

# I-Resolutions Inc.

An Independent Review Organization  
8836 Colberg Dr.  
Austin, TX 78749  
Phone: (512) 782-4415  
Fax: (512) 233-5110  
Email: manager@i-resolutions.com

## NOTICE OF INDEPENDENT REVIEW DECISION

Nov/30/2009

### IRO CASE #:

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

EMG/NCS Right Upper Extremity

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

MD, Board Certified in Physical Medicine and Rehabilitation  
Board Certified in Electrodiagnostic Medicine

### REVIEW OUTCOME:

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

Upheld (Agree)

Overturned (Disagree)

Partially Overturned (Agree in part/Disagree in part)

### INFORMATION PROVIDED TO THE IRO FOR REVIEW

ODG Guidelines and Treatment Guidelines  
Adverse Determination Letters, 10/13/09, 11/4/09  
Utilization Review Referral, 10/8/09  
Orthopaedic Surgery Group, MD, 9/29/09, 8/18/09, 7/2/08,  
10/20/09  
OTR, Hand/Upper Extremity Evaluation, 10/27/09

### PATIENT CLINICAL HISTORY SUMMARY

This is a female who was injured on xx/xx/xx. She underwent an arthroscopic repair of the triangular fibrocartilage. She was felt to be at MMI per Dr. in July 2008. There were no complaints of CTS-like symptoms at that time. She subsequently described symptoms of hand and elbow pain. Dr. noted negative Tinel and Phalen signs at the CTS in his 8/18/09 note. He subsequently described a positive Tinel and Phalen sign in his 9/29/09 note. Her symptoms were pain and tingling and worse at night. Her provider recommended occupational therapy, but it is unclear from the records if this therapy has been completed or not. The current request is for EMG/NCS Right Upper Extremity.

### ANALYSIS AND EXPLANATION OF THE DECISION INCLUDING CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION

This patient was placed at MMI more than one year ago. According to the records, she did not develop hand pain until the Summer of 2009. She had no paresthesias or Tinel or Phalen signs until September 2009. The symptoms of hand pain and paresthesias are vague

according to the records. There was no description in the records if the symptoms are in median innervated or ulnar innervated digits. In addition, it is unclear from the records if surgery is planned for this patient.

The ODG recognizes the role for conduction studies, but not for the EMG except in certain cases. The ODG would advise proceeding with the conduction studies prior to CTS surgery in Workers Comp patients. However, the ODG does not advise the studies solely for the purpose of confirming the presence of CTS without planned surgery. This request does not meet the ODG Guidelines and Treatment Guidelines. No explanation has been provided for why the ODG should not be followed in this case. The reviewer finds that medical necessity does not exist at this time for EMG/NCS Right Upper Extremity.

#### Electrodiagnostic studies (EDS)

Recommended in patients with clinical signs of CTS who may be candidates for surgery. Electrodiagnostic testing includes testing for nerve conduction velocities (NCV), but the addition of electromyography (EMG) is not generally necessary. See also Nerve conduction studies (NCS) and Electromyography (EMG). In general, carpal tunnel syndrome should be proved by positive findings on clinical examination and should be supported by nerve conduction tests before surgery is undertaken. Mild CTS with normal electrodiagnostic studies (EDS) exists, but moderate or severe CTS with normal EDS is very rare. Positive EDS in asymptomatic individuals is not CTS. Studies have not shown portable nerve conduction devices to be effective. Appropriate electrodiagnostic studies (EDS) include nerve conduction studies (NCS). In more difficult cases, electromyography (EMG) may be helpful. NCS and EMG may confirm the diagnosis of carpal tunnel syndrome but may be normal in early or mild cases of CTS. If the EDS are negative, tests may be repeated later in the course of treatment. (Various references listed under "Detection of Neurologic Abnormalities") (Smith, 2002) (Jablecki, 2002) (AHRQ, 2003) (Podnar, 2005) (Lew, 2005) (Schrijver, 2005) (Sheu, 2006) Poor overlap between various screening procedures warns against the use of electrodiagnostic findings alone without also considering the symptom presentation. (Homan, 1999) A large cohort study showed that over one third of patients undergoing CTR may have had an inappropriate electrodiagnostic workup before the surgery. (Storm, 2005) Despite the fact that electrodiagnostic testing is considered by many to be the "gold standard" for the diagnosis of CTS, some studies have suggested that it not be a requirement. According to one systematic review, "in cases of clear-cut clinical CTS, electrodiagnosis is not warranted either as a diagnostic test, where clinical symptoms are well defined, or as a predictive indicator of surgical outcome, but it may still be useful in cases where the clinical diagnosis is not clear." (Jordan, 2002) Regarding preplacement nerve testing for CTS, not hiring workers with abnormal post-offer preplacement median nerve tests to reduce costs of work-related CTS is not a cost-effective strategy for employers. (Franzblau, 2004) NC-stat technology cannot be recommended for screening or diagnosis of CTS in an industrial population. (Katz, 2006) For more information see NC-stat nerve conduction studies. There is concordance between the results of EDS and the initial diagnostic hypothesis only 40% of the time, confirming the usefulness of EDS. (Cocito, 2006) In using demographic and clinical data to identify the clinical pattern that predicts the diagnosis of CTS, the best pattern associated with the diagnosis was the presence of paresthesias or pain in at least 2 of the first 4 digits in association with one of the following: female gender, symptoms worsening at night or on awakening, a BMI  $\geq 30$ , thenar atrophy, or other sign (Tinel's, Phalen's, or Reversed Phalen's signs).

