

Health Decisions, Inc.

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Notice of Independent Review Decision

July 1, 2014

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:

MRI Lumbar Spine without Contrast

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

This physician is Board Certified in Orthopedic Surgery with over 40 years of experience

REVIEW OUTCOME:

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

Overturned (Disagree)

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:

PATIENT CLINICAL HISTORY [SUMMARY]:

The claimant is a male that was injured at work on xx/xx/xx. He is having back pain with bilateral leg pain. Therefore, the provider recommends a weight bearing MRI to visualize the cause.

11-04-09: Operative Procedure Report. PreOp Dx: Failed lumbar spine syndrome with retained symptomatic hardware. PostOp Dx: Same, with pseudarthrosis, L4-5, lateral technique bilaterally. Retained EBI transmitter and bilateral electrodes. Operation/Procedure Performed: 1. Examination under anesthesia and pain study. 2. Revision lumbar spine surgery, L4-5 bilaterally; additional interspace L5-S1 bilaterally. 3. Revision sacral spine surgery, 1st sacral

interval bilaterally. 4. Microdissection technique. 5. Harvesting and preparation of bone graft. 6. Removal of EBI transmitter unit; removal of EBI electrode units bilaterally. 7. Exploration of arthrodesis. 8. Lateral Arthrodesis repair of pseudarthrosis, L4-5, lateral technique bilaterally.

11-12-09: Emergent Operative Procedure Note. PreOp Dx: Postoperative infection with meningeal irritation and failed lumbar spine syndrome. PostOp Dx: Same. Operation/Procedure Performed: Examination under anesthesia and pain study, revision of lumbar spine surgery, L4-5 bilaterally with exploration, irrigation, debridement, removal of necrotic tissue, culture and stat Gram stain with open packing.

11-12-09: Operative Report Detail. PreOp Dx: Postoperative infection with meningeal irritation and failed lumbar spine syndrome. PostOp Dx: Same. Operation/Procedure Performed: Examination with exploration, irrigation, debridement, removal of necrotic tissue, culture and Gram stain with open packing.

09-20-10: Operative Report. PreOp Dx: Failed lumbar spine syndrome with lumbar abscess, retained hardware, and sepsis. Note, this is an emergent procedure. PostOp Dx: Failed lumbar spine syndrome with lumbar abscess, retained hardware, and sepsis with deep infection affecting the instrumentation at L2, L3, L4 and L5 with evidence of deep infection and abscess draining straight from the skin to the hardware, present bilaterally, although worse on the right. No evidence of nerve root irritation or meningeal irritation intraoperatively. Surgical procedure(s) Performed: Revision lumbar spine surgery with incision and drainage, L4-5 bilaterally, additional interspace L5-S1 bilaterally. Revision sacral spine surgery, first sacral interval bilaterally. Revision lumbar spine surgery, L2-L3 bilaterally. Revision lumbar spine surgery, L3-L4 bilaterally. Microdissection technique. Removal of EBI electrode units bilaterally. Exploration of arthrodesis. Removal of post instrumentation segmental fixation, L2, L3, L4 and L5 bilaterally with crosslinks at L2-L3 and L4-L5. Exploration of arthrodesis.

10-26-10: Office Visit Report. The claimant states he feel much better after his hardware removal. His back pain has markedly decreased and he has minimal if any leg pain. Upon examination, he demonstrates negative flip test bilaterally, Lasegue's by 45 degrees, Bragard's, extenson leg, equal and symmetrical knee and ankle jerks, absent posterior tibial tendon jerks. Assessment: 1. Failed lumbar spine syndrome post reconstruction. 2. PostOp infection. Plan: 1. Chronic pain management eval. 2. Completion of IV antibx and wound care.

11-30-10: Office Visit Report. The claimant presents today about to start hydrogen peroxide to complete wound healing. Plan: Continue conservative treatment, exercise program and chronic pain management.

02-21-12: Office Visit Report. The claimant c/o his overall symptomology not being controlled with his pain medication. Upon examination of his back reveals a healed incision with some gapping between the musculature posteriorly.

