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# Spine Surgery in Octogenarians: Quality Improvement and Review of 282 Patients

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## Introduction

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## Methods

We gathered a total of 6,988 surgical case records, of these 282 patients over 80 years of age were separated into an ‘octogenarian’ cohort for retrospective analysis. Pre surgery factors, post-surgery complications,

length of stay were all analyzed with various methods of analysis including using either Chi-square or Fisher’s exact tests, Logistic regression , and Wilcoxon Rank Sum

## Results

Preoperative factors differed strongly between the octogenarian and control groups. CHF (1.4% to 5%), cardiac arrhythmias (5.3% to 15.6%) and osteoporosis (6.6% to 18.1%) were all more common among octogenarians while obesity (10.4% to 4.6%) was more common among the controls. In the logistic regression analysis, the pre-operative presence of cardiac arrhythmias and osteoporosis were highly significant in predicting overall complications, 30-day mortality and long LOS. Obesity was significant in predicting overall complications and 30-day mortality and inpatient class was significant in predicting overall complications

## Conclusions

Being an octogenarian in itself was not significant in any of the models, suggesting that the gathered pre-operative factors may be sufficient to explain the variability in overall outcomes

## Learning Objectives

*Examine the rate of complication and adverse effects in our octogenarian  population

*Add to sparse literature regarding outcomes of octogenarians undergoing spine surgery

*Provide data to clinicians regarding outcome to help weigh risk and benefits of surgery in this population

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