

Insurance status affects in-hospital complication rates after total knee arthroplasty

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In-hospital complications following total knee arthroplasty (TKA) are higher among Medicare and Medicaid patients compared to those with private insurance.

The study, which appears in the journal *Orthopedics*, is believed to be the largest and most comprehensive assessment of medical and surgical complications after TKA and of specifically how [patients' insurance status](#) affects overall complication rates.

TKA is one of the most commonly performed inpatient procedures in the United States. In 2010, 693,400 [total knee replacements](#) were performed in patients older than 45 years, and the demand is projected to rise dramatically during the next decade in response to the aging "baby boomer" population.

Using a large all-payer inpatient health care database, researchers from Boston University School of Medicine (BUSM) found cardiac events were the most common complication and occurred in eight percent of the Medicare patients, more than twice the rate of patients with private insurance. Urinary tract infections and surgery-related complications were the next two most frequent complications overall, and both were more commonly seen in those patients with government-sponsored insurance (Medicaid/Medicare). Urinary tract infection was seen in three percent of Medicare patients and nearly three percent of Medicaid/uninsured patients, compared with 1.8 percent of the privately insured patients.

After controlling for age, sex and other demographic factors and comorbidities between Medicare and [private insurance](#), patients with Medicare insurance had significantly higher risks of

developing central nervous system complications, gastrointestinal complications, wound breakdown and postoperative anemia and also had an increased rate of mortality compared with patients with private insurance. There was no significant difference in both the medical complications or mortality between publicly insured patients with Medicare versus Medicaid. These findings are similar to those of previous studies that found increased complications in patients with Medicaid insurance after total knee replacement surgery compared to privately insured patients.

"Our study results indicate that patients with Medicare insurance have higher in-hospital complication rates after TKA compared to the privately insured patients with a matched cohort," said Xinning Li, MD, associate professor of orthopedic surgery at BUSM and an orthopedic surgeon specializing in sports medicine and shoulder surgery at Boston Medical Center. "As the landscape of healthcare changes with both reimbursements and bundle payments for joint arthroplasties, insurance status or patients with lower socioeconomic status should be factored into the final formula and risk adjusted for both physician and hospital reimbursement."

According to the researchers, the data suggest that insurance status may be considered as an independent risk factor for increased complications when stratifying patients preoperatively for total knee replacement. "Further research is needed to investigate the disparities in these findings to optimize patient outcomes following TKA."

Provided by Boston University School of Medicine

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