MAXIMUS Federal Services

| Case Number: | CM15-0091312 | | |
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| Date Assigned: | 07/14/2015 | Date of Injury: | 04/17/2013 |
| Decision Date: | 08/11/2015 | UR Denial Date: | 04/20/2015 |
| Priority: | Standard | Application Received: | 05/12/2015 |

## HOW THE IMR FINAL DETERMINATION WAS MADE

MAXIMUS Federal Services sent the complete case file to an expert reviewer. He/she has no affiliation with the employer, employee, providers or the claims administrator. He/she has been in active clinical practice for more than five years and is currently working at least 24 hours a week in active practice. The expert reviewer was selected based on his/her clinical experience, education, background, and expertise in the same or similar specialties that evaluate and/or treat the medical condition and disputed items/Service. He/she is familiar with governing laws and regulations, including the strength of evidence hierarchy that applies to Independent Medical Review determinations.

The Expert Reviewer has the following credentials:
State(s) of Licensure: Iowa, Illinois, Hawaii
Certification(s)/Specialty: Preventive Medicine, Occupational Medicine, Public Health & General Preventive Medicine

## CLINICAL CASE SUMMARY

The expert reviewer developed the following clinical case summary based on a review of the case file, including all medical records:

The injured worker is a 48 year old female who sustained an industrial injury on 04/19/13. Initial complaints and diagnoses are not available. Treatments to date include medications and therapies. Diagnostic studies include MRIs, CT scans, and x-rays. Current complaints include severe left sided neck and left upper extremity pain. Current diagnoses include post-concussive injury, and left brachial plexopathy with associate headaches and double crush symptoms. In a progress note dated 04/16/15 the treating provider reports the plan of care as a brachial plexus Doppler ultrasound and diagnostic somatosensory evoked potential testing of the left upper extremities. The requested treatments include a brachial plexus Doppler ultrasound, a neurology consultation, and diagnostic somatosensory evoked potential testing of the left upper extremities.

## IMR ISSUES, DECISIONS AND RATIONALES

The Final Determination was based on decisions for the disputed items/services set forth below:

**Brachial plexus doppler ultrasound:** Upheld

**Claims Administrator guideline:** The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation Expert panels on Vascular Imaging, Neurologic Imaging and Thoracic Imaging. ACR Appropriateness Criteria imaging in the diagnosis of

thoracic outlet syndrome [online publication]. Reston (VA); American College of Radiology (ACR); 2014. 8 p. [50 references] CR Appropriateness Criteria plexopathy [online publication]. Reston (VA): American College of Radiology (ACR); 2012. 14 p. [57 references].

**MAXIMUS guideline:** The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG) Pain, Ultrasound, therapeutic Shoulder, US diagnostic.

**Decision rationale:** MTUS is silent regarding Brachial plexus doppler ultrasound. ODG states "Recommended as indicated below. The results of a recent review suggest that clinical examination by specialists can rule out the presence of a rotator cuff tear, and that either MRI or ultrasound could equally be used for detection of full-thickness rotator cuff tears, although ultrasound may be better at picking up partial tears. Ultrasound also may be more cost-effective in a specialist hospital setting for identification of full-thickness tears. (Dinnes, 2003) Ultrasound is a highly accurate imaging study for evaluating the integrity of the rotator cuff in shoulders that have undergone an operation. Its accuracy for operatively treated shoulders appears to be comparable with that previously reported for shoulders that had not been operated on. (Prickett, 2003) The rotator cuff and its environment can be imaged in many ways. In the hands of a few skilled sonographers, shoulder ultrasound has achieved remarkable success and accuracy. However, in many cases, radiologists are not equipped with the skill or time to provide this imaging modality to orthopedists. (Newberg, 2000) (Blankstein, 2005) A recent study found that ultrasound correctly identified 103 of 104 complete rotator cuff tears (sensitivity: 0.99--specificity: 0.99--accuracy: 98.7%). Preoperative ultrasound examination of the shoulder permits a reliable diagnosis of complete rotator cuff tears and calcium deposits (calcific tendinitis). The method is less sensitive but sufficiently reliable for the diagnosis of partial rotator cuff tears and pathology of the long biceps tendon. Examiner experience plays an important role in these special cases. (Kayser, 2005) Ultrasonography and magnetic resonance imaging have comparable high accuracy for identifying biceps pathologies and rotator cuff tears, and clinical tests have modest accuracy in both disorders. The choice of which imaging test to perform should be based on the patient's clinical information, cost, and imaging experience of the radiology department. (Ardic, 2006) Ultrasound scan (USS) of the shoulder is an accurate and reliable method of detecting full thickness RCTs, and it can reduce the time from GP referral to definitive diagnosis and management. The diagnostic accuracy of USS compared well with MRI. Clinical assessment alone was unreliable in diagnosing full thickness RCTs. (Miller, 2008) See also Arterial ultrasound TOS testing. Ultrasound guidance for shoulder injections: In the shoulder, conventional anatomical guidance by an experienced clinician is generally adequate. While ultrasound guidance may improve the accuracy of injection to the putative site of pathology in the shoulder, it is not clear that this improves its efficacy. For more information and references, see Steroid injections, Imaging guidance for shoulder injections." Additionally, ODG states "Not recommended. Therapeutic ultrasound is one of the most widely and frequently used electrophysical agents. Despite over 60 years of clinical use, the effectiveness of ultrasound for treating people with pain, musculoskeletal injuries, and soft tissue lesions remains questionable. There is little evidence that active therapeutic ultrasound is more effective than placebo ultrasound for treating people with pain or a range of musculoskeletal injuries or for promoting soft tissue healing. (Robertson, 2001)" ODG pain chapter recommend against the use of therapeutic ultrasound. Additionally, ODG recommends MRI over ultrasound for imaging

purposes. The treating physician has not provided rationale for going against guideline recommendations. As such, the request for Brachial plexus doppler ultrasound is not medically necessary.

