



The Canadian Spine Society is a collaborative organization of spine surgeons and health care professionals from across Canada with a primary interest in advancing excellence in spine patient care, research & education.



Canadian Spine Outcomes and Research Network (CSORN):

2014 Annual Report



The Canadian Spine Research & Education Fund (CSREF) is a charitable organization whose mandate is to promote spine research and education in Canada.

Canadian Spine Outcomes and Research Network (CSORN): 2014 Annual Report

The Steering Committee for the Canadian Spine Outcomes and Research Network (CSORN) has compiled the first Annual Report of the CSS Registry study.

The report is not designed to provide complex statistical analyses, but rather to give an overview and summary of some key data collected from January to August 2014. This brief and simple report includes various baseline and outcomes data obtained from enrolled patients and participating CSORN surgeons.

The strength of the Network is the vast contributions from all participating sites; with over one thousand potential data points collected per patient, this report only scratches the surface of the miriade of data mining that is possible from principal and co-investigators.

The report will likely stimulate possible hypotheses and research questions from our readership. Please contact us with any research ideas. We currently have several prospective studies and retrospective reviews that are starting to explore the huge potential of the Network.

- Greg McIntosh

Director of Research Operations
Canadian Spine Society

CSORN Steering Committee:

Charles Fisher, MD
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Date: October 10, 2014

1. Introduction

The Canadian Spine Society (CSS) is a collaborative organization of spine surgeons and health care professionals from across Canada with a primary interest in advancing excellence in spine patient care, research & education. (www.spinecanada.ca)

2. Background and Study Objectives

The objective of the Canadian Spine Outcomes and Research Network (CSORN) study is to track specific outcome measures of different surgical techniques used to treat spinal conditions in the creation of national health data registry. This multicentre Canadian study prospectively enrolls patients with spinal pathology primarily requiring surgical treatment. Registry data collection is comprised primarily of participant and physician reported outcomes.

3. Data Collection Process

Participating study sites across Canada contribute to the CSORN dataset that includes primary data collection, abstracted medical chart information and follow up quality-of-life outcomes. The Network enrolled its' first official patient in October 2012. Overall to date, the Network contains 2260 patients; this includes the contribution of legacy data (1066 patients) collected over a four year period from the Saint John, New Brunswick, orthopaedic site.

The data is held on the Rick Hansen Institute's Global Research Platform (GRP). The Rick Hansen Institute's GRP is a web based application that has been designed specifically for the collection of spinal cord injury and ambulatory spine pain clinical and outcome data in a user friendly format.

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4. CSORN site locations

There are currently 12 sites that contribute to CSORN with 4 more sites expected to join by mid 2015 (Calgary, St Michael's Toronto, Victoria, St John's). The map below displays the site locations.



Participation by site is as follows:

	Frequency	Percent	Valid Percent	Cumulative Percent
HOPITAL DE L'ENFANT JESUS	10	2.3	2.3	2.3
HOPITAL ST-FRANCIS D'ASSISE	13	2.9	2.9	5.2
HOPITAL GENERAL DE MONTREAL	11	2.5	2.5	7.7
HOPITAL GENERAL JUIF SIR MORTIMER B.	1	.2	.2	7.9
QEII HSC HALIFAX - ORTHO	33	7.5	7.5	15.4
SAINT JOHN REGIONAL HOSPITAL - NEURO	22	5.0	5.0	20.4
SAINT JOHN REGIONAL HOSPITAL - ORTHO	77	17.4	17.4	37.8
TORONTO WESTERN HOSPITAL	22	5.0	5.0	42.8
UNIVERSITY OF ALBERTA	76	17.2	17.2	60.0
VANCOUVER GENERAL HOSPITAL	34	7.7	7.7	67.6
VICTORIA HOSPITAL, LONDON, LHSC	56	12.7	12.7	80.3
WINNIPEG HEALTH SCIENCES CENTRE	87	19.7	19.7	100.0
Total	442	100.0	100.0	

5. Annual Report of Pre and post operative data for 2014

This report summarizes a sampling of key data collected over the January to August 2014 timeframe. There have been 442 patients enrolled in 2014 so far; males comprised 54.1% of the cohort. There are 86.2% that are thoracolumbar patients, with the remaining 13.8% cervical. So far this year, 57.2% have proceeded to spine surgery; of those who have had spine surgery, 21.5% have reported having previous spine surgery before inclusion in the Network.

