

CASEREVIEW

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Notice of Independent Review Decision

[Date notice sent to all parties]: November 11, 2012

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE: Anterior Lumbar Interbody Fusion at L4-5 & L5-S1, Posterior Lumbar Decompression with Posterolateral Fusion and Pedicle Screw Instrumentation at L4-5 & L5-S1. (20902 Major Bone Graft, 20902 Major Bone Graft, 22558 Arthrodesis-Ant Interbody Tech, 22585 Anterior Lumbar Fusion add'l interspace, 22612 Posterior Lumbar Fusion, 22614 Arthrodesis: posterior/posterolateral: each add', 22851 Application of Prosthetic Device, 63047 Lumbar Laminectomy, 63048 Additional Segment, 95937 Neuromuscular Junction Testing, 38220 Bone marrow, aspiration only, 38220 Bone marrow, aspiration only, 77002 Fluoroscopic Guidance Needle PI, 77002 Fluoroscopic Guidance Needle PI)

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

This physician is a Neurological Surgeon with over 16 years of experience.

REVIEW OUTCOME:

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

Upheld (Agree)

Provide a description of the review outcome that clearly states whether medical necessity exists for each of the health care services in dispute.

INFORMATION PROVIDED TO THE IRO FOR REVIEW:

01/12/11: CT Lumbar Spine w/o contrast

02/18/11: EMG/NCV of bilateral lower extremities
04/18/11: PPE performed at Liberty Health Care
05/19/11: Operative Report
05/23/11: Initial Narrative Report
06/01/11: Consultation Report
06/24/11: Lumbar Myelogram & Lumbosacral, Nine Views
06/24/11: CT Lumbar Myelogram interpreted
10/31/11: Follow-up Evaluation
05/02/12: TDI-DWC Decision and Order
05/09/12: Follow-up Evaluation
05/24/12: Pre-Surgical Psychological Evaluation

06/06/12: UR
06/10/12: Psychological Evaluation
08/08/12: UR performed
09/25/12: UR performed
10/19/12: UR performed
Physical Therapy Notes
Chiropractic Daily Notes

PATIENT CLINICAL HISTORY [SUMMARY]:

This claimant is a male who was injured on xxxxx while lifting a Truck Saddle back into a crate. He felt immediate pain. He was treated with Physical Therapy and ESI with moderate improvement in his symptomatology.

On February 18, 2011, EMG/NCV of the bilateral lower extremities. Impression:
1. The patient has lumbar spine pain and findings of bilateral S1 radiculopathy, the right being greater than the left. This is chronic and there are no findings of active denervation. 2. Clinical correlation is advised as it pertains to the aforementioned findings. Correlation with lumbar MRI is suggested.

On May 19, 2011, Operative Report. Postoperative Diagnosis: Lumbar radiculopathy. Procedures: 1. Caudal epidural steroid injection. 2. C-arm fluoroscopic guidance. 3. Myelogram without dural puncture. 4. Spinal injection of local anesthetic.

On May 23, 2011, the claimant was evaluated by DC for mild/moderate pain in the lower thoracic and lumbar spine. His pain was rated a 2-3/10. The claimant reported he had recently had an ESI which had helped his pain tremendously, but noted the pain was slowly starting to return. It was reported that he had previous spine surgery in the '70's and had been pain free for the past 30 years. On examination he had tenderness and increased muscle tone at T10-S1 bilaterally. There was not any edema. He noted numbness/tingling/burning extending from his back into the right hip area and extending into the right upper lateral thigh. Sitting SLR was positive bilaterally. xxxxx was positive bilaterally. Kemp's was positive bilaterally. ROM was decreased with moderate pain. Patella and Achilles reflexes were 2+ bilaterally. Pinwheel examination indicated

decreased sensation in the right S1 dermatomal pattern. His gait was observed to be slow and stiff. Plan: The claimant was referred to a spinal surgeon and for a psych evaluation. Post injection rehab was also recommended. Diagnosis: Lumbar disc displacement, Lumbar radiculopathy, Muscle spasms, Restricted motion, and Myofascitis.

