

# P&S Network, Inc.

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## Notice of Independent Review Decision

**DATE OF REVIEW:** 01-20-09

**IRO CASE #:**

**A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:**

This case was reviewed by a Orthopaedic Surgery, Licensed in Texas and Board Certified. The reviewer has signed a certification statement stating that no known conflicts of interest exist between the reviewer and the injured employee, the injured employee's employer, the injured employee's insurance carrier, the utilization review agent (URA), any of the treating doctors or other health care providers who provided care to the injured employee, or the URA or insurance carrier health care providers who reviewed the case for a decision regarding medical necessity before referral to the IRO. In addition, the reviewer has certified that the review was performed without bias for or against any party to the dispute.

**DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE**

Posterior lumbar fusion at L4-5, L5-S1 with pedicle screws and rods, iliac crest bone graft, transforaminal lumbar interbody fusion L4-5, L5-S1 with two day inpatient length of stay

**REVIEW OUTCOME**

Upon independent review the reviewer finds that the previous adverse determination/adverse determinations should be:

**Upheld (Agree)**

**INFORMATION PROVIDED TO THE IRO FOR REVIEW**

- o Submitted medical records were reviewed in their entirety.
- o Treatment guidelines were provided to the IRO.
- o January 14, 2008 Lumbar radiographs read by Dr.
- o January 23, 2008 Lumbar MRI as interpreted by Dr.
- o January 25, 2008 Lumbar MRI read by Dr.
- o February 2, 2008 MRI lumbar spine read by Dr
- o February 2, 2008 CT lumbar spine read by Dr.
- o February 3, 2008 Lumbar and chest x-rays read by Dr.
- o May 5, 2008 Thoracic MRI read by Dr.
- o May 22, 2008 Initial Evaluation report from Dr.
- o May 29, 2008 Clinical evaluation report from Dr.
- o June 4, 2008 Thoracic and lumbar MRIs read by Dr.
- o June 4, 2008 Thoracic and Lumbar x-rays read by Dr.
- o June 10, 2008 Electrodiagnostic studies and report from Dr.
- o June 14, 2008 Progress report from Dr.
- o June 17, 2008 Exam notes and progress report from Dr.
- o June 22, 2008 Functional Restoration report from Dr.
- o June 30, 2008 Functional restoration evaluation from Dr.
- o July 16, 2008 Consultation report from Dr.
- o July 23, 2008 Lateral x-ray lumbar read by Dr.
- o July 23, 2008 Operative Report of Dr. regarding redo laminectomies
- o July 26, 2008 Progress report from Dr.
- o August 9, 2008 Progress report from Dr.
- o August 29, 2008 Lumbar MRI read by Dr.
- o September 2, 2008 Progress report from Dr.
- o October 21, 2008 Progress report from Dr.
- o November 3, 2008 Bone scan read by Dr.
- o November 5, 2008 CT lumbar spine read by Dr.
- o November 8, 2008 Progress report from Dr.

- o November 18, 2008 Utilization review Determination non-certify letter lumbar fusion from
- o December 2, 2008 Reconsideration/Appeal of Adverse Determination letter from
- o December 8, 2008 Follow-up Functional Restoration visit from Dr.
- o January 2, 2009 Request for IRO

**PATIENT CLINICAL HISTORY [SUMMARY]:**

According to the medical records submitted for review, the patient is a xx-year-old employee who sustained an industrial injury to the low back on xx/xx/xx when the small plane he was riding in developed problems and was crash-landed on a road. He did not lose consciousness. He got out of the plane and assisted the pilot. He assisted the pilot to push the plane off the road. With the excitement of the time, he felt little pain across his back. Four hours later he was flown back to his home base in another small aircraft sent to pick him up.

Three days after the incident the patient developed back pain and sought medical attention on January 14, 2008. X-rays of that date show mild disc space narrowing at L5-S1 as well as mild facet hypertrophy at that level. No fracture or dislocation was seen. An injection and medication of hydrocodone were provided and he was referred to his family physician. A second physician was consulted and medications were prescribed and he was sent for an MRI. MRI of January 23, 2008 shows a bulging disc centrally and to the left at L5-S1 with compression of the S1 nerve root bilaterally but particularly on the left. At L3-4 and L4-5 early spinal stenosis and foraminal stenosis was noted with a bulging disc that slightly touches the nerve root.