Frequency distributions for Pain Duration, Type of Chief Complaint and Principal Pathology were calculated using all patients (n=442).

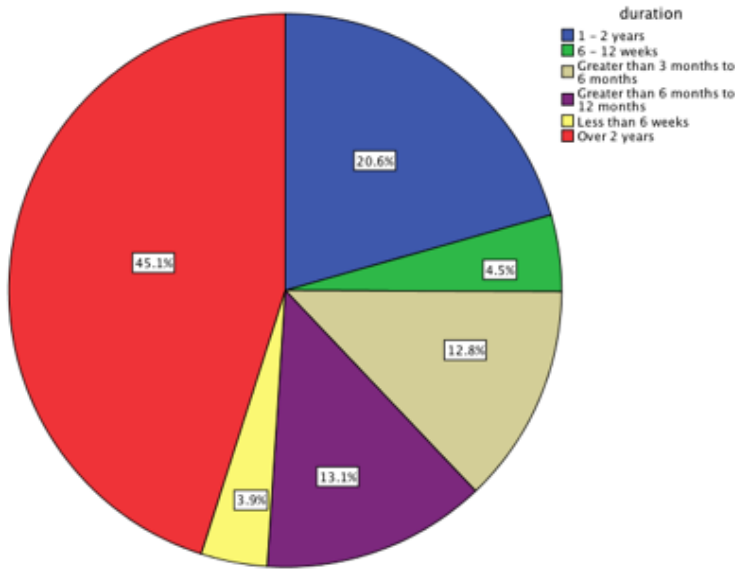
Pain Rating (VAS back, leg, neck, arm), Health State, Oswestry (ODI) and Neck Disability indexes (NDI) were calculated for those who have gone to surgery and completed the initial 3 month follow up (n=140).

The Frequency distribution for Type of Surgery was calculated using only those who have gone to surgery (n=253).

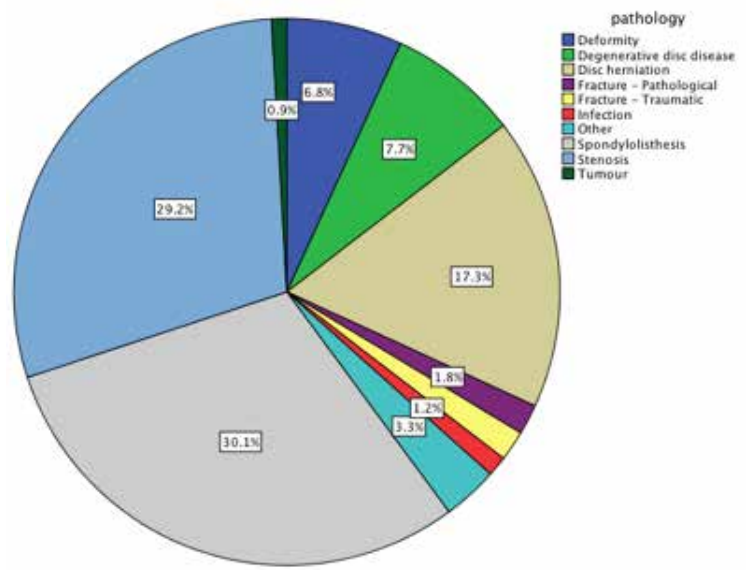
Frequency distributions for the Satisfaction measures were calculated for those who have gone to surgery and completed the initial 3 month follow up (n=140).

