

HEALTHEAST MEDICAL TRANSPORTATION
MEDICAL OPERATIONS MANUAL

2D PULSELESS ELECTRICAL ACTIVITY (PEA)/ASYSTOLE

PATIENT CARE GOALS

- Restore and maintain a perfusing rhythm in the context of cardiac arrest.

EMT

1. Assess the patient and provide initial care, including oxygen and vascular access, per **A.2 General Assessment and Care**.

ADULT	PEDIATRICS (less than 60 kg)
<ol style="list-style-type: none"> 2. Assess ABCs; confirm absence of pulse and adequate breathing. 3. Perform effective and uninterrupted CPR per 7G High Performance CPR until AED or defibrillator is available and follow instructions in Guideline 2B Cardiac Arrest. 	<ol style="list-style-type: none"> 2. Assess ABCs; confirm absence of pulse and adequate breathing. 3. Perform effective and uninterrupted CPR per 7G High Performance CPR until AED or defibrillator is available and follow instructions in Guideline 2B Cardiac Arrest.

PARAMEDIC

ADULT	PEDIATRICS (less than 60 kg)
<ol style="list-style-type: none"> 4. If PEA is present on the monitor check for a pulse. If no pulse present, resume CPR. If pulse is present, treat the patient per 2F Post-Resuscitation Care. 5. If IV/IO access has been established give 1 mg epinephrine 1:10,000 every 3 to 5 minutes. OR Administer an epinephrine (Adrenalin)³ infusion at 0.5 mcg/kg/min (approximately 100 gtts/min with 60 gtts/ml tubing). OR Administer a norepinephrine (Levophed)⁴ infusion starting at 0.5 mcg/kg/min (approximately 100 gtts/min with 60 gtts/ml tubing). 6. Search for and treat possible contributing factors.^{1, 2} 7. Determine if patient is candidate for early transport after 15 minutes of resuscitation.⁵ 8. Administer sodium bicarbonate 1 mEq/kg IV/IO if downtime > 15 minutes or after 15 minutes of resuscitation with good ventilation of the patient. Repeat every 15 minutes. 9. If renal failure is suspected as underlying 	<ol style="list-style-type: none"> 4. If PEA is present on the monitor check for a pulse. If no pulse present, resume CPR. If pulse is present, treat the patient per 2F Post-Resuscitation Care. 5. If IV/IO access has been established give 0.01 mg/kg epinephrine 1:10,000 every 3 to 5 minutes. 6. Search for and treat possible contributing factors.^{1, 2} 7. Determine if patient is candidate for early transport (after 15 minutes of resuscitation).⁵ 8. Administer sodium bicarbonate 1 mEq/kg IV/IO if downtime > 15 minutes or after 15 minutes of resuscitation with good ventilation of the patient. Repeat every 15 minutes. 9. If renal failure is suspected as underlying cause proceed to 2E Hyperkalemic arrest. <div style="border: 2px solid black; padding: 5px; margin-top: 10px;"> <ol style="list-style-type: none"> 10. After 30 minutes of resuscitation with no change in patient status, contact Medical Control for orders to terminate efforts. </div>

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ADULT	PEDIATRICS (less than 60 kg)
<p>cause proceed to 2E Hyperkalemic arrest.</p> <div style="border: 2px solid black; padding: 5px;"> <p>10. After 30 minutes of resuscitation with no change in patient status, contact Medical Control for orders to terminate efforts.</p> </div>	

DOCUMENTATION KEY POINTS

- Pertinent history, including events leading up to the arrest.
- Assessments and treatments provided prior to your arrival, including specific time(s) of shocks and other interventions.
- ECG tracing documentation of all rhythm interpretations, treatment decisions, and changes in the patient's clinical condition.
- Rationale for field discontinuation of resuscitation efforts or early transport.
- Direction provided by medical control.

NOTES

¹ Survival from PEA arrest depends on identifying and correcting the underlying cause. Consider a broad differential diagnosis with early and aggressive treatment. Causes and factors may include:

- | | |
|----------------------------|--------------------------------------|
| * Hypovolemia | * Toxins, drug overdoses |
| * Hypoxia | * Tamponade |
| * Hydrogen ions (acidosis) | * Tension pneumothorax |
| * Hypo/Hyperkalemia | * Thrombosis (coronary or pulmonary) |
| * Hypoglycemia | * Trauma (hypovolemia) |
| * Hypothermia | |

² If hypothermia is the likely cause of the arrest, treat per **E.2 Hypothermia**.

³ **Epinephrine (Adrenalin) infusion:** Use either the infusion mixed during resuscitation or prepare a smaller infusion by mixing 7.5 ml of 1:1,000 epinephrine (from multi-dose vial) in 250 ml NS. Attach to 60 gtt tubing. Monitor carefully for infiltration at the IV/IO site. Continuous cardiac monitoring is required.

⁴ **Norepinephrine (Levophed) infusion:** Mix 8 mg of **norepinephrine (Levophed)** in a 250 ml bag of normal saline (concentration of 32 mcg/ml). Administer using 60gtt/ml tubing. Monitor carefully for infiltration at the IV/IO site. Continuous cardiac monitoring is required.

⁵ When all of the following conditions exist after 15 minutes of resuscitation the patient should be strongly considered for early transport. Call medical control for advice if unsure.

- Regular (wide or narrow QRS) ECG rhythm with a rate greater than 40 beats/minute
- End-tidal readings greater than 20 mmHg
- Airway secured
- Patient able to have Lucas CPR performed during transport (large or small patients may be considered for transport but mode of transport may need to be modified to allow for the delivery of quality CPR).