

# Icon Medical Solutions, Inc.

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## Notice of Independent Review Decision

**DATE:** October 28, 2013

**IRO CASE #:**

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

EMG Left Upper Extremity 95885, NCV Left Upper Extremity 95911, EMG Right Upper Extremity 95885, NCV Right Upper Extremity 95911

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

The reviewer is a licensed 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:

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:**

12/06/12: Office Visit  
12/06/12, 12/13/12, 12/19/12, 12/26/12, 01/03/13: Physician Work Activity Status Report  
12/13/12, 01/03/13: Progress Note  
12/14/12: Therapy Notes  
12/14/12, 12/26/12, 01/03/13, 01/05/13, 01/08/13, 01/22/13, 02/05/13, 02/19/13, 03/12/13, 03/26/13, 04/09/13, 04/23/13, 05/16/13, 05/21/13, 05/30/13, 06/03/13, 06/20/13, 06/27/13, 07/18/13, 08/13/13, 09/10/13: Texas Workers' Compensation Work Status Report  
12/31/12, 01/07/13: Therapy Appointment Detail  
01/28/13: MRI Cervical Spine without Contrast report  
02/15/13: Peer Review  
03/12/13: Progress Notes  
04/01/13: Report of Medical Evaluation  
05/01/13: Neurological Consultation  
05/16/13: Consultation for Determination of Maximum Medical Improvement/Impairment Rating

05/22/13: MRI of the Right Shoulder without Contrast report  
05/28/13: Required Medical Evaluation  
06/26/13: Request for Physical Therapy  
06/27/13, 08/05/13: Office Visit  
07/08/13: Physical Therapy Plan of Care/Statement of Necessity  
07/08/13: Physical Therapy Evaluation  
07/09/13: Request for Authorization  
07/18/13: Patient Referral and Intake Form  
07/18/13: Physician Progress  
07/25/13: Therapy Treatment Plan  
07/25/13: Physical Therapy Evaluation  
07/26/13: Physical Performance Exam  
07/30/13: Precertification Request  
08/06/13, 08/08/13, 08/09/13, 08/12/13, 08/14/13, 08/16/13, 08/20/13, 08/21/13,  
08/22/13, 08/27/13, 08/29/13, 08/30/13, 09/03/13: Daily Progress and Therapy  
Notes  
08/13/13: Preauthorization Request  
08/16/13: UR performed  
08/22/13: Office Visit  
08/22/13: Appeal Request  
08/28/13: Report of Medical Evaluation  
08/30/13: UR performed

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

The claimant is a female who was injured on xx/xx/xx.

12/14/12: The claimant was evaluated. She had limited cervical range of motion. Bilateral shoulder/elbow flexion strength was 4/5.

12/31/12: The claimant was evaluated. It was noted that she had been working with duty restrictions. She had been taking medications and had noted improvement. She was more comfortable with scheduled PT and using the ice pack treatments/point relief. On exam, she had thoracic/cervical muscular tenderness. Normal gait. No Waddell's sign. Good toe/heel walk. No lateral shift. She had equal DTRs. Sensation was intact. Motor strength was 5/5. She was to attend therapy.

01/28/13: MRI of the Cervical Spine without Contrast report. IMPRESSION: At C4-C5, there is a central to slightly right paracentral focal 3-4 mm soft tissue disc protrusion which narrows the subarachnoid space barely contacting but not effacing the cervical cord. Minimal right greater than left foraminal narrowing is noted. The posterior elements appear intact. At C3-C4 and C5-C6, there is a 2-mm central focal soft tissue disc protrusion without significant canal or foraminal narrowing. The posterior elements appear intact.

02/15/13: The claimant was evaluated who noted that no future treatment was medically necessary or indicated per ODG for the compensable injuries as they had resolved at that time.

04/01/13: The claimant was evaluated who determined that she had clinical evidence of a cervicothoracic spine injury without the presence of radiculopathy or loss of motion segment integrity. She was assigned a whole person impairment of 5% due to this condition. He noted that she showed no objective sensory deficit and no objective motor deficit of the cervical spine or upper extremities and the lumbar spine or lower extremities. The date of maximum medical improvement was 03/06/13.

