

A Comparison of Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey Scores Between LumbarDecompression and Lumbar Fusion Surgery Patients

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Introduction

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey has made patient experience a key driver of quality and reimbursement for hospital systems and spine surgeons nationwide.

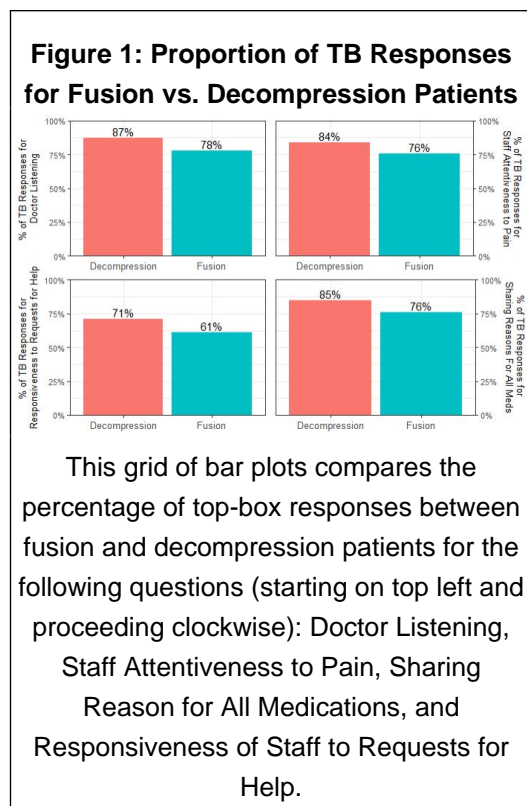
Under the Hospital Value Based Purchasing program, the Centers for Medicare and Medicaid (CMS) withhold 2% of hospital reimbursement and reallocate this money to top performing hospitals based on a metric known as the Total Performance Score (TPS). Patient experience, which accounts for 25% of the TPS, is determined by the percentage of "top-box" responses (highest possible response for a given question) of each dimension on HCAHPS survey.

The purpose of this study was to determine if there are differences in patient experience scores between patients undergoing decompression surgery versus fusion surgery of the lumbar spine.

Methods

A retrospective cohort analysis was performed using HCAHPS survey data from 449 patients who underwent lumbar decompression or fusion surgery at our institution from 1/1/2013-12/31/2015.

Patients were divided by surgery type into either the decompression (n=257) or fusion (n=192) surgery group. The number of "top-box" responses for each HCAHPS survey question was compared between the two groups using Pearson's chi-squared test. Logistic regression analysis was then performed on questions that were found to be significantly different between the fusion and decompression groups. Logistic regression analysis allowed for the assessment of surgery while controlling for patient co-variates, such as age, health status, and education, which are commonly used in the patient-mix adjustments performed by CMS.



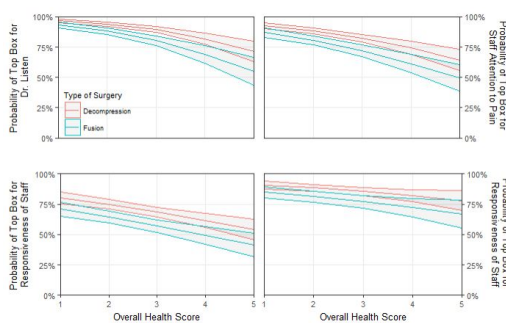
Conclusions

Our results suggest that patients undergoing fusion surgery of the lumbar spine may be more likely to report lower HCAHPS scores than patients undergoing decompression surgery. Our findings also suggest that the variables used in patient-mix adjustments by CMS may not adequately account for the differences in scores between these two groups of lumbar surgery patients. This evidence suggests that hospital and providers who perform a greater percentage of fusion surgeries compared to decompression surgeries may be at risk for lower patient experience scores as measured by the HCAHPS survey.

Results

The fusion surgery group was found to have a significantly less "top-box" responses for four questions of the HCAHPS survey when compared to the decompression group (Figure 1). The four survey questions were related to patient assessments of doctors listening (78.0% vs. 86.4%, $p=0.021$), the hospital staff doing "everything they could" for the patient's pain (75.9% vs. 84.6%, $p=0.027$), the hospital staff explaining the reasons for giving new medications (74.2% vs. 84.9%, $p=0.019$), and the responsiveness of staff after a call button was pressed requesting assistance (60.8% vs. 70.9%, $p=0.037$). Notably, fusion surgery was found to be a significant predictor of lower HCAHPS scores ($p < 0.05$) for all four of these questions even after controlling for patient co-variates (Figure 2). The example predictions shown in Figure 2 also demonstrate how the probability of a top-box response for each question decreases with increasing Overall Health Score, where higher Overall Health Scores equate to worse patient health.

Figure 2. Predictions from Regression Models



These plots demonstrate example predictions of the probability of a top-box response from the regression models developed for the same four questions in Figure 1. For all predictions, co-variates were held at their median values: Age=66, Sex=male, Education=college degree.