

**CARE OF THE COVID PATIENT
(PPE, ISOLATION, TRANSPORT, DISCHARGE)**

Policy: All healthcare workers (healthcare workers) should adhere to infection prevention and control guidelines related to personal protective equipment and standard/transmission based precautions when caring for a suspected or confirmed COVID-19 patient.

Purpose: To minimize the risks of exposure and spreading the disease when caring for confirmed or possible COVID-19 patients or suspected in healthcare setting. Provide guidance on discontinuing isolation according to Center for Disease Control (CDC).

General information

- Close contact defined as being within approximately six feet with COVID-19 patient for ten minutes or more.
- Having direct contact with infectious secretions, which includes sputum, serum, blood and respiratory droplets.

1. Mode of Transmission:

- a. Early reports suggest person-to-person transmission most commonly happens during close exposure to a person infected with COVID-19, primarily via respiratory droplets produced when the infected person coughs or sneezes.
- b. Droplets can land in the mouths, noses, or eyes of people who are nearby. Inhalation of droplets into the lungs of those within close proximity is a risk. The contribution of small respirable particles, sometimes called aerosols or droplet nuclei, to close proximity transmission is currently uncertain. However, airborne transmission from person-to-person over long distances is unlikely.

2. Placement

- a. For patients with COVID-19 or other respiratory infections, evaluate need for hospitalization. If hospitalization is not medically necessary, home care is preferable if the individual's situation allows.
- b. Place patient in standard, droplet and contact precautions.
- c. If admitted, place a patient with known or suspected COVID-19 in a single-person room with the door closed. The patient should have a dedicated bathroom.
- d. Airborne Infection Isolation Rooms (AIIRs) reserved for patients who will be undergoing aerosol-generating procedures

3. Take Precautions When Performing Aerosol-Generating Procedures (AGPs)

- a. Some procedures performed on patient with known or suspected COVID-19 could generate infectious aerosols. In particular, procedures that are likely to induce coughing (e.g., sputum induction, open suctioning of airways) should be performed cautiously and avoided if possible.
- b. If performed, the following should occur: HCP in the room should wear an N95 or higher-level respirator, eye protection, gloves, and a gown.

- c. The number of HCP present during the procedure should be limited to only those essential for patient care and procedure support. Visitors should not be present for the procedure.
 - i. Consider use of portable hepa-filter unit in room if AIIR not available.
 - ii. AGPs should ideally take place in an AIIR.
 - iii. Clean and disinfect procedure room surfaces promptly as described in the section on environmental infection control below.
- d. Do not re-use same n-95 mask after performing an aerosol-generating procedure (AGP) for COVID patient or suspect. Place N-95 mask in the reprocessing bin following AGP on COVID patient or suspect.
- e. Use standard precautions when performing AGP for patients who have a negative COVID test. Use N-95 mask for other known or suspected airborne infectious conditions such as Tuberculosis or Measles

4. Collection of Diagnostic Respiratory Specimens

- a. When collecting diagnostic respiratory specimens (e.g., nasopharyngeal swab) from a possible COVID-19 patient, the following should occur: °HCP in the room should wear an N-95 or higher-level respirator (or facemask if a respirator is not available), eye protection, gloves, and a gown.
- b. The number of HCP present during the procedure should be limited to only those essential for patient care and procedure support. Visitors should not be present for specimen collection.
- c. Perform specimen collection in a normal examination room with the door closed.
- d. Clean and disinfect procedure room surfaces promptly as described in the section on environmental infection control below.

5. PPE

- a. Based on system guidance, providers and associates will wear an N-95 mask without valve, eye protection (i.e. goggles or face shield), isolation gown, and gloves when caring for a patient with a suspected or confirmed COVID-19 infection.
 - i. Avoid routine use of exhalation valve N95 respirator mask.
 - 1. Exhalation valve mask releases unfiltered air when the wearer breathes out.
 - 2. Valve mask do not prevent the wearer from spreading the virus.
 - 3. Exception: When the N95 respirator with exhalation valve is the only option, cover it with a surgical facemask to support source control and prevent spreading the virus.
- b. For patients without a negative COVID test, standard precautions will include facemask and eye protection (goggles or face shield).
 - i. EXCEPTION: In the Emergency Departments, wear minimum of N95 respirator mask and eye protection for all patient care, regardless of COVID-19 status. Wear other PPE according to standard precautions.
- c. When respirator/N95 mask indicated, don surgical mask or face shield over the N95 mask to protect it from contamination. Reference N-95 mask reuse policy.
- d. Wear hospital approved respirator N95 masks.

