Neonatal Abstinence Syndrome (NAS) Management: Clinical Guideline for Provider

A. Initiation, Escalation and Stabilization

- **NAS Score Q3 hours**
  - NAS less than 9
    - Continue non-pharmacologic interventions. Starting from first score, monitor for a minimum of 5 days before discharge.
    - Last 2 scores are increasing
      - Hold discharge and continue Q3 hours scoring
    - NAS less than 9 and not increasing
      - Home with PCP follow up within a week
  - NAS ≥ 9 in a row or >12 x2 in a row
    - Begin non-pharmacologic interventions* 
    - NAS less than 9
      - Continue scoring Q3 hours
    - NAS ≥ 9 x2 in a row
      - Admit to NICU and initiate morphine
        - **Enteral**: 0.05 mg/kg/dose PO Q3 hours.
        - **IV**: 0.02 mg/kg/dose IV Q3 hours.
    - NAS ≥ 9
      - Increase Morphine dose by
        - **Enteral**: 0.05 mg/kg/dose or **IV**: 0.02 mg/kg/dose
    - No two consecutive 9 or higher
      - GO TO WEANING

*Non-Pharmacologic Interventions
- Dark (indirect light)
- Quiet (soft inside voice)
- Quiet humming (music therapy)
- Kangaroo care
- Firm holding (no rocking)
- Minimize stimulation
- Cluster care
- Score in the calmest state
- Breastmilk unless contraindicated
- Use Similac Total Comfort 22 cal/oz if formula is needed.
- Safe sleep
NAS Management: Clinical Guideline for Provider – B. Weaning

If stabilization dose < 0.1 mg/kg/DOSE PO, wean by 0.01 mg/kg/DOSE PO (0.005 mg/kg/DOSE IV).
If stabilization dose >0.1 mg/kg/DOSE PO, wean by 10%. Only 1 wean per day.

Continue non-pharmacologic interventions* and scoring Q3 hours

Go to Backside Management

Two consecutive 9 or higher

No two consecutive 9 or higher for 24 hours

Repeat morphine wean Q24 hours

Discontinue when morphine 0.01 mg/kg/DOSE PO, (Or less than 0.02 mg/kg/DOSE PO if weaning by 10%).

Home with PCP follow up within the week. Medical team to contact PCP.

Monitor patient off morphine for 48 hours before discharge.

Monitor patient off clonidine for 48 hours before discharge.

After stable scores for 24 hours off morphine, decrease clonidine dose by 50% for 24 hours then discontinue

Clonidine

Phenobarbital

Send home with 1 month supply. No need to Rx weaning doses.

Yes

No

Is patient on adjunct therapy?

Home with PCP follow up within the week. Medical team to contact PCP.

*Non-Pharmacologic Interventions

- Rocking to tolerance
- Massage if tolerated
- Minimize stimulation / Cluster care
- Score in the calmest state
- Breastmilk unless contraindicated
- Use Similac Total Comfort 22 cal/oz if formula is needed.

- Cycled light
- Music to tolerance
- Kangaroo care
- Swaddled (below shoulders only) as able
- Boppy / swing / chair if tolerated (ideally, for a max of 1 hour post-care or when infant falls asleep)
NAS Management: Clinical Guideline for Provider – C. Backslide

*Continue to use BW for calculations.

Ensure non-pharmacologic interventions* are maximized

First backslide? No

Second backslide? No

Third backslide? Go to adjunct

First time failing off the 0.01 mg/kg PO dosing?

Yes

Restart morphine 0.01 mg/kg PO Q3H based on previous morphine dosing weight

No

Consider weight adjustment

Yes

Was patient off morphine?

No

Increase dose to previous step at which patient was stable (Stable = 2 scores > 6 consecutive)

Yes

Continue morphine 0.01 mg/kg PO Q3H for 24 hours and then discontinue

No

Continue morphine 0.01 mg/kg PO Q3H for 24 hours and then change to 0.01 mg/kg PO Q6H for 24 hours and then discontinue

Two consecutive 9 or higher

Increase morphine 0.01 mg/kg PO Q3H based on previous morphine dosing weight

No two consecutive 9 or higher for 24 hours

Increase morphine 0.01 mg/kg PO Q3H based on previous morphine dosing weight

No two consecutive 9 or higher for 24 hours

GO TO WEANING

*Non-Pharmacologic Interventions

- Dark with 1-2 hours soft lights per shift
- Quiet with light music and/or humming (music therapy)
- Kangaroo care
- Swaddles holding (no rocking)
- Light massage

- Cluster care
- Score in the calmest state
- Breastmilk unless contraindicated
- Use Similac Total Comfort 22 cal/oz if formula is needed
- On demand feedings if applicable
- Safe sleep
**Adjunct therapy is indicated when there is:**

- a third backslide after initiation of therapy,
- when the morphine dose is greater than 0.1 mg/kg/DOSE (adjunct therapy can be added at the same time as an increasing morphine dose),
- or after two weeks with no progress.

**Notes on Clonidine Dosing**

- If escalating dose, can increase dose or frequency (example: 1 or 2 mcg/kg PO Q6H).
NAS Management: Clinical Guideline for Provider – E. Chronic

For use in patients greater than 21 days of age.

Other interventions:
- Drop sleep score with PMA ≥ 44 weeks
- Can feed Q3-4H and score Q3-4H

*Notes on Clonidine Dosing
- If escalating dose can increase dose or frequency (example: 1 or 2 mcg/kg PO Q6H).
- Typical max dose is 8 mcg/kg/day.
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REFERENCES:
1. NEOFAX Online, 2018
2. Lexicomp Online, 2018