

# Long-term survival worse for black survivors of in-hospital cardiac arrest

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Blacks who survive cardiac arrest during hospitalization have lower odds of long-term survival compared with similar white survivors, according to new research in the American Heart Association's journal *Circulation*.

Half the difference in 1-year [survival rates](#), however, remained unexplained. Nearly one-third of the racial difference in one-year survival was dependent on measured patient factors. Only a small proportion was explained by [racial differences](#) in hospital care and approximately one-half was due to differences in care after discharge.

Researchers studied [patients](#) 65 and older who suffered in-hospital cardiac arrest and survived until discharge between 2000-2011. Survivors from the Get With The Guidelines—Resuscitation registry whose data could be linked to Medicare claims were either black or white. Their survival was studied at 1-year, 3-year and 5-year intervals.

"Compared with white patients, blacks had substantially lower 1-year, 3-year and 5-year survival rates with 28 percent lower relative likelihood of surviving one year and a 33 percent lower relative likelihood of surviving to five years," said the study's lead author Lena Chen, M.D., M.S., assistant professor of internal medicine at the University of Michigan in Ann Arbor.

The black patients in this study were younger, more often female, and were sicker, with higher rates of kidney and respiratory insufficiency, pneumonia, and more often required dialysis prior to cardiac arrest,

compared to [white patients](#) studied.

"Notably, black patients were less likely to have had a [heart](#) attack during hospital admission or a prior history of heart attack. As a result, they were more likely to have a non-shockable initial heart rhythm of pulseless electrical activity and to have experienced their heart stoppage in an unmonitored hospital unit," Chen said.

The study did not look into how caregivers may have been different for [black patients](#) versus white ones, nor did it look at socioeconomic factors like household income or social support.

"Our study's findings suggest a need to examine to what degree differences in post-discharge care explain racial differences in long-term survival after heart stoppages," Chen said.

Co-authors are Brahmajee K. Nallamothu, M.D., M.P.H.; John A. Spertus, M.D., M.P.H.; Yuanyuan Tang, Ph.D.; Paul S. Chan, M.D., M.Sc.; and the GWTC-R investigators.

Author disclosures are on the manuscript.

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In another study published in this issue of *Circulation*, researchers from the University of Michigan Medical School and Veterans Affairs in Ann Arbor, interviewed teams responding to in-hospital cardiac arrests in hospitals participating in the Get With The Guidelines—Resuscitation initiative. They wanted to determine if there were commonalities among hospitals with the highest in-hospital cardiac arrest survival rates that

could serve as best practices for other hospitals. Researchers found the best performing hospitals were more likely to:

- Have team members of diverse disciplines responding to in-hospital cardiac arrests;
- Establish clear roles and responsibilities of team members;
- Exhibit better communication and leadership during in-hospital cardiac arrests; and
- Hold in-depth mock codes.

"These two studies are excellent examples of the valuable findings we garner from our Get With the Guidelines databases, that now have nearly 7 million patient records," said Eric E. Smith, M.D., national chairman of the American Heart Association's Get With The Guidelines steering committee and an associate professor of neurology at the University of Calgary in Alberta, Canada, who was not a part of this study. "Using these data, we can learn so much about the care of heart and stroke patients and work with healthcare providers to improve treatment processes, ultimately improving patient outcomes and saving lives."

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