pennsylvania
DEPARTMENT OF HEALTH

EMS Information Bulletin 2020-18

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SUBJECT: Cardiac Arrest Treatment by EMS of a Patient with Suspected COVID-19

TO: PA EMS Agencies
PA EMS Agency Medical Directors

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The Bureau of EMS (Bureau) is providing this Informational Bulletin to provide best practices in cardiac arrest care for patients with suspected COVID-19 infection. EMS providers should continue to follow the Pennsylvania Cardiac Arrest Protocols – BLS #322, 324, 331A/P, 332, and 333; AEMT #3031iA/P, 3032i, 3035i; and ALS #3031A/P, 3032, 3033P, 3035, 3080, 3091.

Our statewide cardiac arrest protocols already have many good practices that are appropriate for suspected COVID-19 patients, like emphasis on generally transporting only patients who attain ROSC (Return of Spontaneous Circulation) and not those with ongoing CPR and no ROSC. These practices are good care to increase survival, but in the era of COVID-19, they also keep from potentially spreading disease and stressing overwhelmed emergency departments.

Below is a summary of considerations for treating cardiac arrest in patients with suspected COVID-19 infection:

- This is applicable to patients with respiratory symptoms or fever before their cardiac arrest, those who are known COVID positive, and those whose history is unclear and may be infected with COVID-19.

- Personal Protective Equipment
  - Standard, contact, and airborne precautions
  - CPR, assisting ventilations, and placing advanced airways are aerosol-generating procedures. N95 masks or equivalent are required, in addition to eye protection, gown, and gloves. Do not perform CPR without respiratory precautions in place.

- Treatment
  - For patients WITHOUT suspicion of COVID-19 infection, for example a sudden collapse in someone who is otherwise well, follow usual Statewide Cardiac Arrest Protocols.
  - For patients with known recent history of respiratory illness and fever or possible COVID-19 infection, treat according to Statewide Cardiac Arrest Protocols, AND:
    - If available, place a clear drape (medical drape, shower curtain, or drop cloth, over the patient's face and head to reduce exposure to aerosolized secretions

- BVM ventilation and advanced airway placement can occur under the drape.
- **CAUTION – FIRE RISK: Most of these patients should not have a shockable rhythm, but if using a drape, ensure that it does not accumulate oxygen and that defibrillation pads are not under the drape during defibrillation.**
- After call, dispose of drape as if contaminated.

- Attach a viral HEPA filter between the bag-valve and any ventilatory device (BVM mask or advanced airway). There is controversy about risk of aerosol when comparing placing an endotracheal tube versus ventilating through an alternative airway. Placing an alternative airway under a clear drape may have the least risk of aerosol. **EMS agency medical directors should define the expectation for advanced airway management in these patients.**

- When CPR is being performed, only necessary personnel should be next to the patient. Personnel should distance themselves when not performing interventions.

- If no ROSC within 10 minutes of resuscitation, contact medical command for possible termination of resuscitation orders.

- Patients in continuous cardiac arrest **WILL NOT BE TRANSPORTED,** regardless of mechanical CPR device. Resuscitation will either be terminated on scene or ROSC sustained (continued palpable pulse and systolic BP ≥60 mmHg for >10 minutes) BEFORE moving the patient to the patient compartment of an ambulance.

- For witnessed arrests inside the patient care compartment:
  - Pull vehicle to a safe space to park, and perform resuscitation in full PPE, with doors OPEN.

  - If close to the receiving facility, medical command may order continued transport to the hospital, as long as all personnel in the patient compartment have sufficient full PPE (including N95 mask or equivalent) in place.

  - Field termination in the back of the ambulance by medical command order is valid and should be considered if no ROSC after CPR for >10 minutes with nonshockable rhythm in a patient with suspected COVID-19 infection. If this occurs, as with other field termination, contact the county coroner/medical examiner before moving for direction on destination.