

*In recent workers' compensation research, One Call Medical (OCM), the national leader in diagnostic management, found that up to 40 percent of non-qualified or un-credentialed providers performing Electromyography (EMG) and Nerve Conduction Studies (NCS) may deliver inaccurate test results. In this article, we examine the multiple, complex variables that affect EMG & NCS accuracy. Chief among them is the use of providers who are not properly trained to perform these exams. In this News Brief, we analyze two EMG & NCS, which provide clear and compelling evidence of the quality challenges that exist, the costly fallout that can result, and how these issues can be addressed.*

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Electromyography (EMG) and Nerve Conduction Studies (NCS) are invaluable diagnostic tools. When an injured worker sustains a possible neurologic injury, causing symptoms of pain, numbness, tingling, burning, or weakness, EMG and NCS provide the roadmap to locate and evaluate the type and severity of the injury, as well as to rule out other potential medical conditions.

During the performance of an EMG, the examining physician inserts a small needle into the muscle to detect and assess any damage. Muscle activity is evaluated both while the muscle is at rest and during voluntary contraction. During the NCS, mild electrical stimulation is applied directly over the nerve(s) in increasing strength to measure a response from motor and sensory nerves.

Medically Useful EMG and NCS help to determine the right course of treatment, such as whether surgery or physical therapy may be required. EMG and NCS studies that are not medically useful can lead to unnecessary surgery, extended disability, delayed return to work, and overall costly claim outcomes.

### The Question of Quality Providers

**The Facts:** Using a golf analogy, EMG and NCS provider handicaps vary from zero to 40.

Today, there is no barrier to entry in the field of electrodiagnostic medicine. Essentially, any licensed provider is allowed to perform an EMG or NCS. As a result, outcomes vary widely from physician to physician due to training, experience, and the accuracy with which they perform tests.

"If we use a golf analogy, provider handicaps vary from zero to 40," said Dr. John Robinton, Medical Director at One Call Medical. "In this scenario, a professional provider would have a handicap of zero, but patients often visit a doctor who has a handicap of 40 and never realize the doctor is a duffer when

it comes to performing EMGs, and insurance companies do not realize the doctors they're partnering with are performing at unacceptable levels."

**The Facts:** Up to 40 percent of un-credentialed providers who perform EMG and NCS may deliver inaccurate test results.

In workers' compensation, more than half of the EMG and NCS are performed by providers who have not undergone a pre-qualification or credentialing process. Of these non-credentialed providers, up to 40 percent deliver inaccurate or misinterpreted test results. As a result, their tests may not be medically useful in determining the next course of treatment for an injury. There are also multiple, complex variables affecting the accuracy of EMG and NCS outcomes, including proper temperature, appropriate timing for the examination, and many other parameters.

Rather than keep track of physician credentials or accurate test results, workers' compensation payers need a simple turnkey solution to ensure the use of quality providers, properly administered exams, and "medically useful" information.

### A Tale of Two EMGs

**The Facts:** In this case, an inaccurate EMG resulted in a \$2.5 million disability claims.

The clearest, most compelling way to examine today's key testing challenges is to look at an actual patient example. In this case, we'll review two EMG tests—one that was inaccurately performed, and a second test that provided accurate, medically useful information.

**EMG #1:** At work, the patient had "supposedly" sustained a back injury during an un-witnessed fall. The provider who performed the first EMG test was not pre-qualified to perform EMGs, so his credentials and the quality of his reports were not reviewed or confirmed. A historical analysis of this provider's test reports revealed he did the same test on each and every patient—he did not customize his tests according to a patient's affected areas or specific medical needs.

As a result, the provider did not test the clinically affected muscles of this patient. His test results claimed that the patient required back surgery, which was performed, but it did not alleviate the patient's pain. Instead, the back surgery actually made the patient's condition worse.

**EMG #2:** Since the patient still experienced significant pain, a second EMG was performed after the surgery. A One Call Medical provider performed this exam, which means he was rigorously credentialed and pre-qualified in terms of the quality of his medical reports. The second test revealed that the patient actually had a diabetes-related condition, which caused the

pain and which would have not been compensable under workers' compensation.

Due to the initial inaccurate test results and the inappropriate surgery, the worker is now categorized as permanently and completely disabled with a claim projected to cost more than \$2.5 million dollars. Since the workers' compensation insurer had authorized the back surgery, it was liable for the full costs of the claim. In short, this tale of two EMGs exemplifies some of today's key testing challenges:

- Use of a provider who lacked proper training and credentials.
- The wrong muscles were studied.
- Inaccurate test results led to a misguided treatment plan, unnecessary surgery, and a costly permanent disability claim.
- Poor quality of care for the injured worker.

### One Call Medical's EMG & NCS Solution

As a leader in diagnostic management, One Call Medical has identified key strategies to ensure medically useful EMG and NCS. These strategies include:

- **A Network of Quality Providers.** One Call Medical is the only company to establish a network of quality EMG and NCS providers. Using a rigorous credentialing process, it has selected only the best neurologists and physiatrists. Its credentialing process includes a clinical review of sample tests to ensure adherence to Report Standards based upon national guidelines from American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM)

"Of the networks I participate in, only One Call Medical performs a credentialing process to verify qualifications and review sample reports to ensure quality. Passing this credentialing process is a prerequisite to being admitted into the One Call Medical network. Other provider networks only require a provider request to perform EMGs and a signature," said Dr. Robinton.

- **Ongoing Quality Improvement.** Due to complex testing challenges, One Call Medical has developed an ongoing Quality Improvement program. Its Clinical Services team reviews provider reports to ensure continual adherence to national guidelines and proprietary standards. Through continued monitoring, One Call Medical can detect deficiencies and take corrective action to improve outcomes. Network providers are contractually obligated to continue to follow guidelines and standards in order to remain in the network.

"One Call Medical is the only entity that continually reviews

performance to ensure standards are followed on an ongoing basis," said Dr. Robinton.

- **Quality Review.** In many workers' compensation programs, more than half of EMG and NCS are performed by providers who have not undergone a pre-qualification or credentialing process. As a result, One Call Medical offers payers a "Quality Review" of EMG and NCS conducted outside its network. By requesting this free review, the payer obtains an opinion of whether the EMG or NCS was appropriately performed, if the exam is medically useful or not, and the rationale and recommendation(s).

### Real Improvements

One Call Medical offers the only quality delivery model for EMG and NCS in workers' compensation. In addition to improved diagnosis and better care for injured workers, the savings delivered from a quality-driven EMG and NCS program are substantial. To learn more about One Call Medical and its quality-driven EMG and NCS program, please contact these key resources:

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### **About One Call Medical**

One Call Medical, Inc. (OCM), the leading specialized Preferred Provider Organization, offers a nationwide network of fully credentialed high quality facilities and reduced cost for radiology and neurodiagnostic services. Our network includes coverage in all major metropolitan areas across all 50 states. One Call Medical customers realize significant cost savings, receive exceptional scheduling and medical report turnaround services and are confident in knowing that their patients obtain the best quality diagnostic testing in credentialed facilities. Our customers include the nation's leading Workers' Compensation and Group Health insurers, third-party administrators, as well as self-insured employers. More information about One Call Medical can be found at [www.onecallmedical.com](http://www.onecallmedical.com).

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