

## COVID-19 Clinical FAQ **March 24, 2020 1734**

### **What is novel coronavirus 2019 (COVID-19)?**

COVID-19 was first described in Wuhan, Hubei Province, China and has spread within China and around the world; it has been declared a pandemic by the World Health Organization (WHO). COVID-19 refers to the illness caused by the virus SARS-CoV-2.

### **How does the virus spread?**

Spread of this virus occurs person to person when an infected person generates respiratory droplets through sneezing or coughing; these droplets then come into contact with the eyes, nose, and mouth of other people who are nearby, similar to how influenza and other respiratory pathogens spread. The virus can also be spread by a person touching a contaminated surface with their hands and subsequently placing their hands on their face. The virus can live for several days on surfaces. Currently, the role of transmission by asymptomatic carriers is not clear.

### **How wide spread is COVID-19 within our community at this time?**

Due to current limited testing, we believe that the best indicator of wide spread community transmission of COVID-19 is significant presence of suspected or positive patients within the ICU setting. This has been a consistent trend in studies of other countries with higher burden of disease.

### **What are the symptoms of COVID-19?**

Patients with this virus have had mild to severe respiratory illness with symptoms that can include:

<b>Primary</b>	<b>Secondary</b>
<ul style="list-style-type: none"> <li>• Fever</li> <li>• Cough</li> <li>• Shortness of Breath</li> </ul>	<ul style="list-style-type: none"> <li>• Nasal / Sinus Congestion</li> <li>• Myalgias</li> <li>• Fatigue</li> <li>• Headache</li> </ul>

Most patients with COVID-19 have mild illness and do not require hospitalization. A smaller percentage of cases are severe and can involve pneumonia with respiratory failure. Patients who are elderly or have underlying medical conditions seem to be at higher risk for severe infection.

The virus primarily affects the alveolar type 2 cells of the lungs, causing bilateral diffuse alveolar damage. The virus can also affect the heart, liver, and kidneys. Acute Respiratory Distress Syndrome (ARDS) can develop causing fluid to accumulate in the interstitial lining resulting in stiffening of the lungs. Impaired ventilation and reduced oxygenation of blood results in increase mortality.

### **Who is at higher risk of getting very sick from COVID-19?**

Older adults and those with serious chronic medical conditions are at higher risk of getting sick from COVID-19. Chronic medical conditions placing patients at higher risk include: cardiovascular disease, respiratory disease, diabetes, immunocompromise, transplant.

### **What is considered an exposure and what should I do if exposed?**

A team member who has interacted with someone who is COVID+ or presumed COVID+ should self-monitor for symptoms for COVID related symptoms for 14 days. **While you are self-monitoring, you can continue to work as long as you do not have symptoms.** Symptoms to monitor include: a fever > 100°F, worsening shortness of breath in the last 48 hours, worsening cough in the last 48 hours or new

onset sore throat in the last 48 hours. If any of these symptoms exist, please contact the Spectrum Health Team Member hotline at 1-833-559-0658.

A team member exposure has occurred when you have interacted with a COVID+ individual

**AND** you were not wearing appropriate personal protective equipment,

**AND** the COVID+ individual was not wearing a mask,

**AND** you were within 6 feet of the individual

**AND** the duration was for 10 minutes or longer.

If you have had an exposure, please complete a Job-Related Injury Report.

#### Who should be tested for COVID-19?

Generally, testing should be considered on patients presenting with fever, cough and shortness of breath. Because testing capabilities are limited, Spectrum Health is evaluating testing criteria daily. Please refer to the COVID-19 InSite page for most up to date information.

#### What specimens should be collected for COVID-19 testing?

At this time, only a nasopharyngeal swab is required for COVID-19 testing. Swabs should be collected via a deep and vigorous technique.

#### How do I know if my patient has COVID-19 vs a different type of coronavirus?

COVID-19 is caused by SARS-CoV-2. Patients may test positive for other coronaviruses that are found on the respiratory viral panel, the Film Array. These coronaviruses include: *HKU1*, *229E*, *NL63*, *OC43*. These are all different than SARS-CoV-2 and are often causes of the common cold.

The Film Array respiratory panel **does not** test for SARS-CoV-2. Spectrum Health has recently acquired in house testing specific for SARS-CoV-2. Typical turnaround time for resulting is 24 hours.

#### Can a person test negative and later test positive for COVID-19?

Using the CDC-developed diagnostic test, a negative result means that the virus that causes COVID-19 was not found in the person's sample. In the early stages of infection, it is possible the virus will not be detected.

