ESCaping the Finnegan: Implementing the Eating, Sleeping, Consoling Approach at the Vermont Children’s Hospital

Adrienne Pahl MD
Neonatal Perinatal Medicine Fellow
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Disclosures

• I have no relevant financial relationships to disclose or conflicts of interest to resolve

Objectives

• Review the Eating, Sleeping, Consoling Care Tool.
• Discuss training process and implementation at the Vermont Children’s Hospital.
• Share challenges and opportunities in implementation

NAS in 2019

Prevalence of opioid use disorder per 1,000 delivery hospitalizations - 28 states, 2013–2014

(Haight, 2018)

Variation in Care: an opportunity for process improvement?

• Identification of cases
• Type of pharmacologic treatment
• Prenatal counseling
• Weaning of pharmacologic treatment
• Location of care
• Staff training
• Length of hospital stay
• Hospital policies and protocols
• Assessment tool
• Threshold for pharmacologic treatment

(Metta, 2013, Bogen, 2017)
Evidence for a Standardized Care Pathway

Large multicenter collaboratives show that increased standardization in NAS management is associated with reduced length of stay:

- Vermont Oxford Network
- Ohio Children’s Hospital Neonatal Research Consortium
- Yale, Boston Medical Center, and Dartmouth show that symptom prioritization and standardized non-pharmacologic care are associated with reduced length of stay and reduced need for pharmacologic treatment.


ESC Approach

- Prioritizes functional symptoms
- Standardizes non-pharmacologic care
- Clear threshold for pharmacologic treatment
  - Unable to eat, sleep, or console after optimizing non-pharmacologic care
- No exam
- Empowers parents and parental presence is part of treatment

Finnegan Approach

- Scores all symptoms of withdrawal
- Focus is on a number
- No guidance for non-pharmacologic care
- Varied threshold for pharmacologic treatment
  - (3 scores >8 or 2 scores >12 widely used, not validated)
- Exam every 3-4 hours before feeds

ESC Care Tool

1. Symptom prioritization
2. Parental involvement
3. Standardized non-pharmacologic care

NNEPQIN & neoQIC Training and Quality Improvement

- ESC Care Tool & Manual
- Simulation based training (Dartmouth)
- Tools available on neoQIC website
- Data monitoring for quality improvement
- Monthly webinars

Planning for change!
Vermont Children’s Hospital
ESC Planning group

IMPLEMENTATION TEAM
Jenifer Midgett, RN
Sara Burton, RN
Alison Cary, RN
Fran Grimm, RN
Naomi Jakobolt, RN
Amelle Thurston, RN

ESC SUPPORT MEMBERS
Michele Bouchard, RN
Katie Desorcie, RN
Barbara Herle, RN
Susan Lord, RN
Jennifer Robare, RN
Holly Seamore, RN
Tracey Wagner, RN

PROVIDERS
Karin Gray, MD
Anne Johnston, MD
Adrienne Pahl, MD
Molly Rideout, MD
Michelle Shepard, MD
Susan White, APRN
Leslie Young, MD

ESC Care Tool
Implementation Timeline

NNEPQIN Webinars
June, 2017
ESC Workgroup Planning Meetings
December, 2017
Education Sessions
June, 2018
Go-Live
July, 2018

Education Plan

Staff
Provider
Parent

Train the Trainer

• Team of “gold star raters” identified
  – 1 RN and 1 MD previously trained in ESC
  – 4 RNs and 2 MDs attended Dartmouth Simulation Day in January, 2018

Staff Education

• 16 in person trainings at varied times
• 216 staff members (staff nurses, transport teams, pharmacists, and providers)

Overview of ESC Approach and Care Tool Case review: 1 written and 3 video cases (>80% agreement with “gold star rater”)

Staff Education

• Co-score with second nurse until 80% agreement
• Resources:
  – “Gold star rater” scheduled for each shift
  – ESC Resource Binder available on each unit
• Independent study tool to train future staff
Provider Education

- Email announcement
  - Dr. Matt Grossman (Yale) video: ESC Approach
  - Dr. Bonny Whalen (Dartmouth) video: ESC Care Tool
- Medical Staff Meetings
- Pediatric Grand Rounds
- Family Medicine Grand Rounds
- Pediatric resident education session
- OB/Gyn Research Retreat
- ICON ESC Handout

Parent Education

- Goal: consistent ESC information
- Our Care Notebook
  - Includes NNEPQIN information on ESC
  - NeoMed / OBs share at prenatal visits
  - Copies available on inpatient units
- ESC presented to obstetric providers

ESC Implementation

- Education Plan
  - Staff
  - Providers
  - Parents
- Documentation Plan
  - Paper → Electronic Health Record

EHR Integration

- Go Live: July 18, 2018
- modified Finnegan → ESC Care Tool
Planning for Bumps in the Road

- Measures over time
- Monthly case review themes

Measures Over Time

Non-pharmacologic care:
- Rooming In
- Breastmilk Feeds

Length of Stay:
- Non-pharmacologic care only
- Pharmacologically treated

Pharmacologic care:
- Pharmacologic Treatment Rate
- Discharge on Medication

Rooming In

- Percent Rooming In for Entire Hospitalization
- ESC Roll Out: July, 2018
- Median: 52%