On June 1, 2011, the claimant was evaluated by MD who on physical examination found lumbar range of motion was decreased in forward flexion secondary to body habitus and pain. Motor exam revealed a 5/5 strength throughout. Deep tendon reflexes were +2 throughout and symmetrical. Plantar responses were flexor bilaterally. Gait was antalgic. He had slight difficulty with toe walking, less difficulty with heel walking. Straight leg raising was positive on the right at 60 degrees, negative on the left. Sensory exam revealed no hypoesthetic region to pin prick and light touch. Review of the CT scan dated January 12, 2011 was: questionable foraminal stenosis at L4-5, right side greater than left, secondary to facet hypertrophy and questionable HNP. There was a questionable HNP at L5-S1 as well, again with bilateral foraminal stenosis right side greater than left. Impression: Lumbar disc displacement, Lumbar radiculitis, Lumbago, and Lumbar myofascial injury. Recommendations: 1. Continuation of epidural steroid therapy for symptomatic relief. 2. CT myelogram of the lumbar spine to better evaluate foraminal and central canal stenosis at L4-5 and L5-S1.

On June 24, 2011, Lumbar Myelogram and Lumbosacral Spine Series, Nine Views, Impression: 1. Moderate sized anterior extradural defects at L2-3 and L4-5. 2. Mild anterior extradural defects at L1-2 and L3-4. 3. Mild degenerative hypertrophic spondylosis from L1-L2 through L4-L5. 4. Moderate atherosclerotic vascular calcification throughout the abdominal aorta. 5. Grade 1 spondylolisthesis at L2-3.

On June 24, 2011, CT Lumbar Myelogram, Impression: 1. 3mm disk bulges at L1-L2 and L3-L4, which mildly impinge upon the thecal sac, also mildly narrowing the lateral recesses and foramina both segments. 2. Grade 1 spondylolisthesis at L2-L3. There is also a 5mm disk bulge at this segment. The combination causes moderate spinal canal and severe foraminal and lateral recess stenosis. 3. 5mm left paracentral disk protrusion at L4-L5, which mildly touches upon the thecal sac. There is also a severe degree of degenerative facet and ligamentum flavum hypertrophy. The combination causes mild spinal canal and severe left lateral recess stenosis. Also result in diminished opacification of the proximal left L5 nerve root sheath. 4. 2mm posterior central disk protrusion at L5-S1. 5. Mild degenerative hypertrophic spondylosis from L1-L2 through L5-S1.

On October 31, 2011, the claimant was re-evaluated by, MD for continued low back pain with radiation into bilateral lower extremities, right side greater than left, with associated numbness and tingling in a nondermatomal distribution. His pain level was rated 4/10. Recommendations: 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 adjacent level

disease at L4-5 with recurrent disc herniations at both L4-5 and L5-S1 with bilateral foraminal stenosis and lateral recess stenosis, and evidence of pseudoarthrosis from previous onlay fusion, Dr. Battle recommended an anterior lumbar interbody fusion at L4-5 and L5-S1, posterior lumbar decompression with posterolateral fusion and pedicle screw instrumentation at L4-5 and L5-S1.

May 2, 2012, TDI-DWC Decision and Order: Conclusions of Law: 3. The compensable injury of October 21, 2010, extends to and includes the disc bulges/protrusions at L4-5 and L5-S1 and bilateral S1 radiculopathy, but does not include the disc bulges/protrusions at L1-2, L2-3, or L3-4.

