90-day outcomes following total joint arthroplasty in ambulatory surgery centers, hospital outpatient departments, and hospitals using the MARCQI Total Joint Registry Database

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INTRODUCTION: As part of the Michigan Arthroplasty Registry Quality Collaborative Initiative (MARCQI), rates of readmission, Emergency Room (ER) visits, periprosthetic joint infection (PJI), periprosthetic hip fracture, and dislocation after primary total joint arthroplasty (TJA) were compared at ambulatory surgery centers (ASCs), hospital outpatient departments (HOPDs), and hospitals.

METHODS: All MARCQI primary TJAs performed between July 1st, 2021, to June 30th, 2022 (N=41,696) were reviewed. Of the 17,100 THAs: 9.5% (1,631) were at ASCs, 4.7% (798) at HOPDs, and 85.8%(14,671) at hospitals. Of the 24,596 TKAs: 9.3% (2,279) were at ASC, 4.2% (1,036) at HOPDs, and 86.5% (21,281) at hospitals. As expected, patients at hospitals had the highest percentage of patients with obesity class III, American Society of Anesthesiology class 3 or 4, diabetes, and current smokers.

RESULTS: For THAs, ASCs had the lowest readmission rates at 30 (ASC 0.98%, HOPD 1.75%, Hospital 3.36%, p<0.001) and 90 days (ASC 1.66%, HOPD 3.38%, Hospital 5.44%, p<0.001), and the lowest 30-day ER visits (ASC 1.84%, HOPD 3.51%, Hospital 5.33%, p<0.001). Similarly, ASC TKAs had the lowest 30 (ASC 1.18%, HOPD 1.35%, Hospital 3.14%,p<0.001) and 90 day readmission rates (ASC

2.1%, HOPD 2.25%, Hospital 5.15%, p<0.001), and 30-day ER visits (ASC 3.02%, HOPD 6.76%, Hospital 6.33%, p<0.001). PJI and hip dislocation rates were similar, but differences in periprosthetic hip fracture rates were noted (ASC 0.43%, HOPD 0.64%, Hospital 1.18%, p<0.001).

DISCUSSION AND CONCLUSION: ASC TJAs had significantly lower readmission and ER visits, but relatively similar complications compared to arthroplasties performed at HOPDs and hospitals.