

CASEREVIEW

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Notice of Independent Review Decision

DATE OF REVIEW: January 4, 2012

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:

Repeat EMG/NCV R UE

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

This physician is Board Certified by American Board of Orthopedic Surgeons with over 40 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 or not medical necessity exists for each of the health care services in dispute.

INFORMATION PROVIDED TO THE IRO FOR REVIEW:

07/12/11: Operative Report by

07/28/11: Follow-up evaluation with OPA for MD

08/03/11: Follow-up evaluation with MD

08/04/11: Sports Medicine & Rehabilitation Plan of Care by OTR

08/09/11, 08/12/11, 08/16/11, 08/18/11, 08/22/11, 08/23/11, 08/25/11, 08/29/11,
08/30/11: Sports Medicine & Rehabilitation Daily Notes
08/15/11: Electrodiagnostic Study Report by MD
09/12/11: MRI of the right elbow and forearm interpreted by MD
10/14/11: 3T MRI of the right upper extremity interpreted by MD
11/09/11: Follow-up evaluation with MD for MD
12/08/11: UR performed by MD
12/19/11: UR performed by MD

PATIENT CLINICAL HISTORY [SUMMARY]:

The claimant is a male whose right elbow was lacerated by broken glass of a machine on xx/xx/xx. The laceration lead to an injury to the ulnar nerve which was felt to be approximately 80% in the cubital tunnel region. He was admitted to Hospital on xx/xx/xx and discharged on xx/xx/xx.

On xx/xx/xx, an operative report by Postoperative diagnosis: 1. Traumatic laceration, medial aspect, right elbow. 2. Traumatic arthrotomy, right elbow. 3. Laceration of right ulnar nerve at the elbow. Procedures: 1. Irrigation and debridement of skin, subcutaneous tissue, and fascia, traumatic laceration, right elbow. 2. Arthrotomy and debridement of right elbow joint. 3. Repair of right ulnar nerve at the elbow using microscope. 4. Anterior subcutaneous transposition of the ulnar nerve at the elbow. 5. Primary closure of traumatic laceration, right elbow, 10 cm intermediate.

On July 28, 2011, the claimant had a follow-up evaluation with OPA for MD who noted the claimant arrived in a long arm posterior splint which was removed. His incision was clean and dry with no signs of infection. The claimant reported numbness and tingling to the 4th and 5th digits and numbness and tingling along the ulnar nerve distribution. He was able to extend all digits and make a fist with some difficulty, as well as flex and extend his wrist joint. The claimant's sutures were removed and he was placed back into the long arm posterior splint.

On August 3, 2011, the claimant had a follow-up evaluation with MD who noted that he was very stiff in the elbow and forearm. The claimant had intact sensation in the majority of the ulnar nerve distribution. He had sensation along the radial and ulnar border of the ring finger and intact but diminished sensation along the radial and ulnar border of the small finger. He had absent sensation in the dorsal sensory distribution of the ulnar nerve on the ulnar border of the hand. He had intact motor function in the interossei muscles of the hand and the FDP tendon to the middle, ring, and small fingers. Froment test was negative. Dr. Sen opined that it was quite remarkable that the claimant did not have a greater motor deficit at the present time. The claimant was referred to Dr. for a baseline EMG/NCS so they could monitor the progress of the nerve recovery. The claimant was also sent to occupational therapy.

On August 15, 2011, EMG/NCS of the right upper extremity was performed by MD. Impression: Abnormal Study. 1. The patient has evidence of a right ulnar neuropathy with the area of injury most likely being at or near the cubital tunnel. Despite the

severity of the patient's laceration, he does have good responses in the ulnar studies. 2. No evidence of a Martin-Gruber anastomosis. 3. No evidence of a right median mononeuropathy. 4. No evidence of a left ulnar neuropathy. 5. No evidence of right-sided brachial plexopathy or cervical radiculopathy. Clinical Impression: Right ulnar neuropathy related to a laceration in the cubital tunnel. The patient does have evidence of some acute denervation; however, he does have well preserved axon function on nerve conduction testing done today.