6. Transport of Positive or Suspect COVID-19

- a. Avoid transport when possible. Whenever possible, perform procedures/tests in the patient's room.
- b. To transport a COVID-19 patient or PUI
 - i. Place clean gown and linen on patient prior to transport.
 - ii. HCW who is transporting and does not provide patient care must wear N95 respirator mask and face shield at minimum. Wear other PPE based on standard precautions.
 - iii. HCW involved in patient care during transport dons clean PPE for transport of the COVID-19 positive or PUI including:
 - 1. Gown
 - 2. Gloves
 - 3. N95 respirator masks
 - 4. Eye covering such as face shield or goggles.
 - iv. In the event, patient care is needed during transport, designate one "clean" HCW to assist with opening doors and touching elevator buttons. This HCW does not touch patient or provide care to patient during transport. This process is used to minimize contamination to environment during transport. At minimum, the "clean" HCW wears a N95 and eye protection. Wear other PPE based on standard precautions.
 - v. Instruct patient to wear a facemask to contain secretions during transport. If patient cannot tolerate a facemask or one is not available, they should use tissues to cover their mouth and nose.
 - vi. For patients on a VENTILATOR, take the following steps for transport:
 - 1. Don PPE (as mentioned above).
 - 2. Transport on transport ventilator. Respiratory Therapist required.
 - 3. Take care to coordinate use of transport ventilator for COVID-19 or suspect patients.
 - 4. Attach hepa-filter between endotracheal tube and patient wye (Y) or place a HEPA filter at the exhalation port of circuit for additional protection. A single HEPA filter placed at one of these locations will absorb >99% of viral particles.
 - 5. When initiating the transport process, leave the hepafilter filter in place on the endotracheal tube and connect the filter to the transport ventilation device. Clamp/occlude the endotracheal tube whenever it is disconnected from the filter to maintain a closed system.
 - 6. Place a hepa filter on the exhalation side of the ventilator circuit.
- c. Transport with AMBU BAG. Only if a transport ventilator is NOT available and the transport cannot wait, use Ambu bag. Respiratory Therapist required.
 - i. Place the HEPA filter on Ambu bag at the exhalation port of circuit for additional protection (where a PEEP valve is traditionally placed).
 - ii. Once the hepafilter is in place on the endotracheal tube, the breathing circuit can be disconnected from the filter while moving a patient or to reconnect to a different ventilation device. The filter will reliably stop viruses exhaled by the patient from contaminating the room.

- iii. A single HEPA filter placed at one of these locations will absorb >99% of viral particles.
- iv. If use of an elevator is required during transport, use a dedicated elevator for the patient and transport team only. No others should be on the elevator.

1. Reuse of surgical facemask or respirators:

- a. During times of co-horting (housing more than COVID-19 patient on one unit), HCP may remove only gloves and gowns (if used) and perform hand hygiene between patients with the same diagnosis (e.g., confirmed COVID-19) while continuing to wear the same eye protection and respirator or facemask (i.e., extended use). Risk of transmission from eye protection and facemasks during extended use is expected to be very low. HCP must take care not to touch their eye protection and respirator or facemask.
- b. Eye protection and the respirator or facemask should be removed, and hand hygiene performed if they become damaged or soiled and when leaving the unit.

2. Reuse of goggles or face shields

- a. Healthcare provider may wear the same eye protection for repeated close contact encounters with several different patients, without removing eye protection between patient encounters.
- b. Remove, clean and disinfect eye protection if it becomes visibly soiled or difficult to see through.
- c. If a disposable face shield is reprocessed, it should be dedicated to one HCP and reprocessed whenever it is visibly soiled or removed (e.g., when leaving the isolation area) prior to putting it back on. See protocol for removing and reprocessing eye protection below.
- d. Clean single use disposable face shields
 - i. Perform hand hygiene and don gloves.
 - ii. Carefully wipe the inside, followed by the outside of the face shield or goggles using a wipe or clean cloth saturated with EPA- registered hospital disinfectant solution.
 - iii. Wipe the outside of the face shield or goggles with clean water or alcohol to remove residue.
 - iv. Let face shield or goggles fully dry. (air dry or use clean absorbent towels)
 - v. Place cleaned eye protection in a paper bag labeled with the HCW name.
 - vi. Remove gloves and perform hand hygiene.

