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GUIDING PRINCIPLES FOR EMS CARDIAC ARREST MANAGEMENT DURING THE COVID-19 PANDEMIC

Best practices for management of the COVID-19 outbreak are dynamic due to the rapidly evolving situation and changing scientific knowledge. Centers for Disease Control and Prevention (CDC) guidance for [EMS providers](#) and [healthcare personnel](#) are continuously updated. All healthcare personnel should review these recommendations regularly.

Cardiopulmonary resuscitation (CPR) is a potentially aerosol-generating procedure (AGP). Protection of prehospital personnel during cardiac resuscitations while providing optimal patient care during the COVID-19 pandemic is critical.

On April 9, 2020 the American Heart Association published [Interim Guidance for Basic and Advanced Life Support in Adults, Children, and Neonates With Suspected or Confirmed COVID-19](#). Following discussions with the county's emergency medical services clinical leaders, these recommendations have been adapted to the County of San Diego EMS system.

The following principles shall guide EMS providers during the declared COVID-19 state of emergency:

- Manage all cardiac arrest patients in accordance with current County of San Diego policies and protocols.
- Employ the following best practices when feasible:
 - Early use of mechanical CPR devices
 - Limit personnel in the room or on the scene to only those essential for patient care
 - Don appropriate respirators rated N95 or equivalent as part of an overall personal protective equipment ensemble
 - Prioritize oxygenation and ventilation strategies with lower aerosolization risk
 - Securely attach HEPA filters to ventilation devices
 - Implement two-rescuer BVM mask seal ventilation
 - For adults, use passive oxygenation prior to prioritized advanced airway placement as described in [the AHA guidance](#) and [this article](#)
 - Place advanced airways early in cardiac arrest management to control generated aerosols
 - Weigh the risks and benefits of placing perilyngeal airways (PAA) versus performing endotracheal (ET) intubation (see [Frequently Asked Questions](#))

February 4, 2020

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[for EMS Agencies and EMS Providers Regarding the COVID-19 Outbreak, Section 3: Structure, Policy and Protocols Q7 and Q8\)](#)

- Increase the likelihood of first pass PAA and/or ET attempts by:
 - Assigning the most experienced provider to airway management
 - Performing ET intubation only by highly experienced paramedics who have conducted an appropriate evaluation of the airway, and determined that they have a very high likelihood of first-pass success
 - Briefly pause chest compressions while placing PAA/ET if it is anticipated that this will increase the likelihood of successful airway placement
- Implement innovative solutions to minimize AGPs (e.g., intubation boxes, helmets, or other protective solutions)
- Consider placing a cloth covering or other drape over the patient's face during resuscitation
- Consider collecting nasopharyngeal swab samples for COVID-19 source testing prior to termination of unsuccessful resuscitations
- Consider Base Hospital team contact for physician input
- Follow Termination of Resuscitation per [County of San Diego EMS Protocol S-127](#)
- If Return of Spontaneous Circulation (ROSC) is achieved, obtain a 12-lead EKG and make Base Hospital contact prior to initiating transport
- For patients being transported, ensure early notification to allow the receiving facility ample time to prepare for safe patient transfer of care
- Make early Base Hospital contact for any [POLST document with "verbal" signature](#)

Thank you for your continued support and attention to managing this unprecedented event.

Respectfully,



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cc: Nick Yphantides, MD, MPH, Chief Medical Officer
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