Practical steps for implementing quality measurement in practice

David Wang, DO

Becky A. Schierman, MPH

Eric M. Cheng, MD, MS

Amy E. Sanders, MD, MS

Richard M. Dubinsky, MD, MPH

Summary

All neurologists must begin incorporating quality measurement and quality improvement into their practice. Efforts to pay physicians based on the quality of their care and patient outcomes moves quality measurement beyond reporting to satisfy regulatory requirements and pushes physicians to select and use quality measures to improve patient outcomes and patient experience. This article provides practical steps and proposes considerations for neurologic practices advancing quality measurement and improvement.

Health care reforms are having an effect on every health care provider. In order to achieve the Institute for Healthcare Improvement's Triple Aim of "better health, better care, and lower cost,"¹ stakeholders such as certifying bodies, state and federal agencies, and purchasers and private payers are holding providers accountable for improved patient outcomes and lower overall health care costs. For example, in order to maintain professional certification, known as Maintenance of Certification (MOC), physicians must demonstrate competency in quality improvement. The American Board of Psychiatry and Neurology (ABPN) requires diplomates to complete one Performance in Practice Module during the 10-year cycle of MOC.² Diplomates are required to review retrospective data from at least 5 patient cases, comparing their current care to evidence-based quality metrics. After quality improvement interventions are implemented, diplomates

All authors contributed equally to this work.

OSF Healthcare System and INI University of Illinois College of Medicine at Peoria (DW); American Academy of Neurology (BAS), Minneapolis, MN; Department of Neurology (EMC), UCLA Geffen School of Medicine, Los Angeles; Department of Neurology and VA Greater Los Angeles Healthcare Center (EMC), CA; Department of Neurology (AES), SUNY Upstate Medical University, Syracuse, NY; and Department of Neurology (RMD), University of Kansas Medical Center, Kansas City.

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Correspondence to: bschierman@aan.com

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reassess their care within 2 years on the same measures to see if quantifiable improvements have occurred. Quality measures are also the cornerstone of several new physician payment models included in the 2010 Patient Protection and Affordable Care Act.³ Emerging models pay providers for demonstrated value (quality and cost) rather than volume,^{4,5} such as in the Center for Medicare and Medicaid Services' (CMS) value-based payment modifier⁶ and accountable care models,⁷ and in private payer quality contracting (BCBS of Massachusetts Alternative Quality Contract) and physician tiering (UnitedHealth Group Premium Designation Program). To add to the complexity of these new payment models, quality measurement is advancing towards patient outcome and patient experience measures, rather than measuring whether a clinical process occurred.

Despite linking professional certification and payment to quality, the primary purpose of quality measurement is improving patient care and patient outcomes. The act of quality measurement alone does not lead to improvements in patient outcomes. In neurology, the most successful and notable quality improvement initiative that has resulted in improved outcomes is the American Heart Association and American Stroke Association Get with the Guidelines (GWTG) program.⁸ GWTG measures the degree to which evidence-based guideline recommendations are followed for patients with stroke and encourages adoption of systems and processes that improve patient care. Over a 5-year period, improvements were observed in all areas of hospital-based stroke care, including IV recombinant tissue plasminogen activator use within 2 hours, antithrombotics within 48 hours of admission, deep vein thrombosis prophylaxis, discharged on antithrombotic medication, anticoagulation for atrial fibrillation, treatment of low-density lipoprotein cholesterol levels, and smoking cessation.

It is fundamental that quality measures are meaningful to clinical practices. Facilities vary in their subspecialty, specific gaps in care, access to data, and available resources (i.e., information technology, financial, and staff). Each practice must identify which quality measures will provide the appropriate data to assess its current care and whether improvements have occurred, how they will track and store data, and what processes will be used to aggregate and report data. This article provides practical steps and provides examples for advancing quality measurement and improvement in practice.

Step 1: Choose quality measures

What diseases are common in my practice? General neurologists likely have a broader range of quality measures that apply to their patients—from epilepsy to dementia and Parkinson disease. Subspecialists, however, may be limited in the number of quality measures that apply to their patient population. Public and private payer quality reporting programs typically outline program specifics, such as required quality measures and the number of measures needed to fulfill requirements, as well as how data are reported.