Breastmilk Feeds

- Percent Received Maternal Breastmilk
- ESC Roll Out: July, 2018
- Median: 74%

Measures Over Time

Non-pharmacologic care:
- Rooming In
- Breastmilk Feeds
- No Measurable Change

Length of Stay:
- Non-pharmacologic care only
- Pharmacologically treated

Pharmacologic care:
- Pharmacologic Treatment Rate
- Discharge on Medication

Length of Stay

(Non-pharmacologic Treatment only)

- ESC Roll Out: July, 2018
- Median: 5.1 days
**Length of Stay**
(Non-pharmacologic & Pharmacologic Treatment)

- Median: 8.7 days

**Measures Over Time**
- Non-pharmacologic care: Rooming In Breastmilk Feeds
- Length of Stay: Non-pharmacologic care only Pharmacologically treated
- Pharmacologic care: Pharmacologic Treatment Rate Discharge on Medication

**Pharmacologic Treatment Rate**
- ESC Roll Out July, 2018 Median: 27% to 17%

**Discharge on Medication**
- ESC Roll Out July, 2018 Median: 25% to 0%

**Zero is not the Goal**
- Goal is appropriate treatment:
  - Unable to eat, sleep, OR console
    - Due to NAS
    - Despite optimized non-pharmacologic care
Just-in-Time Opioid Dosing

- Not an official part of the ESC Care Tool
- Many hospitals implement following ESC

Eliminates need for long taper
Reduces iatrogenic withdrawal
Often effective with 1-2 doses

Scheduled Dosing with Taper

Just-in-Time Dosing

Just-in-Time Dosing

- Boston Medical Center reports:
  - Average number of doses (Methadone): 2 (SD 1)
  - Mean timing: DOL 4.3 (SD 1.5)\(^1\)

- Vermont Children’s Hospital
  - No official change in management with ESC implementation
  - Attending discretion

Goal Treatment Rate is not Zero!

(1. Wachman, 2019 – NNEPQIN Webinar)

Planning for Bumps in the Road

- Measures over time
- Monthly case review themes

Monthly Case Review Themes

1. Huddle and transfer workflow
   - Why hold a huddle?
   - Who attends a huddle?
   - What happens at a huddle?

2. Support parents / caregivers
   - Cuddler Program
   - Discharge planning

1. Huddle and Transfer Workflow

Why hold a huddle?
Who attends a huddle?
What happens at a huddle?
Formal Parent / Caregiver Huddle

Why? Unable to eat, sleep, OR console
       Due to NAS

Who? Parent / caregiver and Nurse

What? Purposeful plan to optimize non-pharmacologic care

Full Care Team Huddle

Why? Unable to eat, sleep, OR console
       Due to NAS
       Despite optimized non-pharmacologic care

Who? Parent / caregiver, Nurse, and provider
       *NICU provider should be called to attend unless NBN attending in all the bedside

What? Consideration of transfer and pharmacologic therapy

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Monthly Case Review Themes

1. Huddle and transfer workflow
   Why hold a huddle?
   Who attends a huddle?
   What happens at a huddle?

2. Support parents / caregivers
   Cuddler Program
   Discharge planning

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Cuddler Program

- Established for NICU patients in 2012
- Special training required for volunteers to safely hold medically complex infants
- Scheduled for 3 hour shifts during daytime hours
- Cuddlers now prioritize ESC support before NICU

Goal:
- Establish separate newborn nursery cuddler group
- Consider on call scheduling for opioid exposed newborns

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1. Huddle and Transfer Workflow

First “Yes”:
- Optimize non-pharmacologic care in a Formal Parent / Caregiver Huddle

Persistent “Yes” after Formal Parent / Caregiver Huddle:
- Consider transfer and immediate treatment in a Full Care Team Huddle

* Parents may participate in person or by phone *

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2. Support Parents / Caregivers

“Parents as treatment”
- Anticipatory guidance at prenatal visit
- Prenatal handout encouraging respite planning
- In hospital supports for parental rest
  - Cuddler Program
- Pre-discharge planning for home supports

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Discharge Criteria

Discharge criteria emphasize identification of supports at home

- Infant is at least 96 hours old
- Caregiver education complete and caregiver is comfortable with discharge plan
- Caregiver home respite supports identified
- Home Health referral placed
- Safe sleep education complete and no use of sleep aids (e.g. Mamaroo, swing, etc.) for 24 hours prior to discharge

If Methadone received:
- Stable dose or off Methadone for 72 hours prior to discharge

* Monitoring may occur in NBN if Eating, Sleeping, AND Consoling well for 24 hours after a single dose
Monthly Case Review Themes

1. Huddle and transfer workflow
   - Why hold a huddle?
   - Who attends a huddle?
   - What happens at a huddle?

2. Support parents / caregivers
   - Cuddler Program
   - Discharge planning

Summary

- The ESC Care Tool is now the standard assessment for opioid exposed newborns at Vermont Children’s Hospital
- Fewer infants are treated with Methadone and even fewer are sent home on Methadone following implementation
- Continuous case review is essential to a successful implementation of the ESC Care Tool at a new site

Questions / Comments

Adrienne.Pahl@uvmhealth.org