

full-time equivalent (FTE) units, obtained by multiplying the legislated length of leave by the wage replacement rate, in addition to the duration of any paid leave. Further details regarding the calculation of FTE units of paid leave are available elsewhere [1,16]. Second, we examined whether results were sensitive to the inclusion of sampling weights. Third, we added to our primary exposure, paid maternity leave in year $t - 1$, parameters representing paid maternity leave in preceding years ($t - 3$, $t - 2$), the birth year (t), and subsequent years ($t + 1$, $t + 2$, $t + 3$). These analyses assessed if there were persistent effects of the policy changes, as well as whether observed effects were responses to policy changes that occurred in the period during or before the measurement of our outcomes, as we would expect if the effects of paid maternity leave policies were causal. Fourth, as described in [S1 Text](#), we assessed whether our findings were sensitive to the particular selection of control countries. In these analyses, we examined trends in infant, neonatal, and post-neonatal mortality occurring in the decade before our treated countries changed their legislated length of paid maternity leave and then restricted the sample of controls to those countries with parallel pre-intervention trends.

Results

[Table 1](#) shows the rates of infant, neonatal, and post-neonatal mortality for the 20 DHS countries; average rates of infant, neonatal, and post-neonatal mortality over the study period were 55.2, 30.7, and 23.0 per 1,000 live births, respectively. [Table 2](#) shows trends in paid maternity leave benefits and country-level characteristics for the five treated and 15 control countries; baseline values for key covariates are provided for each country in [S1 Table](#) and trends in the duration of paid leave for individual treated countries are shown in [S1 Fig](#). For treated countries, the average length of paid leave increased from 7.6 (standard deviation [SD] = 5.4) wk in 2000 to 12.2 (SD = 3.8) wk in 2008. The average length of paid leave in control countries was 12.2 (SD = 3.0) wk.

Tables 3, 4 and 5 show the effects of an additional month of paid maternity leave on the probability of infant, neonatal, and post-neonatal death, respectively. In the fully adjusted model (Model 3), an additional month of paid maternity leave was associated with 7.9 (95% CI 3.7, 12.0) fewer infant deaths per 1,000 live births. Each additional month of paid leave was associated with 2.9 (95% CI -0.2, 6.0) fewer neonatal and 4.4 (95% CI 0.9, 8.0) fewer post-neonatal deaths per 1,000 live births. On the RR scale, each additional month of paid leave was associated with a 13% (RR = 0.87, 95% CI 0.81, 0.93), 9% (RR = 0.91, 95% CI 0.83, 1.00), and 18% (RR = 0.82, 95% CI 0.64, 1.05) reduction in infant, neonatal, and post-neonatal mortality, respectively ([S2 Table](#)). There was some evidence for a nonlinear effect of an additional month of paid maternity leave on the probabilities of infant and post-neonatal mortality, but not neonatal mortality ([S3 Table](#)). In particular, an additional month of paid leave was associated with a larger absolute reduction in infant and post-neonatal mortality when shorter durations of paid leave were available ([S2 Fig](#)).

There were pronounced socioeconomic gradients in infant and post-neonatal, but not neonatal, mortality; there were, on average, 13.6 (95% CI 7.1, 20.0) fewer infant deaths per 1,000 live births in households in the highest quintile of household SES compared to the lowest quintile. Birth characteristics, including short birth interval (<24 mo) and lower maternal age (<20 y), were consistently associated with neonatal and infant mortality. For example, a short birth interval was associated with an additional 32.9 (95% CI 22.7, 43.1) infant, 14.2 (95% CI 10.4, 18.0) neonatal, and 15.7 (95% CI 10.8, 20.7) post-neonatal deaths per 1,000 live births. Country-level characteristics were not associated with mortality.

Sensitivity Analyses

Results from sensitivity analyses for infant, neonatal, and post-neonatal outcomes are shown in [S4 Table](#), [S5 Table](#), and [S6 Table](#), respectively. The effects of paid leave policies on infant