

# **Influence of racial disparity and socioeconomic status on Infant mortality among Blacks in Kalamazoo and Wayne Counties in Michigan**

**Carla Smart-White (MPH), Padma P. Tadi Uppala Ph.D., MPH, Jean Cadet MD, (MPH) Dixon Anjejo DrPH, and Sherine Brown-Fraser Ph.D., RD. Andrews University, Berrien Springs, MI**

## **Abstract**

The **purpose** of the study was to examine the trends of infant mortality after the Infant Reduction Initiative that began in 2014-2015 in Kalamazoo and Wayne Counties to determine if racial disparities contribute to infant mortality. Despite decreased trends in infant mortality, racial disparities continued to exist with the highest rates among Black infants.

## **Summary**

Infant mortality is the death of children under one year of age. Multiple factors are responsible for infant mortality. Sudden infant death syndrome (SIDS) and other sleep-related infant deaths, together known as sudden and unexpected infant death (SUID) account for more than 4000 deaths each year in the United States. In 2017 the infant mortality rate in the US was 5.9 per 1000 live births. In Michigan for every 1000 live births, seven infants die before reaching their first birthday. Infant mortality is a public health issue that encompasses different elements associated with social factors and birthing outcomes among racially diverse groups. Other factors include maternal behavior, health services (prenatal care), stress, and lack of health care services. Studies have shown that many of these factors can be controlled or changed to prevent infant deaths.

The **purpose** of the is study is to examine the trend of infant mortality after the infant reduction initiative that began in 2014-2015 in Kalamazoo and to determine if racial disparities and socioeconomic status contribute to infant mortality in the city of Kalamazoo based on secondary data analysis.

**Methods:** We used aggregated secondary data records for infant deaths occurring at less than 1 year of age from the Center of Disease Control (CDC) Wonder online database which utilizes a rich ad-hoc query system for the analysis of public health data for 2013-2017. Infant mortality trend rates and socioeconomic status (SES) for Kalamazoo and Wayne County were obtained from the Michigan Department of Human & Health Services vital statistics database for the infant mortality trend for 2013-2107. The study design is comparing the impact of racial disparities in infant mortality rates between the black and white population in Kalamazoo and Wayne County in Michigan.

**Results:** Kalamazoo County's overall infant mortality rate (IMR) has dropped precipitously over the last decade, from 10.2 (per 1,000 births) during the 2001-2003 period to 6.0 (per 1,000 live births) during the 2011-2013 period. In addition, IMR remained stable during 2013-2017 for Black infants while the IMR rates gradually dropped for White Infants. The presence of racial

disparities, however, continued to grow in infant mortality between African American (black, non-white) and the Caucasian (white) populations. The Black race is associated with 2.5 times greater risk of low birth weight even after SES is taken to account, and that higher SES benefits Whites, not Blacks. The black IMR increased from a low 9.8 to a high 20.9 between 2002-2004. There was an overall decrease in infant mortality rates in Kalamazoo following the infant mortality reduction initiative. **Conclusion:** Despite the decreased trends in infant mortality after the infant reduction initiative that began in 2014-2015 in Kalamazoo, racial disparities continued to exist with the highest mortality rates among Black infants.

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