

# Evidence-Based Dentistry

## A Double-Edged Sword

There is danger in embracing scientific principles to the exclusion of clinical experience and know how.

Edward Feinberg, D.M.D.

I ATTENDED the evidence-based dentistry conference in May at ADA Headquarters in Chicago. I found the conference to be both informative and horrifying.

There is great need to promote the practice of dentistry according to evidence-based scientific principles. You might conclude from reading dental journals and tabloids that dental care is often based on assumptions that have no scientific basis behind them. New “high-tech” procedures are not being honestly evaluated against the benchmark of what came before. Today’s dental school graduates are not being taught classical procedures, so they have no background whatsoever to evaluate what is coming down the pike. They are easy targets for the latest marketing gimmick.

The great scientist and innovator Per-Ingmar Branemark said, “Clinical documentation established during half a century must be respected.” It is not surprising, therefore, that the profession is crying out for an evidence-based approach to patient care.

The ADA’s definition of evidence-based dentistry is excellent because it thoroughly outlines this approach. It reads:

*“Evidence-based dentistry is an approach to oral health care that requires the judicious integration of:*

- *Systematic assessments of clinically relevant scientific evidence, relating to the patient’s oral and medical condition and history, together with*
- *The dentist’s clinical expertise and*
- *The patient’s treatment needs and preferences.”*

The conference excelled at providing important sources of information that can be accessed to obtain systematic assessments of research in the literature. Attendees had an in-depth look at the evidence-based section on the ADA’s Web site, [www.ada.org/goto/ebd](http://www.ada.org/goto/ebd), and learned how to retrieve abstracts of published systematic reviews on dental topics and find links to national and international sources of valuable information—for example, the Cochrane Oral Health Group and Pubmed libraries. This information can certainly be valuable in making treatment decisions.

However, there is a danger when these sources are not examined critically. As the ADA’s definition states, clinical experience and the patient’s needs and preferences can never be discounted in making treatment

decisions. Dr. David L. Sackett, the father of evidence-based medicine, said, “The transfer of science into clinical practice remains a challenge because practitioners often face individual needs and demands that are not reflected in the required rigors of randomized controlled clinical trials.”

Amazingly, the presenters at the ADA conference seemed to believe that all the information needed to make evidence-based treatment decisions can be found in searchable studies on the Internet. This is not even close to being true. Everything is not on the Internet, and many of the studies that do exist there are flawed, arrive at false conclusions or are irrelevant if the clinician is doing something totally different from what is being done by the majority of practitioners.

I have 100,000 slides and digital pictures of crown and bridge cases dating back to 1950 in which every tooth was prepared and restored in exactly the same manner using methods that are quite different from mainstream practice. Full-mouth X-rays taken over decades of patient follow-up indicate that these restorative techniques virtually eliminate recurrent decay and halt the progression of periodontal disease in a high percentage of cases. I routinely show



patients cases—some similar, some worse than theirs—that have been treated successfully. I am providing evidence-based treatment from a clinical perspective.

However, like most clinicians, I am not prepared to conduct a statistical analysis of my patients in order to write a research paper. As a result of my unique background, I have definite ideas about evidence-based practice that I believe should be considered by the profession. The conference presenters didn't think so, and my ideas were virtually discounted.

I am deeply concerned that the concept of evidence-based dentistry, for all its good intentions, could ultimately be detrimental to the profession. The conference presenters developed evidence-based, that is, litera-

ture-based, "tools" or flow charts for treating three non-controversial conditions in dentistry. I believe it is their intent to develop these flow charts for every complex condition or issue in dentistry. There were many representatives at the conference from the insurance and legal professions. They would love to have a cookbook of flow charts. I am concerned that such an evidence-based cookbook would stifle the ability of the clinical practitioner to deliver quality or cutting-edge dental care. Instead, they might be forced to follow these flow charts or risk losing patient benefits or being sued.

Experienced practitioners know there are exceptions to every rule because there is tremendous variability in needs, treatment options, health histories and patient desires.

I am all for practicing dentistry according to scientific principles, and I think patients should be offered treatment that is based on a solid background of evidence. However, I also strongly believe that practicing dentists who are chosen to be "evidence-based champions" should be invited to provide input so that both clinical and academic points of view are fairly represented in the evidence-based approach to patient care. It is outrageous to expect that champions are only useful when they can be indoctrinated into preaching concepts developed by academic researchers. ■

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