On September 15, 2011, an MRI of the right elbow and forearm. Impression: 1. Focal area of dilation at the site of anastomosis of the ulnar nerve posterior to the medial malleolus. It has heterogeneous signal with predominant increase in T2-weighted high signal. But with diffuse tensor imaging, there is close to normal diffusion at this site and hence this is likely representative of ulnar nerve regeneration and less likely demyelination. 2. Minimal adjacent scar tissue seen at the posterior medial malleolus/cubital tunnel region. 3. No significant muscle wasting or edema. 4. Normal appearance of the residual ulnar nerve beyond the graft site.

On October 14, 2011, a 3T MRI of the right upper extremity. Impression: 1. Focal area of dilation at the site of anastomosis of the ulnar nerve posterior to the medial malleolus. It has heterogeneous signal with predominant increase in T2-weighted high signal. But with diffuse tensor imaging, there is close to normal diffusion at this site and hence this is likely representative of ulnar nerve regeneration and less likely demyelination. 2. Minimal adjacent scar tissue seen at the posterior medial malleolus/cubital tunnel region. 3. No significant muscle wasting or edema. 4. Normal appearance of the residual ulnar nerve beyond the graft site.

On November 9, 2011, the claimant had a follow-up evaluation with MD for Milan Sen, MD. It was reported that the claimant was 4 months postop with no significant complaints or problems. His pain was significantly improved and he denied any problems with deformities. The claimant had been continuing with his physical therapy. On physical examination he had positive Tinel's to the level of the wrist with sensation intact over the ulnar nerve distribution of his right hand. Two-point discrimination was approximately 6 to 7 mm. He had good interosseus function and flexor digitorum profundus function as well. He had regained significant strength in the right upper extremity and had full range of motion at the elbow, wrist, and hand. A repeat EMG at the 6 month postoperative point was recommended.

On December 8, 2011, MD performed a UR on the claimant. Rationale for Denial: The claimant has recently had an electrodiagnostic studies obtained which does show function of the ulnar nerve which has been repaired. Objectively the claimant is making improvement in strength and sensation. At this time a repeated electrodiagnostic studies with the claimant making notable improvement on physical examination findings do not appear to be medically indicated at this time. If the claimant was not progressing then proceeding with a repeated study may be indicated; however, since there is clear progression on objective physical examination findings, the need for repeating electrodiagnostic studies does not appear to be medically indicated at this time.

On December 19, 2011, MD performed a UR on the claimant. Rationale for Denial: On 11/09/11 Dr. noted no significant complaints and improvement regarding the subjective findings per Dr. It is unclear what further electrodiagnosis would provide and the further care of this claimant as he is making functional improvement with no significant complaints. Further repeat electrodiagnostic is not indicated and appropriate.

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

The previous decisions have been upheld. There is no indication that further EMG/NCV testing would show anything unusual or would be of any benefit in the care or treatment of the claimant. The most recent evaluation on 11/09/11 indicated improvement in subjective findings and reported that the claimant had no significant complaints. Without a worsening of neurological symptoms, a repeat EMG/NCV is not warranted.

ODG:

<p>Tests for cubital tunnel syndrome (ulnar nerve entrapment)</p>	<p>Under study. One test for cubital tunnel syndrome, ulnar motor nerve conduction velocity at the elbow, is reported to have high specificity and low sensitivity. Insufficient data exists to allow firm evidence-based conclusions regarding the effectiveness of any tests for cubital tunnel syndrome, as the evidence base is small and heterogeneous. Diagnosis may be made by symptoms. The elbow is the most common site of compression of the ulnar nerve. Cubital tunnel syndrome is the second most common compressive neuropathy (after carpal tunnel syndrome). Cubital tunnel syndrome affects men 3-8 times as often as women. Affected patients often experience numbness and tingling along the little finger and the ulnar half of the ring finger. This discomfort often is accompanied by weakness of grip. An electromyography (EMG) is not essential when the diagnosis of cubital tunnel syndrome is obvious on clinical examination, as a false test result can be misleading. (AHRQ, 2002) (Lo, 2005) (Robertson, 2005) See also Surgery for cubital tunnel syndrome. The incidence of ulnar nerve entrapment at the elbow (overall 0.8%) is associated with one job related risk factor (holding a tool in position, repetitively, with an odds ratio of 4.1), plus obesity (4.3) and other upper-limb work-related musculoskeletal disorders, especially medial epicondylitis and other nerve entrapment disorders (cervicobrachial neuralgia and carpal and radial tunnel syndromes). (Descatha, 2004) Cubital tunnel syndrome (entrapment of the ulnar nerve at the elbow) is the second most common peripheral nerve entrapment syndrome in the human body, after carpal tunnel syndrome. Patients who are affected with cubital tunnel syndrome often experience numbness and tingling along the little finger and ulnar half of the ring finger, usually accompanied by weakness of grip. This frequently occurs when the patient rests upon or flexes the elbow. When appropriately diagnosed, this condition may be treated by both conservative and operative means. (Cutts, 2007)</p>
<p>Electrodiagnostic studies (EDS)</p>	<p>Recommended as an option after closed fractures of distal radius & ulna if necessary to assess nerve injury. (Bienek, 2006) Electrodiagnostic testing includes testing for nerve conduction velocities (NCV), and possibly the addition of electromyography (EMG). For more information, see the Carpal Tunnel Syndrome chapter. Among patients seeking treatment for hand and wrist disorders generally, workers' compensation patients underwent more procedures and more doctor visits than patients using standard health insurance. WC patients underwent surgery at a higher rate -- 44% compared to 35% -- and electrodiagnostic testing -- 26% compared to 15%. (Day, 2010)</p>
<p>Electrodiagnostic testing (EMG/NCS)</p>	<p>Recommended EMG or NCS, depending on indications. Electromyography (EMG) and Nerve Conduction Studies (NCS) are generally accepted, well-established and widely used for localizing the source of the neurological symptoms and establishing the diagnosis of</p>

focal nerve entrapments, such as carpal tunnel syndrome or radiculopathy, which may contribute to or coexist with CRPS II (causalgia), when testing is performed by appropriately trained neurologists or physical medicine and rehabilitation physicians (improperly performed testing by other providers often gives inconclusive results). As CRPS II occurs after partial injury to a nerve, the diagnosis of the initial nerve injury can be made by electrodiagnostic studies. The later development of sympathetically mediated symptomatology however, has no pathognomonic pattern of abnormality on EMG/NCS. ([Colorado, 2002](#)) EMG and NCS are separate studies and should not necessarily be done together. In the [Carpal Tunnel Syndrome Chapter](#) it says that NCS is recommended in patients with clinical signs of CTS who may be candidates for surgery, but EMG is not generally necessary. In the [Low Back Chapter](#) and Neck Chapter, it says NCS is not recommended, but EMG is recommended as an option (needle, not surface) to obtain unequivocal evidence of radiculopathy, after 1-month conservative therapy, but EMG's are not necessary if radiculopathy is already clinically obvious. Electrodiagnostic studies should be performed by appropriately trained Physical Medicine and Rehabilitation or Neurology physicians. See also [Monofilament testing](#). For more information and references, see the [Carpal Tunnel Syndrome Chapter](#). Below are the Minimum Standards from that chapter.

Minimum Standards for electrodiagnostic studies: The American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) recommends the following minimum standards:

- (1) EDX testing should be medically indicated.
- (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.
- (3) The number of tests performed should be the minimum needed to establish an accurate diagnosis.
- (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.
- (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.
- (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.
- (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. ([AANEM, 2009](#))

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)**