

Cardiac death rates declined for both Black and white Americans since 1999, but racial disparities persist

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While it's well-established that Black adults experience a disproportionately high burden of cardiovascular risk factors and disease in comparison to white adults in the United States, few gender-based analyses of recent national trends exist. Additionally, it is unclear how disparities in cardiovascular mortality between Black and white Americans have changed over time across key geographic determinants of health, such as living in residentially segregated areas—a direct manifestation of structural racism.

In a new paper published in *Circulation*, researchers at the Richard A. and Susan F. Smith Center for Outcomes in Research in Cardiology at Beth Israel Deaconess Medical Center (BIDMC) conducted a comprehensive investigation of national trends in cardiovascular [mortality](#) among Black and [white women](#) and men across multiple socio-demographic domains. The team found a decline in cardiovascular mortality rates across all groups over the last 20 years, as well as in the disparities in cardiovascular disease-related deaths experienced by Black compared with white Americans, or the absolute difference in [death rates](#) between these groups. Despite this progress, the researchers reported that Black Americans continue to experience higher mortality rates than their white counterparts—particularly Black women younger than 65 years of age and Black women and men living in communities with high levels of racial segregation.

"Declines in cardiovascular mortality for both Black and white adults over the past two decades reflect substantial progress in cardiovascular disease prevention, advancement in medical therapies and technology for cardiovascular conditions, as well as national efforts to promote awareness of risk factors impacting heart health," said Rishi K.

Wadhera, MD, MPP, MPhil, senior author of the study, cardiologist and section head of Health Policy and Equity at the Smith Center for Outcomes Research at BIDMC. "However, we found that significant disparities in cardiovascular mortality between Black and white adults continue to persist."

The team used publicly-available national data from the National Center for Health Statistics (NCHS) provided by the Centers for Disease Control and Prevention (CDC) to examine more than 17 million cardiovascular deaths in Black and white adults 25 years or older living in the United States between 1999 and 2019. The researchers cross-referenced the mortality data with information from the U.S. Census Bureau Divisions, dividing the nation into four sections: the Northeast, Midwest, Southeast and West. They also used the NCHS Urban-Rural Classification Scheme to classify counties as urban or rural.

The researchers found that age-adjusted mortality rates declined for Black adults (693.2 to 426.8 per 100,000) and white adults (529.6 to 326.5 per 100,000) from 1999-2019, and the absolute rate difference between Black and white adults also decreased. However, the cardiovascular mortality rate remained consistently higher for Black adults throughout the study period. This pattern remained when the scientists compared cardiovascular mortality rates in Black and white women and in Black and white men. The relative gap between Black and white women and Black and white men was greatest in the younger subgroups, indicating higher rates of premature deaths from cardiovascular disease in Black women and men.

"Our finding that younger Black women are still more than two times more likely than white women to die of cardiovascular causes is very concerning and parallels well-documented racial and ethnic disparities in maternal health outcomes," said first author Ashley Kyalwazi, BSc, a medical student at Harvard Medical School and Zimetbaum Fellow at

the Smith Center. "These disparities were similar, albeit more modest, between Black and white men. This markedly higher premature mortality rates from cardiovascular disease for Black adults is a critically important public health issue, and there is a pressing need for concerted community, health system, state and federal initiatives to prevent and treat cardiovascular disease in younger populations."

The team also found that, while mortality rates declined across all groups in all regions, relative reductions in mortality were most pronounced among white individuals, and Black adults had higher [mortality rates](#) than their white counterparts in both the rural and urban parts of the county. In [rural areas](#), the researchers speculate that distance to healthcare clinics, [food insecurity](#) and high rates of tobacco use, obesity and diabetes may play roles. In more urban settings, rising income inequality—which disproportionately affects Black Americans—and environmental stressors may be associated with cardiovascular mortality.

"The ongoing gap in [cardiovascular mortality](#) between Black and white adults has likely been driven by systemic inequities and structural racism," said Wadhwa, who is also an assistant professor of medicine at Harvard Medical School. "Black adults disproportionately experience social, economic, and environmental barriers toward achieving optimal health. At the policy level, more initiatives are needed to directly address the systemic inequities that that perpetuate poor cardiovascular outcomes among Black adults."

More information: Ashley N. Kyalwazi et al, Disparities in Cardiovascular Mortality Between Black and White Adults in the United States, 1999 to 2019, *Circulation* (2022). [DOI: 10.1161/CIRCULATIONAHA.122.060199](#)

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