Assessment: Failed lumbar spine syndrome with a postop infection now resolved with chronic pain. Plan: Consideration should be given to possible temp spinal cord stimulator or alteration with opioid meds to one of the longer acting opioids.

04-23-14: Progress Report. The claimant presents with back pain with severity from 4/10-9/10. He is using an SPC in the room today to function. The claimant states the pain is getting worse in his back and right leg and is getting Charlie horses in the back and in the right front leg. The constant pain has been increasing for the last month. Pain is better with meds, massage and heating pad. Numbness, tingling and weakness are also being reported. Upon examination, musculoskeletal: On palpation, has pain to right paravertebral muscles at level L2-L4 with muscle spasm noted. ROM: FF 30 degrees and ext 0 degrees. Neurological: right lat bend 5 degrees, left lateral bend 0 degrees. Reflexes: Absent in lower extremities. Sensory exam is decreased in both feet. Strength is 4-/5 RLE/LLE. Assessment Plan: 1. X-ray of low back – AP/lat/flexion/ext. 2. Consult: Re-eval d/t worsening low back pain, worse on R than L and more limited gait, mobility and ROM.

05-27-14: Office Visit Report. The claimant c/o back pain with bilateral leg pain primarily anterior thigh. Upon examination, has mild paravertebral muscle spasm and absent posterior tibial tendon jerks. Assessment: Failed lumbar spine syndrome post reconstruction. Plan: Obtain a weightbearing MRI scan of his lumbar spine.

06-03-14: URA. Rationale: There is no documentation of recent trauma, or red flags such as infection, cancer etc to warrant an MRI. There is no documentation of a myelopathy, no documentation of a neurological deficit to warrant an MRI. Based on the record he was evaluated 3 years ago suggesting he had an MRI at that time. It is likely he had pain before that MRI because he has had multilevel lumbar surgery and was injured in xxxx and it is likely he will continue to complain of pain. Given the documentation in this case of chronic pain without a myelopathy or neurological deficit, a repeat MRI is not indicated. Peer to peer was not successful.

06-06-14: URA. Rationale: I made two reasonable attempts to contact the provider and left messages requesting call back. As of the time that this report was submitted for review. I have received no call back. No additional information has been submitted to justify this request to preauthorize MRI scan of the lumbar spine. There is no medical record documentation of new injury or findings suggesting infection, failure of fusion, or malignancy. In the absence of additional information, adverse determination is respectfully recommended. Prior denial of this request was appropriate and should be upheld.

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

The previous adverse determinations are overturned. Based on the records provided, an MRI of the Lumbar spine would be indicated due to an increase in

symptomology and possible development of neurological compression. reported on the 04/23/14 examination that the claimant's pain was getting worse in his back and right leg. Numbness, tingling, weakness and an increase in Charlie horses was also reported. On examination reflexes were absent in the lower extremities, sensory was decreased in both feet and strength was 4-/5 RLE/LLE. On 05/27/14, also reported absent posterior tibial tendon jerks. ODG supports repeat MRI for change in symptoms. Therefore, the request for MRI of Lumbar spine without contrast is recommended.

Per ODG:

