Eat, Sleep, Console (ESC)
Changing Our Approach to infants with Neonatal Abstinence Syndrome (NAS)

Description
This course assists the learner in identifying a new way to care for infants with neonatal abstinence syndrome. It will take approximately 35 minutes to complete.

Instructions
- This course is tested and guaranteed to function on an Advocate Aurora network PC
- How to navigate this course
- This course does have sound. Please complete it at a computer with speakers, a headset or earbuds

Technical Contact
For technical questions contact:
- Advocate facilities: HR Direct – online or 847-685-1447 (Tie Line 23-1447)
- Aurora facilities: 414-647-3520 in Milwaukee or 1-800-889-9677

Content Contact
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Created: June 2019
Reviewed:
Updated:
Learning Objectives

• Describe the trend in the maternal opioid crisis and how it is affecting the incidence of Neonatal Abstinence Syndrome
• Define the acronyms ILPQC, MNO, NAS, and OEN
• Compare and contrast the modified Finnegan and Eat Sleep Console (ESC) assessment tools
• Name 3 non-pharmacologic measures which can be used to care for OENs
• Apply ESC to a case study
ESC Changing Our Approach to infants with NAS

• A new approach to caring for these infants includes:
  – Couplet care and parent as treatment
  – Use of non-pharmacological treatment measures
  – Standardized pharmacological treatment protocols
  – New parent education materials
  – New bedside assessment tools for the newborn
  – Creation of a safe discharge plan

• Answer the following types of questions for team members:
  – You will be expected to apply this new method of care and use the described tools when caring for newborns affected by opioid use
  – You will be expected to know how to utilize both the modified Finnegan and Eat, Sleep, Console Assessment tools for NAS infants
  – The new approach improves care by
    • keeping mom and baby together
    • decreasing the amount and duration of neonatal pharmacological treatment
    • Shortening LOS
    • Insuring a safe discharge plan
Eat, Sleep, Console (ESC)  
Changing our Approach Neonatal Abstinence Syndrome (NAS)

The scope of the problem
Mothers Affected by Opioids in IL: scope of the problem

Rate of *Recorded* Maternal Antenatal Opioid Use among Deliveries, Illinois Discharge Data 2011-2015

The recording of maternal opioid use increased by 5.9% per quarter during 2011-2015

Pregnancy is a window of opportunity to identify women with OUD and link to treatment as well as begin to develop a plan for optimizing her baby’s care.
Neonatal Abstinence Syndrome in IL: scope of the problem

53% increase in rate of NAS from 2011 – 2016
NAS rate increased 2.1% per quarter from 2011-2016
MNO focus for improvement

- Prevention
- Screening and Linkage to Care
- Optimizing Care for Moms/Babies
Changing our Approach to Neonatal Abstinence Syndrome (NAS)

Opioid Exposed Newborns (OENs)
Neonatal Opioid Withdrawal Syndrome (NOWS)
OENs and NOWS demonstrate NAS

- Clinical diagnosis, multisystem disorder
- Clinical presentation
  - Tremors, irritability, excessive crying, diarrhea, seizures
  - Long-term effects unknown
- Increasing incidence in USA and worldwide
  - Maternal opioid abuse 1.2 mothers per 1000 live births in 2000 → 5.6 mothers per 1000 live births in 2009
  - NAS diagnoses 1.2 per 1000 live births → 3.4 per 1000 live births
  - NAS diagnosis may result in prolonged hospitalization and costs
  - Illinois statistics echo national trends (ILPQC MNO Project)

(Kocherlakota, 2014)
Advocate MNO Team Goals for Opioid Exposed Newborns (OENs)

- Utilize the ESC approach for OENs
- Support infants and mothers rooming-in together during infant hospitalization
- Focus on non-pharmacologic treatments
- Increase breastfeeding rates of OENs
- Decrease pharmacologic treatment and duration of treatment for OENs
- Decrease the average length of stay (LOS) for OENs.
Current Approach to OENs

- Infant assessed every 3-4 hours using Finnegan scale
- Scores >8 require separation from mom, and transfer to NICU
- Opioids titrated to keep score <8
- Hospital length of stay is average of 3 weeks; sometimes more
Modified Finnegan Scale

