



NEONATAL OPIOID WITHDRAWAL SYNDROME: A GENERAL PEDIATRICS PERSPECTIVE

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I have no conflicts of interest to
disclose.

OBJECTIVES

- Discuss the epidemiology of neonatal opioid withdrawal syndrome (NOWS)
- Define the clinical features of NOWS
- Describe the components of management of NOWS

CASE INTRODUCTION

- 25 yo G4P1112 with substance use disorder, depression, anxiety, on buprenorphine
- In intensive treatment program and doing well with regular negative urine tox screens

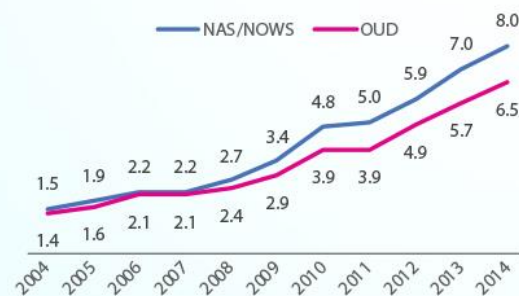
DRAMATIC INCREASES IN MATERNAL OPIOID USE DISORDER AND NEONATAL ABSTINENCE SYNDROME

Opioid use during pregnancy can result in a drug withdrawal syndrome in newborns called **neonatal abstinence syndrome**, or **neonatal opioid withdrawal syndrome** (NAS/NOWS), which causes **costly** hospital stays. A recent analysis showed that an estimated **32,000** babies were born with this syndrome in the United States in 2014, a more than **5-fold increase** since 2004.



**EVERY ~ 15 MINUTES,
A BABY IS BORN SUFFERING
FROM OPIOID WITHDRAWAL.**

NAS/NOWS and Maternal Opioid Use Disorder on the Rise
Rates per 1,000 Hospital Births



Growing Hospital Costs for Treatment of NAS/NOWS
Inflation-Adjusted U.S. Dollars (millions)



Honein et al. Pediatrics 2019, Winkelman et al. Pediatrics 2018, Haight et al. MMWR 2018.



DRUGABUSE.GOV

CLINICAL FEATURES OF NOWS

- Central nervous system irritability
- Respiratory distress
- GI symptoms
- Autonomic dysfunction



ADAM.

Management of NOWS



CASE CONTINUED

- 25 yo G4P1112 with substance use disorder, depression, anxiety, on buprenorphine
- In intensive treatment program and doing well with regular negative urine tox screens
- Baby born at term via NSVD, apgars 8/9
- Placed in paired care with mom

KEY COMPONENTS OF TREATMENT

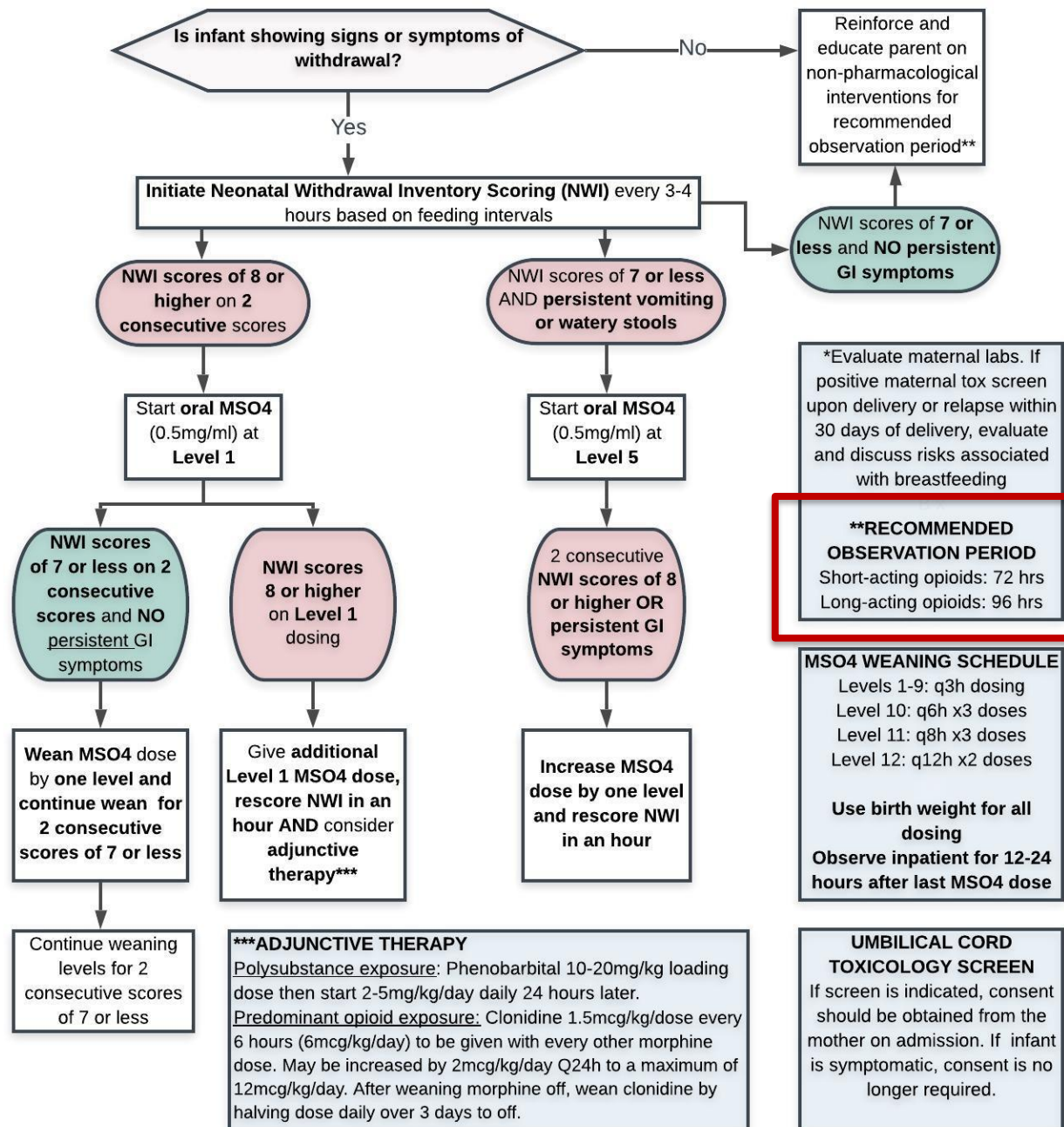
- Observation period
- Non-pharmacologic interventions
- Medications

