A New approach to NAS: home in 6 days

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Disclosure Statement

- Lisa Grisham, NNP-BC
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The people listed above have no relationships or financial gains to disclose relevant to this topic.
Learner Objectives

By the end of this session, the learner will be able to:

1. Identify the signs and symptoms of Neonatal Abstinence Syndrome (NAS).
2. Differentiate between traditional medical management of NAS and the new Family Centered NAS Care Program.
3. Describe at least one non-pharmacologic method of soothing an infant.
4. Summarize the Eat, Sleep, and Console method of assessing infants with NAS.
Neonatal Abstinence Syndrome

- Constellation of signs and symptoms in the newborn due to intrauterine exposure to addictive substances resulting in irritability, jitteriness, high tone, poor feeding and sleeping disturbances after birth

- **These infants can be CHALLENGING**

- Symptoms usually peak: Day 3-4 (wide range)

- The culprit is usually opioids
  - Illicit: Heroin
  - Prescribed: Vicodin, OxyContin, Codeine, Dilaudid, Percocet
  - Prescribed to manage illicit substance dependence: Methadone, Suboxone, Subutex (buprenorphine)
SCOPE of the Problem: Why?

- Women of childbearing age between 2008-2013: 1/3 had opioid prescription
- 22.8% of pregnant women filled a prescription for opioid
- Arizona 12th highest prescription drug misuse: 2013

SCOPE of the Problem: United states

- Rate of NAS has increased significantly:
  - 5 fold increase since 2000
  - 2009-2013: 3-6 per 1000 hospital births
  - Mean LOS = 23 days
  - 4% of all NICU admission

- Total Hospital Charges:
  - $94,400 for pharmacologically treated
  - $3,500 for regular newborn
  - 77%: Medicaid

Source of graph: AZ Department of Health Services
SCOPE of the Problem: Arizona
SCOPE of the Problem
Average length of hospital stay

- National: 23 day
- Our unit:
  - Morphine: 26 day
  - Morphine and Clonidine: 22 days
  - Some up to 2 months
Changing Treatment Model

- Previous research on NAS showed that there was no “solid” scientific basis to the way NAS is currently being treated, especially as related to the long term neurodevelopmental outcomes.

- Questions:
  1. Is there an alternative way to manage these babies?
  2. What is the significance of Finnegan scores?
     - Colic, differences in staff’s interpretation

- New approach: Expect of NAS babies what every other baby does:
  1. Eat
  2. Sleep
  3. Be Consoled
Neonatal Abstinence Syndrome (NAS)
Hospital TREATMENT

- Pharmacologic treatment has been the mainstay in the treatment of NAS

- **Newer approach**
  - PARENTS ARE THE TREATMENT
  - Non-pharmacologic focus: Family Centered - Community Supported NAS Treatment
  - Identify mothers as early as possible
  - Dedicated OB/GYN outpatient Social Worker
  - Neonatal Consultation to outline EXPECTATIONS
  - ESC Method
Instead of treating according to Finnegan scores we use ESC (Eat, Sleep, Console):

- **Eat** – Able to eat at least 1 ounce/feed or breast feed well. If unable to eat (too sleepy or uncoordinated), consider placing a NG tube for feeding
- **Sleep** – Able to sleep for at least 1 hour undisturbed (may have to be held to sleep)
- **Console** – Should be able to be consoled within 10 minutes. Another person should try to console baby after 10 minutes. If still not able to console, a one-time dose of morphine can be given (0.05mg/kg). Baby will be on pulse oximetry for 4 hours after morphine dose.
Family Centered NAS Care  
Mom is the Treatment

- Coach the family in ways to console the baby
  - Dr. Harvey Karp’s 5 S’s – happiestbaby.com
    - Swaddling
    - Shushing
    - Swaying/Swinging
    - Side lying or stomach While held or observed; not for sleep
    - Sucking

- Holding/Baby Wearing
- Feeding
- Immediate intervention when crying
- Low stimulation environment – dim lights, minimal noise
- Ensure safe sleep environment
Family Centered NAS Care
Mom is the Treatment

- Remove barriers to mother’s presence:
  - Provide meals
  - Other children may visit
  - Coordinate trips to the Medication Assisted Treatment clinic
  - Provide breaks
Family Centered NAS Care
Mom is the Treatment

- Mother is the main caregiver. Other family members are also encouraged to support baby and mother.
- If family cannot be present it becomes a joint effort - nurses, residents, physicians, medical students, social worker, volunteers, etc.
Family Centered NAS Care
Staff for the Assist
Plan of Care
- Referral pathways
  - High Risk OB
  - Medication Assisted Treatment Facilities
- Outreach
- Family Medicine Department
- L&D

- Dedicated Outpatient Licensed Medical Social Worker - Joy
FC-NAS Care program at the time of birth

Plan of Care

- Identification of the mother as a candidate at the time of delivery, notify NAS team.
- Birth – Mother and Baby both drug tested.
- **Routine newborn care** – non-judgmental care for mother and education on infant care, NAS Team can be a resource.
- When scores exceed threshold (e.g. three consecutive 8’s), transfer infant to NICU.
- Get mom discharged so she can stay in NICU with her infant.
- Manage infants with ESC and prn morphine.
- Discharge infant when baby is past the peak of withdrawal symptoms and the mother/father/family member is comfortable and shows competency in caring for their NAS infant.
- Disposition oversight is controlled by DCS.
Family Centered NAS Care

