

HEALTHY START LOCAL EVALUATION REPORT

PROJECT NAME: *Kalamazoo County MI Healthy Babies-Healthy Start*

TITLE OF REPORT: *Differential Survival: Do Racial and Socioeconomic Disparities Persist Beyond “Poor Birth Outcome”?*

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Section I: Introduction

In Kalamazoo County, significant racial and socioeconomic disparities are evident in infant mortality rates. The greater prevalence of poor birth outcomes (PBO) (prematurity, low birthweight LBW <2500 g, small for gestational age) among infants of color and poor infants is a significant contributor. It is unknown, however, whether these disparities continue to impact the survival of PBO infants. The purpose of this study was to examine whether there are racial or socioeconomic differences in the one-year-survival of PBO infants, controlling for other health contributors.

Section II: Process

Design. Data was obtained from local health department, Kalamazoo Health and Community Services. Specifically, Kalamazoo County birth records for infant born 2008-2014 and Kalamazoo County death certificates from infant death between 2010-2015 were gathered. Linked birth-death records from 2008-2015 were used in final analysis (figure 1, to the right).

Sample. Using data abstracted from linked birth-death records, 21,858 infants were delivered from 2008-2015. Of those, 17,330 infant births were excluded if they: (1) were of adequate weight and gestation, and (2) had missing race/insurance information.

Measure. Stabilized weights computed from the Association Model's propensity scores were utilized to isolate the effect of race and SES on covariates of interest (plurality, Hispanic ethnicity, teen, kotelchuck score, prenatal care in 1st trimester, previous poor outcome, chronic medical risk, BMI, obstetric medical risk, high school education, infection, tobacco smoker, marital status, weight gain during gestation, figure 2) associated with PBO (grey box, figure 3). This was done in order to obtain greater confidence in the unbiased effect of race and SES on infant mortality. The figures below depict the weights computed, covariates of interest and the outcome model.

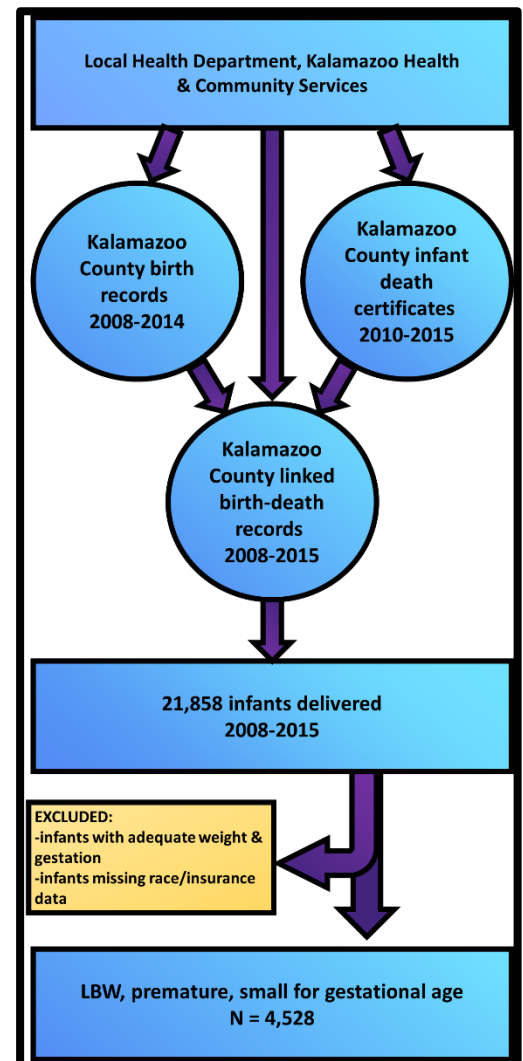


Figure 1: Recruitment design

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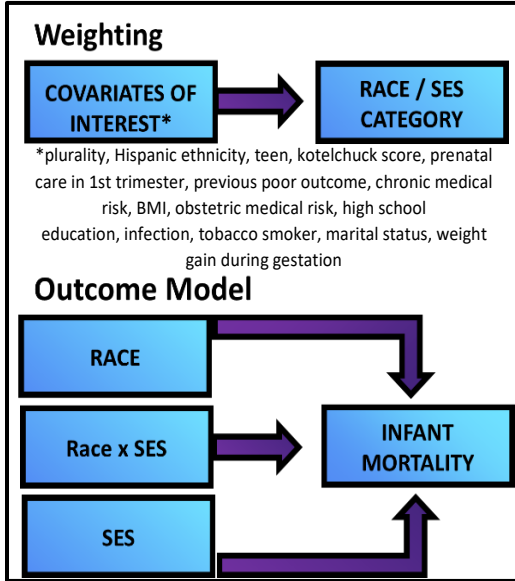


Figure 2: Covariates of Interest

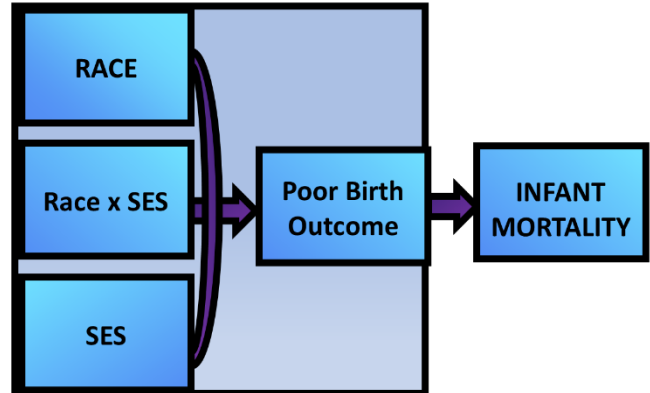


Figure 3: Outcome Model

Section III: Findings/Discussion

Results. The outcome model indicates that neither race ($\beta = -0.1428$, $p = .6134$) nor SES ($\beta = -0.4528$, $p = .3993$) nor the raceXses interaction ($\beta = .4026$, $p = .5088$) are significantly associated with infant mortality. Although racial and socioeconomic disparities are present in the likelihood of a poor birth outcomes, these disparities do not persist beyond the first year.

Table 1: Results

| | Estimate | p-value |
|-------------------------------|----------|---------|
| Race (ref='Mothers of Color') | -.1428 | .6134 |
| SES (ref='Medicaid') | -.4528 | .3993 |
| Race x SES | .4026 | .5088 |

Discussion.

Section IV: Conclusion & Recommendations

What are the clinical and policy implications of these findings... (e.g., (1) clinical and community care of at-risk infants appears to be equitable by race and SES, (2) Prevention efforts should focus upon the maternal preconceptional and interconceptional health...factors such as reproductive spacing, stress-reduction, healthy food & housing options, strengthening social connections, etc)

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