ESC in the NICU: A New Approach to an Old Problem

IMPLEMENTATION AT HILLCREST MEDICAL CENTER

HMC NICU

- 40 bed, Level 3 unit
- 2000 births/year, 650 NICU admissions
- Open unit, pod system design
- 2 isolation rooms, 1 procedure room
- 2 rooming-in rooms in the unit, 2 potential in L&D
- Very medically and socially high-risk population
- Historically used Finnegan Scoring System
  - Long length of stay

Why Change?

- Reduce pharmacologic treatment
  - Morphine not benign
  - Long-term effects not known
- Reduce LOS
- Reduce cost
- Simplify and decrease variability in scoring
- Encourage collaboration between nurses, providers, and parents
- Family-centered care

The Plan: Educate First

- Go Live date of September 1st, 2019
  - Start in NICU only, Finnegan continues in NBN
- Train all NICU staff
  - 80 nurses, 10 NNPs, 7 Neos, support staff
- Identify ESC "champions"
- Educate OB staff and residents

The Plan: Change our Mindset

- Focus on function not symptoms
- Focus on comfort not alleviation
- Focus on the whole baby not individual parts
- Focus on manageability not resolution
- **ESC is a shift in thinking: We are not denying a baby is withdrawing, we are just changing how we approach and treat it.**

The Plan: Change Our Approach

- Change bed location
  - Old- All together in one corner
  - New- Separate and isolate when possible, low lighting, quiet
- Change staffing grid
  - Old- 1:3-4
  - New- 1:2 most of the time
- Invest in change
  - Sound machines, swings, portable monitors, baby carriers

The Process: Screening

- Identify at-risk babies
  - Limited or lack of prenatal care (<5 visits)
  - Concerning maternal behaviors
  - History of use in the last 3 years
  - Positive screen at or after 20 weeks gestation
- Prenatal OB education in the outpatient clinics
- Prenatal consult at time of delivery
- Cord stat sent
- 5 days of observation

The Process: Observation

- First 48hrs spent with mom in Mother-Baby Unit
- Transfer to NICU at or around 48hrs to complete 5 day observation period
- Offer rooming-in as appropriate and able
- DHS consult
- Epic Documentation
  - Flow sheet work-around

Epic Documentation

Component	Yes/No
Eating	
Poor eating due to NAS?	
Sleeping	
Sleep <1hr due to NAS?	
Consoling	
Able to console within 10 min?	
Parental Presence	
Is a care partner present?	
Management Decision	
Recommend a team huddle?	

The Process: Treatment

- Focus on non-pharmacological treatments first
  - Swings, pacifiers, cuddling, effective feeds, diaper rash treatments
- Morphine prn if needed
  - Starting dose of 0.04mg/kg
  - Phenobarb is second-line

Baby wearing

The Results: Undeniable

- Decreased LOS
  - Mirroring national data
- Decreased morphine treatment
  - Both in number of doses and overall dosage amount
- Decreased cost
- Increased family satisfaction
- Increased nursing and provider satisfaction

ESC Concerns

- Changing attitudes are hard
- Will babies be missed?
- Will babies be undertreated?
- What about GI symptoms?

Challenges to HMC

- Open unit
  - Difficult to keep a low-stimulation environment
- Limited ability for parents to room-in
  - Limited rooms
  - COVID
- High-risk population
  - High rate of DHS involvement

Continued Growth and Challenges

- Expanded to NBN July 2020
  - All Mother-Baby staff trained
  - Successful implementation
- Joined OPQIC
- Considering changing 48hr rule
  - Expanding to when moms are discharged
- Watch the pendulum
  - Swinging to undertreating
- OB struggles

Take Home Message

- ESC changes how we approach and treat NAS in a positive way that is easily adaptable for most, if not all NICUs.
- Better care for babies
- Cost effective
- Tools and process are easy to understand and use
- Improvement is easy to see and measure
- Change in attitudes is easier than expected
- Parental involvement is great but not a deal-breaker if not there
- If we can do it, anyone can!