Reviewer's report

Title: Sicily Statement on Evidence-Based Practice

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Reviewer: Benjamin Djulbegovic

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General
The appeal of EBM has been irresistible. In a remarkable short period of time a notion that practice of medicine should be transparent, based on explicit knowledge and that claims of health intervention effects should be founded only on scientifically valid empirical evidence has spread to all corners of the world making an impact not only in medicine but also on lay and policy-makers thinking. In 2001 it was dubbed by the New York Times as one of the “Ideas of the Year”. The movement, which started in early 1990s, has, however, stirred a vigorous debate about principle and the process of EBM (or EBP). Undoubtedly, the EBP movement has required some consolidation and clarification regarding its purpose, process and further integration within framework of education of health care professionals. With this in mind, Martin Dawes and colleagues organized a conference on Evidence-Based Health Care Teachers and Developers from which the Statement on EBP emerged.

This is timely and important exercise, but one has to ask how much it really adds or clarifies the issues that have already been previously debated. The statement predominantly focuses on a five-step process of EBM (or EBP), which was based on appealing normative concepts formulated in early 1990s by the “fathers” of EBM. In the mean time, a lot of debate (and some empirical data) have been published pertaining to each of the “steps” in this 5-step process challenging practicality & feasibility of this “recipe". I am surprised that some consolidated reformulation of this five-step process is not offered in the Statement. For example, appealing PICO format is often not suitable for translation of clinical problems (“uncertainties”) into answerable questions. This is because MEDLINE and other databases do not index research papers according to the PICO format. I am not arguing against PICO format- all I am saying that students may spend their time learning how to ask questions in terms of patient-oriented outcomes, only to become frustrated at the second step when they discover that search according to disease-oriented indexing result in better retrieval (at least in my field of oncology)!

I also believe that steps 4&5 should be modified to reflect better what clinical medicine is all about. Clinical medicine is really about decisions and decision-making (under conditions of uncertainty). A lot of is written about “evidence-based decision-making" but a substantial confusion remains here (as the authors of this paper are undoubtedly aware of the fact that evidence is necessary but not sufficient for decision-making). The Statement like this should provide a paragraph or two about the role of evidence and EBP in enabling rational decision-making (including a definition of rational decision-making and the need to link EBM to other methods of decision-making). Furthermore, the explicit linkage to the purpose of education would be highly desirable. (As a suggestion, one may link EBP goals to Stanford’s Douglas Hurd reflection on the purpose of education, which is to learn how:

• distinguish evidence from propaganda (advertisement)
• probability from certainty
• data from assertions
• rational belief from superstitions
• science from folklore
• theory from dogma

I cannot think of any better way to link EBP with medical education.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The Statement should clearly separate principles, process and evidence-based outcomes. As it currently reads, this is a bit conflated. Also, as indicated above the Statement can be better linked to the purpose of education and the role of evidence (and EBP) in decision-making.

Regarding some assertions made in the paper, I do want to comment on two:

a) practice of medicine and decision-making should be informed by the “tacit and explicit knowledge”. This may be so, but if one acknowledges equal importance of “tacit” (expert) knowledge with the explicit knowledge then a line between EBP and traditional medicine becomes completely blurred. EBP is about explicitness and transparency, and if the Statement implies that care can be equally effectively delivered by those who rely on their tacit knowledge (as opposed to explicit knowledge), then this will lead EBP to a slippery slope and the authors may actually see a demise of EBP instead its further growth. I suggest deleting importance of tacit knowledge in EBP (or very carefully explaining its relationship to “explicit” knowledge)

b) on page 8, the authors make a remarkable, thought-provoking statement: “What has also became evident was the exaggerated impact that weak research methodology and publication bias have on putative effectiveness”. If there are no typographical errors here, this is a truly important statement, and in fact if it is believed to be correct, then it will lead to the death of EBM education as we now know it. This is because the major impetus in EBM courses, as also noted by the authors, has been on critical appraisal. If, however, learning skills of critical appraisal will not affect our conclusions about intervention effectiveness, then a step #3 of the 5-step EBP process will end up being significantly de-emphasized. Personally, I believe that empirical evidence is not strong enough to make this statement (yet). The authors cite the paper, which indicated that worries about allocation concealment may indeed had been exaggerated. Our own work indicates similar findings (see BMJ 2004;328:22-5; Accountability in Research 2003;10:302-317). However, some other work (e.g. Cochrane review on mammography) indicated that poor methodological quality may have been associated with inflated treatment effects. In my opinion, it is too early to de-emphasize the role of critical appraisal.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

Although I have interacted over the years with some of the authors of this paper, I believe that my evaluation is fair and impartial. Consequently, I declare that I have no competing interests in relation to this paper.