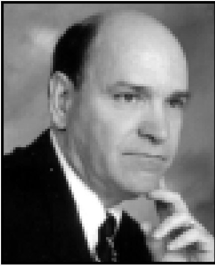

Evidence-based medicine ain't evidence based

A new buzzword entered the medical lexicon in 1992, when the Evidence-Based Medicine Working Group published one of the first articles on the phenomenon in *JAMA*. In the years since, the role that Evidence-Based Medicine (EBM) plays in medical care has increased exponentially. Yet, some now question whether it should play such a prominent role.

"[EBM is not] medicine based on evidence, but the equivalent in the field of medicine of a cult with its unique dogma, high priest… and fervent disciples," opines Dr. John Service, editor-in-chief of *Endocrine Practice.* Indeed, if a doctor questions EBM today, it seems he or she runs the risk of being branded an infidel or heretic, or worse.

Proponents of EBM assume it will improve the quality of health care by basing medical decisions primarily on statistically valid clinical trials; and, so, information gained from randomized clinical trials (RCT) preempts information from all other sources. Yet, isn't it ironic that a review of the literature by this author and others turns up no evidence as defined by EBM to validate this assumption?

"The failure to conduct a randomized control trial, the recognized best form of evidence according to EBM, and reliance on expert opinion, namely theirs (the worst form of evidence according to them), hoist EBM by its own petard," notes Service.

EBM purports to provide "statistical proof" when, in fact, what it provides is "statistical data." Data does not necessarily equate to proof. Data is open to interpretation, which can change over time or vary depending upon one's perspective.

Dr. George Spaeth makes this point in evaluating the Ocular Hypertension Treatment Study, which involved more than 1,000 people who had increased intraocular pressure but no optic nerve damage or visual field loss. Only five percent of those treated went on to develop visual field loss, whereas 10 percent of those not treated did. This data can be used to argue either for or against treatment, Spaeth notes, depending on one's interpretation and incentives. The treating physician could argue that instituting early treatment would reduce visual field loss from glaucoma by 50 percent. Yet, a third party payer with financial incentive could just as easily argue against treatment, noting that the overwhelming majority of patients with elevated intraocular pressure do not get worse, even when not treated. Consider the evidence. Who is right? They both are.

Is there, indeed, a best practice regarding the approach to elevated intraocular pressure? If so, how should the algorithm be constructed? Who should have the ultimate discretion in making that decision? Should it be the treating physician, with the best interest of the individual patient in mind? Or a third party with the best interest of the bottom line in mind?

Clinicians now fear medical malpractice suits, if they do not follow EBM guidelines in the treatment of a patient. But, as one resident recently asked me, which guidelines do you follow? Even guidelines about the same disease can vary substantially, depending upon which professional organization promulgated them. What's more, by following them, don't we freeze medicine into the year 2004? How is progress to be made in health care, if we are forced to walk lockstep with algorithms promulgated last year or the year before?

It is not the epidemiological data of EBM that I question but, rather, the manner in which it is used to displace clinical judgment. The physician has taken the history, performed the physical, reviewed the labs, and discussed the illness with the patient and family. He knows the patient's wishes, desires and values. All of this critical information must be considered by clinicians when treating patients. EBM relies primarily on epidemiological data. EBM then uses this data in such a way that it preempts all other information that the treating physician has collected. In fact, non-quantifiable information such as the patient's values and the physician's clinical experience are not even taken into account in EBM. It is absurd to think that a third party, operating at a distance in time and space from the patient being treated, is able to make a

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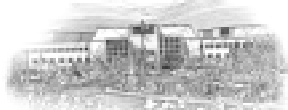

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> **"[EBM is not] medicine based on evidence, but the equivalent in the field of medicine of a cult with its unique dogma, high priest… and fervent disciples," opines Dr. John Service, editor-in-chief of *Endocrine Practice*.**

better medical decision than the treating physician and, therefore, should be allowed to preempt the treating physician's decisions.

Entire medical conferences are devoted to EBM, focusing on the statistical purity of the study. Statisticians are often hired to participate in such conferences. Meanwhile, the clinical question for which evidence was being sought takes a back seat. "The result is form taking precedence over substance," says Service. In the process, it is often forgotten that responses of a group as an aggregate can be quite different than the response of an individual to a specific therapy. Patients are individuals, not groups. When one treatment is shown to be better than another on a population basis, this does not necessarily mean that it is the best treatment for the patient.

The decisions whether to treat and how to treat a disease ultimately lie with the patient, who makes these decisions with the assistance of his or her physician. It's a value judgment, and there is no way to measure value. It is not quantifiable in inches, pounds or miles-per-hour. A third party cannot make value judgments on behalf of another.

The ultimate discretion regarding how information from multiple sources (including EBM, prior clinical experience, and the patient's unique circumstances, wishes and desires) are integrated for the treatment of an individual should be in the hands of the treating physician. Since the physician has the ultimate responsibility for the care of the patient, he should have the ultimate discretion. AM

REFERENCES

Evidence-Based Medicine, a new approach to teaching the practice of medicine, Evidence-Based Medicine Working Group, JAMA 268 (17) (1992) 2420-2425.

F. John Service, "Evidence-Based Medicine?," Endocrine Practice, volume 8, #2, March/April 2002.

Cohen, P. Stavri, W. Hersh, "A Categorization and Analysis of the Criticisms of Evidence-Based Medicine," International Journal of Medicine Informatics (2004) 73, 35-43.

E. Dobbie, F. D. Schneider, A. D. Anderson, J. Littlefield, "What Evidence Supports Teaching Evidence-Based Medicine?", ACAD. Med. 75 (12) (2000) 1184-1185.

G. Spaeth, "To Provide Appropriate Care, Know Yourself," Review of Ophthalmology, March 2004, p. 28.

Dr. Dolinar, an endocrinologist practicing in Phoenix, frequently speaks on health care issues to national audiences. He has testified before the US Senate Subcommittee on Consumer Affairs and has spoken at the annual meeting of the American Legislative Exchange Council. Dr. Dolinar's writings and viewpoints have appeared in leading publications, including The Wall Street Journal, The New York Times and USA Today.

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