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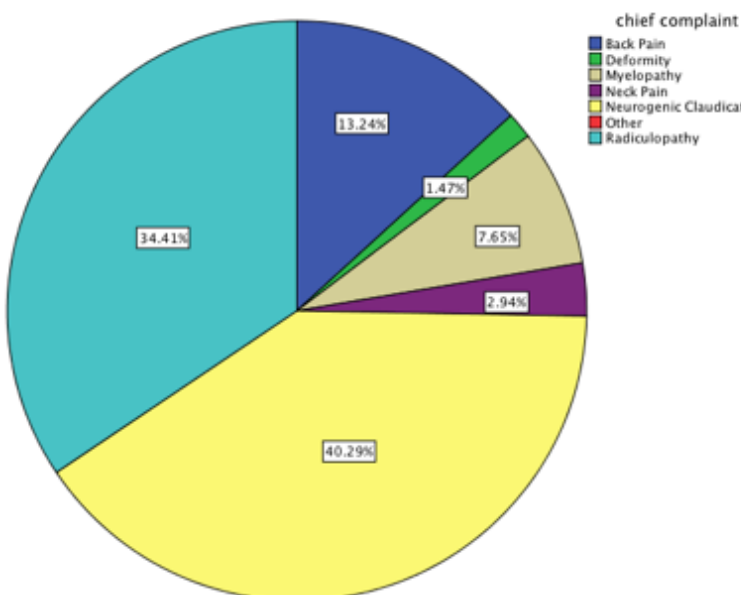
Pain Duration. Those in pain for over 2 years represents the highest percentage of patients:



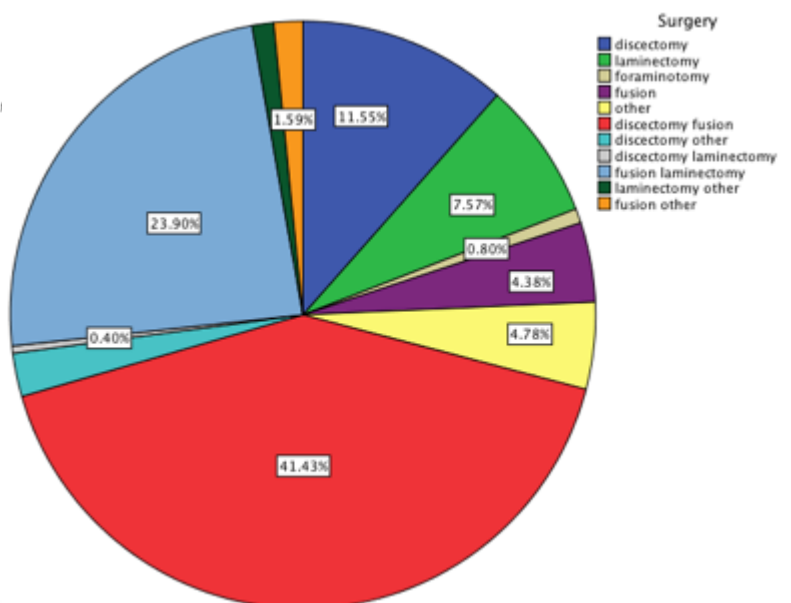
Principal Pathology. The most frequent principal pathologies were stenosis and spondylolisthesis:



Type of Chief Complaint. The most frequent chief complaint is neurogenic claudication:



