

Chiropractic Philosophy & Clinical Technique

The Case for Evidence-Based Chiropractic

By Michael Haneline, DC, MPH

Evidence-based chiropractic (EBC) is the process of “actively seeking support for and improvement of chiropractic clinical practice through the integration of the best available research evidence, combined with clinical expertise and patient preferences.”¹ It takes into account the knowledge and skills of the doctor, as well as the unique values of the patient. Information from the best available scientific evidence is added to these other 2 factors to help the practitioner choose the most effective and appropriate care. EBC is particularly indispensable when clinical situations arise for which the practitioner does not have suitable answers. For example: How valid are planned diagnostic tests? Will the results of these tests be helpful and actually bring the doctor closer to making a diagnosis? What is the best treatment for this patient? At times, however, doctors may not address difficult clinical questions, choosing to refer the patient to another provider or maybe even to provide substandard care.

EBC advocates that the best evidence on the topic be searched for, evaluated for validity and relevance to the clinical problem at issue, and then applied to the management of the patient. Thus, evidence is added to the patient management equation, providing the doctor with information that has the potential to improve patient care, sometimes to a considerable degree. The doctor and pa-

tient are not denied any rights when EBC is implemented in this manner because this newly acquired information is combined with the doctor’s knowledge and past experience with similar patients—and the patient still has the right to accept, reject, or modify the suggested care.

How can one argue against this type of care? Yet EBC is still controversial in some circles, and many DCs resist learning the fundamentals of the interpretation of research needed to put it into practice. Confront just about any doctor of chiropractic on this issue, however, and you will hear that knowledge and use of the best evidence from research have great potential to improve patient care. It is not really the use of EBC that is controversial; it’s the *misuse* of it. For example, it’s misused when insurance companies deny treatment based on how they interpret the findings of research.

Evidence-based chiropractic has been criticized because it purportedly relegates practicing DCs to technician status, in which the elite of the profession (i.e., the researchers) dictate what and how the doctors should provide care.² This criticism does not actually apply. Nowhere in the definition of EBC is this idea promoted. It would be a misuse of this approach. EBC was not designed to establish a set of directives, but to enhance patient care by merging scientific evidence with the doc-

tor’s skill, taking into account the needs of the patient.

Evidence-based practice (EBP) in general has been criticized as too robotic, too much like a cookbook approach. Hunk³ disparaged EBP because he thought the hierarchy of evidence utilized in EBP is sometimes misleading. He pointed out that systematic reviews and randomized controlled trials, considered the highest level of evidence, are often lacking. It’s true that the higher levels of evidence are not available for many of the conditions managed by doctors of chiropractic. Table 1 provides the commonly accepted hierarchy of research evidence, with the study types listed in order of strength of evidence. Stronger evidence is higher on the chart. Systematic reviews of randomized controlled trials are the strongest and expert opinion the weakest.

EBP has also been criticized because empirical evidence cannot be directly applied to the care of individual patients. This is because clinical research deals with groups of individuals who had a variety of outcomes, but it did not include the patient in question. Consequently, the knowledge gained from clinical research may not specifically establish what is best for a particular patient.⁴

When no high-quality evidence is available, lower levels of evidence must be utilized, although this type of evidence will engender less confidence for making clinical decisions. When little

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or no evidence exists to support the chiropractic management of a specific condition, the practitioner must decide whether to render treatment (perhaps on a time- and improvement-dependent trial basis), to refer to an appropriate specialist for autonomous or co-management of the case, or to obtain a second opinion.

The process of EBP has not been rigorously tested in RCTs,⁵ although a case-control study showed that evidence-based care for lower-back pain was more helpful than good-quality usual care. Fewer patients remained in pain, requiring continuing care.⁶ In addition, a cross-sectional study involving nurses showed that the implementation of evidence-based guidelines in the use of peripheral intravenous cannulae resulted in a lower incidence of thrombophlebitis.⁷ Both of these studies used research designs incapable of determining if 1 event caused another. Consequently, one could not say that the evidence-based care provided actually caused the better outcomes observed. It takes a study design at a higher level of evidence (i.e., an RCT) to establish causation. On the other hand, it should be readily apparent that clinical decisions based on up-to-date evidence would be preferable to the alternative. Evidence-based practice is actually just a method to help practitioners find cutting-edge solutions to their patients' clinical problems.

Doctors of chiropractic, like all health care providers, are commonly confronted with unfamiliar clinical problems that require skills they lack.⁸ Answers to clinical problems are often based on information gleaned from textbooks, experts in the field, or respected colleagues. These strategies are frequently inadequate, however, and are not likely to generate the best information possible. Textbooks may be of little or no help because they rapidly become obsolete as new information is produced. Because of the protracted time involved in producing a textbook, some are already outdated by the time they are published. That situation only gets worse with the length of time textbooks sit on a bookshelf. Experts may convey more current information, but it will only be as current as the latest references that they have cited. Besides, experts are not typically readily accessible. Colleagues may provide useful information, although they may be relying on the same outdated information sources used by the inquiring doctor.