Where are there potential opportunities to improve care? When given the choice of what to measure, practices should identify areas of care where there are opportunities to improve. All practices have processes or systems that need improvement, ranging from whether they reconcile medication at each patient visit, assess all patients with Parkinson disease for fall risk, or advise stroke patients to quit smoking. If there are questions about whether a clinical area needs improvement, conducting a small-scale chart audit might help. Practices can review a few patient charts to see if guideline recommendations are being followed for a particular patient

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population. This preliminary audit can show where gaps exist and what tools might support an intervention. For guidance on a full chart audit, see step 4.

Are there existing quality measures? The American Academy of Neurology (AAN) has developed, independently or in partnership with other societies, 6 evidence-based quality measure sets for neurologists. The measure sets are stroke and stroke rehabilitation,⁹ Parkinson disease,¹⁰ epilepsy,¹¹ dementia,¹² distal symmetrical polyneuropathy,¹³ and amyotrophic lateral sclerosis.¹⁴ Several of these measure sets serve as the foundation for neurology-related Maintenance of Certification Performance in Practice modules available on the AAN Web site. Quality measures not developed by the AAN, but that apply to a broader patient population, include depression screening,¹⁵ tobacco use screening and cessation advice,¹⁶ ischemic vascular disease use of aspirin,¹⁷ ischemic vascular disease low-density lipoprotein cholesterol control,¹⁸ and screening for falls risk and falls prevention plan,¹⁹ and are available through the National Quality Forum (www.qualityforum.org) and the National Quality Measure Clearinghouse (www.qualitymeasures.ahrq.gov).

Example: Your practice wants to measure how well it is meeting recommendations for epilepsy care. One of the measures you pick is the following: All female patients of childbearing potential (12–44 years old) diagnosed with epilepsy who were counseled at least once a year about epilepsy and how its treatment may affect contraception and pregnancy. The group confirms through a small audit of charts that there is an opportunity to improve contraceptive counseling for women with epilepsy of childbearing age. Of the 50 charts you pulled for female patients with epilepsy, you reviewed 45: 5 did not meet the measure criteria and only 27 (60%) had documentation of counseling. The practice sets a goal that 80% of female patients with epilepsy will be counseled about pregnancy and contraceptive options.

Step 2: Identify a data storage solution

What are the practice's capabilities to record and track data? Managing the escalating burden of data collection depends on the degree to which a practice has a system in place to collect and store data. There are several practical solutions ranging from tracking data on worksheets in the paper medical record, developing a simple registry, or integrating a vendor registry into an electronic health record (EHR). It is important to talk with others in your practice—for example, the quality department, other clinicians, or information technology staff—to determine if the data are currently collected, who collects the data, how the data are documented in the medical record, who would be accountable for collecting the data, and where the data are stored. This planning will need to occur for each measure selected.

If a practice is using a paper medical record, gathering and aggregating the data can be resource intensive. To ease the administrative burden and ensure that chart audits run smoothly, identify protocols for documenting the data, such as using worksheets or checklists, and clarify how data will be aggregated at a later date.

Data registries are an electronic means to capture, store, and report back data associated with quality measures. The main sources of registries are EHR registries, homegrown registries, and vendor registries. Many health care institutions have implemented EHRs that incorporate a data registry or an add-on registry module. Frequently the data elements required for calculating a quality measure are not routinely captured within EHRs, so neurologists will have to work with onsite information technology staff to design the data fields in their EHR. It is important to avoid data elements that rely on free-form text as EHRs can only query data that are structured (or coded) into the electronic system.

Another option is to develop a homegrown registry. A homegrown registry is a simple electronic record of the patients in a practice who share some characteristic, such as a certain medical diagnosis, often developed and managed in widely available software programs (e.g., Microsoft [Redmond, WA] Excel or Access). Simple analysis (e.g., frequencies, percentages) can be calculated.

Vendor registries are a solution for those who want a data collection system that is more advanced than a homegrown registry. Often vendor registries are developed for a specific disease and require practices to upload data from an EHR system or re-enter the data into the registry. Vendor registries can be expensive to maintain and may not contain fields for the quality measure selected, requiring expensive customization. There are few neurology-specific vendor registries focusing on quality improvement. Two standalone data collection tools similar to a registry are the AAN-owned Maintenance of Certification tool, NeuroPI, and the AAN's business collaboration with CECity PQRIWizard. NeuroPI documents for neurologists ABPN-mandated performance improvement competencies. NeuroPI is not a full-scale clinical registry, but the concept is similar in that users electronically track their quality based on AAN-developed performance improvement modules. The AAN has a business collaboration with CECity's PQRIWizard to provide a registry for AAN members to participate in CMS's pay-for-reporting program, known as the Physician Quality Reporting System. PQRIWizard provides an infrastructure to electronically gather quality data on patient care over time on select quality measures.

