



Electrodiagnostic Services: Pay for Quality

Introduction It is not a coincidence that practices such as the Mayo Clinic (MN), Billings Clinic (MT), and Kaiser Permanente (CA) are delivering high value health care that is less costly, more efficient, and produces better health outcomes.¹ These groups all employ physicians who are well trained to provide quality care. The American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) strongly believes that in order to provide quality electrodiagnostic (EDX) services and reduce the expense of health care, payers should ensure the provider is trained to appropriately perform the necessary services.² The AANEM recommends that payers offer value based (VB) payment models for EDX services to provide quality patient care, ensure timely treatment, and reduce health care costs. A sample payment method is outlined in Table 2 below.

Quality EDX Evaluations Will Result in Savings EDX testing is an important tool in providing an accurate diagnosis. In one review, EDX testing changed the original diagnosis 42% of the time.³ A quality EDX evaluation, performed by a properly trained physician, decreases the number of tests needed to reach a final diagnosis and assures a quick and more accurate diagnosis. This means the necessary treatment interventions are offered in a timely manner, saving healthcare dollars. A normal EDX evaluation often eliminates the need for costly back or carpal tunnel surgery. Fox and colleagues demonstrated the cost savings of utilizing well-trained physicians for EDX evaluations.³ Their study looked at whether an insurer's rule requiring consultation by a physical medicine and rehabilitation (PMR) physician before nonurgent surgical consultation would affect surgery rates. The results showed a 12.1% decrease in total spine care costs and a 25.1% decrease in surgical costs overall, representing a net decrease of more than \$14 million in healthcare costs in 1 year. EDX evaluation was one of the tools utilized by the PMR physicians to determine the need for surgical intervention.⁴

Substandard EDX evaluations, or those that utilize nontraditional devices, can result in unreliable findings and services that need to be repeated, wasting healthcare dollars. Substandard evaluations often have too few tests conducted to accurately diagnose the patient or apply a shot-gun approach and have high testing volumes. A study by Dillingham and colleagues found that neurologists and physiatrists performed a similar number of EDX studies on patients, while other physician groups performed higher numbers.⁵ Nonphysicians performed the lowest number of studies; however, the authors stated that the "less comprehensive examination and testing may lead to failure to distinguish more complex from simple conditions."⁴ Not enough testing therefore likely results in the need for repeat testing. Another study by Dillingham and colleagues further raised concern about untrained providers performing EDX testing and demonstrated the importance of utilizing trained physicians for EDX studies. Polyneuropathy is often seen in diabetes patients, which is a growing segment of the US population. Dillingham's study showed that nonphysician providers identified polyneuropathy at a rate of about one sixth that of physiatrists and neurologists.⁶ Left untreated, neuropathy leads to increased costs for future care.

A study looking at a type of nontraditional machine further supports the use of trained physicians using established methods of EDX testing. Katz found that the machine was "an ineffective method of screening or of diagnosing carpal tunnel syndrome in industrial workers."⁷ Another study found that an automated device with computer generated interpretations produced many false positive results and lacked the specificity necessary for a screening or diagnosis.⁸

Moving Towards Value Based Reimbursement for EDX Services Policymakers and payers must carefully consider the importance of diagnostic accuracy and focus on payment for quality medical care for all patients while protecting healthcare dollars. The most effective way to ensure EDX quality is to reimburse only those providers who have demonstrable training and experience in EDX testing. For EDX providers, quality can be demonstrated via appropriate training in a neurology or PMR residency/fellowship program and certification by a nationally recognized organization. The American Board of Electrodiagnostic Medicine (ABEM) is a certifying organization specifically for physicians interested in EDX medicine. The AANEM also has developed an Electrodiagnostic Laboratory Accreditation Program to identify and acknowledge EDX laboratories for achieving and maintaining the highest level of quality, integrity, and patient safety. Accreditation of an EDX laboratory is a voluntary, peer review process that assesses the expertise of the staff, evaluates the policies and procedures utilized, and ensures the safety of the laboratory and equipment to improve accuracy and reliability of the EDX testing and the patient care being provided. Through the process, the accredited laboratories attest to using appropriate supervision for nerve conduction study (NCS) technologists, as well as their ability to have a physician review and analyze test results onsite and in real time. Providing adequate supervision not only ensures more accurate and

reliable EDX testing, it prevents fraudulent practices involving untrained physicians or physicians utilizing technologists without supervision.

