

Rapid and Safe Transition to Ambulatory Surgical Center During the Covid Pandemic

Aleksander Mika¹, Jacob Wilson¹, Stephen Engstrom¹, Gregory Polkowski¹, Ryan Martin¹

¹Vanderbilt University Medical Center, Nashville, TN

aleksander.mika@vumc.org

Disclosures: A. Mika: None. J. Wilson: None. S. Engstrom: 3B; Enovis, LinkBio. 9; AAHKS-Advocacy Committee, AAOS-Coding Coverage and Reimbursement Committee. G. Polkowski: 3B; Enovis. 9; Board Member AAHKS. R. Martin: None.

INTRODUCTION: There has been a substantial shift in the number of outpatient total joint replacements performed over the last decade. Furthermore, use of ambulatory surgical centers (ASC) has increased, which has led to improved access to operating rooms and increased efficiency for many academic medical centers. However, there remains uncertainty as to the safety of this rapid transition from inpatient to outpatient surgery.

METHODS: Utilizing the total joint registry at our institution, we identified all total hip and knee arthroplasties from 2018-2022. Surgeries were grouped by location (hospital vs. ASC) and by admission status (outpatient vs. inpatient). Patient demographics and clinical outcomes were collected and compared with a focus on readmission.

RESULTS: There was a significant increase in the percentage of outpatient total joint replacements during the pandemic (9.7% to 63.4%). Furthermore, after the introduction of our ASC, nearly half of our total joints were performed there (49.2%) (Figure 1). We identified no significant change in reoperations (2% vs 1%, $p=0.50$) or 30-day readmission (2% vs 2%, $p=0.81$), and patients had fewer medical complications (0% vs 9%, $p<0.0001$) with our rapid transition to outpatient surgery. Additionally, patients indicated for same day surgery after the pandemic were more likely to be diabetic (15% vs 6%, $p<0.0001$), malnourished (22% vs 15%, $p=0.02$) and were overall older (61.84 vs 59.24, $p=0.0003$) than the pre-pandemic cohort (Table 1).

DISCUSSION: Our study demonstrates the safety and efficacy of rapid transition to an outpatient ASC at a major academic medical center. Within one year of the pandemic onset, we transitioned approximately half of our surgical volume from an inpatient hospital setting to a stand-alone ASC. Furthermore, we did not identify any statistical difference in reoperations, readmissions, or complications despite an increasingly morbid patient population. Therefore, we found a rapid transition to ASC outpatient surgery to be a safe option.

SIGNIFICANCE: Indications for outpatient surgery have relaxed, with a significant increase in patient age, diabetes, and malnutrition without any changes in readmission, reoperation, or complications.

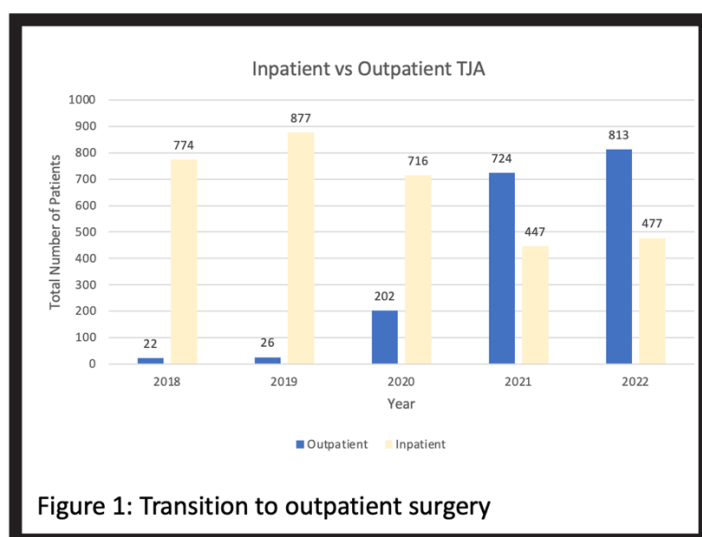


Table 1: Outpatient Pre-Pandemic vs ASC Post Pandemic

	Out-Patient Pre		Out-Patient Post		P Value
Age at Admission	59.24		61.84		0.0003
Hip (n, %)	116	46%	530	44%	0.63
Knee (n, %)	138	54%	680	56%	0.63
Current Smoking (n, %)	19	7%	85	7%	0.79
Revision or Reoperation Flag (n, %)	4	2%	12	1%	0.50
Revision or Reoperation Count (n, %)	5	2%	14	1%	0.35
Operative Time	101		92.29		0.0001
Diabetic (n, %)	16	6%	181	15%	0.0001
Non-Anemic (n, %)	213	84%	958	79%	0.10
Malnourished (n, %)	39	15%	265	22%	0.02
Pre-Op BMI	30.21		30.99		1.00
7 Day Medical Complication Avoidance (n, %)	254	100%	1210	100%	1.00
30 Day Medical Complication Avoidance (n, %)	231	91%	1208	100%	0.0001
30 Day Readmission Flag (n, %)	4	2%	26	2%	0.81