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### Perinatal outcomes associated with fetal sex and screening glucose concentrations measured prior to 24 weeks gestation; significant effect with girl fetus

This study identifies the relationship of fetal sex and early pregnancy (prior to 24 weeks gestation) screening using the oral glucose challenge test (OGCT) on four adverse pregnancy outcomes birth weight and the diagnoses of large for gestational age (LGA), cesarean delivery and pre-eclampsia/eclampsia in 2537 pregnant women. Women who delivered singleton births at Phoenix Indian Medical Center during 2000-2012 were identified from the electronic health record. Boy babies represented 52% (n=1316) of the births. Linear and logistic regression models were used to describe the impact of the OGCT on the four adverse pregnancy outcomes. Associations of 1 hour plasma glucose (1hPG) with each clinical outcome were calculated for girl and boy babies. Odds ratios were calculated for the logistic models and increase in birth weight for the linear model for each 1 SD increase in 1hPG. The implications for girl and boy babies were also described. We found that the pregnant women in this study who were Native Americans were obese (mean BMI=30.5 ±7.2 kg/m<sup>2</sup>) and at high risk for type 2 diabetes mellitus (T2DM) but had not been diagnosed prior to pregnancy. Average time of OGCT administration was 12.5±4.7 weeks gestation and had mean OGCT plasma glucose values of 117.2±32.4 mg/dl. Maternal age was 25.5±5.6 years. We identified a significant interaction of pregnancies with girl fetuses and maternal glucose on adverse outcomes in all models except cesarean deliveries. Identifying hyperglycemia very early in pregnancy offers the opportunity to intervene and possibly affect better outcomes in these pregnancies.

### Biography

Carol Moffett has completed her PhD at University of Arizona in 2007 and Postdoctoral work at National Institutes of Diabetes Digestive and Kidney Diseases. She is the Clinical Faculty at Arizona State University. She is a Fellow in the American Association of Nurse Practitioners.