

NAPCRG 52nd Annual Meeting — Abstracts of Completed Research 2024.

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Title

Neighborhood Poverty and Access to Total Knee Arthroplasty in Maryland

Priority 1 (Research Category)

Social determinants and vulnerable populations

Presenters

Oluwatobi Lasisi, MD, MSBS, Oluwasegun Akinyemi, MD, MS, MS, FMCOG, Eunice Odusanya, BSc, Howard Nelson-Williams, MD, MPH, N. Stacy Amadife, MD, Modupe Oduwole, MD, Abiodun Otolorin, MD, FAAFP, MS, Chinemere Ekezie, MD, oyeyemi olaniran, Chidiebube Nzeako, Ugochi Ojinnaka

Abstract

INTRODUCTION/CONTEXT: Total knee arthroplasty (TKA) is the third most common inpatient surgery in the United States, with increasing percentages performed in ambulatory settings. It is a cost-effective and efficient treatment for individuals with end-stage osteoarthritis. The impact of neighborhood socioeconomic status, a major social determinant of health, on access to these surgeries in outpatient care is significant and warrants examination.

OBJECTIVE: To assess the impact of neighborhood poverty, as measured by the Distressed Communities Index (DCI), on TKA in Maryland.

DATASET: State Ambulatory Surgery and Services Databases (SASD)

POPULATION STUDIED: Patients with osteoarthritis who underwent TKAs in the ambulatory setting

METHODS: We conducted a retrospective study using the State Ambulatory Surgery and Services Databases (SASD) to analyze data on individuals with osteoarthritis who underwent TKAs in the ambulatory setting from January 2018 to December 2020. We examined the independent association

between neighborhood poverty, based on DCI quintiles and access to TKAs, adjusting for age, sex, race/ethnicity, insurance type, household median income, preexisting comorbidities, and lifestyle behaviors.

RESULT: During the study period, 77,961 individuals with osteoarthritis were identified, of whom 14,094 (18.1%) underwent knee replacement surgeries. Those who underwent knee replacement surgeries had a median age of 69 years (interquartile range 63-74), were predominantly White (76.4%) and female (61.5%), and mostly resided in the wealthiest neighborhoods: prosperous (39.9%) and comfortable (38.0%). A substantive association was found between the DCI quintiles and access to TKAs. Compared to the poorest neighborhoods, patients living in prosperous areas (OR = 1.97, 95% CI 1.65-2.34) and comfortable areas (OR = 1.61, 95% CI 1.36-1.91) had significantly higher odds of undergoing TKAs.

CONCLUSION: Neighborhood poverty significantly hinders access to TKAs in Maryland, with residents of the poorest neighborhoods less likely to undergo these surgeries. This emphasizes the impact of socioeconomic factors on health outcomes. It underscores the need to address healthcare disparities to improve access to care in economically distressed neighborhoods.

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