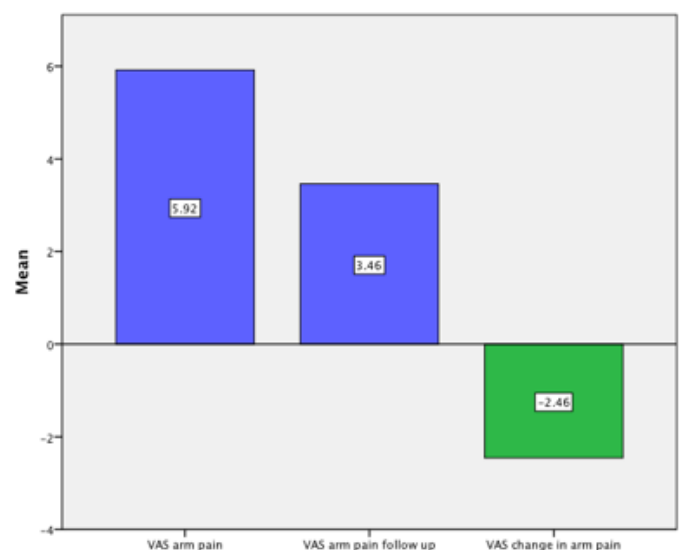
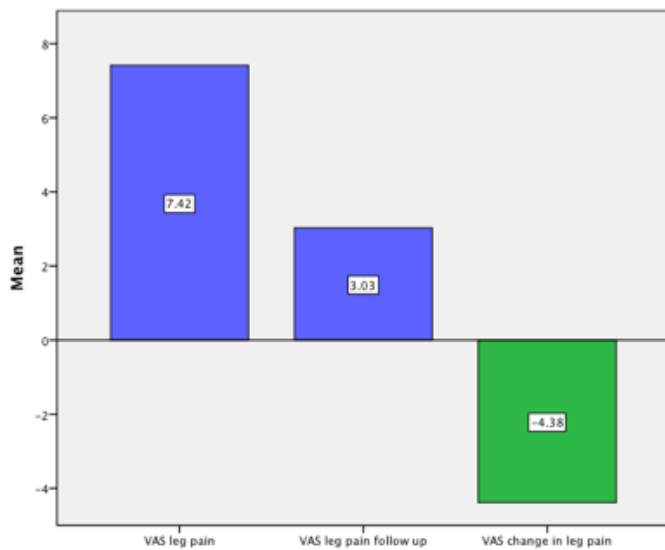
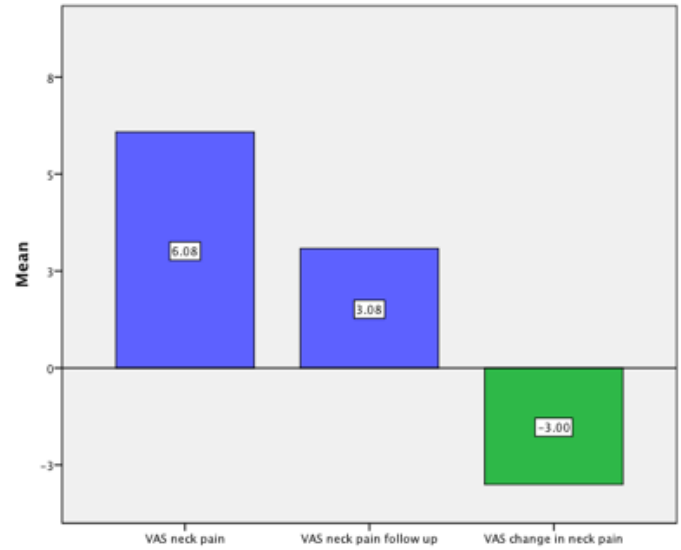
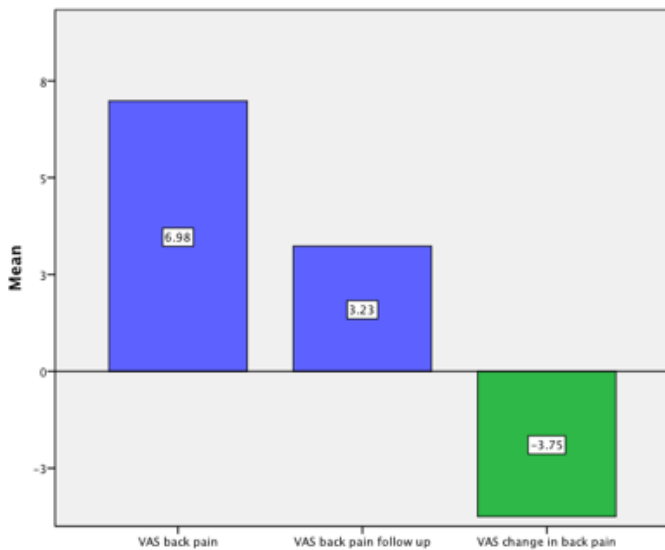
Type of Surgery. Fusion (alone or in combination with other operations) represents the highest percentage of spine surgery procedures:



