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Notice of Independent Review Decision

DATE OF REVIEW: 10/06/08

IRO CASE NO.:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:

Item in dispute: Impt Lumbar laminectomy discectomy at L4-L5 and L5-S1 22899, 63030, 63035

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

Board Certified Orthopedic Surgeon

REVIEW OUTCOME

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

Denial Upheld

PATIENT CLINICAL HISTORY (SUMMARY):

The employee was xx years old when he was reported to have sustained a workplace injury on xx/xx/xx. The employee was setting up cones around a machine when a coworker drove off in a truck and struck him while the truck was moving. This resulted in the employee being knocked down.

The employee was taken to the emergency room and given an injection as well as prescriptions.

The employee was seen in follow-up at Medical Clinic by Dr..

The employee was referred for MRI of the lumbar spine on 03/07/07. This study reported that the L5-S1 spinal canal neural foramen were patent. There were mild facet arthropathy changes present. At L4-L5, there was a central annular tear with central disc protrusion. There was mild spinal canal stenosis. The neural foramen remained patent. There was mild facet arthropathy present. L1-L2, L2-L3, and L3-L4 were reported to be unremarkable.

The employee subsequently sought care from Dr., a chiropractor. The employee was treated with exercises, electrical stimulation, and massage.

The employee was subsequently referred to Dr. on 05/08/07. The employee was not on any prescription medicines except for those prescribed in the emergency room. He denied any prior history of problems with his back. He reported when awakening he had neck and trapezius pain. His lower back pain caused headaches. Upon physical examination, the employee was noted to be 6 feet tall and weighed 270 pounds. He had a markedly limping gait over the right lower extremity. He toe walked with pain. He can heel/toe walk with pain. He had no atrophy. He had reduced lumbar range of motion. He had tenderness to palpation over the paraspinal musculature. He had right greater than left sacroiliac joint tenderness. Reflexes were 2+ bilaterally. There were no focal or motor sensory deficits in the lower extremities. Supine Straight leg raise caused low back pain on the left at 30 degrees and on the right at 20 degrees. A review of the MRI indicated a central L4 disc protrusion with dehydration and an annular tear. There was some degree of posterior facet changes with arthropathy as well. The employee was diagnosed with cervical, thoracic, and lumbar musculoligamentous injuries right greater than left, sacroiliac joint dysfunction, L4 central disc protrusion and L4-L5, and L5-S1 facet arthropathy which was reported to have been aggravated. The employee was recommended to be off work.

The employee was continued with Dr. It was recommended that the employee would do a water based aquatic program, and he was provided oral pain medications.

On 01/25/08, the employee sought care from, D.C. Upon examination, he was reported to be in no acute distress. He had a normal gait and station. Flexion was to 45 degrees and relived by extension. He was reported to have a reduced right knee jerk, a right L5-S1 sensory decrease, and EHL weakness. The employee was diagnosed with an L4-L5 herniated nucleus pulposus with annular tear and a right L5 radiculopathy.

The employee was subsequently recommended to undergo EMG/NCV. This study was performed on 01/31/08. The evaluator suggested that the employee may have an L4 radiculopathy. In reviewing his records, it was noted that the lumbar paraspinal musculature was not tested, and therefore, a diagnosis of radiculopathy could not be made.

On 02/19/08, the employee was referred to Dr. Dr. noted the history above. He reported that the employee had back pain, leg pain, hip pain, and leg weakness. He was reported to have failed conservative treatment over the last year. It was reported that his EMG/NCV was positive for L4 and L5 nerve root symptoms bilaterally, although worse on the right than the left. Dr. reported his review of the MRI scan revealed a contained L4-L5 disc herniation. Radiographs of the pelvis revealed hips without degenerative joint disease and sacroiliac joints without sclerosis. Radiographs of the lumbar spine including flexion extension views revealed L4-L5 extension angle 0 degrees with facet subluxation and foraminal stenosis which does not appear unstable. At L5-S1, the employee was reported to have gross instability with spondylosis and stenosis and retrolisthesis of 1.1cm in extension which corrected in forward flexion. Upon physical examination, the employee had mild paravertebral muscle spasms and a positive spring test at L4-L5 and L5-S1, positive forte finger test on the right, positive sciatic notch tenderness on the right, positive flip test on the right, positive Lasegue's on the right at 45 degrees, positive Braggard's test on the right, absent posterior tibial tendon jerk bilaterally, decreased ankle jerk on the right, weakness to the quadriceps, tibialis anterior EHL, and gastrocsoleus on the right with paresthesias in the L5 and S1 nerve root distribution on the right. Dr. diagnosed the employee with lumbago, instability, disc herniation, right radiculopathy, with failure of conservative treatment greater than one year. Dr. subsequently has recommended that the employee undergo

operative intervention with decompression discectomy at L4-L5 with stabilization of arthrodesis at L5-S1 only. The employee was recommended to have a bone growth stimulator due to his size. The employee denied a smoking history.