05/01/13: The claimant was evaluated for head pain, neck pain, and right arm pain. It was noted that she received five sessions of physical therapy at Concentra and five sessions of physical therapy at Baylor, on her own account, because of workers' comp issues. Her last therapy session noted was in March. She complained of neck pain and right parascapular pain and pain that radiated into the right upper arm, sometimes all the way down to her right hand and fingers. She had paresthesias. She could not fasten her bra. On physical exam, her strength in the left upper extremity and bilateral lower extremities was 5/5. The right upper extremity was somewhat difficult to evaluate because of her current degree of pain which did not allow her to give full effort. It was rated 4/5 at the biceps, triceps, wrist extensors and flexors and 5/5 in the hand intrinsics. There seemed to be a problem with abduction, internal rotation, and external rotation of the right shoulder and lift off, but predominantly of abduction with right AC tenderness and jumping sign on the right AC. No scapular winging. Mid cervical spinous process tenderness associated with increased tone of paravertebral muscles. Axial compression test reproduces paresthesias in the upper arm. Lhermitte's sign was negative. Hoffman's sign was negative. Sensory exam seemed to indicate a decreased light touch and pinprick sensation along the lateral upper arm (deltoid area). No atrophy noted. No paravertebral muscle atrophy or paravertebral sensory loss. Heel-to-shin normal. Rapid alternating movement normal. Rebound negative. No abnormal reflexes. Pulses 1+ throughout. No clonus or Babinski. No long tract signs. No pronation or drift. IMPRESSION: Post-traumatic cervical spine intervertebral disc herniation. RECOMMENDATIONS: Electrical studies of the upper extremities. May recommend epidural steroid injection. Orthopedic evaluation for right shoulder.

05/22/13: MRI of the Right Shoulder without Contrast report interpreted. IMPRESSION: Minimal diffuse rotator cuff tendinosis is noted. There is no definite evidence for partial or full-thickness rotator cuff tear. Minimal AC joint arthrosis produces minimal effacement and impingement of the musculotendinous junction of the supraspinatus tendon.

05/28/13: The claimant was evaluated. On exam, she had tenderness in the paravertebral muscles of the right and left side of the neck, more to the right side. There was tenderness to palpation along the trapezius and suprascapular muscles on the right shoulder. ROM in the neck was limited. She had limited range of motion of the right shoulder, typical of an adhesive capsulitis or a frozen shoulder. She had weakness in the right arm in all planes. She had decreased sensation in the upper lateral aspect of her right arm. There was no numbness in

the fingers. Reflexes in the biceps and triceps were very brisk bilaterally. She was diagnosed with cervical sprain/straight and back contusion.

06/27/13: The claimant was evaluated. On exam, she has pain on cervical range of motion. She had right sided paresthesias more than left. Negative Spurling's to the right and left, 20 degrees flexion. Left-sided weakness with a mild drop arm. Negative finger escape test. Negative Lhermitte's. MRI of the cervical spine dated 01/25/13 revealed protrusion at C4-C5 and C5-C6. She was advised that there was nothing that can be done since does not operate on the C-Spine. She was referred for spinal referral.

07/18/13: The claimant was evaluated for right shoulder and neck pain. On exam, she had limited range of motion in the right shoulder. She was given a prescription for Flexeril and referred to Advantage for FCE and rehab.

07/25/13: Physical Therapy Evaluation from Healthcare Systems notes that the claimant was to receive therapy services 3 times per week x 4 weeks.

08/05/13: The claimant was reevaluated for adhesive capsulitis of the right shoulder and right shoulder bursitis. She complained of weakness, numbness, and tingling. On exam, there was tenderness of the right bicipital groove. She had subscapularis weakness and pain with cross-body adduction on the right. Hawkin's test was negative. Right shoulder MRI demonstrated rotator cuff tendinosis. No focal full-thickness tear present. She elected to undergo a cortisone injection into the right shoulder. She was to attend physical therapy and then follow up.

08/16/13: UR performed. CRITERIA USED IN ANALYSIS: The history and documentation do not objectively support the request for bilateral electrodiagnostic studies for evaluation for possible cervical radiculopathy involving the right arm. The claimant has already had an MRI and it is not clear how this study is likely to change her future course of evaluation and treatment. The medical necessity of this request has not been clearly demonstrated.

