

**IRO REVIEWER REPORT TEMPLATE -WC**

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**INDEPENDENT REVIEWERS OF TEXAS, INC.**

4100 West Eldorado Pkwy' Suite 100 -373 . McKinney, Texas 75070

Office 469-218-1010 . Toll Free Fax 469-374-6852 e-mail: independentreviewers@hotmail.com

Notice of Independent Review Decision

**[Date notice sent to all parties]:**

**08/01/2014**

**IRO CASE #:**

**DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE: bilateral upper extremity EMG**

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

Board Certified Orthopedic Surgeon

**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.

**PATIENT CLINICAL HISTORY [SUMMARY]:**

The patient is a female who reported an injury to her upper extremities when she was involved in a motor vehicle accident on xx/xx/xx. The clinical note dated xx/xx/xx indicates the patient had been thrown around quite a bit despite being restrained during the MVA. The patient reported an onset of low back pain. Upon exam, tenderness was identified at the upper trapezoid areas bilaterally. Moderate spasms were also identified. The patient was able to demonstrate full active range of motion in both shoulders. The MRI of the cervical spine dated 02/14/14 revealed spondylosis most prominently at C4-5, C5-6, and C6-7. No spinal canal stenosis was identified. Moderate right and mild left foraminal narrowing was identified at C4-5 and C5-6. Moderate to severe bilateral foraminal narrowing was identified at C6-7. The clinical note dated 03/18/14 indicates the patient having previously undergone physical therapy. The patient continued with significant pain. The patient stated the pain awakens her and seems to be worse at night. The patient was recommended for a cervical epidural steroid injection. The clinical note dated 06/03/14 indicates the patient continuing with cervical region pain. The patient continued to be recommended for a cervical epidural steroid injection at C5-6. The patient was also

recommended for an EMG of the upper extremities. The peer review dated 06/16/14 indicates the patient continuing with cervical region pain. The note indicates the patient being recommended to wean off of Tizanidine at that time.

The utilization review dated 06/11/14 resulted in a denial as the imaging studies revealed no significant spinal canal stenosis.

The utilization review dated 07/08/14 resulted in a denial as no active radiculopathy was identified at any level in the cervical spine.

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

The documentation indicates the patient complaining of cervical region pain. An EMG of the upper extremities is indicated for patients who have demonstrated significant neurologic deficits. No information was submitted regarding the patient's radiculopathy in the upper extremities. The MRI revealed no significant spinal canal stenosis or indications of neurocompressive findings. Additionally, no active radiculopathy had been identified in the clinical notes supporting the need for electrodiagnostic studies. Given the information submitted for review, it does not appear that an EMG would be appropriate for this patient at this time. As such, it is the opinion of this reviewer that the request for an EMG of the bilateral upper extremities is not recommended as medically necessary.

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

**MEDICAL JUDGEMENT, CLINICAL EXPERIENCE, AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS**

**ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES**

#### Electromyography (EMG)

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%). (AAEM, 1999) 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.

Positive diagnosis of radiculopathy: 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.

Timing: 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

Acute findings: 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).

Chronic findings: 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.

Anatomy: 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.

Paraspinal fibrillation potentials: 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.

Indications when particularly helpful: 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.

H-reflex: 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.

(Negrin, 1991) (Alrawi, 2006) (Ashkan, 2002) (Nardin, 1999) (Tsao, 2007) See Discectomy-laminectomy-laminoplasty. (Surface EMG and F-wave tests are not very specific and therefore are not recommended. For more information on surface EMG, see the Low Back Chapter.)

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. (Plastaras, 2011) (Lo, 2011) (Fuglsang-Frederiksen, 2011)