

Modified Finnegan's Neonatal Abstinence Scoring Tool

Nursing Instructions

1. Begin scoring within 2 hours of life
2. Scores should reflect the infant's behavior for the entire period since the last score was given.
3. If the infant scores ≥ 8 at the 3rd hour after the last score, re-score within 1 hour (preferably at 30 minutes).
4. Notify physician if 2 confirmed scores are ≥ 8 , 1 score ≥ 12 or of any seizure-like activity.
5. Initiate medication if 3 consecutive scores are ≥ 8 or average of 2 scores or 2 consecutive scores are ≥ 12 .
6. If infant asleep at time of rescore, do not awaken and document "asleep" in the rescore column.

Initiation of Morphine Neonatal Oral Solution (0.4mg/ml)

| Category | Score | Morphine | |
|----------|-----------|----------|--------------|
| 0 | 0-7 | none | = 400 mcg/ml |
| I | 8-12 | 0.10ml | = 40 mcg |
| II | 13-16 | 0.20ml | = 80 mcg |
| III | 17-20 | 0.30ml | = 120 mcg |
| IV | 21-24 | 0.40ml | = 160 mcg |
| V | ≥ 25 | 0.50ml | = 200 mcg |

*Initial treatment dosing category should correspond to the highest score

Escalation of dose

Two NAS scores in \geq Category I, despite rescoring, warrants escalation of treatment :

| Category | Score | New Morphine Dose |
|----------|-----------|----------------------|
| I | 8-12 | Previous dose+0.05ml |
| II | 13-16 | Previous dose+0.10ml |
| III | 17-20 | Previous dose+0.15ml |
| IV | 21-24 | Previous dose+0.20ml |
| V | ≥ 25 | Previous dose+0.25ml |

*Escalation dose should correspond to the highest score

*Consider NICU admission if infant requires greater than 0.20mg (0.5ml) of morphine (0.4mg/ml) every 3 hours in order to maintain scores in Category 0.

* Infants who appear somnolent and/or are difficult to arouse warrant transfer to the NICU.

Weaning

1. After a 24-48 hour period of stabilization (Category 0 scores), weaning may be initiated.
2. Morphine can be weaned by 0.05ml every 24 hours as long as scores remain in Category 0.
3. Morphine can be discontinued when scores are stable (Category 0) for 24-48 hours at dose of 0.05ml.
4. Two NAS scores in \geq Category I, despite rescoring, warrants re-escalation of treatment.
5. Re-escalation doses are in general half of the initial escalation doses (e.g. increase morphine by 0.025 ml every 3-4 hours for 2 scores in category I, 0.05ml for 2 scores in category II, and so on).
6. Consider discharge if scores < 8 (Category 0) off of morphine for 48-72 hours.

Adapted from L. Jansson, 2009

Approved at Pediatric Subcommittee: May 2015

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| Signs and Symptoms | | Score | Comments |
|-----------------------------|--------------------------------|-------|---|
| 1 | Cry | | |
| | Continuous high pitched cry | 2 | Crying excessively and difficult to console (25-50% time). Crying continuously despite comfort measures, i.e. pacifier, rocking (>50% time) |
| Continuous high pitched cry | 3 | | |
| 2 | Sleep | | |
| | Sleep > 3 hours after feeding | 0 | |
| | Sleep < 3 hours after feed | 1 | |
| | Sleep < 2 hour after feed | 2 | |
| | Sleep < 1 hour after feed | 3 | |
| 3 | Moro | | Excessive shoulder abduction & elbow extension, with or without tremors. Above plus marked adduction flexion at elbow with arms crossing midline. |
| | Normal Moro Reflex | 0 | |
| | Hyperactive Moro | 2 | |
| | Markedly hyperactive Moro | 3 | |
| 4 | Tremors | | Mild tremors, frequently in fussy/crying states & sometimes quiet, alert states. Mod-severe tremors occasionally in drowsy states, often in quiet alert states, and consistently in fussy/crying states, or consistently & repeatedly in all states Mild tremors occurring in absence of stimulation. Moderate to severe tremors occurring in absence of stimulation. |
| | Mild tremors disturbed | 1 | |
| | Mod-severe tremors disturbed | 2 | |
| | Mild tremors undisturbed | 3 | |
| | Mod-severe tremors undisturbed | 4 | |
| 5 | Tone | | |
| | Normal muscle tone | 0 | |
| | Increased muscle tone | 2 | |
| 6 | Excoriation | | Score as long as excoriation is present; do not score scabbed over, healing areas Diaper dermatitis → red, irritated rash starting at the anus & gradually spreads outward from loose stools. Do not score as excoriation. Diaper area excoriation → red, irritated or broken skin on either side of gluteal folds, due to excessive motor movements of the infant. Score as excoriation. |
| | No | 0 | |
| | Excoriation-specific area | 1 | |
| 7 | Myoclonic Jerks | | |
| | No | 0 | |
| | Yes | 3 | |

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| | | | |
|----|-------------------------------|---|--|
| 8 | Generalized Convulsion | | |
| | No | 0 | |
| | Yes | 5 | |
| 9 | Sweating | | Do not score for environmental factors, i.e. over-bundling Beads of sweat or moist skin |
| | No | 0 | |
| | Yes | 1 | |
| 10 | Fever | | |
| | Normal | 0 | |
| | Fever 100.4-101F =38-38.3°C | 1 | |
| | Fever > 101 F >38.3°C | 2 | |
| 11 | Yawning | | |
| | < 3 times/interval | 0 | |
| | >3-4 times/interval | 1 | |
| 12 | Mottling (marbrure) | | |
| | No | 0 | |
| | Yes | 1 | |
| 13 | Nasal Stuffiness | | Nasal noise on breathing, +/- coryza association & not associated with illness |
| | No | 0 | |
| | Yes | 1 | |
| 14 | Sneezing | | Either individually or continuously. |
| | Moderate to no sneezing | 0 | |
| | Sneezing >3-4 times/interval | 1 | |
| 15 | Nasal Flaring | | |
| | No nasal flaring | 0 | |
| | Nasal flaring | 2 | |
| 16 | Respiratory Rate | | |
| | Normal (0) | 0 | |
| | >60/min w/o retractions | 1 | |
| | >60/min with retractions | 2 | |
| 17 | Excessive Sucking | | Frantic rooting/sucking behaviors, and/or evidence of sucking blisters. |
| | No | 0 | |
| | Yes | 1 | |
| 18 | Feeding | | Slow feed or feeds inadequate amounts unrelated to prematurity. Ineffectual and uncoordinated suck/swallow with rooting and/or sucking behaviors. |
| | No poor feeding | 0 | |
| | Yes poor feeding | 2 | |

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| | | | |
|----|----------------------------|---|---|
| 19 | Regurgitation | | Effortless return of gastric/esophageal contents more frequent than normal. |
| | No | 0 | |
| | Yes | 2 | |
| 20 | Projectile Vomiting | | Forceful ejection of stomach contents. |
| | No | 0 | |
| | Yes | 3 | |
| 21 | Stools | | Loose stools without water ring. Loose stools with water ring. |
| | Normal | 0 | |
| | Loose | 2 | |
| | Watery | 3 | |
| | No first stool | 0 | |

Adapted from:

AAP

Jansson L, Velez M, Harrow C. The opioid exposed newborn: Assessment and pharmacologic management. J Opioid Manag 2009; 5(1):54.

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