

# Health Decisions, Inc.

506 Winchester Dr.

Celina, TX 75009

P 972-800-0641

F 888-349-9735

## Notice of Independent Review Decision

**[Date notice sent to all parties]:** June 19, 2013

### **IRO CASE #:**

### **DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:**

Magnetic Resonance Imaging of the Lumbar Spine without contrast as an Outpatient. X-rays of the Lumbar Spine, with Flexion and Extension Views, as an Outpatient.

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

This physician is Board Certified in Anesthesiology and also specializes in Pain Management with over 6 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:**

04-22-13: Evaluation

05-02-13: UR performed

05-02-13: UR performed

05-15-13: UR performed

05-15-13: UR performed

### **PATIENT CLINICAL HISTORY [SUMMARY]:**

Evaluation for low back, right buttock and thigh pain. Usual pain level was 5/10 and interferes only with some daily activities. It was reported that the claimant is a male who sustained an injury to his lumbar spine on xx/xx/xx when he sustained a right torsional injury. He was initially treated. Previous treatments included Chiropractic therapy: Response-unchanged, Over-the-Counter medication: Aspirin (effectiveness: fair), Acetaminophen (effectiveness: fair), Prescription medication: Etodolac (effectiveness: fair), TENS: Response-unchanged, and Physical therapy:

Response-unchanged. It was also noted previous imaging of the lumbar spine indicated a right paracentral disc protrusion. The claimant had successfully completed physical therapy and was able to have normal function and was subsequently evaluated by a Designated Doctor and found to be at clinical MMI on March 31, 2010 with a 5% impairment rating. The claimant's back pain has become intolerant even though he has continued to perform most of his duties. He has had frequent pain stemming from the back with right buttock, right posterior thigh approximating down to the proximal aspect of the knee. On physical examination, noted his gait to be narrow-based and myelopathic in appearance. He had palpatory tenderness in the midline of the lumbosacral spine and had pain and tenderness down at the region of the PSIS. There was some tenderness over the SI joints, but there was equally some tenderness stemming into the right gluteal region. He had normal motion of the hip, knee, and ankle without deformity. His range of motion observed indicated flexion to approximately 15 degrees. He had some reported pain extending of the right buttock and right SI region. He had some axial pain with extension of lateral bending maneuvers; however, this range of motion was grossly intact. There was some reproduction of his buttock pain with seated leg raise. There was reproduction of his buttock pain with straight leg raise to about 60 degrees. Provocative SI joint testing also revealed tenderness with Yeoman's test as well as iliac compression. His FABER'S test was negative bilaterally. His reflexes were intact at the knee and intact to the left ankle. There was a slight decrease in the right ankle reflex. Sensory exam was intact. Strength was 5/5 in the lower extremities. Heel and toes rise without difficulty. Assessment: Lumbar Sprain/Strain. Recommendations: Because of suspicion of lumbar radicular pain syndrome secondary to differential diagnosis with that of chronic sacroiliac dysfunction, an updated MRI of the lumbar spine was recommended to further assess his neural elements. Flexion-extension x-rays were also recommended.

May 2, 2013, performed a UR for treatment request of MRI of the Lumbar Spine without contrast as an Outpatient. Rationale for Denial: At this time the request for an MRI is recommended for noncertification as being not medically reasonable or necessary. There does not appear to be any significant change in the claimant's condition. There is no evidence for acute neurologic or orthopedic impairment or anything that indicates any acute compressive symptomatology.

May 2, 2013, performed a UR for treatment request of X-rays of the Lumbar Spine, with Flexion and Extension Views, as an Outpatient. Rationale for Denial: Medical records indicate that the claimant's symptoms are essentially the same as they had been for several years. There is no indication of any need for any type of surgical intervention. There is no evidence of acute neurologic or orthopedic impairment on any specific functional impairment. There is no indication of any instability. At this time, the request for x-rays of the lumbar spine with flexion and extension views is recommended for noncertification as being not medically reasonable or necessary.

May 15, 2013, performed a UR for treatment request of MRI of the Lumbar Spine without contrast as an Outpatient. Rationale for Denial: The Official Disability

Guidelines state that MRI of the lumbar spine is indicated for uncomplicated low back pain with radiculopathy after at least one month of conservative treatment or sooner if severe progressive neurologic deficit was noted. The physical examination documented decreased Achilles reflex; however, muscle strength and sensation were noted to be normal in the lower extremities. This does not indicate a severe neurologic compromise. It was not noted if the neurologic symptoms were progressive in nature. Additionally, one month of conservative treatment including medications, physical therapy, or a home-based exercise program was not documented in the provided medical records. Based on these factors, the reconsideration request for magnetic resonance imaging of the lumbar spine without contrast as an outpatient is not medically necessary.