For COVID-19, a negative test result for a sample collected while a person has symptoms likely means that the COVID-19 virus is not causing their current illness. If there is continued concern that COVID-19

is present despite a negative test, the following clinical findings should be considered to determine course of treatment.

SYMPTOMS		
Common Symptoms (>75% prevalence)	Intermediate Symptoms (15-40% prevalence)	Uncommon Symptoms (<5% prevalence)
<ul style="list-style-type: none"> <li>Fever (&gt; or = to 38 degrees) present at any point during the admission</li> <li>Cough</li> </ul>	<ul style="list-style-type: none"> <li>Myalgias</li> <li>Fatigue</li> <li>Sputum production</li> <li>Shortness of breath on admission</li> <li>Septic Shock</li> </ul>	Uncommon Symptoms (<5% prevalence) <ul style="list-style-type: none"> <li>Nausea and Vomiting</li> <li>Diarrhea</li> <li>Hemoptysis</li> <li>Nasal Congestion</li> </ul>
LABORATORY FINDINGS		IMAGING FINDINGS

<ul style="list-style-type: none"> <li>• <b>Absolute lymphopenia &lt;1500 per mm3 (&gt;80% prevalence)</b></li> <li>• Elevated LDH (40% prevalence)</li> <li>• Elevated CRP (severe disease)</li> <li>• Elevated D-dimer (severe disease)</li> <li>• NORMAL WBC count + Procalcitonin</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Chest CT:</b> Approximately 85% of all patients with COVID19 have abnormal Chest CT scan, findings include local or bilateral patchy shadowing, ground glass opacities</li> <li>• <b>CXR:</b> Abnormal in patients with non-severe disease, sometimes consistent with multifocal PNA. In this patient population with negative testing, non-severe disease, and equivocal or negative chest XR, non-contrast CT chest should be considered.</li> <li>• <b>Uncommon:</b> Pleural effusions and hilar adenopathy</li> </ul>
<b>CLINICAL GUIDANCE:</b>	
<p><b>For patients with fever + cough + one or more of the above laboratory or imaging findings, maintain high suspicion of COVID-19.</b> Keep patient in severe respiratory isolation and treat accordingly. Utilize positive or presumed positive COVID-19 discharge instructions upon discharge.</p>	

#### Is there treatment for COVID-19?

The vast majority of patients with COVID-19 will not require hospitalization and will fully recover at home with symptomatic management.

Currently, the main treatment for hospitalized COVID-19 patients is supportive care such as supplemental O2, bronchodilators, hemodynamic support, treating co-morbidities and diagnosing/treating any bacterial co-infections. Additional treatment considerations can be found in the "[Suggested Management of Hospitalized Patients.](#)"

Data gathered on COVID patients thus far indicates that viral co-infection is rare (<2%) and bacterial superinfection is uncommon. There are currently no antiviral drugs licensed by the U.S. Food and Drug Administration (FDA) to treat COVID-19. Some *in-vitro* or *in-vivo* studies suggest potential therapeutic activity of some agents against related coronaviruses, but there are no available data from observational or randomized controlled trials in humans to support recommending any investigational therapeutics for patients with confirmed or suspected COVID-19 at this time. Remdesivir, an investigational antiviral drug,

is currently undergoing clinical trials but is not available for commercial use or on a compassionate use basis at this time.

There is NO vaccine available at this time; several are in development but are not likely to be ready for at least 12 months.

*If you have any questions regarding the treatment or care of a patient positive or with presumed to be positive with COVID-19, please contact and expert provider through the "COVID-19 Provider Resource – Adult/Peds" group found in PerfectServe.*

#### What clinical interventions should be considered in caring for a patient with COVID-19?

- Stay calm - patients will be frightened and need a supportive presence
- Monitor for subtle changes such as (but not limited to):
  - Change in level of consciousness
  - Change in behavior
  - Dyspnea

- Increased oxygen demands
  - Retractions, crackles and rhonchi, and tachycardia
- Ensure good nutritional intake including water and electrolytes
- Implement *nursing interventions* to promote respiratory health
  - Promote Optimum Oxygenation and Ventilation
  - Monitor and Manage Fluid Balance
  - Monitor for Patient Deterioration or Progression to Sepsis, ARDS
- Implement *nursing interventions* to reduce anxiety and/or promote coping with pandemic circumstances (visitor and societal restrictions)
- *Nursing Team*, consider the following Care Plan Guides for specific nursing intervention details:
  - Pneumonia
  - Mechanical Ventilation
  - Fever
  - ARDS (inpatient)
  - Breathing Pattern, Ineffective
  - Dyspnea (ED)
  - Anxiety
  - Coping, Ineffective