Maternal Substance Abuse and NAS:
What is Woman’s Hospital Doing?
Lizzy

Born April 7, 1993

Junior High cheerleader

Developed bacterial endocarditis from using heroin.

Passed away May 12, 2016; 23 years old
Rise in drug-dependent newborns

Since 2003, when Congress called on states to intervene in cases of drug-dependent babies, diagnoses of Neonatal Abstinence Syndrome, also known as newborn drug withdrawal syndrome, have increased dramatically.

NUMBER OF BABIES DIAGNOSED WITH NEONATAL ABSTINENCE SYNDROME (NAS)

Source: Reuters analysis of U.S. Department of Health and Human Services data
What have we seen at Woman’s?

More mothers are being affected by substance misuse

More babies are being affected by maternal substance misuse
# Neonatal Abstinence Syndrome, NAS

<table>
<thead>
<tr>
<th>Not all babies exposed to opioids have NAS</th>
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<tbody>
<tr>
<td>Babies may be out of hospital when they develop symptoms</td>
</tr>
<tr>
<td>Symptoms principally manifest in CNS and GI system</td>
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<tr>
<td>Use of tobacco, SSRI’s, or benzodiazepines may increase risk for developing NAS in opioid exposed baby</td>
</tr>
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# NAS symptoms

<table>
<thead>
<tr>
<th>CNS irritability</th>
<th>Tremors and seizures</th>
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<tbody>
<tr>
<td>Persistent crying</td>
<td>Vomiting, diarrhea, weight loss</td>
</tr>
<tr>
<td>Tight muscle tone</td>
<td>Unstable temperature</td>
</tr>
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</table>
4.4% of pregnant women report illicit drug use in the past 30 days.
Thank you for all your help along the way
May and June 2017 maternal drug use

1328 deliveries

185 had positive history or drug screen (13.93%)

- 38 used opioids (2.86%)
- 17 used cocaine (1.2%)
- 16 used amphetamines/meth (1.2%)
- 9 used a benzodiazepine (0.6%)
- 130 used marijuana (9.79%)
# Neonatal withdrawal inventory scoring

<table>
<thead>
<tr>
<th></th>
<th>Score Description</th>
</tr>
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<tbody>
<tr>
<td>Hypertonicity</td>
<td>Not present =0; Present =2</td>
</tr>
<tr>
<td>Hyperactive Moro</td>
<td>Not present =0; Present =2</td>
</tr>
<tr>
<td>Tremors</td>
<td>Not present =0; When disturbed =3; When undisturbed =4</td>
</tr>
<tr>
<td>Sneezing/Yawning</td>
<td>Not present =0; Greater than 2 since last score =1</td>
</tr>
<tr>
<td>Sweating/Mottling</td>
<td>Not present =0; Present =2</td>
</tr>
<tr>
<td>Regurgitation</td>
<td>Not present =0; Present =2</td>
</tr>
<tr>
<td>Loose watery stools</td>
<td>Not present =0; Present =2</td>
</tr>
<tr>
<td>Emotional status</td>
<td>Not present =0; Irritability =1; Crying/Fist sucking =2; Excoriation of skin =3; Continuous crying =4</td>
</tr>
</tbody>
</table>
May and June 2017 neonatal withdrawal inventory scoring

- 40 babies had NWI scoring
- 21 had NWI scoring > 0
- 7 babies received treatment for Neonatal Abstinence Syndrome
What have we done at Woman’s?

- Encouraged recognition of and screening for maternal substance misuse
- Improved our processes of caring for patients with maternal substance misuse and their babies
- Reached out to partner with others in the community to care for mothers with substance misuse
Motivational Interviewing: A Tool for Behavior Change
We teamed with the LSU School of Social Work to provide information.

About Screening, Brief Intervention, and Referral to Treatment (SBIRT)

SBIRT is a comprehensive, integrated, public health approach to the delivery of early intervention and treatment services for persons with substance use disorders, as well as those who are at risk of developing these disorders. The SBIRT acronym stands for Screening, Brief Intervention, and Referral to Treatment. Primary care centers, hospital emergency rooms, trauma centers, and other community settings provide opportunities for early intervention with at-risk substance users before more severe consequences occur. An estimated 20% of the general population is considered at risk because of harmful substance use patterns, and it is this group of individuals that is targeted by SBIRT.

