Comprehensive Interprofessional Care for Maternal Substance Use Disorders and Neonatal Abstinence Syndrome

Rainey Martin, MSN, RN, AGCNS-BC, RNC-OB
March 2018
6 regions of care in Central Indiana:
- East
- West
- South
- North
- Anderson
- Kokomo
Maternity Services

• Tertiary Care Center
  – CHN: 3800 deliveries/year

• Level 2 hospitals
  – CHS: 1800 deliveries/year
  – CHE: 1000 deliveries/year
  – CHA: 900 deliveries/year
  – CHRH: 500 deliveries/year
Objectives

1. Learn the current impact of maternal substance use & NAS at the national, state, and local level
2. State 2 outcomes and 2 goals of the Indiana Perinatal Substance Use Committee and the Indiana NAS pilot hospital program
3. State 3 interventions implemented at Community Hospital East to address perinatal substance use and neonatal abstinence
4. State 2 future program goals at Community Health Network
9% of babies born in the US test positive for opiates

Incidence of NAS tripled from the year 2000 to 2009

By 2012, one baby diagnosed with NAS every 25 minutes

78% of babies diagnosed with NAS are on Medicaid
## Scope of the Problem - Indiana

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana spends more on health care associated with prescription opioid abuse</td>
<td>more than 38 other states in the nation. $650 million in 2007 (Fairbanks Foundation Report)</td>
</tr>
<tr>
<td>20% babies born in Indiana test positive for opiates</td>
<td>20%</td>
</tr>
<tr>
<td>10% of babies born in Indiana test positive for more than one substance</td>
<td>10%</td>
</tr>
</tbody>
</table>
Indiana’s Action Plan

In 2014, the Indiana General Assembly required ISDH to:

- Establish a task force to develop a working definition of neonatal abstinence syndrome (NAS)
- Identify a process for identification of NAS
- Develop a data collection process to articulate incidence of NAS
- Identify resources needed to support the treatment of maternal substance use and NAS
- Select hospitals to pilot recommendations from the task force
Higher than national rates of positive drug screens for:
- Opioids (more than twice as high)
- Cocaine
- Amphetamines
- Barbituates
- Benzodiazepines

42% of babies born in 2016 were exposed to illicit substances

$12,000 average financial loss to organization for each baby diagnosed with NAS
Why did we get involved?

Network Mission
- Deeply committed to the communities we serve, we enhance health and well-being.

Not about competition
- The substance use epidemic will take all health care organizations working together to address

Assist State Leaders
- State legislators need our help due to lack of knowledge regarding the depth of the problem
## Gaining Support at all levels

<table>
<thead>
<tr>
<th>Senior Leadership</th>
<th>Physicians</th>
<th>Unit leadership</th>
</tr>
</thead>
</table>
| • Current patient statistics  
  • Provider frustrations  
  • Resources needed and current shortage | • Care coordination process  
  • Ability to increase resources  
  • Network resources  
  • Statewide resources | • Care coordination process  
  • Ability to increase resources  
  • Network resources  
  • Statewide resources  
  • Educational resources |
## Responsibilities of Key Team Members

### Nursing Director
- Identify opportunity and define program
- Garner support for changes with senior leaders
- Identify key stakeholders
- Support program and promote buy-in with providers, nursing staff, lab, pharmacy, anesthesia, ambulatory staff
- Assemble team to identify outcome metrics, key performance indicators, and needed resources
- Operationalize processes from ambulatory to inpatient settings via process maps
- Determine financial implications of program

### Clinical Nurse Specialist
- Ensure practice is evidence based and bridge gap between literature and everyday practice
- Identify and implement practices to assist bedside staff in care (COWS, CAGE, Order Sets, Policies, Process Algorithms)
- Facilitate team communication (monthly status calls, nursing consults)
- Assist inpatient and ambulatory nursing leaders with operationalizing new processes
- Represent goals and outcomes of program at the level of the organization
- Collaborate with external organizations (ISDH, USDTL)
- Identify quality metrics and track outcomes for opportunities