On May 9, 2012, the claimant was re-evaluated by, MD who reported the claimant recently completed a radiofrequency ablation of the lumbar spine with no significant improvement in his previous symptomatology. His current pain level was described as 6/10. On physical examination his lumbar ROM was decreased in forward flexion secondary to body habitus, pain and muscle spasm. Motor exam revealed 4/5 strength in the tibialis anterior and extensor hallucis longus muscle on the left and gastrocnemius muscle on the right, otherwise, 5/5 throughout. Deep tendon reflexes were +1 in the right ankle jerk, otherwise +2 throughout and symmetrical. Plantar responses were flexor bilaterally. Gait was antalgic. The patient had difficulty with toe walking, less difficulty with heel walking. Straight leg raising was positive on the right at 60 degrees and positive on the left at 30 degrees. Sensory exam revealed a hypoesthetic region in the L5 and S1 distributions on the right to pin prick and light touch, otherwise intact. Impression: 1. Recurrent lumbar radiculopathy. 2. Recurrent disc herniation at L5-S1. 3. Adjacent level disease at L4-5 with associated disc herniation. 4. Lumbar mechanical/dicogenic pain syndrome at L4-5 and L5-S1. 5. Lumbar retrolisthesis of L5-S1. 6. Lumbago. Recommendations: Dr. continued to recommend an anterior lumbar interbody fusion at L4-5 and L5-S1, posterior lumbar decompression with posterolateral fusion and pedicle screw instrumentation at L4-5 and L5-S1.

On May 24, 2012, the claimant underwent a pre-surgical psychological evaluation in which he was found to be an appropriate candidate for the proposed spinal surgery. It was noted that he currently smokes 2 packs of cigarettes a day which he stated he was in the process of quitting.

On June 6, 2012, UR. Rationale for Denial: This prior spine surgery unrelated to the work incident. The patient had multilevel disc and bony overgrowth changes at several levels. The patient was deconditioned and a smoke as of 6/1/2011 and there was spondylolisthesis of L2-3. There was reported weakness of the left anterior tibialis, but he had no difficulty with heel walking. The patient's records and exam appears incomplete. Further validation is needed.

On June 10, 2012, the claimant underwent a full evidence-based pre-spine surgery evaluation from a psychological and behavioral perspective, the claimant presents with only mild risk factors overall and was cleared to proceed with spine

surgery without any additional psychological or behavioral intervention prior to surgery.

On August 8, 2012, UR. Rationale for Denial: Based on the medical records submitted for review on the above referenced claimant, lumbar fusion is not approved. Lumbar x-rays 9 views on 6/24/11 noted no instability on flexion/extension views. CT myelogram 6/24/11: L1-4 3-5 mm disc bulge, L4-5 with 5 mm disc protrusion severe narrowing of left lateral recess, moderate degenerative facet changes, L5-S1 2mm disc protrusion without contacting the neural elements. Claimant is not a candidate for lumbar fusion. He does not meet ODG criteria below. He does not have instability.

On September 25, 2012, UR. Rationale for Denial: The previous non-certification on August 8, 2012 was due to lack of diagnostic evidence of instability or radiculopathy on physical examination. The previous non-certification is supported. Additional records were not provided for review. The claimant has had no documented true clinical evidence of radiculopathy on physical examination and no diagnostic evidence of significant lumbar instability or segmental instability or motion. Guidelines indicate that lumbar decompression should be performed when clinical evidence of radiculopathy is noted on physical examination including muscular weakness, atrophy, loss of reflex, and diagnostic imaging correlates with those findings. Lumbar spinal fusion should be performed when evidence of neural arch defect is documented on diagnostic imaging or there is segmental motion of greater than 4.5 mm is noted. Flexion/extension x-rays noting clinical evidence of segmental instability greater than 4.5 mm has not been provided. True evidence of nerve root impingement is not noted. Lower extremity physical examination findings indicating true clinical radiculopathy have not been documented.

On October 19, 2012, UR. Rationale for Denial: Objective physical examination findings do not document any significance evidence of a clinical radiculopathy on physical examination. There is no evidence of a significant lumbar instability at L4-S1. Guidelines would not support a fusion unless there was documented significant segmental instability at the levels the surgical procedure was being requested. Imaging studies do not support this portion of the guidelines in this claimant.

