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**Notice of Independent Review Decision**

**Amended August 12<sup>th</sup>, 2010**

**DATE OF REVIEW:** 08/11/2010

**IRO CASE #:**

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

Electromyography and Nerve Conduction

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

This case was reviewed by a Texas licensed MD, specializing in Orthopedic Surgery. The physician advisor has the following additional qualifications, if applicable:

ABMS Orthopaedic Surgery  
 ABMS Orthopaedic Surgery

**REVIEW OUTCOME:**

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

Upheld

Health Care Service(s) in Dispute	CPT Codes	Date of Service(s)	Outcome of Independent Review
Electromyography and Nerve Conduction	95900, 95860	-	Upheld

**INFORMATION PROVIDED TO THE IRO FOR REVIEW:**

No	Document Type	Provider or Sender	Page Count	Service Start Date	Service End Date
1	IRO Carrier/URA Records		17		
2	IRO Requestor Records		15		
3	Referral	Utilization	1	07/23/2010	07/23/2010
4	Diagnostic Test	Diagnostic Neuro Imaging	5	04/17/2009	04/17/2009
5	IRO Request	, MD	11	07/21/2010	07/22/2010
6	Office Visit Report	, MD	9	01/29/2010	07/15/2010
7	Initial Request	Neurological Consultants	1	07/02/2010	07/02/2010
8	Initial Denial Letter	Prium	5	07/08/2010	07/15/2010
9	Initial Denial Letter		6	07/08/2010	07/15/2010
10	Archive		38	07/28/2010	07/28/2010

**PATIENT CLINICAL HISTORY (SUMMARY):**

The patient is a female with a history of right wrist pain with given a DOI of xx/xx/xx. She underwent electrodiagnostic studies on 04/17/2009 revealing carpal tunnel syndrome to the right wrist. She underwent carpal tunnel release on 12/11/2009. She suffered a post operative infection. She had transient

improvement in symptoms; however, now complains that symptoms are unrelieved and unaffected. She has a positive Tinel's sign, abductor pollicis brevis weakness and finger tingling. A request to preauthorize EMG/NC study of both upper extremities has been submitted. The request was considered and denied; it was reconsidered and denied. An IRO appeal has been submitted.

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

Is the performance of EMG/NC study of both upper extremities medically necessary and appropriate? No. The applicable passage from the ODG, 2010, carpal tunnel syndrome chapter is cited above. The history and physical examination of this patient do not include information that would suggest that there is an element of radiculopathy present. There are no cervical symptoms. The primary complaint is pain in the right wrist and finger tingling. The specific fingers involved are not identified. Residual adductor pollicis brevis weakness and thenar eminence atrophy are documented. Medical necessity for EMG/NC study of both upper extremities has not been established. Prior denials of this request to preauthorize such were appropriate.

**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](#)) ([Jablecki2, 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.

**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)

