

Prenatal Exposures to Extreme Heat and Child Development of American Infants

Abstract

Prenatal exposures to extreme heat are life-threatening for mother and fetus, causing severe maternal morbidity, mortality, and preterm birth. Little is known, however, about the lasting effect of prenatal heat exposure on infant development. Understanding whether there is such an effect is needed for preparedness for an increasingly warmer earth. Under the environmental/social ecology framework, Dr Lingxin Hao hypothesizes that prenatal heat exposure will differentially negatively affect infant development depending on the local population and place vulnerability. Linking the massive administrative data on health surveillance from a national network of pediatric clinics (CHADIS) with daily temperature data of geocoded areas from CDC-EPHT, and population and place vulnerability from ASC and NaNDA, Dr Hao examines the association between prenatal heat exposure and domain development of 600,000 American infants 2010-2023. Preliminary analysis reveals a discernible negative impact of prenatal heat exposures above and beyond preterm birth effects.