

# Diet Quality during the First Two Years of Life and the Women, Infants and Children Program

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## Background

- **Importance:** The impact of the Women, Infants and Children (WIC) program on children's diet quality during critical window of opportunity of up to two years of life is largely unknown primarily due to the selection problem polluting the estimation of treatment effects and data scarcity.
- **Objective, Design, Setting and Participants:** This research uses novel data from a large prospective cohort study of African-American and White mother-children pairs (N = 1503) conducted in Memphis, Shelby county, TN to estimate the impact of WIC on Healthy Eating Index-2010 (HEI-2010) dietary outcomes in children up to 24 months.
- **Data:** CANDLE study was primarily designed to investigate the impact of maternal factors, home environment, genetic makeup, and exposure to environmental harms on child's developmental outcomes from birth up to 36 months. Recruitment started during the second trimester of pregnancy. Enrolled mothers received gift cards at each visit for a total of \$135 during the first and second year. This study uses records from the start of data collection up to 24 months.
- **Methods:** We address concerns related to non-random selection in WIC via the use of first-difference estimators combined with a rich set of time-varying covariates.

## Results and Conclusions

- Participation in WIC has a direct impact on diet quality during the first two years of a child's life.
- WIC is associated with a positive and statistically significant impact of 4.65 points in aggregate HEI-2010 scores and increased intake of seafood, plant proteins, refined grains, and lowered sodium consumption.
- Overall, participation in WIC contributes to improved nutritional outcomes up to 24 months.
- WIC has the potential to decrease early-life nutritional inequalities across the socioeconomic spectrum.