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**The North American Spine Society Satisfaction Questionnaire**

<b>Availability:</b>	Please visit this website for more information about the instrument: <a href="#">North American Spine Society Satisfaction Questionnaire</a> .
<b>Classification:</b>	<b>Supplemental:</b> Chiari I Malformation (CM)
<b>Short Description of Instrument:</b>	<p>The North American Spine Society (NASS) Evidence-Based Clinical Guideline on the Diagnosis and Treatment of Cervical Radiculopathy from Degenerative Disorders provides evidence-based recommendations on key clinical questions concerning the diagnosis and treatment of cervical radiculopathy from degenerative disorders. The guideline addresses these questions based on the highest quality clinical literature available on this subject as of May 2009. The guideline's recommendations assist the practitioner in delivering optimum efficacious treatment of and functional recovery from this common disorder.</p> <p><b>Purpose:</b> Provides an evidence-based educational tool to assist spine care providers in improving quality and efficiency of care delivered to patients with cervical radiculopathy from degenerative disorders.</p> <p><b>Study Design:</b> Systematic review and evidence-based clinical guideline. (Bono et al., 2011).</p>
<b>Comments / Special Instructions:</b>	<p>This report is from the Cervical Radiculopathy from Degenerative Disorders Work Group of the NASS' Evidence-Based Clinical Guideline Development Committee. The work group consisted of multidisciplinary spine care specialists trained in the principles of evidence-based analysis. Each member of the group formatted a series of clinical questions to be addressed by the group. The final questions agreed on by the group are the subjects of this report. A literature search addressing each question using a specific search protocol was performed on English language references found in MEDLINE, EMBASE (Drugs and Pharmacology), and four additional evidence-based databases. The relevant literature was then independently rated by a minimum of three reviewers using the NASS-adopted standardized levels of evidence. An evidentiary table was created for each of the questions. Final recommendations to answer each clinical question were arrived at via work group discussion, and grades were assigned to the recommendations using standardized grades of recommendation. In the absence of Levels I to IV evidence, work group consensus statements have been developed using a modified nominal group technique, and these statements are clearly identified as such in the guideline.</p> <p><b>Results:</b> Eighteen clinical questions were formulated, addressing issues of natural history, diagnosis, and treatment of cervical radiculopathy from degenerative disorders. The answers are summarized in this article. The respective recommendations were graded by the strength of the supporting literature, which was stratified by levels of evidence.</p> <p>A clinical guideline for cervical radiculopathy from degenerative disorders has been created using the techniques of evidence-based medicine and best available evidence to aid both practitioners and patients involved with the care of this condition (Bono, et al., 2011).</p>

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<p><b>Scoring:</b></p>	<p>Grade A: Good evidence (Level I Studies with consistent finding) for or against recommending intervention</p> <p>Grade B: Fair evidence (Level II or III Studies with consistent findings) for or against recommending intervention</p> <p>Grade C: Poor quality evidence (Level IV or V Studies) for or against recommending intervention</p> <p>Grade I: Insufficient or conflicting evidence not allowing a recommendation for or against intervention.</p> <p>The NASS Satisfaction is determined from the choice provided provided in the questionnaire including: 1 - the treatment met my expectations; 2 - I did not improve as much as I had hoped, but I would undergo the same treatment for the same outcome; 3 - I did not improve as much as I had hoped, and I would not undergo the same treatment for the same outcome; 4 - I am the same as or worse than before treatment.</p> <p>In the minimally clinically significant important difference (MCID) analysis, patients answering with choice 1 were classified as responders, whereas the those answering choices 2 through 4 were classified as nonresponders (Parker et al., 2012).</p>
<p><b>Rationale / Justification:</b></p>	<p>This is a well-researched guideline system with wide applicability for spine disorders.</p> <p>A recognized shortcoming of symptom questionnaires is that their numerical scores lack a direct, clinically significant meaning. The Health Transition Index (HTI) along with the along with the NASS Satisfaction Questionnaire used to determine a patient’s satisfaction with surgery can be used to define a minimally clinically significant important difference (MCID).</p> <p><b>MCID Threshold Calculation</b></p> <p>The MCID threshold is defined as the lower limit of the 95% confidence interval (CI) for the median change score of each other outcome metrics for the patients classified as responders based on each anchor (NASS satisfaction and HTI). Additionally, the probability that scores will correctly discriminate between responders and nonresponders (accuracy) can be depicted by the area under the receiver-operating characteristic (ROC) curve. This value ranges from 0.5 (discrimination is no better than pure chance) to 1.0 (all patients are able to be correctly discriminated). An area of 0.7 to 0.8 is considered adequate; an area of 0.8 to 0.9 is considered excellent (Coplay et al., 2007).</p>

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<b>References:</b>	<p>Aghayev E, Elfering A, Schizas C, Mannion AF; SWISSSpine Registry Group. Factor analysis of the North American Spine Society outcome assessment instrument: a study based on a spine registry of patients treated with lumbar and cervical disc arthroplasty. <i>Spine J.</i> 2014;14(6):916–924.</p> <p>Angst F, Verra ML, Lehmann S, Gysi F, Benz T, Aeschlimann A. Responsiveness of the cervical Northern American Spine Society questionnaire (NASS) and the Short Form 36 (SF-36) in chronic whiplash. <i>Clin Rehab.</i> 2012;26(2):142–151.</p> <p>Bono CM, Ghiselli G, Gilbert TJ, Kreiner DS, Reitman C, Summers JT, Baisden JL, Easa J, Fernand R, Lamer T, Matz PG, Mazanec DJ, Resnick DK, Shaffer WO, Sharma AK, Timmons RB, Toton JF. An evidence-based clinical guideline for the diagnosis and treatment of cervical radiculopathy from degenerative disorders. <i>Spine J.</i> 2011;11(1):64–72.</p> <p>Copay AG, Subach BR, Glassman SD, Polly DW Jr, Schuler TC. Understanding the minimum clinically important difference: a review of concepts and methods. <i>Spine J.</i> 2007;7(5):541–546.</p> <p>Crawford MJ, Esses SI. Indications for pedicle fixation. Results of NASS/SRS faculty questionnaire. <i>North American Spine Society and Scoliosis Research Society. Spine.</i> 1994;19(22):2584–2589.</p> <p>Daltroy LH, Cats-Baril WL, Katz JN, Fossel AH, Liang MH. The North American spine society lumbar spine outcome assessment Instrument: reliability and validity tests. <i>Spine.</i> 1996;21(6):741–749.</p> <p>Parker SL, Adogwa O, Mendenhall SK, et al. Determination of minimum clinically important difference (MCID) in pain, disability, and quality of life after revision fusion for symptomatic pseudoarthrosis. <i>Spine J.</i> 2012;12(12):1122–1128.</p> <p>Stoll T, Huber E, Bachmann S, Baumeler HR, Mariacher S, Rutz M, Schneider W, Spring H, Aeschlimann A, Stucki G, Steiner W. Validity and sensitivity to change of the NASS questionnaire for patients with cervical spine disorders. <i>Spine.</i> 2004;29(24):2851–2855.</p>
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