<p>MRI's (magnetic resonance imaging)</p>	<p>Recommended for indications below. MRI's are test of choice for patients with prior back surgery, but for uncomplicated low back pain, with radiculopathy, not recommended until after at least one month conservative therapy, sooner if severe or progressive neurologic deficit. Repeat MRI is not routinely recommended, and should be reserved for a significant change in symptoms and/or findings suggestive of significant pathology (eg, tumor, infection, fracture, neurocompression, recurrent disc herniation). (Bigos, 1999) (Mullin, 2000) (ACR, 2000) (AAN, 1994) (Aetna, 2004) (Airaksinen, 2006) (Chou, 2007) Magnetic resonance imaging has also become the mainstay in the evaluation of myelopathy. An important limitation of magnetic resonance imaging in the diagnosis of myelopathy is its high sensitivity. The ease with which the study depicts expansion and compression of the spinal cord in the myelopathic patient may lead to false positive examinations and inappropriately aggressive therapy if findings are interpreted incorrectly. (Seidenwurm, 2000) There is controversy over whether they result in higher costs compared to X-rays including all the treatment that continues after the more sensitive MRI reveals the usual insignificant disc bulges and herniations. (Jarvik-JAMA, 2003) In addition, the sensitivities of the only significant MRI parameters, disc height narrowing and anular tears, are poor, and these findings alone are of limited clinical importance. (Videman, 2003) Imaging studies are used most practically as confirmation studies once a working diagnosis is determined. MRI, although excellent at defining tumor, infection, and nerve compression, can be too sensitive with regard to degenerative disease findings and commonly displays pathology that is not responsible for the patient's symptoms. With low back pain, clinical judgment begins and ends with an understanding of a patient's life and circumstances as much as with their specific spinal pathology. (Carragee, 2004) Diagnostic imaging of the spine is associated with a high rate of abnormal findings in asymptomatic individuals. Herniated disk is found on magnetic resonance imaging in 9% to 76% of asymptomatic patients; bulging disks, in 20% to 81%; and degenerative disks, in 46% to 93%. (Kinkade, 2007) Baseline MRI findings do not predict future low back pain. (Borenstein, 2001) MRI findings may be preexisting. Many MRI findings (loss of disc signal, facet arthrosis, and end plate signal changes) may represent progressive age changes not associated with acute events. (Carragee, 2006) MRI abnormalities do not predict poor outcomes after conservative care for chronic low back pain patients. (Kleinstück, 2006) The new ACP/APS guideline as compared to the old AHCPR guideline is more forceful about the need to avoid specialized diagnostic imaging such as magnetic resonance imaging (MRI) without a clear rationale for doing so. (Shekelle, 2008) A new meta-analysis of randomized trials finds no benefit to routine lumbar imaging (radiography, MRI, or CT) for low back pain without indications of serious underlying conditions, and recommends that clinicians should refrain from routine, immediate lumbar imaging in these patients. (Chou-Lancet, 2009) Despite guidelines recommending parsimonious imaging, use of lumbar MRI increased by 307% during a recent 12-year interval. When judged against guidelines, one-third to two-thirds of spinal computed tomography imaging and MRI may be inappropriate. (Devo, 2009) As an alternative to MRI, a pain assessment tool named Standardized</p>
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Evaluation of Pain (StEP), with six interview questions and ten physical tests, identified patients with radicular pain with high sensitivity (92%) and specificity (97%). The diagnostic accuracy of StEP exceeded that of a dedicated screening tool for neuropathic pain and spinal magnetic resonance imaging. ([Scholz, 2009](#)) Clinical quality-based incentives are associated with less advanced imaging, whereas satisfaction measures are associated with more rapid and advanced imaging, leading Richard Deyo, in the Archives of Internal Medicine to call the fascination with lumbar spine imaging an idolatry. ([Pham, 2009](#)) Primary care physicians are making a significant amount of inappropriate referrals for CT and MRI, according to new research published in the *Journal of the American College of Radiology*. There were high rates of inappropriate examinations for spinal CTs (53%), and for spinal MRIs (35%), including lumbar spine MRI for acute back pain without conservative therapy. ([Lehnert, 2010](#)) Degenerative changes in the thoracic spine on MRI were observed in approximately half of the subjects with no symptoms in this study. ([Matsumoto, 2010](#)) This large case series concluded that iatrogenic effects of early MRI are worse disability and increased medical costs and surgery, unrelated to severity. ([Webster, 2010](#)) Routine imaging for low back pain is not beneficial and may even be harmful, according to new guidelines from the American College of Physicians. Imaging is indicated only if they have severe progressive neurologic impairments or signs or symptoms indicating a serious or specific underlying condition, or if they are candidates for invasive interventions. Immediate imaging is recommended for patients with major risk factors for cancer, spinal infection, cauda equina syndrome, or severe or progressive neurologic deficits. Imaging after a trial of treatment is recommended for patients who have minor risk factors for cancer, inflammatory back disease, vertebral compression fracture, radiculopathy, or symptomatic spinal stenosis. Subsequent imaging should be based on new symptoms or changes in current symptoms. ([Chou, 2011](#)) The National Physicians Alliance compiled a "top 5" list of procedures in primary care that do little if anything to improve outcomes but excel at wasting limited healthcare dollars, and the list included routinely ordering diagnostic imaging for patients with low back pain, but with no warning flags, such as severe or progressive neurologic deficits, within the first 6 weeks. ([Aguilar, 2011](#)) Owning MRI equipment is a strongly correlated with patients receiving MRI scans, and having an MRI scan increases the probability of having surgery by 34%. ([Shreibati, 2011](#)) A considerable proportion of patients may be classified incorrectly by MRI for lumbar disc herniation, or for spinal stenosis. Pooled analysis resulted in a summary estimate of sensitivity of 75% and specificity of 77% for disc herniation. ([Wassenaar, 2011](#)) ([Sigmondsson, 2011](#)) Accurate terms are particularly important for classification of lumbar disc pathology from imaging. ([Fardon, 2001](#)) Among workers with LBP, early MRI is not associated with better health outcomes and is associated with increased likelihood of disability and its duration. ([Graves, 2012](#)) There is support for MRI, depending on symptoms and signs, to rule out serious pathology such as tumor, infection, fracture, and cauda equina syndrome. Patients with severe or progressive neurologic deficits from lumbar disc herniation, or subjects with lumbar radiculopathy who do not respond to initial appropriate conservative care, are also candidates for lumbar MRI to evaluate potential for spinal interventions including injections or surgery. For unequivocal evidence of radiculopathy, see AMA Guides. ([Andersson, 2000](#)) MRI with and without contrast is best test for prior back surgery. ([Davis, 2011](#)) See also [ACR Appropriateness Criteria](#)TM. See also [Standing MRI](#).

