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Notice of Independent Review Decision

DATE OF REVIEW: 4/30/10

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

Low Pressure Lumbar Discogram L4-S1

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

Certified by the American Board of Orthopaedic Surgery

REVIEW OUTCOME

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

☒ Upheld (Agree)

☐ Overturned (Disagree)

☐ Partially Overturned (Agree in part/Disagree in part)

Injury date	Claim #	Review Type	ICD-9 DSMV	HCPCS/ NDC	Upheld/ Overturned
		Prospective			Upheld

INFORMATION PROVIDED TO THE IRO FOR REVIEW

Correspondence throughout appeal process, including first and second level decision letters, reviews, letters and requests for reconsideration, and request for review by an independent review organization.
Physicians'/practitioners' notes/consultations from 2/2/07 to 2/9/10
Notices to claimant dated 12/3/09, 3/6/09, 1/29/09
Computerized Muscle Testing and Range of Motion report dated 10/27/09, 7/28/09, 12/11/08, 9/19/08, 5/19/08, 3/26/08, 12/20/07, 10/8/07, 7/20/07, 3/7/07
X-ray reports dated 2/2/07, 2/16/07, 2/27/07, 2/11/09
Chronic pain management program notes dated 7/27/09
Mental Health Evaluation dated 3/31/09
Functional Capacity Evaluation reports dated 2/4/09, 10/3/08
Operative reports dated 2/15/08, 11/6/07, 9/25/07, 7/11/07

Reference articles
Official Disability Guidelines cited – Low Back, Lumbar and Thoracic

PATIENT CLINICAL HISTORY:

The patient was injured on xx/xx/xx when the he was riding on was hit by a xxxx. The patient sustained injuries to the cervical and lumbar spine as well as a rib fracture. On the examination of 10/11/07 it was noted that the patient had injury to cervical, thoracic, and lumbar spines as well as rib fracture. The examining provider felt the left hip pain was resolved. The patient underwent extensive conservative treatment, but remained symptomatic. Designated doctor examination determined the patient to have reached maximum medical improvement as of 01/30/09 with whole person impairment rating of 10%.

Orthopedic report of 2/9/10 reported the patient to have made exceptional effort to try and treat his symptoms nonoperatively, but at this point he is frustrated with persistent back pain. The patient states his back pain goes across his back and into buttocks and thigh. The patient tried participating in chronic pain program but was having difficulties with transportation and did not feel as though it was helping much. The patient reportedly has had change in heart regarding surgery. Physical examination reported the patient to have tenderness in lumbar spine. He still has some spasm and point tenderness in lower lumbar region. He has painful decreased range of motion. Lower extremity motor strength and sensation are intact. Upper extremity motor strength and sensation are also intact. The patient has increased pain with axial compression of cervical spine. Spurling's sign also reproduces axial neck pain. MRI studies were reviewed and the patient was noted to have reversal of lordosis with protrusions at C4-5, C5-6 and C6-7 of the cervical spine and lumbar spine has bulging in high intensity zone posteriorly at L5-S1. It was noted surgery was being contemplated to address the patient's persistent back pain, and preoperative lumbar discogram was recommended.

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

In the Reviewer's opinion, based on the clinical information provided, medical necessity is not established for the proposed low pressure lumbar discogram L4-S1. The patient was noted to have sustained multiple injuries secondary to a xxxxx in which the bus on which the patient was being transported was hit by a train. The patient was treated for cervical and lumbar injuries as well as rib fractures. MRI of the lumbar spine revealed subligamentous disc protrusion L1-2, L5-S1 with a broad based disc bulge or protrusion 4 mm in diameter at L5-S1 with some indentation of thecal sac appreciated. It is noted the patient underwent designated doctor examination and it was determined that the patient had reached maximum medical improvement as of 1/30/09 with whole person impairment rating of 10%. It was also noted that the patient had positive Waddell's testing for symptom magnification. The examiner opined that the patient sustained aggravation of underlying cervical and lumbar multilevel degenerative disease with no signs of radiculopathy or muscle atrophy. The treating provider recommended the patient for presurgical lumbar discogram, but it does not appear there is a surgical lesion identified.

Moreover, current evidence based guidelines do not support the use of discography results as preoperative indication for IDET or lumbar fusion.

References: 2010 Official Disability Guidelines, 15th edition, online version, Low Back Chapter.
Discography
Not recommended. In the past, discography has been used as part of the pre-operative evaluation of patients for consideration of surgical intervention for lower back pain. However, the conclusions of recent, high quality studies on discography have significantly questioned the use of discography results as a preoperative indication for either IDET or spinal fusion. These studies have suggested that reproduction of the patient's specific back complaints on injection of one or more discs (concordance of symptoms) is of limited diagnostic value. (Pain production was found to be common in non-back pain patients, pain reproduction was found to be inaccurate in many patients with chronic back pain and abnormal psychosocial testing, and in this latter patient type, the test itself was sometimes found to produce significant symptoms in non-back pain controls more than a year after testing.) Also, the findings of discography have not been shown to consistently correlate well with the finding of a High Intensity Zone (HIZ) on MRI. Discography may be justified if the decision has already been made to do a spinal fusion, and a negative discogram could rule out the need for fusion (but a positive discogram in itself would not allow fusion). (Carragee-*Spine*, 2000) (Carragee2-*Spine*, 2000) (Carragee3-*Spine*, 2000) (Carragee4-*Spine*, 2000) (Bigos, 1999) (ACR, 2000) (Resnick, 2002) (Madan, 2002) (Carragee-*Spine*, 2004) (Carragee2, 2004) (Maghout-Juratli, 2006) (Pneumaticos, 2006) (Airaksinen, 2006) (Manchikanti, 2009) 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) Positive discography was not highly predictive in identifying outcomes from spinal fusion. A recent 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) The prevalence of positive discogram may be increased in subjects with chronic low back pain who have had prior surgery at the level tested for lumbar disc herniation. (Heggeness, 1997) Invasive diagnostics such as provocative discography have not been proven to be accurate for diagnosing various spinal conditions, and their ability to effectively guide therapeutic choices and improve ultimate patient outcomes is uncertain. (Chou, 2008) Although discography, especially combined with CT scanning, may be more accurate than other radiologic studies in detecting degenerative disc disease, its ability to improve surgical outcomes has yet to be proven. It is routinely used before IDET, yet only occasionally used before spinal fusion. (Cohen, 2005) Provocative discography is not recommended because its diagnostic accuracy remains uncertain, false-positives can occur in persons without low back pain, and its use has not been shown to improve clinical outcomes. (Chou2, 2009) This recent RCT concluded that, compared with discography, injection of a small amount of bupivacaine into the painful disc was a better tool for the

