Physician attitudes toward evidence-based medicine: is there room for improvement?

Mahmoud A. Moawad, MD, MPH, FACP

Any observer can see that physician attitudes towards evidence-based medicine (EBM) vary widely. EBM remains a hot topic among health care professionals. Suggestions for changing an old paradigm—especially a time-honored tradition like how to acquire medical knowledge and practice medicine—can be difficult. There are those who strongly oppose and question the rational of EBM, some in a sarcastic way, such as the Clinicians for Restoration of Autonomous Practice (CRAP) Writing Group.¹ Not to be outdone, supporters of EBM have presented their seven alternatives to EBM. These include: eminence-, vehemence-, eloquence-, providence-, diffidence-, nervousness-, and confidence-based medicine.² Regardless of all this, a new paradigm for medical practice is emerging. Evidence-based medicine de-emphasizes intuition, unsystematic clinical experience, and pathophysiologic rational as sufficient grounds for clinical decision making and instead, stresses the examination of evidence from clinical research.³

One of the most sobering lessons of “old” paradigm believers came from the Cardiac Arrhythmia Suppression Trial (CAST). Since the occurrence of asymptomatic premature ventricular contractions (PVC's) is a risk factor for subsequent sudden death in survivors of myocardial infarction, treating such arrhythmias seemed the logical thing to do. The common pathophysiologic rational was that these arrhythmias could degenerate into fatal types that could lead to sudden death; therefore, suppressing these PVC's would eliminate this fatal cascade. A major randomized, controlled trial (RCT) was set in motion to test this hypothesis using the anti-arrhythmics encainide, flecainide or moricizine against placebo. Over 2300 patients were recruited and one of the trial treatments was given to each patient. One thousand seven-hundred twenty-seven patients (75%) had suppression of their arrhythmia as assessed by Holter monitor, and those patients were randomized in a double-blinded fashion to either an active drug or a matching placebo. The study had to be terminated prematurely after 10 months since patients receiving encainide and flecainide had a higher rate of death from arrhythmia than the patients assigned to placebo (relative risk, 3.6; 95% confidence interval, 1.7-8.5). Total mortality was also higher among patients on active drugs (RR 2.5; 95% CI, 1.6-4.5).⁴ So despite “cleaning” the Holter monitor with the active drugs, and to the surprise of every one, sudden death significantly increased rather than decreased.

From the Department of Medicine, King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia

Correspondence to:

Mahmoud A. Moawad, MD, MPH, FACP

Consultant Internist and Head

Section of General Internal Medicine

Department of Medicine - MBC 46

King Faisal Specialist Hospital & Research Centre

P.O. Box 3354

Riyadh 11211

Saudi Arabia

Accepted for publication:

September 2004

Ann Saudi Med 2004;24(6):423-424

In its strict definition, EBM is the conscientious, explicit and judicious use of current best evidence about the care of individual patients.⁵ Such a decision should take into account patient values and preferences as well. One of the most common arguments against EBM is “everyone is already doing it”. Such a statement is usually made without careful thought or a strong base for support. Nowadays, reading medical journals, textbooks and attending conferences are not enough to keep up with the tremendous amount of literature released daily. For a general internist to keep abreast of all medical advances reported in primary journals, he/she needs to read 19 articles per day, 365 days per year.⁶ Publishing the results of major trials or meta-analysis could take a long time to translate into clinical practice. One of the most outrageous examples of the gap that exist between availability of the highest level of evidence for benefit of therapy and its routine application or recommendation by experts was the use of thrombolysis in acute myocardial infarction. Meta-analyses of RCT's showed a clear and unequivocal benefit from thrombolysis by mid-1970's. Not until over a decade later did clinical experts start to recommend the therapy as routine. On the other hand, a lack of benefit, and even a suggestion of harm, was shown with the use of prophylactic lidocaine in many trials; yet authorities continued to advocate its use either as a routine or for specific indications in patients with acute myocardial infarction.⁷

Studies addressing physician attitudes toward EBM are lacking in the Arab world in general. In this issue of the *Annals*, Al Baghly and Al Almi⁸ report the results of a cross-

sectional study examining physician attitudes towards EBM in the Eastern Province of Saudi Arabia. A self-administered questionnaire was sent to 409 physicians, and 273 answered (66.7%). Among the respondents, 56% worked in hospitals and 44% in primary health care centers. Seventy percent of the whole group were residents in training. Only 108 of 273 (40%) had heard about the concept of EBM, and this was the group that was examined for their attitude towards EBM. Sixty-six percent were in favor of EBM, and 91% had a positive attitude towards EBM. By multiple linear regression, critical appraisal knowledge and EBM knowledge were the only predictors of highest EBM attitude scores.⁸

