

RESEARCH LETTER

Comparing Approaches to Controlling Medicare Spending

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Payers, providers, and policymakers are testing several major approaches to reducing US healthcare spending without harming quality. One strategy is to bundle payments for a longitudinal episode of care, as in Medicare's popular Bundled Payments for Care Improvement initiative.¹ A second approach is to decrease rates of inappropriate care, through programs such as Choosing Wisely, that discourage use of low-value services.² Finally, a third approach adopted by the Medicare Shared Savings Program strives to reduce both episode costs and rates of inappropriate care, by incorporating annual per capita Medicare spending into performance benchmarks.³ Given these ongoing efforts, it would be important to compare the potential impact of reducing episode payments versus rates of care on total costs of care.

METHODS

For 3 common surgical procedures, we compared the relative influence of procedure rates versus episode payments (among those with procedures) on total Medicare expenditures.

We used complete Part A and B Medicare claims data for: coronary artery bypass grafting (CABG), prostatectomy, and hip replacement. We used International Classification of Diseases, Ninth Revision codes to identify the procedures (CABG: 361.0, 361.1, 361.2, 361.3, 361.4, 361.5, 361.6, 361.7, 361.9, 36.2; prostatectomy: 60.4, 60.5, 60.62 with a prostate cancer diagnosis code of 185 or 233.4; and hip replacement: 81.51, 81.52 excluding hip fracture codes 820.0, 820.1, 820.2, 820.3, 820.8, 820.9).

For each procedure, we estimated age- and sex-adjusted episode rates for each hospital referral region (HRR). The numerator was the number of admissions to an acute care hospital for CABG (total n = 118,185), prostatectomy (total n = 18,328), or hip replacement

(total n = 178,982) from January 2009 to June 2010. The denominator was fee-for-service Medicare beneficiaries age 65 years or older. We excluded those without continuous Part A and B enrollment (total denominator n = 23,403,051). Females were also excluded from the prostatectomy cohort.

For each of the 306 HRRs, we next calculated average HRR-level episode payments. Using CABG as an example, we aggregated up the risk-adjusted (age, sex, race, admission type, Elixhauser⁴ comorbidities), price-standardized⁵ episode payments for all CABG patients residing in an HRR, and divided this by the number of CABG patients living in that HRR.

Finally, we obtained baseline per capita spending by multiplying the age- and sex-adjusted CABG episode rate by the average CABG episode payment in that HRR. All payments were standardized to 2010 dollars using the Consumer Price Index.

We simulated changes in per capita Medicare spending for CABG across all HRRs under 2 scenarios: (1) reducing HRR-level rates to the median versus (2) reducing HRR-level episode payments to the median. We repeated this for prostatectomy and hip replacement.

RESULTS

Age- and sex-adjusted rates of CABG varied more than risk-adjusted, price-standardized episode payments (90th:10th percentile of 2.0 for rates vs 1.2 for payments) (see Supporting Information, Appendix, in the online version of this article). Reducing rates of CABG to the 50th percentile decreased per capita episode payments by 11.1%. In contrast, reducing CABG episode payments to the 50th percentile decreased per capita episode payments by 3.6%. The absolute difference between the 2 simulations was 7.5% (95% confidence interval [CI]: 5.6%-9.4%) (Figure 1). Results were similar for prostatectomy and hip replacement. In sensitivity analyses, reducing hospital-level episode payments (rather than HRR-level episode payments) produced similar findings. Employing the 90th percentile as a cutoff (instead of the median) also produced qualitatively similar results.

DISCUSSION

For 3 common surgical procedures, reducing procedure rates lowers total Medicare spending substantially more than reducing episode payments. These findings are

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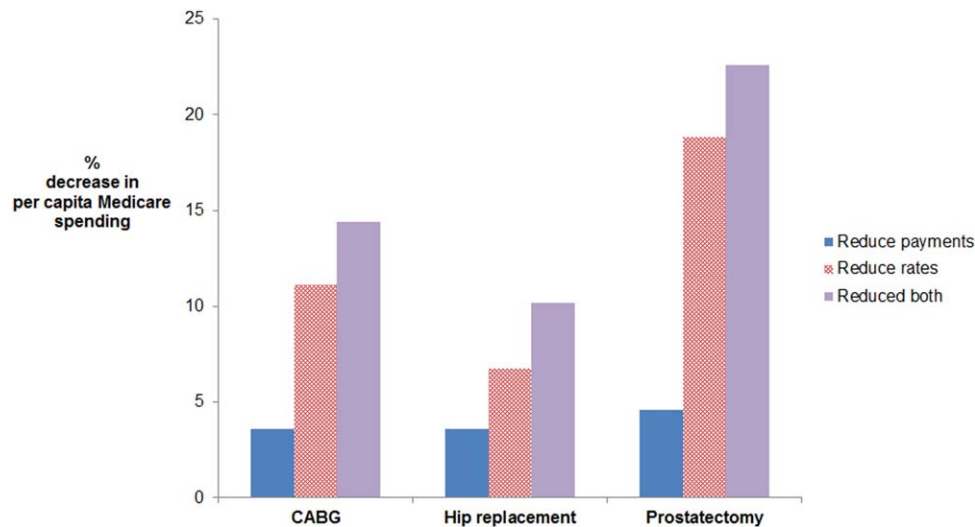


FIG. 1. Decrease in per capita Medicare spending associated with reducing payments versus rates to the 50th percentile, or doing both, for CABG, hip replacement, and prostatectomy. For CABG, the absolute difference between the simulated decrease in per capita Medicare spending due to reducing rates versus reducing payments was 7.5% (95% confidence interval [CI]: 5.6%–9.4%). For hip replacement, the absolute difference was 3.2% (95% CI: 1.9%–4.4%). For prostatectomy, the absolute difference was 14.3% (95% CI: 11.0%–17.6%). The effect of doing both is additive in this simulation, as we did not model possible complex interdependencies between reducing payments and rates. Abbreviations: CABG, coronary artery bypass grafting.

attributable to a much greater variation in procedure rates compared to episode-based payments. Prior research has documented wide variation in rates of surgical procedures.⁶ This may be due to a number of factors, including physician beliefs about indications for surgery, as well as the degree to which patient preferences are incorporated into decision making.⁶

Our findings suggest that it would be important to incorporate population-based episode rates into efforts aimed at incentivizing higher value care. Incentives tied to population-based episode rates are difficult to design well. They may need to be paired with appropriateness criteria to avoid stinting on care. Attribution of a population to a hospital (including those who are not admitted to a hospital) is also complex.⁷ Finally, hospitals are not solely responsible for rates of care, because the decision to admit a patient is sometimes made in the emergency department (eg, for chronic medical conditions), but at other times is made in the outpatient arena (eg, for elective surgery). Nevertheless, a narrow focus on per episode spending limits the potential impact of efforts to control Medicare spending.

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