The patient initiated physical therapy on January 18, 2008. Ten sessions were certified but the patient discontinued after 8 sessions on February 13, 2008 as he felt physical therapy was aggravating his pain.

The patient was admitted to a hospital for an 8-day stay beginning February 2, 2008 when his back locked up and he was seen in emergency. He reports treatment consisted of bed rest and medications. MRI of February 2, 2008 shows a small herniation on the left near the midline of L5-S1 and some eccentric disc bulging at L3-4 and L4-5 greater on the left. The patient also complained of chest pain. Chest films of February 3, 2008 showed a normal heart and lung exam. The patient apparently fell and a second CT scan was performed on February 4, 2008 and shows no evidence of fracture; minimal degenerative changes and a bulging disc at L5-S1.

A third physician was consulted and an initial evaluation provided on February 21, 2008. A repeat CT scan was recommended which was performed on February 27, 2008 and reportedly showed mild diffuse congenital narrowing of the spinal canal. No gross evidence for disc herniation, severe spinal stenosis, or foraminal narrowing. There are probable disc bulges at L4-5 and L5-S1 with mild left paramedian disc bulge versus protrusions at L5-S1. An epidural steroid injection was administered on March 25, 2008 which provided very little relief per the patient's report. It was determined that the patient was a surgical candidate and lumbar laminectomy was performed on April 16, 2008 at L4-5 and L5-S1. Post-op the patient had ongoing difficulties with his surgical wound and infection was considered but ultimately ruled out. He also reported continuing back pain. Apparently frustrated with his treatment, the patient transferred his care to chiropractic management on May 22, 2008.

The initial chiropractic evaluation was provided on May 22, 2008. The patient's wound had not yet closed and he reported persisting severe back pain with limit his activities. The patient's medications included Lyrica, Flexeril, Vicodin, Ibuprofen and Xanax. The patient was referred for medication management and wound evaluation and for orthopedic evaluation. On May 29, 2008 radiographs including flexion/extension views were recommended.

Thoracic and lumbar radiographs and MRIs were performed on June 4, 2008. Moderately advanced thoracic spondylosis was seen in the thoracic spine with an essentially normal spinal canal and neural foramina. Lumbar MRI showed questionable postoperative changes at L4-5 and L5-S1 including extensive edema. Electrodiagnostic studies were performed on June 10, 2008 and showed evidence of S1 radiculopathy bilaterally.

The patient initiated treatment with a new orthopedic provider on June 14, 2008. The patient is noted to be overweight. Straight leg raise is positive on the right. Profound weakness of the L5 and S1 myotomes is demonstrated on the right. Radiographs were taken including flexion/extension views which show "no abnormal translation or rotation. No spondylolysis or spondylolisthesis is seen." Recommendation was for a right-sided decompression. On June 17, 2008 the MRI films were reviewed and it appeared that the prior surgery was an attempt at a medial hemifacotomy on the left at L5-S1, "but the ligamentum flavum is intact and the canal does not appear to have been entered for the purpose of doing a decompression. The broad-based disc protrusion at the L5-S1 level is still present causing compression upon the thecal sac."

The patient was assessed to determine appropriateness for surgery on June 30, 2008. The patient is opined to have chronic pain and secondary symptoms of depression, anxiety and sleep problems. It was noted that the patient has an attorney for a third party lawsuit related to the airplane crash. He reports mood changes and emotional symptoms and is opined to have post-traumatic stress disorder. The patient was provided in-office surgical clearance via an examination of June 16, 2008 and determined to be medically stable to undergo lumbar surgery.

The operative report of July 23, 2008 indicates bilateral redo procedures were performed at L4-5 and L5-S1 of laminectomies and

decompression of the L5 and S1 nerve roots. A large amount of scar tissue was excised. When reevaluated on June 26, 2008 the patient reported resolution of the leg pain but continuing pain at the level of the wound site and ongoing drainage. No infection was present but there was a draining hematoma. On August 9, 2008 a prescription for physical therapy was provided and the chiropractic provider was recommended to initiate therapy at the earliest time. At the end of August the patient presented to an emergency room for increasing low back pain. He was sent for updated MRI as he was reporting chills and flank pain. Post-operative fluid collection was visualized in the operative bed compatible with seroma or hematoma. His provider reevaluated him on September 2, 2008 and noted ongoing back pain without leg symptoms. He had not yet initiated physical therapy.

