

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

Peter C. Wyer, MD
Michael D. Brown, MD, MSc
David H. Newman, MD
Brian H. Rowe, MD, MSc

From the Department of Medicine, Columbia University College of Physicians, New York, NY (Wyer); the Department of Epidemiology and Emergency Medicine, Michigan State University, Grand Rapids, MI (Brown); the Department of Medicine, St. Luke's/Roosevelt Hospital System, New York, NY (Newman) and the Division of Emergency Medicine, Capital Health Authority, Department of Public Health Services, University of Alberta, Edmonton, Alberta, Canada (Rowe).

0196-0644/\$-see front matter
Copyright © 2007 by the American College of Emergency Physicians.
doi:10.1016/j.annemergmed.2007.02.006

SEE RELATED ARTICLE, P. 682.

[Ann Emerg Med. 2007;49:690-692.]

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.acpj.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's⁹ 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, Zehtabchi⁹ 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. Zehtabchi⁹ 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.

Supervising editor: Michael L. Callahan, MD

Funding and support: The authors report this study did not receive any outside funding or support.

Reprints not available from the authors.

Address for correspondence: Peter C. Wyer, MD, 446 Pelhamdale Avenue, Pelham, NY, 10803; E-mail pw91@columbia.edu.

REFERENCES

1. Straus SE, McAlister FA. Evidence-based medicine: a commentary on common criticisms. *CMAJ*. 2000;163:837-841.
2. Evidence-Based Medicine Working Group. Evidence-based medicine: a new approach to teaching the practice of medicine. *JAMA*. 1992;268:2420-2425.
3. Guyatt G, Haynes B, Jaeschke R, et al. Introduction: the philosophy of evidence-based medicine. In: Guyatt G, Rennie D, eds. *Users’ Guides to the Medical Literature: A Manual of Evidence-Based Clinical Practice*. Chicago, IL: AMA Press; 2002:3-12.

4. Guyatt G, Montori V, Devereaux PJ, et al. Patients at the center: in our practice, and in our use of language. *ACP J Club*. 2004;140:A11-A12.
5. Haynes RB, Devereaux PJ, Guyatt GH. Physicians' and patients choices in evidence based practice: evidence does not make decisions, people do. *BMJ*. 2002;324:1350.
6. Newman DH, Rowe BH, Wyer PC. Improving the dissemination of the rational clinical examination series in emergency medicine. *Ann Emerg Med*. 2004;44:74-75.
7. Rowe BH, Wyer PC, Cordell WH. Improving the dissemination of systematic reviews in emergency medicine. *Ann Emerg Med*. 2002;39:293-295.
8. Haynes RB. Of studies, syntheses, synopses, summaries, and systems: the "5S" evolution of information services for evidence-based health care decisions. *ACP J Club*. 2006;145:A8-A9.
9. Zehtabchi S. The role of antibiotic prophylaxis for prevention of infection in patients with simple hand lacerations. *Ann Emerg Med*. 2007;49:682-689.
10. Gruppo Italiano per lo Studio della Streptochinasi nell'Infarto Miocardico. Effectiveness of intravenous thrombolytic treatment in acute myocardial infarction. *Lancet*. 1986;1:397-402.
11. Cucherat M, Bonnefoy E, Tremeau G. Primary angioplasty versus intravenous thrombolysis for acute myocardial infarction. *Cochrane Database Syst Rev*. 2003;3:CD001560.
12. Joyce B. ACGME Outcome Project: introduction to competency-based education. Facilitator's guide. Available at: http://www.acgme.org/outcome/e-learn/21M1_FacManual.pdf. Accessed November 28, 2006.
13. Medical Informatics Advisory Panel. *Contemporary Issues in Medicine: Medical Informatics and Population Health: Report II of the Medical Schools Objective Project*. Washington, DC: AAMC; 1999.
14. Clinical Research Advisory Panel. *Contemporary Issues in Medicine: Basic Science and Clinical Research: Report IV of the Medical Schools Objective Project*. AAMC; 2001.
15. Waeckerle JF, Cordell WH, Wyer P, et al. Evidence-based emergency medicine: integrating research into practice. *Ann Emerg Med*. 1997;30:626-628.
16. Wyer PC, Rowe BH, Guyatt GH, et al. The clinician and the medical literature: when can we take a shortcut? *Ann Emerg Med*. 2000;36:149-155.
17. de Haes H. Dilemmas in patient centeredness and shared decision making: a case for vulnerability. *Patient Educ Couns*. 2006;62:291-298.
18. Haidet P, Kroll TL, Sharf BF. The complexity of patient participation: lessons learned from patients' illness narratives. *Patient Educ Couns*. 2006;62:323-329.
19. Rosenbaum JR, Bravata DM, Concato J, et al. Informed consent for thrombolytic therapy for patients with acute ischemic stroke treated in routine clinical practice. *Stroke*. 2004;35:e353-e355.
20. Zikmund-Fisher BJ, Sarr B, Fagerlin A, et al. A matter of perspective: choosing for others differs from choosing for yourself in making treatment decisions. *J Gen Intern Med*. 2006;21:618-622.
21. Wyer PC. Feedback: walk or die! *Ann Emerg Med*. 1999;34:661-662.
22. Devereaux PJ, Anderson DR, Gardner MJ, et al. Differences between perspectives of physicians and patients on anticoagulation in patients with atrial fibrillation: observational study. *BMJ*. 2001;323:1-7.

Did you know?

You can personalize the new *Annals of Emergency Medicine* Web site to meet your individual needs.

Visit www.annemergmed.com today to see what else is new online!