Double or nothing? A baseline study of the impact of availability of cardiac services on racial differences in cardiac service use and mortality [abstract]

Gregory P; Rhoads G; Wilson A; O'Dowd K; Kostis J

Department of Family Medicine, Robert Wood Johnson Medical School, New Brunswick, NJ 08903-0019, USA.

Abstr Book Assoc Health Serv Res. 1997;14:64-5.

RESEARCH OBJECTIVES: As the number of facilities equipped to provide cardiac catheterization services is planned to double in the State of New Jersey to improve access to services, especially among minorities, we conducted a statewide study to: 1) describe the variations in use of cardiac services and mortality after acute myocardial infarction (AMI) according to the race of the patient and the availability of cardiac services at first hospitalization and 2) evaluate the impact of availability of cardiac services at first hospitalization on racial differences in cardiac service use and mortality.

STUDY DESIGN: The Myocardial Infarction Data Acquisition System (MIDAS) was developed to track outcomes and cardiac service utilization by linking hospital discharge and death certificate files for residents hospitalized for AMI in the State of New Jersey since 1986. There were 14,083 patients in 1990 and 15,010 in 1993 followed for use of cardiac catheterization and use of angioplasty or coronary by-pass graft surgery (revascularization) for 90 days from first hospital admission with primary diagnosis of AMI in the calendar year. Mortality was studied for one year. Logistic regression models of procedure use and proportional hazards regression models of mortality were adjusted for age, sex, health insurance (for patients under age 65), and comorbidity. Separate models were developed for patients under age 65 and for those 65 and older. Effect of availability of cardiac services on racial differences in invasive cardiac procedure use and mortality was studied by analyses of two-way statistical interactions and stratification.

PRINCIPAL FINDINGS: Among all study patients in 1990 and 1993, cardiac catheterization within 90 days of hospitalization was 3-4 times more likely if first admission was to a hospital with cardiac catheterization facilities. When the first hospital was equipped for cardiac catheterization, use of revascularization within 90 days was over 2 times more likely in both age groups and study years. Restricting analyses to patients who survived at least 90 days did not change results. Death within 1 year was approximately 10% more likely if first admission was to a hospital without facilities for cardiac catheterization. This difference reached statistical
significance only for the group 65 years and older in 1993. Although a greater proportion of African Americans than Whites were first admitted to hospitals with cardiac catheterization facilities, White patients were roughly 40% more likely than African Americans to receive cardiac catheterization within 90 days in both age strata and study years. African Americans were less than two thirds as likely to have revascularization than Whites under age 65 in 1990 and 1993, and 65 and older in 1990. Results were not altered by restricting these analyses to patients who had received cardiac catheterization. Among patients 65 and older in 1993, racial differences in revascularization were not as great. One year mortality was not different for African Americans and Whites. Availability of cardiac catheterization services at first hospitalization did not change results of any racial comparisons, except for revascularization in patients under age 65 in 1993. In this group, African Americans first admitted to hospitals without cardiac catheterization facilities were less than half as likely as Whites to receive revascularization compared to three quarters as likely as Whites if the first hospital had cardiac catheterization facilities. CONCLUSIONS: Whether African American or White, availability of cardiac services at first hospitalization greatly increased use of invasive cardiac procedures, yet only slightly decreased mortality. African Americans consistently had lower use of cardiac catheterization and revascularization within 90 days than Whites. No racial differences in one year mortality were found. Availability of cardiac services at first admission had little impact on racial differences in service use or mortality. An increase in the number of facilities equipped for cardiac catheterization should increase use of invasive cardiac procedures overall, and thereby, might lessen racial disparities. It is worth remembering, however, that racial disparities in cardiac service use do not appear to have resulted in detrimental effects on one year mortality. Over-use of these procedures is possible. Future studies should be conducted to include outcomes of morbidity, disability, in addition to mortality, clinical results from cardiac catheterizations, and data on other cardiac therapies. RELEVANCE TO CLINICAL PRACTICE AND POLICY: In an effort to improve access to cardiac services for all its residents, especially minorities, the State of New Jersey is planning to double the number of facilities equipped to provide cardiac catheterization. This study provides valuable baseline information upon which to assess the effectiveness of future expansion.

MAIN MESH HEADINGS: Blacks/*STATISTICS & NUMER DATA
*Health Services Accessibility
Heart Catheterization/*UTILIZATION
Myocardial Infarction/*THERAPY

ADDITIONAL MESH HEADINGS: Aged
Comparative Study
Human
Middle Age
Myocardial Infarction/ETHNOLOGY
Myocardial Infarction/MORTALITY
New Jersey/EPIDEMIOLOGY
Survival Rate
Whites/STATISTICS & NUMER DATA

PUBLICATION MEETING ABSTRACTS TYPES:

http://130.14.32.49/cgi-bin/VERSION_A/IGM-client?15815=next+5

12/19/00