Impact of the Comprehensive Care for Joint Replacement Model on Spending, Quality, and Access: A Systematic Review

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INTRODUCTION:
Medicare's Comprehensive Care for Joint Replacement (CJR) bundled payment model was implemented in 2016 to improve quality and cost efficiency of total joint arthroplasty (TJA). A comprehensive synthesis of evidence on CJR's effects on utilization, outcomes, costs, and healthcare disparities is lacking. This systematic review examines these effects across different socioeconomic and demographic groups.
METHODS:
This systematic review followed PRISMA guidelines and was registered with PROSPERO (CRD42024596111). We searched PubMed, Embase, and Web of Science from January 2015 to September 2024 for studies comparing changes in spending, quality, and access to TJAs before and after CJR implementation. Two independent reviewers assessed studies and extracted data. Methodological bias was evaluated using the ROBINS-I tool.
RESULTS:
We identified 441 studies and finally included 24 observational studies representing 31,929,674 patients (86.5% White, 59.5% female, mean age 72.5 years). Eleven studies showed a reduction in 90-day spending ranging from -$307 (95% CI: −$587 to −$27; P=.04) to -$902 (95% CI: −$1305 to −$499; p<0.001) per episode. Six studies that examined clinical endpoints showed no change in 90-day readmissions (ie: difference of 0.49%, 95% CI -0.15%–1.13%, p-=-0.13) or complications (ie: difference of 0.09%, 95% CI -0.27%–0.46%, p-=-0.62). Seven studies found that the CJR worsened disparities in TJA utilization for Black dual-eligible beneficiaries (0.18% decrease; 95% CI, −0.34 to −0.01; P=.03) compared to white non-dual eligible beneficiaries (0.10% increase 95% CI, 0.05-0.15; P<.001).
DISCUSSION AND CONCLUSION:
The CJR was associated with modest reductions in 90-day Medicare spending without significant changes in 90-day readmission or complication rates. However, implementation of the CJR model was linked to worsening disparities in total joint arthroplasty utilization. These findings highlight the need for future alternative payment models to incorporate strategies that address and monitor healthcare disparities while pursuing cost savings.