- Screening quickly assesses the severity of substance use and identifies the appropriate level of intervention.
- Brief Intervention focuses on increasing insight and awareness regarding substance use and motivation toward behavioral change.
- Referral to Treatment provides those identified as needing more extensive treatment with access to specialty care.
Intervention with Motivational Interviewing........IT’S NOT THIS!

“It’s some new thing called an intervention.”
Effects on the baby

Alcohol use
- Preterm birth
- Birth defects
- Mental retardation
- Stillbirth & miscarriage
Effects on the baby

Tobacco use
- Low birth weight
- Small for gestational age
- Preterm delivery
- SIDS
- Stillbirth
Effects on the baby

Illicit drug use
• Fetal death
• Brain injuries
• Preterm birth
• Developmental problems
• Birth defects
What we would like to do....

- Create a team of nurses, social workers and interested physicians
- Mimic our HIV care coordination program
- Give mothers in need an alternative to substance misuse
We created order sets and pathways for care of the mother with opioid misuse.
Patient on chronic opioid therapy and pregnant

Fig. 1. Algorithm for the approach to the pregnant patient prescribed chronic opioid therapy
## Clinical opiate withdrawal scale (COWS)

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
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<tbody>
<tr>
<td>Resting pulse rate</td>
<td>Sweating</td>
</tr>
<tr>
<td>Restlessness</td>
<td>Pupil size</td>
</tr>
<tr>
<td>Bone or joint aches</td>
<td>Runny nose or tearing</td>
</tr>
<tr>
<td>GI upset</td>
<td>Tremor</td>
</tr>
<tr>
<td>Yawning</td>
<td>Anxiety or irritability</td>
</tr>
<tr>
<td>Gooseflesh skin</td>
<td></td>
</tr>
<tr>
<td>5-12 = mild</td>
<td>13-24 = moderate</td>
</tr>
<tr>
<td>25-36 = moderately severe</td>
<td>&gt;36 = severe withdrawal</td>
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Woman’s Behavioral Agreement

Transition to Medication Assisted Treatment (MAT) or Detox Behavioral Agreement

Patient: __________________________

Date: __________________________

To the Patient:
During your elective treatment of opiate use (transition to medication assisted treatment (MAT) or detoxification), Woman's Hospital staff will take steps to manage your withdrawal symptoms to help make you comfortable. You are being asked to read and acknowledge this form related to your behavior during this admission. You must agree to the following guidelines for ongoing treatment as an inpatient. Failure to comply with the terms of this agreement may result in discharge.

Agreement

I am the patient identified above, and I agree as follows:

1. I agree that I will remain on the assigned nursing unit until I am discharged from the hospital. I will not leave the unit for any reason including to go for a walk. For hospital testing that is off of the unit I will be transported by hospital personnel only.

2. I agree not to take any medicine or drug, legal or illegal, which is not prescribed by my doctor.

3. I will not bring drugs or drug paraphernalia into the hospital nor will I have anyone bring them to me while
### BEHAVIORAL Health – Opiate Addiction-Medication Assisted Treatment Orders

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>ORDERS FOR MEDICATION, DIET AND TREATMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>***** NO BENZODIAZEPINES ** NO STADOL (butorphanol)**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>***** NO NUBAIN (nalbuphine) ** NO ZOFTRAN (ondansetron)******</td>
</tr>
</tbody>
</table>

1. Notify attending physician of arrival
2. Initiate Clinical Opiate Withdrawal Scale (COWS) on admit, then every 2 hours x 24 hours. If score is less than 25 during that period, assess every 4 hours until discharge. If condition changes or score is 25 or greater resume every 2 hour assessment.
3. Consult Social Services
4. Consult MFM
5. Consult Psychiatrist
6. Vital signs and pulse oximetry every 4 hours
7. Telemetry monitoring (hold methadone and notify MD if QTc greater than or equal to 450ms)
8. Fingerstick Blood Glucose every 6 hours
9. Continuous Fetal Monitoring as indicated
10. Diet: □ NPO □ Clear liquid □ Full liquid □ Regular diet
11. Labs:
What have we learned at Woman’s?

The problem is getting worse.

Screening should be universal.

We need to coordinate care.

The WH HIV care navigator program is a good model to follow.
Finally…. 

This will be a journey and not a destination.

We will make mistakes and learn from them.