



# **Interim Healthcare Setting Guidance for Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19) and Their Healthcare Providers**

**March 5, 2020 (replaces version dated February 11)**

All healthcare facilities (including hospitals and outpatient settings) and healthcare providers should be prepared to evaluate patients for many different respiratory infections such as Influenza (Flu), Respiratory Syncytial Virus (RSV), and most recently Coronavirus Disease 2019 (COVID-19).

Preventing transmission of respiratory pathogens in the healthcare setting requires adherence to, and application of, **strong infection prevention** practices and policies including environmental and engineering controls, administrative controls, safer work practices, and personal protective equipment (PPE). Measures that enhance early detection and prompt triage and isolation of patients who should be evaluated for COVID-19 are critical to ensuring effective implementation of infection control measures. Successful implementation of many, if not all, of these strategies is dependent on the presence of clear communication, administrative policies, and organizational leadership that promote and facilitate adherence to these recommendations among the various people within the healthcare setting, including patients, visitors, and healthcare providers (HCP).

## **Recommendations:**

### **1. Minimize Opportunity for Exposures**

#### **Provide Signage, Respiratory Hygiene Supplies**

- Post signage** for patients to encourage prompt notification of travel to an area with ongoing COVID-19 transmission in the last 14 days (see <https://www.cdc.gov/coronavirus/2019-nCoV/clinical-criteria.html>)
- Provide **respiratory hygiene** supplies (e.g., hand hygiene agents, tissues, face masks, trash receptacle)
- Instruct persons with symptoms of a respiratory infection to adhere to respiratory etiquette and wear a **face mask** covering mouth and nose
- Instruct persons with symptoms of a respiratory infection to sit as far away from others as possible

**2. Adhere to Infection Prevention Precautions**

**Identify Patients at Risk for Novel Coronavirus (2019-nCoV) Infection**

A. Identify **signs and symptoms** of COVID-19 and determine **potential for exposure**:

<b>Signs and Symptoms</b>		<b>Potential for Exposure</b>
<input type="checkbox"/>	Fever <sup>1</sup> <b>or</b> signs/symptoms of lower respiratory illness (e.g. cough or shortness of breath)	AND
		Any person, including health care workers <sup>2</sup> , who has had close contact <sup>3</sup> with a laboratory-confirmed <sup>4</sup> COVID-19 patient within 14 days of symptom onset
<b>OR</b>		
<input type="checkbox"/>	Fever <sup>1</sup> <b>and</b> signs/symptoms of a lower respiratory illness (e.g., cough or shortness of breath) <b>and</b> a negative PCR influenza test <sup>5</sup>	AND
		A history of travel from <a href="#">affected geographic area</a> <sup>6</sup> within 14 days of symptom onset
<b>OR</b>		
<input type="checkbox"/>	Fever <sup>1</sup> with severe acute lower respiratory illness (e.g., pneumonia, ARDS) requiring hospitalization and without alternative explanatory diagnosis (e.g., influenza) <sup>7</sup>	AND
		No source of exposure has been identified

Footnotes

<sup>1</sup>Fever may be subjective or confirmed. Fever may not be present in some patients, such as those who are very young, elderly, immunosuppressed, or taking certain fever-lowering medications. Clinical judgment should be used to guide testing of patients in such situations.

<sup>2</sup>For healthcare personnel, testing may be considered if there has been exposure to a person with suspected COVID-19 without laboratory confirmation

<sup>3</sup>Close contact is defined as:

- a) being within approximately 6 feet (2 meters), of a COVID-19 case for a prolonged period of time while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection); close contact can include caring for, living with, visiting, or sharing a healthcare waiting area or room with a COVID-19 case.  
– or –
- b) having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on) while not wearing recommended personal protective equipment.

See CDC’s updated [Interim Infection Prevention and Control Recommendations for Patients with Confirmed COVID-19 or Persons Under Investigation for COVID-19 in Healthcare Settings](#).

Data to inform the definition of close contact are limited. Considerations when assessing close contact include the duration of exposure (e.g., longer exposure time likely increases exposure risk) and the clinical symptoms of the person with COVID-19 (e.g., coughing likely increases exposure risk as does exposure to a severely ill patient). Special consideration should be given to healthcare personnel exposed in healthcare settings as described in CDC’s [Interim U.S. Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with COVID-19](#).

<sup>4</sup>Documentation of laboratory-confirmation of COVID-19 may not be possible for travelers or persons caring for COVID-19 patients in other countries.

