



Adult Asystole / Pulseless Electrical Activity

History

- SAMPLE
- Estimated downtime
- See Reversible Causes below
- DNR, MOST, or Living Will

Signs and Symptoms

- Pulseless
- Apneic
- No electrical activity on ECG
- No heart tones on auscultation

Differential

- See Reversible Causes below



Cardiac Arrest Protocol AC 3

Criteria for Death / No Resuscitation
Review DNR / MOST Form

YES

NO

Decomposition
Rigor mortis
Dependent lividity
Blunt force trauma
Injury incompatible with life
Extended downtime with asystole

Do not begin resuscitation

Follow
Deceased Persons
Policy

AT ANY TIME

Return of
Spontaneous
Circulation



Go to
Post Resuscitation
Protocol AC 10

Begin Continuous CPR Compressions
Push Hard (≥ 2 inches)
Push Fast (100 - 120 / min)
Change Compressors every 2 minutes
(sooner if fatigued)
(Limit changes / pulse checks ≤ 10 seconds)

Ventilate 1 breath every 6 seconds
30:2 Compression:Ventilation if no Advanced Airway
Monitor EtCO2
if available

AED Procedure
if available

P

Cardiac Monitor



IV or IO Access Protocol UP 6

A

Epi (1:1K) 5mg IM or Epi (1:10K) 1 mg IV / IO x 1

Normal Saline Bolus 500 mL IV / IO
May repeat as needed
Maximum 2 L

Search for Reversible Causes

Blood Glucose Analysis Procedure
if applicable

P

Consider Bicarb 100 mEq IV/IO
if history of renal failure or Suspected Overdose



On Scene Resuscitation / Termination of Resuscitation
Protocol(s) AC 12
as indicated

Reversible Causes

Hypovolemia
Hypoxia
Hydrogen ion (acidosis)
Hypothermia
Hypo / Hyperkalemia

Tension pneumothorax
Tamponade; cardiac
Toxins
Thrombosis; pulmonary (PE)
Thrombosis; coronary (MI)

Suspected Opioid Overdose

Administer Naloxone per
Overdose / Toxic Ingestion
Protocol TE 7



Notify Destination or
Contact Medical Control





Adult Asystole / Pulseless Electrical Activity

Priorities:

- Immediate Initiation of high quality CPR & rhythm interpretation.
- Rapid administration of intramuscular or IV Epinephrine
- Goal is to work the code in place and minimize all movement to maximize highest quality CPR
- Minimum. 10 minute cool down time after obtaining ROSC Unless priority time critical diagnosis suspected as in STEMI, Trauma arrest, severe stroke or intracranial hemorrhage.

Intramuscular epinephrine should be given rapidly and as early as possible in Cardiac arrest.

Only one dose of code epinephrine(IV/IM/IO) will be given per patient encounter. If ROSC is obtained. Epi drip or push dose EPI may be utilized. No additional code dose epinephrine If the patient re-arrests.

Pearls

- **Team Focused Approach / Pit-Crew Approach recommended; assigning responders to predetermined tasks. Refer to optional Team Focused CPR Protocol AC 11 or development of local agency protocol.**
- **Efforts should be directed at high quality and continuous compressions with limited interruptions and early defibrillation when indicated.**
- **DO NOT HYPERVENTILATE: If no advanced airway (BIAD, ETT), compression to ventilation ratio is 30:2. If advanced airway in place, ventilate 10 breaths per minute with continuous, uninterrupted compressions.**
- **Do not interrupt compressions to place endotracheal tube. Consider BIAD first to limit interruptions.**
- **Passive oxygenation optional in agencies practicing Team Focused Approach / Pit-Crew Approach.**
- **Reassess and document BIAD and / or endotracheal tube placement and EtCO₂ frequently, after every move, and at transfer of care.**
- **IV / IO access and drug delivery are secondary to high-quality chest compressions and early defibrillation.**
- **IV access is preferred route. Follow IV or IO Access Protocol UP 6.**
- **Defibrillation:** Follow manufacture's recommendations concerning defibrillation / cardioversion energy when specified.
- **End Tidal CO₂ (EtCO₂)**
 - If EtCO₂ is < 10 mmHg, improve chest compressions. Goal is ≥ 20 mmHg.
 - If EtCO₂ spikes, typically > 40 mmHg, consider Return of Spontaneous Circulation (ROSC)
- **Special Considerations**
 - **Maternal Arrest** - Treat mother per appropriate protocol with immediate notification to Medical Control and rapid transport preferably to obstetrical center if available and proximate. Place mother supine and perform Manual Left Uterine Displacement moving uterus to the patient's left side. IV/IO access preferably above diaphragm. Defibrillation is safe at all energy levels.
 - **Renal Dialysis / Renal Failure** - Refer to Dialysis / Renal Failure Protocol AM 3 caveats when faced with dialysis / renal failure patient experiencing cardiac arrest.
 - **Opioid Overdose** - If suspected, administer Naloxone per Overdose / Toxic Ingestion Protocol TE 7 while ensuring airway, oxygenation, ventilations, and high-quality chest compressions.
 - **Drowning / Suffocation / Asphyxiation / Hanging / Lightning Strike** – Hypoxic associated cardiac arrest and prompt attention to airway and ventilation is priority followed by high-quality and continuous chest compressions and early defibrillation.
- **Transcutaneous Pacing:**
 - Pacing is NOT effective in cardiac arrest and pacing in cardiac arrest does NOT increase chance of survival
 - Success is based on proper planning and execution. Procedures require space and patient access. Make room to work.
 - Discussion with Medical Control can be a valuable tool in developing a differential diagnosis and identifying possible treatment options.