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Are Medicare's Comprehensive Care for Joint Replacement Bundled Payments Stratifying Risk Adequately?

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Notes

Introduction: Without adequate risk stratification, bundled payments may be inequitable to providers and restrict access to care for certain patients. The Comprehensive Care for Joint Replacement (CJR) program incorporates risk-adjustment for Diagnosis-Related Group (DRG), geography and cases performed for hip fractures. The goal of this study was to assess additional factors that could improve risk stratification for this program.

Methods: A 20% random sample of Medicare patients spanning 2008-2012 was queried. 95,024 patients were identified who met CJR inclusion criteria (DRG 469, or 470). Reimbursement was used as a proxy for costs of care, and was determined for each patient over the bundle period (including 90 days of post-discharge care). Multivariable regression examined demographics, comorbidities, geography, and specific types of surgery and fractures to identify associations with reimbursement.

Results: Average reimbursement was \$18,786 \pm 12,386. Older age was associated with higher payments compared to patients aged 65-69 (p < 0.05). Dementia was associated with \$781 \pm 172 lower reimbursement (p < 0.01). The highest reimbursement was noted for end stage renal disease, patients with AIDS and acute peptic ulcer disease (PUD). There was considerable variation in payments by state. Cases performed for hip fractures earned higher reimbursement. Male gender was associated with \$8,832 higher reimbursement (p = 0.02) compared to females. Patients in DRG 469 tend to cost \$7,277 more than those in DRG 470. Risk stratification incorporating individual comorbidities displayed greater accuracy than current methods in the CJR program, which uses DRG, presence of fracture, and geography (R2 = 0.23 vs. 0.17).

Conclusion: These results suggest that CJR bundled payments should incorporate a more robust riskstratification to ensure fair reimbursement and maintain access to care for all patients. In addition to DRG, cases performed for hip fractures, and geography, risk-adjustment calculations should include individual comorbidities and demographics.