

**March 17, 2020**

**COVID-19 Guidelines for EMS Health Professionals 3/17/2020 UPDATE  
North Coast EMS Agency**

North Coast EMS recommends that all regional EMS provider agencies regularly review COVID-19 information provided by on the Center for Disease Control and Prevention (CDC) website as this information is updated as more becomes know about this disease. <https://www.cdph.ca.gov/Programs/OPA/Pages/NR20-023.aspx>

North Coast EMS is providing a brief summation of the CDC's information as it applies directly to EMS responders.

All source materials below were accessed **March 15, 2020** from the Center for Disease Control and Prevention (CDC) website.

Recently updated information is highlighted immediately below.

**Summary of Key Changes to CDC Guidance as of March 10, 2020:**

Updated PPE recommendations for the care of patients with known or suspected COVID-19:

Facemasks are an acceptable alternative until the supply chain is restored. Respirators should be prioritized for procedures that are likely to generate respiratory aerosols, which would pose the highest exposure risk to HCP. (Patients and caregivers should in any case both wear a facemask unless the patient is being ventilated via a non-rebreather mask or other means that precludes or obviates the need for a facemask.)

Eye protection, gown, and gloves continue to be recommended.

If there are shortages of gowns, they should be prioritized for aerosol-generating procedures, care activities where splashes and sprays are anticipated, and high-contact patient care activities that provide opportunities for transfer of pathogens to the hands and clothing of HCP.

When the supply chain is restored, fit-tested EMS clinicians should return to use of respirators for patients with known or suspected COVID-19.

Updated guidance about recommended EPA-registered disinfectants to include reference to a list now posted on the EPA website.

CDC EMS Guidelines recommend that 911 Public Safety Answering Points (PSAPs) query to ascertain whether a caller with respiratory complaints may have signs and symptoms and risk factors for COVID-19. Patients who meet the criteria should be transported as a **Person Under Investigation (PUI)**.

PUI information should be provided to the pre-hospital care providers prior to arrival on scene to allow pre-hospital care providers to don appropriate personal protective equipment (PPE).

#### Preparing for the PUI Patient Encounter:

- If PSAP call takers advise that the patient is suspected of having COVID-19, EMS clinicians should put on appropriate [PPE](#) before entering the scene. EMS clinicians should consider the signs, symptoms, and risk factors of COVID-19 (<https://www.cdc.gov/coronavirus/2019-nCoV/clinical-criteria.html>).
- If information about potential for COVID-19 has not been provided by the PSAP, EMS clinicians should exercise appropriate precautions when responding to any patient with signs or symptoms of a respiratory infection.
- Initial assessment should be conducted from a distance of at least 6 feet from the patient if possible. Patient contact should be minimized until a facemask is on the patient. If COVID-19 is suspected, all [PPE](#) as described below should be used. If COVID-19 is not suspected, EMS clinicians should follow standard procedures and use appropriate PPE for evaluating a patient with a potential respiratory infection.
- A facemask should be worn by the patient for source control. If a nasal cannula is in place, a facemask should be worn over the nasal cannula. Alternatively, an oxygen mask can be used if clinically indicated. If the patient requires intubation, see below for additional precautions for aerosol-generating procedures.
- During transport, limit the number of providers in the patient compartment to essential personnel to minimize possible exposures.

#### Recommended Personal Protective Equipment (PPE):

- EMS clinicians who will directly care for a patient with possible COVID-19 infection or who will be in the compartment with the patient should follow **Standard Precautions**, including the use of eye protection. Recommended PPE includes:
- N-95 or higher-level respirator or facemask (if a respirator is not available), N95 respirators or respirators that offer a higher level of protection should be used instead of a facemask when performing or present for an aerosol-generating procedure.

- Eye protection (i.e., goggles or disposable face shield that fully covers the front and sides of the face). Personal eyeglasses and contact lenses are NOT considered adequate eye protection.
- A single pair of disposable patient examination gloves. Change gloves if they become torn or heavily contaminated, and isolation gown.,
- If there are shortages of gowns, they should be prioritized for aerosol-generating procedures, care activities where splashes and sprays are anticipated, and high-contact patient care activities that provide opportunities for transfer of pathogens to the hands and clothing of EMS clinicians (e.g., moving patient onto a stretcher).
- When the supply chain is restored, fit-tested EMS clinicians should return to use of respirators for patients with known or suspected COVID-19.
- Drivers, if they provide direct patient care (e.g., moving patients onto stretchers), should wear all recommended PPE. After completing patient care and before entering an isolated driver's compartment, the driver should remove and dispose of PPE and perform hand hygiene to avoid soiling the compartment.
- If the transport vehicle does not have an isolated driver's compartment, the driver should remove the face shield or goggles, gown and gloves and perform hand hygiene. A respirator or facemask should continue to be used during transport.
- All personnel should avoid touching their face while working.
- On arrival, after the patient is released to the facility, EMS clinicians should remove and discard PPE and perform hand hygiene. Used PPE should be discarded in accordance with routine procedures.
- Other required aspects of Standard Precautions (e.g., injection safety, hand hygiene) are not emphasized in this document but can be found in the guideline titled Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings.

### Precautions for Aerosol-Generating Procedures

If possible, consult with medical control before performing aerosol-generating procedures for specific guidance.

An N-95 or higher-level respirator, instead of a facemask, should be worn in addition to the other PPE described above, for EMS clinicians present for or performing aerosol-generating procedures.,

EMS clinicians should exercise caution if an aerosol-generating procedure (e.g., bag valve mask (BVM) ventilation, oropharyngeal suctioning, endotracheal intubation, nebulizer treatment, continuous positive airway pressure (CPAP), bi-phasic positive airway pressure (biPAP), or resuscitation involving emergency intubation or cardiopulmonary resuscitation (CPR)) is necessary.