**Diagnostic somatosensory evoked potential testing of upper extremity:** Upheld

**Claims Administrator guideline:** The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines, Neck and Upper Back (Acute & Chronic).

**MAXIMUS guideline:** The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation http://emedicine.medscape.com/article/1139393-overview.

**Decision rationale:** MTUS is slinet regarding giagnostic somatosensory evoked potential testing of upper extremity. Medscape states "Somatosensory evoked potentials (SEPs) are generated by stimulation of afferent peripheral nerve fibers by either physiological or electrical means. SEPs were first recorded more than 50 years ago. For an explanation of their physiologic and anatomic basis and description of techniques, see Somatosensory Evoked Potentials: General Principles. In this article, the focus is on the clinical applications of SEPs. SEPs can be recorded after physiological stimuli (eg, muscle stretch). However, electrical stimulation usually is administered to elicit the potential. Typically, a square wave of 0.2- to 2-millisecond duration is delivered to a peripheral nerve by electrodes, usually surface electrodes. For intraoperative monitoring, needle electrodes are used for stimulation since they require smaller currents, which reduce the stimulus artifact. The usual sites for SEP stimulation are the median nerve at the wrist, the common peroneal nerve at the knee, and the posterior tibial nerve. A SEP also may be recorded by stimulating the skin in various dermatomal areas, but the response is much weaker. In mixed peripheral nerves, the threshold for sensory perception is lower than the threshold to elicit movement. For stimulation of mixed peripheral nerves, the stimulating current is adjusted to produce a minimal movement of the joint involved. This stimulation intensity typically is well tolerated by patients. Recording electrodes are placed on the scalp and over the cervical spine. For recording upper extremity SEPs, electrodes are placed over the Erb point. For recording lower extremity SEPs, electrodes are placed over the lumbosacral spine. Waveforms are described in terms of morphology, amplitude, and dispersion. Each laboratory should establish reference values for latencies and interpeak latencies that are based on a patient's age and height. Because limb cooling affects peripheral nerve conduction velocity, minimum skin temperature norms should be established for each laboratory. Responses recorded are classified according to specific latencies. Short-latency SEPs refer to the portion of the SEP waveform that occurs within 25 milliseconds after stimulation of the upper extremity nerves, 40 milliseconds after stimulation of the peroneal nerve, or 50 milliseconds after stimulation of the tibial nerve. Long- latency SEPs refer to the waveforms recorded more than 100 milliseconds following stimulation of these nerves. Middle-latency SEP refers to waveforms that occur between these 2 periods. Mixed nerve stimulation has become the standard for clinical use. Other methods include cutaneous nerve stimulation, dermatomal stimulation (which is more specific than cutaneous nerve stimulation), motor point stimulation, and paraspinal stimulation." The medical documentation provided does not include MRI or EMG to determine causes of

radiuclopathy. The patient does not meet guidelines as outlined above. As such, the request for Diagnostic somatosensory evoked potential testing of upper extremity.

**Neurological consultation:** Upheld

**Claims Administrator guideline:** Decision based on MTUS ACOEM Chapter 8 Neck and Upper Back Complaints Page(s): 166, 171, 180.

**MAXIMUS guideline:** Decision based on MTUS ACOEM Chapter 2 General Approach to Initial Assessment and Documentation Page(s): 33. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG) Pain, Office Visits.

**Decision rationale:** ODG states concerning office visits recommended as determined to be medically necessary. Evaluation and management (E&M) outpatient visits to the offices of medical doctors play a critical role in the proper diagnosis and return to function of an injured worker, and they should be encouraged. The need for a clinical office visit with a health care provider is individualized based upon a review of the patient concerns, signs and symptoms, clinical stability, and reasonable physician judgment. The determination is also based on what medications the patient is taking, since some medicines such as opiates, or medicines such as certain antibiotics, require close monitoring. As patient conditions are extremely varied, a set number of office visits per condition cannot be reasonably established. The determination of necessity for an office visit requires individualized case review and assessment, being ever mindful that the best patient outcomes are achieved with eventual patient independence from the health care system through self-care as soon as clinically feasible. ACOEM states regarding assessments, the content of focused examinations is determined by the presenting complaint and the area(s) and organ system(s) affected. And further writes that covered areas should include Focused regional examination and Neurologic, ophthalmologic, or other specific screening. The treating physician documents this neurological consultation is to evaluate the patient for brachial plexus neurolysis. The treating physician has not provided objective findings to support this diagnosis. As such, the request for Neurological consultation is not medically necessary at this time.