

Authority

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Despite the rise of evidence-based Medicine (EBM), some clinicians, including the author below, yearn for the halcyon days when expert opinion reigned supreme. His remarks illuminate the potential chasm between experts and evidence — a gap that may prove more illusory than real after considering my response.

Letter to the Editor:

As president-elect of the Society for Authority-Based Medicine, I write on behalf of my colleagues with a plea to stop corrupting the minds of your readers with the slavish worship of evidence. Our society is dedicated to the time-tested principles of intuition, experience, and expert opinion as a basis for quality healthcare. Membership requirements include at least 20 years of clinical practice, commitment to case series as a test of efficacy, and letters of support from five members in good standing.

Just as Socrates corrupted the Athenian youth with his aimless chatter, for which he was promptly put to death, you, along with other like-minded editors, appear obsessed with evidence to the point of insanity. Planned research, systematic reviews, evidence-based case reports, and clinical practice guidelines promote sterile, cookbook Medicine that defies common sense and denigrates experience to a level of triviality. Expert opinion plus astute observation were good enough for Hippocrates through Osler, but apparently not for you.

My request is simple: restore common sense to your publishing priorities. A starting point might be publishing more case reports and less original research; more case series and fewer randomized trials; more narrative (state-of-the-art) reviews by experts and fewer systematic reviews by methodology-obsessed neophytes; and more plain-language descriptive reports and less analytic research with detracting statistics, data-laden tables, and *P* values.

The Society for Authority-Based Medicine has yet to choose an official journal. Implementing the changes above may remedy that problem by allowing us to partner with your prestigious publication. Greater emphasis on intuition, experience, and expert opinion will also attract readership by providing a clear message that is eminently understandable and universally appealing.

Authoritatively yours,
Emmet Eminence
Know It All, USA

Editor's Response

Had the Society for Authority-Based Medicine existed in ancient Rome, the choice of president would have been easy: Clarissimus Galen. As recounted by Osler, "For fifteen centuries he dominated medical thought as powerfully as

did Aristotle in the schools. Not until the Renaissance did daring spirits begin to question the infallibility of this medical pope.”¹ And question they did. Galen’s anatomical insights based on apes, oxen, and pigs—set back discovery of the circulation of the blood for centuries, until luminaries like Vesalius questioned Galenic authority, with great personal sacrifice.

Conversely, authority has led to some of Medicine’s greatest achievements. Hippocrates is rightly considered the father of Medicine because his devotion to keen observation as a basis for action vastly improved upon magic and superstition. Fans of case reports and series need look no further than the Hippocratic School for the birth of their beloved genre. Galen improved his powers of observation with animal experiments, and Vesalius advanced further with a refocus on human anatomy. Harvey soon perfected the experimental method, which Osler later embraced with the same fervor he applied to bedside teaching.

Insight and observation helped make Osler the most eminent clinician of the late nineteenth century, when he published his seminal work *The Principles and Practice of Medicine*.² Here, for the first time, expert opinion was codified with a sweeping panorama of scientific insight. Each chapter was, in essence, an expert narrative review arranged under the common headings of definition, etiology, morbid anatomy, symptoms, diagnosis, prognosis, and treatment. This structure, which still forms the basis of many current expert-authored reviews and chapters, was an extraordinary innovation.

Authority-based Medicine, supported by observational studies and expert reviews, still dominates many medical journals and enjoys robust readership. The past few decades, however, have challenged this dominance with exponential growth in EBM, emphasizing clinical trials, systematic reviews, and trusted practice guidelines as the foundation for healthcare decisions. The roots of EBM extend back more than 200 years to the first clinical trial on scurvy by James Lind,³ followed shortly by Pierre Louis’ statistical analysis of bloodletting, and later by the first randomized controlled trials of tuberculosis in the mid-twentieth century.

Darrell Huff, in his classic *How to Lie with Statistics*,⁴ refers jokingly to the paralyzing intellectual aftershocks caused by “. . . the clash of statistics with the human mind.” A contemporary equivalent might be the clash of authority-based medicine with EBM: *experienced clinicians, keenly aware of the unique challenges of managing individual patients, may question clinical guidance based on large-group studies, the statistical wizardry of meta-analysis, and obtuse methods of health policy research.* More clashes are likely with the increasing focus on guidelines, performance measures, and comparative effectiveness research as a basis for quality healthcare given limited resources.

Reconciling this dilemma lies in acknowledging the synergy of opinion and evidence as inseparable, essential components of clinical decision making. The art of Medicine includes both numbers and narrative, each important, neither supreme. Authority-based Medicine does not deny the importance of evidence, merely its supremacy.

What then should be the role of expert opinion, the stepchild of authority-based Medicine, in the current EBM paradigm? Here are some thoughts:

1. Expert opinion *is the lens through which evidence gains context* and meaning, it is *not* a level of evidence unto itself.
2. Expert opinion *links best evidence with individual patient care*, incorporating clinical experience into health-care decisions.
3. Expert opinion *plugs evidence gaps* and may justify recommendations for action, *provided that* they are supported by clear preponderance of benefit over harm, or vice versa in the case of a recommendation against action.
4. Expert opinion *helps manage the inevitable uncertainty of clinical care*, rising in importance as the level of certainty based on available evidence declines.
5. Expert opinion *offsets the somber tone of most peer-reviewed research* by enlivening biomedical journals with commentaries, invited articles, and letters to the editor.

