

# Legislative Analysis



## NERVE CONDUCTION TESTS AND NEEDLE EMG

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**House Bill 4325 as enrolled**  
**Public Act 264 of 2005**

**Sponsor: Rep. Leslie Mortimer**  
**House Committee: Health Policy**  
**Senate Committee: Health Policy**

### Second Analysis (8-25-06)

**BRIEF SUMMARY:** The bill would, with a few exceptions, restrict the performance of needle electromyography (EMG) or the interpretation of nerve conduction tests to licensed physicians.

**FISCAL IMPACT:** Implementation of the proposed scope of practice changes may have a modest fiscal impact for licensing administration of the affected health occupations by the Department of Community Health.

It is unknown what fiscal impact the bill will have on the state of Michigan as a payor of health services for Medicaid participants and for employees. A study of 1998 data nationwide indicated that 6 to 11 percent of electrodiagnostic services were provided by physical therapists. The bill may reduce this rate in Michigan and those services may be administered more often by higher cost providers.

### **THE APPARENT PROBLEM:**

For almost two decades, physicians and physical therapists have been debating the question of whether the performance of needle electromyography (EMG) and interpretation of nerve conduction tests (NCT) belong exclusively within the scope of practice of licensed physicians or if EMGs and NCTs also lie within the scope of practice of specially trained and qualified physical therapists.

Needle EMG (an invasive procedure which involves inserting a thin needle into a muscle to record the muscle's electrical activity) and NCT (which determines how well a nerve's signal travels and if something is impeding the signal) are diagnostic medical tests used by physicians to diagnose a range of neuromuscular disorders and diseases such as carpal tunnel syndrome and Lou Gehrig's disease. Physician groups maintain that physical therapists, in contrast to physicians who diagnose, can treat individuals using a variety of methods and techniques, including electrical stimulation, if they do so under a physician's prescription. Since EMGs and NCTs are used to diagnose and not to "treat" a patient's ailment, they feel physical therapists should no longer be allowed to perform these tests.

Physical therapists, meanwhile, maintain that therapists who have undergone a rigorous academic and clinical training program and who have received national certification by the American Board of Physical Therapy Specialists are capable of performing EMG and

NCT safely and cost effectively, and have done so for decades. Opponents of the attempt to legislatively restrict the performance of these procedures to physicians only point out that according to liability insurance carriers, there has never been a malpractice claim filed against a physical therapist who provided EMG services.

However, since Michigan law appears to allow only licensed physicians to diagnose medical conditions or perform invasive procedures, many believe that the performance of needle EMG and NCT lie solely within the scope of practice of physicians. Physician groups are therefore seeking a legislative answer and have requested that the health code be amended to clearly define who can perform EMGs and NCTs.

### ***THE CONTENT OF THE BILL:***

The bill would amend the Public Health Code (MCL 333.17001 et al.) to restrict the performance of needle electromyography or the interpretation of nerve conduction tests to licensed physicians. Under the bill, only an individual who was licensed as an allopathic physician (M.D.) or osteopathic physician (D.O.) could perform needle electromyography or interpret nerve conduction tests. The bill would also allow a licensed podiatrist or licensed chiropractor to conduct such tests that were within his or her scope of practice. "Electrodiagnostic studies" would mean the testing of neuromuscular functions utilizing nerve conduction tests and needle electromyography. It would not include the use of surface electromyography.

A licensed physical therapist who has been certified by the American Board of Physical Therapy Specialties as an electrophysiologic clinical specialist on the effective date of the bill could perform electrodiagnostic studies that are to be interpreted by a physician if he or she has been performing electrodiagnostic studies in the state on a consistent basis within the five years immediately preceding the bill's effective date. In addition, a licensed physical therapist who has not been certified as an electrophysiologic clinical specialist on the effective date of the bill but who has been performing electrodiagnostic studies within the state on a consistent basis since before May 1, 2001 would be allowed to continue to perform such studies that would be interpreted by a physician as long as he or she became certified by December 31, 2007. "Consistent basis" would mean, at a minimum, an annual average of 10 electrodiagnostic studies each month.

A physician would not be allowed to delegate the performance of a needle EMG to another individual unless that individual was licensed to practice medicine or osteopathic medicine and surgery or was a physical therapist who met the requirements in the bill. However, under the provisions of Section 16215, a physician could delegate the performance of nerve conduction tests to a licensed or unlicensed individual who was otherwise qualified by education, training, or experience if those tests were performed under the direct supervision of a physician.

(The health code does not define the term "under the direct supervision of a physician". However, Part 161 of the code, which pertains to individuals licensed or registered under the Public Health Code, defines "supervision", except as otherwise provided in the code, to mean the overseeing of or participation in the work of another individual by a licensed health professional in circumstances in which all of the following conditions exist:

- The continuous availability of direct communication in person or by radio, telephone, or telecommunication between the supervised individual and the licensed health professional.
- The availability of a licensed health professional on a regularly scheduled basis to review the practice of the supervised individual in the performance of the individual's functions.
- The provision by the licensed supervising health professional of predetermined procedures and drug protocol.)

