The removal of total knee arthroplasty from the inpatient-only list has resulted in an expansion of patient optimization efforts and resources.

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INTRODUCTION:

On 1/1/2018 the Centers for Medicare and Medicaid Services removed total knee arthroplasty (TKA) from the inpatient only (IPO) list, expanding outpatient TKA (oTKA) to include patients with insurance coverage through these programs. Patients insured by Medicare and Medicaid are typically older with more medical comorbidities. Thus, these changes reinforced the need for pre-operative optimization to ensure a safe and timely discharge after surgery. This study compared modifiable pre-operative optimization metrics in patients who underwent oTKA pre- and post- IPO removal. The authors hypothesized that patients post-IPO removal would demonstrate improvement in the selected categories.

METHODS:

Outpatient TKA in the National Surgical Quality Improvement Program were identified and stratified by surgical year (2015-2017 vs. 2018-2020). Using known risk factors for post-operative complications following TKA, the following pre-operative optimization thresholds were established: Albumin >3.5 (g/dL), Creatinine <1.25 (mg/dL), Hematocrit >33.3 (%), Sodium >137 (mEq/L), smoking history, and BMI <40 (kg/m^2). The percentage of patients who fell outside the thresholds before and after TKA was removed from the IPO list were compared.

RESULTS:

2,074 patients underwent oTKA from 2015-2017 compared to 46,480 from 2018-2020. Patients undergoing oTKA after IPO removal were significantly older (67.0 vs 64.4 years; p<0.01). A lower percentage of patients in the post-IPO cohort fell outside the threshold for all modifiable risk factors except Creatinine. Results were significant for pre-operative sodium (10.7% vs 8.8%; p<0.01), BMI (12.4% vs 11.0% p=0.05) and smoking history (9.9% vs 6.6%; p<0.01).

DISCUSSION AND CONCLUSION:

Outpatient TKA has increased considerably post-IPO removal. As this regulatory change has allowed older patients with increased comorbidities to undergo oTKA, the need for appropriate pre-operative optimization has increased. The current dataset demonstrates that surgeons have improved pre-operative optimization efforts for select modifiable risk factors.