## Physicians Order Form

### CCU Adult Induced Hypothermia:

**Post Resuscitation Order Set**

**TIME**: _________

**DATE**: _________

**Diagnosis:**

- [ ] Admit to CCU
- Attending M.D. responsible for Hypothermia: ____________________________
- Time of Arrest: ____________________________
- Time of Return of Spontaneous Circulation: ____________________________
- Time Cooling initiated: ____________________________
- Time Target Temperature Obtained: ____________________________ (24 hour cooling phase once target temperature obtained)

**Consult:**

- [ ] Pulmonary consult: ____________________________
- [ ] Cardiology consult: ____________________________
- [ ] Notify LifePoint Coordinator: ____________________________ for arterial line placement
- ____________________________ for Cool Guard Icy Catheter Placement (unless placed in EC)
- ____________________________ service for addition central venous catheter or PA catheter as needed

### Non-Medication Orders

Inclusion and exclusion criteria are to serve as a guide for decision-making.

**Inclusion Criteria:** (requires all four components)

1. Nontraumatic cardiac arrest with return of spontaneous circulation (ROSC)
2. Core Temperature greater than 34 degrees Celsius at presentation.
3. Time to initiation of hypothermia is less than 6 hours from return of spontaneous circulation (ROSC)
4. Comatose after ROSC: GCS less than 8, AND No purposeful movement to pain

**Exclusion Criteria:** (any one of the following)

1. Uncontrolled Gastrointestinal Bleeding
2. Patient requiring Mannitol therapy
3. Conflict with advanced directives or Do Not Resuscitate Status

**Time Noted**

**Telephone/Verbal Order Received By:**

**Reminder:** VERIFY & READ BACK

**Physician Printed Name**

**Physician Signature**

**Record Final Diagnosis on the Face Sheet**

**Patient Label**
Use Ball Point Pen and Press Firmly

**SPARTANBURG**
Regional Healthcare System  
SRMC Only

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<th>REQUIRED FOR ADMISSION</th>
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<tr>
<td>4. Cardiovascular instability as evidence by: uncontrollable arrhythmias, refractory hypotension (unable to achieve target Mean Arterial Pressure of 65 mmHg despite interventions).</td>
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<td>5. Sepsis as suspected cause of cardiac arrest</td>
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<td>6. Suspected intracranial hemorrhage</td>
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<td>7. Major intracranial, intrathoracic, or intraabdominal surgery within 14 days.</td>
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<td>8. Gravid pregnancy</td>
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<tr>
<td>1. Initiate Cool Guard system and cool for 24 hours once target temperature has been obtained (preferred method). Set machine to 33 degrees Celsius</td>
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<td>2. If unable to use Cool Guard Icy catheter, initiate passive / active cooling methods</td>
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<td>3. No heated humidification on the ventilator.</td>
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<td>4. Maintain PO2 90-100 millimeters Mercury and normal pH range.</td>
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<td>5. Notify Physician of any of the following:</td>
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<tr>
<td>A. Mean Arterial Pressure less than 60 despite use of vasopressors.</td>
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<tr>
<td>B. Urine output &gt; 300 milliliters per hour or &lt; 30 milliliters per hour for two consecutive hours.</td>
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<td>C. Temperature &gt; 35 Celsius during maintenance phase despite implementation of all ordered intervention.</td>
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<td>6. Maintain hypothermia for 24 hours once target temperature of 33 degrees Celsius has been obtained.</td>
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<tr>
<td>- Temperature goal 33 degrees celsius.</td>
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<td>- Monitor primary continuous temperature with the Foley bladder probe.</td>
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<td>- Obtain a secondary temperature source (Rectal or PA Catheter) at least every two hours to ensure accuracy of primary temperature source</td>
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**SPARTANBURG**
Regional Healthcare System

**REQUIRES FOR ADMISSION**

**Height:**

**Weight:**

**Allergies:**

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<th>CHECK</th>
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**PHYSICIANS ORDER FORM**

**CCU Adult Induced Hypothermia:**

**Post Resuscitation Order Set**

**TIME_________**

**DATE__________**

**Diagnosis:**

**MEDICATION ORDERS**

Patient's total body weight: ___________________________ kilograms

Administer the following medications prior to initiation of cooling:

1. Vecuronium  
   **Bolus:** 0.1 milligrams per kilogram as intravenous bolus.  
   **Continuous Infusion:** Start continuous infusion 20 – 40 minutes after initial bolus dose at 1 microgram per kilogram per minute.