The medical report of October 21, 2008 indicates the patient has right-sided lower extremity pain going primarily along the posterior thigh. His back pain seems to be his major concern and has been continuing since his decompression procedure of June 23, 2008. He has difficulty with heel and toe walk and straight leg raise secondary to pain. "He does not show true evidence of sciatica." A true neurologic deficit is not found. Radiographs were done including flexion/extension views which are not useful as he was not able to bend satisfactorily. There is a possibility of facet fracture and a bone scan is desired to rule out a facet fracture.

CT and bone scans were conducted on November 5, 2008. An active infection process was ruled out. The CT scan was interpreted by the radiologist to show post-operative changes and diffuse annular bulging and mild bilateral facet arthropathy worse on the right at L4-5. At L5-S1 there was a right hemilaminectomy defect as well as diffuse annular bulging and mild bilateral facet arthropathy. Per the patient's orthopedic provider, the films also show "evidence of medial displacement of medial facet with complete separation of the facet joints. Therefore the study is consistent with facet fracture at L4-5 with displacement of the medial broken facet."

Request for posterior lumbar fusion at L4-5 and L5-S1 with pedicle screws and autograft was not certified in review on November 18, 2008 with rationale that the case is extremely complex and requires peer-to-peer discussion which was attempted but not realized. Additionally, the CT report of November 5, 2008 does not show evidence of a facet fracture as posited by the provider on November 8, 2008. Discussion of this issue would be of benefit prior to further consideration of the request.

Request for reconsideration was also not certified in review on December 2, 2008 following several unsuccessful attempts for a peer-to-peer discussion with rationale that the flexion/extension study of October 21, 2008 was inadequate but also did not show spondylolysis or spondylolisthesis. While the clinician does suspect a medial facet fracture on the left, there is no demonstrated instability in the spine which obviates the need for fusion. Prior studies failed to identify this facet fracture.

#### **ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION.**

The Official Disability Guidelines criteria for lumbar fusion include, neural arch defect - spondylolytic spondylolisthesis, congenital neural arch hypoplasia. Segmental Instability (objectively demonstrable) - Excessive motion, as in degenerative spondylolisthesis, surgically induced segmental instability and mechanical intervertebral collapse of the motion segment and advanced degenerative changes after surgical disectomy. Fusion procedures are not recommended unless there is objectively demonstrated severe structural instability and/or acute or progressive neurologic dysfunction, but recommended as an option for spinal fracture, dislocation, spondylolisthesis or frank neurogenic compromise, subject to the selection criteria outlined. It is also noted that, fusion can be considered if, revision surgery for failed previous operation(s) if significant functional gains are anticipated, although revision surgery for purposes of pain relief must be approached with extreme caution due to the less than 50% success rate reported in medical literature. After failure of two discectomies on the same disc, fusion may be an option at the time of the third discectomy, which should also meet the ODG criteria.

The medical records indicate the patient's surgeries provided laminectomies but not discectomies. Following the initial laminectomies on April 16, 2008 dynamic radiographs were taken on June 14, 2008 and showed, "no abnormal translation or rotation and no spondylolysis or spondylolisthesis." Additionally, per the operative report of July 23, 2008, the overhanging superior facet of L5 and overhanging superior facet of S1 were resected laterally as far as the medial border of the pedicle to open up the lateral recesses on each side. A tremendous amount of scar tissue was seen. Following two interventions, and anticipated post-op scar tissue formation, a current accurate reading of the films regarding the facets would be very difficult. There may or may not be a facet fracture at L4-5. In any case, the required criteria per ODG for a fusion intervention have not been met. Additionally, the examination report of October 21, 2008 notes, "he does not show true evidence of sciatica. A true neurologic deficit is not found." It is noted that numerous attempts for a peer-to-peer discussion were made at the time of the two prior reviews but unfortunately were not realized. Lacking demonstrated instability in the spine, severe structural instability, or progressive neurologic dysfunction, a positive response cannot be provided to the requested fusion. Therefore, my determination is to agree with the previous non-certification of the request for posterior lumbar fusion at L4-5, L5-S1 with pedicle screws and rods, iliac crest bone graft, transforaminal lumbar interbody fusion L4-5, L5-S1 with two day inpatient length of stay.

