Does Patient Selection Account for the Perceived Cost Savings in Outpatient Spine Surgery?

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Disclosures

- None
Introduction:
Outpatient Spine Surgery

• Increased five-fold between 1994 and 2006
• Outpatient surgery **LESS COSTLY** compared to inpatient procedures (?)
• Hence, more desirable for payers and surgeons
• PREVIOUS LITERATURE:
  • Improved outcomes for outpatient surgeries
  • Reduced costs

Objective

• To evaluate the role of patient selection on outcomes and cost effectiveness of outpatient procedures
Methods

1. **Meta-analysis** of available observational studies comparing outcomes for inpatient and outpatient spine surgery, to characterize the patient selection.

2. **Bayesian Modeling approach** to extend the results from meta-analysis to examine cost data from a national database of academically affiliated hospitals.
Results: 1.
Final Studies and Characteristics

- 16 studies

- 370,195 patients
  - 290,611 inpatient (78.5%)
  - 79,584 outpatient (21.5%)

- Procedures:
  - ACDF
  - Lumbar Decompression
  - Lumbar Fusion
Results:

1. Age

- Patients undergoing an **outpatient procedure** were **younger** than those undergoing an inpatient procedure (MD = -2.33, 95% CI: -4.40 to -0.25)
2. Diabetes

- Odds of undergoing an **outpatient surgery** were found to about \( \frac{1}{3} \) less for those **who have DM** compared to those who do not (OR = 0.77, 95% CI: 0.51 to 0.97).
Other Patient Selection Factors

• Those with **higher BMI** values were more likely to be treated in the **inpatient setting**.

• All four studies found that undergoing **inpatient spine** surgery was associated with a **higher CCI** compared to outpatient surgery.
Cost Analysis

- Outpatient spine surgeries were less costly than inpatient procedures (MD = -$13,850, 95% CI: -$22,859 to -$4,695)
Cost Analysis

• Dataset: CDB/RM, Vizient, inc.

• Used to assess the difference in direct costs between inpatient and outpatient for patients undergoing ACDF and Lumbar laminectomy

• Analyzed for two different age groups separately
  • Young age group (30-35 year olds)
  • Old age group (65-70 year olds)
Cost Analysis

• Direct costs were lower for outpatient procedures in both subgroups

• Lower only by $555 for those aged 30-35 (95% CI: -$733 – -$374)

• Those aged 65-70 had a larger cost difference of $7,290 (95% CI: -$7380 – -$7,190)
Conclusion

- Procedures performed in the outpatient setting compared to those in the inpatient setting were associated with more favorable short-term outcomes and an initial reduction in direct costs.

- The additional analysis of the national database suggests that cost savings in the outpatient setting may be a result of outpatient procedures being offered more frequently to younger and healthier individuals.