

INCLUSION CRITERIA

Any patient who has a cardiac arrest lasting greater than 1 min with sustained ROSC

EXCLUSION CRITERIA

None

MEASURES

- Percent of time temperature within goal range
- Percent of MAP within goal range
- Percent of glucose within goal range
- Mortality rate

POST-CPR GOALS

- Normotension for age
- Normoxia (SpO2 94-99%) *Cardiac pts may differ*
- Normocapnia (CO2 35-45), use pH if chronic hypercapnia/metabolic alkalosis, *Cardiac pts may differ*
- Normoglycemia (80-200 mg/dl)
- Monitor/treat seizures

POST CARDIAC ARREST LABS

Every 4 hours or PRN:

- Blood glucose (q1h if on insulin infusion)
- ABG with ionized calcium and lactate

Every 12 hours or PRN:

- BMP, magnesium, phosphorus
- CBC

Daily:

- PT/PTT with fibrinogen
- Hepatic function panel
- Amylase and lipase

Once/PRN:

- Mixed venous (if available)

Consider Initial screening

- BNP
- Troponin

RN PRIORITIES AFTER CPR

- Elevate head of bed 30 degrees
- Strict temperature control
- Strict blood pressure control
- Strict oxygen saturation
- Strict glucose control

Standard Monitoring:

Arterial Line, Pulse ox, Urine Output, Telemetry, Continuous temperature probe (rectal or foley), End-tidal Co2

Sustained Return of Spontaneous Circulation (ROSC)

- Consider STAT head CT if neurologic exam asymmetrical or loss of brain stem reflexes
- Monitor BP closely, aggressively prevent hypotension, see *minimum BP goal by Age table*
- Utilize Post Cardiac Arrest Order Set
- RN utilize "Post Cardiac Arrest" flow sheet
- Post Cardiac Arrest goal sheet at bedside

Baseline mental status?

Yes

No

Targeted Temperature Management (TTM)

- Core temp goal 36-37.5°C
- Prevent fever
- See Post Cardiac Arrest labs
- Consult Neurology and order continuous EEG
- Monitor and treat seizures
- Order EKG and Echo
- Consult cardiology as indicated for abnormal EKG/Echo

Clinically Worsening

Stable 24 hours?

No

Yes

Return to Standard Care

- Consider spacing labs
- Return to standard critical care

Continue TTM for 72-120 hours

Targeted Temperature Management (TTM)

****Delaware Valley CICU ONLY:
See Induced Hypothermia^{1**}**

- Initiate TTM core temp goal 36-37.5°C **minimum 72 hours** (up to 120 hours)
- Start continuous temperature monitoring
- Prevent fever
- Order EKG and Echo
- Consider paralytic infusion to prevent shivering and tremors
- Sedation to maintain SBS -2
- See Post Cardiac Arrest labs
- Consult Neurology and order continuous EEG
- Monitor and treat seizures
- Follow neurology recommendations, consider imaging after 72 hours for prognosis
- Consult cardiology as indicated for abnormal EKG/Echo

Assess Neurologic Status

- 72 hours after event can stop TTM and other target therapies
- Discuss prognosis with family based on neurologic exam and imaging
- If appropriate contact organ procurement organization

Profound Neurologic Injury

- If at any point child has signs of profound neurologic injury TTM can be stopped
- Profound neurologic injury is associated with poor prognosis
- Prepare family for prognosis and discuss end of life care
- Contact Organ Donation Program

