Oral Session 4

Research Study

Title: “The Association Between Race and Management with Echocardiograms in Patients with Valvular Heart Disease in the United States”

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Category: Health Services Research; Health Disparities

Keywords: Valvular heart disease; Echocardiography; Racial disparities; Ambulatory center; Follow-up studies

Introduction and Objective. Nonrheumatic valvular heart disease (VHD) is a condition that develops with increasing age and affects about 2.5% of the population in the United States. Of the people affected, more than 25,000 die every year. Studies have shown that a gap in the diagnosis and treatment of VHD exists due to race. The purpose of this study is to assess if Blacks and other Non-White races have a lower frequency of echocardiogram examination for management of their VHD compared to Whites in an outpatient setting in the United States.

Methods. Cross-sectional study based on secondary analysis of the 2006-2016 data from the National Ambulatory Medical Care Survey (NAMCS). Our study sample consisted of patients 45 years and older with VHD. The independent variable of interest is the race of the patients. To assess for potential confounders, bivariate analysis was performed. Differences in patient characteristics were compared using the Pearson chi-square test for categorical variables and independent-samples t test for continuous variables. Multivariate logistic regression models were created to assess for independent associations for categorical outcomes.

Results. The NAMCS database had 1,667 who were diagnosed with VHD. Of the 1,667, there was no information on age for 156 patients. This resulted in a final sample size of 1,511 patients. The unadjusted odds of receiving an echocardiogram was 37% greater in non-Whites than Whites, but this was not statistically significant (OR = 1.37; 95% CI 0.75-2.48; p = 0.303). After adjusting for age, sex, and congestive heart failure, the association between race and echocardiogram remained not statistically significant (OR = 1.00; 95% CI 0.49-2.02; p = 0.999).

Conclusions-Implications. Our study found no evidence of an association between race and echocardiography management of VHD patients. Such patients may benefit from appropriate monitoring and management of their condition in an ambulatory setting regardless of their race. Results should be interpreted lightly due to limited sample size. Future studies should try to maximize the sample size available by focusing on echocardiography management of VHD patients from cardiovascular providers nationally.