

Racial disparities: Young, Black adults had significantly worse heart transplant outcomes

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Young, Black adults are more than twice as likely to die in the first year after a heart transplant when compared to same-age, non-Black heart transplant recipients, according to new research published today in *Circulation: Heart Failure*, an American Heart Association journal.

Research has consistently shown that Black [heart transplant](#) recipients have a higher risk of death following heart transplantation compared to non-Black recipients. Black patients have higher prevalence of cardiovascular disease at younger ages, and therefore, they may need heart transplants at younger ages. Researchers hypothesized that studies focused on disparities among Black heart transplant recipients may be missing an even greater [disparity](#)—younger Black patients.

"Generally, older patients are at a higher risk of having worse outcomes following a major procedure," said Errol L. Bush, M.D., senior author of the study, associate professor of surgery and surgical director of the Advanced Lung Disease and Lung Transplant Program at Johns Hopkins University in Baltimore, Maryland. "Organ transplantation, however, is a complex operation that requires lifelong, specialized medical and surgical care. Continued access to the [health care system](#) and financial resources such as insurance may be unfairly limited in younger patients, potentially leading to worse outcomes."

Researchers analyzed the outcomes of almost 23,000 adults (median age 56, 25% female) who had a heart transplant between Jan. 1, 2005 and Jan. 31, 2017. Patient information was obtained from the Scientific

Registry of Transplant Recipients, a registry that includes data on all transplant donors, wait-listed patients and recipients in the United States. Risks of mortality were compared between Black and non-Black transplant recipients in four different age groups (18-30 years, 31-40 years, 41-60 years and 61-80 years).

The researchers found that when compared to other heart transplant recipients:

- Across all age groups, Black heart transplant recipients had approximately a 30% higher risk of death.
- However, when examined by age groups, the risk of death among Black heart transplant recipients was 2 times higher among recipients aged 18-30 years and 1.5 times higher among recipients aged 31-40 years.
- Among Black heart transplant recipients aged 18-30, the risk of death was primarily during the first year after transplant, with Black recipients having 2.3 times higher risk of death in this time period.

"Our study is the first to highlight young, Black recipients as a subgroup at a higher risk of death during the first year after a heart transplant," said Hasina Maredia, M.D., first author of the study whose interest in health disparities inspired her to initiate and lead the project as a medical student at Johns Hopkins. "Our findings indicate clinical research moving forward should focus attention on young, Black recipients during this high-risk period so that longstanding racial disparities seen in heart transplant survival can be improved."

In the study, young, Black [heart transplant](#) recipients differed from young, non-Black recipients in several ways, including being more likely to have diabetes and/or high blood pressure; have a weakened heart muscle (cardiomyopathy); and be insured by Medicaid rather than a

private insurer. More serious illness and additional medical problems prior to surgery might increase the risk of death from surgical complications, and financial constraints might make it more difficult for younger recipients with limited insurance to access specialized care and take the medications needed to prevent organ rejection, according to the researchers' discussion of possible mechanisms for the disparity.

"The high risk associated with Black race is not specifically due to race itself; it is a marker of systemic racism and inequities that have resulted in significant health care disparities," said Bush and Maredia.

The American Heart Association recently published a [presidential advisory](#) that addresses structural racism as a cause of poor health and premature [death](#) from heart disease and stroke. The advisory, titled "Call to Action: Structural Racism as a Fundamental Driver of Health Disparities," reviews the historical context, current state and potential solutions to address structural racism in the U.S. and outlines steps the Association is taking to address and mitigate the root causes of health care disparities.

More information: *Circulation: Heart Failure*, [DOI: 10.1161/CIRCHEARTFAILURE.119.006107](#)

Provided by American Heart Association

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