

Identification of Surgeon Outliers to Improve Cost Efficiency: A Novel Use of the CMS Quality Payment Program

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INTRODUCTION:

Bundled payment programs for total joint arthroplasty provide surgeons with a financial incentive to decrease costs through reconciliation, making it advantageous to identify and emulate cost-efficient surgeons. Our objective was to determine if CMS Quality Payment Program (QPP) and institutional data could be combined to identify cost-efficient surgeons within our geographic region of practice.

METHODS:

Public data was obtained from the CMS-QPP for total knee arthroplasty (TKA) surgeons within a metropolitan area in the United States from 1/1/2019 to 12/31/2021. This included case volume, NPI numbers, expected costs as determined by CMS, and observed costs to CMS. A univariate linear regression determined the relationship between surgical volume and cost efficiency, measured by the ratio of observed-to-expected costs. Cost-efficient surgeons were identified with a threshold of two standard deviations from this regression line. Case data was collected from institution financial records and used to determine x-ray visits, physical therapy (PT) visits, and out-of-pocket payments to the practice.

RESULTS:

Four high-cost-efficiency TKA surgeons were identified, three of whom were within our practice. Practice financial data demonstrated that these cost-efficient surgeons performed cases that resulted in fewer x-ray visits (1.06 vs. 1.11, $p < 0.001$) and lower out-of-pocket costs (\$86.10 vs. \$135.46, $p < 0.001$) relative to cases performed by other practice surgeons. Their rates of PT utilization were also significantly lower (1.73 vs. 2.05 visits, $p = 0.07$). If all our practice surgeons performing > 30 TKA CMS cases annually achieved similar efficiency, the savings to CMS would be \$17.2 million. (\$75,802,705 vs. \$93,028,477).

DISCUSSION AND CONCLUSION: The CMS-QPP can be used to identify surgeons who perform cost-efficient surgery. Practice patterns that result in CMS cost savings could be emulated to decrease the cost curve for performing TKAs, resulting in reconciliation payments to surgeons and/or institutions and cost savings to CMS.