3. Gown Usage:

- a. Put on a clean isolation gown upon entry into the patient room or area.
- b. Change the gown if it becomes soiled.
- c. Remove and discard the gown in a dedicated container for waste or linen before leaving the patient room or care area.
- d. Discard disposable gown after use.
- e. Cloth gowns should be laundered after each use.

4. During shortages of gowns, prioritize for Aerosol-generating procedures:

- a. Care activities where splashes and sprays are anticipated
- b. High-contact patient care activities that provide opportunities for transfer of pathogens to the hands and clothing of HCP. Examples include: dressing, bathing/showering,

transferring, providing hygiene, changing linens, changing briefs or assisting with toileting, device care or use and wound care.

- c. Use same gown on more than one patient:
 - i. HCW interacting with more than one patient known to be infected with the same infectious disease when these patients housed in the same location (i.e., known COVID-19 positive patients residing in an isolation cohort).
 - ii. Consider ONLY if there are no additional co-infectious diagnoses transmitted by contact (such as *Clostridioides difficile*, MRSA) among patients.
 - iii. If the gown becomes visibly soiled, it must be removed and discarded as per usual practices.
 - iv. HCW should strictly follow basic infection control practices between patients (e.g., hand hygiene, cleaning and disinfecting shared equipment)
- 5. **Crisis Capacity Strategies:**
 - a. Shift gown use towards cloth isolation gowns.
 - b. Use coveralls. HCW unfamiliar with the use of coveralls must be trained and practiced in their use, prior to using during patient care.
 - c. Use expired gowns beyond the manufacturer-designated shelf life for training.
 - d. Contingency Capacity Strategies
 - i. Cancel all elective and non-urgent procedures and appointments for which a gown is typically used by HCW.
 - ii. Extended use of isolation gowns.
 - iii. Re-use of cloth isolation gowns.
 - 1. Disposable gowns are not typically amenable to being doffed and re-used because the ties and fasteners typically break during doffing.
 - 2. Cloth isolation gowns could potentially be untied and retied and could be considered for re-use without laundering in between.
 - iv. In a situation where the gown is being used as part of standard precautions to protect HCW from a splash, the risk of re-using a non-visibly soiled cloth isolation gown may be lower. However, for care of patients with suspected or confirmed COVID-19, HCP risk from re-use of cloth isolation gowns without laundering among (1) single HCW caring for multiple patients using one gown or (2) among multiple HCW sharing one gown is unclear. The goal of this strategy is to minimize exposures to HCW and not necessarily prevent transmission between patients. Any gown that becomes visibly soiled during patient care should be disposed of and cleaned.
 - v. Surgical gowns should be prioritized for surgical and other sterile procedures. Facilities may consider suspending use of gowns for endemic multidrug resistant organisms (e.g., MRSA, VRE, ESBL-producing organisms).
 - vi. When No Gowns Are Available. In situation of severely limited or no available isolation gowns, the following pieces of clothing can be considered as a last resort for care of COVID-19 patients as single use. However, none of these options can be considered PPE, since their capability to protect HCW is unknown.
 - 1. Disposable laboratory coats

2. Reusable (washable) patient gowns
3. Reusable (washable) laboratory coats
4. Disposable aprons
5. Combinations of pieces of clothing can be considered for activities that may involve body fluids and when there are no gowns available:
6. Long sleeve aprons in combination with long sleeve patient gowns or laboratory coats
7. Open back gowns with long sleeve patient gowns or laboratory coats
8. Sleeve covers in combination with aprons and long sleeve patient gowns or laboratory coat.

6. Discontinuing Isolation

- a. The decision to discontinue Isolation Precautions for patients with confirmed COVID-19 should be made using a symptom-based (i.e., time-since-illness-onset and time-since-recovery strategy) or time-based strategy as described below.
- b. A test-based strategy is no longer recommended (except as noted below) because, in the majority of cases, it results in prolonged isolation of patients who continue to shed detectable SARS-CoV-2 RNA but are no longer infectious.
- c. Meeting criteria for discontinuation of Transmission-Based Precautions is not a prerequisite for discharge.
- d. For patients who are not severely immunocompromised and who were asymptomatic throughout their infection, Transmission-Based Precautions may be discontinued when at least 10 days have passed since the date of their first positive viral diagnostic test.
- e. Levels of illness
 - i. Although not developed to inform decisions about duration of Transmission-Based Precautions, the definitions in the National Institutes of Health (NIH) COVID-19 Treatment Guidelines are one option for defining severity of illness categories. The highest level of illness severity experienced by the patient at any point in their clinical course should be used when determining the duration of Transmission-Based Precautions.
 1. **Mild Illness:** Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain) without shortness of breath, dyspnea, or abnormal chest imaging.
 2. **Moderate Illness:** Individuals who have evidence of lower respiratory disease by clinical assessment or imaging, and a saturation of oxygen (SpO₂) ≥94% on room air at sea level.
 3. **Severe Illness:** Individuals who have respiratory frequency >30 breaths per minute, SpO₂ <94% on room air at sea level (or, for patients with chronic hypoxemia, a decrease from baseline of >3%), ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO₂/FiO₂) <300 mmHg, or lung infiltrates >50%.
 4. **Critical Illness:** Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction.

