



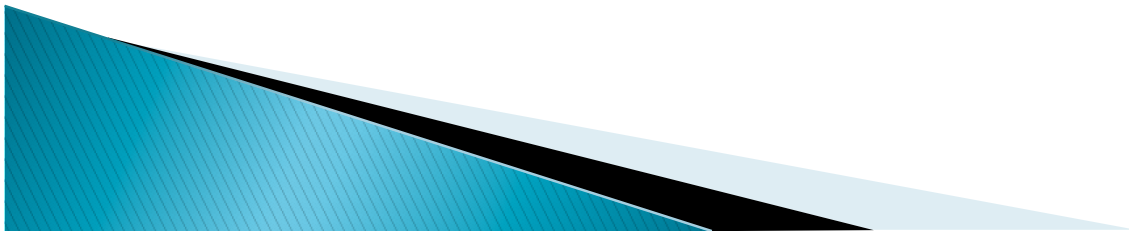
# Sarnat Scoring

Jayne Solomon ARNP-BC  
St. Joseph's Women's Hospital  
August 5, 2017



# Disclosure

- ▶ I have nothing to disclose





# Objectives

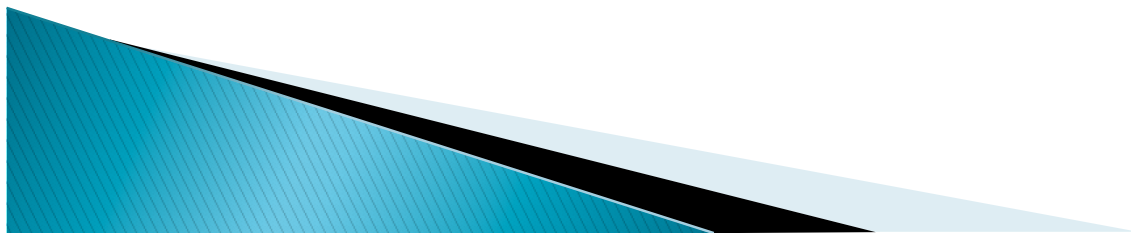
- ▶ Describe the rationale for Sarnat Scoring Certification.
- ▶ Review the requirements for Sarnat Scoring Certification.
- ▶ Review strategies that will assist teams in obtaining and maintaining certification.





# Rationale for Certification Process

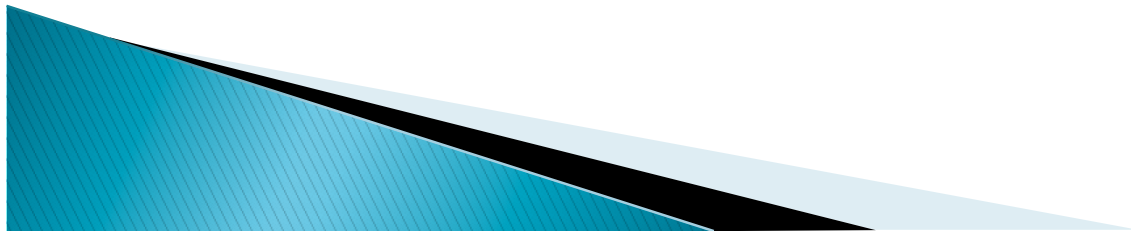
- ▶ Establishing competency in scoring reduces inter-examiner variability and increases the accuracy of individual examiner scores
- ▶ Increases sensitivity of identifying infants who qualify for cooling
- ▶ Inclusion criteria for cooling include both objective and subjective data



# Initial Screening Criteria for Therapeutic Hypothermia



- ▶ Gestational Age greater than or equal to 35 weeks
- ▶ Birth weight greater than or equal to 1.8 kg
- ▶ Less than or equal to 6 hours since insult occurred
- ▶ Biochemical criteria
- ▶ Abnormal neurological exam





Check box if examiner is Gold Standard ☐ If exam is conducted by physician desiring to be certified, provide name of Gold Standard Examiner: \_\_\_\_\_

Examiner Name \_\_\_\_\_ Date of Exam: \_\_\_\_/\_\_\_\_/20\_\_\_\_

Site Name \_\_\_\_\_ Time of Exam: \_\_\_\_:\_\_\_\_:\_\_\_\_

Infant # \_\_\_\_\_ (refer to infant by number. Initials or names should not be used)

- Does the infant have seizures?
- Is the infant sedated/paralyzed?