Recent research: More than half of requests for MRI of the lumbar spine are ordered for indications considered inappropriate or of uncertain value, pointing to evidence of substantial overuse of lumbar spine MRI scans. For family physicians, only 34% of their MRI scans were considered appropriate vs 58% of those ordered by other specialties. On the other hand, the vast majority of MRIs ordered for headaches, 83%, were deemed appropriate. ([Emery, 2013](#)) This study casts doubt on the value of post-op spinal imaging for patients with sciatica, because it could not distinguish those with a favorable clinical outcome from those with persistent symptoms. Disk herniation was visible in 35% of patients with a favorable outcome and in 33% with

an unfavorable outcome, and nerve root compression was present in 24% of those with a favorable outcome and in 26% of those with an unfavorable outcome. They concluded that the MRI scan does not have any discriminatory power at all. Irrelevant findings have the potential to frighten patients and initiate cascades of unnecessary testing or intervention, with occasional risks. The study showed that neither a herniated disk nor the presence of scar tissue on MRI was associated with patient outcome, but these findings may lead to unnecessary further imaging and surgery. ([el Barzouhi, 2013](#)) A *JAMA* article on worsening trends for low back treatment found that there was an escalation in the use of MRI or CT, from 7.2% in 1999 to 11.3% in 2010, while imaging in the acute care setting provides neither clinical nor psychological benefit to patients with routine back pain. The general feeling among physicians was that patients may equate getting MRIs with being synonymous with good medical care, which could drive doctors to try to improve patient satisfaction. ([Mafi, 2013](#))

Indications for imaging -- Magnetic resonance imaging:

- Thoracic spine trauma: with neurological deficit
- Lumbar spine trauma: trauma, neurological deficit
- Lumbar spine trauma: seat belt (chance) fracture (If focal, radicular findings or other neurologic deficit)
- Uncomplicated low back pain, suspicion of cancer, infection, other “red flags”
- Uncomplicated low back pain, with radiculopathy, after at least 1 month conservative therapy, sooner if severe or progressive neurologic deficit.
- Uncomplicated low back pain, prior lumbar surgery
- Uncomplicated low back pain, cauda equina syndrome
- Myelopathy (neurological deficit related to the spinal cord), traumatic
- Myelopathy, painful
- Myelopathy, sudden onset
- Myelopathy, stepwise progressive
- Myelopathy, slowly progressive
- Myelopathy, infectious disease patient
- Myelopathy, oncology patient

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)**