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

The previous adverse determinations are upheld. The claimant's clinical records do not support a decision for anterior and posterior fusion at L4/5 and L5/S1. The claimant has chronic findings on EMG/NCVs from February 2011, four months after his injury. There is also a lack of significant clinical radiculopathy documented on physical examinations. His Lumbar CT Myelogram shows stenosis at L4/5 only. No spondylolisthesis or other instability noted at L4/5 or

L5/S1. The claimant has no clear indications for fusion per ODG criteria. Therefore, the request for Anterior Lumbar Interbody Fusion at L4-5 & L5-S1, Posterior Lumbar Decompression with Posterolateral Fusion and Pedicle Screw Instrumentation at L4-5 & L5-S1. (20902 Major Bone Graft, 20902 Major Bone Graft, 22558 Arthrodesis-Ant Interbody Tech, 22585 Anterior Lumbar Fusion add'l interspace, 22612 Posterior Lumbar Fusion, 22614 Arthrodesis: posterior/posterolateral: each add', 22851 Application of Prosthetic Device, 63047 Lumbar Laminectomy, 63048 Additional Segment, 95937 Neuromuscular Junction Testing, 38220 Bone marrow, aspiration only, 38220 Bone marrow, aspiration only, 77002 Fluoroscopic Guidance Needle PI, 77002 Fluoroscopic Guidance Needle PI) is not found to be medically necessary.

PER ODG:

ODG Indications for Surgery -- Discectomy/laminectomy --

Required symptoms/findings; imaging studies; & conservative treatments below:

I. Symptoms/Findings which confirm presence of radiculopathy. Objective findings on examination need to be present. Straight leg raising test, crossed straight leg raising and reflex exams should correlate with symptoms and imaging.

Findings require ONE of the following:

- A. L3 nerve root compression, requiring ONE of the following:
 - 1. Severe unilateral quadriceps weakness/mild atrophy
 - 2. Mild-to-moderate unilateral quadriceps weakness
 - 3. Unilateral hip/thigh/knee pain
- B. L4 nerve root compression, requiring ONE of the following:
 - 1. Severe unilateral quadriceps/anterior tibialis weakness/mild atrophy
 - 2. Mild-to-moderate unilateral quadriceps/anterior tibialis weakness
 - 3. Unilateral hip/thigh/knee/medial pain
- C. L5 nerve root compression, requiring ONE of the following:
 - 1. Severe unilateral foot/toe/dorsiflexor weakness/mild atrophy
 - 2. Mild-to-moderate foot/toe/dorsiflexor weakness
 - 3. Unilateral hip/lateral thigh/knee pain
- D. S1 nerve root compression, requiring ONE of the following:
 - 1. Severe unilateral foot/toe/plantar flexor/hamstring weakness/atrophy
 - 2. Moderate unilateral foot/toe/plantar flexor/hamstring weakness
 - 3. Unilateral buttock/posterior thigh/calf pain

(EMGs are optional to obtain unequivocal evidence of radiculopathy but not necessary if radiculopathy is already clinically obvious.)

II. Imaging Studies, requiring ONE of the following, for concordance between radicular findings on radiologic evaluation and physical exam findings:

- A. Nerve root compression (L3, L4, L5, or S1)
- B. Lateral disc rupture
- C. Lateral recess stenosis

Diagnostic imaging modalities, requiring ONE of the following:

- 1. MR imaging
- 2. CT scanning
- 3. Myelography
- 4. CT myelography & X-Ray

III. Conservative Treatments, requiring ALL of the following:

- A. Activity modification (not bed rest) after patient education (>= 2 months)
- B. Drug therapy, requiring at least ONE of the following:
 - 1. NSAID drug therapy
 - 2. Other analgesic therapy
 - 3. Muscle relaxants

4. [Epidural Steroid Injection](#) (ESI)
- C. Support provider referral, requiring at least ONE of the following (in order of priority):
1. [Physical therapy](#) (teach home exercise/stretching)
 2. [Manual therapy](#) (chiropractor or massage therapist)
 3. [Psychological screening](#) that could affect surgical outcome
4. [Back school](#) ([Fisher, 2004](#))
- For average hospital LOS after criteria are met, see [Hospital length of stay](#) (LOS).

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 - Spondylytic 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 discectomy, with 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. Spinal instability criteria includes 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 correlated with symptoms and exam findings; & (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](#))

For average hospital LOS after criteria are met, see [Hospital length of stay](#) (LOS).

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)**