<sup>5</sup> If PCR flu is not available then SLPH can run one prior to running COVID testing

<sup>6</sup>Affected areas are defined as [geographic regions](#) where sustained community transmission has been identified. Relevant affected areas will be defined as a country with at least a CDC Level 2 Travel Health Notice. See all [COVID-19 Travel Health Notices](#)..

<sup>7</sup>Category includes single or clusters of patients with severe acute lower respiratory illness (e.g., pneumonia, ARDS) of unknown etiology in which COVID-19 is being considered.

B. The COVID-19 outbreak is a rapidly evolving situation and the case definition may change as the CDC learns more about the disease. Please visit the following website for the **most current case definition**: <https://www.cdc.gov/coronavirus/2019-nCoV/clinical-criteria.html>. Only individuals meeting one of the above criteria and approved by the Communicable Disease Branch (919-733-3419; available 24/7) will be eligible for testing at the NC State Laboratory of Public Health.

## Infection Prevention Precautions for Patients at Risk for coronavirus disease 2019 (COVID-19)

- A. Patient placement:
- IMMEDIATELY:**
- Place a **surgical mask on the patient**. If this is not possible (e.g. would further compromise respiratory status, difficult for patient to wear), have the patient cover their mouth/nose with tissue when coughing.
  - Isolate** patient in a private room with the door closed (use an airborne isolation room, if available).
  - Ensure that all healthcare personnel entering the room use **contact AND airborne precautions INCLUDING eye protection** (e.g., goggles or face shield). Please note: Airborne precautions include use of NIOSH-approved fit-tested N95 mask or higher.
  - Limit the number of healthcare providers and exclude visitors** (as possible) to minimize possible exposures.
- B. Notify infection prevention and health department personnel:
- Notify your healthcare facility's **infection control personnel**.
  - Notify your **local health department** (<http://www.ncalhd.org>) and the **NC DPH Communicable Disease Branch** (919-733-3419; available 24/7) to discuss need for laboratory testing for COVID-19
- C. Monitor the CDC's COVID-19 infection prevention guidance for changes as the outbreak evolves and comply with the **most up-to-date recommendations**: <https://www.cdc.gov/coronavirus/2019-nCoV/infection-control.html>

### 3. Management of Patient and Environment

#### Manage Patients at Risk for Novel Coronavirus (2019-nCoV) Infection

- A. Provide treatment according to standard protocols with the following considerations included:
- Use caution when performing **aerosol-generating** procedures (e.g., procedures likely to produce coughing).
    - Perform procedures only if medically necessary.
    - Limit** number of healthcare providers to minimize possible exposures.
    - Conduct procedures in **negative pressure** (airborne isolation) rooms when feasible.
  - Use **disposable or dedicated** noncritical patient care equipment (e.g., blood pressure cuffs). If equipment will be used for another patient, clean and disinfect according to manufacturer guidelines before use.

## Diagnostic Testing

- A. Perform any **clinically indicated respiratory** and other **diagnostic tests**  
 Respiratory testing:

<input type="checkbox"/> <b>Rapid Influenza:</b> <input type="checkbox"/> A <input type="checkbox"/> B	<input type="checkbox"/> Neg <input type="checkbox"/> Pos <input type="checkbox"/> Pending <input type="checkbox"/> Not Done
<input type="checkbox"/> <b>Rapid Strep</b>	<input type="checkbox"/> Neg <input type="checkbox"/> Pos <input type="checkbox"/> Pending <input type="checkbox"/> Not Done
<input type="checkbox"/> <b>Viral Respiratory Panel</b>	<input type="checkbox"/> Neg <input type="checkbox"/> Pos <input type="checkbox"/> Pending <input type="checkbox"/> Not Done
<input type="checkbox"/> <b>Legionella</b>	<input type="checkbox"/> Neg <input type="checkbox"/> Pos <input type="checkbox"/> Pending <input type="checkbox"/> Not Done
<input type="checkbox"/> <b>Other:</b> _____	<input type="checkbox"/> Neg <input type="checkbox"/> Pos <input type="checkbox"/> Pending <input type="checkbox"/> Not Done
<input type="checkbox"/> <b>Other:</b> _____	<input type="checkbox"/> Neg <input type="checkbox"/> Pos <input type="checkbox"/> Pending <input type="checkbox"/> Not Done
<input type="checkbox"/> <b>Other:</b> _____	<input type="checkbox"/> Neg <input type="checkbox"/> Pos <input type="checkbox"/> Pending <input type="checkbox"/> Not Done

**Other clinically relevant testing:**

**Chest X-Ray**  Not Done  Pending  Normal  
 Abnormal: \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Other: \_\_\_\_\_

- B. **Clinicians** caring for patients who meet the CDC criteria for Person Under Investigation (PUI) **with approval to test** from the NC Communicable Disease Branch (919-733-3419; available 24/7) should contact the North Carolina State Laboratory of Public Health **BTEP Duty Phone** (919-807-8600; available 24/7) to coordinate the collection and shipment of specimens.

