
Personal Protection During Treatment of Patients During the Coronavirus Disease (COVID-19) Pandemic and Decontamination of Equipment after Use

Purpose: To outline infection prevention and personal protection when providing treatments during the COVID-19 pandemic. To outline the appropriate decontamination for people, equipment, and vehicles utilized in treatment and transport of patients at risk for COVID-19.

- I. Applicable patients – Due to community spread and the risk of asymptomatic and pre-symptomatic patients, all patients should be considered at risk for COVID-19.
- II. Personal Protection –
 - a. Standard, contact, and airborne precautions must be observed if within six feet of patient.
 - i. Standard precautions - The principle that all blood, body fluids, secretions, excretions except sweat, nonintact skin, and mucous membranes may contain transmissible infectious agents. Standard Precautions include a group of infection prevention practices that apply to all patients, regardless of suspected or confirmed infection status, in any setting in which healthcare is delivered.
 - ii. Contact precautions - intended to prevent transmission of infectious agents, including epidemiologically important microorganisms, which are spread by direct or indirect contact with the patient or the patient’s environment. Healthcare personnel caring for patients on Contact Precautions wear a gown and gloves for all interactions that may involve contact with the patient or potentially contaminated areas in the patient’s environment. Strict hand hygiene must be performed after each patient encounter and after doffing gloves.
 - iii. Airborne precautions – intended to prevent transmission of infectious agents that remain infectious over long distances when suspended in the air. EMS personnel caring for patients on Airborne Precautions wear an N95 or higher-level respirator or mask that is donned prior to room entry. Personnel who are not providing aerosolized treatments and not in close proximity (in the closed compartment of the ambulance) with a patient with active respiratory symptoms may use a surgical mask in lieu of an N95 respirator.
 - b. Contact with patients should include the use of eye protection/face shield.
 - c. Respirators are considered to be N95 rated or above. Surgical facemasks offer more protection than a sewn face covering but not as much as a respirator. Sewn facemasks offer some protection but not as much as surgical facemasks or respirators.
 - d. All patient contacts should include universal source control:
 - i. A surgical mask should be applied to all patients, especially prior to being placed in an ambulance, unless they are receiving oxygen by mask.
 - ii. A cloth or sewn face covering or surgical mask should be applied to anyone accompanying patient in ambulance regardless of COVID-19 symptoms.

III. Guidance for respiratory protection utilization based on situation

Situation	Appropriate Respiratory Protection
Greater than 6 feet from any patient (excluding patient compartment of ambulance)	Unnecessary personnel should not enter patient care area, no respirator required. All personnel should always have at least a sewn facemask in place.
Between 3 and 6 feet of any patient	If personnel must be in this area, surgical facemask required
Within 3 feet, including direct patient care	Surgical Facemask acceptable, Respirator recommended
Present within 6 feet (or in the same room) when patient receives aerosol generating procedure.	Respirator required
Patient with respiratory symptoms or distress (cough, shortness of breath) or confirmed COVID-19 positive in patient compartment of ambulance)	Respirator required
Patient unable to wear a mask	Respirator required
Within 6 feet of any person, including the cab of a vehicle	At least sewn facemask required

IV. During Treatment

- a. The number of responders within six feet of the patient should be limited to the fewest number to provide essential patient care.
- b. A (surgical type) facemask should be placed on the patient for source control. Do not place N-95 or similar masks on patients as these increase the work of breathing.
- c. Any family or bystanders should not be within six feet of responders, and if they are should wear a cloth facemask.
- d. Aerosol Generating Procedures
 - i. In addition to PPE, there should be increased caution in aerosol-generating procedures (BVM, suctioning, emergency airways, nebulizers, etc)
 - ii. Perform aerosol-generating procedures only when clinically indicated.

- iii. Keep patient and aerosolization away from others without PPE (e.g., bystanders, EMS personnel not in PPE, etc).
 - iv. Preferably, aerosolized procedures should be done OUTSIDE of the ambulance. When treating patient in the ambulance, activate patient compartment exhaust fan at maximum level.
 - v. When possible, consider using HEPA filtration to expired air from the patient. (Ventilators, CPAP, biPAP, BVM)
- V. Patient Compartment –
- a. When practical, utilize a vehicle with an isolated driver and patient compartment.
 - b. Seal any openings between the driver and patient compartment.
 - c. Only necessary personnel should be in the patient compartment with the patient.
 - d. All compartments should have ventilation maintained, with outside air vents open and set to non-recirculated mode.
- VI. Patient Transfer
- a. Friends and family of the patient should not ride in the transport vehicle with the patient. If they must accompany the patient, they should have a cloth facemask applied.
 - b. Personnel driving the transport vehicle should doff PPE (with the exception of respirator) and perform hand hygiene before entering the driver's compartment. Respirator (N95) or surgical facemask should be maintained throughout.
 - c. Ventilation in the driver's compartment should be set to bring in outside air and on maximum speed.
 - d. Notification of infectious risk should be made to receiving facility as soon as feasible.
 - e. Upon arrival at receiving facility, open patient compartment doors BEFORE opening driver's compartment doors.
 - f. Maintain mask on patient and filtered exhaust while transporting patient to room.
 - g. Patients should never be transported into a hospital with a nebulizer treatment in progress.
 - h. If patient care requires CPAP, contact receiving hospital to coordinate hand-off in a manner that minimizes hospital environmental risk.
 - i. Avoid transporting the patient within 6 feet of others (e.g., unprotected hospital staff, patients, bystanders, etc.)
 - j. Transfer patient care via verbal report.
 - k. Doff PPE after leaving patient room and perform hand hygiene before touching documentation tools.
- VII. Cleaning of Transport Vehicle and Equipment
- a. Personnel should wear disposable gown and gloves for decontamination of the vehicle. A face shield or facemask and goggles should be worn if there is a potential for splashing or sprays.
 - b. Maintain doors open during cleaning.

- c. Disinfect after cleaning using EPA-registered, hospital-grade disinfectant to all surfaces that were touched, or all surfaces if aerosol-generating procedures were performed. Products with statements for emerging viral pathogens should be used.
- d. All equipment that was involved in patient care and equipment that was inside of patient compartment of ambulance should be cleaned.
- e. Ambulances should be thoroughly cleaned (including door/compartment handles and ambulance cab) at the beginning and end of each shift in which patient transport occurred, regardless of COVID-19 patient status.