

# Population health impact of infants born small for gestational age in low- and middle-income countries

August 18 2017

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In low-and middle-income countries, it is common for babies to be born of low birth weight, due to either inadequate growth in utero (fetal growth restriction) and/or preterm birth, (birth before 37 weeks gestation). Maternal undernutrition, infections, poor access to health care

and environmental exposures during pregnancy are risk factors for both of these conditions. Babies born too small or too soon are at a high risk of mortality, stunted growth, developmental delay, and chronic disease.

In results published online in *BMJ* on August 17, researchers at Brigham and Women's Hospital and the Child Health Epidemiology Reference Group (CHERG), a global collaboration of over 40 investigators, used the first international, multiethnic birth weight standard, known as the INTERGROWTH-21st, to describe the global burden of suboptimal fetal growth, also referred to as "small for gestational age." The researchers estimated that in 2012, 23.3 million infants, or almost 20 percent of live births, were born small for [gestational age](#) in low and [middle income countries](#). Among these, 1.5 million [babies](#) were both premature and small for gestational age, and at substantially higher risk for adverse outcomes. They also estimated that 606,500 newborn deaths, or 22 percent, were attributable to being small for gestational age. The highest burden was in South Asia, where one in three infants is born small for gestational age and 26 percent of newborn deaths are attributable to being small for gestational age.

"By reducing the percentage of babies born small for gestational age to 10 percent in low and middle income countries (a level that we would expect in a multi-ethnic population of optimal pregnancy nutrition and health), we could prevent approximately 250,000 newborn deaths annually," said lead author, Anne CC Lee, MD, MPH, pediatrician in the Department of Pediatric Newborn Medicine at BWH. "The prevention of [fetal growth restriction](#) is complex and requires better understanding of the causes within different populations. However, several feasible and evidence based interventions can be provided, even now, in low-resource settings, to improve the survival and outcomes of these vulnerable infants, including continuous skin to skin contact for very [low birth weight](#) babies, breast feeding support for parents, management of newborn infections and newborn resuscitation."

According to Lee, implementing these proven interventions are key priorities to reduce newborn mortality in low and middle income countries.

**More information:** Anne CC Lee et al, Estimates of burden and consequences of infants born small for gestational age in low and middle income countries with INTERGROWTH-21st standard: analysis of CHERG datasets, *BMJ* (2017). [DOI: 10.1136/bmj.j3677](https://doi.org/10.1136/bmj.j3677)

Provided by Brigham and Women's Hospital

Citation: Population health impact of infants born small for gestational age in low- and middle-income countries (2017, August 18) retrieved 20 April 2024 from <https://medicalxpress.com/news/2017-08-population-health-impact-infants-born.html>

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