

## **Discontinuation of Transmission-Based Precautions for COVID-19 Patients**

### **Updated December 10, 2020**

On July 22, 2020, Centers for Disease Control and Prevention (CDC) released updated guidance on the duration of isolation precautions for adults with COVID-19. In this guidance, CDC recommended moving to a time-based strategy for discontinuation of isolation, and cites published evidence demonstrating that:

- The period of time during which a person with mild to moderate COVID-19 illness is shedding live virus, and capable of transmitting SARS-CoV-2, is 10 days.
- In patients with severe COVID-19 illness who were immunocompromised, approximately 10% shed live virus between 10 and up to but not beyond 20 days after symptom onset. A recent NEJM correspondence reported that some severely immunocompromised patients receiving CAR-T cell therapy or allogeneic stem cell transplants for hematologic malignancies had potential for longer shedding with active virus.

A test-based strategy for discontinuation of isolation should only be used when recommended by the Department of Infection Prevention & Control in rare clinical situations.

#### **Penn Medicine facilities use a time-based strategy for discontinuation of isolation precautions for all patients (ambulatory and inpatient) with specific exceptions as detailed below.**

A time-based strategy for discontinuing isolation precautions has several important benefits for patient care and for resource utilization. Removing hospitalized COVID-19 patients from Special Isolation Precautions will allow them to have a visitor, which can be impactful in their care and recovery. Additionally, understanding when infectivity ends, allows healthcare organizations to safely discontinue isolation precautions, and thus optimize supplies, and personal protective equipment (PPE).

#### **Implementation of Time-Based Strategy to Discontinue Isolation**

##### **Definitions:**

- **Mild illness:** Patients who have any of the signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain) without shortness of breath, dyspnea, evidence of lower respiratory disease as evidenced by hypoxemia, or abnormal chest X-ray.
- **Moderate illness:** Patients with evidence of lower respiratory disease by clinical assessment or imaging and a saturation of oxygen (SpO<sub>2</sub>)  $\geq$  94%.
- **Severe illness:** Patients with respiratory rate  $>30$  breaths/minute, SpO<sub>2</sub> $<94\%$  on room air (or for patients with chronic hypoxemia a decrease from baseline of  $>3\%$ ), lung infiltrates  $> 50\%$ .
- **Critical illness:** Patients with respiratory failure requiring high flow nasal cannula, noninvasive positive-pressure or ventilator support, septic shock, and/or multi-organ system dysfunction from COVID-19 without alternative etiology such as secondary bacterial pneumonia or bacteremia.
- **Immunocompromised:**
  - Actively undergoing chemotherapy for malignancy prior to illness onset
  - Solid organ transplant patient on chronic immunosuppressant therapy
  - Untreated HIV infection and AIDS (CD4 count  $< 200$ )
  - Assessment regarding degree of immunosuppression due to other biologic therapies or chronic high doses of steroids will be made on a case-by-case basis in consultation with Infectious Diseases

## TIME-BASED ISOLATION DISCONTINUATION STRATEGY

	Clinical Criteria for Discontinuation of Isolation	Day When Isolation Is Discontinued	Actions
<b>COVID-19 POSITIVE Asymptomatic (Immunocompetent)</b>	<b>N/A</b>	<b>Day #11 after initial test</b> OR <b>Hospital Day #11</b> (if test collected prior to hospitalization)	<ul style="list-style-type: none"> <li>Discontinue COVID-19 Special Isolation Precautions</li> <li>Remove "COVID-19 Confirmed" flag</li> <li>Add "COVID-19 Resolved" flag</li> </ul>
<b>COVID-19 POSITIVE Mild – Moderate – Severe Illness</b>	<b>10 days from first positive test</b> <ul style="list-style-type: none"> <li>Afebrile (T &lt; 100.0°F) for 24 hours</li> <li>Improving symptoms</li> </ul>	<b>Day #11</b> after symptom onset or after initial test if symptom onset unknown OR <b>Hospital Day #11</b>	<ul style="list-style-type: none"> <li>Discontinue COVID-19 Special Isolation Precautions</li> <li>Remove "COVID-19 Confirmed" flag</li> <li>Add "COVID-19 Resolved" flag</li> </ul>
<b>COVID-19 POSITIVE Critical Illness</b>	<b>20 days from first positive test and</b> <ul style="list-style-type: none"> <li>Afebrile (T &lt; 100.0°F) for 24 hours</li> <li>Improving symptoms</li> </ul>	<b>Day #21</b> after symptom onset or initial positive test OR <b>Hospital Day #21</b>	<ul style="list-style-type: none"> <li>Discontinue COVID-19 Special Isolation Precautions</li> <li>Remove "COVID-19 Confirmed" flag</li> <li>Add "COVID-19 Resolved" flag</li> </ul>
<b>COVID-19 POSITIVE Severely Immunocompromised (Symptomatic or Asymptomatic)</b>	<b>20 days since symptom onset</b> <ul style="list-style-type: none"> <li>Afebrile (T &lt; 100.0°F) for 24 hours</li> <li>Improving symptoms</li> </ul>	Decision to discontinue Isolation will be made in collaboration with Infection Prevention and Primary Teams	See section below for further guidance on when to consider a test-based strategy

