

## ***Targeted Temperature Management after Cardiac Arrest***

Supersedes: 04-06-09

Effective: 11-24-15

### BACKGROUND

Mild induced hypothermia has been a component of comprehensive cardiac care for victims of out of hospital cardiac arrest. A complex cascade of physiological changes occurs in the post arrest patient. Some of these changes, specifically hyperthermia, have known detrimental impact on neurological recovery. The most recent evolution of mild induced hypothermia, after several studies looking at outcomes in cardiac arrest victims, is now Targeted Temperature Management [TTM] between 32-36 degrees C. In the prehospital setting, components of TTM are important for continued neurological recovery. However, the routine prehospital cooling of patients with rapid infusion of large volume cold IV fluids after ROSC is not recommended and not a prehospital component of TTM.

### INDICATIONS FOR TTM

- Age 16 or older, and
- ROSC – patient demonstrates no purposeful movement to sternal rub or response to commands 5 minutes into ROSC, and
- Palpable Carotid pulse with a stable cardiac rhythm, and
- Patient temperature was checked by esophageal probe and is 36 degree C or greater and
- Pt is intubated

### CONTRAINDICATIONS FOR TTM

- Age < 16, or
- Traumatic arrest, or
- Hypothermia exists (< 36° C) by esophageal temp prior to onset of treatment, or
- Identified Pregnancy, or
- Major Surgery within the past 2 weeks, or
- Known bleeding disorder, i.e. idiopathic thrombocytopenic purpura, thrombotic thrombocytopenic purpura, hemophilia etc.

Note: STEMI is NOT a contraindication for TTM.

### METHOD

- Maintain supportive care. Do not delay transport to initiate cooling. TTM should be initiated in the ambulance. If patient becomes unstable, focus on the ongoing resuscitation issues, cooling can be reassessed when patient is stable.
- Place esophageal thermometer probe to establish patient's baseline body temperature
- If patient's esophageal probe temperature is between 32 degrees and 36 degrees C, continue active monitoring of temperature. Keep patient's temperature in this range by maintaining temperature in the ambulance compartment.
- If the patient's esophageal probe temperature is **36 degrees C or greater**, proceed to the following maneuvers:
  - Remove additional clothing from patient

## Treatment Protocols / Special Project Waivers

- If feasible, control environmental temperature in ambulance compartment
- Ice packs to axilla, groin and neck area