Neonatal Abstinence Syndrome: Supporting the Mother-Baby Dyad

MBC 6th Perinatal Hospital Leadership Summit
May 17, 2019
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What is Neonatal Abstinence Syndrome (NAS)?

- Constellation of signs in neonate that occurs after abrupt discontinuation of gestational exposure to substances taken by the mother.
- Major cause is opiates.


Scope of the problem - National

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)


<table>
<thead>
<tr>
<th>TABLE 1 Major Drugs of Abusers</th>
<th>CNS Stimulants</th>
<th>CNS Depressants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opioids (Morphine, Oxycodone)</td>
<td>Amphetamines</td>
<td>Alcohol</td>
</tr>
<tr>
<td>Methadone</td>
<td>Meperidine (Demerol)</td>
<td>Barbiturates</td>
</tr>
<tr>
<td>Codeine</td>
<td>Benzphetamine (Didrex)</td>
<td>Belladonna (Atropine)</td>
</tr>
<tr>
<td>Oxycodone (Percocet, OxyContin)</td>
<td>Methamphetamine</td>
<td>Methadone</td>
</tr>
<tr>
<td>Hydrocodone (Lortab, Vicodin)</td>
<td>Amphetamine sulfate</td>
<td>Quaalude</td>
</tr>
</tbody>
</table>
**Family Centered Care**
*In the Context of Neonatal Abstinence Syndrome*

- This is hard work
- Take care of yourself first and foremost
- If you feel overwhelmed or anxious, use grounding exercises such as deep, slow, mindful breathing

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**Addiction v. Substance Abuse**

- **Substance Abuse**
  - Not a disease
  - Impacts functioning of brain and body
  - Able to learn from negative consequences
  - Able to stop using or change their patterns of use

- **Addiction**
  - Complex, chronic disease
  - Alters functioning of brain and body
  - Preoccupation with using
  - Behaviors are compulsive, or uncontrollable, despite harmful consequences
  - Tolerance builds up, withdrawal takes place without use

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**Scope of the Problem - NE MN**

- EH-NICU, Duluth, MN. Admission diagnosis - NAS

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**Maternal-Infant Journey**

- Prenatal Care
  - Education
  - Testing
  - Breastfeeding
  - Scoring
  - Consults
  - Treatment

- Hospital
  - Education
  - Referrals

- NICU
  - Education
  - Referrals
  - Close Follow-up
Addiction is a Disease

*We tend to divide the world of mental health, chemical health, and physical health, but the body only knows it as one.*

Addiction is a disease.
Center on Addiction.

Trauma Informed Care

*As healthcare providers we need to promote a culture of compassion with a trauma informed lens*
- Optimize a point as a single point of contact
- Build relationships
- Provide continuity of care
- Provide expertise in attachment and trauma informed care
- Promote a culture of compassion in the healthcare setting

Adverse Childhood Experience(s)

*It’s not what’s wrong with you, it’s what happened to you.*

Childhood trauma affects health across a lifetime

Nadine Burke Harris, MD, CEO
Center for Youth Wellness in San Francisco, CA

Essentia Health’s Approach

- Center for Alcohol and Drug Treatment (CADT)
- Medication Assisted Treatment (MAT) Program
  - Methadone
  - Subutex
- Started the “Clear Start Program” on site at CADT
  - This is an OB Clinic that is staffed by a Midwife employed by Essentia Health.
- Clients of MAT that became pregnant were encouraged to get involved in the Clear Start Program.
- Building a trusting relationship with these moms so they would continue in their prenatal care.
So What About Reporting?

State Statute 626.556 Reporting of Maltreatment of Minors.
Subdivision 1. Public Policy
(a) The legislature hereby declares that the public policy of this state is to protect children whose health or welfare may be jeopardized through physical abuse, neglect, or sexual abuse. While it is recognized that most parents want to keep their children safe, sometimes circumstances or conditions interfere with their ability to do so. When this occurs, the health and safety of the children must be of paramount concern. Intervention and prevention efforts must address immediate concerns for child safety and the ongoing risk of abuse or neglect and should engage the protective capacities of families.

Definitions:

Prenatal Exposure and Mandatory Reporting

• Prenatal exposure: Ingestions of controlled substance(s) for a non-medical purpose during pregnancy
• Mandatory reporting of prenatal exposure to controlled substances – 626-5561, Subd. 1:
  – Mandated report immediately to the local welfare agency with knowledge or belief that a woman is pregnant and has used a controlled substance for a nonmedical purpose during pregnancy in any way that is habitual or excessive.