The first point above merits elaboration. Expert opinion is often mistakenly considered a level of evidence, when in fact it is simply the lens through which all evidence must be viewed. Rating expert opinion as the lowest evidence level, below even biased or flawed observational studies, ignores the value of clinical experience accrued over a lifetime.⁵ Expert opinion based on wisdom and careful observation brings evidence into clearer focus. Conversely, when based on personal gain or self-preservation, distortion ensues. Franklin D. Roosevelt noted, “There are as many opinions as there are experts,”⁶ and clearly not all expert opinion is created equal.

Enthusiasm for an intervention based on expert opinion must be tempered by potential harm and adverse events. For example, proponents of screening or early use of diagnostic tests must balance the quest for early detection against the inevitable misdiagnoses and false positives that result and lead to unnecessary tests, surgery, or anesthesia. Similarly, proponents of medical or surgical interventions, which may be safe in their own “expert” hands, must consider the potential for unanticipated complications, especially in the hands of mere mortal clinicians with less experience. The balance between the desirable and undesirable consequences of alternative management strategies is a prime consideration in guideline development,⁷ perhaps even more important than the quality of the underlying evidence.

Expert opinion cannot substitute for clinical trials in assessing efficacy. Kind, caring, experienced clinicians with superb results cannot tell if an outcome may have occurred anyway because of natural history, spontaneous resolution, or regression to a mean symptom state. Moreover, experts often use impressive treatments in impressive settings, setting the stage for placebo and halo effects. Recommendations of clinical experts may lag behind the best contemporary research evidence, meaning that both effective and dangerous treatments are overlooked.⁸ Last, expert claims of 100 percent safety and no adverse events are impossible to substantiate without the uniform follow-up attainable only in planned research.

A pitfall of expert opinion is the belief that evidence applies only to less experienced (and less insightful) clinicians because of the bountiful flaws in research quality that render the evidence irrelevant to the expert's superior practice style and unique patient population. Since the evidence has already been peer-reviewed and published, often in high-quality journals, the "flaws" more often reflect differences of opinion than fatal shortcomings that invalidate the research. Unfortunately, "Certitude is not the test of certainty," cautioned Oliver Wendell Holmes, Jr., and, "We have been cocksure of many things that were not so."⁹ Reconciling the certainty of experts with the uncertainty of evidence is never easy, but those who try are likely to provide the best patient care and health policy.

The limitations above must not obscure the role of expert opinion as a necessary link between evidence and action. Expert opinion, tempered with humility and acknowledgement of flaws and pitfalls, adds a missing dimension to research evidence. Would anyone reading this editorial prefer to be cared for by "non-experts" when ill, going out of the way to find a clinician armed with the latest guidelines but possessing only minimal experience? The challenge is to rise above the myopia and biases that eventually woo all experts, by maintaining a healthy respect for new evidence and alternate points of view.

"Our knowledge can only be finite, while our ignorance must necessarily be infinite," observed Karl Popper, one of the greatest philosophers of science in the twentieth century.¹⁰ Applied to the preceding discussion, EBM categorizes our finite knowledge, but the lens of expert opinion focuses it more sharply on the problem at hand. Consequently, I reach out to the Society for Authority-Based Medicine and like-minded groups for the best experts to participate in the journal as authors or reviewers, and in post-publication peer review through letters and correspondence. Ultimately, it is our readers and patients who will profit most from the synergy of experts and evidence.

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References

1. Osler W. The Evolution of Modern Medicine. Birmingham: The Classics of Medicine Library, Division of Gryphon Editions; 1982. p. 83.
2. Osler W. The Principles and Practice of Medicine: Designed for the Use of Practitioners and Students of Medicine. New York: D. Appleton and Company; 1892.
3. Tröhler U. James Lind and the evaluation of clinical practice. The James Lind Library. Available at: www.jameslindlibrary.org. Accessed May 6, 2010.
4. Huff D. How to Lie with Statistics. New York: W.W. Norton & Co. Inc; 1954. 5.
5. Tonelli MR. In defense of expert opinion. *Acad Med* 1999;74:1187-92. 6.
6. Franklin D. Roosevelt quotes. Thinkexist.com. Available at: www.thinkexist.com. Accessed April 28, 2010. 7.
7. Guyatt GH, Oxman AD, Kunz R, et al. GRADE: going from evidence to recommendations. *BMJ* 2008;336:1049-51. 8.
8. Rennie D, Chalmers I. Assessing authority. *JAMA* 2009;301:1819-21. 9.
9. Oliver Wendell Holmes, Jr., quotes. Thinkexist.com. Available at: www.thinkexist.com. Accessed May 6, 2010. 10.
10. Karl Popper quotes. Thinkexist.com. Available at: www.thinkexist.com. Accessed April 28, 2010.