

Notice of Independent Review Decision

DATE OF REVIEW: AUGUST 31, 2010

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

EMG/NCS Bilateral UE

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

This reviewer is licensed by Texas Board of Physical Medicine and Rehabilitation with 14 years of experience.

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)

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

On February 29, 2009, the claimant was evaluated by, M.D. The claimant had complaints of painful parasthesia along the entire trapezius and into the shoulders. Impression: Cervical radiculitis, Cervicalgia and unspecified idiopathic peripheral neuropathy.

On March 15, 2010, the claimant was evaluated by, P.A. The claimant complained of aching and spasms radiating into the left shoulder and left upper arm. She had a history of an ESI after which she developed hemiparesis to the left side. Impression: Neck pain and paresthesia. Dr. ordered an MRI of the Cervical Spine.

On March 25, 2010, an MRI of the Cervical Spine was performed. Impression: 1. Posterior disc osteophyte complex at C4-5 and C5-6 efface the ventral subarachnoid space. 2. Broad-based disk protrusion asymmetric leftward at C5-6 projects into the region of the left C5-6 neural foramen and caused mild left foraminal stenosis, impingement of the exiting left C6 nerve root in not entirely excluded. 3. Tiny central disk protrusion C6-7 as interpreted by , M.D.

On May 19, 2010, the claimant was evaluated by, M.D., an orthopedic surgeon. She complained of weakness in the wrist extensor function and wrist flexor function. She had atrophy of the left triceps and well as weakness in the left deltoid region. Impression: Cervical disk protrusions especially at the C5-6 area, C6-7 with spondylotic changes also at the C4-5 area. The disk osteophyte complex effaces the ventral subarachnoid space at C4-5 and C5-6.

On May 19, 2010, x-rays were taken of the cervical spine. Impression: Plain x-rays, AP and flexion/extension reveal spondylotic disease especially at the C5-6 area as interpreted by, M.D

On May 19, 2010, x-rays were taken of the lumbar spine. Impression: 1. Minimal curvature convex to the left and minimal to mild degenerative changes. 2. Satisfactory alignment maintained on flexion and extension views as interpreted by Dr..

On June 23, 2010, the claimant was re-evaluated by, M.D. Impression: Cervical protrusions with weakness that has been present.

On July 19, 2010, a CT/Myelogram was performed of the cervical spine. Impression: 1. Slight degenerative changes most pronounced at C5-C6 with both slight anterior and slight posterior spurring. Slight spurring is also seen about the posterior superior aspect of C4. 2. Straightening of normal lordotic curvature of cervical spine suggest muscle spasm and/or soft tissue injury. 3. CT scan of the cervical spine post Myelogram procedures is otherwise within normal limits as interpreted by, M.D.

On July 21, 2010, the claimant was re-evaluated by, M.D. Impression: Post laminectomy syndrome with nerve pain with progressive left sided weakness. Dr. recommended and EMG to assess if this is a complication with chronic changes or whether this is an acute phenomenon.

On July 29, 2010, , M.D. performed a utilization review on the claimant, Dr. denied the request for a bilateral upper extremity EMG/NCS. Rationale: "I was unable to reach the provider for peer-to-peer discussion." The injured worker's weakness symptoms seem to be on the left, so I do question the necessity of a bilateral study.

On August 6, 2010, M.D. performed a utilization review on the claimant, Dr. denied the request for a bilateral upper extremity EMG/NCS. Rationale: Three attempts were made to speak with the requesting physician, but these were unsuccessful. It is unknown if the documented findings are of an acute or chronic nature. In the absence of clinical information supporting that there has been any progressive symptoms or clinical change, the electromyographic studies cannot be approved at the present time.

PATIENT CLINICAL HISTORY:

The claimant is female with complaints of neck pain. She was injured on xx/xx/xx when she was lifting a 1.5 liter bottle of Ozarka. She subsequently had disk protrusions at C5-6 and C6-7 that was treated with a cervical block. Unfortunately, post block, she had a hematoma that required emergent surgical decompression posteriorly. Subsequently, approximately 5 months down the road, apparently there was a spinous process fracture that required additional surgery and removal.

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

I agree in part/disagree in part with past decisions to deny request for bilateral upper extremity EMG/NCV. I agree with the denial for bilateral upper extremity study. A physician advisor is unable to partially preauthorize a request without agreement from the requesting provider. Since the physician advisor was unable to clarify the case with the requesting

provider, they denied the study all together. In that case there is agreement. I disagree with decisions in the sense that needle EMG/NCS of the left upper extremity is medically reasonable and necessary. Clinical records provided indicate pain, weakness, and atrophy about the left upper extremity and imaging studies of the cervical spine reveal changes to multiple levels with potential nerve root irritation on the left.

ODG neck chapter recommends needle EMG as an option in diagnosis of radiculopathy with differentiation of acute versus chronic findings based on presence of varying abnormal wave forms.

ODG neck chapter does not recommend NCS in regards to symptoms of radiculopathy. ODG low back chapter #7 under electrodiagnostics indicates that the dissociation of NCS and EMG results into separate reports are inappropriate. Despite this conflict of recommendations, it is standard clinical practice to perform NCS with needle EMG to thoroughly assess for various etiologies of symptoms including nerve entrapments and generalized peripheral neuropathy.

Again, needle EMG/NCS of the left upper extremity is medically reasonable and necessary based upon review of the clinical records and in accordance with ODG Guidelines.

Per ODG Guidelines:

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](#).)

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)