Linking PDMP and NAS Data 2020-2022

Harold Rogers PDMP National Conference / Rasaki Aranmolate, MD, MPH, DrPH / August 13, 2024

Overview

- What is neonatal abstinence syndrome (NAS)
- Epidemiology of NAS
- Data linkage method of PDMP to NAS
- Important outcome of the study
- Learning objectives
- Acknowledgement

What is Neonatal Abstinence Syndrome?

- NAS is a drug withdrawal syndrome that results from the abrupt discontinuation of chronic fetal exposure to substances that were used or abused by the mother during pregnancy.

- Substances of abuse include;
  - Opioids (e.g., morphine, methadone)
  - Benzodiazepines (e.g., diazepam, alprazolam)
  - Barbiturates (e.g., phenobarbital, Seconal)
  - Illicit drugs, such as heroin, cocaine, and methamphetamine

Symptoms of NAS

- Tremors
- Excessive crying
- Excessive sucking
- Poor feeding
- Sweating
- Vomiting
- Diarrhea
- Blotchy skin
- Hyperactive reflexes and occasionally seizures

Reportable Toxicology results

- Positive results for any opioids, benzodiazepines, or barbiturates (OBB) in any specimen from infants less than 28 days old.
- Positive results for any OBB in maternal specimens (e.g., urine, and blood) four weeks before delivery.
- Toxicology is positive for any OBB, **positive results for all substances** should be reported.
- NAS is a Notifiable Condition in Georgia as of January 1, 2016, under the Official Code of Georgia.

Epidemiology of NAS in United States

- According to 2020 data from the Healthcare Cost and Utilization Project (HCUP), about 6 newborns were diagnosed with (NAS) for every 1,000 newborn hospital stays.
- That is about 1 baby diagnosed with NAS every 24 minutes in the United States (U.S), or more than 59 newborns diagnosed every day.
- The number of babies born with NAS in the U.S. increased by 82% from 2010 to 2017.
- Increases were seen for nearly all states and demographic groups.

Epidemiology of NAS in Georgia

- There were 762 confirmed cases of NAS in Georgia in 2017.
- 59% had signs/symptoms consistent with NAS (with or without positive toxicology screening results), while 41% had positive toxicology only.
- Infants with NAS were born most frequently to mothers aged 25–29 years (7.0 per 1,000 live births) in 2017.
- Non-Hispanic Whites (8.6 per 1,000 live births) had the highest rates of NAS.

Data linkage Method of PDMP to NAS

- Goal: to determine the rate of opioid, benzodiazepine, stimulant, and buprenorphine prescribing among pregnant mothers.
- Population: Women aged 15 years and older whose infants developed NAS during 2020–2022.
- Comparison: PDMP prescribing rates for NAS mothers (mothers whose babies developed NAS) identified through NAS cases reported to DPH which were matched to birth certificates, to non-NAS mothers identified through birth certificates.

Variables

- NAS data
  - Age
  - Date of birth (DOB)
  - Race/ethnicity
  - Level of education
  - Payment type for delivery
- PDMP data includes prescriptions filled

Learning Objectives

- Using PDMP to describe prescribing practices for NAS mothers.
- Understand the impact of PDMP data beyond prescription through linkage to other health-related datasets.
- Identify the potential for health disparities in controlled substance prescribing with early identification of risky behavior among mothers.

Important Outcome of the Study

- Compare controlled substance prescribing practices and demographics to understand differences between NAS and non-NAS mothers in Georgia during this time period (2020-2022).

Acknowledgement

- Laura Edison, DVM, MPH, CDC Career Epidemiology Field Officer
- Kathleen Kassa, JD, MPH, Program Coordinator, Drug Surveillance Unit
- Donovan Stephens, MPH, PDMP Administrator

Questions

For more information, please contact:

Rasaki Aranmolate, MD, MPH, DrPH
PDMP Epidemiologist
Georgia Department of Public Health
O: 770-686-0032
Rasaki.Aranmolate@dph.ga.gov