Neonatal Abstinence Scoring System
Modified Finnegan Scoring System

Linda Krajacich RNC
Montana Perinatal Association
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Neonatal Abstinence Scoring System

• A semi-subjective scoring system
• List of 20 symptoms
  – Symptoms often seen with drug-exposed infants
  – Score assigned for each symptom and associated degree of severity
  – The total abstinence score is determined by totaling the score assigned to each symptom over the scoring period
Key Points

• First score/Baseline score – done approximately 2 hours after birth or admission
• Re-scoring at 3-4 hour intervals
• If high scores- more frequent scoring
• Scoring is dynamic
  – All signs and symptoms observed during the scoring interval are included in the point total for that period.

Key Points

• If the score is ≥ 8-
  – scoring is increased to every 2 hours and continued for 24 hours from the last total score of 8 or higher
• If the scores every 2 hours are ≤ 7 for 24 hours-
  – resume the 3-4 hour interval

Consider Treatment

If scores are:
• ≥ 8 for 3 consecutive scores
• > 12 for 2 consecutive scores
• ≥ 15 once

Goal

• Score of < 8
  – Allows for appropriate drug weaning
• Discharge
  – Score < 8 off medications for 24- 72 hours
NAS
- Designed for term infants on 4 hour feeding schedule
- Needs to be modified for preterm infants.
- Scoring should be performed 30 minutes to 1 hour after a feeding, before the baby falls asleep.

Assessment and Scoring
- A crying baby should be soothed and quieted before assessing muscle tone, Moro reflex and respiratory rate.

Modified Finnegan
- Central Nervous System Disturbances
- Metabolic/Vasomotor/Respiratory Disturbances
- Gastrointestinal Disturbances

Central Nervous System Disturbances

Excessive or high-pitched crying
- Score 2: high-pitched or prolonged < 5 minutes
- Score 3: continuous high-pitched or prolonged > 5 minutes

Sleep
- Scale of increasing severity
  - Term- One score from the 3 levels of severity
  - Preterm- eating every 3 hours can sleep for 2 ½ hours.
    - score 1 if sleeps < 2 hours
    - 2 if < than 1 hour
    - 3 if does not sleep between feedings.
**Moro reflex**
- Score 2: pronounced jitteriness (rhythmic tremors that are symmetrical and involuntary) of the hands during or at the end of a Moro reflex.
- Score 3: jitteriness and clonus (repetitive involuntary jerks) of the hands and/or arms are present during or after the initiation of the reflex.

**Tremors**
- Scale of increasing severity
- Baby should only receive one score from the 4 levels of severity
- Undisturbed refers to baby asleep or at rest in crib

**Increased muscle tone**
- Score if: excessive or above-normal muscle tone or tension is observed
  - muscles become “stiff” or rigid and the baby shows marked resistance to passive movements.
- Example:
  - no head lag when being pulled to the sitting position;
  - if there is tight flexion of the baby’s arms & legs (unable to slightly extend these when an attempt is made to extend and release the supine infant’s arms & legs)

**Excoriation**
- Skin abrasions - result from constant rubbing against a surface
- Score only when excoriations first appear, increase or appear in a new area

**Myoclonic jerks**
- Score if involuntary muscular contractions
- Twitching or jerking of limbs
  - irregular
  - exceedingly abrupt (usually involving a single group of muscles)

**Generalized seizures**
- Referred to as tonic seizures
- Most often a generalized activity involving tonic extensions of all limbs
- Sometimes limited to one or both limbs on one side
- Activity doesn’t stop if limb is held
Generalized seizures-cont.
- Swimming
- Rowing
- Pedaling
- Bicycling
- Eye staring
- Rapid involuntary movements of eyes
- Chewing
- Back arching
- Fist clenching

Metabolic /Vasomotor/Respiratory Disturbances

Sweating
- Score If: spontaneous sweating
  - not due to excessive clothing or high room temperature
- Score if: there is moisture on forehead, upper lip or back of neck

