

STRONG CHILDREN'S RESEARCH CENTER

Ciara Patel

University of Oklahoma

Mentors: Dr. Lynette Johnson & Dr. Carl D'Angio

The Effect of Infant Race when Screening for Substance Abuse in the Newborn Population

Background: Substance use (i.e., alcohol, illicit and non-illicit drugs) during pregnancy has been identified as a concern for both maternal and infant health. Screening high-risk infants for exposure to illicit substances could improve care for these infants. However, screening also poses legal risks to parents and infants. Inconsistent application of screening criteria could both risk missing exposed infants and subject one portion of the population to more aggressive screening than others. A previous study performed in 2010 at the Golisano Children's Hospital (GCH) found that there was higher rate of infants of Black women being screened for substance abuse than those that identified as being Non-Black, despite no differences in rates of positive screens among groups. We hypothesize that these outcomes were the result of institutional racism and unconscious bias.

Objective: To determine if biases in screening for substances of abuse persist at GCH in infants that are exposed to substance use in utero.

Methods: A retrospective case/control investigation was approached in this study where the electronic records of 186 mother-infant patient pairs were reviewed. The data used included those that were admitted in the Neonatal Intensive Care Unit (NICU) during the year 2021. Evidence in the electronic records that indicated that the mother-infant pairs had met a single criterion of substance abuse that were set by the guidelines from the 2013 GCH NICU Housestaff Manual were recorded. The universal maternal screening criteria included history of substance use, limited prenatal care (<5 prenatal visits), and unexplained placental abruption. The conditional maternal screening criteria included history of sexually transmitted diseases (hepatitis B and C, AIDS, syphilis, gonorrhea), unexplained premature labor, precipitous labor, myocardial infarction, severe mood swings, cerebrovascular accidents, hypertensive episodes, and repeated spontaneous abortions. The conditional infant criteria included unexplained neurologic complications, unexplained intrauterine growth restriction, urogenital anomalies, and necrotizing enterocolitis in first 1-2 days postpartum. Maternal race was compared between screened and non-screened infants, both for pairs meeting screening criteria and those not meeting screening criteria. Results were analyzed by Chi-Square.

Results: A total of 186 mother-infant pairs were analyzed where 93 pairs were screened, and 93 pairs were not screened. The Table shows racial breakdowns of infants whose screening status was inconsistent with the indications for screening.

Race	Screening Test Not Performed		Screening Test Performed	
	Total	At least 1 Screening Criterion Documented No. (%)	Total	No Documented Screening Criterion Met No. (%)
Non-Black	71	45 (63%)	61	6 (9%)
Black	22	15 (68%)*	32	5 (15%)**

* p-value of 0.68
** p-value of 0.41

Conclusion: In contrast to earlier results from this institution, we found no differences to suggest that decisions to screen were affected by maternal race. A larger sample size could help confirm or refute these preliminary findings. Further, it is apparent that the screening protocol is being applied inconsistently due to the high percentage of screenings not being performed when at least one criterion for screening is met. This could be the result of other biases and deserves further scrutiny.