May 15, 2013, performed a UR for treatment request of X-rays of the Lumbar Spine, with Flexion and Extension Views, as an Outpatient. Rationale for Denial: The Official Disability Guidelines state that plain film X-rays are indicated in cases of lumbar spine trauma or in uncomplicated low back pain when there is suspicion of cancer, infection, osteoporosis when the individual is over 70, in cases of myelopathy, or to evaluate the status of a fusion surgery. The medical records provided do not indicate signs of significant neurologic compromise. No recent trauma to the lumbar spine was documented. The physical examination did not indicate the presence of signs consistent of myelopathy. Based on these factors, the reconsideration request for X-rays of the lumbar spine with flexion and extension views as an outpatient is not medically necessary.

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

Based on the claimant's history, the request for repeat MRI of the lumbar spine as an outpatient is not medically necessary at this time, nor is the request for X-rays of the lumbar spine with flexion and extension views as an outpatient. ODG state that MRI of the lumbar spine is indicated for uncomplicated low back pain with radiculopathy after at least one month of conservative treatment or sooner if severe progressive neurologic deficit was noted. ODG also states Flexion/Extension studies for spinal instability, may be a criteria prior to fusion, for example in evaluating symptomatic spondylolisthesis when there is consideration for surgery. Physical examination documented decreased Achilles reflex; however, muscle strength and sensation were noted to be normal in the lower extremities. Therefore, there is no evidence of neurologic compromise. Furthermore, there is no significant change or progression of the patient's neurologic symptoms. Additionally, there is no documentation of the failed conservative therapy, indication of instability or need for surgical intervention. Based on these factors, the reconsideration request for Magnetic Resonance Imaging of the Lumbar Spine without contrast as an Outpatient and X-rays of the Lumbar Spine, with Flexion and Extension Views, as an Outpatient are not medically necessary.

PER ODG:

MRI's (magnetic	Recommended for indications below. MRI's are test of choice for patients with prior
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resonance imaging)	<p>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). (<a href="#">Bigos, 1999</a>) (<a href="#">Mullin, 2000</a>) (<a href="#">ACR, 2000</a>) (<a href="#">AAN, 1994</a>) (<a href="#">Aetna, 2004</a>) (<a href="#">Airaksinen, 2006</a>) (<a href="#">Chou, 2007</a>)</p> <p>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. (<a href="#">Seidenwurm, 2000</a>) 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. (<a href="#">Jarvik-JAMA, 2003</a>) In addition, the sensitivities of the only significant MRI parameters, disc height narrowing and annular tears, are poor, and these findings alone are of limited clinical importance. (<a href="#">Videman, 2003</a>) 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. (<a href="#">Carragee, 2004</a>)</p> <p>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%. (<a href="#">Kinkade, 2007</a>) Baseline MRI findings do not predict future low back pain. (<a href="#">Borenstein, 2001</a>) 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. (<a href="#">Carragee, 2006</a>) MRI abnormalities do not predict poor outcomes after conservative care for chronic low back pain patients. (<a href="#">Kleinstück, 2006</a>) 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. (<a href="#">Shekelle, 2008</a>) 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. (<a href="#">Chou-Lancet, 2009</a>) 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. (<a href="#">Devo, 2009</a>) As an alternative to MRI, a pain assessment tool named Standardized 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. (<a href="#">Scholz, 2009</a>) 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. (<a href="#">Pham, 2009</a>) Primary care physicians are making a significant amount of inappropriate referrals for CT and MRI, according to new research published in the <i>Journal of the American College of Radiology</i>. 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. (<a href="#">Lehnert, 2010</a>) Degenerative changes in the thoracic spine on MRI were observed in approximately half of the subjects with no symptoms in this study.</p>
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([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](#)) ([Sigmundsson, 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](#)<sup>TM</sup>. 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](#))