The employee was referred for psychiatric evaluation on 06/29/08. It was noted that the employee was recommended to participate in individual counseling. On clinical testing, the employee had a 76 in the pain experienced scale which indicated a moderate level of emotional worry or response. He had a 67 on the pain questionnaire indicating that he experienced pain often and described the severity as horrible. The Oswestry low back pain disability questionnaire identified was crippled. The employee was experiencing elevated levels of fear related to his work injury. His Beck Depression Inventory score was 18 indicating a moderate level of depression. His Beck Anxiety Inventory score was 39 indicating he was experiencing severe levels of anxiety. The employee was recommended to have individual psychotherapy.

On 09/03/08, a request was placed for L4-L5 and L5-S1 laminectomies with discectomies and arthrodesis with posterior instrumentation and implantation of a bone growth stimulator at L5-S1 only. This case was reviewed by Dr. who found the request was not medically necessary.

This case was subsequently appealed and was reviewed on 09/15/08 by Dr. Dr. found the request as not being medically necessary.

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

I would concur with the two previous reviewers in that the requested operative intervention is not considered medically necessary.

The available medical records indicate that the employee sustained an injury to his back on xx/xx/xx when he was struck by a motor vehicle while at work.

The employee has undergone MRI of the lumbar spine on 03/07/07, which indicated mild degenerative changes at L4-L5 and L5-S1. Most prominent was a central disc protrusion with central annular tear at L4-L5. There was mild facet arthropathy noted at these levels. The employee has been treated conservatively with oral medications and chiropractic treatment.

The records do not indicate that the employee has received focused physical therapy.

The employee has undergone EMG/NCV studies on 01/31/08; however this study was incomplete. The lumbar paraspinal musculature was not tested, and therefore, conclusions cannot be drawn regarding a radiculopathy. The employee later came under the care of Dr. who reported that the employee's EMG was positive at L4 and L5 for nerve root symptoms bilaterally, although worse on the right than left. It is unclear from this comment whether or not the employee was referred for a second EMG/NCV. Clearly this information does not correlate with the report dated 01/31/08. The employee was reported to have undergone radiographs, which indicated gross instability at L5-S1 with retrolisthesis of 1.1cm in extension that corrected with forward flexion. There were no outside radiographs to corroborate this report.

The most recent clinical note submitted by Dr. is dated 03/18/08. There were no more recent notes covering this request.

The employee was referred for psychiatric evaluation on 06/29/08. The employee clearly has significant psychiatric issues, which would make him a poor surgical candidate.

The employee has been recommended to undergo individual psychotherapy, and there is no indication from this report that the employee was cleared for surgery.

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

Official Disability Guidelines

Surgical discectomy for carefully selected employees with radiculopathy due to lumbar disc prolapse provides faster relief from the acute attack than conservative management, although any positive or negative effects on the lifetime natural history of the underlying disc disease are still unclear. Unequivocal objective findings are required based on neurological examination and testing. ([Gibson-Cochrane, 2000](#)) ([Malter, 1996](#)) ([Stevens, 1997](#)) ([Stevenson, 1995](#)) ([BlueCross BlueShield, 2002](#)) ([Buttermann, 2004](#))

