Hospital and Surgeon Competition and its Association with Disclosure of Payments for Major Joint Arthroplasty

Gloria Zhang, Emily Mae Peairs, Richard C Mather[1], Yuqi Zhang, Marcelo Cerullo
[1]Duke Med Ctr

INTRODUCTION: Total hip (THA) and total knee arthroplasty (TKA) account for significant healthcare spending, yet payer-specific prices remain opaque. The Centers for Medicare and Medicaid Services (CMS) price transparency rule allows for cost-conscious selection. We examined the impact of market competition and orthopaedic surgeon availability on hospital price disclosure for THA/TKA.

METHODS: Leapfrog Hospital Survey was used to identify hospitals performing THA/TKA, their quality ratings and procedural volumes. Herfindahl-Hirschman Index was used to estimate hospital referral region (HRR) competition. Hospitals were linked to procedure-specific prices (source: Turquoise Health Research Dataset) and to financial performance (source: CMS Medicare Cost reports). Orthopaedic surgeon availability within HRRs was gleaned from the 2019 Area Health Resource File. Modified Poisson regression evaluated the association between hospital price disclosure and quality indicators, adjusting for market concentration and surgeons per HRR procedural volume.

RESULTS: Of 1,366 hospitals, 656 (48.7%) withheld prices for TKA/THA. Overall, non-disclosing hospitals had higher total margins (-3.49% vs. 3.52%, $p<0.001$) and charge-to-cost ratios (4.93 vs. 6.05, $p<0.001$). Lower market competition was associated with a greater likelihood of price non-disclosure (IRR:1.35, $p=0.023$). In HRRs with higher orthopaedic surgeon availability, higher quality ratings were associated with non-disclosure (IRR:1.392, $p=0.012$). After adjusting for both surgeon availability and market competition, higher quality rating was associated with greater likelihood of non-disclosure (IRR:1.19, $p=0.038$). There were no geographic trends (Figure 1).

DISCUSSION AND CONCLUSION:

Our study has three main findings, first, that there is a high non-disclosure rates in total joint arthroplasty (TJA), which has not been studied before. Second, we found that non-disclosure is associated with a higher operating margin, higher markup, and higher procedural volume. Third, hospitals that met the highest quality ratings for TJA were less likely to disclose TJA prices if they were in a more concentrated hospital market or in a region with high orthopaedic surgeon availability. In subanalyses controlling for both market concentration and orthopaedic surgeon availability, higher quality hospitals were still less likely to disclose TJA prices. In aggregate, our results show that procedural non-disclosure – particularly among high-performing hospitals – makes it difficult to ascertain whether cost-reduction efforts to enhance care for joint arthroplasty patients are effective. These data suggest that it will be difficult to evaluate whether higher quality TJA hospitals are more cost-effective to payers and patients with limited price disclosures.