



CLAIMS EVAL

*Utilization Review and
Peer Review Services*

Notice of Independent Review Decision-WCN

DATE OF REVIEW: 4-1-09 (REVISED 4/6/09)

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

Anterior lumbar interbody fusion at L5-S1, posterior decompression with fusion

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

American Board of Orthopaedic Surgery-Board Certified

REVIEW OUTCOME

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

- Upheld (Agree)
- Overturned (Disagree)
- Partially Overturned (Agree in part/Disagree in part)

Provide a description of the review outcome that clearly states whether or not medical necessity exists for each of the health care services in dispute.

INFORMATION PROVIDED TO THE IRO FOR REVIEW

- 7-8-08 MRI of the lumbar spine.
- 7-15-08 MD., office visits from 7-15-08 through 9-2-08, for a total of 4 visits.
- 7-31-08 bilateral lumbar facet injections of L4 and L5 performed by DO.
- 8-21-08 an EMG/NCS performed by DO.
- MD., office visits on 10-10-08 and 1-23-09.
- 12-29-08 DO., office visit.
- 12-29-08 x-rays of the lumbar spine.
- 1-15-09 Lumbar myelogram with post myelographic CT scan.
- 2-6-09 Behavioral Health Evaluation.
- 2-9-09 MD. provided an appeal letter.
- 2-17-09 MD., Utilization Review.
- 2-24-09 Behavioral Health Evaluation Addendum.
- 2-26-09 MD., performed an over-read review.
- 3-2-09 MD., performed a re-review of the CT myelogram.
- 3-10-09 DO., Utilization Review.
- 3-16-09 MD., provided a letter.

PATIENT CLINICAL HISTORY [SUMMARY]:

On 7-8-08, an MRI of the lumbar spine shows transitional L5 segment associated with vestigial disc at L5-S1. There is a 0.5-1 mm bulge of the annulus present at L5-S1 not impinging upon neural structures. There is a 2-3 mm broad based disc protrusion

present at L4 transitional L5 level effacing the ventral epidural fat contacting the descending L5 nerve roots and narrowing the neural foramina moderately on both sides. This is indicative of edema. Facet arthrosis throughout the lumbar range and facet effusions bilaterally at L4-L5 indicating posttraumatic inflammatory and reparative change.

On 7-15-08 MD., the claimant reports worsening of low back pain. The MRI was reviewed. The claimant is continued with medications.

7-31-08 bilateral lumbar facet injections of L4 and L5 performed by DO.

Follow-up visits with MD., notes the claimant continues with pain to the lower back, numbness and tingling. On 8-5-08, the evaluator recommended bilateral EMG/NCS to the lower extremities. The claimant was continued with medications to include Hydrocodone and Zanaflex. The claimant is continued off work.

On 8-21-08, an EMG/NCS performed by DO., shows no evidence of a focal nerve entrapment, generalized peripheral neuropathy, plexopathy, radiculopathy or central spinal stenosis. The study was normal.

On 9-2-08, MD., notes the claimant reports continued low back pain with radiation to the right buttock and leg. The claimant had one injection without significant pain relief. The claimant is continued off work.

On 10-10-08, the claimant was evaluated by MD. The claimant reported he was lifting a heavy metal rack with acute onset of low back pain. The pain radiates to the left lower extremity associated with numbness and tingling of the lateral thigh and calf and intermittently into the dorsum of the left foot. The claimant is status post a short course of physical therapy and epidural steroid therapy times one with no significant improvement. He currently describes his pain as 9-10/10 with worsening of symptomatology. The claimant's medications include Lortab and Flexeril. On exam, lumbar range of motion was decreased in forward flexion due to pain. Motor exam was 4/5 in tibialis anterior and extensor hallucis longus on the left. Otherwise 5/5 throughout. DTR were +2 throughout and symmetrical. Planter responses were flexor bilaterally. Gait was antalgic. The claimant had difficulty in heel walking, less difficulty with toe walking and no difficulty with tandem walk. SLR was positive on the left at 50 degrees and negative on the right. The evaluator reviewed the MRI of the lumbar spine. The evaluator discussed with the claimant various options with the claimant. The evaluator recommended evaluation for epidural steroid therapy and CT myelogram of the lumbar spine.

On 12-29-08, the claimant was evaluated by DO., the claimant is seen for consultation. The claimant reports low back pain that radiates to the posterior left thigh and is associated alternately with pain, numbness, and tingling. On exam, the claimant has positive SLR bilaterally from a seated position. He also has pain over his lower lumbar facets bilaterally. His MRI shows bilateral facet arthrosis at L4-L5 and L5-S1, as well as

a 3 mm disc bulge at L4-L5 and a 1 mm disc bulge at L5-S1. The evaluator recommended proceeding with a CT myelogram.

On 12-29-08, x-rays of the lumbar spine shows very mild curvature on the AP view suggesting mild scoliosis or muscle spasm. No subluxation fracture or instability demonstrated.

