5068 West Plano Parkway Suite 122
Plano, Texas 75093
Phone: (972) 931-5100

REVIEW: 06/07/2010

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:

IRO - Bilateral EMG/NCS Upper Extremity

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 Neurological Surgery. The physician advisor has the following additional qualifications, if applicable:

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
IRO - Bilateral EMG/NCS Upper Extremity	95900, 95904, 95861	-	**Upheld**

INFORMATION PROVIDED TO THE IRO FOR REVIEW:

No	Document Type	Provider or Sender	Page Count	Service Start Date	Service End Date
1	IRO Request	TDI	17	05/18/2010	05/18/2010
2	Designated Doctor Report	MD	7	03/09/2010	03/09/2010
3	Diagnostic Test	MRI	2	12/01/2008	12/01/2008
4	Diagnostic Test	Imaging	1	03/18/2010	03/18/2010
5	Office Visit Report	Spine & Pain Center	9	11/30/2009	01/26/2010
6	Office Visit Report	MD	2	04/26/2010	04/26/2010
7	Office Visit Report	Spine Rehab	6	02/22/2010	03/16/2010
8	Office Visit Report		5	11/06/2009	11/06/2009
9	Initial Denial Letter		8	03/25/2010	04/06/2010

PATIENT CLINICAL HISTORY [SUMMARY]:

The patient is a male whose date of injury is xx/xx/xx. Records indicate the patient was xxx and the line backed up and wrapped around his arm and pulled his shoulder. An MRI of the right shoulder dated 03/18/10 reported mild impingement upon the subacromial space and rotator cuff; no partial or full thickness rotator cuff tear; no glenohumeral joint instability. The patient also underwent MRI of the cervical spine on 12/01/09 which reported C5-6 moderate bilateral foraminal stenosis with mild compression of the right C6 nerve root in neural foramen. At C5-6 there is moderate bilateral foraminal stenosis with mild impression upon both exiting C5 nerve roots.

The patient was seen by Dr. on 03/09/10 for a designated doctor examination. On examination the patient is reported to be 5'9" tall and 240 lbs. Head carriage was normal, shoulders were level and equal, there were no deformities noted, and there is no scapular winging. The patient complains of tenderness and spasm of the right trapezius muscle. There was no muscle atrophy of the shoulders bilaterally, shoulder girdle is level, and there is no tenderness to palpation with axial compression. There was tenderness to palpation on the left side of the neck down his left upper extremity and trapezius muscle. The patient complains of paresthesias of the right upper extremity. He has no atrophy of the muscles of the right upper extremity. There is no crepitus with palpation of the supraclavicular fossa, trapezius, shoulder girdle, elbows, wrist or hand. Shoulder stability was within normal limits. Spurling's maneuver was within normal limits. Adson's test was negative. Apprehension test, Neer, Hawkins, and cross body adduction tests were negative. Muscle strength was normal bilaterally. There was decreased range of motion of the right shoulder to 90 degrees on shoulder adduction. Cervical range of motion reported flexion 40, extension 22, lateral flexion right 30 and left 20, rotation right 40 and left 45. There was decreased grip strength of the right compared to left. Dr. diagnosis was aggravation of cervical degenerative disc disease. He opined that although degenerative disc disease is not acute process, the patient aggravated his neck condition when he jerked his neck during the injury. Dr. further opined the patient was able to return to work with restrictions.

Office note dated 03/16/10 by unknown provider reported objective findings with spasms and tenderness in left trapezius, left suboccipital, left lower cervical, left levator scapula, left cervical paraspinal, right trapezius, right suboccipital, right lower cervical, right levator scapula, right cervical paraspinal, right SCM, right deltoid, right rhomboids, and right supraspinatus muscle. The patient reportedly had weakness in right arm as compared to left, but this was not quantified.

