

The Impact of an Internal Orthopaedic Medical and Social Optimization Program on Surgical Delays and Cancellations for Total Hip and Knee Arthroplasty in an Urban, Tertiary-Care Health Safety-Net Hospital

Brian Scott Tao, Rehan Rizwan Khan, Vin Nuthalapati, Michael S Kain, David M Freccero, Ayesha Abdeen

INTRODUCTION:

Contemporary value-based care models that penalize complications may inadvertently limit access to care in higher risk, vulnerable patient populations. We propose an orthopedic-driven optimization program to address modifiable medical and social risks prior to primary TJA- SAFE (Screen, Assess, Follow-up, Elective surgery) in a health safety-net setting. We aim to determine the delay/cancellation rates associated with SAFE and whether socioeconomic factors play a role.

METHODS:

A single center, retrospective cohort study was conducted in an academic, tertiary care, urban health safety net hospital from September 2014 to December 2023. Controls underwent surgery prior to the start of SAFE on January 1, 2018; study patients had surgery after implementation of SAFE. Primary outcomes: surgical delay, cancellation rate; secondary outcomes: race, ethnicity, socioeconomic status (insurance type as surrogate) on surgical delay and cancellation rates. Chi-squared, ANOVA, and logistic regression were used to evaluate significance at a threshold of $p < 0.05$.

RESULTS:

There were 2897 patients in the SAFE group and 1227 controls. Those in SAFE had an increased chance undergoing TJA to controls (96% vs 95%, $p = 0.0247$). SAFE was associated with increased delays from indication for surgery to surgical date (130.58 ± 111.92 days vs 77.50 ± 78.19 days, $p < 0.0001$). The cancellation rate was 1.8% and 0.4% for controls and patients undergoing SAFE, respectively. Same-day cancellation rate was 1.3% and 0.3% for these groups, [respectively](#). Patients experiencing homelessness were less likely to be canceled after undergoing SAFE in comparison to controls. (OR 0.25, $p = 0.043$).

DISCUSSION AND CONCLUSION: The SAFE protocol was associated with increased delays to surgery, however reduced cancellations. There were no difference in delays and cancellations on the basis of age, sex, BMI, ethnicity, education. SAFE increased access to TJA surgery for patients with housing insecurity. SAFE enables vulnerable patients to be successfully optimized to undergo TJA improving their access to care.