Evidence, Values, Communication: Essential Ingredients of Shared Emergency Medicine Decisionmaking

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A common criticism of evidence-based medicine assumes that its advocates propose to favor the results of clinical research over consideration of patients' clinical circumstances, values, and preferences in making decisions and recommendations.[1] In fact, an emphasis on patient values and preferences pervades published elaborations of evidence-based clinical practice.[2-5]

Why, then, the misperception? Perhaps an important reason is that evidence-based publications that practitioners are most likely to encounter may seem consistent with a physician-centered model of decisionmaking. Evidence-based reviews, including meta-analyses, concentrate on identifying and summarizing all clinical studies relevant to a well-defined focused question. Synopses, such as those published by the *Annals of Emergency Medicine*[6,7] and *ACP Journal Club* (available at http://www.acpjc.org/?hp), combine expert critical appraisal of primary studies and systematic reviews with clinical commentaries written by practitioners experienced in the relevant area of practice.[8] All of these communications are directed to physicians and other professionals rather than to patients. Hence, a patient-centered model of shared decisionmaking may not be emphasized.

In this issue of *Annals*, Zehtabchi's[9] review of antibiotic prophylaxis for uncomplicated hand lacerations initiates a new series of evidence-based emergency medicine (EBEM) reviews that feature elements explicitly directed at such a model. After conducting a thorough search of large and specialized databases, Zehtabchi[9] found that only 3 older and relatively poor-quality trials met minimum reporting standards and were directly relevant to the practice context and clinical outcomes embodied in his query. There were no statistically significant differences in wound infection between patients who received prophylactic antibiotics and those who did not. None of the trials reported cosmetic outcomes.

Under the circumstances, it is plausible that larger and more rigorously controlled trials might reveal that prophylactic antibiotics result in significant differences in patient-important outcomes either for all patients or for well-defined subgroups such as those with evidence of wound contamination on presentation. However, although not definitive, this evidence is also not irrelevant. Zehtabchi[9] explores how knowledge of the evidence may affect practitioner-centered themes, such as fear of malpractice, and, in a short segment titled "Patient Communication," patient-centered decisionmaking.

The interplay between clinical circumstances, patient values and preferences, and evidence from research may be complex.[5] When evidence from research strongly supports effectiveness of an intervention (eg, thrombolytic therapy compared to placebo in reducing 30-day mortality in older patients experiencing myocardial infarction, number needed to treat to prevent 1 death=10 to 20),[10] compelling contraindications based on patient circumstances or preferences should exist for it not to be reasonably offered and adopted. Such contraindications may, however, exist no matter how large the apparent benefit. When the evidence is less compelling or the clinical impact less clear cut (eg, the choice of percutaneous revascularization over thrombolytic therapy for the same indication, number needed to treat to prevent 1 death=50 to 100 or greater),[11] patient values and circumstances will likely play a greater role in shaping the decision. When the evidence is relatively poor and the benefits are unclear, as in the case of prophylactic antibiotics for preventing infection or improving cosmesis in uncomplicated hand lacerations, patient circumstances and preferences reasonably prevail in importance over evidence from research. Understanding the strength and clinical impact of such evidence remains a critically important informant of the process.

Evidence-based medicine has illuminated, but has not created, the decisionmaking model we are describing. In 1999, the Accreditation Council for Graduate Medical Education, which oversees residency training programs in the United States, included as part of its Outcomes Project "mak[ing] informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment" as an included element of

competency in patient care.[12] In the same year, the Medical School Objectives Project of the American Association of Medical Colleges listed "the ability to translate current clinical research into lay language for patients" as a learning objective for medical undergraduates.[13,14] We believe that the *Annals* EBEM review series provides a valuable opportunity to interject the substance of these mandates into the context of evidence summaries for clinical application. As such, we perceive ourselves to have revised the instructional mission of the EBEM series relative to when it was inaugurated.[15]

The goal of the original EBEM series was to introduce practitioners in our specialty to evidence-based methodology in a form comparable to what such practitioners might do, in a simplified way, in researching questions arising from their own practice.[16] We sought to empower readers to recognize the elements of a well-done evidence-based medicine review and to make independent judgments about the quality of reviews, individual studies, and an ever-expanding array of available products and resources.

We believe that in the 10 years since the EBEM review series was inaugurated, many of the original learning objectives have been achieved. A multiplicity of initiatives and advances within emergency-medicine-relevant peer-reviewed publications, and also within the fabric of graduate and postgraduate emergency medicine training, has increased familiarity with evidence-based methods within our specialty. We perceive that addressing the culture of thinking and communication surrounding the use of clinical evidence in decisionmaking is now our most important instructional mission.

The "Patient Communication" segment of each installment will provide an example of how a practitioner might incorporate the results and strength of evidence bearing on the subject question into a statement aimed at informing a patient about the relevant options and the kinds of circumstances that could affect the direction of a decision that needs to be made. Patient values, the third part of the decision equation, are too variable to be fruitfully incorporated into the formula. Practitioners and their patients must therefore not expect these segments to directly provide "recommendations" for a particular case.

Practitioner-centered themes such as medicolegal concerns, pressures from peers and consultants, and even promotional hype from manufacturers constitute considerations external to relevant scientific evidence and may seem to distract from the patient-centered viewpoint we are advocating. By actively incorporating them into the scenarios used to define the subject decision for each installment and by addressing them directly in the "Applying the Evidence" section, we seek to further empower practitioners to maintain their decisionmaking focus in line with what we know to be their ideals: the interests of patients as defined by their circumstances and values.

Two caveats are in order. For the reasons already mentioned, we will not attempt to offer definitive recommendations. The reader should also not expect to find rigorously derived cost-benefit evaluations or even thorough explorations of relevant patient values and circumstances in these reviews. Rather, the reviews will seek to illuminate ways in which knowledge of the relevant evidence may strengthen emergency practitioners' relationship to peers and consultants and their communications with patients.

A second caveat is the acknowledgement that shared decisionmaking, albeit an ideal well worth striving for from the standpoint of today's societal values, is not a simple prescription.[17] Nor is it free from potential tradeoffs.[18] Patients in life-threatening situations or with conditions that impair baseline capacity pose special challenges to emergency physicians racing the clock to deliver time-sensitive interventions.[19]

However, we should be careful about complacency when it comes to reversion to the paternalistic medical model of decisionmaking. An abundance of evidence attests to the fact that physicians' decisions on behalf of their patients may be entirely contrary to the decisions the same physicians would make on their own behalf.[20,21] A study comparing physician and patient preferences with respect to the risks of stroke versus bleeding in the context of anticoagulant treatment for patients with atrial fibrillation found that patients were much more tolerant of the risk of bleeding to prevent stroke than were their physicians.[22] In settings in which we are forced to assume responsibility for the patient's side of the decision process, either because the patient cannot or wishes not to take part, such examples should teach us how much more sobering the responsibility for such a task is than otherwise might have been evident.

We hope that the installments in our series serve to enhance readers' sensibilities about these matters, and we invite them to participate in their discussion.

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