

## **Medicare Procedural Costs in Ambulatory Surgery Centers vs. Hospital Outpatient Departments for Spine Surgeries**

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### **INTRODUCTION:**

Multiple studies have demonstrated the safety of outpatient spine surgery, with reports of equivalent to improved patient outcomes as compared to inpatient procedures. This has resulted in increased utilization of outpatient surgery over time. Additionally, ambulatory surgery centers (ASCs) have been shown to have better cost effectiveness than hospital outpatient departments (HOPDs) in specific procedures. However, there remains a paucity of literature evaluating the difference in costs between ASC and HOPD based procedures for Medicare beneficiaries.

### **METHODS:**

Publicly available data from CMS was accessed via the Medicare Procedure Price Lookup Tool. Current Procedural Terminology codes were used to identify spine specific procedures approved for the outpatient setting by CMS. Procedures were grouped into decompression (cervical, thoracic, lumbar), fusion/instrumentation (cervical, lumbar, sacroiliac), and kyphoplasty/vertebroplasty cohorts, as well as an overall cohort.

Data regarding total costs (defined as facility fees + surgeon reimbursement), facility fees, surgeon reimbursement, Medicare payments (defined as portion of costs covered by Medicare and not requiring payment from patient), and patient co-payments (defined as portion of costs required to be paid by patient and not covered by Medicare) were extracted for each procedure. Descriptive statistics were used to calculate means and standard deviations. Differences between ASC and HOPD associated costs were analyzed using Mann Whitney U test.

### **RESULTS:**

Twenty-one individual CPT codes approved by Medicare for ASC and/or HOPD setting were identified. Decompression procedures had significantly lower total cost (4,183±411.07 vs. 7,583.67±410.89; p<0.001), facility fees (2,998±0 vs. 6,397±0; p<0.001), Medicare payments (3,345.75±328.80 vs. 6,064.75±328.80; p<0.001), and patient payments (835.58±82.13 vs. 1,515.58±82.13; p<0.001) in ASCs as compared to HOPD. Fusion/instrumentation procedures had significantly lower facility fees (10,436.6±2347.51 vs. 14,161±2147.07; p=0.044) and Medicare payments (9,501.2±1732.42 vs. 13,757±2037.58; p=0.009) in ASCs, as well as a trend toward lower total costs (11,876.8±2165.22 vs. 15,601.2±2016.06; p=0.076). Patient payments in HOPD setting were significantly lower in the fusion/instrumentation cohort (2,374.4±433.48 vs. 1,843.6±73.42; p=0.009). In the kyphoplasty / vertebroplasty cohort, there was no statistically significant difference between ASC and HOPD, despite lower overall costs in the ASC for all variables. Surgeon fees were the same regardless of setting for all procedures (p=1.00). When combining decompression, fusion / instrumentation, and kyphoplasty / vertebroplasty CPT codes into a single cohort, ASC setting was associated with significant cost savings in total cost, facility fees, Medicare payments, and patient payments.

### **DISCUSSION AND CONCLUSION:**

Performing spine surgeries in ambulatory surgery centers is associated with cost savings as compared to hospital outpatient departments. This was demonstrated for decompression, fusion / instrumentation, and kyphoplasty / vertebroplasty Medicare approved outpatient procedures. This study will assist surgeons, patients, and policy makers in ensuring delivery of safe and cost-effective spine care to Medicare beneficiaries.