hubei province of China that painted an eerily familiar picture to the severe respiratory syndrome (SARS) epidemic.¹ On January 7, 2020, the virus was identified as a new strain of coronavirus and temporarily named 2019-nCoV,¹ making it the third notable coronavirus outbreak in recent times following SARS and Middle East Respiratory Syndrome (MERS). The first cases of 2019-nCoV were linked to Huanan Seafood Wholesale Market where there was sale of animal meat for human consumption. As a result, it was presumed that the virus was spread through direct contact with animals. However, on January 21st, 2020 WHO reported a case of a 35-year-old female who tested positive for 2019-nCoV with no history of known contact with confirmed 2019-nCoV cases or wild animals in Wuhan City.² As of January 24, 2020 there are 895 laboratory-confirmed cases of 2019-nCoV infections with 26 deaths reported. Of these, 878 cases are from China, four from Thailand, three from Singapore, two each from Hong Kong, Japan, South Korea, Vietnam and once case each in Taiwan and the United States. The first Real time Reverse Transcription-Polymerase Chain Reaction (rRT-PCR) test positive case of 2019-nCoV in the United States was confirmed by the Centers of Disease Control and Prevention (CDC) on January 21st. Although all cases seen outside China had a travel history to Wuhan,³ the increasing number of cases is concerning for possible person-to-person transmission, as was the prior two coronavirus outbreaks of SARS and MERS.⁴

The 2019-nCoV was found to have 70% similarity in genetic sequence to SARS-CoV, which first emerged in China in 2002 and spread to 29 countries/regions through a travel-related global

outbreak with 8,098 cases and a case fatality rate of 9.6%.⁵ The Chinese health authorities initially notified WHO on 31st December 2019 of this virus that prompted surrounding countries to institute screening and quarantine measures for travelers from Wuhan. The United States also began implementing public health entry screening at 5 major airports as of January 23rd.⁶

Health care professionals should be suspicious for 2019-nCoV when a patient presents with fever, symptoms of lower respiratory illness and there is a history of travel to Wuhan, China in the last 14 days prior to symptom onset, close contact with a person who is under investigation for the virus or is a laboratory-confirmed 2019-nCoV patient.⁶ It is important to implement droplet and contact precautions for suspected and confirmed cases. The WHO has published detailed interim guidance for clinical management of severe acute respiratory illness when 2019-nCoV is suspected. At present, there is no specific anti-nCoV treatment for patients with suspected or confirmed nCoV.⁶

References

1. Novel coronavirus (2019-nCoV) - who.int. Available at: <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200121-sitrep-1-2019-ncov.pdf>. Accessed January 24, 2020.
2. Novel Coronavirus – Republic of Korea (ex-China). World Health Organization. Available at: <https://www.who.int/csr/don/21-january-2020-novel-coronavirus-republic-of-korea-ex-china/en/>. Accessed January 24, 2020.
3. Geographical Distribution of 2019-nCoV Cases. European Centre for Disease Prevention and Control; 2020. Available at: <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases>. Published January 24, 2020.
4. First Travel-Related Case of 2019 Novel Coronavirus Detected in United States. Centers for Disease Control and Prevention; 2020. Available at: <https://www.cdc.gov/media/releases/2020/p0121-novel-coronavirus-travel-case.html>. Published January 21, 2020.
5. Hui DS, Azhar EI, Madani TA, et al. The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health — the latest 2019 novel coronavirus outbreak in Wuhan, China. *Int J Infect Dis*. 2020;91:264–266.
6. Clinical Criteria: Evaluating 2019-nCoV PUIs. Centers for Disease Control and Prevention; 2020. Available at: <https://www.cdc.gov/coronavirus/2019-nCoV/clinical-criteria.html>. Published January 17, 2020.

* Address correspondence to Mohammad Ammad Ud Din, MD, Rochester General Hospital, 1425 Portland Avenue, Rochester, NY

E-mail address: Mohammad.ammad-ud-din@rochesterregional.org

(M. Ammad Ud Din).

Conflict of interest: None to report.