

AAN clinical practice guidelines

Above the fray

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The American Academy of Neurology (AAN) has been a leader in developing clinical practice guidelines. Both the Quality Standards Subcommittee (QSS) and the Therapeutics and Technology Assessment Subcommittee (TTA) produce guidelines: "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances."¹ These guidelines aim to improve the quality of patient care and possibly the efficiency in use of health care resources.²

Clinical practice guidelines are typically based on 1) the best available peer-reviewed scientific evidence, 2) a consensus of expert opinion, or 3) a combination of these two sources.³ The AAN's guideline development process aims at the evidence-based category, with little use for expert opinion.

Recently, methodologic standards for assessing the quality of guidelines have been suggested.² Three dimensions of guideline characteristics are considered: 1) development and format, 2) evidence identification and summary, and 3) formulation of recommendations. Using these criteria, only 43% of the standards were met across a broad swathe of published guidelines.² Of concern, only 15% of guidelines explicitly graded the scientific evidence and only 13% graded recommendations according to the strength of the evidence. These two critical standards are strengths of the AAN guideline development process.

In this issue of *Neurology*, Hart and Bailey apply a similar set of standards to assess the rigor of published stroke guidelines.⁴ Among 22 guidelines reviewed, the majority (64%) used explicit methods to grade the strength of evidence. This is reflected in the consistent recommendations, based on strong evidence, regarding use of coumarin anticoagulants for patients with nonvalvular atrial fibrillation and use of low-dose (50 to 325 mg/day) aspirin for initial antiplatelet therapy following stroke. The inclusion of weaker evidence led to more inconsistency in recommendations regarding which atrial fibrillation pa-

tients are at highest risk for stroke, or which antiplatelet agent is most effective if aspirin fails. The most inconsistent stroke guidelines were those most reliant on expert opinion. Regarding carotid endarterectomy for asymptomatic carotid stenosis, recommendations ranged from endorsement of surgery (>60% stenosis, low perioperative risk) by the National Stroke Association to withholding surgery by the Canadian Stroke Consortium.

The AAN has produced an occasional guideline based on expert opinion when evidence was weak and demand was high for guidance. The 1997 guideline on management of sports concussion used consensus to develop both a concussion severity grading scale and specific recommendations regarding return to play.⁵ These recommendations were based on expert opinion and received only weak endorsement for practice.

Pertinent to this guideline and in this issue of *Neurology*, Hinton-Bayre and Geffen test the validity of the consensus-based concussion severity grading scale, prospectively applying three brief measures of neuropsychological test performance in 21 concussed rugby athletes.⁶ The concussion severity scales correlated poorly with the presence and duration of test impairment. The lesson here is that guidelines based on expert consensus or other weak evidence require stronger evidence to become more refined. Guidelines become obsolete and should be reassessed for validity and updating every 3 years.⁷ The Hinton-Bayre and Geffen study, itself a class III study, does not provide new, high-quality evidence to alter the sports concussion guideline. It does, however, substantiate the fact that low-level recommendations, while educational, should not be interpreted dogmatically.

Should expert consensus have any role in clinical guideline development? Perhaps. The QSS is currently piloting use of expert consensus to develop research case definitions of clinical disorders (e.g.,

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distal symmetrical neuropathy, postpolio syndrome). The establishment of such case definitions will provide a more consistent approach to clinical or epidemiologic research in these disorders.⁸ Even in this instance, however, the consensus process must be explicit, using well-defined methods such as use of structured ratings to synthesize individual judgments (Delphi method).⁹ This degree of explicit clinical decision making is almost never apparent in existing clinical guidelines.⁴

A second area of appropriate expert consensus deliberation may relate to the development of guidelines related to the process of care, rather than to specific treatment. Expert panels in Washington State have developed “best practice” guidelines to improve the process of care for workers with carpal tunnel syndrome (CTS).¹⁰ This type of guideline could improve the coordination of care for workers with CTS in a community. One example would be timely referral for nerve conduction testing, either to validate the presence of CTS or to follow progress appropriately pre- and postoperatively. Similar improvements in the process of care are the actions most likely to improve patient satisfaction with care.¹¹ Patient demands for specific tests, treatments, or referrals may not be associated with improved satisfaction with care.¹² Taking patient preferences into account for care process-related guidelines is more likely to be productive than attempting to do so for specific treatment-related guidelines.

Professional organizations such as the AAN should lead the way in the development of strongly evidence-based practice parameters. We avoid commercial sponsorship and request statements of real and potential financial conflicts of interest at the initiation of every guideline panel. To reduce potential bias, the detail on such conflicts must be explicit and the guideline panel should be balanced between those with and without conflict, as it is difficult to find an expert panel in neurology completely devoid of potential conflict.

Each guideline produced by a panel is reviewed by the QSS or TTA, by an extensive network of clinical experts, and by three to five reviewers for *Neurology*. This degree of review provides maximum face validity to the final products.

Most importantly, the guidelines are not intended to be inflexible standards of care. Rather, each guideline contains a statement recognizing that “specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.”

Improving the quality of health care delivery has taken on increasing prominence, and is likely to be the centerpiece of any real reform of the health care system. Producing high-quality, evidence-based clinical practice guidelines will advance this goal.¹³

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