08/22/13: The claimant was evaluated for complains of neck pain, right upper extremity pain, weakness, and lack of shoulder range of motion. She noted that she had numbness in the index, middle, and ring finger bilaterally, but it was worse on the right than on the left. She stated that a Medrol Dose Pack was not helpful. She had not had an epidural steroid injection. Her medications included cyclobenzaprine and Norco. On physical exam, her gait was normal. Romberg was normal. Upper extremity strength testing showed on the left 5/5 deltoid, biceps, triceps, wrist extensor, and grip. Muscle groups 4+/5, wrist flexion 4/5, interosseous, on the right deltoid 3/5, biceps 4-/5, triceps 4/5, wrist extensor 5/5, wrist flexor 4+/5, grip 4\_/5, and interosseous 4/5. She had decreased sensation in the index, middle, and ring finger bilaterally but more so on the right than the left. She had decreased sensation to light touch in all aspects of the forearm and lateral aspect of the arm on the right, only on the left is intact, other than the index, middle, and ring finger. She had trace DTRs of the brachioradialis and

biceps, 1+ of the triceps bilaterally. She had normal Hoffman's bilaterally. Neck range of motion is about 50% limited in terms of flexion and extension, lateral bending and rotation. Shoulder range of motion is limited at 80 degrees of elevation. X-rays showed really a lack of degenerative spurs in her cervical spine without evidence of listhesis. MRI showed a disc herniation at C4-C5 causing stenosis of her cervical spine, more so on the right. The disc herniation was right paracentral and contacting the spinal cord but not displacing it. noted that he believed that she had a frozen shoulder likely caused by radicular pain from the C4-C5 disc herniation. He was to set her up for an epidural steroid injection and transforaminal C4-C5 on the right. She was to return after the injection. If she had temporarily relief of her pain, she would be a candidate for ACDF at C4-C5. She was to resume physical therapy.

08/28/13: The claimant was evaluated. Her symptoms involving her right shoulder and right upper extremity had remained stable. She indicated that they had not improved but also had not particularly worsened. Her primary complaint was that of pain, which was intermittently severe at 9/10 and seldom less than moderate at 7/10. EXTENT: "This is a very difficult, but evolving set of circumstances demonstrable in this examinee. It is complicated because some of the most significant interventions are in progress and I do not have records of them. For example, she is receiving recommended physical therapy three times per week on an extended basis, and this appears to be improving all of her symptoms slowly. An EMG was recommended by the neurologist, and it was felt that this was needed to direct further intervention; the EMG has not been performed to date. The examinee saw a spine specialist but I have no records from this. She has received some injections and additional cervical spine injection are being considered, pending the evaluation of the spine specialist. Based on the recommendation by the neurologist and spine specialist and the treatment she is receiving now with physical therapy, and it is in my medical opinion that the disputed conditions are related to her injury."

08/30/13: UR performed. CRITERIA USED IN ANALYSIS: The claimant has complaints of pain in the right arm radiating from the upper back. The examination shows weakness in the right arm. There is consideration of possible radiculopathy, but the symptoms and findings on examination are not entirely consistent with a radicular pattern. EMG/NCS of the right arm is certified. There is no indication for EMG/NCS of the left arm. Sometimes the non-affected side is done for comparison, but the comparisons can be made within the same arm or against lab normal values. I was unable to speak with the treating provider for modification, this request is noncertified. Based on the clinical information submitted for this review and using the evidence-based peer-reviewed guidelines referenced above, this request for an APPEAL – Is EMG Right Upper extremity 95885/APPEAL EMG Left Upper Extremity 9855/appeal NCV Left Upper Extremity 94911/APPEAL NCV Right Upper Extremity 95911 are not certified.

