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### **Health Care Professional and First Responder Safety**

The emergence of coronavirus disease 2019 (COVID-19) has raised questions among those who may need to give care in an emergency. This page is meant to inform professional responders and healthcare workers on how to protect themselves from contracting COVID-19 while providing patient care. [The complete Red Cross Scientific Advisory Council guidance can be found here.](#)

#### **Guidance on Preventing COVID-19 Transmission During Resuscitation**

There is currently no specific data on COVID-19 transmission in the setting of cardiac resuscitation. Based on studies of other disease transmission, it is reasonable to conclude that chest compressions and cardiopulmonary resuscitation (CPR) have the potential to generate aerosols. While there would be a risk of disease transmission when performing CPR on a person with COVID-19, compression-only CPR may be associated with a decreased risk of transmitting the virus compared to CPR with rescue breathing.

#### **Guidance on PPE for Resuscitation in EMS and In-Hospital Settings in the Case of Suspected or Confirmed COVID-19 Patients**

Follow current CDC guidance for Personal Protective Equipment (PPE), which includes standard- and transmission-specific precautions.

- Current recommendations for PPE include:
  - Glove use and thorough hand hygiene after care provision.
  - N95 respirator use when providing care to all suspected and confirmed COVID-19 patients.
    - *Note: If N95 masks are not available, a simple surgical mask should be worn.*
  - Eye protection; ideally full-face shield. Eyeglasses are insufficient protection.
  - Liquid resistant gowns (if there is a shortage of gowns, they should be reserved for aerosol generating procedures and those activities with high contact or where splashes or sprays are anticipated).
- As feasible, limit personnel in the resuscitation area to only essential personnel.
- For aerosol generating procedures, providers should use respiratory protection as described above, and the patient should be in an airborne isolation room if in-hospital.
- If out-of-hospital, first responders and EMS personnel should use respiratory and eye protection as described above. Heating, ventilation, and air conditioning (HVAC) should be maximized as much as

possible (procedures performed outdoors, and/or ambulance ventilation systems running, and doors open when feasible in an ambulance).

- Aerosol generating procedures include:
  - Intubation
  - Placement of supraglottic airways
  - Bag-valve-mask (BVM) ventilation
  - Continuous positive airway pressure (CPAP) or bilevel positive airway pressure (BiPAP) use

#### **Guidance on Transmission Precautions for Intubation in EMS and In-Hospital Settings in the Case of Suspected or Confirmed COVID-19 Patients**

- When intubating the patient, strategies to maximize intubation success with minimal attempts and techniques to protect the person performing intubation and team should be employed.
  - Intubation should be performed by the most experienced team member.
  - Respiratory protection should be worn as described above.
  - Prior to intubation ventilate with BVM with HEPA filter and a tight seal or as appropriate for patient pre-oxygenate with non-rebreathing mask and face mask.
  - Rapid sequence intubation, including preoxygenation and use of paralytics to ensure apnea, and early ventilator use will minimize manual ventilation of patient's lungs and aerosolization from the patient's lungs.
  - Video assisted intubation may reduce exposure of the person performing intubation.
- Ventilatory equipment should have a high-efficiency particulate air (HEPA) filtration in the exhalation path per manufacturer recommendations.
- In the setting of respiratory failure, it is appropriate to consider performing endotracheal intubation and ventilator use early to avoid aerosol-generating interventions such as non-invasive ventilation.

#### **Guidance on Transmission Precautions for Cardiac Arrest Care in EMS and In-Hospital Settings in the Case of Suspected or Confirmed COVID-19 Patients**

- For cardiac arrest, patients should be intubated as soon as possible. This will usually occur after rhythm analysis and electrical therapy as indicated.
- If equipment available, processes in place, personnel properly trained, and appropriate for the patient, consider using mechanical compression devices to reduce the number of personnel required for resuscitation.

#### **Specific Guidance for In-Hospital Healthcare Professionals**

In the current COVID-19 pandemic, healthcare professionals should use PPE including respiratory and eye protection for aerosol generating procedures during resuscitation. For possible or confirmed COVID-19 patients, consider immediate defibrillation before donning PPE or additional PPE in situations where the provider assesses that benefits may exceed the risks.

Healthcare institutions should discuss end-of-life decision making with patients or their legal proxies as early as possible and should put in place protocols regarding resuscitation of COVID-19 patients. These should include Crisis Standards of Care with specific guidance regarding resuscitation and use of ventilators. It is recognized that Healthcare Crisis Standards of Care protocols will often be based on governmental issues Crisis Standards of Care guidelines and executive orders.

## **Specific Guidance for Emergency Medical Dispatchers, First Responders & Emergency Medical Services**

- Emergency medical dispatchers should screen calls to identify possible COVID-19 patients. First responders and hospitals should be notified prior to arrival if COVID-19 is suspected or confirmed. Telecommunicator CPR should continue to be provided but follow the modifications described above for lay person CPR.
- All out-of-hospital cardiac arrest patients should be presumed to be COVID-19 positive and appropriate PPE should be worn during resuscitation efforts. For all aerosol generating procedures, first responders and EMS personnel should use respiratory protection as described above. If performed in an ambulance, the rear doors should be open and ventilation system running when feasible.
- EMS systems should put in place protocols to determine when to start resuscitation and termination of resuscitation in the setting of COVID-19. These should include Crisis Standards of Care with specific guidance regarding resuscitation. It is recognized that EMS Crisis Standards of Care protocols will often be based on governmental issues Crisis Standards of Care guidelines and executive orders.
- For all on-scene cardiac arrest patients for whom return of spontaneous circulation (ROSC) is NOT obtained, EMS providers should consider termination of resuscitation (TOR) and follow local TOR protocols or contact medical control for guidance before a transport decision is determined. This discussion is important to help avoid transporting medically futile patients to the hospital and avoidable transmission of COVID-19.

### **Guidance for Providers After Caring for Someone Suspected or Confirmed COVID-19 Positive**

Providers with contact with persons known or suspected to have COVID-19 should monitor themselves for symptoms, including fever or respiratory symptoms, e.g., cough, shortness of breath, sore throat. If these symptoms occur, they should self-evaluate and immediately contact their healthcare provider.