



# A Bibliometric Analysis of Patient Reported Outcome Instruments Used for Spinal Trauma Over the Past Decade

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## Introduction

Patient centered health measures have become the gold standard to assess efficacy of surgical spine procedures and are an essential component of cost-effectiveness research. Currently, however, there is an expansive range of patient centered outcome instruments without an established consensus as to which should be used for a particular diagnosis or procedure. This study aims to assess incidence, trends and use of patient centered health measures over the past decade to better define various instruments used in traumatic spine research.

## Methods

A search was conducted on PubMed from 2004-2013 of five orthopaedic journals (The Journal of Bone and Joint Surgery, The Bone and Joint Journal, The Spine Journal, The European Spine Journal and Spine). All journal abstracts were inspected for traumatic spine surgery and inclusion of patient centered outcome instruments. Articles were then analyzed for diagnosis, procedure and level of evidence. Prevalence of outcome instruments and level of evidence were reported as percentages of total studies included.

## Results

From 19,736 articles published, 1,090 articles reported patient outcomes. A total of 102 articles addressed traumatic spine surgery with most coming from The European Spine Journal (49.0%). Overall, there were 28 distinct outcome measures used. The top five most used outcome measures in descending order were: Visual Analog Scale (61.8%), Short Form-36 (25.5%), Oswestry Disability Index (25.5%), Neck Disability Index (8.8%) and American Spine Injury Association Impairment Scale (8.8%). Most articles were of Level IV evidence (40.2%), while only 7.8% of all articles were of Level I evidence.

## Conclusions

The breadth of patient centered outcome measures in traumatic spine surgery research is extensive. A consensus may be needed to consistently use a fewer number of most relevant instruments for more effective communication and comparison without overburdening patients.

## Learning Objectives

- 1) Importance of patient reported outcome instruments
- 2) The presence of vast amounts of different PRO measure instruments in spinal trauma surgery
- 3) The need to consolidate and determine which PRO instruments are the most valuable and unify those to be used in studies of spinal trauma