

EBM: Where Do We Go From Here?

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We began our EBM series in early 2020, just before the all-encompassing coronavirus pandemic impacted every aspect of our lives. While addressing the pandemic had not been our original intent, that was, inevitably, what happened. We dedicated, for example, several articles in the EBM series to a translation of the official Covid-19 clinical guideline from South Korea.¹

Why EBM Matters to You

The original purpose of our EBM series, however, has been to create a basic set of knowledge on EBM and on acupuncture research for practitioners so we may be able to provide safe and effective, up-to-date, and reliable clinical information as health care practitioners. We are engaged in patient care, and we should be able to discern what is safe and what is unsafe; what is real; and what is sometimes deliberate misinformation.²

When we have reliable information, we should also be able to discuss evidence or proof that our medicine works with other health care practitioners. Communicating with other health care practitioners does not mean pigeonholing our medicine to fit into a biomedicine mold. We should relish every opportunity for speaking with our patients and with other health care practitioners so we are able to let others know that our medicine works. We have plenty of evidence and empirical data on our side. Our patients do get better, and our medicine is beginning to be recognized at the federal level.

Those were the primary reasons that spurred us on to continue with the series. Let's close the series with a brief summary of some of the areas we explored as they apply to you and your practice.

A Critical Step in the Process: Understanding Basic Research

Equipping ourselves with adequate research skills is essential; it begins with finding reliable clinical studies. PubMed or PubMed Central may serve as a good starting point for locating clinical studies with pertinent information. Once we have located studies that may be useful for our purpose, we should, then, be able to quickly read through abstracts and decide whether the study is viable for our purposes and worthy of further reading.

By quickly gleaning through abstracts, we will be able to sort through various studies to assess which study may be better than others and which study may be applicable to our goals. Formats of abstracts may vary depending on the requirements of the publication, but an abstract typically contains introduction, methods, results and conclusion, and provides a quick glance into the study.

The more we read abstracts, the more we may be able to understand the nature of scientific and clinical research publications.³

We should also be able to understand the information given in tables and figures to assess whether

a particular study is viable or not. To understand tables and figures, one of the reference articles may be, "How to Interpret Figures in Reports of Clinical Studies," published in *BMJ* in 2008. The article is available via PMC at www.ncbi.nlm.nih.gov/pmc/articles/PMC2394578/.⁴

Finally, it is essential for us to understand that not all publications are valid. We should know by now that not everything printed or spoken by someone in a leadership position is true. We should be able to analyze information critically and become smart consumers of information.

The constant thought in our mind should be, *How do we know that? Is there any proof (evidence)?* Evidence requires proof. It is induced by empirical observation; there has to be something observed or proven *first* to arrive at a possible explanation of that something. It is this evidence or proof that is used in EBM.

The Future of EBM and Our Medicine

EBM is not static. It continues to develop and change as our views about clinical evidence change, especially in our field of acupuncture and traditional medicine. RCTs may be the *de facto* standard for proving the effectiveness of pharmaceuticals, for the purpose of regulatory control, but social phenomena that occur daily in a person's life lie outside the realm of RCTs. As such, we have an increasing number of clinical studies published in fields such as psychology that facilitate pragmatic clinical trials, in which clinical studies are done in real-life settings in real-life settings.

For these reasons, real-world data (RWD) are collected for usage in regulatory decisions. In fact, we have already been reading and hearing about the real-world evidence of vaccines against the covid virus from scientists, medical professionals and, of course, Dr. Fauci.⁵ We have already been discussing evidence-based medicine for some time now.

Personalized medicine such as acupuncture and traditional medicine certainly falls in this realm of real-world data and real-world evidence. RCTs are no longer the only option available for research. In fact, RCTs may not be the best type of research for our medicine, due to methodological issues in measuring placebos.⁶

We also need more well-planned and executed clinical studies in our field to conduct reliable systematic reviews (SRs) and meta-analyses, studies considered to be the highest level of evidence. In order to conduct reliable SR research for our medicine, we need to have enough reliable clinical research studies available.

In our medicine, however, while SRs have been increasing, the actual clinical research studies have been decreasing. The result is that SRs in our field are currently lopsided, lacking underlying clinical research.

For these reasons, rather than SRs or meta-analyses, we should focus our efforts on specific clinical studies that focus on a particular issue, such as back pain, digestive disorders, allergies, and so forth. These clinical studies may be called randomized, controlled trials (RCTs), cohort studies, case-control studies, and case reports. Although the level of evidence may vary, studies that provide practical information for us are going to be the most useful.

Our efforts in the EBM series have perhaps been sporadic at best, presenting only the most basic sets of information. It is our humble hope, however, that our EBM series introduced our readers to basic understanding of EBM and essential research skills to improve treatment protocols and the lives of our patients. Our efforts are just beginning.

We close our series with the essence of EBM, as envisioned by David Sackett, which we introduced in our first article. EBM considers all of the following three components: 1) health care decisions on evidence (data, quantifiable information); 2) the clinical experience and expertise of the practitioner; and 3) patient values and circumstances.⁷ It is our hope that armed with evidence, our own experience as practitioners, and understanding our patient's values and needs, we will continue to provide safe and effective care for our patients.

Editor's Note: This is the final article in an ongoing series by the authors on evidence-based medicine; previous articles appeared in the [March 2020](#), [June 2020](#), [August 2020](#), [September 2020](#), [February 2021](#) and [March 2021](#) issues.

References

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