Example: Your practice has a paper medical record and will use paper forms for data collection. You plan to include a checklist of AAN epilepsy quality measures for the physician to fill out at each visit, including a prompt to talk about contraception in female patients over age 12. On a weekly basis, medical records staff will enter the worksheet data into a database developed by your coding staff.

Step 3: Improve quality

Quality improvement is a continuous and systematic process of defining a problem, setting an aim for improvement, developing an intervention to meet the aim, implementing the intervention, reassessing care to determine if any improvements occurred, and making improvements to the intervention based on the data. The ability to develop, test, and implement changes is essential for any practice that wants to improve. Several quality improvement methods are available to help practices set goals and monitor improvements, including the Institute for Healthcare Improvement (Plan, Do, Study, Act) and Lean-Six Sigma (Define, Measure, Analysis, Improvement, Control). After identifying specific changes to make, practices run improvement cycles to test a change or group of changes on a small scale to see if they result in improvement. Practices then expand the tests and gradually incorporate larger samples until they are confident that the changes can be adopted more widely across the practice. The AAN Web site has quality improvement tools and resources available at www.aan.com/view/quality.

Example: Your goal is that 80% of your female patients with epilepsy will be counseled on pregnancy and birth control options. Your team analyzed the practice and determined that documentation needs to be standardized. Staff developed a data collection form that the intake nurse will complete. The nurse will initiate the conversation with the patients and if there are further questions the neurologist will follow up during the encounter. The team also identifies clinician familiarity with birth control options as a potential gap in knowledge. They design a learning session with pharmacy staff from the local hospital. You decide to implement the interventions and then re-measure to see if improvements are made in 3 months.

Step 4: Conduct a full or sample chart audit

A chart audit is a process where all relevant patients or a sample of the patients are identified and an auditor determines how often a quality measure was met. For accuracy, a chart review consists of at least 2 auditors with an overlap of about 10% of the patients to determine whether the

results are reliable. The process will depend on how your medical records are stored: on paper or in an EHR.

Practices with paper records will identify all patients who meet the denominator criteria. Sampling is often used to reduce the administrative burden of reviewing the paper charts of all patients meeting the denominator criteria. Determining sample size is important because samples that are too large waste time and money, while samples that are too small lead to inaccurate data interpretation. The size of the sample depends on how confident you want to be that the results represent your patient population. Once the sample is identified, the auditor retrieves the paper medical records, reviews the charts to determine whether the patient meets the inclusion criteria, and documents whether the service or care process occurred within the measurement timeframe. Chart audit tools help to systematically record the findings, which are then entered into an electronic spreadsheet capable of simple statistical analysis.

Chart audits are just as important in an EHR environment. An EHR chart audit checks whether the reports generated by the EHR are accurate and if the EHR is finding all the requisite data elements. Neurologists will need to work with an internal team including their EHR vendor and information technology staff to identify the best plan for retrieving the data. Retrieving the quality data from an EHR system depends on the specific system capabilities, whether the data are easily retrieved from a discrete field, and if the practice management and medical record systems are linked.

Example: After the intervention has been in place for 3 months, you conduct a larger chart audit to see how frequently women with epilepsy are counseled about their birth control options. Only those patients with at least one visit in the last 12 months are included. Your office staff pulls the charts of 100 adult female epilepsy patients, 80 of whom meet the denominator criteria. Your staff fills out the audit tool for each of the 80 patients. They will be looking for evidence of a discussion about birth control and concerns with pregnancy on an annual basis. The goal is that 80% (64) of the patients have documentation of counseling. Of those 80 patients, you find that 55 (68.7%) had documentation of annual counseling, which means that a gap of 11.3% exists. Your team meets again and decides how to continue to improve the intervention.

DISCUSSION

The landscape of practicing medicine has changed. As quality measures are increasingly incorporated into new payment models, physicians will need to incorporate quality measurement and improvement into practice. Those who do not invest in collecting and improving quality data will see decreases in payment based on their performance. The AAN is working to ensure neurologists are measured on meaningful, relevant, and statistically sound metrics and have the skills to incorporate quality improvement into practice. For more information, see AAN's Quality Web site at AAN.com/view/quality.

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