

**Michigan**  
**Adult Cardiac Protocols**

ASYSTOLE / PULSELESS ELECTRICAL ACTIVITY (PEA)

Date: June 5, 2009

Page 1 of 2

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## ***Asystole / Pulseless Electrical Activity***

During CPR, consider reversible causes of Asystole/PEA and treat as indicated. Causes and efforts to correct them include:

Hypovolemia – fluid bolus

Hypoxia – reassess airway and ventilate with high flow oxygen

Tension pneumothorax – see **Pleural Decompression Protocol**

Hypothermia – follow **Hypothermia Protocol** rapid transport

Hyperkalemia (history of renal failure) – see #6 below.

### **Pre-Medical Control**

1. Follow the **Cardiac Arrest - General Protocol**.
2. Confirm that patient is in asystole by evaluating more than one lead.

<b><u>Vasopressin</u></b>
<input type="checkbox"/> Included
<input type="checkbox"/> Not Included



3. Administer Epinephrine 1 mg 1:10,000 IV/IO (10 ml), repeat every 3-5 minutes.
4. Administer Vasopressin 40 units IV/IO in place of second dose of Epinephrine as approved by local medical control.
5. If asystole or slow PEA (<60/minute), administer Atropine 1 mg IV/IO every 3-5 minutes (maximum 3 mg).
6. In a dialysis patient hyperkalemia is likely. Administer Calcium Chloride 1gm IV/IO and Sodium Bicarbonate 1 mEq/kg IV/IO with 20 ml NS flush in between medications.
7. Continue CPR and reassess rhythm every 2 minutes.
8. If AED has been applied by BLS personnel, skip to appropriate place in protocol that incorporates previous care. ALS personnel should switch to manual defibrillator after initial AED shock or place in manual mode.

### **Post-Medical Control**

9. Additional basic and/or advanced life support care as appropriate.
10. Consider termination of resuscitation per local MCA protocol.

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Page 2 of 2

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- Hypovolemia – fluid bolus
- Hypoxia – reassess airway and ventilate with high flow oxygen
- Tension pneumothorax – See **Pleural Decompression Protocol**
- Hypothermia – follow **Hypothermia Protocol** rapid transport
- Hyperkalemia (history of renal failure) – see below

Follow **Cardiac Arrest – General Protocol**

Confirm that patient is in asystole by evaluating more than one lead



**Vasopressin**

- Included
- Not Included

- Administer Epinephrine 1:10,000; 1 mg IV/IO every 3-5 mins.
- Administer Vasopressin 40 units IV/IO in place of second dose of Epinephrine as approved by local medical control
- If asystole or slow PEA (less than 60/minute). Administer Atropine 1 mg IV/IO every 3-5 min (maximum 3 mg)
- In a dialysis patient hyperkalemia is likely. Administer Calcium Chloride 1gm IV/IO and Sodium Bicarbonate 1 mEq/kg IV/IO with 20 ml NS flush in between medications.
- Continue CPR, reassess rhythm every 2 minutes
- If AED has been applied by BLS personnel, skip to appropriate place in protocol that incorporates previous care. ALS personnel should switch to manual defibrillator after initial AED shock or palce in manual mode



**Contact  
Medical  
Control**



Additional basic and/or advanced life support care as appropriate.

Consider termination of resuscitation per local MCA protocol