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Patient Information Handout

Novel 2019 Coronavirus Pandemic

By Scott Field, MD, FCP

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Origin:

The **virus** that emerged in China in late 2019 is called **SARS-CoV-2** because it was initially noted to cause a severe acute respiratory syndrome (SARS) and was identified as a coronavirus (CoV), and was the second (2) coronavirus strain to cause SARS.¹ The first SARS illness also arose from China and was caused by a coronavirus (SARS-CoV). It appeared in 2002, had a higher (10%) fatality rate, and was not as easily transmitted from person to person. Because of the limited transmission between people and extensive healthcare efforts, the original SARS was contained. The Middle East Respiratory Syndrome (MERS) of 2012 was also caused by a new coronavirus strain (MERS-CoV) that was thought to have been originally transmitted to humans from camels. It was more (36%) lethal than the original SARS and was even less easily transmitted from human to human. The **disease** caused by SARS-CoV-2 is called **COVID-19**.

Disease expression:

COVID-19 is different from most human respiratory viruses in that few infected individuals have nasal symptoms. They generally have a dry **cough (68%)** (although around a third of cases produce sputum or phlegm), **fever (88%)**, and **shortness of breath (19%)**. Many (38%) get fatigued, and between 11 and 14 percent experience chills, body aches, headaches, and sore throats. Rarer symptoms include nasal congestion (4.8%), nausea and vomiting (5%), diarrhea (3.7%) and irritated eyes (0.8%).²

Severity of disease is related to age and underlining conditions such as heart, lung or kidney disease, diabetes, and immunosuppression. Those under 19 years of age only accounted for 2.4% of cases in the China World Health Organization (WHO) study.² Of those younger cases, 2.5% got severe disease and 0.2% got critical disease. Most younger people either don't get the virus as easily or they don't get as sick when they do get it. It is possible that they and older individuals that have little to no symptoms from the virus may still potentially be able to transmit it to others.³ The disease has an average incubation period (time from exposure to the virus to onset of symptoms) of 4-5 days, but can potentially range from 1-14 days.² Most of the relatively rare cases of asymptomatic infected individuals developed symptoms within a couple days of their positive test. Most (80%) of the laboratory confirmed COVID-19 infections were mild to moderate, 13.8% severe, and 6.1% critical in severity.

Spread:

The spread or transmission of COVID-19 has been rapid and extensive from its origins in China to all over the World. It is spread both directly by droplets (created with coughing and sneezing) and through surfaces contaminated from such droplets.² The latter situation can end up infecting susceptible individuals when they come

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in contact with such contaminated surfaces, but it remains to be determined how likely infection is to occur by that method, since this disease is normally just a lower (down in the lungs) respiratory infection. The greatest risk of infection is from prolonged close (within 6 feet) “contact” with an infected individual.

In China, only 2.8% of close contacts were found to get COVID-19. Most (78-85%) of disease clusters occurred in families, but infection of other family members in households was only 3-10%.² Because the severity varies so much, the real danger is for those who do not have severe symptoms to unwittingly transmit this disease to others, including those elderly people who are at greatest risk for severe and fatal disease. ***It is imperative that anyone who might have been around someone with the disease, and now is coughing, should self-quarantine (stay away from other people) until they are well and found to be negative for the virus by testing. They should not go to a doctor’s office or hospital without first calling to determine their risk to others and measures to be taken to reduce that risk.*** Those without symptoms should not be tested, except under research protocol. *If exposed to a known case of COVID-19 (even without symptoms), one should also self-quarantine for 14 days after such exposure, but should be considered safe to come out of quarantine if no symptoms develop during those 14 days, although longer incubation periods have also been reported. Those who test positive for COVID-19 need to be isolated (more strict form of quarantine) until they have been medically proven to no longer be contagious (may take at least several weeks).*

Testing:

Testing guidelines have recently changed, and are likely to continue to change. Criteria for testing include:

1. Those who have cough and fever (especially without nasal symptoms) with possible exposure to COVID-19 within the previous 2 weeks. Exposure is more likely if the individual has been to a location where COVID-19 has been positively diagnosed.
2. Anyone with a new severe illness characterized by cough, shortness of breath, and fever.

Anyone awaiting test results should take all precautions not to contaminate others (i.e. wearing masks and/or face shields) regardless of the test results. Good monitoring is critical.

For up-to-date information on the COVID-19 outbreak, visit the Centers for Disease Control (CDC) website: <https://www.cdc.gov/coronavirus/2019-nCoV/summary.html>

References:

1. Paules CI, Marston HD, Fauci AS. Coronavirus infections – more than just the common cold. *JAMA* 2020;323(8):707-708. Doi: 10.1001/jama.2020.0757
2. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19) 16-24 February 2020.
3. Bal Y, Yao L, Wei T, et al. Presumed asymptomatic carrier transmission of COVID-19. *JAMA* 2020; doi:10.1001/jama.2020.2565

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