<table>
<thead>
<tr>
<th>CNS</th>
<th>Score</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cry</td>
<td>Highpitched, possible to soothe</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Highpitched, not possible to soothe</td>
<td>3</td>
</tr>
<tr>
<td>Sleep</td>
<td>Sleeps &lt; 3 h after feed</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sleeps &lt; 2 h after feed</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Sleeps &lt; 1 h after feed</td>
<td>3</td>
</tr>
<tr>
<td>Moro-reflex</td>
<td>Over active</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Very over active</td>
<td>3</td>
</tr>
<tr>
<td>Tremor</td>
<td>Moderate tremors disturbed</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Severe tremors disturbed</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Moderate tremors undisturbed</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Severe tremors undisturbed</td>
<td>4</td>
</tr>
<tr>
<td>Scratch marks</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Tone</td>
<td>Increased muscle tone</td>
<td>2</td>
</tr>
<tr>
<td>Seizures</td>
<td>Myoclonic jerks</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Generalised seizures</td>
<td>5</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Yawning</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Frequent yawning &gt;3-4/interval</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nostril flaring</td>
<td>1</td>
</tr>
<tr>
<td>Sneezing</td>
<td>&gt;3-4 times/interval</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Nasal flaring</td>
<td>2</td>
</tr>
<tr>
<td>Tachypnea (&lt;60/min)</td>
<td>No retractions</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>With retractions</td>
<td>2</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>Sucking behaviour</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Excessive sucking</td>
<td></td>
</tr>
<tr>
<td>Feeding</td>
<td>Poor feeding</td>
<td>2</td>
</tr>
<tr>
<td>Vomiting</td>
<td>Regurgitation</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Projectile vomiting</td>
<td>3</td>
</tr>
<tr>
<td>Stool</td>
<td>Loose</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Watery</td>
<td>3</td>
</tr>
<tr>
<td>Other symptoms</td>
<td>Sweating</td>
<td>1</td>
</tr>
<tr>
<td>Fever</td>
<td>37.2-38.2°C</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>&gt;38.2°C</td>
<td>2</td>
</tr>
<tr>
<td>Colour</td>
<td>Mottling</td>
<td>1</td>
</tr>
</tbody>
</table>

“The FNASS has been used to guide the management of infants with NAS since its development in the mid-1970s, but despite its wide acceptance, it has never been validated nor have its widely used score cutoffs been tested. The score of 8 appears to be derived from the following quote from Finnegan's original 1975 article: "The infant with a score of 7 or less was not treated with drugs for the abstinence syndrome because, in our experience, he would recover rapidly with swaddling and demand feedings. Infants whose score was 8 or above were treated pharmacologically."

Grossman et. al., 2018
What is lacking in this approach?

- Overlap with normal infant behavior
- Nasal stuffiness/sneezing does not warrant opioid treatment
- Finnegan scoring does not promote the use of non-pharmacologic measures
- Scoring is often done “in the moment”
- Does not account for co-exposures (e.g. nicotine, alcohol)
- Goals of treatment are to reach scores of <8
- Partnering with families is not a central focus
### Assessment and Treatment of Opioid Exposed Newborns

#### Finnegan

<table>
<thead>
<tr>
<th>Time</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CNS</strong></td>
<td></td>
</tr>
<tr>
<td>Cry</td>
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</tr>
<tr>
<td></td>
<td>Sleeps &lt; 2 h after feed</td>
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<td></td>
<td>Sleeps &lt; 1 h after feed</td>
</tr>
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<td></td>
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<tr>
<td><strong>Respiratory</strong></td>
<td></td>
</tr>
<tr>
<td>Yawning</td>
<td>Frequent yawning &gt;3-4/interval</td>
</tr>
<tr>
<td>Nose</td>
<td>Congested nose</td>
</tr>
<tr>
<td>Sweating</td>
<td>&gt;3-4 times/interval</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
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<td>Excessive stooling</td>
</tr>
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<td></td>
<td>Projectile vomiting</td>
</tr>
<tr>
<td>Stool</td>
<td>Loose</td>
</tr>
<tr>
<td></td>
<td>Watery</td>
</tr>
</tbody>
</table>