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Pain Rating. Mean baseline back pain rating was 6.98; at first follow up (~3 months post surgery) back pain rating decreased by an average of 3.75 points. Mean baseline leg pain rating was 7.42; leg pain rating at first follow up decreased by an average of 4.38 points.

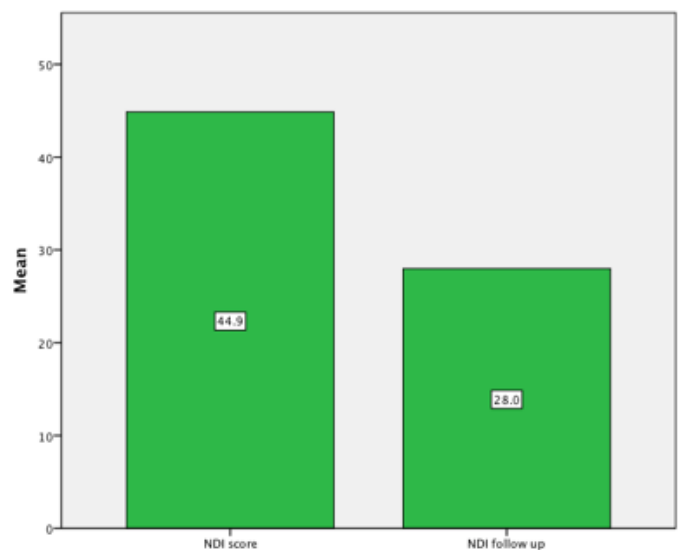
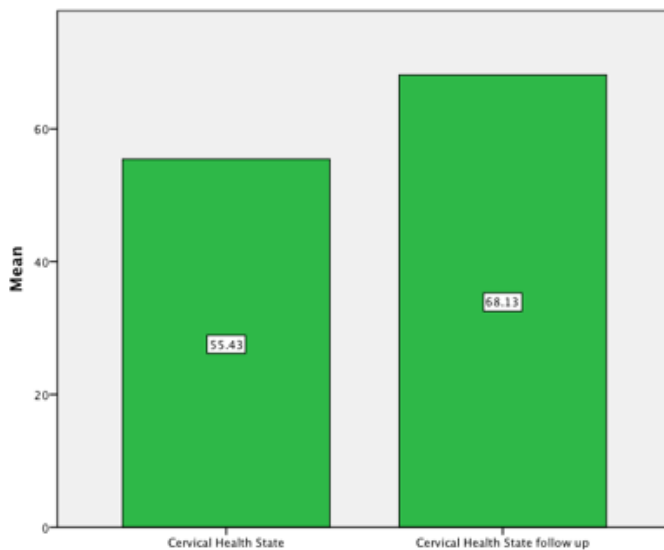
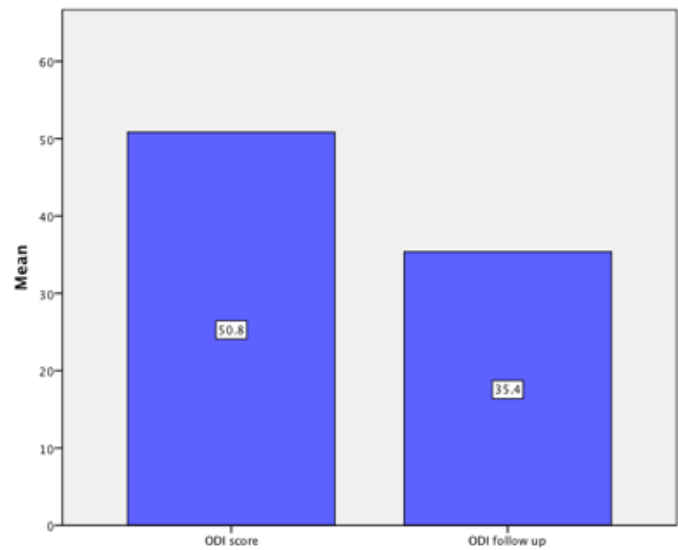
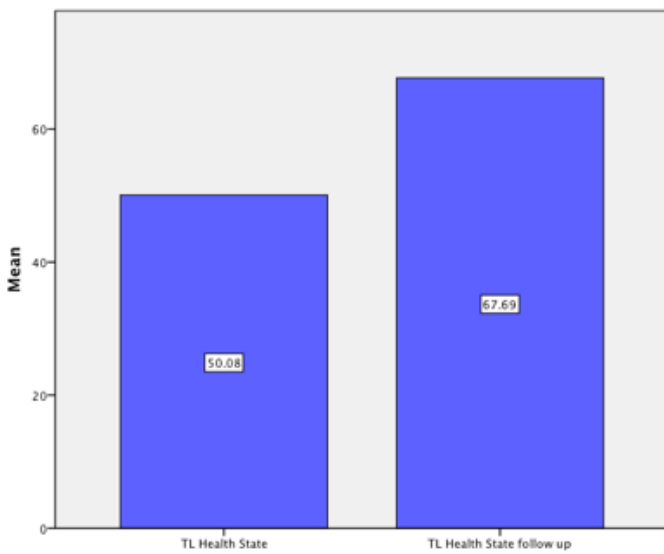
Mean baseline neck pain rating was 6.08; at first follow up (~3 months post surgery) neck pain rating decreased by an average of 3.0 points. Mean baseline arm pain rating was 5.92; arm pain rating at first follow up decreased by an average of 2.46 points.



