

More rural Medicare beneficiaries elect joint replacement surgery than urban recipients

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Southern Illinois University researchers determined Medicare beneficiaries living in rural areas were 27% more likely than urban recipients to have total knee or hip replacement surgeries. Researchers found women were more likely than men to undergo total joint replacement surgeries. Differences in elective joint surgeries between white individuals and minorities in both rural and urban areas were observed, but were less pronounced in rural settings. Full findings appear in the in the December issue of *Arthritis & Rheumatism*, a journal published by Wiley-Blackwell on behalf of the American College of Rheumatology.

Arthritis is the leading cause of disability in the U.S., and musculoskeletal problems consume roughly 2.5% of U.S. gross domestic product. The National Institute of [Arthritis](#) and Musculoskeletal and Skin Diseases (NIAMS) reported that 773,000 Americans have a hip or knee replaced each year. Generally, new joints last 10 to 15 years and younger patients may need to have repeated surgeries to replace damaged joints.

The research team, led by Mark L. Francis, M.D., used the 2005 Medicare Provider Analysis and Review File from the Centers for Medicare and Medicaid Services along with the entire 2005 Medicare denominator file to establish the study group. This cohort was comprised of close to 6 million rural Medicare beneficiaries and nearly 38 million urban recipients. Both men and women were represented in the study, with a mean age of 70 for rural and 71 for urban participants. Racial

representation in the rural versus urban areas included white (90.8% vs. 83.2%), African American (6.4% vs. 10.5%), Hispanic (0.6% vs. 2.3%), Asian (0.2% vs. 1.9%), Native American (1.3% vs. 0.3%), and other (0.5% vs. 1.7%).

Of the number of participants in the study, 1.02% of rural and 0.80% of urban beneficiaries underwent a total knee or [hip replacement](#) surgery in 2005. Results showed 27% more rural beneficiaries were likely to have total knee or hip replacement surgeries than Medicare recipients in urban areas. "We were surprised by the finding that more rural participants elected to undergo joint surgery than those in urban areas," said Dr. Francis. "There was reason to believe that differences in physician access, cultural backgrounds, and the need to travel farther for surgery would deter more rural patients from elective surgical procedures."

In addition to confirming earlier findings with African Americans and Hispanics, this study also finds similar disparities for Asians and Native Americans. Although there were some differences among minority groups compared to Caucasians, these disparities were overall less in rural areas.

The current study concurred with prior study results finding that women were more likely to have total joint replacement surgeries compared with men. However, given the higher prevalence of arthritis in women it is likely that men with arthritis had total joint replacement surgeries relatively more frequently than women noted the authors. According to a 2006 report from the Centers for Disease Control and Prevention (CDC), the prevalence of arthritis in women was 25.4% compared with 17.6% in men.

"While our study explored differences between rural and urban areas, joint replacement surgeries in suburban populations is an important area for future research," concluded Dr. Francis. The authors also

emphasized that results from this study are based on an industrialized country with an advanced transportation infrastructure and should not be generalized to less industrialized countries.

More information: "[Joint Replacement](#) Surgeries Among [Medicare](#) Beneficiaries in Rural Compared With Urban Areas." Mark L. Francis, Steven L. Scaife, Whitney E. Zahnd, E. Francis Cook, and Sebastian Schneeweiss. *Arthritis & Rheumatism*; Published Online: November 30, 2009 ([DOI 10.1002/art.25004](#)); Print Issue Date: December 2009.

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