

The Effects of Modifier-22 on Reimbursement in Total Joint Arthroplasty at a Tertiary Care Center

Michael Mariner, MD¹, Aline Thiengmany, BS¹, Victoria Tappa, MS¹, Jacob M. Elkins, MD, PhD¹.
¹University of Iowa Department of Orthopedics and Rehabilitation, North Liberty, IA,
Email of Presenting Author: michael-mariner@uiowa.edu

Disclosures: Michael Mariner(N), Aline Thiengmany (N), Victoria Tappa (8), Jacob M. Elkins (3B, 5, 8)

INTRODUCTION: Total knee and hip arthroplasty (TKA, THA) in patients with morbid obesity (BMI ≥ 40 kg/m²) is associated with increased surgical complexity, longer operative times, and heightened risk, often leading to financial loss for surgeons. The CPT (current procedural terminology) Modifier-22 allows for up to 25% increased reimbursement for complex procedures, but prior reports have found its use inconsistent, with unclear payer criteria and frequent denials. This study evaluates whether the use of Modifier-22 in total joint arthroplasty (TJA) for morbidly obese patients leads to meaningful differences in reimbursement.

METHODS: This study received IRB approval. Records of patients who underwent TJA between 1/1/2014 to 6/1/2023 at a large academic care center were retrospectively reviewed for procedural information including charges and billing. Information was reviewed for primary TKA using CPT 27447 and for primary THA using CPT 27130. Descriptive statistics and student's T-Test were calculated with SPSS 26 (IBM, Armonk, NY, USA).

RESULTS: Billing information was collected for 3037 patients undergoing TKA (44.3% male) and 2170 undergoing THA (49.3% male). CPT Modifier-22 was charged in 559 (18.4%) of TKA and 272 (12.5%) of THA. In those with Modifier-22 charges during TKA, charges were 26.9% higher ($p < 0.001$), expected reimbursement was 16.6% higher ($p < 0.001$), and actual payment received was 13.4% higher ($p = 0.003$) than those without Modifier-22. In those with Modifier-22 charges during THA, charges were 31.4% higher ($p < 0.001$), expected reimbursement was 8.9% higher ($p = 0.117$), and actual payment received was 7.7% higher ($p = 0.191$) than those without Modifier-22. Obesity was the most common documented reason for Modifier-22 (96.6%).

DISCUSSION: This study illustrates that surgeons billing Modifier-22 for TKA are likely to see increased reimbursement that they are not likely to see when performing THA with the same modifier. This study shows that TKA with Modifier-22 is likely to yield roughly 13% higher reimbursement, which is statistically significant. THA with and without Modifier-22 did not have a statistically significant difference in reimbursement. This study differs from previous reports of up to 25% increased reimbursement with this modifier. While not necessarily a significant increase, surgeons should continue to bill and charge for Modifier-22 for complex procedures to maximize reimbursement.

SIGNIFICANCE/CLINICAL RELEVANCE: (1-2 sentences): Despite minimal benefit, orthopedic surgeons should continue to employ CPT Modifier-22 to maximize reimbursement in arthroplasty procedures of increasing complexity.