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Health State. Mean baseline health state (thoracolumbar patients) was 50.1; mean at first follow up (~3 months post surgery) increased by approximately 17 points. Mean baseline health state (cervical patients) was 55.43; mean at first follow up increased by approximately 13 points.

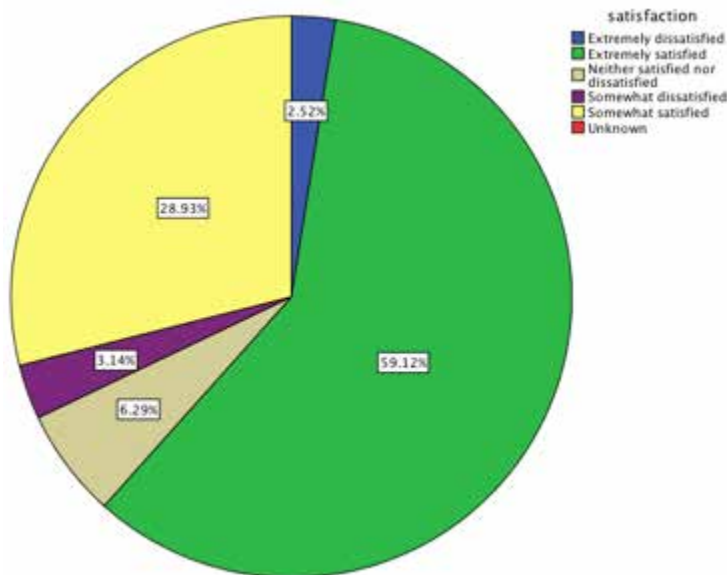
Oswestry and Neck Disability Index. Mean baseline Oswestry (ODI) score was 50.8 (range 10-96); the ODI score at first follow up (~3 months post surgery) decreased by approximately 15 points. Mean baseline Neck Disability (NDI) score was 44.9 (range 20-82); the NDI score at first follow up decreased by approximately 15 points.