Past clinical experience is another resource that can be useful for making chiropractic clinical decisions. If the original information sources used to build the clinical experience are incomplete or outdated, however, the practitioner may be incapable of providing optimal care. This is not to say that clinical experience is worthless—quite the opposite.

It is extremely valuable. It's one of the major steps of EBC, which integrates evidence from research into clinical expertise. Furthermore, combining clinical expertise with the best available research evidence is complementary to and has a synergistic effect on patient care.

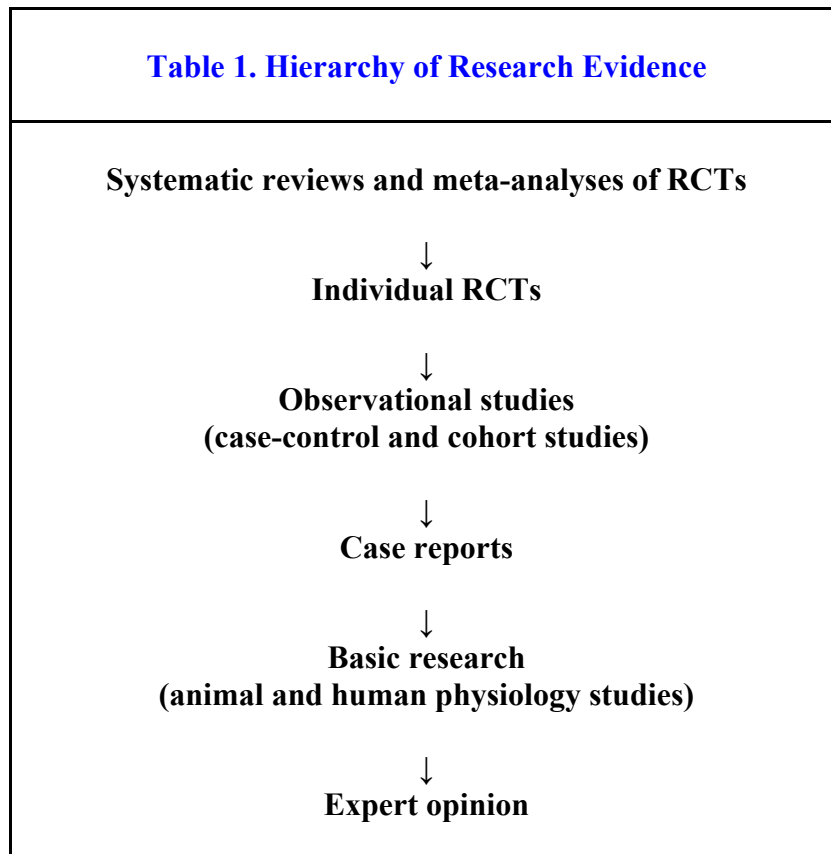
There are many reasons EBC should be a part of the normal routine for all DCs, but the most important one is that those who do not incorporate evidence-based methods into their practices are shortchanging their patients, as well as themselves. DCs who do not use EBC may not provide their patients with optimal care, which patients certainly deserve. Failure to use EBC also exposes the doctor to a variety of potential problems (e.g., insurance reimbursement and legal difficulties). The solution, of course, is to take the time to learn and become proficient at EBC—and then use it regularly. ■

This column is coordinated by Robert Cooperstein, MA, DC, professor and director of technique/research at Palmer West College of Chiropractic.

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Table 1. Hierarchy of Research Evidence



References

1. Haneline MT. *Evidence-based chiropractic practice*. 2007, Sudbury, MA: Jones & Bartlett; 2007.
2. Kent C. Evidence based chiropractic: fad, folly, or fascism? *The Chiropractic Journal* [serial online] Jan 2007.
3. Hunink MGM. Does evidence-based medicine do more good than harm? *BMJ* 2004;329(7473):1051.
4. Tonelli MR. The limits of evidence-based medicine. *Respir Care* 2001;46(12):1435-40; discussion 1440-1.
5. Straus SE, McAlister FA. Evidence-based medicine: a commentary on common criticisms. *CMAJ* 2000;163(7):837-841.
6. McGuirk B, et al. Safety, efficacy, and cost effectiveness of evidence-based guidelines for the management of acute low-back pain in primary care. *Spine* 2001;26(23):2615-22.
7. Ahlqvist M, et al. Handling of peripheral intravenous cannulae: effects of evidence-based clinical guidelines. *J Clin Nurs* 2006;15(11):1354-61.
8. Delaney PM, Fernandez CE. Toward an evidence-based model for chiropractic education and practice. *J Manipulative Physiol Ther* 1999;22(2):114-8.