

Preoperative Contralateral Joint Pain and/or Back Pain Are Associated with Worse Baseline PROMs and Failing to Achieve the 22-Point Substantial Clinical Benefit for HOOS-JR After THA: Implications for the New CMS PROMs Policy

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INTRODUCTION: The Centers for Medicare & Medicaid Services (CMS) has identified contralateral joint and back pain as risk variables influencing the likelihood of reaching the substantial clinical benefit (SCB) threshold of 22 points on the Hip injury and Osteoarthritis Outcome Score for Joint Replacement (HOOS-JR). Given the limited understanding of these factors on patient-reported outcome measures (PROMs), we aimed to analyze baseline PROMs and likelihood of meeting the SCB following primary total hip arthroplasty (THA) in Medicare patients with and without preoperative contralateral joint pain and/or back pain.

METHODS: A prospective cohort of Medicare patients who underwent primary THA (n=4412) between 2016–2023 from a single healthcare system was analyzed. Patients were grouped based on preoperative contralateral joint and/or back pain measured by Total Painful Joints and Oswestry index questions into contralateral joint and back pain (n=1670, 37.8%), contralateral joint pain only (n=274, 6.2%), back pain only (n=1678, 38%), and no contralateral joint pain or back pain (n=790, 18%) groups. Median baseline PROMs were compared between the four groups. Multivariable logistic regression models were used to compare the achievement of the SCB 22-point threshold, controlling for pre-specified demographics, baseline PROMS, and surgical confounding variables between patients. A p-value <0.05 was considered statistically significant.

RESULTS: Patients without contralateral joint or back pain had the highest baseline scores across all PROMs compared to those with both types of pain: HOOS-Pain (50.0 vs. 38.9, p<0.001), HOOS-Physical function Shortform (PS) (58.0 vs. 48.8, p<0.001), Mental Component Summary (MCS) (median 57.1 vs. 48.6, p<0.001), and HOOS-JR (median 52.5 vs. 42.3, p<0.001). They were also more likely to have the most favorable PROM phenotype (Pain+, PS+, MCS+; 43.5% vs. 15.7%, p<0.001) and less likely to have the least favorable phenotype (Pain-, PS-, MCS-; 10.6% vs. 33.2%, p<0.001). At 1-year, back pain was associated with a higher risk of not achieving the SCB for HOOS-JR (OR=1.55, p<0.01). The presence of contralateral joint pain was associated with even greater odds (OR=1.73, p=0.01), while patients experiencing both back and contralateral joint pain faced the highest risk of not meeting the threshold for SCB (OR=3.11, p<0.001).

DISCUSSION AND CONCLUSION: Preoperative contralateral joint pain and/or back pain are significant predictors of worse baseline patient-reported outcome measures and reduced likelihood of achieving substantial clinical improvement one year after THA. Patients presenting with both conditions exhibit the lowest baseline function and mental well-being, and face the greatest risk of failing to achieve the 22-point substantial clinical benefit threshold on the HOOS-JR. These findings underscore the importance of comprehensive preoperative evaluation and optimization strategies that account for coexisting musculoskeletal pain, particularly in light of the new CMS PROMs mandate.