Children's Hospital at Dartmouth-Hitchcock

NAS Management Algorithm

Updated Dec 17, 2018

- If infant with **"Yes"** for any **ESC** item or consistently receives **"3s"** for **"Consoling Support Needed"** perform **team huddle** with mother/parent and RN at minimum to determine **non-pharm care interventions** that can be **optimized** further. If **non-pharm care optimized** perform **full team huddle** with parent, RN and Provider. Full team huddle also recommended if **other significant concerns present**.

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Morphine Initiation: Consider initiating oral **Morphine** after a **full team huddle** if:

- **Continues with "Yes" to any ESC item** or **"3s"** for **"Consoling Support Needed"** *OR* **other concerning signs of withdrawal present** (e.g. persistent hyperthermia, tachypnea, increased work of breathing)
- **Non-pharm care optimized to greatest extent**
- **Non-NAS causes excluded** (e.g., cluster feeding, SSRI or nicotine withdrawal in first 24 hours, pain)

As needed dose Neonatal Morphine oral solution:

- **0.05 mg/kg/dose** PO every 3 hours PRN (use birthweight for dosing)
- If at next assessment infant is eating, sleeping, and consoling well *AND* no other significant concerns present, do not give further doses of morphine

Consider scheduling Neonatal Morphine oral solution after a full team huddle if:

- **6 or more PRN doses of morphine given in last 24 hours** *AND*
- **Continues with "Yes" to any ESC item** or **"3s"** for **"Consoling Support Needed" despite optimized non-pharm care** *AND* **Non-NAS causes excluded** *OR* **other concerning signs of withdrawal persist**

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Morphine Escalation: Consider increase in morphine dose after **full team huddle** if **continues with "Yes" for any ESC item** *OR* **"3s"** for **"Consoling Support Needed"** due to NAS despite **optimal non-pharm care**

To increase oral morphine dose:

- Give bolus dose of 0.02 mg/kg once and increase morphine baseline dose by 0.02 mg/kg/dose (e.g., baseline dose = 0.05 mg/kg/dose; new dose = 0.07 mg/kg/dose)
- Recommended maximum dose = 0.12 mg/kg/dose every 3 hrs

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Morphine Weaning: Consider weaning morphine dose if **primarily "No"** for **ESC items** and **non-pharm care optimized to greatest extent**

- Initially, **wean morphine by 10% of maximum dose**
- **If wean tolerated, wean by 10% maximum dose up to 3 times daily**
- **Discontinue morphine when dose is less than or equal to:**
  a) 0.02 mg/kg/dose *OR*
  b) dose no longer possible to measure for infant less than 2.5 kg
- Monitor infant for at least **24 hours** off morphine before discharge

→ Consider adding **secondary agent** if infant with **ESC "Yes"** responses despite **optimal non-pharm care** *AND*:

- Morphine dose maximized *OR*
- Infant unable to wean by day 7 of treatment

Discuss secondary agent to be used with covering attending

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Failed Weaning: If after weaning or discontinuation of morphine, infant has persistent **"Yes"** responses to any **ESC item** due to NAS and **non-pharm care optimized**:

- Restart infant on last effective (or discontinuation) dose of morphine and maintain infant on that dose for minimum of 24 hours *OR*
- Attempt to **hold current dose** for up to 24 hours, particularly towards end of weaning process

↑ (return to Morphine Weaning)