

Impact of Patients' Functional Status on Satisfaction with Outcomes 12-months After Elective Spine Surgery for Lumbar Degenerative Disease

Silky Chotai MD; Clinton J. Devin MD; Kristin Archer PhD, DPT; Mohamad Bydon MD; Matthew J. McGirt MD; Nian Hui PhD; Scott L. Parker MD; Frank Harrell; Robert Dittus; Anthony L. Asher MD FACS; N2QOD Investigator group

Introduction

Patient-reported outcomes and patient satisfaction are center of the current value-based health care reforms. The impact of Oswestry disability index (ODI) on satisfaction with outcomes is not well documented. In this analysis, we set out to determine the impact of functional status of the patient at baseline and 12-months on satisfaction with outcomes.

Methods

Patients undergoing elective spine surgery for degenerative lumbar disease were entered into a prospective multi-center registry (N2QOD) over a two-year period. Baseline and 12-month follow-up ODI were recorded. Satisfaction was measured using North American Spine Society (NASS) satisfaction questionnaire. Multivariable proportional odds logistic regression analysis was conducted to determine the impact of baseline and 12-month ODI on satisfaction with surgery.

Results

A total of 5453 patients met inclusion criteria with 64% (n=3460) being satisfied at a level where surgery met their expectations at 12month follow-up. In a multivariable proportional odd logistic regression model for satisfaction, after adjusting for all the baseline patient-specific and surgery-specific variables, baseline ODI scores and 12-month ODI scores were associated with achieving satisfaction with outcomes at postoperative 12-months. The 12month ODI score had the highest impact (Wald chi-square=1555, 86% of total chi-square) on achieving satisfaction with outcomes at 12month compared to baseline ODI scores (Wald chi-square=93, 5% of the total chi-square). The level of satisfaction decreases with increasing 12-month ODI score and a higher change in ODI score is required to achieve a better satisfaction level.

Conclusions

Absolute 12-month ODI following surgery had a significant impact on satisfaction. Patients with higher baseline ODI required a larger change score in ODI to achieve satisfaction. No single measure can be used as a sole yardstick to measure quality of care after spine surgery. Satisfaction may be utilized in conjunction with baseline and 12m ODI scores to provide an assessment of the quality of spine surgery provided.

Learning Objectives

The present study demonstrates that satisfaction is closely correlated to 12 month back pain related disability scores, which accounted for 86% of the "variability" of satisfaction measured by Wald chi-square statistics. At the same time, satisfaction alone cannot demonstrate the value of an episode of care.

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