Y N  
Y N

See definitions for Neurologic Examination on page 2

The 6 CATEGORIES:		SIGNS OF HIE IN EACH CATEGORY			Your Determination:	
	NORMAL/ MILD HIE	MODERATE HIE	SEVERE HIE			
1. LEVEL OF CONSCIOUSNESS	1	2 = Lethargic	3 = Stupor/coma			= _____
2. SPONTANEOUS ACTIVITY	1	2 = Decreased activity	3 = No activity			= _____
3. POSTURE	1	2 = Distal flexion, complete extension	3 = Decerebrate			= _____
4. TONE	1	2a = Hypotonia (focal or general) 2b = Hypertonia	3a = Flaccid 3b = Rigid			= _____ (note a or b)
5. PRIMITIVE REFLEXES						Code highest level
Suck	1	2 = Weak or has bite	3 = Absent			= _____
Moro	1	2 = Incomplete	3 = Absent			= _____
6. AUTONOMIC SYSTEM						Code highest level
Pupils	1	2 = Constricted	3 = Deviation/dilated/non-reactive to light			= _____
Heart rate	1	2 = Bradycardia	3 = Variable HR			= _____
Respiration	1	2 = Periodic Breathing	3a = Apnea requiring ventilator 3b = on vent w/ spont breaths 3c = on vent w/out spont breaths			= _____ (if vent, code a or b)

- Total # Categories should be NO MORE THAN 6 (Count Only the Highest Level in each sign)

Mild

#### BABYBAC II NEUROLOGIC EXAM CERTIFICATION FORM

New examiners should review the study protocol and training slides prior to completing the certification form.

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	NORMAL/ MILD HIE	MODERATE HIE	SEVERE HIE		
1. LEVEL OF CONSCIOUSNESS	1	2 = Lethargic	3 = Stupor/coma	= 15	
2. SPONTANEOUS ACTIVITY	1	2 = Decreased activity	3 = No activity	= _____	
3. POSTURE	1	2 = Distal flexion, complete extension	3 = Decerebrate	= _____	
4. TONE	1	2a = Hypotonia (focal or general) 2b = Hypertonia	3a = Flaccid 3b = Rigid	= _____ (note a or b)	
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Heart rate	1	2 = Bradycardia	3 = Variable HR		= _____

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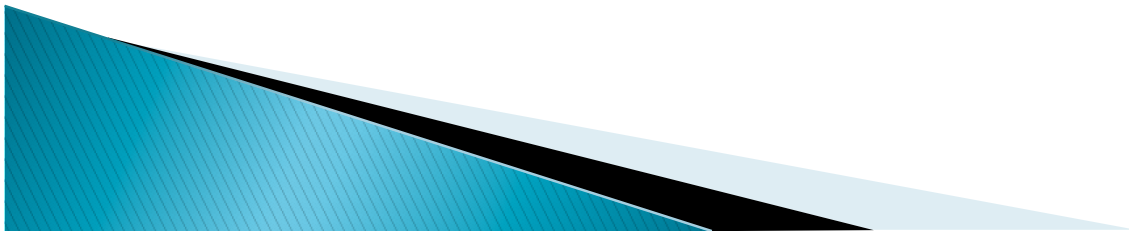
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# \_\_\_\_\_ Mild/Normal # \_\_\_\_\_ Moderate # \_\_\_\_\_ Severe



# Validation Tool

- ▶ Streamline certification process
- ▶ Educate team members
- ▶ Evaluate performance
- ▶ Correctly document the exam





## Components of Education and Skills Validation

- ▶ Establish eligibility
- ▶ Knowledge Review
- ▶ Performance & Critical Steps
- ▶ Validation
- ▶ Submission