Neonatal Opioid Withdrawal Syndrome: Screening and Management

FOR NEONATES BORN TO MOTHERS WITH OPIATE USE WITHIN ONE WEEK OF DELIVERY

PRIMARY GOALS: Promote normal patterns of sleeping, feeding, and weight gain and treat symptoms of withdrawal

Initiate low stimulation, non-pharmacological interventions for all exposed infants: quiet and low-lit room, skin-to-skin, C-shaped hold, nesting/swaddling with soft blankets, gentle rocking, sucking on a pacifier
Recommend breastfeeding*



Observation
Period
Non-
pharmacological
Interventions
Medication
Management

ROOMING IN

- Parents stay with infants in shared room during infant hospitalization
- Provides environment to promote universal supportive care for infants at risk for NOWS
- Non-pharmacologic measures, along with standardized scoring and medication dosing have shown improved outcomes
- When opioids are necessary, these measures support weaning medication
- Parental benefits in addition to neonatal benefits

Grossman MR, Berkwitz AK, Osborn RR, et al. An Initiative to Improve the Quality of Care of Infants With Neonatal Abstinence Syndrome. *Pediatrics*. 2017;139(6):e20163360

Holmes AV, Atwood EC, Whalen B, et al. Rooming-In to Treat Neonatal Abstinence Syndrome: Improved Family-Centered Care at Lower Cost. *Pediatrics*. 2016;137(6):e20152929

ROOMING IN PILOT – U OF U

- Inclusion criteria
 - SUPeRAD
 - Prenatal education regarding program
 - Able to be present and identify a consistent family caregiver
- Exclusion criteria
 - Active substance abuse
 - DCFS court hold on infant
 - Maternal incarceration
 - Newborn requires higher level of care

ROOMING IN – LESSONS LEARNED

- Parent satisfaction survey
 - Nurse satisfaction survey
 - Nurse documented outcomes
 - Medical record outcomes
-
- Families are satisfied with care
 - Nurses are satisfied
 - Families need support after discharge

University of Utah **BRIDGE Program**



All newborns need consistent, loving care. A newborn who may experience withdrawal is very sensitive and needs specific care. The goal of the **BRIDGE** program is to help you take the best care possible of your baby.

Our team of pediatricians have experience in identifying and treating withdrawal in newborns. We will meet with you before your baby is born to talk about what to expect after your baby's birth and the special treatment your baby may need. We also know from experience that you will likely need extra support in caring for your baby in the first few weeks after birth. This is why we are pleased to offer you specialized follow up care in our pediatric clinics and to provide you with support by phone after you go home to help answer your questions and give you specific advice on what to do when you have concerns.

As pediatricians we care for children of all ages and are happy to continue to care for your child well beyond the first few weeks. If you choose to see another pediatrician, we will reach out to your new pediatrician to provide information and answer any questions they may have about your baby.

We look forward to working with you.



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OUTPATIENT FOLLOW UP

- 1-2 days after discharge for 5 day well child check
- 2 week well child check + NOWS visit
- 1 month NOWS visit
- 6 week NOWS visit
- 2 month well child check + NOWS visit

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- In intensive treatment program and doing well with regular negative urine tox screens
- Baby born at term via NSVD, apgars 8/9
- Placed in paired care with mom
- Infant noted to be jittery at 36 hours of life
- NWI scores 3-6
- Baby discharged to home after 96 hour observation
- Follow up with PCP 1-2 days after discharge

TAKE HOME POINTS

- Neonatal opioid withdrawal syndrome is an increasingly prevalent diagnosis
- Early identification of pregnant women with opiate exposure is necessary
- Infants at risk for NOWS require close observation for symptoms of withdrawal and close follow up after discharge

QUESTIONS?