Hyperthermia
- Temperature taken per axilla
- Mild pyrexia- 99-100° is an early indication of heat produced by increased muscle tone or tremors
  - Score 1 if: 99-101°
  - Score 2 if: > 101°

Yawning
- Score if: more than 3 yawns observed within the scoring interval

Mottling
- Score if: mottling (marbled appearance of pink and pale or white areas) is present on the baby’s chest, trunk, arms or legs.
**Nasal stuffiness**

- Score if: nasal drainage with or without stuffy nose

**Sneezing**

- Score if: more than 3-4 sneezes observed within the scoring interval

**Nasal flaring**

- Score only if: repeated dilation of the nostrils is observed without other evidence of lung or airway disease

**Respiratory rate**

- Score 1 if: >60 per minute without other evidence of lung or airways disease
- Score 2 if: respirations > 60 per minute & involve retractions

**Gastrointestinal Disturbances**

**Excessive sucking**

- Score if:
  - hyperactive/disorganized sucking
  - increased rooting with swiping movements of hand across mouth
  - attempts to suck fists or thumbs (more than that of an average hungry infant)
Poor feeding

• Score if: baby demonstrates excessive sucking prior to feeding, yet sucks infrequently during a feeding taking a small amount of breast milk or formula
• Demonstrates an uncoordinated sucking reflex (difficulty sucking and swallowing)

Poor feeding- cont.

• Premature infants may require tube feeding and should not be scored for poor feeding if tube feeding is expected for their gestation

Regurgitation / vomiting

• Score 2 if: > 2 times during or after feeding
• Score 3 if: projectile vomiting

Loose stools / diarrhea

• Score 2 if loose (curds/seedy appearance)
  – May or may not be explosive
• Score 3 if watery stools (water ring on diaper around stool) are observed
• Check the diaper after the exam is completed

Nursing Interventions

• Reduce environmental stimuli
• Hold firmly and close to the body
• Gentle rocking, talking/singing/humming
• Use of infant swing
Sleeplessness

- Wrap or swaddle baby
- Minimal handling
- Skin to skin
- Use swing
- Feed baby on demand

Myoclonic Jerks, Tremors, Jitteriness, Irritability

- Prepare everything prior to disturbing the baby to minimize handling
- Slow movements
- Reduced lighting
- Reduced noise levels
- Soft music
- Massage
- Relaxation baths

Excoriation

- Tegaderm® to knees and elbows
- Clean skin regularly
- Dry clothing and bedding to prevent skin infection

Hyperthermia

- Ensure adequate hydration
- Reduce environmental temperature
- Avoid heavy bedding
- Dress or swaddle in loose light fabrics
- Skin to skin contact with mother

Nasal Stiffness / Excessive Nasal Secretions

- Use gentle suction if nasal secretions cause obstruction to ensure adequate respiratory function

Nasal flaring / tachypnea

- Avoid swaddling so that respirations can be observed
- Refer to Medical Staff if cyanosis or mottling observed
Excessive Sucking
- Apply mittens if trauma to fingers.
- Offer pacifier for nonnutritive sucking.

Poor Feeding
- Feed on demand
- Reduce environmental stimuli during feeding
- Frequent small feeds with rest between sucking
- Assess coordination of suck/swallow reflex—support cheeks and jaw if necessary
- If insufficient fluid intake notify Medical Staff
- May need hypercaloric formula

Regurgitation / vomiting
- Burp frequently when baby stops sucking & at end of feeding

Loose/watery stools
- Frequent diaper changes
- Use barrier creams
- Occasional skin exposure to allow bottom to dry

Total Score
Treat if scores are:
- $\geq 8$ for 3 consecutive scores
- $\geq 12$ for 2 consecutive scores
- $\geq 15$ once

• Achieving reliable scores using the Modified Finnegan Neonatal Scoring Tool can be done by:
  - Establishing set descriptions of the criterion scored
  - Education of staff
  - Consider reassessing inter-rater reliability among staff