In 2012, the Center for Medicare and Medicaid Services (CMS) announced significant cuts in 2013 for EDX services. The cuts were between 32-67% of 2012 fees. In 2014, EDX codes were impacted by an across-the-board reduction in practice expense relative value units, however, this reduction was offset by the temporary increase in the sustainable growth rate conversion factor. Rather than simply cutting their rates by the same percentage as Medicare, many private payers went even further and matched Medicare rates, resulting in even greater reductions. In order to create a baseline for analysis of the impact of private payers' decision to match Medicare rates instead of just cutting rates by an equal percentage to the Medicare reductions, the AANEM, in September 2013, conducted a member survey requesting information about 2012 payment rates received from private insurance carriers.

The survey participants identified their patients' top four insurance providers, other than Medicare or Medicaid, as Blue Cross/Blue Shield, United Healthcare, Aetna, and Cigna. The survey found a wide discrepancy in payment rates amongst private payers. A significant percentage of practices were paid above Medicare rates (72% were paid between "up to 25% more" to "250% or more" than Medicare) while only 28% were paid below Medicare. This wide variance in payments occurred in private practice and academic settings and across different regions of the country. Hospital-based practices were most likely to be paid significantly above Medicare rates with nearly 15% reporting getting paid "126-150% above" Medicare. Nearly 70% reported getting paid between "up to 25% to 75% more" than Medicare. Table 1, column 5 shows a range of assumed private payer rates paid in 2012 for EDX testing of 2012 rates plus 25-100%.

The impact of private payer cuts to rates equal to Medicare payments can be seen by comparing the 2012 private payment rates (column 5) to 2014 Medicare rates (column 3). Where private payers have matched Medicare fees, physicians have seen cuts of almost 50% to over 75% of what they were receiving in 2012 from those payers. These cuts are financially devastating to neurology and PMR practices, particularly to private practices.

Table 1 2012 Medicare Payments vs 2014 Payments

EDX Test	2012 MFS Rates*	2014 MFS Rates (using temporary conversion factor 1/1/14-3/31/14)	% Cuts MFS 2014 from 2012	2012 Private Payer Rate (2012 MFS + 25-100%)
1-2 NCSs	\$ 139.54	\$ 95.29	31.71%	\$174.43-279.08
3-4 NCSs	\$ 258.00	\$ 117.50	54.16%	\$322.50-516.00
5-6 NCSs	\$ 382.92	\$ 141.50	63.05%	\$478.65-765.84
7-8 NCSs	\$504.09	\$ 185.92	63.12%	\$630.11-1008.18
9-10 NCSs	\$643.65	\$ 226.04	64.88%	\$804.56-1287.30
11-12 NCSs	\$775.71	\$ 265.81	66.73%	\$969.64-1551.42
13 + NCSs	\$896.89	\$ 309.15	65.53%	\$1121.11-1793.78
Complete EMG, per limb, w/ NCS	\$87.47	\$ 91.71	(4.85)%	\$109.34-174.94
Complete EMG, per limb, w/o NCS	\$ 95.99	\$121.80	(26.89)%	\$119.99-191.98

* Rates for NCS were calculated based on typical diagnosis for the number of nerves indicated and the number of different NCS codes (95900, 95903, and 95904) that would typically be utilized to reach that diagnosis.

The AANEM believes that cuts of this magnitude (50-75%) will result in access problems, misdiagnosis, unnecessary surgery, and delayed diagnosis which has the potential to increase long term healthcare costs. A sample VB fee schedule that adequately compensates providers who have met quality standards is illustrated in Table 2. This table recognizes that physicians that have met the quality standards outlined above will provide high value care, which will result in greater efficiency and reduction in related healthcare costs. A VB incentive has been calculated for NCS and EMG based on the number of studies that should be utilized to reach a specific diagnosis. A VB incentive should typically only be paid for the

indications listed below. **If the indication does not match the number of studies performed, carriers should question the billing and pay, at most, the Medicare rate and not a VB fee.**

The AANEM chose to use a range of 225% to 325% above the 2014 Medicare fee to calculate the VB rates included in Table 2. These recommended payments do not return the payments paid by private payers to the 2012 rates, but at least these rates will more fairly compensate physicians for the work involved in dealing with patients with muscle and nerve disease. The AANEM recognized the pressures on providers to decrease health care costs and therefore the values in Table 2 represent a reduction to the 2012 payments while also recognizing the importance of paying for quality services. This table is provided for informational purposes for payers and physicians. It is not intended to suggest the rate that should be paid in any particular case and is not meant as the only solution to creating a VB system.