5. In pediatric patients, radiographic abnormalities are common and, for the most part, should not be used as the sole criteria to define COVID-19 illness category. Normal values for respiratory rate also vary with age in children, thus hypoxia should be the primary criterion to define severe illness, especially in younger children.

SYMPTOMATIC PATIENTS with mild to moderate illness who are not severely immunocompromised: COVID-19 should remain in Transmission-Based Precautions until they meet the symptom-based strategy for discontinuation.

SYMPTOM-BASED STRATEGY: At least 24 hours have passed since recovery defined as:

- Resolution of fever without the use of fever-reducing medications

And

- Improvement in respiratory symptoms (e.g., cough, shortness of breath),

And

- At least 10 days have passed since symptoms first appeared. Retesting previously positive individuals not recommended within 3 months.

SYMPTOMS AND INITIAL COVID RESULT IS NEGATIVE:

- The decision to discontinue transmission-based precautions by excluding the diagnosis of current SARS-CoV-2 infection for a patient with suspected SARS-CoV-2 infection can be made based upon having negative results from at least one respiratory specimen.
- If a higher level of clinical suspicion for SARS-CoV-2 infection exists, consider maintaining Transmission-Based Precautions and performing a second test for SARS-CoV-2 RNA.

PATIENTS WITH SEVERE TO CRITICAL ILLNESS or who are severely immunocompromised:

- At least 10 days and up to 20 days have passed since symptoms first appeared

And

- At least 24 hours have passed since last fever without the use of fever-reducing medications

And

- Symptoms (e.g., cough, shortness of breath) have improved

Consider consultation with Infectious Disease physician.

ASYMPTOMATIC PATIENTS with laboratory-confirmed COVID-19 should remain in Transmission-Based Precautions until either:

TIME-BASED STRATEGY

- 10 days have passed since the date of their first positive COVID-19 diagnostic test, assuming they have not subsequently developed symptoms since their positive test.
- Note, because symptoms cannot be used to gauge where these individuals are in the course of their illness, it is possible that the duration of viral shedding could be longer or shorter than 10 days after their first positive test.
- **NOTE: FOR SEVERELY IMMUNOCOMPROMISED PATIENTS WHO WERE ASYMPTOMATIC THROUGHOUT THEIR INFECTION, TRANSMISSION-BASED PRECAUTIONS MAY BE DISCONTINUED WHEN AT LEAST 10 DAYS AND UP TO 20 DAYS HAVE PASSED SINCE THE DATE OF THEIR FIRST POSITIVE VIRAL DIAGNOSTIC TEST.**

7. Discharge of Patients with COVID-19

- a. Physician will discharge patient from the healthcare facility whenever clinically indicated.
 - b. If patient in isolation at time of discharge due COVID suspect or known:
 - i. If medication needed from the MLH pharmacy, coordinate with pharmacy so that a visit to the MLH pharmacy is NOT required by the patient or family. This includes med to bed process or curbside delivery.
 - ii. Notify family of discharge and what time to arrive at hospital.
 - iii. Instruct family not to enter the hospital unless in-person care training required (e.g. tube feeding training, other device care, or other training needed for caregiver).
 - iv. Place surgical mask on patient.
 - v. Place clean sheet over patient for transport.
 - vi. Patient should be transported directly to car and not go to other locations in hospital (e.g. such as pharmacy, cafeteria).
- 8. Home Discharge:** Continue isolation at home if the patient returns home before discontinuation of isolation precautions.
- 9. Discharged to a long-term care or assisted living facility:**
- a. Communicate to the accepting facility continued need for Isolation as appropriate.
 - b. If isolation precautions have been discontinued, but the patient has persistent symptoms from COVID-19 (e.g., persistent cough), they should be placed in a single room, be restricted to their room until resolution of symptoms.
 - c. If isolation precautions have been discontinued and the patient's symptoms have resolved, the patient does not require further restrictions, based upon history of COVID-19.