# Spine Surgery A Mari Usque Ad Mare: Pre-operative Patient Metrics Across Canada

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## Introduction

CSORN is the spine registry of the Canadian Spine Society. For the first time, we use this powerful tool to directly compare pre-operative characteristics in patients undergoing thoraco-lumbar procedures between 5 surgical centers across the country: Vancouver, BC, Calgary AB, Edmonton, AB, Toronto, ON and St-Johns, NB. Patients were not stratified according to procedure performed.

## Methods

We extracted data from the main CSORN database concerning pre-operative metrics. Those 32 variables included patient characteristics (Age, BMI, Smoking, etc.), comorbidities (medical, psych, type of medications, prior spine OR, etc.) and functional indicators (VAS LE, VAS Back, SF12, EQ5D, PHQ9 and ODI). ANOVA was used for preliminary analysis followed by multinomial logistic regression.

## Results

There was a total of 1534 patients across the 5 centers. Average age ranged from 37 y.o. in Edmonton to 50 y.o. in Vancouver. Average BMI ranged from 26.4 in Edmonton to 29.9 in St-Johns. Average VAS LE ranged from 6.93 in Toronto to 7.71 in Calgary. Average VAS Back ranged from 6.12 in Toronto to 7.08 in St-Johns. Average ODI ranged from 43 in Toronto to 51 in Edmonton. Univariate analysis revealed statistically significant higher age in Vancouver (p<0.001), higher BMI in St-Johns (p=0.004), lower VAS LE and VAS Back in Toronto (p=0.04 for both) as well as lower ODI (p=0.03). There was no significant differences between other variables. The multivariate analysis found no statistically significant difference across centers.

## Conclusions

Remarkable homogeneity in pre-operative patient characteristics exists between surgical centers across Canada despite varying surgical caseloads, procedures of choice and focus or lack thereof on academic pursuits. Canadian universal healthcare system might partially explain this intriguing finding. The consistency of patient populations across centers bodes well for the strength and reproducibility of findings from the

## Learning Objectives

By the conclusion of this session, participants should be able to: 1) Understand the differences or lack of between surgical centers across Canada

2) Observe the range of pre-operative patient characteristics between surgical centers across Canada

## References