

## RETURN OF SPONTANEOUS CIRCULATION (ROSC)

This protocol should be followed for all **adult** cardiac arrests with ROSC. If it is unknown whether the arrest is traumatic or medical, continue with this protocol.

- A. Follow **Initial Treatment / Universal Patient Care Protocol**
- B. If ventilation assistance is required, ventilate at 10 - 12 breaths per minute. Do not hyperventilate.
  - 1. Avoid excessive ventilation. Start at 10 - 12 breaths/minute. *If capnography available:* Titrate to target ETCO<sub>2</sub> of 35 - 40 mm/Hg.
    - a. Titrate oxygen to minimum necessary to achieve SpO<sub>2</sub> at 94 - 99%.
    - b. Start with 100% oxygen during the CPR phase.
- C. Consider Advance Airway: ET or Supraglottic
- D. Reassess patient. If patient becomes pulseless, begin CPR and follow **Cardiac Arrest Protocol 4205**.
- E. Continue to monitor ABC's.
- F. Follow Initial Treatment / Universal Patient Care Protocol
- G. Start an IV / IO NS KVO if not already performed.
- H. Treat hypotension (SBP < 90 mm/Hg) with an IV/IO fluid bolus consistent with **Hypoperfusion / Shock Protocol 4108**.
- I. Perform 12 lead ECG. If STEMI, follow STEMI guidelines.
- J. Consider treatable causes. (H's and T's)

Assess for Reversible Causes	
Hypoxia	Toxins
Hydrogen Ion	Tension Pneumothorax
Hypothermia	Cardiac Tamponade
Hypovolemia	Thrombus (cardiac)
Hypo/Hyperkalemia	Thrombus (pulmonary)
Hypoglycemia	Trauma
<b>(OPTIONAL) Sodium Bicarbonate 50 mEq may be administered per MCP order</b>	

- K. If ventilation assistance is required with an advanced airway in place and quantitative

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waveform capnography (*if available*); target ETCO<sub>2</sub> is 35 - 40 mm/Hg.

- L. Transport to a facility capable of Percutaneous Coronary Intervention (PCI) and/or therapeutic hypothermia in consultation with **Medical Command**.



- M. If patient remains unresponsive after ROSC, consider cooling the patient with 250 ml Normal Saline 4 degrees Centigrade (*optional equipment if available*); cold packs to axilla, groin, neck, etc.

- N. Consider the administration of **Amiodarone** Infusion or **Lidocaine** infusion if the patient was resuscitated following an episode of VF/VT and is without profound bradycardia or high-grade heart block (2nd degree Type II or 3<sup>rd</sup> degree or idioventricular rhythm) **per MCP Order**.  
**Note:** *Continue using the anti-arrhythmic medication that was administered during resuscitation.*



- O. If hypotension persists after 250 ml IV / IO fluid bolus, administer Dopamine 5 – 20 micrograms/kg/min **per MCP Order**.