

Advancing Information Mastery in Family Practice

Paul A. Nutting, MD, MSPH
Denver, Colorado

As a young physician, I was overwhelmed by the volumes of information necessary for providing good patient care. Over the years, I had accumulated enough knowledge to complete training and pass the required examinations. Nonetheless, I continually encountered questions in clinical practice for which my accumulated body of fact did not provide satisfactory answers. In retrospect, I realize that I had come face to face with the two major challenges of information mastery in family practice: staying current with the relevant literature and discovering answers to clinical questions that arise in daily work.

The frustration of my early experiences has reinforced my commitment to seek new ways for *The Journal of Family Practice* to address the needs of family physicians to both stay current and find answers to clinical questions that arise each day in practice. The central concept behind the *Journal's* approach to meeting family physicians' information needs is the distinction between POEMs (Patient-Oriented Evidence that Matters) and DOEs (Disease-Oriented Evidence).^{1,2} DOEs are by far the more common among the medical literature and are needed to expand the basic sciences of medicine. These articles give us information about disease etiology, prevalence, and pathophysiology. They are less important than POEMs, however, to the family physician because they provide little information on how to achieve outcomes that matter to patients. A POEM provides information about the effectiveness of patient care on the basis of an outcome that matters to family physicians and patients, such as a decrease in mortality, or an increase in functional status, quality of life, or patient satisfaction. Further, the evidence in a POEM is so relevant and compelling that it should change the way we practice.

In 1994, we introduced the "Journal Club,"³ and the following year made the growing body of practice-relevant information available on the Internet.⁴ Each month, the POEMs editors (Mark Ebell, MD, David Slawson, MD, Allen Shaughnessy, PharmD, and Henry Barry, MD) conduct a systematic search of more than 80 medical journals to find POEMs. Under the direction of the editors, a group of more than 50 experts in evidence-based medicine carefully analyze and summarize the eight most important POEMs for publication each month in the *Journal*. Last year, we changed the name of the "Journal Club" to "POEMs" to more accurately reflect the unique approach used to select articles.⁵ We also launched *Evidence-Based Practice*, a related newsletter that publishes 15 to 20 short-

er reviews (in addition to those covered in the *Journal*) found by the same systematic search that produces the POEMs section each month in the *Journal*. The newsletter also contains other methods for applying the principles of evidence-based medicine, such as useful clinical prediction rules, information on using the best test to rule in or rule out a particular disease, and evidence-based discussions of drug therapy for particular symptoms or diseases.⁵

A NEW FEATURE: EVIDENCE-BASED CLINICAL REVIEWS

This issue of the *Journal* will introduce a new feature that helps physicians take an evidence-based approach to clinical practice. Dr Brewer's article on low-molecular-weight heparin⁶ is the first evidence-based clinical review to be published here, and begins a feature of the *Journal* that will eventually replace the traditional clinical review. Evidence-based clinical reviews will differ from traditional reviews in two important ways. The articles will deal explicitly with a clear clinical question and will conclude with an unambiguous answer to that question on the basis of a systematic review, evaluation, and synthesis of all the available evidence. The clinical question and the implications for practice will be clearly indicated. Each article will explicitly describe the methods used to search for, evaluate, and interpret the evidence.

Family physicians will have great difficulty finding answers to all their clinical questions using only their own time and resources.^{7,8} To survive the information jungle, we must be able to rely on each other for reviews and interpretations of the literature. An evidence-based approach makes it possible to be a critical consumer of any syntheses of the evidence by others, and to read secondary literature with some confidence that the results, conclusions, and interpretations are valid and reproducible. The most useful information is highly relevant because it concerns patients like your own, is highly valid because the methods are sound, and takes little work to access. That concept has been summarized in the usefulness equation:¹

$$\text{USEFULNESS OF INFORMATION} = \frac{\text{RELEVANCE} \times \text{VALIDITY}}{\text{WORK}}$$

Evidence-based clinical reviews are specifically designed to increase the validity and relevance and decrease the work for the clinician.

Validity. Evidence-based clinical reviews will search for, evaluate, and synthesize all relevant studies that inform the clinical question. It is rare that a single study, however large and complex, will provide the definitive answer to a clinical question. Most syntheses

All correspondence should be addressed to Paul A. Nutting, MD, MSPH, Editor, *Journal of Family Practice*, 1650 Pierce St, Denver, Colorado, 80214.
E-mail: Paul.Nutting@ASP.nmc.org.

will reveal a range of results of the selected studies, and in the overlap lies important information about variability that can be related to differences in patient characteristics. Carefully constructed clinical syntheses can produce information not contained in any of the individual studies that make up the review. Often the variations among studies of the same clinical question serve to highlight the differences that apply to different subsets of patients. This is an example of the whole (the synthesis) being greater than the sum of its parts (the individual studies).

As an aid to our research colleagues, the evidence-based clinical reviews will also identify and comment on some of the most important gaps in the evidence. The authors will provide a brief commentary on the further research that should be done to increase our confidence in the validity of the evidence, relevance to our daily practice, and importance of outcomes to our patients.

Even the reader who does not carefully review the methods section of an evidence-based clinical review can assume a degree of confidence in the validity of the conclusions, knowing that the review has undergone peer review by both content experts and experts in an evidence-based approach.

