

Low Uptake of Voluntary Patient-Reported Outcomes for Total Hip and Knee Arthroplasty: A Nationwide CMS Dataset Analysis

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INTRODUCTION: Patient-reported outcomes (PROs) are essential for understanding functional recovery and quality of life after orthopedic procedures, particularly total hip and knee arthroplasty (THA/TKA). Despite their recognized clinical utility, PRO collection through the CMS THA/TKA Patient-Reported Outcomes Performance Measure (PRO-PM) is voluntary and lacks financial incentives. This study aimed to assess national and state-level PRO reporting rates across U.S. hospitals and identify geographic variation in participation.

METHODS: This retrospective, cross-sectional study analyzed CMS’s publicly available “Patient Reported Outcomes Facility” dataset from January 1 to June 30, 2023. Hospitals were classified based on whether they voluntarily submitted PRO data for THA/TKA. National and state-level reporting rates were calculated. To evaluate geographic disparity, a post-hoc chi-square test was used to compare the ten highest reporting states and the ten lowest reporting states among those with at least one reporting hospital (non-zero). Visualizations were generated using Python’s Matplotlib and Seaborn libraries. Because the dataset was public and de-identified, IRB approval was not required.

RESULTS SECTION: Of 4,593 U.S. hospitals, only 88 (1.92%) voluntarily submitted PRO data for THA/TKA during the six-month study period (Figure 1). Most states had reporting rates below 2%, with many showing no participation at all. Only Connecticut and Pennsylvania exceeded the 10% threshold for hospital-level reporting, standing out as notable outliers among otherwise low-performing regions (Figure 2). A post-hoc chi-square analysis comparing the ten highest- and ten lowest-reporting non-zero states revealed a statistically significant difference ($\chi^2 = 30.21$, $p < 0.05$), indicating that observed disparities are unlikely to be due to chance alone (Figure 3).

DISCUSSION: Despite national emphasis on value-based care, PRO reporting for THA/TKA remains exceptionally low among U.S. hospitals. Structural barriers, including lack of mandates, financial disincentives, and workflow limitations, likely contribute to this trend. Outlier states may offer insights into facilitators of successful adoption. Broader implementation will require policy reform, infrastructure investment, and alignment of incentives to ensure integration of patient-centered data into orthopedic quality measurement.

SIGNIFICANCE/CLINICAL RELEVANCE: This study highlights a significant gap in orthopedic quality reporting, as very few hospitals currently collect and submit PROs following hip and knee replacement. Addressing this gap could make patient-reported outcomes a standard part of arthroplasty care, providing clinicians and health systems with actionable insights to guide treatment decisions, improve quality of care, and enhance patients’ long-term function and quality of life.

IMAGES AND TABLES:

Figure 1

National distribution of voluntary THA/TKA PRO reporting among hospitals, January through June 2023. Only 1.92 percent of hospitals submitted reports.

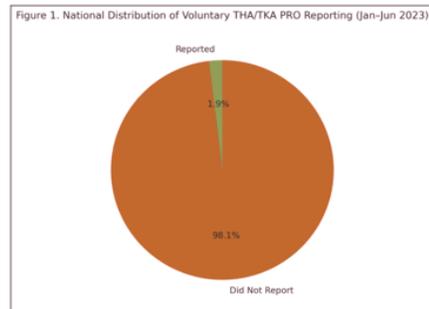


Figure 2

Top ten U.S. states by percent of hospitals reporting PROs. Only Connecticut and Pennsylvania exceeded the 10 percent mark.

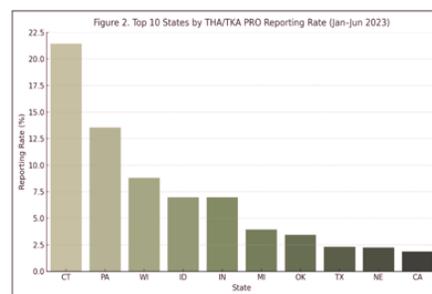


Figure 3

Summary Table for Post-Hoc Chi-Square Analysis: Top vs. Bottom 10 States.

State Group	Hospitals Reporting	Hospitals Not Reporting
Top 10 States	75	1437
Bottom 10 States	19	1412