BVMs, and other ventilatory equipment, should be equipped with HEPA filtration to filter expired air.

EMS organizations should consult their ventilator equipment manufacturer to confirm appropriate filtration capability and the effect of filtration on positive-pressure ventilation.

If possible, the rear doors of the transport vehicle should be opened and the HVAC system should be activated during aerosol-generating procedures. This should be done away from pedestrian traffic.

#### EMS Transport of a PUI or Patient with Confirmed COVID-19 to a Healthcare Facility (including interfacility transport) :

During transport, limit the number of providers in the patient compartment to essential personnel to minimize possible exposures.

If a patient with an exposure history and signs and symptoms suggestive of COVID-19 requires transport to a healthcare facility for further evaluation and management (subject to EMS medical direction), the following actions should be taken:

- Keep the patient separated from other people as much as possible.
- Family members and other contacts of patients with possible COVID-19 should **not** ride in the transport vehicle, if possible. If riding in the transport vehicle, they should wear a facemask.
- Isolate the ambulance driver from the patient compartment and keep pass-through doors and windows tightly shut.
- When possible, use vehicles that have isolated driver and patient compartments that can provide separate ventilation to each area.
- Close the door/window between these compartments before bringing the patient on board.
- During transport, vehicle ventilation in both compartments should be on non-recirculated mode to maximize air changes that reduce potentially infectious particles in the vehicle.
- If the vehicle has a rear exhaust fan, use it to draw air away from the cab, toward the patient-care area, and out the back end of the vehicle.
- Some vehicles are equipped with a supplemental recirculating ventilation unit that passes air through HEPA filters before returning it to the vehicle. Such a unit can be used to increase the number of air changes per hour (ACH)  
(<https://www.cdc.gov/niosh/hhe/reports/pdfs/1995-0031-2601.pdf> ).
- If a vehicle without an isolated driver compartment and ventilation must be used, open the outside air vents in the driver area and turn on the rear

exhaust ventilation fans to the highest setting. This will create a negative pressure gradient in the patient area.

- Follow routine procedures for a transfer of the patient to the receiving healthcare facility (e.g., wheel the patient directly into an examination room).

#### Patient Treatment Considerations (Aerosol-Generating Procedures):

- If possible, consult with medical control before performing aerosol-generating procedures for specific guidance.
- In addition to the PPE described above, EMS clinicians should exercise caution if an aerosol-generating procedure (e.g., bag valve mask (BVM) ventilation, oropharyngeal suctioning, endotracheal intubation, nebulizer treatment, continuous positive airway pressure (CPAP), bi-phasic positive airway pressure (biPAP), or resuscitation involving emergency intubation or cardiopulmonary resuscitation (CPR) is necessary.
  - BVMs, and other ventilatory equipment, should be equipped with HEPA filtration to filter expired air.
  - EMS organizations should consult their ventilator equipment manufacturer to confirm appropriate filtration capability and the effect of filtration on positive-pressure ventilation.
- If possible, the rear doors of the transport vehicle should be opened and the HVAC system should be activated during aerosol-generating procedures. This should be done away from pedestrian traffic.

#### Transport – Receiving Hospital Communications:

- EMS personnel should advise receiving hospital that they are transporting a patient that is considered to be a PUI as early in process as is feasible so that the receiving hospital can make appropriate preparations to receive the patient.
- Prior to arrival at the hospital, EMS personnel should confirm the patient's room assignment from the hospital staff.
- Should this or other infectious disease circumstances warrant, North Coast EMS may, in consultation with Federal, State, and County Department Officials, authorize PUI patient transport to alternative destinations or non-transport. Individual transport decisions would, as always, be made in consultation with the ambulance crew's base hospital ED physician.
- Follow routine procedures for a transfer of the patient to the receiving healthcare facility (e.g., wheel the patient directly into an Airborne Infection Isolation Room).

### Cleaning transport vehicle after transporting a PUI:

- After transporting the patient, leave the rear doors of the transport vehicle open to allow for sufficient air changes to remove potentially infectious particles. The time to complete transfer of the patient to the receiving facility and complete all documentation should provide sufficient air changes.
- When cleaning the vehicle, EMS clinicians should wear a disposable gown and gloves. A face shield or facemask and goggles should also be worn if splashes or sprays during cleaning are anticipated.
- Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly, to include the provision of adequate ventilation when chemicals are in use. Doors should remain open when cleaning the vehicle.
- Routine cleaning and disinfection procedures (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product's label) are appropriate for SARS-CoV-2 (the virus that causes COVID-19) in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed.

### Documentation:

- Documentation of patient care should be done after EMS clinicians have completed transport, removed their PPE, and performed hand hygiene
- EMS documentation should include a listing of EMS clinicians and public safety providers involved in the response and level of contact with the patient (for example, no contact with patient, provided direct patient care). This documentation may need to be shared with local public health authorities.

### Exposure Controls:

In the event that EMS personnel suspect they may have had an unprotected exposure during contact with a PUI, they should notify their supervisor and/or county health officials and self-isolate while awaiting medical advice.

## EMS Employer Responsibilities

- EMS units should have infection control policies and procedures in place, including describing a recommended sequence for safely donning and doffing PPE.
- Provide all EMS clinicians with job- or task-specific education and training on preventing transmission of infectious agents, including refresher training.
- Ensure that EMS clinicians are educated, trained, and have practiced the appropriate use of PPE prior to caring for a patient, including attention to correct use of PPE and prevention of contamination of clothing, skin, and environment during the process of removing such equipment.