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

The previous adverse decisions are overturned. This female has a history of a work injury in xx/xxxx. Initially she had neck pain and bilateral arm weakness that appeared to resolve and she was given 5% Impairment Rating and MMI on 03/06/13 per Her pain did not respond to physical therapy as per the May 2013 evaluation In May 2013, she had neck pain with right arm weakness/radiating pain and this has been persistent on subsequent exams. There has been some question of left-sided arm and hand numbness on her subsequent exams since May 2013. The claimant's MRI was reviewed as showing C4-C5 HNP with some cord contact with some concern for C4-C5 ACDF needed if her symptoms persisted. The claimant's history and exam are concerning for persistent radicular complaints that are bilateral but worse on the right. Given the persistent nature of her radicular complaints, an EMG/NCV would be helpful to exclude other sources for her arm symptoms. The claimant has weakness that warrants surgical consideration if there is a strong sense that her cervical disc bulges are to blame. The bilateral EMG/NCVs will help complete the clinical picture in this claimant and assist with treatment options. Therefore, the request for EMG Left Upper Extremity 95885, NCV Left Upper Extremity 95911, EMG Right Upper Extremity 95885, NCV Right Upper Extremity 95911 is medically necessary.

**ODG:**

<p>Electrodiagnostic studies (EDS)</p>	<p>See also <a href="#">Nerve conduction studies</a> (NCS) and <a href="#">Electromyography</a> (EMG). Electrodiagnostic studies should be performed by appropriately trained Physical Medicine and Rehabilitation or Neurology physicians. For more information and references, see the <a href="#">Carpal Tunnel Syndrome Chapter</a>. Below are the Minimum Standards from that chapter.</p> <p>Minimum Standards for electrodiagnostic studies: The American Association of Neuromuscular &amp; Electrodiagnostic Medicine (AANEM) recommends the following minimum standards:</p> <ol style="list-style-type: none"> <li>(1) EDX testing should be medically indicated.</li> <li>(2) Testing should be performed using EDX equipment that provides assessment of all parameters of the recorded signals. Studies performed with devices designed only for "screening purposes" rather than diagnosis are not acceptable.</li> <li>(3) The number of tests performed should be the minimum needed to establish an accurate diagnosis.</li> <li>(4) NCSs (Nerve conduction studies) should be either (a) performed directly by a physician or (b) performed by a trained individual under the direct supervision of a physician. Direct supervision means that the physician is in close physical proximity to the EDX laboratory while testing is underway, is immediately available to provide the trained individual with assistance and direction, and is responsible for selecting the appropriate NCSs to be performed.</li> <li>(5) EMGs (Electromyography - needle not surface) must be performed by a physician specially trained in electrodiagnostic medicine, as these tests are simultaneously performed and interpreted.</li> <li>(6) It is appropriate for only 1 attending physician to perform or supervise all of the components of the electrodiagnostic testing (e.g., history taking, physical evaluation, supervision and/or performance of the electrodiagnostic test, and interpretation) for a given patient and for all the testing to occur on the same date of service. The reporting of NCS and EMG study results should be integrated into a unifying diagnostic impression.</li> <li>(7) In contrast, dissociation of NCS and EMG results into separate reports is inappropriate unless specifically explained by the physician. Performance and/or interpretation of NCSs separately from that of the needle EMG component of the test should clearly be the exception (e.g. when testing an acute nerve injury) rather than an established practice pattern for a given practitioner. (<a href="#">AANEM, 2009</a>)</li> </ol>
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<p>Electromyography (EMG)</p>	<p>Recommended (needle, not surface) as an option in selected cases. The American Association of Electrodiagnostic Medicine conducted a review on electrodiagnosis in relation to cervical radiculopathy and concluded that the test was moderately sensitive (50%-71%) and highly specific (65%-85%). (<a href="#">AAEM, 1999</a>) EMG findings may not be predictive of surgical outcome in cervical surgery, and patients may still benefit from surgery even in the absence of EMG findings of nerve root impingement. This is in stark contrast to the lumbar spine where EMG findings have been shown to be highly correlative with symptoms.</p> <p><i>Positive diagnosis of radiculopathy:</i> Requires the identification of neurogenic abnormalities in two or more muscles that share the same nerve root innervation but differ in their peripheral nerve supply.