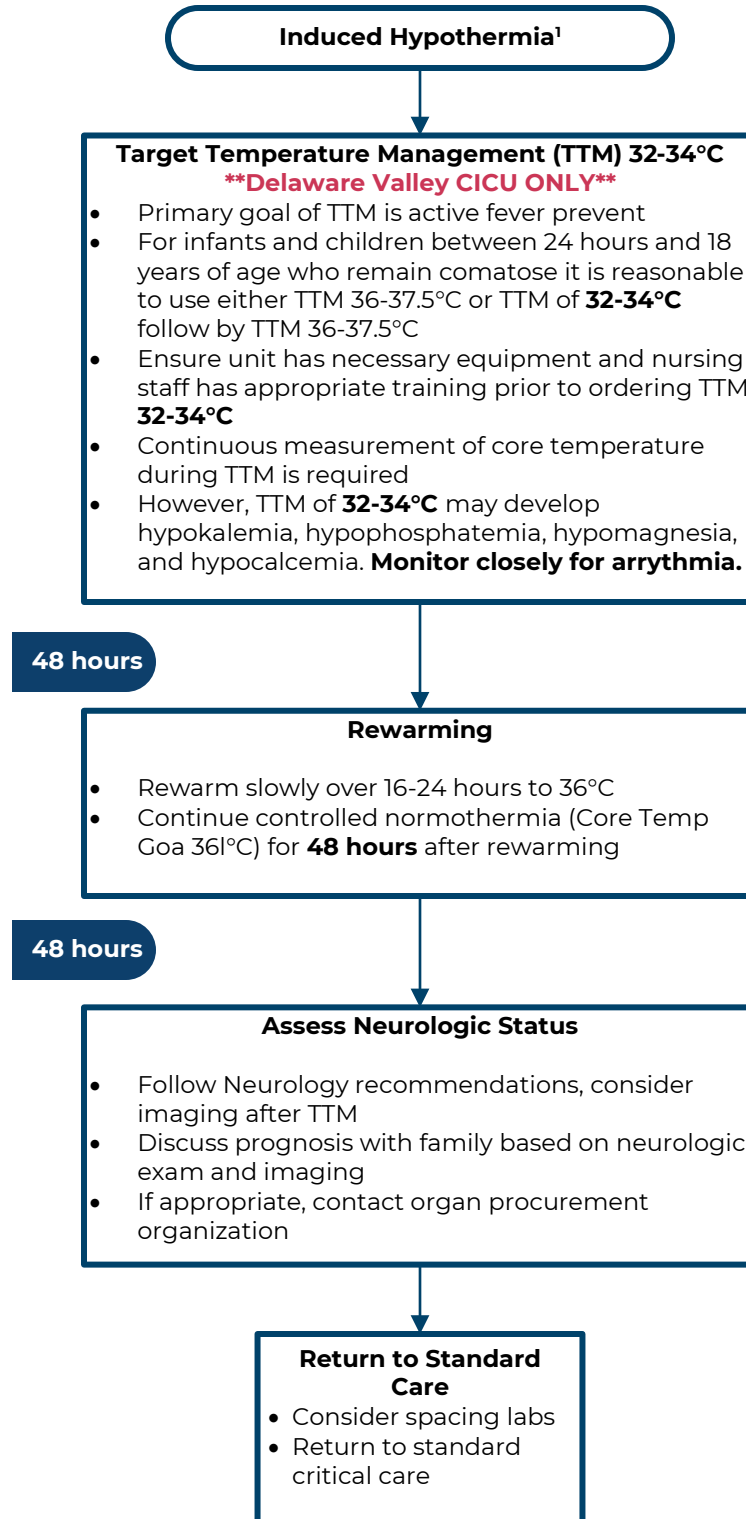
Signs of Profound Neurologic Injury

- Evidence of brainstem herniation or No brainstem reflexes
- And no physical movements/seizure and suppressed EEG

Minimum Blood Pressure Goals by Age

Age Group	MAP	SBP
Neonate	> 50	> 70
1 to 12 months	>50	>80
1 to 2 years	>50	>90
3 to 5 years	>60	>95
6 to 12 years	>70	>100
13 to 17 years	>75	>110

^{*}Consider lower BP goals if severely depressed ventricular function or postoperative bleeding
^{*}Consider higher BP goals if high central venous pressure



Components of Post-Cardiac Arrest Care

- ☐ Measure oxygenation and target normoxemia 94%-99% (or child's normal/appropriate oxygen saturation).
- ☐ Measure and target Paco2 appropriate to the patient's underlying condition and limit exposure to severe hypercapnia or hypocapnia.
- ☐ Set specific hemodynamic goals during post-cardiac arrest care and review daily
- ☐ Monitor with cardiac telemetry.
- ☐ Monitor arterial blood pressure.
- ☐ Monitor serum lactate, urine output, and central venous oxygen saturation to help guide therapies.
- ☐ Use parenteral fluid bolus with or without inotropes or vasopressors to maintain a systolic blood pressure greater than the fifth percentile for age and sex
- ☐ Measure and continuously monitor core temperature.
- ☐ Prevent and treat fever immediately after arrest and during rewarming.
- ☐ If patient is comatose apply TTM (32° C-34° C) followed by (36° C-37.5° C) or only TTM (36° C-37.5° C)
- ☐ Prevent shivering.
- ☐ Monitor blood pressure and treat hypotension during rewarming.
- ☐ If patient has encephalopathy and resources are available, monitor with continuous electroencephalogram.
- ☐ Treat seizures.
- ☐ Consider early brain imaging to diagnose treatable causes of cardiac arrest.
- ☐ Measure blood glucose and avoid hypoglycemia.
- ☐ Maintain electrolytes within normal ranges to avoid possible life-threatening arrhythmias.
- ☐ Treat with sedatives and anxiolytics.
- ☐ Always consider multiple modalities (clinical and other) over any single predictive factor
- ☐ Remember that assessments may be modified by TTM or induced hypothermia.
- ☐ Consider electroencephalogram in conjunction with other factors within the first 7 days after cardiac arrest.
- ☐ Consider neuroimaging such as magnetic resonance imaging during the first 7 days.

Disclaimer: The clinical pathways are based upon publicly available medical evidence and/or a consensus of medical practitioners at Nemours Children's Health ("Nemours") and are current at the time of publication. These clinical pathways are intended to be a guide for practitioners and may need to be adapted for each specific patient based on the practitioner's professional judgment, consideration of any unique circumstances, the needs of each patient and their family, and/or the availability of various resources at the health care institution where the patient is located.

VERSION MANAGEMENT

- Version 1.0 (5/9/2023): Go Live.
- Version 2.0 (12/23/2025): Look back review completed.
- Version 2.1 (6/20/2026): Updated BP tables.

Questions about this pathway should be directed to clinicalpathways@nemours.org.

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