

Eat, Sleep, Console (ESC)

This information was presented during a CPQCC Maternal Substance Exposure (MatEx) webinar in August 2021 by Lisa Chyi, MD, Joanne Kuller, CNS, and Lee Trope, MD. Moderated by Angela Huang, RNC-Nic, BSN, MPH. The full presentation and slides can be found [here](#).

Origin of Care for Infants with Neonatal Opioid Withdrawal Syndrome (NOWS)

The Finnegan Neonatal Abstinence Scoring Tool is an assessment of 21 signs and symptoms related to opioid exposure used to determine an infant's need for pharmacologic treatment.

- Infants are assessed on a point system where each sign and symptom are weighted with corresponding values. For many centers, the threshold to begin pharmacologic treatment is either three consecutive scores of 8 or more or two consecutive scores of 12 or more.
- One drawback of the Finnegan tool is that the assessment requires an infant to be unswaddled and evaluated from head to toe periodically. The continual disturbance of the infant contradicts the first line treatment for NOWS, which is to comfort and calm the infant.

Finnegan Score Reliability

- Some symptoms, which may not be exclusive to NOWS (e.g. hyperactive Moro reflex, frequent yawning, nasal stuffiness, sneezing, etc.), can add up to 6 points on their own. This is concerning since the threshold for treatment in many facilities is a score of 8.
- Further, an infant's score is based on 21 subjective items which commonly leads to a variability between scorers.

While the Finnegan Neonatal Abstinence Scoring Tool has been a catalyst in improving care, other newer methods may more accurately and effectively address the needs of infants with NOWS. Shifting from a score-based assessment tool to a function-based tool, from medication management to primarily non-pharmacologic care, and from physician-led care to family-focused care management has been demonstrated to improve outcomes for infants with NOWS.

Eat, Sleep, Console (ESC) Approach

ESC is an alternative approach to NOWS assessment that emphasizes non-pharmacologic care as the first line of treatment starting with the creation of a low stimulation environment. Please refer to the ESC algorithm on page three of this tip sheet.

ESC emphasizes parental involvement in determining care and treatment plans which result in increased support of the mother-infant dyad.

Compared to the 21-item list of the Finnegan tool which requires disturbing the infant, ESC focuses on 3 'observation only' items to guide management.

- Can the infant eat ≥ 1 oz per feed or breastfeed well? Can the infant sleep ≥ 1 hour? Can the infant be consoled within 10 minutes?
- If all three criteria are met, no further interventions are necessary. If not, increased non-pharmacologic interventions are prioritized before pharmacologic treatment is started.

Frequently Asked Questions

1 Can Eat, Sleep, Console (ESC) be used alongside pharmacologic treatment?

Yes! When non-pharmacologic care has been optimized but the infant is unable to eat, sleep, or be consoled, prn morphine may be used as guided by the ESC assessment. Non-pharmacologic interventions should continue to be optimized alongside morphine administration. If symptoms remain uncontrollable, move to a scheduled morphine treatment protocol. The infant is continually assessed to dictate treatment direction.

2 How do you get hospital administration on board in terms of cost and additional staffing/resources?

Often the amount of resources and staffing currently in place are sufficient and only minimal changes must be made. A common staffing ratio between infants to nurses in the NICU is 2:1, with a priority to manage infants in an isolation room when possible. Many babies can and should be treated in the mother/baby unit though. A compelling reason to implement ESC is the demonstrated decreased length of stay for infants with NOWS compared to pharmacologic methods.

3 How should we use the ESC assessment with late pre-term infants who may already have issues with eating and sleeping? Are there other infant/maternal population considerations?

Although this issue requires frequent troubleshooting, the first step is to determine if the poor eating or sleeping is due to NOWS by excluding other possibilities (e.g., prematurity, transitional sleepiness in the first 24 hours, anatomically difficult latch, etc.). The ESC assessment must then be taken in context.

For this reason, the ability to discern the differences between what one would normally expect when working with pre-term infants compared to those who are displaying symptoms of withdrawal can be valuable.

4 What about polysubstance drug exposure and use of ESC protocols?

As polysubstance drug exposure is very common, assessing what symptoms the infant is displaying most frequently will direct care. Babies tend to declare themselves one way or the other: infants exposed to methamphetamine are often very sleepy the first few days while infants with opioid exposure exhibit poor coordination. Optimizing non-pharmacologic care helps infants with both opioid or polysubstance related withdrawal.

One of the best tools for determining treatment plans is to give the infant time, which the ESC protocols advocate for. If necessary, an infant may be given food via an NG tube until a determination can be made.

5 With COVID-19 protocols, decreased parent visitation, and decreased volunteers, how are units coping and still promoting ESC?

In order to adapt to recent challenges, many units have come up with creative alternatives. Some nurses and residents have explored consoling the infant utilizing a baby carrier, though this should be approved by hospital administration prior to implementation. Another unit noted using a self-rocking bassinet (the SNOO) for infants with NOWS to soothe the patient when neither staff nor family were available.

Eat, Sleep, Console (ESC) Algorithm

Grossman et al, *Pediatrics*, 2017

