

**BACKGROUND**

In-utero narcotic exposure predisposes the infant to withdrawal, known as Neonatal Abstinence Syndrome (NAS). There has been a surge in the number of infants born chemically dependent to opioids, resulting in increased numbers of infants born with NAS. To date there is no accepted standard of care for the treatment of NAS.

**OBJECTIVES**

The purpose of this quality improvement project was to measure the number of deviations from NAS pharmacological management at a single Neonatal Intensive Care Unit (NICU). The goal was to inform practice and to provide an opportunity for improvement through education or guideline modification.

**METHOD**

A retrospective chart review was conducted. The sample included 50 infants, 34 weeks gestation and greater admitted to the NICU between July 1, 2014 and February 28, 2017, with an ICD 9/10 code for NAS.

**RESULTS**

**Maternal Population**  
 Descriptive statistics for maternal race, age, gravidity, and parity and GA at delivery are presented for the total (Table 1) late preterm/term

**Neonatal Characteristics**  
 The four most common diagnoses being: 80.0% intrauterine drug exposure (IUDE), 46.6% respiratory distress (RDS), 30.0% hypoglycemia, and 23.3% preterm. IUDE was not included in all of the admitting diagnoses as this was not the primary diagnosis for admission of all patients.

Table 1: Maternal and Neonatal Characteristics

| Maternal    | range     |
|-------------|-----------|
| Age         | 22-43     |
| Gravidity   | 1-8       |
| Parity      | 2-4       |
|             |           |
| Race        | % (n)     |
| Causasian   | 76.7 (23) |
| Af Am       | 3.3 (1)   |
| Mexican     | 3.3 (1)   |
| Unavaialble | 16.7 (5)  |
| GA          | % (n)     |
| LPTB        | 23.3 (7)  |
| ET          | 33.3 (10) |
| FT          | 40.0 (12) |
| LT          | 3.3 (1)   |

**Adherence to the NAS Guideline**  
 Overall adherence to the institutional guideline was observed in only 13.3% (4/30) of patient charts. Non-adherence to the guideline was noted in 86.7% (26/30) (P<0.001) of charts, with the most common reasons for non-adherence being delayed treatment (73.3%; 22/30) (p<0.003), and delayed dosage increases (60.0%; 18/30). Inappropriate increases in medication dosages, (3.3%; 1/30) delayed weaning (3.3%; 1/30), weaned too quickly (3.3%; 1/30), and the premature initiation of medication (3.3%; 1/30) were infrequently noted.

**FUTURE IMPLICATIONS**

The findings from this project have the potential to decrease length of treatment and hospitalization, as well as improve management of infants with NAS While the purpose of a guideline is to allow for consistency and improved care, its value is only realized when its contents are understood and supported. This project has identified an area for improvement in optimizing the care of the opioid exposed newborn.