PCORnet Obesity Observational Study | Short and Long-Term Effects of Antibiotics on Childhood Growth

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The chief objectives are to assess the comparative effects of different types, timing, and amount of antibiotic use in the first 2 years of life with (Aim 1) body mass index (BMI) and obesity at ages 5 and 10 years and (Aim 2) growth trajectories to age 5 years. In Aim 3, we will examine effect modification according to several a priori specified socio-demographic, clinical, and maternal variables. Using individual patient-level data on the whole study population, we will evaluate the distributed data systems. Further, within subgroups of the study population with appropriate data, we will explore the extent to which observed associations are confounded by maternal and perinatal characteristics, and the extent to which using dispensing instead of prescribing data for medication use alters the findings.

**Potential Impact**

The products of this study will enhance scientific understanding of the relationship between antibiotic use and weight gain among young children and how to communicate with stakeholders about prescribing antibiotics in childhood and provide valuable insight into the impact of future growth following early childhood exposure to antibiotics.