



POST RESUSCITATION

Return of Spontaneous Circulation

Repeat Primary Assessment	
	Optimize Ventilation and Oxygenation <ul style="list-style-type: none">Remove Impedance Threshold DeviceRespiratory Rate 10 / minuteMaintain SpO2 92 – 98%DO NOT HYPERVENTILATE
B	<ul style="list-style-type: none">ETCO2 ideally 35 – 45 mm Hg
	Airway Protocol(s) AR 1, 2, 3, 4 as indicated
B	12 Lead ECG Procedure
	IV or IO Access Protocol UP 6
P	Cardiac Monitor
	Monitor Vital Signs / Reassess
	Search for reversible causes

	Chest Pain and STEMI Protocol AC 4 if indicated
	Hypotension / Shock Protocol AM 5 as indicated
A	Optimize Systolic BP and Mean Arterial BP Systolic BP > 90 mmHg
P	Mean Arterial BP > 65 mmHg MAP = DP + 1/3(SP – DP)
	Appropriate Arrhythmia Protocol(s) AC 2, 6, 7 as indicated
	Seizure Protocol UP 13 as indicated
	Post Intubation BIAD Management Protocol AR 8
	Targeted Temperature Management Protocol AC 13 if available

Notify Destination or Contact Medical Control

Transport Destination Decision
Post-resuscitation patient is medically complex.

Consider facility capabilities:

- 24-hour cardiac catheterization laboratory
- Medical ICU service
- Cardiology service
- Neurology service
- Pulmonology service
- Targeted Temperature Management

Reversible Causes

Hypovolemia
Hypoxia
Hydrogen ion (acidosis)
Hypothermia
Hypo / Hyperkalemia

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

Arrhythmias are common and usually self limiting after ROSC

If Arrhythmia Persists follow Rhythm Appropriate Protocol

Adult Cardiac Protocol Section 1



POST RESUSCITATION

IF RE-ARREST OCCURS, DIVERT TO THE CLOSEST FACILITY, ROUTINE TRAFFIC, WITH CPR IN PROGRESS.

Pearls

- **Recommended Exam: Mental Status, Neck, Skin, Lungs, Heart, Abdomen, Extremities, Neuro**
- **Continue to search for potential cause of cardiac arrest during post-resuscitation care.**
- **Hyperventilation is a significant cause of hypotension and recurrence of cardiac arrest in the post resuscitation phase and must be avoided. Titrate FiO₂ to maintain SpO₂ of 92 - 98%.**
- **Pain/sedation:**
 - Patients requiring advanced airways and ventilation commonly experience pain and anxiety. Unrelieved pain can lead to increased catecholamine release, ischemia, immunosuppression, and prolonged hospitalization.
 - Ventilated patients cannot communicate pain / anxiety and providers are poor at recognizing pain / anxiety.
 - Vital signs such as tachycardia and / or hypertension can provide clues to inadequate sedation, however they both are not always reliable indicators of patient's lack of adequate sedation.
 - Pain must be addressed first, before anxiety. Opioids are typically the first line agents before benzodiazepines. Ketamine is also a reasonable first choice agent.
- **Ventilator / Ventilation strategies:**
 - Tailored to individual patient presentations. Medical Control can indicate different strategies above.
 - In general ventilation with BVM should cause chest rise. With mechanical ventilation a reasonable tidal volume should be about 6 mL/kg and peak pressures should be < 30 cmH₂O.
 - Continuous pulse oximetry and capnography should be maintained during transport for monitoring.
 - Head of bed should be maintained at least 10 – 20 degrees of elevation when possible to decrease aspiration risk.
- **EtCO₂ Monitoring:**
 - Initial End tidal CO₂ may be elevated immediately post-resuscitation, but will usually normalize.
 - Goal is 35 – 45 mmHg but avoid hyperventilation to achieve.
- Titrate fluid resuscitation and vasopressor administration to maintain SBP of 90 – 100 mmHg or Mean Arterial Pressure (MAP) of 65 – 80 mmHg.
- **STEMI (ST-Elevation Myocardial Infarction)**
 - Consider placing 2 IV sites in the left arm: Many PCI centers use the right radial artery for intervention.
 - Consider placing defibrillator pads on patient as a precaution.
 - Document and time-stamp facility STEMI notification and make notification as soon as possible.
 - Document the time of the 12-Lead ECG in the PCR as a Procedure along with the interpretation (Paramedic).
- Consider transport to facility capable of managing the post-arrest patient including hypothermia therapy, cardiology / cardiac catheterization, intensive care service, and neurology services.
- **Targeted Temperature Management (optional):**
 - Maintain core temperature between 32 - 36°C.
 - Infusion of cold saline is NOT recommended in the prehospital setting.
 - No evidence suggests improved survival with prehospital cooling.
- The condition of post-resuscitation patients fluctuates rapidly and continuously, and they require close monitoring. Appropriate post-resuscitation management may best be planned in consultation with Medical Control.