Title: Effects of Chronic Disease on Indiana Birth Outcomes

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Background. From 2013-2017, 9,366 births in Indiana were to mothers who had chronic hypertension and/or pregestational diabetes. We wanted to examine the impact of these conditions on birth outcomes amongst Indiana mothers.

Methods. Mothers were categorized into chronic hypertension, pregestational diabetes, or both. Trends for each category were examined by race and ethnicity across our 5 years of data. Birth outcomes examined consisted of preterm birth, low birthweight (<2500g), very low birthweight (<1500g), high birthweight (>4,000g), and congenital anomalies. Maternal complications were also examined. Outcomes were analyzed using p-values and odds ratios.

Results. Having chronic hypertension, pregestational diabetes, or both can adversely affect birth outcomes and put mothers at an increased risk of complications before or after delivery. For all of the birth outcomes examined, we identified a statistically significant correlation between chronic hypertension and/or pregestational diabetes ($p<.0001$). Odds ratios were also examined for each and showed that mothers with these conditions had an increased risk of delivering preterm and low birthweight babies with odds ratios of 3.04 and 2.20, respectively. It is also significant to note that there was a relationship between maternal bleeding, laceration, and ICU admission ($p<.0001$) with odds ratios 1.86, 0.60, and 3.53, respectively. There was an association between chronic hypertension and/or pregestational diabetes and the other maternal complications we examined (ruptured uterus, unplanned hysterectomy, and unplanned operation following delivery), however this association was not statistically significant.

Biography:

Sara Abdalla, MD, MPH is a Maternal and Child Health Epidemiologist at the State of Indiana and a CSTE member. After finishing her medical degree, her passion to overall community health and her strong believe in prevention led her to pursue public health path. She has an experience working as a research assistant at Indiana University along with her epidemiology experience. Her most recent abstract was presented at the Epi open house organized by the Indiana State Department of Health.

Brittany Reynolds, MPH, CHES© completed her MPH with an Epidemiology concentration at the University of Cincinnati in Cincinnati, Ohio. She now resides in Indianapolis where she is the Pregnancy Risk Assessment Monitoring System (PRAMS) Epidemiologist and Coordinator at the Indiana State Department of Health. Her interests include minority health, maternal and child health, and HIV/AIDS. Brittany has experience with both quantitative and qualitative data analysis and literature review, with a publication in progress. Her ultimate goal is to work at a federal agency focusing on minority health and reducing health disparities.

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