



COVID-19: Response and Prevention

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After reading the newsletter, the home health aide should be able to:

1. Describe the history and spread of COVID-19.
2. Discuss transmission, signs, and treatment of COVID-19.
3. Discuss complications of COVID-19 and infection control measures.

On January 15, 2020, a man traveled from Wuhan, China back to his home in Washington state. Shortly after, he began feeling ill and went to an urgent care center for treatment. Based on his travel history, local and state health departments were notified, and testing for COVID-19 was done. On January 20, he became the first person in the US to be diagnosed with COVID-19.

On February 26, the Centers for Disease Control and Prevention (CDC) confirmed the first US case of COVID-19 from an unknown source. The patient from northern California had no travel history or contact with people having virus, indicating spread in the community.

Since then, cases of COVID-19 in the US and throughout the world have increased rapidly. On March 11, the World Health Organization (WHO) declared the outbreak a pandemic, defined as the worldwide spread of a new disease. As of May 4, CDC data shows that there have been 1,152,372 cases of COVID-19 in the US, with 67,456 deaths due to the virus.



This newsletter will discuss the novel coronavirus, including history, transmission, diagnosis, signs of infection, and current treatment methods. Complications associated with the virus will also be covered, as well as preventive measures. This information has been changing very rapidly, and guidelines presented here are accurate as of May 4, 2020. Please refer to the CDC, FDA and WHO for any new or updated guidelines.

The Novel Coronavirus

COVID-19, the novel coronavirus, was first identified in an outbreak affecting people who attended a market in Wuhan, China in December 2019. The coronaviruses are a large group of viruses that infect humans and animals. They are named for the spiky crowns on the virus surface. The term novel indicates that this new virus has never before been seen in humans. The WHO named this infection COVID-19, to indicate **CO**rona**VI**rus **D**isease 20**19**, the year it emerged. The virus is named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).



Transmission

According to the CDC, the novel coronavirus "spreads easily" from person to person. It's more contagious than influenza, but less so than measles, which is highly contagious. Once a person is exposed, the incubation period, or time until illness occurs, is 2-14 days. It's believed that the virus can be transmitted from 2-3 days before symptoms occur to several weeks after.

Transmission of coronavirus is believed to occur mainly by droplets expelled when coughing, sneezing or talking. These droplets can be inhaled or may land on the mucous membranes (eyes, nose, mouth) of someone within 6 ft. It may also be transmitted by direct or indirect contact with an infected person. An example of direct contact is kissing an infected person, while indirect contact involves touching a contaminated

surface and then touching one's own eyes, nose or mouth. The possibility of airborne transmission is a concern with the virus, but there is no evidence showing this at this time. The virus can be transmitted by infected people who have no symptoms of illness. This may occur before symptoms develop, and in those who never develop symptoms.

Symptoms, Diagnosis, and Treatment

Symptoms of COVID-19 usually occur 2-14 days after exposure to the virus, and range in severity from mild to very severe illness, including death. The most common are fever, dry cough, and shortness of breath. Others include muscle pain, loss of taste and smell, sore throat, headache, and GI symptoms, such as diarrhea. In some cases, people with the virus may have no symptoms at all.

Complications of COVID-19 include pneumonia, acute respiratory distress syndrome, sepsis, liver and kidney injury, and clotting disorders, such as stroke and thromboembolism. Groups at highest risk for complications include those age 65 and over or who have chronic conditions such as diabetes, COPD, asthma, severe obesity, decreased immunity, or liver, kidney or heart disease. Residents of long-term care facilities are at particularly high risk, due to advanced age, reduced immunity, chronic health conditions, and close contact with others.

There are two main types of testing for COVID-19. Current cases are diagnosed by a swab specimen collected from the back of the nose or throat. A sputum specimen may also be collected. Previous infections from which the person has recovered are identified using an antibody blood test. At this time, it is not known whether having antibodies offers protection from future infection.

Treatment of COVID-19 has been mainly supportive, such as treating symptoms and managing respiratory distress. This is changing rapidly, however, as more knowledge is gained about the virus. Several drugs have shown promise in battling the virus. Remdesivir, an antiviral drug, performed well in clinical trials. On May 1 the FDA authorized emergency use of this drug for COVID-19 patients, prior to its final approval. This is the first drug authorized for the treatment of COVID-19.