1-15-09 Lumbar myelogram with post myelographic CT shows right paracentral disc extrusion L5-S1, that indents the ventral aspect of the thecal sac extending to the mid portion of the S1 vertebral body. There is mild bilateral foraminal stenosis that results. There is no central canal stenosis.

1-23-09 MD., the claimant is seen in follow up. He was last evaluated on 10-1-08, at which point it was recommended that he obtain a CT myelogram of the lumbar spine. The claimant now returns in follow up with no significant improvement in his previous symptomatology which includes low back pain that he describes as a "constant deep ache" with "intermittent shooting pains" mainly into the left, lower extremity with associated numbness and tingling of the lateral thigh and calf, and intermittently into the dorsum of the left foot. The claimant continues to describe his pain level as a 9/10 on a visual analog scale with worsening symptomatology after prolonged sitting, standing, coughing, sneezing or Valsalva maneuver. The claimant also denies bowel or bladder dysfunctions at this time. On exam, lumbar range of motion was decreased in forward flexion secondary to pain. Motor exam reveals 4/5 strength in the tibialis anterior and extensor hallucis longus muscle on the left, otherwise 5/5 throughout. Deep tendon reflexes were +2 throughout and symmetrical. Plantar responses were flexor bilaterally. Gait was antalgic. The claimant had difficulty with heel walking, less difficulty with toe walking and no difficulty with tandem walk. Straight Leg Raising was positive on the left at 50 degrees, negative on the right. Sensory exam reveals a hypoesthetic region in the L5 and S1 distributions on the left to pin prick and light touch, otherwise intact. The evaluator reported he reviewed a CT scan, which demonstrates a transitional L5 segment. The last fully segmented interspace will be designated L5-S1 for the purposes of this dictation, which shows spondylolisthesis of L5 on S1, retrolisthesis approximately 3-4 mm with associated disc herniation paracentrally and toward the left with bilateral foraminal stenosis left side greater than right. There was decreased disc height and "fish mouth appearance" of the L5-S1 interspace showing a 5 mm disc protrusion with significant bilateral foraminal stenosis and central canal stenosis as well. Impression: Lumbar mechanical/discogenic pain syndrome at L5-S1, lumbar spondylolisthesis of L5 on S1 grade I, lumbar segmental instability at L5-S1, lumbago. The evaluator reported that due to failure of conservative medical therapy including physical therapy and epidural steroid therapy, pain duration greater than six months, current neurologic status with evidence of spondylolisthesis of L5-S1 with retrolisthesis approximately 3-4 mm with associated disc herniation approximately 5 mm with bilateral foraminal stenosis right side greater than left with internal disc disruption as well and evidence of instability at L5-S1, the evaluator felt the claimant is a surgical candidate and would benefit from an anterior lumbar interbody fusion at L5-S1, posterior lumbar decompression with posterolateral fusion and pedicle screw instrumentation at L5-S1..

2-6-09 Behavioral Health Evaluation - the claimant was referred to assess psychological factors on the claimant's ability to tolerate lumbar surgery. The evaluator reported that the claimant appears psychologically stable enough to proceed with the recommended surgery. The results of this assessment suggest that he is experiencing mild symptoms of psychological distress at this time related to concerns over his significant pain level and functional deficits. The claimant welcomes any procedure that would help him regain much of his functionality. He reports that he has a general understanding about the procedure and has discussed the treatment, possible outcomes and risks with doctors. The claimant has had prior medical procedures and reports that he has no fear of blood, injections, the hospital or anesthesia. The claimant stated he would have no problem asking pertinent questions of the doctor. The claimant said he has an excellent relationship with and a very high level of confidence in his medical advisors.

2-9-09 MD., provided an appeal letter. The evaluator noted that he surgery requested is ALIF at L5-S1. The evaluator noted the claimant meets ODG criteria for fusion. The evaluator noted the claimant has failed conservative care. The claimant has undergone physical therapy/injections and medications without relief. The claimant is currently on home PT program after undergoing structured physical therapy in the office that included active modalities. Re-read by a DABR radiologist on the claimant Myelogram dated 2-26-09 shows the claimant has Grade I spondylolisthesis at L5/S1 with 5mm of anterior subluxation of the L5 vertebra in lumbar flexion. There is also a large 9mm posterior disk protrusion at L5/S1 that broadly impinges upon the thecal sac in both the nerve root sheaths. The claimant's psychological evaluation (recheck) on 2/5/09 indicates clearance for surgery with smoking addressed. The claimant weaned from 1 pack daily to one cigarette daily with a program to be completely smoke free 3-1-09. The claimant will be able to participate in a post surgery rehab.

On 2-17-09, MD., provided an adverse determination for requested ALIF at L5-S1 posterior decompression. The evaluator performed a Peer to peer with DC., chiropractor in Dr. 's office, as contact was not achieved with Dr. the evaluator reported non-approval for the procedure due to inconsistencies between the most recent behavioral health evaluation which appeared to have been a brief evaluation that said the claimant was stable enough psychologically to proceed with surgery compared to the evaluation just two months earlier. The claimant also continues to smoke significantly at this time. Therefore, the evaluator reported he could not recommend proceeding with surgical intervention. There is no progressive neurologic deficits, no motion segment instability that has been confirmed. The evaluator reported the claimant continues to smoke and has been documented to be a poor surgical candidate.

