

Medicare Advantage Enrollees are Rising and Show Distinct Characteristics from Traditional Medicare TKA Patients

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INTRODUCTION:

Medicare Advantage (MA) enrollment is becoming more popular among the Medicare population. Despite this growth, little is known about the difference in characteristics and proportion of growth, if any, between traditional Medicare (TM) and MA beneficiaries undergoing primary total Knee arthroplasty (TKA). We aimed to compare baseline characteristics and overall growth in numbers between MA and TM patients who underwent primary TKA in a single healthcare system.

METHODS: A total of 7267 Medicare patients who underwent primary TKA between 2016–2023 from a single healthcare system were analyzed. Among these, 3974 (54.6%) were TM and 3293 (45.4%) were MA patients. Baseline characteristics recorded included age, gender, race, body mass index (BMI), smoking status, Charlson Comorbidity Index (CCI), Area Deprivation Index (ADI), preoperative Knee disability and Osteoarthritis Outcome Score (KOOS) scores for pain, Physical Function Shortform (PS), and Joint Replacement (JR), and Veterans RAND 12-Item Mental Component Summary (VR-12 MCS) score. Proportions of TM and MA over the study period and baseline characteristics were compared. A p-value <0.05 was considered statistically significant.

RESULTS: Both the MA and TM groups demonstrated growth in patient volume through 2019, followed by a decline from 2020 onward. From 2016 to 2023, the proportion of MA increased (from 43.7% to 49.8%) while the proportion of TM decreased (from 56.3% to 50.2%) (**Figure 1**). When comparing baseline characteristics of MA relative to TM patients, MA patients had a higher proportion of females (63.4% vs. 60%, p=0.01), higher BMI (median 30.5 vs. 30, p=0.01), higher proportion of non-white race (14.6% vs. 8.9%, p<0.001), higher proportion of smokers (4.9% vs. 3.3%, p<0.001), and higher ADI score (median 47 vs. 42, p<0.001). However, both groups had similar ages (median 72 vs. 71, p=0.3). Also, MA patients showed lower baseline scores for KOOS-pain (median 41.7 vs. 44.4, p<0.001), KOOS-PS (median 52 vs. 4, p<0.001), KOOS-JR (median 45 vs. 48, p<0.001), and VR-12 MCS (median 52 vs. 54, p<0.001).

DISCUSSION AND CONCLUSION: In this single-institution study of Medicare patients undergoing primary TKA, we observed a progressive increase in Medicare Advantage enrollment relative to Traditional Medicare, with near parity reached by 2023. MA patients demonstrated distinct baseline characteristics, including higher BMI, greater social deprivation, higher rates of smoking, and a greater proportion of non-white and female patients. Additionally, MA patients presented with lower baseline functional, pain, and mental health scores compared to TM patients. These findings reflect not only shifting patterns in Medicare enrollment but also suggest that MA patients may represent a more clinically and socially complex population. Understanding these differences is critical for tailoring perioperative care and for optimizing outcomes within value-based arthroplasty models.