Exemption to Reporting

626.5561 Reporting of prenatal exposure to controlled substances

A health care professional or a social service professional who is mandated to report, is exempt from reporting a woman’s use or consumption during pregnancy if the professional is providing prenatal care or other healthcare services.

A voluntary report may be made.

ACOG Recommendations

• Before pregnancy and in early pregnancy, all women should be asked about their use of tobacco, alcohol, and other drugs, including marijuana and other medications used for nonmedical reasons.
• Women who are pregnant or contemplating pregnancy should be encouraged to discontinue marijuana use.
• Marijuana use while breast feeding is discouraged due to insufficient data to evaluate the effects of it on infants.
Difficult Conversations

- Talk to mothers about the potential impact her use could have on her baby.
- All women should be informed about planned medical testing.
- Clear and honest communication with the mother regarding drug testing is very important.
  - Explain and document reasons for testing.
- Offer treatment options.

What About Breastfeeding?

- The general rule of thumb is if the mother is on a prescribed treatment program: methadone, buprenorphine, or morphine for chronic pain, then yes.
- If she is taking illicit drugs, or drugs not prescribed to her, such as methamphetamines, opioids, multiple substances or has a positive drug screen then no, at least not at first.

General Recommendations for Breastfeeding

From ABM Clinical Protocol #21
Guidelines for Breastfeeding and Substance Use or Substance Use Disorder

- Encourage breastfeeding under the following circumstances:
  - Engaged in substance abuse treatment
  - Plans to continue in substance abuse treatment
  - Abstinence from drug use for 90 days prior to delivery; ability to maintain sobriety demonstrated in an outpatient setting
  - Toxicology testing of maternal urine negative at delivery
  - Engaged in prenatal care and compliant

- Encourage stable methadone or buprenorphine-maintained women to breastfeed regardless of the dose
- Management of mothers who use opioid therapy for chronic pain therapy should be closely supervised by a chronic pain physician who is familiar with pregnancy and breastfeeding
- Judicious amounts of oral narcotic pain medication, when used in a time-limited situation for an acute pain problem, are generally compatible with continued breastfeeding

Prenatal Counseling

During pregnancy mother should receive counseling about:
- Breastfeeding her infant or providing breastmilk
- Golden hour, rooming in, support person
- Possibility of her infant requiring a longer hospital stay
- Possible admittance of her infant to the NICU or pediatrics for treatment
- Recognition of her role as most important person in her newborn’s life and that she continue to room-in wherever her infant is receiving care.
Maternal-Infant Journey

**Prenatal Care**
- Education
- Testing
- Breastfeeding
- Scoring
- Consults
- Treatment

**Hospital**
- NICU
- Pediatrics

**Post-Discharge**
- Education
- Referrals
- Close Follow-up

Communicating with Mother

- Provide mother with support in a nonjudgmental and compassionate environment.
  - If the conversation does not take place, mothers might not have the opportunity to get services and support to help them maintain sobriety and prevent involuntary system involvement.
- Mothers who receive treatment and support during pregnancy have a better prognosis for recovery from addiction, which improves neonate outcomes.

Admission Assessment

- If mother or baby test positive at the time of delivery, a CPS report will be made.
- If mother has a CPS history, even THC/alcohol use during pregnancy can lead to larger consequences.
- Mother may question why she was not told about potential consequences during prenatal care.
- Our verbal and nonverbal language matters.
- Compassionate care is the best care.

Creating a Culture of Compassion

- Acknowledge the ACEs
- Recognize the power of language
- Understand nonverbal communication is important
- Believe and communicate that we are working toward shared goals
Family Requests

- Listen to me
- Do not judge me
- Engage me in decision-making and caregiving
- Tell me what I am doing well
- Do not assume you know everything about me
- Respect my privacy
- Ask how we can work together to reach mutually agreed upon goals

Creating a Trauma Sensitive Healthcare Environment

- Focus on family centered and multidisciplinary care
- Recognize triggers
- Practice mindfulness
  - Self care
  - Self kindness
  - Self compassion
- Seek consultation and support

Supporting the Mother-Baby Dyad

A mother’s love for her child is like nothing else in the world. It knows no law, no pity; it dares all things and crushes down remorselessly all that stands in its path.

- Agatha Christie

Intrapartum Breastfeeding Counseling and Support

- Lactation support: as you would treat any breastfeeding couplet.
- Uninterrupted skin-to-skin after birth regardless of feeding choice or status.
- Breastfeed within first hour of life and encourage feeding on cues.
- Encouraging and facilitating continued unrestricted skin-to-skin between mother and baby.
- Utilizing her support persons or nursing staff to hold space for couplet to get safe rest together.
- Educating on keeping room cozy, quiet and calm, in hospital and at home.
- Consider delay of any painful procedures if possible.
- Breastfeeding follow-up and support resources identified and referrals made before discharge.
- Education of safe formula preparation if needed.
- Meeting this couplet where they are at today.
What would you want for your baby?

