As the number of global cases of coronavirus disease 2019 (COVID-19) rises, it is imperative that healthcare providers stay informed and prepared with the best clinical practices to combat the SARS-CoV-2 virus. Following appropriate guidelines and practicing proper technique will benefit both patients and clinicians and better prevent the further spread of the virus.

It has been established that the virus mostly spreads from person to person via close contact or respiratory droplets. The Centers for Disease Control and Prevention (CDC) defines close contact with a patient with COVID-19 as being within 6 feet for an extended period of time or having direct contact with the patient's bodily fluids (i.e., sputum, blood, respiratory droplets).[1] When treating patients in such close proximity, it is especially important to use personal protective equipment (PPE), which can help to reduce the risk of acquiring the virus.

PPE and Isolation Precautions

In a podcast interview, Betsey Todd, MPH, RN, a nurse epidemiologist and clinical editor of *American Journal of Nursing*, noted the importance of proper PPE and how it varies depending on the 4 categories of isolation precautions: standard, contact, droplet, and airborne precautions.[2]

Unlike standard precaution, contact, droplet, and airborne precautions are all types of transmission precautions that Ms Todd notes may be used in combination. While contact precautions include the use of gloves and gowns to treat conditions such as methicillin-resistant *Staphylococcus aureus*, other conditions such as influenza infections or tuberculosis may require more PPE, such as a face mask or shield (droplet precautions) or an N95 respirator and negative pressure rooms (airborne precautions), respectively.[2]

When discussing the treatment of patients with suspected or confirmed COVID-19, Ms Todd noted that there is relative certainty that the virus spreads by droplets, which might suggest the need for a mask and face cover. However, she notes that because the virus is still so new, "the CDC recommends for patients that are suspected of having or have confirmed COVID-19, that [health care providers] go ahead and use, not droplet, but airborne precautions, and place the patient in a negative pressure room if available."

Ms. Todd went on to note that "regular surgical-type masks are made for containing droplets from [a clinician's] own mouth…whereas N95 respirators or other kinds of particulate respirators are made to protect what [clinicians are] breathing in." Therefore, she suggests the use of airborne precaution technique.

Proper PPE would not be as effective if not worn correctly. When wearing a mask, make sure to fit-test by taking a moment to make sure that the mask fits appropriately. Take a few deep breaths to ensure there is no leakage around or near the mask.[2]

When asked who should be wearing the N95 masks, Ms. Todd replied, "the CDC and World Health Organization are really trying to strongly push back against the idea that everybody should go around wearing any kind of mask… . People think that it will protect them out in public, but the fact is that N95s are not appropriate for wearing long periods of time."

The World Health Organization noted earlier this month in a news release that the "shortages [in PPE] are leaving doctors, nurses, and other frontline workers dangerously ill-equipped to care for COVID-19 patients, due to limited access to supplies such as gloves, medical masks, respirators, goggles, face shields, gowns, and aprons."[3]

Practices for Healthcare Providers and Patients

Amy Fuller, DNP, director of the Master's Nurse Program at Endicott College in Beverly, Massachusetts, described steps nurse practitioners (NPs) and physician assistants (PAs) can take to ensure the best prevention and treatment techniques.

Because the 2019 coronavirus outbreak has overlapped with the current influenza season, Dr Fuller noted that "it's hard to differentiate because they both have the same kind of symptoms. But the incidence and prevalence for the flu is so much greater than for the coronavirus." For nurses, NPs, and PAs, she noted that it should be "common sense" that if a patient is "coughing or sneezing, put a mask on."

She continued by noting that both healthcare providers and patients should be "realistic" and that the SARS-CoV-2 virus will "be here with more of a presence than it is currently." Healthcare providers should inform their patients to "avoid crowded places" and "avoid close contact with people who are sick," in addition to avoiding cruise travel and nonessential air travel and staying at home as much as possible to further reduce the risk of exposure.[4]

Another recommendation was for healthcare providers to be mindful of the patients who present to their practices and make sure to triage them immediately. It is important to be mindful of their symptomology, their contact with others, and their travel history.

Both clinicians and patients should avoid touching their face, nose, and eyes; be sure to wash their hands often with soap and water (for at least 20 seconds) or with at least 60% alcohol-containing hand sanitizer if soap and water are not available; and to clean and disinfect common surface areas in the home.[4]

When asked whether a patient should be self-quarantined or seen in a medical practice, Dr Fuller noted that it depends on the case. "I would certainly recommend self-quarantine if they have the risk factors…if [patient] symptoms are mild, and most cases are mild, [the patients] don't require any kind of hospitalization."

If a patient presents with symptoms, "the caveat could be that the nurse, NP, or PA can check on the patient in 12 hours and see how they are doing or instruct them to call back if their symptoms get worse. But if they just have cold-like symptoms with no fever, I'm not entirely invested in sending them to the hospital."

There is currently no vaccine or antiviral to treat this infection. Current treatments may include fever-reducing medications but "the last thing we want to do is have a big rush of people to the hospital who only have mild, cold-like symptoms."

Risks and Symptoms to Look Out For

According to the CDC, it is important for healthcare providers to pay attention to symptoms such as fever, cough, and shortness of breath.[4] While human coronaviruses can cause disease similar to a common cold, more severe cases can cause pneumonia, severe acute respiratory syndrome, and even death.[5] Individuals with a higher risk for COVID-19 include older adults and those with chronic medical conditions such as heart disease, diabetes, and lung disease. Emergency warning signs that require immediate medical attention include difficulty breathing or shortness of breath, persistent pain or pressure in the chest, new confusion or inability to arouse, and/or bluish lips or face. Although these are not all inclusive, the CDC urges adults with these symptoms to contact their medical providers.

Conclusion

Healthcare providers are at the forefront, caring for infected patients and increasing their own risk of exposure to the virus. The information surrounding COVID-19 is constantly being updated as we learn more about the virus, the illnesses it causes, and who is at risk.

It is imperative that clinicians continue to read new information and stay updated, practice recommended hygiene, wear the appropriate PPE, and make sure that their patients are educated. Following the appropriate steps will help to reduce the spread of the virus and hopefully prevent further exposure in uninfected individuals.

Reference

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