



**REGION 11
CHICAGO EMS SYSTEM
PROTOCOL**

Title: Adult and Pediatric Post-ROSC Care – ALS

Section: Cardiovascular

Approved: EMS Medical Directors Consortium

Effective: December 1, 2022

ADULT AND PEDIATRIC POST-ROSC CARE - ALS

I. PATIENT CARE GOALS

The immediate ROSC period is critical in stabilizing patients and preparing for transport. Therefore, the goal is to maximize survival and optimize neurologic and cardiovascular function following a return of spontaneous circulation through the following steps:

1. Manage airway
2. Manage respiratory parameters
3. Manage hemodynamic parameters and maximize blood pressure
4. Obtain 12-lead ECG and identify ST-elevation myocardial infarction (STEMI) or reversible causes of arrest
5. Recognize pending re-arrest
6. Transport to a STEMI Center

II. PATIENT PRESENTATION

Inclusion Criteria: Adult and pediatric patient with return of spontaneous circulation (ROSC) after non-traumatic cardiac arrest

III. PATIENT MANAGEMENT

1. Confirm Return of Spontaneous Circulation (ROSC):
 - a. Identify palpable pulse
 - b. Document auscultated blood pressure
 - c. Perform 12-lead ECG and assess for STEMI
 - d. A significant percentage of post-ROSC patients will re-arrest. Continue close monitoring and be prepared for re-arrest during the post-ROSC phase of care.
2. Assess Oxygenation and Ventilation:
 - a. Maintain oxygen saturation \geq 94%, do not hyperoxygenate
 - b. Assist spontaneous respirations with BVM as necessary
 - c. If no spontaneous respirations, place i-gel or endotracheal tube and attach continuous ETCO₂ capnography
 - d. Avoid hyperventilation
 - i. Adults: Ventilate at a rate of 1 breath every 6 seconds (10 breaths per minute)
 - ii. Children: Ventilate at 1 breath every 5 seconds (12 breaths per minute)
 - iii. Infants: Ventilate at 1 breath every 3 seconds (20 breaths per minute)
 - e. Titrate ventilation to target ETCO₂ of 35-45 mmHg



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3. Assess Circulation:

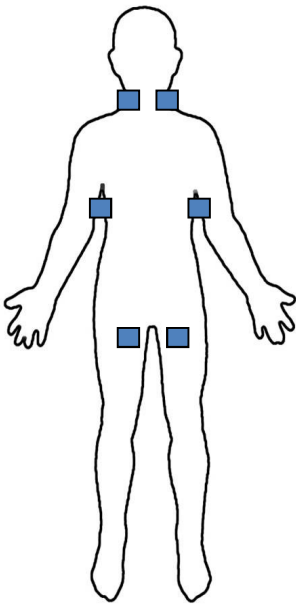
- a. For adults, If SBP is less than 90 mmHg, administer one 300 ml bolus of NS and repeat as indicated to maintain SBP \geq 90 mmHg.
- b. For pediatric patients, administer 20 ml/kg fluid bolus to maintain blood pressure at or above normal for age as listed on Region 11 Pediatric Resuscitation Card.

4. Assess Mental Status:

- a. Check blood glucose, treat hypoglycemia accordingly.
- b. If adult patient is comatose with GCS \leq 8, evaluate for Targeted Temperature Management

5. Evaluate for Targeted Temperature Management (TTM):

- a. For adult patients that are comatose (GCS \leq 8) and sustained ROSC for a minimum of 5 minutes
- b. Apply ice packs to each of the following locations (6 total):
 - i. 1 to each carotid artery on neck
 - ii. 1 to each axilla
 - iii. 1 to each femoral artery on groin



Snap and then apply ice packs as shown. One over each carotid artery (neck), one in each axilla, and one over each femoral artery (groin)

6. Contact Online Medical Control:

- a. Minimize movement of patient during post-arrest phase
- b. In the radio report, notify Online Medical Control if:
 - i. Patient has ST Elevation Myocardial Infarction (STEMI) on 12-lead.
 - ii. If Targeted Temperature Management (TTM) has been started.

7. Transmit 12-lead ECG and transport ALL adult patients to a Region 11 STEMI Center. Transport all pediatric patients to a Region 11 EDAP hospital.