**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"

	<ul style="list-style-type: none"> <li>- Uncomplicated low back pain, with radiculopathy, after at least 1 month conservative therapy, sooner if severe or progressive neurologic deficit.</li> <li>- Uncomplicated low back pain, prior lumbar surgery</li> <li>- Uncomplicated low back pain, cauda equina syndrome</li> <li>- Myelopathy (neurological deficit related to the spinal cord), traumatic</li> <li>- Myelopathy, painful</li> <li>- Myelopathy, sudden onset</li> <li>- Myelopathy, stepwise progressive</li> <li>- Myelopathy, slowly progressive</li> <li>- Myelopathy, infectious disease patient</li> <li>- Myelopathy, oncology patient</li> </ul>
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Flexion/extension imaging studies	Not recommended as a primary criteria for range of motion. An inclinometer is the preferred device for obtaining accurate, reproducible measurements. See <a href="#">Range of motion</a> (ROM); <a href="#">Flexibility</a> . For spinal instability, may be a criteria prior to fusion, for example in evaluating symptomatic spondylolisthesis when there is consideration for surgery. See <a href="#">Fusion</a> (spinal).
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Radiography (x-rays)	<p>Not recommend routine x-rays in the absence of red flags. (See indications list below.) Lumbar spine radiography should not be recommended in patients with low back pain in the absence of red flags for serious spinal pathology, even if the pain has persisted for at least 6 weeks. However, some providers feel it “may” be appropriate when the physician believes it would aid in patient expectations and management. The theory is that this reassurance may lessen <a href="#">fear avoidance</a> regarding <a href="#">return to normal</a> activities and <a href="#">exercise</a>, but this has not been proven. (<a href="#">Ash, 2008</a>) Indiscriminant imaging may result in false positive findings that are not the source of painful symptoms and do not warrant surgery. A history that includes the key features of serious causes will detect all patients requiring imaging. (<a href="#">Kendrick, 2001</a>) (<a href="#">Bigos, 1999</a>) (<a href="#">Seidenwurm, 2000</a>) (<a href="#">Gilbert, 2004</a>) (<a href="#">Gilbert2, 2004</a>) (<a href="#">Yelland, 2004</a>) (<a href="#">Airaksinen, 2006</a>) (<a href="#">Chou, 2007</a>) According to the American College of Radiology, “It is now clear from previous studies that uncomplicated acute low back pain is a benign, self-limited condition that does not warrant any imaging studies.” (<a href="#">ACR, 2000</a>) A Recent quality study concludes that MRI is no better than x-rays in management of low back pain, if the cost benefit analysis includes all the treatment that continues after the more sensitive MRI reveals the usual insignificant disc bulges and herniations. (<a href="#">Jarvik-JAMA, 2003</a>) The new proposed HEDIS (Health plan Employer Data Information Set) report card on the use of imaging for low back is scheduled to go into effect on Jan 1, 2005. This new standard is the first one in which the issue is over utilization. In young and middle-aged adults, with new episodes of mechanical LBP, without any indication of comorbid complications, the new standard assumes that there is no indication for imaging. (<a href="#">HEDIS, 2004</a>) The new ACP/APS guideline as compared to the old AHCPR guideline is similarly cautious about the use of plain x-ray imaging, but now more strongly supported by the availability of randomized trials showing no benefit for early x-ray imaging. (<a href="#">Shekelle, 2008</a>) 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. (<a href="#">Martin, 2008</a>) 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. (<a href="#">Chou-Lancet, 2009</a>) 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 patients have severe progressive neurologic impairments or signs or symptoms indicating a serious or</p>
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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 recommendation to avoid early imaging for low back pain was included in the National Physicians Alliance's list of Top 5 Health Care Activities for Which Less Is More. ([Srinivas, 2012](#)) See also [ACR Appropriateness Criteria](#)<sup>TM</sup>. See also [Flexion/extension imaging studies](#).

**Indications for imaging -- Plain X-rays:**

- Thoracic spine trauma: severe trauma, pain, no neurological deficit
- Thoracic spine trauma: with neurological deficit
- Lumbar spine trauma (a serious bodily injury): pain, tenderness
- Lumbar spine trauma: trauma, neurological deficit
- Lumbar spine trauma: seat belt (chance) fracture
- Uncomplicated low back pain, trauma, steroids, osteoporosis, over 70
- Uncomplicated low back pain, suspicion of cancer, infection
- Myelopathy (neurological deficit related to the spinal cord), traumatic
- Myelopathy, painful
- Myelopathy, sudden onset
- Myelopathy, infectious disease patient
- Myelopathy, oncology patient
- Post-surgery: evaluate status of fusion

**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)**