The IRO's decision is consistent with the following guidelines:

**A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:**

- ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE
- AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES
- DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES
- EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN
- INTERQUAL CRITERIA
- MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS
- MERCY CENTER CONSENSUS CONFERENCE GUIDELINES
- MILLIMAN CARE GUIDELINES
- ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES
- PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR
- TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS
- TEXAS TACADA GUIDELINES
- TMF SCREENING CRITERIA MANUAL
- PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)
- OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME

The Official Disability Guidelines - Low Back, Lumbar and Thoracic - December 31, 2008:

Not recommended for patients who have less than six months of failed recommended conservative care unless there is objectively demonstrated severe structural instability and/or acute or progressive neurologic dysfunction, but recommended as an option for spinal fracture, dislocation, spondylolisthesis or frank neurogenic compromise, subject to the selection criteria outlined in the section below entitled, "Patient Selection Criteria for Lumbar Spinal Fusion," after 6 months of conservative care. For workers' comp populations, see also the heading, "Lumbar fusion in workers' comp patients." After screening for psychosocial variables, outcomes are improved and fusion may be recommended for degenerative disc disease with spinal segment collapse with or without neurologic compromise after 6 months of compliance with recommended conservative therapy. [For spinal instability criteria, see AMA Guides (Andersson, 2000)] For complete references, see separate document with all studies focusing on Fusion (spinal). There is limited scientific evidence about the long-term effectiveness of fusion for degenerative disc disease compared with natural history, placebo, or conservative treatment. Studies conducted in order to compare different surgical techniques have shown success for fusion in carefully selected patients. (Gibson-Cochrane, 2000) (Savolainen, 1998) (W etzel, 2001) (Molinari, 2001) (Bigos, 1999) (Washington, 1995) (DeBarard-Spine, 2001) (Fritzell-Spine, 2001) (Fritzell-Spine, 2002) (Deyo-NEJM, 2004) (Gibson-Cochrane/Spine, 2005) (Soegaard, 2005) (Glassman, 2006) (Atlas, 2006) According to the recently released AANS/NASS Guidelines, lumbar fusion is recommended as a treatment for carefully selected patients with disabling low back pain due to one- or two-level degenerative disc disease after failure of an appropriate period of conservative care. This recommendation was based on one study that contained numerous flaws, including a lack of standardization of conservative care in the control group. At the time of the 2-year follow up it appeared that pain had significantly increased in the surgical group from year 1 to 2. Follow-up post study is still pending publication. In addition, there remains no direction regarding how to define the "carefully selected patient." (Resnick, 2005) (Fritzell, 2004) A recently published well respected international guideline, the