2. Vecuronium  
   0.1 milligrams per kilogram intravenously every 1 hour as needed for shivering.

3. Fentanyl  
   ______ micrograms per hour intravenous continuous infusion (suggested initial rate: 2 micrograms per kilogram per hour) not to exceed 150 micrograms an hour.

4. Fentanyl  
   ______ micrograms intravenously PRN every 4 hours for agitation or breakthrough pain (suggested: 25 – 50 micrograms)

5. Propofol  
   ______ micrograms per kilogram per minute intravenous continuous infusion while receiving chemical paralysis (suggested initial rate: 5 micrograms per kilogram per minute).  
   Increase rate in 5- 10 microgram per kilogram per minute increments every 5 minutes until goal sedation scale < 3 achieved.

6. Esomeprazole  
   40 milligrams intravenously every day.

7. Maintenance IV of 0.9% sodium chloride at ______ milliliters per hour.  
   **Add ______ milliequivalents of Potassium Chloride per liter.**

8. Norepinephrine (Levophed) IV start at 0.5 micrograms per minute and titrate as needed to keep mean arterial pressure greater than 65.

9. Other pressor agent: _____________________________________________________________

10. Nitroglycerin IV start if systolic blood pressure over ________.  
    Start at 5 micrograms per minute and titrate until systolic blood pressure is less than _____________.

11. Lacrilube to both eyes every four hours and as needed while on neuromuscular blocking agents.

*** All intravenous solutions should be Dextrose free during cooling and rewarming phase.****

**** Do not administer any medication through the Coolguard ICY catheter if medication is labeled “do not refrigerate”.***  
(Example: Mannitol)

**TIME NOTED TELEPHONE/VERBAL ORDER RECEIVED BY:**

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**PHYSICIAN SIGNATURE**

Patient Label
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Height:  
Weight:  

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PHYSICIANS ORDER FORM
CCU Adult Induced Hypothermia:  
Post Resuscitation Order Set

Diagnosis:

DVT Prophylaxis Choose one of the following:

☐ 1. Sequential compression devices (SCD)
☐ 2. Enoxaparin 40 milligrams subcutaneously every day
☐ 3. Enoxaparin 30 milligrams subcutaneously every 12 hours
☐ 4. Enoxaparin 30 milligrams subcutaneously every day for creatine clearance less than 30
☐ 5. Heparin 5000 units subcutaneously every 8 hours

Blood Glucose Control Initiation

Blood Glucose Control:
If Blood Glucose is greater than 120 milligrams per deciliter, start intravenous Regular Human Insulin infusion drip with concentration of 1 unit per milliliter Normal Saline

<table>
<thead>
<tr>
<th>Blood glucose milligrams per deciliter</th>
<th>Regular insulin units per hour</th>
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<tbody>
<tr>
<td>&lt;120</td>
<td>0</td>
</tr>
<tr>
<td>120-170</td>
<td>1</td>
</tr>
<tr>
<td>171-200</td>
<td>2</td>
</tr>
<tr>
<td>201-250</td>
<td>3</td>
</tr>
<tr>
<td>&gt;251</td>
<td>5</td>
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1. Test Blood Glucose every hour until stable (when no change in insulin dosage for 6 hours) then test every 2 hours.

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### Post Resuscitation Order Set

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TIME______  
DATE______

3. Potassium sliding scale will only be used during rewarming phase as needed.
   Recheck serum Potassium level 1 hour after each infusion.