At this time, there are no approved vaccines to prevent COVID-19. Several vaccines are currently in clinical trials, but may not be available for public use until 2021.

Implications for Home Health Care

Home care agencies have been significantly impacted by COVID-19, with changes in admissions,

staffing, and shortages of medical supplies. Also, the nature of home care increases staff exposure to the community and family members and visitors in homes. During this pandemic, the safety of clients and staff is of critical importance. The CDC makes guidelines and recommendations, but it is up to each state to develop its own response to this public health crisis. This is usually done by Executive Order of the governor. State requirements vary widely on issues such as stay-at-home orders and closing businesses. It's important to become familiar with and follow the orders in your state as they change.

The cornerstones of COVID-19 prevention are social distancing and hand hygiene. For home care providers, the Centers for Medicare and Medicaid Services (CMS) and CDC recommend measures such as checking clients and staff daily for fever ($\geq 100.0^{\circ}\text{F}$) and other symptoms and having clients leave the home only if medically necessary. Only essential items should be brought into the home, and must be disinfected before removal. Healthcare providers should wear masks inside the home at all times. Proper hand hygiene must be done frequently, using soap and water or alcohol-based hand sanitizer. At a minimum, it should be done before and after all client contact, contact with potentially infectious material, and before and after use of personal protective equipment (PPE). It should also be done before and after touching/adjusting your face mask.



The CDC recommends the use of standard, droplet, and contact precautions when staff are within 6 feet of clients with known or suspected COVID-19. This includes use of N95 respirators or face masks, gloves, gowns, and eye protection (face shields or goggles). Eyeglasses and cloth face masks are not considered PPE, and should not be used for precautions in this situation. PPE should be put on and removed outside the home, whenever possible. Clients with known or suspected COVID-19 should remain in a room with the door closed.

Every client should be watched closely and asked about signs of illness daily. As you work with your clients, pay close attention to any physical or mental changes and report them immediately. And remember, elderly clients may not show classic signs, such as fever. Also, monitor yourself closely for signs of illness. If any signs develop, you should call the agency and not report to work.

By following recommended infection-control precautions and monitoring your clients closely, you can help to decrease the risk of COVID-19 transmission. As a healthcare provider, you provide valuable service in helping to keep Americans safe during this difficult time, and we thank you.



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NAME: _____ DATE: _____ UNIT: _____

Directions: Place the letter of the one best answer in the space provided.

- _____ 1. The virus causing the current pandemic has been named which of the following by the WHO?
 - A. COVID-19
 - B. SARS-CoV-2
 - C. MERS-CoV
 - D. Wuhan coronavirus

- _____ 2. The novel coronavirus is more contagious than influenza, but less so than measles.
 - A. True
 - B. False

- _____ 3. The novel coronavirus has NOT been shown to spread in which of the following ways:
 - A. airborne
 - B. droplet
 - C. direct contact
 - D. indirect contact

- _____ 4. Transmission of the novel coronavirus to others occurs only after the infected person develops symptoms.
 - A. True
 - B. False

- _____ 5. Known signs and symptoms of the novel coronavirus include:
 - A. loss of taste and smell
 - B. diarrhea
 - C. muscle pain
 - D. all of the above

- _____ 6. Groups at highest risk for complications of coronavirus disease include all of the following EXCEPT those:
- A. with chronic illness
 - B. living in long-term care facilities
 - C. having obesity
 - D. age 12-18 years
- _____ 7. Which of the following drugs is the first to receive FDA emergency authorization for treatment of coronavirus disease?
- A. saquinavir
 - B. famotidine
 - C. hydroxychloroquine
 - D. remdesivir
- _____ 8. Since laws regarding public health are made by the CDC and federal government, requirements for prevention of coronavirus disease are the same in each state.
- A. True
 - B. False
- _____ 9. When healthcare providers are within six feet of clients with known or suspected coronavirus disease, the CDC recommends the use of:
- A. standard precautions only
 - B. standard, airborne and contact precautions
 - C. standard, droplet and contact precautions
 - D. standard, droplet and airborne precautions
- _____ 10. Currently, the most effective way to prevent coronavirus disease is by:
- A. wearing a mask at all times
 - B. vaccines and antibody testing
 - C. hand hygiene and social distancing
 - D. covering coughs and sneezes with a tissue

