

# True Resolutions Inc.

An Independent Review Organization

835 E. Lamar Blvd. #394

Arlington, TX 76011

Phone: (214) 717-4260

Fax: (214) 276-1904

Email: rm@trueresolutionsinc.com

## NOTICE OF INDEPENDENT REVIEW DECISION

**DATE OF REVIEW:**

Jul/27/2009

**IRO CASE #:**

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

EMG/NCV upper extremities

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

Board Certified in Physical Medicine and Rehabilitation

Subspecialty Board Certified in Pain Management

Subspecialty Board Certified in Electrodiagnostic Medicine

Residency Training PMR and ORTHOPAEDIC SURGERY

**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)

**INFORMATION PROVIDED TO THE IRO FOR REVIEW**

OD Guidelines

Denial Letters 6/25/09 and 7/7/09

Dr. 8/25/08 thru 6/22/09

2/20/06

MRI 6/27/05

Dr. 7/18/08 thru 11/26/08

3/2/09 thru 4/10/09

**PATIENT CLINICAL HISTORY SUMMARY**

This is a xx-year-old man injured in xxxx. His Mri at that time showed cervical stenosis. He apparently had radicular pain and a cervical laminectomy was discussed in 2/06. This was performed, but no date was provided. Most of the notes from Dr. and Dr. described his low back pain and lumbar laminectomy symptoms, but commented upon the prior cervical problem. A progress note from dated 11/10/09 (probably 4/10 and the number was not clear) noted neck pain. Dr. noted in 6/22/09 of pain in the scalp and right arm. He did not localize where the pain was in the right arm. He noted the neurological examination was intact. He wants EMGs and NCV to determine cervical nerve root compression.

## **ANALYSIS AND EXPLANATION OF THE DECISION INCLUDING CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION**

First, nerve conduction studies are not approved for cervical radiculopathy. The study is used to rule out more distal nerve root compressions, such as CTS. The Reviewer is not aware of NCS techniques showing compression in the proximal and upper cervical spine. He is known to have the prior cervical surgery.

### **Cervical**

#### **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.

EMG studies are limited in the cervical paraspinal muscles after prior surgery in the posterior cervical area. The Reviewer is not aware from the records provided what prior cervical surgery was performed, was this a posterior laminectomy or an anterior decompression and fusion. Further, he described a normal neurological exam. EMGs demonstrate motor more than sensory abnormalities. There was description of extremity pain, but not in a specific dermatome to assess this to be a radiculopathy.

#### **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](#).)

The information did not provide a picture of a radiculopathy. This is the normal neurological exam and no specific dermatomal radicular pain pattern. There was the prior cervical surgery. Without more information, the Reviewer cannot justify the electrodiagnostic studies.

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

**ACOEM-AMERICA 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 ERVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)**

**OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)**