Table 2 Example of Reimbursement Rates: Medicare versus Value Based Fee

EDX Test	Indication	VB Fee
1-2 NCSs	Bell's palsy, hemifacial spasm and localized traumatic injuries	\$214.40-309.69
3-4 NCSs	Neuromuscular junction, Myopathy	\$264.38-381.88
5-6 NCSs	Motor Neuropathy, Amyotrophic Lateral Sclerosis, Mononeuropathy	\$318.38-459.88
7-8 NCSs	Carpal Tunnel Syndrome (unilateral), Radiculopathy	\$418.32-604.24
9-10 NCSs	Carpal Tunnel Syndrome (bilateral), Mononeuropathy Multiplex, Polyneuropathy, Pain, Numbness, or Tingling (unilateral)	\$508.59-734.63
11-12 NCSs	Tarsal Tunnel Bilateral, Plexopathy, Pain, Numbness, or Tingling (unilateral)	\$598.07-863.88
13 + NCSs*	Guillain Barré	\$695.59-1004.74
* A single diagnosis, other than Guillain Barré, should not receive VB payment without explanation of the need for such a high volume of testing.		
Complete EMG, per limb, done w/ NCS	All indications listed above	\$206.35-298.06
Complete EMG, per limb, w/o NCS	Payers should ask for explanations prior to payment. No VB payment is provided because EMGs are rarely done without NCSs.	No VB Fee

The AANEM has long believed the appropriate number of studies to be performed should be left to the judgment of the physician performing the service. Due to the potential of overutilization, payers should pay special attention to the diagnoses listed in Table 2. While not intended to be an all-inclusive list, these diagnoses can help guide the determination of any VB payment for a specific Current Procedural Terminology (CPT) code. Specifically, complex testing for diseases like myasthenia gravis, peripheral neuropathy, or cases where multiple diagnoses are identified or considered will result in larger volumes of tests and would be reimbursed appropriately under a VB structure. For example, a patient with multiple symptoms/indications for testing may require additional EDX services. Claims with a high volume of testing for other conditions than those listed in the table should be further scrutinized.

The fee-for-service model has become a costly way to pay for care and does not safeguard the patient or consumer. Providing VB reimbursement for properly-performed EDX testing and assessment of a patient will increase the value of each healthcare dollar spent.

References

- Wennberg, JE, Brownlee, S, Fisher, ES, Skinner JS, Weinstein JN. Dartmouth Atlas White Paper: An Agenda for Change Improving Quality and Curbing Health Care Spending: Opportunities for the Congress and the Obama Administration, December 2008. http://www.dartmouthatlas.org/downloads/reports/agenda_for_change.pdf accessed May 15, 2013.
- AANEM. (2010) Quality Electrodiagnostic Medicine Controls Costs. Retrieved from: http://www.aanem.org/getmedia/55f244dc-2101-412c-a27a-3fe450421a9d/QualityEDX_1.pdf.aspx
- Haig AJ, Tzeng HM, LeBreck DB: The value of electrodiagnostic consultations for patients with upper extremity nerve complaints: a prospective comparison with the history and physical examination. Arch Phys Med Rehabil. 80(10):1273-1281, 1999.
- Fox, J, Haig, A, Todey, B, Challa, S. The Effect of Required Physiatrist Consultation on Surgery Rates for Back Pain. Spine 2013; 38:3; E178-E184.
- Dillingham, TR, Pezzin, LE, Rice, JB. Electrodiagnostic Services in the United States. Muscle Nerve 2004; 29:198-204.
- Dillingham, TR, Pezzin, LE. Under-Recognition in Persons With Diabetes by Nonphysician Electrodiagnostic Providers. American Journal of Physical Medicine & Rehabilitation. 2005; 84: 399-406.
- Katz RT. NC-stat as a Screening Tool for Carpal Tunnel Syndrome in Industrial Workers. J Occup Environ Med. 2006; Apr; 48(4):414-418.
- Schmidt, K., Chinae, N. M., Sorenson, E. J., Strommen, J. A. and Boon, A. J., Accuracy of diagnoses delivered by an automated hand-held nerve conduction device in comparison to standard electrophysiological testing in patients with unilateral leg symptoms. Muscle Nerve, 2011; 43: 9-13.