Study: African-Americans have better stroke survival rates

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A study published today shows that African Americans have a better survival rate compared to whites after being hospitalized for a stroke. This conclusion contradicts prevailing wisdom and is one piece in a growing body of evidence that points to the important role that patients – and the decision they and their families make in terms of treatment – may play on mortality rates.

The study found that – after adjusting data for variables such as age, socioeconomic status, and risk factors – that African Americans who were hospitalized for acute ischemic stroke had a significantly lower mortality rate than whites. The survival advantage was most pronounced early after the stroke but persisted for up to one year. The study also found that African Americans were also more likely during their hospitalization to have received more aggressive treatment measures, such as kidney dialysis, a tracheostomy, or cardiopulmonary resuscitation. They were also less likely to use hospice care. These results were published today in the *Annals of Internal Medicine*.

"These results fly in the face of conventional wisdom that says that black patients with strokes have worse outcomes," said University of Rochester Medical Center (URMC) neurologist Robert Holloway, M.D., M.P.H. a co-author of the study. "Even though we do not know the exact reasons for these differences, these data highlight the potential importance of treatment intensity, and the expression of patient preference for different treatments on survival and mortality. This is not such a far-fetched idea for physicians who take care of a lot of stroke

patients."

"We know that African Americans have a higher prevalence of stroke and higher risk factors for stroke," said Ying Xian, M.D., Ph.D., a former graduate student in Health Services Research and Policy with URMC Department of Community and Preventive Medicine and now a fellow with the Duke Clinical Research Institute and co-author of the study. "But this data shows that African Americans have lower mortality rates than whites. It also shows that African Americans are more likely to be treated aggressively and we suspect that this may have an impact on their mortality outcomes."

The study used data from the New York State Statewide Planning and Research Cooperative System, a reporting system that collects detailed information on every hospital and emergency department admission in the state. They compiled information for all non-Hispanic blacks and non-Hispanic whites age 18 and older who were admitted to a hospital with a diagnosis of acute ischemic stroke in 2005 and 2006.

The researchers used a novel statistical approach to minimize the difference between two pools of black and white patients in terms of demographic profiles, co-morbidities, and the type of hospital where they received their care. They then looked at mortality rates for several incremental periods beginning at 7 days and up to a year after the stroke and what life-sustaining interventions the patients received during their hospitalization. The authors found that over the course of the year African American patients had a statistically lower rate of mortality and at the same time were more likely to receive aggressive life-sustaining treatments.

While the data used for the study does not illustrate the role of patient preference – either expressed intent or in the form of do not resuscitate orders, health care proxies, or living wills – or the decisions made by

family member on their behalf, the authors believe the evidence indicates that there might be a link between the treatment decisions made by patients and their families when seriously ill with stroke and survival rates.

"Although we don't show any causal relationship, the association of lower risk of death and increased use of life-sustaining interventions is actually very consistent with the idea that preference sensitive end-of-life care may have an important impact on short-term mortality," said Holloway. "We were unable to measure health or quality of life in those patients who survived, which is a critically important question. We also need much more research on ways to measure the quality of the decision process itself to make sure that the treatments patients receive are consistent with their underlying values and preferences."

"Even though people who receive aggressive life-sustaining care have lower mortality it does not mean they have better quality of care or quality of life," said Xian. "Mortality is important measure but not only measure."

Provided by University of Rochester Medical Center