



EDITORIAL

## **Commentary: Research Evidence Will Not Be Enough**

In his timely and thoughtful editorial (Jason, 2000), Dr. Jason recommended that we have “trustable research findings” replace “personal opinions as a basis for decision-making in the education of health professionals.” In doing so he endorsed the creation and development of the “Campbell Collaboration” (modeled on the Cochrane Collaboration on evidence-based medicine) that will assemble, develop and disseminate findings on what is being called “Best Evidence Medical Education” (BEME).

Dr. Jason pointed out, among other things, that: “Opinion-based decision making has dominated health professions education so far. Much of what goes on in curriculum committees ... involves debates over assumptions, cherished traditions, and quaint myths. Seldom are there informed dialogues over the interpretation of available research findings.” But Dr. Jason also expressed some concerns about BEME. He pointed out that what happens in the classroom and in the clinic derives not only from too-often-unscientific decision-making at the planning (“macro”) level. It also results from “micro” level decisions made, on the spot, by individual instructors. These moment-to-moment decisions are often even less informed by educational science and the needs of health care practice than are macro level decisions on these matters. Further, such micro decision-making is difficult to study scientifically. For this and several other equally sound reasons, Dr. Jason concludes that while we should recognize BEME as an important and useful tool in health sciences education reform, we should recognize that it has its limits. I would like to add the following supportive points, limiting my observations to the medical education context.

As observed by Dr. Jason, both in terms of its relevance to the needs of the students and of the profession, and its conformance (or lack thereof) with sound (adult) learning theory, the quality of much current, conventional teaching of medical students and residents ranges from fair to poor. This conclusion doesn't come as a surprise to informed observers. A principal source of this state of affairs is the fact that so few teachers of medical students or residents, at either the basic science or the clinical level, have had any systematic preparation for the task of teaching. Indeed, it is ironic that in the United States (and perhaps elsewhere), it is the least qualified group of teachers, the residents (house officers), who are doing more and more of the clinical teaching of medical students. This situation arises from the continuing decline in government support of medical education and the resulting demands that are placed on clinical

attending instructors to earn more and more of their own incomes from direct clinical practice.

However (and this is an essential point when considering the possible limits of BEME), very little of the evaluative research that is being done on medical education focuses on the bulk of the teaching and learning experiences offered to medical students and residents. The majority of that teaching, as done by basic science and clinical instructors who are mostly untrained in teaching/learning, is rarely examined. Most medical education evaluative research focuses on new instructional initiatives, many of which are informed by adult learning theory.

This situation in medical education is analogous to the situation in the field of clinical preventive medicine. Often, the treatment community and the financial institutions that support clinical care say to the preventionists “before we’ll do it, prove that we should” (and they really mean prove not only the efficacy and clinical effectiveness, but also the cost-effectiveness of prevention). Of course, this policy is pursued even though, over the years, there has been little or no similar proof required for the use of many of the established clinical interventions (that is, until the recent advent of authentic evidence-based medicine). Similarly, the research purview in medical education often ignores the vast majority of conventional, traditional teaching, even though that is what really needs studying, if only to correctly inform reform efforts.

Sadly, it is precisely that majority of medical student/resident teaching that is rarely the subject of evaluative research. Furthermore, given the responses of most conventional teachers in medical education over the last 30 years to the growing body of evidence that has been gathered on what makes for effective learning, it is unlikely that significant changes will take place just because more research on teaching/learning is conducted.

What will we need to make effective changes in medical education? To improve medical student (and resident) teaching will require not only research to illustrate and validate what is good (effective) teaching and what is bad (ineffective and worse—counterproductive) teaching. It will also require a training/qualification/certification system for medical educators. It will require that no longer will medical school faculty members be hired simply on the basis of demonstrated expertise (or demonstrated promise) in research or clinical medicine. It will require that demonstrated teaching/learning experience and aptitude will also be included among the hiring and retention criteria.

I am a member of two teaching professions: medical educator and certified ski instructor. For the former, I was hired almost 30 years ago on the basis of some production and some promise of future production in the field of health policy analysis. Teaching experience/aptitude was never considered when I was hired. I have managed to produce research and writing in both health policy analysis and health promotion/disease prevention during the past 30 years, and that output has been reviewed from time to time. I have also taught medical students, other graduate students, and residents over the same period. That work has never been

reviewed (except in student evaluations) and I have never had to take any education/continuing education courses in teaching.

To become a certified ski instructor, on the other hand, I had to do the following. First, make it through a hiring clinic at a ski school where both my skiing ability and teaching potential were evaluated. Second, be hired by that school. Third, keep my job until I had put in enough hours so that my director would permit me to take a national certifying exam at the first of three levels of difficulty. And finally, pass that exam, on both my skiing and teaching abilities. To maintain my certification, I must undergo two days of continuing education on my skiing and teaching abilities every year. If I want to advance to the next level of certification, I will first need to accumulate much more teaching experience under the watchful eye of a ski school director and his training staff. Then I will need to take a set of specific exam-preparation courses. Finally, having been given the approval to try it by my director, I will have to pass another, rather rigorous, reality-based (two-days-on-the-snow) exam. The difference in what I needed and need to do to teach future doctors and I what I needed and need to do in order to teach people to ski is striking (and ludicrous)!

However, neither more research nor the existence of such stark comparisons between the requirements for teaching skiers and teaching future doctors will by themselves bring about the needed changes. In addition, what will be needed, as Dr. Jason said, “is a sufficient number of administrators, policy makers, and teachers who care enough about [the] principles [and practice of good education], who consider our learners and our educational programs centrally important, and who are willing to acknowledge that there is a substantial difference between unexamined assumptions and good thinking.” And those folks will then need to actually get out there and make the needed changes in everything from hiring criteria to providing effective, ongoing faculty development and quality assurance programs. In most instances, none of this will be easy, and sometimes it will be a thankless set of tasks. In The Network there are many examples of people who have been working to make these sorts of changes. But the vast majority of medical schools—and many schools in the other health professions—around the world remain untouched. There is an enormous challenge ahead. BEME may be part of the solution, but it is only one part.

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## Reference

JASON, H. (2000). The importance—and limits—of Best Evidence Medical Education. *Education for Health*, 13, 9–13.