A preauthorization request for bilateral EMG/NCS upper extremity was reviewed by Dr. on 03/25/10. Dr. determined the request was not authorized. She noted electromyography may be recommended as option to validate presence of radiculopathy after sufficient physical therapy, but nerve conduction studies are not recommended when patient is presumed to have symptoms on basis of radiculopathy. Dr. noted there was no relative documentation provided to validate the patient has had sufficient number of therapy as well as failure of the patient to respond to conservative measures. Dr noted that a comprehensive neurologic assessment with motor and sensory examination must be conducted, but there was nothing in records which supports this. She noted the latest clinical assessment neither affirms nor negates the presence of pain, numbness and/or paresthesias in dermatomal distribution which is hallmark of radiculopathy. Dr. noted the indications for bilateral EMG/NCV is not clear, and medical necessity of the request is not fully established.

An appeal request for bilateral EMG/NCS upper extremity was reviewed by Dr. on 04/06/10. Dr. determined the request was not authorized. He noted neither the 03/16/10 treatment note by unknown doctor, signature illegible, nor the 03/09/10 examination by designated doctor contained any evidence of neurologic deficits in dermatomal distribution. There was some decrease in grip strength noted, but manual muscle testing as performed by designated doctor was reported as normal. Neither doctor performed pinwheel testing. There was no mention of subjective complaints referable in dermatomal pattern. Dr. concluded that the objective data failed to support the need for further diagnostic testing.

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

Based on the clinical information provided, the request for a bilateral EMG/NCS for the upper extremity is not medically necessary. The patient is noted to have sustained an injury in xx/xx while cleaning and the line he was using caused him to jerk his arm and neck. The MRI of the cervical spine revealed degenerative changes at C4-5 and C5-6, with moderate bilateral foraminal stenosis and mild compression of right C6 nerve root in the neural foramen at C5-6. At C4-5 there is mild bilateral foraminal stenosis with mild impression of both exiting C5 nerve roots. The information submitted for initial utilization review and

subsequent appeal request included no evidence of neurologic deficit in specific myotome or dermatome. There was no evidence of motor weakness, although the patient was noted to have complaints of right versus left upper extremity weakness. Testing by designated doctor reported motor strength to be normal. While the patient is noted to have complaints of some paresthesias, again there was no specific dermatomal distribution identified. Subsequent to reviews, the patient underwent a history and physical on 04/26/10 by Dr.. Dr. reported the patient had positive pain and weakness in bilateral upper extremities, right worse than left, with positive neck pain, minimal muscle spasms, pain on right scapula and weakness on grip and pinch strength on right compared to left. Again, there was no specific distribution identified and no quantification of reported motor weakness. It is unclear if the patient's subjective reports of weakness are secondary to pain or true muscle weakness. Given the current clinical data, medical necessity is not established for the proposed bilateral EMG/NCS for the upper extremity.

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

ODG Neck and Upper Back Chapter, online version

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 reinervation is found at about 3-6 months
Acute findings: Identification of fibrillation potentials in dennervated 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.)

Nerve conduction studies (NCS)

Not recommended. There is minimal justification for performing nerve conduction studies when a patient is presumed to have symptoms on the basis of radiculopathy. (Utah, 2006) See also the Carpal Tunnel Syndrome Chapter for more details on NCS. Studies have not shown portable nerve conduction devices to be effective.

- ☐ **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**
- X **MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS**
- ☐ **MERCY CENTER CONSENSUS CONFERENCE GUIDELINES**
- ☐ **MILLIMAN CARE GUIDELINES**
- X **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)**

TEXAS DEPARTMENT OF INSURANCE COMPLAINT PROCESS: The Texas Department of Insurance requires Independent Review Organizations to be licensed to perform Independent Review in Texas. To contact the Texas Department of Insurance regarding any complaint, you may call or write the Texas Department of Insurance. The telephone number is 1-800-578-4677 or in writing at: Texas Department of Insurance, PO Box 149104 Austin TX, 78714. In accordance with Rule 102.4(h), a copy of this Independent Review Organization (IRO) Decision was sent to the carrier, the requestor and claimant via facsimile or U.S. Postal Service from the office of the IRO on 06/07/2010.