

Is an “Outpatient Arthroplasty Risk Assessment Score” Needed for Predicting Safe Selection of Outpatient Arthroplasty Candidates?

David Anthony Crawford¹, Adolph V Lombardi¹, Matthew Thomas Seimer, Robert Erlichman, Derek Semaan, Joanne B Adams¹, Keith R Berend¹

¹JIS Orthopedics

INTRODUCTION: Total joint arthroplasty is rapidly shifting to the outpatient space. One of the challenges of same-day discharge adoption has been determining which patients are suitable candidates. Several risk assessment tools have been developed including the Outpatient Arthroplasty Risk Assessment (OARA) score. The purpose of this study is to assess the predictive utility of the OARA score compared to a simplified medical optimization model at a high-volume outpatient arthroplasty practice.

METHODS: A retrospective review was performed of all patients who underwent outpatient total joint arthroplasty at a single free standing ambulatory surgery center in 2018 yielding a cohort of 1105 patients (1332 arthroplasties). Procedures included 596 TKA (44.7%), 438 THA (32.9%), 275 UKA (20.6%), 18 revision TKA (1.4%) and 5 revision THA (0.4%). The institution’s outpatient criteria were that all medical conditions were optimized and as long as the patient had no failing organ system (i.e. renal failure, cardiac failure, pulmonary failure) they were candidates for same day discharge surgery. Surgery center and office records were reviewed for overnight stay, direct facility transfers, and re-admission within 48 hours. An OARA score was calculated on all patients based on preoperative history and physical, and analysis was performed on the statistical utility of the OARA score in predicting successful same-day discharge.

RESULTS: Mean age was 58.9 years, mean BMI 33.3 kg/m² and 51.5% of patients were female. Overall 45% of patients had one or more major medical comorbidity. OARA scores were acceptable (<60) in 81.6% of patients. Ninety-seven percent of patients with an “unacceptable” OARA score successfully discharged home the same day. Seventeen patients stayed overnight for medical observation and 6 patients were directly transferred to a hospital (1.7%). Of those 23 patients, only 7 (30.4%) had an OARA score ≥60. The OARA score positive predictive value was 98.5%, negative predictive value 28.6%, sensitivity 81.8% and specificity 30.43%.

DISCUSSION AND CONCLUSION: The OARA score was accurate in predicting patients who successfully had a same day discharge but poor at predicting which patients would not. This scoring system is cumbersome and may be too restrictive on which patients are candidate for outpatient arthroplasty. Surgeons may consider more simplified criteria for outpatient arthroplasty.