However, the clinical picture alone in the workers' compensation case, without neurophysiologic studies, may not be sufficient to correctly predict the diagnosis of CTS. (Gomes, 2006) This study used the CTS-6 assessment tool along with a comprehensive history and physical examination in diagnosing CTS, and concluded that in unambiguous cases of CTS, electrodiagnostic testing would not be warranted if its sole purpose is to confirm the diagnosis of CTS. As such, its value in this situation is not only to confirm a physician's suspicion of CTS, but also to quantify and stratify the severity of the condition.

(Graham, 2008) See also Multiple extremity testing. Note: ODG recommends that NCS should be done to support the diagnosis of CTS prior to surgery in workers' compensation cases. If an individual has appropriate responses to treatment (i.e. injections, modification of activities, meds) but still has symptoms with normal NCS, surgery may be appropriate on a case-by-case basis and reasonable documentation by the treating physician

Protocols for electrodiagnostic studies: The American Association of Electrodiagnostic Medicine, American Academy of Neurology, and the American Academy of Physical Medicine and Rehabilitation have jointly published their practice parameter for electrodiagnostic studies in carpal tunnel syndrome. In patients with suspected CTS, the following EDX studies are recommended

(1) Perform a median sensory NCS across the wrist with a conduction distance of 13 to 14 cm. If the result is abnormal, compare the result of the median sensory NCS to the result of a sensory NCS of one other adjacent sensory nerve in the symptomatic limb

(2) If the initial median sensory NCS across the wrist has a conduction distance greater than 8 cm and the result is normal, one of the following additional studies is recommended

(a) Comparison of median sensory or mixed nerve conduction across the wrist over a short (7 to 8 cm) conduction distance with ulnar sensory nerve conduction across the wrist over the same short (7 to 8 cm) conduction distance, or

(b) Comparison of median sensory conduction across the wrist with radial or ulnar sensory conduction across the wrist in the same limb, or

(c) Comparison of median sensory or mixed nerve conduction through the carpal tunnel to sensory or mixed NCSs of proximal (forearm) or distal (digit) segments of the median nerve in the same limb. (Jablecki, 2002) (Chang, 2006)

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)

#### Electromyography (EMG)

Recommended only in cases where diagnosis is difficult with nerve conduction studies (NCS). In more difficult cases, needle electromyography (EMG) may be helpful as part of electrodiagnostic studies which include nerve conduction studies (NCS). There are situations in which both electromyography and nerve conduction studies need to be accomplished, such as when defining whether neuropathy is of demyelinating or axonal type. Seldom is it required that both studies be accomplished in straightforward condition of median and ulnar neuropathies or peroneal nerve compression neuropathies. Electromyographic examinations should be done by physicians. (Utah, 2006) Surface EMG is not recommended. See Electrodiagnostic studies.

#### Nerve conduction studies (NCS)

Recommended in patients with clinical signs of CTS who may be candidates for surgery. Appropriate electrodiagnostic studies (EDS) include nerve conduction studies (NCS). Carpal tunnel syndrome must be proved by positive findings on clinical examination and should be supported by nerve conduction tests before surgery is undertaken. Mild CTS with normal electrodiagnostic studies (EDS) exists, but moderate or severe CTS with normal EDS is very rare. Positive EDS in asymptomatic individuals is not CTS. There is minimal justification for performing nerve conduction studies when a patient is presumed to have symptoms on the basis of radiculopathy. Nerve conduction studies should be done by a qualified technician working directly under the supervision of a physician. (Utah, 2006) See Electrodiagnostic studies; and Portable nerve conduction devices

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

ACOEM-AMERICA 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)