National Institute on Aging (NIA)/National Institutes of Health (NIH): Hospital Quality and Racial Differences in Heart Attack Treatment and Outcomes

Differences between black and white heart attack patients in quality of care received are due in part to the quality of the hospital in which they are treated. These results suggest that hospital-level interventions to improve quality of care may be needed.

Lead Agency:

National Institute on Aging (NIA)

National Institutes of Health (NIH)

Agency Mission:

- Support and conduct genetic, biological, clinical, behavioral, social, and economic research related to the aging process, diseases and conditions associated with aging, and other special problems and needs of older Americans.
- Foster the development of research and clinician scientists in aging.
- Communicate information about aging and advances in research on aging to the scientific community, health care providers, and the public.

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Partner Agency:

The Robert Wood Johnson Foundation

General Description:

Black patients who have suffered a heart attack or are at risk are less likely than white patients to receive invasive procedures such as percutaneous coronary interventions (PCI) and coronary artery bypass grafts (CABG), and much evidence suggests that they are also less likely than whites on average to receive effective low-intensity treatments such as

aspirin and beta blocker prescriptions. A key unresolved question is the extent to which these racial disparities result from physicians and hospitals providing poorer quality care for their black patients than for whites, or from black patients more often than whites being treated in facilities providing lower quality care for all their patients.
In a recent study, NIH-supported researchers analyzed the records of more than one million adults who were treated for acute myocardial infarction (AMI) at over 4,000 non-federal hospitals from 1997 to 2001. They found that patients of all races were at higher risk of mortality in hospitals with a disproportionate share of African-American heart attack patients. Patients treated at largely minority-serving hospitals were not sicker and did not have more severe heart attacks than patients at other hospitals. The differences in outcomes also were not explained by patients' income, the hospitals' AMI patient volume, region of the country, or urban status.

In related work, NIH-supported investigators reviewed data on Medicare patients treated for AMI in 1994 and 1995 to assess the extent to which differences in the actual hospitals where blacks and whites were treated explain the differences observed in the frequency of specific treatments and in subsequent mortality. They used statistical techniques that allowed them to study whether black and white patients treated *at the same hospital* received different care and had different outcomes, rather than - as in previous studies - whether patients treated at hospitals with similar measurable characteristics had similar outcomes. They found that the overall black-white gap in lower-intensity medical procedures such as prescription of beta-blockers and ACE inhibitors was entirely explained by differences in hospitals. However, blacks were given fewer surgical treatments requiring complex referrals and follow-up, such as catheterization, PCI, and CABG than whites attending the same hospitals. Both of these studies suggest that black-white differentials in medical procedures known to be effective would be greatly reduced by hospital-level interventions to improve quality of care.

Excellence: What makes this project exceptional?

Previous studies have documented racial disparities in heart attack treatment among Medicare beneficiaries. However, it has not been clear whether these differences are due primarily to differential treatment of black and white patients within the same institutions or to differences in the quality of care across hospitals. These studies suggest that quality differences between hospitals (as opposed to differential treatment of races within the hospitals) accounts for the larger share of these disparities.

Significance: How is this research relevant to older persons, populations and/or an aging society?

Age is a risk factor for heart disease, and over a million Americans have heart attacks each year and approximately half of these individuals die from the attacks. Heart attack is most common among African-American men and is more common among African-American women than white women.

Effectiveness: What is the impact and/or application of this research to older persons?

Understanding the origins of health disparities is the crucial first step toward eliminating them. The development of effective hospital-level interventions to eliminate disparities in heart attack treatment may lead to improved outcomes for vulnerable groups.

Innovativeness: Why is this exciting or newsworthy?

This research helps explain treatment differences between black and white heart attack patients observed at the aggregate level and offers insight into avenues - i.e., hospital-level interventions - to ameliorate these differences.