#### Eat Sleep Console (ESC)

![Image of Eat Sleep Console (ESC) with Advocate Aurora Health logo]
Eat Sleep Console

- Use alone or in conjunction with the Modified Finnegan’s Scoring System
- Three simple components that assess infant’s basic responsibilities
- Studies show a decrease in length of stay, exposure to pharmacologic treatment, and hospitalization costs
- Partnering with Families and emphasis on non-pharmacologic treatment

Partnering with Families

• Is not included in Finnegan approach
• Includes inviting parents to care for infant – new education
• Parents as treatment
• Rooming-in / couplet care
• Non-pharmacologic measures
• Breastfeeding
Partnering with Families - New Tools

- Parental Partner Agreement
- Newborn Care Diary – A Tool for Parents

### Newborn Care Diary

**A Tool for Parents**

<table>
<thead>
<tr>
<th>Baby’s Name:</th>
<th>Baby's MKN:</th>
<th>Date:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Time of baby’s feed (start to finish)</th>
<th>Breastfeeding (minutes)</th>
<th>Infant Weight (total mL.)</th>
<th>Time baby fell asleep heading up in this feed</th>
<th>Time baby woke up heading up in this feed</th>
<th>Did the baby feed for at least 15 minutes or tit-bits to at least 19 oz. in total?</th>
<th>Did the baby sleep for at least 1 hour?</th>
<th>Did the baby consume 1/2 ounces of breast milk?</th>
<th>Comments (saw, other medication, etc.)</th>
<th>Check for pain</th>
<th>Check for feeding</th>
<th>Other comments, non-pharmaceutical care provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example 1:50 pm - 1:51 pm</td>
<td>Example L: 10 mins</td>
<td>Example R: 12 mins</td>
<td>Example NA</td>
<td>Example 11:01 am</td>
<td>Example 1:11 pm</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
</tr>
<tr>
<td>Example 2:00 pm - 4:03 pm</td>
<td>Example L: 15 mins</td>
<td>Example R: 9 mins</td>
<td>Example NA</td>
<td>Example 3:15 pm</td>
<td>Example 4:15 pm</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
</tr>
<tr>
<td>Example 3:00 pm - 6:00 pm</td>
<td>Example L: 15 mins</td>
<td>Example NA</td>
<td>Example 6:00 pm</td>
<td>Example 17:00 pm</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
<td>Example Yes</td>
</tr>
</tbody>
</table>

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For more information, visit [Advocate Aurora Health](https://advocateaurorahealth.com) website.
Tool instructions explain how to score infant, huddle to determine non-pharmacologic care interventions, monitor infant’s response, and consider pharmacologic care.
Eat

Does the infant have poor eating due to NAS?

• “Eating well” defined as breastfeeding 8-12 times per day with effective latch OR feeding expected volume

• Poor eating due to NAS
  – Less than 10 minutes at breast
  – Less than 10 mL with bottle

• Possible withdrawal symptoms that would interfere
  – Fussiness, tremors, uncoordinated suck, excessive rooting

• Do NOT indicate yes if poor feeding is NOT due to NAS

(E. Wachman, Whalen, Minear, & Macmillan, 2017)
Sleep

Does the infant sleep less than 1 hour after feeding due to NAS?

• It may be normal for an infant to sleep < 1 hour if cluster feeding
• Only indicate YES if sleeping < 1 hour is due to NAS
• Possible withdrawal symptoms that would interfere
  – Fussiness, tremors, increased startle, restlessness
• If it is not clear, indicate YES

(E. Wachman, Whalen, Minear, & Macmillan, 2017)
Is the infant unable to be consoled within 10 minutes due to NAS?

- Indicate YES if infant is unable to be consoled due to NAS within 10 minutes despite non-pharmacologic interventions.

