Neonatal Abstinence Syndrome (NAS) Due to Maternal Opioid Use
Pharmacologic Treatment Advancement Algorithm (v.11-8-18)

***Indicators** of substance use include**:**

- Known drug use/abuse
- Poor prenatal care (<3 visits)
- Obvious intoxication
- Placenta abruption
- Signs of neonatal abstinence syndrome

Other possible indicators of substance use include**:**

Maternal:

- Previous unexplained fetal demise
- Repeated spontaneous abortions
- Precipitous labor
- Severe mood swings
- MI
- Cerebrovascular accidents
- History of psychiatric illness
- Positive sexually transmitted infections and suspected or known high-risk sexual behavior
- Inappropriate behavior arousing suspicion
- Reported physical or sexual abuse
- Positive HIV
- Hepatitis, pancreatitis, cirrhosis, cellulitis, endocarditis

Neonatal:

- Preterm birth
- Jitteriness with normal glucose levels
- Marked irritability
- Atypical vascular incidents or MI
- Unexplained IUGR, seizures, apnea
- Neurobehavioral or congenital abnormalities
- Necrotizing enterocolitis in otherwise healthy term infant

Consider other potential causes of jitteriness, irritability, poor feeding:

- Hypoglycemia
- Hypocalcemia
- Hypomagnesemia
- Sepsis
- Meningitis
- CNS injury/bleed/stroke

Immediately contact the medical practitioner for the following changes:

- Seizures
- Diarrhea (6 or more stools/day or watery ring)
- Repetitive vomiting >10% of intake
- Tachycardia (HR >20 beats/minute over baseline)
- Systolic BP >90mm Hg
- Cyanosis or mottling
- Continuous inconsolable crying despite nursing intervention
- Increased respiratory support

If perinatal history suggests in-utero exposure or infant shows signs of withdrawal:

- ***Obtain urine toxicology, Cord STAT and meconium** Notify OB provider to send Urine for OB Hold for urine drug testing.
- **Start** Modified Finnegan Neonatal Abstinence Score Sheet **2 hours after birth and continue every 3 hours for a minimum of 48h** and **Start** n**on-pharmacologic interventions**

Infants at risk for/with symptoms of NAS should receive these non-pharmacologic interventions:

Reduce stimuli:

- Quiet room with dim lighting
- Avoid talking at the bedside
- Prepare everything prior to disturbing infant
- Minimize handling

Supportive therapy:

- Swaddle
- Slow body movements
- Rock gently, talk, sing or hum softly
- Hold firmly and close to the body
- Promote skin to skin contact
- Use a pacifier for excessive sucking
- Feed on demand, frequent small feedings or per orders
- Allow rests between sucking
- Assess coordination of suck/swallow reflex, support cheeks & jaw if necessary
- Change diaper frequently start barrier cream prophylactically on admit to prevent skin damage

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If after maximizing non-pharmacologic interventions the average score is ≥8 (rule of 24)*

Yes

Step 1

Give 1x PO Morphine dose based on most recent score :

Score	Dose
8-10	0.05mg/kg
11-13	0.06mg/kg
14-16	0.08mg/kg
>16	0.1mg/kg

Assess & score in 2 hours

2 hr Score: ≥8?

No → Continue current dose Q3h & score every **3** hours

Yes

Step 2

Score 8-13: Repeat last dose x1 and score in **2 hours**

Score >13: Increase last dose by 0.02 mg/kg 1x and score in **2 hours**

2 hr Score: ≥8?

No → Continue last dose Q3h & score every **3** hours

Yes

Step 3

Repeat step 2 until NAS score: <8
If scores continue to be ≥8 when dose is up to 0.2mg/kg Q2h x3 doses, advance to adjunct treatment algorithm

*3 consecutive scores averaging > 8 *or* 2 consecutive scores averaging > 12

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Adjunct Pharmacologic Treatment Advancement Algorithm (v.11-8-18)

If the infant is being treated with maximal dose of morphine (0.2 mg/kg Q3H) and NAS scores continue to meet/exceed the rule of 24, consider adjunctive treatment using the following algorithm