2-24-09 Behavioral Health Evaluation Addendum - the claimant was assessed regarding his surgical preparedness on 2-24-09 to reassess his symptoms of depression and anxiety and to also assess his ability to dramatically decrease the frequency of smoking cigarettes. The claimant reported that due to the counseling and the increase of Zoloft from 50mg to 100mg on 1-30-09, he has seen a significant improvement with his depression and anxiety symptoms. The claimant reported that he

only smokes one cigarette per day and he fully understands that he absolutely cannot smoke after the surgery has been conducted. Diagnostic impression from behavioral evaluation: Depression with anxiety (due to compensable injury), Anxiety disorder, NOS, related to injury medical condition, Psychological factors adversely affecting medical conditions classified elsewhere, chronic pain, physical limitations, ineffective coping skills to manage pain/sleep disturbance, GAF (current): 55 — mild psychological symptoms with moderate difficulty in social and occupational functioning.

On 2-26-09, MD., performed an over-read of the claimant previous diagnostic testing performed at an outside facility. Impression: Grade I spondylolisthesis at L5-S1 with 5 mm of anterior subluxation of the L5 vertebra in lumbar flexion. There is reduction of this claimant's vertebral body subluxation in lumbar extension. The radiographic findings likely to result in clinical symptoms of instability. There is a large 9 mm broad, posterior disc protrusion at L5-S1, which broadly impinges upon the thecal sac in both the S1 nerve root sheaths in the lateral recesses. The disc protrusion causes mild spinal canal stenosis, severe narrowing of both of the lateral recesses and nonopacification of both of the S1 nerve root sheaths.

On 3-2-09, MD., performed a re-review of the CT myelogram. The reviewer reported at the L5-S1 level, there is a broad based right paracentral disc extrusion that measures approximately 2 cm in transverse dimension at its base with the annulus and extends approximately 8 mm beyond the disc space on the axial images. It also results in right S1 subarticular recess encroachment that could result in right S1 radiculopathy. There is also slight effacement of the thecal sac.

On 3-10-09, non-certification is provided by DO. The evaluator reported that there is significant difference in interpretation of CT myelogram dated 1-5-09 by Dr. who performed by the CT myelogram and by the subsequent reevaluation by Dr. Given the significant differences and findings, it appears that an independent evaluation for a Designated Doctor or IME would be appropriate with review of all imaging studies to resolve any discrepancies prior to proceeding with surgical intervention.

3-16-09 MD., letter - The requested surgery is ALIF at L5-S1 with Posterior Decompression with Posterolateral fusion and pedicle screw instrumentation at L5-S1. The main reason for denial was the difference in interpretation of the Myelogram by the Performing MD and the evaluator. We had addressed this when I sent the films to an Independent Radiologist (I have no affiliation with this MD) and asked for an Independent Reading. He read the films without the benefit of my report. The MD that did the myelogram was an anesthesiologist. This was addressed with the Peer Reviewers but they indicated that the carrier wanted a Designated Doctor appointment. The evaluator reported the surgery cannot be denied pending an evaluation by the carrier. We did our due diligence by having an MD not associated with my practice review the films when we noted the difference in readings. The evaluator reported that he personally reviewed the actual films.

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

Based on the medical records provided, the MRI and x-rays of the lumbar spine show a Grade I spondylolisthesis of L5-S1 accompanied by a disc herniation at L5-S1. In addition, the patient has a noted transitional vertebrae, which is known to cause adjacent segment stress risers. Regardless what the CT myelogram shows, the MRI, X-rays and physical exam confirms the patient is unstable at this junction (L5-S1) and warrants surgery. Some would argue that the CT myelogram should have never been ordered in the first place. Therefore, the request for anterior lumbar interbody fusion at L5-S1, posterior decompression with fusion is certified.

ODG-TWC, last update 3-17-09 Occupational Disorders of the Low Back – Lumbar Fusion:

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) (Wetzel, 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](#)) This study showed that fusion for chronic lower back pain was the least successful common orthopaedic surgery. The study compared the gains in quality of life achieved by total hip replacement, total knee replacement, surgery for spinal stenosis, disc excision for lumbar disc herniation, and arthrodesis for chronic low back pain. For chronic lower back pain, improvements were statistically significant but clinically negligible. Although pain was reduced and function improved slightly, outcomes remained in the moderately affected range, quality of life was not improved and rendered worse, on average. While surgery for spinal stenosis and for disc herniation compare well with archetypical orthopaedic operations, the outcomes of surgery for chronic lower back pain do not even approach those of other orthopaedic procedures, and the data show that patients with back pain are rendered worse off by surgery. ([Hansson, 2008](#)) Recent studies document a 220% increase in lumbar spinal fusion surgery rates, without demonstrated improvements in patient outcomes or disability rates. ([Deyo, 2009](#)) 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) (Devo-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, 2002)

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 FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)