- Define the level of support used:
  1. Console on own
  2. Console with caregiver support within 10 minutes
  3. Unable to console with caregiver support within 10 minutes

(E. Wachman, Whalen, Minear, & Macmillan, 2017)
### ESC Bedside Sheet

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESC Assessment</td>
<td>Poor feeding due to NAS V/N</td>
</tr>
<tr>
<td>Sleeping ≥ 1 hour due to NAS V/N</td>
<td></td>
</tr>
<tr>
<td>Unable to console within 10 minutes due to NAS V/N</td>
<td></td>
</tr>
</tbody>
</table>

**Consulting Support Needed**
- Unable to console on own
- Able to console with caregiver support within 10 minutes
- Unable to console with caregiver support within 10 minutes

**Care Plan**

**Recommend Care Team Model One V/N**

**Management Decision**
1. Optimize non-pharmacologic Care
2. Initiate Medication Treatment
3. Continue Medication Treatment
4. Other (please describe)

**Parental/Caregiver Presence**
- No parent present
- 1 ≤ 1 hour
- 2 ≤ 2 hours
- 3 ≤ 3 hours
- 4 ≤ 4 hours

**Non-Pharmacologic Care** (check all that were reviewed)
- Please answer: Increases/reinforce V/N

**Rooming in**
- Parent/caregiver presence
- Skin-to-skin contact
- Holding by caregiver
- Safe snuggling
- Optimal feeding at early hungry cues
- Quiet, less light environment
- Non-stress testing/cap/monitor
- Limiting visitors
- Clustering care
- Safe hand/hygiene prevention
- Was the infant bedside sheet complete for the shift?
- Parent/caregiver self-care and rest

**Next:** Putting it all together!
Non-pharmacologic Care

- Rooming-in with mom
- Holding, cuddling, or gently rocking
- Breastfeeding on demand
- Swaddling
- Non-nutritive sucking
- Lights, noise, visitors to a minimum
- Skin-to-skin contact
- Gently handling
- Avoid waking baby
ESC Assessment

- If YES is indicated for any of the items or a score of 3 given for consoling support → Formal Parent / Caregiver Huddle
  - Discuss optimization of non-pharmacologic care

- If continuation of YES is indicated for any of the items or a continuation of a score of 3 given for consoling support → Formal Full Care Team Huddle
  - Discuss possible initiation of pharmacologic treatment

Parents should be encouraged to be present at all times!!!

(E. Wachman, Whalen, Minear, & Macmillan, 2017)
Guideline for Pharmacological Treatment for Neonatal Abstinence Syndrome

**Purpose**

To provide guidance for pharmacological treatment of Neonatal Abstinence Syndrome

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**Treatment Protocol based on Scores Table 1**

<table>
<thead>
<tr>
<th>ESC</th>
<th>Finnegan</th>
<th>PRN (Doses)</th>
<th>Morphine mg/kg/dose</th>
<th>Clonidine mcg/kg/dose</th>
<th>Phenobarbital mg/kg/dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>&gt;8 x 1</td>
<td>Initial (max 3)</td>
<td>0.04</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>&gt;8 x 1</td>
<td>With Maintenance Dose (max 3)</td>
<td>0.02</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ESC</th>
<th>Finnegan</th>
<th>Maintenance Dose</th>
<th>Morphine</th>
<th>Clonidine</th>
<th>Phenobarbital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading</td>
<td>No</td>
<td>No</td>
<td></td>
<td></td>
<td>10 (max x2)</td>
</tr>
<tr>
<td>Treat</td>
<td>q3h</td>
<td>q6h</td>
<td>q12h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>&gt;8 x 3</td>
<td>Initiate</td>
<td>0.04</td>
<td>1.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Yes</td>
<td>&gt;8 x 3</td>
<td>Escalate</td>
<td>0.02</td>
<td>None</td>
<td>To blood level</td>
</tr>
<tr>
<td>Yes</td>
<td>&gt;8 x 3</td>
<td>Escalate</td>
<td>q3h</td>
<td>None</td>
<td>q24h</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>Maximum</td>
<td>0.16</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>&lt;8</td>
<td>Wean dose</td>
<td>0.02</td>
<td>0.25</td>
<td>0.5</td>
</tr>
<tr>
<td>No</td>
<td>&lt;8</td>
<td>Wean</td>
<td>q12h</td>
<td>q12h</td>
<td>q48h</td>
</tr>
<tr>
<td>No</td>
<td>&lt;8</td>
<td>Discontinue</td>
<td>0.02</td>
<td>0.25</td>
<td>0.5</td>
</tr>
<tr>
<td>No</td>
<td>&lt;8</td>
<td>Weaning</td>
<td>-</td>
<td>After morphine</td>
<td>Before morphine</td>
</tr>
</tbody>
</table>
Guideline for Pharmacological Treatment for Neonatal Abstinence Syndrome

