

Regional Variation in Outpatient Utilization and Costs of Posterior Lumbar Interbody Fusion in the United States

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INTRODUCTION:

The proportion of spinal surgeries performed in outpatient settings has steadily increased over the years driven by advancements in surgical technique and postoperative care. The transition to more outpatient spinal surgery has been associated with reduced healthcare costs compared to inpatient procedures.

METHODS: A retrospective cohort study was conducted using the MarketScan Commercial Claims and Encounters Database. We identified patients who underwent single level posterior lumbar interbody fusions between April 1st, 2018 and November 30th 2023 with continuous insurance coverage 90 days prior to and 30 days after their surgery. The primary outcomes were regional variations in surgery setting utilization and total surgical payments.

RESULTS:

Among 15,035 identified PLIFs, 10,612 (70.6%) surgeries were inpatient procedures, 3,552 (23.6%) were in a hospital outpatient department (HOPD) and 871 (5.8%) were in an ambulatory surgical center (ASC). Inpatients were older and more likely to have a diagnosis of obesity, diabetes, and hypertension compared to patients who had surgeries performed in an outpatient setting. Across all regions, the average payment for an inpatient PLIFs was \$74,595, compared to \$30,624 for HOPDs and \$33,440 for ASCs. Inpatient surgeries were most expensive in the northeast, averaging almost \$79,000. The proportion of surgeries performed in HOPDs has risen across all region from 7.8% in 2018 to 40.8% in 2023. The south has experienced the largest increase in outpatient surgeries coupled with the lowest average payments for outpatient surgeries compared to other regions. In contrast, the Northeast had the smallest increase in outpatient utilization, with 65% of PLIFs still performed inpatient. ASC utilization has remained relatively stable over time.

DISCUSSION AND CONCLUSION:

This data highlights a clear shift towards a greater proportion of PLIFs being performed in outpatient settings, mostly in HOPDs. The increasing utilization of HOPDs suggest a growing recognition of their potential to reduce healthcare spending while maintaining quality, especially in lower-risk patient populations. Our findings revealed variation in both surgical setting utilization and total payments for PLIFs among regions of the United States, which may be indicative of differing healthcare policies and payment structures.

