

NICU HIE MANAGEMENT ALGORITHM

Legend:

< = less than
> = greater than
FHR = Fetal Heart Rate
q = every
h = hour
PPHN = Persistent Pulmonary
Hypertension of the Newborn
ACoRN = Acute Care of at-Risk
Newborns

Complete ACoRN Primary Survey and
relevant sequences

Complete ACoRN Neurology Sequence

One of:

- Cord pH \leq 7.00
- Base Deficit $>$ -16
- pH 7.01 to 7.15 or base deficit -10 to -15.9 on cord gas or blood gas within 1h
AND one of
 - Apgar score of \leq 5 at 10 min
 - At least 10 min of positive pressure ventilation

Relative Contraindications:

- \leq 1800 grams
- $<$ 35 weeks
- Severe PPHN (FiO₂ $>$ 0.8)
- Severe coagulopathy
- Intracranial hemorrhage / severe head trauma

- Complete Abbreviated Encephalopathy Table (AET)
- Complete ACoRN Neurology Sequence

- $<$ 8 hours of age **and**
- 3 of 6 criteria for AET **or**
- Seizures

- $<$ 8 hours of age **and**
- \leq 2 criteria for AET

Initiate Strict Normothermia
on Criticool

- \geq 8 hours of age **and**
- 3 of 6 criteria for AET **or**
- Seizures

- Complete Abbreviated Encephalopathy Table (AET)
- Repeat q1h until 8 hours of age

YES

NO

- 3 of 6 criteria for AET **or**
- Seizures

YES

YES

Initiate Therapeutic Hypothermia

\geq 8 hours of
age?

NO

YES

Initiate Strict Normothermia on
Criticool

Abbreviated Encephalopathy Table (AET)				
Category	Normal	Mild	Moderate	Severe
Level of alertness	<input type="checkbox"/> alert, normal sleep wake cycles	<input type="checkbox"/> hyperalert	<input type="checkbox"/> lethargy	<input type="checkbox"/> stupor or coma
Spontaneous activity	<input type="checkbox"/> normal	<input type="checkbox"/> normal	<input type="checkbox"/> decreased activity	<input type="checkbox"/> no activity
Posture	<input type="checkbox"/> flexed	<input type="checkbox"/> mild distal flexion	<input type="checkbox"/> arms flexed, legs extended (decorticate)	<input type="checkbox"/> arms and legs extended (decerebrate)
Tone	<input type="checkbox"/> normal	<input type="checkbox"/> normal	<input type="checkbox"/> hypotonic	<input type="checkbox"/> flaccid
Primitive reflexes	<input type="checkbox"/> normal suck and Moro	<input type="checkbox"/> weak suck, strong Moro	<input type="checkbox"/> weak suck, incomplete Moro	<input type="checkbox"/> absent suck, absent Moro
Autonomic (one of)				
Pupils	<input type="checkbox"/> reactive	<input type="checkbox"/> dilated reactive	<input type="checkbox"/> constricted	<input type="checkbox"/> dilated or nonreactive
Heart rate (HR)	<input type="checkbox"/> normal	<input type="checkbox"/> tachycardia	<input type="checkbox"/> bradycardia	<input type="checkbox"/> variable HR
Respirations	<input type="checkbox"/> normal	<input type="checkbox"/> normal	<input type="checkbox"/> periodic	<input type="checkbox"/> apnea
Seizures	<input type="checkbox"/> none	<input type="checkbox"/> none	<input type="checkbox"/> common	<input type="checkbox"/> uncommon