Contributing Factors in the Successful Cessation of Drug and Alcohol Abuse in Dependent Pregnant Mothers

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NEONATAL ABSTINENCE SYNDROME

Definition: Neonatal Abstinence Syndrome (NAS)

• “Neonatal abstinence syndrome is a result of the sudden discontinuation of fetal exposure to substances that were used or abused by the mother during pregnancy” (Kocherlakota, 2014).

History:

• NAS is becoming increasingly more common, especially in rural areas in Indiana
• NAS is most frequently caused by opioid use during pregnancy such as:
  – Hydrocodone
  – Morphine
  – Oxycodone
• Sometime physicians prescribe opiate replacement therapy (Methadone)
  – Results are similar or worse when compared to symptoms in newborns
• Prescribed antidepressants such as benzodiazepines can also lead to NAS
• NAS babies require extensive care in the Neonatal Intensive Care Unit (NICU)

Why NAS?

We realize the best way to help babies suffering from NAS is to first help the mothers who are suffering from addictions while pregnant.

Substances used during pregnancy causing NAS:

Prescription Drugs

Illicit Drugs

Tobacco

Alcohol

Illicit Drugs

• Opioids
• Benzodiazepines
• Other Narcotic Analgesics
• Other Psychotropic Opioids
• Other CNS Depressants
• Illicit Substances (e.g., marijuana and heroin)
• CNS Stimulants

GOALS

Long-Term Goals:

• Using the original study as a springboard, we intend to launch a wider study involving the community which drives deeper into the contributing factors of drug and alcohol dependency for pregnant mothers
• Seeking to find ways to help the mothers avoid becoming addicted to drugs prior to becoming pregnant
• Expanding upon this study to accomplish an additional goal of researching the drug issues affecting many in the population
• Understanding the long-term effects
• We also desire to further understanding of the long-term effects of NAS on the affected child as well as the possible differences/similarities between prescribed versus illicit drug use.

STUDY

Purpose or Significance:

• Identify the numbers and any increase in these dependent mothers
• Understand the barriers pregnant women face when continuing abuse of drugs and alcohol
• Discover factors that influence women to cease substance abuse while pregnant

Study Design and Timeline:

• Permission to conduct the study at regional south central Indiana acute care facility March 2017
• University Institutional Review Board (IRB) approval March 23, 2017
• Approval through the hospital IRB August 7, 2017
• Study launch meeting with unit manager of August 25, 2017
• Screen participants based on inclusion/exclusion criteria August-September 2017
• Invited participants to complete the survey
• Research will be compiled and null hypotheses will be either rejected or fail to be rejected based on study results
• Meeting with unit staff to disseminate study results in December of 2017
• Poster presentation at the Sigma Theta Tau International Conference October 28-29, 2017
• Continue data collection with possible expansion to another facility

Participants will be given an information sheet as well as a consent form.  Patients in the Labor and Delivery Unit at CRH will be informed of the study. The monthly unit data collected for 2016-2017 is reflected in the graphic above.  The numbers represent positive NAS screened births in orange as compared to the overall number of births on the unit in blue.  Self-reported drug and/or alcohol dependent mothers admitted to the unit had an unlawful cord blood collected for the screening in accordance with the request from the Indiana State Health Department (this has occurred since July 2016 with daily toxicology reports).  Incidence of NAS positive tested babies (NAS+ Diagnosis) at the hospital mirrored less than 4% total for the entire year of 2015.  These numbers coincide with the overall increase of NAS incidence of approximately 230-300% increase nationally (CDC, 2016).  Dependent mothers also tested during the same 2016-2017 time period show positive results for tetrahydrocannabinol and opioids (90% of positive cases) with the addition of methamphetamine (10% of positive cases) for remaining cases.

Preliminary Findings:

Neonatal abstinence syndrome (NAS) Unit Birth Trends by Month 2016-2017

The monthly unit data collected for 2016-2017 is reflected in the graphic above.  The numbers represent positive NAS screened births in orange as compared to the overall number of births on the unit in blue.  Self-reported drug and/or alcohol dependent mothers admitted to the unit had an unlawful cord blood collected for the screening in accordance with the request from the Indiana State Health Department (this has occurred since July 2016 with daily toxicology reports).  Incidence of NAS positive tested babies (NAS+ Diagnosis) at the hospital mirrored less than 4% total for the entire year of 2015.  These numbers coincide with the overall increase of NAS incidence of approximately 230-300% increase nationally (CDC, 2016).  Dependent mothers also tested during the same 2016-2017 time period show positive results for tetrahydrocannabinol and opioids (90% of positive cases) with the addition of methamphetamine (10% of positive cases) for remaining cases.

REFERENCES