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# Behavioral Correlates for Quitting Opioids among Opioid-Dependent Pregnant and Non-Pregnant Women of Childbearing Age in Rural Appalachia

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# **Behavioral Correlates for Quitting Opioids among Opioid-Dependent Pregnant and Non-Pregnant Women of Childbearing Age in Rural Appalachia**

Appalachian Forum

April 4, 2018

## Outline

- Background
- NAS Incidence rates
- Our Study
  - Methods
  - Results
  - Discussion
- Future implications

## Neonatal Abstinence Syndrome

- United States is the largest consumer of prescription opiates in the world.
- Tennessee has the highest incidence of NAS cases.
- Maternal Use of opiates during pregnancy results in NAS, babies can have a variety of symptoms which are life threatening.
- Opiates cross the placental barrier during pregnancy and drug dependence develops in babies before birth.
- Heroin, Codeine, Methadone, oxycontin (painkillers, prescribed medications for addictive behavior or abused due to illicit drug use).

# Neonatal Abstinence Syndrome

**High-pitched crying**

**Seizures**

**Temperature Instability**

Symptoms taken from the CDC



**Sleep problems**

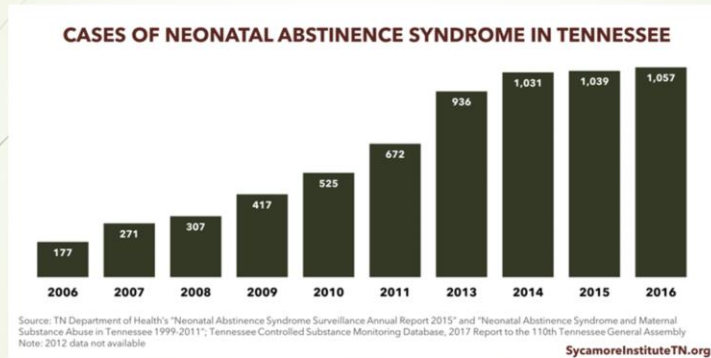
**Sneezing**

**Feeding Difficulties**

**Tremors**

5

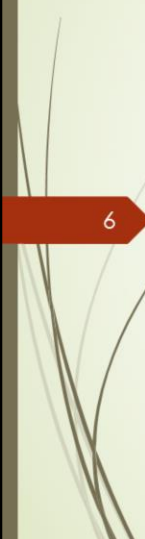
## NAS rate/trend from 2006-2016 in Tennessee



There is a six-fold increase in NAS cases since 2006

Medication- assisted treatment for opiate use.

- 52.5% of children diagnosed with NAS in Tennessee have had exposure to one prescription drug.
- 27.2% were exposed to a combination of prescribed medications and illicit substances.



In this study: We examined the behavioral correlates that determine the wish to quit opioids or not to quit opioids among opioid-dependent pregnant and non-pregnant women in rural Appalachia.



## Methods

7

- 10 females of childbearing age were recruited to join in the study from the rural Appalachia region (pregnant and non-pregnant).
  
- Variables used:
  - Age
  - Hamilton Depression Rating Scale (HAM-D)
  - Visual Analogue Scale – Pain (VAS-P)
  - Modified Opiate Craving Scale (MOCS)
  - Visual Analog Commitment to Quit Opiates
  - McGill Pain Index (MPI)

All were receiving physician-managed Medication Assisted Treatment (MAT) therapy for the treatment of severe opioid use disorder, or are currently being prescribed an opioid medication.

- Drug prescriptions
- tobacco and alcohol use, illicit substance use
- Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES)
- Adverse Childhood Experience (ACE) questionnaire

-The HAM-D, MOCS, MPI, and SOCRATES scores were log-transformed to approximate a normal distribution to ensure equal distribution between each of the variables.

-Descriptive statistics and the Spearman's rank correlation (with a 95% Confidence Interval) were conducted to examine significant behavioral correlates for quitting opioids.

## Results

- ▶ Women with higher HAM-D and MOCS scores are not likely to express willingness to quit opioids. There is a statistically significant strong positive correlation of 0.679.
- ▶ Women with high depression and pain scores are not likely to quit opioids.
- ▶ Women who recognize the need to quit opioids or are “taking steps” to quit are more likely to quit opioids.

## Discussion

- ▶ Opioid abuse and depression correlation is bi-directional. One can be a risk factor for another and vice versa.
- ▶ Addiction can lead to the feelings of hopelessness, despair and guilt often associated with depression
- ▶ 48% of people dependent on the drug will also experience depression.

Nunes, E. V., Sullivan, M. A., & Levin, F. R. (2004). Treatment of depression in patients with opiate dependence. *Biological Psychiatry*, 56(10), 793-802

Depression bears a complex relationship to opiate dependence and may represent an independent disorder or may be engendered by psychosocial stress or toxic and withdrawal effects of drugs.

## Future Implications

- ▶ Use larger sample size
- ▶ Explore correlation of Depression, Pain scores and Opiate abuse in different regions of US.
- ▶ Consider Non-opioid medications

Thank you

Questions?