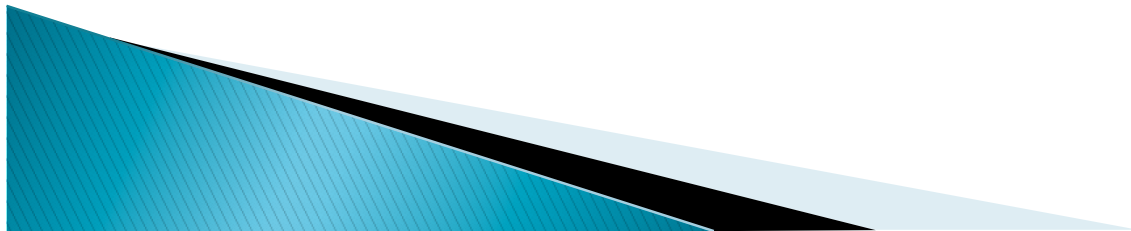






# Establish Eligibility

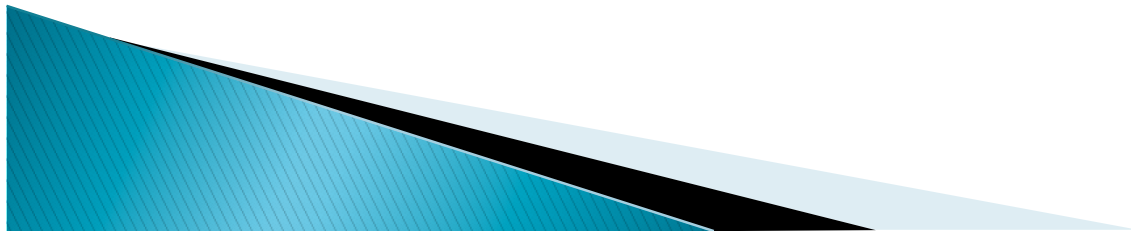
- ▶ Screen for appropriate infants greater than or equal to 35 weeks
- ▶ Type of infant for exam
- ▶ Two examinations required
- ▶ Two infants with neurologic abnormalities OR one infant with neurologic abnormality and one with normal findings





# Knowledge and Review

- ▶ HIE Supportive Care Management Guidelines. State of Florida Protocol
- ▶ Policy and Procedure: Care of the Infant with HIE
- ▶ View: Screening Neurologic Exam For Therapeutic Hypothermia @ <http://hopefn3.org>





# Performance

- ▶ Verbalize if infant meets the biochemical criteria for cooling
- ▶ State the components of the observational portion of the exam
- ▶ State the components of the active portion of the exam
- ▶ Complete Neurologic Exam Certification Form





# Validation

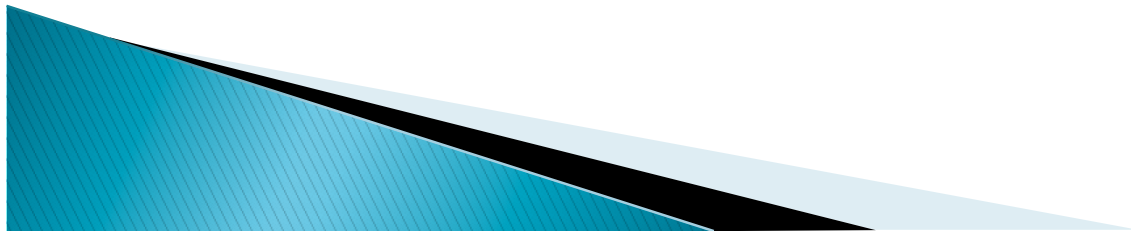
- ▶ Gold standard examiner scores the infant
- ▶ Team member independently examines infant and completes neurologic exam form
- ▶ Gold standard examiner reviews exam with team member
- ▶ Discuss any differences in exam scoring and form completion
- ▶ \*If exams are discordant in more than 1 **category**, repeat competency
- ▶ Two successful exams are required for certification





# Submission/Processing

- ▶ If your center is participating in the BABYBAC II Trial, email PDF of both exams to Meg Crawford for review by Dr. Shankaran
- ▶ If your center is not participating, Sarnat Certification Scoring forms can be emailed to Livia Sura ([livia.sura@peds.ufl.edu](mailto:livia.sura@peds.ufl.edu))
- ▶ A list of certified examiners will be posted on the RTI & FN3 website





# Putting it all together

- ▶ Sarnat Scoring Education and Skills Validation
- ▶ Neurological Exam Certification Form
- ▶ Sarnat Certification PowerPoint
- ▶ Neurologic Exam PowerPoint
- ▶ HIE Protocol (State of Florida)
- ▶ Policy & Procedure: Care of the infant with HIE (unit specific)
- ▶ Completed Exams
- ▶ Team Roster

