

Easy Evaluation of Research in Evidence-based Dentistry

The basic principle underlying evidence-based medicine or dentistry indicates that the recommended treatment for a given condition should be the one that the available scientific data suggest. What does a researcher comparing conditions want to know? Is the difference observed reliable? Is the observed difference large enough? What does a patient who faces a choice among treatments want to know? Would one particular option be better than the other?

Because any difference, however small, can yield a significant difference, when the sample size is large enough, those in applied fields have long sought a more intuitively appealing measure of a treatment's comparative effectiveness. One might rely upon "experts" to judge every case (How can we tell who is truly expert?). Or, we might use focus groups of relevant people (patients and possibly families or payers). Certainly, a valid and reliable system for grading published reports is important and necessary in order to assign some degree of ranking to the quality of individual studies, in terms of their effectiveness and efficacy.

The website askward.net has recently been introduced to assist the clinician in making wiser decisions with respect to the treatment of each patient using the best available evidence. The dentist is prompted to state the clinical question, such as, "What is the best treatment for patients with mucositis?" The question is translated into a PICO question, and the research is procured to generate the consensus statement following the stringent evidence-based principles outlined in this issue of the *Journal of the California Dental Association*. The output is generated within a short amount of time (generally one to 15 days, depending upon the complexity of the clinical question). It provides the dentist, for a minimal fee, with a critical evaluation of the available research by means not only of a score of research quality, which assists the

dentist in accepting or rejecting the findings in clinical decision-making, and with a short qualitative grading. The output also proposes a consensus statement about the best available evidence.

The website does not seek to replace the clinical decision-making process by the dentist. Rather, it provides essential information so that the dentist can be fully informed to make decisions with respect to the optimal treatment for the each patient, based on the whole body of research. Furthermore, the website provides regular updates of the critiques and consensus statements.

In a slight modification of this approach, the website can provide the service of aiding in crafting better research reports. The author is queried with respect to research methodology, design, and data analysis. This directed guidance ensures that the manuscript follows CONSORT and any other standard of sound research reporting.

This is one example of the important steps now being made to actualize evidence-based dentistry a practical reality in the dental practice in California in the 21st century. It is a promising one because it places the onus of reading and critically assessing the research literature to individuals fully trained in oral biology and medicine, as well as in research methodology, design, and data analysis. Therefore, it frees the dentists from the gargantuan task of acquiring the skills for reading critically the entire body of research on every domain of research that pertains to their patients, and allows them to utilize the well-reviewed and succinctly synthesized bottom line in the clinical treatment of their patients. **CDA**



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