- Physical and occupational therapy
- Respite care for mom and dad or help with other children
- Logistics: getting to and from Methadone Clinic and appointments
- Home visits with Public Health
- Help Me Grow program referral
- Refer to Lactation for help if any issues not readily fixed... Milk supply, latch, infant weight issues
- Refer to provider if NAS scores consecutively higher than baseline from discharge
- Breastfeeding support group, peer counselor
- Support and education if needs to bottle feed formula or pump and dump

"For species such as primates, the mother IS the environment." Sarah Blaffer Hrdy

“Nothing an infant can or cannot do makes sense, except in light of mother’s body.” Dr. Nils Bergman

Maternal-Infant Journey

Prenatal Care

- Education
- Treatment
- Referrals

Post-Discharge

Hospital

- Education
- Referrals
- Close Follow-up

NICU

Pediatrics

Birthplace

Drug testing

- Screening is required in MN if medical provider suspects substance abuse, either by history or clinical evaluation. Positive results are reportable to county of patient residence.
- Maternal
  - Urine drug screen performed on maternal admission when indicated.
- Newborn
  - Urine reflects recent in utero exposure.
  - Meconium and umbilical cord reflects in utero exposure within approximately 3 months.
  - Hold umbilical cord on all newborns, test when indicated.

Minn Statute 626.5562
**NAS Scoring - Modified Finnegan**

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>EVALUATED COMPONENTS</th>
<th>MARKS</th>
<th>TOTAL MARKS</th>
</tr>
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<tbody>
<tr>
<td>Head</td>
<td>Scalp color, tone</td>
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</tr>
<tr>
<td></td>
<td>Tone</td>
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<td>3</td>
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<td>Agitation</td>
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<tr>
<td></td>
<td>Mouth</td>
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<tr>
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<tr>
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<td>Response</td>
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<td>Pupillary reaction</td>
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<td>Anterior fontanelle</td>
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<tr>
<td></td>
<td>Hematocrit (Venous)</td>
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<tr>
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<td>Palmar/Plantar flexion</td>
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<td>Tone</td>
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<tr>
<td>TOTAL MARKS</td>
<td>10</td>
<td>20</td>
<td></td>
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**NAS Scoring - Eat, Sleep, Console (ESC)**

- **Team Huddle**
  - Parent/caregiver and medical team (RN, MD/NP)
  - Done if infant scores a 3 in Consoling or a Yes to any question
  - Maximize non-pharm management
    - Parent/caregiver presence, rooming in, skin to skin, holding, swaddling, responding quickly to early hunger cues, low light and noise, limit visitors, cluster cares, parent/caregiver rest, increase PT/OT sessions

- **Eat**
  - Poor eating due to NAS?
    - Obtain coordinated latch within 10 min
    - Feed for at least 10 min and appropriate volume

- **Sleep**
  - Poor sleeping due to NAS?
    - Sleep < 1 hr

- **Console**
  - Unable to console within 10 min
    - Consoling support needed
      - Consoles on own = 1
      - Consoles with caregiver support (CS) within 10 min = 2
      - Unable to console with CS within 10 min = 3

**Pharmacologic Treatment**

- Non-pharmacologic treatment must be maximized first and no non-NAS causes identified.
- If infant still with Yes to any question or scoring 3 on consoling, then oral morphine therapy is initiated at 0.04 mg/kg/dose q 3 hr.
- Dose increased by 0.02 mg/kg/dose if continues to meet treatment threshold.
- Dose weaned daily by 10% of max dose if there were no ‘yes’ answers to Eat or Sleep and Console score ≤ 2 in prior 24 hr. Stop when < 0.02 mg/kg/dose.
- Rare need for adjunct therapy and/or Peds Neurology consult.
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Hospital
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Post-Discharge
- Education
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- Referrals

Discharge Criteria
- Safe disposition plan in place.
- Hep B vaccine given and all screenings done.
- Routine newborn education completed.
- Parents and caregivers comfortable and skilled in non-pharmacologic management.
- Adequate intake to support weight gain.
- Off of morphine with controllable symptoms for at least 24 hr.
- Follow-up arranged:
  - See PCP within 2-3 days
  - Specialty MD follow-up prn
  - Lactation Clinic follow-up prn
  - Public Health Nurse and Help Me Grow referrals
  - If NICU admission needed, refer to NICU Follow-up Clinic