

First Heroes: Engaging Fathers in the First 1000 Days
Statistical Analysis Plan
NCT04477577
December 15, 2025

Statistical Analyses

We will compare distributions of maternal, paternal, and infant characteristics across the study arms using t-tests, chi-square tests, fisher's exact tests.

To compare the prevalence of rapid infant weight gain and WFL-z $\geq 97.7^{\text{th}}$ percentile between groups, we will use logistic regression, adjusting for age at measurement. We will perform linear mixed-effects models to assess differences in WFL-z changes from baseline to 6- and 12-months of age, with an interaction term for group x time as the primary predictor. For parent weight outcomes, we will use linear mixed-effects models to assess changes in maternal weight from pre-pregnancy and changes in paternal BMI from enrollment to 6- and 12- months. We will include random intercepts in the models to account for within-individual correlation over time. Fixed effects included intervention group, time (baseline, 6 months, and 12 months), and the time-by-intervention interaction term, which examines whether there was differential change in weight outcomes in the intervention versus the control group. Adjusted models will also include time duration in months between baseline and 6- or 12-month surveys as a covariate. Participants missing anthropometric outcomes will be excluded from analyses.

We will perform bivariate analyses using t-tests, chi-square tests, and Fisher's exact tests to compare infant and parent health behavior outcomes between groups. All analyses will be conducted with SAS (version 9.04, SAS Institute Inc., Cary, NC) or R (version 4.4.1).