diagnosis of discogenic LBP. (Ohtori, 2009) Discography may cause disc degeneration. Even modern discography techniques using small gauge needle and limited pressurization resulted in accelerated disc degeneration (35% in the discography group compared to 14% in the control group), disc herniation, loss of disc height and signal and the development of reactive endplate changes compared to match-controls. These finding are of concern for several reasons. Discography as a diagnostic test is controversial and in view of these findings the utility of this test should be reviewed. Furthermore, discography in current practice will often include injecting discs with a low probability of being symptomatic in an effort to validate other disc injections, a so-called control disc. Although this strategy has never been confirmed to increase test validity or utility, injecting normal discs even with small gauge needles appears to increase the rate of degeneration in these discs over time. The phenomenon of accelerated adjacent segment degeneration adjacent to fusion levels may be, in part, explained by previous disc puncture if discography was used in segments adjacent to the fusion. Similarly, intradiscal therapeutic strategies (injecting steroids, sclerosing agents, growth factors, etc.) have been proposed as a method to treat, arrest or prevent symptomatic disc disease. This study suggests that the injection procedure itself is not completely innocuous and a recalculation of these demonstrated risks versus hypothetical benefits should be considered. (Carragee, 2009) Discography involves the injection of a water-soluble imaging material directly into the nucleus pulposus of the disc. Information is then recorded about the pressure in the disc at the initiation and completion of injection, about the amount of dye accepted, about the configuration and distribution of the dye in the disc, about the quality and intensity of the patient's pain experience and about the pressure at which that pain experience is produced. Both routine x-ray imaging during the injection and post-injection CT examination of the injected discs are usually performed as part of the study. There are two diagnostic objectives: (1) to evaluate radiographically the extent of disc damage on discogram and (2) to characterize the pain response (if any) on disc injection to see if it compares with the typical pain symptoms the patient has been experiencing. Criteria exist to grade the degree of disc degeneration from none (normal disc) to severe. A symptomatic degenerative disc is considered one that disperses injected contrast in an abnormal, degenerative pattern, extending to the outer margins of the annulus and at the same time reproduces the patient’s lower back complaints (concordance) at a low injection pressure. Discography is not a sensitive test for radiculopathy and has no role in its confirmation. It is, rather, a confirmatory test in the workup of axial back pain and its validity is intimately tied to its indications and performance. As stated, it is the end of a diagnostic workup in a patient who has failed all reasonable conservative care and remains highly symptomatic. Its validity is enhanced (and only achieves potential meaningfulness) in the context of an MRI showing both dark discs and bright, normal discs -- both of which need testing as an internal validity measure. And the discogram needs to be performed according to contemporary diagnostic criteria -- namely, a positive response should be low pressure, concordant at equal to or greater than a VAS of 7/10 and demonstrate degenerative changes (dark disc) on MRI and the discogram with negative findings of at least one normal disc on MRI and discogram. See also Functional anesthetic discography (FAD).

Discography is Not Recommended in ODG.

Patient selection criteria for Discography if provider & payor agree to perform anyway:

o Back pain of at least 3 months duration

o Failure of recommended conservative treatment including active physical therapy
o An MRI demonstrating one or more degenerated discs as well as one or more normal appearing discs to allow for an internal control injection (injection of a normal disc to validate the procedure by a lack of a pain response to that injection)
o Satisfactory results from detailed psychosocial assessment (discography in subjects with emotional and chronic pain problems has been linked to reports of significant back pain for prolonged periods after injection, and therefore should be avoided)
o Intended as a screen for surgery, i.e., the surgeon feels that lumbar spine fusion is appropriate but is looking for this to determine if it is not indicated (although discography is not highly predictive) (Carragee, 2006) NOTE: In a situation where the selection criteria and other surgical indications for fusion are conditionally met, discography can be considered in preparation for the surgical procedure. However. all of the qualifying conditions must be met prior to proceeding to discography as discography should be viewed as a non-diagnostic but confirmatory study for selecting operative levels for the proposed surgical procedure. Discography should not be ordered for a patient who does not meet surgical criteria.
o Briefed on potential risks and benefits from discography and surgery
o Single level testing (with control) (Colorado, 2001)
o Due to high rates of positive discogram after surgery for lumbar disc herniation, this should be potential reason for non-certification

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)**