

## Update 52

### 'FACTS' AND 'MYTHS' ABOUT EVIDENCE-BASED PRACTICE (EBP).

In May 2004, I had the opportunity to listen to Professor Jennifer E. Bolton, who is the Research Director at the Anglo-European College of Chiropractic, present a paper at the ECU Conference in Finland. That paper, which I summarise below for you, has now been published as a commentary (1) in the latest edition of the peer-reviewed scientific journal, *Clinical Chiropractic*.

Professor Bolton presents a number of statements that relate to evidence-based health care (EBP), and explores the extent to which each statement is a 'fact' or 'myth' relative to the relevant research published to date.

In total Professor Bolton presents, and explores, the following six separate statements -

1. **EBP has had a cataclysmic effect on health care over the past decade.**
2. **EBP improves the health of patients.**
3. **The best evidence comes from the RCT.**
4. **Clinicians can't, or won't, evidence-base their practice.**
5. **The theory-practice gap must be bridged if EBP is to succeed.**
6. **EBP is good for chiropractic.**

Below I present brief quotes related to each statement from Professor Bolton's commentary.

1. **EBP has had a cataclysmic effect on health care over the past decade.** Professor Bolton contends that, "...not many would argue with this statement," and that, "Arguably, the main change in which EBP resulted is the way that clinicians access and keep up-to-date with the information to inform practice, a change reflected in undergraduate medical education, which now emphasises research methodology and critical appraisal far more than it once did."
2. **EBP improves the health of patients.** Professor Bolton observes that, "This is where things start to get a little uncomfortable in that this assumed truth is far from evidence-based," and that, "It is something of a paradox that, by the rules of EBP itself, there is little, or even no evidence that EBP is more effective in improving the health outcomes of patients compared with, for example, practice-as-usual."
3. **The best evidence comes from the RCT.** Professor Bolton describes this as, "...a myth of gigantic proportions." "It is a fact that the RCT is the design most likely to provide truthful conclusions about 'cause and effect' and thus about what treatment interventions can work best (efficacy). But to propagate the hierarchy of evidence with the RCT at the pinnacle for all clinical research is nothing short of absurd..."
4. **Clinicians can't, or won't, evidence-base their practice.** "There is increasing evidence to support the truthfulness of this statement in that, in spite of taking the hard work out of finding and appraising the research evidence through the production and dissemination of clinical guidelines, it is very hard to achieve any change in the way in which clinicians practice," and that, "One of the major reasons (for this unwillingness to change) may be the lack of appropriateness of the evidence

presented to clinicians for implementation, in particular the applicability of research on large groups to an individual patient.”

5. **The theory-practice gap must be bridged if EBP is to succeed.** The author contends that, “There is little doubt that this statement is fact, since it underlies the whole purpose of EBP. The enormous gap between research and practice goes to the heart of the deep cultural differences between science on one hand, which strives to change or subvert current knowledge bases and accepted practices, and the profession on the other, which sets and maintains common practices and standards. So what can be done to bridge the gap? Firstly, researchers need to get out more and communicate with clinicians. Researchers should remember that clinicians are part of the solution and not part of the problem. Research that is clinically meaningful will not be devised and developed in the lofty and isolated ivory towers of academia. Secondly, clinicians need to be more open-minded and understand that research has everything to do with them.”

6. **EBP is good for chiropractic.**

“It is a fact that EBP has arrived, and will almost certainly be around for the foreseeable future .... The ‘E’ in EBP, however, must be clinically meaningful, using research designs that provide the right answers to the right questions.”

**ASRF Update Editor’s comment:** Regarding point number 4 above (Clinicians can’t, or won’t, evidence-base their practice), a growing body of evidence, discussed in a recent editorial (2) hints toward just a few of the reasons why efforts to implement EBP have been met with resistance from medical practitioner -

- Firstly, the published evidence that clinicians need is scattered among thousands of journals, textbooks, monographs, reports, guidelines, many of which are not electronically indexed.
- Secondly, electronic indexing of articles is far from ideal (3), and the techniques of electronic searching are still complex and outdated. As a result, electronic searches all too often yield no “hits” or an avalanche of irrelevant citations (4).
- Thirdly, most medical practitioners now in practice did not acquire the skills of literature retrieval during their training.
- Furthermore, although 80% of medical students believe that their literature searching skills are adequate by the time they graduate (5), those skills rapidly decay unless clinicians use them regularly, which few manage to do.
- Finally, even using current electronic systems, finding and selecting literature- data to solve a single patient-related problem can easily require an hour or more (6). Health care providers just don’t, and never will, have that kind of time to look for the answers to most of their clinical questions themselves.

## References:

1. Bolton JE. 'Facts' and 'Myths' about clinical research [commentary]. *Clinical Chiropractic* 2004;7:107-11.
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3. Funk ME, Reid CA. Indexing consistency in MEDLINE. *Bull Med Libr Assoc* 1983;71:176-83.
4. McKibbin KA, Haynes RB, Dilks CJ, et al. How good are clinical MEDLINE searches? A comparative study of clinical end-user and librarian searches. *Comput Biomed Research* 1990;23:583-93.
5. Medical School Graduation Questionnaire. All Schools Report. Question 20. Association of American Medical Colleges, 1999. <http://www.aamc.org/meded/gq>
6. Florence V. Clinical extracts of biomedical literature for patient-centered problem solving. *Bull Med Libr Assoc* 1996;84:375-85.