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**Topic:** The first 1000 days, infant feeding, and early childhood development

**Title:** ANTIOXIDANT MICRONUTRIENT STATUS AND PREGNANCY OUTCOMES IN GHANAIAN ADOLESCENTS ATTENDING ANTENATAL CLINIC IN URBAN (SUNTRESO) AND RURAL (MAMPONG) HOSPITALS

**Presentation Type:** Oral

**Objective:** Antioxidants are important in maintaining cellular functions in normal pregnancy and are needed for mitigating the effects of oxidative stress. However, there is paucity of information on the importance of antioxidants in pregnant adolescents. This study was aimed at assessing associations between maternal antioxidant micronutrient status and pregnancy outcomes in Ghanaian pregnant adolescents. **Methods:** A prospective cohort study design was used to assess the antioxidant micronutrient status of 100 pregnant adolescents aged 11 to 19 years, attending antenatal clinic at the Mampong and Suntreso Government hospitals between March and November, 2014. Two 24hr recalls and a food frequency questionnaire were used to assess dietary antioxidant micronutrient (Vitamin A, E, C, Zinc and Selenium) intakes of study participants. Biochemical status was assessed by measurement of serum Vitamin A, zinc and selenium using standardized methods. Pregnancy outcomes were obtained from hospital records after parturition. **Results:** Mean intakes of Vitamin A ( $246.86 \pm 26.80$ mcg/d), E ( $7.32 \pm 0.46$ mg/d) and zinc ( $7.56 \pm 0.42$ mg/d) of participants during the study were below the RDA for the nutrients. Mean serum concentrations of Vitamin A ( $22.64 \pm 1.78$ µg/dl) and zinc ( $137.43 \pm 25.27$ ) were higher than reference values. With a mean concentration of  $63.20 \pm 13.58$ µg/dl, serum selenium deficiency was observed in 74% of the participants. The mean birth weight and gestational age of the study population was  $2.89 \pm 0.05$ kg and  $38.23 \pm 1.06$  weeks, respectively. Twenty-three percent (23%) of the babies had low birth weight. **Conclusion:** Generally, pregnant adolescents were deficient in serum selenium but had good vitamin A and zinc status. This however had no influence on birth outcomes.