

Study shows US infant mortality declined, but low birth weight, preterm births increased from 2014–2019

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Nearly 4 million infants are born in the United States each year. Despite improvements in obstetric and perinatal care, infant mortality in the U.S.

is of ongoing concern. The nation ranks No. 23 in the world for infant mortality rates with 5.4 deaths per 1,000 live births, with worse outcomes observed in Black infants than in white infants.

Now, new original research from Florida Atlantic University's Schmidt College of Medicine and collaborators indicates that infant mortality alone may be insufficient as a health indicator. For the study, researchers explored time trends and racial inequities in infant mortality, [low birth weight](#) and preterm births from 2007 to 2019 using the U.S. Centers for Disease Control and Prevention's Wide-ranging Online Data for Epidemiologic Research (WONDER) and the Linked Birth/Infant Death Records (LBIDR).

Results recently published in *Annals of Pediatrics and Child Health* show that from 2014 to 2019 infant mortality fell, while low birth weight and preterm births rose. For all three indicators, researchers reported significant inequities between white and Black infants. When compared with white infants, Black infants experienced a significant twofold greater infant mortality and low birth weight and one-and-a-half times greater preterm birth rate.

"During this period, infant mortality, on average, declined across all groups," said Charles H. Hennekens, M.D., Dr.PH, co-author and first Sir Richard Doll Professor of Medicine, senior academic advisor to the dean, and interim chair, Department of Population Health and Social Medicine, in FAU's Schmidt College of Medicine, and an adjunct professor of family and [community medicine](#) at Baylor College of Medicine. "There was a statistically significant increase in low birth weight and preterm birth rates overall and among Black infants. While infant mortality appears to be trending down in all groups, a statistically significant decrease was observed among whites between 2014 and 2018."

The differences between Black infants and white infants have remained largely unchanged for decades. Based on data from the current original research, the Black infant mortality rate in 2018 approximated the white infant mortality rate of 1981. Since 1980, the U.S. Healthy People (HP) initiative has drafted objectives to improve health and well-being in the U.S. had hoped to eliminate racial inequities by 2010. The HP 2023 initiative has opined that infant mortality is the leading health indicator of child health.

For the study, researchers calculated annual [infant mortality](#) rates per 1,000 live births and low birth weight as well as preterm birth rates per 100,000 [live births](#). Newborns of low [birth](#) weight were classified as those weighing approximately 5.5 pounds or less. Preterm births were classified as 20 to 36 weeks' gestation. A total of 47,474,176 infant births from the LBIDR over 11 years were analyzed, out of which 7,111,385 and 25,735,338 were the number of white and Black infant births, respectively.

Researchers obtained data by year and mother's race: reported as non-Hispanic white and Black as well as non-Hispanic Black.

"While further analytic studies are needed, there are certainly important clinical and public health implications based on our study findings," said Sarah K. Wood, M.D., senior author, director of the Harvard Macy Institute at Harvard Medical School and former professor of pediatrics and vice dean for [medical education](#), FAU Schmidt College of Medicine. "It is tempting to hypothesize about possible etiologic factors in addition to social and economic determinants of health such as maternal education, access to health care, poverty and crime as well as structural racism."

Study co-authors are Hannia Diaz Allyon, first author and second-year medical student at FAU's Schmidt College of Medicine; and Robert S.

Levine, M.D., professor of family and community medicine at Baylor College of Medicine, and an affiliate professor in FAU's Schmidt College of Medicine.

More information: Hannia P. Diaz Ayllon et al, [Temporal Trends in United States Infants: Implications for Achieving Health Equity](#), *Annals of Pediatrics and Child Health* (2023).

Provided by Florida Atlantic University

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