Key Points

- Keep the mother and baby together by removing barriers
- Eat, Sleep, and Console Model (ESC) instead of treating based on Finnegan scores
- Coach and Partner with the parent on how to care for their NAS infant
- Empower the family/mother: Reduce guilt by being the solution
- Culture of acceptance and teamwork between the mother and staff
- Pharmacological treatment may be needed
- Limit interventions that irritate the baby
- Encourage breast feeding if compliant with Medication Assisted Treatment program
- Moms need to feel welcomed
## Culture Change Through Education

### Development of A Core Group

<table>
<thead>
<tr>
<th>Education</th>
<th>CORE Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey</td>
<td>Physician and Neonatal Nurse Practitioners</td>
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<td>Monthly meetings</td>
<td>Nurses</td>
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<td>1:1 education</td>
<td>Respiratory Therapists</td>
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<td>Culture of Acceptance</td>
<td>Occupational and Physical Therapy</td>
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<td>Addiction Education</td>
<td>Social Workers</td>
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<td>Volunteers</td>
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<td>Unit Clerks</td>
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</table>
When do we realize a mom isn’t going to be compliant and stop trying to make her take care of her baby? Who is going to be looking for when mom is no longer reliable? These are moms that obviously haven’t been making smart choices and don’t have the “toolbox” to rely on.
Addiction

❖ Books
   ❖ Dreamland, by Sam Quinones
   ❖ Chasing the Scream, by Johann Hari

❖ In-service – Local experts (Dr. Susan Hadley) presented

❖ Documentaries
   ❖ Hooked: From Prescription to Addiction – https://cronkitenews.azpbs.org/hookedrx/
   ❖ Pleasure Unwoven – this is only sold on DVD. You can also catch some of the clips on YouTube: https://www.youtube.com/playlist?list=PLA8F89537FD4C3FD1
<table>
<thead>
<tr>
<th>Collaboration</th>
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<tbody>
<tr>
<td><strong>Antepartum</strong></td>
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<tr>
<td>❖ OB/GYN</td>
</tr>
<tr>
<td>❖ Family Medicine</td>
</tr>
<tr>
<td>❖ Medication Assisted Treatment (MAT) Centers</td>
</tr>
<tr>
<td>❖ COPE</td>
</tr>
<tr>
<td>❖ CODAC</td>
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<tr>
<td>❖ La Frontera/HOPE Center</td>
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<tr>
<td>❖ Arizona Rehab Campus</td>
</tr>
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</table>
Department of child safety (DCS)

- Communication and Collaboration
  - Goal: to discharge baby home safely
    - Home with parents
    - Home to foster
  - Identify placement earlier – TDM no later than day 4
  - Improve communication with DCS
  - SENSE
Collaboration

Task Forces

- SEN Prevention Task Force (State)
- PAPN - Polysubstance Abuse in Pregnancy and Newborns (Pima County)
- State Coalition on Prevention
- CHIP – Community Health Improvement Plan (Pima County Health Dept)
- Arizona Prescription Drug Misuse and Abuse Initiative Health Care Advisory Team (State)
- Arizona Council of Human Service Providers Opioid Task Force (State/ AHCCCS)
Resources: ADHS Opioid Epidemic

http://www.azdhs.gov/opioid

Real Time Opioid Data

For the first time, statewide opioid data is available in real time. Check out the details of the five categories of data we are now collecting.

- **957** suspect opioid deaths
- **6,200** suspect opioid overdoses
- **615** neonatal abstinence syndrome
- **9,329** naloxone doses dispensed
- **4,072** naloxone doses administered

**Neonatal Abstinence Syndrome**

51% of mothers of NAS cases were being medically supervised while taking opioids while pregnant.
## Resources: CSPMP

https://pharmacypmp.az.gov/

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<th>Written</th>
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<th>Rx #</th>
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<td>26</td>
<td>Id Hea</td>
<td>WALGR (4415)</td>
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Measuring Success

- Type and amount of medication doses, days in hospital, cost...
- Bonding, breast feeding, keep family together, decrease use of medication
- Rate of child abuse
- Rate of readmission
- Developmental follow up clinic: assess development at 2, 6, 9, and 18-24 months
First patient
Preliminary Results

- 19 babies since June 24\textsuperscript{th}, 2017
- Length of Stay
  - Range 5-11 days
  - Average 6.1*
- Total rescue doses of morphine needed – 5
  - 2 patients needed 1 dose
  - 1 patient needed 3 doses
  - 16 patients did not need any morphine

- Disposition
  - 15 with mother
  - 3 with family members
  - 1 with adoptive parents
- Transformation in these women
<table>
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<tr>
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<th>Maternal Medication</th>
<th>Morphine</th>
<th>LOS</th>
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<td>11</td>
<td>MOB</td>
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<td>2</td>
<td>Subutex 4mg BID</td>
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<tr>
<td>3</td>
<td>Methdone 80mg QD</td>
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<td>Parents</td>
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<td>4</td>
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<td>5</td>
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<td>6</td>
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<td>Amphetamines and Opiates</td>
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<tr>
<td>10</td>
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<tr>
<td>11</td>
<td>Heroin (unknown amount)</td>
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<td>10</td>
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</table>
Lessons Learned

- Recognizing how truly biased we are
- Normalizing these families and infants
- How important initial and continuing contact is for attachment
- Significance of before and after care for these families – what a small part we play in the lives of these mothers and babies
- Importance of early program contact with mothers
- History – gathering meaningful information
Continuing Challenges

- TIME
- Ability to have early program contact with these mothers
- Inability to extend program to all opioid/opiate exposed infants
- Room and unit constraints
- Continuing staff education
- Mother-Baby unit – Finnegan scoring and FC-NAS care education
References


THANK YOU

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