

Wisconsin Association for Perinatal Care

NEWBORN WITHDRAWAL PROJECT

Facts for Providers: Care of Opioid-Exposed Infants Experiencing Neonatal Abstinence Syndrome (NAS)

Introduction

WHAT IS NAS?

Neonatal Abstinence Syndrome (NAS) refers to a group of problems that are associated with the withdrawal process babies may experience after birth if their mothers have used addictive prescription or illicit drugs during pregnancy. This information sheet focuses on NAS associated with opioids.

WHO IS AT RISK FOR NAS?

Infants born to mothers who are taking prescription or illicit opioids are at risk for NAS.

Methadone maintenance remains the most common treatment for illicit opioid dependence in pregnant women based on its safety and association with improved birth outcome. It is important for the pregnant mother to know that methadone treatment is not without risk. **The greatest risk is that the neonate may undergo NAS.** However, the benefits of methadone treatment to the mother outweigh the risks to the infant.

Signs and symptoms of withdrawal from other medications and drugs are similar to those associated with opioids. It is important to consider other causes of withdrawal as they may affect treatment choices.

WHAT PROBLEMS ARE ASSOCIATED WITH NAS?

NAS is a generalized disorder that is characterized by CNS hyperirritability, GI dysfunction, respiratory distress, and autonomic symptoms. Infants can be compromised further by these symptoms leading to sleep-wake abnormalities, inability to be consoled, feeding difficulties, weight loss, seizures, and disruption of the mother-infant relationship.

Infant Assessment

The **onset of opioid withdrawal can** occur during the first 0-7 days. Timing of peak symptoms and duration may vary greatly depending on the opioid. For methadone, a long-acting opioid, symptoms generally peak between 10 – 21 days and subtle symptoms may last up to 6 months.

Withdrawal in term infants is more severe and presents earlier (1 – 2 days) than that of preterm infants due to CNS maturity.

Assessment of NAS is determined by maternal and infant clinical indicators, maternal history, maternal urine testing, and testing of newborn urine and meconium specimens.

Potential Newborn Clinical Indicators for Screening:

- Jittery despite normal glucose levels
- Marked irritability
- Prematurity (preterm infants are less likely to be symptomatic)
- Unexplained seizures or apnea
- Increased muscle tone and rigidity
- Unexplained intra-uterine growth restriction (IUGR)
- Neurobehavioral abnormalities
- Necrotizing enterocolitis (NEC) in otherwise healthy infant
- Signs of NAS and/or positive toxicology screen

Maternal Screening:

- Prescribed opioids
- Drug and alcohol abuse history
- Prenatal records from methadone treatment clinics
- Non-compliance with prenatal care
- Unexplained poor weight gain during pregnancy
- Preterm labor
- Previous or current placental abruption or unexplained bleeding
- Prior referrals to child protection services

Signs & Symptoms of NAS

The American Academy of Pediatrics (AAP) recommends the use of an objective abstinence scoring tool to measure the severity of withdrawal. Conduct scoring according to the recommendations for the tool used.

Infant scoring should include the following three areas:

Central Nervous System

- Irritability, fussiness
- High-pitched cry
- Hypersensitivity to stimuli
- Tremors
- Seizures
- Skin excoriation on knees and face from hyperactivity
- Changes in muscle tone
- Sleep problems

Gastrointestinal

- Dehydration
- Poor feeding
- Regurgitation
- Diarrhea
- Skin excoriation on buttocks
- Excessive sucking

Metabolic, Vasomotor, Respiratory

- Nasal stuffiness, sneezing
- Frequent yawning
- Frequent episodes of hiccups
- Fever
- Sweating
- Tachypnea
- Apnea

Interventions and Rationale

Support Measures for the Treatment of Withdrawal Symptoms

1. **Quiet and Calm Environment**—Infants can be supported using slow, steady handling and quiet voices during cares. Infants with NAS often have trouble falling asleep, so it is important to let them sleep undisturbed while minimizing noise, light, and visitors.
2. **Swaddling**—Swaddling helps infants gain and maintain organization of their bodies. This can be evident in fewer tremors, stable respirations, and better coordination of sucking, swallowing, and breathing. Overdressing and over-bundling can lead to overheating.
3. **Sucking**—Breastfeeding or bottle feeding when hungry, or pacifier use at other times, will help calm the infant.
4. **Respond to Distress Cues**—Infants will communicate when they have had enough. If an infant is over stimulated, stop and give him/her a break.
5. **Over Stimulation Support**—Hold infants close and gently rock in a quiet environment.
6. **Gradually Introduce Stimuli**—Introduce stimuli one at a time (light, sound, touch, voice). Gradually increase number of stimuli as tolerated.
7. **Feeding Environment**—Infants should be fed in quiet and calm surroundings with minimal noise and disturbances.
8. **Organize Care**—Minimize handling, establish routine, and implement a demand feeding schedule.

Administer pharmacological treatment as ordered when, despite maximal supportive care, abstinence scoring remains consistently elevated.

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Care Concerns for the Neonate

Risks:

- **Imbalanced nutrition:** decreased intake and/or intolerance related to CNS irritability, poor suck reflex, hyperactive motor tone, and diarrhea
- **Insomnia:** related to hyperirritability and hypersensitivity to environmental stimuli
- **Impaired parenting:** related to absent attachment behaviors, continued parental illicit drug use, and inadequate support systems

Goals: The overall goal is to alleviate symptoms of opioid withdrawal and support optimal growth and development in the infant's family and social context.

- Parents receive anticipatory guidance and understand risks, assessment, and management of NAS.
- Parents are actively involved in caring for the infant and receive education throughout the process.
- Infant is able to take adequate nutrition for appropriate weight gain. Breastfeeding or providing expressed breast milk is encouraged for bonding and to ease the infant's withdrawal symptoms, unless contraindicated for other reasons (e.g., illicit drug use or HIV positive status).
- Infant is able to organize behavior effectively to calm self and establish healthy sleep patterns.

Parental Support

- Acknowledge the mother's actions and resultant fetal and infant effects in a nonjudgmental manner. If a mother is in an opioid treatment program, she is doing what she can for her infant and herself.
- Promote trust. Encourage parental participation in all aspects of infant care.
- Provide parents instruction on the use of the abstinence scoring tool and give updates on medication dosages.
- Evaluate parent's care capabilities. Determine assistance needed to comply with care at home, parent's readiness for a rehab program, and need for social services involvement.

Discharge

- Early discharge is not an option. An extended hospital stay of at least 5 days is suggested to evaluate progress of withdrawal and psychosocial circumstances of the family.
- If breastfeeding or providing expressed breast milk, mothers should be counseled not to stop providing breast milk abruptly.
- If infant is tolerating feedings but not gaining weight adequately, consider supplementing breastfeeding or using higher calorie breast milk or formula.
- Follow-up (medical). Infant medical follow-up should include regular assessments of weight and withdrawal symptoms. Follow-up can include a combination of more frequent assessments by the pediatric care provider and home health visits.
- Follow-up (developmental). Infants exposed to opioids prenatally have greater risk for developmental problems. Infant follow-up should include comprehensive developmental assessments.
- SIDS. Infant mortality rates are higher for infants whose mothers received opioids during pregnancy. Care providers should counsel families about usual measures to minimize SIDS such as breastfeeding (unless contraindicated), avoiding exposure to smoke, and ensuring appropriate sleep position and sleep environment.

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