



## Influence of Gender on Outcomes after Spinal Deformity Surgery

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### Introduction

Gender may have an effect on surgical outcomes. Large scale studies examining the effect on gender on outcomes after spinal deformity surgery have not been performed to date.

### Methods

Adults (> 18 years) undergoing spinal deformity surgery from 2005-2012 were identified using the Current Procedural Terminology (CPT) codes in the ACS NSQIP database. Patients were divided by gender. Baseline, operative, and outcomes data were compared in bivariate fashion. Univariate and multivariate analyses were performed to assess the impact of gender on 30-day postoperative complications and mortality.

### Results

9,397 patients were identified, of which 55.1% were women. Women had higher rates of dyspnea as a baseline comorbidity (7.7% compared to 6.0% for men,  $p < 0.00$ ), but men had higher rates of diabetes (15.4% to 13.2%,  $p < 0.00$ ), cardiac risk factors (4.3% to 1.6%,  $p < 0.00$ ), hypertension requiring medication (52.5% to 49.2%,  $p < 0.00$ ), and higher preoperative American Society of Anesthesiology (ASA) risk index classification scores (ASA 3 and ASA 4 status of 43.2% to 40.1% and 2.8% to 1.8%, respectively,  $p < 0.002$ ). Men had higher overall intraoperative complications (1.16% to 0.68%,  $p < 0.02$ ). Women had increased length of stay (4.0 vs 3.7,  $p < 0.002$ ) and overall rates of postoperative complications (26.2% to 20.2%,  $p < 0.00$ ). On multivariate analysis, women had higher postoperative morbidity (Odds Ratio 1.36,  $p < 0.00$ ) and lower mortality (Odds Ratio 0.2,  $p < 0.01$ ).

### Conclusions

Thirty-day morbidity is higher in females than males after spinal deformity surgery, but intraoperative complications and mortality are higher in males.

### Learning Objectives

By the conclusion of this session, participants should be able to assess the effect of gender on 30-day outcomes after spinal deformity surgery.

### References