

## **A Retrospective Cohort-Based Analysis of the “Quiet Knee” Protocol After Primary Total Knee Arthroplasty**

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**INTRODUCTION:** Traditional physical therapy after total knee arthroplasty (TKA) often includes early, aggressive activity and passive motion, yet this may traumatize already inflamed surgical tissue. At our institution, we have begun initiating a “Quiet Knee” protocol that limits passive range-of-motion (ROM), restricts ambulation (<1,000 steps/day), and mandates aggressive cryotherapy for the first 10 days.

**METHODS:** All patients undergoing a primary TKA at our institution from 2020-2024 were retrospectively reviewed, and a strict “Quiet Knee” group comprised 271 patients treated with monitored telerehabilitation postoperatively were identified. Two comparison cohorts consisting of patients who were only given verbal Quiet Knee guidance, and patients who used traditional early-motion postoperative therapy. These patients were matched 1:1:1 on sex, Charlson Comorbidity Index, age ( $\pm 5$ ) and body-mass index ( $\pm 3$ ) yielding 813 patients with mean age 66 years, 56% female, BMI 31 kg/m<sup>2</sup>, and median CCI 0. Outcomes were opioid consumption, diagnosis of venous thromboemboli, manipulation under anesthesia (MUA), revision-free survivorship and Knee injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS-JR).

**RESULTS:** Ninety-day cumulative MME medians were 405 for Quiet Knee, 560 in partial adherence, and 548 in routine early motion cohorts ( $p < 0.001$ ). No symptomatic DVT occurred in any group, and only one PE was recorded in the early motion cohort. Survivorship free of MUA was non-different across all three cohorts ( $p = 0.96$ ). Revision-free survivorship was similarly equivalent across all three cohorts, with the only cases occurring due to deep PJI ( $p = 0.88$ ). KOOS-JR scores improved markedly in all groups. Neither absolute scores nor delta improvements differed across cohorts at any time interval (all  $p > 0.6$ ).

**DISCUSSION AND CONCLUSION:** A supervised Quiet Knee protocol significantly reduces 90-day opioid exposure by over 25% while delivering equivalent functional recovery, complication rates, and survivorship free of MUA and revision. Conservative early rehabilitation warrants broader investigation as a narcotic-sparing strategy after TKA.