Standard discectomy and microdiscectomy are of similar efficacy in treatment of herniated disc. ([Bigos, 1999](#)) While there is evidence in favor of discectomy for prolonged symptoms of lumbar disc herniation, in employees with a shorter period of symptoms but no absolute indication for surgery, there are only modest short-term benefits, although discectomy seemed to be associated with a more rapid initial recovery, and discectomy was superior to conservative treatment when the herniation was at L4-L5. ([Osterman, 2006](#)) The SPORT studies concluded that both lumbar discectomy and nonoperative treatment resulted in substantial improvement after 2 years, but those who chose discectomy reported somewhat greater improvements than employees who elected nonoperative care. ([Weinstein, 2006](#)) ([Weinstein2, 2006](#)) A recent RCT compared decompressive surgery with nonoperative measures in the treatment of employees with lumbar spinal stenosis, and concluded that, although employees improved over the 2-year follow-up regardless of initial treatment, those undergoing decompressive surgery reported greater improvement regarding leg pain, back pain, and overall disability, but the relative benefit of initial surgical treatment diminished over time while still remaining somewhat favorable at 2 years. ([Malmivaara, 2007](#)) Employees undergoing lumbar discectomy are generally satisfied with the surgery, but only half are satisfied with preoperative employee information. ([Ronnberg, 2007](#)) If employees are pain free, there appears to be no contraindication to their returning to any type of work after lumbar discectomy. A regimen of stretching and strengthening the abdominal and back muscles is a crucial aspect of the recovery process. ([Burnett, 2006](#)) According to a major recent trial, early surgery (microdiscectomy) in employees with 6-12 weeks of severe sciatica caused by herniated disks is associated with better short-term outcomes, but at 1 year, disability outcomes of early surgery vs conservative treatment with eventual surgery if needed are similar. The median time to recovery was 4.0 weeks for early surgery and 12.1 weeks for prolonged conservative treatment. The authors concluded, "Employees whose pain is controlled in a manner that is acceptable to them may decide to postpone surgery in the hope that it will not be needed, without reducing their chances for complete recovery at 12 months. Although both strategies have similar outcomes after 1 year, early surgery remains a valid treatment option for well-informed employees." ([Peul-NEJM, 2007](#)) ([Deyo-NEJM, 2007](#)) A recent randomized controlled trial comparing decompression with decompression and instrumented fusion in employees with foraminal stenosis and single-level degenerative disease found that employees 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](#)) A recent British study found that lumbar discectomy improved employees' self-reported overall physical health more than other elective surgeries. ([Guilfoyle, 2007](#)) Microscopic sequestrectomy may be an alternative to standard microdiscectomy. In this RCT, both groups showed dramatic improvement. ([Barth, 2008](#)) There is consistent evidence that for employees with a herniated disk, discectomy is associated with better short-term outcomes than continued conservative management, although outcomes begin to look similar after 3 to 6 months. This is a decision to be made with the employees, discussing the likelihood that they are going to improve either way but will improve faster with surgery. Similar evidence supports the use of surgery for spinal stenosis, although the outcomes look better with surgery out to about 2 years. ([Chou, 2008](#)) Standard open discectomy is moderately cost-effective compared with nonsurgical treatment, a new Spine Employee Outcomes Research Trial (SPORT) study shows. The costs per quality-adjusted life-year gained with surgery compared with nonoperative treatment, including work-related productivity costs, ranges from \$34,355 to \$69,403, depending on the cost of surgery. It is wise and proper to wait before initiating surgery, but if the employee continues to experience pain and is missing work, then the higher-cost option such as surgery may be worthwhile. ([Tosteson, 2008](#)) Note: Surgical decompression of a lumbar nerve root or roots may include the following procedures: discectomy or microdiscectomy (partial removal of the disc) and laminectomy, hemilaminectomy, laminotomy, or foraminotomy (providing access by partial or total removal of various parts of vertebral bone). Discectomy is the surgical removal of herniated disc material that presses on a nerve root or the spinal cord. A laminectomy is often involved to permit access to the intervertebral disc in a traditional discectomy.

Employee Selection: Microdiscectomy for symptomatic lumbar disc herniations in employees with a preponderance of leg pain who have failed nonoperative treatment demonstrated a high success rate based on validated outcome measures (80% decrease in VAS leg pain score of greater than 2 points), employee satisfaction (85%), and return to work (84%). Employees should be encouraged to return to their preinjury activities as soon as possible with no restrictions at 6 weeks. Overall, employees with sequestered lumbar disc herniations fared better than those with extruded herniations, although both groups consistently had better outcomes than employees with contained herniations. Employees with herniations at the L5-S1 level had significantly better outcomes than did those at the L4-L5 level. Lumbar disc herniation level and type should be considered in preoperative outcomes counseling. Smokers had a significantly lower return to work rate. In the carefully screened employee, lumbar microdiscectomy for symptomatic disc herniation results in an overall high success rate, employee satisfaction, and return to physically demanding activities. ([Dewing, 2008](#))

Spinal Stenosis: For employees with lumbar spinal stenosis, standard posterior decompressive laminectomy alone (without discectomy) offers a significant advantage over nonsurgical treatment. Discectomy should be reserved for those conditions of disc herniation causing radiculopathy. (See Indications below.) Laminectomy may be used for spinal stenosis secondary to degenerative processes exhibiting ligamentary hypertrophy, facet hypertrophy, and disc protrusion, in addition to anatomical derangements of the spinal column such as tumor, trauma, etc. ([Weinstein, 2008](#)) ([Katz, 2008](#)) See also [Laminectomy](#).

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. For unequivocal evidence of radiculopathy, see AMA Guides, 5th Edition, page 382-383. ([Andersson, 2000](#)) 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 [employee 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](#) (massage therapist or chiropractor)
- 3. [Psychological screening](#) that could affect surgical outcome
- 4. [Back school](#) ([Fisher, 2004](#))