Target Temperature Management
(Optional)

History
- Non-traumatic cardiac arrests (drownings and hanging / asphyxiation are permissible in this protocol.)
- All presenting rhythms are permissible in this protocol
- Age 18 or greater

Signs and Symptoms
- Cardiac arrest
- Return of Spontaneous Circulation post-cardiac arrest

Differential
- Continue to address specific differentials associated with the arrhythmia

Return of Spontaneous Circulation ROSC

Criteria for Induced Hypothermia
Initial rectal temperature
≥ 93.2 F (34C)

YES

NO

Exit to Post Resuscitation Protocol AC 10

Agencies utilizing cerebral cooling devices are unlikely to see a change in rectal temperature during transport.

Continued temperature assessment not warranted with these devices. Document initial temperature

B	**Advanced Airway (includes BIAD) in place** with EtCO2 > 20 mmHg
	Airway Protocol(s) AR 1, 2, 3 ***as indicated***
	Post Resuscitation Protocol AC 910 ***as indicated***
	IV / IO Access Protocol UP 6
	Hypotension / Shock Protocol AM 5 ***as indicated***
	Perform Neurological Assessment
	Expose and apply ice packs to axilla and groin areas

Agency Specific Cooling Device

Reassess Rectal Temperature
Target: 89.6 – 96.8 °F
(Range 32 – 36C)

< 89.6° F *(32° C)*

Stop cooling measures
Until temperature increases

Reassess temperature every 10 minutes

Continue Post Resuscitation Care

≥ 89.6° F *(32° C)*

Continue Cooling

Exit to Post Resuscitation Protocol AC 9

Shivering noted

NO

YES

P

Fentanyl 50 – 75 mcg IV / IO
Repeat every 5 minutes as needed
Maximum 200 mg

Versed 2 – 2.5 mg IV / IO
Repeat every 5 minutes as needed
Maximum 10 mg

Vecuronium 10 mg IV / IO
If shivering uncontrolled following Opioid and Benzodiazepine Administration

Notify Destination or Contact Medical Control

Adult Cardiac Protocol Section

Target Temperature Management
(Optional)

Pearls

- Criteria for Targeted Temperature Mangement:
  - Return of spontaneous circulation not related to blunt / penetrating trauma or hemorrhage with ventricular fibrillation / tachycardia and non-shockable arrhythmias.
  - Temperature greater than 93.2°F (34° C).
  - Advanced airway (including BIAD) in place with no purposeful response to verbal commands.
  - Infusion of cold saline is NOT recommended in the prehospital setting.
- Hyperventilation is a significant cause of hypotension and recurrence of cardiac arrest in the post resuscitation phase and must be avoided. Titrate FiO_2 to maintain SpO_2 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 has 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.
- 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.
- Titrate fluid resuscitation and vasopressor administration to maintain SBP of > 90 mmHg or Mean Arterial Pressure (MAP) of 65 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.
- Utilization of this protocol mandates transport to facility capable of managing the post-arrest patient and continuation of induced hypothermia therapy.
- If no advanced airway in place obtained, cooling may only be initiated on order from medical control.
- 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.