

Paper #14

When do Patient Reported Outcome Scores Peak After Primary Unilateral TKR and THR?

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Introduction: Research traditionally reports one-year post-operative patient reported outcomes (PROs) following primary unilateral total knee (TKR) and total hip replacement (THR). The new CMS bundled payment program suggests post-operative PRO collection between 9-12 months. We compared 6 and 12-month PROs to quantify the change between 6 and 12 months and to determine if earlier PRO scores would capture full recovery.

Methods: A contemporary multi-site US cohort of over 200 surgeons who underwent a unilateral primary identified 4884 TKR and 3288 patients with pre-op, 6 and 12-month PROs. Patient demographics, comorbidities, and pre- and post-operative stiffness, pain, and function (ADL) Knee/ Hip Osteoarthritis and Injury Outcome Score (KOOS/HOOS) were evaluated.

Results: TKR/THR patients had a mean age = 67.6/66.4 years, mean BMI= 31/28, were 64%/59% female. Mean pre, 6 and 12month pain scores for TKR were 48.2, 82.5, and 85.3, and for THR were 44.2, 89.7, and 90.4, respectively Overall, 77% of TKR and 87% of THR patients reported no clinically meaningful change in pain between 6-to-12 months; 83% (TKR) and 85% (TKR) had no meaningful change in ADL. TKR patients with ≥ 10 -point gain in pain between 6-12 months had 2 or more knees/hips with moderate-severe pain before surgery. TKR and THR patients with ≥ 10 -point gain in ADL had lower MCS, lower pre-ADL score, and 2 or more knees/hips with moderate-severe pain before surgery.

Conclusion: Approximately 80%-85% of patients report peak improvement in knee pain and function by 6 months after TKR or THR. The population change in pain and ADL scores between 6 and 12 months was not clinically meaningful, and occurred in a subset of patients with pain in multiple lower extremity joints and poorer emotional health. For quality analyses at the population level, surgeons can report PRO scores as early as 6 months.

Notes