Relevance. To be relevant to the practicing family physician, a review article must deal with a clinical question that arises frequently in practice and must involve studies of patients similar to those seen in typical family practice. The evidence-based clinical reviews will focus on topics that have been identified by practicing physicians as key clinical questions common in practice and relevant to the care of patients in family practice. The STFM/NAPCRG Evidence-Based Medicine Working Group started the process, and we invite clinical questions from our readers. Working in conjunction with the *Journal*, the Ambulatory Sentinel Practice Network is considering a series of studies that would identify relevant and common clinical questions, both as a basis for defining further research activities of the network, as well as identifying those questions for which a careful analysis and summary of existing (but poorly synthesized) information would be useful to practicing physicians.

To further increase the relevance of evidence-based clinical reviews, the authors will select and evaluate evidence on the basis of patient groups that reflect the variety of patients we care for in family practice. For example, a study of patients referred to a tertiary care center will have less impact on the conclusions drawn in the review than a study that includes patients seen in primary care, all other characteristics being constant. The evidence-based clinical reviews will reduce the frustration we commonly experience when we read a study that carefully excluded most of the patients with the diverse characteristics (comorbidities, psychosocial problems, difficulties in adhering to a therapeutic regimen, and so forth) that are typical of our patients.

THE JOURNAL OF FAMILY PRACTICE WEB SITE

The *Journal* is committed to improving the ease of access to its own and other sources of peer-reviewed evidence-based material. Our Web site (www.jfp.denver.co.us) continues to expand the information available to family physicians, and provides an easily searchable database of the more than 250 POEMs published to date. The Web site also contains important links to other evidence-based sources of clinical information, and will soon provide opportunities to see comments from other readers and responses from the authors. The searchable database of POEMs and material from the *Evidence-Based Practice* newsletter is already available for use on the Newton family of handheld computers, putting the power of the POEMs, summaries of evidence-based practice guidelines, useful clinical prediction rules, and information to help select and interpret diagnostic tests literally in the physician's hand. See <http://www.familypractice.msu.edu/retriever.htm> for more information on database availability. Versions for Windows '95/NT and Windows CE will be released soon.

THE FAMILY PHYSICIAN AS AN INFORMATION MASTER

Creating an evidence-based clinical review represents a substantial investment of time and intellectual energy. The concepts and methods of a carefully constructed clinical synthesis are every bit as demanding as those of a randomized clinical trial.^{9,10} I would strongly encourage academic promotion and tenure committees to recognize the importance of an evidence-based clinical review to the academic development and achievement of young faculty and reward them accordingly. As the primary advocate for the patient, developing critical syntheses of best evidence for family practice should

TABLE

How to use *The Journal of Family Practice* to become an information master

To find the answer to a clinical question:

Go to the *Journal's* Web site at www.jfp.denver.co.us
Click on **POEMs**
Click on **Search**
Enter a clinical topic (such as UTI, CHF, or diabetes mellitus)
Select and read the POEMs that turn up in your search

To read the literature to stay current:

Read the POEMs each month in the *Journal*
Read the evidence-based clinical review each month in the *Journal*
Subscribe to and read the *Evidence-Based Practice* newsletter (Call 1-800-423-1359)
Read any evidence-based supplements to the *Journal*

become one of the important contributions of our academic departments of family medicine.

In no other area of medicine is it as critical as in family practice to become adept in the skills of information mastery. The tools of such mastery provided by the *Journal* are summarized in the Table. As family physicians we are in a unique position to care for the whole patient. This perspective gives us an opportunity to integrate the best evidence for medical practice into the psychosocial context of the patient. It is for this reason that POEMs (as opposed to DOEs) hold a special attraction for us. We also have the clinical experience necessary to allow us to integrate the structure provided by evidence from clinical trials with our role in meeting the individual and unique needs of our patients. In this way we appropriately blend the art and science of family practice. David Slawson and Allen Shaughnessy have coined the term "clinical jazz" to express the interrelationship of the structure provided by evidence-based medicine and the improvisation of applying clinical experience. As in jazz, improvisation without structure is random cacophony, while structure without improvisation is boring. By integrating the two, family physicians can provide their patients with the best possible care.

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WANTED: Relevant Clinical Questions

The editorial office of the *Journal of Family Practice* is maintaining a running list of practice-relevant clinical questions. You can contribute to this growing list by adding questions from your practice experience. Please send any clinical questions you would like to see addressed in the *Journal* to Paul A. Nutting, MD, MSPH, Editor, The Journal of Family Practice, 1650 Pierce St, Denver, CO, 80214. E-mail: Paul.Nutting@ASPN.amc.org.

WANTED: Authors of Evidence-Based Clinical Reviews

The editorial office of the *Journal* is accepting commitments by authors to develop an evidence-based clinical review on one of the practice-relevant topics that have been identified or another topic that can be justified as common and relevant to family practice. Interested potential authors should contact Paul A. Nutting, MD, MSPH, Editor, The Journal of Family Practice, 1650 Pierce St, Denver, CO, 80214. E-mail: Paul.Nutting@ASPN.amc.org.