- Collection of **three specimen types:** nasopharyngeal **and** oropharyngeal swabs; and sputum if a productive cough is present. Sputum should **not** be induced.

## Manage Visitor Access and Movement within the Facility

- A. **Limit the number of visitors** to minimize possible exposures.
- B. **Manage visitors** to rooms of patients at risk for coronavirus disease 2019 (COVID-19):
- Screen visitors for symptoms of acute respiratory illness before entering the hospital
  - Evaluate risk to the health of the visitor (e.g., visitor might have underlying illness putting them at higher risk for 2019-nCoV) and ability to comply with precautions
  - Provide instructions prior to patient room entry on: hand hygiene, limiting surfaces touched, and use of PPE according to current facility policy while in the patient's room
  - Exclude during aerosol-generating procedures
  - Instruct visitors to **limit movement** within the facility
  - Maintain log** of all visitors who enter COVID-19 patient rooms

## Environmental Infection Control

- A. **Hand hygiene:**
- Use **standard FDA-approved** hospital hand hygiene agents effective against coronavirus (e.g., alcohol foam or liquid soap)
- B. **Cleaning/disinfection:**
- Use **EPA-registered disinfectant** appropriate for coronavirus in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed
  - Manage laundry, food service utensils, and medical waste in accordance with routine procedures and category B waste handling

## 4. Management of Healthcare Personnel

### Monitor Healthcare Providers

- A. Healthcare provider follow-up:
- Maintain log** of all healthcare providers entering room (template available [here](#))
  - Healthcare providers caring for 1) patients under investigation (PUI) for COVID-19 whose test results are likely to be delayed more than 72 hours, or 2) patients with confirmed COVID-19, regardless of appropriate PPE use should:
    - Self-monitor with delegated supervision** for symptoms while caring for the patient and for 14 days following the last date of exposure
    - Supervision of self-monitoring** may be provided by the employer occupational health or infection control program in coordination with the state/local health department of jurisdiction. The supervising organization should remain in daily contact with the healthcare provider through the **self-monitoring** period.
    - Maintain symptom monitoring log.(template available [here](#))
  - Asymptomatic healthcare providers** who have had an **unprotected exposure** (i.e., not wearing recommended PPE at the time of contact, see risk assessment guidelines provided by CDC here: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>) to 1) patients under investigation (PUI) for COVID-19 whose test results are likely to be delayed more than 72 hours, or 2)patients with confirmed COVID-19 should:
    - Notify** their supervisor and occupational health immediately,
    - Comply with **work exclusion and monitoring** as determined by employer occupational health and state/local health department based on risk assessment and monitoring guidance provide by the CDC: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>
    - Note: Respirators confer a greater level of protection than a facemask regardless of the care scenario. However in the CDC guidance, use of respirator or facemask they are considered together. Risk categorization may differ for those wearing facemasks rather than respirators depending upon the nature of exposure (e.g. wearing a facemask rather than a respirator during a procedure likely to generate higher concentrations of aerosols would be considered higher risk when considering the use of a facemask rather than a respirator during routine care that was less likely to produce aerosols.)
  - Healthcare providers who **develop any respiratory symptoms** after an **exposure**, whether **protected or unprotected** (i.e., not wearing recommended PPE at the time of contact) to a patient with COVID-19 should:
    - Notify** their supervisor and occupational health immediately,
    - Implement respiratory hygiene and cough etiquette,
    - Comply with **work exclusion** (as determined by employer occupational health and state/local health department) until they are no longer deemed infectious.

## Donning and Doffing of Personal Protective Equipment (PPE)

### Donning (Putting on):

- Perform hand hygiene** before putting on any PPE
- General approach to putting on this PPE combination for respiratory pathogens:
  - gown
  - respirator
  - goggles or face shield
  - gloves

### Doffing (Taking off):

- Consider performing hand hygiene** using an alcohol based hand rub with gloves on prior to removing any PPE
- General approach to removing PPE for respiratory pathogens:
  - Gloves
  - goggles or face shield
  - gown
  - respirator
- Remove all PPE except respirator** at doorway or in anteroom
- Perform hand hygiene**
- Exit room
- Remove respirator **after leaving patient room and closing door**. Careful attention should be given to prevent contamination of clothing and skin during the process of removing PPE.
- Perform hand hygiene** after removing all PPE