SORT: Strength of Recommendation Taxonomy

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In February 2004, *American Family Physician* (AFP), the *Journal of the American Board of Family Practice* (JABFP), and the *Journal of Family Practice* (JFP) will simultaneously publish an article titled "Strength of Recommendation Taxonomy (SORT): A Patient-centered Approach to Grading Evidence in the Medical Literature."[1-3] The purpose of the article is to present the SORT system, which was created in a collaborative effort by the editors of multiple family medicine journals and the Family Practice Inquiries Network. SORT is intended to provide authors and readers of family medicine journals with a simple, user-friendly system for grading the strength of diagnostic and treatment recommendations that appear in the articles in those journals.

With the advent of evidence-based medicine, many researchers, journals, and organizations have developed systems for grading the strength of research evidence. Indeed, in 2002, the Agency for Health Care Quality and Research reported that there were more than 100 such evidence-grading systems.[4] Many of these systems are too complicated for use by the clinicians who need to apply evidence to patient care, and the systems use such varied rating scales that researchers and authors cannot keep track of them. In fact, a given source of evidence will often be assigned a different strength rating, depending on which rating system is used.

(Fam Med 2004;36(2):141-3.)

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Benefits of SORT

SORT provides a uniform recommendation-rating system that can be applied throughout the family medicine literature. SORT will be useful to the clinicians who read family medicine journals because it is simple and straightforward, with only three levels of evidence: A, B, and C. SORT is also relevant to clinicians because its ranking system is based on patient-oriented outcomes. The system will also be useful for authors who prepare articles for the family medicine journals because it allows recommendations to be rated according to a clearly defined set of rules that will apply to multiple journals.

A brief synopsis of SORT is shown in Table 1. More detail about the system, including an algorithm to aid in assigning strength of recommendations, is available in the articles published in the February 2004 issues of AFP, JABFP, and JFP.

Limitations of SORT

While use of the SORT system will add clinical utility and uniformity to clinical recommendations that appear in the family medicine literature, there are limitations and exceptions to the use of the system. First, there will still be the need to use rating systems other than SORT. For example, the widely cited US Preventive Services Task Force (USPSTF) recommendations are based on the USPSTF evidence-grading system, and there is no intent that SORT replace the USPSTF system in the pages of family medicine journals.

Second, there will sometimes be the need to cite recommendations based on evidence that falls outside the scope of SORT. In particular, SORT does not take into account the results of qualitative research studies, even though such research results may be useful in guiding our approach to patient care.

Third, once SORT is put into widespread use, other limitations may become apparent, and the system will inevitably require revision over time to meet the evolving needs of readers and authors. To learn how to deal with exceptions to and changes in the SORT system, authors should consult the instructions for authors from the journals for which they are preparing manuscripts.

Despite these exceptions, establishing a uniform system for grading recommendations will go a long way to bringing cohesion to the family medicine literature. Readers will learn to accept and use a single standardized rating system that they can easily apply to practice, and authors can benefit by the use of a standardized taxonomy that will apply to multiple journals.

Relevance to *Family Medicine:* Evidence-based Teaching

I should comment on the relevance of SORT to *Family Medicine,* a journal that primarily publishes educational and clinical research and does not publish clinical reviews and recommendations. It is for this reason that *Family Medicine* is not publishing the SORT article in its entirety.

Nonetheless, SORT is relevant to this journal for two reasons. The first is that the readers of *Family Medicine* include many of the authors who write the clinical reviews published in other journals. SORT is directly applicable to these authors. Academic family medicine faculty will likely lead the way in using SORT for such publications, and we want to be sure our readers know about the new grading system.

The second reason why SORT is relevant to *Family Medicine* is because we do occasionally publish review articles and recommendations. The only difference is that the reviews and recommendations published in *Family Medicine* are mostly about teaching methods and other academic matters, rather than about clinical care. Recent reviews, for example, have focused on malpractice liability related to residents obtaining "curbside" consultations from specialists,[5] approaches for eliminating racial and ethnic disparities in immunizations,[6] how to deal with closure of family medicine residency programs,[7] and a recommended approach to best practices research.[8]

Unfortunately, we publish very few of the review articles submitted to the journal, largely because the recommendations and conclusions in these articles tend to be based on common practice, expert opinion, and sometimes just on the authors' own opinions and experience. Indeed, although the articles I just cited were quite good and useful to our readers, they nonetheless contained such recommendations—many of which would qualify as grade-C evidence (the weakest level) in the SORT system.

We strive to base our clinical care decisions on grade-A evidence. Why, then, shouldn't recommendations regarding teaching methods and other academic issues also be based on grade-A evidence? *Family Medicine* has not yet adapted a SORT-type system for grading the strength of research on which teaching recommendations are based, but the journal's Editorial Board recently began a discussion about the possibility of doing so. Authors are advised, therefore, to carefully consider the quality of the evidence they cite when recommending approaches to teaching and other academic issues and to base those recommendations on the highest-quality evidence available. Basing our teaching methods on strong research evidence would be beneficial to our discipline and to our learners, because it would assure that trainees are being exposed to teaching methods known to be effective. As we move more and more toward evidence-based clinical care, it will be desirable for us to teach about evidence-based care using evidence-based teaching methods.

Table 1

A Synopsis of SORT (Strength of Recommendation Taxonomy)

*Strength of Recommendation**	*Definition*
A	Recommendation based on consistent and good-quality patient-oriented evidence.** Examples: • Systematic review or meta-analysis of high-quality studies • High-quality randomized controlled trial of treatment† • High-quality diagnostic cohort study‡ • Validated clinical decision rule for diagnostic approach • All-or-none study§
B	Recommendation based on inconsistent or limited-quality patient-oriented evidence.** Examples: • Systematic review or meta-analysis of lower-quality studies or studies with inconsistent findings. • Lower-quality clinical trials • Cohort study of treatment • Retrospective cohort study of prognosis • Case-control study
C	Recommendation based on consensus, usual practice, opinion, disease-oriented evidence, or on case series for studies of diagnosis, treatment, prevention, or screening. Examples: • Consensus guidelines • Usual practice or expert opinion • Disease-oriented evidence using only intermediate or physiologic outcomes • Case series

* Recommendations should be based on the highest-quality evidence available. For example, vitamin E was found in some cohort studies (level-B study quality) to have a benefit for cardiovascular protection, but good-quality randomized trials (level A) have not confirmed this effect. Therefore, it is preferable to base clinical recommendations in a manuscript on the level-A studies.

** Patient-oriented evidence measures outcomes that matter to patients: morbidity, mortality, symptom improvement, cost reduction, and quality of life.

† High-quality randomized controlled trial is defined as one with allocation concealed, blinding if possible, intention-to-treat analysis, adequate statistical power, adequate follow-up (greater than 80%).

‡ High-quality diagnostic cohort study: cohort design, adequate size, adequate spectrum of patients, blinding, and a consistent, well-defined reference standard.

§ In an all-or-none study, the treatment causes a dramatic change in outcomes, such as antibiotics for meningitis or surgery for appendicitis, which precludes study in a controlled trial.

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