Patient Care – Induction Phase

- Administer sedation prior to initiation of neuromuscular blocking agents
- Obtain baseline data with Bispectral Index Monitor (BIS) and Peripheral Nerve Stimulator prior to initiation of neuromuscular blocking agents and sedatives.
- Baseline goal prior to sedative administration for BIS is 70-80.
- Sedated patients should maintain a BIS level of 40-60.
- ***Paralytics may alter BIS level***.
- Peripheral Nerve Stimulator baseline will be acquired using Train of Four.
- Baseline goal of Train of Four is 4 twitches out of 4 twitches (not to exceed 40-50 milliamps).
- Train of Four will be performed every 15 minutes during initiation and titration of neuromuscular blocking agent until goal of 2 twitches out of 4 twitches is achieved (do not exceed 40-50 Milliamps).
- Once goal of 2 twitches out of 4 twitches is achieved Train of Four will performed every 2 hours during paralytic infusion.
- Insert Naso-Gastric Tube or Oral-Gastric Tube and connect to intermittent low wall suction.
- Obtain blood glucose every 4 hours or as needed per Insulin Protocol.
- Check Arterial Blood Gases (ABG) baseline and repeat at 33 degrees Celsius.
- Hemoccult stool every morning.
- Monitor neurological status per Coronary Care Unit (CCU) protocol. Notify M.D. for shivering, myoclonus or seizure activity.

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***If Cool Guard Icy Catheter can not be obtained, the following cooling techniques will be implemented***

- Passive Convective Cooling - check appropriate boxes
  - Expose patient, dampen skin, cooling fan
  - Cooling blanket set to 33 degrees Celsius
  - Cool room
  - Ice packs applied to axilla / skin
- Active Central Cooling - check appropriate boxes
  - Naso-Gastric lavage with ice cold 0.9% Normal Saline repeat as needed

Labs

- Labs to be drawn NOW
  - Complete blood count (CBC), Prothrombin Time / Partial Thromboplastin Time (PT/PTT), Arterial Blood Gases (ABG)
  - Complete Metabolic Profile (CMP),
  - Creatinine phosphokinase (CPK), Troponin Ultra, Creatine Kinase Myocardial Bands (CK-MB)
  - Urinalysis
  - Lactate

- Labs to be drawn every 6 hours x 24 hours
  - Complete Metabolic Profile, Arterial Blood Gases (ABG), Complete blood count (CBC), Prothrombin Time / Partial Thromboplastin Time (PT/PTT), Phosphorus
  - Creatinine phosphokinase (CPK), Troponin Ultra, Creatine Kinase Myocardial Bands (CK-MB)

- Labs to be drawn 12 hours post arrest
  - Blood Cultures x 2

Daily Diagnostic Testing

- Basic Metabolic Profile, Complete Blood Count,
- Arterial Blood Gas, Portable Chest X-Ray while on ventilator
- Electrocardiogram (EKG) daily

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## PHYSICIAN'S ORDER FORM

### CCU Adult Induced Hypothermia:

**Post Resuscitation Order Set**

**TIME**___________  **DATE**_________

**Patient Care – Rewarming Phase**

- 24 hours post target temperature, initiate rewarming
- Time Rewarming started:

**Time target temperature of 36.1 degrees Celsius met:**

- Notify M.D. of Central Venous Pressure (CVP) < 4
- Empty Foley at start of rewarming
- Continue sedation, analgesics and neuromuscular blocking agents until temperature is equal to or greater than 36.1 degrees
- Celsius (discontinue neuromuscular blocking agents first, then wean sedation and analgesic infusions)

**Coolguard ICY Catheter Induced Hypothermia**

- Activate rewarming (program Cool Guard for 0.5 degrees Celsius/hour for target temperature of 36.1 degrees Celsius)
- May place warm blankets (Do not use Bair Hugger)
- Maintain Coolguard at 36.1 degrees Celsius for 18 hours once target temperature has been achieved

**Passive Cooling Induced Hypothermia**

- Remove Cooling Blanket and cover patient with dry sheets
- Resume passive cooling methods if temperature increases more than 1 degree Celsius per hour or exceeds 37 degrees Celsius.

**Labs**

Basic Metabolic Profile, Arterial Blood Gases (ABG), Lactate every 6 hours until temperature 36.1 degrees Celsius

**Medications**

- Meperidine (Demerol) 12.5 milligrams intravenous may repeat in 5 minutes times one dose for shivering during rewarming phase only.

*** If above methods are ineffective call MD for further orders (may need to restart neuromuscular blocking agents and sedation.)

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