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**Title**

*Association between Social Determinants of Health and Management of Fetal Macrosomia*

**Priority 1 (Research Category)**

Social determinants and vulnerable populations

**Presenters**

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**Abstract**

Introduction: Fetal macrosomia is defined as a fetal weight of more than 4kg or 4.5 kg irrespective of gestational age at delivery. The mode of delivery is usually left to the surgeon's discretion, but fetal macrosomia increases the risk of cesarean delivery among women worldwide. In addition, the role of social determinants of health such as maternal race, educational level, and insurance in managing fetal macrosomia cannot be overemphasized.

Aim: To determine the interaction between maternal race, insurance, and education level and how this affects the management of fetal macrosomia in the United States.

Method: We utilized the U.S. vital statistics records from 2015 to 2019 to collate data on deliveries among women with fetal macrosomia. In a multivariate analysis model, we determined the interaction between maternal race, insurance, education, and mode of delivery among the study population. We then conducted a propensity score matching procedure to compare selected women who had a cesarean section with a control group of women with vaginal deliveries accounting for paternal and maternal parameters, pre-pregnancy conditions, pregnancy, and labor events. The outcome measures were the 5-min Apgar score, neonatal unit admission, neonates receiving assisted ventilation > 6 hours, Neonatal seizures or Neonatal Antibiotics after delivery, mothers requiring blood transfusion, unplanned hysterectomy, and the intensive care unit admission

Results: There were 1 211,460 deliveries among women with fetal macrosomia during the study period. Among the women, 62.98% were Whites, 7.79% were Blacks, 21.13% were Hispanics, and 6.77% belonged to other races/ethnicities. 16.31% of these women had a previous cesarean section. The cesarean section rate was 39.53%. Black women were more likely to have a cesarean section compared to other races/ethnicities. (OR= 1.44, 95% CI 1.40-1.48). Across all races/ ethnicities, increasing maternal educational level and private insurance were associated with a higher likelihood of cesarean deliveries

among women with fetal macrosomia. When matched with control, women with cesarean section had a higher risk of adverse pregnancy outcomes across all measured outcomes.

Conclusion: Access to cesarean section is driven by maternal race, education level, and insurance status among women with fetal macrosomia. Across all measures of pregnancy outcomes, vaginal delivery appears to be safer than cesarean section among women with fetal macro