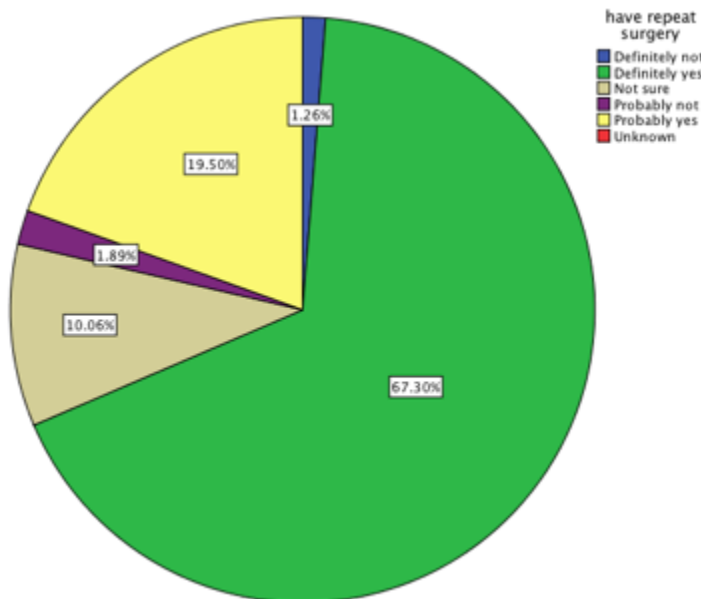
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Satisfaction Measures.

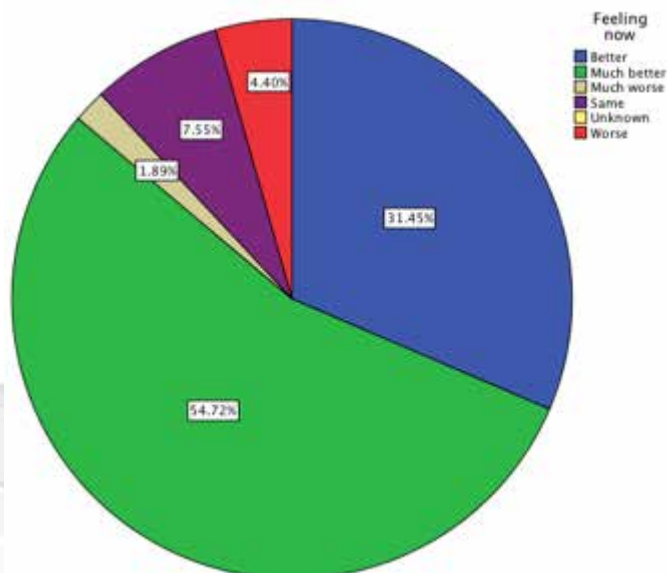
Satisfaction. There were 88.1% who were either extremely or somewhat satisfied with the results of surgery:



Would you have the same surgery again? There were 86.8% who indicated definitely or probably 'yes' to having the same surgery again:



How do you feel now? There were 86.2% who described themselves as feeling either better or much better:



6. Conclusion

The Canadian Spine Outcomes and Research Network (CSORN) now contains more than 2200 patients from 12 contributing sites. The Network has only been in existence for approximately one and half years. There have been 442 patients enrolled so far in 2014; 57.2% have proceeded to spine surgery. From baseline to first follow up, pain ratings have generally decreased, perceived function and health state have improved and satisfaction is high.



Online Donations

(credit card only):

Please visit the CSS website at

www.spinecanada.ca

and click on the

CanadaHelps.org

graphic.



Mail Your Donation

(by cheque only):

Canadian Spine Research & Education

Fund Office

PO Box #1065 Markdale ON N0C 1H0

The Canadian Spine Research & Education Fund has accepted the essential role of funding Canadian Spine Outcomes and Research Network (CSORN). To honour this commitment we require help from those most intimately involved with the provision of spinal treatment. Please plan to make a personal annual donation and consider canvassing your patients and colleagues to join your charitable efforts. Promotional materials (patient solicitation letters, brochures, etc) are available through the CSREF office; contact us today.

CSREF EXECUTIVE BOARD 2014/5:

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