</p> <p><i>Timing:</i> Timing is important as nerve root compression will reflect as positive if active changes are occurring. Changes of denervation develop within the first to third week after compression (fibrillations and positive sharp waves develop first in the paraspinals at 7-10 days and in the limb muscles at 2-3 weeks), and reinnervation is found at about 3-6 months</p> <p><i>Acute findings:</i> Identification of fibrillation potentials in denervated muscles with normal motor unit action potentials (usually within 6 months of symptoms: may disappear within 6 weeks in the paraspinals and persist for up to 1-2 years in distal limbs).</p> <p><i>Chronic findings:</i> Findings of motor unit action potentials with increased duration and phases that represent reinnervation. With time these become broad, large and polyphasic and may persist for years.</p> <p><i>Anatomy:</i> The test primarily evaluates ventral (anterior) root function (motor) and may be negative if there is dorsal root compression (sensory) only. Only C4-8 and T1 in the neck region have limb representation that can be tested electrodiagnostically. The anatomic basis for this lies in the fact that the cervical nerve roots have a motor and a sensory component. It is possible to impinge the sensory component with a herniated disc or bone spur and not affect the motor component. As a result, the patient may report radicular pain that correlates to the MRI without having EMG evidence of motor loss.</p> <p><i>Paraspinal fibrillation potentials:</i> May be seen in normal individuals and are nonspecific for etiology. The presence of these alone is insufficient to make a diagnosis of radiculopathy and they may be absent when there is a diagnosis of radiculopathy secondary to sampling error, timing, or because they were spared. They may support a diagnosis of radiculopathy when corresponding abnormalities are present in the limb muscles.</p> <p><i>Indications when particularly helpful:</i> EMG may be helpful for patients with double crush phenomenon, in particular, when there is evidence of possible metabolic pathology such as neuropathy secondary to diabetes or thyroid disease, or evidence of peripheral compression such as carpal tunnel syndrome.</p> <p><i>H-reflex:</i> Technically difficult to perform in the upper extremity but can be derived from the median nerve. The test is not specific for etiology and may be difficult to obtain in obese patients or those older than 60 years of age. (<a href="#">Negrin, 1991</a>) (<a href="#">Alrawi, 2006</a>) (<a href="#">Ashkan, 2002</a>) (<a href="#">Nardin, 1999</a>) (<a href="#">Tsao, 2007</a>) See <a href="#">Discectomy-laminectomy-laminoplasty</a>. (Surface EMG and F-wave tests are not very specific and therefore are not recommended. For more information on surface EMG, see the <a href="#">Low Back Chapter</a>.)</p> <p>While cervical electrodiagnostic studies are not necessary to demonstrate a cervical radiculopathy, they have been suggested to confirm a brachial plexus abnormality or some problem other than a cervical radiculopathy, but these studies can result in unnecessary over treatment. (<a href="#">Plastaras, 2011</a>) (<a href="#">Lo, 2011</a>) (<a href="#">Fuglsang-Frederiksen, 2011</a>)</p>
<p>Nerve conduction studies (NCS)</p>	<p>Not recommended to demonstrate radiculopathy if radiculopathy has already been clearly identified by EMG and obvious clinical signs, but recommended if the EMG is not clearly radiculopathy or clearly negative, or to differentiate radiculopathy from other neuropathies or non-neuropathic processes if other diagnoses may be likely based on the clinical exam. There is minimal justification for performing</p>

	<p>nerve conduction studies when a patient is already presumed to have symptoms on the basis of radiculopathy. (<a href="#">Utah, 2006</a>) (<a href="#">Lin, 2013</a>) While cervical electrodiagnostic studies are not necessary to demonstrate a cervical radiculopathy, they have been suggested to confirm a brachial plexus abnormality, diabetic neuropathy, or some problem other than a cervical radiculopathy, with caution that these studies can result in unnecessary over treatment. (<a href="#">Emad, 2010</a>) (<a href="#">Plastaras, 2011</a>) (<a href="#">Lo, 2011</a>) (<a href="#">Fuglsang-Frederiksen, 2011</a>) See also the <a href="#">Shoulder Chapter</a>, where nerve conduction studies are recommended for the diagnosis of TOS (thoracic outlet syndrome). Also see the <a href="#">Carpal Tunnel Syndrome Chapter</a> for more details on NCS. Studies have not shown portable nerve conduction devices to be effective.</p>
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**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)**