The bill would not require new or additional third party reimbursement or mandated worker's compensation benefits for services rendered by an individual authorized to conduct electrodiagnostic studies under its provisions.

The bill took effect on March 30, 2006.

MCL 333.17001 et al.

## ***ARGUMENTS:***

### ***For:***

According to physicians' representatives, the practice of medicine continues to be eroded by attempts to expand the scope of practice of ancillary health care professions. Supporters of such efforts believe that allowing allied health professionals to perform procedures historically done only by physicians improves patient access and lowers health care costs. However, physicians believe that these efforts decrease the level of safety and quality of care. In the end, poor patient outcomes increase health care costs and spur malpractice actions.

In regard to the performance of needle electromyography and nerve conduction tests, the results of these tests are used for recommending surgical procedures and to aid in the diagnosis of diseases. Serious risks such as infection, puncturing a blood vessel or vital organ, and entering a contaminated space in the body (such as the bowel) are associated with EMGs and NCTs. In addition, if a test is not performed well, the results give inaccurate information to the physician, thus leading to a wrong or missed diagnosis. Examples provided by the American Academy of Neurology and the American Association of Electrodiagnostic Medicine revealed poor quality patient care as a result of non-physician electromyography that included missed diagnoses of ALS (Lou Gehrig's disease), EMG studies that led to unnecessary surgery, and EMG studies that erroneously suggested carpal tunnel syndrome or other disease states. A misdiagnosis can result in the delay of appropriate treatment which can in turn impact a patient's quality of life.

Many other states have interpreted their laws to place electrodiagnostic services within the scope of practice of physicians only. Since the interpretation of nerve conduction tests results in making a diagnosis and since needle electromyography is an invasive

procedure, only physicians should be allowed to interpret NCTs and perform needle EMGs. It is time that Michigan lawmakers protect the health and well being of citizens and settle the question once and for all by clarifying in the law that the interpretation of nerve conduction tests and the performance of needle EMGs should only be done by physicians.

***Response:***

A previous version of the bill would have required physicians to complete additional training in the performance and interpretation of electrodiagnostic studies that was satisfactory to their respective medical board before being able to perform electromyography or interpret nerve conduction tests. This is important because NCTs and EMGs are very complicated diagnostic tests which should only be performed by trained physicians; a physician may be not qualified to perform these tests if he or she did not receive specialized training.

For example, neurology residents take an additional year of fellowship training in order to become proficient in performing EMGs and to qualify for board certification in performing the studies. According to testimony submitted by the president of the Michigan Neurological Association, "only 6 neurologists and physiatrists out of the 20 in the Department of Neurology at Henry Ford Hospital are permitted to perform" NCTs and needle EMG tests; none of the other 1,000 physicians in the Henry Ford Medical Group are credentialed to perform these tests.

If unqualified physicians are allowed to continue to perform electrodiagnostic studies, or to delegate them to other under-trained assistants and non-medical personnel, the poor outcomes and injuries to patients described above will continue to happen.

***Against:***

This attempt to restrict the performance of an EMG or NCT to physicians is little more than a turf battle and has little to do with patient safety. Physical therapists who perform needle EMGs and NCTs have undergone a rigorous academic and clinical training program and certification from the national American Board of Physical Therapy Specialists, as well as maintaining continuing education requirements. In fact, some physical therapists limit their practices to performing electrodiagnostic studies. Many physicians refer their patients to physical therapists and see the proposed legislation as limiting their choice of qualified providers. Physical therapists have been performing electrodiagnostic studies for decades in Michigan and the Board of Physical Therapy is perfectly capable and qualified to investigate complaints regarding safety or quality issues, if there are any. Reportedly, there have been no malpractice claims filed against Michigan physical therapists regarding performing needle EMGs or NCTs.

Passage of the bill would not increase patient safety, especially since it would allow physicians without specialized training to perform the tests or delegate the performance of the tests to other under-trained personnel. Physical therapists do not currently interpret nerve conduction tests, though those with the appropriate training and credentialing do perform needle EMGs. The bill would, however, make it more difficult for some patients, especially those in rural areas where there is a shortage or absence of neurologists or other trained physicians, to obtain a needle EMG or NCT in a timely

manner. And, since physical therapists are reimbursed at a lower rate than physicians for performing an electrodiagnostic service, insurance costs (and out-of-pocket expenses for the state's uninsured) are sure to increase.

The bill would grandfather in those physical therapists with the appropriate training and credentialing who have been performing these tests within the last five years, and allow certain physical therapists to continue to perform the tests if they obtain credentialing by the end of 2007, but it would close the field to others down the road. This is unfair and unnecessary at a time when the profession as a whole is moving toward requiring a doctoral degree for entry into the profession and when several quality programs exist to train physical therapists to safely perform these tests.

In the absence of documented harm to patients at the hands of Michigan physical therapists, the bill can only be viewed as an attempt by some physicians to "corner the market" so to speak on a procedure that can and has been done safely and with a high degree of quality by specially trained physical therapists.

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