In a questionnaire examining general practitioners attitude towards EBM in the former Wessex region of England, McColl found that respondents mainly welcomed EBM and agreed that its practice improved patient care. However, only 40% knew of the Cochrane Database of Systematic Reviews, and even if aware, many did not use them. The majority perceived that the barrier to practicing EBM was lack of personal time. Respondents thought the most appropriate way to move towards evidence-based general practice was by using evidence-based guidelines or proposals developed by colleagues.⁹ In a similar study from Canada on addressing evidence-based obstetric practice, 51% indicated that when faced with a difficult clinical problem, they consulted a respected authority; 37% used a textbook or clinical practice guideline; while only 8% conducted MEDLINE literature searches. Concerns about EBM were expressed through comments such as "erosion of physician autonomy," "it is time consuming,"¹⁰ and "EBM ignores clinical experience".¹¹

For the vast majority of practicing physicians, especially in the developing world, EBM is an acquired, self-motivated knowledge. Not everyone is willing to navigate away from his/her old, safe and warm style of learning into the new, unknown and possibly stormy ocean of EBM. The term is intimidating, even for many who "think" that they know and practice EBM. The mere thought of learning new skills in electronic searching and critical appraisal of literature

can be prohibitive for many physicians. Keeping that in mind, the Evidence-Based Medicine Working Group at the Department of Medicine, King Faisal Specialist Hospital and Research Centre (KFSHRC) conducted two Evidence-Based Medical Practice Workshops in May 2003 and April 2004. The format was a simple, basic, and non-threatening introduction to EBM. The main component was role-play about a real clinical scenario from our morning report. The limitations of traditional sources of evidence and the use of EBM tools in finding answers were highlighted throughout this play. The rest of the workshop consisted of hands-on computer searching, small group discussions and a few, short didactic talks. Our stated objective of "generating interest in EBM and encouraging participants to spend time to learn more about the concept" was achieved by 100% and 97% for the two workshops, respectively (Unpublished data).

In Al-Baghly's study, EBM-knowledge and critical appraisal knowledge were the only variables associated with the highest EBM-attitude scores. For those among us who are interested in and teach EBM, we recommend presenting the concept in a simplified, friendly format with hands-on experience while trying to teach less. Those principles were keys to the favorable responses to our KFSHRC workshops. We also have to acknowledge that one size does not fit all in this case, and EBM cannot be taught to all practitioners to bring them to the same level of knowledge. Generating interest and introducing the basics in a non-intimidating fashion, in my opinion, is far more effective. From there, each individual can take this base and build as high as he/she wishes. For some, access to secondary sources of evidence (already appraised articles) with knowledge of a hierarchy of evidence could be enough, while others might feel that competency with the five steps of EBM is a minimum. Acknowledging the constraints of time and logistics (and until EBM becomes a part of the curriculum of all our medical schools), locally generated and adopted clinical practice guidelines and clinical pathways seem the most logical way to implement evidence based medical practice during this transition period.

References

1. Clinicians for the Restoration of Autonomous Practice (CRAP) Writing Group. Evidence-Based Medicine: unmasking the ugly truth. *BMJ*. 2002;325: 1496-1498.
2. Isacs D, Fitzgerald D. Seven alternatives to evidence-based medicine. *BMJ*. 1999;319:1618.
3. Evidence Based Medicine Working Group. Evidence-Based Medicine: A new approach to teaching the practice of medicine. *JAMA*. 1992;268(17): 2420-2425.
4. The Cardiac Arrhythmia Suppression Trial (CAST) Investigators. Preliminary report: effect of encainide and flecainide on mortality in a randomized trial of arrhythmia suppression after myocardial infarction. *N Engl J Med*. 1989;321(6):406-412.
5. Sackett D, Rosenberg W, Gray J, et al. Evidence-Based Medicine: What it is and what it isn't. *BMJ*. 1996;312:71-72.
6. Davidoff F, Haynes B, Sackett D, et al. Evidence-Based Medicine: a new journal to help doctors to identify the information they need. *BMJ*. 1995;310: 1085-1086.
7. Antmann E, Lau J, Kupelnick B, et al. A comparison of results of Meta-analysis of randomized control trials and recommendations of clinical experts. *JAMA*. 1992;268(2):240-248.
8. Al-Baghly N, Al-Almaie S. Physician's attitude towards evidence based medicine in Eastern Saudi Arabia. *Ann Saudi Med*. 2004;24(6).
9. McColl A, Smith H, White P, et al. General Practitioners' perception of the route of evidence based medicine: a questionnaire survey. *BMJ*. 1998;316:361-363.
10. Olatunbosun O, Edouard L, Pierson R. Physicians' attitude toward evidence based obstetric practice: a questionnaire survey. *BMJ*. 1998;316:365-366.
11. Tracy CS, Dantas GC, Upshur RE. Evidence-based medicine in primary care: qualitative study of family physicians. *BMC Fam Pract*. 2003;4(1):6.