

Changes in Address and the Child Opportunity Index after Delivery in a Cohort of First-time Mothers

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Background: The Child Opportunity Index (COI) characterizes social determinants of health across the United States including education, health and environment, and social and economic factors. The objective of the study was to determine if the nulliparous pregnant persons changed addresses between the time of delivery and at the time of follow-up 9-11 years after delivery and to evaluate the trajectory of the COI over time.

Methods: We analyzed data from nulliparous pregnant people participating in the nuMoM2b Heart Health follow-up Study (HHS). Residential addresses at delivery and at follow-up (~9 years) were compared to determine if the participant changed addresses and to evaluate the COI trajectory. Descriptive characteristics (age, race, income, pregnancy outcomes) and the COI trajectory were compared for those who did and did not move using chi-square and t-tests.

Results: 410 participants were analyzed. 304 (74%) of the participants changed addresses resulting in changes in census tracts. Moving was associated with a lower mean maternal age (24.3 vs. 27.2 yrs, $p \leq 0.001$) and a lower average income (62.3% vs 41.1% <200% FPL, $p \leq 0.001$) compared to the participants who did not move. 40.5% moved to a neighborhood with a higher COI quintile, 56 (18.4%) participants moved down a COI quintile, and 125 (41.1%) participants did not have a change in COI category. White participants who moved addresses were significantly more likely to increase their COI category (55%) compared to non-White participants who moved addresses (22.2%, $p \leq 0.001$). There were no differences in how COI changed between White and non-White participants who did not move.

Conclusion: The majority of the participants moved in the years after delivering their first child. Moving was typically associated with an improvement in COI categories, with disparities seen as White participants were more likely to increase their COI if they moved compared to non-White groups.