"European Guidelines," concluded that fusion surgery for nonspecific chronic LBP cannot be recommended unless 2 years of all other recommended conservative treatments - including multidisciplinary approaches with combined programs of cognitive intervention and exercises - have failed, or such combined programs are not available, and only then in carefully selected patients with maximum 2-level degenerative disc disease. (Airaksinen, 2006) For chronic LBP, exercise and cognitive intervention may be equivalent to lumbar fusion without the potentially high surgical complication rates. (Ivar Brox-Spine, 2003) (Keller-Spine, 2004) (Fairbank-BMJ, 2005) (Brox, 2006) In acute spinal cord injury (SCI), if the spine is unstable following injury, surgical fusion and bracing may be necessary. (Bagnall-Cochrane, 2004) (Siebenga, 2006) A study on improving quality through identifying inappropriate care found that use of guideline-based Utilization Review (UR) protocols resulted in a denial rate for lumbar fusion 59 times as high as denial rates using non-guideline based UR. (Wickizer, 2004) The profit motive and market medicine have had a significant impact on clinical practice and research in the field of spine surgery. (Weiner-Spine, 2004) (Shah-Spine, 2005) (Abelson, 2006) Data on geographic variations in medical procedure rates suggest that there is significant variability in spine fusion rates, which may be interpreted to suggest a poor professional consensus on the appropriate indications for performing spinal fusion. (Deyo-Spine, 2005) (Weinstein, 2006) Outcomes from complicated surgical fusion techniques (with internal fixation) may be no better than the traditional posterolateral fusion. (van Tulder, 2006) (Maghout-Juratli, 2006) Despite the new technologies, reoperation rates after lumbar fusion have become higher. (Martin, 2007) According to the recent Medicare Coverage Advisory Committee Technology Assessment, the evidence for lumbar spinal fusion does not conclusively demonstrate short-term or long-term benefits compared with nonsurgical treatment for elderly patients. (CMS, 2006) When lumbar fusion surgery is performed, either with lateral fusion alone or with interbody fusion, unlike cervical fusion, there is no absolute contraindication to patients returning even to contact sports after complete recovery from surgery. Like patients with a thoracic injury, those with a lumbar injury should be pain free, have no disabling neurological deficit, and exhibit evidence of bone fusion on x-ray films before returning. (Burnett, 2006) A recent randomized controlled trial comparing decompression with decompression and instrumented fusion in patients with foraminal stenosis and single-level degenerative disease found that patients universally improved with surgery, and this improvement was maintained at 5 years. However, no obvious additional benefit was noted by combining decompression with an instrumented fusion. (Hallett, 2007) Discography may be supported if the decision has already been made to do a spinal fusion, and a negative discogram could rule out the need for fusion on that disc (but a positive discogram in itself would not justify fusion). Discography may help distinguish asymptomatic discs among morphologically abnormal discs in patients without psychosocial issues. Precise prospective categorization of discographic diagnoses may predict outcomes from treatment, surgical or otherwise. (Derby, 2005) (Derby2, 2005) (Derby, 1999) New research shows that healthcare expenditures for back and neck problems have increased substantially over time, but with little improvement in healthcare outcomes such as functional disability and work limitations. Rates of imaging, injections, opiate use, and spinal surgery have increased substantially over the past decade, but it is unclear what impact, if any, this has had on health outcomes. (Martin, 2008) The efficacy of surgery for nonspecific back pain is uncertain. There may be some patients for whom surgery, fusion specifically, might be helpful, but it is important for doctors to discuss the fact that surgery doesn't tend to lead to huge improvements on average, about a 10- to 20-point improvement in function on a 100-point scale, and a significant proportion of patients still need to take pain medication and don't return to full function. (Chou, 2008) Lumbar spinal fusion surgeries use bone grafts, and are sometimes combined with metal devices, to produce a rigid connection between two or more adjacent vertebrae. The therapeutic objective of spinal fusion surgery for patients with low back problems is to prevent any movement in the intervertebral spaces between the fused vertebrae, thereby reducing pain and any neurological deficits. See also Adjacent segment disease/degeneration (fusion) & Iliac crest donor-site pain treatment.

Lumbar fusion in workers' comp patients: In cases of workers' compensation, patient outcomes related to fusion may have other confounding variables that may affect overall success of the procedure, which should be considered. Until further research is conducted there remains insufficient evidence to recommend fusion for chronic low back pain in the absence of stenosis and spondylolisthesis, and this treatment for this condition remains "under study." It appears that workers' compensation populations require particular scrutiny when being considered for fusion for chronic low back pain, as there is evidence of poorer outcomes in subgroups of patients who were receiving compensation or involved in litigation. (Fritzell-Spine, 2001) (Harris-JAMA, 2005) (Maghout-Juratli, 2006) (Atlas, 2006) Despite poorer outcomes in workers' compensation patients, utilization is much higher in this population than in group health. (Texas, 2001) (NCCI, 2006) Presurgical biopsychosocial variables predict patient outcomes from lumbar fusion, which may help improve patient selection. Workers' compensation status, smoking, depression, and litigation were the most consistent presurgical predictors of poorer patient outcomes. Other predictors of poor results were number of prior low back operations, low household income, and older age. (DeBerard-Spine, 2001) (DeBerard, 2003) (Deyo, 2005) (LaCaille, 2005) (Trief-Spine, 2006) Obesity and litigation in workers' compensation cases predict high costs associated with interbody cage lumbar fusion. (LaCaille, 2007) A recent study of 725 workers' comp patients in Ohio who had lumbar fusion found only 6% were able to go back to work a year later, 27% needed another operation, and over 90% were in enough pain that they were still taking narcotics at follow-up. (Nguyen, 2007)