Figure 1

Initiation of Pharmacological Treatments for Neonatal Abstinence Syndrome

- Start fentanyl /EDC care within 2 hours of birth. Score every 3-4 hours AFTER feeding.
  - Score ≤ 8 OR EDC = "No"; Refer to Figure 2 if at maximum dose of morphine at 0.16 mg/kg/dose.
  - Score > 8 OR EDC = "Yes"; Give morphine 0.04 mg/kg/dose every 3-4 hours, or for score < 8 OR EDC = "Yes" (Max of 3 doses in 24 hours).
  - Received morphine PNN x 3 doses in 24-hour period.
  - Increase maintenance morphine starting at 0.04 mg/kg/dose every 3-4 hours.
  - Score > 9 OR EDC = "Yes"; Give morphine 0.02 mg/kg/dose pre for score > 9 OR EDC = "Yes" (Max of 3 doses in 12 hours and no more than 1 dose in between maintenance doses).
  - Received morphine PNN x 3 doses in 12-hour period.

Advocate Aurora Health
Guideline for Pharmacological Treatment for Neonatal Abstinence Syndrome

Escalating and Weaning of Pharmacological Treatment

- **Initial Dose of Morphine 0.1 mg/kg/dose OR No change in maintenance dose ≤ 48 hours OR Plus substance abuse**
  - Score ≤ 5 OR ESC = "No"
    - Decrease dose by 0.01 mg/kg/dose every 12 - 24 hours
  - Increase maintenance dose by 0.02 mg/kg/dose up to maximum of 0.16 mg/kg/dose
    - Received Morphine X3 in 12 hours period
  - Give Morphine 0.02 mg/kg/dose up to maximum of 7 doses

- **Add Opioid therapy with Clonidine or Naloxone**
  - Add Opioid therapy:
    - 0.5 mg/kg/dose every 12 hours
    - Phenobarbital Load 1 mg/kg/dose 1x1 and then start maintenance at 1 mg/kg/dose PO Q12
  - Continue SAS scoring for 24 hours after discontinuing all medications.
  - May consider discharging after all levels of last naloxone dose

- **Guideline Wean:**
  - Decrease by 0.35 mg/kg/dose every 12 hours
  - Continue using Clonidine as needed OR phenobarbital

- **End of Wean:**
  - Score > 0 OR ESC = "Yes"

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*Note: Morphine has been tapered off, restart at the lowest adequate dose no more than 72 hours after initial dose in a 24-hour period.
**If no medications have been maximal and are still insufficient, the third medication may be added as well.
***If two medications are being used, they should be weaned in the following order: Phenobarbital before Morphine before Clonidine.*
Case Study

Using the Eat Sleep Console Method
Background History

• Ms. B is a 30 year old G5P3. Ms. B began prenatal care at 18 weeks. At her first prenatal visit, she disclosed that she takes oxycodone 10 mg 4 or 5 times a day for back pain she sustained after a fall from a ladder in 2010.

• The OB referred her for MAT (medication assisted treatment), where she converted her pain medication to Methadone. She has been compliant throughout her pregnancy. In the office, she informed nurses she would like to breast feed.

*What preparations can be done before delivery?*
New Education

- ILPQC, Pregnancy: Methadone and Buprenorphine
- State of Illinois – IDPH – Prescription Pain Medicine, Opioids, and Pregnancy: What All Pregnant Women Need to Know
- State of Illinois – IDPH – Neonatal Abstinence Syndrome – What you need to know (also a small sheet of paper in this booklet)
• Ms. B delivered a baby boy at 0400 this morning via NSVD at 40 weeks. Infant initially exhibited grunting, flaring and retractions; which quickly resolved.

• Infant toxicology screening and mom toxicology screening both tested positive for methadone.

