Improving Tennessee Health Care Providers Understanding of Neonatal Abstinence Syndrome

Ivy Click  
*East Tennessee State University*, click@etsu.edu

Nicholas E. Hagemeier  
*East Tennessee State University*, hagemeier@etsu.edu

Follow this and additional works at: [https://dc.etsu.edu/etsu-works](https://dc.etsu.edu/etsu-works)

Part of the Appalachian Studies Commons, and the Substance Abuse and Addiction Commons

Citation Information  
Click, Ivy; and Hagemeier, Nicholas E.. 2015. Improving Tennessee Health Care Providers Understanding of Neonatal Abstinence Syndrome. Podium presentation. *5th Annual AppNET Conference*, Johnson City, TN. [https://drive.google.com/drive/folders/0B4gQRfHvsW_pc21WbU0zOWhrYVU](https://drive.google.com/drive/folders/0B4gQRfHvsW_pc21WbU0zOWhrYVU)

This Presentation is brought to you for free and open access by the Faculty Works at Digital Commons @ East Tennessee State University. It has been accepted for inclusion in ETSU Faculty Works by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact digilib@etsu.edu.
Improving Tennessee Health Care Providers Understanding of Neonatal Abstinence Syndrome

Copyright Statement
This document was originally published by the 5th Annual AppNET Conference.
IMPROVING TENNESSEE HEALTH CARE PROVIDERS UNDERSTANDING OF NEONATAL ABSTINENCE SYNDROME

Ivy Click, EdD & Nick Hagemeier, PharmD, PhD
AppNET Conference
March 13, 2015

DISCLOSURES

Drs. Click and Hagemeier DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

OBJECTIVES

- Describe Neonatal Abstinence Syndrome (NAS) trends in Tennessee
- Explain the applicability of the Theory of Planned Behavior to prescriber and dispenser substance use prevention behaviors
- Describe preliminary study outcomes
NEONATAL ABSTINENCE SYNDROME

- Neonatal Abstinence Syndrome (NAS) is a withdrawal syndrome that occurs when a baby is born dependent upon substances taken by the mother during pregnancy.
- NAS can be associated with:
  - Prescription drugs obtained with prescription
    - Includes women on pain therapy or replacement therapy
  - Prescription drugs obtained without prescription
  - Illicit drugs

NAS SYMPTOMS

- Opioid withdrawal symptoms primarily related to:
  - Central Nervous System:
    - Seizures
    - Tremors
    - Hyperactivity
  - Gastrointestinal System:
    - Poor feeding
    - Vomiting
    - Poor weight gain
    - Diarrhea
    - Uncoordinated sucking

NAS SYMPTOMS

- Opioid withdrawal symptoms:
  - May appear as early as within the first 24 hours
  - May take as many as 4-5 days to appear
  - Occur in 55-94% of exposed infants
NAS IN TENNESSEE

- The incidence of NAS has increased by more than 10-fold during the last decade in Tennessee.
- NAS incidence highest in East TN.
- The substance of exposure is typically an opioid, which may or may not have been prescribed to the mother.
- Babies with NAS have significantly longer hospital stays than otherwise healthy infants and may be at risk for developmental delays or other health concerns as they grow.
- The average cost to Medicaid ( TennCare) for caring for an affected infant is over $66,000.
- Infants with NAS are more likely to enter state custody, placing an additional toll on the state’s child welfare system.
PREVENTION VS. TREATMENT

- Maternal substance use prevention
  - Appropriate use
  - Risk awareness
  - Contraception

- Maternal substance use treatment
  - 4.4% of pregnant women report past month illicit drug use (NSDUH, 2011)
  - Withdrawal during pregnancy is not recommended (ACOG, 2015)
  - Methadone had been gold standard, but recent evidence supports use of buprenorphine (Jones et al, NEJM 2010)
  - ~55% of NAS cases in TN report supervised replacement therapy as source of medication

- Maternal substance use prevention
  - Appropriate use
  - Risk awareness
  - Contraception

- Maternal substance use treatment
  - 4.4% of pregnant women report past month illicit drug use (NSDUH, 2011)
  - Withdrawal during pregnancy is not recommended (ACOG, 2015)
  - Methadone had been gold standard, but recent evidence supports use of buprenorphine (Jones et al, NEJM 2010)
  - ~55% of NAS cases in TN report supervised replacement therapy as source of medication
PREVENTION BEHAVIORS ARE ESSENTIALLY UNEXPLORED

STUDY RESEARCH QUESTIONS

- What are the attitudes, beliefs, and behaviors of Tennessee prescribers and dispensers specific to substance use in pregnancy and NAS primary prevention?
- How do prescriber/dispenser perceptions of and behaviors regarding substance use in pregnancy and NAS prevention differ across prescriber/dispenser characteristics?
- What is the impact of a pilot NAS primary prevention academic detailing intervention with AppNET prescribers and buprenorphine prescribers on NAS primary prevention attitudes, beliefs, and behaviors?
**METHODS**

- TPB instruments constructed
- Stratified random samples selected (N=100 each)
  - Buprenorphine "in-office" treatment authorized
  - Pain management clinic directors
  - Community pharmacists
  - Primary care physicians
  - Primary care NPs/PAs
- Pre-notification → Mailing #1 → Reminder → Mailing #2 → Telephone follow-up

**SMALL GROUP ACTIVITY**

**PRELIMINARY RESULTS**
### NEXT STEPS

- **Pilot intervention:**
  - Trained academic detailers will provide an educational outreach program to ~50% of survey respondents from PCP and buprenorphine prescriber cohorts.
  - Trained detailers will provide face-to-face presentations within participants' clinic settings.
  - Trained academic detailers will provide an educational outreach program to ~50% of survey respondents from PCP and buprenorphine prescriber cohorts.
  - Repeat survey with all respondents in PCP and buprenorphine prescriber cohorts.
  - Evaluate change in perceptions and behaviors between pre/post.
  - Differences in perceptions and behavior across cohorts.

### Table 1: Comparison of Pre- and Post-Intervention Survey Results

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>PCP</th>
<th>Bup. Prescribers</th>
<th>Pain Clinic</th>
<th>Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Document the type of contraception to be used while taking the long-term opioids?</td>
<td>9.31</td>
<td>9.26</td>
<td>9.37</td>
<td>9.38</td>
<td>9.29</td>
</tr>
<tr>
<td>11. Direct patients to community resources through which LARC can be accessed?</td>
<td>9.31</td>
<td>9.26</td>
<td>9.37</td>
<td>9.38</td>
<td>9.29</td>
</tr>
</tbody>
</table>