Lumbar fusion for spondylolisthesis: Recommended as an option for spondylolisthesis. Patients with increased instability of the spine after surgical decompression at the level of degenerative spondylolisthesis are candidates for fusion. (Eckman, 2005) This study found only a 27% success from spinal fusion in patients with low back pain and a positive single-level low-pressure provocative discogram, versus a 72% success in patients having a well-accepted single-level lumbar pathology of unstable spondylolisthesis. (Carragee, 2006) Unilateral instrumentation used for the treatment of degenerative lumbar spondylolisthesis is as effective as bilateral instrumentation. (Fernandez-Fairen, 2007) Patients with degenerative spondylolisthesis and spinal stenosis who undergo standard decompressive laminectomy (with or without fusion) showed substantially greater improvement in pain and function during a period of 2 years than patients treated nonsurgically, according to the recent results from the Spine

Patient Outcomes Research Trial (SPORT). (Weinstein-spondylolisthesis, 2007) (Deyo-NEJM, 2007) For degenerative lumbar spondylolisthesis, spinal fusion may lead to a better clinical outcome than decompression alone. No conclusion about the clinical benefit of instrumenting a spinal fusion can be made, but there is moderate evidence that the use of instrumentation improves the chance of achieving solid fusion. (Martin, 2007) A recent systematic review of randomized trials comparing lumbar fusion surgery to nonsurgical treatment of chronic back pain associated with lumbar disc degeneration, concluded that surgery may be more efficacious than unstructured nonsurgical care but may not be more efficacious than structured cognitive-behavior therapy. Methodological limitations of the randomized trials prevented firm conclusions. (Mirza, 2007)

Lumbar fusion for Scheuermann's kyphosis: Recommended as an option for adult patients with severe deformities (e.g. more than 70 degrees for thoracic kyphosis), neurological symptoms exist, and pain cannot be adequately resolved non-operatively (e.g. physical therapy, back exercises). Good outcomes have been found in a relatively large series of patients undergoing either combined anterior-posterior or posterior only fusion for Scheuermann's kyphosis. (Lonner, 2007)

#### Patient Selection Criteria for Lumbar Spinal Fusion:

For chronic low back problems, fusion should not be considered within the first 6 months of symptoms, except for fracture, dislocation or progressive neurologic loss. Indications for spinal fusion may include: (1) Neural Arch Defect - Spondylolytic spondylolisthesis, congenital neural arch hypoplasia. (2) Segmental Instability (objectively demonstrable) - Excessive motion, as in degenerative spondylolisthesis, surgically induced segmental instability and mechanical intervertebral collapse of the motion segment and advanced degenerative changes after surgical disectomy. [For excessive motion criteria, see AMA Guides, 5th Edition, page 384 (relative angular motion greater than 20 degrees). (Andersson, 2000) (Luers, 2007)] (3) Primary Mechanical Back Pain (i.e., pain aggravated by physical activity)/Functional Spinal Unit Failure/Instability, including one or two level segmental failure with progressive degenerative changes, loss of height, disc loading capability. In cases of workers' compensation, patient outcomes related to fusion may have other confounding variables that may affect overall success of the procedure, which should be considered. There is a lack of support for fusion for mechanical low back pain for subjects with failure to participate effectively in active rehab pre-op, total disability over 6 months, active psych diagnosis, and narcotic dependence. [For spinal instability criteria, see AMA Guides, 5th Edition, page 379 (lumbar inter-segmental movement of more than 4.5 mm). (Andersson, 2000)] (4) Revision Surgery for failed previous operation(s) if significant functional gains are anticipated. Revision surgery for purposes of pain relief must be approached with extreme caution due to the less than 50% success rate reported in medical literature. (5) Infection, Tumor, or Deformity of the lumbosacral spine that cause intractable pain, neurological deficit and/or functional disability. (6) After failure of two discectomies on the same disc, fusion may be an option at the time of the third discectomy, which should also meet the ODG criteria. (See ODG Indications for Surgery -- Discectomy.)

Pre-Operative Surgical Indications Recommended: Pre-operative clinical surgical indications for spinal fusion should include all of the following: (1) All pain generators are identified and treated; & (2) All physical medicine and manual therapy interventions are completed; & (3) X-rays demonstrating spinal instability and/or myelogram, CT-myelogram, or discography (see discography criteria) & MRI demonstrating disc pathology; & (4) Spine pathology limited to two levels; & (5) Psychosocial screen with confounding issues addressed. (6) For any potential fusion surgery, it is recommended that the injured worker refrain from smoking for at least six weeks prior to surgery and during the period of fusion healing. (Colorado, 2001) (BlueCross BlueShield,