• Baby boy B is now 5 hours old and is doing well. He does not have signs of respiratory distress and is eating every 2-3 hours

What is your management of the mom/baby couplet?
Partner with Family

- Confirm mom’s understanding of her role in the treatment of her newborn
- Discuss the items on the Parent Agreement which outlines the parent as treatment, limitation of visitor and a dark, quiet environment
- Review the Newborn Care Diary
- Discuss the need for additional support persons
- LOS
- Begin to plan for a safe discharge
Components to Eat, Sleep, Console Method

- Does the infant have poor feeding due to NAS?
- Did the infant sleep less than an hour after feeding?
- Is the infant unable to be consoled within 10 minutes due to NAS?

How often do you assess the infant using the ESC Care Tool?
ESC Assessments

• Begin using ESC 4-6 hours after birth
• Continue for 4-7 days for infants exposed to long acting opioids (buprenorphine, methadone) and a minimum of 48 hours with short acting opioids (Oxycodone, Codeine)
• Assess every 3-4 hours after feedings
• Include all caregivers in huddle
ESC Documentation

- Mother/caregiver will document in the Newborn Care Diary
- RN will document in the ESC Care Tool with each assessment
- Some Advocate institutions may ask that the RN continue to document in Finnegan in the EMR
When you go in to do your assessments, the mom has documented on her Newborn Diary that the infant slept 1.5 hours, had 2 loose stools and “cries a lot”, but slept after 5 minutes of skin-to-skin care.

**What is your recommendation?**
This is a normal ESC score. Continue to reinforce methods, survey the environment and suggest other ways to calm her baby.

Mom states she would like to leave for the afternoon to “run errands”.

What is your response?
Remind mom of the commitment to room in with her infant. Suggest alternate caregiver, if available. Infant need to transfer to a nursery environment while mom is away.

The infant is now 12 hours old and mom reports that the baby “only slept 20 minutes, he was crying and I could not settle him down”!

What is his ESC Score?
What are your next steps?
Using the ESC Care Tool, the score is 3 in Consoling Support Needed, Yes to poor feeding and Yes to sleeping less than 1 hour.

Try increasing ESC Support measures.

After working as a team to maximize non-pharmacologic measures and three huddles with family and caregivers, the baby continues to sleep 30 minutes at a time, is eating less than 10 ml and will not settle down after skin to skin, swaddling and pacifier.

What can be considered when caring for this baby?
Consider pharmacologic care only after Full Care Team Huddle

The baby is given a PRN dose of Morphine with good results. The baby and mom continue to room together. The infant will need monitoring after PRN Morphine.

The baby sleeps 2 hours, and consoles quickly with tight swaddling methods. Mom continues to room in with baby over the next 4 days. She has her mother come to care for the baby if she needs to leave the hospital. Cuddlers also help to hold the baby if mom is unavailable. The baby is ready to be discharged after 48 hours post last Morphine Dose.

What discharge considerations are needed with this family?
Coordinating a Safe Discharge

- 4-7 days of monitoring
- The infant should feed well and gain weight over two consecutive days (consider 22cal)
- Consult Social Work
- Communicate with primary care provider
- Community resources
- DCFS and IDPH (home visits) Plan
- Developmental Follow up
- Referral to Early Intervention
- WIC
- Follow up appointments
- APORS
- Safe sleep, infant CPR
- Vaccinations
MNO-Neo OEN Protocol

Complete and document prenatal consult

Obtain toxicology testing, perform standardized assessment of NAS signs & symptoms for OENs

Initiate Non-pharmacologic treatment, document non-pharm care checklist in medical record

Determine maternal eligibility to breastfeed, encourage breastfeeding and determine/provide appropriate nutrition support

After optimization of non-pharmacologic care, initiate pharmacologic treatment protocol as needed

Complete and document safe discharge plan

Implement unit-wide provider education

Provide patient education re: OUD, NAS, and engaging mothers in newborn care

Activating the OEN protocol for every OEN
New Tools

- Guideline: *Care of Mothers and Infants affected by Substance Use Disorders*
- *System ESC Bedside Tool RN*
- *System Parental Agreement NAS*
- *System Newborn Care Diary*
- *Guideline for Pharmacologic Treatment for NAS*
- *AAH Coordinating Safe Discharge for MNO*
References


