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Having a dry start into life - Drought impacts on child health in Malawi

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Under- and malnutrition – particularly in the first years of life – can severely impact the physical and mental development of a child. This can have lasting consequences for the child’s future education, health and wellbeing outcomes. At the same time, climate change is expected to intensify the frequency and severity of droughts in many regions of the world, exacerbating concerns about food security and nutrition. Using repeated cross-sections of a large household survey in Malawi – a country where the majority of the population is engaged in smallholder subsistence agriculture and where virtually all agriculture is rainfed – we assess the impact of drought events on children’s health outcomes. We focus on stunting, a measure of chronic undernutrition and explore drought effects at different periods of a child’s development. To minimize concerns about recall error or reporting bias, we combine geo-referenced household data on child anthropometrics with biophysical data at high spatial resolution to measure drought exposure with the Standardized Precipitation Evapotranspiration Index (SPEI). The advantage of the SPEI over other drought indicators such as the SPI is that it accounts not only for precipitation but also other climate variables relevant to the water balance and thus agricultural productivity. We find that children exposed to a drought shock have a significantly lower height-for-age z-score (HAZ) and are at greater risk of being stunted. Furthermore, we explore which household characteristics and coping strategies might have helped in mitigating the drought impact on child health.