

COVID-19

Summary

SARS-CoV-2, the virus that causes COVID-19, emerged from Wuhan, China near the end of 2019. By January 2020, cases were detected outside of China. WHO declared a global pandemic on March 11, 2020.

COVID-19 first presented as primarily a respiratory illness. We now know that this virus affects many different body systems.

Common symptoms include fever/chills, cough, shortness of breath or trouble breathing, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, diarrhea. This is not a complete list of all possible symptoms. Symptoms may vary depending on the severity and variant of this illness and vaccine status.

Vaccination significantly decreases the risk of severe illness or hospitalization, especially in those 65 and older or with certain underlying conditions.

This chapter will deal with acute COVID-19 illness. Long COVID or post-acute sequelae of COVID-19 (PASC) will not be discussed.

Agent

COVID-19 is a disease caused by a coronavirus named SARS-CoV-2. It is very contagious and has quickly spread around the world. The family of coronaviruses includes head and chest colds, severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS).

The word corona means crown and refers to the appearance coronaviruses get from the spike proteins that stick out from them. The spike protein attaches to the human cell to infect it. This allows the virus to replicate inside the cell and spread to other cells. Some antibodies from prior infection or vaccination can offer some protection by targeting these spike proteins.

Genetic changes happen over time. These are called variants. Variants of SARS-CoV-2 can have different attributes that determine how fast the virus spreads or the severity of the illness it causes or how well treatments work against it.

Transmission

Mode of transmission:

COVID-19 spreads by droplets from an infected person. This person could be speaking, coughing, sneezing, or singing. These droplets come into contact with another person's mucous membranes of the nose, mouth, and eyes. Epidemiological studies have shown that the greatest risk of transmission occurs in closed, poorly ventilated rooms where people are in close proximity for 10-15 minutes or longer.

Period of communicability:

People are considered infectious 2 days before symptoms started or 2 days before specimen collection date of positive test if no symptoms through 10 full days after symptoms started or specimen collection date of positive test if no symptoms.

The day symptoms start or the day the specimen was collected that resulted in a positive test is considered day 0.

Clinical Disease

Incubation period:

2-14 days.

Illness:

The acute phase of COVID-19 can vary in severity depending on age, underlying conditions, vaccination status, and variant. The illness can be mild, severe, or even asymptomatic. Symptoms can range from mild cold-like symptoms to very severe symptoms causing hospitalization and even death.

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Laboratory Diagnosis

There are two main types of viral tests for SARS-CoV-2: nucleic acid amplification tests (NAATs) and antigen tests.

- **NAATs**, such as PCR-based tests, are most often performed in a laboratory. They are typically the most reliable tests for people with or without symptoms. These tests detect viral genetic material, which may stay in your body for up to 90 days after you test positive. Therefore, you should not use a NAAT if you have tested positive in the last 90 days.
- **Antigen tests** are rapid tests which produce results in 15-30 minutes. They are less reliable than NAATs, especially for people who do not have symptoms. A single, negative antigen test result does not rule out infection. To best detect infection, a negative antigen test should be repeated at least 48 hours apart (known as serial testing). Sometimes a follow-up NAAT may be recommended to confirm a negative antigen test result. Home tests are antigen tests.

Treatment

Treatment has changed as variants have emerged. For a detailed and up to date review of symptom management and illness treatment, please refer to this CDC link:

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/clinical-considerations-course.html>

Surveillance

Case definition:

For a detailed description of the case definition including clinical criteria, laboratory criteria, epidemiologic linkage, and case classification, please see this link:

<https://ndc.services.cdc.gov/case-definitions/coronavirus-disease-2019-2021/>

Reporting:

Report all 1) laboratory confirmed cases of COVID-19, 2) COVID-19-related deaths 3) COVID-19 illness involving a large number of people in the same geographic area (outbreaks) or outbreaks in Correction facilities or Long-term care facilities to the Epidemiology and Response Division (ERD) at 505-827-0006.

Control Measures

1. Case management
 - a. Isolation and precautions for people with COVID-19: <https://www.cdc.gov/coronavirus/2019-ncov/your-health/isolation.html>
 - b. If you are sick with COVID-19 or taking care of someone who is sick with COVID-19: <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/index.html>
 - c. If you were exposed to COVID-19: <https://www.cdc.gov/coronavirus/2019-ncov/your-health/if-you-were-exposed.html>
 - d. Understanding your risk of getting COVID-19 and having severe illness: <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/index.html>
2. Prevention
 - a. For detailed information on how to prevent getting COVID-19, please see the following link: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

Management of COVID-19 in Long-term Care Facilities or other Institutional Settings

Please consult with the New Mexico Department of Health epidemiologist on call (505-827-0006) to report any cases of COVID-19-like illness at semi-enclosed institutional settings such as nursing homes, rehabilitation centers, or correctional institutions for assistance with testing to confirm COVID-19 and recommendations for prevention and control of further illness.

Annually updated guidelines for the management of COVID-19 in childcare, schools, outpatient, acute care, and long-term care settings can be accessed at the New Mexico Department of Health COVID-19 Website: <https://cv.nmhealth.org/>

References

American Academy of Pediatrics. In: Kimberlin, DW, et al eds. Red Book: 2021-2024 Report of the Committee on Infectious Diseases. 32nd ed. Itasca, IL: American Academy of Pediatrics; 2021.

Heymann, DL, ed. Control of Communicable Diseases Manual. 21st edition. Washington, DC: American Public Health Association; 2022.

<https://www.cdc.gov/coronavirus/2019-nCoV/index.html>

<https://www.cdc.gov/coronavirus/2019-ncov/your-health/index.html>

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care.html>

<https://ndc.services.cdc.gov/case-definitions/coronavirus-disease-2019-2021/>

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