*(See above for definitions of mild-moderate-severe/critical illness)*

**Inpatients who have met the criteria outlined above will be removed from Special Isolation Precautions for COVID-19 with the following process:**

1. An Infection Preventionist will communicate with a member of the care team to share decision and give them an opportunity to ask questions or raise issues/concerns.
2. The red "COVID-19 confirmed" infection flag will be removed, and a pink "COVID-19 resolved" flag will be added.

### **Ambulatory Patients**

1. Patients with COVID-19 illness who remain outpatients throughout their illness, or those who have short inpatient stays, and are then discharged to home, should follow the same guidance for discontinuation of isolation precautions as outlined in the table above.
2. COVID flags should be managed as noted above.

### **When to Consider Using a Test-Based Strategy:**

- For the vast majority patients, a test-based strategy is no longer recommended except to discontinue Special Isolation Precautions earlier than would occur under the strategies outlined in the table above.
- For patients who are severely immunocompromised, a test-based strategy for clearance from Special Isolation Precautions may be considered in consultation with Infectious Diseases and Infection Control, if providers are concerned that the patient may be infectious for longer than 20 days from symptom onset.
  - Clearance by a test based strategy requires a negative test result from two consecutive respiratory specimens collected  $\geq 24$  hours apart (total of two negative specimens) tested using an FDA-EUA molecular assay to detect SARS-CoV-2 RNA.
    - i. If the patient is intubated or ventilated via tracheostomy, the initial respiratory specimen tested should be an endotracheal sample, and the second specimen a nasopharyngeal (NP) or anterior nasal swab. Otherwise, both specimens can be NP or anterior nasal swabs.
  - Many of these individuals will have prolonged shedding of non-infectious degraded viral RNA remnants, limiting the utility of this test-based approach.

### **Managing Patients Who Have Recovered from COVID-19:**

- Recovered COVID-19 patients who have been cleared from isolation, are **NO LONGER INFECTIOUS**.
- Such patients should NOT undergo further testing for SARS CoV-2 virus including testing for re-admission for at least 90 days after recovery, without consultation from Infectious Diseases.
  - For recovered COVID-19 patients at all Penn Medicine entities in Pennsylvania, it is recommended that no pre-procedure testing is needed until 6 months after illness.
  - For recovered COVID-19 patients at Princeton Medical Center who will undergo a procedure, please follow New Jersey state mandates on timing of repeat testing
- If testing is required for purposes of disposition (i.e. a post-acute care facility or hemodialysis unit requirement) please contact your local Infection Control office for further guidance.
- In the event a patient who has been cleared from Special Isolation Precautions is re-tested for SARS-CoV-2, and is positive, the patient is NOT CONSIDERED INFECTIOUS. Further the patient:
  - Should not be transferred to a COVID unit
  - Should not be placed back into Special Isolation Precautions
  - Should undergo any procedures or tests using standard precautions

### **Managing COVID-19 Patients Who Are Admitted or Re-admitted Within the 10-Day or 20-Day Window After Initial SARS-CoV-2 Positive Test Result**

- If the patient has already been removed from special isolation precautions and had their infection flag/banner cleared from PennChart (or e-Health), then they should not be placed back into special isolation for COVID-19.
- If the patient's COVID-19 infection flag/banner is still in place at time of re-admission, then the patient should be admitted under Special Isolation Precautions.
  - If clinically appropriate, such patients will be assessed further by IC or provider team to determine whether they now meet the time-based strategy for discontinuation of Special Isolation Precautions.

- During the re-admission, if the patient passes either the 10-day or 20-day window, based on infection severity, since initial SARS-CoV-2 positive test, then the patient may be considered for removal from special isolation precautions, in accordance with criteria as outlined above.