### OB/GYN Physician Lead
- Champion for program with peers within CHNw, administrators, legislative and ISDH leaders
- Prescribe subutex to patients within OB/GYN practice
- Co-manage substance use disorder patients with other OB/GYN providers in CHNw
- Identification of barriers and limited resources for pregnant women with substance use disorders
## Responsibilities of Key Team Members

<table>
<thead>
<tr>
<th>Behavioral Health Consultant</th>
<th>Neonatologist and Neonatal Nurse Practitioner</th>
<th>Physician Lead &amp; VP Women’s and Children’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assess and treat wide variety of behavioral health and</td>
<td>• Diagnose and treat neonatal abstinence syndrome</td>
<td>• Provide support at the network &amp; state level</td>
</tr>
<tr>
<td>psychosocial concerns</td>
<td>• Provide nursing staff education</td>
<td>• Highlight the work &amp; success of the clinical team</td>
</tr>
<tr>
<td>• Design and managed interventions, including referrals to</td>
<td>• In-person consultation with expectant mothers regarding care of babies exposed to</td>
<td>• Break barriers that cause issues within the program</td>
</tr>
<tr>
<td>intensive outpatient therapy</td>
<td>substances during pregnancy</td>
<td>• Provide resources for the project team</td>
</tr>
<tr>
<td>• Assist with care coordination</td>
<td>• Champion for program with peers within CHNw, administrators, legislative and ISDH</td>
<td></td>
</tr>
<tr>
<td>• Assist with transition of care from OB/GYN buprenorphine</td>
<td>leaders</td>
<td></td>
</tr>
<tr>
<td>provider to primary care buprenorphine provider</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Therapy liaison for staff with questions about therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>process</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Community Hospital East’s Action Plan

- Universal toxicology screens on Initial prenatal visit and on admission to hospital
- Referral of all positive screens to Behavioral Health Consultant for on-going therapy
- Referral to MAT (2 OB/GYN and 1 NP buprenorphine prescribers on site)
- Prenatal consult with neonatology, CRNA, and lactation consultant
- Umbilical cord drug screens for infants born to mother with hx of SUD and/or +toxicology screen on admission to hospital
- Observation of all exposed infants for 5 days
- Transitional care post-delivery to primary care and on-going behavioral health services
Impact at Community Hospital East

Women who test positive for drugs prenatally and later test negative upon admission for labor and delivery

- 2015: 45%
- 2016: 50%
- 2017: 55%
Impact at Community Hospital East

Average Length of Stay for Babies with NAS Dx

- 2015: 23 days
- 2016: 20 days
- 2017: 27 days
Methadone and Buprenorphine Exposure

Newborn LOS in days

- **Methadone Exposure**
  - 2015: 33.67 days
  - 2016: 30.5 days
  - 2017: 16.2 days

- **Buprenorphine Exposure**
  - 2015: 22.67 days
  - 2016: 19.4 days
  - 2017: 7 days
Patient Testimonials

- Indiana Infant Mortality Summit
- OB staff meetings
- Focus groups with Indiana Perinatal Substance Use Committee
Opportunities for Improvement

- Strengthen relationships with primary care and pediatric providers to standardize follow up for exposed infants
- Strengthen referral process for post-delivery care for mothers
- Recruit additional buprenorphine providers in our system and in Indiana
- Track long term outcomes on exposed babies
- Sustainable data tracking platform
# Actionable steps to get started

**Gain senior leadership support**

- Recruit OB/GYN buprenorphine provider, identify a physician champion.
- Budget for umbilical cord drug screening and universal maternal screening
- Establish connection with behavioral health services for pregnant women
- Neonatal abstinence training for maternity and nursery/NICU staff
- Standardize mandatory observation periods for opioid-exposed infants
- Standardize prenatal consults with nursery and anesthesia providers
- Educate team members on use of screening tools (COWS, CAGE, 4Ps, 5Ps)
- Build tools into EMR to assist staff and providers (order sets, COWS, CAGE)
Recommendations from professional organizations

Positive results of the pilot program for Maternal Substance Use support the approach recommended by multiple professional organizations:

“The problem of drug and alcohol use during pregnancy is a health concern best addressed through education, prevention and community-based treatment, not through punitive drug laws or criminal prosecution.”

-ACOG, AWHONN, AAP, ACNM, AAFP, APHA, ASAM, MoD
Questions
References