

## Discussion

We merged longitudinal information on the legislated duration of paid maternity leave in 20 LMICs with a panel of approximately 300,000 live births recorded in DHS surveys in those countries between 2000 and 2008 and used this dataset to conduct the first evaluation, to our knowledge, of the impact of paid maternity leave on infant mortality in LMICs. Difference-in-differences analyses suggested that each additional month of paid maternal leave was associated with approximately eight fewer infant deaths per 1,000 live births. These findings were relatively robust to alternative model specifications.

Policies guaranteeing new mothers paid leave from work provide new mothers with the opportunity to rest and recover after childbirth, increase their job protection and labor force attachment [38], and may benefit their mental and physical health [7,8,39]. Moreover, a growing literature suggests that paid maternity leave policies have a beneficial effect on maternal health behaviors, including breastfeeding [12–15], and infant health in higher-income countries [3–5]. Given the lack of evidence, it has been unclear if these findings can be generalized to poorer countries, where rates of female labor force participation in the formal economy are generally lower. Our results indicate that more generous paid maternity leave policies may have an even greater potential to reduce infant mortality in LMICs than in higher-income countries [3,4], both in absolute and relative terms, although prior work in high-income countries considered parental leave rather than maternity leave per se. Furthermore, our findings suggest that the benefits of additional paid maternity leave in terms of reducing infant mortality were larger when shorter durations of paid leave were available. Heterogeneity in the impact of paid maternity leave across countries warrants further investigation. Although a smaller proportion of women may be eligible for leave in LMICs than in high-income countries, and leave policy implementation may be poorer, the actual benefit to child health conditional on being eligible may be substantial, given higher infant mortality rates in poorer contexts. Furthermore, a greater proportion of women in LMICs may be benefiting from leave benefits than we might anticipate. Labor reforms targeting the formal economy may have spillover effects that influence workers in the informal economy. Moreover, many international labor standards and national laws are constructed to encompass all types of workers.

Similar to observations from higher-income countries [3,4], extending the duration of paid leave available to new mothers resulted in larger reductions in mortality in the post-neonatal than in the neonatal period. An increase in the duration of paid leave available to mothers might influence postnatal factors, including the duration of breastfeeding and vaccination uptake, which are consistently associated with better infant health [40–42]. Recent work, for example, showed that increases in paid maternity leave were associated with increased uptake of diphtheria, pertussis, and tetanus immunizations [43]. Epidemiologic evidence suggests that neonatal mortality, by contrast, is determined to a greater extent by antenatal factors that are less likely to be influenced by increases in maternity leave, unless that leave is taken before birth; these factors include maternal and reproductive factors, such as maternal age and birth spacing, as well as health services characteristics, including the use of antenatal care and the place of delivery [44–50]. Further research into the effects of maternity leave policies on utilization of health services and behavioral risk factors for neonatal and infant mortality is needed.

Our findings suggest there is potential for improving infant health by increasing the duration of paid maternity leave in LMICs. Recently, the Countdown to 2015 report suggested that only one-third of the 75 “Countdown countries,” those accounting for more than 95% of global maternal and infant deaths, achieved the Millennium Development Goal 4 of reducing child (<5 y) mortality by two-thirds by 2015 [51]. As others have argued [52], in order to end preventable deaths among children, countries will need to address neonatal and infant deaths